

NEXERA



#RegionyNEXERY2020
REPORT



Contents

1.	Everyday life	08
	Living more online	10
	We need fibre optic	12
	Growing demand for online entertainment	14
	We have new earning opportunities	16
	We use more online services	18
	Growing importance of online shopping	20
	High-speed Internet equalizes opportunity	22
	Better contact with family	24
	Better access to medical services	26
2.	Entrepreneurship	28
	Earning more	30
	Internet is an important aspect of running a business	32
	More effect contact with customers and employees	34
	Able to employ people from all over Poland - e-recruitment, home office	36
	Better trained staff	38
3.	Education	40
	Schools struggle against digital exclusion	42
	New skills and knowledge areas	44
	More interesting classes	46
	Better access to new and important tools	48
	Remote schooling	50
	Easier teacher recruitment	52
4.	Administrative services	54
	No need to go to the office	56
	Government administration employees can organize their work more easily	58
	More transparency in local government	60
	Remote work in administrative services? It's possible	62
5.	Data from NEXERA Regions	64
	Introduction	66
	Łódzki Region	68
	Świętokrzyski Region	78
	Kujawy, Pomorze & Mazowsze Region	88
	Warmia & Mazury Region	98

Methodology

Report #RegionyNEXERY2020 is the second edition of the original NEXERA survey, which has been implemented by the company GfK in March and April 2020 r. It is one of the most cross-cutting sources of knowledge about Polish Internet users in areas where there is no broadband access or access to them is restricted.

The report is divided into several thematic areas:

- **Survey on everyday life** (conducted among the residents) was carried out by CAWI (computer assisted web interview). All the respondents are Internet users. This survey included residents living in the area covered by the NEXERA network. A total of 1601 interviews was carried out.
- **Survey on entrepreneurship** (conducted among entrepreneurs) was carried out by CATI (computer assisted telephone interview, supplemented by CAWI interviews). The survey included companies operating in the area covered by the NEXERA network. A total of 330 interviews was carried out.

- **The survey on education** (conducted among teachers) was carried out using the CAWI interview technique on the GfK Access Panel and CATI using the GfK Polonia polling network. The survey was attended by teachers working in schools operating within the NEXERA network. A total of 320 interviews was conducted.
- **The survey on administrative services** (conducted among officials) was carried out using the CATI telephone interview technique. The survey was attended by representatives of borough and district local governments in the area covered by the NEXERA network. In total, 298 interviews were conducted.

The report #RegionyNEXERY2020 also used data from public sources and analysis of the InsightOut Lab team.

Introduction



This year's survey of NEXERA Regions took place at an exceptional time and therefore illustrates exceptional processes. Never before in history has the demand for services available on the Internet been so great. Never before have we performed so many activities on the Internet.

And finally, never before in such a short period of time have so many people received a kind of training in the use of online tools as at the turn of the first and second quarter of 2020. The need to work remotely, learn from home, shop online, do business remotely or access administrative services without leaving home not only made people aware of the role and importance of access to a stable Internet, but also increased the demand for faster Internet connections. In last year's edition of the survey, 12% of Internet users from NEXERA Regions spent 6 or more hours a day on the Internet. This year the percentage was as high as 28%. At the same time the percentage of respondents considering increasing the speed of the Internet connection went up to 46% (by 20 p.p.). These values are not surprising if we compare them with significant demand for entertainment available online. The number of people watching films online or playing computer games

has clearly increased. It is difficult to predict today how many habits acquired during the pandemic will remain with us after it ends, although one in five Internet users is of the opinion that they will still watch movies and series on streaming platforms more often once things return to normal. Therefore, we can expect growing demand for fast and stable connections. The disadvantages of slow Internet have been exposed mainly by remote work, never before performed by so many people at the same time. One in five respondents who could not perform their duties from home indicated technological barriers as the reason. Slow Internet caused problems with downloading large files from cloud storage, stuttering video, and interrupted calls in applications such as Skype or Microsoft Teams. The proper functioning of the latter was important not only for business reasons. Being forced to stay at home meant that contacts with loved ones had to be limited to mobile or Internet networks. And although a video call cannot replace a face-to-face meeting, it has become the best facsimile of live contact. Apps for video calls have broken popularity records. They were also appreciated by entrepreneurs, who were able to keep in touch with their employees and customers. A much higher percentage of business people noted the relationship between Internet speed and revenue, compared to a year ago. 39% of entrepreneurs from NEXERA Regions are of the opinion that increasing the speed of the Internet would have a positive impact on the increase in profitability and development of the company, which is 19 p.p. higher than in 2019. The advantages of a fast and stable Internet at this particular time were also

noticed by teachers in NEXERA Regions. Three quarters of them (74%) believe that connecting a fibre optic cable enables the use of tools which they could not use before. 77% are of the opinion that thanks to it lessons are more interesting for students. High-speed Internet can also change the work of government administration employees. 9 out of 10 think that building a fibre optic network in their region will improve their working conditions. One in three (32%) even claims that the expansion of access to a high-speed Internet network is now much more important than the expansion of road infrastructure or the development of cultural and educational institutions. Last year, such an opinion was expressed by only 17% of the surveyed government administration employees. The pandemic has significantly accelerated the processes which we observed already last year. The NEXERA Regions 2020 report explains them thoroughly. I wish you a pleasant reading.

Jacek Wiśniewski
President of the Management Board NEXERA

About NEXERA

NEXERA is Poland's first exclusively large-scale wholesale telecommunications operator, developing a high throughput (min. 100 Mb/s) fibre optic access network (NGA). The shareholders of NEXERA are companies operating on the global telecommunications market for years: Infracapital and Nokia.

Under the Digital Poland Operational Programme (POPC), NEXERA builds a fibre optic network in 14 areas of central and north-eastern Poland. The programme aims to eliminate those places in the country that do not have access to very fast Internet and to counteract digital exclusion of EU citizens. Thanks to NEXERA's activities, by the end of 2022 over 670 000 households and almost 3 000 schools and educational units will be within the reach of the most modern fibre optic network. Schools and over 311,000 households from this group will be covered by the NEXERA network thanks to the POPC funding of nearly PLN 597 million. The remaining funds come from NEXERA shareholders and the total value of the investment amounts to approximately PLN 1.5 billion.

NEXERA opens new opportunities

NEXERA's mission is to open up new opportunities for residents to live, work and do business better. It achieves this goal by building and managing a fibre optic access network and providing fast, stable and reliable access to the digital world in regions that have not been connected to a broadband network so far. NEXERA operates within the framework of one of the most important infrastructure projects of the Polish government - the Digital Poland Operational Programme (POPC). The aim of this Programme is to eliminate territorial differences in access to fast, broadband Internet and to counteract digital exclusion. As a beneficiary of this Programme, NEXERA implements its goals by eliminating the so-called "white spots", i.e. places that are not connected to the broadband network.

NEXERA Regions

NEXERA develops telecommunications infrastructure in small towns and rural areas by building and managing a fibre optic access network in four Regions of Poland: Łódzki, Świętokrzyski, Kujawy, Pomorze & Mazowsze Region, and Warmia & Mazury. Homes, companies and all institutions that are within the reach of the NEXERA network have the possibility of accessing fast Internet with a throughput of at least 100 Mb/s. NEXERA also brings the Internet to all schools in the project Regions, thanks to which their students and teachers will gain access to the Internet with a throughput of at least 100 Mb/s.

NEXERA projects implemented under POPC:

Łódzki Region

Area	Households	Schools
skierniewicki	35 000	133
sieradzki	43 000	182
piotrowski A	28 000	99
Total in Łódzki Region	106 000	414

Świętokrzyski Region

Area	Households	Schools
kielecki A	29 000	112
kielecki B	49 000	110
sandomiersko-jędrzejowski A	22 000	101
sandomiersko-jędrzejowski B	37 000	165
Total in Świętokrzyski Region	137 000	488

Kujawy, Pomorze & Mazowsze Region

Area	Households	Schools
grudziądzki	33 000	163
bydgosko-toruński	38 000	70
inowrocławski	30 000	115
płocki	63 000	153
Total in Kujawy, Pomorze & Mazowsze Region	164 000	501

Warmia & Mazury Region

Area	Households	Schools
elbląski	46 000	178
olsztyński	52 000	198
ełcki	25 000	97
Total in Warmia & Mazury Region	123 000	473



01

Everyday life

Living more online



In January 2020, there were
30.63
 million
 Internet users in Poland, according to DataReportal data.

That is **2,3%**
 more than the year before

The number of people using the Internet in our country is gradually increasing every year. However, what happened in recent months in connection with the pandemic has increased interest in services available on the Internet much more and in a short period of time, as evidenced by the results of our latest research. We conducted it in April 2020, i.e. during the pandemic. They give a full picture of the dynamic changes that have taken place in the Internet world in recent times. The place where the inhabitants of NEXERA Regions use the Internet most often is still their home. 92% of respondents use the Internet connection at home, which represents a significant increase of 5 p.p. compared to last year's survey. On the other hand, 79% of respondents use the Internet on the phone and 46% at work, i.e. 7 p.p. more than in 2019. However, the real picture of dynamic changes in the behaviour of Poles is provided by

answering how much time the respondents spend online every day.

28% of the inhabitants of NEXERA Regions spend 6 hours or more a day online.

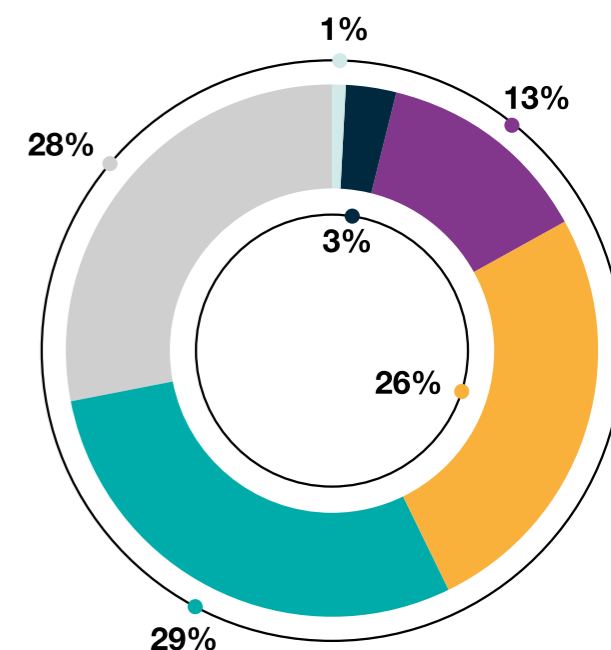
Compared to last year's survey, this is an increase by as much as 16 p.p. The share of people who spend between 4 and 5 hours on the Internet has also increased significantly by 14 p.p. Today it is 29%. This means that the percentage of people spending 4 hours or more on the Internet increased by 30 p.p. to 57%. In 2020, we moved many activities to the Internet, which had to translate into time spent there.

The coronavirus has become the largest ever motivator to use the Internet. At a time when many people were forced to stay at home, the demand for online services has increased significantly. Especially for those requiring high-speed connections.



Average daily Internet usage time:

- Less than one hour
- 1 hour
- 2 hours
- 3 hours
- 4-5 hours
- 6 and more hours



The coronavirus epidemic and the related social isolation have unexpectedly put many Poles, but also companies, public institutions and schools in a completely new situation. Overnight, it became necessary for people to transfer some aspects of their everyday life to the Internet in order to limit direct contacts and ensure their own safety and that of their loved ones. Working, doing business, shopping, administrative services and even entertainment were basically only possible online. Many people or businesses that had not used the Internet so far would have to learn more about the possibilities of the digital world. Probably most of them have found out how quickly, conveniently and effectively many things can be done remotely. Although such a dynamic increase in Internet use is due to the limitations caused by a hopefully temporary pandemic, we can bet that certain habits acquired during this time will stay with us also after it has run its course. This means that the inhabitants of the Regions will be increasingly open to new, virtual experiences and their digital competences will increase.

Paweł Biarda,
 Member of the Board, Commercial, NEXERA

We need fibre optic

According to some of the respondents in our survey, current connections are not able to meet today's requirements.

Already one in four respondents (25%) is not satisfied with their Internet. This is a clear increase of 7 p.p. compared to last year's edition of the survey. This dissatisfaction is even more evident in the percentage of home Internet users who consider increasing the speed of their connection in the coming year. Nearly half of respondents (47%) are considering this. This is an increase of as much as 20 p.p. compared to the previous year.

In this context it should not come as a surprise that to the question "How important is it that the apartment has access to fibre optic Internet?" 65% of the respondents responded that it was definitely or rather important.

After all, optic fibre provides the fastest and most stable connection to the Internet, and Internet users need access to a reliable connection as never before.

According to data from the Office of Electronic Communications (UKE), the much larger number of people working remotely, taking part in online courses and enjoying entertainment and other services centred around the #SiećWdomu hashtag, significantly increased the transfer demand of Poles.

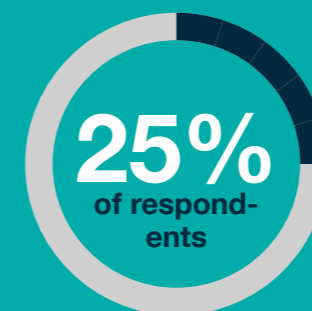
A record network load was recorded for fixed lines - during the pandemic, it was 20%, 100%, and on 16 April even 140% higher than usual.

Our survey shows that during the pandemic 63% of Poles had the opportunity to work remotely. Education also moved to the network, and the tool most frequently used by teachers were webinar platforms (45% of indications) which put significant strain on connections. In a situation where all household members are forced to move their daily activities to the Internet and perform them at the same time, optic fibre has become a home medium just as necessary to function as water, gas or electricity. All the more so because the network is not only used for learning and working.

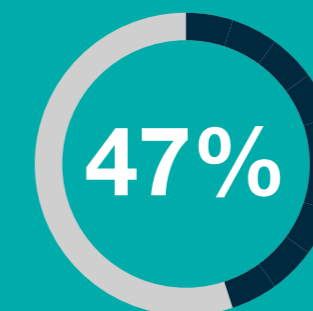


I can easily contact my family and friends who live far away through video calls. This gives me a surrogate for a face-to-face conversation. A high-speed Internet connection offers a variety of leisure activities. We can watch family videos (no commercials), play with friends (who are in their homes) and work remotely, which is especially important in the era of coronavirus.

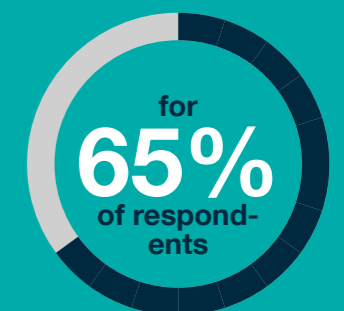
A respondent's statement



are not satisfied with their Internet connection



of home Internet users consider increasing their connection speed in the coming year



it is important that the apartment has access to a fibre optic cable



The pandemic clearly showed how much everyone needs access to fast Internet. Without a fibre optic cable, the participation of children in remote lessons at the same time as parents taking part in a videoconference will most likely prove completely impossible. More and more people are also beginning to understand how important it is not only to quickly download data from the network, but also to send it. Only high bandwidth upload connections will allow you to quickly upload files to the cloud or enable good quality video conferencing. Likewise, fibre is nowadays irreplaceable in gaming and e-sport – all players know how important low latency is to online gaming with friends from around the world. In time, the fibre optic cable will become even more necessary. This will be forced by the mass use of VR, 4K streaming and more and more popular remote working.

Piotr Mieczkowski,
Managing Director, Digital Poland Foundation

Growing demand for online entertainment



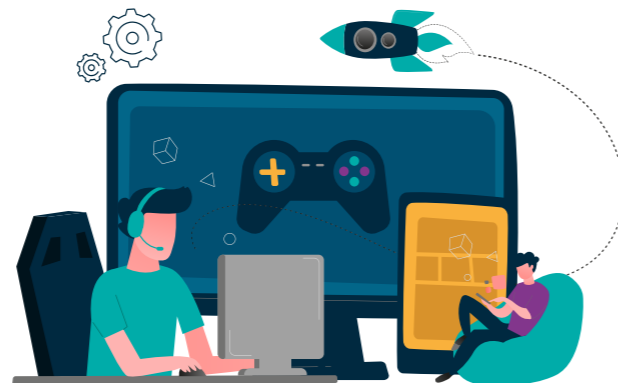
Video in 4K resolution, live social media coverage, virtual meetings, playing games together - the demand for high-quality online entertainment is growing. Although virtual reality cannot replace the real one, it is becoming an increasingly better imitation.

The Digital 2020 report, based on data from 17 countries around the world, shows that in April 2020, 57% of Internet users between the ages of 16 and 64 used streaming services (films and series) more often than before, and one in three (35%) have played computer games or video games longer. Entertainment - as well as work and study - has moved to the network.

8 out of 10 Internet users from NEXERA Regions (81%) watch films online. Compared to last year, this is an increase of 22 p.p. Half (51%) say they use VOD services. The most frequently used platform is Netflix (75%). Fewer (39%) choose HBO Go, Player and Ipla (39%), and one in three VOD service users (35%) connect to Cda.pl.

The number of people playing computer games also increased significantly. 35% of respondents use the network for this form of entertainment, which is 13 p.p. higher than a year ago.

With such a high popularity of video-on-demand sites, it is not surprising that almost half of respondents (45%) cite video viewing difficulties as one of the most bothersome problems caused by slow Internet. At the same time, one in five (20%) surveyed by NEXERA adds to this list the so-called "lagging", i.e. delays in gameplay.



Although such dynamic growth was influenced by the pandemic, as much as 20% of Internet users expect that after it's over they will still watch movies and series in streaming services more often, and 10% will play video and computer games. Certain habits acquired during a pandemic may become the norm even after it passes.

Internet used for entertainment:



90%
use social media



89%
use instant messaging
(+15 p.p.)



81%
watch movies online
(22 p.p.)



62%
listen to music on
streaming platforms
(+13 p.p.)



47%
use the cloud, i.e. network
storage



35%
play computer games on-
line (with other players)
(+13 p.p.)



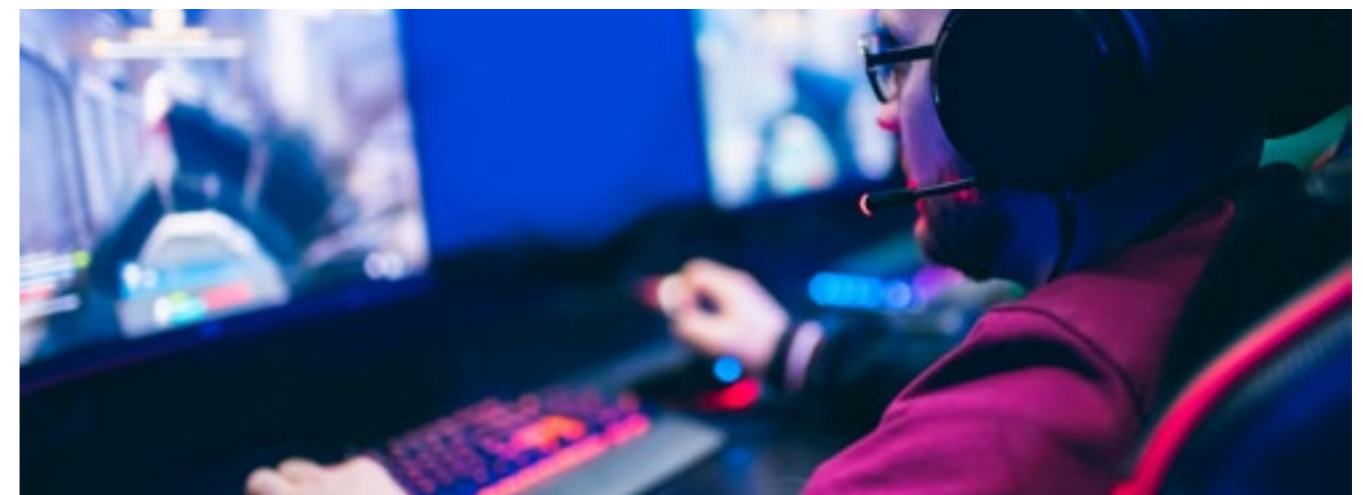
34%
make friends online
(not dating sites)
(+11 p.p.)



10%
use dating sites (+4 p.p.)



10%
use betting sites (+5 p.p.)

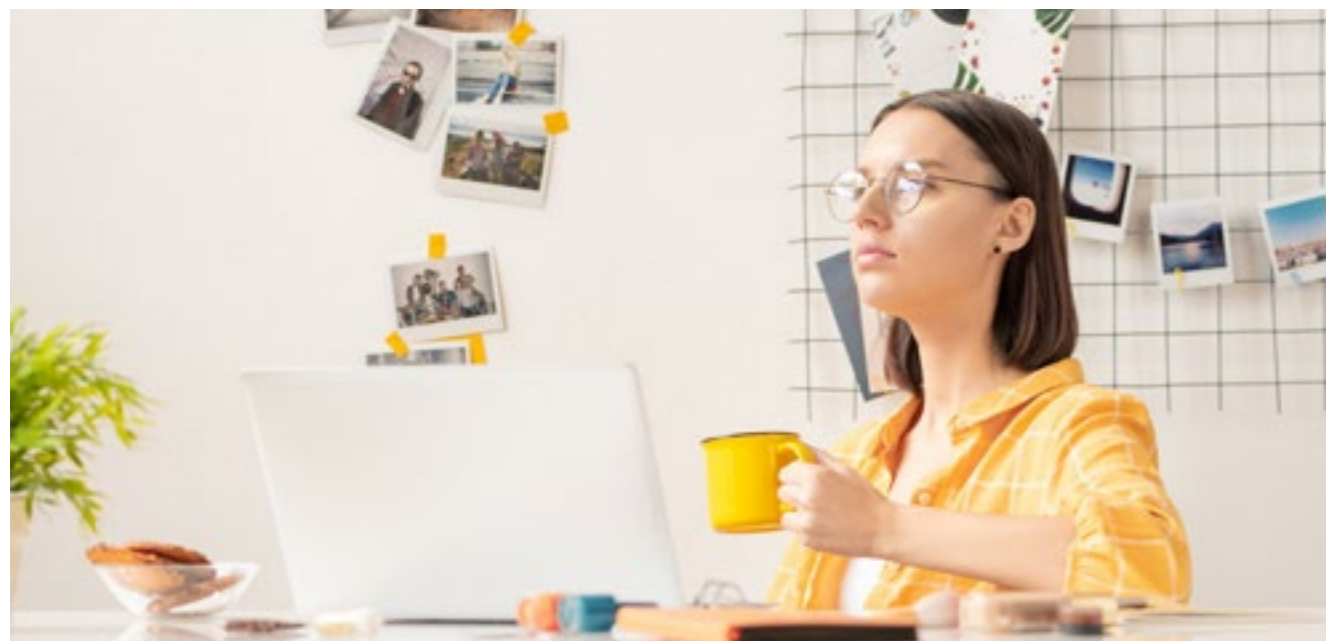


We have new earning opportunities

A week after the announcement of the pandemic in Poland, the value of sales of articles from the “office furniture” category on Allegro increased by 30% - reads a report prepared by DEVA and easyCommerce. Poles started to equip their home offices at a record pace.



67% of respondents declare they would like to work remotely if only they could. Home office increases the attractiveness of living in a small town (according to 68% of respondents), and may even be a solution to the problem of unemployment in regions (according to 59% of respondents). Working via the Internet is not only an opportunity to perform current duties without leaving home. It is also an opportunity to acquire clients and orders from all over the world and to work in a completely new profession. According to the survey by the remote work service UseMe, 30% of Polish freelancers work in copywriting and services focused on social media, 24% - graphics and design, and 12% - IT, SEO/SEM and programming services. Remote working increases the earning potential of residents in areas where there may be no demand for e.g. programmers or graphic designers. Working via the Internet eliminates geographical barriers and equalises opportunities.



Reasons why 28% of respondents cannot work remotely

81%
because of the type of work they do

11%
due to lack of technological solutions in the company

8%
due to lack of technological solutions at home



“
Already in the fourth quarter of 2019, more than 60% of employees who took part in the Michael Page survey declared they would like to work from home from time to time. At the time, apart from a few industries that were almost completely remote, such as IT, the “home office” was treated as a benefit. However, in comparison with other EU countries, we were still positive about the so-called flexibility of the workplace. Now, after the experience of social isolation, we can see that remote working is an even more natural, if not common, phenomenon. Both employers and employees whose profession and specialization do not oblige them to stay in one specific place / company have realized that performing their professional duties outside the office – while maintaining the same or even better efficiency - is possible. In addition, such a solution allows the optimisation of costs. We notice that more and more of our clients are expanding their pool of candidates to other locations as well. Employers are more open to including people living outside their target workplace in the recruitment processes and do not expect candidates to be ready to move. We can assume that remote work - in the case of professions and industries that allow it - will become even more popular over time. It is fundamental to find a healthy balance that will allow you to benefit from the advantages of the “home office” and at the same time will not have a negative impact on building direct relationships with employees.

Radosław Szafranski,
Senior Director in Michael Page recruitment

We use more online services

The Internet is a tool that makes things faster, and during a pandemic, it even enables many activities. In 2019, 83% of Internet users from NEXERA Regions said they used electronic banking.

This year the result was 12 p.p. higher (95%). Almost the same number of respondents (94%) pay their bills online, which is an increase of 14 p.p. It seems, however, that a pandemic can change the habits related to administrative matters even more.

The Internet is already present even in such areas of life where it may have seemed unnecessary until recently. In 2017, the Biostat survey showed that 6.8% of respondents have ever used telemedicine services. In a survey conducted in mid-April 2020, the percentage of respondents who stated that they had used remote medical assistance in the last seven days was 43.8%. Internet users also look for help in choosing products.

Last year 77.4% of Poles using the Internet searched for information about goods and services (CSO data). This was an introduction to later Internet shopping.



According to our last year's survey, 72% of NEXERA's residents shopped online. This year this percentage increased by as much as 21 p.p., to 93%.

Among the residents of NEXERA Regions using the Internet:

95%
use electronic banking

94%
pay bills online

93%
shop online

39%
use administrative services online

This data is reflected in a significant increase in the number of transactions reported by auction sites and online stores.



Residents of the various NEXERA Regions use the Internet in a similar way. However, there are also aspects that distinguish individual Regions, e.g. in the Kujawy, Pomorze & Mazowsze Region, 55% of the inhabitants within the range of optic fibre use this efficient connection. In the Warmia & Mazury Region this percentage is clearly smaller and amounts to 42%. This may be due to slightly lower demand for a high-speed connection - our study shows that residents from the region of Warmia & Mazury spend less time on the Internet than those from the region of Kujawy, Pomorze & Mazowsze Region and slightly less frequently indicate the need to provide an optic fibre to schools, universities or medical facilities. It is worth noting, however, that despite differences in some aspects, the common denominator for all NEXERA Regions is a clear increase in interest in online services.

Piotr Wiczorkiewicz,
Member of the Board, Operations, NEXERA

Growing importance of online shopping

Based on the behaviour of more than one million users, Revolut compared data on transactions in the application in Poland between February and March 2020. The Revolut Money Report study shows that the number of transactions on Allegro increased by 42% and spending - by 57%. At the same time, even greater increases were recorded in the Glovo application, which delivers food, medicine and shopping. The number of transactions increased by 122% and their value by 142%. And while it is unclear how long the boom in some areas of online commerce will continue, the data show that the pandemic has had an extremely strong impact on consumer buying behaviour. E-commerce has become a recipe to compensate for losses related to the closure of traditional shops. Brick and mortar clothing stores of the LPP group recorded a 42% drop in revenue in March, 100% in April, and 84% in the first three weeks of May (compared to the same periods in 2019). At the same time revenues from e-commerce increased by 62%, 251% and 391%, respectively.



The KEP market (courier, express and parcel services) has been experiencing clear growth in e-commerce for years. According to the GS1 Poland report from February 2020, the number of parcels handled by KEP operators increased from 273 million to 476 million in 2014-2018, which gives an average annual growth of 15%. Courier companies unequivocally admit that in 2020 much more dynamic growth can be expected due to the pandemic, as confirmed by data from our survey.

93% of the residents of NEXERA Regions state they shop online, which is an increase of 21 p.p. compared to the survey a year ago.

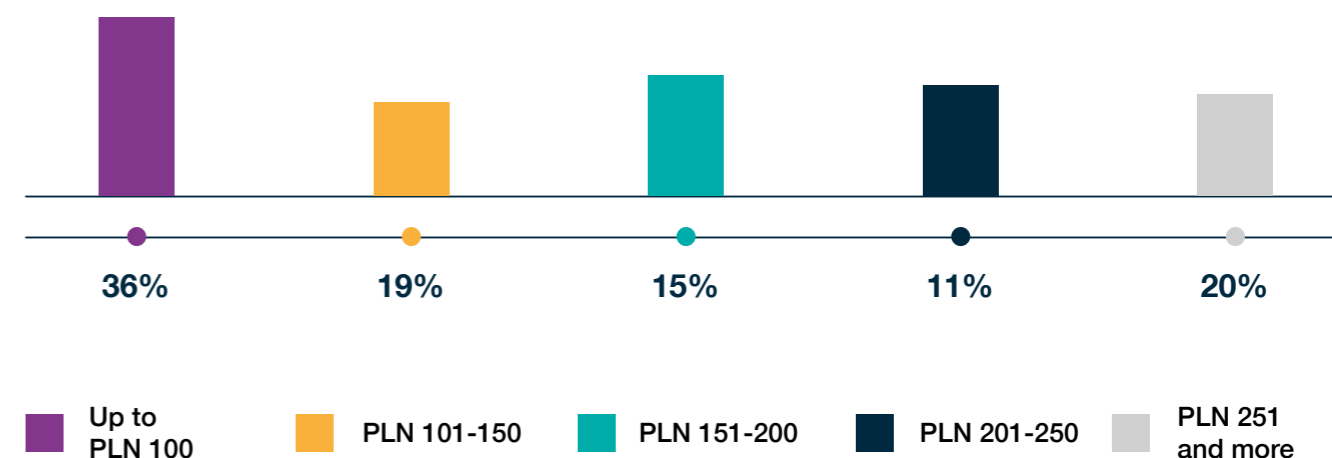
The frequency of these purchases has also increased significantly.

20%
declare that they shop once a week or more often (+7 p.p.),

32%
declare that they shop once every two weeks (+12 p.p.),

This means that more than half of Internet users who shop online (52%) are regular users of online shopping, using it at least once every two weeks. 31% of respondents spend over PLN 200 on shopping.

Online shopping spending



During the pandemic, consumers learned to go shopping online when restrictions were effected. According to the report of the Chamber of Electronic Economy, 64% of Poles believe that the COVID-19 virus will continue to be active in Poland; 49% have stocked up for the quarantine: mainly food products, cleaning and disinfecting agents. 38% of consumers have stocked up on the Internet with the necessary food, hygienic and chemical products, and 37% consider e-commerce safer. Allegro made free deliveries from Allegro Smart available to customers, which benefited more than 2 million customers, and savings on delivery costs exceeded

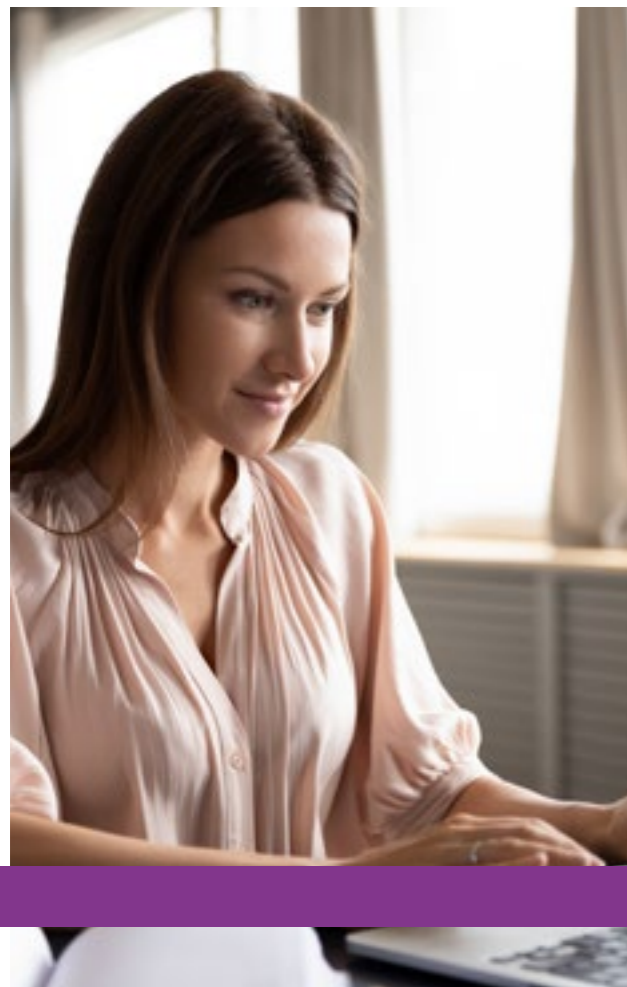
PLN 200 million. Because of the restrictions, the online channel has become the only one available to many companies, so many new sellers have appeared here. Allegro introduced the Sellers Support Package, thanks to which over 15 000 new companies appeared on the platform and immediately began selling successfully. Since the introduction of the Package, a new company has registered on Allegro on average every five minutes. On average, the new companies made their first offers within 2.5 days from registration, and the first sales were usually concluded after 5 days. New companies achieved record sales results supported by the popularity of offers with free deliveries from Allegro Smart! The record-breaker achieved a turnover of PLN 513 000 per month, which is about 7 times more than the average sales of a new vendor in the first month of operation on Allegro. Despite loosening restrictions on commerce, customers still remain in the online channel, which is convenient, safe and accessible. Many companies have won customers there and it is hard to imagine they would give up on it.

Michał Bonarowski,
Public Relations Officer, Allegro

High-speed Internet equalizes opportunities

In a period of increased activity focused on the #SiećWdomu, the most important factor that equalises the opportunities has become access to fast and stable Internet.

Never before have so many activities been performed online by so many Poles. The place of residence or transport links have lost their importance. The Internet has become the most important connection.



51%
of the inhabitants
of NEXERA Regions are of the opinion that access to fast Internet at home is more important than a greater number of transport connections to the city.

High-speed Internet equalizes the opportunities of inhabitants of towns and villages not only in terms of online access to entertainment, administrative services, shopping or remote work. One of the most important aspects is access to education in its broadest sense.

Recent Google Trends data show a multiple increase in popularity of phrases “online training” and “e-learning”. This rapid increase took place in mid-March, i.e. on the days when the state of epidemic emergency was introduced in Poland. Trainings and courses had to be transferred to the Internet.

37%
of Internet users
in NEXERA Regions declare that they use online courses

This is an increase by as much as 17 p.p. compared to the survey carried out last year. The Academy of the Polish Agency for Enterprise Development (PARP) has been running an interactive training platform for several years. During the pandemic PARP noted a three-fold increase

in interest in online trainings. Online services can equalize the chances of inhabitants of villages, small towns and large metropolises. The condition is universal and location-independent access to fast and stable Internet.



Nowadays it is difficult to imagine meeting basic life needs without access to high-speed Internet. This applies both to personal development and the enjoyment of culture, as well as to working in many professions and participating in public life. It is not surprising that, for 51% of respondents, home Internet access is more important than more transport connections to the city, since for many of them going to the city meant accessing administrative services, going to the cinema, buying books or branded clothing or participating in various forms of education. Thanks to e-administrative services, platforms such as Netflix or HBO, online shopping and remote education (increase by 17%), this aspect of “going out on the town” is losing importance. Especially since the pandemic was conducive to investing in personal digital competences. At the same time, it also highlighted the exclusion of people who were in a difficult situation due to the lack of access to fast Internet. For example, students whose families were unable to provide this service, or equipment that meets minimum requirements (laptop, tablet). It can be assumed that in the nearest future there will be a growing demand for the development of digital competences at the intermediate level (use of remote communication tools, educational platforms, online teamwork tools, etc.). It is crucial for the state of democracy at local, national and global levels to be able to critically use digital media to avoid disinformation and manipulation facilitated by the nature of social media.

Jacek Królikowski,
president, Information Society Development Foundation

Better contact with family

Instant messengers, especially those based on video chatting, are the best tool for contacting loved ones who, e.g. due to emigration, cannot regularly visit their hometowns. Although Internet conversation is only a substitute for a face-to-face meeting, it is sometimes the only possible form of contact.

This became painfully obvious during the pandemic, which probably explains the high percentage of supporters of high-speed Internet in hospitals (as much as 73%). In some cases, families wishing to visit their loved ones in hospital were forced to use video calls - traditional visits were prohibited. Nine out of ten respondents in our survey already use instant messaging, which means a clear increase of 15 p.p. compared to the 2019 survey.

The great need for contact is illustrated by data on the popularity of applications for exchanging text messages or making video calls. According to analyses by Sensor Tower, in the second half of March, Zoom was the second most downloaded application in the world, right after TikTok (among non-gaming applications). In April, the list of the ten most frequently downloaded applications in the world included as many as five used to communicate with others.

The number one application was Zoom with

131
million downloads.

This means a 60-fold increase in interest in the application compared to April 2019.

Next places were taken by WhatsApp, Messenger, Google Meet and Microsoft Teams. Three other applications in the top ten were social media applications (TikTok, Facebook and Instagram). Never before has the need for Internet contact been as strong as during the pandemic.



90%
of respondents
use social media

89%
of respondents
use instant messaging

Thanks to fast Internet, I can easily contact my family and friends who are far from me through video calls. This gives me a face-to-face conversation. The high-speed Internet connection also offers a variety of leisure activities. We can watch family videos, play games with friends and work remotely, which is especially important in the era of coronavirus.

A respondent's opinion



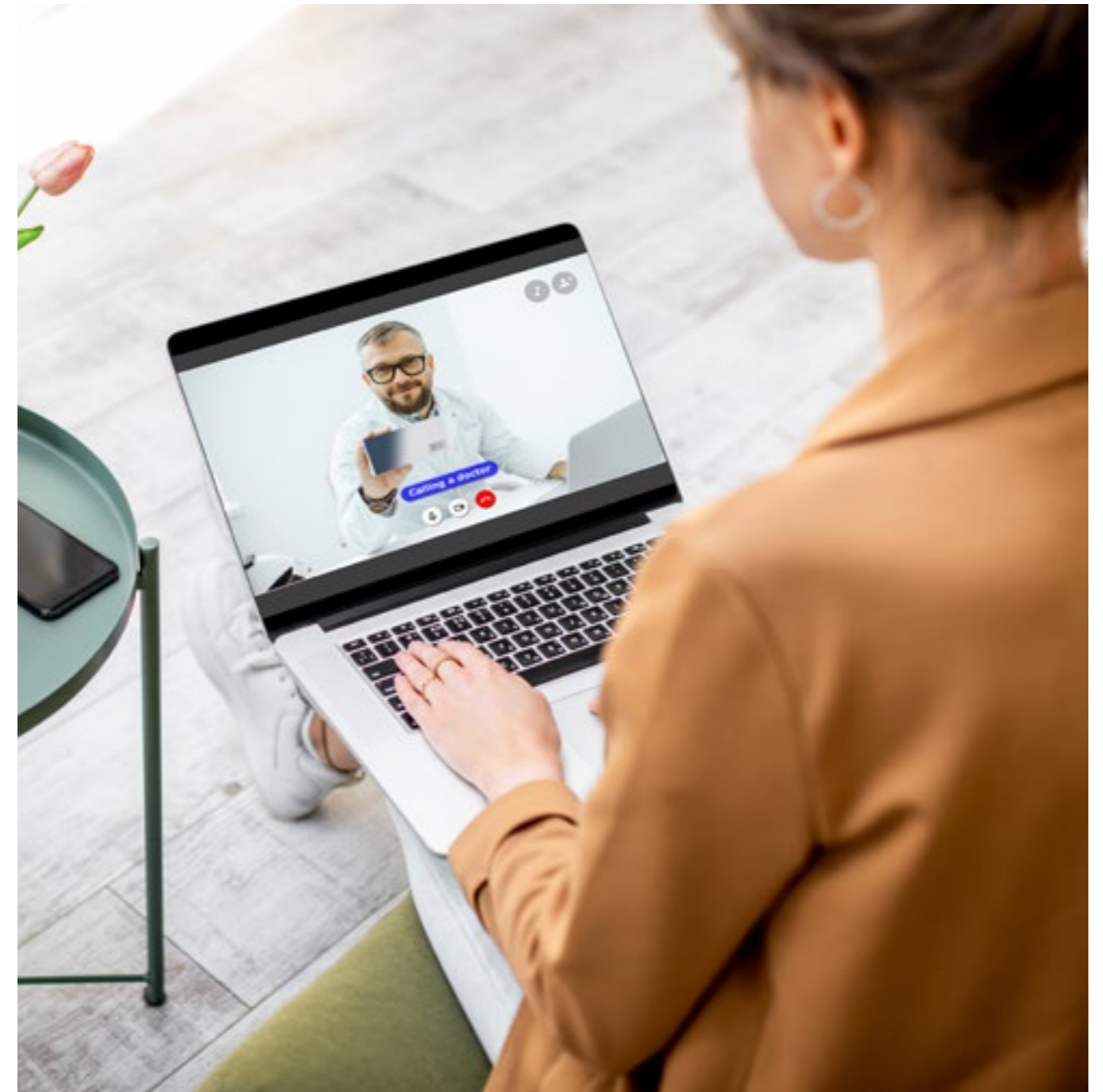
Better access to medical services



Biostat data indicate that 80% of the respondents want to be able to use remote medical assistance in a situation where direct contact with a doctor is difficult.

Such a high percentage of positive responses was of course influenced by the date of the survey (mid-March 2020). 57.5% of respondents would like to use telemedicine for fear of contracting the coronavirus. The same number (57.4%) indicate the restrictions in the functioning of medical facilities due to pandemic as one of the causes. However, for a slightly smaller percentage of people, a reason not related to coronavirus also speaks in favour of telemedicine - 40.4% indicate time savings. What is important, e-consultations with doctors are strongly or rather positively viewed by as many as 87.8% of respondents who used this type of service.

Of course, remote medical consultations cannot replace a traditional examination, but in many cases they allow to significantly speed up certain procedures, e.g. when repeating prescriptions or transmitting test results or medical records. The possibility of obtaining them without the need to travel to a medical facility is not only a convenience for patients, but also shortens queues to medical practices.



Again, as in the case of better contact with relatives in hospitals, it is worth to look at data from our survey, which shows that as many as 73% of respondents believe medical facilities and hospitals should have fast Internet connections. There are several reasons for this high percentage of positive responses. First of all, fast Internet in a hospital means access to e-entertainment for

patients. Secondly, it is an opportunity for doctors to have uninterrupted contact with patients wishing to make an online visit. Thirdly, it is the aforementioned stable connection with relatives in the hospital, who for various reasons cannot be visited personally. Fast and stable Internet in a medical facility simply means better care for patients.



02

Entrepreneurship

Earning more

Among all the entrepreneurs we surveyed, 15% are not satisfied with their current connection (another 11% do not have an opinion about it). As much as 74% are of the opinion that weaker than expected network parameters have a negative impact on business. What hinders the work of those whose Internet is too slow?

The most frequently indicated burdensome problems caused by too slow Internet are:

38%
connection interruptions

30%
downloading difficulties

26%
and problems with watching training materials

No wonder that as many as 64% of the respondents believe that it would be important for their new company's headquarters to be within the reach of fibre optic Internet. Already today, one in four surveyed entrepreneurs (25%) would change

their Internet provider if they had the option, and one in five (19%) plans to switch to a faster one within the next six months.

Thanks to fast Internet, small local companies can reach a much wider group of customers, offer e-services, build their image on a large scale, promote their offer among strictly defined recipients, i.e. simply expand the scope of their business, potentially increasing profits.



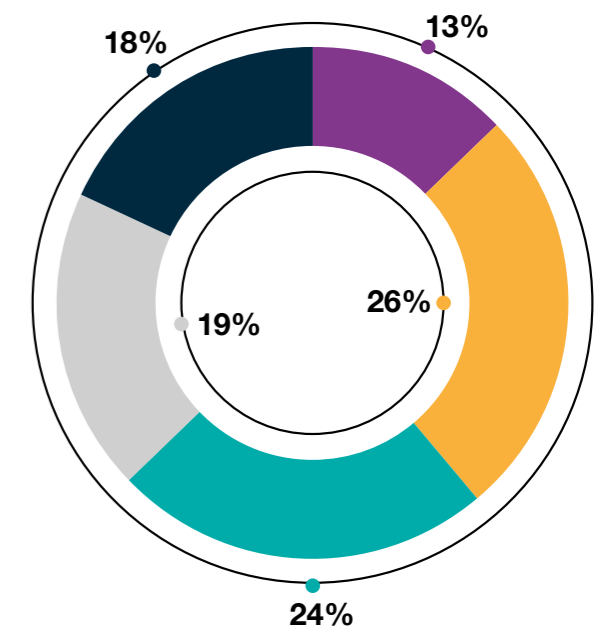
Of all the surveyed entrepreneurs, 39% are of the opinion that increasing the speed of the Internet would have a positive impact on increasing profitability and development of the company.

This is a very significant increase (by 19 p.p.) compared to last year's survey. It was undoubtedly influenced by the pandemic. The role of the Internet in businesses in this particular period began to be

more clearly perceived. The need to communicate with employees and customers at a distance, to perform much more activities than previously

online and network overload made stability and speed of the connection more important.

In the opinion of entrepreneurs, would increasing the speed of the Internet have a positive impact on the company's profitability and development?



64%
of surveyed entrepreneurs are of the opinion that it would be important for their new business premises to be within the reach of fibre optic Internet

19%
of surveyed entrepreneurs plan to switch their connection to a faster one within 6 months



The pandemic has forced companies to transfer many processes to the network, at the same time making entrepreneurs aware of the possibilities and advantages of remote working, but also of the importance of access to fast Internet connections. In last year's edition of our survey, one in five respondents from NEXERA Regions (20%) were of the opinion that increasing the speed of the Internet would have a positive impact on the company's profitability and development. This year they were almost twice as numerous (39%). By far the largest increase in the percentage of entrepreneurs agreeing with this opinion was recorded in the Świętokrzyski Region. Today, half of respondents from this Region (51%) believe that a faster connection means higher revenue. A year ago, one in five respondents was of this opinion. It seems that the pandemic has not so much completely changed the attitude of entrepreneurs to high-speed Internet, but simply accelerated the popularization of certain solutions and increased the awareness of the possibilities that many entrepreneurs using high-speed Internet already have.

Paweł Hordyński,
Member of the Board, Financial, NEXERA

Internet is an important aspect of running a business

Responses of to the question "What are the most important benefits of high-speed Internet in the work of an entrepreneur?"

- If it didn't exist, my company wouldn't exist either
- The speed of communication between the departments in the company, searching for customers, items, materials for business.
- Possibility of transferring services from hosting to own servers.
- We have several locations, the priority is communication with our locations, we work on three servers.
- Instant access to data in the cloud, video contacts with contractors, administrative services via the Internet.



94% of enterprises are connected to the Internet. The most frequently used type of connection (66%) is a fixed wired link. This percentage depends on

the size of the company - the bigger, the more often it uses a fixed link. 91% of companies employing over 250 people say they use this type of link. The size of the company also has a clear impact on the choice of fixed link speed. The percentage of companies using a link faster than 600 Mb/s is 5% among companies employing up to 9 people, and 32% in the group of largest companies with over 250 employees.

The speed of the connection is the most important criterion for entrepreneurs when choosing an Internet provider. It is indicated by almost half of respondents (47%) in our survey. The price is most important for 32%. This may be due to the fact that a more expensive but faster and more stable Internet allows the reduction of the total costs of running a business, e.g. by reducing the number of business trips (contact with the customer via videoconferencing) or discontinuing hosting services. This is probably the reason why 61% of companies within the reach of optic fibre opt for this technology.

Companies use the Internet not only to promote their business (59% have their own website). 96% of the surveyed entrepreneurs use online payments. E-invoicing is declared by 70% of them. In addition, 51% use social media, 38% use a virtual drive (cloud) and 29% use courses and training available online.

During the pandemic, however, the possibility of remote contact with employees and customers came to the fore, as without it there can be no effective remote work. Skype, Microsoft Teams or Zoom have recently become the most desirable applications available on the Internet.

61%

of companies that are within the reach of a fibre optic network use this type of connection

47%

of entrepreneurs consider speed as the most important criterion for choosing an Internet provider

Which services are used by entrepreneurs on the Internet?



96%
Internet payments



70%
e-invoicing



59%
own website



51%
social media



38%
virtual disk (cloud)



29%
online courses and training



The COVID-19 pandemic accelerated the digital transition. Companies are developing the use of the Internet in the area of marketing and sales, but also face the challenge of efficient work organization. For many of them it has become a necessity to provide very good Internet access also outside the office. More and more people are forced or consciously choose to work from different locations, not only from home. In this situation, efficient cloud services become a necessity to ensure effective communication and access to all required resources. The results of the survey clearly show that there is still much to be done here, especially among smaller and smallest companies, and in areas remote from the metropolis.

Dr Jan Zajac,
CEO, Sotrender

More effective contact with customers and employees

In a survey carried out in the last days of March, 28% of the respondents claimed that despite the pandemic that prevailed then, they could not work remotely.

The vast majority of respondents indicated the nature of work as the reason, which made it impossible to be performed from home (81%). However, one in five respondents (19%) pointed to lack of technological solutions that would enable remote working. In more than half the cases, the employer was at fault. During the pandemic, technology gained more importance than ever before.

When asked which tool the respondents consider most useful in remote working, 67% answered that it was a fast and stable Internet connection.

This was the most frequently indicated answer. 37% of the most important tools mentioned applications for contact with customers and employees. Videoconferencing during the isolation period became the best method of conducting conversations. The peak moment of growing interest in them was the end of March.



According to Google Trends data, a record was set in the week of 22-28 March - the word “videoconference” was searched 20 times more often than in the period of 2-8 February.

Video conferencing applications also beat popularity records. In April, the list of the ten most frequently downloaded applications in the world included as many as five for communicating with

others. This was due to a strong need for contact with loved ones, but also because of the need to work from home and to use the tools available online to contact customers and employees.

It is not known how much the popularity of video conferencing applications will decline after the pandemic. However, it is possible that some companies have only just had the opportunity to see how such tools work in practice and how they can facilitate work. Video conferencing is not only a tool for contact with customers or current employees. It is also a way to recruit.

19%

of employees who could not work remotely listed technological barriers as the reason for this

67%

of respondents think that the most useful tool for remote work is fast and stable Internet



I can hire employees from all over Poland - e-recruitment, home office

A video call is not a substitute for direct contact, but it has become the best tool to verify candidates applying for a job.

There is no doubt that after the pandemic, the most important element in the recruitment process will still be a face-to-face meeting between the recruiter and the candidate, but the compulsion to use e-recruitment could show some HR workers how online tools can complement the processes used so far.

A remote conversation allows for the acquisition of employ-

ees from virtually every corner of the world, which makes it possible to reach specialists who may be missing in the immediate vicinity.



The greatest benefit of high-speed Internet is the unlimited possibilities of communication.

Survey respondent



However, while direct meetings with candidates for HR departments are extremely important, they do not have to be so for future employees. According to a survey conducted by the Responsible Business Forum in the last days of March, most Poles believe that many meetings held at work are unnecessary.

Half of respondents (50%) believe that the pandemic has shown that too much of society is digitally excluded e.g. by lack of access to a computer and the Internet. A fast and stable connection in the new reality is as important as water or electricity.

According to 59% of respondents, the pandemic made them aware of how much time they waste at work in unnecessary meetings that could be held in other ways, e.g. by telephone or video. The same percentage (59%) believes that when everything returns to normal, we will use new technologies more often at work. Of course, provided that employees have access to these technologies.

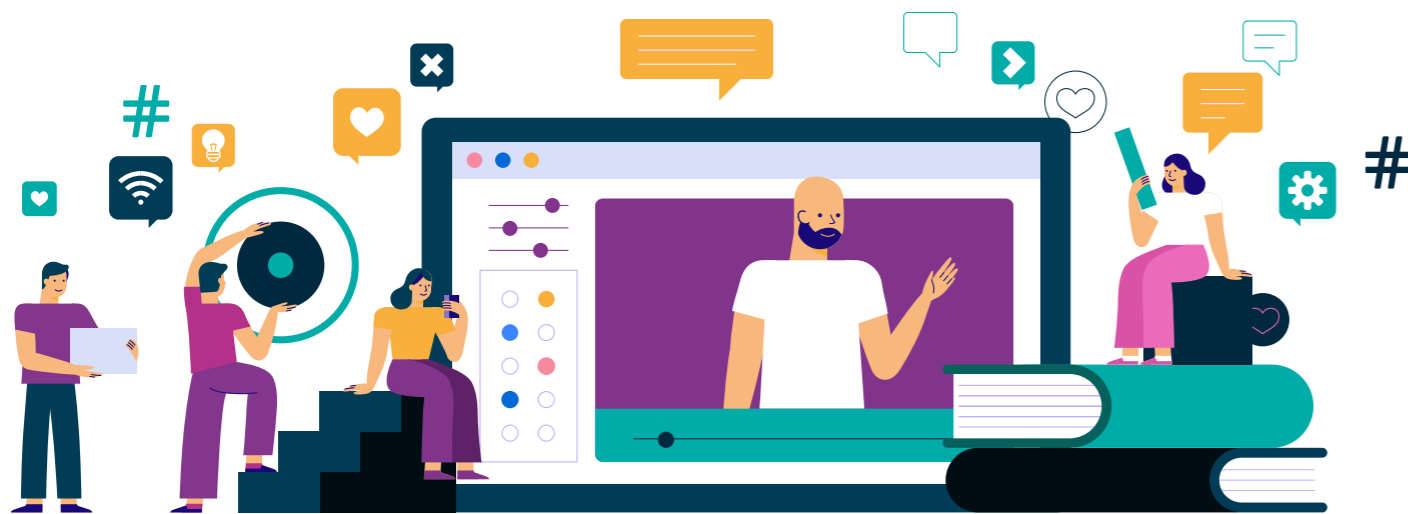


Remote recruiting is not able to fully replace the traditional employee recruitment process, but in many cases it allows the process to be significantly accelerated. This is a good alternative to looking for and hiring new people when this is not possible on site. In this way we continued to recruit candidates e.g. during social isolation, when it was not advisable to talk face-to-face to another person. Video conferencing can be particularly helpful in the first stage of searching for employees, as it allows for quicker preliminary selection of candidates and assessment of their technical skills or motivation to undertake new professional challenges. It is also an optimal solution in the case of recruitments involving frequent business travellers, when it is difficult to find an available date in the calendars. For a long time now, the last stage of recruitment, related to formalities - making an offer and signing a contract is also processed remotely. It is worth remembering,

however, that a very important aspect in the process of acquiring candidates is to assess whether the applicant fits into the organizational culture of the company and team and whether they can establish effective relations with their superior. We are only tentatively testing the effectiveness of remote recruitment in this area. The vast majority of candidates and employers still care about face-to-face meetings. I am convinced that over the years, more and more new ideas and solutions in this area will appear, which will also bring better results and optimize time and resources.

Paweł Wierzbicki,
Partner with Page Executive recruitment company

Better-trained staff



According to the data of the Polish Chamber of Training Companies, at the end of March half of companies (54%) in the training services sector expected a total loss of revenue. The same amount (55%) already recorded delays in payments for services provided earlier.

The training industry was mentioned together with the tourism and event industries as one that could lose the most due to coronavirus-related restrictions. This does not mean that the demand for courses has dropped to zero. Some companies actually stopped spending in this area, but there were also those that organised online training for their employees.

During the pandemic, the Academy of the Polish Agency for Enterprise Development recorded a three-fold increase in interest in e-learning courses. The same increase can be seen in Google data.

The phrase “e-learning” was entered three times more often in the search field in the week of 22-28 March than two weeks earlier. The same increases were noted for the phrase “online training”.

Our survey also confirms the great interest in online training.

29%
of entrepreneurs

declare they use courses and trainings organized on the Internet.

This percentage among companies employing from 51 to 250 people is clearly higher than the average and amounts to 45%.

Online courses and trainings in the era of coronavirus have become the only possible form of developing professional competences of employees. It is worth remembering that such training is sometimes the only possible or most convenient form of improving the professional skills of the staff for companies whose headquarters are located in small towns.

Online training can be held from any place, sometimes even at any time. All you need is a computer connected to a stable network.





03

Education

Schools struggle against digital exclusion

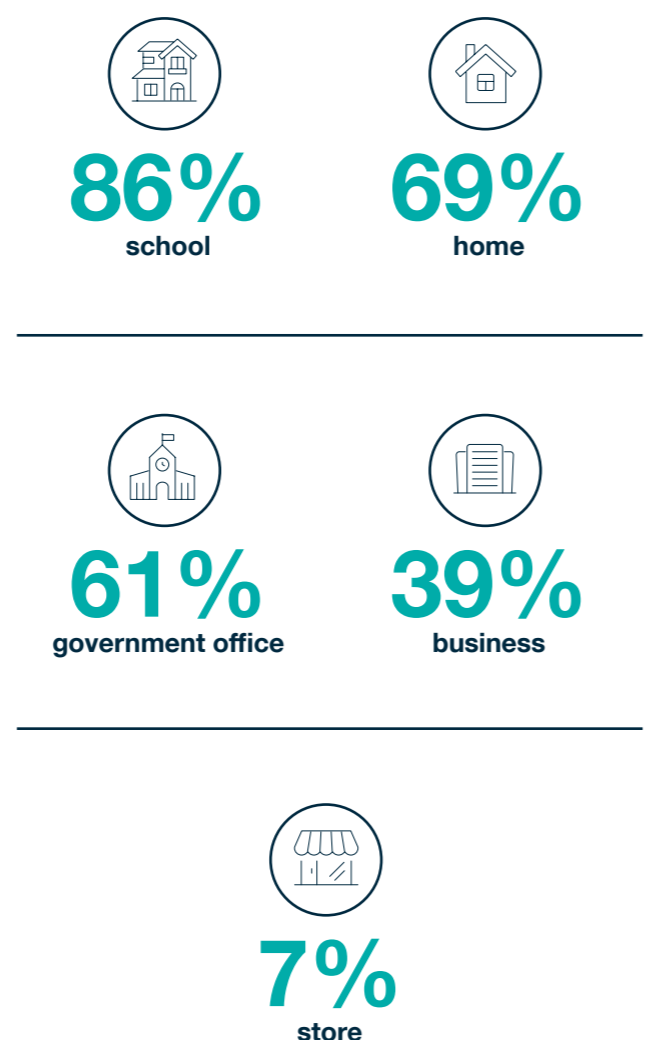
Awareness of the scale of digital exclusion in Poland grew during this period of increased network activity. According to a survey conducted by the Responsible Business Forum, 57% of Poles believe the pandemic showed how much children and young people in education are excluded digitally e.g. by lack of access to computers and the Internet. At the same time, according to 89% of the respondents to our survey, the Internet is the basic tool for online learning. The same number of respondents (90%) admitted that not all children have the necessary tools for remote learning, such as a computer or laptop for their own needs, as well as access to a fast and stable connection. Schools play an important role in the fight for equal opportunities for students.

The teachers from NEXERA Regions we examined most often (86%) listed schools as the place where access to fast Internet should be available.



This answer was indicated more often than home (69%) or office (61%). Educational staff when asked who should provide students with access to the Internet, indicate schools as often as parents do (20% each). The remainder (60%) are of the opinion that students should have access to fast Internet at school and at home.

Which locations, according to teachers, should have access to high-speed Internet?



As our study shows, just bringing the Internet to school is not enough. The speed of the connection is also important. Only fast and stable Internet can provide students and teachers with access to tools to make lessons more attractive. Why is this

Meanwhile, one in three teachers (34%) claim that the school where they work has plans to increase the speed of the Internet, which may be a signal that the current network does not meet the expectations of the management.



so important? Because in schools, the Internet is no longer just a tool to communicate with parents. Teachers point to many other benefits that come from having it.



High-speed Internet for rural areas may be an opportunity to help a demographic problem, but it requires wise education to strengthen opportunities, rather than create new threats. A school with good infrastructure can be a place that will remove small-town children's hang-ups concerning technology. But the school must not forget to equip them with good social skills and an internal compass that will allow them to make good and wide use of new technologies, build effective teams and at the same time be able to enjoy life offline. Among other things, this is what the project of the Academy of Leadership for Educational Leaders (aplo.pl), of which NEXERA has also become a partner this year, aims for - to develop school directors as leaders who will have the ability to combine both perspectives - human and technological - in the spirit of the idea of our Institute.

Zofia Dzik, Investor, Innovator, CEO of „Man and Technologies” Humanites Institute

New skills and knowledge areas

According to our survey, nine out of ten schools (89%) keep electronic diaries. Nearly the same number (92%) use the Internet to contact parents. The network is therefore a common communication tool used by schools. Teachers, however, point to many more areas where high-speed Internet is helpful.

In the first place, they mention the possibility of participating in online training courses intended for them. This answer was indicated by half (48%) of respondents. It is a clear declaration that educational staff want to use the Internet not only during lessons, but also to broaden their competences. However, making the classes more attrac-

tive is equally important - 46% of the respondents are of the opinion that fast Internet is the most helpful in presenting educational materials posted on YouTube during lessons.

Teachers also appreciate the fast connection for uninterrupted video conferencing, access to the cloud, i.e. the virtual disk, for the students' project work and when cooperating with other schools using social media.



The possibilities offered by the high-speed Internet at school, as indicated by the teachers themselves, are multiple. However, according to Poles, not everyone is able to take advantage of them.

Only 35% of respondents believe that teachers are ready to learn online. Schools in this respect were positively evaluated by 28% of respondents.

Areas where, according to teachers, fast Internet is most helpful:

48%

opportunities to participate in training courses for teachers

46%

presenting educational materials posted on YouTube during lessons

38%

use of video conferencing and video communicators

34%

using the cloud, i.e. virtual disk, in students' project work

25%

cooperation with other schools through social media



Access to the Internet give an opportunity to do business from anywhere in the world, without the need to migrate to large urban agglomerations, thus contributing to the equalisation of opportunities between rural and urban centres. However, for this equalisation to take place, the quality of the education system, consisting of infrastructure and people, is important. Education should be ahead of social and market needs. It should be a place to prepare children and youth for a good, independent life in a rapidly changing world under the influence of technological transformation. Meanwhile, research shows that school is lagging behind. It has a big technological gap to close. This is illustrated, among other things, by the result that 43% of students declare readiness to work remotely, while only 28% of the schools have declared such readiness.

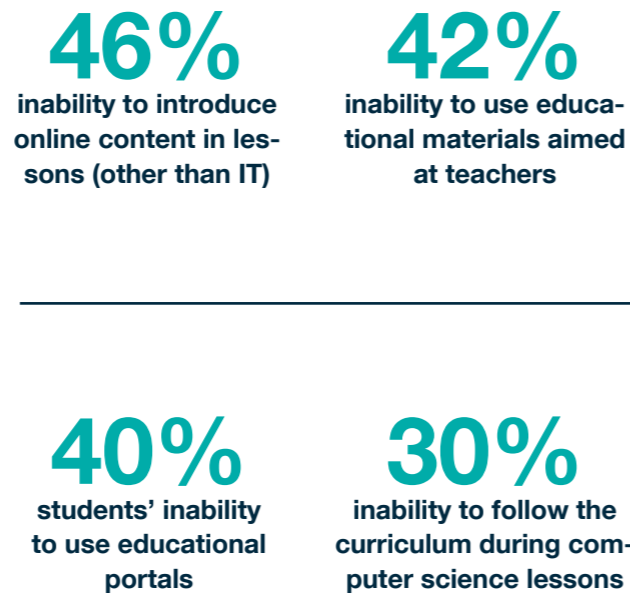
Zofia Dzik,
Investor, Innovator, CEO of „Man and Technologies” Humanites Institute

More interesting classes

According to teachers, slow Internet not only restricts educational opportunities, but sometimes may even prevent the implementation of the curriculum.

Among the biggest problems caused by slow connections, the respondents most often mention the inability to introduce Internet content in lessons other than IT. This opinion is supported by almost half of teachers (46%). The respondents are also worried by the fact that they cannot use educational materials addressed to them (42%). Among those mentioned by 40%, the problem is also the students' inability to use educational portals. However, the problem with following the curriculum in computer science lessons, cited by 30% of teachers, is particularly worrying. It is impossible to teach students to use modern technologies if they do not have access to them during lessons.

Problems that arise when the Internet is too slow:



Where do these opinions come from? The most frequently mentioned nuisance caused by too slow an Internet, i.e.: slow loading pages containing many graphic elements (56%); problems with downloading material from the Internet (47%); stuttering video content (35%); interrupted connections in instant messengers (27%). These problems would not exist if there was fast and stable Internet in schools.

This is confirmed by the teachers themselves. Three out of four (77%) are of the

opinion that access to fast and stable Internet allows for more interesting lessons for students. All thanks to services available only through a fast connection. 74% of respondents claim that connecting a fibre optic cable enables the use of tools which could not be used before. There are many of them.



Better access to new and important tools

The tools and programs most often mentioned by teachers, which can be accessed via fibre optic, include: educational platforms with rich multimedia, educational materials from MEN platforms, interactive/show lessons, platforms for teaching programming, educational films and plays.



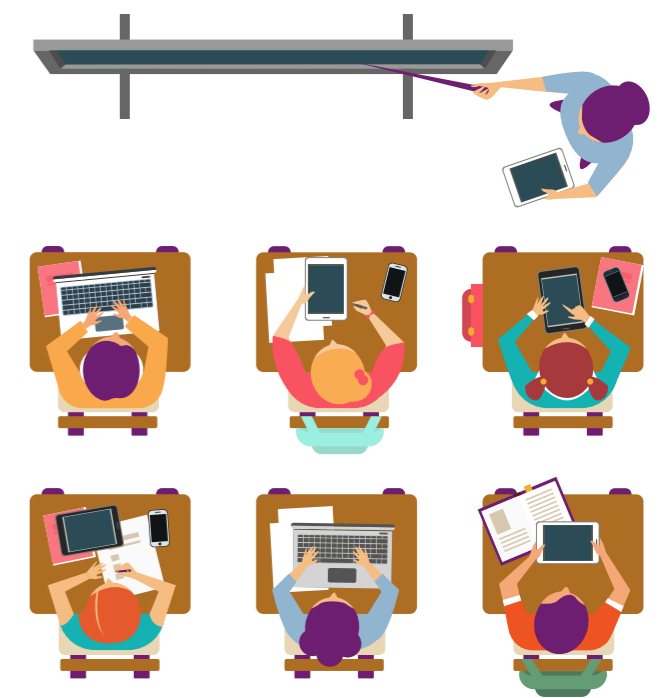
Many teachers had to learn to use at least some of these tools due to the pandemic.

According to our survey, in the last days of March, 39% of parents with school-age children admitted that their children have organised online teaching in all school subjects. 45% said that only some school activities were conducted online. Teachers were forced to conduct lessons remotely and to use tools only available online. This caused a lot of problems (90% of parents believe that some students do not have the right tools to learn online), but at the same time it has become the biggest impulse in history to use modern technology in the educational process.

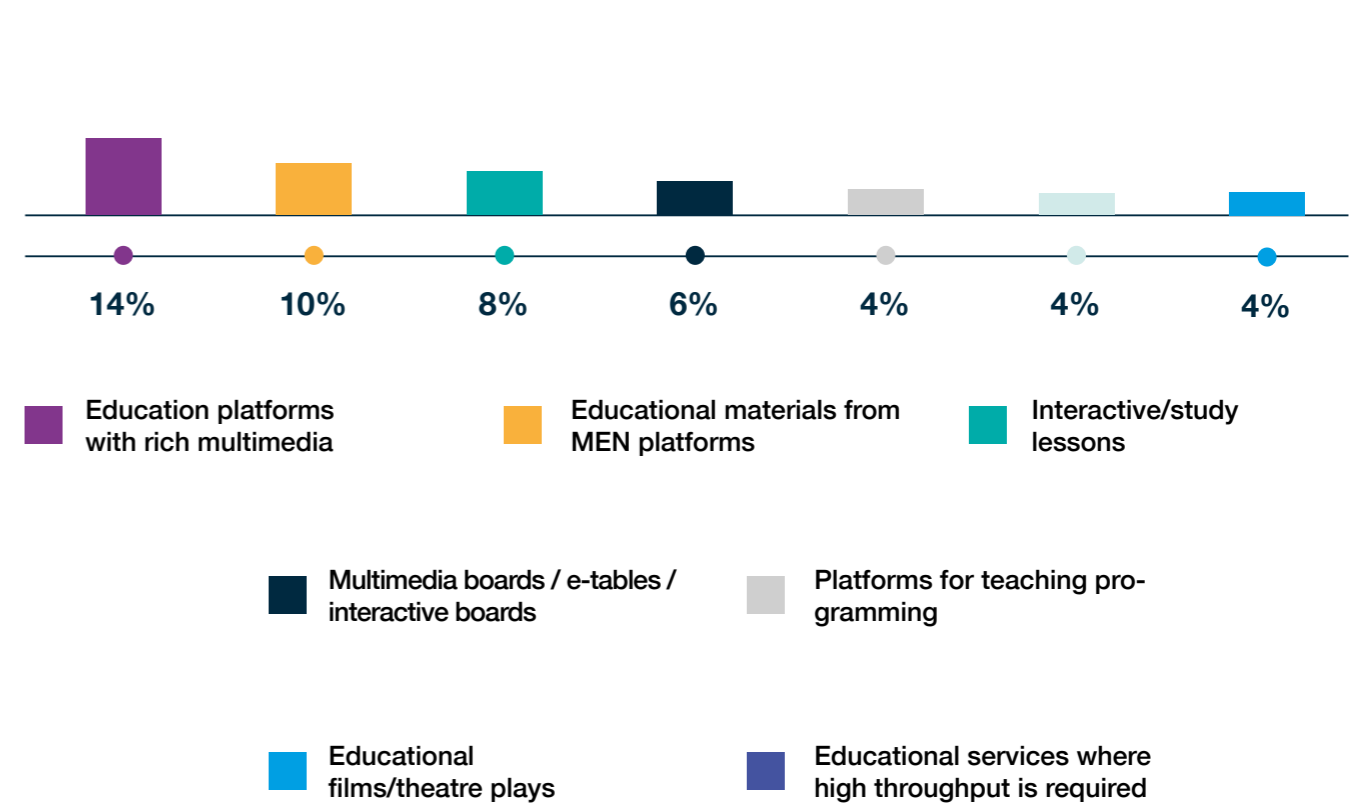
Those teachers who have not used it so far have been able to see how many new opportunities are offered by the Internet and the services available through it.

Tools most frequently used in e-learning (according to parents) included webinar platforms (45%), social media (38%), teleconference programs (35%) and dedicated educational services (21%).

It is difficult to predict what percentage of teachers will want to use the tools learned during the pandemic after returning to normal teaching, but this may result in even greater demand for fast Internet in schools than before.



Which tools can be used thanks to fibre optic broadband according to teachers?



Remote schooling

Since the end of March, Polish schools have been in remote mode, for which many of them and their teachers were not prepared. Until now, the Internet has supported the learning process, but has not been its basic tool. In the last days of March, many parents were dissatisfied with the shape of lessons in the new reality. According to 43% of respondents, students were then ready to learn online. Teachers were positively evaluated by 35% of respondents and schools by 28%.

The surprisingly small percentage of parents saying that students are ready for remote learning is most probably due to the awareness of unequal opportunities in access to tools such as the Internet or computer, which became necessary during the pandemic. That is why it is so important to extend the reach of the fibre optic Internet so that there are as few blank spots, i.e. digitally excluded places, as possible. All the more so because new technologies are important not only during a pandemic.



Students who are seriously ill, disabled or have learning difficulties can join an individual teaching programme that is provided to them at home. This sometimes cumbersome system could be replaced by an e-learning programme that would allow a student who is forced to study at home to participate in classes with their peers - the image from the classroom would be transferred to the monitor of their computer, giving a substitute for participating in class life.

According to teachers, fast Internet in schools makes lessons more attractive, provides access to training platforms, speeds up and facilitates work, offering many alternatives in times of crisis. Moreover, according to our research, it can also be helpful in the recruitment process.



43%

of respondents at the end of March were of the opinion that students are ready to learn online.

35%

of respondents at the end of March were of the opinion that teachers are ready for online learning

28%

of respondents at the end of March were of the opinion that schools are ready for online learning

Easier teacher recruitment

From September 2019, the minimum salary of a teacher trainee is 2538 PLN gross, a contract teacher - 2611 PLN, an appointed teacher - 2965 PLN, and a certified teacher - 3483 PLN.

Teachers with experience in school work receive up to 20% of seniority bonus. Since September last year, a tutoring allowance of PLN 300 has been added to their salaries. Low earnings are the main reason for staff shortages in Polish schools and the rising average age of teachers, which today - according to data from the Ministry of National Education - is 44.1 years.



79%
of the teachers surveyed are of the opinion that thanks to fast Internet the school can be more modern.

It provides school employees with additional didactic tools, which can be an important argument for them when choosing a place to work, as more than half of them admit. Fibre optic broadband seems to be particularly important for schools located in small towns and villages.

71%
of respondents believe that fast and stable Internet can reduce the gap between schools in rural areas and in cities, equalizing chances of access to modern technologies not only among students but also teachers.

58%
of respondents claim that access to fast Internet may be an important argument in the process of teacher recruitment.



Salaries in schools vary in individual regions, as they depend to some extent on school directors. It should be noted, however, that the level of earnings is obviously not the only argument for directors to attract potential employees to their schools.



04

Administrative
services

No need to go to the office

97%
of government administration employees participating in our survey stated that residents can submit requests online.

More than half of the respondents (52%) are of the opinion that this applies to all types of cases, and 26% are of the opinion that it applies to the majority of cases (an increase by 10 p.p. compared to last year's survey). The rest believe that residents can only process some requests online. Apparently, however, knowledge of how much can be done in the e-office is not common, although the pandemic has made it clearly more popular.

Only 20% of government administration employees believe that residents process most administrative services online. It is worth noting that only a year ago this percentage was 13 p.p. lower (7%). This state of affairs was undoubtedly influenced by the limited work of the offices during the pandemic. However, it is still a relatively small value if we compare it with the numerous opinions of officials that all types of administrative services can be accessed online.

What things are most often processed via e-offices? Government administration employees definitely most often mention filing the application for the identity card (32%). Moreover, 17% of respondents mention tax declarations and returns, 13% declarations concerning municipal waste, 11% building permits and zoning plans, and 10% applications for access to public information.

In the opinion of government administration employees, it is not only the ignorance of the services provided by the e-office that causes not all residents to process their requests online. The most frequently mentioned obstacles are lack of access to the Internet/poor Internet connection (37%) and attachment to old habits - 31% state that people simply prefer to visit offices in person and 22% mention habit. One in five respondents (21%) also mentions not having an e-profile or trusted signature.



What things do government administration employees list most often among those processed by residents online?

32%
ID card applications

17%
tax returns and declarations

13%
municipal waste declarations

11%
building permit and zoning plans

10%
requests for access to public information



The Digital Poland Operational Programme, thanks to which the telecommunication network throughout the country is being built, consists of three budget lines. The first concerns the construction of infrastructure which enables the recipients to use the network without interruptions. The second is related to the construction of IT systems by public administration in order to make it easier for citizens to handle official matters using online forms. The third supports citizens' digital competence to make practical use of the tools available online.

The GUS report on the information society in Poland shows that the number of people using e-services is systematically growing. This is due to, among other things, a reliable telecommunications network or an extensive database of services that can be provided over the Internet.

Wojciech Szajnar,
Director, Digital Poland Project Centre

Government administration employees can organize their work more easily

The government administration employees we surveyed point to many of the benefits of residents accessing administrative services online. It is hard not to see the benefits also for the employees themselves. The fewer people in the offices, the easier it is to organize their work.

93%
of government administration employees are in favour of providing residents with the opportunity to do things online (e-Government, e-Office).

56%
of officials say that administrative services would be more efficient if traditional notification procedures were replaced by online applications.

One in three officials (32%) even admits that the expansion of access to a high-speed Internet network is now much more important in the boroughs or districts than the expansion of road infrastructure, bicycle routes or cultural and educational facilities. This is a much higher percentage than in the survey carried out a year ago, when 17% of officials agreed with this opinion. This means an almost twofold increase (by 15 p.p.).

However, without fast and stable Internet, there can be no question of improving the work of government administration employees, as our survey clearly shows. The barrier most often mentioned by them, which stands in the way of handling official matters online, is the lack of access to the Internet or a poor connection. In urban boroughs this problem is indicated by 36% of respondents, and in rural boroughs - by 44%.

The respondents' answer to the question "What are the most important benefits of fast Internet in the work of government administration employees?" were

„It's easier for me to do my job. I use the Internet very often. I have constant access to up-to-date regulations. I can make electronic payments in the office"; "If we have a good Internet, we have access to all the materials that we can make freely available if necessary. We also have electronic sessions".



Limited access to e-offices for residents due to slow Internet is not the only issue. An inefficient network also causes many problems in the work of government administration employees. 43% cite pages that load too slowly, 28% point to lost

connections, e.g. via Skype, 24% indicate problems with smooth video playback and one in five (20%) problems with downloading materials from the Internet.

What kind of problems caused by too slow Internet in the office are most bothersome?

43%
websites are slow to load

28%
connection established by e.g. Skype is lost

24%
problem with smooth video playback

20%
problem with downloading



Polish administration employees are beset by a huge number of procedures and guidelines, which change on an ongoing basis. Government administration employees often lose themselves in this, not being sure which rule ultimately applies. The Internet makes it all simpler. First of all, it enables quick verification of facts and the state of affairs. Secondly, the transfer of processes to the network minimizes mistakes and at the same time facilitates control. Thirdly, more and more excellent algorithms and artificial intelligence can do some of the work for the employees, which significantly speeds up their work and increases the efficiency of administration. However, it is important for the citizen to be able to complete the whole process online, which is still not the case, as the pandemic showed. Some procedures are stuck or require a visit to the office anyway.

Dr Małgorzata Bonikowska,
Co-founder and President of the THINKTANK Centre,
President of the Centre for International Relations

Increased transparency of local governments

67%
of NEXERA Regions inhabitants know what e-government means.

71%
of the inhabitants of NEXERA Regions process their administrative requests online.

Moreover, 9 out of 10 (89%) say they use Skype or WhatsApp instant messaging. All this may be important from the point of view of local government transparency.

Since 2018, boroughs are obliged to prepare reports on their activities. These are presented to councillors and residents, who can actively participate in their discussion. The reports most often describe activities concerning culture, public education, social welfare, public order and safety of citizens, as well as physical culture and tourism. In other words, the boroughs describe in them everything they did in a given year. The reports could be a very important part of the debate at the local government level, a way of contact with the inhabitants and an element of promotion of officials' activities. They could be if more people read them.



The Batory Foundation analysed reports from one hundred boroughs. A total of 120 residents took part in the discussions. In 12 boroughs the debate on the report did not take place at all, because none of the councillors took the floor and not a single inhabitant came to participate in the discussion. Therefore, it can be concluded that the reports on municipality activities reach a tiny number of recipients.

It could be different if the discussion was transferred to the Internet. Some boroughs already broadcast council sessions on the Internet, so that every resident can participate in them indirectly, without leaving home. In our survey, one of the surveyed officials mentioned this possibility as the most important advantage that the fast Internet gives in his work.

The answers of the respondents to the question “What are the most important benefits of high-speed Internet at work?”

Residents can participate in city council meetings, they can follow what is happening in their city on an ongoing basis.

Remote work in administrative services? It's possible

In last year's edition of our survey, one in four officials (28%) asked whether they would like to perform their duties remotely if the office they currently work in would provide such an opportunity, answered that they definitely would. During the period covered by this year's survey, many government administration employees experienced remote working in connection with the pandemic. This very clearly influenced their opinion about working from home.

The percentage of those who would like to perform their duties remotely increased by 24 p.p. and is now

52%

This means that half of government administration employees would like to work from home.

What is important, we did not notice any significant differences in answers that were given in rural, urban-rural and municipal boroughs - employees of borough and district offices answered very similarly. The pandemic showed that a partial transfer of the offices' activities to the Internet is possible, with many advantages noticed by the inhabitants and - as our survey shows - the employees themselves. The condition is the development of a fibre optic network, without which it is difficult to talk about effective remote work. It is also worth noting that, in the opinion of administration employees, not only administrative facilities are an argument for extending the range of high-speed Internet.

According to 90% of the surveyed, the construction of a fibre optic network in the Region will positively influence the attractiveness of the inhabitants' lives. Exactly the same percentage indicates an improvement in the attractiveness of their work. Moreover, 89% claim that a fibre optic network will increase the investment attractiveness of the region, and 74% indicate an improvement in tourist attractiveness.



Do you agree with the following statements:

Expansion of the fibre optic network will positively influence the attractiveness of life of the residents

✓ 90%

Expansion of the fibre optic network will positively influence the attractiveness of the residents' work

✓ 90%

Expansion of the fibre optic network will increase the investment attractiveness of the Region

✓ 89%

Expansion of the fibre optic network will increase the tourist attractiveness of the Region

✓ 74%



“
Many tasks of central administration, government administration or local government employees can be performed remotely, as the current situation has shown, among other things. The remodelling of the work style requires taking into account several factors: the telecommunications access infrastructure, having the appropriate equipment, and ensuring data security. Now it is particularly important to ensure a sense of community among employees, which until now has been possible when working in the office. We should also look for ideas to foster the development of remote working, as it not only increases efficiency but also optimises costs. It can also become an opportunity for candidates from smaller towns looking for work in offices, which are usually located in large cities.

Eliza Pogorzelska,
Director of the Broadband Project Implementation
Department in the Digital Poland Project Centre



05

Data from
NEXERA Regions

Introduction



NEXERA builds fibre optic networks in four Regions called NEXERA Regions. These include the Warmia & Mazury Region, Kujawy, Pomorze & Mazowsze Region, Łódzki Region and Świętokrzyski Region. Ultimately, by the end of 2022, over 670,000 households and almost 3,000 schools and educational units will be within the reach of our fibre optic network. Schools and over 311,000 households from this group will be covered by the NEXERA network thanks to

POPC funding of nearly PLN 597 million. The remaining funds come from NEXERA shareholders, and the total value of the investment is about PLN 1.5 billion. Thanks to POPC, schools (educational units) in more than 1,800 locations will also be able to use this Internet access. Why is this so important?

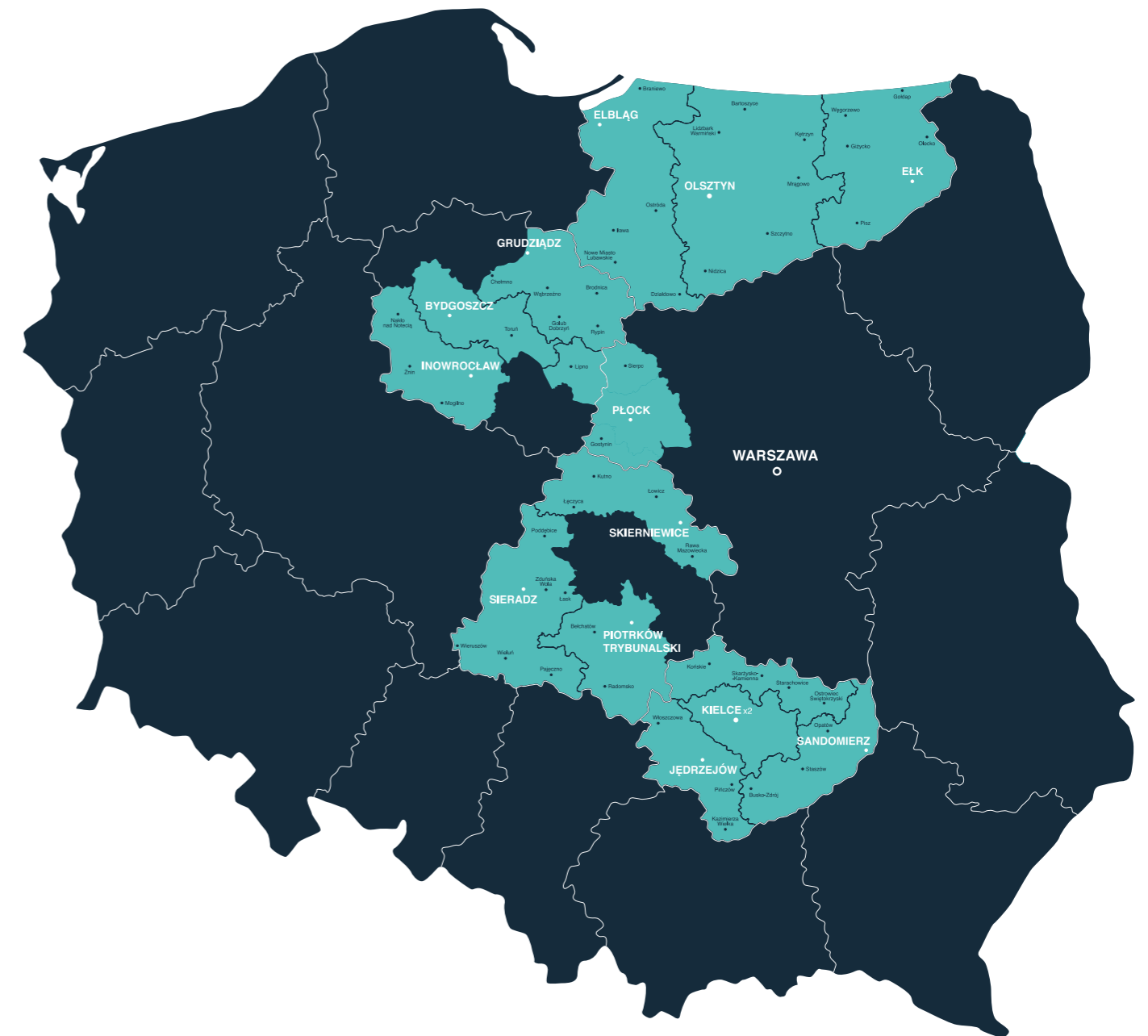
For the second year in a row, we are investigating the role that high-speed Internet plays in the daily lives of residents, in the activities of entrepreneurs, in education and in the work of government employees in NEXERA Regions. This year's survey took place at a special time - the pandemic made us aware of how many things depend on Internet access and how important the speed of connection is. This has been shown by a much higher percentage of residents, entrepreneurs, teachers and officials than a year ago who believe that extending fibre optic coverage is now more important than expanding road and bicycle infrastructure.

That is why we feel doubly motivated to eliminate the so-called NGA blank spots, i.e. places where the Internet access network does not allow for the provision of access services with a throughput of at least 30 Mb/s, and in the case of educational institutions - with a throughput of at least 100 Mb/s.

In the fifth chapter of the NEXERA Regions 2020 report you will find a very detailed comparison of Internet usage in all NEXERA Regions. What do local officials think about fast Internet? How fibre optics could affect the profitability of companies from the Regions: Warmia & Mazury, Kujawy, Pomorze & Mazowsze Region, Łódzki and Świętokrzyski? How could it change the functioning of local schools and, finally, what would change in the lives of the inhabitants of these Regions?

We answer these and many other questions in the last chapter of our report. I wish you a pleasant reading.

*Jacek Wiśniewski,
President of the Management Board, NEXERA*



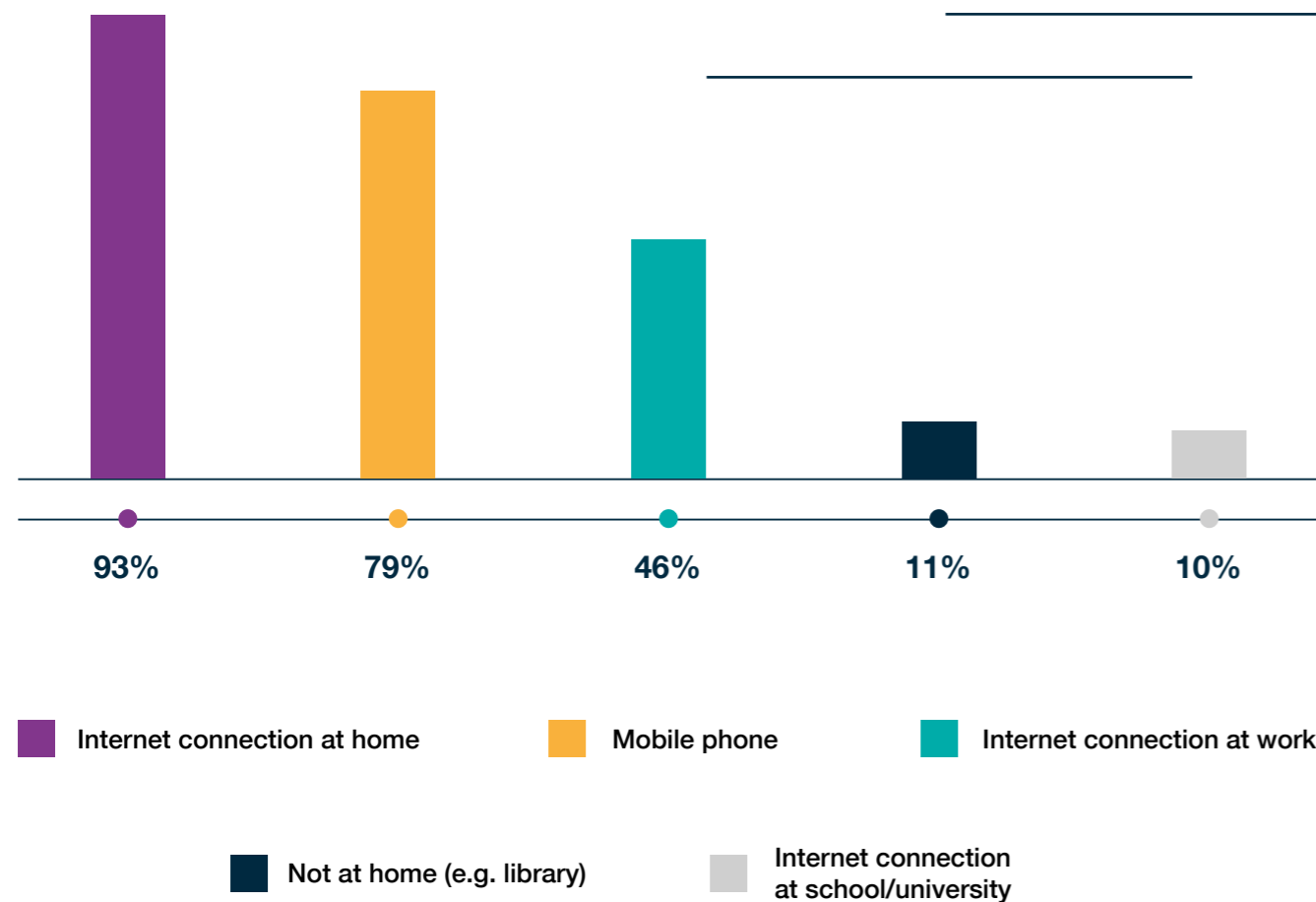
Łódzki Region

Internet at home, on the phone and at the university

Inhabitants of the Łódzki Region most often use a home connection (93%, increase by 6 p.p) and Internet on a mobile phone (79%, decrease by 8 p.p) to connect to the Internet. Interestingly, in

this Region we recorded the highest increase in the use of the Internet at school or university - it is already used by 10% of all Internet users (5 p.p. more than a year ago).

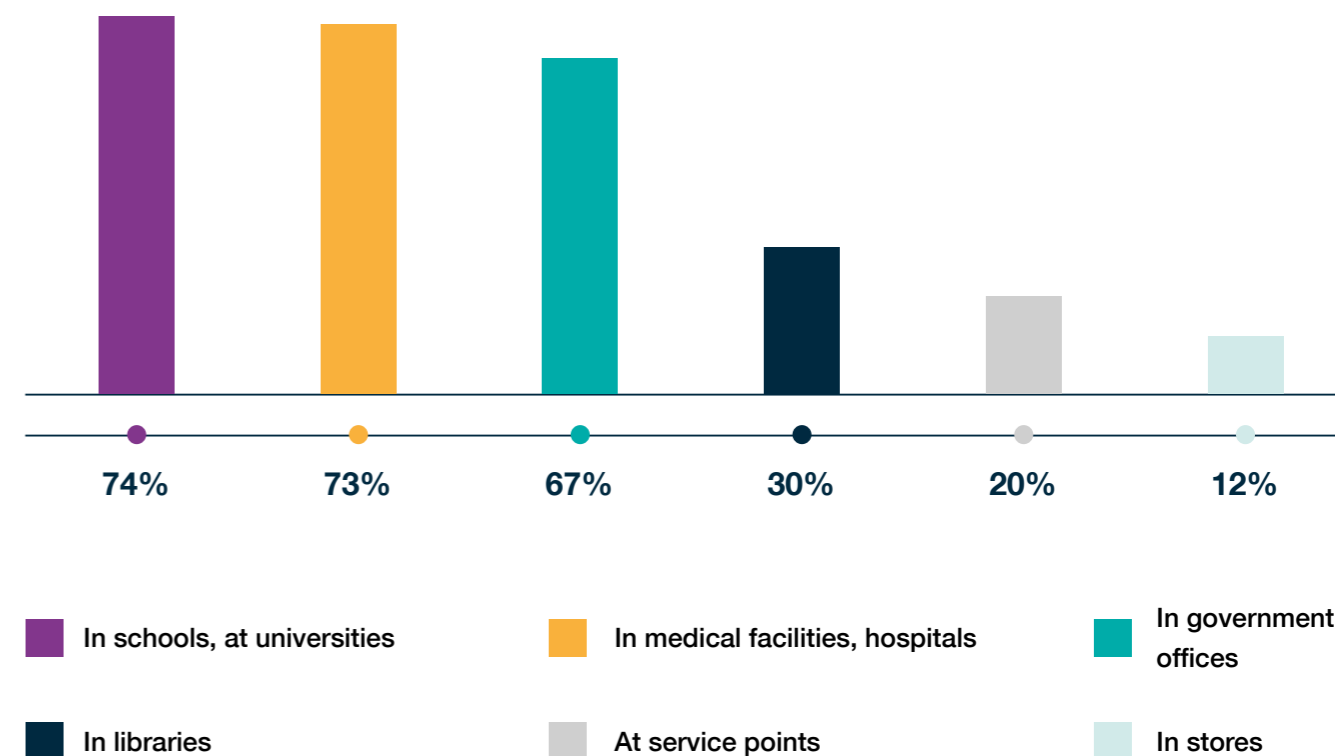
Place of Internet use:



74% of residents believe that high-speed Internet should be available in schools and universities, 73% - in medical facilities and hospitals and a little less – 67% - in offices



Where should high-speed Internet be available?

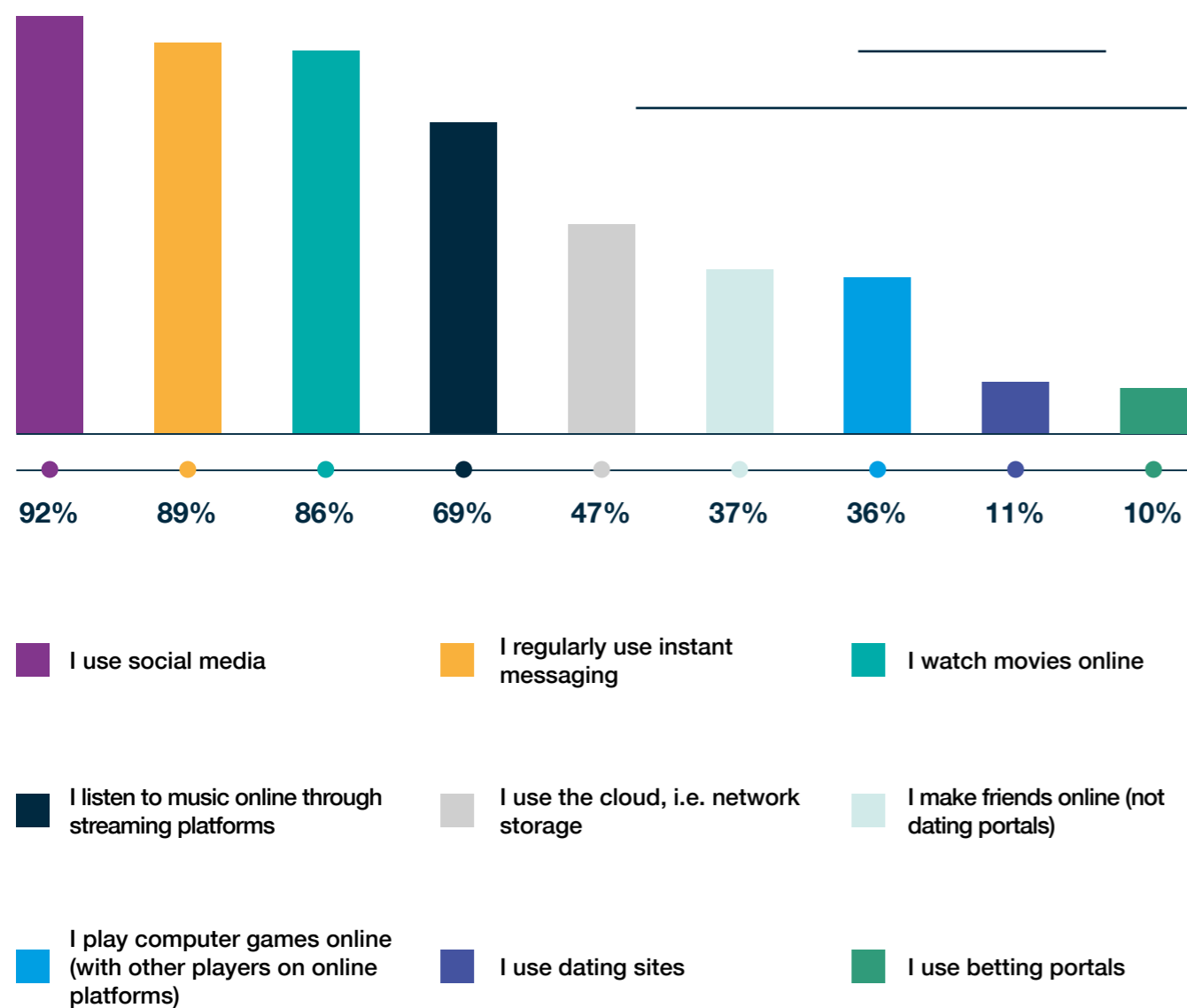


Online entertainment? Gladly

Compared to last year's survey, there is a significant increase in the use of various forms of online entertainment, and the Łódzki Region is a leader in many categories.

Among all the surveyed Regions, the highest percentage of Internet users uses VOD services (54%), social media (92%), watches films online (86%) or listens to music (69%). At the same time, the same percentage declared the use of instant messaging in all regions (89%).

Use of the Internet for entertainment

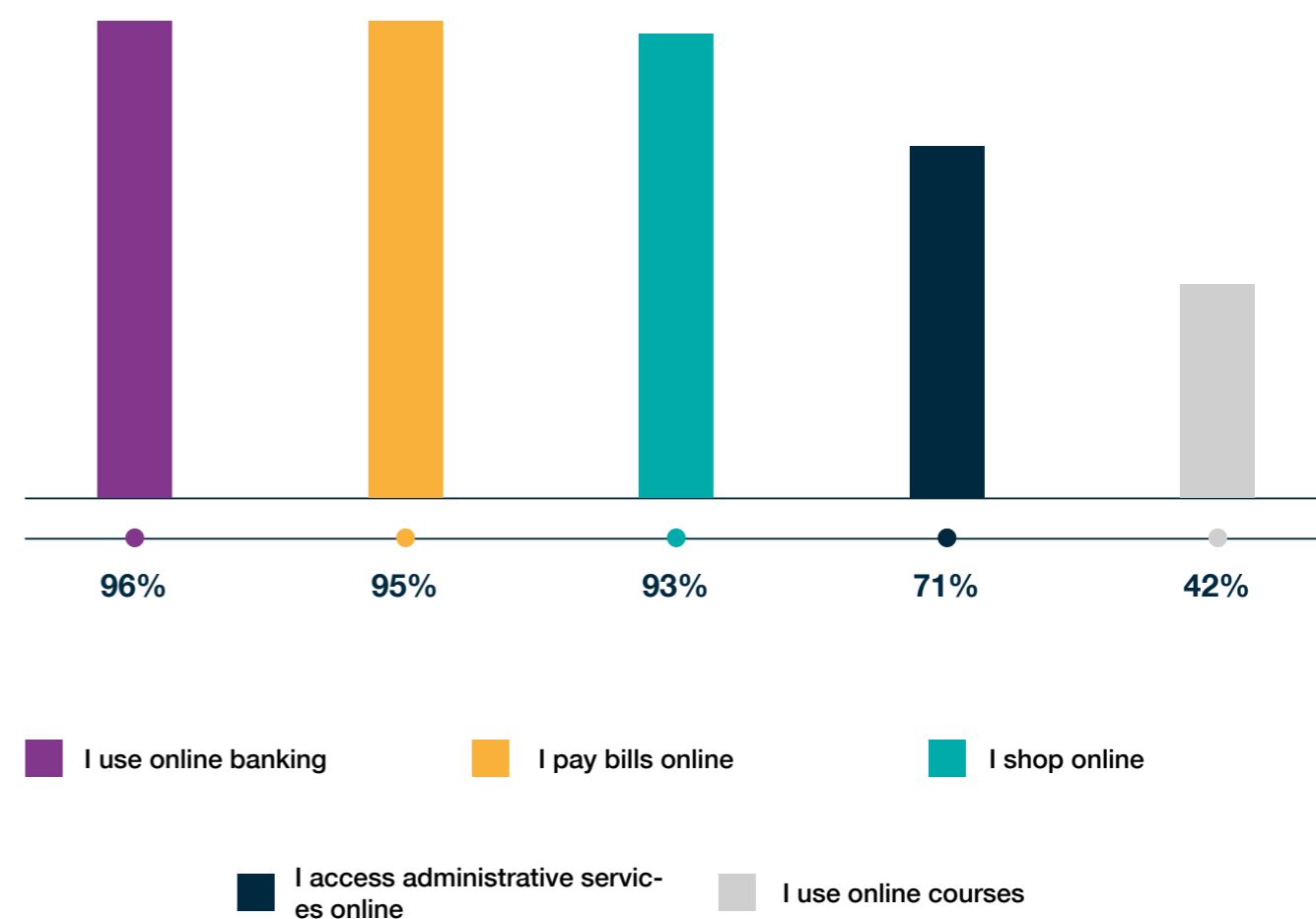


Everyday matters online

Conducting the study in a specific period of social isolation may partly justify the increased use of the Internet in everyday life, but the increases observed in this field are very significant. In the Łódzki Region, 96% of Internet users already use e-banking and just as many pay their bills online (95%, in both cases by 14 p.p. more than a year ago). A slightly smaller percentage - 93% - shops online, which represents a very significant increase by 24 p.p.



Internet in everyday life

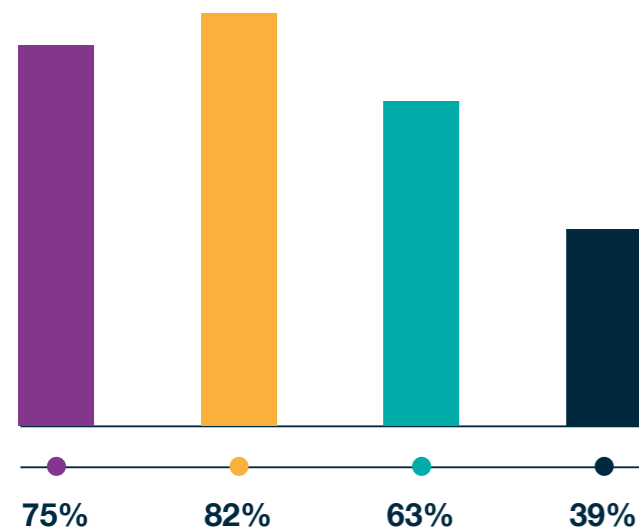


Administrative services of the future

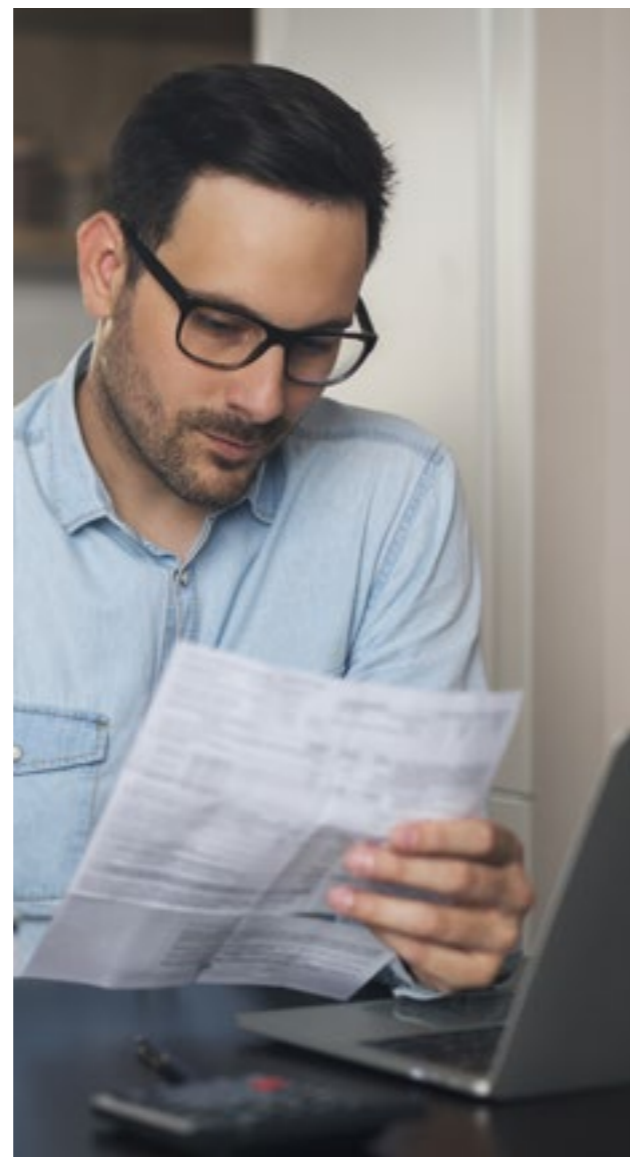
A smaller percentage processes their administrative requests online : 71%. However, there is a very high growth rate compared to last year - an increase of 29%. What is very important is that as many as 82% of respondents declare that they would process their administrative requests

online if only there was such a possibility (most of all of the Regions), and 75% believe that it takes too long to process them personally. At the same time, only 39% declare that they prefer to shop online rather than in shops or shopping malls.

Government e-services



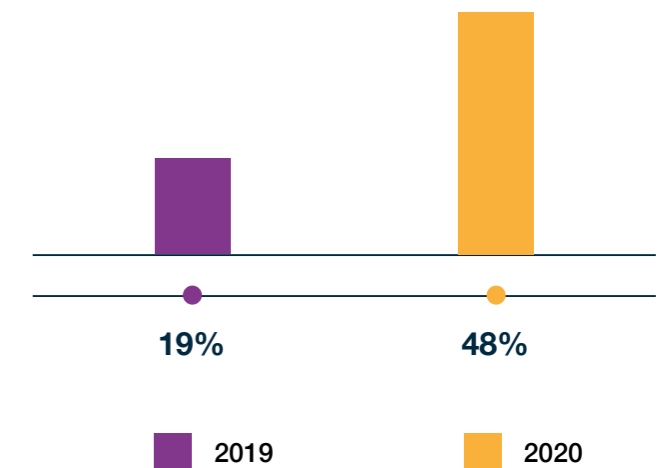
- It takes far too long to process requests personally at the office
- If only I could, I would use online administrative services
- Instead of traditional newspapers, I prefer to read news on web portals
- I prefer (would prefer) to shop online instead of in malls/shops



Speed: growing requirements

Last year, in the Łódzki Region, 19% of those using a home Internet connection considered increasing its speed. This year, as many as 48% of respondents are considering it, which indicates how much the requirements for a fast and stable connection are growing. 58% of the Region's inhabitants declare that a fibre optic cable is available in their place of residence and 49% of them use this Internet access option. 65% of the respondents believe that the availability of optic fibre would be an important issue in case of a change of residence.

Considers increasing Internet connection speed within a year



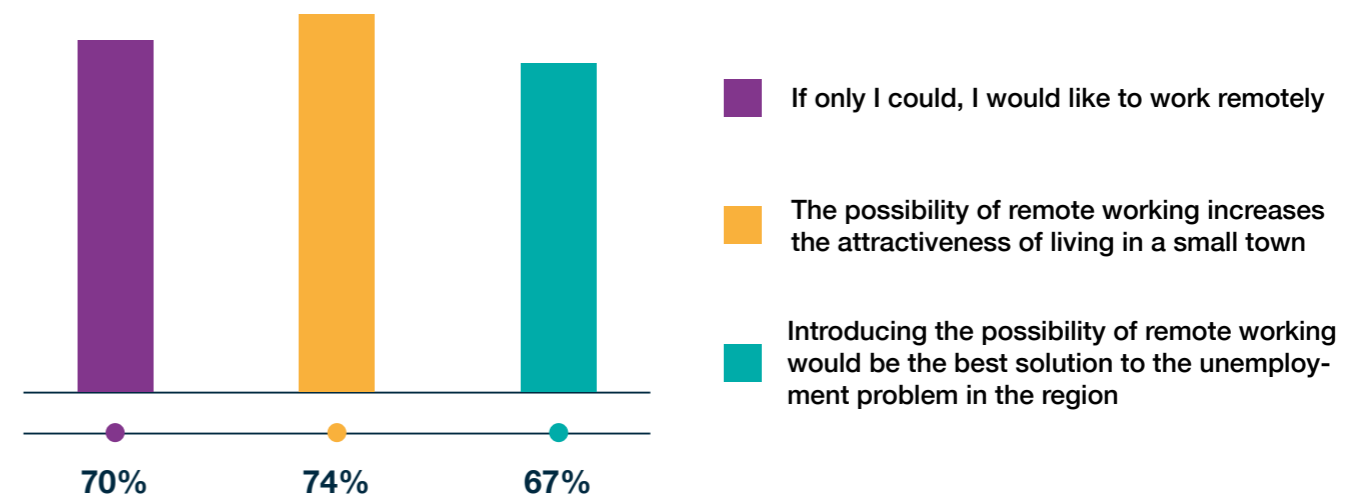
Remote work is well familiar

The pandemic and social isolation contributed to the spread of remote working.

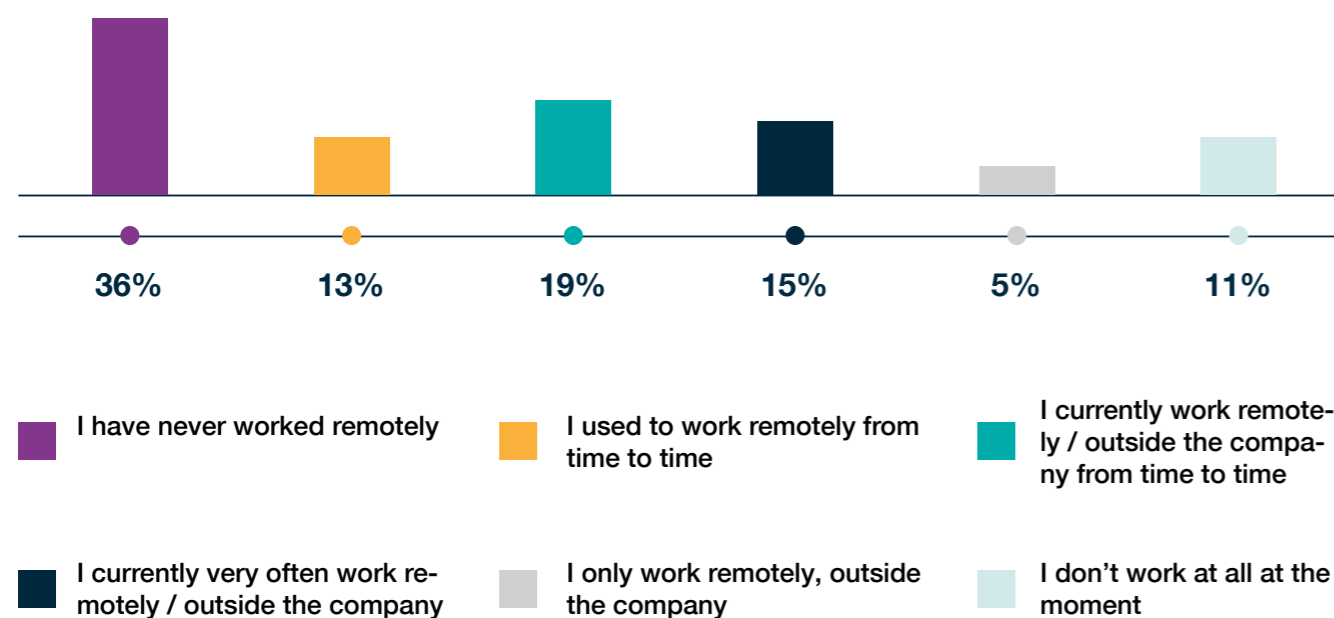
In the Łódzki Region, 95% of the respondents are familiar with the concept of remote work (increase by 15 p.p.). 52% of Internet users work or have already had the opportunity to work remotely. 36% of respondents have never worked remotely - last year it was 69%.



Opinions about remote work



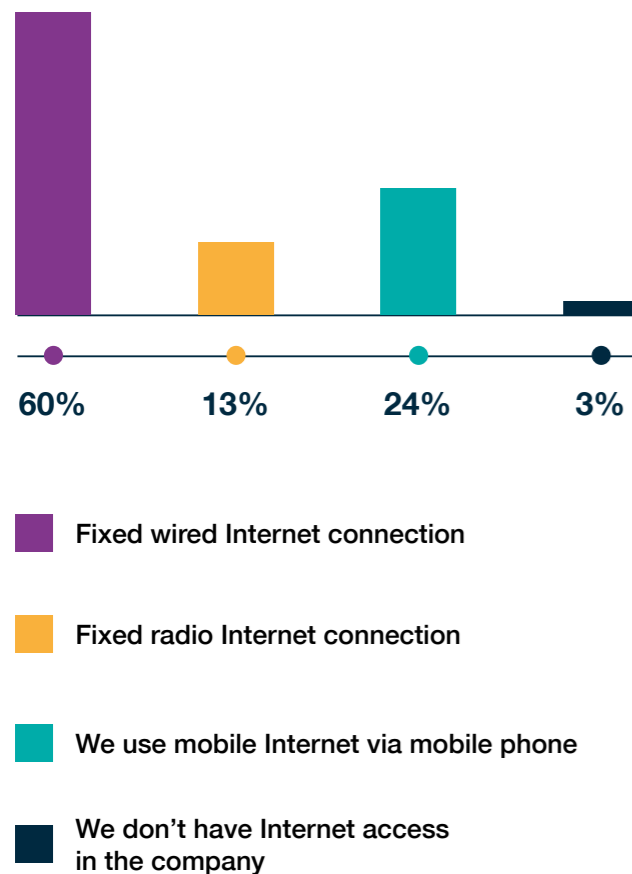
Remote work



Wired connection is the first choice for businesses

97% of companies in the Region have access to the Internet (the highest percentage of the surveyed areas and at the same time an increase of 8 p.p. compared to the previous survey). In the case of 60% it is a fixed wired connection (less than in other Regions), while as many as 24% of companies use mobile Internet (more often than in other Regions). Interestingly, as many as 13% of the surveyed companies declared using a fixed radio link in Łódzki Region - the highest percentage among NEXERA Regions.

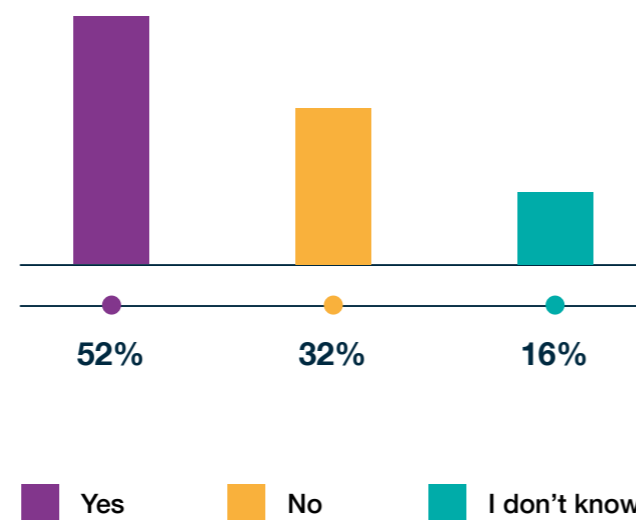
Main Internet connection in companies



52% of companies from the Region declare that fibre optic cable is available in their location. 38% of them use optic fibre and this is the lowest percentage among all the Regions.



Is optic fibre available?



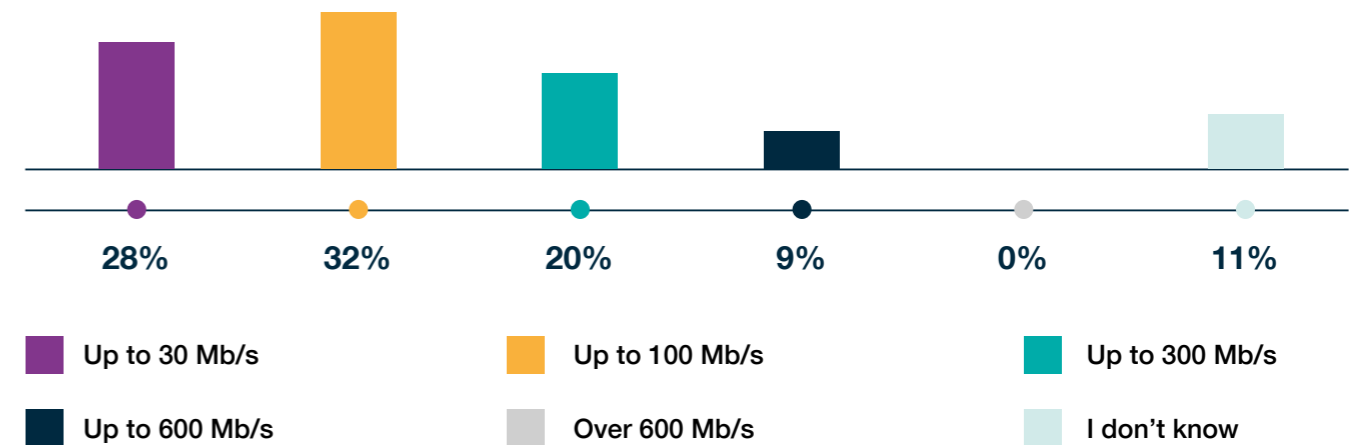
Fixed Internet connection speed in companies

The largest number of companies in the Łódzki Region say they use lines with a throughput of up to 100 Mb/s (32%), slightly fewer (28%) use slower lines with a throughput of up to 30 Mb/s. 20% of companies have connections up to 300 Mb/s, and only 9% indicated fast connections up to 600 Mb/s - in both cases these are below the average for the Regions. Interestingly, only 10% of the companies from the Region declared their willingness to switch to faster connections within

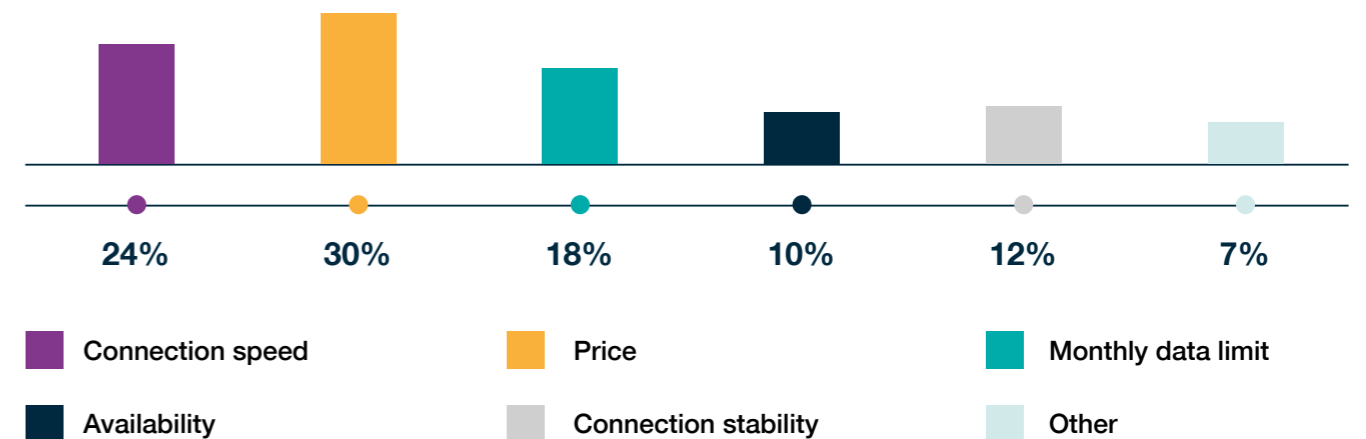
the next 6 months - the average for all Regions is 9 p.p. higher. As in other Regions, when choosing an Internet provider, entrepreneurs are mainly guided by the price (30%) and the speed of the link (24%), but significantly more often they pay attention to other parameters of the link, such as data limit (18%) and stability (12%).

77% of respondents are satisfied with their link.

Fixed Internet connection speed in companies



The most important criterion for choosing an Internet provider



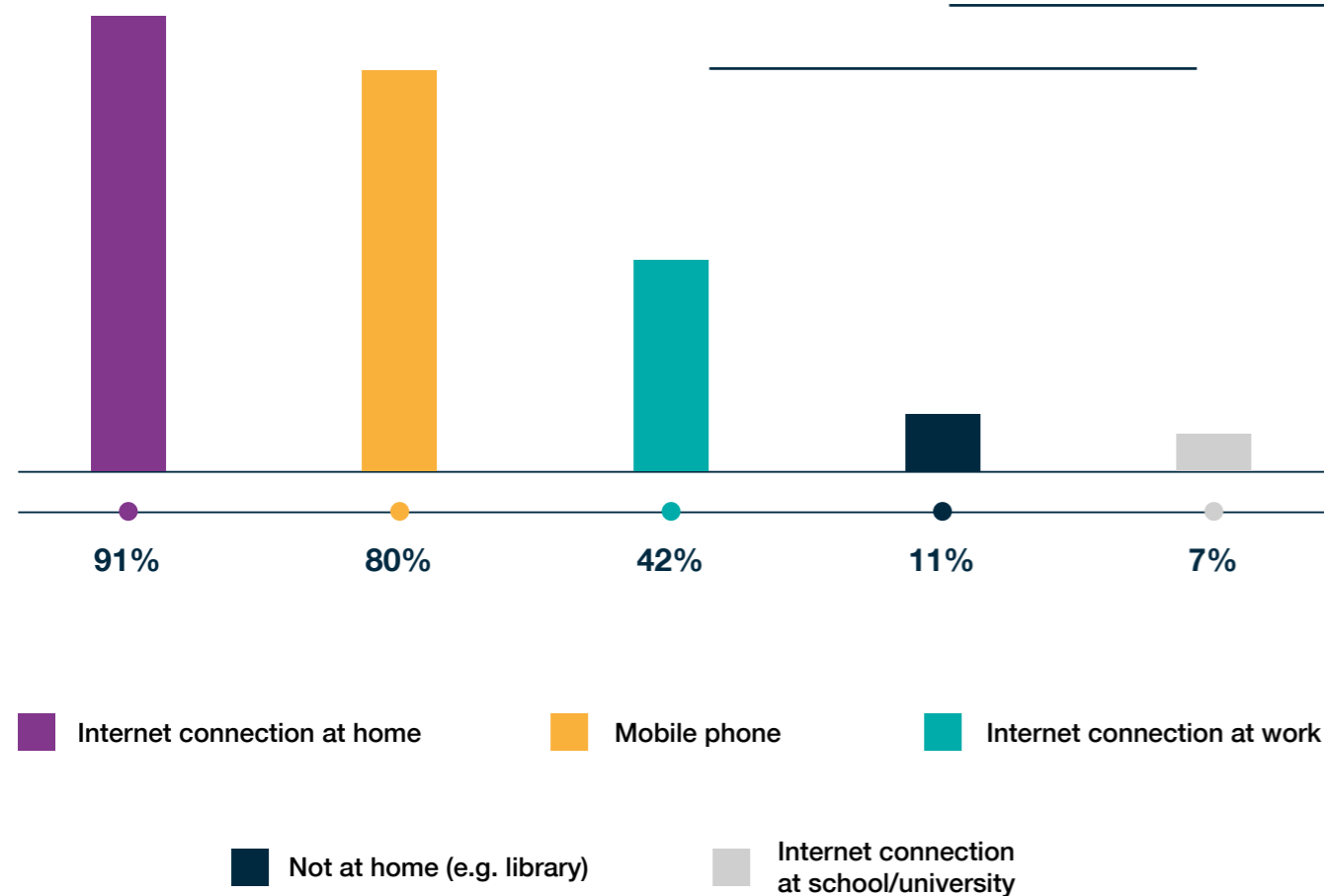
Świętokrzyski Region

Internet at home and in the mobile phone

To connect to the Internet, inhabitants of the Świętokrzyski Region most often use a home connection - 91% (increase by 7 p.p. compared to the previous study) and mobile Internet - 80%. Some

respondents state they use Internet outside their homes, 42% at work, 11% in the library and 7% at school or university.

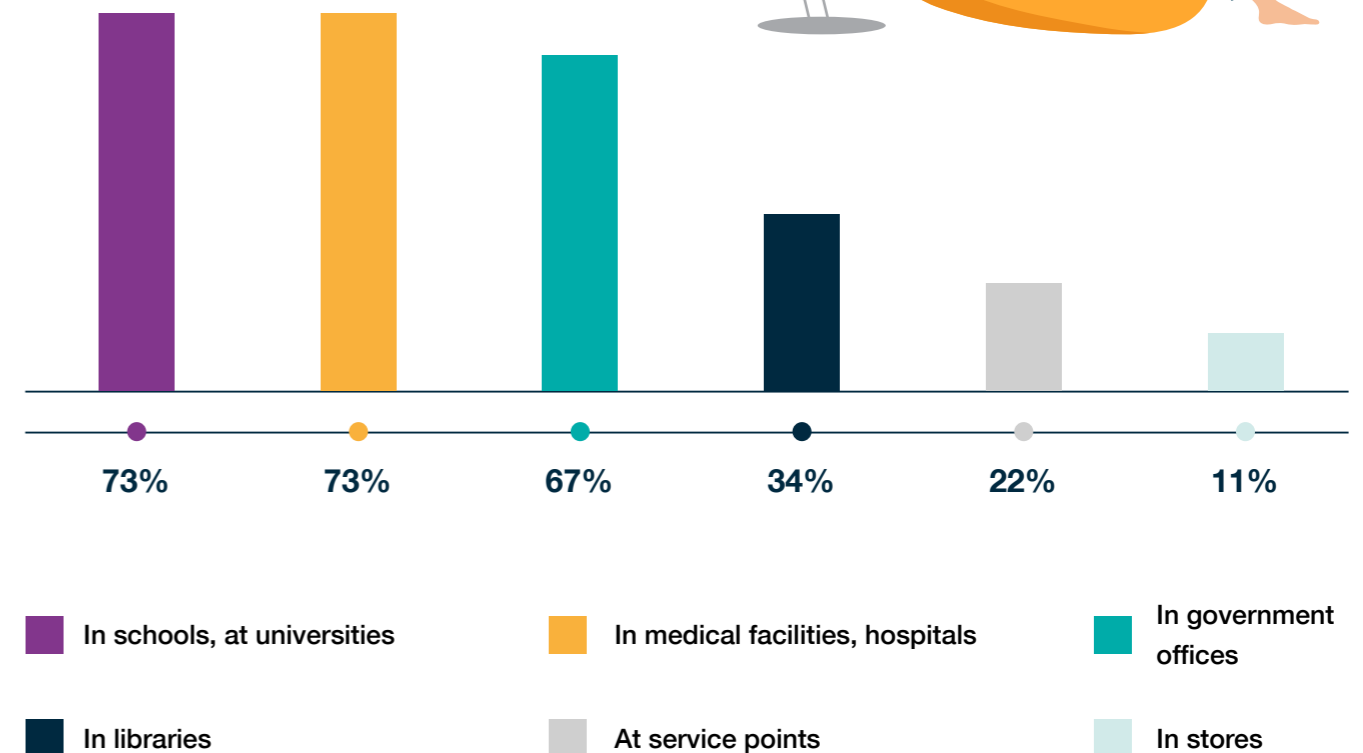
Place of Internet use:



73% of the inhabitants believe high-speed Internet should be available in schools and universities and the same percentage - in medical facilities and hospitals, while a little less - 67% - in offices.



Where should high-speed Internet be available?

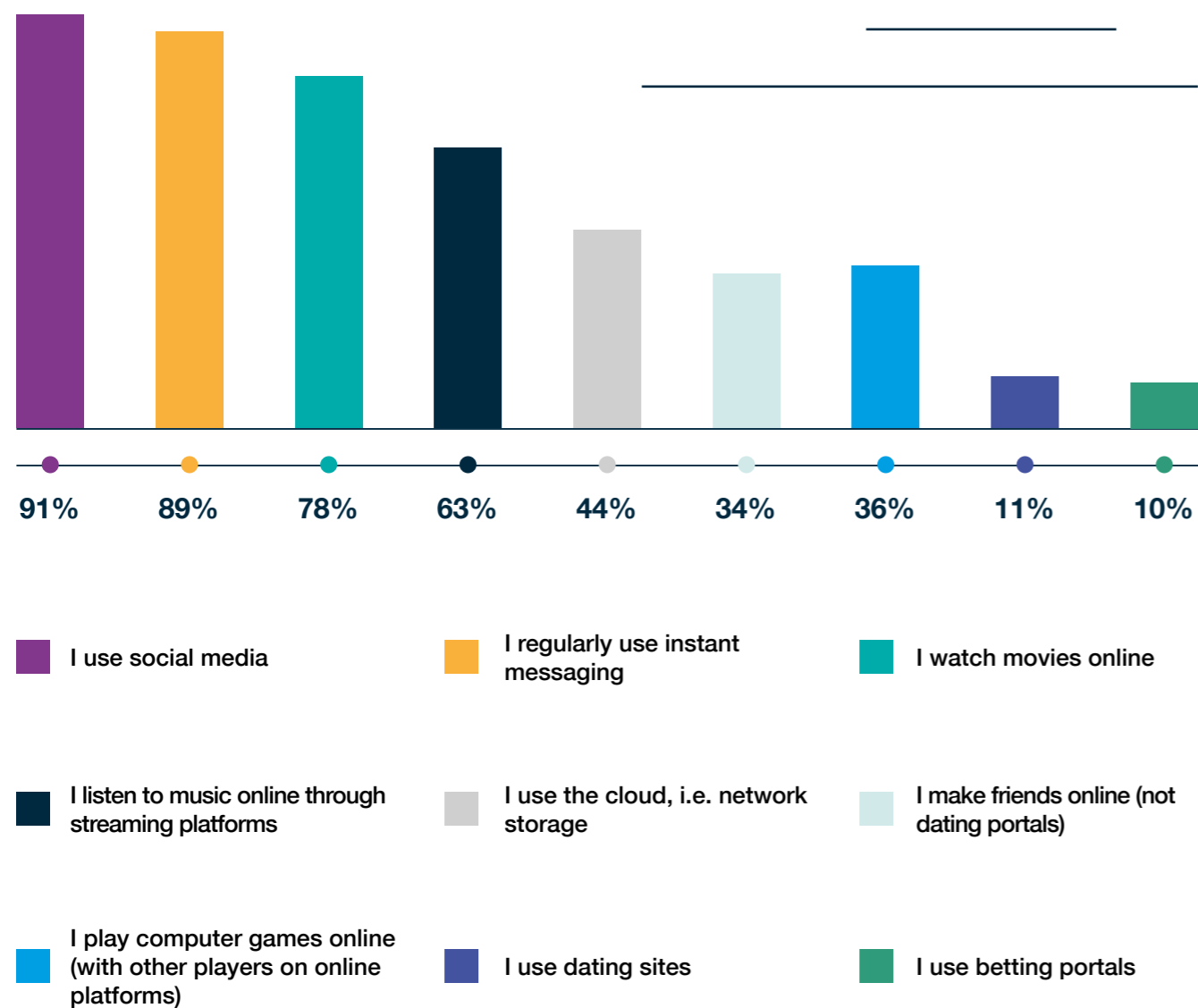


New dimension of entertainment

Compared to last year's survey, there is clearly more interest in the use of the Internet for entertainment.

As much as 91% of respondents use social media, 89% use instant messaging (increase by 23 p.p.), 78% watch movies online (increase by 20 p.p.), and 63% listen to music via streaming services (by 25 p.p. more). 49% use VOD services.

Use of the Internet for entertainment

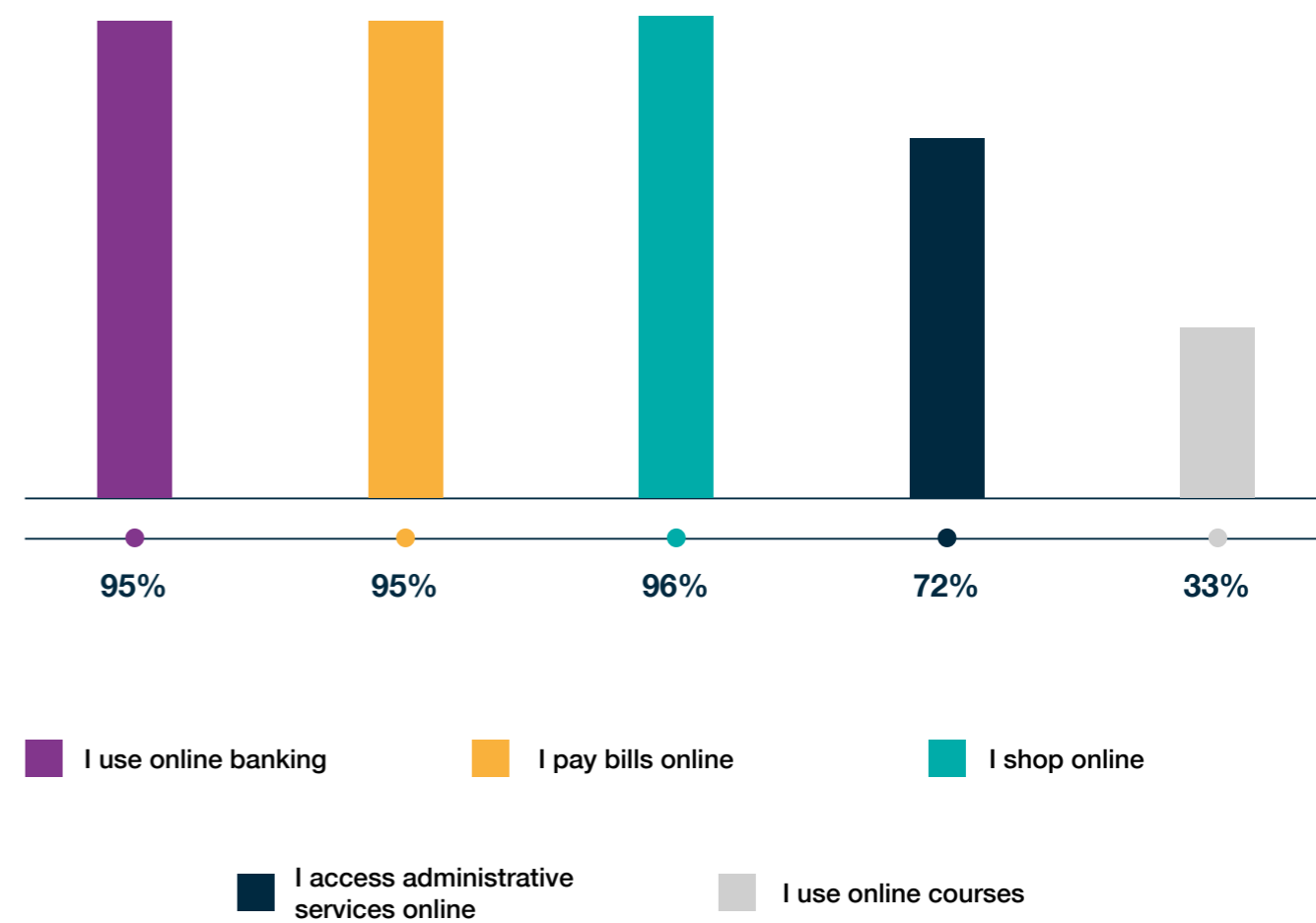


Internet and everyday activities

The Internet is also much more frequently used for everyday tasks and activities. The increases can be partly explained by the survey being carried out during a period of social isolation, but they are very significant. Already 95% of the inhabitants of the Świętokrzyski Region use Internet banking (increase by 18 p.p.) and the same percentage pays their bills online (increase by 20 p.p.). As many as 96% do online shopping (increase by 25 p.p.), which is the highest result among all NEXERA Regions.



Internet in everyday life

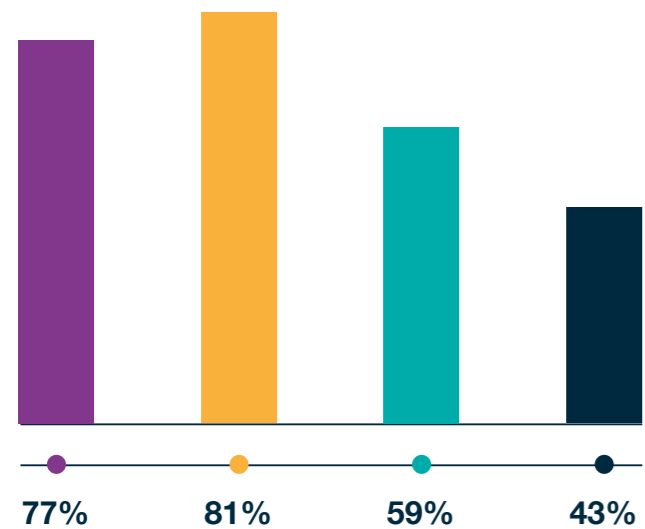


Yes to e-offices

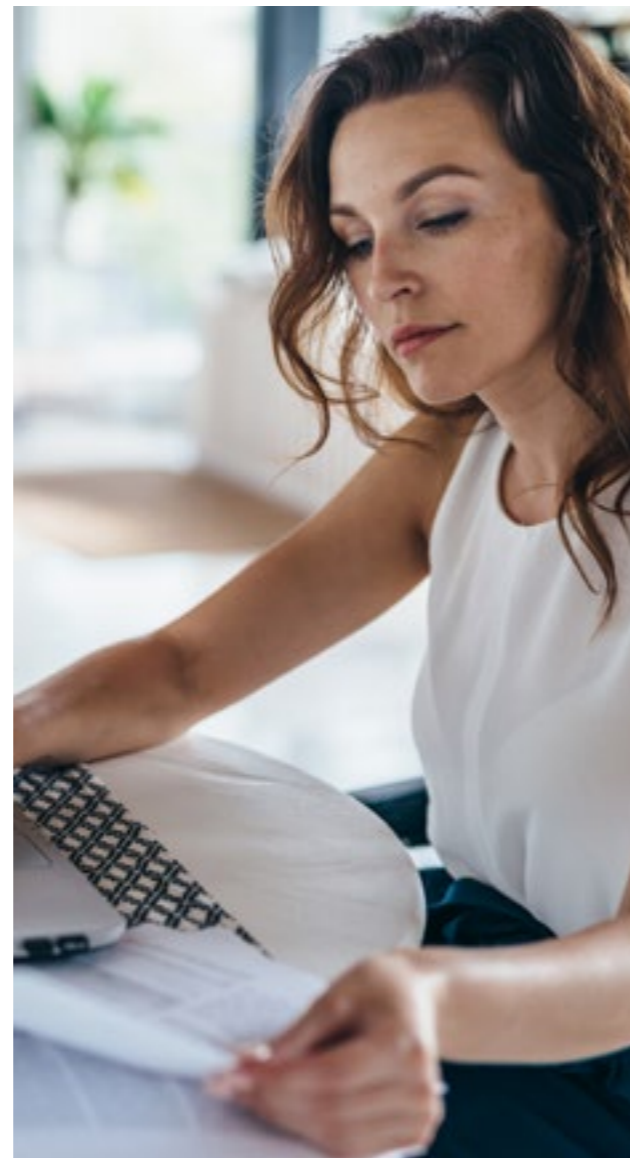
Currently 72% of the Region's population process their administrative requests online - this represents quite an enthusiastic approach to this form, as the increase here is as high as 32 p.p. However, 81% declare they would process administrative

requests online if only there was such a possibility. At the same time - for comparison - only 43% of respondents prefer the possibility of shopping online instead of in a traditional shop or shopping mall.

Government e-services



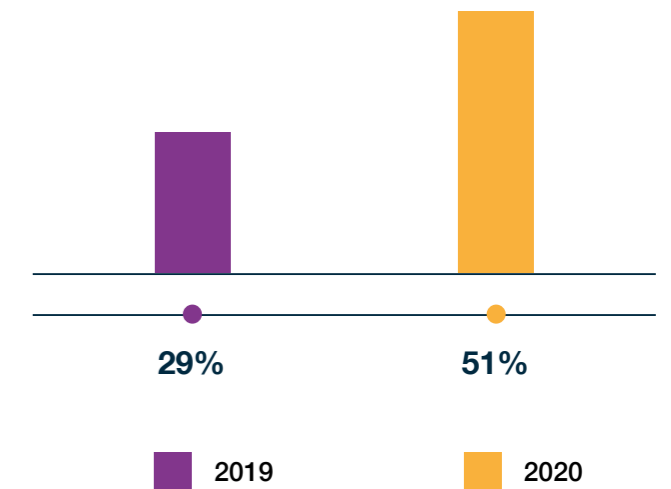
- It takes far too long to process requests in person at the office
- If only I could, I would use online administrative services
- Instead of traditional newspapers, I prefer to read news on web portals
- I prefer (would prefer) to shop online instead of in malls/shops



Need for fast Internet

Growing opportunities for online services or entertainment also mean that users have higher expectations of Internet connections. More than half (51%) of those using a home connection consider increasing its speed - 22 p.p. more than a year ago. Currently 54% of the Region's inhabitants declare that there is a fibre optic cable available in their location, 46% of them use a fibre optic connection.

Considers increasing Internet connection speed within a year



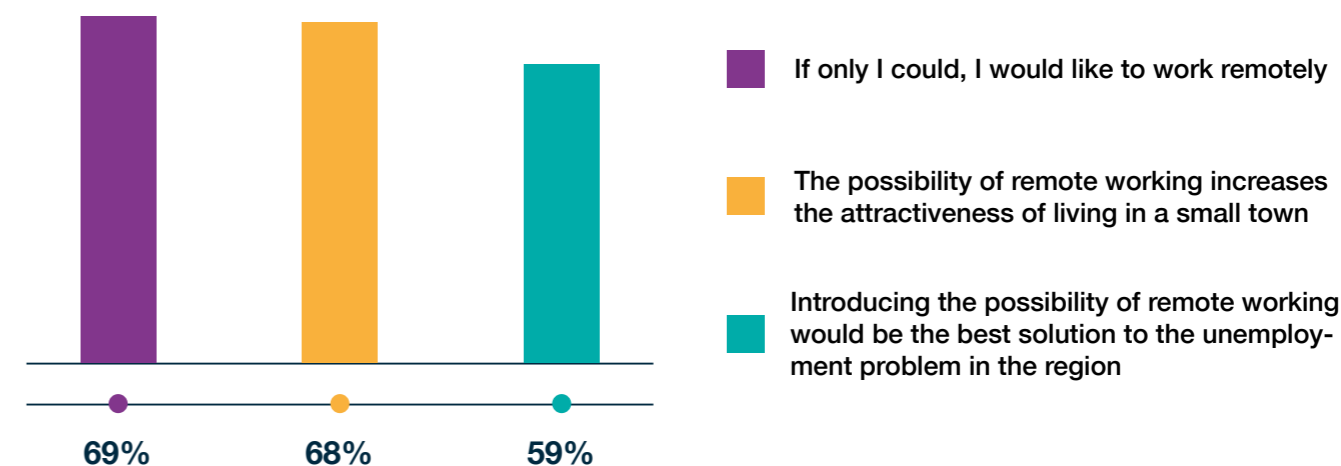
Growing popularity of remote work

Familiarity with the concept of remote working has clearly increased, to which the period of social isolation has undoubtedly contributed.

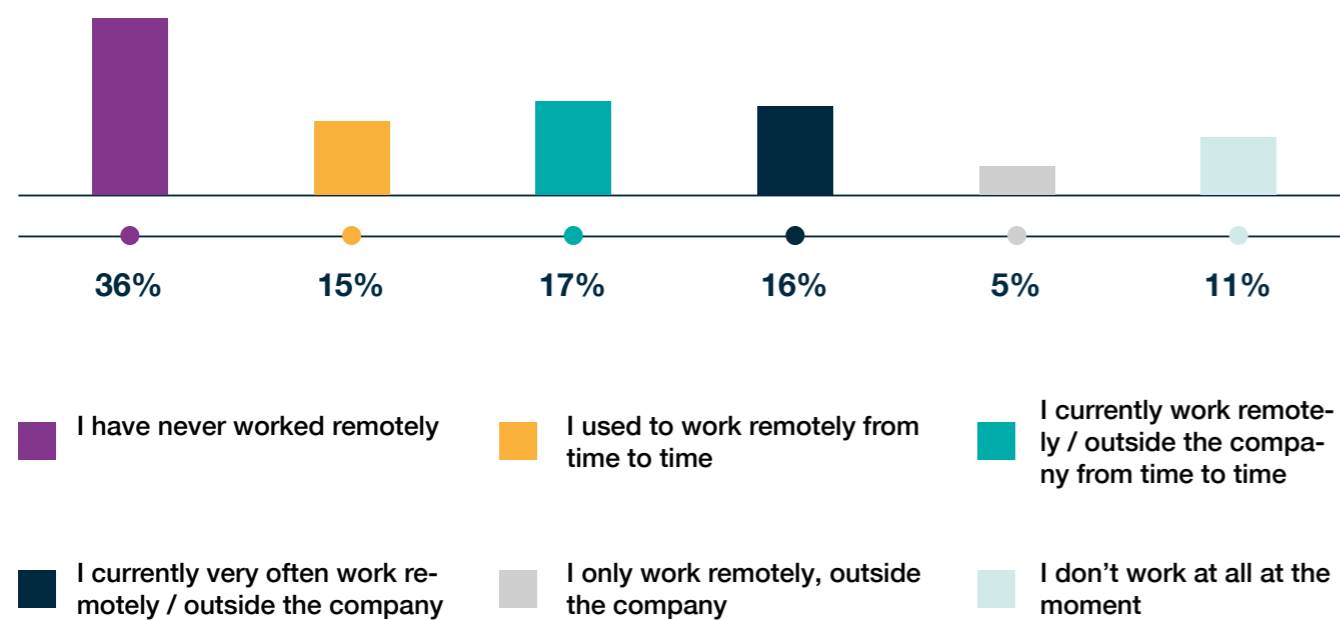
In the Świętokrzyski Region the concept of remote working is known to 95% of respondents (increase by 39 p.p.). 53% of those using the Internet work or have already had the opportunity to work remotely. Only 36% of respondents have never worked remotely - last year it was as much as 74%.



Opinions about remote work



Remote work



Most companies choose fixed wired connection

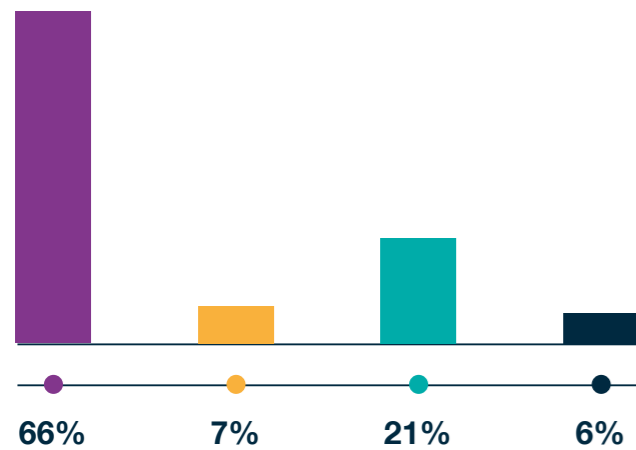
94% of companies in the Region declare they have access to the Internet, which is the average for all Regions.

The vast majority of companies use fixed wired connections - 66%, followed by mobile connections - 21% and radio connections - 7%. 57% of

companies from the Region declare that optic fibre is available in their location, and 73% of them use optic fibre (the highest percentage among the surveyed Regions).

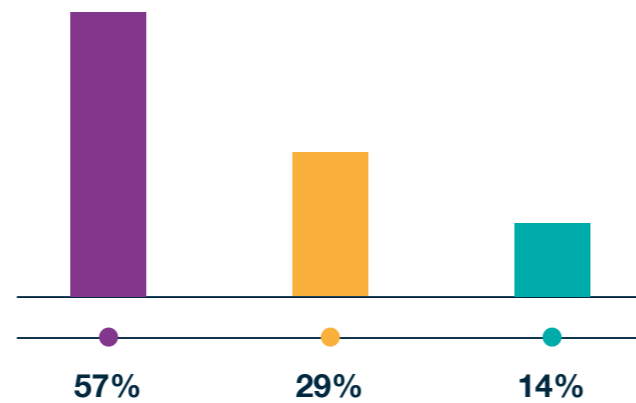


Main Internet connection in companies



- Fixed wired Internet connection
- Fixed radio Internet connection
- We use mobile Internet via mobile phone
- We don't have Internet access in the company

Is optic fibre available?



- Yes
- No
- I don't know

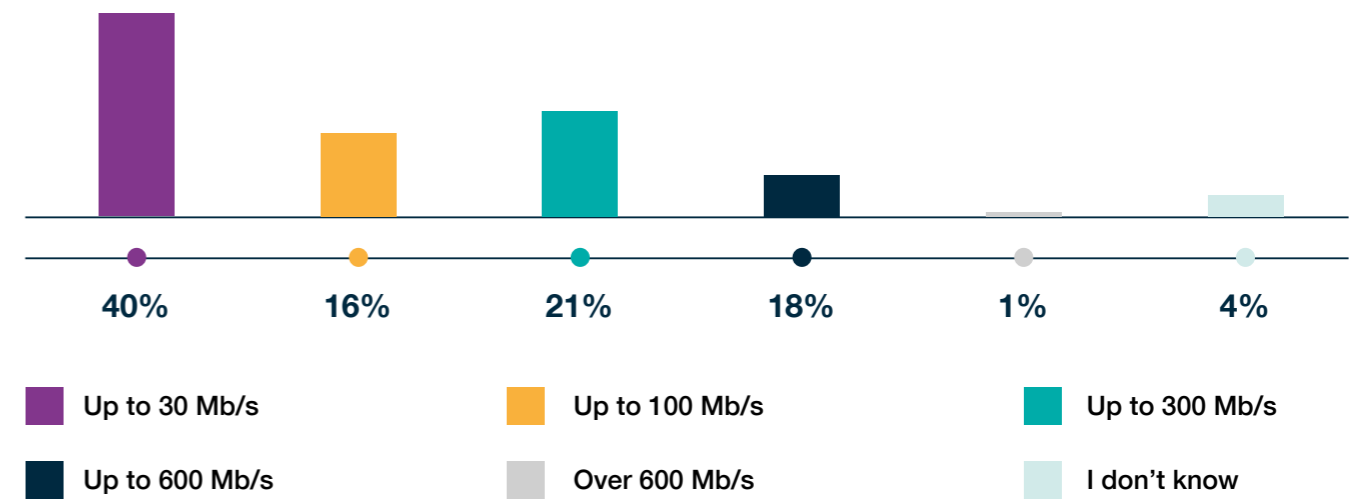
Fixed Internet connection bandwidths in companies

Most enterprises (40%) from the Region state they use the slowest category of fixed wired connections - up to 30 Mb/s. It is also the highest percentage among all NEXERA Regions. 16% of companies use connections up to 100 Mb/s, 21% up

to 300 Mb/s and - interestingly - a high percentage - 18% - use fast connections of up to 600 Mb/s.

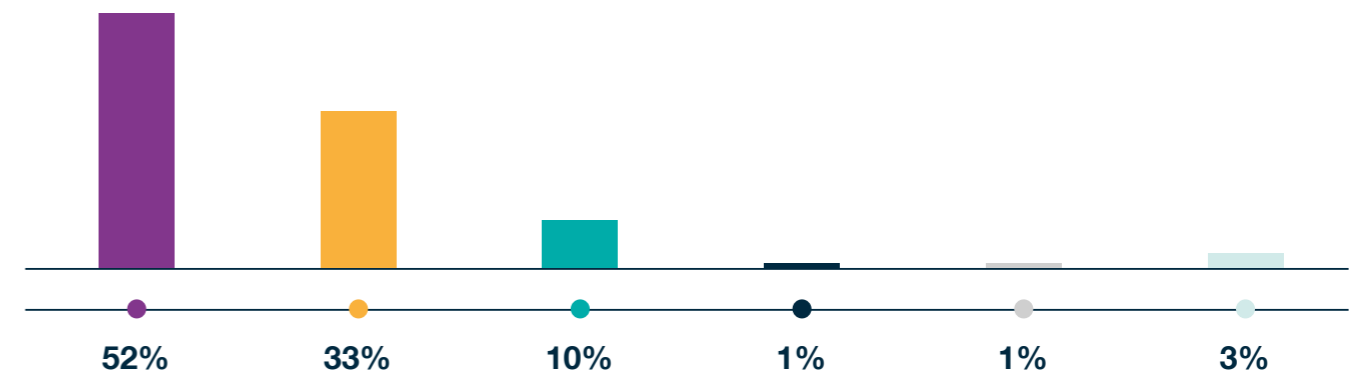
63% of respondents are satisfied with their connections.

Fixed Internet connection speed in companies



- Up to 30 Mb/s
- Up to 100 Mb/s
- Up to 300 Mb/s
- Up to 600 Mb/s
- Over 600 Mb/s
- I don't know

The most important criterion for choosing an Internet provider



- Connection speed
- Price
- Monthly data limit
- Availability
- Connection stability
- Other

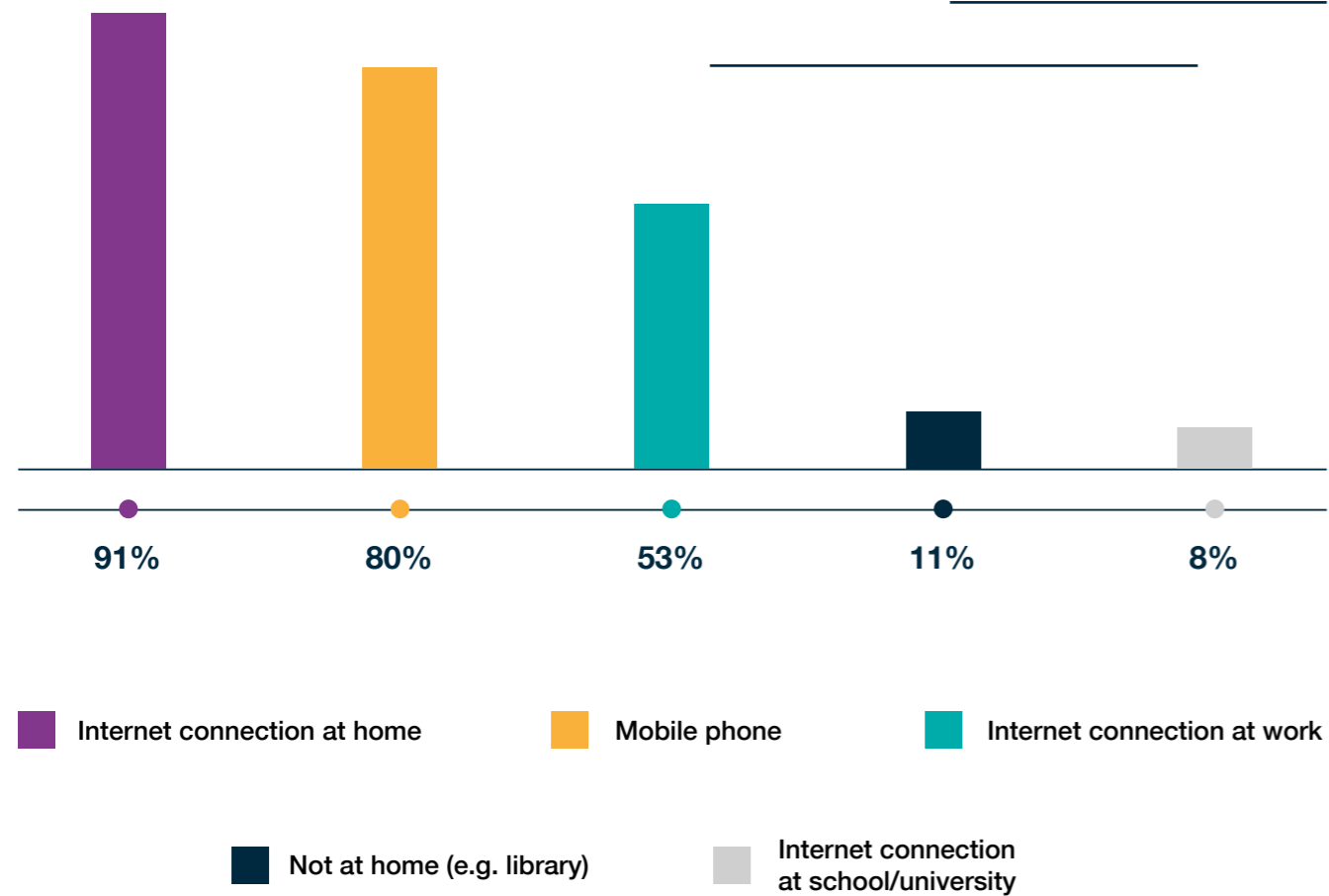
Kujawy, Pomorze & Mazowsze Region

Internet at home, on the phone and at work

Most of the Region's inhabitants use a home connection to connect to the Internet - 91% (increase by 6 p.p.) and mobile phone Internet - 80% (also

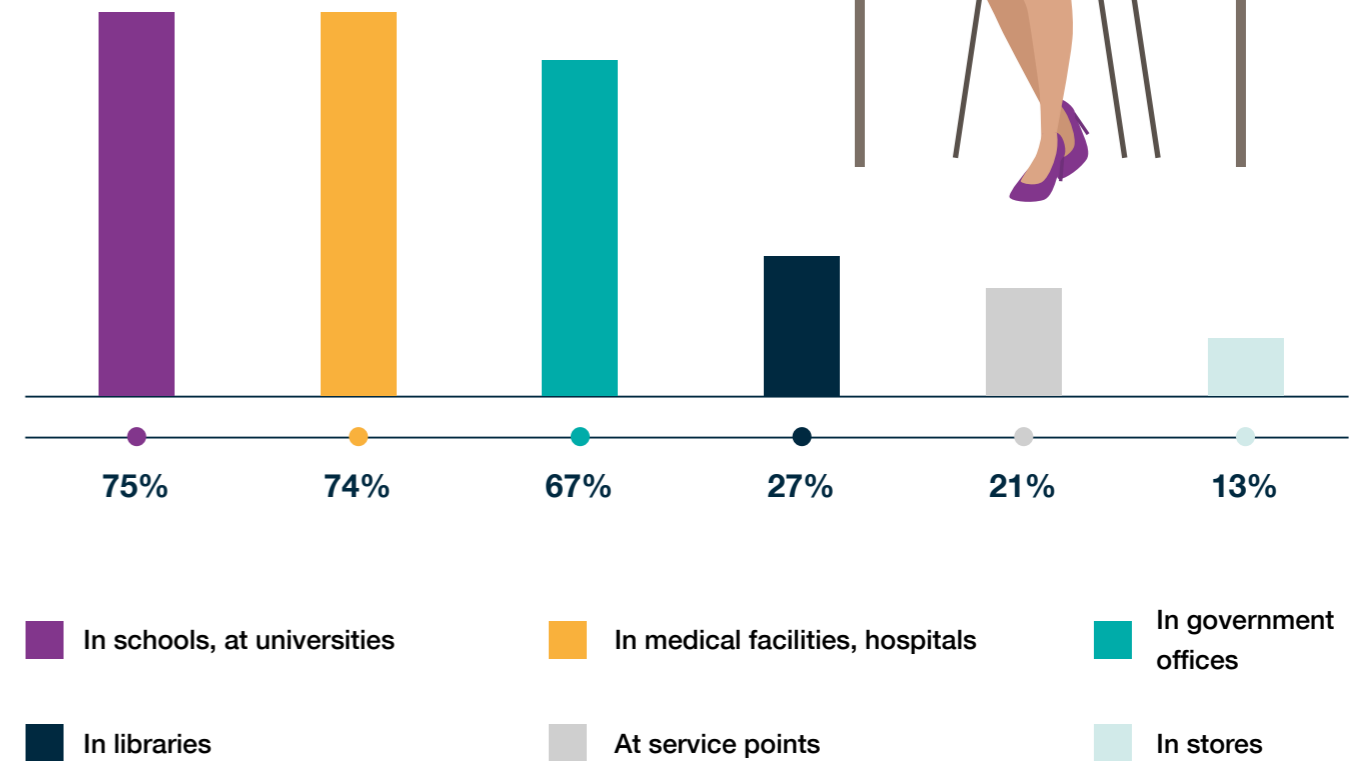
increase by 6 p.p.). 53% use the Internet at work, which is the highest percentage among all Regions.

Place of Internet use:



75% of the Region's inhabitants believe that fast Internet should be available in schools and universities, similarly (74%) - in medical institutions and hospitals, and slightly less (67%) - in offices.

Where should high-speed Internet be available?

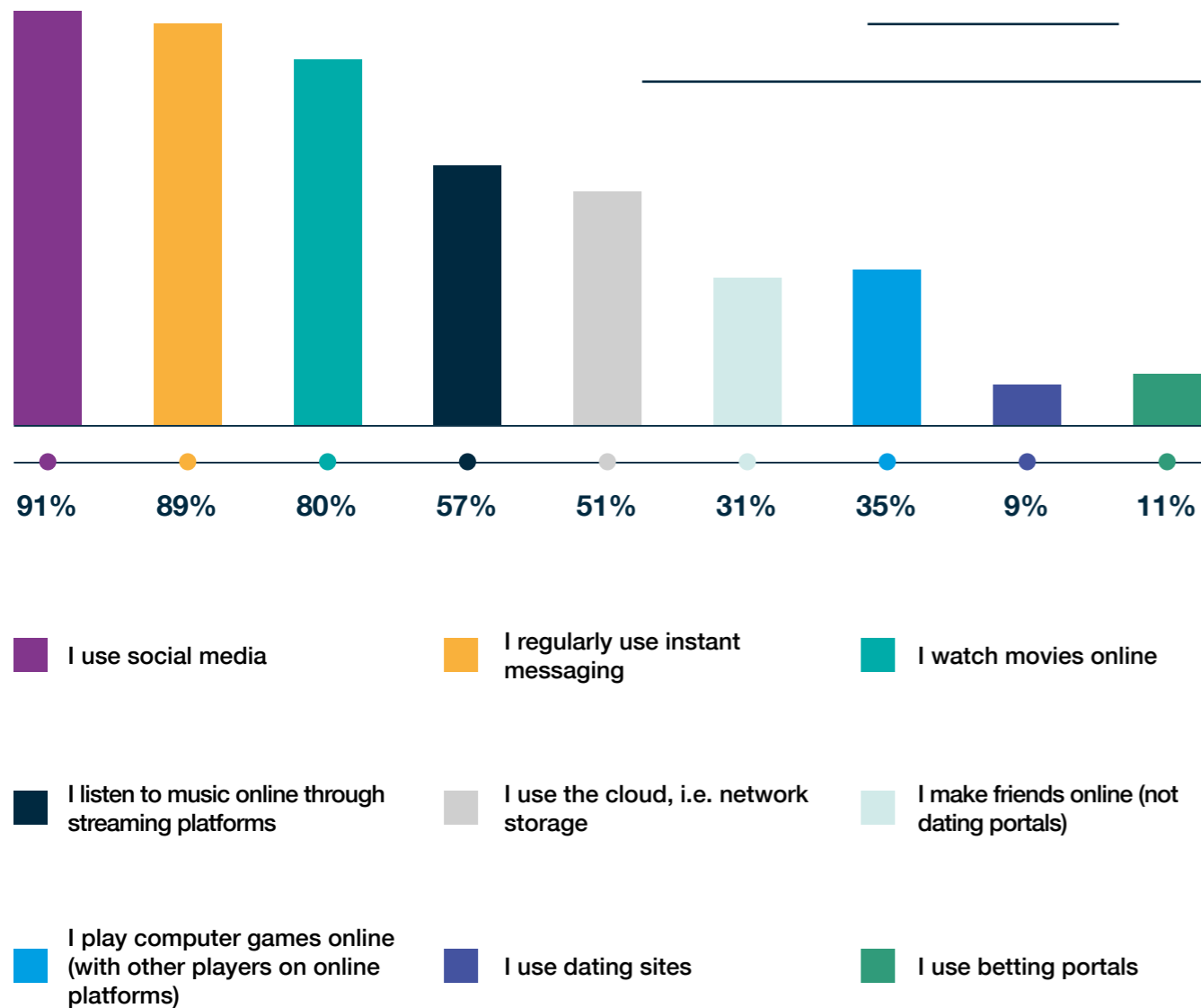


Internet is a source of entertainment

Year after year, there is a growing interest in the Internet as a source of entertainment.

In the Kujawy, Pomorze & Mazowsze Region, as much as 91% of respondents use social media and 89% use instant messaging. On the other hand, 80% of the respondents watch movies online (increase by 21 p.p.) and 57% listen to music via streaming services. 50% of the respondents use VOD services.

Use of the Internet for entertainment

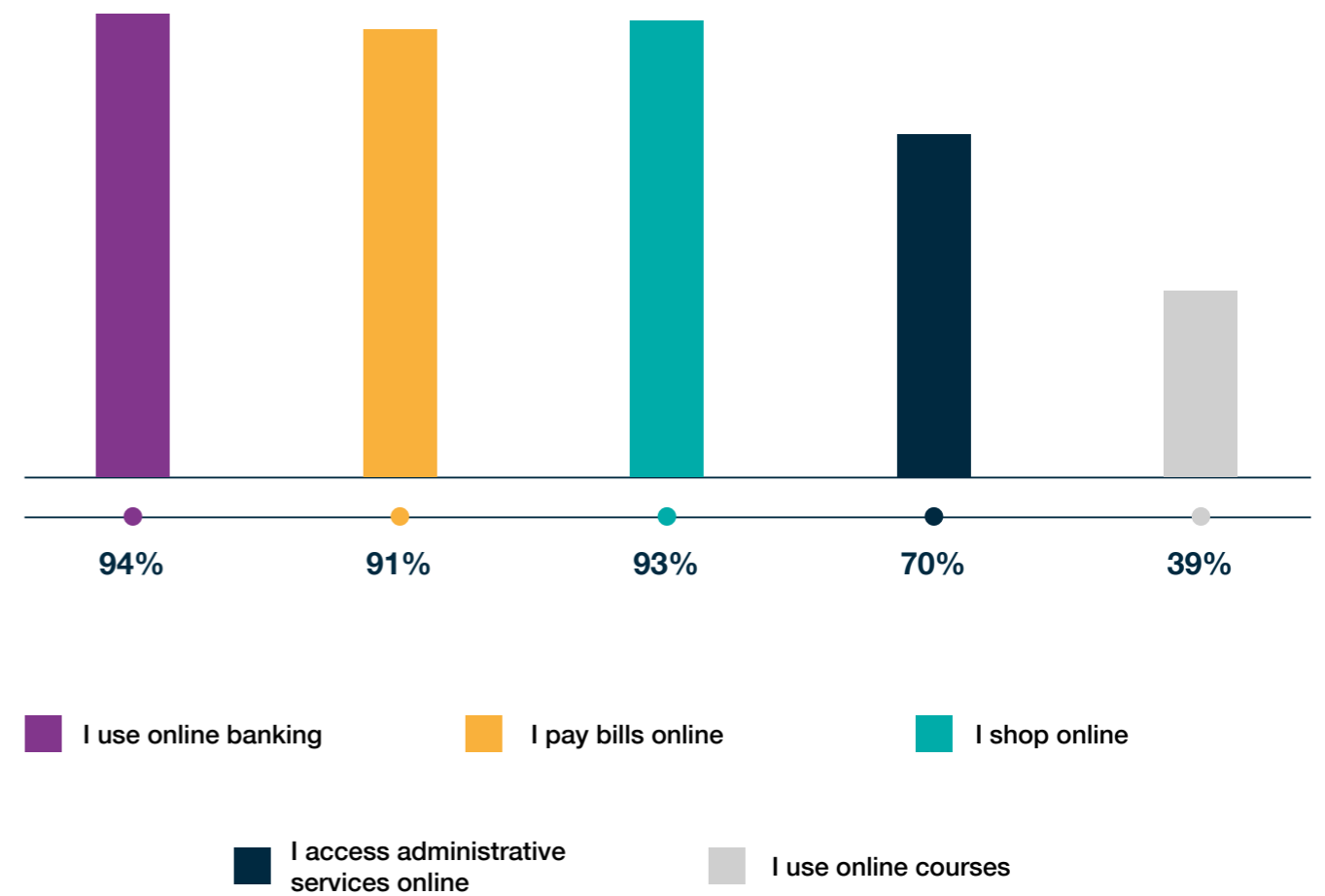


Everyday life and the Internet

The virtual world is increasingly intertwined with the real world, making everyday tasks and responsibilities easier. The important role of the Internet has been particularly highlighted in recent months by the social isolation associated with the coronavirus pandemic. Already 94% of the inhabitants of the Kujawy, Pomorze & Mazowsze Region use Internet banking (increase by 4 p.p.). 91% of respondents pay their bills online (increase by 6 p.p.). Respondents are more willing to make purchases online than a year ago - such a response was indicated by 93% (increase by 18 p.p.).



Internet in everyday life

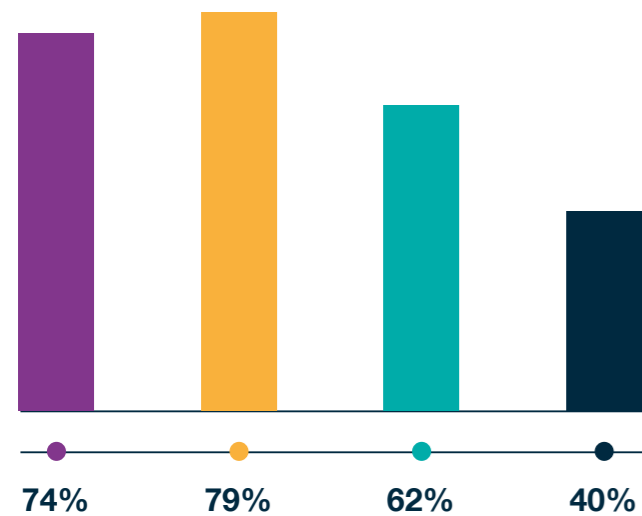


Online government services

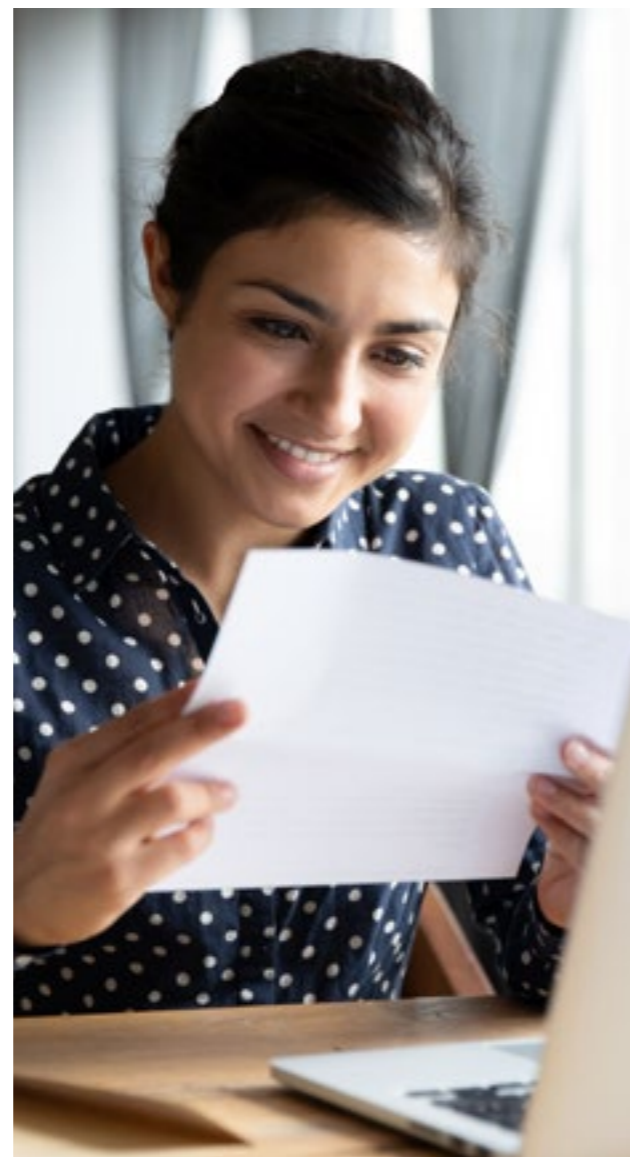
70% of those surveyed in the Region say they process their administrative requests online. As recently as last year, only 38% of the inhabitants used the net for this purpose (the increase is 32 p.p.). 79% would process their administrative

requests online if only they could. Interestingly, in the case of online shopping, only 40% of the respondents would prefer to use the net rather than do it in a traditional shop or shopping mall.

Government e-services



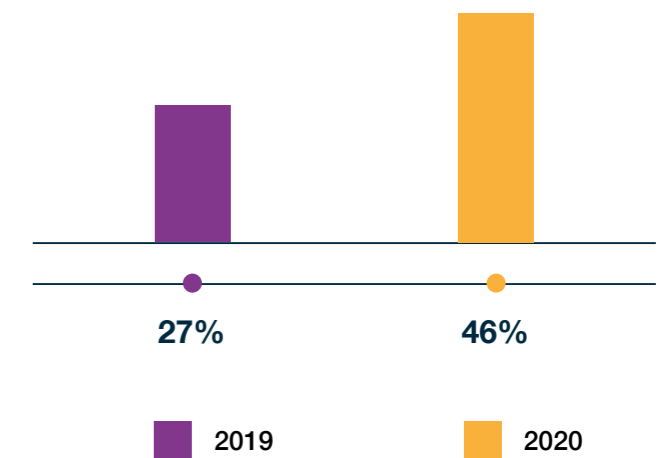
- It takes far too long to process requests personally at the office
- If only I could, I would use online administrative services
- Instead of traditional newspapers, I prefer to read news on web portals
- I prefer (would prefer) to shop online instead of in malls/shops



Consumer expectations are rising

The expanding offer of online entertainment and the availability of many services increases consumers' appetite for Internet connections. Nearly half (46%) of those using a home Internet connection consider increasing its speed - a year earlier 27% of respondents wanted to make such a decision. Currently 56% of the Region's inhabitants declare that there is fibre optic cable available in their location, 55% use fibre optic cable.

Considers increasing Internet connection speed within a year



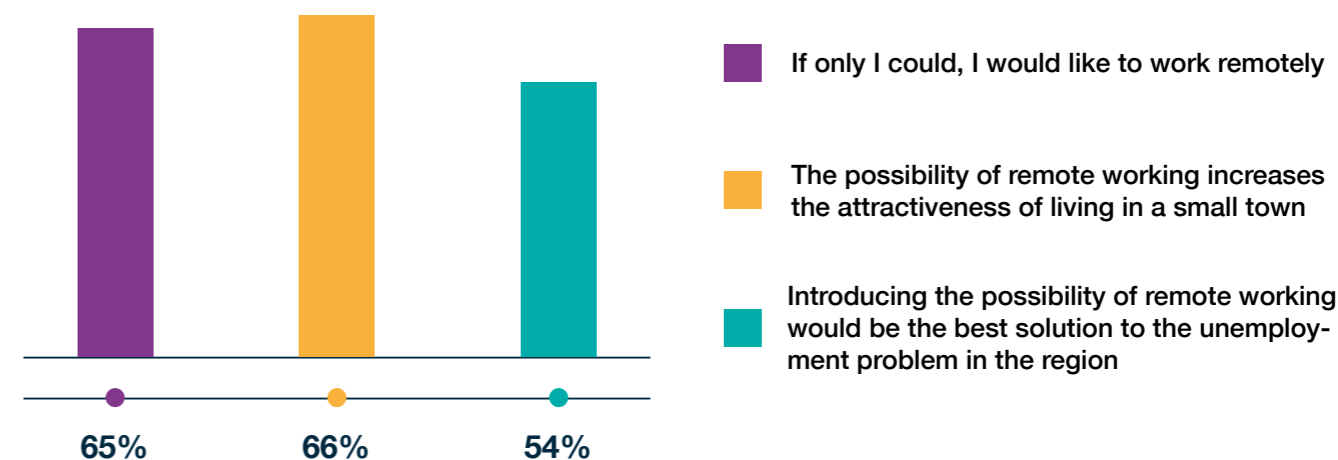
Home office is important

The period of social isolation influenced the perception of remote work.

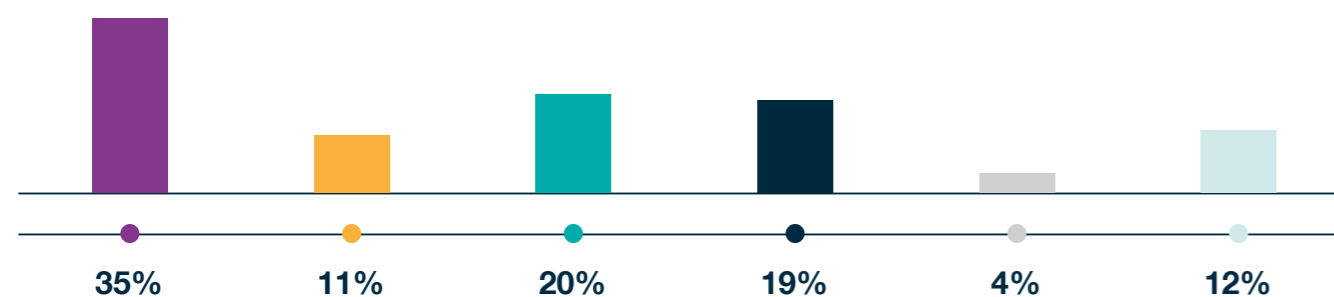
Inhabitants of the Kujawy, Pomorze & Mazowsze Region are well aware of this concept - this is confirmed by 92% of respondents (increase by 31 p.p.). 53% of those using the Internet work or have already had the opportunity to work remotely. Only 35% of the respondents did not work remotely - a year ago such an answer was indicated by 71%.



Opinions about remote work



Remote work



- I have never worked remotely
- I used to work remotely from time to time
- I currently work remotely / outside the company from time to time
- I currently very often work remotely / outside the company
- I only work remotely, outside the company
- I don't work at all at the moment

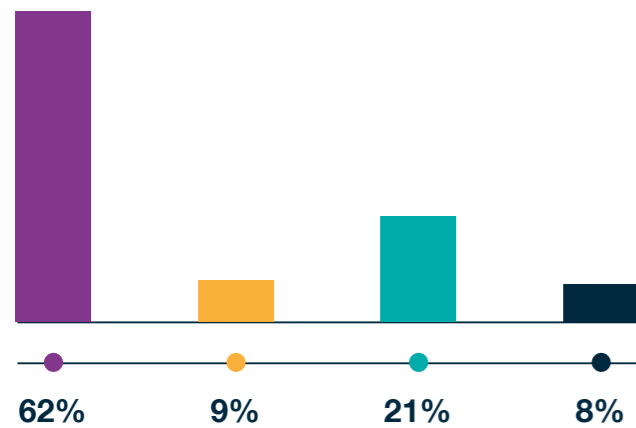


8% of enterprises without Internet

92% of companies in the Region declare that they have access to the Internet and this is the lowest percentage among the surveyed Regions.

62% of companies use a fixed wired connection (slightly below the average - 66%). 21% of companies use a mobile connection as their main link and 9% use a radio connection.

Main Internet connection in companies

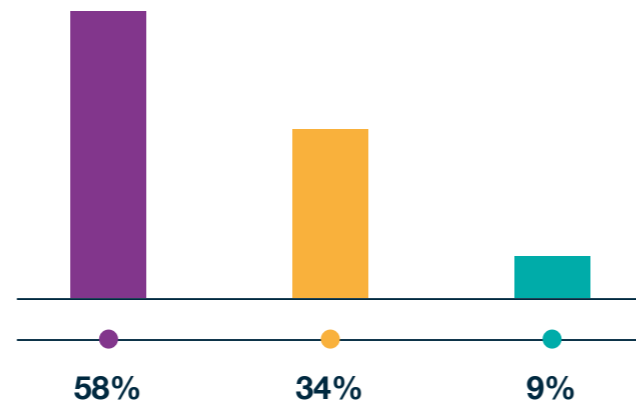


- Fixed wired Internet connection
- Fixed radio Internet connection
- We use mobile Internet via mobile phone
- We don't have Internet access in the company

58% of companies from the Region declare fibre is available in their location and 68% of them use fibre (7 p.p. above the average for the Regions).



Is optic fibre available?



- Yes
- No
- I don't know

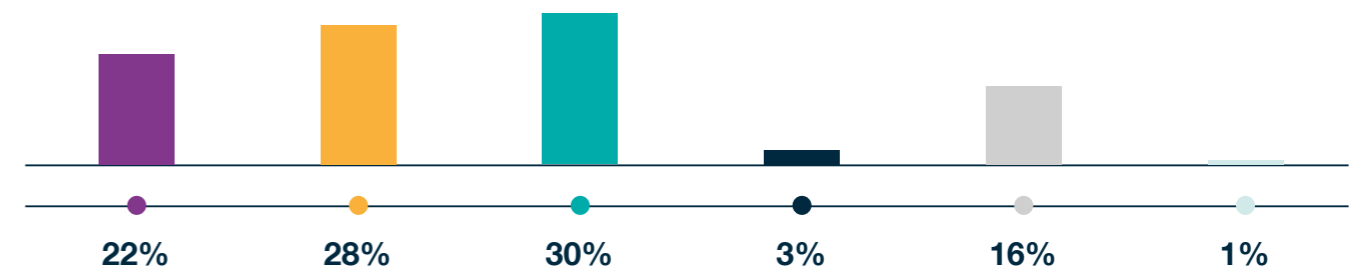
Fixed Internet connection bandwidths in companies

The largest number of companies in the Region state they use connections up to 300 Mb/s (30%), a little less (28%) uses slower connections up to 100 Mb/s. As many as 16% of the companies have fast connections over 600 Mb/s, and the lowest percentage among the surveyed Regions (22%)

use the slowest connections up to 30 Mb/s.

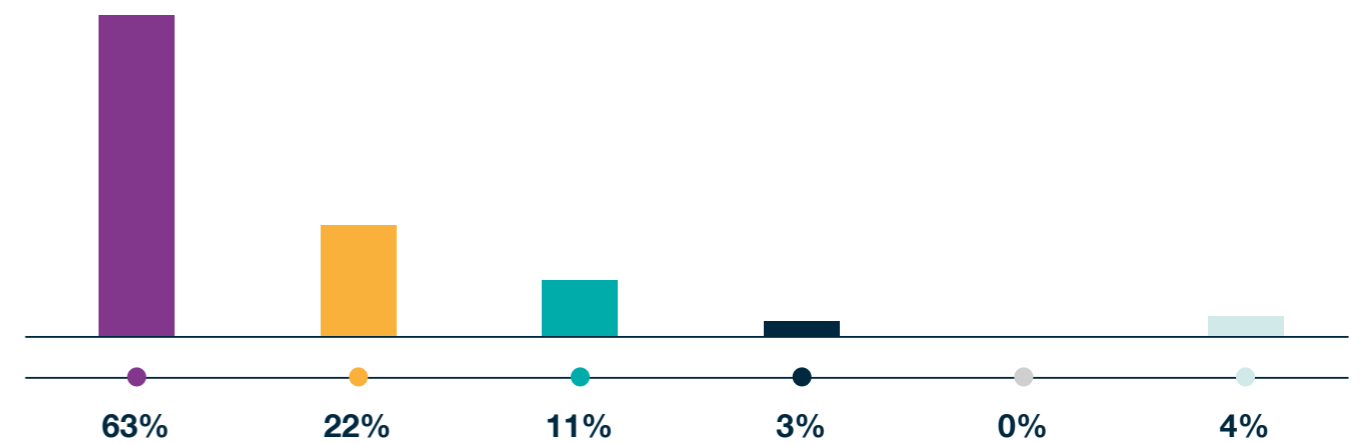
77% of the surveyed companies are satisfied with their lines.

Fixed Internet connection speed in companies



- Up to 30 Mb/s
- Up to 100 Mb/s
- Up to 300 Mb/s
- Up to 600 Mb/s
- Over 600 Mb/s
- I don't know

The most important criterion for choosing an Internet provider



- Connection speed
- Price
- Monthly data limit
- Availability
- Connection stability
- Other

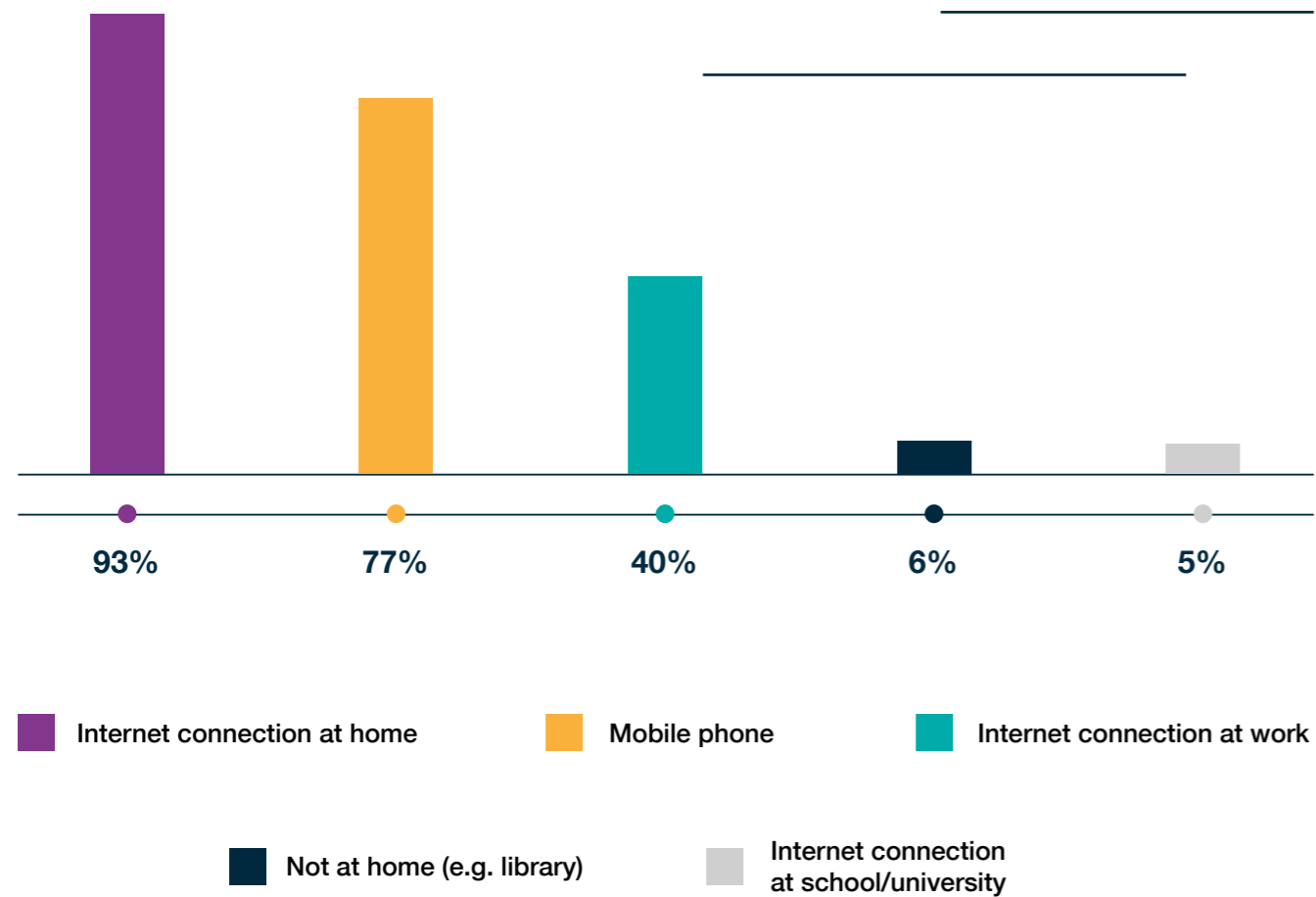
Warmia & Mazury Region

Internet at the fingertips

Inhabitants of the Warmia & Mazury Region usually connect to the Internet through a home connection - 93% (increase by 5 p.p. compared to the survey conducted last year) and mobile

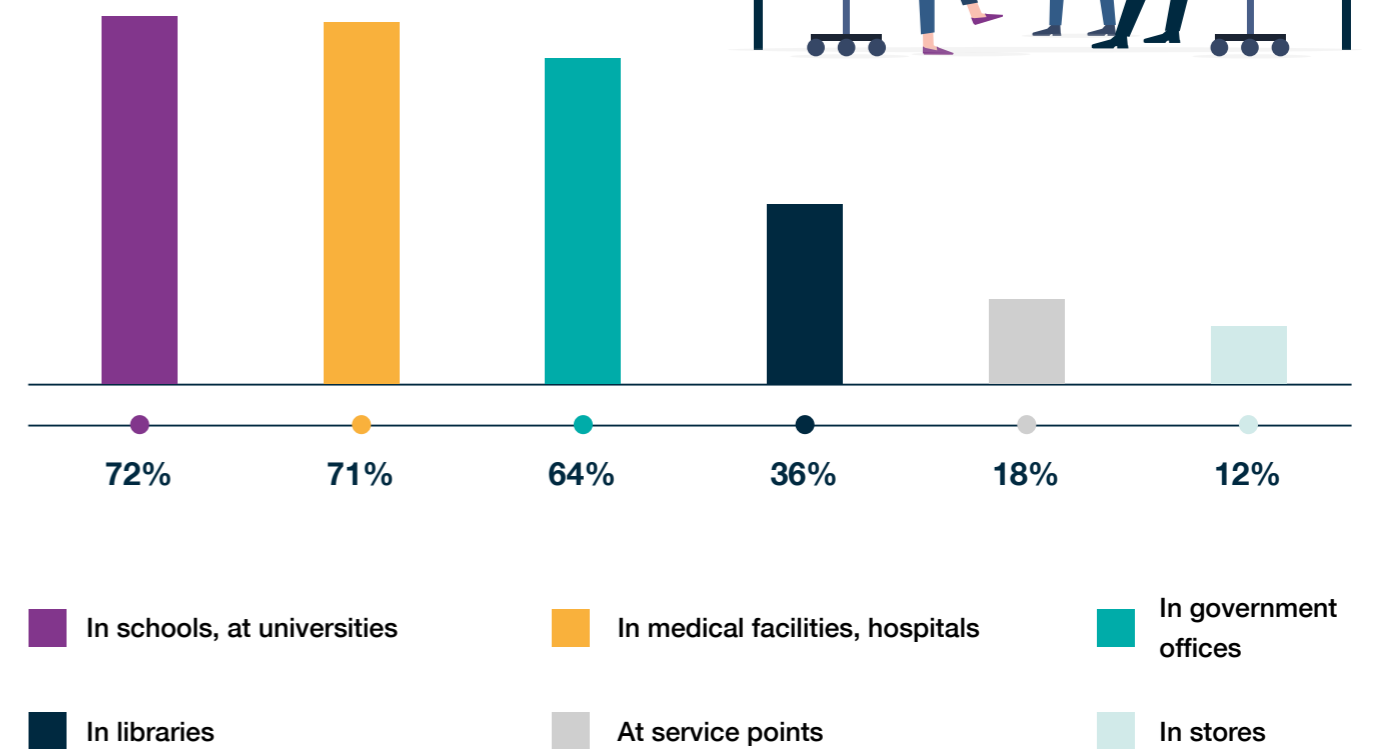
connections - 77%. Respondents also use the Internet outside their homes: 40% at work, 6% in the library and 5% at school or university.

Place of Internet use:



According to 72% of respondents, high-speed Internet should be available in schools and universities. 71% of inhabitants indicated medical facilities and hospitals, and 64% offices

Where should high-speed Internet be available?

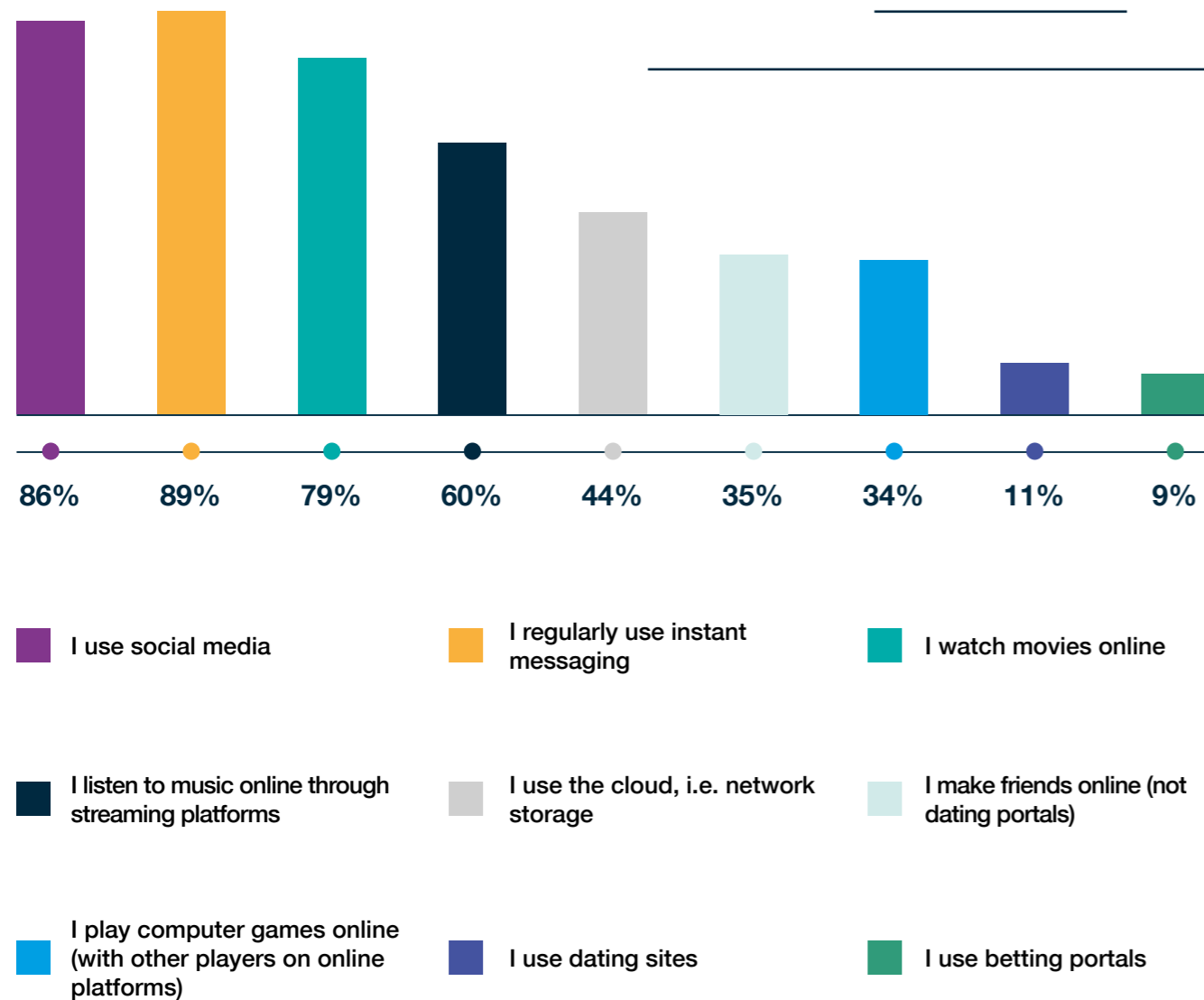


Internet for relaxation

Every year we observe a steady increase in interest in the use of the Internet for entertainment.

86% of respondents use social media, 89% regularly use instant messaging (increase by 29 p.p.). 79% of inhabitants watch online movies (increase by 21 p.p.), 60% listen to streamed music (increase by 13 p.p.), 49% use VOD services.

Use of the Internet for entertainment

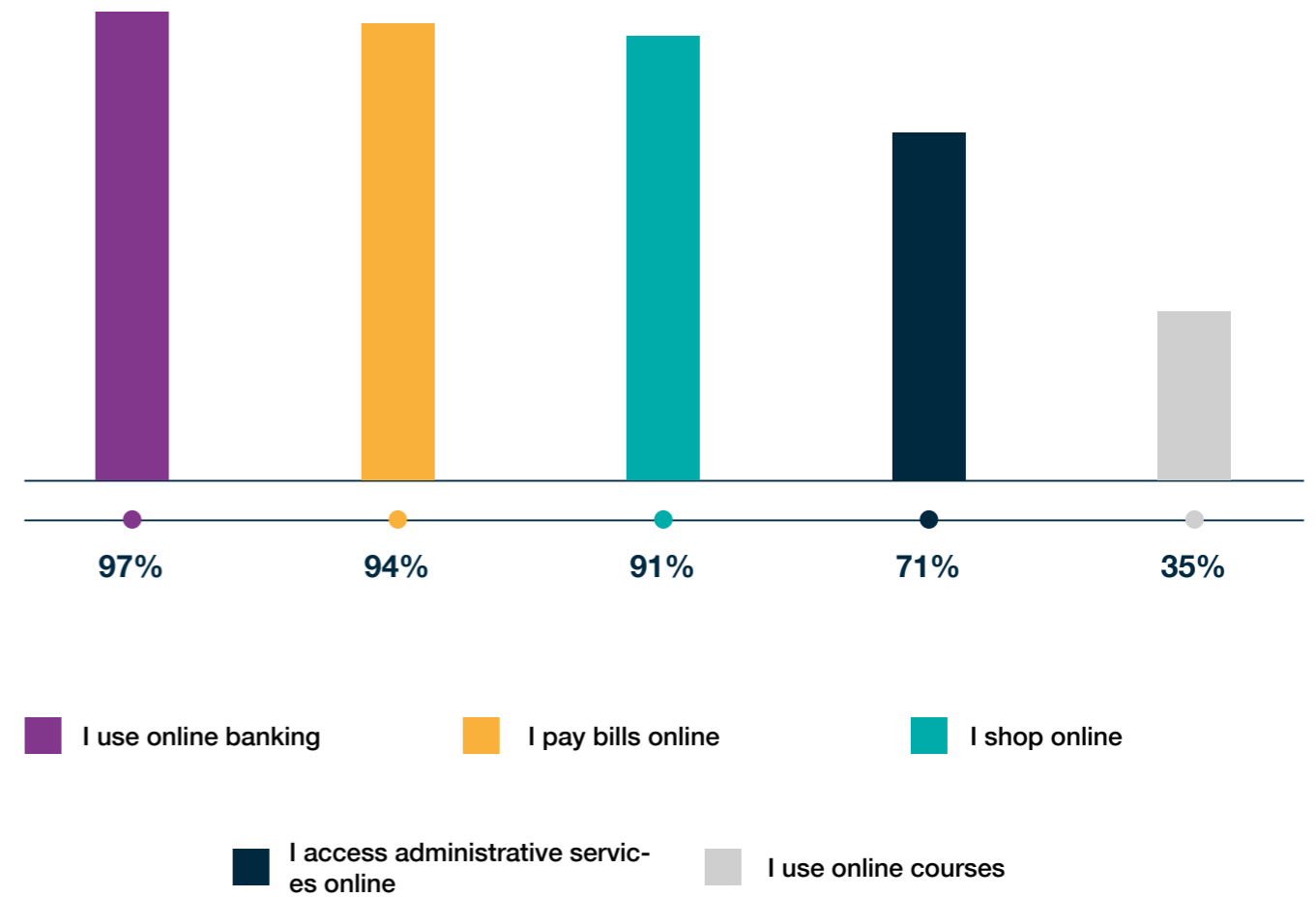


More comfort in everyday life

The Internet supports daily tasks and activities. Its importance can be seen when faced with social isolation. As many as 97% of the respondents in the Warmia & Mazury Region use Internet banking - this is the highest result among all analysed Regions. The increase compared to the previous year was 17 p.p. 94% of respondents pay their bills online (increase by 17 p.p.). On the other hand, 91% of inhabitants make purchases via the Internet (increase by 18 p.p.).



Internet in everyday life

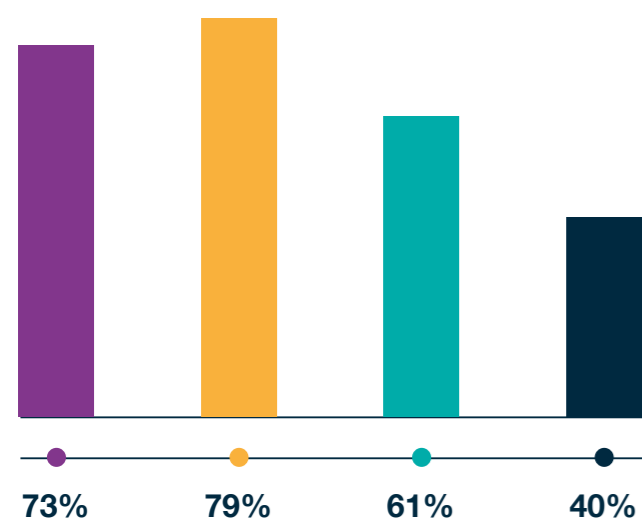


Online government services

Currently 71% of respondents in the Warmia & Mazury Region process their administrative matters online, although only 47% did so last year (increase by 24 p.p.). 79% indicate they would do it online if only there was such a possibility.

For comparison - 40% of respondents prefer shopping online instead of in a traditional shop or shopping mall.

Government e-services



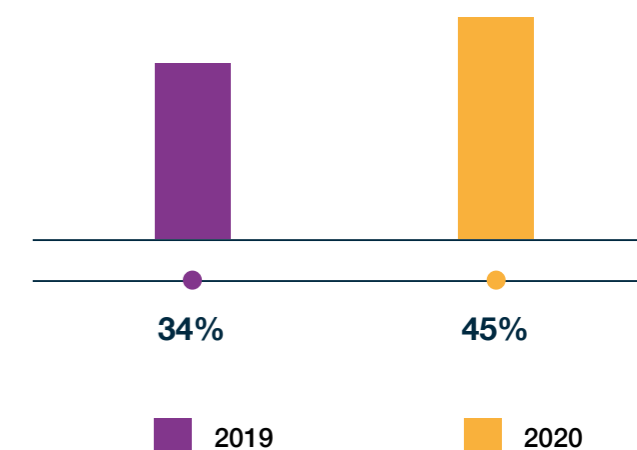
- It takes far too long to process requests personally at the office
- If only I could, I would use online administrative services
- Instead of traditional newspapers, I prefer to read news on web portals
- I prefer (would prefer) to shop online instead of in malls/shops



Greater demand for high-speed connections

The development of services and a wide range of online attractions translate into users' expectations of Internet connections. Nearly half (45%) is thinking about increasing their speed - by 11 p.p. more than last year. Currently, 48% of respondents from the Warmia & Mazury Region declare that there is fibre optic cable available in their location, and 42% use it.

Considers increasing Internet connection speed within a year



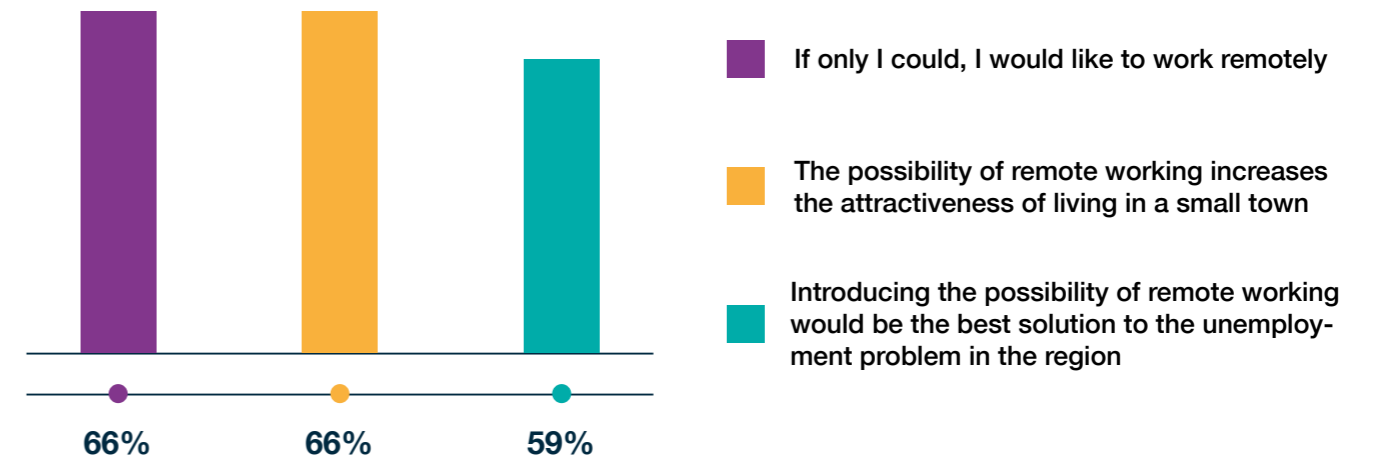
Remote workers

Social isolation has increased the importance of remote working.

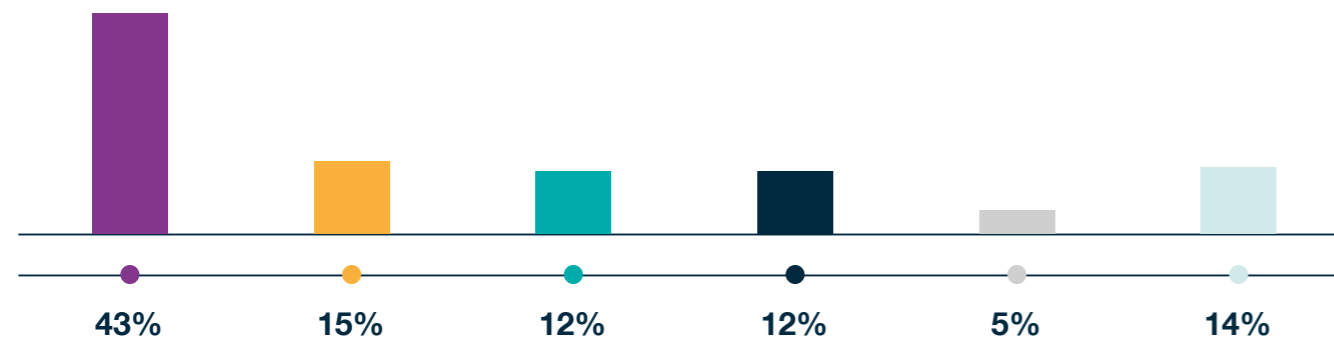
The concept is familiar to 94% of respondents in the Warmia & Mazury Region. 44% of those using the Internet work or have already had the opportunity to work remotely. 43% of respondents declare they have never used this solution - last year it was as much as 70%.



Opinions about remote work



Remote work



- I have never worked remotely
- I used to work remotely from time to time
- I currently work remotely / outside the company from time to time
- I currently very often work remotely / outside the company
- I only work remotely, outside the company
- I don't work at all at the moment

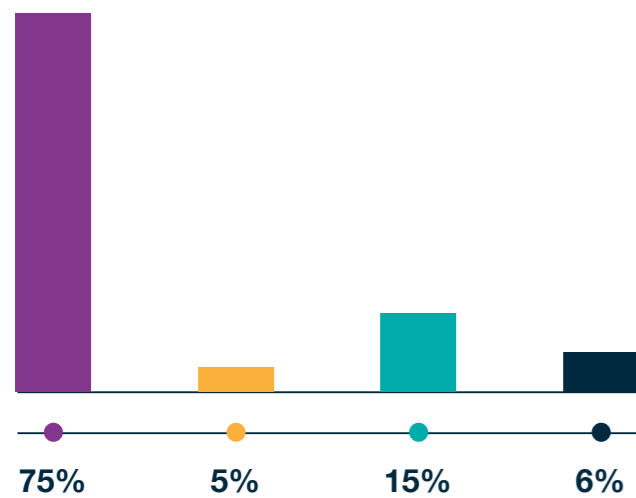


Wired connections in enterprises

Similarly to other Regions, in the Warmia & Mazury Region, the Internet is used by the majority of companies - 94%, which means an increase of 2 p.p. compared to the previous survey.

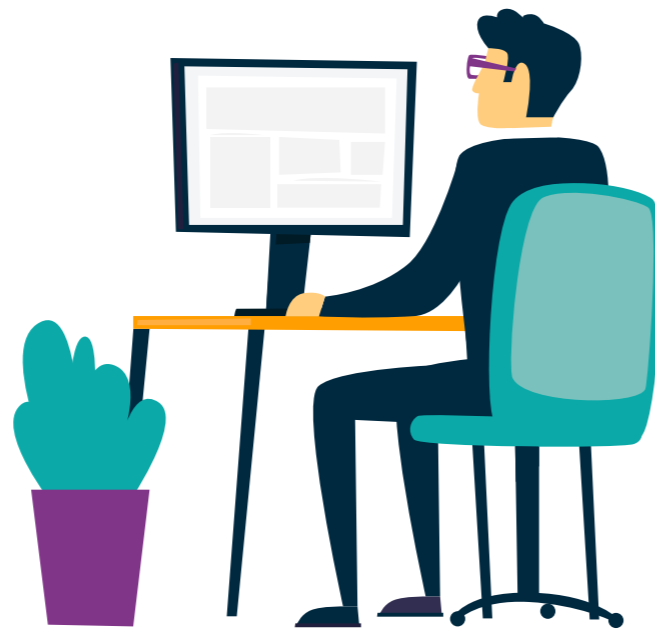
In the Region discussed, most companies by far use fixed wired connections as their main connection (75%, 9 p.p. above the average for all NEXERA Regions). Mobile lines come second - 15% of companies.

Main Internet connection in companies

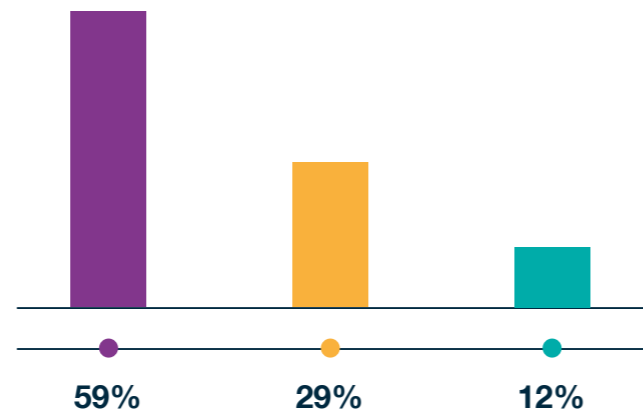


- Fixed wired Internet connection
- Fixed radio Internet connection
- We use mobile Internet via mobile phone
- We don't have Internet access in the company

59% of companies from the Region declare that optic fibre is available in their location, and 57% of them use fibre (slightly below the average of 61% for all surveyed Regions).



Is optic fibre available?



- Yes
- No
- I don't know

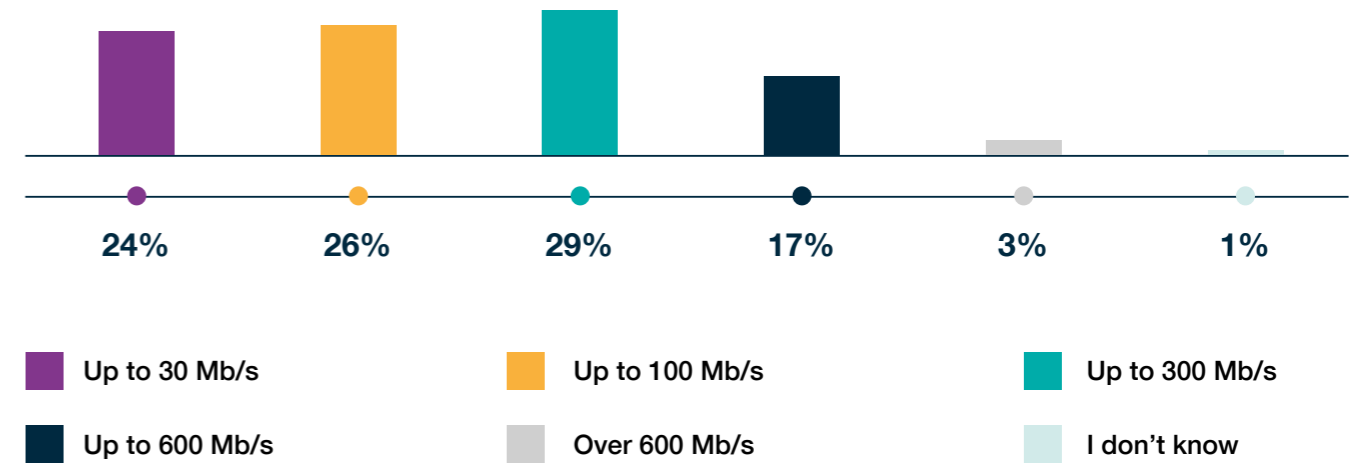
Fixed Internet connection bandwidths in companies

Enterprises with fixed wired connections in the Warmia & Mazury Region declare relatively high throughput of their connections compared to other Regions. Only 24% use the slowest connections of up to 30 Mb/s. 26% use connections up to 100 Mbps, 29% use connections up to 300 Mbps (by 3 p.p. above average), as much as 17% use connections to 600 Mbps (6 p.p. above average) and 3% above 600 Mbps. 16% of companies are

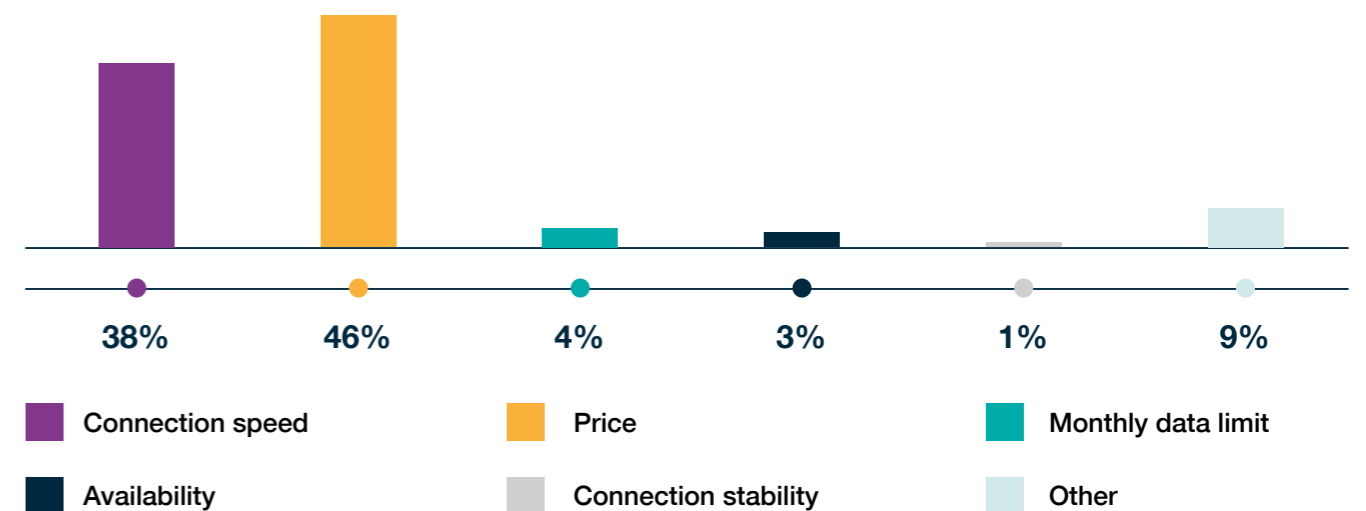
considering the possibility of switching to a faster connection within the next 6 months (average 19%), and the most important criteria for choosing a supplier remain price (for 46% of companies) and speed (for 38%).

78% of respondents are satisfied with their connection

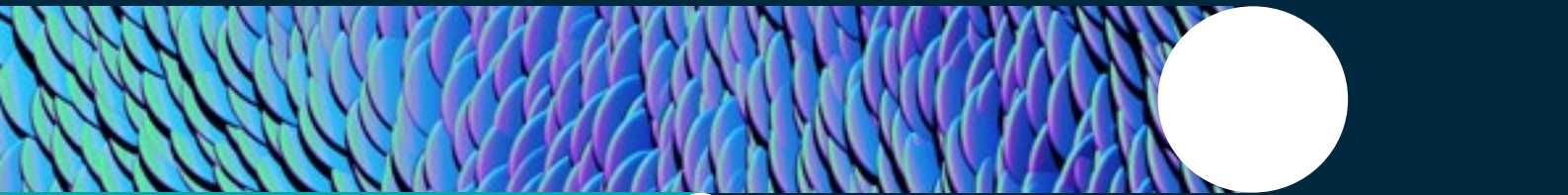
Fixed Internet connection speed in companies



The most important criterion for choosing an Internet provider



- Connection speed
- Price
- Monthly data limit
- Availability
- Connection stability
- Other



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