Annual Report 2021

Contents

Overview

VK in brief

VK is an online ecosystem that helps millions of people get on with their daily tasks. The ecosystem includes a variety of online communication products, entertainment, online education, e-commerce and other services.

COMMUNICATIONS & SOCIAL

Among other services, the segment includes two leading Russian language social networking services and communication platforms VKontakte and Odnoklassniki, Russia's leading email service (Mail.ru), music and video services (VK Music and VK Video), media projects and search functions.

GAMES

Represented by the MY.GAMES brand, a global digital entertainment provider that develops and publishes games across various genres for PC, console and mobile devices for millions of players worldwide. The MY.GAMES ecosystem also includes services for donations and streaming such as Boosty.to and Donation Alerts, along with a Cloud gaming business.

EDUCATION TECHNOLOGIES

The online education platforms represented by Skillbox Holding Limited, which includes Skillbox, Geekbrains, SkillFactory, Mentorama and Lerna, offering hundreds of courses and programmes on a variety of subjects, from analytics and big data to cybersport and management.

NEW INITIATIVES

The location-based online Classifieds Youla, the content recommendation platforms such as Pulse and Relap, and a range of cloud and B2B products among other experimental and earlier stage products and services.

Our history

1998-2001
Communications

Launch of Email & Portal

2007
Social

Entry into the social networking business

2008
Games

Entry into the games market

2016-2020
New Initiatives & EdTech

Launch of e-commerce and O2O services, including through joint ventures (JVs)

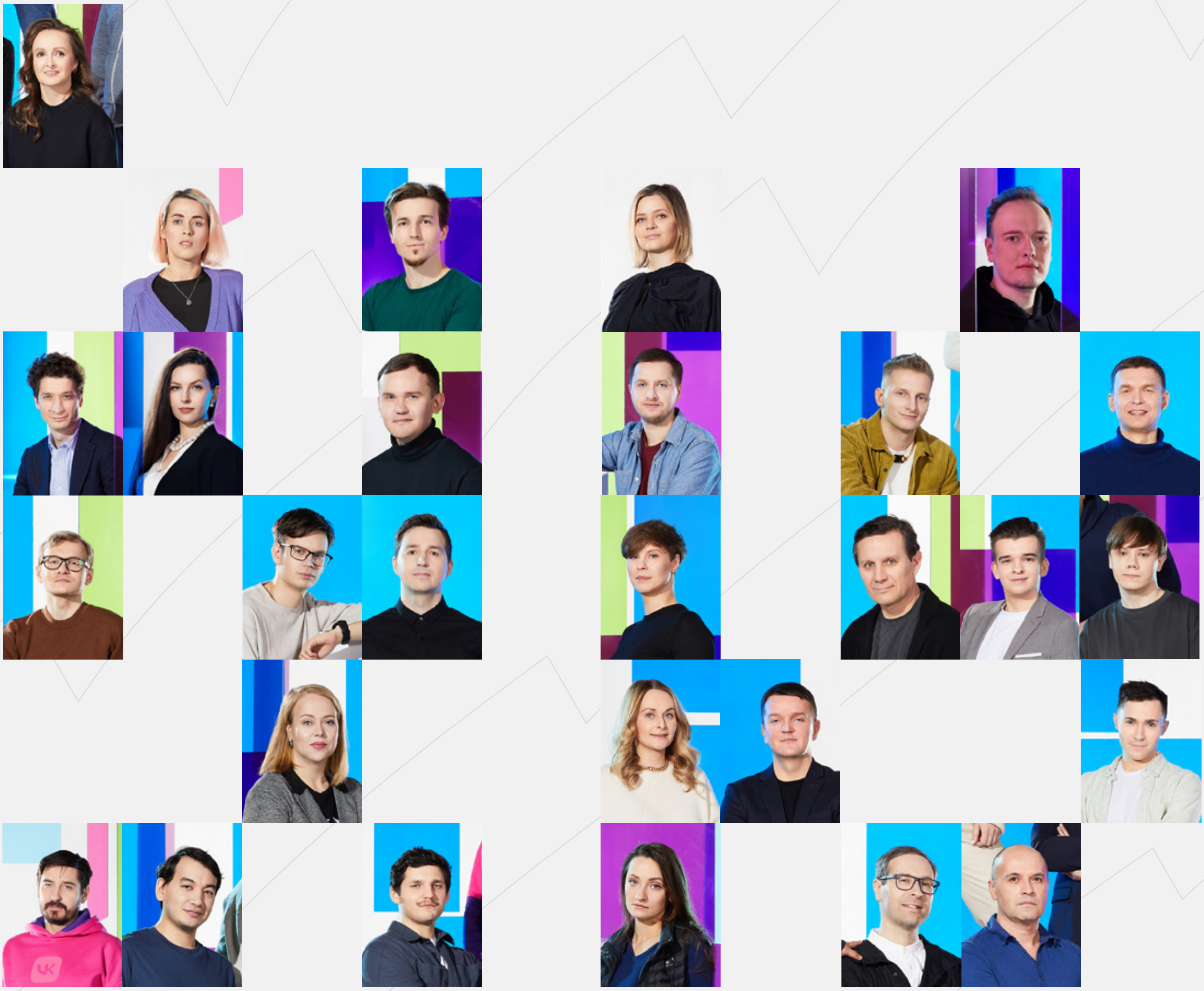
2021
Rebranding into VK

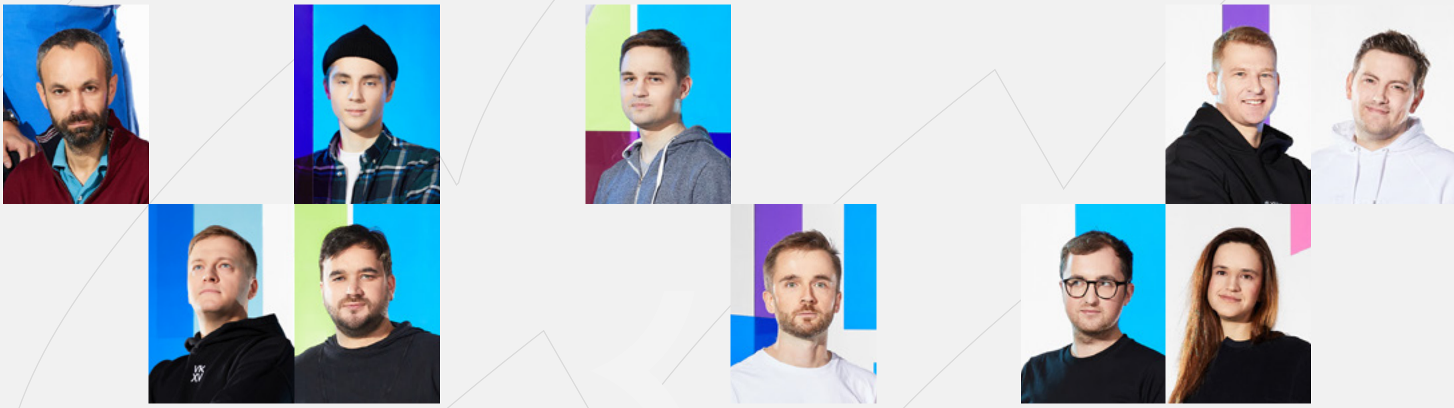
Our people

VK PEOPLE AWARDS → 2021

Since the company was founded, one of our key priorities has been to build an exceptional team through attracting top talent and helping those already working for the company grow professionally in a diverse, welcoming and safe environment.

The dedication and motivation of our employees to either become or remain leaders in their fields has always been crucial to our ability as a company to accept challenges and deliver solid results.





OUR MAIN ASSET IS OUR EVER-GROWING TEAM OF DEDICATED PROFESSIONALS

CEO's statement

I believe there is both an opportunity and an urgency to improve our focus and execution but I also have a lot of confidence in our team and our unified ability to make VK the best it can be.

VLADIMIR KIRIENKO

CEO VK

Introduction

The 2021 financial year again demonstrated that the structural shift to digitalisation continues, while our products continue to serve user needs and remain in high demand at all times, which has been the key driver for another strong year for VK. Despite the effects of the pandemic, and the ongoing geopolitical issues, we continue to provide our users with convenient, safe and unifying products and technologies and plan to transform and improve our business further in 2022.

Group revenue grew by 18% YoY to RUB 125.8bn in 2021. Online advertising, the largest revenue stream, accelerated revenue growth to 24.6% YoY, driven by our ongoing improving AdTech, along with the relatively low base of the initial COVID-19 year (2020). Typifying this, we saw a significant reduction in cost per install in 2021 through better predictive models, which drove revenues from app install ads. The year 2021 brought a number of challenges to the global games market, with product launches being postponed, changes in the IDFA policy that affected the mobile games market, and the high base effects of 2020 in the whole. Yet MY.GAMES managed to successfully tackle these challenges and demonstrated a stable growth driven particularly by its diversified catalog's strong performance. Moreover, MY.GAMES delivered RUB 10.4bn in EBITDA in 2021, having more than doubled EBITDA versus the 2018 level (RUB 5.0bn) a year ahead of guidance. Looking ahead, the MY.GAMES team will continue diversifying its portfolio and investing in the development of products across all three segments: PC, console, and mobile. MY.GAMES will also continue experimenting with new niches and genres and developing cross-platform products to accommodate its increasingly growing audiences.

As befits its ongoing importance, EdTech has become a separate reporting segment in 2021, having delivered the fastest growth for the year, expanding by 71% and approaching 10% of total Group revenues in Q4 2021 versus 8% a year ago. Throughout 2021, our EdTech platforms continued to increase their product matrix and grow their own customer base. We have also expanded our geographical footprint in the C.I.S. & Brazil (including through our acquisition of Mentorama) while enhancing our leadership position on the domestic market through the acquisition of SkillFactory. Within the New Initiatives segment, Youla and B2B projects remain the largest components, each accounting for about a third of the segment's revenues. Pulse and Relap, our recommendation platforms, and sales of smart speakers were also important revenue contributors in 2021. Notably, the New Initiatives segment demonstrated ongoing improvement in profitability across most product groups for the year.

In 2021, we also continued to invest and support the development of our major partnerships: the AliExpress Russia JV in e-commerce and the O2O JV in foodtech and mobility. AliExpress Russia has been actively expanding its local business, which reached 36% of total GMV in 2021. Among the O2O assets we can highlight the rapid expansion of the Samokat express delivery business as well as Delivery Club, our restaurant delivery platform, for its strong performance and continued market leadership. Samokat's dark store base exceeded a milestone of 1,000 in December (+2.5x YoY), one of the largest globally. Delivery Club, meanwhile, generated RUB 16bn in gross revenue (+60% YoY) in 2021. Notably, given the increased scale, the introduction of new technologies and the rising efficiency of operations, Delivery Club showed a positive contribution margin for the whole year for the first time company-wide.

In October 2021 VK started a new chapter in its history, after rebranding from Mail.ru Group into VK. The rebranding came as a natural step in the process of our evolution into a leading domestic internet ecosystem. To achieve this, the company is required not only to continue to launch high quality and convenient services for millions of users, but also needs to maximize links between our products and services. The VK brand was chosen as universal due to its association with our core social networking asset VKontakte, its major reach, high recognition and strong fundamental potential.

At the end of 2021, VK also saw changes within its shareholding structure (on the MFT level), but with no change in the controlling shareholder – there remains no single controlling shareholder of VK. In December, Vladimir Kirienko became CEO (Russia) of VK.

CEO's statement

While I only joined the company as the new Chief Executive Officer (Russia) in December 2021, I would like to share my initial impressions and discuss VK's key achievements over the past year.
First of all, I believe that VK offers a phenomenal combination of assets, which cover almost all the daily online, and now also many offline, needs of millions of users. I have also been impressed with the team at all levels and their motivation to either remain or to become the leaders in their relevant fields. I think we have a strong brand as well as a unique culture. However, what I have also noticed is a high level of complexity, and hence there is substantial room for more synergies and unity between the various teams, room for more long-term planning, focus and consistency in execution as well as higher internal transparency. These are therefore some of the areas we have been zooming in on and are looking to enhance.

ESG

We strive to improve people's lives by making technologies simple and accessible to all and distributing our services in a way that has the least possible impact on the environment. We aim to design, offer and support sustainable technologies that make a real difference to our users' lives and follow a responsible approach to the consequences and impact of our products on communities. We believe that it is our duty to help society in its digital transformation. We work on improving users' quality of life with our products, while enhancing their opportunities by improving their skillset, and giving back to society and the communities in which we operate, including through assisting small and medium businesses.
Though the digital world brings many benefits to users, we also understand the growing concerns about personal data protection and privacy issues, as more and more sensitive personal data becomes digitalised and transmitted via global networks, with millions of new devices and millions of user accounts. As the leading Russian internet company, we make data security and privacy our top priorities.
With the ESG agenda becoming increasingly important for our strategy and day-to-day operations and decision making, we continue to improve our ESG-related disclosure. In 2021 we launched quarterly ESG presentations, while also making ESG-related highlights in our regular IR news digests and IR blogs, in addition to the annual ESG report.

Thanks and appreciation

I would like to close this section with an acknowledgement to a number of key groups, given the success that we saw in 2021 and the support that is required in these current uneasy times. First of all, we would like to thank our employees for their loyalty and achievements. Our people remain our main asset. Our employees are highly skilled and continue to form our tech-driven culture with their commitment to driving further strong growth for the business. In 2021 our headcount expanded by a further 18% to more than 10,000 people.

We would also like to thank our millions of users, who sit at the heart of our ecosystem and our day-to-day activity. We promise to continue to create accessible and useful technologies to further improve your internet journeys. We also want to thank all our business partners, who continue to trust us with their business and relationships even in uncertain circumstances. Additionally, on behalf of the Board, we want to thank our shareholders, who not only believed in the promising future of our business but also provide valuable and useful feedback, share their expertise and thoughts. We appreciate this feedback and try to adopt it when possible. For example, we continued to improve our disclosure in 2021, adding some details about our JVs, introducing a separate EdTech segment and waving a reporting on a pro-forma basis. We aim to continue to build on our success in this new reality, despite the challenges and uncertainty. We believe that past and future investments, the ongoing changes in management approaches, our strong position on the market and our dedication will help us to further transform and drive VK to the best it can be in 2022.

2021 key highlights

January

VK expands its advertising partnership model in Kazakhstan. Now local agencies and advertisers can launch marketing campaigns on the Company's properties and advertising network without intermediaries

Warface reaches 100 mn registered users

VKontakte is ranked the 1st place in grossing social networks apps in iOS as well as Google Play, also iPhone in Russia

OK is ranked the 1st place in grossing social networks apps on iPad in Russia

VK's browser Atom adds a voice control function via integration with the Marusia voice assistant

VK and Raiffeisenbank launch a pilot using VK's flexible payroll service PayDay

Ural Federal University and SkillFactory launch a new Masters program on AI engineering

February

VKontakte, OK, and Mail.ru Email introduce smart noise suppression in video calls

VKontakte launches a neural network to help public page managers fight threats in comments

MY.GAMES Venture Capital invests in the Pizza Club Games studio

MY.GAMES Venture Capital enters the list of top 10 gaming venture funds

Marusia learns to manage Xiaomi smart home devices

March

VK opens early access to Multimarket, a unified B2B platform for managing stores on VKontakte, OK, AliExpress and Youla

OK releases its first own original comedy series "Friendmates" as a new step in professional content production and exclusivity

Hybrid working regime and the "Make Really Good" concept introduced

Super App mode is set as the default for new installs of the Mail.ru Email application

VK and Rostelecom launch the Sferum educational platform

Lead Ads forms and Canvas pages become available to all OK users

OK presents a major interface update in the desktop version and mobile apps for its 15th anniversary

April

VK Digital Technologies introduces a new communication platform for a hybrid office based on VK Teams

The Digital Indoor advertising self-service tool is launched in myTarget

OK launches a chatbot to assist users facing authorisation problems

OK becomes the first social network to launch audio stickers

VK Business launches the Services section in communities

VKontakte updates its iPad app

VK Clips launches Duets

Youla launches video selfie verification

MY.GAMES Cloud launches 4k gaming and up to 120 FPS

May

VK Digital Technologies introduces the Process Mirror platform

OK's series "Friendmates" is released on Megafon TV

VK Calls introduces support for calls to keep up to 2,000 people on hold simultaneously

VKontakte becomes the world's first social network to add a voice assistant, Marusia, to its app

VKontakte launches community calls

June

VKontakte launches self-destructing and quiet messages

VK Calls introduces 4K screen sharing

VK Classifieds is integrated with local and thematic groups in VKontakte

Login to Mail.ru Email and Cloud Mail.ru becomes available through VK ID (ex VK Connect)

VK presents Capsula Mini, a new smart speaker with display

MY.GAMES launches Warface's console cross-play

OK launches payment for advertising for legal entities in the internal advertising account

myTarget launches a self-service programmatic tool for running DOOH campaigns

July

OK expands a variety of gaming products and launches a hyper-casual games segment

OK launches its first referral programme with AliExpress, allowing users to receive discounts for inviting friends to the marketplace

OK launches contests in Moments – users can choose which contest to join or create a new one

OK users can now recommend business profiles with the "Recommend" button on the page

VKontakte gives communities the ability to publish clips

Cloud Mail.ru neural network is now able to select the best photos for social networks

August

VKontakte and OK music services limit background availability and provide the ability to download tracks to paid subscription users.

OK launches a paid subscription to groups and a monetisation platform for authors

VKontakte Business launches automatic promotion of services

VKontakte launches a desktop app for video calls

VKontakte introduces reactions

VK Clips launches thematic playlists

VKontakte launches chat themes and introduces a new design for the messaging function

VK publishes its second ESG report

VK announces the establishment of a new education holding based on Skillbox and GeekBrains

Mail.ru Email launches cancellation of sent messages

VK and QazCloud agree to launch a cloud platform in the Republic of Kazakhstan

VK Mail appears in the VK ecosystem

VK invests an additional USD 60.3mn in JV AliExpress Russia

MY.GAMES Venture Capital and Google launch Game Drive 2.0

September

VKontakte introduces an updated version of collections for stores

VKontakte launches VK Squad, a free video blogging education platform

VKontakte integrates the new QUIC network protocol

Pulse adds video monetisation

MY.GAMES Venture Capital invests in The Breach Studios

MY.GAMES launches Tacticool on PC in MY.GAMES Store

MY.GAMES acquires the hyper-casual publisher Mamboo Games

OK launches a neural network to combat clickbait on the social network

October

Mail.ru Group rebrands into VK

VK Cloud Solutions opens access to the speech recognition and synthesis platform Cloud Voice, based on the technologies of the voice assistant Marusia

The VK Video platform is launched

Umschool joins VK

OK now allows goods to be sold in video streams, while users will be soon able to pay for goods on the social network

VKontakte accelerates video and live stream start speeds by 1.5x

VKontakte releases a neural network-based automatic translation feature for posts

VKontakte launches automatic video subtitles

VKontakte releases the VK Calls SDK

Mail.ru media projects — Mail.ru News, Hi-Tech Mail.ru, Auto Mail.ru, and others — begin integration with the Pulse and Relap recommendation platform

Skillbox Holding acquires shares in the Mentorama and SkillFactory educational projects

MY.GAMES Venture Capital invests in 3 new studios: VOX, Tworogue Games, and Wideview Games

OK launches an audio message recognition service

OK launches a music recognition function similar to Shazam

November

VK Calls becomes the world's first platform to support calls with no limit on participants

OK presents a large-scale update at its own online conference OK.Update in November. The changes affect many large social network services: OK announces the launch of a new version of the news feed and new content

OK launches Memories, service where users will be able to create slide shows with previously published photos.

OK adds new functionality to the Moments service

VK Dating is launched

VK Music is launched

VK Video presents the VKontakte video catalogue

VK launches Customer Experience Hub, based on PREDICT, Tarantool and VK Cloud Solutions technologies, helping users to manage data, atomise marketing and personalise communication strategies

VK Pay, Home Credit bank and the financial service «Buy Don't Save» launch an installment programme for offline purchases

Skillbox Holding acquires shares in Tefiti (Lerna)

December

VK launches VK Protect, an information security system overhaul and user data protection programme update

VK Women, an internal female association, is recognised at the VK People awards

OK becomes the first social network to launch a service based on its own deepfake technologies

VK Fest lasts 5 days and draws 33mn unique viewers

VK Video introduces offline mode

VK Video introduces NeuroHD

VKontakte launches the VK Workouts Mini App

VK Calls launches its in-house background filter technology on the desktop version of the website

MY.GAMES Venture Capital invests in 2 new studios: Square Triangle and Talerock

Cloud Mail.ru creates collections of the best photos of the year

Financial highlights

18.2% ↗

Revenue
RUB mn

125,752
2021

106,373
2020

18.2% ↗

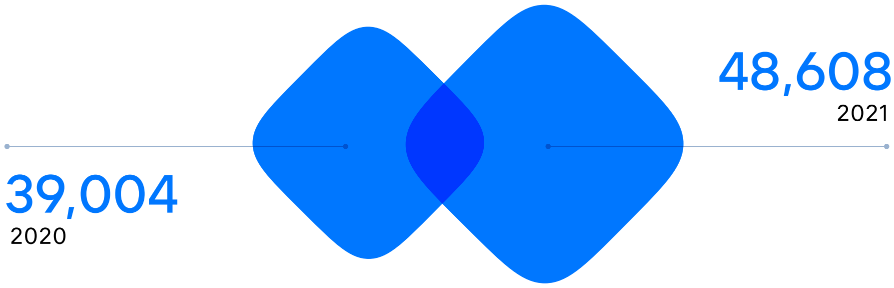
EBITDA
RUB mn

31,802
2021

26,912
2020

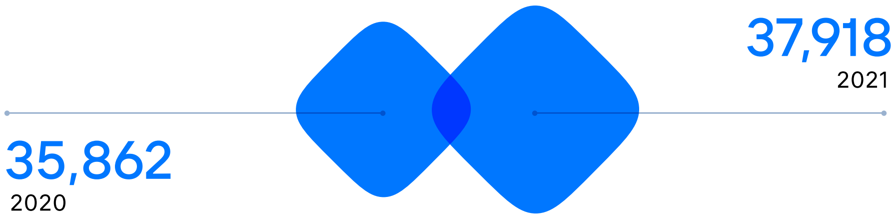
25% ↗

Online advertising
RUB mn



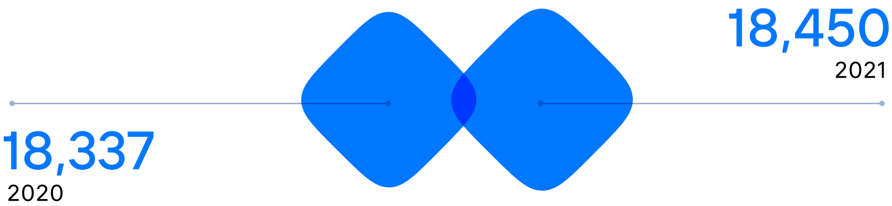
6% ↗

MMO Games
RUB mn



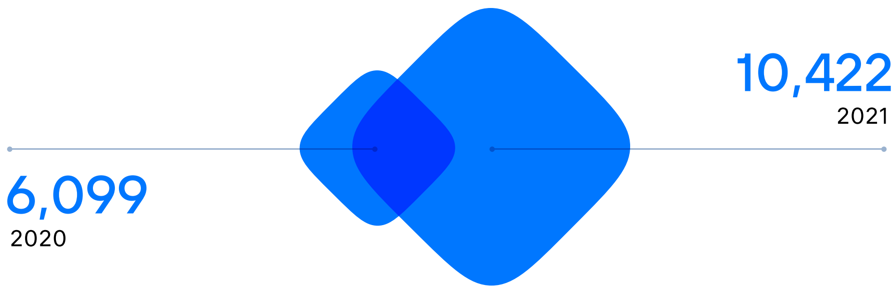
1% ↗

Community IVAS
RUB mn



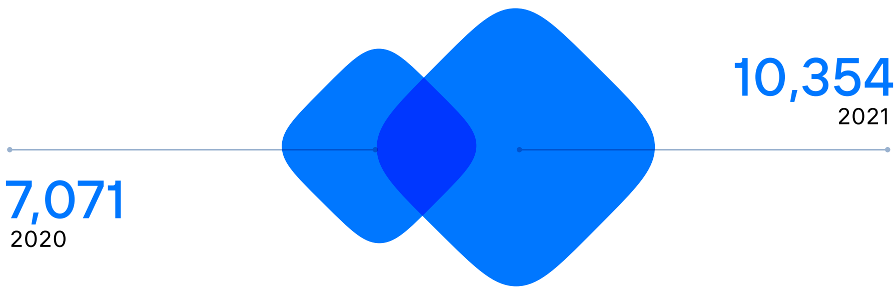
71% ↗

Education Technology services
RUB mn



46% ↗

Other revenue
RUB mn



STARTUP OF THE YEAR

Andrey Kovalev ▪ Natalia Rusina ▪ Ruben Akopov ▪ Sergey Mardanov

SFERUM

STARTUP OF THE YEAR

Konstantin Sidorkov ▪ Roman Bogautov ▪ Andrey Dimitrov ▪ Dmitriy Zaharov

VK MUSIC

STARTUP OF THE YEAR

Sergey Suvorov ▪ Alexander Tobol ▪ Alexander Volodin ▪ Marina Krasnova ▪ Ilya Smirnov

VK VIDEO

Operating review

Operating review

Our services attract millions of users each day. Whether they are using our social networks, email, instant messaging (IM) or our games, we aim to increase the time they spend on our sites and mobile applications by continuously offering new and relevant features and services.

Communications & Social

We operate the two leading Russian-language social networks, VKontakte and Odnoklassniki (OK). They enable users to find connect and communicate with friends, families and colleagues. Our products include a newsfeed, messaging services, status updates, photos, videos, stories and other features. Users can play games together, send each other online gifts, recommend websites and keep track of events such as birthdays. We frequently add new products and services to maintain and increase user engagement.

VKontakte

VKontakte is Russia's leading social networking platform, with an average Russia MAU of 72.5mn and DAU of 47mn in Q4 2021. According to Mediascope, VKontakte reaches 76% of the Russian internet audience every month, with 45% visiting the platform daily[1].

Throughout 2021, the VKontakte team launched over 230 product and technological updates, driving user engagement. These updates include:

- the launch of VK Video
- the launch of VK Music
- playlists in Clips
- QUIC network protocol integration
- an updated app for iPad
- removal of all limits on VK Calls
- reactions to posts
- message backgrounds and self-destructing messages
- monetisation platform for content creators
- the launch of one of the largest geographically distributed CDN networks in Russia

We continue to work on developing VKontakte to ensure its position as the leading local platform for user communication, entertainment and everyday needs. This is made possible thanks to our broad and varied offering and the convenience of our services. In 2021, VKontakte focused on technologies and innovation, entertainment, communication, and social tools.

The convenience, speed, and variety of communication and entertainment services make VKontakte popular among people of all ages. Research from mobile service provider Yota[2] has showed that VKontakte's popularity is unrelated to generational habits. VKontakte is the leading social network in Russia for Zoomers, Millennials and Gen Xers.

VKontakte's popularity can be proven not only in the numbers but in users' opinions as well. According to Ipsos, VKontakte is Zoomers' favourite social media platform.[3] At the same time, we are trying to make our platform universal and useful for all internet users. In addition, the VKontakte brand is very recognisable. VKontakte has the highest top-of-mind rate among social networks in Russia (85% spontaneous awareness rate and 58% top-of-mind rate).

[1] Source: Mediascope, Russia, 0+, 12+, December 2021, Desktop & Mobile data
[2] Source: Yota, analysis of client's traffic of different age groups in July 2021
[3] Source: Mediascope, Russia, 0+, August 2021 data

In 2021, engagement also continued to grow thanks to product updates and development of the VKontakte content platform:

- 48mn active content creators publishing over 5.6bn items of content
- VK Video DAU of 40mn in Q4 in Russia, with 2bn unique videos watched per year and 250mn video uploads from users around the world
- Implementation of the new QUIC network protocol accelerated content delivery by 2x
- In December 2021 VK Mini Apps grew by 18% YoY and the number of services grew by 53% YoY
- VK Clips video daily views reached the peak of 437 mn (368mn on average in Q4)
- >5mn people listen to music with VK Combo subscription premium features
- 15bn messages delivered per day on average during 2021
- Mobile Games catalogue grew by 280% YoY in December 2021

Given the existing high internet penetration rate and the slowdown in the overall growth of the Russian internet audience, VKontakte is focused on boosting stickiness. According to Mediascope, users visit VKontakte every other day, more than any other Russian social network[1].

Technologies

A key focus of VKontakte's technology strategy in 2021 was the development of technologies in video and conferencing, machine learning algorithms on the platform and the acceleration of content delivery through network optimisation.

In 2021, the team was actively engaged in development of a single technological video platform, VK Video. It unites VK's key technological solutions: adaptive streaming, a cross-platform player with the fastest first frame, 4K quality, video downloads of up to 256 GB, optimised network protocols and content delivery technologies, as well as the video platform's own search service and recommendation system built on machine learning algorithms. VK Video also presented NeuroHD, an in-house technology that improves video resolution, restores details and removes noise in videos uploaded to VKontakte and OK. This and other updates were introduced to the VKontakte's technology platform using modern technological solutions.

VK Calls benefitted from large-scale technological upgrades: the platform architecture was completely rebuilt and a new approach to working with video and audio streams was adopted. VK Calls became the first among the social networks globally to remove restrictions on the number of video call participants. This was possible thanks to the horizontal scaling of calls using proprietary technology. In 2021, VK Calls launched a smart noise suppression technology, 4K screen sharing, and the ability to set up AR backgrounds. VK Calls also released its SDK, which allows other developers to integrate the platform into their IT projects.

VKontakte is among the global leaders in the rollout of advanced data transmission technology based on the new QUIC network protocol, which doubled the speed of content delivery. Following its introduction on VKontakte, content delivery time was reduced by 55% on both weak internet connections and unstable mobile networks. As a result, the total number of daily pieces of content viewed by users increased by more than 250mn.

An important milestone in VKontakte's technological development in 2021 was the expansion of the geographically distributed content delivery network (CDN). The network has become one of the largest in Russia and includes more than 50 nodes. VKontakte users worldwide can now consume content at high connection speeds. Video and live streams start playing 1.5 times faster on average, regardless of location. In addition, video quality increased by an average of 20%, depending on network conditions, and occurrences of buffering decreased.

VKontakte technologies not only help with content delivery but with content promotion as well. VKontakte launched neural network-based automatic translation of posts from Russian into English. Users in all countries can now enjoy unique Russian content on VKontakte, and content creators are able to reach a broader audience.

VK Video

VK Video was released in October. This is a single technological video platform for all VK products, where users have access to a multi-million content library of UGC, PUGC and licenced content. Thanks to this integration, it reached average DAU of 40mn in Russia in Q4 2021. During a year, viewers of the video platform watched more than 2bn unique videos, and content creators uploaded more than 250mn videos. VK Videos attracts more than 2bn views per day, with 75mn viewers from around the world watching videos on VKontakte every month.

In October, an updated video player with automatic Russian subtitles was rolled out to further drive engagement. Subtitles are useful for people with hearing impairments and for users who want to watch videos without sound. In November, a new interface to the video catalogue was released, along with an updated search and recommendation system. New machine learning-based technologies increased user engagement by selecting the content most relevant to users' interests. VK Video also released an offline mode for the iOS and Android VKontakte app. This allows users to save videos to their devices in order to watch them when offline. In December, the video catalogue became available to unregistered users, which led to a 35% increase in anonymous views on the desktop version of the website. Thanks to this, we expanded the service's potential audience and demonstrated the possibilities of VK Video.

The first series of a VK Video original reality show was released, generating 44mn views within its first three months. In 2022, we plan to increase the amount of professional content on the platform, including more videos produced by VKontakte. Reality shows, series and other projects are already in development, all centred around increasingly popular short, vertical videos.

[1] Average stickiness during the year

437 mn

ANNUAL RECORD IN DAILY VIEWS OF VK CLIPS

VK Clips

In June 2020, we invested in the short vertical video format by launching VK Clips. Since then, the service has shown steady growth in views and engagement. At the end of December 2021, VK Clips offered over 11.3mn Clips (+223% YoY) from more than 2.4mn unique content creators (+118% YoY). Engagement continues to rise, with daily video views reaching a record of 437mn in 2021 (368mn on average in Q4). Time spent per user in Clips grew by 103% YoY in December, with the number of users spending 10+ minutes per day in Clips rising by 135% over the same period.

This growth was made possible thanks to regular product updates. VK Clips was the first short video platform to launch thematic playlists. Viewers will be able to not only scroll through an endless feed of Clips but view content on specific topics, such as music, technology, video games, sport and more. Thanks to these playlists, Clip creators will be able to find their audience and increase their reach. Another important launch that will help increase reach and grow audiences was the ability for all communities, as well as users, to upload Clips. VKontakte also launched flexible privacy settings so content creators can reach only the audience they want to reach.

Other new features included the launch of Duets, new personalised recommendations and technological improvements to the Clips player, which have made content creator collaboration and the discovery of new content even smoother.

VK Clips already features advertising-based monetisation methods. The two main monetisation formats are traditional video promos and special projects that feature special effects, AR masks, challenges, etc. However, the main near-term focus remains on driving user engagement and retention on the platform. To further develop VK Clips, the team plans to boost content consumption by enhancing thematic playlists, challenges, and other mechanics and effects, as well as looking for an optimal balance between UGC, PUGC, and the VK Clip Series (vertical video series and special projects with partner integration).

VK Calls and VK Messenger

Throughout the COVID-19 pandemic, when many people moved their communication online, our communication services, VK Calls and VK Messenger, came in especially useful. We are continuing to develop these products that help people stay in touch with family and friends, communicate with classmates and fellow students, interact with their colleagues and study remotely.

Over the past year, we have been actively working on the VK Calls platform. We launched AR enhancements and the ability to simultaneously host an unlimited number of participants on VK Calls, which drove its MAU on VKontakte to 13mn (and 20mn on both VKontakte and OK) in December. In 2021, the VK Calls desktop application was released, and a new Calls section was added to VKontakte in which users can quickly access calls. In it, users can create call invite links, view their call history, or join ongoing group calls. VK Calls has all the tools necessary for managing and moderating large calls, such as the Waiting Room feature and the ability for participants to raise their hands or join calls anonymously without having a VKontakte account.

VKontakte users continue to communicate via the platform's messaging function, exchanging 15bn messages every day. In 2021, we carried out dozens of updates to make it even more convenient to communicate. We also added new options for personalising messaging, such as the ability to change the chat background and message colour. Every day around 150k users change the VK Messenger theme. We also introduced the option to use "quiet" and self-destructing messages. These allow users to show tact and care when talking to loved ones and keep their chats free of superfluous information. To further help our users maintain good chat hygiene, we also launched the Archive, which allows users to hide chats from their chat list. VKontakte also enabled support for messages on Android Auto and launched "Favourites," enabling users to save notes, favourite messages and files. Voice messages remain the most popular attachment in chats, amounting to average during 2021 MAU of 33mn people.

In 2022, we will continue to actively develop and invest in communication tools to bring people together by giving them all the necessary tools for personal and professional communication online.

Content creators and content monetisation tools

VKontakte is Russia's largest content platform, a place where users can create and promote content in a wide variety of formats. It unites 48mn active content creators, both users and public pages. In 2021, they created more than 5.6bn pieces of content, including posts in communities and on profiles, articles, Clips, videos, audio content and Stories. VKontakte's leading position as a platform for creators is confirmed by independent research. According to data from Brand Analytics, Russian social network users published over 408mn posts in October 2021, three times more than on any other platform. In October, users published 95mn more posts on VKontakte than on all other platforms combined (Instagram, YouTube, TikTok, Facebook, Twitter, and others).

In 2021, VKontakte worked actively on developing an ecosystem of tools for content creators and communities that includes a partner programme, the VK Donut platform for community content monetisation, news feeds and recommendations, the VK Talents grant programme, and other services.

February 2021 saw the launch of a unified monetisation platform for content creators, created based on the new partner programme for VKontakte communities. Programme participants receive money when users view promoted posts in communities and the news feed. According to the results of its first year, communities with such content saw a 33% growth in earnings. The largest monthly earnings received by a public page exceeded RUB 1.5mn.

We are continuing to develop VK Donut. Users can buy subscriptions to support their favourite communities on a regular basis. Content creators who joined VK Donut have earned RUB >180mn by December 2021 since its launch in June 2020, and 14 content creators have already earned more than RUB 1mn each through VK Donut. This platform has become the main source of revenue for many communities. In December, the number of paying subscribers rose to 148k (+97% YoY), and, for the first time, communities earned more than RUB 19mn in a month (+151%YoY).

VKontakte's thematic news feeds help bring content creators and their audiences together. These are tabs featuring posts on specific topics, such as K-pop, IT, sport, football, films, or Euro 2020 and Tokyo 2020. On average, posts in thematic feeds get 189% more likes, and their creators gain 81% more followers.

Throughout the year, content creators were supported by the VK Talents programme, which held contests, presented grant programmes, and recognised the best creators. In 2021, VK Talents gave out 255 prizes and 12 grants to creators of unique content on VKontakte.

Games

Games on VKontakte are traditionally popular, with over 10mn users playing them every month. In 2021, The VKontakte Mobile Games catalogue grew by 280% YoY, with 31% YoY growth in in-game payments on mobile using VKontakte's internal currency in Q4.

VK Mini Apps

In 2021, the number of VK Mini Apps rose by 53% YoY to above 39,700, with an MAU of 46mn (+18% YoY). Monetisation of mini apps and games on the VK Mini Apps platform is expanding, with its in-app ad revenue increasing by 300% YoY in Q4. The main drivers of growth were developer education, precise advertising network settings, new advertising networks and new ad formats. Cross-integration continues, with VK Mini Apps now available on the desktop version of Odnoklassniki (OK).

We updated the second tab by changing the design and ranking of services. The menu changed from a block with five services, identical for all users, to a block displaying services chosen based on each user's preferences. The menu item ranking mechanism was refined, taking into account users' actions in Mini Apps. This personalised approach has made it easier for users to navigate the variety of services VKontakte and third-party developers offer.

The VK Mini Apps platform meets a wide range of user needs, from online shopping or ordering food to looking for jobs and learning workout techniques online. For example, VK Jobs mini app users created >2mn new CVs inside VKontakte in 2021. VK Health brings together services that help users maintain a healthy lifestyle and take care of their well-being. In 2021, VK Health users took 3.6trn steps. In December, VKontakte launched VK Workouts, a personalised online fitness service offering free programmes from athletic championship medallists.

Business

In 2021, small businesses continued their expansion to online platforms as a way of helping them to overcome the problems created by the ongoing pandemic. About 2mn businesses have an active page on VKontakte, which accounts for around a third of all B2C businesses in Russia. We focused on simplifying our products for SMBs to make the first steps easier and more rewarding for new and growing businesses on VKontakte.

We launched a new unified platform for SMBs, bringing all the key tools to a single place, where businesses can launch a marketplace or advertise their products or services within VK. Thanks to overall product simplification, business owners no longer require any special skills – they need just three minutes and RUB 500 to launch their first ad campaign on VKontakte from scratch. Each month, we provide SMBs with over 45mn paid clicks and over 20mn leads (which include followers, messages and orders).

We also introduced the Services section to help business owners drive client orders and awareness. It allows SMBs focused on offering paid services to showcase all their options on a business page as well as on a web page created with our free builder tool. It also has a dedicated simple automatic promotion tool. The number of business pages and accounts using Services has grown to 135k.

Thanks to the steps we've taken during 2021, VKontakte has increased its total revenue. VKontakte increased its total revenue by 21.9% YoY to RUB 27.9bn, further strengthening of its leading position on the domestic social networking market remains among our major strategic priorities.

Our vision for 2022

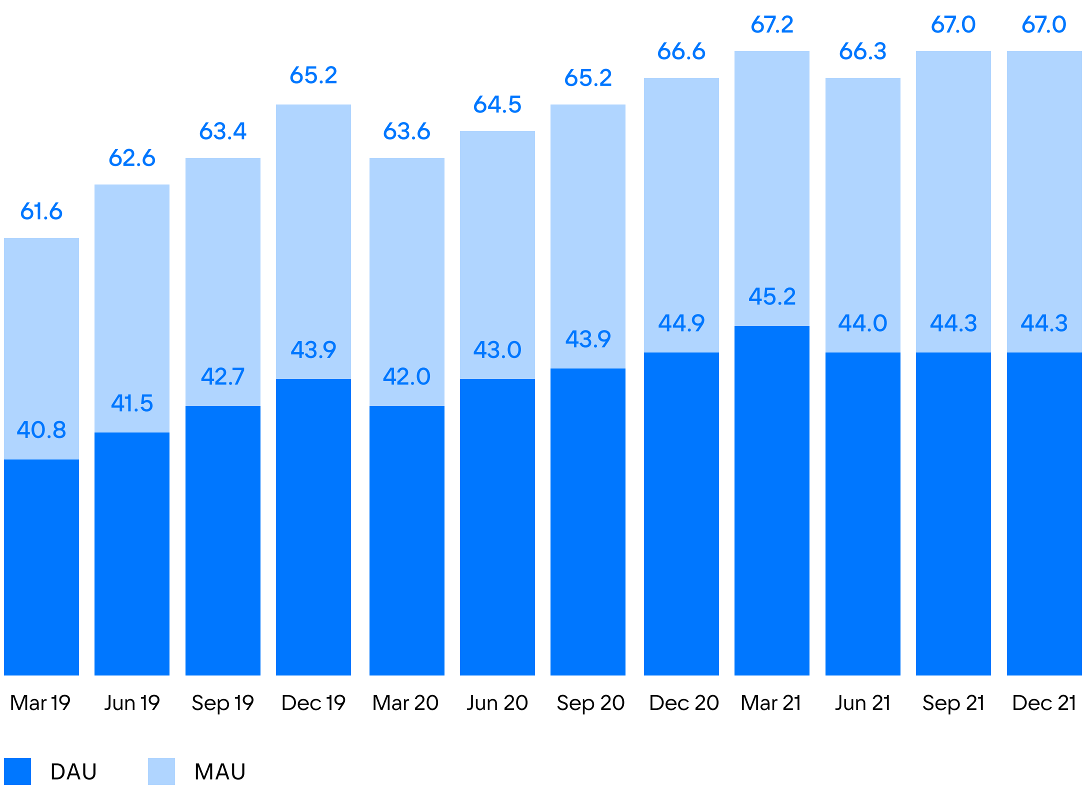
VKontakte brings millions of people together and remains the most popular social platform in Russia. We are continuing our mission to connect people, services and companies by creating simple and convenient communication tools.

VKontakte offers very strong social and content features that allow users to create content, chat, learn new things and have all of their communication needs met in one place. VK Messenger and VK Calls work well for personal and professional online communication, while communities help creative minds share their work and also provide business owners with new opportunities. We see the high demand for these products among our audience and will therefore continue to actively develop them in 2022.

VKontakte products include entertainment services such as VK Video, VK Music, Games, and others. The short vertical video format has skyrocketed in popularity on our platform, as shown by the number of daily views on VK Clips regularly reaching record highs. These products have high engagement and an even bigger potential, which is why we are continuing to invest in them.

The stability and speed of our services are supported by our technological platform. The year 2022 will be one of technology and innovation, making it possible for users to start chatting, having fun and studying right away on any device, no matter their internet connection.

VK, mobile users, Russia, mn



Source: Company data

28,000,000

MONTHLY USERS OF MOMENTS

OK

OK is one of the leading social platforms in Russia that gives people the power to build strong communications with friends and family, find communities and grow businesses. In 2021, Russia's average MAU stood at 38 mn, with mobile MAU at 33 mn.

Key 2021 launches:

- OK presented a large-scale update at its own online conference OK.Update in November. The changes affected many of its major social network services. For example, OK announced the launch of a new version of the news feed and new content formats.
- OK continues to develop one of its leading content services, Moments, adding some brand new features and introducing major updates during the year: contests, private publications, responses in private messages, slide shows.
- OK presented a unique solution for IVAS: awarding virtual gifts as a reward for video ad views in order to diversify revenue from user payments and ensure that traditional IVAS services continue to enjoy a high level of monetisation.
- OK introduced major interface changes to its mobile apps and desktop version.
- Social commerce: payment for goods within a social network, goods in video broadcasts
- OK presented a full-fledged service for the sale of goods through video broadcasts.
- New Vertical Content Feed, monetisation platform and a new algorithm for supporting new and interesting authors.
- OK was the first social network to launch a service based on its own deepfake technologies.
- VK Mini Apps are now available in the social network's mobile apps and in the desktop version of OK: developers of mini-applications on the VK Mini Apps platform will now be able to publish their projects in the mobile and desktop version.

Communication services

OK remains the main domestic platform for sending holiday greetings. In 2021 we continued to give users handy tools to congratulate their loved ones and friends. On Women's Day, 42% of Russian women (33.5 mn) received virtual gifts through OK, with 1.4 bn gifts exchanged in total over a 3-day period. The New Year holidays saw traditionally huge user engagement: from 30 December to 1 January, OK users sent more than 900 mn gifts and 200 mn themed "snowball"-postcards in messages.

OK continued to focus on communication services: in total in 2021 users sent more than ~37.3 bn virtual gifts, 3.2 bn postcards and more than 2 bn stickers, contributing to Group's IVAS growth. In 2021, OK also launched a special sticker constructor through which users can create stickers and memes without special photo editing skills. Following the launch the number of user generated stickers grew by x2. In H2, OK also presented a unique solution for IVAS: awarding virtual gifts as a reward for video ad views. In-game advertising revenue and the launch of the gifts for ad views initiative showed 300% growth YoY, helping to diversify revenue from user payments and ensure that traditional IVAS services continue to enjoy a high level of monetisation.

OK was the first social network to launch a service based on its own deepfake technologies in December 2021. OK also rolled out a service for creating a "New Image" personalised animation for personal greetings based on deepfake technology and neural networks. OK users are now able to transform themselves into a bright image in just one click.

Entertainment services: games, video platform, music

OK's entertainment services such as games, videos and broadcasts also have reached new heights, making them a go-to destination for social network users looking for entertainment. The mobile games audience became more engaged. Mobile games DAU grew by 7% YoY in Q4, with penetration exceeding 10.9% of OK's overall mobile DAU and MAU exceeding 13mn. Total payments to game developers exceeded RUB 3.2 bn in 2021; of these, total payments to mobile game developers were more than RUB 1.2 bn.

OK continued to develop its video platform — in 2021 video uploads also grew by 14% YoY. In H1, OK finished airing its first original series Friendmates — OK was the first social network in Russia to present its own original series. The production of the comedy series marked a new step for OK in working with its own professional content. During the series' run, 10 original episodes of the series aired, drawing more than 59 mn views from 9 mn viewers on the OK video the platform. OK also started to distribute series on the largest online Russian internet platforms via the revenue sharing ad model.

OK moved ahead with developing its own music service by introducing a new function for quickly identifying music, based on ShazamKit technology in iOS15. OK also expanded the capabilities of the music service and offered the option to download music for offline playback.

Moments publishing disappearing photos and videos

OK continues to develop Moments, one of its leading content services, adding some brand new features and introducing major updates during the year: in 2021 the team added new unique competitive mechanics to Moments — thematic contests for users. Moments also released its API to third-party developers. In 2022, contests will be available to groups, brands and media in OK. Users have access to privacy settings when publishing disappearing photos and videos, with the ability to respond to Moments with private messages and the publication of several photos at once in the form of a music slideshow.

The service's monthly active audience has reached 28 mn users in the year since the launch of Moments and is already more than half of the audience of the entire social network in Russia. The number of views and reactions grew to 434 mn (up by x4 YoY) and 46 mn (up by x4.8 YoY) respectively during Q4.

Content platform

As part of its 2021 product strategy, OK revamped its platform, introducing a completely new format for consuming content. OK, the news feed has been completely updated: the content recommended by the algorithm is added to the news feed for posts from friends and subscriptions. Now, after viewing all the latest posts from their friends and groups in the feed, the user will see the recommended content from groups to which he was not previously subscribed. Thanks to the new model, users will be able to learn new things directly from the news feed. This will help content creators reach new audiences while keeping in touch with their followers. The social network is constantly developing recommendations: both in the News Feed and in a separate Discovery section (thematic news sections). The number of unique authors receiving impressions in the discovery section doubled in 2021. We are making the content platform more attractive to authors: specifically, we have introduced an algorithm for promoting new authors, new content formats (including vertical videos), and new monetisation tools — such as a unified platform for author monetisation via subscriptions.

OK also announced a new scheme for working with content creators for the updated content platform, in order to have as many interesting original authors as possible. New technology for selecting high-quality content will appear in early 2022, and will automatically highlight interesting authors, groups and media on social networks and give them additional coverage.

Redesign of the desktop and mobile version

OK also introduced major interface changes to the desktop and mobile version: a change of font for the social network logo, and a change of color for the classic OK top menu from orange to white. The main apps page now has a lighter design, and a single content creation button allows users to quickly access all formats: from photos and posts to Moments. Now, users can use several services at once with a single button: upload a photo or video, capture a moment, or publish a post.

Social commerce

OK is consistently developing its social commerce activities. In addition to working on a joint marketplace with AliExpress Russia, OK helps online stores sell their products and services through groups and profiles on social networks. In 2021, OK took the next step in social e-commerce market development and presented a fully-fledged service for the sale of goods through video broadcasts. The service is now available on all platforms and allows product cards to be shown directly in the video player, both one by one and in a list in a carousel format. With the help of OK creative studio technologies, broadcast authors will be able to add annotations with links to products posted in a profile or group. Viewers of the broadcasts will be able to go to the product they are interested in right away and make a purchase. The service operates based on the single video platform VK Video.

Our long-term growth strategy also includes innovation and new product development, and services have to offer benefits that meet our users' needs. Users are able to purchase goods from group and business profiles directly on the social network using the built-in secure payment system. Moreover, OK does not charge a commission on the sale of goods. So after placing the product in OK, the online store will be able to set up interaction with the customer in three ways: through personal messages, visiting the product page on the store's website or through payment for the product on OK.

SMB platform development

In 2021, OK also continued to expand the SMB ecosystem and providing it with strategic solutions. Ad monetisation on OK has continued to be an important driver – the number of SMB advertisers through an internal OK Ads manager increased by 17.8% YoY, with revenue growing by 45% YoY in 2021. The share of OK revenue generated by legal entities' payments in ad manager reached 22.4% in December.

Entrepreneurs will be able to find customers even faster on the updated OK content platform: both with the help of high-quality content and through paid tools. A retargeting technology for the advertisers' CRM database will appear inside the OK ads manager (which is based on myTarget technologies) in the near future, as well as payment per clicks under the CPC model, in which funds for ad impressions are not debited.

In 2021 OK launched a programme to support small and medium-sized businesses: the social network doubled the budget for promotion through an internal ad manager that is based on myTarget technologies, until 20 December 2021 inclusive. In this way, OK helps entrepreneurs to increase the number of customers and to reach their audience at a time when the coronavirus restrictions have made it difficult for business.

VK ecosystem integrations

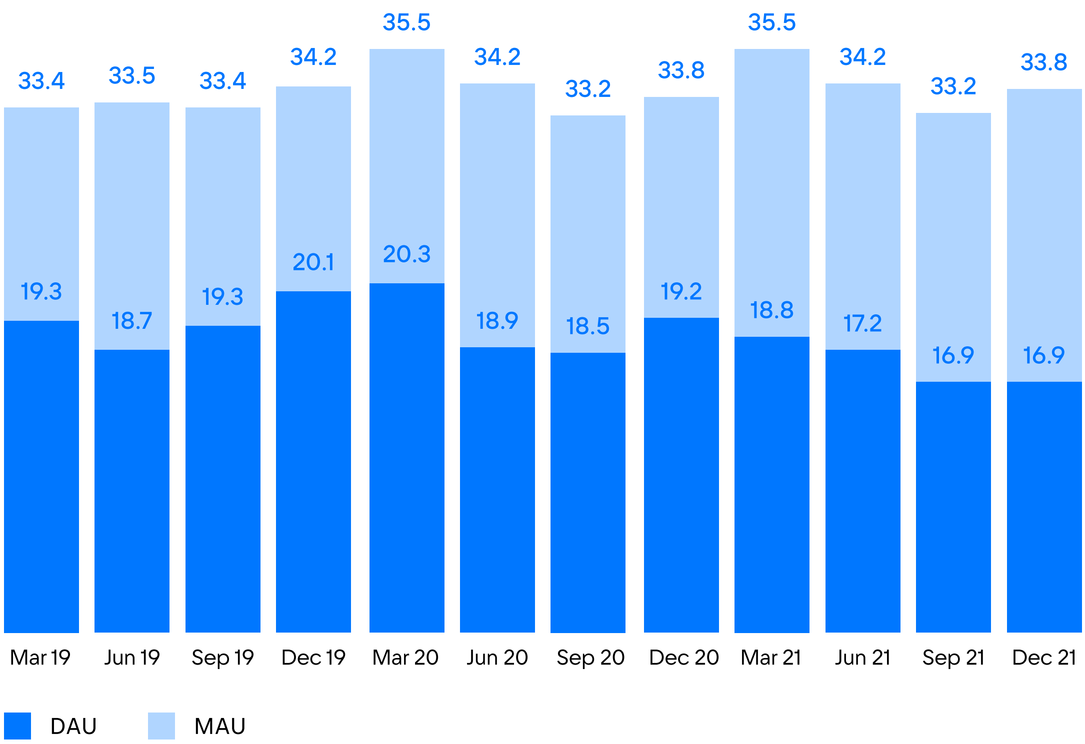
In September, OK rolled out the AI-based voice message transcription feature based on technology developed by VKontakte, and enhanced its music service by quickly identifying music technology and ability to download music for offline playback.

Also in 2021, VK Mini Apps became available in OK's mobile applications and desktop version: developers of mini-applications on the VK Mini Apps platform will now be able to publish their projects in the mobile and desktop version. By doing this, OK took the next step in integrating the platform into the social network and developing VK ecosystem products. With the help of mini-applications, a user can place any new service or project on OK, or adapt an already published application on the VKontakte social network.

13mn

MAU OF GAME PLAYERS IN OK

OK, mobile users, Russia, mn



Source: Company data

45,400,000

MAU OF EMAIL MAIL.RU

Email Mail.ru

Email Mail.ru continues to maintain its position as the No.1 email service on the Russian-speaking internet, with 16.9mn daily active users and 45.4mn monthly active users in Russia alone[1]. The Mail.ru email mobile app has retained its place among Russia's top five apps in the App Store and in the top 10 apps on Google Play.[2]

The product revenue grew by +38% YoY in 2021 thanks to ad UI and technical optimisations, including improvements in the MyTarget ad network.[3]

Mobile revenue increased by +144% YoY. At the same time we achieved historic high rates of NPS scores, App Store and Google Play user rates.[4]

Mobile user retention rates grew by +7% on Android and +17% on iOS.[5] This balanced and stable growth was achieved through numerous product improvements.

"Swipes" have been added to mobile apps to help users clear and sort their inboxes with a single gesture to archive, delete or mark mail as read. Smart folders with automatically sorted mail have been scaled from 39% to 56% DAU, improving 30-day retention among them by +14%. The "Unsend" mail feature has been added to desktop web and prevents over 500k emails from being accidentally sent every month. The quick "Unsubscribe" shortcut on the mailing list has been scaled to all web users and helps them get rid of unwanted newsletters. The new anti-spam ML model combines a state-of-the-art natural language understanding approach with tens of millions of sampled texts in order to detect spam and fraud practically in real time, and is showing high efficiency. Spam complaints and false spam detections fell by 8.8% and 12.6% respectively YoY in 2021. The Mail.ru team continues to improve users' security by launching separate passwords for third-party email apps, and reducing the number of hacks through external applications.

All mobile app users now have native access to our productivity and media services. The calendar is now automatically filled with over 200k events every day, created via an ML algorithm that analyzes the content of emails: courier deliveries, appointments, tickets, etc. Tests proved that the Pulse recommendation system and News notifications are effective in increasing time spent using the service and the sticky factor. Marusia's mail reading skill (text to speech), launched in 2020, was improved last year with ML and used by more than 10% of our Mobile MAU.

To build strategic advantages and attract a young audience, we launched VK Mail, a new email app and web interface for @vk.com.

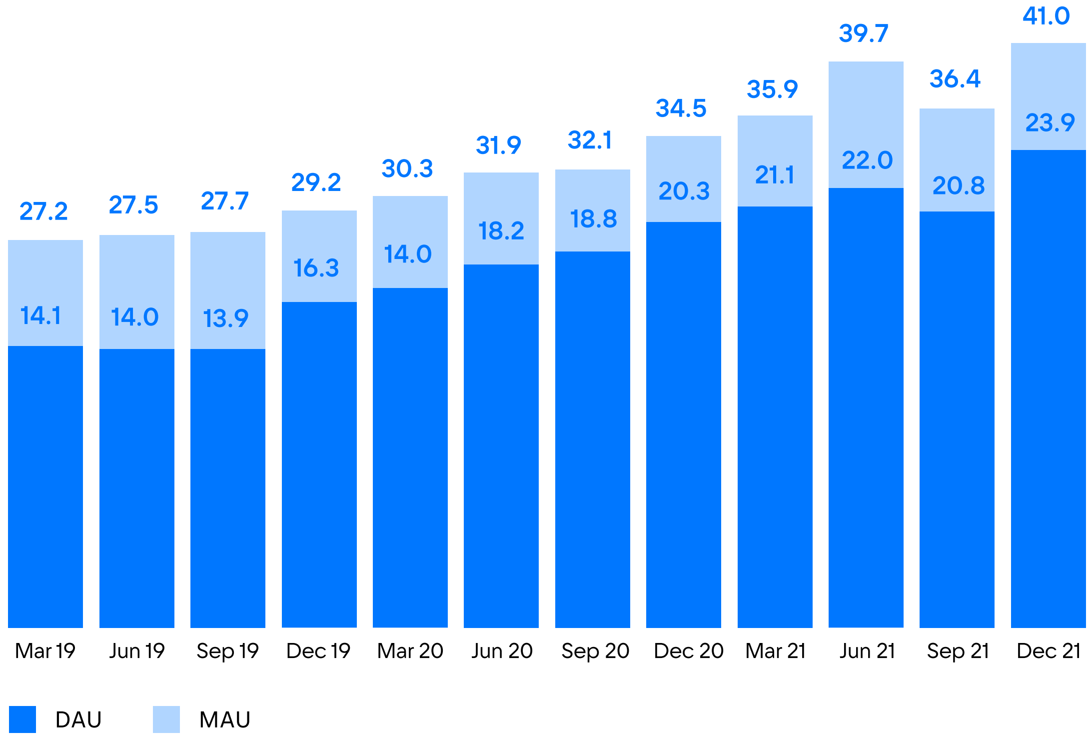
A total of 65% of VK Mail MAU had not used Mail.ru during the previous 30 days and were therefore new to the company's services. The launch of VK Mail was received enthusiastically by the public and journalists, resulting in the highest media index and largest number of publications in recent years.

We also launched support chats in cooperation with the VK Messenger team. Users can now instantly contact customer service via an email link. This new feature is already available for key e-commerce players such as OZON, AliExpress, M-Video, Wildberries, and Sportmaster.

As another move to fortify the ecosystem, Mail.ru has adapted VK ID and now allows it to be used by all Mail.ru users to sign up and log in. All payments in the Mail.ru apps and web have now been transferred completely to VK Pay checkout.

[1] Source: Mediascope, WEB-Index, Russia 0+, age 12+, Desktop&Mobile, average for Jan 2021 - Oct 2021
[2] Source: App Annie, Russia, Jan 2021 - Dec 2021
[3] Source: Internal Data (SAP)
[4] Source: AppStore and Google Play, Internal Data (Brand Health Tracking)
[5] Source: Internal Data (MyTracker)

Mail.ru email, mobile users, Russia, mn



Source: Company data

Cloud Mail.ru

Cloud Mail.ru remains one of the leading B2C cloud solutions on the Russian digital market. In 2021, product revenue grew +33% YoY and storage cost per GB fell by 28%.

In 2021, Cloud set big goals and introduced several important updates. All of this helped to increase the number of paid subscribers by 50% YoY as of December 2021. Continued efforts to develop the main funnels of entry into the Cloud have resulted in a 53% YoY increase in file uploads via the mobile app.

The "Stories" automated photo collections were the most important launch in the mobile version of Cloud in 2021. One of the most powerful mobile features, it improved the retention rate and time spent by 30%. A lot of important changes were introduced to make it happen: new notifications and a new app user interface, ML models to determine the best photos of a user, objects and faces in a photo, as well as various scenarios to generate collections including travels, places, best photos of the week, a day in history, etc. Work is still in progress and the team sees great potential in the development of "Stories" and retention growth in 2022.

Media Projects

Media Projects consists of 11 projects. The biggest one, News Mail.ru, is in the top five most visited Russian mass media websites with 21mn average MAU and 250 page views in 2021.

In order to support the national vaccination programme, News Mail.ru released real-time statistics of the number of fully vaccinated adult citizens of Russia. In addition, we showed the rate of general immunity in all Russian regions. In June 2021, News Mail.ru introduced the AliGate tool, which helps to create e-commerce lists and analyse their effectiveness.

Cinema Mail.ru is one of the biggest movie databases on the Russian internet, in 2021 project reached 19 mn MAU. The project aggregates content from 13 most popular online cinema platforms, including OKKO and KION — in 2021 these big platforms became our major commercial clients for the CPC sales model. Cinema Mail.ru also publishes news, articles, ratings, film reviews and interviews with celebrities.

Hi-Tech Mail.ru is the leading IT, tech and science media in digital in Russia with an average MAU in 2021 of 10 mn users, with external traffic of 53%. In 2021, Hi-Tech Mail.ru launched performance commitments to commercial formats and in total developed more than 300 native and special articles and videos, becoming the most commercially effective media project last year. Its two media hubs (Huawei, Honor) provided the most income in 2021 and both have been extended for the whole of 2022. In 2021, Hi-Tech promoted "The Year of Science" in Russia, and video materials were nominated for "National Internet Content Award".

Lady Mail.ru is the leading media outlet aimed at Russian-speaking women. In 2021, it's average MAU was 11mn users and page views amounted to 200mn. The site produces its own content about fashion, beauty, psychology, horoscopes, recipes and many more. Since Q1 2021, Lady Mail.ru has shared horoscopes with OK. The site's editorial approach was also refined: Lady's goal is now to produce attractive, respectable and professional content focusing on fashion, beauty, health and entertainment.

Sport Mail.ru is one of Russia's largest sports websites with an average MAU in 2021 of 8mn and 75mn page views. Every day it publishes interesting news and reports, vivid photo galleries and video clips, text broadcasts and video highlights of the most popular sport events in the world.

News Mail.ru and Sport Mail.ru expanded their range of commercial formats, such as Diafilm, which is now a colourful publication with a lot of conversion blocks for social commerce on its pages.

Auto Mail.ru is one of the biggest automotive media in digital in Russia with an average MAU in 2021 of 5mn users. Auto's editorial team created and published 2,740 exclusive articles in 2021. Besides, Auto's team provides exclusive market & opinion researches and issues press-releases: coverage 610 mn* in 2021. In 2021 Auto developed and introduced a unique brand-lift technology to be used in text content as a new effectiveness measurement tool for advertisers. Last year Auto Mail.ru achieved a record: 78 commercial special projects.

Great results for e-commerce on Auto Mail.ru: 350,000+ clicks per month (during period from February to December 2021) in different e-commerce offerings. Auto Mail.ru branded car in partnership with TV-Channels and Russian Geographical Society set a new Guiness Record for the highest speed on the ice of Lake Baikal. Auto Mail.ru also released an educational video series of five items about road safety (1mn video views on social media).

*Number of impressions, Medialogia

Pets Mail.ru is a project for cat and dog owners featuring veterinary consultations and a pet food store. Pets Mail.ru has launched a service offering a selection of food for dogs and cats and a special project dedicated to infrastructure for domestic pets in Russia.

As part of the integration of "Vse Apteki" technologies and AliExpress Russia we have introduced a feature allowing users to order medicines from pharmacies in the "Est!" section of the AliExpress application. Vse Apteki launched a new storefront in collaboration with the Sbermarket service, making express delivery of medicines from pharmacies available to users. Vse Apteki has joined the "Chestny Znak" system of digital labelling and tracking for medicines.

Health Mail.ru is a website for information on health and healthy lifestyles, featuring a medical catalogue and a symptom checker service. In 2021, it's average MAU was 6mn users and page views amounted to 21mn. In Q4 the medical consultations section on Health Mail.ru was closed down.

Weather Mail.ru is one of the most popular forecasting websites in Russia with an average MAU in 2021 of 6mn and 30mn page views. It publishes current weather forecasts, detailed weather reports for any period of time, and the most interesting news about unusual natural phenomena. Weather Mail.ru launched hourly weather forecasts for cities all over the world in Q3. In addition, we added real-time broadcasting from weather cameras for several cities in Russia and overseas in Q4.

Kids Mail.ru is one of Russia's top three websites for parents, covering everything from family life to pregnancy and raising children. In Q2, Kids Mail.ru launched a new commercial format that allows clients to create a detailed description of their products in a structured article with an interactive content section. In 2021, it's average MAU was 4.6mn users and page views amounted to 34mn.

Home Mail.ru is a property portal covering topics from interior design and construction to home selection. In Q3 Home Mail.ru launched two commercial formats: collections of articles organised by topic and a more colourful version of Diafilm. These allow Home Mail.ru to promote advertisers' goods and services more effectively. In 2021, it's average MAU was 1.5mn users.

Overall increase in e-commerce & partnership income for all media projects equaled to 29% YoY, exceeding the target by 67%. It was mostly driven by collaboration with AliExpress.

LEADER OF THE YEAR

ALEXANDER TOBOL

VKONTAKTE, VK VIDEO, VK CALLS

LEADER OF THE YEAR

MITYA OSADCHUK

REBRANDING MAIL.RU GROUP → VK

LEADER OF THE YEAR

VARVARA YAFFA

VK WOMEN — PROFESSIONAL FEMALE COMMUNITY OF VK

MY.GAMES

The year 2021 brought a number of challenges to the global games market with several key factors at play: the high base effect from the lockdowns of 2020, the new IDFA policy disrupting mobile game market, and product launches being postponed. However, MY.GAMES managed to overcome all these challenges and see its revenue grow by 10.5% YoY in 2021 (to RUB 43.8bn). MY.GAMES delivered on its promises, reaching RUB 10.4bn in EBITDA in 2021, having more than doubled its EBITDA against its 2018 level (RUB 5.0bn) a year ahead of guidance. The gaming segment accounted for 35% of the Group's revenues in 2021.

Mobile games remained one of the top drivers for MY.GAMES' business growth in 2021, accounting for 74% of total MY.GAMES revenue. Our top five revenue-generating mobile games at the end of Q4 2021 were: War Robots, Hustle Castle, Rush Royale, Grand Hotel Mania, and Left to Survive. Rush Royale, the hit game we launched in late 2020, became a top-five title in the MY.GAMES portfolio a mere month after its release, and secured its place as a top-three revenue generator in Q4 2021. The game was named the Best Tower Defense Strategy in terms of revenue according to data.ai (ex App Annie) 2021 rating, having raked in USD 60mn and 19mn installs since release, making it the most successful mobile launch in the history of MY.GAMES. Left to Survive, from MY.GAMES' Whalekit studio, was also commended as Best Action Game at the Best of Galaxy Store Awards 2021. The Warface franchise (2013, PC/console/mobile) remains a top-two revenue generator for MY.GAMES.

In 2021 MY.GAMES consolidated two studios through its investment division MGVC (MY.GAMES Venture Capital) – Playkey and Mamboo Games – and invested in 12 new studios. MGVC portfolio now boasts 49 partner-studios.

MGVC was also ranked among the top 15 largest gaming investment funds in the world.[1] MGVC also teamed up with Google to launch Game Drive 2.0, a business accelerator programme for up-and-coming developers in 2021, with more than 80 teams from 15 countries applying to participate.

MY.GAMES is continuing to develop its product and services ecosystem. At the moment, the MY.GAMES Cloud beta has over 500 games in its catalogue. In 2021, MY.GAMES Cloud MAU stood at 150,000, and the average monthly revenue of the service has increased twelvefold.

10.4bn

MY.GAMES EBITDA 2021

[1] Source: InvestGame, July 2021

Online Education

Skillbox Holding Limited

Online Education (EdTech), represented by Skillbox Holding Limited, is an international educational holding that encompasses a number of major edtech brands, including Skillbox (100%), GeekBrains (100%), SkillFactory (63.76%), Mentorama (90%), Lerna (70%). Skillbox has a well-diversified portfolio of programmes (design, gaming, multimedia, management) and courses of shorter duration with a lower average price and asynchronous education (pre-recorded videos). GeekBrains focuses on long and complex courses (mainly programming) with a higher average price, and live webinars. SkillFactory has a particularly strong offering in data science programmes and higher education (joint programmes in partnership with universities) and focuses mainly on the asynchronous learning format. Mentorama provides courses in different fields, including web design, database development, 3D modelling, and interior design.

As of 31 December 2021, Skillbox Holding Limited had provided over 349,000 learners with high-quality online educational content relevant to their development and career ambitions. Skillbox Holding Limited boasts more than 1,500 educational products, and offers online courses in design, programming, marketing, management, game development, multimedia (which includes, among others, music production, scriptwriting, film directing and songwriting), creative professions and others.

Content developed for Skillbox Holding is channelled into specialised course structures and professional training programmes that incorporate content with designated coursework, supplemental content and additional learning formats (such as textual, video or interactive). Our production teams use up-to-date technology and camera equipment to ensure high-quality video and compatibility with the great variety of devices our learners use for content viewing.

In the year ended 31 December 2021, we checked nearly over 222,000 items of coursework per month and provided detailed feedback within 24 hours for 90% of our learners.

New Initiatives

VK Classifieds & Youla

Youla, our mobile-focused location-based classifieds business, has strengthened its position in 2021 by improving the user experience and continuing to seamlessly integrate with VKontakte (VK Classifieds). Youla also demonstrates stable growth and is making good progress towards breakeven point.

In 2021, Youla and VKontakte continued to develop VK's native classified ads section so that sellers and buyers can enjoy access to the widest audience. The shared ad base with Youla allows VKontakte users to find and sell goods or services in VK Classifieds and vise versa. For example, last year VK Classifieds developed a desktop version for listings in addition to the mobile version. Buyers are now able to view sellers' profile data on VK Classifieds (such as ratings, number of friends, reviews), which has allowed us to develop a social graph. VK Classifieds now feature bookmarks that are synchronised with Youla favorites and a user's main bookmarks on VK. Recommended groups on VK Classifieds have led to a 1.5x increase in subscriptions and Youla users are now able to save searches and set search update notifications.

Youla cares about the safety of its users, so raising trust and safety on the platform was among the main focus areas for the team during the year. In 2021, it became fully possible to login via VK ID, and Youla launched facial video verification in order to confirm user's profiles using biometrics. Youla had previously allowed users to hide their number in the app and on the website to prevent unwanted calls and introduced profile verification using the VKontakte page. Users reacted positively to the introduction of these security technologies, so that in less than six months every 10th user on Youla and 75% of accounts with a verified VKontakte profile had undergone facial verification.

The team achieved 18% growth in mounthly audience of Youla and VK Classifieds, which equaled 39mn, making it the second largest classifieds site in Russia. These results are due to intensive integration into VK thematic groups and public user pages last year. As of December 2021, about 200,000 VKontakte communities have already set up the service. A focus on monetisation and product development (seamless integration with VKontakte continues) resulted in Youla growing YoY revenue by 27% to RUB 3.8bn in 2021, in line with guidance.

Capsula

VK extended its line of smart devices in June 2021 with the launch of a new product – the Capsula Mini smart speaker. Thanks to cooperation with all major electronics distributors and online marketplaces, it is now available in all eight of Russia's federal districts. Capsula Mini speakers are on sale at more than 3,300 M.Video and DNS stores and are also available at our own capsula.mail.ru online store.

Capsula is positioned as a high-quality voice-controlled sound system with access to VK Music, Wink and other ecosystem services via a VK Combo subscription. Capsula's variety of functions and user experience quality grew steadily over the last year. By the end of 2021, we were offering more than 200 skills and features to users of smart speakers with Marusia. The audience for smart devices is expanding and becoming more active, so that the average number of skills used by a user increased to more than 16 per month.

Smart speakers provide users with a massive package of entertainment content and information services for all family members. Calls via VKontakte, VK Music, voice games, radio streaming, weather reports, news and children's fairy tales increase time spent using the company's services to more than 11.5 hours every month. The quality of answers is continuing to grow QoQ, while the accuracy of voice recognition is of a level that meets standards. We are also working to increase the safety and comfort of speaker usage for all groups of users by introducing intelligent safe modes for children.

In October 2021, in partnership with Xiaomi, a large electronics designer and manufacturer, we launched the Xiaomi Mi Smart Speaker – a voice speaker featuring Marusia, in the mid-price segment of RUB 4,490. In so doing we have extended our range of partnership devices, earlier represented only by the Prestigio SmartVoice smart speaker launched in November 2020. In 2021 VK also launched a series of smart watches for children with leading distributors such as Jet, Aimoto and Geozon.

VK continues to expand Capsula's partnership with Rostelecom's Wink, one of Russia's top five video platforms. The product's voice control and content discovery have made it popular among the operator's subscribers, and Rostelecom has become a significant distribution partner for VK. Capsula's Smart Home platform increased its IoT tech partners, which now number 41.

Marusia

Marusia has been available to users of the social network VKontakte (iOS, Android, Web) since May 2021. For closer integration, the assistant has now learned how to send messages and initiate calls to friends within the social network using voice commands. It can also search for user and community profiles, talk about games on VKontakte, answer questions from users and navigate through the sections of the service, as well as search for videos on VKontakte and other popular video services. It has become easier for the voice assistant to access network content and Marusia is able to read the service user's feed, as well as articles posted on it (VKontakte longreads).

Marusia continued its integration into Mail.ru services. The expansion of Super App application has allowed the assistant to become more accessible to mail users. The assistant is now able to send audio messages, boasts improved FAQ, and offers the option of reading out a user's messages when it is more convenient to listen to them than to read them. The assistant has also become more proactive and has learned to send content push notifications to the user (weather, exchange rates, interesting facts, etc).

Assistant integrations, including those made back in 2020 (web mail.ru, the Atom browser), make up 80% of Marusia's entire audience, and have made a significant contribution to YoY growth.

In 2021, the Marusia mobile standalone application was approved for addition to the list of Russian programs that must be pre-installed on certain types of equipment of complex goods sold in Russia. This increased the application's audience sevenfold with no drop in product metrics. In addition, the following are now supported on the application side: in-app purchases and payments for Combo subscriptions, pre-installed versions of applications, including ones for children, and support for working with VK Mini Apps and new devices and their functions, such as the smart home mode.

In 2021, Marusia developed advanced chat and question answering abilities, so the assistant is now able to provide relevant responses to most user requests

Marusia's external skills more than doubled over the year, thanks to platform improvements and developer championships (534 external skills are currently available). The platform is used by both indie developers and businesses. In October 2021, Marusia launched a B2B service for ASR and TTS speech technologies on the VK Cloud Solutions platform and supplemented it with three variations of voice synthesis: female, male, and children. The voice assistant's speech technologies are now being actively promoted within the platform and beyond: via advertising channels, through partners. This same synthesis is available for the External Skills Platform.

Marusia is increasingly integrating with products from the VK ecosystem – for example, you can use a voice assistant to repeat your last order from Delivery Club.

Recommendation systems

Pulse

Pulse, a personal feed based on users' interests, was officially launched on the Mail.ru homepage on 31 January 2019. Recommendations are based on collaborative filtration algorithms – document matching is based on a user's behaviour on the internet and feedback from users' interaction with the Pulse recommendation feed. Average audience in Q4 2021 was around 9.8mn users to browse through the Pulse feed daily, while MAU amounted to 77mn.

We started the experiment with raising the Pulse feed to a more visible position on the main page for 50% of the audience. In Q4, the experiment was completed and applied to 100%. As the result, the revenue grew by +4% and the total clicks by 10%.

Our recommendation team continued to work on algorithms in 2021. We learned to determine user interests better thanks to the interest sampling algorithm: on each user visit, we randomly select interests in proportion to their weight in the system and thus present a more diverse feed to the user. We have also learned how to highlight narrow interests from visited articles and take these interests into account when making recommendations.

In Q1, Pulse integrated recommendations in the browser, and on the minus 1 screen and the lock screen of Xiaomi smartphones. This feature increased DAU by up to 1,500k. We also launched integration with the Huawei Browser.

We started to focus on attracting new authors to the platform. The referral programme for authors was launched in Q2, leading to a threefold increase in the number of active authors.

The launch of a machine learning ranking algorithm for news on the mail.ru homepage resulted in through-clicks to news on the homepage increasing by 15%.

In Q3, we completed the first stage of integration with the VK Single Video platform, made it possible to upload video for authors via the Pulse personal cabinet, and launched an experiment with video recommendations in the feed for 5% of the audience of the Mail.ru home page.

We have continued our work on mobile vendor integrations. In Q4, we integrated the Pulse Platform on Huawei smartphones and launched Pulse Feed for C.I.S. Geo (Belarus and Kazakhstan). We also launched a new recommendations algorithm for commercial content, which has already achieved +23% ARPU according to the test results in Xiaomi.

Throughout 2021, we were preparing to open registration for all blogs. It is important for us to create a safe and friendly environment on the service, so first of all, we were engaged in the development of tools for content moderation. In Q1, we developed a convenient system for moderators, with the option to pre-moderate articles. We have divided bloggers and publishers into groups according to the degree of risk, and special categories are not published on the feed until the articles have been approved by the moderators. In Q2, we started to validate all article comments with toxicity models and in Q3 we started to automatically hide comments above the 60% toxicity threshold and automatically delete comments with a toxicity probability close to 1. In Q4, we launched an automated content moderation system that reduced the use of human resources. In addition, we have simplified the system of payments to self-employed authors within Russian legislation.

The number of full-text articles increased by 4.5x up to 365K, with 12% RPM* growth in Q4 2021 compared to Q4 2020.

9.8mn

DAU

77mn

MAU

* RPM - revenue per thousand impressions

Relap

Relap.io is a recommendation project that helps publishers to monetise content, retain and increase their audience, and help advertisers to reach their target audience.

During 2021 Relap generated >500bn of content recommendations and a comparable amount of ads. Relap's widget is actively used by premium-level publishers and resulted in > 9bn ad impressions during the year.

The key vectors of the Relap evolution – and the major drivers of revenue growth – are the following:

- New formats that allow us to take additional placements, and new demand that raises the fill rate and average selling price.
- Integrations with new partners.
- Introduction of new features and the continuous optimisation of existing ones.

The brand new advertising format "TGB-Inread" allows us to monetise TGB demand much more effectively: we achieved x2 growth in the average CTR.

In Q3 we developed and introduced internal Relap identifiers. Now 99% of our readers have the Relap User ID in Relap's domain.

The integration with the fraud-detecting solution allows to decrease malware traffic and raise efficiency and brand safety for advertisers.

We have redesigned and improved tools for the advertorials, allowing advertisers to raise ad frequency as well as to download and analyse statistics right from the account. All those activities are aimed at helping advertisers to attract more viewers and generate additional revenue.

During 2020-2021 Relap demonstrated an impressive traffic increase that led to load growth. Due to the optimization of technologies we decreased the response time from 1000 ms to 300 ms as well as increased ads rendering time twice.

VK Digital Tech

VK Digital Tech is a technological division of the Company that is now gaining professional recognition as a trustworthy digital transformation partner.

VK Digital Tech's 2021 revenue exceeded RUB 3.3bn. The cloud service subscriptions accounted for almost a third of this amount. Indicators related to all software products grew as well. In 2021, the range of our partners was extended with the major reps of financial, retail, industrial and telecom market segments.

VK Cloud Solutions

The VK Cloud Solutions platform doubled revenue YoY. The functionality of the data platform has been extended significantly, and it is now beginning to be launched in new regions — VK cloud services will soon be available in the Republic of Kazakhstan.

With the average sale value per platform customer almost doubling, the VK Cloud Solutions development strategy focusing on large businesses is proving to be successful. This performance indicator has been affected both by the launch of new projects with large industrial companies, and by expanding collaboration with current customers. For example, interaction with one of Russia's largest retailers, saw significant expansion in 2021.

VK Cloud Solutions has extended its Enterprise on-premise product line through enabling the private deployment of S3 object storage, and the software and hardware system supply service. On-premise S3 storage provides 10,000 RPS and 150Gbps of peak traffic, and a high level of information security, including against encrypting viruses.

Development of partner relations with Arenadata for the Big Data services is worth mentioning as a separate point. While previously the cooperation was based solely on the analytical Arenadata DB (Greenplum DB-based Enterprise-level service), in 2021, on Arenadata's initiative, Hadoop as-a-service version 3 was launched in Russia for the first time. The portfolio of analytical solutions was also reinforced with a monitoring service.

The VK Cloud Solutions revenue from the data platform grew threefold, while Big Data PaaS revenue rose by 4.5 times. Inter alia, this growth is accounted for by the large-scale Big Data projects that Russian companies are deploying in the VK Cloud Solutions public cloud. For example, a large retailer has relied on the VK Cloud Solutions platform to analyse thousands of TB of data and to create ML solutions.

In April 2021, the platform presented the outcome of the VK Cloud Solutions and Tarantool collaboration: a cloud-based message queuing service for distributed and high-load applications. Message processing with the Tarantool-based queue management service reaches a speed of up to 5,000 transactions per second per queue. VK Cloud Solutions has also opened up access to the speech recognition and synthesis platform Cloud Voice, based on technologies used by the voice assistant Marusia.

"Kubernetes as a Service" remains VK Cloud Solutions' most in-demand platform service, with an annual revenue increase of over 60%. On the whole, PaaS consumption is growing faster than that of any other services and its share in all other services has seen an increase of 15 percentage points.

Tarantool

In 2021, the Tarantool in-memory computing platform received a significant functional boost, enhanced stability and reliability for big cluster installations, optimised data storage, and upscaled migration scenarios from version 1.6 to version 2.8.2. With these changes in place, companies will be able to deploy clusters of 1,000 instances with a single command.

Tarantool's commercial version improved scalability through flexible cluster management, enhanced UI to speed up the supported business processes, and multi-tenancy for work in large enterprise infrastructures.

A large-scale cluster (500 instances) was deployed in one of the largest Russian banks. Over 30 projects in roadmaps were developed during the year. During 2021, the platform expanded its presence in banking, accelerating ABS through caches. One of Russia's leading retailers developed a variety of Tarantool-based solutions, such as a golden customer record, omnichannel interaction, and logistics. The new customer segment now makes up almost 20% of Tarantool's revenue.

Business Software

The revenue of Communications & HR solutions has more than doubled in 2021. Mail.ru for Business and Instant Messenger units have been integrated into the VK Digital Tech department. A new concept of the unified communications platform was launched based on the VK Teams messaging function to support flows, task tracker, organisational chart, calendar, and mail and to underpin an automated workplace for civil servants. The pilot launch is scheduled to take place by the end of 2022 in five federal departments. We completed the installation of communications services for one of the leading industrial companies as well. The Communications business grew almost eightfold compared to the previous year.

A solution for smart process automation – Digital Assistant for Business – became available as a self-service tool for more than 10,000 VK employees in response to HR requests. Moreover, the solution has been successfully integrated in a variety of companies to automate routine operations. VK Assistant provides first line support for Russian telecom companies and answers questions from clients and suppliers.

In 2021, the number of companies using solutions based on the VK Tax Compliance platform grew 2.2x YoY. The platform has been integrated with the top five ERP solution providers, which means 85% market coverage. VK's TC Platform is used by key companies in the Russian economy. In 2021, the amount of taxes reported through the TC Platform exceeded 2% of GDP. VK, a Russian industrial company and the Federal Tax Service of Russia have successfully implemented all declared methods of integrating the VK Tax Complience Platform with Tax-3 AIS. As part of the pilot project, a unified software interface has been created on the VK Tax Compliance Platform to enable operational two-way data exchange between taxpayers' information systems and the Federal Tax Service of Russia.

PRODUCT OF THE YEAR

Alexander Faynshteyn ▪ Andrey Morzhuhin ▪ Natalya Tolstova ▪ Nikolay Vasilchuk ▪ Mikhail Zykov

VK CALLS

PRODUCT OF THE YEAR

Anton Belyak ▪ Evgeniy Chernov ▪ Dmitrii Pilipenko ▪ Artem Shitov

MARUSIA

PRODUCT OF THE YEAR

Pavel Korolev ▪ Boris Kaganovich ▪ Maria Matskevich ▪ Ivan Vozvakhov

CAPSULA MINI

Key partnerships

O2O JV

GMV of O2O JV reached 187bn (+62% YoY) in 2021. EBITDA burn was RUB 29bn with e-grocery being the main focus investment area. At the same time, continuous focus on operational efficiency resulted in an EBITDA margin of minus 16% (as % of GMV), an improvement versus minus 23% in 2020.

Delivery Club

Delivery Club is the leading online food delivery service in Russia in terms of both audience,[1] mobile app downloads,[2] market share, number of partners and orders. In 2021, Delivery Club broke the record for the number of orders several times. In June, Delivery Club completed more than 7mn orders for the first time and by October, it had set a new record of more than 8mn orders. In December, Delivery Club reached the milestone of 10mn monthly transactions (incl. 9.8mn orders from restaurants and grocery stores).

Despite our already broad restaurant coverage across Russia, we continue to focus on the acquisition of restaurants and retail stores. Delivery Club is active in all eight federal districts and covers >50% of the Russian population, with an associated vendor network exceeding 53,000 in December (including 7,500 retail stores), compared to 38,900 vendors at the beginning of 2021.

Delivery Club continued to expand our delivery service to restaurants and retail stores that do not have their own delivery capabilities. In Q4 2021, 66% of orders came from 1P versus 59% as of Q4 2020. In 2021, the company focused on service and efficiency improvement. As a result of the ongoing improvements, average delivery time decreased to 33 minutes in Q4 despite the seasonality and weather conditions. Furthermore, Delivery Club achieved a record share of orders delivered in less than 30 minutes and a record low percentage of undelivered orders.

In 2021, Delivery Club continued to operate, despite the Covid-19 pandemic. As part of its anti-Covid measures, the service provided contactless delivery, distributed protective equipment and opened vaccination points for couriers.

In 2021, grocery delivery vertical was fundamentally improved. In Q4 2021, e-grocery orders amounted to 22% of the total, with a monthly record 2.3mn orders in December. Delivery Club achieved significant growth in this vertical due to increase purchase frequency, store activation and constant service improvement. In H2, we introduced guaranteed 30-minute delivery from Magnit and Vkusvill in nine different cities.

Delivery Club also continued to develop its in-app services vertical: takeaway orders and restaurant tips. In the end of 2021, the takeaway option was available in more than 28,000 restaurants; we launched this service in chains such as Starbucks, Domino's Pizza, Chaihona №1 and many others. In December 2021, we hit the milestone of more than 8,000 daily restaurant tip transactions.

Metrics such as frequency of service use and the size of the active customer base showed significant growth. The average frequency increased YoY, with ~4.8 orders/active user in Q4 2021 and the number of active customers up to 21% YoY to 5.5mn. In Q4 2021 we launched a DC Pro subscription to help drive customer frequency and retention.

Thanks to the increased scale of operations and the implementation of new technologies, Delivery Club showed a positive contribution margin for the whole of the year for the first time. The contribution margin covers all direct costs including discounts and direct logistics expenses. EBITDA ratio improved by 4 p.p in 2021 vs. 2020.

[1] Source: Mediascope, Russia, cities 0+, age 12+, December 2021
[2] Source: App Annie, December 2021

SAMOKAT IS OPERATING IN 43 CITIES, REACHING AROUND 32% OF THE COUNTRY'S POPULATION

Samokat

Samokat is an e-commerce retailer with the largest chain of dark stores in Europe. The company sells and delivers groceries, household essentials, and beauty products in just 15 minutes. Samokat operates dark stores in each neighbourhood, enabling the service to achieve those ultra-fast delivery times.

Samokat has launched operations in 39 additional Russian cities during 2021. In total, Samokat was live in 43 cities as of the end of 2021, reaching around 32% of the country's population.

In Q4 2021, Samokat's gross revenue grew by 3.2x YoY (to RUB 13.8bn) reaching 23.7mn orders (2.8x YoY), including up to 310,000 daily orders in December.

In December, Samokat's dark store base reached 1,008 dark stores (2.5x YoY) and became one of the largest in the world.

Product categories continue to expand, and private label reached 770 SKUs, contributing more than 17% of revenue in Q4.

Throughout 2021, Samokat maintained its leading position in the number of orders in Russia, and was also among the top three in online sales.

In 2021, Samokat continued to expand into new business areas and came up with new services: Supermarket, with on-demand delivery within 1.5 hours; Kitchen, offering hot food delivery; Weekend Farmer's Market; Pharmacy; Beauty and media on beauty products and personal care.

In 2021, the number of Samokat partner couriers exceeded 70,000. To create comfortable working conditions for them, Samokat added a Tip button to the app, created shift statistics in the Samokat Pro app, and also introduced «Caring about the Courier», a special no-fee accident insurance policy.

Samokat never stops working on ways to make the app more intuitive. New service features and delivery scenarios are increasingly attracting more customers from different audiences and making them want to embark on the journey of selecting products in the app. In 2021, for a smoother customer experience, the company launched the media, Order History feature and allowed users to place the same order again.

For broader synergies within the ecosystem, Samokat continued to cooperate with Delivery Club and launched a VK mini app.

Samokat regularly runs charity campaigns, as well as projects that promote sustainable development. For example, Samokat delivered goods to the Nochlezhka fund totaling RUB 1mn. Samokat also launched a series of initiatives with the likes of Dobro Mail.ru, Teper Tak, and Vasileostrovsky Market, among others.

AliExpress Russia (AER) JV

With a monthly audience of more than 35 million people and more than 28.7mn annual unique buyers as of November 2021, AliExpress Russia remains the most visited marketplace in Russia. As of the end of the year, the number of total SPUs had reached 211mn and 16.5mn for the domestic marketplace, an increase of more than 184% over the year, while the number of total/local sellers stood at ~400,000 (+69% YoY) and ~102,500 (+193% YoY) respectively.

Cross-border trade represents the big share of AER's commercial activity, but it is also developing its local marketplace offering, providing its buyers access to a vast assortment of SPUs – 211mn in total – while connecting sellers to Russia's biggest online customer base. AER's local SPU and seller base grew multiple times in 2021 and reached 102,500 local sellers by December. Local sellers are now present across most of the categories, including new categories such as FMCG and groceries. Local GMV share reached 36% of total GMV. During 2021 many local and international brands launched their stores on AliExpress.

Alibaba's 11.11 Global Shopping Festival has become a national event in Russia, with more and more e-commerce platforms participating in the biggest sale of the year. Last year AER reported RUB 33.3bn in GMV during the sale (11-12 November and a few warm-up days before the sale). The total number of orders placed during the sale reached over 25.6mn.

In 2021, the company launched its own logistics infrastructure. In September, AliExpress Russia opened its first own 55,000-sq.m fulfilment centre in the town of Chekhov in the Moscow Region. The new fulfilment centre will process orders from local sellers. The company has also launched joint Svyaznoy*AliExpress co-branded pickup points in Moscow, Kazan and Krasnodar. In 2021, AliExpress Russia opened the first self-branded pickup points in Russian Post offices.

AER completely revamped its customer and sales support service by opening its own support centre in Nizhny Novgorod. The centre occupies 1,500 sq. m and consists of a comfortable office and staff training unit.

AER's launched Est'! ("Eat!" in Russian) e-grocery channel is increasing its audience: it now operates in 120 cities in Russia, delivering from stores and services such as Samokat, VkusVill, Auchan, Lenta Online, Metro, LeMurr, Four Paws, and Verny. This service also delivers online medicine orders in cooperation with the "Vse Apteki" service.

In summer 2021, AER launched a local app on the iOS and Android platforms, which was developed by a Russian IT team. According to App Annie, this app has become Russia's most downloaded shopping app. Buyers spend 20% more time using the local application than the global one, and use the app for an average of 13 minutes. Compared to the global app, loyalty indicators (retention rate and the frequency of purchases) have improved again.

AER is actively investing in its features, with projects such as a click & collect service, its own loyalty programme with cashback in a new local app, a filter for the Top goods, and the Mobile ID service, which uses an automatic customs form to simplify the processing of overseas orders. AER has also launched new tools for sellers, including a machine learning service on the platform for Russian sellers, which helps to download and update items.

In partnership with VKontakte and OK, AER has launched a number of social commerce product innovations that have increased AER's 2021 social e-commerce audience to 13 million unique users. As of the end of 2021, the share of social e-commerce in the total GMV is more than 6%.

The social e-commerce products include the group buy feature in the AliExpress mini-app on VKontakte, AE Platform (AliExpress Russia's first proprietary official affiliate platform), and a new social Live&Feed platform with monetisation within the application for all users of the marketplace.

AER has launched an export programme for Russian sellers in the "goods for mothers and children" and "food" categories.

AER has joined a strategic partnership with Russian Post to implement a logistics enhancement programme for the e-commerce market in Russia from 2021-2025. AER has also signed a cooperation agreement with the Mir payment system, to develop a loyalty programme for Mir cardholders, holding joint promotions, increasing interest in the selection of goods on the AliExpress marketplace and stimulating the active use of Mir cards by buyers when paying for purchases.

In 2021 AER became the owner of a 50.1% controlling stake in the KazanExpress marketplace holding. In the coming year, AliExpress plans to develop last mile logistics together with KazanExpress.

Uchi.ru Group

The main product of Uchi.ru Group is a subscription-based online education platform across the K-12 education market segment in Russia. In 2021, the usage of the platform continued to grow, as well as market penetration.

In 2021, more than half of all Russia's school students actively used the platform.

The successful expansion of new courses and the continuous update of the lessons base for the main subjects resulted in an ARPPU increase of 18% YoY (K-5 students). Five new interactive courses for primary and middle school students were launched during the year. The new content development consisted of 90,000 unique tasks that covered all basic school subjects for years 5-11. Additionally, Uchi.ru organised 14 Olympiad competitions with more than 6mn participants and organised the first national knowledge monitoring in Russian and maths for years 2-9 involving 1.7mn students and 98,000 teachers.

In 2021, Uchi.ru joined the Digital Education System social programme, which gives thousands of students the opportunity to get full access to the platform. Thanks to this programme, approximately 800,000 students registered on the platform in October-December 2021.

In Q4 2021, Uchi.ru acquired 100% of its main competitor on the middle- and high-school market, YaKlass.ru, a digital educational platform focused primarily on pupils in years 5-11. YaKlass.ru has a broad student base, which in 2021 reached over 3.5mn users. The mission of YaKlass.ru is to improve the quality of education, creating a platform in which both students and teachers can interact in a fun, creative, and productive environment.

Another promising business-unit launched in 2018, Uchi.Doma, which offers 1-on-1 online tutoring, expanded its product range from English for primary school pupils to all major K-12 subjects (years 1-11), including exam preparation (USE) and programming courses for pupils in years 1-5.

In pursuit of market expansion and product-line diversification, in April 2021 Uchi.ru Group acquired the community-based free-of-charge questions and answers website Vashurok.ru. In 2021 the average number of monthly website visitors was 8.4mn (+31% YoY), with the monthly number of questions answered over 4,000. Under Uchi.ru Group, Vashurok will continue to bring educational value and serve as a community space for middle- and high-schoolers, along with generating traffic to the Group's other businesses.

Uchi.ru Group has also developed a new business unit through the acquisition of a 15% share in the CodeClass franchising network of offline educational centres. After-school classes offer offline programming and maths courses for children aged 7-15, with the platform's technology playing a major role in the learning process.

Uchi.ru Group is successfully converting its online users into offline students, attending CodeClass centers. In 2021, CodeClass revenue grew by 125% YoY, with the number of active centres reaching 250. In addition, in early 2022 CodeClass launched an English-language unit with great market potential.

UMSCHOOL IS RUSSIA'S LARGEST ONLINE SCHOOL FOCUSING ON SCHOOL EXAM PREPARATION

Umschool

In October 2021, VK acquired 25% of Umschool, an online school for preparing for Russia's Unified State Exam (USE) and General State Exam (GSE), which focuses on remote preparation for the compulsory school exams in the high school segment (years 8-11).

Umschool is Russia's largest online school focusing on school exam preparation. At the end of 2021, the company was ranked eighth in the top 15 largest Edtech companies in Russia, and second in the Edtech category in the top 100 most successful startups of 2021. The company is a resident of Skolkovo and is on the Russian software registry.

Umschool's main product is educational courses for school exam preparation, most of which operate under the subscription system. The studying is carried out in the format of webinars on the Umschool online platform, which contains a complete infrastructure for study: classes, copyright tasks, hints and solutions to tasks, and mentor consultations. The educational materials are compiled by professional methodologists. Umschool develops and actively implements artificial intelligence in its educational courses. The system allows students to engage in a personalised educational trajectory, creating conditions suitable for each student's pace and goals. The Umschool course model is arranged according to a "large-class" system, where one teacher can teach an unlimited number of students at a time in an online/offline webinar format. This system allows it to keep hold of the low-cost segment and to expand easily. The average cost of one month of study per subject at Umschool is RUB 3,000. By early 2022 more than 700,000 graduates have registered on the Umschool platform. In the 2021/2022 school year, Umschool has been selling more than 80,000 paid subscriptions monthly.

In 2020, Umschool launched an early preparation option for the USE for 10th-year pupils. This has increased LTV potential from 18 to 27 months, and now accounts for 6% revenue growth. In 2021, every 10th graduate of a Russian school has studied with Umschool for at least one month. Umschool revenue increased by 40% in 2021 compared to 2020.

Umschool has plans to develop its primary/secondary-school education offering (years 5-8), vocational courses for 1st-4th year university students, and programming.

Tetrika

In August 2021, VK acquired a 61% stake in Tetrika, an online education platform for 1-on-1 tutoring with an interactive whiteboard and gradebook, focused on preparing students for exams.

Since its launch in 2019, more than 20,000 students have studied on Tetrika and 3,000 tutors have worked with the platform. The company continues to grow rapidly: the number of new paying users grew threefold in 2021 compared to 2020.

During 2021 Tetrika began to develop a primary school product, including educational programmes prepared by methodologists. This makes it possible for pupils to study with the platform from preschool age until their final exams, and will result in a longer customer lifetime. Primary school students accounted for 29% of all paying users in 2021.

In 2021, a new education product called "Mini-groups" was launched on Tetrika. Classes are held in groups of 3-9 students on an interactive platform where students can see and hear the teacher, use a board, and communicate with other students and the teacher both orally and in a chat. This is a promising product for the regions, as its low cost allows it to offer users competitive rates.

TEAM OF THE YEAR

Vladimir Sukhodoev ▪ Alexey Lapik ▪ Ekaterina Sergeeva ▪ Nikita Samoylov

VK CLIPS

TEAM OF THE YEAR

Irina Kashirina ▪ Natalia Tanaeva ▪ Mitya Osadchuk

REBRANDING MAIL.RU GROUP → VK

TEAM OF THE YEAR

Andrey Pronin ▪ Alexander Korobkov ▪ Eugene Mironov

RESTAURANT INTEGRATION TEAM

Other activities

VK Ecosystem products

VK Connect

During 2021, VK ID (formerly VK Connect) made a breakthrough in integrating products into the VK ecosystem. A number of key VK projects - Youla, VK Rabota, VK Music, Vse Apteki - made the full switch to using VK ID for automatic authorisation, resulting in a significant increase in the registration and authorisation rate. Automatic authorisation accounted for up to 85%, depending on the product and platform. In total, VK ID was integrated into 20+ projects during 2021, and the cumulative number of external authorisations via VK ID (excluding VK mini apps) consequently reached 37 mn by the end of 2021 (+284% YoY).

VK Pay

In Q2 2021, VK Pay presented its virtual card and loyalty programme with cashback for any purchases. By the end of the year, 1 mn+ cards had been issued and 215 mn+ bonuses had been accrued. Additionally, in Q4 2021 it became possible to use the VK Pay card for proxy payments. Now users can not only earn cashback for any purchase and then use it to buy products and services from a wide network of partners, but also use an installment plan to make payments online and offline.

In 2021, the number of partner shops and services grew rapidly and expanded offline.

As of 31 December 2021 the number of VK Pay users exceeded 20 mn. A total of 700 mn+ purchases were made via VK Pay in 2021, while the average monthly number of transactions reached 60 mn.

VK Combo

In 2021 the number of VK Combo subscribers reached 5 mn (+27% YoY).

Disabling background mode in VK music – meaning non-subscribers would then hear adverts –brought in up to 900k additional subscribers. The year 2021 was generous for subscribers: the offer pack was expanded significantly, and now includes Skillbox, MY.GAMES Cloud, Samokat (automatic discounts for VK ID users), and a number of temporary offers such as AliExpress, Adidas, etc. VK Combo also made an important change to its video provider – it now uses the Wink service instead of OKKO. This move is showing excellent results: the video audience is growing up to 40% MoM (in average during 4Q). Another important update in 2021 was the launch of a student tariff for VK Combo, which is a good way to upsell to a loyal audience and set up partnerships with universities.

VK Music

VK Music was launched in November and unites all of the company's music products on a single platform, including the music sections of the VKontakte and Odnoklassniki social networks, a single content library, products for musicians and labels, general recommendation technologies, and a separate VK Music mobile app. The VK Music database currently has over 100 mn unique playlists made by users and communities.

VK Music features products for musicians, such as VK Studio, which was also launched in November. This is a special section where musicians can analyse their audience, access promotional tools, and launch advertising campaigns based on up-to-date data.

In 2021, users shared music playlists 12% more often than in the previous year. All of these updates helped us reach a record >5 mn people who listen to music using the VK Combo subscription premium features.

Advertising technologies and marketing solutions

VK has continued to invest in technologies that help advertisers to meet their challenges in a rapidly changing environment and to achieve excellent business results. Our focus in 2021 was on rebalancing our efficiency in the core verticals of performance ads and branding ads, mitigating measurement-related issues due to privacy changes, and the development of data solutions and instruments for marketing automation.

Performance ads

We are constantly improving our algorithms in order to better predict the likelihood of ad clicks, installs, and other lower funnel events, so we drive more target actions to performance advertisers grabbing a larger share in their budgets. In 2021, we made a major breakthrough in app install advertising, where improved algorithms brought 2.1x more app installs for our advertisers in Q4 2021 vs. Q4 2020. This led to growth of up to 46% YoY in advertisers' spending on mobile app promotion in 2021.

As part of our focus on e-commerce ads, we added several new features to the key product, dynamic product ads that are automatically created from e-commerce feeds. In addition to retargeting purposes, these ads can now help recruit new users for mobile apps or websites. In dynamic remarketing, advertisers were given the flexibility to change the order in which their products appear in ads. Algorithms will show only products which are more likely to motivate users for targeted actions, taking into account the chosen approach. All of this resulted in 1.7x YoY growth in revenue from dynamic product ads in Q4.

Automated campaign management tools broaden our customer base and allow them to scale efficiently with minimal manual input. For instance, in 2021 we introduced campaign budget optimisation in VK advertising platform which automatically allocates a budget across ads and maximises ad clicks within the campaign. Our targeting solutions such as look-alike now find 3x more in similar audience. Finally, to improve the efficiency of mobile app promotion, we added a new solution to the VKontakte advertising platform that helped our clients to run ad campaigns with optimised installs and target actions (registrations, purchases, etc.). This resulted in the growth of e-commerce and finance applications promotions up to 1.5x YoY.

Video ads

Our growing video inventory allows us to increase penetration into the fast-growing video ads market. The share of video among ad placements for websites and apps promotion has consequently reached 40%. In 2021 we introduced several new ad formats within video, such as mobile app ads in VK Clips and in instream video; adaptive ads in instream video on web for performance advertisers; pre-roll video ads in live streaming of sporting events. We optimised ad delivery through smarter placement of mid-roll ads throughout the video, and improved brand safety through deeper segmentation of video inventory. As a result, our revenue from video ads increased by 31% YoY in 2021, driven by instream ads, which grew by 43% YoY.

Innovative solutions and initiatives

In 2021 we developed and launched one of our key products, the VK Customer Experience Hub based on PREDICT, Tarantool and VK Cloud Solutions technologies. This technological platform allows brands to improve their clients' experience at all stages of the marketing funnel. Moreover, it enables companies to create and automate personalised communication strategies based on their CRM, with the clients agreeing on direct communications from the brand. This approach allows them to increase customer loyalty and engagement, reduce their outflow and acquisition costs, and to grow sales. Integration with the VK ecosystem allows us to create custom segments for advertising campaigns, attract new customers, implement O2O mechanics and expand analytics tools.

This year we have continued to observe a dramatic increase in demand from brands for customised digital marketing solutions and ecosystem approach. We therefore expanded the product portfolio of the Innovative Solutions team and continued to develop high-end projects that meet customers' needs and help businesses in reaching their marketing goals with VK products and technologies. Additionally, in partnership with GroupM, we introduced an instrument for creating customised promotion campaigns within the VKontakte social network with reduced launch time.

Privacy and measurement

In an age of ever tighter user data security policies, we continued to work on innovative and secure solutions to make advertising efficiency forecasts and attribution possible. We continued to develop new solutions for MyTracker, our system of analytics and attribution for mobile apps and websites. In 2021, the service provided an opportunity to app owners and marketers to collect income data from different sources in one place.

Additionally, MyTracker introduced free life-time value (LTV) forecasting for e-commerce stores and free LTV predictions based on SKAdNetwork data. To keep our clients and their advertising budgets safe, MyTracker introduced a new functionality to its Fraud Scanner tool – the ability to detect ad fraud in website traffic.

VK also launched ML attribution based on MyTracker and myTarget technologies, which evaluates the possibility of installs and other target actions in apps. The algorithms analyse SKAdNetwork attribution results, ads campaign data in myTarget, performance statistics for ad formats and placements, device characteristics and other parameters, resulting in up to 90% attribution accuracy on iOS 14.5 and newer versions.

DOOH, App Marketplace and advertising network

In 2021 we developed new tools for the launch of both indoor and outdoor self-service campaigns in myTarget. These innovations give our clients the opportunity to set, run and control targeted campaigns on more than 900 digital surfaces in Moscow, St. Petersburg and other regions, as well as launch advertising on media screens in the Russian leading supermarket chain.

We continued to develop the myTarget App Marketplace, integrating new applications from external AdTech developers. In 2021 we integrated the DataDarvin, videoMixer and Vinstant.pro services. Partners' solutions help to expand myTarget tools as well as to customise the platform for advertisers' needs.

In 2021, we also developed mobile mediation, which allows us to monetise apps by displaying ads from multiple ad networks. For example, the myTarget ad network has integrated with the ironSource mediation platform and Yandex mobile mediation on an in-app bidding model.

SMB

Supporting small and medium businesses is one of our key priorities. Two years ago, we introduced our first simplified solution for SMBs. During 2021, we significantly expanded our range of simple tools and combined them in a unified interface, which allows any SMB to launch ads throughout the VK ecosystem, even without a VKontakte page. Interfaces and algorithms have been matched with the goal of each business, whether this is the promotion of goods, services, websites, or VKontakte pages. We have further simplified the user journey, which has led to a ~10% increase in conversion to first ad campaign launch within a simple promotion tool. All these activities led to +39% YoY in SMB ads revenue on the VKontakte social network in 2021.

Services, a product that is new to the VKontakte social network and helps business owners drive clients' orders and awareness, now has its own simple autopromotion tool. As with advertising goods, it takes only three simple steps to start promoting services. Within a month of the launch of Services, simple autopromotion tools saw a 20% YoY increase in total active clients.

As a result, more than 40% of SMB advertisers now run ads using simple tools. We will follow a simplification strategy to provide each SMB with access to technologically advanced solutions without any special skills.

At SPIEF 2021 we made key partnerships with Moi Biznes centres in the Moscow Region and a number of other Russian regions. These initiatives are aimed at SMB sector support, including the digitalisation of business in the regions, the sharing of best practices, the development of IT expertise and the implementation of high-tech solutions.

To help entrepreneurs to improve their digital skills and provide support for promoting their businesses on the VKontakte social network, we teamed up with Moi Biznes to launch a support programme for SMBs on the VK Business platform.

PREDICT (Predictive analytics solutions)

In 2021 the Predictive Analytics Solutions team focused on developing ML-based services for solving clients' business problems and expanding its product portfolio for the market. The number of clients increased by 45% YoY. PREDICT's client portfolio includes leading Russian companies from various industries including finance, retail, telecom, gadgets and electronics, insurance, real estate, travel, etc.

Among the ML services presented to the market are tourist traffic analytics, apartment building mix, developers' income forecast, market share analytics, user flow assessment for telecom, connection quality control for telecom, and customer journey map development.

IT infrastructure

Our network infrastructure is designed to meet the requirements of our operations and to support the growth of our business. This infrastructure includes services supplied internally as well as by third parties.

Our computer servers and networking equipment are located in our own data centres as well as in rented ones. VK also has a number of relationships with third-party IT providers, which provide it with a range of telecommunication services, including internet access and internet (traffic) transit.

In 2021, the peak network traffic increased to 7.2 terabits per second and the total amount of outgoing data reached 16,000 petabytes.

VK has 74,000 servers in 11 data centres in Moscow, St. Petersburg and Udomlya.

In 2021, we actively developed our new data centre in Udomlya, located between Moscow and St. Petersburg. We thereby achieve a significant geographical distribution of our services and user data, as well as reduce operating costs.

We also launched a new project to build our own data centre with a total capacity of 15 MW. The first stage of 5 MW will be launched in early 2023. The new data centre will use highly efficient cooling systems (free cooling with adiabatic cooling) for server equipment, which will reduce hosting costs.

The transition to a new generation of processors has provided an increase in computing density per node from 40% to 90%, as well as a reduction in the capital cost of the CPU resource for projects from 16% to 33% year-on-year (without a negative effect on operating costs).

In 2021 we built and launched a common cluster for machine learning based on hundreds of GPUs and CPUs with a fast interconnect, allowing us to run distributed computing and effectively redistribute resources between different projects.

We continued our research into efficient cooling of servers and significantly increased our liquid cooling infrastructure. It is now used for more than 300 high TDP CPUs and GPUs. In addition, we built a thermal laboratory to conduct full-fledged equipment testing in various environmental conditions in order to reduce PUE in our future data centres.

The ability to provide products and services depends on the continuous operation of our network and IT infrastructure. It also relies on the provision of network facilities by third-party IT providers and on the performance and reliability of the internet, power and telecommunications infrastructure.

We have significantly expanded our broadband capacity. This expansion has allowed us to reduce the risks of technical and economic dependence on large internet providers. The current network infrastructure has sufficient resources to support business growth for at least the next 12 months.

A staff of full-time engineers administers the network infrastructure. They handle the day-to-day functioning of its system as well as hardware operations and maintenance. VK's automation, dispatch, and monitoring systems are being continuously improved in all infrastructure divisions. The team is committed to increasing the level of system autonomy while reducing the human role in the decision-making process.

The team pays close attention to the protection of user data. The Information Security department monitors the entire infrastructure and prevents, detects and responds to security threats.

To achieve the most efficient use of technical and material resources, a team of engineers monitors the changes in load profiles and optimises the infrastructure while ensuring that the company's products and services benefit from a high level of availability.

High priority is placed on providing users with a consistently high-quality service and support from the technical support staff.

Employees

18
Youngest

31.2
Average age

71
Oldest

Men	64%	Women	36%

Our structure by gender and position as of 31 December 2021 is presented in the chart above.

As of the end of 2021 the headcount of VK Company exceeded 10,000 full-time employees, over 4,000 employees were hired throughout the year.

Transfer to a hybrid work regime and the 'Make Really Good' concept

VK focuses on the interests, needs and values of our employees. In order for everyone's opinion to be heard, the company launched a series of polls at the end of 2020. The results were surprising: the share of those who were uncomfortable working remotely was increasing as well as the share of those who noted a decrease in their productivity. In August only 17% felt discomfort about remote work, while in December this share reached a third (31%). The share of those who faced a decline in efficiency rose from 8% to 14% from August to December. Many people were missing the advantages of personal interaction with colleagues. At the same time they got used to the flexibility of the remote working regime and were not ready to give it up.

According to the results of the poll, the preferences remained stable: 63% chose a hybrid option, 32% chose remote work, 5% chose to work onsite.

Based on the results above, in 2021 we launched our mixed work model 'Make Really Good', intended to unite the unique features of both the office and the WFH models.

We developed and introduced a model that allows all employees to choose a convenient format whilst maintaining efficiency, productivity and interpersonal interactions with colleagues. This was possible thanks to a new vision of management, IT infrastructure and workspace transformation in the offices. The new approach gives us a competitive advantage in attracting top talents from the IT industry, as we were the first to adopt this unconventional working model.

In addition, we released a hybrid working guide. The guide contains references about hybrid model implementation and can be used by any party.

VK rebranding

We prepared guidebooks for internal and external communication about rebranding, organised events for employees and journalists and an internal stream, a forum on HR issues, and many more polls for our personnel in order to ensure that the new brand is perceived equally by all parties.

In addition, we have launched workshops on the implementation of corporate values, and conducted training sessions on change management for all business unit executives.

Visual activities in offices and corporate merchandise featuring a new company values logo are aimed at supporting our corporate culture.

Learning and talent development opportunities

In 2021, we conducted 280 training sessions, attended by 3,500 unique users, to provide employees with opportunities to improve their specific knowledge, skills and talents. The participants were highly satisfied, with a 41% NPS for the learning programmes. We increased awareness among people managers of how to talk with team members regarding career opportunities through the broad sharing of techniques and new digital courses.

We identified a profile for the middle manager role in order to identify the right people for the right positions and to help them with the development plan. We also provided assessment for 3,500+ employees to identify key individuals and those with potential and create 420+ development and retention plans via our internal digital tools.

Our internal learning platform STUDY has 7,344 active users and an average DAU of 212. Many employees undertook individual study during the year: 1,050 viewed videos, 2,725 read articles, and 1,489 completed self-learning courses.

The onboarding process for new employees, including our welcome sessions, was moved online last year. Mandatory courses on fire security, labour protection, electrical safety, first aid rules, and information security for newcomers are now presented as short video courses.

We are developing professional expertise and a culture of reciprocity based on equal rights:

- The "Introduction to IT" course, led by 14 internal experts, was completed by 776 employees
- The "Machine learning" course by the VKontakte data centre was taken by 156 employees

In collaboration with VK educational projects, we also provided employees with courses on Scala, Python, mobile development, data structures and algorithms.

We enhanced employee feedback via an internal NPS survey of effective and clear processes. A total of 2,456 comments and ideas were incorporated into action plans based on new ways of cross-functional collaboration.

VK Education

VK is developing education and providing support to our users on their journey towards a career in IT, helping them improve their skills and explore new career paths. We take a comprehensive approach to developing online education services, ranging from preschool to vocational training. The company has its own educational projects under VK Education, and invests in related services seeking to improve the education landscape in Russia. By the end of 2021, our ecosystem included controlling stakes in Skillbox Holding Limited (GeekBrains, Skillbox, SkillFactory, Lerna and Mentorama), as well as stakes in Algoritmika, Tetrika, Uchi.ru and Umschool. VK's online educational platforms enable users to learn new skills online, honing their knowledge of school subjects or pursuing new qualifications.

The year 2021 marked VK Education's 10th anniversary. Our journey started with the launch of an educational project with the Bauman Moscow State Technical University (BMSTU), providing classes and practice for future IT specialists. Today VK Education is involved in educational projects spanning all levels and ages, from schools all the way up to professional training. Our ultimate ambition is for ~10mn students to complete our various educational programmes by the end of 2023.

More than 3,500 students attended VK educational centres and courses at 13 of Russia's leading universities, including BMSTU, Moscow State University, the Higher School of Economics, the Moscow Institute of Physics and Technology, the MEPhI National Research Nuclear University, Peter the Great St. Petersburg Polytechnic University, and others. VK also partnered with MIREA — Russian Technological University and the Algoritmika educational platform to launch the Algoritmika Coding Bootcamp. In 2021, VK and ITMO also expanded their cooperation in the field of education and research projects.

In cooperation with the Moscow Institute of Physics and Technology and BMSTU, VK holds the annual Technocup programming competition, with the winners given the possibility to enrol at the university without passing exams. A total of 5,000 students from 70 regions took part in the Technocup in 2021. Together with the Federal Agency for Youth Affairs (Rosmolodyozh), the Russian Znanie ("Knowledge") society, the Russian School Movement, and other partners we held large-scale educational marathons, lectures, hackathons and other educational initiatives. We also support the Bolshaya Peremena nationwide contest for schoolchildren to help them discover their abilities.

To help high school pupils navigate through the various career trajectories in IT, we run IT Knowledge Day, Data Lesson, VK Lessons and other activities. In 2021, IT Knowledge Day, our career guidance campaign focused on game development, brought together 5,700 schools and more than 290,000 school students from Russia, Belarus, Latvia, Germany and other countries, with more than 3mn online viewers. For the last five years we have hosted IT Knowledge Day, with more than 9.7mn schoolchildren watching the online streams.

We continued to participate in the Digital Lesson educational project, which enables schoolchildren to learn from top IT companies and improve their skills and competencies in the digital economy. Over 3mn children from 138 countries took part in the Digital Lesson on game development, which we prepared and hosted together with BIT.GAMES and Uchi.ru. Together with Uchi.ru, the company held the all-Russia online programming Olympiad. The Olympiad introduces children to the basics of programming, helping them develop logical thinking and enhance their creative potential.

Over the last four years we have been developing a community of ambassadors. In 2021, 40 students and university employees from 27 universities and 10 regions acted as technology evangelists, promoting our brand and products. For junior students, we launched a summer internship programme – IT diving. The internship gives students an opportunity to dive in and explore the world of IT, to take a sneak peek at how the VK ecosystem project works. In 2021 the initiative attracted over 100 students.

We also help tech professionals boost their skills. In 2021, we continued with the MADE Academy, our educational programme for experienced professionals. Over 224 graduates and 186 students joined the academy in 2021 and started studying Data Science, Machine Learning Engineering and Data Engineering. Over 120 students have successfully completed the training programme at the MADE Academy for Product Managers. They have made a qualitative breakthrough in the development of their products and become part of a closed community of VK product managers.

We continue to hold various IT competitions on the All Cups platform. The project brings together more than 300,000 people from 130 countries and allows them to search for talented professionals around the world. In 2021, more than 47,000 new users joined the platform and more than 121,000 solutions were uploaded.

In March, 2021 VK and Rostelecom launched Sferum, a learning platform for schoolchildren, (as well as teachers and parents), which enables them to communicate and study online. The platform is designed to make learning, including distance learning, more flexible, technologically advanced and convenient. Sferum unites more than 3mn users across the country.

In addition, VK Education carried out many initiatives to support teachers and make the digital world more accessible for them. We named 2022 the "School Year with Marusia", and invited teachers across the country to share their creative ideas on how voice assistants help them in the learning process. Teachers from 73 regions took part in the "2022 School Year with Marusia" national competition.

In 2022, one of our major aspirations is to improve the accessibility of education in Russia through development, including through the provision of digital and hybrid options throughout the entire educational journey.

VK Social Projects

VK continues to support social activities through its direct initiatives as well as via all our products and services.

Dobro Mail.ru service continued to raise money to support NGOs that help children, adults, animals, nature, the environment, and culture. Currently, there are 146 funds on Dobro, as well as 261 charitable initiatives. Since 2013, Dobro Mail.ru has raised RUB 471mn, Kod Dobra foundation in 2021 alone raised RUB 96mn.

VK held its key ecosystem social activity - the Day Against Cyberbullying for the third time. This year, the project was supported by more than 70 brands, including VK, OK, MY.GAMES, Skillbox, Sferum, Citymobil, Citydrive, AliExpress, Delivery Club, Lamoda, Kaspersky, MTS, Semrush, Megafon, Tinkoff, and Alliance for the protection of children in the digital environment. On November 11, each company and brand launched special projects dedicated to fighting cyberbullying. The Day Against Cyberbullying campaign coverage nearly doubled and reached 130 mn views.

Interactive series “Nichego Strashnogo” (Not a Big Deal) about bullying in school was created as a part of the campaign thanks to the support of the Institute of Internet Development. The show is based on real stories of victims of bullying and the results of research into various types of bullying. This is a joint project of VK, Lateral Summer studio with the support of the Institute of Internet Development. Over just two weeks 4 mn people watched the series.

Also the ecosystem social activities were dedicated to breast cancer, autism, and perinatal loss awareness. It facilitated an open discussion of the issues and provided help to those who need it.

VK promotes inclusivity and gender diversity in Russian society The Company held the survey on the attitude of parents to the additional education of children dedicated to the UN’s International Day of the Girl and the gender differences. An annual study was conducted on the attitude of Russian parents to inclusive education.

The Company raises awareness on environmental issues and conservation of nature – we conducted an annual study on the eco-friendly habits of Russians and supported the global Earth Hour campaign, as well as initiatives with WWF. Also Citydrive together with Dobro Mail.ru started to support Delfa foundation helping to save the dolphins in Black Sea.

VK’s New Year ecosystem campaign “Delat Dobro Luchshe Vmeste” (It’s better to do good together) was held in order to support systemic charity. As a result, VK transferred RUB 32mn to 22 charitable foundations in equal shares for each VK Music user, each order in Delivery Club, Citymobil, or Citydrive, every purchased Capsula and Capsula Mini speakers with Marusia voice assistant, and subscription to VK Combo. The campaign’s coverage was over 20 mn users.

In 2021, VKontakte social network continued to actively develop the platform’s charitable segment. The main focus of the VK Charity division was to help non-profit organizations, build a culture of charity, educate campaigns on important social issues, and integrate charitable initiatives into the platform's key operations. Because of such integrations, VKontakte social network was able to raise more than RUB 40mn in 2021 to support charitable foundation projects. Donations were raised by users as part of holiday campaigns – “Vecherinka” for the social network's birthday and "Snegopad podarkov" for the New Year holidays. As part of the latter, over 170,000 people donated to WWF Russia, raising RUB 29mn to assist projects for the conservation of endangered animal species.

In 2021, VKontakte social network provided support to more than 120 socially oriented non-profit organizations with grants for advertising campaigns and helping with implementing them. In addition, educational programs for non-profit organizations received a lot of attention. VKontakte supported and launched campaigns to prevent cancer and other dangerous diseases as part of educational efforts, as well as campaigns to support women in crisis situations, prevent cyberbullying, orphanhood, promote environmental initiatives, and other key social issues.

Every year OK supports charitable foundations and social projects. In addition, OK regularly helps projects aimed at protecting women's rights and condemns discrimination and all forms of violence. On November 25, OK presented an illustration dedicated to eliminating gender discrimination on its authorization page. It displayed a phone number for a nationwide hotline for women who suffered domestic violence. As a result of the campaign, the number of calls to the hotline more than doubled the following day after the number was posted.

Our services actively participated in various social activities throughout the year.

- Skillbox educational platform introduced a program offering up to 90% off all courses on the platform to beneficiaries and employees of Russian public organizations, allowing 71 non-profit organizations to save approximately 80% of the education budget.
- Sferum platform launched an advanced training course "Digital Transformation of Education: Profile of a Modern Teacher". Since November 2021, 35,000 education workers have received free training. In addition, Sferum team, together with the experts from Variant project, launched a service for free anonymous psychological consultations for teachers.
- SkillFactory launched the “Nezabyvaemye” project together with the International Wildlife Fund (WWF) dedicated to endangered animal species. Our students use the Data Science skills and data analytics to assist ecologists in protecting the creatures on the Red List.
- MY.GAMES held more than 30 internal educational events attended by more than 12,000 employees, launched educational programs with universities, held surveys on video game development education programs, and more.
- As part of our VK EdTech efforts we collaborated with Dobry (a Coca-Cola HBC juices and nectars brand) and developed an online educational platform named Academy Super for 3-12 y.o. kids where they can develop skills in four main areas: software engineering, financial literacy, blogging and ecology.
- VKontakte helps keep track of news and the latest statistics about coronavirus and vaccination around the world. Our mini-app Collective Immunity with 2 mn unique users provides important information about vaccination from official sources, feedback from close friends and acquaintances, and statistics on vaccination levels on a worldwide level.
- Delivery Club was actively involved in improving cycling safety. The service launched a cycling delivery training program and a social campaign for cycling safety. Delivery Club and Skillbox developed an educational grant program, where 150 Delivery Club couriers received free training in new fields, with the total cost of educational programs totaling 20 mn rubles.
- Citymobil and Dobro Mail.ru had another successful year in a joint Miles of Kindness. Over 1.1 mn miles were donated to non-profits.
- Local Kitchen, OK, Citydrive, Youla and AliExpress Russia supported numerous charitable activities and events for various foundations to help elderly, children in need, disabled people and other vulnerable groups.
- DonationAlerts and Dobro Mail.ru launched LoveAlerts, the world's first project to help influencers and bloggers in the face of stalking and domestic violence.
- Marusia educated users and highlighted important social issues. Together with funds and NGO specialists the voice assistant published information about breast cancer diagnostics, told a tale about kids with autism, provided help guide for homeless pets.

FEATURE OF THE YEAR

Olga Vlasova ▪ Ivan Samsonov ▪ Anastasia Fedorova

AUTO-TRANSLATION OF ALL TEXT CONTENT IN VK: ENGLISH/SPANISH/ PORTUGUESE

FEATURE OF THE YEAR

Alexander Orlov ▪ Alexander Tobol ▪ Ilya Shcherbak

ACCELERATION OF THE VKONTAKTE APPLICATION USING THE QUIC PROTOCOL

Financial review

Financial review

This review reflects the highlights of our financial performance for 2021. Full details can be found in the annual financial statements presented on pages 109 to 177 of this annual report.

Overview of consolidated results

We have demonstrated solid progress throughout 2021 in all the key areas, with total revenues growing by 18%. Online education continued to show very strong performance with more than 70% growth for the year. Our advertising revenue expanded by nearly 25% in 2021, driven by increased user engagement, improved advertising technologies and sales execution. Within the advertising formats, we saw significant growth for video. Our games business continued to produce very solid performance. As in previous periods, music subscriptions showed significant growth, along with the number of active paid and trial subscriptions on our platforms.

Structure

In 2021 we changed the approach to the presentation and composition of reporting segments in order to improve the presentation of our strategy and the way the business is managed. Since 2021 we have presented reportable segments based on the consolidation scope as determined in accordance with IFRS, a change from the previously applying a pro forma approach to acquisitions, disposals and assets held for sale.

We have identified our operating segments in order to reflect our strategy, the way the business is managed, and units' interconnection within its ecosystem. Additionally, from 2021, we revised the reportable segments and presented EdTech as a separate segment. We have identified the following reportable segments on this basis:

- Communications & Social
- Games
- EdTech
- New Initiatives

We have also developed a more granular split for the nature of our revenue streams with "Education Technology services" revenue distinguished from the "Other" revenue line.

Please refer to "Basis of preparation" below in the "Operating segment performance" section for more details on operating segment presentation.

Acquisitions and disposals in 2021

In September 2021, we acquired control over the educational online platform SkillFactory LLC ("SkillFactory") by increasing our share to 61.809% (43.50% in addition to 18.309% stake as of 30 June 2021). In December 2021 we executed our conversion option to acquire additional interest and increased our share up to 63.763%. The primary purpose of the acquisition of SkillFactory was to expand our presence in the online education market by achieving substantial synergies with Skillbox and Geekbrains, our other online educational platforms.

In August 2021, we acquired control over the mobile games publisher and developer Mamboo Games LLC ("Mamboo Games") by purchasing 51% of shares. Mamboo Games is a hyper-casual games publisher and developer. The primary purpose of the acquisition of Mamboo Games was to enhance our position on the mobile games market.

In October 2021, we acquired 90% in the educational online platform Mentorama. The primary purpose of the acquisition of Mentorama was to expand our presence to the Brazilian education market.

In October 2021 we acquired 25% in the e-learning platform Umschool LLC.

The total cash consideration for the acquisition of SkillFactory, Mamboo Games, Mentorama and Umschool was RUB 2.8bn. Mamboo Games was acquired in a form of executing a call option for a cash consideration of RUB 168 mn, effective settlement of convertible loans with a total carrying value of RUB 202mn and contingent consideration of RUB 39mn.

See also Notes 6 and 25 to our consolidated financial statements for further details on acquisitions and disposals.

Goodwill

We account for business combinations by applying the acquisition method. As a result, we record goodwill as the fair value of the consideration transferred, including the recognised amount of any non-controlling interest in the acquiree, less the net recognised amount (generally fair value) of the identifiable assets acquired and liabilities assumed, all measured as of the acquisition date. The significant goodwill recorded in connection with our acquisitions may lead to charges in future periods if goodwill is impaired.

Total goodwill amounted to RUB 138,600mn as of 31 December 2021, an increase of RUB 2,930mn from 31 December 2020. The goodwill is allocated to groups of cash-generating units (CGUs): "Email, Portal and IM", "Search", "MY.GAMES", "Odnoklassniki", "VKontakte", "Pixonic", "UMA", "Skillbox", "Geekbrains", "SkillFactory", "Mentorama" and others – in accordance with the operating segment structure of our business and IFRS requirements. Please see Notes 8 and 12 to our consolidated financial statements for further details.

Operating segments performance

Basis of preparation

In order to assess operational performance and allocate resources, the Chief Executive Officer of the Group, who is the Group's Chief Operating Decision Maker (CODM), reviews selected items of each segment's income statement, assuming 100% ownership in all of the Group's key operating subsidiaries, based on management reporting.

Management reporting is different from IFRS, because it does not include certain IFRS adjustments which are not analysed by the CODM in assessing the core operating performance of the business. These adjustments affect such major areas as revenue recognition, share-based payments, disposal or impairment of investments, fair value adjustments, amortisation and impairment thereof, net foreign exchange gains and losses, as well as irregular non-recurring items that occur from time to time and are evaluated for adjustment as and when they occur. The tax effect of these adjustments is also excluded from management reporting.

As mentioned in the Structure section above, the Group revised its reportable segments.

The Communications and Social segment aggregates the Group's social network VKontakte and two other social networks (OK and My World) and earns revenues from (i) commission from application developers based on the respective applications' revenue, (ii) user payments for virtual gifts, stickers and music subscriptions and (iii) online advertising, including display and context advertising. This segment also includes email, instant messaging and the mail.ru portal (main page and media projects). It earns substantially all revenues from display and context advertising. It also includes search and music services. These businesses have similar nature and economic characteristics: they are represented by social networks and online communications, they have similar types of customers for their products and services, and they are regulated under a similar regulatory environment.

The Games segment contains online gaming services, including MMO, social and mobile games, games streaming and platform solutions operated by the Group under the MY.GAMES brand and within the MY.GAMES ecosystem. It earns substantially all revenues from (i) the sale of virtual in-game items to users (f2p) or the sale of digital copies of the games (b2p), (ii) royalties for games and gaming solutions licensed to third party online game operators, (iii) in-game advertising, and (iv) revenues from streaming services and gaming platform services.

The EdTech segment includes the Group's online education platforms with educational courses and programs (such as GeekBrains, Skillbox and SkillFactory) and earns substantially all revenue from purchases of educational courses by individuals, with a small B2B contribution.

The New Initiatives segment represents separate operating segments that have been aggregated into one reportable segment because of their similar nature as newly acquired or newly launched and dynamically developing businesses. This segment primarily consists of Youla classifieds, which earns substantially all revenues from advertising and listing fees; B2B, including Cloud; and VK Clips, which has the potential to become a major separate product with the planned launch of its own application and targeted presence across the various Group's services; and Pulse – a personalized feed of articles and videos based on user interests, along with other services that are considered insignificant by the CODM for the purposes of performance review.

The Group measures the performance of its operating segments through a measure of earnings before interest, tax, depreciation and amortisation (EBITDA). Segment EBITDA is calculated as the respective segment's revenue less operating expenses (excluding depreciation and amortisation and impairment of intangible assets), including Group corporate expenses allocated to the respective segment.

EBITDA is not a measure of financial performance under IFRS. The calculation of EBITDA by the Group may be different from the calculations of similarly labelled measures used by other companies, and it should therefore not be used to compare one company against another or as a substitute for analysis of the Group's operating results as reported under IFRS. EBITDA is not a direct measure of the Group's liquidity, nor is it an alternative to cash flows from operating activities as a measure of liquidity, and it needs to be considered in the context of the Group's financial commitments. EBITDA may not be indicative of the Group's historical operating results, nor is it meant to be predictive of the Group's potential future results. The Group believes that EBITDA provides useful information to the users of the consolidated financial statements because it is an indicator of the strength and performance of the Group's ongoing business operations, including the Group's ability to fund discretionary spending such as capital expenditure, acquisitions and other investments, and the Group's ability to incur and service debt.

The Group's share of the profits of key strategic JVs and associates is not attributed to any operating segment and not included in the calculation of EBITDA. The Group's share of profits of key strategic JVs and associates (AliExpress Russia (15% stake), O2O JV (45.01% stake), Uchi.ru (25% stake) and Umschool (25% stake) is included in the net profit reviewed by the CODM. The net profit of key strategic JVs and associates is calculated using accounting principles used for the segment financial information of the Group's consolidated operations. The Group's share of profits of non-core equity associates (Haslop Company Limited, Tetrika and others) is not included in the financial information reviewed by the CODM.

Principal revenue drivers

Organic growth in our revenue, including online advertising, MMO games, IVAS and Education technology services, is primarily driven by the audience of our assets. Advertising revenues also depend on the pricing of our advertisements and availability and sell-through rates of our advertising inventory, while IVAS revenue is also driven by paying user engagement and average revenue per paying user ("ARPPU"), MMO games are gaining traction because of the growth and popularity of digital content, and Education Technology services depend on the number of learners and price per course.

Analysis of 2021 results compared with 2020

The discussion that follows is based on the analysis of segment and supporting management financial information according to the Group's actual structure as of the date of this Annual Report. As discussed under "Basis of Preparation" above, this information differs in certain significant respects from the information presented in accordance with IFRS.

Group aggregate segment financial information*

RUB millions	2021	% of revenue	2020	% of revenue	YoY, %
Group aggregate segment revenue					
Online advertising	48,608	39%	39,004	37%	25%
MMO games	37,918	30%	35,862	34%	6%
Community IVAS	18,450	15%	18,337	17%	1%
Education Technology services	10,422	8%	6,099	6%	71%
Other revenue**	10,354	8%	7,071	7%	46%
Total Group aggregate segment revenue	**125,752**	**100%**	**106,373**	**100%**	**18%**
Group aggregate operating expenses					
Personnel expenses	32,774	26%	25,253	24%	30%
Agent/partner fees	33,667	27%	28,997	27%	16%
Marketing expenses	20,707	16%	19,985	19%	4%
Server hosting expenses	853	1%	777	1%	10%
Professional services	1,488	1%	960	1%	55%
Other operating (income)/ expenses, excluding amortisation and depreciation	4,461	4%	3,489	3%	28%
Total Group aggregate operating expenses	**93,950**	**75%**	**79,461**	**75%**	**18%**
Group aggregate segment EBITDA	**31,802**	**25%**	**26,912**	**25%**	**18%**
margin, %	25.3%		25.3%		
Depreciation, amortisation and impairment ***	14,750	12%	11,840	11%	25%
Share of loss of key JVs and equity associates	18,915	15%	11,923	11%	59%
Other non-operating expense/ (income), net	(2,206)	-2%	(2,431)	-2%	-9%
Profit/(loss) before tax	**(4,069)**	**-3%**	**718**	**1%**	**-667%**
Income tax expense	2,417	2%	2,677	3%	-10%
Group aggregate net profit from consolidated subsidiaries	**12,429**	**10%**	**9,964**	**9%**	**25%**
margin, %	9.9%		9.4%		
Group aggregate net loss	**(6,486)**	**-5%**	**(1,959)**	**-2%**	**231%**
margin, %	-5.2%		-1.8%		

(*) The numbers that appear in this table and henceforth in the document may not exactly foot or cross-foot due to rounding.

(**) Including other IVAS revenues.

(***) Including the impairment of games Love Choice and Ashes of Creation for a total of RUB 327mn in 2021.

The income statement items for each segment for the year ended 31 December 2021, as presented to the CODM, are presented below:

RUB millions	Communications & Social	Games	EdTech	New Initiatives	Eliminations	Group
Revenue						
External revenue	60,053	43,671	10,428	11,600	-	125,752
Intersegment revenue	328	137	2	46	(513)	-
Total revenue	**60,381**	**43,808**	**10,430**	**11,646**	**(513)**	**125,752**
Total operating expenses	33,066	33,451	12,036	15,910	(513)	93,950
EBITDA	**27,315**	**10,357**	**(1,606)**	**(4,264)**	**-**	**31,802**
Net profit from consolidated subsidiaries						**12,429**
Aliexpress Russia JV						(4,392)
O2O JV						(14,423)
Umschool						(34)
Uchi.ru						(66)
Net loss						**(6,486)**

The income statement items for each segment for the year ended 31 December 2020, as presented to the CODM, are presented below:

RUB millions	Communications & Social	Games	EdTech	New Initiatives	Eliminations	Group
Revenue						
External revenue	52,513	39,553	6,100	8,207	-	106,373
Intersegment revenue	172	102	-	41	(315)	-
Total revenue	**52,685**	**39,655**	**6,100**	**8,248**	**(315)**	**106,373**
Total operating expenses	28,120	33,320	5,046	13,290	(315)	79,461
EBITDA	**24,565**	**6,335**	**1,054**	**(5,042)**	**-**	**26,912**
Net profit from consolidated subsidiaries						**9,964**
Aliexpress Russia JV						(1,350)
O2O JV						(10,573)
Net loss						**(1,959)**

Online advertising

Online advertising includes three major types: Context advertising; Advertising for small and medium sized business (SMB); and advertising for large businesses, advertising agencies and media (Non-SMB).

Each of SMB and Non-SMB online advertising revenue includes 2 types: Branding and Performance.

Branding is online advertising revenue from products, which are sold for impression or view (CPM, CPV).

Performance marketing is online marketing campaigns where advertisers pay for results achieved, such as clicks or conversions.

Context advertising is mostly represented by mobile monetisation revenue related to the placement of target advertising, display advertising and advertising through integration in applications, advertising through offers on the Group's applications.

We generated revenue of RUB 48,608mn from online advertising in 2021 (2020: RUB 39,004mn). Our advertising revenue grew by 25% for the full year. The strong growth in our advertising revenues was driven by the continued shift of advertising budgets online from all other media, and in the online segment towards video, mobile and social networks in particular. In line with this trend, promo posts across our social networks and our native in-stream video formats were our fastest-growing advertising revenues in 2021. VKontakte remains the key contributor to our core online advertising revenue stream with the social networking having delivered 21.9% YoY revenue growth in 2021 (RUB 27.9bn). In terms of products and client segments, performance advertising was the major driver for the Group’s advertising revenues.

MMO games

About a third of our total revenue is generated from MMO games, including mobile, PC console and cross-platform titles. Players have the opportunity to buy in-game enhancements for free-to-play games. In 2021, we generated revenues of RUB 37,918mn from MMO games (2020: RUB 35,862mn). The 6% increase in MMO revenues is primarily due to the strong growth of Rush Royale, Grand Hotel Mania and Conqueror`s Blade. MMO Games continued to expand despite the challenging base effect, combined with no new games launches.

Community IVAS

Community IVAS revenue is driven by payments for features and virtual items sold primarily on our social networks. These features and items include virtual gifts, stickers, premium music access and other paid features. Community IVAS revenue is also driven by revenues shared with application developers through our Application Programming Interface ("API"). A significant portion of these payments are paid via online payment systems.

The fees for such services are collected from customers using various payment channels, including bank cards, online payment systems, mobile app stores and mobile operators.

Aggregate segment Community IVAS revenue increased by 1% to RUB 18,450mn (2020: RUB 18,337mn), mostly driven by growth in music subscribers and the growing popularity of this product among users, and partially offset by declining revenue from virtual gifts in Odnoklassniki primarily due to a decrease in paying users of Odnoklassniki.

MMO games, average monthly paying users, K

Source: Company data
Footnote: The numbers combine paying users of individual MMO and mobile games and may include overlap

Education Technology services

Education Technology services revenue represented by online education platforms including Skillbox, Geekbrains, Skillfactory, Mentorama and Lerna with educational courses and programmes for individuals. Aggregate segment EdTech revenue increased by 71% to RUB 10,422mn (2020: RUB 6,099mn). The platforms exceeded 9.9mn in combined cumulative registered learners as of the end of December, up 1.5x YoY. The cumulative number of paying learners approached 349,000, up 2.1x YoY. During Q4 2021 alone the units launched 115 new courses and programmes (professions and faculties).

Other revenue

Other revenue mostly consists of revenue from B2B services, payment processing and the sale of voice speakers.

In 2021 other revenue increased by 46% to RUB 10,354mn (2020: RUB 7,071mn), primarily due to the strong growth of B2B services, the sale of voice speakers and significant increase in payments collected by Money.Mail.Ru.

Costs and margins

Our principal cost items include personnel expenses, agent/partner fees, marketing expenses, server hosting expenses, professional services and other operating expenses, excluding depreciation, amortisation and impairment.

Personnel expenses increased by 30% to RUB 32,774mn (2020: RUB 25,253mn), mainly driven by an increase in headcount, principally within online education, MY.GAMES, VK Ecosystem and corporate services, mostly sales, advertising technologies, corporate IT.

Agent/partner fees increased by 16% to RUB 33,667mn (2020: RUB 28,997mn). The increase in agent/partner fees was primarily driven by growth in revenue collection costs, advertising commissions and payments to music license owners.

Revenue collection costs represent fees to payment systems for processing payments for our games and Community IVAS. These costs also include the share of our mobile product revenue that we pay to mobile app stores (mainly Google Play and Apple's App Store), as well as the share of our console gaming revenue paid to the respective console platforms (Sony's PlayStation and Microsoft's Xbox). The increase in revenue collection costs was mainly due to increased revenue from games, mostly mobile and console titles.

Advertising commissions represent arrangements where we share our advertising revenue with external advertising agencies. The increase in commission is mainly due to the growth in related revenue in 2021.

The increase in payments to music license owners was driven by growth in revenue from music subscriptions.

Marketing expenses increased by only 4% to RUB 20,707mn (2020: RUB 19,985mn), mostly driven by the marketing efforts to support the rapid growth in online education, partially offset by decreased marketing in Games due to no new launches in 2021.

Other operating expenses increased by 28% to RUB 4,461mn (2020: RUB 3,489mn), mainly driven by tax risk provisions in some of our EdTech businesses.

In total, our aggregate segment operating expenses (excluding depreciation, amortisation and impairment) increased by 18% to RUB 93,950mn (2020: RUB 79,461mn). As a result, our aggregate segment EBITDA increased by 18% to RUB 31,802mn (2020: RUB 26,912mn) and EBITDA margin was stable YoY at 25.3% in 2021 and 2020.

Depreciation, amortisation and impairment, other non-operating income, income tax and net income

Depreciation, amortisation and impairment increased by 25% to RUB 14,750mn (2020: RUB 11,840mn), primarily as a result of growth in servers and network equipment, mostly driven by the development of new businesses. It is also due to the rental of additional office space, driven by growth in headcount, and impairment of games Love Choice and Ashes of Creation, recognised in 2021.

Share of loss of key JVs increased by 59% to RUB 18,915mn (2020: RUB 11,923mn) due to increasing loss of AliExpress and O2O JVs.

Loss before income tax amounted to RUB 4,069mn (2020 profit: RUB 718mn), as a result of the 59% increase of share of loss of key JVs and equity associates. At the same time, income tax expense decreased by only 10% to RUB 2,417mn (2020: RUB 2,677mn). This was primarily driven by (1) the non-taxable share of loss of key JVs and equity associates (2) certain tax risk accruals resulting from the finalisation of a field tax audit of one of our subsidiaries, recorded in 2020.

As a result, Group aggregate net loss increased more than 2-fold to RUB 6,486mn (2020: RUB 1,959mn).

Consolidated results of operations in accordance with IFRS

The following tables summarise the principal line items from our consolidated income statements under IFRS:

RUB millions	2021	2020
Total revenue	**126,061**	**100,542**
Total operating expenses	**(96,614)**	**(81,263)**
EBITDA	**29,447**	**19,279**
Loss before income tax expense	**(14,626)**	**(19,393)**
Income tax expense	(1,071)	(1,833)
Net loss	**(15,697)**	**(21,226)**
Attributable to:		
Equity holders of the parent	(15,493)	(20,921)
Non-controlling interests	(204)	(305)

Our consolidated revenue increased by 25.4% to RUB 126,061mn (2020: RUB 100,542mn) in 2021, mostly due to organic growth and adjustments in 2021 related to changes in estimates in MMO Games and deferred revenue calculation for EdTech. For more details of the changes in estimates, see note 4.2.9 in our consolidated financial statements for the year ended 31 December 2021. The primary drivers of the organic revenue growth are described under "Operating segments performance" above.

EBITDA under IFRS increased to RUB 29,447mn (2020: RUB 19,279mn), while the EBITDA margin increased to 23.4% (2020: 19.2%) as a result of revenues growing at a faster pace than operating expenses (excluding depreciation, amortisation and impairment).

Operating expenses grew by 18.9% to RUB 96,614mn, or 76.6% of revenue (2020: RUB 81,263mn, or 80.8% of revenue).

The growth in operating expenses was primarily driven by a RUB 7,841mn increase in personnel expenses, by a RUB 4,679mn increase in agent/partner fees and by a RUB 1,515mn increase in other operating expenses, all mostly organic. The key drivers and components of the organic growth in operating expenses are discussed in detail under "Operating segments performance" above.

Our loss before income tax expense under IFRS was RUB 14,626mn (2020: RUB 19,393mn), primarily due to an increase in EBITDA partially offset by an increased share in losses from equity accounted associates and joint ventures and depreciation and amortisation, as discussed above.

Our net loss under IFRS was RUB 15,697mn (2020: RUB 21,226mn), a combination of loss before tax and income tax expense.

The income tax expense under IFRS decreased to RUB 1,071mn (2020: RUB 1,833mn), mostly due to a decrease in taxable profits and other drivers, as described under "Operating segments performance" above.

The majority of our taxable profits in 2021 and 2020, as well as income tax expenses, were generated in Russia. Pre-tax gains and losses in other jurisdictions mostly relate to share-based payment expenses, fair value revaluation, foreign exchange gains and losses, and other similar items, which are generally non-taxable (non-deductible) in those jurisdictions. These items affect pre-tax profit, but do not have an influence on income tax expense, which has an effect on the blended tax rate.

A detailed reconciliation of our aggregate segment financial information to IFRS is presented in the tables below.

Reconciliation of aggregate segment financial information to IFRS

	2021	2020 (restated)
Group aggregate segment revenue, as presented to the CODM	**125,752**	**106,373**
Adjustments to reconcile revenue as presented to the CODM to consolidated revenue under IFRS		
Differences in timing of revenue recognition	309	(5,831)
Consolidated revenue under IFRS	**126,061**	**100,542**

	2021	2020 (restated)
Group aggregate segment EBITDA, as presented to the CODM	**31,802**	**26,912**
Adjustments to reconcile EBITDA as presented to the CODM to consolidated loss before income tax expenses under IFRS		
Differences in timing of revenue recognition	309	(5,831)
Share-based payment transactions	(2,091)	(1,770)
Expected credit loss on consideration receivable	(554)	–
Other	(19)	(32)
EBITDA	**29,447**	**19,279**
Depreciation and amortisation	(18,371)	(15,138)
Impairment of fair value adjustments to intangible assets	(1,714)	(285)
Share of loss of equity accounted associates and joint ventures	(21,167)	(19,892)
Finance income	969	336
Finance expenses	(4,253)	(2,969)
Other non-operating loss	(197)	(163)
Goodwill impairment	–	(7,050)
Net gain on financial assets and liabilities at fair value through profit or loss	2,700	5,281
Net gain on disposal of subsidiary	–	1,437
Impairment of equity accounted associates	(559)	(260)
Net loss on disposal of intangible assets	–	(124)
Gain on remeasurement of previously held interest in equity accounted associate	305	46
Loss on remeasurement of financial instruments	(843)	(327)
Net foreign exchange (loss)/gain	(943)	436
Consolidated loss before income tax expense under IFRS	**(14,626)**	**(19,393)**

	2021	2020 (restated)
Group aggregate segment net loss, as presented to the CODM	**(6,486)**	**(1,959)**
Adjustments to reconcile net loss as presented to the CODM to consolidated net loss under IFRS		
Differences in timing of revenue recognition	309	(5,831)
Share-based payment transactions	(2,091)	(1,770)
Expected credit loss on consideration receivable	(554)	–
Other non-operating loss	(197)	(163)
Goodwill impairment	–	(7,050)
Impairment of fair value adjustments to intangible assets	(1,387)	(285)
Net gain on disposal of subsidiaries	–	1,437
Net loss on disposal of intangible assets	–	(124)
Net gain on financial assets and liabilities at fair value through profit or loss	2,700	5,281
Impairment of equity accounted associates	(559)	(260)
Gain on remeasurement of previously held interest in equity accounted associate	305	46
Loss on remeasurement of financial instruments	(843)	(327)
Net foreign exchange (loss)/gain	(943)	436
Amortisation of fair value adjustments to intangible assets	(3,947)	(3,298)
Net loss on financial liabilities at amortised cost	(892)	–
Differences in recognition of net share in loss of equity accounted associates and joint ventures	(2,252)	(7,969)
Other	(186)	(234)
Tax effect of the adjustments	1,326	844
Consolidated net loss under IFRS	**(15,697)**	**(21,226)**

Semi-annual analysis

RUB millions	2021				2020			
	H1 2021	% of revenue	H2 2021	% of revenue	H1 2020	% of revenue	H2 2020	% of revenue
Group aggregate segment revenue								
Online advertising	21,720	37%	26,888	40%	16,685	35%	22,319	38%
MMO games	18,947	33%	18,971	28%	17,150	36%	18,712	32%
Community IVAS	8,924	15%	9,526	14%	9,196	19%	9,141	16%
Education Technology services	4,319	7%	6,103	9%	1,891	4%	4,208	7%
Other revenue*	4,371	7%	5,983	9%	2,827	6%	4,244	7%
Total Group aggregate segment revenue	**58,281**		**67,471**		**47,749**		**58,624**	
Group aggregate segment EBITDA	**12,733**	**22%**	**19,069**	**28%**	**13,060**	**27%**	**13,852**	**24%**
Group aggregate net (loss)/profit	(3,928)	-7%	(2,558)	-4%	1,089	8%	(3,048)	-5%

*Other revenue includes other IVAS

The table above represents our segment semi-annual results, with the percentage of revenue for the four consecutive half-years ended 31 December 2021.

The majority of our revenues are affected by seasonality and as a result, revenues and operating profits are generally higher in the second half of the year than in the first six months:

- Advertising revenues are generally higher in the second half of each year, since significant amounts of advertising budgets are typically spent in the last quarters of the year.
- MMO games revenues are generally higher during the second half of the year due to the end of the vacation period, because users tend to play our MMO games more when not on holiday. But in H2 2021 the seasonality factor was compensated by the fact that there were no games launches and more expensive and less effective marketing traffic. At the same time MY.GAMES reached its goal of doubling EBITDA versus RUB 5.0bn delivered in 2018 a year ahead of schedule, with its 2021 EBITDA reaching RUB 10.4bn.
- Community IVAS revenues are generally higher ahead of, during and immediately after holiday and festive periods.
- Education Technology services also always higher in the second half of the year, because of Black Friday in November and Christmas and New Year promotions.
- Other revenues are also higher in the second half of the year, primarily due to the more significant number of B2B contracts in the second half of 2021.

In addition to seasonal fluctuations, our semi-annual H2 2021 results were driven by strong growth in revenue from online advertising and online education.

Most of the revenue growth in H2 2021 was concentrated in Online advertising (+20.5% vs. H2 2020), EdTech (+45% vs. H2 2020) and Other revenue (+41% vs. H2 2020).

The growth in online advertising was primarily driven by growth in online advertising in VKontakte, Odnoklassniki and Youla. VKontakte remains the key contributor to our core online advertising revenue stream.

The growth in online education was mostly driven by an increase in the number of students and courses of GeekBrains and Skillbox.

The growth in other revenue was mostly driven by new B2B projects and increasing sales of Capsula Mini (launched in February 2021) in the second half of 2021.

Aggregate segment EBITDA increased by 37.7% in H2 2021 vs. H2 2020 thanks to a faster increase in revenue than in expenses (15.1% vs. 8.1%). Personnel expenses increased by 23.4% in H2 2021 due to an increase in headcount, principally within EdTech and MY.GAMES. Increase in personnel expenses is compensated for by a decrease in marketing expenses by 17% in H2 2021, mostly within MY.GAMES as there were no new games launches in H2 2021 and marketing traffic was more expensive.

Financial position

Liquidity and capital resources

As of 31 December 2021, the Group had RUB 23,737mn in cash and had outstanding debt (excluding lease liabilities) and bonds (ruble and convertible USD bonds) worth a total of RUB 58,767mn.

In 2021, net cash provided by operating activities before interest and income tax decreased by 4% to RUB 26,464mn (2020: RUB 27,513mn). The decrease in net cash provided by operating activities before interest and income was mostly driven by a significant amount of contributions to the venture capital fund MVOF L.P., which was partially offset by an increase in EBITDA (excluding the effect of share-based payment expense and change in revenue deferral estimate, which represent the most significant non-cash IFRS adjustments to EBITDA).

The ratio of net cash provided by operating activities to consolidated revenues decreased to 16.6% in 2021 (2020: 22.9%), mainly as a result of factors described above and partially offset by reduced non-cash revenue deferral.

Capital expenditure to acquire property and equipment and intangible assets increased by 36% to RUB 15,113mn, driven by an increase in investment in servers and infrastructure for our social networks, B2B new projects and Cloud Gaming, as well as purchased and internally developed game software, and was otherwise in line with the organic growth of the business.

Net cash used in investing activities in 2021 included aggregate cash contributions of RUB 21.6bn invested into the O2O JV, RUB 4.4bn into the AER JV and RUB 4.7bn into online education and games.

In September 2021, the Group issued RUB 15bn unsecured bonds with an annual interest rate of 7.9% listed on the Moscow Exchange (MOEX). The bonds are issued at 100% of their principal amount with a denomination of RUB 1,000 each and will be redeemed at par on 15 September 2026.

The proceeds were raised in order to:

- fund development and organic growth across existing verticals;
- maintain the flexibility to pursue strategic M&A opportunities in high-growth verticals, with a particular focus on those stimulated by the pandemic;
- finance investments into the O2O and AliExpress Russia JVs;
- finance loans to the Group's subsidiaries, to be used for the purposes described above.

New option plans

In 2021 the Remuneration Committee of the Board of Directors of the Company approved Performance Stock Unit Plans ("2021 PSU Plan" and "2021 Special PSU Plan") setting out that PSU vesting shall generally be conditional on the meeting of certain performance KPIs. Please refer to Note 25 to our Consolidated Financial statements for further details.

During 2021, Skillbox Holding Limited issued option plans to Skillbox management and directors, setting out a vesting condition linked with an increase in market valuation and certain operating results. Please refer to Note 25 to our Consolidated Financial statements for further details.

PROFESSIONAL OF THE YEAR

SERGEY MARDANOV

VK EDUCATION

PROFESSIONAL OF THE YEAR

VLADIMIR SUKHODOEV

PROJECT OFFICE

PROFESSIONAL OF THE YEAR

ALEXANDER DZYUBA

VK VIDEO

Management

Management

Board of Directors

Dmitry Grishin
Co-Founder and Non-executive director, Chairman of the Board, Chairman of Remuneration and Nomination Committee
Dmitry Grishin was appointed Chairman of the Board in March 2012. He co-founded Mail in 2005 and served as Chief Executive Officer (Russia) from November 2010 to October 2016. Dmitry joined VK (formerly Mail.ru Group) in 2000 and was promoted to Technical Director in 2001. From 2003 to 2010, he led the business as CEO. Dmitry graduated from the Faculty of Robotics and Complex Automation at Moscow State Technical University and in 2012 he founded Grishin Robotics, a global investment company dedicated to supporting personal robotics around the world.

Dmitry Chudakov
Non-Executive Director, Member of Audit Committee, Member of Remuneration and Nomination Committee
Member of the Board of Directors since January 2022. Dmitry Chudakov has been the Head of Legal Department at Gazprom Media Holding since 2015. He is the Secretary of the Board of Directors of Gazprom Media Holding. He is a member of the Board of Directors of Gazprom ID Operator LLC, TNT Broadcasting Network JSC, Ruform LLC, PREMIER LLC, MT Technologies LLC, and Comedy Club Production LLC. Dmitry's career in law started in 1994. He managed legal departments at Pepsico Holdings and Novartis Pharma, and was a member of the Board of Directors of PepsiCo Holdings. Dmitry Chudakov graduated from the Morris Torez Moscow State Linguistic University in 1989 with a degree in Translating and Interpreting, and from the Lomonosov Moscow State University in 1996 with a degree in Law.

Uliana Antonova
Non-executive Director, Member of Audit Committee
Member of the Board of Directors since May 2019. In April 2019 Uliana Antonova was appointed General Director of MF Technologies, JSC. Uliana previously served as Vice President for Legal and Leasing Affairs of KARO cinema network (2014-2019), and Head of Legal at Rambler & Co (2009-2014); worked for Amtel-Vredestein Group (2007-2009) and was Member of the Board and Head of Legal for Tinkoff Group (2004-2007). In February 2020 Uliana was awarded the Certificate in Company Direction from IoD, UK. In November 2021 she successfully completed of the Effective Board Program held at INSEAD Business School, France. Uliana Antonova graduated from the Faculty of Law at Lomonosov Moscow State University.

Anton Ustinov
Non-Executive Director, Member of Remuneration and Nomination Committee
Member of the Board of Directors since January 2022. In 1999 he worked in the Legal Directorate of the Federal Road Transport Agency (Rosavtodor). From 1999 to 2000, he held the position of the Head of Department, Deputy Head of Directorate, and Head of the Legal Directorate of Rosavtodor. From 2000 to 2004, he was Deputy Head and Head of the Legal Directorate at the Ministry for Taxes and Levies of the Russian Federation. From 2004 to 2008, he headed the Legal Directorate of the Federal Taxation Service of Russia. From 2008 to 2012, he held the position of Aide, Deputy Head of the Secretariat of the Deputy Chairman of the Government of the Russian Federation, Executive Secretary of the Government Commission on the Fuel and Energy Complex and Regeneration of the Mineral and Raw Materials Base and Energy Efficiency. In June 2012, he was appointed as an Advisor to the President of the Russian Federation. Since March 2016, he has been the Chairman of the Management Board, SOGAZ INSURANCE. Anton Ustinov graduated the Saratov State Academy of Law in 1998 as well as the Russian Presidential Academy of National Economy and Public Administration in 2000. He holds a PhD in Law. He is a 2nd Class Full State Councilor of the Russian Federation. He has been awarded the Order of Honour, and he is a cavalier of the Order "For Merit to the Fatherland", IV class; he received the gratitude of the President of the Russian Federation. He is an Honorary Worker of the Fuel and Energy Complex.

Sergey Kuprianov
Non-executive Director, Member of Remuneration and Nomination Committee
Member of the Board of Directors since December 2021. Sergey Kuprianov has been the Press Secretary to the Chairman of the Management Committee at Gazprom PJSC since 2003, and the Head of Department at Gazprom PJSC since 2019. He coordinates information policy, internal and external communications activities, as well as media relations. He has also been serving as the Member of the Board of Directors of Gazprom-Media Holding since 2018. Sergey Kuprianov graduated from the Moscow Institute of Physics and Technology, majoring in Applied Mathematics and Physics.

Alexander Ayvazov

Executive Director

Member of the Board of Directors since 30.03.2022.

Alexander Ayvazov joined the VK team in 2022. As Senior Vice President for Investments and Business Development, he oversees these areas, the company's M&A deals and online education.

Prior to VK, Alexander worked for Rostelecom, where he was Vice President for Business Development. Previously, he had been CEO and managing partner of Titanium Investments, which he left in 2016. Since 2011, he has been focused on investments in high tech companies in different countries. From 2000 to 2011, he managed companies that specialized in direct investments and asset consolidation, was involved in M&A deals in Russia and abroad, and provided strategic consulting.

Alexander Ayvazov graduated from Tbilisi State University with a degree in applied physics and information technologies. He also studied at the Open University (UK), specializing in strategic management.

Vladimir Gabrielyan

Executive Director

Vladimir Gabrielyan began his career in IT as a system administrator at Russia Telecom. He later launched his own project, Web-Hosting.ru. Vladimir joined VK (formerly Mail.ru Group) in 2001 as a system administrator. He then moved on to head the development and technical support of one of the company's largest assets, the Mail.ru email service. Vladimir Gabrielyan was Mail.ru Group's Vice President and CTO from 2005 to 2019. For 13 years he has run a number of major projects and departments, leading all major technological initiatives. Vladimir Gabrielyan has been the First Deputy Chief Executive Officer of VK since 2019. Vladimir is an established expert in machine learning and big data.

Nikita Anisimov

Independent Non-Executive Director

Member of the Board of Directors since 30.03.2022.

From 2002 to 2013, Nikita Anisimov worked at Lomonosov Moscow State University in various positions: from leading specialist to Vice Rector. From 2013 to 2016, he held positions of Vice Rector for Academic Affairs, First Vice Rector, and Acting Rector at the University of Mechanical Engineering (Moscow). From August 2016 to June 2021, Nikita Anisimov was Rector of the Far Eastern Federal University. Starting July 2021, he heads HSE University.

Nikita Anisimov graduated from Lomonosov Moscow State University. He holds a PhD in Physical and Mathematical Sciences.

Mikhail Gordin

Non-executive Director

Member of the Board of Directors since 30.03.2022.

Mikhail Gordin was appointed Acting Rector of Bauman Moscow State Technical University in 2021.

From 2015 to 2021, he held executive positions in major scientific institutes in the aviation industry: the National Research Center «Zhukovsky Institute» and the Baranov Central Institute of Aviation Motor Development. From 2005 to 2015, he worked in managerial positions at Sibur and TNK-BP Management.

From 1997 to 2005 Mikhail Gordin rose from planning analyst to senior analyst at Conoco International Petroleum in Moscow. Before that he was an engineer and researcher at the Institute for Systems Analysis of Russian Academy of Sciences and worked as an economist at Global Edge.

He graduated from Bauman Moscow State Technical University with a degree in Automated Systems of Information Processing and Control in Technical Sciences. He completed his MBA program at the Institute of Business Studies RANEPA in Moscow.

Natalia Yakovleva

Independent Non-executive Director, Chair of Audit Committee

Member of the Board of Directors since 30.03.2022.

Ms Yakovleva is a certified accountant and experienced auditor, having spent 23 years at PricewaterhouseCoopers Russia ("PWC") including 12 years as an audit partner. She currently serves as independent non-executive director and chair of the audit committee at Globaltruck Management JSC, as independent director of Mediascope JSC.

Ms Yakovleva is a Russian national and a fluent English speaker. Natalia Yakovleva joined PWC in Moscow in 1993 and during her time with the organisation became an audit partner and served variously as PWC Russia's leader for Technology, Entertainment and Media Practice, corporate responsibility leader (ESG), regulatory contacts partner and quality review partner. Since leaving PWC in 2016, she has taken on roles as an independent director at Mediascope (formerly TNS Gallup) and, since 2017, at leading publicly-listed Russian logistics company Globaltruck Management.

Ms Yakovleva graduated with honors from the Moscow Institute of International Relations with a specialist degree in international economics, auditing and accounting. She is an ACCA certified accountant and Institute of Directors certified independent director.

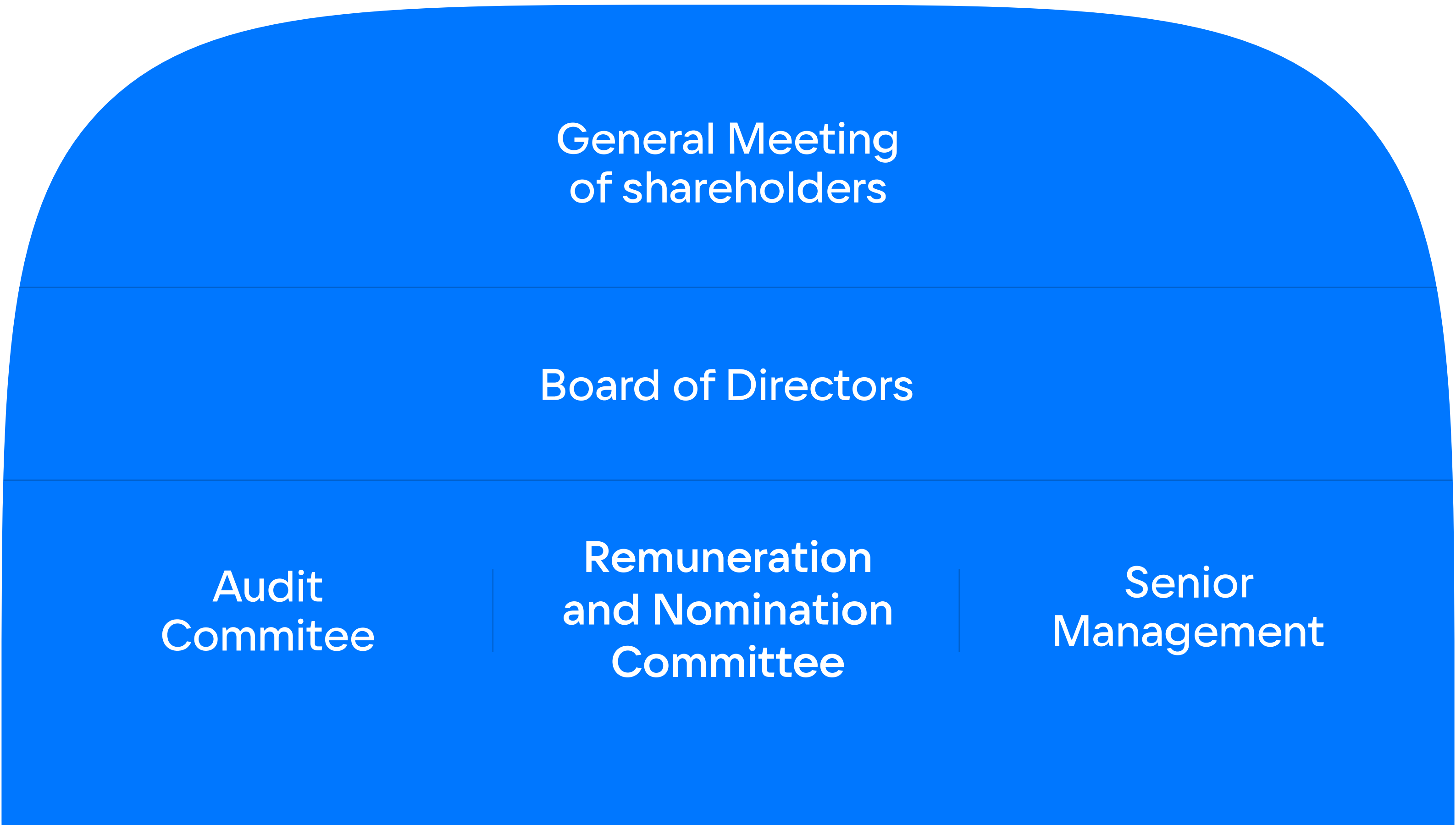
Corporate governance

VK Limited is incorporated in the British Virgin Islands, with its principal office in Limassol, the Republic of Cyprus.

Governance structure

In accordance with the Memorandum and Articles of Association of the Company and applicable BVI law, our ultimate decision-making body is the shareholders' meeting. Any action that can be taken by the members at a meeting may also be taken by a Resolution of Members.

This is followed by the Board of Directors; they are responsible for the general management of the Group, including coordinating strategy and general supervision. We also have an Audit Committee and a Remuneration and Nomination Committee. In the meantime, operational management is involved in the day-to-day running of the Group.



Share capital structure

The Company's authorised and issued share capital as of the date hereof:

Class of shares	Authorised shares	Issued shares
Class A (USD 0.000005 par value each)	10,000,000,000	11,500,100
Ordinary (USD 0.000005 par value each)	10,000,000,000	227,874,940

Both classes of shares are in registered form. In respect of Ordinary Shares, Global Depositary Receipts ("GDRs") (which represent interests in such Ordinary Shares) have been issued by Citibank NA and are traded on the London Stock Exchange and Public Joint-Stock Company "Moscow Exchange MICEX-RTS". Trading of VK's GDRs on the London Stock Exchange ("LSE") was suspended by the LSE on March 3, 2022, and remains suspended.

As of the date hereof, there are the following types of options over the Company's shares:

- Options for 6,423,842 Ordinary Shares granted to the Mail.ru Employee Benefit Trust on 11 November, 2010 with the initial exercise price of USD 27.70, which was then reduced by USD 3.80 on 17 August, 2012 and further reduced by USD 4.30 on 20 March, 2013 (due to the dividend payments), resulting in the current exercise price of USD 19.60. Out of 6,423,842 options, 5,581,680 options have been exercised. As of the date hereof, 728,505 of these options have been allocated and are fully vested;
- Options for 4,282,561 Ordinary Shares granted to the Mail.ru Employee Benefit Trust on 22 December, 2011 with the initial exercise price of USD 25.60, which was then reduced by USD 3.80 on 17 August, 2012 and further reduced by USD 4.30 on 20 March, 2013 (due to the dividend payments), resulting in the current exercise price of USD 17.50. As of the date hereof, 519,117 of these options remain allocated with 454,117 options fully vested. Out of 4,282,561 options, 3,601,758 options have been exercised.

The options generally have a four-year vesting schedule.

In March, 2015 the Shareholders of the Company approved the issue of up to 10,977,971 Ordinary Shares, all of which were issued to the Mail. ru Employee Benefit Trust to establish an incentive plan for employees, directors, officers and consultants of the Group. In December 2018, an increase by 2,000,000 GDRs to be acquired on the market was approved. September 2020 saw the approval of the issuance of 12,150,000 new ordinary shares to Mail.ru Employee Benefit Trustees Limited for the purposes of making awards under the incentive plans. On the basis of this pool of shares and GDRs various incentive scheme were established, including: 2015 RSU Plan, 2017 RSU Plan, 2021 PSU Plan, 2021 Special PSU Plan, giving its participants rights to acquire VK's GDRs subject to vesting of RSUs/PSUs under the terms of respective plans. In March 2022, the Company implemented the replacement of RSUs/PSUs generally vesting in 2022 with rights to receive cash at the exchange rate of 1,440 (in Russian Rubles) per RSU/PSU. Replaced RSUs/PSUs returned to the pool of funds of Mail. ru Employee Benefit Trust.

As of the date hereof, out of the total pool 6,814,677 PSUs/RSUs remain allocated, 535,000 of which are vested. 10,550,219 RSUs/PSUs were exercised.

During the 2021 financial year, the Company itself did not acquire any treasury stock.

Annual General Meeting (AGM) of shareholders

The shareholders' meeting is the Company's supreme governing body. AGMs are convened by the Board of Directors or by a written request from shareholders who hold, in aggregate, 30% or more of the outstanding votes in the Company.

The share capital of the Company is divided into two classes of shares: Class A Shares and Ordinary Shares. Class A Shares each carry 25 votes at shareholders' meetings, while Ordinary Shares carry one vote per share.

The agenda for the shareholders' meetings is determined by the Board of Directors. However, a shareholder or shareholders who hold, in aggregate, 7.5% or more of the outstanding voting shares of the Company may add items to the agenda of a meeting:

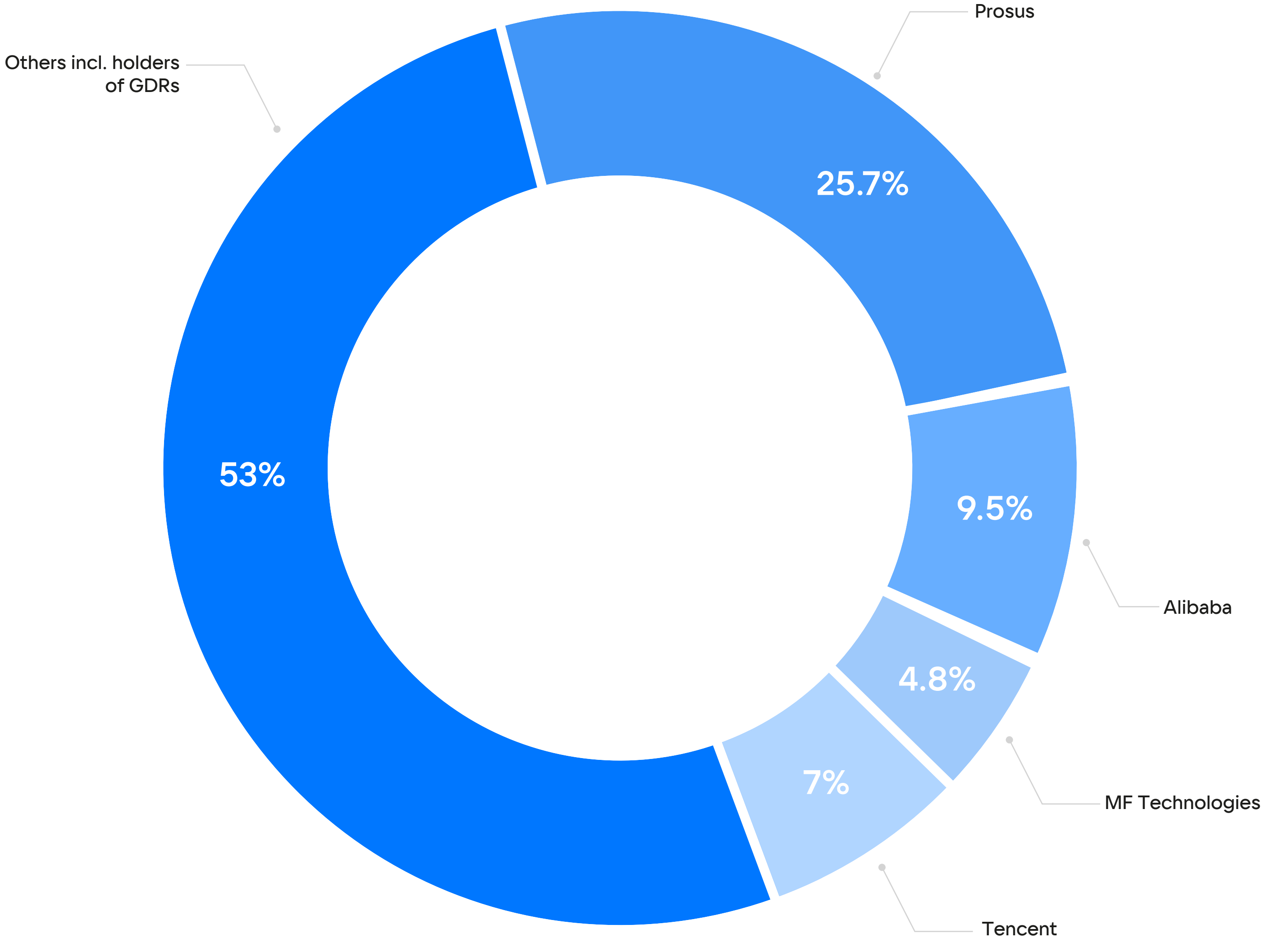
i. no later than a week before the meeting or;
ii. during a meeting, with the consent of shareholders who hold, in aggregate, more than 50% of the outstanding voting shares of the Company.

Transfer and conversion of shares

Ordinary Shares are freely transferable. Class A Shares are freely transferable, save that a transfer of Class A Shares that would result in a proposed acquirer (other than a person who was already a member on 27 August, 2010) and persons acting in concert with the acquirer holding 75% or more of the voting rights of the Company is subject to meeting the mandatory offer requirements set out in the Articles.

At the request of any member holding any Class A Shares, the Class A Shares which are the subject of the request are automatically converted into Ordinary Shares. This is on the basis that each Class A Share automatically converts into one Ordinary Share and ranks pari passu in all respects with the existing Ordinary Shares in issue.

Shareholders' economic interest, %



Voting rights

Each Class A Share has the right to 25 votes at a meeting of the shareholders of the Company or on any resolution made by the shareholders of the Company.

Each Ordinary Share has the right to 1 vote at a meeting of the shareholders of the Company or on any resolution made by the shareholders of the Company.

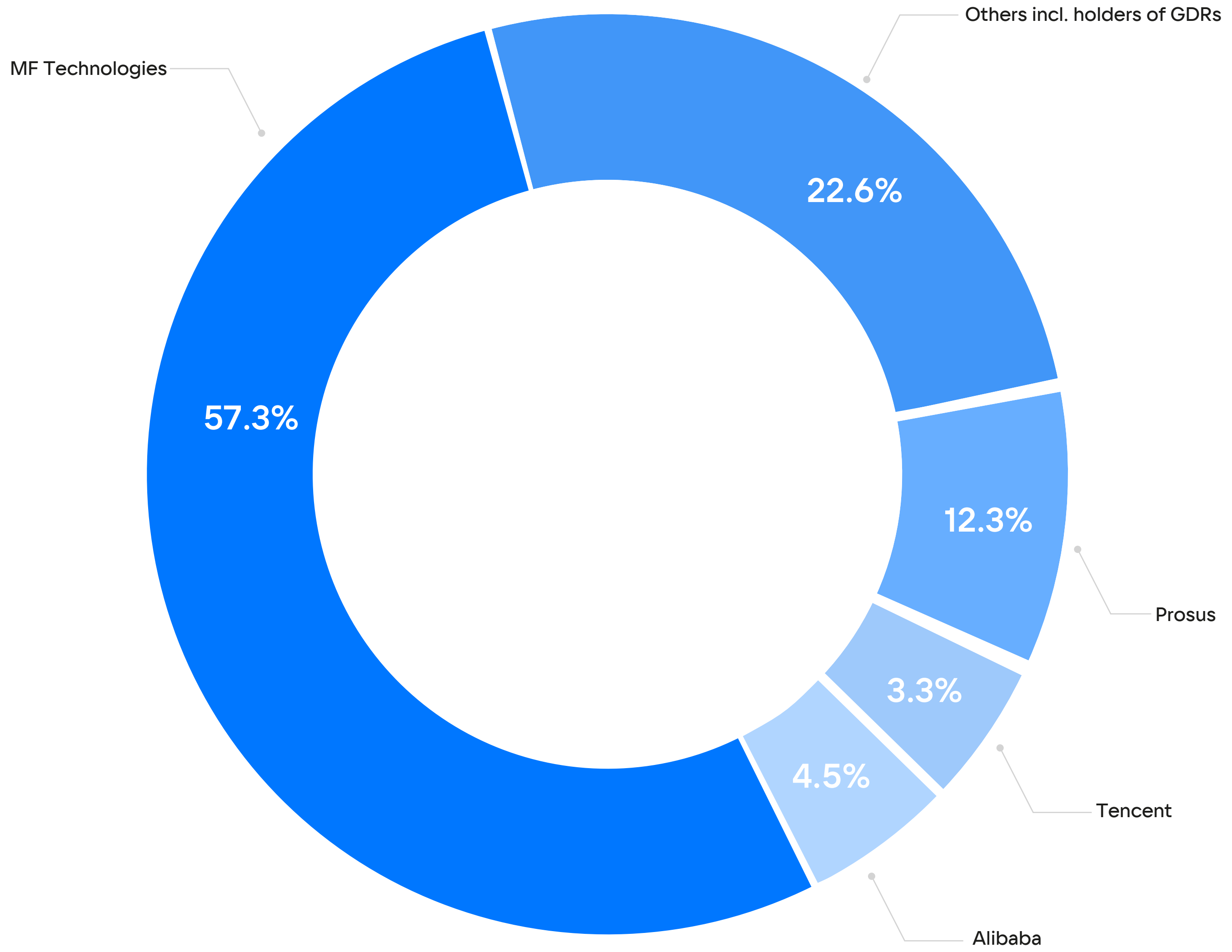
Board of Directors

The Board of Directors is responsible for the general management of the Group. This includes strategic planning and general supervision.

The Memorandum and Articles of Association specify that there shall be 10 Directors – eight of whom shall be nominated and elected by shareholders (the "Elected Directors") and two of whom shall be independent directors (the "Independent Directors").

Shareholders' voting interest, %

as of the date hereof:



The Elected Directors are appointed by a vote of the members, with each proposed candidate being put to the members for a vote, with voting on each candidate being treated as a separate vote and with each member being entitled to vote on each proposed candidate (to the effect that the eight candidates who attract the highest number of votes shall be elected as the eight Elected Directors) for a period from the date of their appointment until the second AGM after that date. On expiry of their term, Elected Directors must resign, but are eligible for re-election.

Any shareholder, or group of shareholders, who holds, in aggregate, no less than 5% of (a) the total number of votes attached to the issued shares; or (b) the total number of the issued shares, is entitled to nominate candidates for election by the shareholders as Elected Directors to the Board of Directors. Such nomination must be made not less than 21 days before any AGM at which any Elected Director is due to resign.

The two Independent Directors are nominated by the Board of Directors and appointed by a resolution of the Board of Directors. Independent Directors serve for the period fixed in their terms of appointment, as specified by the Board.

The Board of Directors elects one of its members to act as the Chairman of the Board.

Powers of the Board of Directors

The Board of Directors is granted the authority to manage the business affairs of the Group. They have the authority to make decisions relating to, among other things, the following:

- The right to issue shares and other securities (except as otherwise required by the Company's Memorandum and Articles of Association).
- The approval of the annual budget and annual financial statements of the Company.
- The declaration of any dividend.
- The convening of any shareholders' meeting.
- The appointment of the Group's auditors.
- The appointment of any committee of the Board of Directors, including the Company's Audit Committee and Remuneration Committee (see below).
- The exercise of all rights of the Company in relation to ICQ LLC.
- The approval of any proposal under which the Company or any direct subsidiary delegates any substantial management authority to any other entity.
- The approval of any transaction that the Managing Director is not empowered to approve under the Memorandum and Articles of Association, but that is not a Substantial Transaction;
- The exercise of any rights that the Managing Director is not empowered to exercise under the Memorandum and Articles of Association and that does not require any kind of Resolution of Members.

The Board of Directors, or any committees thereof, meet when and how the Directors determine to be necessary or desirable. Meetings are held in the Company's principal office or wherever the majority of the Directors agree.

A resolution at a duly constituted meeting of the Board of Directors or of a committee of Directors is approved by a simple majority vote of the Directors. A resolution consented to in writing is approved by an absolute majority of all the Directors. For the purposes of establishing a majority, the Chairman of the Board (or chairman of the meeting as the case may be) has a casting vote in the event of a tie.

Name	Position	Date of appointment	Expiry of term
Dmitry Grishin	Chairman	11 June, 2021	2023 AGM
Uliana Antonova	Non-executive Director	11 June, 2021	2023 AGM
Sergey Kuprianov	Non-executive Director	14 Dec, 2021	2023 AGM
Dmitry Chudakov	Non-executive Director	10 Jan, 2022	2023 AGM
Anton Ustinov	Non-executive Director	10 Jan, 2022	2023 AGM
Natalia Yakovleva	Independent Director	30 March, 2022	2023 AGM
Nikita Anisimov	Independent Director	30 March, 2022	2023 AGM
Mikhail Gordin	Non-executive Director	30 March, 2022	2023 AGM
Alexander Ayvazov	Executive Director	30 March, 2022	2023 AGM
Vladimir Gabrielyan	Executive Director	30 March, 2022	2023 AGM

Committees of the Board of Directors

VK Company Limited has an Audit Committee and a Remuneration and Nomination Committee.

Audit Committee

The Audit Committee is appointed by the Company's Board of Directors and meets on a regular basis, but at least once every quarter.

The purpose of the Audit Committee is to assist the Company's Board of Directors in fulfilling its responsibilities in respect of:

- the quality and integrity of the Group's integrated reporting, including its financial statements;
- the Group's compliance with key applicable legal and regulatory requirements as relating to financial reporting;
- the quality and independence of the Group's external auditors;
- the performance of the Group's internal audit function and external auditors;
- the adequacy and effectiveness of internal control measures, accounting practices, risk management, information systems and audit procedures;
- monitoring compliance with the Company's code of ethics.
- The Audit Committee is responsible, among other things, for:
- reviewing annual financial statements and interim financial results;
- regular internal reports to management prepared by the internal audit department, and management's response;
- consideration of external auditors' reports – including the receipt and review of reports, which furnish, in a timely fashion, information related to various accounting matters – and matters relating to internal controls if applicable, emphasising reported unadjusted audit differences and disagreements between the external auditors and management;
- annually reviewing and reporting on the quality and effectiveness of the audit process; assessing external auditors' independence, deducing whether they have performed the audit as planned and establishing the reasons for any changes; obtaining feedback about the conduct of the audit from key members of the Group's management, including the CFO;
- reviewing the performance of the external auditors and evaluating the lead partner and discharging and replacing, in consultation with the Board, the external auditor or lead audit partner when circumstances warrant;
- presenting the Committee's conclusions in respect of the external auditors to the Board;
- evaluating and providing commentary on the external auditors' audit plans and scope of findings, identifying issues and reports, and approving non-audit services performed by the external auditor.

Members of the Committee

- Natalia Yakovleva (Chair)
- Uliana Antonova
- Dmitry Chudakov

Remuneration and Nomination Committee

The Remuneration and Nomination Committee is responsible for approving the terms of appointment and remuneration of the Group's senior managers as well as for the approval of options or RSUs to be granted under incentive plans.

The Remuneration and Nomination meets on an as-and-when-appropriate basis.

Members of the Committee

- Dmitry Grishin (Chairman)
- Dmitry Chudakov
- Sergey Kuprianov
- Anton Ustinov

Internal control system in relation to the financial reporting process

Internal control is exercised by the Group's Board of Directors, executive bodies, officers and operational management. Their aim is to secure the achievement of goals set by the Company in the following areas:

- the efficiency and effectiveness of the Group's business activity;
- the reliability and credibility of the Group's reporting and compliance with the requirements of regulatory acts and the Group's internal documents.
- The following functions are performed by the Internal Audit Department:
- carrying out internal audits, reviews and other engagements with respect to the Company's subsidiaries;
- assessing the effectiveness of the Company's internal control system, including its subsidiaries, and proposing recommendations as a result of those assessments;
- assessing the effectiveness of the risk management process within the Group and proposing recommendations as a result of those assessments;
- providing necessary consultations to the management of the Company and its subsidiaries on appropriate corrective action plans flowing from internal audits.

Risk management system

VK Company Limited is subject to certain risks that affect our ability to operate, serve our clients, and protect our assets. Controlling these risks through a formal programme is necessary for the well-being of VK Company Limited. The Group is committed to identifying and managing risk, in line with international best corporate governance practice.

Effective and adequate risk management and internal control systems are crucial to the achievement of business strategies. To ensure the effectiveness and efficiency of both these systems the Group has adopted the "three lines of defence" model, which comprises day-to-day operations and management, risk management function and independent assurance. These lines are aimed at providing reasonable but not absolute insurance against material losses or failures to achieve strategic objectives.

The existing risk management system operates as follows:

- the Board of Directors has the responsibility to ensure that it has dealt with the governance of risk comprehensively;
- the Board is also responsible for overseeing the risk appetite, i.e. the level of risk the Group is willing and is ready to take;
- the CEO is accountable to the Board for the enterprise-wide management of risk;
- management is responsible for assessing and managing risks in accordance with approved plans and policies;
- the Risk Management Committee assists the management in carrying out its responsibility for the governance of risk, reviews and approves risk management policy, risk mapping and registers risk assessments and mitigation activities; ensuring that an appropriate enterprise-wide risk management system and process is in place with adequate and effective risk management processes that include strategy, ethics, operations, reporting, compliance, IT and sustainability;
- the Audit Committee assists the Board in its responsibility for overseeing the risks, including financial reporting risks and internal financial controls, as well as fraud and IT risks as they relate to financial reporting; the overall adequacy and effectiveness of risk management;
- internal audit provides assurance on the adequacy and effectiveness of the risk management process across the Group. The Risk Management Committee comprises of the principal operating managers of the Group (the heads of principal business units) appointed by the CEO or his Deputy.

The Risk Management Committee is chaired by the Deputy CEO. Members of the Risk committee, taken as a whole, must Comprise of individuals with risk management skills and experience.

Corporate governance code

VK Company Limited, as a BVI incorporated limited company with a listing of Global Depositary Receipts on the Official List maintained by the UK Listing Authority, which are admitted to trading on the London Stock Exchange and Public Joint-Stock Company "Moscow Exchange MICEX-RTS", is not subject to any corporate governance code, nor has it voluntarily decided to apply any corporate governance code.

However, the Company does apply corporate governance standards, including: the appointment of two Independent Directors to its Board of Directors; the appointment of Remuneration and Nomination and Audit committees; and the periodic re-election of Directors. This goes beyond the requirements of national law.

The Board of Directors has adopted various policies and charters relating to the Company's governing bodies. These include the Board Charter, Code of Ethics and Business Conduct, Directors' Right to Access Information/Documents Policy, Legal Compliance Policy, Charter of the Audit Committee of the Board of directors, Internal Audit Charter, Remuneration and Nomination Committee of the Board of Directors Charter, Risk Committee Charter, Risk Management Policy, Policy on Access to Inside Information and the Trading Policy for Directors, Senior Managers and Employees. These are all followed by the Group in all material respects.

Policies and other details of the Company's corporate governance practices can be found at https://vk.company/ru/investors/corpgov/.

INTERNAL SOLUTION OF THE YEAR

Denis Golovachev ▪ Vladislav Bryzgalin ▪ Andrey Iatsuk ▪ Sergey Mikhalev

NETFLOW 2.0 —STATISTICS OF ALL NETWORK TRAFFIC IN VK

INTERNAL SOLUTION OF THE YEAR

Ivan Levikov ▪ Daniil Smirnov ▪ Artem Burla ▪ Nikolay Razuvaev

VK STF — REMOTE ACCESS TO FARM OF SMARTPHONES AND VIRTUAL MOBILE DEVICES

INTERNAL SOLUTION OF THE YEAR

Igor Yermakov ▪ Anastasia Pechatnikova ▪ Dmitry Fedorov ▪ Dmitry Smyslov ▪ Anna Latkina-Turkova

HYBRID OFFICE "MAKE REALLY GOOD"

Risk management

Impact of the Latest Geopolitical Developments on the Company

In connection with Russia's special operation in Ukraine in 2022, the US, EU, UK and other countries have imposed broad economic and trade sanctions. The scope of these sanctions has evolved at pace and continues to do so across various jurisdictions including among other restrictions on dealing with designated individuals and entities; blocking and asset freezing sanctions; restrictions on the Russian financial sector and imposing export controls limiting the export of a wide range of goods and technical assistance to Russia. Moreover, there is a risk that further sanctions may be introduced, such as all Russian banks will be disconnected from SWIFT. Furthermore, in response to sanctions imposed on Russia by a number of countries, Russia has implemented new counter-sanctions including among other restrictions on provision of debt financing by Russian creditors to foreign recipients, restrictions on transactions involving shares in Russian companies and immovable property, restrictions on transferring funds abroad and on payment of dividends and other payments on Russian securities.

On the macroeconomic side these sanctions and geopolitical situation are likely to have significant economic and financial consequences both regionally and potentially at a global scale.

Certain Company's indirect shareholders and management representatives have been targeted by various recent sanctions. However, as far as the Company is aware, neither the Company, nor any of its subsidiaries is directly designated under any of US, UK or EU sanctions. As far as the Company is aware, neither the Company nor any of its subsidiaries is directly subject to any sanctions announced to date by the US, UK or EU.

As the political situation is constantly evolving, it is impossible at the moment to accurately predict the full impact of the sanctions imposed or any counter measures taken by the Russian government in response to such sanctions with further negative effect on the Russian economy and financial markets. If all Russian banks are disconnected from SWIFT, we may experience difficulties in conducting payments abroad. Moreover, we are subject to risks relating to our technology as a result of the current environment as we heavily rely on foreign technology infrastructure, such as servers and server equipment, and iOS and Android app stores to download our apps from. If the businesses on which we rely for these aspects of our operations, are unable to continue to provide uninterrupted services, our operations may be disrupted.

We will continue to monitor and revisit our contingency plans in light of developments, including in response to any further sanctions. The events mentioned above require us to adapt to a changing operating environment characterized by high level of uncertainty and having a significant impact on the Company and its operations.

Liquidity and financial resources

Liquidity risk is defined as the risk that an entity will encounter difficulty in meeting obligations associated with financial liabilities. The Group monitors its risk of a shortage of funds using a liquidity planning tool. Management regularly monitors projected and actual cash flow information, analyzes the repayment schedules of the existing financial assets and liabilities and performs annual detailed budgeting procedures.

The Group's objective is to maintain a balance between continuity of funding and flexibility through the use of operating cash flows, bank loans and overdrafts. Other financial liabilities of the Group are mostly represented by trade payables with maturity of less than one year.

Credit risk

Credit risk is the risk that a counterparty will not meet its obligations under a financial instrument or customer contract, leading to a financial loss.

Financial assets, which potentially subject the Company and its subsidiaries and associates to credit risk, consist principally of cash and cash equivalents, short-term time deposits, short-term receivables and convertible loans. The total of these account balances represents the Group's maximum exposure to credit risk.

The Group places its cash and cash equivalents with highly rated financial institutions, which are considered at the time of deposit to have minimal risk of default. The Group does not require collateral or other security to support the financial instruments subject to credit risk. Accounts receivable from the two largest customers collectively represented 8.5% of total trade accounts receivable of the Group as of December 31, 2021 and 12% as of December 31, 2020.

No customer accounted for more than 10% of revenue in 2021 or 2020. The Group provides credit payment terms to its customers in accordance with market practices and based on thorough review of the customer's profile and creditworthiness. Although collection of receivables could be influenced by economic factors, management believes that there is no significant risk of loss beyond the allowance already recorded.

Capital management policy

For the purpose of the Group's capital management, capital includes issued capital, share premium and all other equity reserves attributable to the equity holders of the parent. The primary objective of the Group's capital management is to maximize shareholder value. The Group manages its capital structure and makes adjustments in light of changes in economic conditions.

Market risk

Market risk is the risk that the fair value of future cash flows of a financial instrument will fluctuate because of changes in market prices. The market risks the Group is exposed to comprise of two types of risk: currency risk and equity risk. The Group's financial instruments affected by market risk include payables, cash and cash equivalents, short-term time deposits, financial investments in associates and derivative financial instruments. The Group's equity risk arises from uncertainties about future values of the investment into unlisted securities.

Risks relating to Company's financial condition

Company's failure to comply with the restrictive covenants in the Loan Agreements or in the terms and conditions of the Bonds may cause the acceleration of repayments of our outstanding debt, which could have a material adverse effect on our business, financial condition, operational results and prospects.

In 2019 and 2020, we raised several loans with a total value of RUB 22,846mn from Sberbank and Raiffeisenbank, maturing in 2023 and 2024 respectively, to fund M&A and day-to-day activities (the "Loan Agreements"). The Loan Agreements contain various restrictive covenants, including an obligation to maintain certain financial ratios, that we as a borrower are required to fulfill.

In 2020 we issued USD 400mn in Senior Unsecured Convertible Bonds due in 2025 (the "Bonds"). The terms and conditions of the Bonds contain various restrictive covenants, including obligations to maintain and pay any other forms of financial indebtedness we may have, that we as an issuer of the Bonds are required to fulfill. As the Company previously disclosed on its press-releases under the terms of the Company's Bonds, a "De-listing Event" occurs if, among other things, trading of the GDRs on the LSE Main Market is suspended for a period of 10 consecutive dealing days or more. On March 3, 2022, trading of the VK's GDRs on the London Stock Exchange ("LSE") was suspended by the exchange. As a result, a "De-listing Event" under the Bonds has occurred following the close of trading on March 16, 2022 as trading did not resume.

Due to, among other things, uncertainty around the impact of the restrictions under the recently enacted Russian capital control and protection measures on the ability to transfer cash funds from the Company's Russian subsidiaries to its foreign holding company, which is the issuer of the Bonds, and continuing multiple changes to the regulatory backdrop, there is a risk that the Issuer will not have sufficient liquidity to fund the payments required for the redemption if most of the bondholders choose to exercise their redemption right.

In 2021 we issued RUB 15bn Local Russian Bonds due in 2026 (the "Rus Bonds").

As noted, our loan agreements and the terms and conditions of our Bonds and Rus Bonds contain customary market standard restrictive covenants and other obligations. Failure to comply with our financial and other covenants contained in any of our loan agreements or the terms and conditions of the Bonds, including compliance with financial ratios and other covenants, or failing to obtain prior consent of lenders and/or the holders of the Bonds or the trustee of the Bonds for certain actions, or failing to obtain extensions or waivers in respect of any breaches of our loan agreements, the terms and conditions, the Bonds, amendments to our loan agreements, or the terms and conditions of the Bonds, would constitute an event of default under the relevant loan agreement or the terms and conditions of the Bonds. This could result in the acceleration of repayment of principal and interest under the relevant loan agreement or under the terms and conditions of the Bonds, reduced opportunities for future borrowing, debt service or Bonds obligations in excess of our ability to pay, liability for damages or inability to further develop our business and pursue our strategic objectives, any of which could have a material adverse effect on our business, financial condition, operational results and prospects.

Business risks

Technological changes and development

The internet industry is characterised by constant and rapid change in technology, consumer preferences, the nature of services offered and business models. A failure to innovate, to provide popular products and services or to react quickly to changes in the market could affect our products and services and, in turn, could affect advertising revenue. If we are unable to respond effectively to change and continue to offer attractive and innovative products to our users, the popularity of our products and services may decline, which could adversely affect our business in a number of ways, including through lower revenues.

Quality products for expansion to new markets

The Group aims to continue its expansion to foreign markets by offering innovative and competitive products to audiences. Should we fail to ensure a sufficient supply of high-quality game titles, mail services and social network features for our users, we may face a decline in respective audiences and, subsequently, revenues.

The recently introduced sanctions may affect the company expansion strategy to foreign markets.

Mobile distribution

As we distribute our mobile products primarily via app stores, we are dependent on the interoperability of our products with major operating systems which we do not own or otherwise control: e.g. iOS and Android.

If Google Play or Apple's App Store remove our mobile products, alter their search mechanisms or otherwise give preferential treatment to competing apps, we may face a decline in popularity for our products and, subsequently, changes in mobile market shares.

Mobile technology development

The use of mobile devices to access internet services is growing every year. Mobile device monetisation may not catch up with desktop monetisation rates. Manufacturers may introduce their own standards and technical requirements for their devices, which may adversely affect performance and usability of our services and products on these devices. If we fail to successfully develop or use new mobile technologies or adapt in a cost-effective and timely manner to the changing industry standards or user preferences, whether due to legal, financial or technical or other reasons, our financial results could be adversely affected. An inability to develop products and services which are compatible with new mobile devices could result in a failure to capture a significant share of an increasingly important market.

Ad-blocking technologies

We earn a significant portion of our revenues from displaying advertisements on own and partners` platforms. When targeting and measuring ad campaigns, we heavily rely on data signals from user activity on owned platforms as well as on platforms that we do not control. Any restrictions, whether by law or by ad-blocking technologies on use of these data signals may harm efficiency of our advertising products, hence decrease ad revenues. The company has a process in place to perform monitoring of any new restrictions, whether by law or by ad-blocking technologies on use of data signals to implement a compensating measure.

Advertising market

Advertisers' spending depends on the overall economic situation in Russia and could be negatively affected by a recession or other economic factors. Advertisers may also re-distribute their budgets to other channels, such as TV, should the latter offer favourable terms or additional inventory. Such a decrease in online advertising expenditure due to any of these factors may negatively affect our revenue.

Competition

The development by domestic and large international internet companies of products which compete with the services provided by the Group could decrease the Group's user base and make it less attractive to advertisers.

Increased competition could result in a reduction in the number of customers who use and buy our products. This, in turn, would result in lower revenue and net income. Similarly, the Group may be required to spend additional resources to promote or improve its services in order to compete effectively, which could require additional capital or adversely affect the Group's profitability.

Unsuccessful game titles

User expectations regarding the quality, performance and gameplay of MMOs are high, though even the most successful titles remain in high demand only for a limited period of time, unless refreshed or otherwise enhanced with additional content. In order to remain competitive and attractive to our users we must constantly develop new products or enhance existing ones. There is a risk that the major new MMO titles may fail to gain traction with users, which would lead to the underperformance of the online games business and lower-than-expected revenues.

Mobile games could also be unsuccessful as they may fail to achieve the required profitability targets due to the high cost of marketing and revenue share payable to mobile platforms.

Investments and acquisitions

Investments in and acquisitions of other entities are an important part of our overall strategy. We have invested in a number of diverse businesses over the history. We expect to continue to consider various businesses, technologies, services, products and teams as potential investment targets for our development strategy and use of capital. We may face difficulties in integrating these diverse corporate cultures, technologies, business models, employees, internal controls, financial reporting, and other policies and procedures into our existing business processes in an effective and efficient manner. We may also encounter difficulties with those investments in relation to their underperformance relative to our initial expectations or acquisition price, or we may incur unexpected expenses pertaining to these integrations.

Joint ventures

To pursue our strategic development goals we have entered into several joint venture agreements with third parties. These joint ventures (JVs) could have a significant impact on our financial position and results.

We do not exercise sole control over such entities, as shareholders' agreements provide certain contractual and management rights to our partners.

Failure to successfully develop such new businesses and to operate them in a sustainable and efficient manner or a failure to reap the anticipated benefits of our investments could cause us to face unanticipated liabilities and harm our overall financial results.

As far as we know our JVs are not subject to any direct sanctions announced to date by the United States, the United Kingdom, the European Union or other countries. However, our partners in JVs could be directly or indirectly affected by the imposed sanctions which in turn may have a significant negative impact on JVs operations, financial position and results.

In spite the fact that currently our JVs have all the necessary technologies, equipment, and software to continue operate as usual there is a risk that sanctions may limit the JVs access to new technologies, equipment, and software and may negatively affect JVs growth in long run.

The company has a process in place to monitor international sanctions that might directly or indirectly affect our JVs to ensure that timely measures are developed and applied by management to compensate the impact on the Company operation where it is possible.

Personnel

As competition in Russia's internet industry increases, our business and operations could be adversely affected by difficulties in hiring, motivating and retaining highly skilled people. Our performance and future success depend on talent and efforts of a large number of highly skilled individuals within the Group. We will need to continue to identify, hire, develop, motivate and retain highly skilled personnel for all areas of our organisation, including those with programming skills in rare computer languages. Competition in the internet industry, for suitably qualified employees is high. As this competition increases, it may be more difficult for us to motivate, retain and hire highly skilled personnel. If we do not succeed in retaining or motivating existing personnel or attracting additional highly skilled personnel, there may be a significant and adverse effect upon our business and operational results.

Our future success depends heavily upon the continuing services of our senior management team, and a failure to retain these personnel could have a significant adverse effect on our business.

In addition, even if sufficient numbers of highly skilled personnel can be retained, salaries may rise significantly due to competition, increasing our costs.

This could have a significant adverse effect on our business, operational results and financial condition.

Infrastructure and capacity

If the infrastructure in Russia is not able to support increased demand, the Group's services could be interrupted or its systems damaged. A reduction in the availability of third-party providers of network and server capacity could limit the Group's ability to offer certain services or to expand. Coronavirus, potential politically motivated sanctions or other similar outbreaks or adverse public health developments may result in our operations, and those of our customers and suppliers, facing delays or disruptions, such as difficulty obtaining equipment and its components, and/or the temporary suspension of operations. Network or power failures could result in the loss of data and in a reduction in the number of users, which could have a significant effect on the Group's business, operational results and financial condition.

Cyber security

Hackers and groups of hackers may create malicious software (malware) to pursue their own criminal interests. These cyber criminals create Trojan programs and computer viruses, including adware and ransomware, which are becoming more and more sophisticated and numerous, aimed at stealing sensitive information or otherwise harming users and their data. Although we believe we have processes and systems in place to protect the data we possess, no measures can ensure absolute security and prevention of data loss, as our industry is especially prone to cyber threats.

Should hackers target the Group's customer databases or online gamers' personal data, and we fail to appropriately and rapidly defend our servers, we may face serious reputational losses and significant financial effects.

Intellectual property rights

The Group may be subject to infringement claims from third parties in the future resulting from the technology and intellectual property used in the provision and marketing of its services.

If the Group is found liable for infringement, it may be required to pay significant damages, and if it is unable to license or develop non-infringing technology in good time, it may be unable to continue offering the affected services without risk of liability.

Similarly, third parties may obtain and use the Group's intellectual property without authorisation. The validity, application, enforceability and scope of protection of intellectual property rights for many internet-related activities are uncertain and still evolving, which may make it more difficult for the Group to protect its intellectual property. This could have a significant effect on its business, operational results and financial condition. The Group and its associates have been subject to such proceedings in the past. Although none of them was individually significant, similar potential claims may potentially subject the Group to significant losses in the future, which currently cannot be reliably estimated.

Political, economic and social risks

Political instability in Russia

VK is registered in the BVI, with the Company's principal office in the Republic of Cyprus, whereas the operating business of the Company's subsidiaries is mostly in Russia. Russia's economic, political and social conditions, as well as government policies, could affect VK's business, financial condition and the results of VK's operations. A substantial portion of VK's businesses, assets and operations are located in Russia. Accordingly, our financial condition, operational results and business prospects are, to a significant degree, subject to economic, political and legal developments in the Russian Federation. At present the Russian economy differs from the economies of most developed countries in many respects, including, among other things, the level of economic development and economic instability, government scrutiny, the economic growth rate, levels of inflation and the instability of the banking system. Any future downturns in the Russian economy may impair our ability to achieve positive financial results and our overall business prospects.

Future political stability in the Russian Federation is not guaranteed and any instability could have a negative impact on the overall economic situation, including capital flight and a slowdown of investment and business activity. Additionally, the Russian parliament and/or government officials may apply politically motivated or ambiguous legislative acts which could have a material adverse effect on the value of investments relating to the Russian Federation and securities in particular, as well as on our business, our ability to obtain financing in the international markets and our financial position or prospects.

Economic and geopolitical conflicts, sanctions

Economic instability in Russia could have an adverse effect on our business.

VK is registered in the BVI with the Company's principal office in the Republic of Cyprus, whereas the operating business of the Company's subsidiaries is mostly in Russia. As an emerging market, Russia is vulnerable to economic instability, market downturns and economic slowdowns elsewhere in the world. Such risks, whether actual or perceived, may negatively affect investors' intentions and willingness to invest money in the Russian economy. In 2014-2022 the continued economic sanctions imposed on certain Russian companies, sectors and government officials by the U.S., EU and certain other countries over the conflict in Ukraine also added significant uncertainty to the investment climate and overall economic situation. This may create difficulties for the Russian economy to properly develop, obtain sufficient liquidity, avoid volatility, and for foreign investors to pursue with confidence, and expect returns on, investments.

The involvement of the Russian Federation in economic or geopolitical conflicts could adversely affect our business and the value of investments in GDRs.

Increased international sanctions on Russia in 2022 due to involvement in special operation, and continuing changes to the nature and potential impact of those sanctions, may have an adverse significant effect on our business and financial condition.

On March 3, 2022, trading of VK's GDRs on the London Stock Exchange ("LSE") was suspended by the exchange in accordance with the orderly markets provision under the London Stock Exchange rules. As a result, a "De-listing Event" under the Bonds has occurred following the close of trading on March 16, 2022 as trading did not resume. Also, as it is currently unknown when trading in the VK's GDRs will be resumed there is a risk that VK's GDRs may be delisted from LSE if the trading is not resumed during the period of more than six months from the date of suspension.

There is a risk that the Company will not have sufficient liquidity to fund the payments required for the redemption of the Bonds if most of the bondholders choose to exercise their redemption right or for other reasons outside the Company's control.

Due to continuing changes to the nature and potential impact of sanctions, there is a risk that the Company, and its related companies located outside of Russia may face difficulties with funds transfer from/to its bank accounts, or bank accounts blockage due to sanctions.

In spite the fact that currently the Company has all the necessary technologies, equipment, and software to continue operate as usual there is a risk that sanctions may limit the company access to new technologies, equipment, and software and negatively affect the company's growth in long run.

The company has a process in place to monitor international sanctions that might directly or indirectly affect the Company to ensure that timely measures are developed and applied by management to compensate the impact on the Company operation where it is possible.

Changes in currency exchange rates and currency swings could materially adversely affect our business, financial condition and operational results.

The functional currency of the Company and majority of its subsidiaries and associates is the Russian ruble. The Group has, however, monetary assets and liabilities which are denominated in other currencies, and changes in exchange rates can result in gains or losses. By way of example, in FY2021, the Group recorded a loss of RUB 943m against a gain of RUB 436m in FY2020 due to fluctuations in currency exchange rates.

Inflation could increase our costs.

The Russian economy has been characterised by high rates of inflation. Our costs (in particular salaries) are sensitive to rises in general price levels in Russia. As a result, high rates of inflation could increase our costs, and there can be no assurance that we will be able to maintain or increase our margins.

Emerging markets such as Russia are generally subject to greater risks than more developed markets, and global financial or economic crises or even turmoil in any large emerging market country could have an adverse effect on our business and the value of GDRs.

Global financial or economic crises or even financial turmoil in any large emerging market country tend to adversely affect prices in the equity markets of most or all emerging market countries as investors move their money to more stable, developed markets. The Russian equity markets were highly volatile in the second half of 2008, principally due to the impact of the global financial and economic crises on the Russian economy. As has happened in the past, financial problems or an increase in the perceived risks associated with investing in emerging economies could dampen foreign investment in Russia and adversely affect the Russian economy. In addition, during such times, businesses that operate in emerging markets can face severe liquidity constraints as foreign funding sources are withdrawn. Accordingly, investors should exercise particular care in evaluating the risks involved and must decide for themselves whether, in light of those risks, their investment is appropriate. Potential investors are urged to consult with their own legal and financial advisers before making an investment in GDRs.

COVID-19 pandemic

First identified in December 2019, the coronavirus still has some negative influence on the Company operations in 2022. The pandemic has resulted in some restrictions, limitations, lockdowns, countrywide COVID-19 vaccination campaign and other preventive measures by authorities aiming at containing and mitigating the consequences of the decease. Overall, the Company has adopted its operational processes and business model to work in Covid-19 related restrictions with a limited negative influence on the Company.

Although it is still difficult to predict how the pandemic will develop in the future management believes it is taking appropriate measures to support the sustainability of the Group's business in the circumstances of a global pandemic and new possible COVID-19 strains. Nevertheless, COVID-19 pandemic may still negatively affect the company operations and financial results.

Legislative and legal risks

Regulation

The legal framework in the Russian Federation is still evolving, and VK may be required to comply with additional regulatory requirements in the future. Amendments to existing laws and/or the addition of new laws may require VK to spend additional funds and resources, which may, in turn, limit VK's ability to provide its usual services. There are currently few laws or regulations applicable to commercial online services or the internet in Russia, and commercial activities via the internet are mainly regulated by Russian general civil legislation. The current regulatory environment for the internet industry is uncertain, for example there is not a detailed legislative framework in place regarding behavioural targeting or big data processing. Due to the specific nature of internet-related activities, the application of general legislation results in different interpretations by the courts and regulatory agencies and gives rise to legal uncertainty. Potential amendments to current legislation that address specific aspects of internet-related activities and increase the regulatory load may require further investments, lead to changes to the business models for some of our activities or render them unprofitable. Regulatory and court authorities may disagree with our interpretations of existing laws or regulations or the applicability of such laws or regulations to our business, or they may alter their views on the activities of certain of our companies due to changes in the applicable regulatory framework, interpretations of existing laws or regulations or otherwise. If we fail to comply with existing or future regulatory or other legal requirements, it could have a material adverse effect on our business, operational results and financial condition.

Government regulation of the internet, and requirements related to data protection, could adversely affect our business.

The internet and its associated technologies are subject to government regulation. In addition, new laws and regulations, or new interpretations of existing laws and regulations, may be adopted with respect to the internet or other online services that we provide.

Our failure, or the failure of our third party providers, to accurately comply with the laws and regulations could create liability for us, result in adverse publicity, or could otherwise have a material adverse effect on our business, operational results and financial condition, including the blocking of our assets.

VK as an Internet company with access to a substantial portion of Russia's population, may from time to time be required to grant law enforcement authorities conducting investigations or regulatory inspections access to users' personal data, mailboxes and other account information. The Company has a process in place to control that user's personal data is disclosed only by a legally valid request from law enforcement authorities.

Legal proceedings

The Group has been and continues to be the subject of legal proceedings and adjudications from time to time, none of which has had, individually or in aggregate, a significant adverse impact on the Group. Management believes that the resolution of all current and potential legal matters will not have a significant impact on the Group's financial position or operational results.

Taxation

Russian tax, currency and customs legislation is subject to varying interpretations and changes, which can occur frequently.

Management's interpretation of such legislation as applied to the transactions and activity of the Group may be challenged by the Russian tax authorities. Current practice within the Russian Federation suggests that the tax authorities are taking a more assertive position in their interpretation of legislation and assessments and as a result, it is possible that transactions and activities that have not been challenged in the past may be challenged. As such, significant additional taxes, penalties and interest may be assessed. Fiscal periods remain open to review by the authorities in respect of taxes for three calendar years preceding the year of review. Under certain circumstances, reviews may cover longer periods.

The Group's management believes that its interpretation of the relevant legislation is appropriate and is in accordance with current industry practice and that the Group's tax, currency and customs positions will be sustained. However, the interpretations of the relevant authorities could differ and the effect of additional taxes, fines and penalties on these consolidated financial statements, if the authorities were successful in enforcing their different interpretations, could be significant.

The Russian Federation is actively considering measures that may be taken in order to prevent tax evasion, such as limiting the use of low-tax jurisdictions and aggressive tax planning structures. Initiatives incorporated into Russian law and effective from 2015 include the concept of beneficial ownership, regulations relating to the tax residency of legal entities and the introduction of "controlled foreign companies" rules. The Russian tax authorities now pay more careful attention to any structure that contains a foreign element. They now have more instruments allowing them to identify risks, collect relevant tax information and impose taxes than ever before, including international information exchange under double tax treaty provisions and/or automatic international exchange (in effect from 2018 for Russia). In addition, in 2017 Russia enacted Article 54.1 of the Tax Code, on the basis of which the Russian tax authorities could disallow both VAT and tax deductions on profits for payments made to bad faith suppliers.

The Group may be subject to additional tax liabilities as a result of such changes being applied to transactions carried out by the Group, which could have a significant adverse effect on the Group's business, financial condition and operational results.

Russia is negotiating and interpreting its double tax treaties with various jurisdictions. By way of example, amendments were made to the Cyprus-Russia Double Tax Treaty in 2020. The clarifications subsequently issued by the Russian Ministry of Finance originally disallowed the 5% tax rate on dividends to public companies if the company in question listed depositary receipts on stock exchanges rather than shares. Later on, in February 2021, the Russian Ministry of Finance changed its position. In particular, it clarified that depository receipts qualified as shares if they were listed on either Russian or Cyprus stock exchanges only. This could thus result in a 15% withholding tax on dividends from the Russian subsidiaries to Cyprus. The Russia-Netherlands double tax treaty has been terminated with effect from January 1, 2022. Such changes could adversely affect the Group's business.

In 2021 a new law regarding the taxation of IT companies entered into force in Russia. The law proposes VAT exemption and a decrease in the profit tax rate and social contributions for Russian IT companies if certain criteria are met. In particular, VAT exemption will only apply to licensing software and databases included in the register of domestic software. Previously the exemption applied to all software and databases and was used by the Group. As a result, the new VAT exemption rules have limited the extent of the VAT benefits available to the Group. The Group cannot guarantee that it will be eligible to apply this new VAT exemption in future. In addition, it is not clear if the Group could benefit from the reduction in profit tax rate and social contributions as certain requirements of the law are still to be clarified.

On March 2, 2022, the Russian President announced a list of new measures to support IT business in Russia. The list includes inter alia the following:

- To establish for accredited IT companies the corporate income tax rate of 0 percent until December 31, 2024;
- To simplify the procedures for the employment of foreign citizens in accredited IT companies and for obtaining a residence permit by these citizens;
- To establish tax benefits for accredited IT companies that receive income from advertising, provision of services in their applications and online services or from the sale, installation, testing and maintenance of domestic IT products;
- To exempt the accredited IT companies from tax control, currency control and other types of state control (supervision) and municipal control for up to three years;
- To consolidate and promote the purchase of domestic IT solutions.

The measures should be clarified by implementing legislation and/or government decrees.

Modifications to the Group's legal structure carried out from time to time may result in additional taxes, interest, and penalties in various jurisdictions. Any such taxes or penalties caused by the Group's structure or modifications to it could have a significant adverse effect on the Group's business, operational results, financial condition or prospects.

Tax audits

Our Russian legal entities are subject to tax audits by the respective authorities, who may audit periods of up to three years preceding the year in which a tax audit is initiated. Such audits may result in additional tax liabilities, fines and penalties, should the respective authorities disagree with our approach to taxation issues. Management believes that its tax positions are sustainable and are in accordance with all applicable legislation.

Self-employed persons

Some of our Russian counterparties in food and grocery delivery services are registered as self-employed persons and, therefore, we are not obliged to withhold personal income tax and unified social tax while reimbursing them for the services they provided to us. According to current tax regulations these self-employed persons are the ones responsible for paying income and social taxes to the respective tax authorities under special simplified rules for tax on professional income. We do not consider these counterparties to be part of our personnel and believe that we hold no responsibility for paying related taxes and contributions for them.

However, as the concept of a self-employed person is relatively new in Russia and remains untested by the tax authority with no relevant court practice for such cases, there is a risk that Russian tax authorities would try to reclassify such counterparties as our employees, claiming the related taxes under labour law rules. Such reclassification may adversely affect our financial results.

Payment regulations

We accept payments for our services through our internal service and through third party services, who both provide payment processing by debit and credit cards. We are subject to a number of industry and legislative requirements, including PCI DSS and Russian statutory requirements for enhanced authentication.

We might face negative effects on our expenses should the interchange fee from third parties increase in future or even experience disruption in services if any third party is unwilling or is not available to provide the payment service. Failure to comply with any legislative acts might lead to an increase in the cost of litigations and legal fees, negative media coverage and an outflow of users.

Due to continuing changes to the nature and potential impact of sanctions, there is a risk that the Company, and its related companies located outside of Russia may face difficulties with funds transfer through payment processing systems due to sanctions.

BRIGHT START OF THE YEAR

ELIZA DUDURKAEVA

FINANCIAL MONITORING


BRIGHT START
OF THE YEAR
ALEXANDER SKVORTSOV
MAIL.RU

Board and Management remuneration

The Remuneration and Nomination Committee is responsible for approving the remuneration of the Directors and senior managers of the Group. It also reviews and approves general policy relating to the Group's strategic compensation and the approval of grants under the incentive schemes. Further information on the Remuneration Committee can be found in the Corporate Governance section on (page 85).

Interests of members of our Board of Directors and our employees

Certain members of our Board of Directors have beneficial ownership interests in our Global Depositary Receipts. The table below includes information on their ownership. It also highlights options and RSUs over Ordinary Shares of the Company held, directly or indirectly, by each Director as of the date hereof.

The aggregate beneficial interest in the Company (excluding options granted over Ordinary Shares) held by senior managers of the Group (including Matthew Hammond) as of the publication date is about 0.16%.

Incentive scheme

In November 2010, the Board of Directors of the Company adopted an equity-based long-term incentive scheme. Under the scheme, the Board, or its Remuneration Committee, is authorised to grant options to acquire Ordinary Shares to a broad base of employees, consultants and Directors. This can be direct or through an employee benefit trust or vehicles controlled by such persons.

The 2010 Option Plan comprised options over an aggregate of 10,706,403 Ordinary Shares. On the IPO date, the Company assigned options for 6,423,842 Ordinary Shares to the Mail.ru Employee Benefit Trust with an exercise price equal to the IPO price of USD 27.70, which was reduced by USD 3.80 on 17 August, 2012 and then by USD 4.30 on 20 March, 2013, resulting in an exercise price of USD 19.60. As of the date hereof, 728,255 of these options remain allocated, all of which are vested.

Subsequently, in December 2011 the Company assigned options for 4,282,561 Ordinary Shares to the Mail.ru Employee Benefit Trust with an exercise price equal to the then-current market price of USD 25.60, which was reduced by USD 3.80 on 17 August, 2012 and then by USD 4.30 on 20 March, 2013, resulting in the exercise price of USD 17.50. As of the date hereof, 519,117 of these options remain allocated, 454,117 of which are vested. The options have generally a four-year vesting schedule.

In March, 2015 the Shareholders of the Company approved the issue of up to 10,977,971 Ordinary Shares, all of which were issued to the Mail.ru Employee Benefit Trust to establish an incentive plan for employees, directors, officers and consultants of the Group, to be known as the '2015 Restricted Stock Unit Plan'. On 23 November, 2017 the Remuneration Committee of the Board of Directors of the Company approved the New Terms for the '2015 Restricted Stock Unit Plan' (the '2017 RSU Plan'), setting out that the RSU vesting shall generally be conditional on the meeting of certain performance KPIs. In December 2018, an increase of the size of the '2017 RSU Plan' by 2,000,000 RSUs and the acquisition of the corresponding amount of GDRs were approved. There was no further revision of the Plan in 2020 and 2021.

A new KPI and bonus payment structure was approved by the Remuneration Committee in February 2020. In the 2020 financial year, the Group adopted a new KPI system with a number of weighted KPI parameters based around financial performance, key engagement metrics and the wider Group strategy. The aim is to align the operating performance of all the key employees with the 2020-2023 strategy of the Group as well as minority interests through a focus on meeting set financial targets, while growing the Group's audience reach and broadening synergies within the Group as part of its ongoing ecosystem development.

September 2020 saw the approval of the issuance of 12,150,000 new ordinary shares to Mail.ru Employee Benefit Trustees Limited for the purposes of making awards under the incentive plans for employees, directors, officers and consultants of the Company and its subsidiaries. Furthermore, in March 2021 the Board approved a Performance Stock Unit Plan (the "PSU Plan") and in November 2021 "2021 Special PSU Plan" for grants that vest by reference to financial KPIs, with such PSUs, if vested and exercised, resulting in the holders of the PSUs acquiring VK Global Depository Receipts tradable on the London and Moscow stock exchanges.

In March 2022, the Company implemented the replacement of RSUs/PSUs generally vesting in 2022 with rights to receive cash at the exchange rate of 1,440 (in Russian Rubles) per RSU/PSU. Replaced RSUs/PSUs returned to the pool of funds of Mail. ru Employee Benefit Trust.

As of the date hereof, in aggregate under the 2015 RSU Plan, 2017 RSU Plan, 2021 PSU Plan, 2021 Special PSU Plan 6,814,677 PSUs/RSUs remain allocated, 535,000 of which have vested. 10,550,219 RSUs/PSUs were exercised.

Compensation

Directors of the Company

Total cash remuneration of the members of the Board of Directors (each a "Director" and collectively, "Directors") of the Company amounted to RUB 135mn for the year ended December 31, 2021. In 2021 55,000 PSUs were granted to Directors. During the year ended December 31, 2021, Directors did not forfeit any RSUs/PSUs or options and exercised 15,000 RSUs over shares of the Company. The corresponding share-based payment expense was negative RUB 96mn for year ended December 31, 2021 .

Key Management of the Group

Total cash remuneration of the key management of the Group (excluding Directors) amounted to RUB 1,136mn for the year ended December 31, 2021. In addition to the cash remuneration for the year ended December 31, 2021, key executive employees of the Group were granted 4,696,600 RSUs/PSUs. During the year ended December 31, 2021, key management of the Group (excluding Directors) exercised 185,875 RSUs/PSUs and options and forfeited 230,000 RSUs/PSUs and options over shares of the Company. The corresponding share-based payment expense amounted to RUB 711mn for year ended December 31, 2021.

	Class A shares (direct and indirect)	Ordinary shares/ GDRs (direct and indirect)	Total % of the Company's issued share capital represented by outstanding shares	Outstanding options and RSUs over Ordinary Shares
Dmitry Grishin	-	2,300,792	0.96%	-
Dmitry Chudakov	-	-	-	-
Anton Ustinov	-	-	-	-
Sergey Kuprianov	-	-	-	-
Uliana Antonova	-	-	-	-
Alexander Ayvazov	-	-	-	-
Vladimir Gabrielyan	-	-	-	453,750
Nikita Anisimov	-	-	-	-
Mikhail Gordin	-	-	-	-
Natalia Yakovleva	-	-	-	-

Responsibility statement

We confirm that, to the best of our knowledge:

- The consolidated financial statements, prepared in accordance with IFRS, give a true and fair view of the assets, liabilities, financial position and profit and loss of the Company and the undertakings included in the consolidation taken as a whole.

- This annual report includes a fair review of the development and performance of the business and the position of the Company and the undertakings included in the consolidation, taken as a whole, together with a description of the principal risks and uncertainties that they face.

By order of the Board
Matthew Hammond
Managing Director, Chief Financial Officer
VK Company Limited
28 April 2022

Financial statements

VK Company Limited

Consolidated Financial Statements

For the year ended December 31, 2021

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ИНН: 7709383532

Independent auditor's report

To the Shareholders and Board of Directors of
VK Company Limited

Opinion

We have audited the consolidated financial statements of VK Company Limited and its subsidiaries (hereinafter, the Group), which comprise the consolidated statement of financial position as at December 31, 2021, and the consolidated statement of comprehensive income, consolidated statement of cash flows and consolidated statement of changes in equity for the year then ended, and notes to the consolidated financial statements, including a summary of significant accounting policies.

In our opinion, the accompanying consolidated financial statements present fairly, in all material respects, the consolidated financial position of the Group as at December 31, 2021 and its consolidated financial performance and its consolidated cash flows for the year then ended in accordance with International Financial Reporting Standards (IFRSs).

Basis for opinion

We conducted our audit in accordance with International Standards on Auditing (ISAs). Our responsibilities under those standards are further described in the *Auditor's responsibilities for the audit of the consolidated financial statements* section of our report. We are independent of the Group in accordance with the International Ethics Standards Board for Accountants' (IESBA) International Code of Ethics for Professional Accountants (including International Independence Standards) (IESBA Code) together with the ethical requirements that are relevant to our audit of the consolidated financial statements in the Russian Federation, and we have fulfilled our other ethical responsibilities in accordance with these requirements and the IESBA Code. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Key audit matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the consolidated financial statements of the current period. These matters were addressed in the context of our audit of the consolidated financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters. For each matter below, our description of how our audit addressed the matter is provided in that context.

We have fulfilled the responsibilities described in the *Auditor's responsibilities for the audit of the consolidated financial statements* section of our report, including in relation to these matters. Accordingly, our audit included the performance of procedures designed to respond to our assessment of the risks of material misstatement of the consolidated financial statements. The results of our audit procedures, including the procedures performed to address the matters below, provide the basis for our audit opinion on the accompanying consolidated financial statements.

Key audit matter	How our audit addressed the key audit matter
Annual goodwill impairment analysis	
Under IFRSs, the Group is required to annually test the amount of goodwill for impairment by assessing the recoverable amounts of each cash-generating unit (CGU) or a group of CGU comprising operating segments of the Group, and comparing it with the carrying amount of relevant CGU or groups of CGU. This annual impairment test was a key audit matter because the balance of goodwill of RUB 138,600 million as at December 31, 2021 is material to the consolidated financial statements. In addition, the management's process to assess the recoverable amounts is complex and highly judgmental and is based on assumptions, specifically cash flow projections from financial budgets approved by management. These assumptions are affected by expectations about future market or economic conditions, particularly those expectations related to Russian internet market. Information about goodwill impairment is disclosed in Note 12 to the consolidated financial statements.	Our audit procedures included, among others, examining the amounts of goodwill allocated to each operating segment, involving our specialists in the evaluation of the significant assumptions and methodologies used by the Group, in particular those relating to the forecasted revenue growth and earnings before interest, taxes, depreciation and amortization (EBITDA) and profit margins for operating segments. In addition, we tested mathematical accuracy of the impairment models and analysed the sensitivity of the recoverable amount to the changes in key assumptions. We also focused on the disclosures in the Group consolidated financial statements about those assumptions to which the outcome of the impairment test is the most sensitive, that is, those that have the most significant effect on determination of the recoverable amount of goodwill.

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Key audit matter	How our audit addressed the key audit matter
Revenue recognition	
The Group's online advertising revenues as well as revenues from other services is a complex automated process. It involves volume discounts and third-party commissions that require judgment in recognizing them as expenses or a reduction in revenue. On-line games and Community IVAS (Internet value-added services) revenues involve complex and judgmental calculations of material amounts of deferred revenues related to in-game items purchased by the users inside on-line games or social networks. Selecting and applying revenue recognition policies requires management judgment, therefore, this matter was a key audit matter. Information about revenue is disclosed in Notes 5 and 17 to the consolidated financial statements.	We tested application and IT-dependent manual controls over revenue recognition process. We examined and tested, on a sample basis, standard significant and non-standard revenue arrangements. We considered revenue recognition policy in respect of specific revenue streams (including various incentives and volume rebates) and relevant disclosures. We tested the Group's reconciliation of the amount of revenues recognised in the accounting systems to the relevant automated IT systems. We analysed the calculation of deferred revenue, including the assessment of the estimated life span of in-game items in online games and in social networks. We involved our IT specialist to assist us with the above-mentioned audit procedures.

Other information included in the Group's 2021 Annual Report

Other information consists of the information included in the Group's 2021 Annual Report, other than the consolidated financial statements and our auditor's report thereon. Management is responsible for the other information. The Annual Report is expected to be made available to us after the date of this auditor's report.

Our opinion on the consolidated financial statements does not cover the other information and we do not express any form of assurance conclusion thereon.

In connection with our audit of the consolidated financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the consolidated financial statements or our knowledge obtained in the audit or otherwise appears to be materially misstated.

Responsibilities of management and the Audit Committee for the consolidated financial statements

Management is responsible for the preparation and fair presentation of the consolidated financial statements in accordance with IFRSs, and for such internal control as management determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, management is responsible for assessing the Group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Group or to cease operations, or has no realistic alternative but to do so.

The Audit Committee is responsible for overseeing the Group's financial reporting process.

Auditor's responsibilities for the audit of the consolidated financial statements

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ISAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements.

As part of an audit in accordance with ISAs, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Group's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.

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- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the consolidated financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

We communicate with the Audit Committee regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide the Audit Committee with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, actions taken to eliminate threats or safeguards applied.

From the matters communicated with the Audit Committee, we determine those matters that were of most significance in the audit of the consolidated financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

The partner in charge of the audit resulting in this independent auditor's report is A.A. Chizhikov.

A.A. Chizhikov,
acting on behalf of Ernst & Young LLC
on the basis of power of attorney dated March 1, 2022,
partner in charge of the audit resulting in this independent auditor's report
(main registration number 21906109798)

March 2, 2022

Details of the auditor

Name: Ernst & Young LLC
Record made in the State Register of Legal Entities on December 5, 2002, State Registration Number 1027739707203.
Address: Russia 115035, Moscow, Sadovnicheskaya naberezhnaya, 77, building 1.
Ernst & Young LLC is a member of Self-regulatory organization of auditors Association "Sodruzhestvo". Ernst & Young LLC is included in the control copy of the register of auditors and audit organizations, main registration number 12006020327.

Details of the audited entity

Name: VK Company Limited
Registered: May 4, 2005
Address: 28 Oktovriou, 365, VASHIOTIS SEAFRONT, office 402, Neapoli, 3107 Limassol, Cyprus.

Consolidated Statement of Financial Position

As of December 31, 2021
(in millions of Russian Roubles)

	Notes	As of December 31, 2021	As of December 31, 2020
ASSETS			
Non-current assets			
Investments in equity accounted associates and joint ventures	11	48,921	41,948
Goodwill	8, 12	138,600	135,670
Right-of-use assets	7	14,843	15,618
Other intangible assets	8	18,324	19,623
Property and equipment	9	15,798	11,651
Financial assets at fair value through profit or loss	23	6,903	2,305
Deferred income tax assets	19	5,157	2,924
Long-term loans receivable	23	69	422
Advance under office lease contract		462	249
Total non-current assets		249,077	230,410
Current assets			
Trade accounts receivable	13, 23	20,688	16,707
Prepaid income tax		359	358
Prepaid expenses and advances to suppliers		2,353	853
Loans receivable	23	109	2,441
Inventories		157	98
Other current assets		1,445	1,247
Cash and cash equivalents	14	23,737	39,297
Total current assets		48,848	61,001
Total assets		297,925	291,411
EQUITY AND LIABILITIES			
Equity attributable to equity holders of the parent			
Issued capital		–	–
Share premium	15	79,397	77,101
Treasury shares	15	(1,044)	(1,071)
Retained earnings		89,985	103,103
Accumulated other comprehensive income		1,578	1,195
Total equity attributable to equity holders of the parent		169,916	180,328
Non-controlling interests		346	1,663
Total equity		170,262	181,991
Non-current liabilities			
Deferred income tax liabilities	19	1,228	1,379
Deferred revenue	4.2.9	1,455	1,871
Non-current lease liabilities	7, 23	11,327	11,338
Financial liabilities at fair value through profit or loss, non-current	23	879	3,506
Long-term interest-bearing loans and borrowings	23	50,810	41,497
Other non-current liabilities		522	265
Total non-current liabilities		66,221	59,856
Current liabilities			
Trade accounts payable	23	14,541	10,923
Income tax payable		3,208	2,673
VAT and other taxes payable		4,391	2,259
Deferred revenue and customer advances	4.2.9	17,980	16,912
Short-term portion of long-term interest-bearing loans	23	7,078	3,718
Current lease liabilities	7, 23	4,121	3,861
Other payables, accrued expenses and contingent consideration liabilities	16, 23	10,123	9,218
Total current liabilities		61,442	49,564
Total liabilities		127,663	109,420
Total equity and liabilities		297,925	291,411

Consolidated Statement of Comprehensive Income

For the year ended December 31, 2021
(in millions of Russian Roubles)

	Notes	2021	2020
Online advertising		48,686	39,008
MMO games	4.2.9	38,327	32,769
Community IVAS		18,387	18,215
Education technology services	4.2.9	10,651	3,461
Other revenue		10,010	7,089
Total revenue		126,061	100,542
Personnel expenses		(34,864)	(27,023)
Agent/partner fees		(33,680)	(29,001)
Marketing expenses		(20,706)	(19,994)
Server hosting expenses		(853)	(777)
Professional services		(1,501)	(973)
Other operating expenses		(5,010)	(3,495)
Total operating expenses		(96,614)	(81,263)
EBITDA		29,447	19,279
Depreciation and amortisation	7, 8, 9	(18,371)	(15,138)
Impairment of intangible assets	8	(1,714)	(285)
Share of loss of equity accounted associates and joint ventures	11	(21,167)	(19,892)
Finance income		969	336
Finance expenses	18	(4,253)	(2,969)
Other non-operating loss		(197)	(163)
Goodwill impairment	12	–	(7,050)
Net gain on financial assets and liabilities at fair value through profit or loss	23	2,700	5,281
Net gain on loss of control over subsidiaries	8	–	1,437
Impairment of equity accounted associates	11	(559)	(260)
Net loss on disposal of intangible assets	8	–	(124)
Gain on remeasurement of previously held interest in equity accounted associates	11	305	46
Loss on remeasurement of financial instruments		(843)	(327)
Net foreign exchange (loss)/gain		(943)	436
Loss before income tax expense		(14,626)	(19,393)
Income tax expense	19	(1,071)	(1,833)
Net loss		(15,697)	(21,226)
Attributable to:			
Equity holders of the parent		(15,493)	(20,921)
Non-controlling interests		(204)	(305)
Other comprehensive income that may be reclassified to profit or loss in subsequent periods			
Other comprehensive income that may be reclassified to profit or loss in subsequent periods		383	1,025
Total other comprehensive income net of tax effect of 0		383	1,025
Total comprehensive loss, net of tax		(15,314)	(20,201)
Attributable to:			
Equity holders of the parent		(15,110)	(19,896)
Non-controlling interests		(204)	(305)
Loss per share, in RUB:			
Basic loss per share attributable to ordinary equity holders of the parent	20	(69)	(95)
Diluted earnings per share attributable to ordinary equity holders of the parent	20	n/a	n/a

Consolidated Statement of Cash Flows

For the year ended December 31, 2021
(in millions of Russian Roubles)

	Notes	2021	2020
Cash flows from operating activities			
Loss before income tax		(14,626)	(19,393)
Adjustments to reconcile loss before income tax to cash flows:			
Depreciation and amortisation	8, 9	18,371	15,138
Impairment of intangible assets	8	1,714	285
Share of loss of equity accounted associates and joint ventures	11	21,167	19,892
Finance income		(969)	(336)
Finance expenses	18	4,253	2,969
Expected credit loss allowance on trade and other receivables	14	418	183
Goodwill impairment	12	–	7,050
Net gain on financial assets and liabilities at fair value through profit or loss	23	(2,700)	(5,281)
Net gain on disposal of subsidiaries		–	(1,437)
Impairment of equity accounted associates	11	559	260
Net loss on disposal of intangible assets		–	124
Gain on remeasurement of previously held interest in equity accounted associates	11	(305)	(46)
Loss on remeasurement of financial instruments		843	327
Net foreign exchange loss/(gain)		943	(436)
Cash settled and equity settled share-based payments	25	2,091	1,770
Other non-cash items		227	173
Change in operating assets and liabilities:			
Increase in accounts receivable		(3,912)	(1,949)
(Increase)/decrease in prepaid expenses and advances to suppliers		(1,512)	296
(Increase)/decrease in inventories and other assets		(960)	166
Increase in accounts payable and accrued expenses		5,700	2,469
Decrease/(increase) in other non-current assets		205	(128)
Increase in deferred revenue and customer advances		86	5,832
Increase in financial assets at fair value through profit or loss	23	(5,129)	(415)
Operating cash flows before interest and income taxes		26,464	27,513
Interest received		393	370
Interest paid		(2,977)	(2,564)
Income tax paid		(2,968)	(2,298)
Net cash provided by operating activities		20,912	23,021
Cash flows from investing activities			
Cash paid for property and equipment		(8,767)	(6,730)
Cash paid for intangible assets		(6,346)	(4,388)
Dividends received from equity accounted associates	11	891	29
Loans issued		(15,959)	(2,803)
Loans collected		348	515
Cash paid for acquisitions of subsidiaries, net of cash acquired	6	(3,503)	(804)
Proceeds from disposal of subsidiaries, net of cash disposed	8	–	1,090
Cash paid for investments in equity accounted associates and joint ventures	11	(11,767)	(17,318)
Net cash used in investing activities		(45,103)	(30,409)
Cash flows from financing activities			
Payment of lease liabilities	7	(3,783)	(4,023)
Loans received, net of bank commission	23	21	14,346
Loans repaid	23	(3,718)	(17,595)
Proceeds from bonds issued	23	15,000	30,944
Proceeds from issuance of GDR, net of issuance costs paid	15.3	–	15,209
Cash received from disposal of non-controlling interests in subsidiaries		1,486	–
Cash paid for non-controlling interests in subsidiaries		(20)	(947)
Dividends paid by subsidiaries to non-controlling shareholders		(215)	(237)
Net cash provided by financing activities		8,771	37,697
Net (decrease)/increase in cash and cash equivalents		(15,420)	30,309
Effect of exchange differences on cash balances		(140)	(837)
Cash and cash equivalents at the beginning of the year		39,297	9,825
Cash and cash equivalents at the end of the year		23,737	39,297

Consolidated Statement of Changes in Equity

For the year ended December 31, 2020
(in millions of Russian Roubles)

	Share capital: Number of shares issued and outstanding	Share capital: Amount	Share premium	Treasury shares	Retained earnings	Accumulated other comprehensive income (net of tax effect of 0)	Total equity attributable to equity holders of the parent	Non-controlling interests	Total equity
Balance at January 1, 2020	217,184,316	–	60,286	(1,152)	125,351	170	184,655	809	185,464
Loss for the year	–	–	–	–	(20,921)	–	(20,921)	(305)	(21,226)
Other comprehensive income									
Foreign currency translation	–	–	–	–	–	1,025	1,025	–	1,025
Total other comprehensive income	–	–	–	–	–	1,025	1,025	–	1,025
Total comprehensive (loss)/income	–	–	–	–	(20,921)	1,025	(19,896)	(305)	(20,201)
Share-based payment transactions	–	–	1,690	–	–	–	1,690	–	1,690
Exercise of RSUs and options over the shares of the Company	1,147,159	–	(84)	81	–	–	(3)	–	(3)
Issue of GDR	7,142,858	–	15,209	–	–	–	15,209	–	15,209
Dividends paid by subsidiaries to non-controlling shareholders	–	–	–	–	–	–	–	(327)	(327)
Acquisitions of non-controlling interests*	–	–	–	–	(1,327)	–	(1,327)	380	(947)
Non controlling interests arising from business combination	–	–	–	–	–	–	–	1,106	1,106
Balance at December 31, 2020	225,474,333	–	77,101	(1,071)	103,103	1,195	180,328	1,663	181,991

* *In October 2020, the Group increased its share in Skillbox by 10.326% (to 70.7%) for total cash consideration of RUB 638 and in December 2020 – in GeekBrains by 49% (to 100%) for a total cash consideration of RUB 294.*

Consolidated Statement of Changes in Equity

For the year ended December 31, 2021
(in millions of Russian Roubles)

	Share capital								
	Number of shares issued and outstanding	Amount	Share premium	Treasury shares	Retained earnings	Accumulated other comprehensive income (net of tax effect of 0)	Total equity attributable to equity holders of the parent	Non-controlling interests	Total equity
Balance at January 1, 2021	225,474,333	–	77,101	(1,071)	103,103	1,195	180,328	1,663	181,991
Loss for the year	–	–	–	–	(15,493)	–	(15,493)	(204)	(15,697)
Other comprehensive income									
Foreign currency translation and other comprehensive income	–	–	–	–	–	383	383	–	383
Total other comprehensive income	–	–	–	–	–	383	383	–	383
Total comprehensive (loss)/income	–	–	–	–	(15,493)	383	(15,110)	(204)	(15,314)
Share-based payment transactions (Note 25)	–	–	2,323	–	–	–	2,323	–	2,323
Exercise of RSUs and options over the shares of the Company	656,374	–	(27)	27	–	–	–	–	–
Dividends by subsidiaries to non-controlling shareholders	–	–	–	–	–	–	–	(215)	(215)
Non-controlling interests arising from business combinations (Note 6)	–	–	–	–	–	–	–	11	11
Acquisitions of non-controlling interests	–	–	–	–	–	–	–	(20)	(20)
Disposal of non-controlling interests*	–	–	–	–	2,375	–	2,375	(889)	1,486
Balance at December 31, 2021	226,130,707	–	79,397	(1,044)	89,985	1,578	169,916	346	170,262

* *In July 2021, the Group sold a 49% stake in its subsidiary GeekBrains for a total cash consideration of RUB 655. As a result of the transaction, the Group's effective share in GeekBrains was reduced to 51%. The Group retained control of GeekBrains.*

* *In October 2021, the Group sold a 5.705% stake in its subsidiary Skillbox Holding for a total cash consideration of RUB 831. As a result of the transaction, the Group's effective share in Skillbox Holding was reduced to 57.54%. The Group retained control of Skillbox Holding.*

Notes to the Consolidated Financial Statements

For the year ended December 31, 2021
(in millions of Russian Roubles)

1 Corporate information and description of business

These consolidated financial statements of VK Company Limited (hereinafter "the Company") and its subsidiaries (collectively – "the Group" or "VK") for the year ended December 31, 2021 were authorised for issue by the directors of the Company on March 2, 2022.

The Company was registered on May 4, 2005 in the Territory of the British Virgin Islands ("BVI"), pursuant to the International Business Companies Act (the "Act"), Cap. 291. The principal office of the Company is at 28 Oktovriou, 365, VASHIOTIS SEAFRONT, office 402, Neapoli, 3107 Limassol, Cyprus.

The Company consolidates or participates in businesses that operate in the Internet segment, including portals, social networking and communications, online marketplaces, education technologies, online-to-offline services, massively multiplayer online games ("MMO games"), social and mobile games. The Group has leading positions in Russia and other CIS states where its operations are present.

In October 2021, the Group announced rebranding into VK. VK becomes a single user and corporate brand for the entire Group. The VK brand will be noticeable to users of every project: some products will be renamed, the brand will be associated with the rest through the logo and communications.

The parent of the Company is MF Technologies. MF Technologies does not have a single controlling shareholder. Sogaz JCS owns 45%, Gazprom-Media Holding JSC owns 45% and RT-Business Development LLC owns 10% of voting interests of MF Technologies, respectively. MF Technologies is jointly controlled by Sogaz JSC and the Russian Federation.

Information on the Company's main subsidiaries is disclosed in Note 10.

2 Basis of preparation

These consolidated financial statements have been prepared on a historical cost basis, except for financial assets and liabilities designated as at fair value through profit or loss and derivative financial instruments that have been measured at fair value.

The Group has prepared the financial statements on the basis that it will continue to operate as a going concern.

2.1 Statement of compliance

These consolidated financial statements have been prepared in accordance with and comply with International Financial Reporting Standards ("IFRS").

The Group maintains its accounting records and prepares its statutory accounting reports in accordance with domestic accounting legislation and instructions for each of its subsidiaries. These consolidated financial statements are based on the underlying accounting records, appropriately adjusted and reclassified for fair presentation in accordance with the standards and interpretations issued by the International Accounting Standards Board ("IASB"). IFRS adjustments include and affect such major areas as consolidation, revenue recognition, accruals, deferred taxation, fair value adjustments, business combinations, impairment, share-based payments etc.

2.2 Application of new and amended IFRS and IFRIC

The accounting policies adopted are consistent with those followed in the preparation of the Group's annual financial statements for the year ended December 31, 2020, except for the adoption of new and amended IFRS and International Financial Reporting Interpretations Committee ("IFRIC") interpretations effective as of January 1, 2021. The Group has not early adopted any other standard, interpretation or amendment that has been issued but is not yet effective.

In August 2020, the IASB issued amendments to IFRS 7 *Financial Instruments: Disclosures*, IFRS 9 *Financial Instruments* as well as IFRS 4 *Insurance Contracts* and IFRS 16 *Leases* named *Interest Rate Benchmark Reform – Phase II*. The amendments are effective on or after January 1, 2021. The amendments provide temporary reliefs which address the financial reporting effects when an interbank offered rate (IBOR) is replaced with an alternative nearly risk-free interest rate (RFR). The amendments include the following practical expedients:

- A practical expedient to require contractual changes, or changes to cash flows that are directly required by the reform, to be treated as changes to a floating interest rate, equivalent to a movement in a market rate of interest;
- Permit changes required by IBOR reform to be made to hedge designations and hedge documentation without the hedging relationship being discontinued; and
- Provide temporary relief to entities from having to meet the separately identifiable requirement when an RFR instrument is designated as a hedge of a risk component.

These amendments had no impact on the consolidated financial statements because the Group does not have financial instruments with floating rates.

On May 28, 2020, the IASB issued *Covid-19-Related Rent Concessions* – amendment to IFRS 16 *Leases* The amendments provide relief to lessees from applying IFRS 16 guidance on lease modification accounting for rent concessions arising as a direct consequence of the Covid-19 pandemic. This amendment had no impact on the consolidated financial statements, as the Group did not elect to use this practical expedient.

2 Basis of preparation (continued)

2.3 Standards issued but not yet effective

The new and amended standards and interpretations that are issued, but not yet effective, up to the date of issuance of the Group's financial statements are disclosed below. The Group intends to adopt these new and amended standards and interpretations, if applicable, when they become effective.

Amendments to IAS 1 and IAS 8 Classification of Liabilities as Current or Non-current

In January 2020, the IASB issued amendments to paragraphs 69 to 76 of IAS 1 to specify the requirements for classifying liabilities as current or non-current. The amendments clarify:

- What is meant by a right to defer settlement;
- That a right to defer must exist at the end of the reporting period;
- That classification is unaffected by the likelihood that an entity will exercise its deferral right;
- That only if an embedded derivative in a convertible liability is itself an equity instrument would the terms of a liability not impact its classification

The amendments are effective for annual reporting periods beginning on or after January 1, 2023 and must be applied retrospectively.

Proposed amendments In November 2021, the Board published an exposure draft in which it proposed that if a right to defer settlement for at least twelve months is subject to an entity complying with conditions after the reporting date, those conditions do not affect whether the right to defer settlement exists at the reporting date for the purpose of classifying a liability as current or non-current. Additional presentation and disclosure requirements would be applicable in such circumstances, including presenting noncurrent liabilities that are subject to covenants to be complied with within twelve months after the reporting period, separately in the statement of financial position. Furthermore, the Board proposed to defer the effective date to no earlier than January 1, 2024 (from January 1, 2023). Comments are due to be received by the Board by March 21, 2022.

Application of the amendment will potentially cause a RUB 26 bln reclassification of convertible bonds payable from non-current liabilities to current liabilities in the Group's consolidated statement of financial position.

Reference to the Conceptual Framework – Amendments to IFRS 3

In May 2020, the IASB issued Amendments to IFRS 3 *Business Combinations – Reference to the Conceptual Framework*. The amendments are intended to replace a reference to the *Framework for the Preparation and Presentation of Financial Statements*, issued in 1989, with a reference to the *Conceptual Framework for Financial Reporting* issued in March 2018 without significantly changing its requirements. The Board also added an exception to the recognition principle of IFRS 3 to avoid the issue of potential 'day 2' gains or losses arising for liabilities and contingent liabilities that would be within the scope of IAS 37 or IFRIC 21 *Levies*, if incurred separately.

At the same time, the Board decided to clarify existing guidance in IFRS 3 for contingent assets that would not be affected by replacing the reference to the *Framework for the Preparation and Presentation of Financial Statements*. The amendments are effective for annual reporting periods beginning on or after January 1, 2022 and apply prospectively. The amendments are not expected to have a material impact on the Group.

Property, Plant and Equipment: Proceeds before Intended Use – Amendments to IAS 16

In May 2020, the IASB issued *Property, Plant and Equipment – Proceeds before Intended Use*, which prohibits entities deducting from the cost of an item of property, plant and equipment, any proceeds from selling items produced while bringing that asset to the location and condition necessary for it to be capable of operating in the manner intended by management. Instead, an entity recognises the proceeds from selling such items, and the costs of producing those items, in profit or loss.

The amendment is effective for annual reporting periods beginning on or after January 1, 2022 and must be applied retrospectively to items of property, plant and equipment made available for use on or after the beginning of the earliest period presented when the entity first applies the amendment. The amendments are not expected to have a material impact on the Group.

Onerous Contracts – Costs of Fulfilling a Contract – Amendments to IAS 37

In May 2020, the IASB issued amendments to IAS 37 to specify which costs an entity needs to include when assessing whether a contract is onerous or loss-making. The amendments apply a "directly related cost approach". The costs that relate directly to a contract to provide goods or services include both incremental costs and an allocation of costs directly related to contract activities. General and administrative costs do not relate directly to a contract and are excluded unless they are explicitly chargeable to the counterparty under the contract. The amendments are effective for annual reporting periods beginning on or after January 1, 2022. The Group will apply these amendments to contracts for which it has not yet fulfilled all its obligations at the beginning of the annual reporting period in which it first applies the amendments. The amendments are not expected to have a material impact on the Group.

Notes to the Consolidated Financial Statements (continued)

2 Basis of preparation (continued)

2.3 Standards issued but not yet effective (continued)

IFRS 1 First-time Adoption of International Financial Reporting Standards – Subsidiary as a first-time adopter

As part of its 2018-2020 annual improvements to IFRS standards process, the IASB issued an amendment to IFRS 1 *First-time Adoption of International Financial Reporting Standards*. The amendment permits a subsidiary that elects to apply paragraph D16(a) of IFRS 1 to measure cumulative translation differences using the amounts reported by the parent, based on the parent's date of transition to IFRS. This amendment is also applied to an associate or joint venture that elects to apply paragraph D16(a) of IFRS 1. The amendment is effective for annual reporting periods beginning on or after January 1, 2022 with earlier adoption permitted. The amendments are not applicable to the Group.

IFRS 9 Financial Instruments – Fees in the '10 per cent' test for derecognition of financial liabilities

As part of its 2018-2020 annual improvements to IFRS standards process the IASB issued amendment to IFRS 9. The amendment clarifies the fees that an entity includes when assessing whether the terms of a new or modified financial liability are substantially different from the terms of the original financial liability. These fees include only those paid or received between the borrower and the lender, including fees paid or received by either the borrower or lender on the other's behalf. An entity applies the amendment to financial liabilities that are modified or exchanged on or after the beginning of the annual reporting period in which the entity first applies the amendment.

The amendment is effective for annual reporting periods beginning on or after January 1, 2022 with earlier adoption permitted. The Group will apply the amendments to financial liabilities that are modified or exchanged on or after the beginning of the annual reporting period in which the entity first applies the amendment. The amendments are not expected to have a material impact on the Group.

Amendments to IAS 1 Presentation of Financial Statements and IFRS Practice Statement 2 Disclosure of Accounting Policies

In February 2021 the IASB issued amendments to IAS 1 and IFRS Practice Statement 2. The amendments to IAS 1 require companies to disclose their material accounting policy information rather than their significant accounting policies. The amendments to IFRS Practice Statement 2 provide guidance on how to apply the concept of materiality to accounting policy disclosures. The amendments will be effective for annual reporting periods beginning on or after January 1, 2023, with early application permitted. The amendments are not expected to have a material impact on the Group.

Amendments to IAS 8 Accounting Policies, Changes in Accounting Estimates and Errors: Definition of Accounting Estimates

In February 2021 the IASB issued amendments to IAS 8. The amendments clarify how companies should distinguish changes in accounting policies from changes in accounting estimates. That distinction is important because changes in accounting estimates are applied prospectively only to future transactions and other future events, but changes in accounting policies are generally also applied retrospectively to past transactions and other past events. The amendments will be effective for annual reporting periods beginning on or after January 1, 2023, with early application permitted.

Amendments to IAS 12 Income Taxes

In May 2021, the IASB issued amendments to IAS 12 *Income Taxes*, named Deferred taxes related to Assets and Liabilities arising from a Single Transaction. The amendments clarify that initial recognition exception under IAS 12 does not apply to such transactions as recognition of leases and decommissioning obligations. The amendments are effective on or after January 1, 2023. The Group is currently assessing the potential impact.

IFRS 17 Insurance Contracts

In May 2017, the IASB issued IFRS 17 *Insurance Contracts* (IFRS 17), a comprehensive new accounting standard for insurance contracts covering recognition and measurement, presentation and disclosure. Once effective, IFRS 17 will replace IFRS 4 *Insurance Contracts* (IFRS 4) that was issued in 2005. IFRS 17 applies to all types of insurance contracts (i.e., life, non-life, direct insurance and re-insurance), regardless of the type of entities that issue them, as well as to certain guarantees and financial instruments with discretionary participation features.

A few scope exceptions will apply. The overall objective of IFRS 17 is to provide an accounting model for insurance contracts that is more useful and consistent for insurers. In contrast to the requirements in IFRS 4, which are largely based on grandfathering previous local accounting policies, IFRS 17 provides a comprehensive model for insurance contracts, covering all relevant accounting aspects. The core of IFRS 17 is the general model, supplemented by:

- A specific adaptation for contracts with direct participation features (the variable fee approach); and
- A simplified approach (the premium allocation approach) mainly for short-duration contracts.

IFRS 17 is effective for reporting periods beginning on or after January 1, 2023, with comparative figures required. Early application is permitted, provided the entity also applies IFRS 9 and IFRS 15 on or before the date it first applies IFRS 17. In addition, IASB issued Amendments to IFRS 17 *Insurance Contracts: Initial Application of IFRS 17 and IFRS 9 Comparative Information* on December 9, 2021. These standard and ammendmends are not applicable to the Group.

Notes to the Consolidated Financial Statements (continued)

2 Basis of preparation (continued)

2.4 Education technology services revenue stream separation

During the year ended December 31, 2021, Education technology services revenue stream has significantly increased and has been disclosed separately, it was a part of Other revenue stream in the consolidated statement of comprehensive Income for the year ended December 31, 2020.

2.5 Presentation of comparative information

Certain comparative figures have been reclassified and/or regrouped to conform to the current presentation adopted in the consolidated statements for the year ended December 31, 2021. This does not have an impact on the reported amounts of net loss for the reporting periods.

3 Summary of significant accounting policies

Set out below are the principal accounting policies used to prepare these consolidated financial statements.

3.1 Principles of consolidation

These consolidated financial statements comprise the financial statements of the Company and its subsidiaries as at December 31, 2021 and for the year then ended.

Control is achieved when the Group is exposed, or has rights, to variable returns from its involvement with the investee and has the ability to affect those returns through its power over the investee.

Specifically, the Group controls an investee if and only if the Group has:

- Power over the investee (i.e. existing rights that give it the current ability to direct the relevant activities of the investee);
- Exposure, or rights, to variable returns from its involvement with the investee; and
- The ability to use its power over the investee to affect its returns.

When the Group has less than a majority of the voting or similar rights of an investee, the Group considers all relevant facts and circumstances in assessing whether it has power over an investee, including:

- The contractual arrangement with the other vote holders of the investee;
- Rights arising from other contractual arrangements; and
- The Group's voting rights and potential voting rights.

The Group re-assesses whether or not it controls an investee if facts and circumstances indicate that there are changes to one or more of the three elements of control. Consolidation of a subsidiary begins when the Group obtains control over the subsidiary and ceases when the Group loses control of the subsidiary. Income and expenses of a subsidiary acquired or disposed of during the year are included in the consolidated statement of comprehensive income from the date the Group gains control until the date the Group ceases to control the subsidiary.

The financial statements of the subsidiaries are prepared for the same reporting period as the parent company, using consistent accounting policies.

All intra-group balances, income and expenses and unrealised gains and losses resulting from intra-group transactions are eliminated.

If the Group loses control over a subsidiary, it:

- Derecognises the assets (including goodwill) and liabilities of the subsidiary;
- Derecognises the carrying amount of any non-controlling interests;
- Derecognises the cumulative translation differences recorded in equity;
- Recognises the fair value of the consideration received;
- Recognises the fair value of any investment retained;
- Recognises any surplus or deficit in profit or loss; and
- Reclassifies the parent's share of components previously recognised in other comprehensive income to profit or loss or retained earnings, as appropriate, as would be required if the Group had directly disposed of the related assets or liabilities.

Notes to the Consolidated Financial Statements (continued)

3 Summary of significant accounting policies (continued)

3.2 Business combinations and goodwill

Business combinations are accounted for using the acquisition method. The cost of an acquisition is measured as the aggregate of the consideration transferred, measured at acquisition date fair value, and the amount of any non-controlling interest in the acquiree. For each business combination, the acquirer measures the non-controlling interest in the acquiree either at fair value or at the proportionate share of the acquiree's identifiable net assets. Acquisition costs incurred, such as finder's fees, legal fees, due diligence fees, and other professional and consulting fees, are expensed and included in operating expenses.

The Group measures goodwill as the fair value of the consideration transferred including the recognised amount of any non-controlling interest in the acquiree, less the net recognised amount (generally fair value) of the identifiable assets acquired and liabilities assumed, all measured as of the acquisition date.

Consideration transferred includes the fair values of the assets transferred, liabilities incurred by the Group to the previous owners of the acquiree, and equity interests issued by the Group. Consideration transferred also includes the fair value of any contingent consideration and vested share-based payment awards of the acquiree that are replaced in the business combination.

If control is achieved in stages, the acquirer's previously held equity interest in the acquiree is remeasured to fair value as at the acquisition date through profit or loss.

A contingent liability of the acquiree is recognised in a business combination only if such a liability represents a present obligation and arises from a past event, and its fair value can be measured reliably.

Only components of non-controlling interest constituting a present ownership interest that entitles their holder to a proportionate share of the entity's net assets in the event of liquidation are measured at either fair value or at the present ownership instruments' proportionate share of the acquiree's identifiable net assets. All other components are measured at their acquisition date fair value.

The Group accounts for a change in the ownership interest of a subsidiary (without loss of control) as a transaction with owners in their capacity as owners. Therefore, such transactions do not give rise to goodwill, nor do they give rise to a gain or loss and are accounted for as an equity transaction.

After initial recognition, goodwill is measured at cost less any accumulated impairment losses. For the purpose of impairment testing, goodwill acquired in a business combination is, from the acquisition date, allocated to each of the Group's cash generating units that are expected to benefit from the synergies of the combination, irrespective of whether other assets or liabilities of the acquiree are assigned to those units.

Where goodwill forms part of a cash-generating unit (CGU) and part of the operation within that unit is disposed of, the goodwill associated with the operation disposed of is included in the carrying amount of the operation when determining the gain or loss on disposal of the operation. Goodwill disposed of in this circumstance is measured based on the relative values of the operation disposed of and the portion of the cash-generating unit retained.

If the Group reorganises its reporting structure in a way that changes the composition of one or more cash-generating units to which goodwill has been allocated, the goodwill is reallocated to the units affected. The reallocation is performed using a relative value approach similar to that used in connection with the disposal of an operation within a cash-generating unit, unless some other method better reflects the goodwill associated with the reorganised units.

3.3 Current versus non-current classification

The Group presents assets and liabilities in the consolidated statement of financial position based on current/non-current classification. An asset is current when it is:

- Expected to be realised or intended to be sold or consumed in the normal operating cycle
- Held primarily for the purpose of trading
- Expected to be realised within twelve months after the reporting period; or
- Cash or cash equivalent unless restricted from being exchanged or used to settle a liability for at least twelve months after the reporting period.

All other assets are classified as non-current.

A liability is current when:

- It is expected to be settled in the normal operating cycle
- It is held primarily for the purpose of trading
- It is due to be settled within twelve months after the reporting period; or
- There is no unconditional right to defer the settlement of the liability for at least twelve months after the reporting period.

3 Summary of significant accounting policies (continued)

3.3 Current versus non-current classification (continued)

The terms of the liability that could, at the option of the counterparty, result in its settlement by the issue of equity instruments do not affect its classification.

The Group classifies all other liabilities as non-current. Deferred tax assets and liabilities are classified as non-current assets and liabilities.

3.4 Fair value measurement

The Group measures financial instruments such as derivatives, at fair value at each balance sheet date.

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The fair value measurement is based on the presumption that the transaction to sell the asset or transfer the liability takes place either:

- In the principal market for the asset or liability; or
- In the absence of a principal market, in the most advantageous market for the asset or liability.

The principal or the most advantageous market must be accessible by the Group. The fair value of an asset or a liability is measured using the assumptions that market participants would use when pricing the asset or liability, assuming that market participants act in their economic best interest.

A fair value measurement of a non-financial asset takes into account a market participant's ability to generate economic benefits by using the asset in its highest and best use or by selling it to another market participant that would use the asset in its highest and best use.

The Group uses valuation techniques that are appropriate in the circumstances and for which sufficient data are available to measure fair value, maximising the use of relevant observable inputs and minimising the use of unobservable inputs.

All assets and liabilities for which fair value is measured or disclosed in the financial statements are categorised within the fair value hierarchy, described as follows, based on the lowest level input that is significant to the fair value measurement as a whole:

- Level 1 – quoted (unadjusted) market prices in active markets for identical assets or liabilities;
- Level 2 – valuation techniques for which the lowest level input that is significant to the fair value measurement is directly or indirectly observable;
- Level 3 – valuation techniques for which the lowest level input that is significant to the fair value measurement is unobservable.

For assets and liabilities that are recognised in the consolidated financial statements at fair value on a recurring basis, the Group determines whether transfers have occurred between levels in the hierarchy by re-assessing categorisation (based on the lowest level input that is significant to the fair value measurement as a whole) at the end of each reporting period.

The Group determines the policies and procedures for both recurring fair value measurement, such as financial derivatives and unquoted financial assets, and for non-recurring measurement, such as assets held for sale in discontinued operations.

At each reporting date, the Group analyses the movements in the values of assets and liabilities which are required to be remeasured or re-assessed as per the Group’s accounting policies. For this analysis, the Group verifies the major inputs applied in the latest valuation by agreeing the information in the valuation computation to contracts and other relevant documents. The Group also compares the change in the fair value of each asset and liability with relevant external sources to determine whether the change is reasonable.

3.5 Investments in associates and joint ventures

Associates are entities in which the Group generally has between 20% and 50% of the voting rights, or is otherwise able to exercise significant influence, but which it does not control or jointly control.

A joint venture is a type of joint arrangement whereby the parties that have joint control of the arrangement have rights to the net assets of the joint venture. Joint control is the contractually agreed sharing of control of an arrangement, which exists only when decisions about the relevant activities require the unanimous consent of the parties sharing control.

The Group participates in the operating management of its equity accounted associates and joint ventures and intends to stay involved in their operations from a long-term perspective. Under the equity method, the investments in associates and joint ventures are carried in the consolidated statement of financial position at cost plus post acquisition changes in the Group’s share of net assets of the associate or joint venture. Distributions received from an investee reduce the carrying amount of the investment. Goodwill relating to the associate or joint venture is included in the carrying amount of the investment and is neither amortised nor individually tested for impairment.

3 Summary of significant accounting policies (continued)

3.5 Investments in associates and joint ventures (continued)

The consolidated statement of comprehensive income reflects the Group's share of the results of operations of associates and joint ventures. Where there has been a change recognised directly in the equity of the associates or joint ventures, the Group recognises its share of any changes in the investment balance and discloses this, when applicable, in the consolidated statement of changes in equity. Unrealised gains and losses resulting from transactions between the Group and the associate are eliminated to the extent of the interest in the associate or joint venture.

Dividends received from equity accounted associates and joint ventures are shown in investing activities in the consolidated statement of cash flows.

The share of profit and other comprehensive income of equity accounted associates and joint ventures is shown on the face of the consolidated statement of comprehensive income. This is the profit attributable to equity holders of the associates and joint ventures and therefore is profit after tax of the associates and joint ventures and after non-controlling interests in the subsidiaries of the associates or joint ventures. The Group's share of movements in reserves is recognised in equity. However, when the Group's share of accumulated losses in a equity accounted associate or joint venture equals or exceeds its interest in the associate or joint venture, the Group does not recognise further losses, unless the Group is obliged to make further payments to, or on behalf of, the associate or joint venture.

The financial statements of equity accounted associates and joint ventures are prepared for the same reporting period as the Group. Where necessary, adjustments are made to bring the accounting policies in line with those of the Group.

After application of the equity method, the Group determines whether it is necessary to recognise an impairment loss on the Group's investment in its associates and joint ventures. The Group determines at each reporting date whether there is any objective evidence that the investment in the associate or joint venture is impaired. Determining whether the investment is impaired is based on the guidance of IFRS 9 discussed under 3.15.6.

If there is objective evidence that an associate or joint venture is impaired, the Group calculates the amount of impairment as the difference between the recoverable amount of the associate or joint venture and its carrying value in accordance with IAS 36 (as discussed under 3.17) and recognises the amount of impairment in earnings under '*Impairment losses related to equity accounted associates or joint ventures*'. If the recoverable amount of the impaired investment subsequently increases, the related impairment is reversed to the extent of such increase.

Step acquisitions of significant influence in equity accounted associates previously classified as available-for-sale financial assets are accounted for using a cost-based approach whereby the investment in associate is recognised at the aggregate of (a) the historical cost of the available-for-sale investment and (b) the consideration transferred by the Group upon acquisition of significant influence. Any changes in the fair value of the available-for-sale investment are reversed through other comprehensive income upon acquisition of significant influence. Goodwill is calculated as a difference between (c) the cost of the investment so determined and (d) the Group's share in the fair value of the investee's net assets at the date significant influence is attained.

Upon acquisition of an additional stake in an existing associate where control is not obtained, the fair value of the consideration transferred for the additional stake is allocated to the acquired share of the fair value of associate's assets and liabilities, and the excess is recognised as goodwill as part of the investment in equity accounted associates.

Upon loss of significant influence over the associate or joint control over the joint venture, the Group measures and recognises any retained investment at its fair value. Any difference between the carrying amount of the associate or joint venture upon loss of significant influence or joint control and the fair value of the retained investment and proceeds from disposal is recognised in profit or loss.

3.6 The Group as a lessee

Right-of-use assets

The Group recognises right-of-use assets at the commencement date of the lease (i.e., the date the underlying asset is available for use). Right-of-use assets are measured at cost, less any accumulated depreciation and impairment losses. The cost of right-of-use assets includes the amount of lease liabilities recognised, initial direct costs incurred, and lease payments made at or before the commencement date less any lease incentives received. Unless the Group is reasonably certain to obtain ownership of the leased asset at the end of the lease term, the recognised right-of-use assets are amortised on a straight-line basis over the shorter of its estimated useful life and the lease term as follows:

Premises	1 to 6 years
Racks in data centers and optic fibre channels	1 to 3 years

Right-of-use assets are subject to impairment.

Notes to the Consolidated Financial Statements (continued)

3 Summary of significant accounting policies (continued)

3.6 The Group as a lessee (continued)

Lease liabilities

At the commencement date of the lease, the Group recognises lease liabilities measured at the present value of lease payments to be made over the lease term. The lease payments include fixed payments (including in substance fixed payments) less any lease incentives receivable, variable lease payments that depend on an index or a rate, and amounts expected to be paid under residual value guarantees. The lease payments also include the exercise price of a purchase option reasonably certain to be exercised by the Group and payments of penalties for terminating a lease, if the lease term reflects the Group exercising the option to terminate. The variable lease payments that do not depend on an index or a rate are recognised as expense in the period on which the event or condition that triggers the payment occurs.

In calculating the present value of lease payments, the Group uses the incremental borrowing rate at the lease commencement date if the interest rate implicit in the lease is not readily determinable. After the commencement date, the amount of lease liabilities is increased to reflect the accretion of interest and reduced for the lease payments made. In addition, the carrying amount of lease liabilities is remeasured if there is a modification, a change in the lease term, a change in the in-substance fixed lease payments or a change in the assessment to purchase the underlying asset.

Leases of low-value assets

The Group applies the lease of low-value assets recognition exemption to leases of office equipment that are considered of low value. Lease payments on leases of low-value assets are recognised as expense on a straight-line basis over the lease term.

Accounting for short-term leases

The Group elects not to apply simplifications for short-term leases and account for them using right-of-use asset model.

3.6.1 The Group as a lessor

Leases in which the Group does not transfer substantially all the risks and rewards incidental to ownership of an asset are classified as operating leases. Rental income arising is accounted for on a straight-line basis over the lease terms and is included in other operating income/expenses in the consolidated statement of profit or loss due to its operating nature. Initial direct costs incurred in negotiating and arranging an operating lease are added to the carrying amount of the leased asset and recognised over the lease term on the same basis as rental income.

3.7 Property and equipment

3.7.1 Recognition and measurement

Property and equipment are recorded at purchase or construction cost less accumulated depreciation and accumulated impairment. Interest costs on borrowings to finance the construction of property and equipment are capitalised, during the period of time that is required to complete and prepare the asset for its intended use. Expenditures for continuing repairs and maintenance are charged to earnings as incurred.

Cost includes expenditure that is directly attributable to the acquisition of the asset. The cost of self-constructed assets includes the cost of materials and direct labour, any other costs directly attributable to bringing the asset to a working condition for its intended use, and the costs of dismantling and removing the items and restoring the site on which they are located. Purchased software that is integral to the functionality of the related equipment is capitalised as part of that equipment.

When parts of an item of property and equipment have different useful lives, they are accounted for as separate items (major components) of property and equipment.

Gains and losses on disposal of an item of property and equipment are recognised net under '*Other non-operating income/(expense)*' in the consolidated statement of comprehensive income.

The cost of replacing part of an item of property and equipment is recognised in the carrying amount of the item if it is probable that the future economic benefits embodied within the part will flow to the Group and its cost can be measured reliably. The carrying amount of the replaced part is derecognised.

3 Summary of significant accounting policies (continued)

3.7 Property and equipment (continued)

3.7.2 Depreciation and useful life

Depreciation is calculated on property and equipment on a straight-line basis from the time the assets are available for use, over their estimated useful lives as follows:

	Estimated useful life (in years)
Servers and computers	2-5
Furniture	7
Office IT equipment	2-3
Leasehold improvements	Lesser of useful life or life of lease

The assets' residual values, useful lives and depreciation methods are reviewed, and adjusted as appropriate, at each financial year-end. The Group classifies advances paid to equipment suppliers as assets under construction in property and equipment in the consolidated statement of financial position.

3.8 Intangible assets other than goodwill

Intangible assets acquired separately are measured on initial recognition at cost. The cost of intangible assets acquired in a business combination is their fair value as at the date of acquisition. Following initial recognition, intangible assets are carried at cost less any accumulated amortisation and assessed for impairment whenever there is an indication that the intangible asset may be impaired.

3.8.1 Software development costs

Expenditure on research activities, undertaken with the prospect of gaining new scientific or technical knowledge and understanding, is recognised in the consolidated statement of comprehensive income when incurred.

Development activities involve a plan or design for the production of new or substantially improved products and processes. Development expenditure is capitalised only if development costs can be measured reliably, the product or process is technically and commercially feasible, future economic benefits are probable, and the Group intends to and has sufficient resources to complete development and to use or sell the asset. The expenditure capitalised includes the cost of materials, direct labour and overhead costs that are directly attributable to preparing the asset for its intended use. Other development expenditure is recognised in profit or loss as incurred.

Research and development costs that do not meet criteria for capitalisation according to IAS 38 are recognised as an expense in the consolidated statement of comprehensive income during 2021 amounted to RUB 859 (2020: RUB 894).

Subsequent expenditure is capitalised only when it increases the future economic benefits embodied in the specific asset to which it relates. All other expenditure, including expenditure on internally generated goodwill and brands, is recognised in profit or loss as incurred.

3.8.2 Useful life and amortisation of intangible assets

The Group assesses whether the useful life of an intangible asset is finite or indefinite and, if finite, the length of, or number of production or similar units constituting, that useful life. An intangible asset is regarded by the entity as having an indefinite useful life when, based on an analysis of all of the relevant factors, there is no foreseeable limit to the period over which the asset is expected to generate net cash inflows for the entity. The Group did not have any intangible assets with an indefinite useful life in the years ended December 31, 2021 and 2020.

Intangible assets with finite lives are amortised over the useful economic lives and assessed for impairment whenever there is an indication that the intangible asset may be impaired.

Amortisation periods and methods for intangible assets with finite useful lives are reviewed at least at each financial year-end. Changes in the expected useful life or the expected pattern of consumption of future economic benefits embodied in the asset are accounted for by changing the amortisation period or method, as appropriate, and treated as changes in accounting estimates.

The estimated useful lives of the Group's intangible assets are as follows:

	Estimated useful life (in years)
Patents and trademarks	7-20
Capitalised software development costs	3
Domain names	10
Games	3-9
Customer base	3-15
Licenses	3-5
Purchased software	1-4

3 Summary of significant accounting policies (continued)

3.9 Cash and cash equivalents

Cash and cash equivalents comprise cash at banks and on hand, short-term deposits with an original maturity of three months or less and short-term, highly liquid investments that are readily convertible to known amounts of cash and which are subject to an insignificant risk of changes in value. All these items are included as a component of cash and cash equivalents for the purpose of the consolidated statement of financial position and consolidated statement of cash flows.

3.10 Employee benefits

Wages and salaries paid to employees are recognised as expenses in the current period or are capitalised as part of software development costs. The Group also accrues expenses for future vacation payments.

Under provisions of Russian legislation, social contributions are made through social insurance payments calculated by the Group by the application of a 30% rate to the portion of the annual gross remuneration of each employee not exceeding RUB 1.465 and a rate of 15.1% to the portion exceeding this threshold.

3.11 Provisions

Provisions are recognised when the Group has a present legal or constructive obligation as a result of past events, it is probable that an outflow of resources will be required to settle the obligation, and a reliable estimate of the amount can be made. Where the Group expects a provision to be reimbursed, for example under an insurance contract, the reimbursement is recognised as a separate asset but only when the reimbursement is virtually certain.

If the effect of discounting is material, provisions are determined by discounting the expected value of future cash flows at a pre-tax rate that reflects current market assessments of the time value of money and, where appropriate, the risks specific to the liability. Where discounting is used, the increase in the provision due to the passage of time is recognised as an interest expense.

3.12 Revenue recognition

Under IFRS 15, revenue is recognised at an amount that reflects the consideration to which an entity expects to be entitled in exchange for transferring goods or services to a customer. Revenues from services are recognised in the period when services are rendered.

3.12.1 Online advertising

Promo posts in social networks, video and banner advertising space for display advertising is sold on a dynamic basis (i.e., a function of time that an advertisement lasts) or a static basis (i.e., according to the number of page views on an advertisement). The Group has standard rates for online advertisements that depend on several factors, including the specific web page on which the banner appears, the length of the contract, the season, and the format, size and position of the advertisement. Display advertising revenue is recognised as the services are provided (i.e., as per page view for dynamic banners and over the contractual term for static banners). For display advertising sold through some third party advertising agencies, revenue generally is recognised net of any portion attributable to the third parties. For arrangements related to display advertising where the Group does not control advertising services before these services are transferred to end customers, and hence, the Group is an agent rather than a principal in these contracts and recognises revenue on net basis.

The Group earns revenues for search context advertising through partnerships with third parties. Once a user carries out a search on certain of the Group’s websites, search results and advertisement links are displayed on the webpage based on relevancy to the search topic and other known user parameters. When clicked on by the user, the advertisement links lead to sites owned by the third parties’ advertising customers, for which the third party receives a fee, a portion of which it shares with the Group. Context advertising revenue is recognised as the services are provided (i.e., upon “click-through”, which is when a user clicks on an advertiser’s listing) on a net basis. This type of context advertising revenues is based on reports provided by third parties.

Context advertising also includes mobile monetization revenue related to the placement of target advertising, display advertising and advertising through integration in applications, advertising thought offers on the Group's applications. The revenue from mobile monetization is recognised on a net basis (gross revenue less advertising networks fee)

Context advertising also includes revenue related to the placement of target advertising, display advertising and advertising through integration in applications, advertising thought offers on the Group’s websites and in applications, advertising via networks comprising advertising banners placement on third party websites and advertising on the Group's site communities pages. The revenue from advertising in applications, on the web pages of communities and via networks is recognised on a gross basis with costs and commissions paid to third party owners and administrators of websites, applications, platforms and communities recognised in “Agent/partner fees”.

3.12.2 Internet value-added services (“IVAS”)

Revenue from IVAS is derived from a variety of Internet-based services, including communication products and online games.

Notes to the Consolidated Financial Statements (continued)

3 Summary of significant accounting policies (continued)

3.12 Revenue recognition (continued)

3.12.2.1 Revenue from MMO games

The Group operates its games mainly under the free-to-play game model. The Group derives its online game revenue from in-game virtual items representing additional functionality and features for the game players' characters purchased by game players to play the Group's MMO games and casual games. The amounts of cash or receivables from payment systems for cash from the users, net of short messaging service operators, are not recognised as revenues and are credited to deferred revenue. They are then converted by the players into in-game points. In-game points are used to purchase in-game items. Under the item-based revenue model, revenues are recognised over the life of the in-game virtual items that game players purchase or as the in-game virtual items are consumed. Deferred revenue is reduced as revenues are recognised. The estimated life span of in-game items is determined based on historical player usage patterns and playing behaviour.

The Group enters into licensing arrangements with overseas licensees to operate the Group's games in other countries and regions. These licensing agreements provide two separate elements, each having commercial substance: the initial non-refundable fees and the usage-based royalty fees. The initial non-refundable payment represents the license of the game and is recognised as license revenue immediately once the games are launched into commercial use by the licensees. Ongoing usage-based royalties determined based on the amount of money charged to the players' accounts or services payable by players in a given country or region to the licensees are recognised when they are earned, provided that the collection is probable.

3.12.2.2 Community IVAS

The Group derives Community IVAS revenues through certain communication products, where users pay a fee for the paid content and online services, mainly through social networking web sites and through the commission from third party developers of the various applications placed on social networking web sites, including games, based on the respective applications' revenue. The fees for such services are collected from customers using various payment channels, including bank cards, online payment systems and mobile operators and from the applications developers. The mobile network operators collect fees for such services from their customers, usually through mobile short message services ("SMS"), and pass such fees to the Group. Revenues from third party applications and developers on the Group's platforms are recognised net of commission to mobile operators and any portion attributable to the developer of the application, at the time when customer payment is due. Revenues from services including games developed by the Group and operated on third party platforms are reported gross as the services are provided net of commission to mobile operators. If the amount of revenue is measured based on third party data, such amounts of revenue are recorded based on the best available data at the date of issuance of the consolidated financial statements.

3.12.3 Education Technology services (EdTech) revenue

The Group generates revenue from the sale of online education courses and professional training programs provided via customized in-house educational platforms directly to customers (learners). Services provided during the course may include: online educational materials, lectures and webinars, services to control the educational process (homework review and examinations revision) and other related services (job placement program, supporting services and hosting). Contracts with customers are billed in advance and require payment by the customer prior to accessing any course content without any free trial period. After the purchase and checkout, customers receive a lifetime license to access the course's digital content in addition to the unlimited access to the platform's online services and the content.

The pre-recorded courses and professional training programs are based on the pre-recorded content, which is available to a customer for unlimited period from the moment of getting access to the education platform and the purchased course or professional training program. Such courses and professional training programs do not include obligatory webinars, and customers have opportunity to study the materials in their own timeline.

Sales are made under the Group's standard terms specified in contracts. The time between the customer's payment and the receipt of funds usually does not exceed one day. Payment terms are fixed and do not include variable consideration. Revenue is recognised net of refunds, discounts and value added tax.

Performance obligations committed in a contract are identified based on the services that will be transferred to the customer that are both capable of being distinct, whereby the customer can benefit from the service either on its own or together with other resources that are readily available from third parties or from the Group, and are distinct in the context of the contract, whereby the transfer of the services and the products is separately identifiable from other promises in the contract

Revenue is recognised at the time the related performance obligation is satisfied by transferring the control of the promised service to a customer. Revenue is recognised in an amount that reflects the consideration that the Group expects to receive in exchange for those services. The Group has a stand-ready obligation to deliver its services continually throughout the contract period, which is unlimited in respect of the access to the content and education platforms. As such, the Group recognizes revenue on a straight-line basis as it satisfies the performance obligation over the customers' period of studying which is determined based on the program duration (for live webinar programs) or estimated based on historical customer activity patterns and studying behavior (for pre-recorded courses and professional training programs).

3 Summary of significant accounting policies (continued)

3.12 Revenue recognition (continued)

3.12.4 Other revenue

Other revenues primarily consist of classifieds revenue, non-advertising b2b big data services,database software implementation and support services, listing fees and dividends from venture investments.

3.13 Income taxes

The Company as a Cypriot tax resident is not subject to tax on capital gains and withholding taxes. However, in some jurisdictions where the Company's subsidiaries and associates are incorporated (particularly in Russia), investment income is subject to withholding tax deducted at the source of the income. The Group presents the withholding tax separately from the gross dividend income in the consolidated statement of comprehensive income and the consolidated statement of cash flows.

The Group is also subject to taxation in Russia, the Netherlands and some other jurisdictions its subsidiaries operate in (see also Note 19).

Current income tax

Current income tax assets and liabilities for the current and prior periods are measured at the amount expected to be recovered from or paid to the taxation authorities. The tax rates and tax laws used to compute the amount are those that are enacted or substantively enacted by the reporting date. Current income tax relating to items recognised directly in other comprehensive income is recognised in other comprehensive income and not in profit or loss.

Deferred income tax

Deferred tax is recognised in respect of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for taxation purposes. Deferred tax is not recognised for the following temporary differences: the initial recognition of assets or liabilities in a transaction that is not a business combination and that affects neither accounting nor taxable profit or loss, and differences relating to investments in subsidiaries and jointly controlled entities to the extent that it is probable that they will not reverse in the foreseeable future. In addition, deferred tax is not recognised for taxable temporary differences arising on the initial recognition of goodwill. Deferred tax is measured at the tax rates that are expected to be applied to temporary differences when they reverse, based on the laws that have been enacted or substantively enacted by the reporting date. Deferred tax assets and liabilities are offset if there is a legally enforceable right to offset current tax liabilities and assets, and they relate to income taxes levied by the same tax authority on the same taxable entity, or on different tax entities, but they intend to settle current tax liabilities and assets on a net basis or their tax assets and liabilities will be realised simultaneously.

A deferred tax asset is recognised for unused tax losses, tax credits and deductible temporary differences, to the extent that it is probable that future taxable profits will be available against which they can be utilised. Deferred tax assets are reviewed at each reporting date and are reduced to the extent that it is no longer probable that the related tax benefit will be realised.

3.14 Share-based payment transactions

Employees (including senior executives) of the Group and its associates (each of which a "share-based payment recipient"), may receive remuneration in the form of share-based payment transactions, whereby share-based payment recipients render services as consideration for equity instruments ("equity-settled transactions") or a cash equivalent thereof ("cash-settled share-based payments").

If the Group has a choice to settle share-based payments in cash or in equity, the entire transaction is treated either as cash-settled or as equity-settled, depending on whether or not the Group has a present obligation to settle in cash.

3.14.1 Equity-settled transactions

The cost of equity-settled transactions with share-based payment recipients for awards granted is measured by reference to the fair value of the awards at the date on which they are granted. The fair value is determined using an appropriate pricing model (Black-Scholes-Merton, binomial, Monte-Carlo or other).

The cost of equity-settled transactions is recognised, together with a corresponding increase in equity, over the period in which the performance and/or service conditions are fulfilled, ending on the date on which the relevant share based payment recipients become fully entitled to the award ("the vesting date"). The cumulative expense recognised for equity-settled transactions at each reporting date until the vesting date reflects the extent to which the vesting period has expired and the Group's best estimate of the number of equity instruments that will ultimately vest. The expense or credit for a period recognised in profit or loss represents the movement in cumulative expense recognised as at the beginning and end of that period.

No expense is recognised for awards that do not ultimately vest based on estimated forfeiture rates or as actual forfeitures occur for groups of employee where we cannot make reliable estimates.

3 Summary of significant accounting policies (continued)

3.14 Share-based payment transactions (continued)

Where the terms of an equity-settled award are modified, the minimum expense recognised is the expense as if the terms had not been modified. An additional expense is recognised for any modification, which increases the total fair value of the share-based payment arrangement, or is otherwise beneficial to the share-based payment recipient as measured at the date of modification.

Where an equity-settled award is cancelled, it is treated as if it had vested on the date of cancellation, and any expense not yet recognised for the award is recognised immediately. This includes any award where non-vesting conditions within the control of either the entity or the counterparty are not met. However, if a new award is substituted for the cancelled award, and designated as a replacement award on the date that it is granted, the cancelled and new awards are treated as if they were a modification of the original award, as described in the preceding paragraph.

The dilutive effect, if any, of outstanding options is reflected as additional share dilution in the computation of diluted earnings per share (Note 20).

3.14.2 Cash-settled transactions

The cost of cash-settled transactions is measured initially at fair value at the grant date using a binomial model, further details of which are provided in Note 25. This fair value is expensed over the period until the vesting date with recognition of a corresponding liability. The liability is remeasured to fair value at each reporting date up to, and including the settlement date, with changes in fair value recognised in *'Personnel expenses'* in the consolidated statement of comprehensive income.

3.14.3 Accounting for the change in form of settlement of share-based payments

As a result of modification of share-based payment awards from equity-settled to cash-settled the Group recognises a share-based payment expense which comprises as a minimum the following elements:

- The grant date fair value of the original equity-settled award; plus
- Any incremental fair value arising from the modification of that award; plus
- Any remeasurement of the liability between its fair value at modification date and the amount finally settled.

At the date of modification a liability is recognised based on the fair value of the cash–settled award as at that date and the extent to which the vesting period has expired.

The corresponding debit is taken to equity only to the extent of the fair value of the original equity-settled award as at the date of modification. Any incremental fair value of the cash-settled award over the equity-settled award as at the modification date is expensed immediately on modification to the extent that the vesting period has expired. The remainder of any incremental value is expensed over the period from the date of modification to the date of settlement.

The total fair value of the cash-settled award is remeasured through profit or loss on an ongoing basis between the date of modification and the date of settlement.

3.15 Financial instruments

3.15.1 Initial recognition and measurement

Financial assets within the scope of IFRS 9 are classified as financial assets at fair value through profit or loss, financial assets through other comprehensive income or financial assets at amortised cost, as appropriate.

Financial liabilities within the scope of IFRS 9 are classified as financial liabilities at fair value through profit or loss and financial liabilities at amortised cost as appropriate.

The Group determines the classification of its financial assets and liabilities at initial recognition. All financial assets are recognised initially at fair value plus, in the case of investments not at fair value through profit or loss, directly attributable transaction costs. At initial recognition, the Group measures trade receivables at their transaction price (as defined in IFRS 15) if the trade receivables do not contain a significant financing component in accordance with IFRS 15. Financial liabilities are recognised initially at fair value and, in the case of loans and borrowings, directly attributable transaction costs.

In order for a financial asset to be classified and measured at amortised cost, it needs to give rise to cash flows that are 'solely payments of principal and interest (SPPI)' on the principal amount outstanding. This assessment is referred to as the SPPI test and is performed at an instrument level. The Group's business model for managing financial assets refers to how it manages its financial assets in order to generate cash flows. The business model determines whether cash flows will result from collecting contractual cash flows, selling the financial assets, or both.

Notes to the Consolidated Financial Statements (continued)

3 Summary of significant accounting policies (continued)

3.15 Financial instruments (continued)

The Group's financial assets include cash and cash equivalents, short-term time deposits, trade and other receivables, financial investments in venture capital investees (as defined under 3.20), and derivative financial assets, mainly over equity instruments of the Group's investees. The Group's financial liabilities include trade and other payables, loans and borrowings, and derivative financial liabilities, mainly over equity instruments of the Group's associates and subsidiaries. None of the derivative financial instruments held by the Group were designated as effective hedging instruments.

3.15.2 Subsequent measurement

The subsequent measurement of financial instruments depends on their classification. The Group classifies its financial assets and liabilities into the categories below in accordance with IFRS 9, as follows:

3.15.2.1 Financial assets and liabilities at fair value through profit or loss

Financial assets and liabilities at fair value through profit and loss are carried in the consolidated statement of financial position at fair value. The changes in their fair value are recognised in the consolidated statement of comprehensive income under 'Net gain on financial assets and liabilities at fair value through profit or loss'.

3.15.2.2 Financial assets and liabilities at amortised cost

The Group measures financial assets at amortised cost if both of the following conditions are met:

- The financial asset is held within a business model with the objective to hold financial assets in order to collect contractual cash flows; and
- The contractual terms of the financial asset give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

Financial assets at amortised cost are subsequently measured using the effective interest rate (EIR) method and are subject to impairment. Gains and losses are recognised in profit or loss when the asset is derecognised, modified or impaired.

After initial recognition, interest bearing loans and borrowings and other financial liabilities are subsequently measured at amortised cost using the EIR method. Gains and losses are recognised in the consolidated statement of comprehensive income when the liabilities are derecognised as well as through the amortisation process.

Amortised cost is calculated by taking into account any discount or premium on acquisition and fees or costs that are an integral part of the EIR. The EIR amortisation is included in 'Finance expenses' in the consolidated statement of comprehensive income.

3.15.2.3 Contingent consideration

Contingent consideration recognised by the Group in a business combination to which IFRS 3 applies is subsequently measured at fair value with changes recognised in profit or loss under 'Net gain on financial assets and liabilities at fair value through profit or loss'.

Contingent consideration includes the liabilities shown in the consolidated statement of financial position under 'Other payables, accrued expenses and contingent consideration liabilities'.

3.15.3 Derecognition

A financial asset (or, where applicable a part of a financial asset or part of a group of similar financial assets) is de-recognised where:

- The rights to receive cash flows from the asset have expired; or
- The Group has transferred its rights to receive cash flows from the asset or has assumed an obligation to pay the received cash flows in full without material delay to a third party under a 'pass-through' arrangement; and
- Either (a) the Group has transferred substantially all the risks and rewards of the asset, or (b) the Group has neither transferred nor retained substantially all the risks and rewards of the asset, but has transferred control of the asset.

The Group de-recognises a financial liability when the obligation under the liability is discharged, cancelled or expires.

3 Summary of significant accounting policies (continued)

3.15 Financial instruments (continued)

3.15.4 Offsetting of financial instruments

Financial assets and financial liabilities are offset and the net amount reported in the consolidated statement of financial position if, and only if, there is a currently enforceable legal right to offset the recognised amounts and there is an intention to settle on a net basis, or to realise the assets and settle the liabilities simultaneously.

3.15.5 Fair value of financial instruments

The fair value of financial instruments that are actively traded in organised financial markets is determined by reference to quoted market bid prices at the close of business on the reporting date. For financial instruments where there is no active market, fair value is determined using valuation techniques. Such techniques may include: using recent arm's length market transactions; reference to the current fair value of another instrument that is substantially the same; discounted cash flow analysis or other valuation models.

An analysis of fair values of financial instruments and further details as to how they are measured are provided in Note 23.

3.15.6 Impairment of financial assets

The Group recognises an allowance for expected credit losses ("ECLs") for all debt instruments not held at fair value through profit or loss. ECLs are based on the difference between the contractual cash flows due in accordance with the contract and all the cash flows that the Group expects to receive, discounted at an approximation of the original effective interest rate. The expected cash flows will include cash flows from the sale of collateral held or other credit enhancements that are integral to the contractual terms.

For trade receivables the Group applies a simplified approach in calculating ECLs. The Group has established a provision matrix that is based on its historical credit loss experience, adjusted for forward-looking factors specific to the debtors and the economic environment.

3.15.6.1 Financial assets carried at amortised cost

For financial assets carried at amortised cost (loans and receivables), evidence of impairment may include indications that the debtor or a group of debtors is experiencing significant financial difficulty, default or delinquency in interest or principal payments, the probability that they will enter bankruptcy or other financial reorganisation and where observable data indicate that there is a measurable decrease in the estimated future cash flows, such as changes in arrears or economic conditions that correlate with defaults.

If there is objective evidence that an impairment loss has been incurred, the amount of the loss is measured as the difference between the asset's carrying amount and the present value of estimated future cash flows (excluding future expected credit losses that have not yet been incurred) discounted using the asset's original EIR. The carrying amount of the asset is reduced through the use of an allowance account and the amount of the loss is recognised in profit or loss as a 'Bad debt expense' in 'Other operating expenses'. The allowance is estimated based on a combination of specific accounts and general ageing analysis.

Trade accounts receivable are recorded at the invoiced amount and are non-interest bearing. Credit is only granted to customers after a review of credit history.

3.16 Foreign currency translation

The consolidated financial statements are presented in RUB, which is the Group's presentation currency, and all values are rounded to the nearest million (RUB '000000) except per share information and unless otherwise indicated. Each entity in the Group determines its own functional currency and items included in the financial statements of each entity are measured using that functional currency. The functional currency of the Group's Russian subsidiaries and associates as well as the Company itself is RUB.

Transactions in foreign currencies are initially recorded in the functional currency at the rate ruling at the date of transaction. Monetary assets and liabilities denominated in foreign currencies are retranslated at the measurement currency rate of exchange ruling at the reporting date. All resulting differences are taken to the consolidated statement of comprehensive income and included in the determination of net profit as '*Net foreign exchange (losses)/gains*'. Non-monetary items that are measured in terms of historical cost in a foreign currency are translated using the exchange rate as at the date of initial transaction.

As at the reporting date, the assets and liabilities of the Company, its subsidiaries and joint venture with functional currencies other than the RUB are translated into the presentation currency of the Group (RUB) at the rate of exchange ruling at the reporting date and their operations are translated at exchange rates prevailing at the date of the transactions. The exchange differences arising on the translation are recognised in other comprehensive income.

3 Summary of significant accounting policies (continued)

3.17 Impairment of non-financial assets and investments in equity accounted associates and joint ventures

The Group assesses at each reporting date whether there is an indication that an asset may be impaired. If any indication exists, or when annual impairment testing for an asset is required, the Group estimates the asset's recoverable amount. An asset's recoverable amount is the higher of an asset's or cash-generating unit's ("CGU") fair value less costs to sell and its value in use and is determined for an individual asset, unless the asset does not generate cash inflows that are largely independent of those from other assets or groups of assets. Where the carrying amount of an asset or CGU exceeds its recoverable amount, the asset is considered impaired and is written down to its recoverable amount. In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset. In determining fair value less costs to sell, an appropriate valuation model is used. These calculations are corroborated by valuation multiples, quoted share prices for publicly traded companies or other available fair value indicators.

Impairment losses of continuing operations are recognised in earnings in those expense categories consistent with the function of the impaired asset.

For assets excluding goodwill, an assessment is made at each reporting date as to whether there is any indication that previously recognised impairment losses may no longer exist or may have decreased. If such indication exists, the Group estimates the asset's or cash-generating unit's recoverable amount. A previously recognised impairment loss is reversed only if there has been a change in the assumptions used to determine the asset's recoverable amount since the last impairment loss was recognised. The reversal is limited so that the carrying amount of the asset does not exceed its recoverable amount, nor exceed the carrying amount that would have been determined, net of depreciation or amortisation, had no impairment loss been recognised for the asset in prior years. Such reversal is recognised in earnings.

Goodwill is tested for impairment annually and when circumstances indicate that the carrying value may be impaired.

Impairment is determined for goodwill by assessing the recoverable amount of each CGU (or group of CGUs) to which the goodwill relates. Where the recoverable amount of the CGU is less than its carrying amount an impairment loss is recognised. Impairment losses relating to goodwill cannot be reversed in future periods.

3.18 Earnings per share

The Group presents basic and diluted earnings per share ("EPS") data for its ordinary and Class A shares. Basic EPS is calculated by dividing the profit or loss attributable to shareholders of the Company by the weighted average number of shares outstanding during the period, adjusted for own shares held.

Diluted EPS is determined by adjusting the profit or loss attributable to shareholders and the weighted average number of shares outstanding, adjusted for own shares held, for the effects of all dilutive potential ordinary shares, which may comprise share options granted to employees of the Group.

3.19 Segment reporting

An operating segment is a component of the Group that engages in business activities from which it may earn revenues and incur expenses, including revenues and expenses that relate to transactions with any of the Group's other components. An operating segment's operating results are reviewed regularly by the Group's chief operating decision maker ("CODM") to make decisions about resources to be allocated to the segment and assess its performance, and for which discrete financial information is available.

Segment results that are reported to the CODM include items directly attributable to a segment as well as those that can be allocated on a reasonable basis.

3.20 Financial investments in venture capital investees

Financial investments in venture capital investees, are the Group's investments in start-up Internet ventures and smaller Internet companies in Russia, Ukraine and Israel with ownership ranging from 1.5% to 50% and which gives the Group significant influence in some of these investments. They form the Group's venture capital portfolio and are monitored and managed exclusively on the basis of their fair values. The Group's involvement in the operating management of the investees is limited, and the possibility of the Group maintaining a specific financial investment in its investment portfolio in the long run is remote. Financial investments in such associates are carried in the consolidated statement of financial position at fair value even though the Group may exert significant influence over those companies. This treatment is permitted by IAS 28 *Investments in Associates and Joint Ventures*, which allows investments held by venture capital organisations to be excluded from its scope where those investments are designated, upon initial recognition, as at fair value through profit or loss and accounted for in accordance with IFRS 9, with changes in fair value recognised in profit or loss in the period of the change. Accounting policies of the Group with respect to financial investments in associates are discussed in more detail under Note 3.15 above as part of the Group's accounting policies with respect to financial assets.

Notes to the Consolidated Financial Statements (continued)

3 Summary of significant accounting policies (continued)

3.21 Non-current assets held for sale and discontinued operations

The Group classifies non-current assets and disposal groups as held for sale if their carrying amounts will be recovered principally through a sale transaction rather than through continuing use. Non-current assets and disposal groups classified as held for sale are measured at the lower of their carrying amount and fair value less costs to sell. Costs to sell are the incremental costs directly attributable to the disposal of an asset (disposal group), excluding finance costs and income tax expense.

The criteria for held for sale classification is regarded as met only when the sale is highly probable, and the asset or disposal group is available for immediate sale in its present condition. Actions required to complete the sale should indicate that it is unlikely that significant changes to the sale will be made or that the decision to sell will be withdrawn. Management must be committed to the plan to sell the asset and the sale expected to be completed within one year from the date of the classification.

Property, plant and equipment and intangible assets are not depreciated or amortised once classified as held for sale.

Assets and liabilities classified as held for sale are presented separately as current items in the consolidated statement of financial position.

A disposal group qualifies as discontinued operation if it is a component of an entity that either has been disposed of, or is classified as held for sale, and:

- Represents a separate major line of business or geographical area of operations
- Is part of a single co-ordinated plan to dispose of a separate major line of business or geographical area of operations; or
- Is a subsidiary acquired exclusively with a view to resale.

Discontinued operations are excluded from the results of continuing operations and are presented as a single amount as profit or loss after tax from discontinued operations in the consolidated statement of comprehensive income.

In cases the Group ceases to classify the asset (or disposal group) as held for sale then the asset is measured at the lower of:

- Its carrying amount before the asset (or disposal group) was classified as held for sale, adjusted for any depreciation, amortisation or revaluations that would have been recognised had the asset (or disposal group) not been classified as held for sale; and
- Its recoverable amount at the date of the subsequent decision not to sell.

The Group includes any required adjustment to the carrying amount of a non-current asset that ceases to be classified as held for sale in profit or loss from continuing operations in the period in which the criteria of classification as asset held for sale are no longer met. Financial statements for the periods since classification as held for sale was applied are amended accordingly.

4 Significant accounting judgments, estimates and assumptions

The preparation of consolidated financial statements in conformity with IFRS requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, disclosures of contingent assets and liabilities at the reporting dates and the reported amounts of revenues and expenses during the reporting periods. However, uncertainty about these assumptions and estimates could result in outcomes that require a material adjustment to the carrying amount of the asset or liability affected in future periods.

4.1 Judgments

In the process of applying the Group's accounting policies, management has made the following judgments which have the most significant effect on the amounts recognised in the consolidated financial statements:

4.1.1 Investments in associates and joint ventures

The Company directly or indirectly owned up to 50% in certain of its investments. Based on its voting rights and restrictions in the respective governing documents, the Group made judgments about whether it has control or significant influence over these investments. Subsequently, these entities are either accounted for as subsidiaries (consolidated) or associates (accounted for under the equity method or as financial assets at fair value through profit or loss).

Under the equity method, the investment in an associate or a joint venture is initially recognised at cost. The carrying amount of the investment is adjusted to recognise changes in the Group’s share of net assets of the associate or joint venture since the acquisition date. Goodwill relating to the associate or joint venture is included in the carrying amount of the investment and is not tested for impairment separately.

4 Significant accounting judgments, estimates and assumptions (continued)

4.1 Judgments (continued)

The consolidated statement of comprehensive income reflects the Group's share of the results of operations of the associate or joint venture. Any change in OCI of those investees is presented as part of the Group's OCI. In addition, when there has been a change recognised directly in the equity of the associate or joint venture, the Group recognises its share of any changes, when applicable, in the consolidated statement of changes in equity. Unrealised gains and losses resulting from transactions between the Group and the associate or joint venture are eliminated to the extent of the interest in the associate or joint venture.

The aggregate of the Group's share of profit or loss of an associate and a joint venture is shown on the face of the consolidated statement of comprehensive income outside operating profit and represents profit or loss after tax and noncontrolling interests in the subsidiaries of the associate or joint venture.

The financial statements of the associate or joint venture are prepared for the same reporting period as the Group. When necessary, adjustments are made to bring the accounting policies in line with those of the Group.

After application of the equity method, the Group determines whether it is necessary to recognise an impairment loss on its investment in its associate or joint venture. At each reporting date, the Group determines whether there is objective evidence that the investment in the associate or joint venture is impaired. If there is such evidence, the Group calculates the amount of impairment as the difference between the recoverable amount of the associate or joint venture and its carrying value, and then recognises the loss within '*Impairment of equity accounted associates*' in the consolidated statement of comprehensive income.

Upon loss of significant influence over the associate or joint control over the joint venture, the Group measures and recognises any retained investment at its fair value. Any difference between the carrying amount of the associate or joint venture upon loss of significant influence or joint control and the fair value of the retained investment and proceeds from disposal is recognised in profit or loss.

4.1.2 Consolidation of a structured entity

In November 2010, the Company established, as settlor, an employee benefit trust (the "Trust") under a Trust Deed dated November 11, 2010 ("Trust Deed"), the trustee of which is Mail.ru Employee Benefit Trustees Limited (the "Trustee"). The purpose of the Trust consists in holding trust funds for present and former employees and consultants and related persons. The Trustee manages employee stock options under the 2010 Option Plan (as defined in Note 25). Starting from October 2011, the Trustee was also instructed by the Company to acquire GDRs representing shares of the Company on the stock market and transfer those GDRs to employees in settlement of the 2010 Option Plan options as the options are exercised by the employees. The Group does not hold any equity interest in the Trust; however, under the Trust Deed, the Group has the power to appoint and remove the Trustee at its sole discretion. The operations of the Trust are restricted per the Trust Deed to the activities described above and are solely used by the Group. Based on these facts and circumstances, management concluded that the Group controls the Trustee and, therefore, consolidates the Trustee in its financial statements.

4.1.3 Accounting treatment of share-based payments where the Group has a choice to settle in cash or equity

The Group has wide discretion over the manner of settlement of options issued and determines the accounting treatment of the options based on whether the Group has a present obligation to settle in cash. Specifically, any option holder granted an aggregate of 20,000 or more options was only allowed to exercise the respective portion options in the form of GDRs, while exercises by the optionees granted a smaller cumulative number of options can continue to be in GDRs or cash at the Group's discretion. The terms of the option plan and past exercise history make it reasonable to expect cash settlement of most of the smaller option exercises, even though the Group continues to have discretion over the way of option exercise settlement. Larger than cumulative 20,000 options per person continue to be accounted for as equity awards.

4.2 Estimates and assumptions

Significant estimates and assumptions reflected in the Group's consolidated financial statements include, but are not limited to the following:

- Revenue recognition;
- Fair value of financial instruments;
- Useful lives of intangible assets;
- Software development costs;
- Impairment of goodwill and other intangible assets;
- Fair value of assets and liabilities in business combinations; and
- Recoverability of deferred tax assets.

Actual results could materially differ from those estimates.

4 Significant accounting judgments, estimates and assumptions (continued)

4.2 Estimates and assumptions (continued)

The key assumptions concerning the future events and other key sources of estimation uncertainty at the reporting date that have a significant risk of a material adjustment to the carrying amounts of assets and liabilities within the next financial year are discussed below.

4.2.1 Revenue recognition – in-game items life span

Deferred revenue is recognised as revenue over the estimated life span of the in-game items purchased or as the in-game items purchased with the game points are consumed. The estimated life span of in-game items is determined based on historical player usage patterns and playing behaviour. Future usage patterns may differ from the historical usage patterns on which the Group's revenue recognition policy is based. The Group monitors the operational statistics and usage patterns of its online games and modifies the expected life span when materially different.

Other significant judgements that significantly affect the determination of the amount and timing of revenue from contracts with customers in accordance with IFRS 15 include (i) the timing of satisfaction of performance obligations and (ii) the transaction price and the amounts allocated to performance obligations.

4.2.2 Fair value of financial instruments

Where the fair value of financial assets and financial liabilities recorded in the consolidated statement of financial position cannot be derived from active markets, they are determined using valuation techniques including the discounted cash flows model. The inputs to these models are taken from observable markets where possible, but where this is not feasible, estimates and assumptions have to be made, and a degree of judgment has to be applied in establishing fair values. The judgments, estimates and assumptions include considerations of inputs such as liquidity risk, credit risk and volatility. Changes in assumptions about these factors could affect the reported fair value of financial instruments.

The expected volatility in the pricing models used to measure the fair value of the derivative financial assets and liabilities is determined by reference to peer companies' historical volatility, as the issuers of the underlying equity instruments are not public. When determining risk-free rates to be used in the pricing models, regard is given to US Treasury bonds or Russian government bonds with maturities equal to the expected terms of the respective derivative financial instruments.

Detailed information on the fair values of the Group's financial instruments is available in Note 23.

4.2.3 Useful life of intangible assets

The Group estimates remaining useful lives of its intangible assets at least once a year at the reporting date. If the estimation differs from the previous estimations, the changes are accounted for in accordance with IAS 8 *Accounting Policies, Changes in Accounting Estimates and Errors*. These estimates may have a significant impact on the carrying value of intangible assets and amortisation, charged to earnings. The carrying value of intangible assets is disclosed in Note 8.

4.2.4 Software development costs

Software development costs are capitalised in accordance with the accounting policy described in Note 3.8.1 Initial capitalisation of costs is based on management's judgment that technological and economical feasibility is confirmed, usually when a product development project has reached a defined milestone according to an established project management model. In determining the amounts to be capitalised management makes assumptions regarding the expected future cash generation of the assets, discount rates to be applied and the expected period of benefits.

4.2.5 Impairment of goodwill and other intangible assets

Impairment exists when the carrying value of an asset or cash generating unit exceeds its recoverable amount, which is the higher of its fair value less costs of disposal and its value in use. The fair value less costs of disposal calculation is based on available data from binding sales transactions, conducted at arm's length, for similar assets or observable market prices less incremental costs for disposing of the asset. The value in use calculation is based on a discounted cash flow ("DCF") model. The cash flows are derived from management forecast. The recoverable amount is sensitive to the discount rate used for the DCF model as well as the growth rate used for extrapolation purposes. The key assumptions used to determine the recoverable amount for the different CGUs are disclosed and further explained in Notes 8 and 12.

4.2.6 Fair value of assets and liabilities in business combinations

At the acquisition date the Group recognises separately the identifiable assets, liabilities and contingent liabilities acquired or assumed in a business combination as well as contingent considerations at their fair values, which involves estimates. Such estimates are based on valuation methods that require considerable judgment in forecasting future cash flows and developing other assumptions.

4 Significant accounting judgments, estimates and assumptions (continued)

4.2 Estimates and assumptions (continued)

4.2.7 Share-based payments

Management estimates the fair value of equity-settled stock options at the date of grant and the fair value of cash-settled options at each reporting date using the Black-Scholes-Merton, binominal, Monte-Carlo or other option pricing models, as applicable. The option pricing models were originally developed for use in estimating the fair value of traded options, which have different characteristics than the Group's stock options granted by the Company. The models are also sensitive to changes in the subjective assumptions, which can materially affect the fair value estimate. These subjective assumptions include expected volatility, dividend yield, risk-free interest and forfeiture rates.

4.2.8 Deferred taxes on undistributed earnings

Deferred tax is recognised based on estimated dividends distributions of Company's subsidiaries taking into account limitation of cash and cash equivalents available at the reporting date.

4.2.9 Changes in estimates

MMO Games revenue

In Q4 2020, the Group enhanced the granularity of the data relating to the patterns of how the in-game items are consumed by paying game players and further refined its estimate of the performance obligation satisfaction period in relation to virtual in-game items. This update was recorded prospectively starting from October 1, 2020 and resulted in an increase in revenue and a decrease in deferred MMO Games revenue estimated at RUB 620 as at December 31, 2020.

In Q4 2021, the Group has performed similar update based on information received during 2021, this update was recorded prospectively starting from October 1, 2021 and resulted in an increase in revenue and a decrease in deferred MMO Games revenue estimated at RUB 852 as at December 31, 2021.

EdTech revenue

In Q4 2021, the Group considered internally available historical data for the past 2 years to estimate the customers' period of studying. The Group analysed the historical activity patterns of customers who purchased the pre-recorded courses and professional training programs. To assess the customers' period of studying for the pre-recorded courses and professional training programs, the Group calculated the length of the period starting from the date when the customer receives control of the education materials until the latest date the customer is active on the education platform, to arrive at the best estimate for period of studying.

The Group applied stratified approach splitting the learners into strata by the period of studying based on the historical data. The Group recognised revenue for each stratum ratably over the estimated period of studying. This update was recorded prospectively starting from October 1, 2021 and resulted in an increase in revenue and a decrease in deferred EdTech revenue estimated at RUB 1,554 as at December 31, 2021.

4.2.10 Significant judgement in determining the lease term of contracts with renewal options

The Group determines the lease term as the non-cancellable term of the lease, together with any periods covered by an option to extend the lease if it is reasonably certain to be exercised, or any periods covered by an option to terminate the lease, if it is reasonably certain not to be exercised.

The Group applies judgement in evaluating whether it is reasonably certain to exercise the option to renew. That is, it considers all relevant factors that create an economic incentive for it to exercise the renewal. After the commencement date, the Group reassesses the lease term if there is a significant event or change in circumstances that is within its control and affects its ability to exercise (or not to exercise) the option to renew (e.g., a change in business strategy).

4.2.11 Significant judgement in determining incremental borrowing rate

For the interest rate the Group obtained estimation from banks and compared it to the interest rate swap applicable for currency of the lease contract and for similar tenor, corrected by the average credit spread of entities with rating similar to the Group's rating. As of December 31, 2021 the rate is close to 7.0% for weighted average lease duration. Duration for discount rate is based on weighted average lease period (2.4 years for January 1, 2021). The discount rate is applied to all lease contracts.

Notes to the Consolidated Financial Statements (continued)

5 Operating segments

In order to assess operational performance and allocate resources, the Chief Executive Officer of the Group, who is the Group's Chief Operating Decision Maker (CODM), reviews selected items of each segment's income statement, assuming 100% ownership in all of the Group's key operating subsidiaries, based on management reporting.

Management reporting is different from IFRS, because it does not include certain IFRS adjustments which are not analysed by the CODM in assessing the core operating performance of the business. These adjustments affect such major areas as revenue recognition, share-based payments, disposal or impairment of investments, fair value adjustments, amortisation and impairment thereof, net foreign exchange gains and losses, as well as irregular non-recurring items that occur from time to time and are evaluated for adjustment as and when they occur. The tax effect of these adjustments is also excluded from management reporting.

In 2021 the Group changed the approach to the presentation and composition of reporting segments in order to improve presentation of the Group's strategy and the way the business is managed. From 2021 the Group has presented reportable segments based on the consolidation scope as determined in accordance with IFRS, a change from previously applying a pro forma approach to acquisitions, disposals and assets held for sale. Additionally, from 2021, the Group revised its reportable segments and presented EdTech as a separate segment:

- Communications and Social;
- Games;
- EdTech; and
- New initiatives.

The Communications and Social segment includes email, instant messaging and portal (main page and media projects). It earns substantially all revenues from display and context advertising. This segment also aggregates the Group's social network Vkontakte and two other social networks (OK and My World) and earns revenues from (i) commission from application developers based on the respective applications' revenue, (ii) user payments for virtual gifts, stickers and music subscriptions and (iii) online advertising, including display and context advertising. It also includes Search and music services. These businesses have similar nature and economic characteristics as they are represented by social networks and online communications, common type of customers for their products and services and are regulated under a similar regulatory environment.

The Games segment contains online gaming services, including MMO, social and mobile games, games streaming and platform solutions operated by the Group under the MY.GAMES brand and within the MY.GAMES ecosystem. It earns substantially all revenues from (i) sale of virtual in-game items to users (f2p) or sale of digital copies of the games (b2p), (ii) royalties for games and gaming solutions licensed to third-party online game operators (iii) in-game advertising and (iv) revenues from streaming services and gaming platform services.

The EdTech segment includes the Group's online education platforms with educational courses and programs (such as GeekBrains, Skillbox and Skillfactory) and earns substantially all revenue from individuals for education technology services.

The New initiatives reportable segment represents separate operating segments aggregated in one reportable segment for their similar nature of newly acquired or newly launched and dynamically developing businesses. This segment primarily consists of Youla classifieds that earns substantially all revenues from advertising and listing fees, VK Clips with potential to become a major separate product with the planned launch of own application and target presence across the various Group's services, B2B new projects including cloud along with other services, that are considered insignificant by the CODM for the purposes of performance review.

The Group measures performance of its operating segments through a measure of earnings before interest, tax, depreciation and amortisation (EBITDA). Segment EBITDA is calculated as the respective segment's revenue less operating expenses (excluding depreciation and amortisation and impairment of intangible assets), including Group corporate expenses allocated to the respective segment.

EBITDA is not a measure of financial performance under IFRS. The calculation of EBITDA by the Group may be different from the calculations of similarly labeled measures used by other companies, and it should therefore not be used to compare one company against another or as a substitute for analysis of the Group's operating results as reported under IFRS. EBITDA is not a direct measure of the Group's liquidity, nor is it an alternative to cash flows from operating activities as a measure of liquidity, and it needs to be considered in the context of the Group's financial commitments. EBITDA may not be indicative of the Group's historical operating results, nor is it meant to be predictive of the Group's potential future results. The Group believes that EBITDA provides useful information to the users of the consolidated financial statements because it is an indicator of the strength and performance of the Group's ongoing business operations, including the Group's ability to fund discretionary spending such as capital expenditure, acquisitions and other investments and the Group's ability to incur and service debt.

The Group's share of profits of key strategic JVs and associates is not attributed to any operating segment and not included in the calculation of EBITDA. The Group's share of profits of key strategic JVs and associates (Aliexpress Russia JV, O2O JV, Uchi.ru and Umskul) is included in Net profit reviewed by the CODM. The net profit of key strategic associates is calculated using accounting principles used for the segment financial information of the Group's consolidated operations. The Group's share of profits of non-core strategic associates (Haslop Company Limited, Tetrika and others) is not included in the financial information reviewed by the CODM.

The information about the breakdown of revenue from external customers by the customers' country of domicile and non-current assets by country is not available to the management of the Group, and it considers that the cost to develop such information would be excessive.

5 Operating segments (continued)

The income statement items for each segment for the year ended December 31, 2021, as presented to the CODM, are stated below:

	Communications and Social	Games	EdTech	New initiatives	Eliminations	Group
Revenue						
External revenue	60,053	43,671	10,428	11,600	–	125,752
Intersegment revenue	328	137	2	46	(513)	–
Total revenue	60,381	43,808	10,430	11,646	(513)	125,752
Total operating expenses	33,066	33,451	12,036	15,910	(513)	93,950
EBITDA	27,315	10,357	(1,606)	(4,264)	–	31,802
Net profit from consolidated subsidiaries						12,429
Aliexpress Russia JV						(4,392)
O2O JV						(14,423)
Umskul						(34)
Uchi.ru						(66)
Net loss						(6,486)

The income statement items for each segment for the year ended December 31, 2020, as presented to the CODM, are stated below (restated):

	Communications and Social	Games	EdTech	New initiatives	Eliminations	Group
Revenue						
External revenue	52,513	39,553	6,100	8,207	–	106,373
Intersegment revenue	172	102	–	41	(315)	–
Total revenue	52,685	39,655	6,100	8,248	(315)	106,373
Total operating expenses	28,120	33,320	5,046	13,290	(315)	79,461
EBITDA	24,565	6,335	1,054	(5,042)	–	26,912
Net profit from consolidated subsidiaries						9,964
Aliexpress Russia JV						(1,350)
O2O JV						(10,573)
Net loss						(1,959)

A reconciliation of group aggregate segment revenue, as presented to the CODM, to IFRS consolidated revenue of the Group for the years ended December 31, 2021 and 2020 is presented below:

	2021	2020 (restated)
Group aggregate segment revenue, as presented to the CODM	125,752	106,373
Adjustments to reconcile revenue as presented to the CODM to consolidated revenue under IFRS		
Differences in timing of revenue recognition	309	(5,831)
Consolidated revenue under IFRS	126,061	100,542

Notes to the Consolidated Financial Statements (continued)

5 Operating segments (continued)

A reconciliation of group aggregate segment EBITDA, as presented to the CODM, to IFRS consolidated loss before income tax expense of the Group for the years ended December 31, 2021 and 2020 is presented below:

	2021	2020 (restated)
Group aggregate segment EBITDA, as presented to the CODM	31,802	26,912
Adjustments to reconcile EBITDA as presented to the CODM to consolidated loss before income tax expenses under IFRS		
Differences in timing of revenue recognition	309	(5,831)
Share-based payment transactions	(2,091)	(1,770)
Expected credit loss on consideration receivable	(554)	–
Other	(19)	(32)
EBITDA	29,447	19,279
Depreciation and amortisation	(18,371)	(15,138)
Impairment of fair value adjustments to intangible assets	(1,714)	(285)
Share of loss of equity accounted associates and joint ventures	(21,167)	(19,892)
Finance income	969	336
Finance expenses	(4,253)	(2,969)
Other non-operating loss	(197)	(163)
Goodwill impairment	–	(7,050)
Net gain on financial assets and liabilities at fair value through profit or loss	2,700	5,281
Net gain on disposal of subsidiary	–	1,437
Impairment of equity accounted associates	(559)	(260)
Net loss on disposal of intangible assets	–	(124)
Gain on remeasurement of previously held interest in equity accounted associate	305	46
Loss on remeasurement of financial instruments	(843)	(327)
Net foreign exchange (loss)/gain	(943)	436
Consolidated loss before income tax expense under IFRS	(14,626)	(19,393)

A reconciliation of group aggregate net loss, as presented to the CODM, to IFRS consolidated loss of the Group for the years ended December 31, 2021 and 2020 is presented below:

	2021	2020 (restated)
Group aggregate segment net loss, as presented to the CODM	(6,486)	(1,959)
Adjustments to reconcile net loss as presented to the CODM to consolidated net loss under IFRS		
Differences in timing of revenue recognition	309	(5,831)
Share-based payment transactions	(2,091)	(1,770)
Expected credit loss on consideration receivable	(554)	–
Other non-operating loss	(197)	(163)
Goodwill impairment	–	(7,050)
Impairment of fair value adjustments to intangible assets	(1,387)	(285)
Net gain on disposal of subsidiaries	–	1,437
Net loss on disposal of intangible assets	–	(124)
Net gain on financial assets and liabilities at fair value through profit or loss	2,700	5,281
Impairment of equity accounted associates	(559)	(260)
Gain on remeasurement of previously held interest in equity accounted associate	305	46
Loss on remeasurement of financial instruments	(843)	(327)
Net foreign exchange (loss)/gain	(943)	436
Amortisation of fair value adjustments to intangible assets	(3,947)	(3,298)
Net loss on financial liabilities at amortised cost	(892)	–
Differences in recognition of net share in loss of equity accounted associates and joint ventures	(2,252)	(7,969)
Other	(186)	(234)
Tax effect of the adjustments	1,326	844
Consolidated net loss under IFRS	(15,697)	(21,226)

Notes to the Consolidated Financial Statements (continued)

6 Business combinations in 2020 and 2021

6.1 InGame

In March 2020 the Group acquired control over mobile games developer BeIngame Limited ("InGame") by increasing its share to 100% (75% in addition to 25% stake as of December 31, 2019) for a total cash consideration of RUB 309 (at the exchange rate as of the acquisition date) and settlement of pre-existing relationship in the amount of RUB 858 that represents fair value of Group's trade receivables due from InGame (that approximates its carrying value). As of March 31, 2020, as a result of the control acquisition the Group derecognized the equity accounted investment in InGame with a gain from remeasurement of previously held interest in equity accounted associates of RUB 46. The primary purpose of the acquisition of InGame was to enhance the Group's position in the mobile games market.

In March 2021 the Group finalised purchase price allocation for InGame acquisition, which resulted in no change from provisional values.

The fair values of the identifiable assets and liabilities of InGame as at the date of acquisition were as follows:

	Fair value
Intangible assets	373
Trade accounts receivable	72
Other current assets	83
Cash and cash equivalents	292
Total assets	820
Deferred revenue	113
Deferred tax liabilities	33
Total liabilities	146
Total net assets	674

Goodwill on the transaction was calculated as the excess of:	
(a) The consideration transferred by the Group measured at fair values:	
[1] Cash paid	309
[2] The acquisition date fair value of the Group's previously held equity interest	99
[3] Effective settlement of trade payables to the Group	858
Consideration transferred by the Group	1,266
Over	
(b) The net of the acquisition date amounts of the identifiable assets acquired and the liabilities assumed measured at fair values	674
Goodwill	592

Goodwill is mainly attributable to development of new games and potential synergy with the Group's business. Goodwill is not expected to be deductible for income tax purposes and is allocated to Games CGU.

Intangible assets mainly include mobile games and are amortised over the period of 2 to 5 years.

The cash flows on acquisition were as follows:

Cash paid (included in cash flows from investing activities)	309
Cash acquired (included in cash flows from investing activities)	(292)
Net cash flow on acquisition	17

6.2 Deus Craft

In October 2020 the Group acquired control over mobile games developer DCGAMEPUB LIMITED ("Deus Craft") by increasing its share to 51.16% (51.06% in addition to 0.1% stake as of September 30, 2020) for a total cash consideration of RUB 1,048 and contingent consideration, measured at fair value, of RUB 624 based on ongoing financial KPIs.

On May 20, 2021 the Group paid the contingent consideration for the acquisition of Deus Craft of RUB 287.

In December 2021 the Group finalised purchase price allocation for Deus Craft, which resulted in an increase in fair value of intangible assets by RUB 158 and an increase in deferred income tax liabilities by RUB 20. Net effect on goodwill is RUB 70 decrease.

6 Business combinations in 2020 and 2021 (continued)

6.2 Deus Craft (continued)

The fair values of the identifiable assets and liabilities as at the date of acquisition were as follows:

	Fair value
Intangible assets	2,844
Trade accounts receivable	323
Other current assets	23
Cash and cash equivalents	274
Total assets	3,464
Deferred revenue	84
Deferred income tax liabilities	345
Trade accounts payable	667
Other payables	10
Total liabilities	1,106
Total net assets	2,358

Goodwill on the transaction was calculated as the excess of:	
(a) The consideration transferred by the Group measured at fair values:	
[1] Cash paid	1,048
[2] Financial assets at fair value through profit and loss – derivative over the equity of investee	373
[3] Contingent consideration	625
Consideration transferred by the Group	2,046
(b) The amount of non-controlling interest in Deus Craft measured at the proportionate share of the identifiable net assets	1,152
Over	
(c) The net of the acquisition date amounts of the identifiable assets acquired and the liabilities assumed measured at fair values	2,358
Goodwill	840

Goodwill is mainly attributable to development of new games and potential synergy with the Group's business. Goodwill is not expected to be deductible for income tax purposes and is allocated to Games CGU.

Intangible assets mainly include mobile games and are amortised over the period of 2 to 5 years.

The cash flows on acquisition were as follows:

Cash paid (included in cash flows from investing activities)	1,048
Cash acquired (included in cash flows from investing activities)	(274)
Net cash flow on acquisition	774

6.3 Uchi.ru

In December 2020 the Group acquired 25% in e-learning platform Uchi.ru for a total cash consideration of RUB 4,130. In accordance with IAS 28, the Group accounts the investment in Uchi.ru as an equity accounted associate.

In December 2021 the Group finalised purchase price allocation for Uchi.ru which resulted in an increase in fair value of intangible assets by RUB 110. Net effect on goodwill is RUB 28 decrease.

6 Business combinations in 2020 and 2021 (continued)

6.3 Uchi.ru (continued)

The fair values of the identifiable assets and liabilities as at the date of acquisition were as follows:

	Fair value
Intangible assets	5,231
Property and equipment	20
Right-of-use assets	36
Other non-current assets	6
Prepaid expenses and advances to suppliers	17
Other current assets	11
Cash and cash equivalents	1,120
Total assets	6,441
Deferred tax liability	3
Trade accounts payable	63
Deferred revenue and customer advances	1,035
Current lease liabiltites	34
Other payables, provisions and accrued expenses	83
Total liabilities	1,218
Total net assets	5,223
Group's effective share in equity – 25%	1,306
Goodwill on the transaction was calculated as the excess of:	
(a) The consideration transferred by the Group measured at cost in accordance with IAS 28	4,130
Over	
(b) The net of the acquisition date amounts of the identifiable assets acquired and the liabilities assumed measured at fair values	1,306
Goodwill	2,824

Goodwill in the amount in RUB 2.8 bln is included in the carrying amount of Uchi.ru investment.

Intangible assets mainly include trademark and customer base and are amortised over the period of 3 to 10 years.

6.4 Skillfactory

In September 2021, the Group acquired control over educational online platform “Skillfactory” LLC (“Skillfactory”) by increasing its share to 61.809% (43.50% in addition to 18.309% stake as of June 30, 2021 that was accounted for as an equity accounted associate) by executing a call option for a total cash consideration of RUB 1,088. As of September 30, 2021, as a result of the control acquisition the Group de-recoqnised the equity accounted investment in Skillfactory in the amount of RUB 153 with the gain from remeasurement of previously held interest in equity accounted associates of RUB 305.

In February 2021, the Group granted a loan to Skillfactory in the amount of RUB 125. As of September 30, 2021 carrying value of the loan comprised RUB 133. In accordance with the terms of the addendum to shareholders agreement, the Group received a convertion option to acquire an additional interest of 1.92% as of the date of execution of the above mentioned call option and intends to convert the loan into the share capital of Skillfactory. This conversion option provides the Group with present access to returns associated with that ownership interest and was accounted for as if the underlying 1.92% ownership interest was acquired. As a result, total Group’s ownership interest in Skillfactory is 63.73%.

The Group has also written put options over the remaining 36.27% non-controlling interests at the date of acquisitions of control in Skillfactory. The Group treats both business combination and the written put options as a single transaction. The written put options are accounted for as a derivative financial liability with fair value of RUB 123 as the Group retains control over condition under which these put options become exercisable. The derivative financial liability is measured at fair value through profit or loss.

The primary purpose of the acquisition of Skillfactory was to expand the Group’s presence in the online education market by achieving substantial synergies with Skillbox and Geekbrains, the Group’s online educational platforms.

Notes to the Consolidated Financial Statements (continued)

6 Business combinations in 2020 and 2021 (continued)

6.4 Skillfactory (continued)

The provisional fair values of the identifiable assets and liabilities as at the date of acquisition were as follows:

	Provisional fair value
Intangible assets	284
Property and equipment	5
Trade accounts receivable	5
Other current assets	17
Cash and cash equivalents	45
Total assets	356
Trade accounts payable	8
Deferred revenue	540
Other payables, provisions and accrued expenses	24
Total liabilities	572
Total net assets	(216)

Goodwill on the transaction was calculated as the excess of:	
(a) The consideration transferred by the Group measured at fair values:	
[1] Cash consideration	1,088
[2] The acquisition date fair value of the Group's previously held equity interest	458
[3] Fair value of the written put options over 36.27% non-controlling interest	123
[4] Effective settlement of convertible loan	133
Consideration transferred by the Group	1,802
(b) The amount of non-controlling interest in Skillfactory measured at the proportionate share of the identifiable net assets	(78)
Over	
(c) The net of the acquisition date amounts of the identifiable assets acquired and the liabilities assumed measured at provisional fair values	(216)
Goodwill	1,940

Goodwill is mainly attributable to the educational services and potential synergy with the Group's business. Goodwill is not expected to be deductible for income tax purposes.

Intangible assets mainly include software and trademark and customer base and are amortised over the period of 3 to 9 years.

The cash flows on acquisition were as follows:

Cash paid (included in cash flows from investing activities)	1,088
Cash acquired (included in cash flows from investing activities)	(45)
Net cash flow on acquisition	1,043

6.5 Mamboo games

In August 2021, the Group acquired control over mobile games publisher and developer Mamboo Games LLC ("Mamboo Games") by purchasing 51% of shares in form of executing a call option for a cash consideration of RUB 168 and effective settlement of convertible loans with total carrying value of RUB 202 measured at fair value through profit or loss. In addition, as of the date of acquisition a contingent consideration of RUB 39 was recognised.

Mamboo Games is a hypercasual games publisher and developer. The primary purpose of the acquisition of Mamboo Games was to enhance the Group's position on the mobile games market.

Notes to the Consolidated Financial Statements (continued)

6 Business combinations in 2020 and 2021 (continued)

6.5 Mamboo games (continued)

The provisional fair values of the identifiable assets and liabilities as at the date of acquisition were as follows:

	Provisional fair value
Intangible assets	49
Trade accounts receivable	43
Other current assets	15
Cash and cash equivalents	1
Total assets	108
Trade accounts payable	70
Other payables, provisions and accrued expenses	5
Total liabilities	75
Total net assets	33

Goodwill on the transaction was calculated as the excess of:	
(a) The consideration transferred by the Group measured at fair values:	
[1] Cash paid	168
[2] The acquisition date fair value of the Group's previously held equity interest	1
[3] Effective settlement of convertible loans	202
[4] Contingent consideration	39
Consideration transferred by the Group	410
(b) The amount of non-controlling interest in Mamboo games measured at the proportionate share of the identifiable net assets	16
Over	
(c) The net of the acquisition date amounts of the identifiable assets acquired and the liabilities assumed measured at provisional fair values	33
Goodwill	393

Goodwill is mainly attributable to the development of new games and potential synergy with the Group's business. Goodwill is not expected to be deductible for income tax purposes.

Intangible assets mainly include mobile games and are amortised over the period of 5 years.

The cash flows on acquisition were as follows:

Cash paid (included in cash flows from investing activities)	168
Cash acquired (included in cash flows from investing activities)	(1)
Net cash flow on acquisition	167

6 Business combinations in 2020 and 2021 (continued)

6.6 Mentorama

In October 2021, the Group acquired 90% in educational online platform Mentorama for a total cash consideration of RUB 711.

The primary purpose of the acquisition of Mentorama was to expand the Group's presence in the Brazil education market. The provisional fair values of the identifiable assets and liabilities as at the date of acquisition were as follows:

	Provisional fair value
Intangible assets	113
Trade accounts receivable	1
Cash and cash equivalents	7
Total assets	121
Deferred revenue	34
Deferred income tax liabilities	27
Other payables, provisions and accrued expenses	11
Total liabilities	72
Total net assets	49

Goodwill on the transaction was calculated as the excess of:	
(a) The consideration transferred by the Group measured at fair values:	
[1] Cash paid	711
Consideration transferred by the Group	711
(b) The amount of non-controlling interest in Mentorama measured at the proportionate share of the identifiable net assets	5
Over	
(c) The net of the acquisition date amounts of the identifiable assets acquired and the liabilities assumed measured at provisional fair values	49
Goodwill	667

Goodwill is mainly attributable to the educational services and potential synergy with the Group's business. Goodwill is not expected to be deductible for income tax purposes.

Intangible assets mainly include content and trademark and are amortised over the period of 2 to 5 years.

The cash flows on acquisition were as follows:

Cash paid (included in cash flows from investing activities)	711
Cash acquired (included in cash flows from investing activities)	(7)
Net cash flow on acquisition	704

Notes to the Consolidated Financial Statements (continued)

6 Business combinations in 2020 and 2021 (continued)

6.7 Umskul

In October 2021 the Group acquired 25% in e-learning platform Umskul LLC ("Umskul") for a total cash consideration of RUB 950. In accordance with IAS 28, the Group accounts the investment in Umskul as an equity accounted associate.

The prosivional fair values of the identifiable assets and liabilities as at the date of acquisition were as follows:

	Provisional fair value
Intangible assets	421
Property and equipment	4
Trade accounts receivable	69
Other current assets	3
Cash and cash equivalents	21
Total assets	518
Trade accounts payable	40
Deferred revenue	88
Provisions	1,759
Other payables, provisions and accrued expenses	5
Total liabilities	1,892
Total net assets	(1,374)
Group's effective share in equity – 25%	(344)
The consideration transferred by the Group measured at fair values:	
[1] Cash paid	950
Consideration transferred by the Group	950
Goodwill on the transaction was calculated as the excess of:	
(a) The consideration transferred by the Group measured at cost in accordance with IAS 28:	950
Over	
(b) The net of the acquisition date amounts of the identifiable assets acquired and the liabilities assumed measured at fair provisional values	(344)
Goodwill	1,294

Goodwill in the amount in RUB 1,294 is included in the carrying amount of Umskul investment.

Intangible assets mainly include software, trademark and customer base and are amortised over the period of 2 to 5 years.

7 Lease contracts

Set out below are the carrying amounts of the Group's right-of-use assets and lease liabilities and the movements during the financial year ending December 31, 2021 and December 31, 2020:

	Right-of-use assets				
	Premises	Racks in data centers	Other	Total	Lease liability
As at January 1, 2021	14,200	1,398	20	15,618	15,199
Additions	1,080	3,013	48	4,141	4,032
Depreciation charge	(3,253)	(1,610)	(53)	(4,916)	–
Interest expense	–	–	–	–	1,186
Payments	–	–	–	–	(4,969)
As at December 31, 2021	12,027	2,801	15	14,843	15,448

Notes to the Consolidated Financial Statements (continued)

7 Lease contracts (continued)

In 2021, lease liabilities payments of RUB 4,969 include payment of lease liability principal amount of RUB 3,783 and interest of RUB 1,186.

	Right-of-use assets				
	Premises	Racks in data centers	Other	Total	Lease liability
As at January 1, 2020	4,247	747	15	5,009	4,786
Additions	12,567	1,962	72	14,601	14,435
Depreciation charge	(2,614)	(1,311)	(67)	(3,992)	–
Interest expense	–	–	–	–	842
Payments	–	–	–	–	(4,864)
As at December 31, 2020	14,200	1,398	20	15,618	15,199

In 2020, lease liabilities payments of RUB 4,864 include payment of lease liability principal amount of RUB 4,022 and interest of RUB 842.

8 Intangible assets

	Goodwill	Trademark	Customer base	Game software and software development costs	Other software, licenses and other	Total
Cost						
At January 1, 2020	145,665	15,683	22,114	12,387	10,538	206,387
Additions	–	–	3	772	2,767	3,542
Disposals	–	–	–	(247)	(86)	(333)
Additions due to acquisition of subsidiaries	1,497	–	–	3,053	209	4,759
Disposal due to disposal of subsidiaries	(62)	–	(256)	–	–	(318)
Translation adjustment	–	64	–	493	203	760
At December 31, 2020	147,100	15,747	21,861	16,458	13,631	214,797
Additions	–	–	–	2,229	5,209	7,438
Disposals	–	–	(4)	(16)	(131)	(151)
Additions due to acquisition of subsidiaries	3,000	307	–	116	1,144	4,567
Translation adjustment	(70)	(68)	–	(112)	(17)	(267)
At December 31, 2021	150,030	15,986	21,857	18,675	19,836	226,384
Accumulated amortisation and impairment						
At January 1, 2020	(4,380)	(9,549)	(16,315)	(8,002)	(6,884)	(45,130)
Charge for the year	–	(1,170)	(1,385)	(1,369)	(3,347)	(7,271)
Disposals	–	–		157	327	484
Disposal due to disposal of subsidiaries		–	142	–	–	142
Impairment	(7,050)	(69)	(58)	(3)	(155)	(7,335)
Translation adjustment	–	(38)	–	(220)	(136)	(394)
At December 31, 2020	(11,430)	(10,826)	(17,616)	(9,437)	(10,195)	(59,504)
Charge for the year	–	(1,128)	(1,311)	(1,925)	(4,128)	(8,492)
Disposals	–	–	–	3	130	133
Impairment	–	–	–	(1,714)	–	(1,714)
Translation adjustment	–	17	–	79	21	117
At December 31, 2021	(11,430)	(11,937)	(18,927)	(12,994)	(14,172)	(69,460)
Net book value						
At January 1, 2020	141,285	6,134	5,799	4,385	3,654	161,257
At December 31, 2020	135,670	4,921	4,245	7,021	3,436	155,293
At December 31, 2021	138,600	4,049	2,930	5,681	5,664	156,924

Because of the downward revision of the forecasted cash inflows of the games Grand hotel mania, Guild of heroes, Love choice and Ashes of creation in Q4 2021, the Group recognised an impairment charge of RUB 1,714. The impairment entirely belongs to the Games operating segment.

8 Intangible assets (continued)

On November 2, 2020 the Group completed the sale of 100% of MAPS.ME, a mobile maps and navigation for RUB 1.6 bln. Proceeds obtained under the deal RUB 1.1 bln (net of accounts receivable RUB 0.5 bln offset).

Game software and development costs consist of internally and externally developed and acquired software for online games in use and in process of development.

Games represent separable CGUs and the analysis of impairment is performed at the level of each game, where either impairment was previously recognised or current operating performance was below the original forecasts. The analysis included the comparison of the value in use determined based on discounted future cash flows to the carrying amount. The value in use calculation uses cash flow projections from financial budgets approved by senior management covering a period limited to the useful life of the respective game, ranging from 3 to 5 years.

Determining value in use requires the exercise of significant judgment, including judgment about appropriate discount rates, remaining useful life, the amount and timing of expected future cash flows. The cash flows employed in the DCF analysis are based on the Group's most recent budget and, for years beyond the budget, the Group's estimates, which are based on assumed growth rates. The discount rates used in the DCF analysis are intended to reflect the risks inherent in the future cash flows of the respective cash generating units. The pre-tax discount rates used in the DCF models as of December 31, 2021 and December 31, 2020 are presented in Note 12.

The calculation of value in use is most sensitive to the following assumptions:

- Russian online entertainment market growth rates;
- The Group's market share;
- Games operating performance and net profit margins; and
- Discount rates.

8.1 Playkey cloud gaming acquisition

In June 2021 the Group obtained control of Igroviye Resheniya LLC (Playkey cloud gaming) by purchasing of 100% in its share capital. The Playkey cloud gaming technology solution allows users to play any games on PC, tablets and smartphones via a video streaming solution. This technology can help the Group to develop its cloud gaming technology under MY.GAMES Cloud platform and to scale up cloud gaming in Russia. The MY.GAMES Cloud platform allows users to play new games on high resolutions video settings from all popular devices. The Playkey technology contributes to the future development and potential of the MY.GAMES Cloud platform.

Following IFRS 3 *Business Combinations* management of the Group performed a concentration test and concluded that the acquisition represented assets acquisition.

At the acquisition date, the Group recognised the Playkey technology as software in the amount of RUB 1,115, which was included in "Other software, licenses and other" group of Intangible assets with estimated useful life of 5 years. In addition, the Group acquired cash and cash equivalents in the amount of RUB 25.

Notes to the Consolidated Financial Statements (continued)

9 Property and equipment

	Servers and computers	Leasehold improvements	Furniture, office equipment and motor vehicles	Assets under construction	Other property and equipment	Total
Cost						
At January 1, 2020	16,485	1,086	481	2,380	1,285	21,717
Additions	86	–	18	6,692	–	6,796
Transfers	5,242	10	125	(5,544)	167	–
Disposals	(420)	–	(8)	(3)	(2)	(433)
Additions due to acquisition of subsidiaries	–	–	–	3	–	3
Translation adjustment	133	1	14	12	6	166
At December 31, 2020	21,526	1,097	630	3,540	1,456	28,249
Additions	11	–	18	9,133	3	9,165
Transfers	6,498	892	121	(8,020)	509	–
Disposals	(577)	(484)	–	(5)	(2)	(1,068)
Additions due to acquisition of subsidiaries	5	–	–	–	–	5
Translation adjustment	(54)	–	(5)	(4)	(2)	(65)
At December 31, 2021	27,409	1,505	764	4,644	1,964	36,286
Accumulated depreciation and impairment						
At January 1, 2020	(11,385)	(644)	(251)	–	(725)	(13,005)
Charge for the year	(3,431)	(222)	(78)	–	(144)	(3,875)
Disposals	410	–	7	–	–	417
Translation adjustment	(113)	(1)	(17)	–	(4)	(135)
At December 31, 2020	(14,519)	(867)	(339)	–	(873)	(16,598)
Charge for the year	(4,621)	(82)	(85)	–	(175)	(4,963)
Disposals	534	484	–	–	1	1,019
Translation adjustment	43	–	10	–	1	54
At December 31, 2021	(18,563)	(465)	(414)	–	(1,046)	(20,488)
Net book value						
At January 1, 2020	5,100	442	230	2,380	560	8,712
At December 31, 2020	7,007	230	291	3,540	583	11,651
At December 31, 2021	8,846	1,040	350	4,644	918	15,798

Notes to the Consolidated Financial Statements (continued)

10 Consolidated subsidiaries

These consolidated financial statements include the assets, liabilities and financial results of the Company and its subsidiaries, whose main activity is providing Russian-language Internet services. The significant subsidiaries as at December 31, 2021 and 2020 are listed below:

Subsidiary	Main activity	Ownership,%* December 31, 2021	Ownership,%* December 31, 2020
Mail Cooperatief UA (Netherlands)	Holding entity	100.0%	100.0%
MRGroup Investments Limited (Cyprus)	Holding entity	100.0%	100.0%
Mail.Ru Group LLC (renamed from Internet company Mail.Ru LLC) (Russia)	Holding company	100.0%	100.0%
Mail.ru Internet Holdings B.V. (Netherlands)	Holding company	100.0%	100.0%
Mail.ru Aggregates B.V. (Netherlands)	Holding company	100.0%	100.0%
VK Company LLC (renamed from Mail.ru Group LLC) (Russia)	Online portal services, development and support of online games, social network	100.0%	100.0%
Mail.Ru Development LLC (Russia)	Research and development of online products	100.0%	100.0%
MGL MY.COM (CYPRUS) LIMITED (renamed from Benstar limited)	Support of online games	100.0%	100.0%
Data Centre M100 LLC (Russia)	Hosting services	100.0%	100.0%
My.com B.V. (Netherlands)	Support of online games and portal services	100.0%	100.0%
V kontakte LLC (Russia)	Social network	100.0%	100.0%
Pixonic LLC (Russia)	Research and development of online products	100.0%	100.0%
MY.GAMES HOLDINGS LTD (CYPRUS) (renamed from Pixonic Games Limited (Cyprus))	Online games operation	100.0%	100.0%
Skillbox LLC (Russia)	Education technologies	57.54%	70.7%
GeekBrains LLC (Russia)	Education technologies	57.54%	100.0%
Skillfactory LLC (Russia) (Note 6)	Education technologies	36.69%	–
BEINGAME LIMITED (Cyprus)	Mobile games development	100%	100%
DCGAMEPUB LIMITED (Cyprus)	Mobile games development	51.2%	51.2%

* *The ownership percentages above represent the Company's effective indirect ownership in each subsidiary. There are no differences between economic and voting rigths which the Group holds in subsidiaries.*

11 Investments in equity accounted associates and joint ventures

The Group has investments in associates and joint ventures operating popular Internet websites and providing various services over the Internet. Investments in equity accounted associates and joint ventures as of December 31, 2021 and December 31, 2020 comprised the following:

	Main activity	Voting shares December 31, 2021	Voting shares December 31, 2020	Carrying value December 31, 2021	Carrying value December 31, 2020
Joint ventures					
Aliexpress Russia Holding Pte. Ltd.	E-commerce platform	18%	18%	10,092	11,506
O2O Holding LLC	Russian platform in mobility and food-tech	50%*	50%*	33,085	24,694
Associates					
Uchi.ru LLC (Russia)	Educational portal	25%	25%	3,874	4,130
Umskul LLC	Educational portal	25%	–	917	–
Inplat Holdings Limited (Cyprus)	Operation of electronic online payment systems	17.76%	17.76%	–	564
Haslop Company Limited (Cyprus) and Russian subsidiaries (collectively, "Mamba")	Provides content for www.love.mail.ru, a vertical of the www.mail.ru portal operated by a subsidiary of Mail.Ru Internet NV	28.10%	28.10%	493	484
Others				460	570
Total				48,921	41,948

* *including 45% direct interest and 5% indirect*

The above entities have the same reporting date as the Company. None of the entities were listed on a public exchange as of December 31, 2021.

The tables below illustrate the summarised financial information of the Group's significant equity accounted investments and joint ventures in:

Notes to the Consolidated Financial Statements (continued)

11 Investments in equity accounted associates and joint ventures (continued)

11.1 Uchi.ru

	December 31, 2021	December 31, 2020 (restated)
Current assets	942	1,148
Non-current assets	5,650	5,293
Current liabilities	(2,332)	(1,218)
Non-current liabilities	(61)	–
Equity	4,199	5,223
Group's share in equity – 25%	1,050	1,306
Goodwill	2,824	2,824
Group's carrying amount of the investment	3,874	4,130

	2021	2020
Revenue	2,492	242
Cost of sales	(2,697)	(363)
Finance and other income/expenses	(814)	(5)
Loss before tax	(1,019)	(126)
Income tax expense	(5)	(3)
Loss for the year	(1,024)	(129)
Group's share of loss for the period	(256)	(32)

11.2 O2O Holding LLC

	December 31, 2021	December 31, 2020
Current assets	19,728	16,945
Non-current assets	64,322	49,376
Current liabilities	(18,252)	(20,097)
Non-current liabilities	(17,107)	(11,147)
Equity	48,691	35,077
Group's share in equity – 50% (effective share in equity adjusted by NCI – 51.35% (2020: 47.36%)	25,005	16,614
Goodwill	8,080	8,080
Group's carrying amount of the investment	33,085	24,694

	2021	2020
Revenue	58,227	18,135
Cost of sales	(57,561)	(24,772)
Administrative expenses	(35,335)	(21,755)
Finance and other income/expenses	(5,094)	(15,295)
Loss before tax	(39,763)	(43,687)
Income tax benefit	6,107	6,072
Loss for the year	(33,656)	(37,615)
Non-controlling interest share	(2,555)	(1,983)
Group's share of loss for the year	(15,551)	(17,816)

Notes to the Consolidated Financial Statements (continued)

11 Investments in equity accounted associates and joint ventures (continued)

11.3 Aliexpress Russia Holding Pte Limited

	December 31, 2021	December 31, 2020
Current assets	41,296	33,004
Non-current assets	49,211	42,991
Current liabilities	(33,294)	(16,908)
Non-current liabilities	(11,949)	(8,598)
Equity	45,264	50,489
Group's share in equity – (effective share in equity adjusted by NCI – 15.11% (2020: 15.01%))	6,144	7,580
Goodwill	3,948	3,926
Group's carrying amount of the investment	10,092	11,506

	2021	2020
Revenue	37,592	25,820
Cost of sales	(40,395)	(21,205)
Marketing expenses	(24,995)	(10,742)
Administrative expenses	(8,256)	(4,930)
Finance and other costs	(4,146)	(4,108)
Loss before tax	(40,200)	(15,165)
Income tax benefit	39	1,853
Loss for the year	(40,161)	(13,312)
Group's share of loss for the year	(5,980)	(1,999)
Total other comprehensive income	132	1,466

11.4 Umskul LLC

	December 31, 2021
Current assets	467
Non-current assets	392
Current liabilities	(2,365)
Non-current liabilities	–
Equity	(1,506)
Group's share in equity – 25%	(377)
Goodwill	1,294
Group's carrying amount of the investment	917

	October-December 2021
Revenue	489
Cost of sales	(336)
Administrative expenses	(16)
Finance and other income/expenses	(217)
Loss before tax	(80)
Income tax expense	(52)
Loss for the year	(132)
Group's share of loss for the year	(33)

11 Investments in equity accounted associates and joint ventures (continued)

11.4 Umskul LLC (continued)

Movement in investments in equity accounted associates and joint ventures for the years ended December 31, 2021 and 2020 is presented below:

	2021	2020
Investments in equity accounted associates and joint ventures at January 1	41,948	49,834
Acquisition of shares in equity accounted associates (Note 6.7)	950	4,858
Acquisition of shares in equity accounted joint ventures	–	31
Loans converted to the share capital of joint venture (Note 23.7)	17,843	–
Additional contribution to equity accounted joint ventures	10,817	6,001
Share in net profits of equity accounted associates and joint ventures	(21,167)	(19,892)
Dividends received	(891)	(29)
Acquisition of control over equity accounted associates (Note 6.4)	(153)	(57)
Impairment of equity accounted associate and joint ventures	(559)	(260)
Foreign currency translation effect relating to joint venture	133	1,462
Investments in equity accounted associates and joint ventures at December 31	48,921	41,948

In September-October 2021, the Group converted loans receivable of RUB 17,385 and interest receivable of RUB 458 into the share capital of O2O JV. The Group's share in the JV remained unchanged as Sberbank also converted its loans receivable from the JV to the share capital in the same amount.

In August 2021, the Group provided USD 60.3 million (RUB 4,435) to AliExpress Russia JV in return for additional shares in the JV as part of its new share issuance. After the completion of the JV's funding round in Q4 2021, the Group's shareholding in the JV remained broadly unchanged.

In 2021, the Group revised its assumption to recover the carrying value of investments in InPlat of RUB 559 through the contribution to Payment JV and concluded that this assumption is no longer probable. As a result, the Group recognised an impairment charge of RUB 559 related to the investment in InPlat.

In 2020, due to the poor performance of Tiwo investment in associate, the Group recorded an impairment charge of RUB 260.

12 Impairment testing of goodwill

The table below shows movements in goodwill per groups of CGUs, corresponding to the Group's operating segments for each of the years ended December 31, 2021 and 2020:

Group of CGU	Cost at January 1, 2020	Disposal	Impairment	Additions	Cost at December 31, 2020	Change in preliminary valuation	Additions	Cost at December 31, 2021
Email, Portal and IM	8,192	–	(3,934)	–	4,258	–	–	4,258
Social Networks	18,474	–	–	–	18,474	–	–	18,474
Online Games	1,952	–	–	–	1,952	–	–	1,952
Search	2,496	–	(2,496)	–	–	–	–	–
Vkontakte	93,691	–	–	–	93,691	–	–	93,691
Pixonic	1,592	–	–	–	1,592	–	–	1,592
ESForce	620	–	(620)	–	–	–	–	–
UMA	6,617	–	–	–	6,617	–	–	6,617
Skillbox	1,775	–	–	(18)	1,757	–	–	1,757
Deus Craft	–	–	–	910	910	(70)	–	840
Ingame	–	–	–	592	592	–	–	592
Skillfactory	–	–	–	–	–	–	1,940	1,940
Mamboo games	–	–	–	–	–	–	393	393
Mentorama	–	–	–	–	–	–	667	667
Others	5,876	(62)	–	13	5,827	–	–	5,827
Total	141,285	(62)	(7,050)	1,497	135,670	(70)	3,000	138,600

The recoverable amount of goodwill has been determined based on value-in-use calculations as of October 1, 2021 and December 31, 2020.

12 Impairment testing of goodwill (continued)

12.1 Value in use

At October 1, 2021, value in use was determined using cash flow projections from financial budgets and forecasts approved by senior management covering a five-year period.

The major assumptions used in the DCF models at December 31, 2021 are presented below:

	Email, Portal and IM	Social Networks	Online Games	Deus Craft	E-commerce and EdTech	Vkontakte	Pixonic
Terminal growth rate	5.0%	5.0%	5.0%	5,0%	5.0%	5.0%	5.0%
Pre-tax discount rate	18.4%	18.6%	18.8%	22.6%	19.7%	17.9%	17.4%

The major assumptions used in the DCF models at December 31, 2020 are presented below:

	Email, Portal and IM	Social Networks	Online Games	Deus Craft	E-commerce and EdTech	Vkontakte	Pixonic
Terminal growth rate	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
Pre-tax discount rate	17.0%	17.3%	17.2%	26.6%	19.3%	16.7%	16.8%

Determining value in use requires the exercise of significant judgment, including judgment about appropriate discount rates, terminal growth rates, the amount and timing of expected future cash flows. The cash flows employed in the DCF analysis are based on the Group's most recent budget and, for years beyond the budget, the Group's estimates, which are based on assumed growth rates. The discount rates used in the DCF analysis are intended to reflect the risks inherent in the future cash flows of the respective cash generating units.

The calculation of value in use is most sensitive to the following assumptions:

- Revenue Compound annual growth rates ("CAGR");
- EBITDA margins;
- Growth rates used to extrapolate cash flows beyond the budget period including terminal growth rate in last year of projections; and
- Discount rates.

Reasonably possible changes in any key assumptions would not result in impairment of goodwill of any CGU.

In 2020, given the challenging market environment caused by the global recession and effect of COVID-19, with ongoing lockdowns and pressures around the advertising market as well as the related uncertainty in particular, the Group concluded that these circumstances might significantly and adversely affect the advertising market in Russia and accordingly, the Group revised its advertising revenue projections downward. As a result of this analysis in Q1 2020 management recognised an impairment charge of RUB 2,496 against goodwill related to the Search CGU and RUB 3,934 against goodwill related to the Email, Portal and IM CGU.

13 Trade accounts receivable

As of December 31, 2021 and 2020 trade receivables comprised the following:

	December 31, 2021	December 31, 2020
Trade accounts receivable, gross	21,570	17,319
Allowance for expected credit losses	(882)	(612)
Total trade receivables, net	20,688	16,707

The accounts receivable increased primarily due to growth of online advertising and MMO games revenue.

The movements in the allowance for expected credit losses of trade receivables were as follows:

Balance as of January 1, 2020	(440)
Charge for the year	(183)
Accounts receivable written off	11
Balance as of December 31, 2020	(612)
Charge for the year	(418)
Accounts receivable written off	148
Balance as of December 31, 2021	(882)

13 Trade accounts receivable (continued)

An impairment analysis is performed at each reporting date using a provision matrix to measure expected credit losses. The provision rates are based on days past due for groupings of various customer segments with similar loss patterns and the likelihood of default over a given time horizon. The calculation reflects the probability-weighted outcome, the time value of money and reasonable and supportable information that is available at the reporting date about past events, current conditions and forecasts of future economic conditions.

Set out below is the information about the credit risk exposure on the Group's trade and other receivables as of December 31, 2021 and 2020 using a provision matrix:

	Trade accounts receivable				
	Days past due				
	<90 days	90-180	180-360	>360	Total
As of December 31, 2021					
Expected credit loss rate	0.05%-19.88%	0.99%-54.87%	1.64%-73.49%	100.00%	
Estimated total gross carrying amount at default	19,429	893	464	784	21,570
Expected credit loss	(4)	(44)	(50)	(784)	(882)

	Trade accounts receivable				
	Days past due				
	<90 days	90-180	180-360	>360	Total
As of December 31, 2020					
Expected credit loss rate	0.23%-21.05%	1.22%-54.87%	1.91%-73.49%	100.00%	
Estimated total gross carrying amount at default	15,927	279	626	487	17,319
Expected credit loss	(24)	(14)	(87)	(487)	(612)

The accounts receivable balances as of December 31, 2021 and 2020 mainly represented amounts due from online electronic payment systems and advertising customers.

The trade receivables are non-interest bearing and are generally settled in RUB on a 40-90 days basis. There is no requirement for collateral to receive credit.

Management considers that the carrying amount of the receivable balances approximated their fair value as of December 31, 2021 and 2020.

14 Cash and cash equivalents and short-term deposits

As of December 31, 2021 and 2020 cash and cash equivalents consisted of the following:

	Currency	December 31, 2021	December 31, 2020
Current accounts and cash on hand:	USD	9,371	30,650
	RUB	3,786	3,044
	EUR	3,078	2,517
	Other	80	3
Total current accounts and cash on hand		16,315	36,214
Deposit accounts with an original maturity of three months or less:	USD	–	354
	RUB	7,422	2,729
Total deposit accounts with an original maturity of three months or less		7,422	3,083
Total cash and cash equivalents and short-term deposits		23,737	39,297

15 Share capital

15.1 Charter capital and share issues

The charter capital of the Company consisted of 227,874,940 ordinary shares and 11,500,100 Class A shares with USD 0.000005 par value each as of December 31, 2021, while the number of authorised shares of the Company as of the same date consisted of 10,000,000,000 ordinary shares and 10,000,000,000 Class A shares. GDRs representing 13,238,213 shares of the Company were held in treasury by the Group as of December 31, 2021.

The charter capital of the Company consisted of 227,874,940 ordinary shares and 11,500,100 Class A shares with USD 0.000005 par value each as of December 31, 2020, while the number of authorised shares of the Company as of the same date consisted of 10,000,000,000 ordinary shares and 10,000,000,000 Class A shares. GDRs representing 649,637 shares of the Company were held in treasury by the Group as of December 31, 2020.

As of December 31, 2021 and 2020 all issued shares were fully paid.

Notes to the Consolidated Financial Statements (continued)

15 Share capital (continued)

15.1 Charter capital and share issues (continued)

Rights attached to the share classes as of December 31, 2021 and 2020

The Class A shares and the ordinary shares rank pari passu in all respects, but constitute separate classes of shares, i.e. each and every ordinary share and Class A share has the following rights:

(i) The right to an equal share in any dividend or other distribution paid by the Company to the holders of the shares, pari passu with all other Class A shares and ordinary shares; and, for the avoidance of doubt, any dividend or other distribution may only be declared and paid by the Company to the holders of the Class A shares and the ordinary shares together, and not to the holders of one of those classes of shares only;

(ii) The right to an equal share in the distribution of the surplus assets of the Company pari passu with all other ordinary shares and Class A shares upon the winding up of the Company.

Each Class A share has the right to twenty five votes and each ordinary share has the right to one vote at a meeting of members of the Company or on any resolution of members of the Company.

For additional details on the options over the shares of the Company outstanding as of December 31, 2021 and 2020, refer to Note 25.

15.2 GDR buying programme

Starting 2011, the Trustee commenced a GDR buying programme in order to cover a part of the employee and director options. Under the GDR buying programme, the Trustee acquires GDRs representing shares of the Company and will subsequently transfer the GDRs to the respective option holders upon the exercise of the options.

15.3 Cash capital increase

On September 24, 2020 the Group announced placing of 7,142,858 newly issued Global Depository Receipts at a placement price of USD 28.00 per GDR corresponding to a capital increase of USD 200 million (RUB 15,209 net of issuance costs of RUB 154). Settlement of the placement was on September 28, 2020.

The expected use of proceeds raised by the Group was as follows:

- Fund development and organic growth across existing verticals;
- Finance and develop strategic M&A opportunities; and
- Finance investments into O2O and AER JVs

16 Other payables and accrued expenses

Other payables and accrued expenses consist of:

	December 31, 2021	December 31, 2020
Payables to personnel	3,818	3,373
Accrued vacations	2,643	2,190
Contingent consideration liabilities (Note 23)	943	1,604
Other current payables and provisions	2,719	2,051
Total other payables and accrued expenses	10,123	9,218

Notes to the Consolidated Financial Statements (continued)

17 Revenue

Contract balances comprise trade receivables presented as a separate line item in the consolidated statement of financial position and contract liabilities. Contract liabilities comprise deferred revenue and customer advances presented as separate line items in the consolidated statement of financial position.

As required for consolidated financial statements disaggregation of revenue from contracts with customers for the year ended December 31, 2021, based on the Group's segment reporting (Note 5) is presented below:

Segments	Communications and Social	Games	EdTech	New initiatives	Eliminations	Group
Timing of revenue recognition						
Services transferred at a point in time	49,131	20,198	150	11,646	(513)	80,612
Services transferred over time	11,250	23,610	10,280	–	–	45,140
Total revenue	60,381	43,808	10,430	11,646	(513)	125,752

Disaggregation of revenue from contracts with customers for the year ended December 31, 2020 based on the Group's segment reporting (Note 5) is presented below (restated):

Segments	Communications and Social	Games	EdTech	New initiatives	Eliminations	Group
Timing of revenue recognition						
Services transferred at a point in time	41,855	16,115	129	8,248	(315)	66,032
Services transferred over time	10,830	23,540	5,971	–	–	40,341
Total revenue	52,685	39,655	6,100	8,248	(315)	106,373

18 Finance expenses

Finance expenses consist of:

	2021	2020
Interest on loans and borrowings	3,003	1,969
Interest on lease liabilities	1,186	842
Bank charges and commissions	64	158
Total finance expenses	4,253	2,969

19 Income tax

The business activity of the Group and its associates is subject to taxation in multiple jurisdictions, including:

The Russian Federation

The Group's subsidiaries and associates incorporated in the Russian Federation are subject to corporate income tax at the standard rate of 20% applied to their taxable income. In 2021 a new law regarding taxation of IT companies entered into force in Russia. The law proposes VAT exemption and decrease in profit tax rate and social contributions for Russian IT companies if certain criteria are met. In particular, VAT exemption will only apply to licensing software and databases included in the register of domestic software. Previously the exemption applied to all software and databases and was used by the Group. As a result, the new VAT exemption rules have limited the extent of the VAT benefits available to the Group. The Group cannot guarantee that it will be eligible to apply that new VAT exemption in the future. In addition, it is not clear if the Group could benefit from the reduction in profit tax rate and social contributions as certain requirements of the law are still to be clarified.

Withholding tax of 15% is applied to any dividends paid out of Russia. Specifically, the Group can incur the 15% withholding tax on dividends from the Russian subsidiaries to Cyprus based on amendments made to the Cyprus – Russia Double Tax Treaty in 2020 and clarifications subsequently issued by the Russian Ministry of Finance disallowing 5% tax rate on dividends to public companies, if they list on stock exchanges with depositary receipts instead of shares. Subsequently the Russian Ministry of Finance modified its position. In particular, either shares or depositary receipts must be listed in one of the contracting states, i.e. in Cyprus or in Russia. It is currently not clear if the Group would be able to apply reduced withholding tax rate on dividends paid out of Russia to Cyprus. In addition, the Russia – Netherlands double tax treaty was terminated. Such changes could adversely affect the business of the Group.

Cyprus

The Company and the Group's subsidiaries and associates incorporated or tax resident in Cyprus are subject to a 12.5% corporate income tax applied to their worldwide income. Capital gains derived from sale of securities are tax exempt (except for capital gains realised in connection with sale of shares in companies deriving their value or the greater part of their value from immovable property located in Cyprus). Dividend income is also tax exempt.

Notes to the Consolidated Financial Statements (continued)

19 Income tax (continued)

British Virgin Islands

The Company and its subsidiaries and associates incorporated in the British Virgin Islands are exempt from all taxes under the respective laws, unless they become tax residents in other jurisdictions.

The Netherlands

The Group's subsidiaries incorporated in the Netherlands are subject to corporate income tax at a standard rate of 25% applied to their taxable income. Dividend income and capital gains received by the Dutch subsidiaries are exempt from the corporate income (participation exemption) if certain criteria are met.

The major components of income tax expense in the consolidated statement of comprehensive income are as follows:

	2021	2020
Current income tax expense	3,502	4,241
Deferred income tax benefit	(2,431)	(2,408)
Total income tax expense	1,071	1,833

The reconciliation between tax expense and the product of accounting profit multiplied by domestic rates applicable to individual Group entities for the years ended December 31, 2021 and 2020 is as follows:

	2021	2020
Loss before income tax expense	(14,626)	(19,393)
Tax at domestic rates applicable to individual group entities	3,245	3,805
Tax effect of amounts which are not deductible (taxable) in calculating taxable income		
Non-deductible expenses	(671)	(651)
Non-taxable foreign exchange and other gains	1,143	920
Adjustments in respect of current income tax of previous year	(33)	350
Effect of changes in tax rates	138	298
Tax accruals and penalties	(206)	(1,213)
Utilisation of previously unrecognised deferred tax losses	(245)	(409)
Share of results of equity associates and joint ventures	(4,411)	(3,978)
Remeasurement of contingent liability	–	923
Goodwill and intangible assets impairment	–	(1,467)
Write-down of deferred tax assets	–	(394)
Other	(31)	(17)
Total income tax expense	(1,071)	(1,833)

The majority of the Group's taxable profits as well as income tax expenses in 2021 and 2020 are generated in Russia and the Netherlands. Pre-tax gains and losses in other jurisdictions in 2021 and 2020 mostly relate to share based payment expenses, fair value revaluation, foreign exchange gains and losses, and other similar items which are generally non-taxable (non-deductible) in those jurisdictions. These items affect pre-tax profit, but do not have an influence on income tax expense, which has an effect on the blended tax rate.

Deferred income tax assets and liabilities as of December 31, 2021 and 2020 are summarised below:

	Consolidated statement of financial position		Consolidated statement of comprehensive income	
	December 31, 2021	December 31, 2020	2021	2020
Deferred tax liabilities arising from:				
Intangible assets book basis in excess of tax basis	(1,133)	(2,030)	1,362	1,302
Other	(848)	(767)	(239)	(32)
Deferred tax liabilities netting	753	1,418	–	–
Total deferred tax liabilities	(1,228)	(1,379)	1,123	1,270
Deferred tax assets arising from:				
Tax credit carryforwards	1,449	1,097	411	648
Deferred compensation and accrued employee benefits	1,060	913	147	241
Accrued expenses	503	284	80	(227)
Revenue recognition	1,780	1,410	530	405
Unrealised intercompany profit	105	105	–	–
Other	1,013	533	140	71
Deferred tax assets netting	(753)	(1,418)	–	–
Total deferred tax assets	5,157	2,924	1,308	1,138
Net deferred tax assets	3,929	1,545	2,431	2,408

Notes to the Consolidated Financial Statements (continued)

19 Income tax (continued)

The temporary differences associated with investments in subsidiaries for which deferred tax liabilities have not been recognised, aggregate to RUB 91,538 (2020: RUB 84,351).

Changes in net deferred tax assets/(liabilities) from January 1, 2020 to December 31, 2021 were as follows:

	2021	2020
Total deferred income tax assets/(liabilities), net at January 1	1,545	(208)
Translation reserve	(114)	(313)
Deferred tax benefit	2,545	2,391
Effect of acquisition of subsidiaries (Note 6)	(47)	(325)
Total deferred income tax assets, net at December 31	3,929	1,545

20 EPS

20.1 Basic EPS

Basic EPS amounts are calculated by dividing earnings/loss for the year attributable to equity holders of the parent by the weighted average number of ordinary and Class A shares outstanding during the year.

	2021	2020
Net loss attributable to equity holders of the Company	(15,493)	(20,921)
Weighted average number of ordinary and class A shares in issue and outstanding	225,888,295	219,673,210
Basic loss per share (RUB per share)	(69)	(95)

20.2 Diluted EPS

Diluted EPS is calculated by adjusting the weighted average number of ordinary and Class A shares outstanding by the assumption of the conversion of all potential dilutive ordinary shares arising from share options and RSUs granted by the Company (collectively forming the denominator for computing the diluted EPS).

For share options and RSUs, a calculation is done to determine the number of shares that would have been issued assuming the exercise of the share options and RSUs. The above number is added to the denominator as an issue of ordinary shares for no consideration. Net profit/loss attributable to equity holders of the parent (numerator) is adjusted for the charge that would arise if equity settlement took place.

The calculation of diluted EPS is summarised in the table below:

	2021	2020
Net loss attributable to equity holders of the Company	(15,493)	(20,921)
Adjustment for the gains from cash setlled option	(258)	–
Adjusted net loss attributable to equity holders of the Company	(15,751)	(20,921)
Weighted average number of ordinary and class A shares in issue and outstanding	225,888,295	219,673,210
Effect of equity-settled share based payments of the Company	8,957,947	3,841,697
Total diluted weighted average number of shares	234,846,242	223,514,907
Diluted EPS (RUB per share)	n/a	n/a

21 Commitments, contingencies and operating risks

21.1 Operating environment of the Group

Most of the Group's operations are in Russia. Russia continues economic reforms and development of its legal, tax and regulatory frameworks as required by a market economy.

Starting from 2014 the Russian economy has been negatively impacted by sanctions imposed on Russia by a number of countries. The Rouble interest rates remained high. The combination of the above resulted in reduced access to capital, a higher cost of capital and uncertainty regarding economic growth, which could negatively affect the Group's future financial position, results of operations and business prospects. Management believes it is taking appropriate measures to support the sustainability of the Group's business in the current circumstances.

Notes to the Consolidated Financial Statements (continued)

21 Commitments, contingencies and operating risks (continued)

21.1 Operating environment of the Group (continued)

On March 11, 2020, the World Health Organization declared a new coronavirus infection (COVID-19) a pandemic. The global markets began to experience significant volatility. Together with other factors, this have resulted in a sharp decrease in the oil price, stock market indices and coal prices, as well as a depreciation of the Russian rouble. Responding to the potentially serious threat the COVID-19 presents to public health, the Russian and other countries government authorities have taken extensive measures to contain the outbreak, including imposing restrictions on the cross-borders movement of people, entry restrictions for foreigners and instructing business community to transfer employees to working from home. The scope and duration of these events against the backdrop of the second wave of COVID-19 remain uncertain and may have further significant influence on the economy and companies operating in this environment.

The number of new COVID-19 cases in Russia started to grow again in December 2021 and January 2022 and reached a new record high. As such, some regions in Russia continued to introduce various lockdown measures and restrictions. The performance in the upcoming months will highly depend on the epidemiological situation in Russia and the magnitude of the potential restrictive measure simplemented by authorities.

The management of the Group is taking necessary precautions to protect the safety and well-being of employees against the spread of COVID-19. The Group has developed plans for mitigating the impact on its business and has reviewed the economic environment; the demand for the Group's products; its available bank facilities; and the possible effects on its cash flow and liquidity position, including consideration of debt covenants.

Taking into account the above-mentioned measures and the Group's current operational and financial performance along with other currently available public information, the management of the Group does not anticipate significant adverse or favourable impact of the COVID-19 outbreak on the Group's financial position and operating results, except:

- Social networks, Online Games and Vkontakte. The Group saw an acceleration of demand during the pandemic, continued to demonstrate solid growth trends and expects sustainable growth for these groups of CGU's;
- Email, Portal and IM, Search and ESForce. The Group revised a number of assumptions used for impairment test and recognised an impairment charge in 2020 for these groups of CGU's (see Note 12).

The management of the Group conducted a thorough analysis of the Group's receivables and did not identify any indicators that could significantly affect the measurement of the allowance for expected credit losses. Please see Note 13 for details.

The loan agreements contain restrictive financial and non-financial covenants that the Group as the borrower is obliged to fulfil. Restrictive covenants include maintaining certain financial ratios. As of December 31, 2021 and December 31, 2020 all restrictive covenants are met. Please see Note 23 for details.

However, it may be difficult to predict the impact of the COVID-19 in the medium and long term perspective. Management closely monitors the development of the situation and takes necessary measures to mitigate negative effects of the COVID-19 pandemic.

The consolidated financial statements reflect management's assessment of the impact of the business environment on the operations and the financial position of the Group. The future business environment may differ from management's assessment.

21.2 Taxation

Russian tax, currency and customs legislation is subject to varying interpretations, and changes, which can occur frequently. Management's interpretation of such legislation as applied to the transactions and activity of the Group may be challenged by the relevant regional and federal authorities. Recent events within the Russian Federation suggest that the tax authorities are taking a more assertive position in their interpretation of the legislation and assessments and as a result, it is possible that transactions and activities that have not been challenged in the past may be challenged. As such, significant additional taxes, penalties and interest may be assessed. Fiscal periods remain open to review by the authorities in respect of taxes for three calendar years preceding the year of review. Under certain circumstances reviews may cover longer periods.

Modifications of the Group's legal structure made from time to time may result in additional taxes, interest, and penalties in various jurisdictions. Any such taxes or penalties caused by the Group's structure or its modifications could have a material adverse effect on the Group's business, operating results, financial condition or prospects.

Management estimates that possible exposure in relation to the aforementioned risks, as well as other profits tax and non-profits tax risks (e.g. imposition of additional VAT liabilities), that are more than remote, but for which no liability is required to be recognised under IFRS, could be few times as high as income tax payable and VAT and other taxes payable reflected in the consolidated statement of financial position at that date. This estimation is provided for IFRS requirement for disclosure of possible taxes and should not be considered as an estimate of the Group's future tax liability.

21 Commitments, contingencies and operating risks (continued)

21.3 Legal proceedings

The Group has been and continues to be the subject of legal proceedings and adjudications from time to time, none of which has had, individually or in the aggregate, a material adverse impact on the Group. Management believes that the resolution of all current and potential legal matters will not have a material adverse impact on the Group's financial position or operating results.

21.4 Data privacy

To become registered on a website operated by the Group, users have to input their personal data, which is then protected by the Group from access by third parties. Should such data become available to third parties as a result of hackers' attacks, the Group may become a party to litigation from its users. Management believes it takes all necessary steps to reduce the related risk to an acceptable level.

21.5 Intellectual property rights

The Group may be subject to infringement claims from third parties in the future resulting from the technology and intellectual property used in the provision and marketing of its services. If the Group is found liable for infringement, it may be required to pay significant damages, and if it is unable to license or develop non-infringing technology on a timely basis, it may be unable to continue offering the affected services without risk of liability. Similarly, third parties may obtain and use the Group's intellectual property without authorisation. The validity, application, enforceability and scope of protection of intellectual property rights for many Internet-related activities are uncertain and still evolving, which may make it more difficult for the Group to protect its intellectual property and could have a material effect on its business, results of operations and financial condition. The Group has been subject to such proceedings. Although none of them was individually significant, similar potential claims may subject the Group to significant losses in the future, which currently cannot be reliably estimated.

21.6 Development

A failure to innovate, to provide popular products and services or to react quickly to changes in the market could affect the popularity of the Group's sites and, in turn, could affect the Group`s revenue. An inability to develop competitive products and services which are compatible with new mobile devices could result in a failure to capture a significant share of an increasingly important market.

21.7 Regulation

The Internet and its associated technologies are subject to government regulation. Substantial part of the Group's business is subject to Russian laws.

On July 1, 2021 the new amendments to the Advertising Law came into force, regulating the placement of social advertisement on the Internet. The new rules establish certain requirements for social advertising and specify that the advertiser of social advertisement has to be selected by a government agency (Roscomnadzor). Advertising networks and/or advertising distributors are obliged to place social advertisements free of charge (in volume of 5%), as well as to send reports on the forms, volumes and methods of advertising distribution for the purpose of making forecasts. Failure to comply with these requirements may result in restrictive measures.

On July 1, 2021, the new law was adopted and came into force that obliges foreign IT companies operating in the Russian Federation to open their own representative offices in the Russian Federation and comply with a number of requirements of Russian legislation. The rule on the obligation of foreign IT companies to create representative offices (legal entities) on the territory of the Russian Federation came into force on January 1, 2022.

On June 17, 2021, new amendments to the Federal Law *On the Mass Media* and *On Information, Information Technologies and Information Protection* were adopted. The new rules are aimed on providing an independent measurement of the audience volume of TV channels (TV programs, TV broadcasts), network publications, audiovisual services, news aggregators and other Internet information resources that distribute media products, audiovisual works and other publicly available information.

New amendments to the Federal Law *On Advertising* will come into force on September 1, 2022. The aim is creating a unified system for accounting for advertisements distributed on the Internet. People who place advertisements on the Internet on the territory of the Russian Federation are obliged to provide Roskomnadzor with information about the advertisement. In addition, the amendments prohibit distribution of advertising on the information resource of a foreign organization by decision of Roskomnadzor if such foreign organization violates the law.

The State Duma of the Russian Federation adopted in the first hearing amendments to the Federal Law *On Information, Information Technologies and Information Protection* that is obliged operators of search services to remove links from search results to content that violates the rights of copyright holders.

A new draft law to the Federal Law *On Information, Information Technologies and the Protection of Information* was submitted to the State Duma that limits foreign participation in domestic audiovisual services (AVS) to 20%. This rule is similar to the regulation in mass media which was introduced in 2017.

21 Commitments, contingencies and operating risks (continued)

21.7 Regulation (continued)

The Group is also subject to other various specific Russian laws, such as so called Anti-Piracy Law, Anti-extremism Law, Black List Law etc. Noncompliance with the applicable regulations could lead to penalties or blocking of non-compliant services. The Group complies with the existing and new laws in all material respect. The Group does not expect any negative consequences associated with the adoption of these laws.

21.8 Personnel

As competition in Russia's internet industry increases, the Group's business and operations could be adversely affected by difficulties in hiring, motivating and retaining highly-skilled people. Competition for senior managers is high. One or more could join a competitor, or set-up a competing company, with the result that operations and profitability could be affected by a loss of strategic direction, users, know-how and additional staff.

21.9 Infrastructure and capacity

If the infrastructure in Russia were not able to support increased demand, the Group's services could be interrupted or the Group's systems damaged. A limited availability of third-party providers of network and server capacity could limit the Group's ability to offer certain services or to expand. Network or power failures could result in the loss of data and in a reduction in the number of users, which could have a material effect on the Group's business, results of operations and financial condition.

21.10 Fund commitment

In April 2020 the Group entered into the venture capital fund MVOF L.P. (the Fund) as a limited partner. The purpose of the Fund is to carry on the business of investing and, in particular, of identifying, negotiating, making, monitoring the progress of and realising, exchanging or distributing investments. Main investment areas and geographic focus are the sectors of consumer internet, foodtech, EdTech, fintech, AI and modern software, and any other sectors which are generally complementary to such identified sectors in developed markets outside Russia. The Group has right to the share in the financial results of the Fund's investments in the proportion of its participation.

The Group does not control or exercise significant influence over the Fund according to IFRS criteria as the Group does not manage relevant activities of the Fund. Investments in the Fund are accounted for as financial assets at fair value through profit or loss.

As of December 31, 2021, the total remaining capital commitment of the Group was RUB 6,091 (USD 82 million including USD 68 million contributions made made by December 31, 2021). As of December 31, 2020 the total capital commitment of the Group was RUB 10,137 (USD 137.2 million including USD 12.8 million contributions made made by December 31, 2020).

Capital contributions to the Fund are made quarterly based on the capital call notices. Anticipated lifetime of the Fund is 10 years.

22 Balances and transactions with related parties

The following table provides the total amount of transactions, which have been entered into with related parties for the relevant financial year, excluding Directors and key management of the Group (see Notes 22.2 and 22.3). All related party transactions were made in accordance with contractual terms and conditions agreed between the parties.

The Group applies the exemption from the disclosure requirements of IAS 24 *Related Parties*, paragraph 18, in relation to related party transactions and outstanding balances with:

- A government that has control or joint control of, or significant influence over, the reporting entity; and
- Another entity that is a related party because the same government has control or joint control of, or significant influence over, both the reporting entity and the other entity.

Notes to the Consolidated Financial Statements (continued)

22 Balances and transactions with related parties (continued)

As of December 31, 2021, the Russian Federation, represented by SOGAZ and Gazprom-Media Holding, had significant influence over the Group.

	December 31, 2021		December 31, 2020	
	Amounts owed by related parties	Amounts owed to related parties	Amounts owed by related parties	Amounts owed to related parties
Trade accounts receivable and Trade and other payable				
Equity accounted associates	65	6	37	8
Joint ventures	2,040	2,444	3,201	788
Entities with significant influence over the Group including government related entities	47	31	104	5
Loans issued and Loans received				
Equity accouned associates	–	–	–	–
Joint ventures	–	–	–	–
Entities with significant influence over the Group including government related entities	–	13,243	–	14,346

	2021		2020	
	Sales to related parties	Purchases from related parties	Sales to related parties	Purchases from related parties
Sales and Purchases				
Equity accounted associates	193	18	328	17
Joint ventures	4,784	239	5,112	428
Entities with significant influence over the Group including government related entities	591	109	470	195
Interest expense				
Entities with significant influence over the Group including government related entities	–	956	–	1,079

	2021		2020	
	Cash balances on current accounts	Cash balances on deposit accounts	Cash balances on current accounts	Cash balances on deposit accounts
Cash balances				
Cash balances on current and deposit accounts with government related banks	1,902	3,600	7,692	–

	2021		2020	
	Lease liabilities at the end of the year	Lease payments during the year	Lease liabilities at the end of the year	Lease payments during the year
Lease				
Lease transactions with government related entities	7,513	222	–	–

Before December 3, 2021, entities with significant influence over the Group and other entities line included Sberbank and MegaFon and their respective subsidiaries. Starting from December 3, 2021, Entities with significant influence over the Group and other entities line included SOGAZ and Gazprom-Media Holding.

22.1 The ultimate controlling party

The parent of the Company is MF Technologies. MF Technologies does not have a single controlling shareholder. Sogaz JCS owns 45%, Gazprom-Media Holding JSC owns 45% and RT-Business Development LLC owns 10% of voting interests of MF Technologies, respectively. MF Technologies is jointly controlled by Sogaz JSC and the Russian Federation.

22.2 Directors of the Company

Total cash remuneration of the members of the Board of Directors (each a “Director” and collectively, “Directors”) of the Company amounted to RUB 135 for the year ended December 31, 2021 (2020: RUB 122). In 2021 55,000 PSUs were granted to Directors (2020: nil). During the year ended December 31, 2021, Directors did not forfeit any RSUs/PSUs or options (2020: nil) and exercised 15,000 RSUs over shares of the Company (2020: nil). The corresponding share-based payment expense was negative RUR 96 for year ended December 31, 2021 (2020: 36).

On June 23, 2021 one of independent directors has sold 6,500 ordinary shares of the Company for RUB 10 (USD 141,791).

22 Balances and transactions with related parties (continued)

22.3 Key management of the Group

Total cash remuneration of the key management of the Group (excluding Directors) amounted to RUB 1,136 for the year ended December 31, 2021 (2020: 1,204).

In addition to the cash remuneration for the year ended December 31, 2021, key executive employees of the Group were granted 4,696,600 RSUs/PSUs (2020: 145,000). During the year ended December 31, 2021, key management of the Group (excluding Directors) exercised 185,875 RSUs/PSUs and options (2020: 552,750) and forfeited 230,000 RSUs/PSUs and options over shares of the Company (2020: nil). The corresponding share-based payment expense amounted to RUB 711 for year ended December 31, 2020 (2020: 675).

23 Financial instruments

As of December 31, 2021 and December 31, 2020, the Group's financial instruments are presented by category in the table below:

	Category*	December 31, 2021	December 31, 2020
Financial assets at fair value through profit and loss			
Non-current			
Financial investments in venture capital investees	FAFVPL	5,992	1,265
Convertible loans	FAFVPL	585	565
Financial derivative under lease contract	FAFVPL	326	475
Financial assets at amortised cost			
Non-current			
Loans issued	FAAC	69	422
Current			
Trade accounts receivable	FAAC	20,688	16,707
Loans issued and interest receivable	FAAC	109	2,441
Cash and cash equivalents	FAAC	23,737	39,297
Total financial assets		51,506	61,172
Financial liabilities at fair value through profit and loss			
Current			
Contingent consideration payable	FLFVPL	943	1,604
Non-current			
Conversion option of bond issue	FLFVPL	219	3,506
Financial liabilities at fair value through profit or loss	FLFVPL	660	–
Financial liabilities at amortised cost			
Current			
Trade accounts payable	FLAC	14,541	10,923
Other payables and accrued expenses	FLAC	9,180	7,614
Short-term portion of long-term interest-bearing loans	FLAC	7,078	3,718
Short-term lease liabilities	FLAC	4,121	3,861
Non-current			
Long-term interest-bearing loans and bonds	FLAC	50,810	41,497
Non-current lease liabilities	FLAC	11,327	11,338
Total financial liabilities		98,879	84,061

* *Financial instruments used by the Group are included in one of the following categories:*

- *FAFVPL – financial assets at fair value through profit or loss;*
- *FLFVPL – financial liabilities at fair value through profit or loss;*
- *FAAC – financial assets at amortised cost; or*
- *FLAC – financial liabilities at amortised cost.*

None of the Group's financial investees are public companies and none of the Group's financial instruments are traded in active markets. Accordingly, fair values of the Group's financial assets and liabilities at fair value through profit or loss are determined using valuation techniques, including discounted cash flow models, comparison to similar instruments for which observable market prices exist, option pricing models and other relevant valuation models. Such valuation techniques require management to make certain assumptions about model inputs, including credit risk and volatility.

23 Financial instruments (continued)

Fair value of cash and cash equivalents, short-term time deposits, short-term accounts receivable, other current assets, trade accounts payable approximate their carrying amounts largely due to the short-term maturities of these instruments.

23.1 Financial assets at amortised cost

The Group classifies the following financial assets at amortised cost:

- The asset is held within a business model with the objective of collecting the contractual cash flows and the contractual terms give rise on specified dates to cash flows that are solely payments of principal and interest on the principal outstanding;
- Trade receivables;
- Cash and cash equivalents

Detailed information on short-term receivables, cash and cash equivalents and short-term time deposits is available in Notes 13 and 14.

23.2 Fair value hierarchy

The Group uses the following hierarchy for determining and disclosing the fair value of financial instruments by valuation technique:

- Level 1: quoted prices (unadjusted) in active markets for identical assets or liabilities;
- Level 2: inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly (i.e., as prices) or indirectly (i.e., derived from prices);
- Level 3: inputs for the asset or liability that are not based on observable market data (unobservable inputs).

As at December 31, 2021 and 2020 the Group held the following financial instruments measured at fair value through profit or loss:

	December 31, 2021	Level 1	Level 2	Level 3
Financial assets measured at fair value through profit or loss				
Financial investments in venture capital investees	5,992	–	–	5,992
Convertible loans	585	–	–	585
Financial derivative under lease contract	326	–	–	326
Total financial assets measured at fair value through profit or loss	6,903	–	–	6,903
Financial liabilities measured at fair value through profit or loss				
Financial derivative on put options over non-controlling interests of the Group's subsidiary	660	–	–	660
Contingent consideration payable	943	–	–	943
Conversion option of bond issue	219	–	219	–
Total financial liabilities measured at fair value through profit or loss	1,822	–	219	1,603

	December 31, 2020	Level 1	Level 2	Level 3
Financial assets measured at fair value through profit or loss				
Financial investments in venture capital investees	1,265	–	–	1,265
Convertible loans	565	–	–	565
Financial derivative under lease contract	475	–	–	475
Total financial assets measured at fair value through profit or loss	2,305	–	–	2,305
Financial liabilities measured at fair value through profit or loss				
Contingent consideration liabilities	1,604	–	–	1,604
Conversion option of bond issue	3,506	–	3,506	–
Total financial liabilities measured at fair value through profit or loss	5,110	–	3,506	1,604

23 Financial instruments (continued)

23.2 Fair value hierarchy (continued)

The balance of financial assets and liabilities at fair value through profit or loss measurements as of January 1, 2021 is reconciled to the balance of those measurements as of December 31, 2021 as follows:

	Balance as of January 1, 2021	Gains/(losses) recognised in profit and loss	Purchases/ settlement	Business combinations (Note 6)	Balance as of December 31, 2021
Financial assets measured at fair value through profit or loss					
Financial investments in venture capital investees	1,265	567	4,160	–	5,992
Convertible loans	565	(747)	1,102	(335)	585
Financial assets and derivatives under lease contracts	475	(149)	–	–	326
Total financial assets at fair value through profit or loss	2,305	(329)	5,262	(335)	6,903
Financial liability measured at fair value through profit or loss					
Financial derivative on put options over non-controlling interests of the Group's subsidiary	–	(537)	–	(123)	(660)
Contingent consideration payable	(1,604)	279	421	(39)	(943)
Conversion option of the bonds issued	(3,506)	3,287	–	–	(219)
Total financial liabilities measured at fair value through profit or loss	(5,110)	3,029	421	(162)	(1,822)

The balance of financial assets and liabilities at fair value through profit or loss measurements as of January 1, 2020 is reconciled to the balance of those measurements as of December 31, 2020 as follows:

	Balance as of January 1, 2020	Gains/(losses) recognized in profit and loss	Foreign exchange gains/(losses)	Settlements	Purchases/ issue	Convertible loan execution	Recognition of deposit	Balance as of December 31, 2020
Financial assets measured at fair value through profit or loss								
Financial investments in venture capital investees	673	46	–	(309)	855	–	–	1,265
Derivative financial assets over the equity of investee	113	(251)	–	–	138	–	–	–
Convertible loans	539	51	–	–	381	(406)	–	565
Financial assets and derivatives under lease contracts	514	(13)	–	–	–	–	(26)	475
Total financial assets at fair value through profit or loss	1,839	(167)	–	(309)	1,374	(406)	(26)	2,305
Financial liability measured at fair value through profit or loss								
Contingent consideration liabilities	(5,472)	4,492	–	–	(624)	–	–	(1,604)
Conversion option of the bond issue	–	956	296	–	(4,758)	–	–	(3,506)
Total financial liabilities measured at fair value through profit or loss	(5,472)	5,448	296	–	(5,382)	–	–	(5,110)

Notes to the Consolidated Financial Statements (continued)

23 Financial instruments (continued)

23.3 Interest-bearing loans and bonds

On September 21, 2021, the Group issued RUB 15,000 unsecured bonds with an annual interest rate of 7.9% listed on the Moscow Exchange (MOEX). The bonds are issued at 100% of their principal amount with a denomination of RUB 1 thousand each and will be redeemed at par on September 15, 2026.

The proceeds raised will be used to:

- Fund development and organic growth across existing verticals;
- Maintain flexibility to pursue strategic M&A opportunities in high growth verticals;
- Finance investments into O2O and AliExpress Russia JVs; and
- Finance loans to the members of the Group to be used for the purposes described above.

The table below represents the major loans and bonds as of December 31, 2021 and December 31, 2020:

	Original currency	Interest rate	Maturity date	Outstanding amount as of December 30, 2021	Outstanding amount as of December 31, 2020
Raiffeisen bank loan	RUB	7.2%	March 6, 2023	3,291	5,905
Sberbank loan	RUB	6.67%	December 26, 2024	13,250	14,354
LSE Convertible bonds	USD	1.625%	October 1, 2025	25,996	24,956
MOEX Bonds	RUB	7.9%	September 15, 2026	15,329	–
Other current borrowings				22	–
Total interest bearing loans, bonds and borrowings				57,888	45,215

Total undrawn amount under the loan agreements was RUB 48,653 as of December 31, 2021 (December 31, 2020: 19,769). The drawdown is subject to certain conditions.

Loans movements in 2021 and 2020 are presented below:

	January 1, 2021	Principal amount, proceeds	Principal amount, repayment	Interest, accrual	Interest, repayment	Reclassification from non-current to current	Foreign exchange differences	December 31, 2021
Current interest bearing loans	3,718	–	(3,718)	1,309	(1,309)	7,056	–	7,056
Non-current interest bearing loans	16,541	–	–	–	–	(7,056)	–	9,485
LSE convertible bonds	24,956	–	–	1,364	(482)	–	158	25,996
MOEX bonds	–	15,000	–	329	–	–	–	15,329
Other current borrowings	–	21	–	1	–	–	–	22
Total liabilities from financing activities	45,215	15,021	(3,718)	3,003	(1,791)	–	158	57,888

	January 1, 2020	Principal amount, proceeds	Principal amount, repayment	Interest, accrual	Interest, repayment	Reclassification from non-current to current	Foreign exchange differences	December 31, 2020
Current interest bearing loans	4,076	1,104	(3,801)	1,658	(1,643)	2,324	–	3,718
Non-current interest bearing loans	19,471	13,188	(13,794)	–	–	(2,324)	–	16,541
LSE convertible bonds	–	26,186	–	311	–	–	(1,541)	24,956
Total liabilities from financing activities	23,547	40,478	(17,595)	1,969	(1,643)	–	(1,541)	45,215

23 Financial instruments (continued)

23.4 Valuation techniques

The Group investments in venture capital investees are represented by investments into the Fund. For the valuation of the investments into the Fund the Group recognizes certain portion of fair value adjustments of the Fund's investments. When the fair values of items recorded in the statement of financial position cannot be derived from active markets, their fair value is determined using a variety of valuation techniques that include the use of valuation models. The inputs to these models are taken from observable markets where possible, but where this is not feasible, estimation is required in establishing fair values. The estimates include considerations of liquidity and model inputs related to items such as credit risk (both own and counterparty), correlation and volatility. Changes in assumptions about these factors could affect the reported fair value of items in the statement of financial position and the level where the items are disclosed in the fair value hierarchy. The models are tested for validity by calibrating to prices from any observable current market transactions in the same item (without modification or repackaging) when available. To assess the significance of a particular input to the entire measurement, the Group performs sensitivity analysis or stress testing techniques.

23.4.1 Unlisted equity investments

The Fund invests in private equity companies that are not quoted in an active market. Transactions in such investments do not occur on a regular basis. The Fund uses a market-based valuation technique for these positions. The Fund's investment manager determines comparable public companies (peers) based on industry, size, leverage and strategy, and calculates an appropriate trading multiple for each comparable company identified. The multiple is calculated by dividing the enterprise value of the comparable company by an earnings measure. The trading multiple is then discounted for considerations such as illiquidity and size differences between the comparable companies based on company-specific facts and circumstances. The discounted multiple is applied to the corresponding earnings measure of the investee company to measure the fair value. The Fund and the Group classifies the fair value of these investments as Level 3.

23.4.2 Unlisted managed funds

The Fund invests in managed funds, including private equity funds, which are not quoted in an active market and which may be subject to restrictions on redemptions such as lock up periods, redemption gates and side pockets.

The Fund's investment manager considers the valuation techniques and inputs used in valuing these funds as part of its due diligence prior to investing, to ensure they are reasonable and appropriate. Therefore, the net asset value (NAV) of these funds may be used as an input into measuring their fair value. In measuring this fair value, the NAV of the funds is adjusted, as necessary, to reflect restrictions on redemptions, future commitments, and other specific factors of the fund and fund manager. In measuring fair value, consideration is also paid to any transactions in the shares of the fund. The Fund and the Group classifies these funds as Level 3.

23.5 Quantitative information of significant unobservable inputs – Level 3

	Valuation technique	Input	Fair value as of December 31, 2021
Unlisted equity investments			
Investments with recent market deal	Market approach	Market value of shares and convertion of different types of shares	2,079
Investments under income approach	Income approach (DCF)	Discount rate 30%-40% Terminal growth rate 2%	1,265
Recently performed investments	Cost approach	Last financing round	1,573
Other investments	Cost approach	n/a	371
Total unlisted equity investments			5,288
Unlisted managed funds	Cost approach	Last available observable information	190
Cash in hand owned by the Fund allocated to the Group			515
Total financial investments in venture capital investees			5,993

23.6 Sensitivity analysis to significant changes in unobservable inputs within Level 3 hierarchy

	Input	Sensitivity used	Effect on fair value
Unlisted equity investments			
	Discount rate	5%	2
	Terminal growth rate	1%	44

Notes to the Consolidated Financial Statements (continued)

23 Financial instruments (continued)

23.7 Convertible bonds issuance

On October 1, 2020 the Group issued USD 400 million (RUB 30,944 net of RUB 572 issue costs) unsecured bonds convertible into Global Depositary Receipts of the Company listed on the London Stock Exchange, each representing one ordinary share.

The bonds are issued at 100% of their principal amount with a denomination of USD 200,000 each and – unless previously converted, repurchased or redeemed – will be redeemed at par on October 1, 2025. The conversion right may be exercised at any time on or after October 1, 2021. The bonds are offered with an annual interest rate of 1.625%, payable semi-annually, and a conversion premium of 42.5% above the placement price (Note 15.3). The bonds are subject to a cash settlement option at the discretion of the Group. The conversion feature of the bond is classified as financial liabitily and measured at fair value through profit and loss, while the host liability is accounted for at amortised cost using market interest rate of 5.55% per annum at the initial recognition.

As at December 31, 2021 the fair value of the conversion option was RUB 219 (December 31, 2020: 3,506) and was determined based on inputs that are observable (Level 2) and included in non-current financial liabilities. For details please refer to Note 23.2.

The proceeds raised will be used to:

- Fund development and organic growth across existing verticals;
- Maintain flexibility to pursue strategic M&A opportunities in high growth verticals, with particular focus on those stimulated by the pandemic; and
- Finance investments into O2O and AliExpress Russia JVs; and
- Finance loans to the members of the Group to be used for the purposes described above.

23.8 Loans issued

During the 2021, the Group granted loans to O2O JV in the amount of RUB 15,500 at the interest rate of 7.2% with maturity in September of 2021 (2020: RUB 1,885).

In September-October 2021, the Group converted loans receivable of RUB 17,385 and interest receivable of RUB 458 into the share capital of O2O JV.

24 Financial risk management objectives and policies

24.1 Introduction

The Group's principal financial liabilities mainly comprise interest-bearing loans and bonds, contingent consideration liability and trade accounts payable. The main purposes of these financial liabilities are to finance the Group's operations and, in the case of the contingent consideration, a business acquisition. The Group has short-term receivables, short-term time deposits, cash and cash equivalents and other current financial assets that arise directly from the Group's operations.

The Group also has a venture capital investment portfolio consisting of equity investments in Internet start-ups and smaller Internet companies and derivative contracts over the equity of the Group's venture capital investees.

The Group's senior management is responsible for identifying and controlling risks. These activities are supervised by the Board of Directors, the Group's governing body that is ultimately responsible for the Group's overall approach to risk management. The Board of Directors is developing risk management policies covering the following major aspects: identification and analysis of the risks the Group faces, setting appropriate risk limits and controls, and monitoring risks and adherence to limits. Risk management procedures and systems are contemplated to be reviewed regularly to reflect changes in market conditions and the Group's activities. The Group, through its training and management standards and procedures, aims to develop a disciplined and constructive control environment in which all employees understand their roles and responsibilities.

The Group's Audit Committee has been established to oversee, inter alia, how management monitors compliance with the Group's risk management practices and procedures when these are approved by the Board of Directors.

24 Financial risk management objectives and policies (continued)

24.2 Liquidity and financial resources

Liquidity risk is defined as the risk that an entity will encounter difficulty in meeting obligations associated with financial liabilities. The Group monitors its risk of a shortage of funds using a liquidity planning tool. Management regularly monitors projected and actual cash flow information, analyzes the repayment schedules of the existing financial assets and liabilities and performs annual detailed budgeting procedures.

The Group's objective is to maintain a balance between continuity of funding and flexibility through the use of operating cash flows, bank loans and overdrafts. Other financial liabilities of the Group are mostly represented by trade payables with maturity less than one year.

The contractual maturities of the Group's financial liabilities are presented below:

Year ended December 31, 2021	Carrying amount	Contractual cash flows	Less than 3 months	3 to 12 months	1 to 3 years	> 3 years
Short-term and long-term interest-bearing loans and bonds	57,888	73,659	2,912	6,908	16,276	47,563
Trade accounts payable	14,541	14,541	14,541	–	–	–
Current and non-current lease liabilities	15,448	17,596	1,300	2,954	7,348	5,994
Contingent consideration liabilities	943	943	788	155	–	–
Other payables, accrued expenses	9,180	9,180	9,180	–	–	–
Total financial liablities	98,000	115,919	28,721	10,017	23,624	53,557

Year ended December 31, 2020	Carrying amount	Contractual cash flows	Less than 3 months	3 to 12 months	1 to 3 years	> 3 years
Short-term and long-term interest-bearing loans and bonds	45,215	58,269	1,042	4,175	17,944	35,108
Trade accounts payable	10,923	10,923	10,923	–	–	–
Current and non-current lease liabilities	15,199	18,850	1,154	3,162	7,128	7,406
Contingent consideration liabilities	1,604	1,604	980	624	–	–
Other payables, accrued expenses	7,614	7,614	7,614	–	–	–
Total financial liablities	80,555	97,260	21,713	7,961	25,072	42,514

24.3 Credit risk

Credit risk is the risk that a counterparty will not meet its obligations under a financial instrument or customer contract, leading to a financial loss.

Financial assets, which potentially subject the Company and its subsidiaries and associates to credit risk, consist principally of cash and cash equivalents, short-term time deposits, short-term receivables and convertible loans. The total of these account balances represents the Group's maximum exposure to credit risk.

The Group places its cash and cash equivalents with highly rated financial institutions, which are considered at the time of deposit to have minimal risk of default. The Group does not require collateral or other security to support the financial instruments subject to credit risk. Accounts receivable from the two largest customers collectively represented 8.5% of total trade accounts receivable of the Group as of December 31, 2021 and 12% as of December 31, 2020. No customer accounted for more than 10% of revenue in 2021 or 2020. The Group provides credit payment terms to its customers in accordance with market practices and based on thorough review of the customer's profile and creditworthiness. Although collection of receivables could be influenced by economic factors, management believes that there is no significant risk of loss beyond the allowance already recorded.

24.4 Capital management policy

For the purpose of the Group's capital management, capital includes issued capital, share premium and all other equity reserves attributable to the equity holders of the parent. The primary objective of the Group's capital management is to maximise the shareholder value. The Group manages its capital structure and makes adjustments in light of changes in economic conditions.

24.5 Market risk

Market risk is the risk that the fair value of future cash flows of a financial instrument will fluctuate because of changes in market prices. The market risks the Group is exposed to comprise two types of risk: currency risk (Note 24.6) and equity risk. The Group's financial instruments affected by market risk include payables, cash and cash equivalents, short-term time deposits, financial investments in associates and derivative financial instruments. The Group's equity risk arises from uncertainties about future values of the investment into unlisted securities.

24 Financial risk management objectives and policies (continued)

24.6 Foreign currency risk

The following table demonstrates the sensitivity to a reasonably possible change in USD and EUR exchange rate, with all other variables held constant. The impact on the Group's profit before tax is due to changes in the fair value of monetary assets and liabilities. The Group's exposure to foreign currency changes for all other currencies is not material.

	Change in USD rate	(Negative)/positive effect on profit before tax
2021	`+15%	(1,477)
	`-15%	1,477
2020	`+16%	226
	`-16%	(226)

	Change in EUR rate	(Negative)/positive effect on profit before tax
2021	`+15%	524
	`-15%	(524)
2020	`+16%	638
	`-16%	(638)

25 Share-based payments

25.1 Share-based payment arrangements of the Company and its subsidiaries

25.1.1 Option/RSU/PSU plans VK Company Limited

During 2021 and 2020, the Company had the following outstanding option/RSU plans:

	2010 Option Plan	2015 RSU Plan	2017 RSU Plan	2021 PSU Plan	2021 Special PSU Plan
Adoption date	November 2010	February 2015	November 2017	March 2021	November 2021
Type of shares	Ordinary shares	Ordinary shares	Ordinary shares	Ordinary shares	Ordinary shares
Number of options or RSU reserved	10,706,403	5,795,500	7,202,471	11,150,000	1,000,000
Exercise price	Granted: • prior December 31, 2011 – USD 19.60 • since December 31, 2011 – USD 17.50	Nil	Nil	• Nil • 20 USD	Nil
Exercise basis	Prior to November 2011 – net share basis only Since November 2011 – net share basis or cash at the Group's discretion	Shares or cash at the Group's discretion	Shares or cash at the Group's discretion	Shares or cash at the Group's discretion	Shares or cash at the Group's discretion
Expiration date	December 2022	December 2022	December 2026	December 2030	December 2030
Vesting period	Generally 4 years	Generally 4 years	Generally 4 years	Generally 4 years following the performance Year in which PSUs are granted	Expected within 5 years, but not more than 9 years
Other major terms	• The options are not transferable; • All other terms of the options under the 2010 Option Plan are to be determined by the Company's Board of Directors or Remuneration Committee.	• The RSUs are not transferable; • All other terms of the options under the 2015 RSU Plan are to be determined by the Company's Board of Directors or Remuneration Committee.	• The RSUs are not transferable; • Performance conditions • Immediate vesting due to change of ultimate controlling party. • All other terms of the options under the 2017 RSU Plan are to be determined by the Company's Board of Directors or Remuneration Committee.	• The PSUs are not transferable; • Performance conditions; • Continious employment; • All other terms of the options under the 2021 PSU Plan are to be determined by the Company's Board of Directors or Remuneration Committee.	• The PSUs are not transferrable; • Vesting condition is linked with increase of market price of the certain assets; • Continious employment; • All other terms of the options under the 2021 PSU plan are to be determined by the Company's Board of Directors or Remuneration Committee.

25 Share-based payments (continued)

25.1 Share-based payment arrangements of the Company and its subsidiaries (continued)

25.1.2 Changes in outstanding options VK Company Limited

The table below summarises the number and weighted average exercise prices (WAEP) of and movements in share options and RSUs/PSUs in 2021 and 2020 for the Company:

	Number of options/RSU/PSU	WAEP
Outstanding as of December 31, 2019	5,547,342	5.22
Exercisable as of December 31, 2019	1,598,622	13.58
Available for grant as of December 31, 2019	415,021	9.51
Granted during the year	262,500	–
Exercised during the year	1,292,573	2.83
Cancelled during the year	–	n/a
Forfeited during the year	52,000	5.05
Outstanding as of December 31, 2020	4,465,269	5.61
Exercisable as of December 31, 2020	1,692,123	12.92
Available for grant as of December 31, 2020	204,521	20.58
PSU 2021 program	12,150,000	n/a
Granted during the year	6,888,100	7.59
Exercised during the year	696,448	1.51
Cancelled during the year	–	n/a
Forfeited during the year	391,823	0.73
Outstanding as of December 31, 2021	10,265,098	2.31
Exercisable as of December 31, 2021	2,101,800	12.43
Available for grant as of December 31, 2021	5,858,244	0.72

The weighted-average share price was USD 22.03 for options and RSUs/PSUs exercised in 2021 and USD 23.32 for options and RSUs/PSUs exercised in 2020.

The range of exercise prices for options and RSUs/PSUs outstanding as of December 31, 2021 and 2020 is presented in the table below:

Exercise price	December 31, 2021	December 31, 2020
–	3,768,926	3,121,647
17.5	539,117	615,367
19.6	728,255	728,255
20	2,614,400	–

25.1.3 Valuations of share-based payments VK Company Limited

The valuations of all equity-settled options and RSU/PSU granted during 2021 and 2020 are summarised in the table below:

Option plan / grant date	Number of options	Share price (USD)	Fair value, total (million RUB)	Fair value per option/RSU (RUB)
2011 Option Plan / 2019	180,000	22.20-23.70	102	568
2017 RSU Plan / 2019	2,758,000	19.01-26.26	4,389	1,591
2017 RSU Plan / 2020	262,500	16.17-28.35	510	1,943
2021 PSU Plan / 2021	6,888,100	12.06-27.1	8,628	1,253

The valuations of all cash-settled options as of December 31, 2021 are summarised in the table below:

Number of options	Dividend yield %	Volatility, %	Risk-free interest rate, %	Expected term, years	Share price (USD)	Fair value, total (million RUB)	Fair value per option (RUB)	Valuation method
387,230	0%	32%	1.04%	N/A	11.59	3	8	Binomial

The forfeiture rate used for expenses calculation in 2021 is 0.1%-15.6%. It is based on historical data and current expectations and is not necessarily indicative of forfeiture patterns that may occur.

The expected volatility reflects the assumption that the historical volatility over a period similar to the life of the options/RSUs/PSUs is indicative of future trends, which may not necessarily be the actual outcome.

Notes to the Consolidated Financial Statements (continued)

25 Share-based payments (continued)

25.2 Share-based payment arrangements of Skillbox Holding Limited

25.2.1 Option plans Skillbox Holding Limited

During 2021 Skillbox Holding Limited has issued the following option plans to Skillbox management and directors:

	Option plan A	Option plan B	Option plan C
Adoption date	October 1, 2021	October 1, 2021	October 1? 2021
Type of shares	Ordinary shares	Ordinary shares	Ordinary shares
Number of options	2,588,235	2,588,235	2,588,236
Exercise price	0.1	254	254
Currency	EUR	RUB	RUB
Exercise basis	Shares	Shares	Shares
Expiration date	December 31, 2031	December 31, 2031	December 31, 2031
Vesting period	1 part – granting date 2 part – 1 year from granting date 3 part – 2 years from granting date 4 part – 3 years from granting date 5 part – 4 years from granting date	1 part – vesting condition is linked with increase of market price and certain operating results 2 part – 1 year from the date when vesting condition for 1 part of option plan are met 3 part – 2 years from the date when vesting condition for 1 part of option plan are met 4 part – 3 years from the date when vesting condition for 1 part of option plan are met 5 part – 4 years from the date when vesting condition for 1 part of option plan are met	1 part – vesting condition is linked with increase of market price and certain operating results 2 part – 1 year from the date when vesting condition for 1 part of option plan are met 3 part – 2 years from the date when vesting condition for 1 part of option plan are met 4 part – 3 years from the date when vesting condition for 1 part of option plan are met 5 part – 4 years from the date when vesting condition for 1 part of option plan are met

25.2.2 Outstanding options Skillbox Holding Limited

The table below summarises the number and weighted average exercise prices (WAEP) of and movements in share options of Skillbox Holding Limited in 2021 :

	Number of options	WAEP (EUR)	WAEP (RUB)
Outstanding as of December 31, 2020	–	–	–
Granted during the year	6,748,159	0.1	254
Outstanding as of December 31, 2021	6,748,159	0.1	254
Exercisable as of December 31, 2021	517,647	0.1	–
Available for grant as of December 31, 2021	1,016,547	–	254

The range of exercise prices for options outstanding as of December 31, 2021 is presented in the table below:

Currency	Exercise price	December 31, 2021
EUR	0.1	2,588,235
RUB	254	1,571,688
RUB	254	2,588,236

Notes to the Consolidated Financial Statements (continued)

25 Share-based payments (continued)

25.2 Share-based payment arrangements of Skillbox Holding Limited (continued)

25.2.3 Valuations of share-based payments Skillbox Holding Limited

The valuations of all equity-settled options for Skillbox Holding Limited granted in 2021 are summarised in the table below:

	Option plan 1	Option plan 2	Option plan 3
Grant date	November 15, 2021	November 15-25, 2021	November 15-25, 2021
Number of options	2,588,235	1,571,688	2,588,236
Exercise price	0.1	254	254
Currency	EUR	RUB	RUB
Expiration date	December 31, 2031	December 31, 2031	December 31, 2031
Option pricing model	Black scholes model	Black scholes model	Black scholes model
Stock price	253	253	253
Expected volatility	52.40%	52.40%	52.40%
The risk-free interest rate	8.30%	8.30%	8.30%
Expected dividends	not expected	not expected	not expected
Fair value per option (RUB)	215-249	157-182	157-182
Fair value, total (RUB thousand)	601,110	303,011	403,143

The Group recognised RUB 205 expenses related to equity-settled share-based payment in the year ended December 31, 2021. The expense was included under "Personnel expenses" in the consolidated statement of comprehensive income.

25.3 Share-based payment expense

The Group recognised RUB 2,091 in share-based payment expenses in the year ended December 31, 2021 (2020: RUB 1,770), including expense of RUB 2,323 (2020: 1,690) related to equity-settled share-based payments and income of RUB 232 related to cash-settled portion (2020 expense: RUB 80). The expense was included under "Personnel expenses" in the consolidated statement of comprehensive income.

26 Events after the reporting period

In January 2022, the Group granted loans to O2O JV in the amount of RUB 5,000 at the interest rate of 9.25% with maturity in February of 2022. In January 2022, the Group also contributed an additional RUB 2,000 to the share capital of O2O JV.

In February 2022, the Group converted loans receivable of RUB 5,000 and interest receivable of RUB 25 into the share capital of O2O JV.

On February 22, 2022, the Group's CEO (Russia) was included into the OFAC SDN list. All the sanctions applied are personal and concern only the CEO personally. Therefore, the Group's assessment is that these sanctions have no impact on the Group's operational and financial activities.

In February 2022, certain countries announced new packages of sanctions against the public debt of the Russian Federation and a number of Russian banks. Due to the growing geopolitical tensions, since February 2022, there has been a significant increase in volatility on the securities and currency markets, as well as a significant depreciation of the ruble against the US dollar and the Euro.

The Company regards these events as non-adjusting events after the reporting period, the quantitative effect of which cannot be estimated at the moment with a sufficient degree of confidence. The Group is currently assessing the impact of the restrictions on the financial activity of the Group and will implement all the measures necessary for the cash management and to mitigate risks arising from cash balances in such banks.

On March 2, 2022, the Russian President announced a list of new measures to support IT business in Russia. The list includes inter alia the following:

- To establish for accredited IT companies the corporate income tax rate of 0 percent until December 31, 2024;
- To simplify the procedures for the employment of foreign citizens in accredited IT companies and for obtaining a residence permit by these citizens;
- To establish tax benefits for accredited IT companies that receive income from advertising, provision of services in their applications and online services or from the sale, installation, testing and maintenance of domestic IT products;
- To exempt the accredited IT companies from tax control, currency control and other types of state control (supervision) and municipal control for up to three years;
- To consolidate and promote the purchase of domestic IT solutions.

In March 2022, the Group decided to make a replacement award offer to its employees holding RSUs or PSUs over the shares of the Company. The Group will offer to replace RSUs/PSUs vesting in 2022 with rights to receive cash at the exchange rate of 1,440 (in Russian Rubles) per RSU/PSU, vesting in several tranches, mostly within FY 2022. Total maximum estimated payable amount is RUB 3.6 bln.

Cautionary statements

Forward-looking statements

The VK Company Limited Annual Report and Accounts for 2021 contain certain “forward-looking statements” that include all statements other than those of historical facts that relate to the Group’s plans, financial position, objectives, goals, strategies, future operations and performance, together with the assumptions underlying such matters. VK Company Limited generally uses words such as “estimates”, “expects”, “believes”, “intends”, “plans”, “may”, “will”, “should” and other similar expressions to identify forward-looking statements. VK Company Limited has based these forward-looking statements on the current views of its management with regard to future events and performance. These views reflect the management’s best judgement, but involve uncertainties and are subject to certain known and unknown risks together with other important factors outside the Group’s control, the occurrence of which could cause actual results to differ materially from those expressed in VK Company Limited's forward-looking statements.

Competitive position

Statements referring to VK’s competitive position reflect the Group’s beliefs and, in some cases, rely on a range of sources, including investment analysts’ reports, independent market studies and VK’s internal estimates of market share based on publicly available information regarding the financial results and performance of various market participants.

Rounding

Certain figures included in this document have been subject to rounding adjustments. Accordingly, figures shown for the same category presented in different tables may vary slightly and figures shown as totals in certain tables may not be an arithmetic aggregation of the figures that precede them.

Terminology

In this document, a reference to the "Company" means VK Company Limited, which together with its subsidiaries is referred to as “we”, the “Group” or “VK”. Any reference to the position of Vladimir Kirienko as Chief Executive Officer (CEO) is a reference to his position as Chief Executive Officer (CEO), Russia. Any reference to the position of Vladimir Nikolsky as Chief Operating Officer (COO) is a reference to his position as Chief Operating Officer (COO), Russia. Any reference to the position of Vladimir Gabrielyan as First Deputy Chief Executive Officer is a reference to his position as First Deputy Chief Executive Officer, Russia.

See you soon