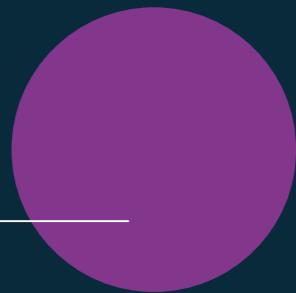
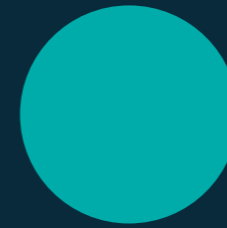


NEXERA

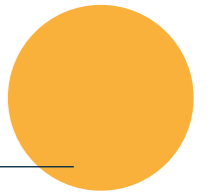
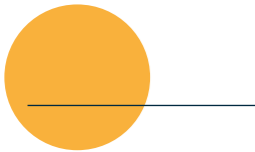
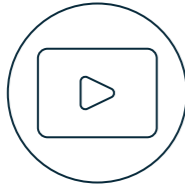


REPORT

#RegionyNEXERY2021

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Third Edition of the #RegionyNEXERY Report. Time to Free Their Potential Even More



Jacek Wiśniewski,
President of the Management Board, NEXERA

“ We are pleased to present to you the third edition of the #RegionyNEXERY Report. Once again, and hopefully for the last time, the survey took place at a time of a pandemic. Over the past months, we have been struggling with many challenges, including digital ones. For the first time, we have had the opportunity to see what opportunities broadband opens up and how remote solutions can make our daily routines, work and study easier. Some people will not go back to their old habits. Others cannot wait to go offline. But one thing we all agree on is that universal access to high-speed Internet is now an essential element of urban and rural infrastructure and is as crucial to residents as access to water or electricity.

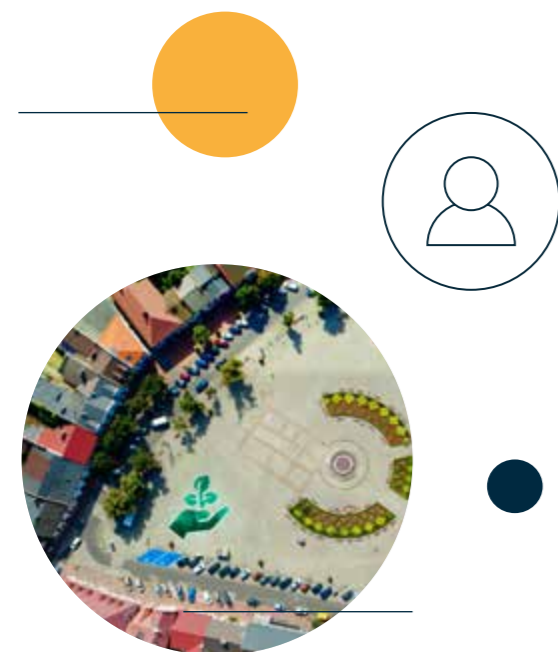
It has now been more than a year since the start of the Covid-19 pandemic. The spread of technology, which would otherwise

have taken many years, has accelerated precipitously. Teachers, students, entrepreneurs, employees, civil servants, we all had to adapt to the new reality in a flash. As a result, the digital skills of people in Poland and the Regions have increased significantly. As we have moved many fundamental aspects of our lives online, some of us have had the opportunity to discover the possibilities of the digital world for the first time. We are slowly returning to analogue reality, but certain habits born during the pandemic are likely to continue. And let us hope so because thanks to a stable Internet connection many activities can be done more efficiently, conveniently, quickly and with less burden on the environment. Let us make sure that we take full advantage of the opportunities presented by the accelerated digitisation of society and that environmentally friendly habits remain for the long term.

I would like to present you the latest edition of the #RegionyNEXERY Report. It offers numerous analyses, statistics and expert commentaries. The results of the survey may be surprising but it is for three years now that we have been demonstrating that the Internet opens new opportunities for a better life, work and business. And while the residents of the NEXERA Regions appreciate their localities in many ways, there is still much to be done to improve their quality of life and unlock their potential. Access to broadband infrastructure is key to reaching even further and achieving even more.

I wish you pleasant and fruitful reading.

About NEXERA



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

NEXERA is building a fibre optic network in 14 areas of Central and North-Eastern Poland on the basis of the Operational Programme Digital Poland (POPC) and as a part of implementation of its own projects. The POPC Programme aims at eliminating the white spots with no access to high-speed Internet and counteracting digital exclusion of the European Union citizens. NEXERA also implements its own projects by acquisition and by consolidating existing infrastructure with a view to selling access as a wholesale operator.

NEXERA is appreciated in the Polish and international arena. It is the winner of the competition Teraz Polska and Dream Employer (2021). In 2020, the company won in the international competition

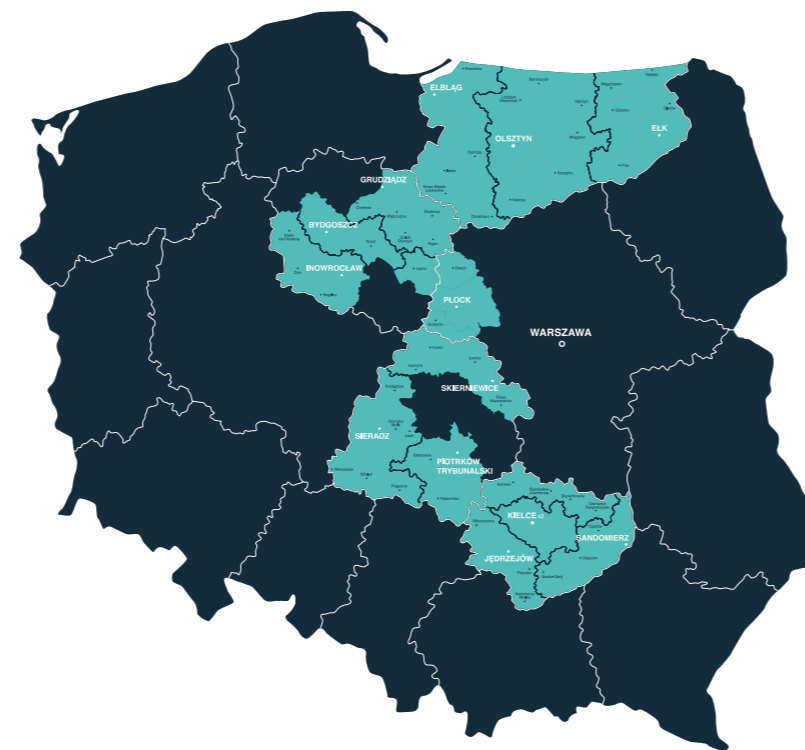
Global Carrier Awards 2020 in the category of the best BSS/OSS implementation, thus joining the group of the most valued telecommunications companies in the world. NEXERA also won the title of "Innovator of the Year" in the Golden Antennas competition and the award for Best Cloud Service Implementation in the Best in Cloud 2019 poll, organised by Computerworld Poland.



NEXERA Regions

The NEXERA network will provide impetus for economic growth mainly in rural areas of Poland and will ultimately cover over 1 million households and almost 3,000 schools and educational establishments in nearly 80 counties, in four Regions: Świętokrzyski, Łódzki, Kujawy, Pomorze & Mazowsze, and in the Warmia & Mazury Region. These areas are called NEXERA Regions.

Residents on the NEXERA Regions. Listen to their statements:



Warmia & Mazury Region

473 education establishment locations **150,000** households

Kujawy, Pomorze & Mazowsze Region

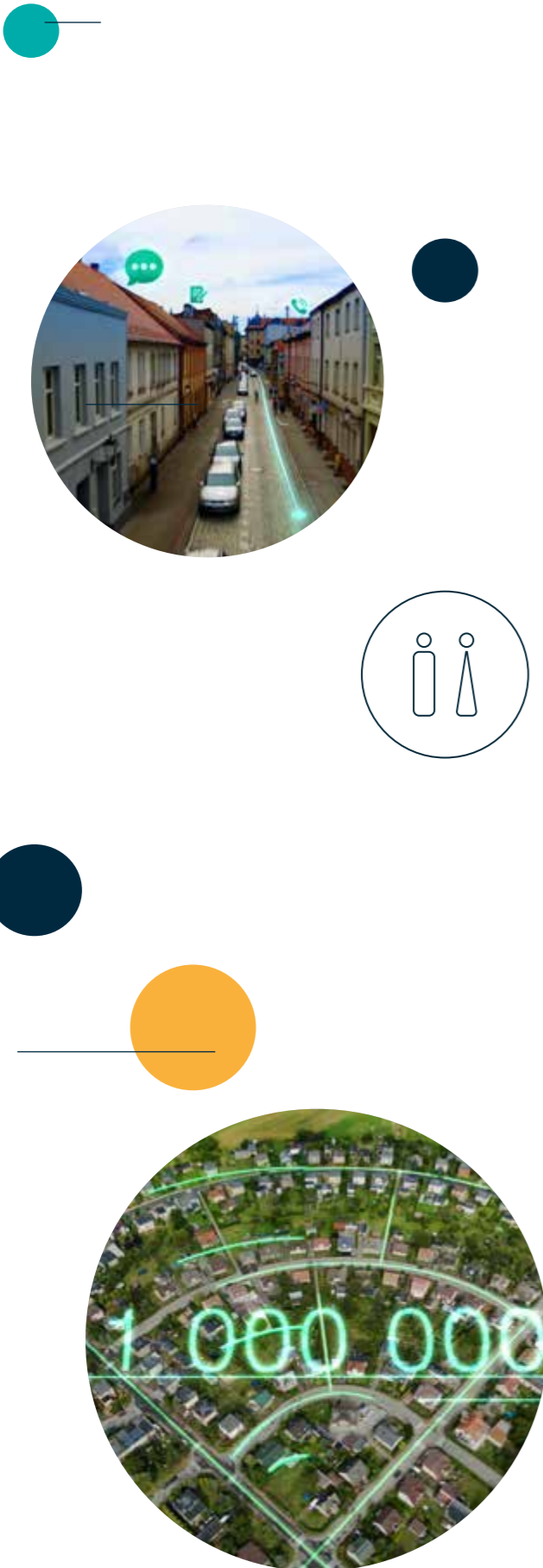
501 education establishment locations **223,000** households

Łódzki Region

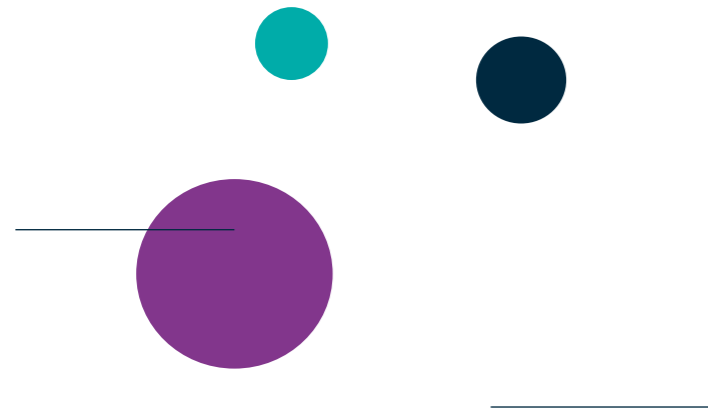
414 education establishment locations **281,000** households

Świętokrzyski Region

488 education establishment locations **346,000** households



NEXERA Opens up New Possibilities



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 the broadband network so far.

Publications



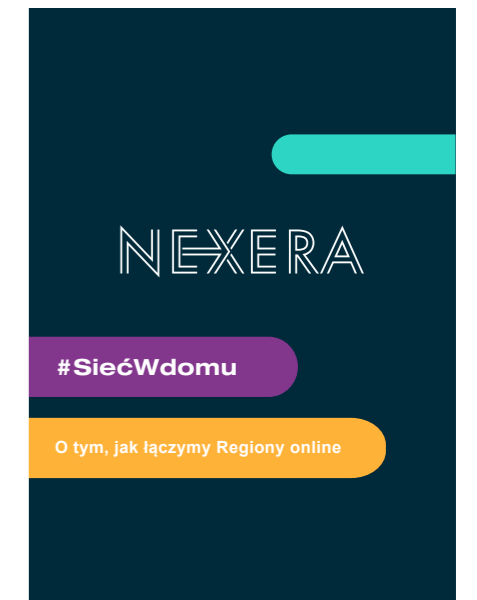
#RegionyNEXERY2019 Report



#RegionyNEXERY2020 Report



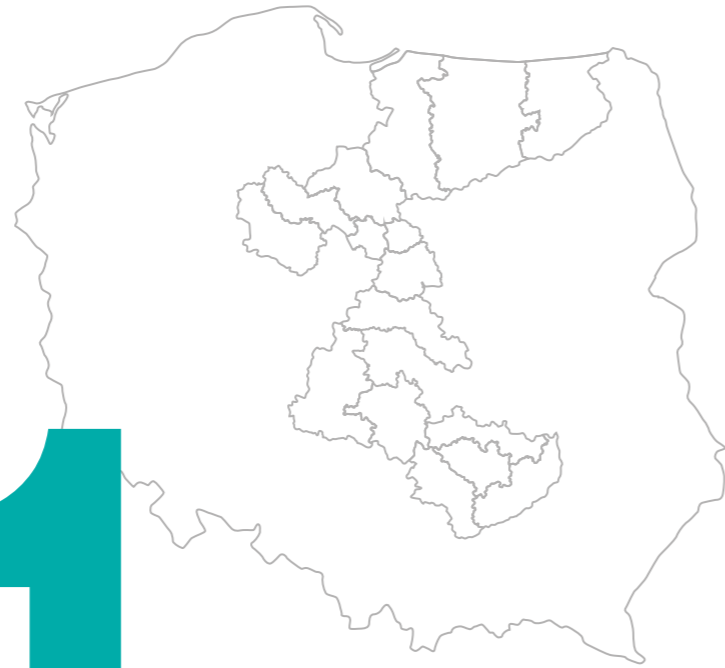
#NEXERAHeroes CSR Report



NEXERA #SiećWdomu podcast



01



Key Findings



Key Findings

The Covid-19 pandemic has made a negative impact on the NEXERA Regions yet also created a positive impulse for development.



The digital skills of some residents and the efficiency of doing official business online have improved. Some businesses use the Internet more than before the pandemic. Despite some concerns, teachers recognise the benefits of online lessons and see potential in continuing this format even after the pandemic has ended. However, for some residents, social isolation and lockdown have worsened living and working conditions in the Region and made a negative impact on their incomes.



57%

of residents in NEXERA Regions report an increase in digital competence in the last year.

6 out of 10

officials (61%) in NEXERA Regions say that doing official business online is now more efficient than before the pandemic.

35%

of companies in NEXERA Regions use the Internet more than before the pandemic.

1/3

of the population (32%) report that living and working conditions have deteriorated as a result of the pandemic.

Daily Life

Residents of the NEXERA Regions tend to spend more time and do more things online if they have access to high-speed Internet.



They are eager to take advantage of the opportunities and conveniences in their daily lives offered by the online world. E-service trends which emerged last year, such as using e-banking or instant messaging or watching movies online, are still growing and it is possible that they will turn into permanent habits and needs of the inhabitants. On the other hand, there are some signs of fatigue with the increasingly digital reality.

52%

of residents shop online at least once every fortnight.

4 out of 10

residents work remotely to some extent.

Around half

of the population (52%) would like to work remotely. Compared to last year, there has been a decrease of as much as 15 p.p.

48%

of the population spends more than 6 hours a day online. This is an increase of 20 p.p. on 2020 and 36 p.p. on 2019.

Over 90%

of residents use e-banking, pay bills and shop online.

82%

of residents deal with official matters online.

7 out of 10

residents benefited from at least one online medical consultation last year.

Business

More and more companies in the NEXERA Regions are investing in faster Internet. This is probably why they are satisfied with their connection and are experiencing problems resulting from slow Internet less and less often.

Through the web, they mostly use social media, as well as sales platforms and cloud solutions. As the use of innovative IT solutions increases, so does their competitiveness in an increasingly digital business environment. However, probably due to financial difficulties, the number of companies that have given up on Internet access has also increased.



Education

Fast and stable Internet is becoming increasingly important in education, as it ensures uninterrupted transmission during videoconferences and smooth operation of instant messaging, whose role during distance learning has become paramount.

Teachers are also taking advantage of other opportunities provided by the high-speed Internet. The vast majority of schools have an electronic diary and the Librus system. Teachers improve their qualifications through online training. Still more than half of the pedagogues are satisfied with the functioning of the Internet at school, but compared to last year, there are slightly fewer of them. One of the reasons for this may be the increasingly often declared problems with breaking video connections.



84%

of companies are satisfied with the link parameters.

Almost 2/3

of companies (63%) have no experience with a slow Internet connection.

42%

of companies use Internet speeds between 100 and 300 Mb/s. This is an increase of 16 p.p. year-on-year.

2 out of 3

companies with fixed lines use fibre optics.

Almost 1 in 5

companies (17%) in the NEXERA Regions do not have access to the Internet. This is a year-on-year increase of 11 p.p.

45%

of teachers point out that due to slow Internet, connections are broken when using instant messaging. This problem has started to bother teachers the most over the last year.

42%

of teachers participated in online courses. This is the most frequently indicated way of improving competences.

9 out of 10

teachers have the possibility of electronic contact with parents of their students. The same number declare that their school has an electronic diary.

2 out of 3

teachers believe that fibre optics opens up new learning opportunities.

According to 52%

of teachers, video messaging is now a key application of high-speed Internet in education.

E-government

Officials in the NEXERA Regions have a positive attitude towards e-government. They believe that submitting cases online is easy and offices are ready to work online.

Practically in all offices there is a possibility to process matters online. Most often residents use e-government to apply for an ID card, as well as for access to public information. According to officials, however, the possibilities of e-offices are not used to the full extent, as some issues are preferred to be dealt with in person. Lack of Internet access or a poor-quality connection is also a barrier.

9 out of 10

officials are satisfied with the Internet in the office.

99%

of administrations allow online processing of cases.

2 out of 3

officials assess the willingness of public authorities to carry out activities via the Internet as sufficient.

9 out of 10

officials support the development of e-government, but only half think online applications would be more efficient than traditional procedures.

42%

of officials believe that residents do not use e-government because they prefer to come to the office in person.



Environment

Residents of the NEXERA Regions are committed to ecology in their daily lives. A significant number of them know that fibre optics is good for the environment.

Experts explain that this is due to lower energy consumption and lower maintenance costs than in the case of traditional technology. In addition, fibre optics enables lifestyle changes, such as less car use. The older the respondents are and the more they earn, the more important eco-friendly solutions are for them. The main source of knowledge on environmental issues for all residents is the Internet.

4 out of 10

residents (42%) know that fibre optics is an environmentally friendly solution.

83%

of residents segregate their waste. Among people aged 61-75, 94% do it, while in the youngest age group (18-25), only 71%.

For almost 3/4

of residents (72%) regardless of age, the Internet is the primary source of knowledge on environmental issues.

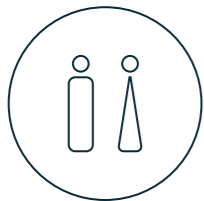
More than half

of the residents (55%) rate their involvement in environmental issues as at least 7 points on a scale of 1 to 10.



Growth of NEXERA Regions

High-speed Internet increases the attractiveness and quality of life in NEXERA Regions. In smaller towns, it is the first step towards realising the Smart Village concept.



Its aim is sustainable development through the use of digital tools and stopping young people from leaving rural areas. At the moment, residents most appreciate the leisure opportunities and life in general in their Regions. Other key areas, such as tourism and education, and especially work and business, are rated slightly lower. The residents agree with the statement that fibre optic infrastructure could improve the attractiveness of NEXERA Regions in key aspects.



NEXERA Regions are unique in many respects. They are distinguished by their scenic and touristic qualities as well as their unique culture, history and folklore. The study also found that each of the Regions has its own distinctive feature.

In the Kujawy, Pomorze & Mazowsze Region the largest number of residents use the fibre optic cable. In the Łódzki Region the largest number of residents make friends on the Internet. Warmia & Mazury Region is assessed by the residents as an attractive place to spend free time and in terms of tourism. Świętokrzyski Region stands out in terms of the high level of use of high-speed Internet in businesses.

92%

of officials believe that the construction of a fibre optic network will have a positive impact on the attractiveness of the Region.

Almost 1/3

of residents aged 25-40 plan to change their place of residence within the next 3 years.

53%

of residents find their Region attractive for leisure activities and 51% for living in general.

51%

of residents believe that high-speed Internet will make young people more likely to spend their days off in their small hometowns.

More than half

of residents and teachers believe that high-speed Internet can give a positive boost to the local economy and community.

33%

most inhabitants use fibre optics in Kujawy, Pomorze & Mazowsze Region.

46%

most inhabitants make acquaintances in the Internet (apart from dating sites) in the Łódzki Region.

64%

according to inhabitants the most attractive Region for spending free time is Warmia & Mazury Region.

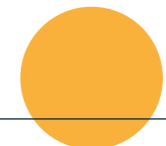
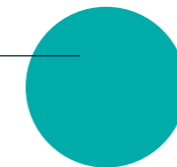
76%

most companies have a fixed wired Internet connection in the Świętokrzyski Region.

02



Positive Impulses and Negative Impacts of the Pandemic



Positive Impulses and Negative Impacts of the Pandemic

The pandemic has not been without impact on the social and economic situation in the NEXERA Regions. It brought negative consequences, but it also gave positive impulses. The digital skills of some inhabitants have improved, as well as the efficiency of doing official business online. Some companies use the Internet more than before the pandemic. Despite some concerns, teachers recognise the benefits of online lessons and see potential in using them even after the coronavirus-enforced remote education ends. However, for some residents, the pandemic has worsened living and working conditions in the Region and caused a negative change in their material situation.

32% of the inhabitants of NEXERA Regions declare that living and working conditions have deteriorated due to the pandemic. The worst situation is in the Warmia & Mazury Region, where 40% think that the situation has worsened.

49% of residents say their current financial situation has not changed compared to the pre-pandemic period.

73% of residents agree with the statement that during a pandemic people move from big cities to smaller towns

57% of residents report an increase in digital competences in the last year and 42% estimate that they have remained at the same level.

61% of civil servants say that doing official business online is now more efficient than before the pandemic.

49% of teachers believe that students' digital skills are insufficient.

35% of companies use the Internet more often than before the pandemic and the rest with a similar frequency. In the Kujawy, Pomorze & Mazowsze Region as many as 57% of companies use the Internet more than before the pandemic.

Worse Living and Working Conditions Resulting from the Pandemic

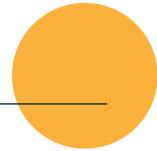
The pandemic has worsened the living and working conditions of 1/3 of the inhabitants of the NEXERA Regions. However, the majority of respondents believe that they have not changed. The proportions are similar for the financial situation of the inhabitants.

Eurofound, one of the agencies of the European Union, conducts regular research into the social and economic situation of Europeans - "Living, Working and COVID-19". In comparison with other EU countries, Poland comes out badly in terms of key indicators. For example, in February-March 2021, 39% of respondents from Poland declared that they had no savings, and 33% predicted that their financial situation would worsen within 3 months.

In the NEXERA Regions, a total of 32% of the population declares that living and working conditions have deteriorated as a result of the pandemic. However, 48% are of the opinion that they have not changed. Only 9% of respondents declare improvement and 11% have no opinion on the matter.

Residents of different NEXERA Regions differ in their opinion on the impact of the pandemic on living and working conditions. The highest number of respondents, who think that the situation worsened, lives in Warmia & Mazury Region, while the least negative changes were experienced by respondents from Łódzki Region. The opinions of inhabitants of Warmia & Mazury could be influenced by sanitary restrictions, which were introduced in that area earlier than in other Regions of the country.





1/3 of the population believes that the pandemic has worsened living and working conditions in Region.

In the last 12 months, in your opinion, have living and working conditions in Region in which you live...

Warmia & Mazury Region



Świętokrzyski Region



Total NEXERA Regions



Kujawy, Pomorze & Mazowsze Region



Łódzki Region



- Have worsened
- Unchanged
- Improved
- I don't know/difficult to say

When asked about their current financial situation, compared to before the pandemic, residents of the NEXERA Regions most often answer that it has not changed. At the same time, it has worsened for more than 1/3 of the respondents. In contrast, 15% of residents feel their financial situation has improved.



The financial situation of almost half of the residents has not changed, but for more than 1/3 has worsened.

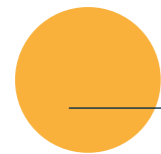
How does your household's overall financial situation compare to before the pandemic outbreak last March?



- Significantly worsened
- Has deteriorated
- Has not changed
- Somewhat improved
- Significantly improved

Polish People Are Moving to Smaller Towns

People in the NEXERA Regions agree that as a consequence of the pandemic, people are moving from big cities to smaller towns. Governments in some countries are developing special programmes for social and economic strengthening of rural areas. High-speed Internet is critical to ensure success as it will allow people in small villages to maintain jobs and a standard of living comparable to the opportunities offered by cities.



Almost 3/4 of those surveyed agree that people move from big cities to small towns during the pandemic.

Which of the following statements do you think is more true now (during the coronavirus pandemic):



- People move from big cities to small towns
- People move from small towns to big cities

73% of NEXERA Regions residents agree with the statement that people move from large cities to smaller towns during the pandemic.

In Poland, this is a trend that analysts have been observing for several years, but it has accelerated in recent months due to the pandemic. Increased interest has been shown especially in locations that are attractive for tourism and nature, and a factor that has influenced the whole trend is the possibility of remote working.

Information published by the PKO BP bank shows that the proportion of loan applications for home purchases in counties surrounding metropolitan areas has increased from **24%** in 2019 to **26%** in 2020. In 2016, this figure stood at **20%**.

Migration of people within countries is an important socio-economic phenomenon, and not just a factor associated with a pandemic. In particular, the migration of young people from small towns to large cities threatens to depopulate entire Regions, including Poland. For this reason, Ireland, for example, has linked the country's planned recovery from the pandemic with multi-annual plans for social and economic strengthening of rural areas. Ireland's "Our Rural Future" programme takes into account, among other things, the environmental and technological context: "(...) it builds on the economic opportunities for rural development as we invest in online connectivity, new technologies, infrastructure and skills to open up new employment opportunities, and respond to new ways of working and climate change".



Jacek Wiśniewski,
President of the Management Board, NEXERA

“Undoubtedly, the pandemic was a huge blow to the Polish and global economy. However, we must look for the positive aspects of this difficult period and take advantage of the new opportunities and possibilities we faced. The broad digital competences of the inhabitants of the whole country, including the NEXERA Regions, have definitely increased. We are using technology more and more consciously to acquire knowledge, enhance skills and participate in social life. Perhaps our most important challenge today is to equalise access to education and work, regardless of where we live. We can achieve this through universal access to high-speed Internet, which - as we have seen - overcomes location barriers and is the basis for the development of localities, and thus for improving the quality of life of residents”.

Improved Digital Skills in Population

As a result of the pandemic, the digital competences of more than half of the inhabitants of the NEXERA Regions have increased.

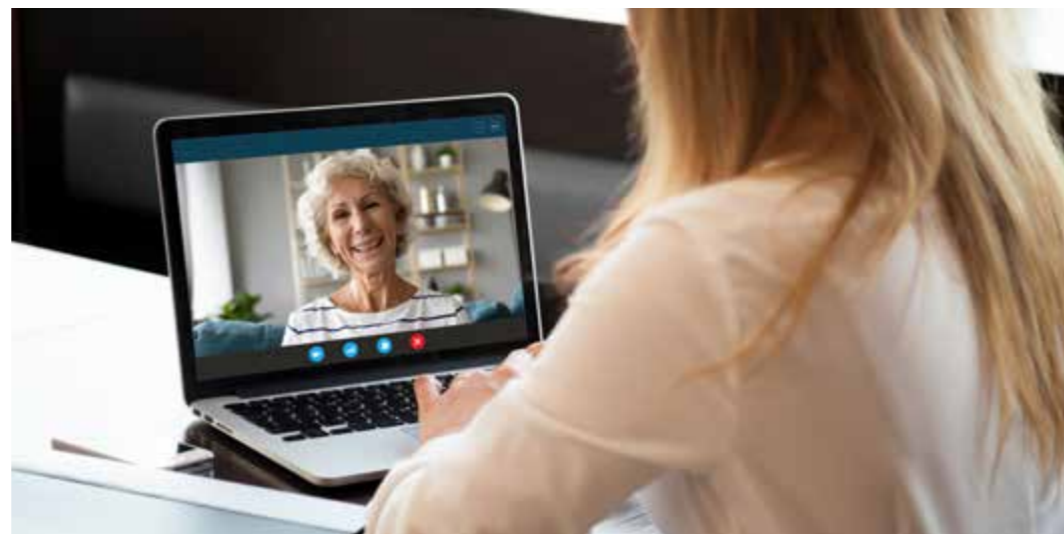


According to experts at the European Centre for the Development of Vocational Training (Cedefop), the pandemic has increased the demand for digital skills in many professions, especially outside the IT and telecommunications industries.

57% of residents in the NEXERA Regions say that their ability to use the Internet in various areas of their lives has increased over the past year. The remainder estimate that they have not changed.

“The parents have learned how to use instant messaging and I kept in touch with them”. A teacher from the Łódzki Region

The Kujawy, Pomorze & Mazowsze Region and the Łódzki Region have the highest percentage of residents whose digital skills have not changed. Both Regions also have the least number of residents who have definitely improved their competences. On the other hand, in the Warmia & Mazury and Świętokrzyski Regions, most people have improved their technological skills.



More than half of those surveyed report higher digital skills now than before the pandemic.

How have your skills related to using the Internet in different areas of your life changed over the last year?

Kujawy, Pomorze & Mazowsze Region



Łódzki Region



Total NEXERA Regions



Warmia & Mazury Region



Świętokrzyski Region



- Have remained at the same level
- Slightly increased
- Definitely increased



Piotr Mieczkowski,
Managing Director, Digital Poland Foundation

” The pandemic has clearly demonstrated the importance of not only telecommunications infrastructure but also digital skills, without which it is impossible to work remotely, shop safely online, do official business or even register for vaccinations. According to the study, as many as 49% of teachers believe that digital skills of students are at an insufficient level. This means that one in two students may have problems with remote learning, which may exacerbate inequalities in society. In turn, nearly 42% of the population state that they have not acquired new digital skills during the pandemic. These figures should not come as a surprise, since Poles are at the tail end of European statistics on lifelong learning. Without the creation of a comprehensive programme from public funds to improve digital skills and without the involvement of companies and institutions in educating the public, Poland will also remain far behind in the European DESI ranking (Digital Economy and Society Index). That is why we established the Digital Festival at the Foundation, which helps the whole society to benefit from the advantages of the digital world, and this year’s edition will be dedicated mainly to digital skills training”.

Improved e-Government

Officials in the NEXERA Regions assess that dealing with official matters online is more efficient than before the pandemic. More than half of those surveyed have a more positive attitude to e-government than a year ago.

We are shifting to a virtual customer. We take more time to do things. Communication between offices is more efficient. An official from the Kujawy, Pomorze & Mazowsze Region

61% of officials believe that online procedures are now more efficient than before the pandemic. 36% of the officials in the NEXERA Regions believe that the pandemic has not changed anything in terms of the efficiency of doing official business online.



Nearly 2/3 of civil servants believe that doing business online is now more efficient than before the pandemic.

Overall, how would you rate doing official business online NOW compared to before or at the start of the pandemic?



- A little less efficient
- Same as before the pandemic
- A little more efficient
- Definitely more efficient

The pandemic has had a positive impact on the attitude of officials in the NEXERA Regions towards e-government. Overall, 59% of respondents rated their attitude towards e-government as more positive than a year ago, 41% as the same and just 1% as more negative.

The most positive changes were declared by officials in the Kujawy, Pomorze & Mazowsze Region, and the least in the Świętokrzyski Region. In the latter Region, most respondents did not change their attitude towards e-government. On the other hand, the highest level of change to a negative attitude was noted in the Warmia & Mazury Region, although it still remains at a very low level.



Over half of civil servants are now more positive about e-government than a year ago.

How have your attitudes towards e-government changed in the past 12 months?

Kujawy, Pomorze & Mazowsze Region



Łódzki Region



Total NEXERA Regions



Warmia & Mazury Region



Świętokrzyski Region



- Is more NEGATIVE
- It is the same
- Is more POSITIVE

Internet in Companies Used At Least as Often as Before the Pandemic. 35% of Companies Improved Their Online Presence

Most companies in the NEXERA Regions use the Internet to a similar extent as before the pandemic. If companies increased their online activities, it was most often in areas related to finance, as well as promotion and customer contact.



“We have put more emphasis on online promotion and some positions have gained the ability to work from home”. Entrepreneur from the Warmia & Mazury Region

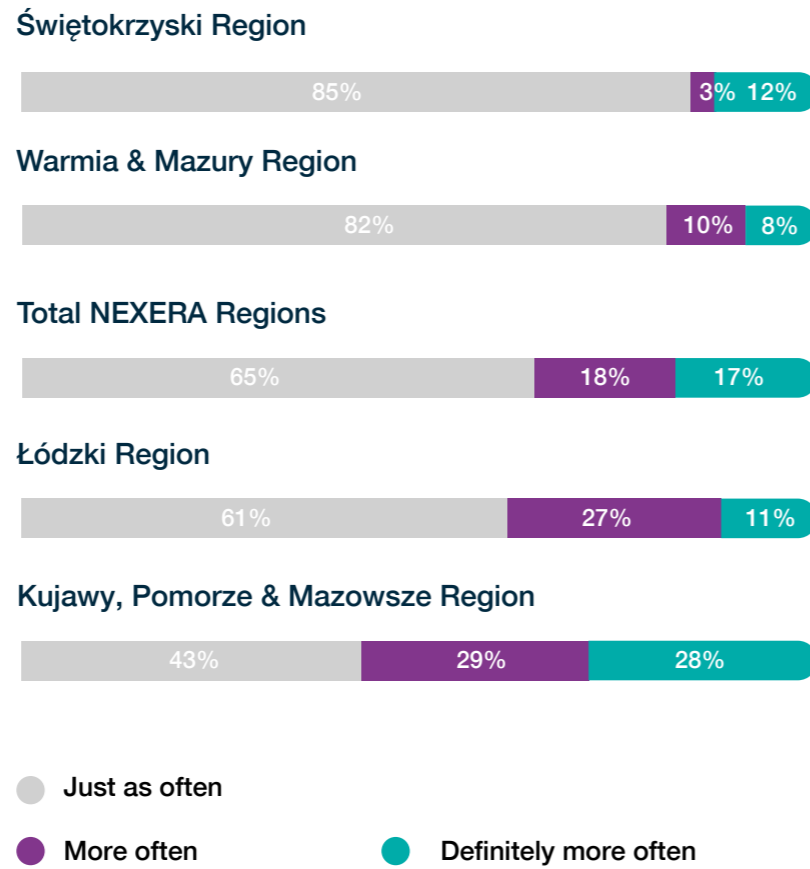
“Customer contacts have partly been transferred to computer links”. Employer from the Warmia & Mazury Region

In the NEXERA Regions, the pandemic did not adversely affect the extent to which companies use the Internet in their operations. Overall, 65% of businesses use the Internet as often as before the pandemic, 18% more often and 17% definitely more often.

NEXERA Regions differ in the extent to which companies use the Internet during the pandemic. In the Kujawy, Pomorze & Mazowsze Region, more than half of the companies use the Internet more often. At the opposite pole are the Świętokrzyski and Warmia & Mazury Regions, where the vast majority of companies use the Internet as often as they did a year ago.

More than 1/3 of companies use the Internet to a greater extent than before the pandemic.

How would you rate the level of Internet use in your business, compared to before the pandemic? Internet is used:



When asked about areas for increasing the scope of online activities, companies most often answer, 47% of indications, that nothing has changed in this respect. The next three selected answers concern the financial area. Entrepreneurs are also more involved in promotional activities, customer contact and marketing. They have also taken advantage of the possibility to work remotely.

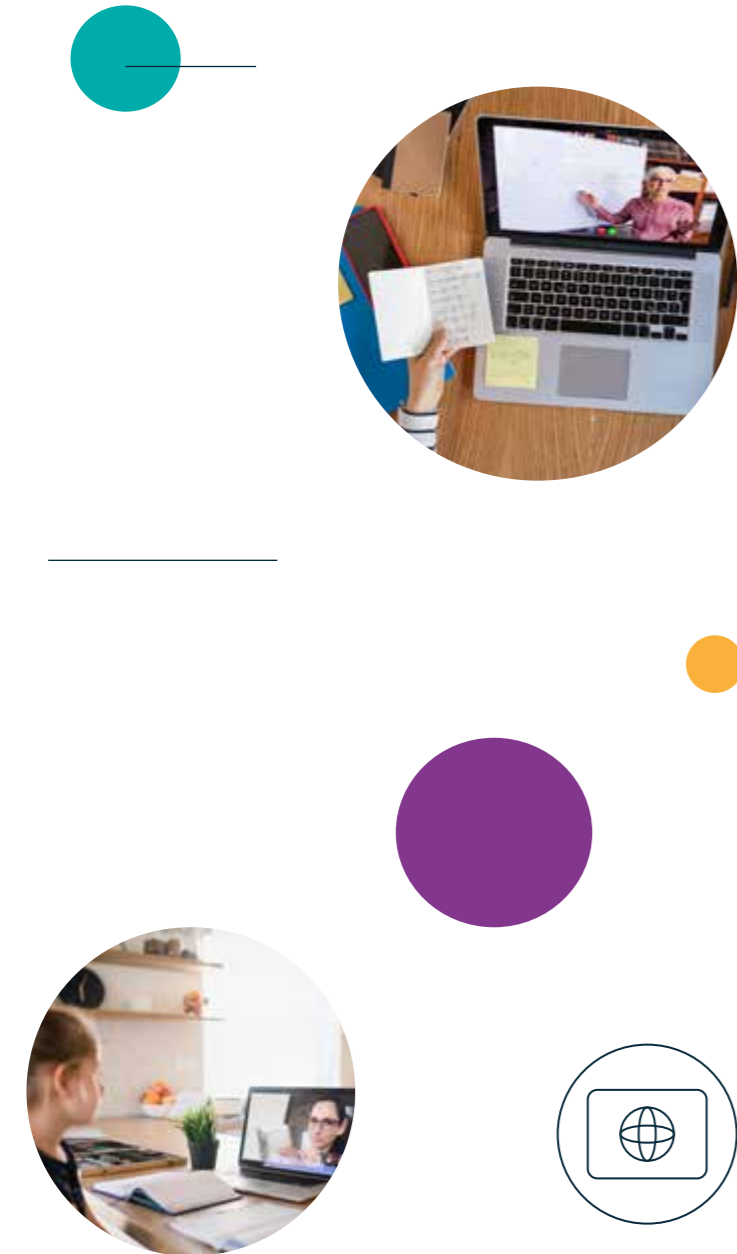
If companies increased their online activities, it was mostly in the financial area.

In which areas have you increased your company's online activities over the last 12 months?



Not All Students and Teachers Have High-speed Connection and Digital Skills

Residents of the NEXERA Regions agree that access to a continuous Internet connection is the basis for remote learning. At the same time, they admit that some children may not have the tools to learn online. Teachers, on the other hand, are quite critical about the digital competences of both their students and themselves.



76% of the residents surveyed agree that access to a fast broadband connection is essential for remote learning.

Only a handful of respondents hold the opposite view and a slightly larger group has no opinion on the matter. Residents also believe that some children may not have access to tools that enable online learning.

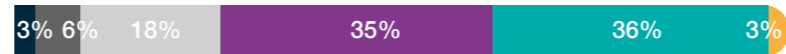
3/4 of the population agrees, that a fast fixed connection is essential for remote learning. Only slightly fewer think that some children may not have the tools to learn online.

To what extent do you agree with the following statements:

Access to a high-speed fixed line connection is essential for online remote learning:



Some children may not have the tools for online learning, e.g. Internet access, laptop:



- Strongly disagree
- I tend to disagree
- Neither agree nor disagree
- I tend to agree
- Strongly agree
- No answer

Teachers are less decisive in their opinions on remote education. Only slightly more than half believe that both their students and themselves have sufficient digital competences for online learning. Teachers rate the students' skills slightly lower than their own.

Teachers are undecided, how to assess students' and their own skills to use the Internet for teaching.

How, in your opinion, is the readiness for online learning among teachers, understood as the ability to use the Internet for teaching?



How, in your opinion, is the readiness for online learning among students, understood as the ability to use the Internet for teaching?



- Definetly insufficient
- Rather insufficient
- Rather sufficient
- Definetly sufficient

Remote Education Has Advantages and May Stay with Us for Longer

Remote education is criticised by experts, among other things, because of its negative psycho-social consequences. From the teachers' point of view, however, it also has its advantages and, to a certain extent, can be used after returning to full-time teaching.

According to the study "Remote Education in a Time of Pandemic", conducted by the Digital Centre, "Psychological problems affected not only pupils from difficult, dysfunctional families. The main factor affecting children's mental state was the lack of contact with peers. Especially those from the youngest classes, who, not writing and not having smartphones with installed communicators, endured isolation badly".

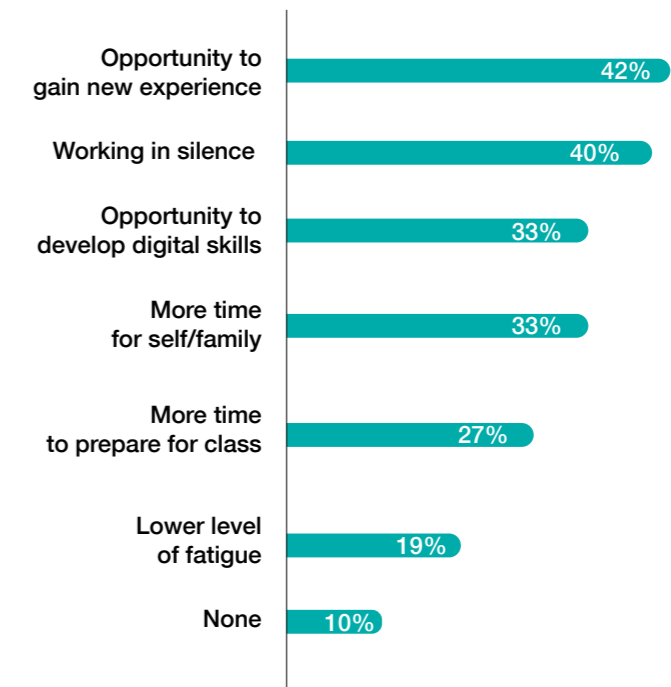
„We conduct most of our lessons online. This takes a lot of time because you have to prepare interesting content that doesn't bore students in front of their screens. The Internet is an inexhaustible source of knowledge and working online has allowed me to discover many interesting places, which I use to work with students". A teacher from the Świętokrzyski Region



In the NEXERA Regions, teachers most often see the benefits of e-learning in the areas of gaining new competences and quality of work and work-life balance. Educators see the benefits of online learning in gaining new experiences and developing digital competences. No less important are more comfortable teaching conditions, working in silence and lower fatigue levels. Teachers also point to the typical benefits of remote working, i.e. saving time.

Advantages of online learning most frequently mentioned by teachers are new experiences and working in silence.

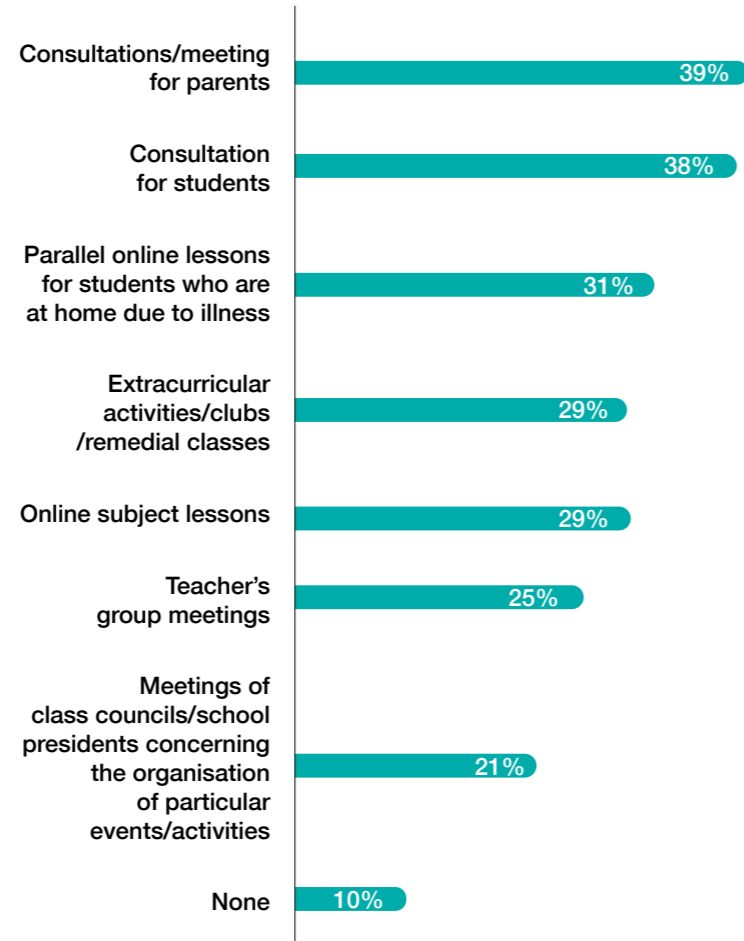
What advantages, from your perspective as a teacher, does online learning have?

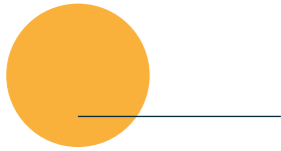


The interviewed teachers most often indicate two areas where they see an opportunity to use the remote learning experience after the pandemic. One is all kinds of extracurricular meetings and consultations for pupils, parents and teachers themselves, which previously took place on site. Besides, online learning could function as a support and, in some circumstances, also as an alternative to traditionally taught lessons.

Parent meetings and consultations for pupils after the end of the pandemic could continue online.

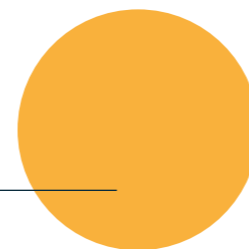
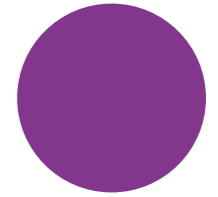
Do you allow for the possibility for schools to take the lessons learned and continue online, post-pandemic?





03

Residents Increasingly Online



Residents Increasingly Online

This year's edition of the survey shows that residents of the NEXERA Regions are staying online longer and longer and do more and more errands thanks to access to high-speed Internet. We are eager to take advantage of the opportunities and facilitations in everyday life offered by the online world. The trends related to the use of e-services, which emerged last year, are still continuing and it is possible that they will turn into permanent habits and needs of the inhabitants. On the other hand, there are some signs of fatigue with the increasingly digital reality.

48%

of residents spend more than 6 hours a day online (up 20 p.p. from 2020 and 36 p.p. from 2019).

32%

of residents have increased their home Internet speed in the last year.

40%

of residents work remotely to varying degrees.

70%

of residents used at least one online medical consultation last year.

82%

of residents deal with official matters online.

52%

of residents shop online at least once every fortnight.

Over

90%

of residents use e-banking, pay bills and shop online.

Longer and Longer Online

Almost half of the NEXERA Regions residents surveyed are online more than 6 hours a day. The survey results show the extent to which pandemic restrictions have changed residents' habits and moved part of their daily lives online.



According to WeAreSocial agency, Polish Internet users spent an average of **6 hours 44 minutes** online in 2020. The world average is **10 minutes longer**.

The reason for the increase in time spent online is not only due to work and distance learning. A large part of our private and entertainment life has also moved online. We also shop and order food online. Various e-activities are taking up more and more time and are gradually becoming habits that will be difficult to give up.

12% of NEXERA Regions residents surveyed spend more than **10 hours a day on the Internet**, **11%**, **9-10 hours**, and **25%**, **6-8 hours**.



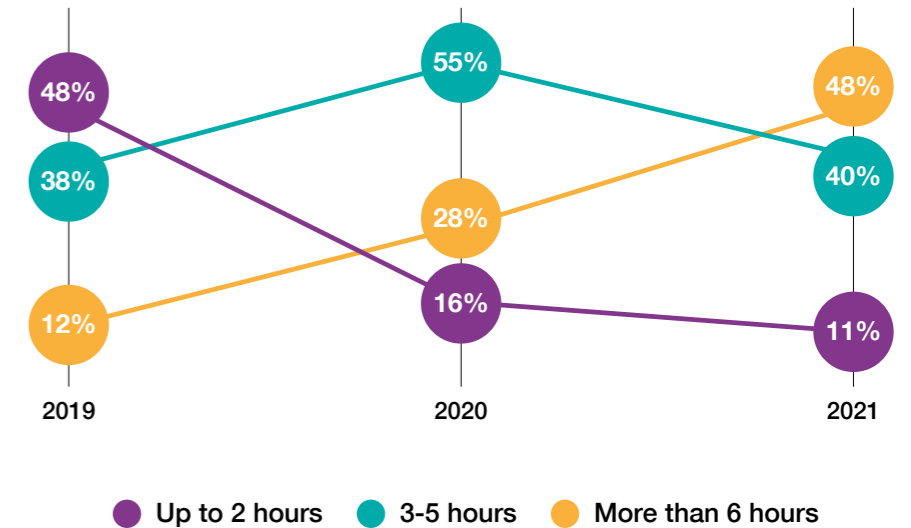


This year, almost half of the respondents already admit that they spend more than 6 hours a day online. In the previous edition of the survey, this answer was marked by 28% of respondents, and in 2019 only 12%. A similar trend, but this time a downward one, applies to the number of people declaring that they use the web for no more than 2 hours a day. As recently as in 2019, there were 48% of them, the following year only 16%, and now this indicator has fallen to just 11%. The number of people using the Internet for 3-5 hours remains at a similar level as in 2019, although compared to 2020, there are as many as 15 p.p. fewer of them.



The number of respondents spending more than 6 hours a day online is systematically increasing. There is a proportional decrease in the percentage of people who are online for up to 2 hours.

On average, how many hours a day do you use the Internet regardless of location? Please also consider mobile Internet.



Faster Internet, High Satisfaction and Higher Demands on the Network

More and more NEXERA Regions residents have faster Internet. Even though most of them are satisfied with the available connection, almost half of them plan to increase the Internet speed at home. This shows that the differences in bandwidth and network speed are noticeable to residents and important in order to carry out professional duties and daily errands online without any obstacles.

62% of residents have a fixed connection.

32% of residents have increased their Internet speed in the last year.

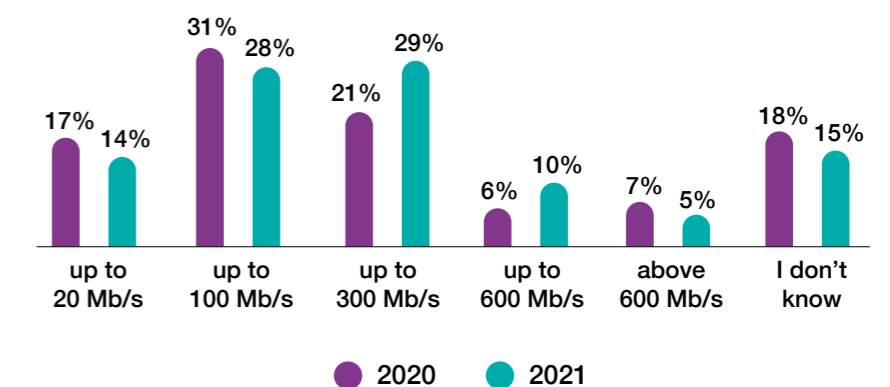
29% of residents have a mobile connection.

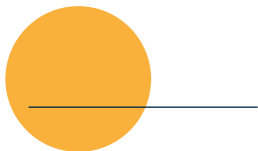
19% of respondents have no experience with slow Internet.

29% of residents have a connection with speeds between 100 and 300 Mb/s. This is the most frequently indicated answer, and the percentage of respondents who declared it increased by 8 p.p. compared to 2020. Slightly more people than a year ago also declared using the Internet with speeds between 300 and 600 Mb/s. A slight decrease of 3 p.p. can be observed for the lowest connection speeds, which means that they are less and less likely to meet Internet users' expectations.

More and more residents have increasingly faster Internet in homes.

What speed of Internet connection do you use at home?





The vast majority of those surveyed, 68%, are satisfied with the performance of their Internet at home. However, this percentage is steadily decreasing compared to previous years. In 2020, it was 75%, and in 2019, it was 82%. Despite the fact that most respondents are satisfied with their home connection, as many as 49% plan to increase its speed. Thus, it can be seen that the current parameters of Internet networks are slowly becoming insufficient in relation to the needs and expectations of residents related to their online lives.



More than 2/3 of respondents are satisfied with parameters of their connection, but almost half of those surveyed still plan to increase their Internet speed.

Are you satisfied with your household's current Internet access performance?



- Definitely not satisfied
- Rather dissatisfied
- Neither satisfied nor dissatisfied
- Rather satisfied
- Definitely satisfied

Do you plan to increase the speed of your current Internet connection at home in the next 12 months, assuming this would be technically possible?



- Definitely not
- Rather not
- I don't know yet
- Rather yes
- Definitely yes



Paweł Biarda,
Member of the Board, Commercial, NEXERA

“The coronavirus pandemic has resulted in a significant increase in demand for fast and efficient Internet. Widespread remote working, online learning, or efficient use of e-government and telemedicine would not be possible without access to a high-speed network. Fibre optic technology is becoming more and more popular, as it is currently the best possible solution, which is the only one that fully meets transfer speed expectations, both for downloading and uploading data. There is no doubt that the role of high-speed optical fibre will only grow in the coming years”.

E-services Are Becoming a Habit

Surveyed residents of the NEXERA Regions regularly use a range of online services that make everyday life easier and also provide rich experiences through modern entertainment.

According to the Statistics Poland, **49,5%** of Poles use e-banking services, **41,5%** listen to music on the Internet and the same number watch videos on platforms such as YouTube.

This year's NEXERA study confirms that the increased use of online services seen in the 2020 report was not a temporary anomaly, but may evolve into new habits for residents that will not disappear with the pandemic. As residents become accustomed to 4K videos, live streaming on social media and teleconferencing with colleagues and families, they will constantly need and increasingly use the opportunities that high-speed Internet provides.

Residents of the NEXERA Regions maintain a high level of use of online services. 94% of those surveyed use online banking, 91% pay their bills online, and 79% watch movies online.

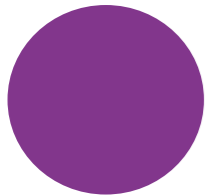
55% of residents in the NEXERA Regions report using VOD. Among VOD services, Netflix is by far the most popular, watched by **83%** of those who use VOD.

Adam Siennica,

Assistant Editor-in-Chief, naEKRANIE.pl

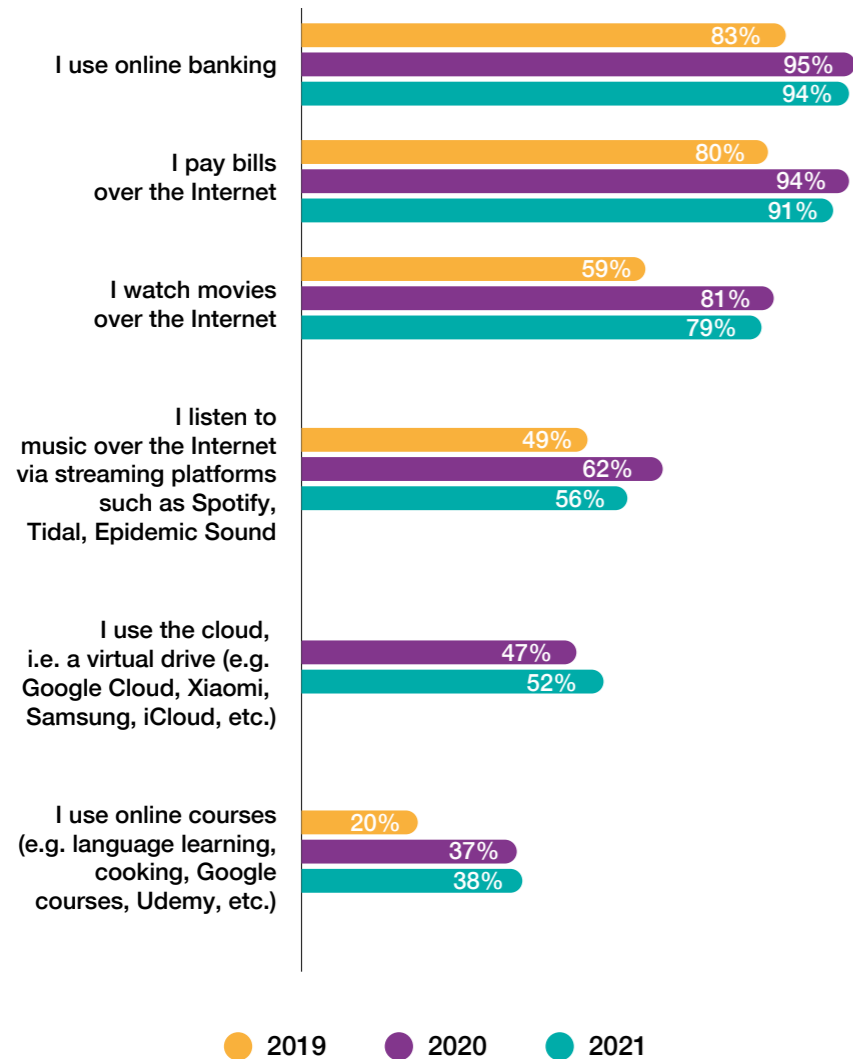
“ We're spending more and more time online, so the growing popularity of streaming platforms isn't particularly surprising either. The coronavirus pandemic has actually accelerated the process of slowly moving away from TV and partly cinema to VOD. This process has been going on for years, but only gained momentum from March 2020 onwards, when subscriptions to Netflix and other platforms grew ever faster globally. A year of pandemic reality has allowed people to get used to and also, in the case of at least the older generation, familiarise themselves with technological innovations, led by the use of platforms. This trend is most evident in Netflix, which has the most diverse content compared to its competitors. In the past, TV was on, today VOD is the first choice of viewers. This change in habits will continue until it reaches a balance with interest in other topics, such as returning to cinemas after a pandemic. I am convinced that the situation will never return to the result before March 2020 and we can prepare for a new reality”.

The changes in comparison to last year's survey in most categories are insignificant, which may mean that both everyday duties and leisure time activities have settled online for good.



Use of e-services remains high and is becoming a habit for residents.

Which of the following services do you use online?
Please consider services you use regularly.



There Is a Growing Need to Establish Social Relationships via the Internet

Most residents use social media and are also more likely to make friends online. An increasing number of respondents also play games online together with other people. The Internet helps us to satisfy the need to be close to another person. Increased online activity in this respect may partly be due to restrictions in the real world.

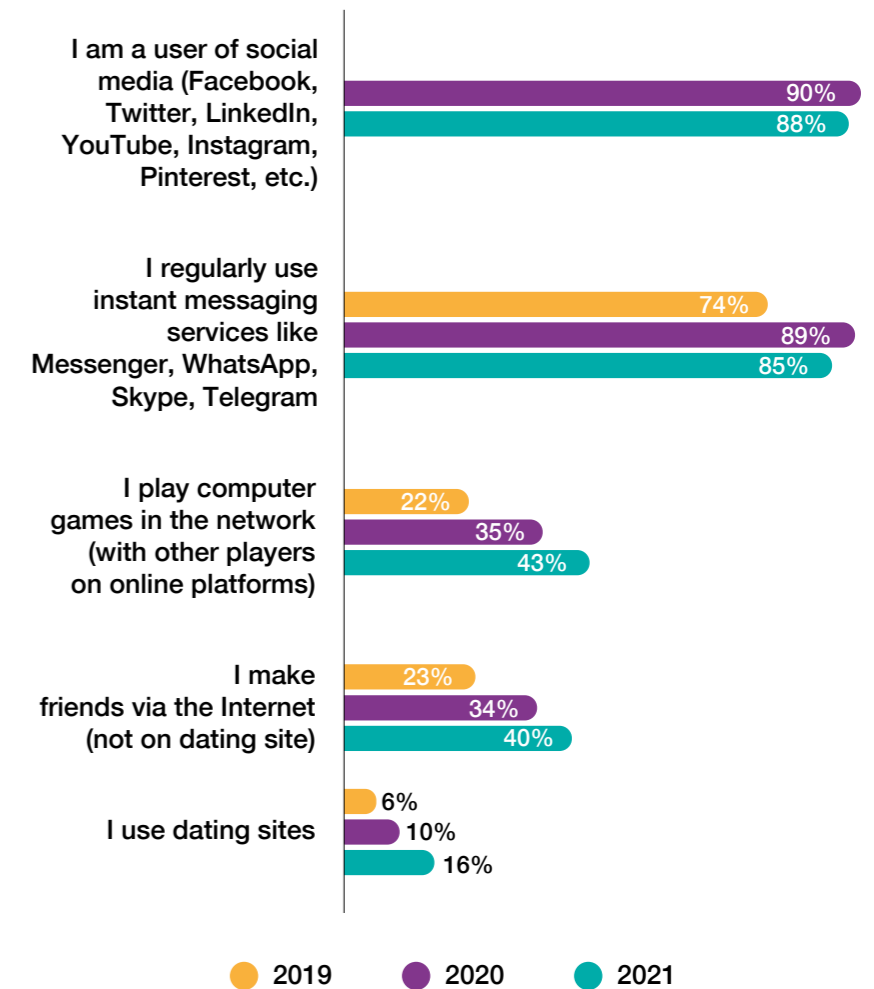


Using dating sites increased from 10% in 2020 to 16% in 2021, making friends (outside of dating sites) from 34% to 40%, and playing games online from 35% to 43%.

It is easy to guess that these activities are more popular among younger people. The age limit beyond which the percentage of their users decreases is 50.

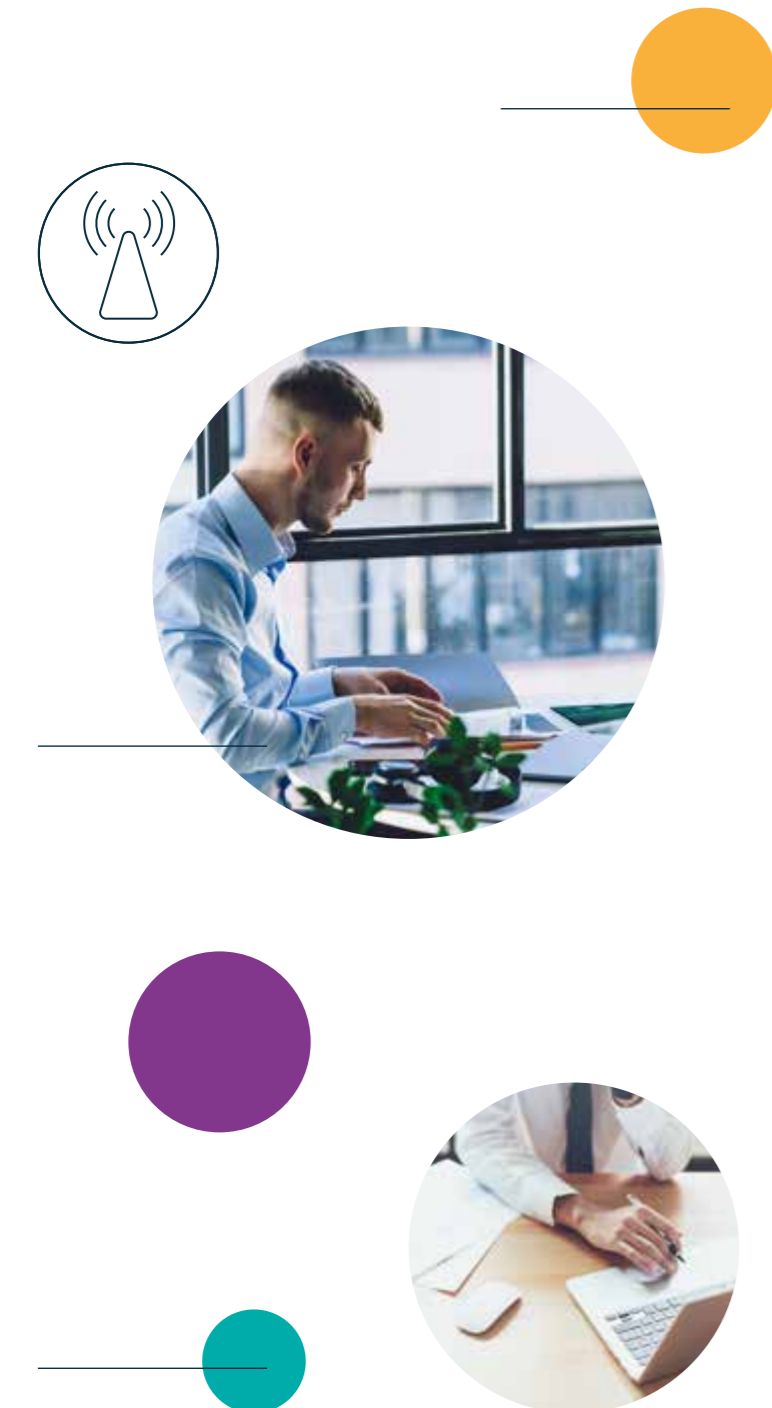
More and more residents are using e-services to establish social relationships.

Which of the following services do you use online?
Please think of the services you use regularly.



Have e-Offices Lived up to Residents' Expectations?

Residents are increasingly willing to use e-government services, but at the same time they are not entirely sure whether they can handle more matters online than at the office counter.

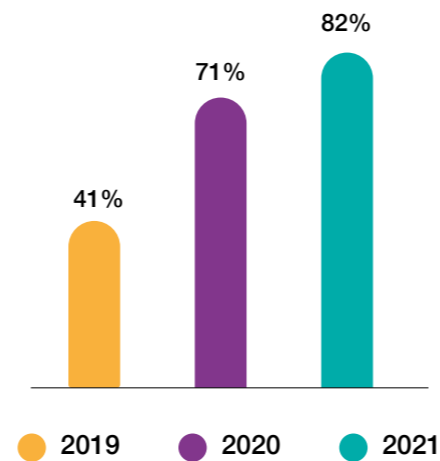


As a consequence of the pandemic, e-government in Poland has grown rapidly. According to the Chancellery of the Prime Minister, 1.4 million letters will be sent to Polish offices electronically in 2020, which is 0.9 million more than in 2019. More than 4.1 million trusted profiles were set up, accounting for 47% of all active profiles.

Among residents of the NEXERA Regions, the use of the Internet for official matters increased particularly markedly between 2019 and 2020, from 41% to 71%. 82% of respondents now say they use this type of service, an increase of 11 p.p. compared to 2020.

The percentage of residents who deal with official matters over the Internet is systematically increasing.

I take care of official business over the Internet.



Among those who declared that they have dealt with official matters online, the majority, i.e. 39%, did so 3-4 times over the past year. Only slightly less, 31%, used this option 5 or more times.

Over the past year residents have usually used the e-office several times each.

During the past year, how many times have you handled official matters via the Internet?



● Never ● 1-2 times ● 3-4 times ● 5 times or more



However, the opinions on handling official matters via the Internet are to some extent ambiguous. On the one hand, as many as 67% of respondents agree that dealing with issues in an office takes far too long, and 62% admit that they would prefer to deal with official issues online. On the other hand, only 50% of the respondents believe that more issues will be handled online than in a fixed office, and 35% do not have a definite opinion on this issue. Perhaps in the opinion of some respondents the e-office offer is still far from expectations?



Residents think that using e-government is more convenient, but are not sure whether they can handle more matters online than in person.

To what extent do you agree with the following statements?

Dealing with issues in person in an office take far too long:



I would prefer to handle my official matters over the Internet:



I am able to handle more official matters by doing it over the Internet than in person:



- I strongly disagree
- I tend to disagree
- Neither agree nor disagree
- I tend to agree
- I strongly agree

Online Shopping is Quicker But Not Everyone Prefers It that Way

Residents of the NEXERA Regions agree that online shopping takes less time than stationary shopping. At the same time, some people prefer shopping in malls.

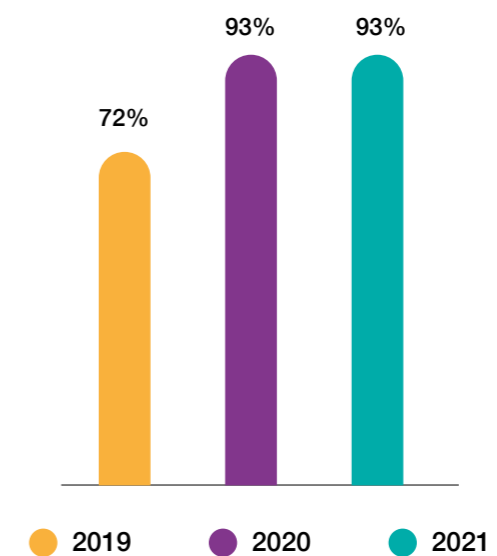


In recent years, the e-commerce market has been developing dynamically in Poland. According to a study by Gemius agency, from 2018 to 2020 the percentage of Internet users shopping online increased from 56% to 73%. The most popular e-commerce platform in Poland, Allegro, recorded a 61% year-on-year increase in net revenue in Q4 2020, and a 54% increase for the whole of 2020. The management assumes that in 2021 Allegro Group's net revenue will increase by more than 20% year-on-year.

Online shopping is one of the most used e-services among residents of the NEXERA Regions. Since last year, the percentage of respondents who say they shop online has remained at 93%.

Percentage of residents who shop online remains high.

I shop online:



Residents of the NEXERA Regions shop online regularly. Among those who use the web to buy various products, 22% place orders once a week or more often, and another 30% once every fortnight. The largest group of respondents, 31%, buy online once a month.

More than half of residents shop online at least once every 2 weeks.

How often do you shop online?



- Less often
- Once every 2-3 months
- Once a month
- Once every 2 weeks
- Once a week or more

The vast majority of NEXERA Regions residents surveyed, 68%, agree that online shopping is more convenient and saves time. At the same time, only 41% admit that they prefer online shopping to shopping in malls or shops, and 24% explicitly state that they do not prefer online shopping. Some people probably miss the social aspect of shopping, which is why they prefer to go to a gallery or shop, but it is worth noting that as many as 36% of respondents have no opinion on this issue.



Compared to 2020, the proportion of respondents who think that outside the home the Internet should be available in shops has increased from 12 to 17%, and from 20 to 24% that it should be available in service outlets.

Residents find it more convenient to shop online. Although some still prefer stationary shopping.

To what extent do you agree with the following statements?

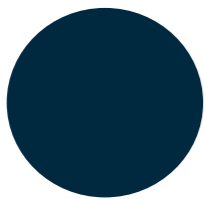
Internet shopping is more convenient and saves time:



I prefer shopping on the Internet to shopping in malls or regular shops:



- I strongly disagree
- I tend to disagree
- Neither agree nor disagree
- I tend to agree
- I strongly agree



Internet for Health

The majority of residents in the NEXERA Regions have used at least one online medical consultation in the past year and believe that Internet should be available in medical facilities.

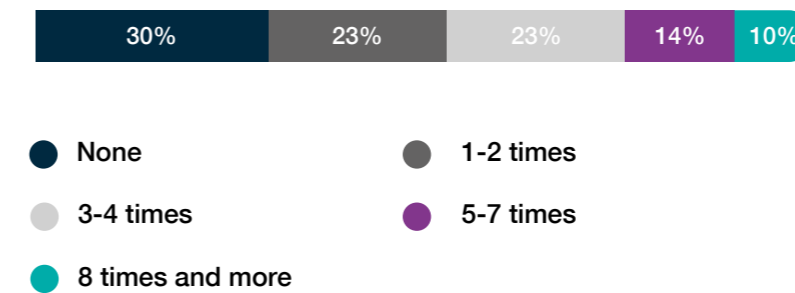
In 2020 and 2021, sanitary restrictions on the operation of health care facilities made it necessary to move some medical appointments online. Poles quickly got used to the changes. According to the estimates of the National Health Fund (NFZ), primary healthcare facilities across Poland provided several million pieces of advice per month in 2020, of which between about 1/4 and about 1/3 were remote. In almost 92% of cases, online medical consultation solved the problem with which the patient reported to the doctor.

The most frequently indicated places where the Internet should be available outside the home are schools and universities, 69%, medical institutions, 66%, and offices, 62%.

70% of NEXERA Regions residents surveyed have used at least one online medical consultation in the past year. 23% of respondents opted for remote advice 1-2 times. The same number spoke to a doctor by phone or Skype 3-4 times. Those using online medical consultations more often are in the minority. 30% of respondents have not used a remote doctor's appointment even once.

More than 2/3 of those surveyed have used at least one online medical consultation during the year.

How many times have you consulted a medical doctor by phone/Skype over the past 12 months. Please, indicate consultation for yourself and/or your child, if appropriate.



Anna Bartusiak-Chatys,
Cardiologist

“The coronavirus pandemic has caused a shift to remote medicine in the Polish national health service. Before the pandemic, only holders of commercial medical service packages offered by large medical service providers had access to online consultations. This has helped medical professionals maintain interactions with patients whenever physical contact has to be minimised due to epidemiological risks. GPs and consultants are able to continue treating patients without health risks to patients and medical staff. The key advantage of this approach is shorter waiting times for patients, which is particularly critical in emergency situations. However, virtual interactions with patients present challenges to doctors in terms of diagnosing. It is harder to assess the health status of the patient and identify all symptoms. A stable and fast Internet connection is critical for an effective real-time interview of the patient that may save his or her health or life. We hope that progress in technology will help us build an even more efficient and reliable remote communication system with patients”.

Working from Home Still Popular but Employees Less Enthusiastic

Half of the people surveyed in the NEXERA Regions had experience of remote working behind them. Enthusiasm for it still remains high, although it has declined markedly over the year.

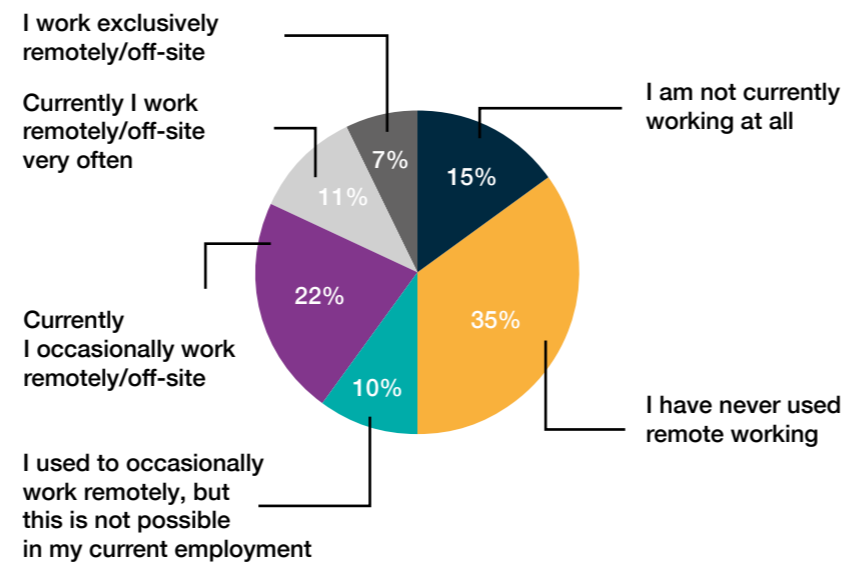


Research by the Statistics Poland shows that remote working is far more popular in some industries than in others. In the information and communication industry, more than 50% of all employees were working from home at the end of Q3 2020. In the case of professional scientific and technical activities, as well as financial and insurance, one in four employees worked remotely.

As many as half of the NEXERA Regions residents surveyed have had experience working remotely in their careers. Currently, 40% of respondents work this way. However, it is worth noting that 35% of respondents have never had the opportunity to work off-site. As many as 15% of respondents were unemployed at the time of the survey.

Half of the respondents have experience in remote working.

Do you have experience of remote working?



Among respondents who declared that they have experience in remote work, as many as 35% work partly at home and partly in the company. About 40% fulfil their work duties mostly at home and exceptionally at the company or in reverse proportions. Age is a factor that largely influences how often residents work from home. In the 18-25 age group, as many as 43% of respondents work exclusively off-site.

More than 1/3 of respondents who declare to work remotely work in a hybrid mode.

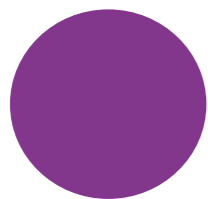
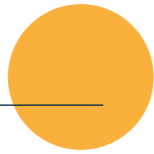
Dimension of remote working for those using it:



- I work remotely full-time (exclusively at home, off-site)
- As a rule I work from home, only in exceptional situations I work in the company
- I work alternate days, some days I work from home, some days I work in the company
- I generally work in the company, only in exceptional situations I work from home

This year's research showed that the enthusiasm for remote working seen in 2020 has dimmed somewhat. This may be due to several influencing reasons. Experts point to the overload of meetings and online work with a reduction of real collegial and social contacts, as well as additional household and child-rearing responsibilities caused by the closure of schools. Still, 52% of respondents would like to work remotely, but there has been a drop of as much as 15 p.p. compared to last year. At the same time, the percentage of respondents who would not like to work from home has increased from 17% to 26%.





Still more than half of those surveyed would like to work remotely, but that's definitely down from 2020.

If I had the opportunity (now or in the future) I would like to work remotely:

2020:



2021:



- Strongly disagree
- Neither agree nor disagree
- I strongly agree
- I don't think I agree
- I tend to agree



Radosław Szafranski,
Country Head of PageGroup Poland

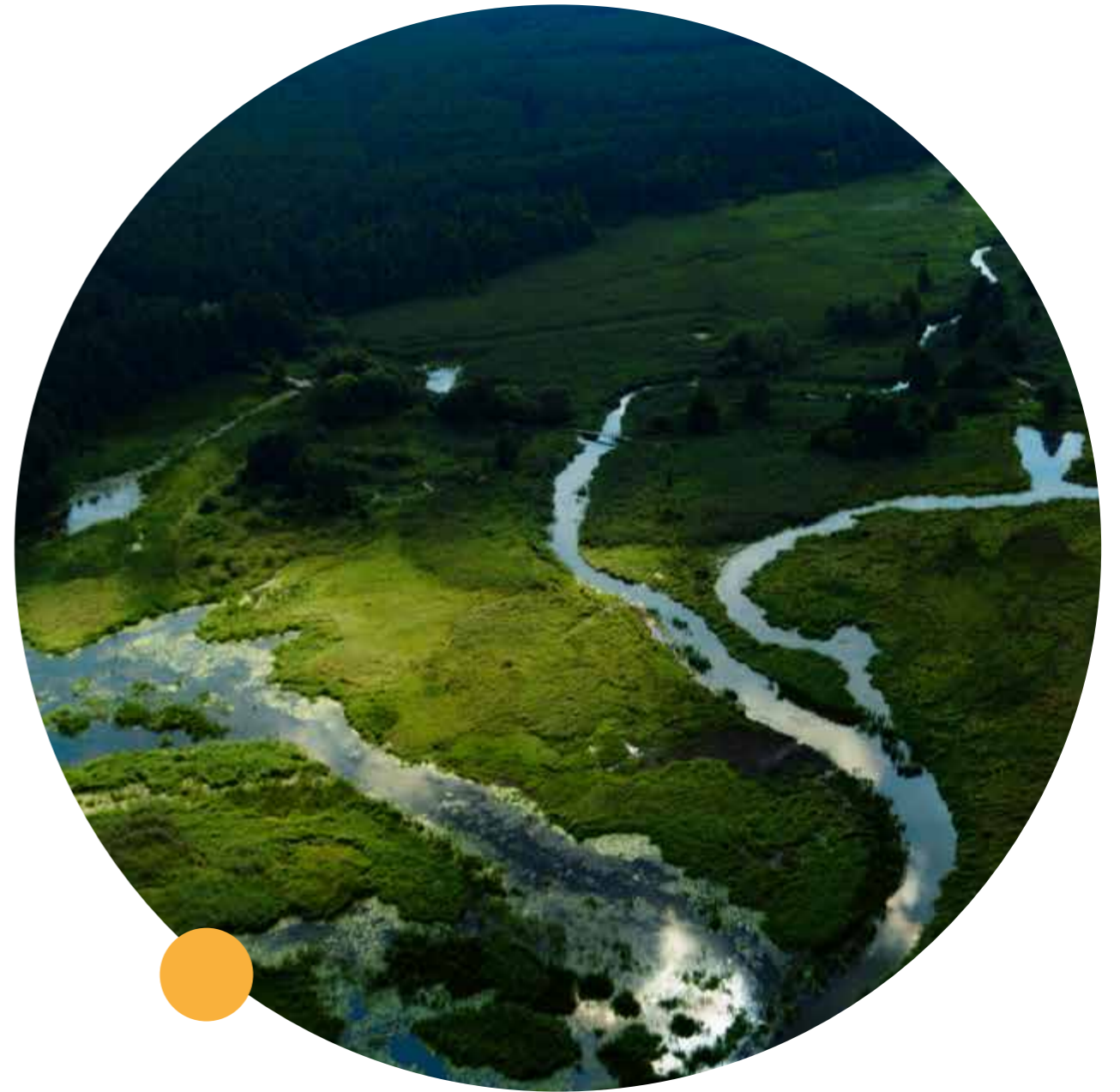
“Homeworking has opened up brand new opportunities before employers and job seekers. Geography is no longer an issue for the benefit of both employees and job seekers alike. People from more remote communities may now apply for jobs in large cities without having to move home. Companies located away from major cities may recruit employees from across the country, which gives them an additional competitive edge in the labour market and access to unique talent which is not always locally available. This is definitely creating a level playing field for prospective employees and employers who gain an unlimited access to the talent pool and can grow their business and compete in larger geographies”.



04



**Companies with High-speed
Internet Can Compete
Locally and Globally**



Companies with High-speed Internet Can Compete Locally and Globally

More and more companies in the NEXERA Regions have invested in faster Internet. This is probably why they are satisfied with their connection and are experiencing fewer and fewer problems resulting from slow Internet. Through the web, they mostly use social media, as well as sales platforms and cloud solutions. As the use of innovative IT solutions increases, so does their competitiveness in an increasingly digital business environment. However, probably due to financial difficulties, the number of companies that have given up on Internet access has also increased.

All

large companies have a permanent Internet connection. Among micro-businesses, this percentage is 69%.

2/3

of companies with a fixed connection use optical fibre. Among micro-enterprises this percentage is slightly lower, i.e. 64%, and among the largest enterprises, 92%.

84%

of companies are satisfied with the link parameters.

17%

of companies in the NEXERA Regions do not have access to the Internet. This is a year-on-year increase of 11 p.p.

2%

of employers have an online business, 44% of businesses are partly based online.

65%

of companies have no experience with a slow Internet connection.

42%

of companies use a connection speed between 100 and 300 Mb/s.

Faster Internet Opens up New Opportunities

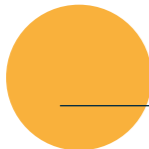
Companies in the NEXERA Regions are benefiting from increasingly faster Internet. This is probably why they report fewer and fewer problems resulting from low bandwidth, and the vast majority are satisfied with the parameters of the connection.



Access to fast and reliable Internet is a basic tool and condition for companies to participate in the digital economy, which is described by researchers from the Digital Economy Lab of the University of Warsaw. Companies in NEXERA Regions meet this fundamental requirement and thanks to that they can join the race with competitors not only in Poland, but also in the region of Europe and even in the world.

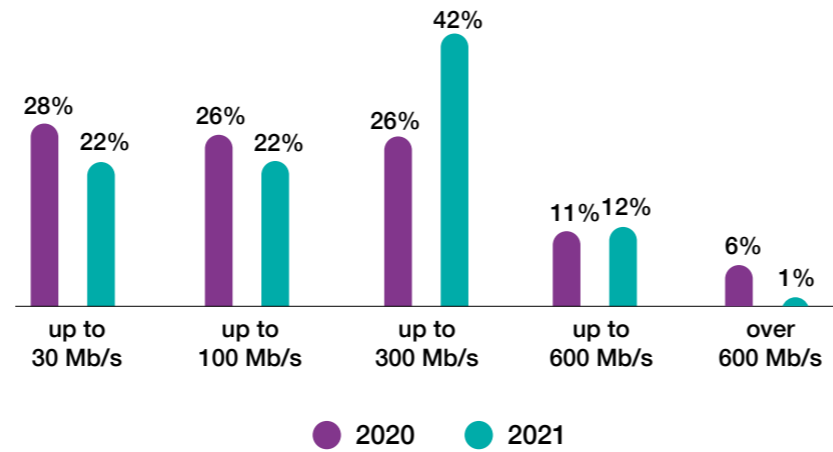
Statistics Poland data for 2020 shows that among companies employing 10 people and more: **19%** have a fixed line with speed of less than 30 Mb/s, **31%** between 30 and 100 Mb/s, **28%** between 100 and 500 Mb/s, and **22%** even faster.

Between 2020 and 2021, the dominant fixed connection speed has clearly changed among companies in the NEXERA Regions. Today, companies most often report having Internet speeds between 100 and 300 Mb/s. The percentage of companies that use a connection with this speed has increased by 16 p.p.



Increasingly more and more companies with Internet speeds of up to 300 Mb/s.

Which broadband speed do you use in your company?

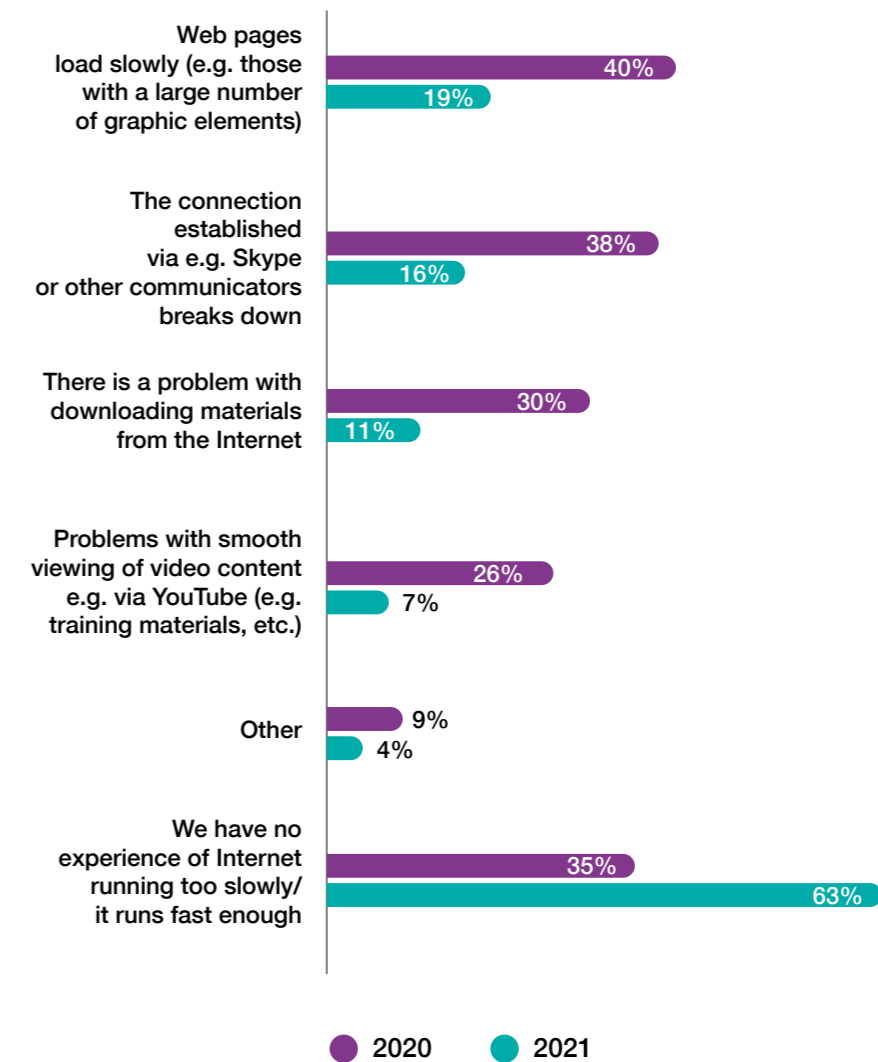


Companies in the NEXERA Regions declare problems resulting from slow Internet much less frequently than in 2020. Decreases in individual cases reach up to several dozen percentage points. Only in one category have there been increases: significantly more companies do not experience problems caused by slow Internet.



Companies are increasingly less likely to report problems with slow Internet, and almost 2/3 companies do not perceive any difficulties.

What kind of problems caused by too slow Internet in your company are most bothersome for you?



Statistics Poland data for 2020 shows that among companies employing **10 people or more** and using the Internet, **78%** are satisfied with their connection speed.



User satisfaction is linked to bandwidth capacity. In the case of companies, it increased by 10 p.p. year-on-year, and currently 84% of companies are satisfied with the Internet speed. At the same time, the percentage of companies dissatisfied with network access has decreased by 7 p.p. and currently amounts to 8%.

Over 3/4 of companies are satisfied with the speed of the available Internet. The percentage of those dissatisfied is decreasing.

Are you satisfied with the performance of your company's current main Internet access?

2020:



2021:



- Strongly dissatisfied
- Rather dissatisfied
- Neither satisfied nor dissatisfied
- Rather satisfied
- Definitely satisfied



Paweł Hordyński,
Member of the Board, Financial, NEXERA

“ High-speed Internet is not only a tool that facilitates communication and online work but it offers companies access to data, interaction with business partners from all over the world and an opportunity to participate in training and conferences without business travel. The online presence of companies is critical for both large and small businesses. The Internet is now the first source of information and offers access to a large audience. The pandemic has questioned the continued existence of some businesses or it has become an opportunity to diversify and increase profits significantly for other. Entrepreneurs who have demonstrated agility and innovation have been able to use digitisation to their advantage”.



E-services for Innovation and Competitiveness

Companies most often use social media and sales platforms online. They relatively frequently admit using cloud solutions. The Internet enables the use of innovative IT solutions that improve competitiveness.

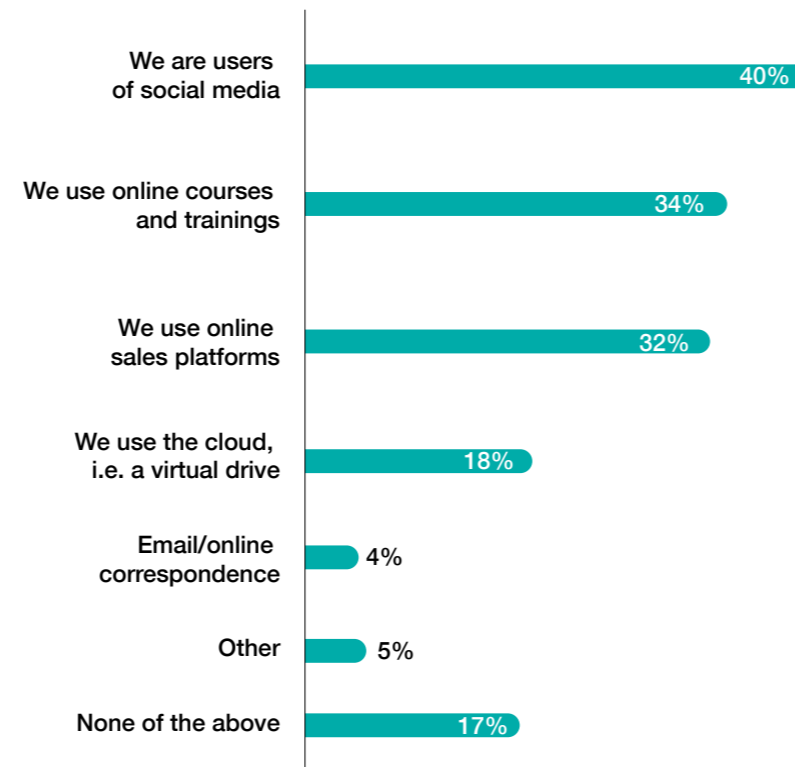


According to Statistics Poland data for 2020, among companies employing **10 or more people, one in four (25%)** uses cloud solutions.

The surveyed representatives of companies from the NEXERA Regions most often declare using social media via the Internet. High among the most frequently indicated e-services is the use of the offer of sales platforms, as well as cloud solutions. The aforementioned e-services are important indicators in the European The Digital Economy and Society Index (DESI), which determines digital sophistication and competitiveness of, among others, companies. As the use of innovative IT solutions increases, so does their competitiveness in an increasingly digital business environment.

Via Internet firms most often use social media.

Which of the following services do you use in your company via the Internet?



The NEXERA survey shows that almost all companies using the Internet have and make payments via a company bank account and payment card. However, the e-invoicing system is used in just over half of the surveyed companies.

The latest available Statistics Poland data (for 2019) shows that among companies employing **10 people or more, 68%** used e-invoicing.

Electronic payments are commonplace. More than half of companies use e-invoicing.

Do you make payments electronically, through a company bank account or with a company payment card?



Do you use e-invoicing in your company?



● Yes ● No





Dr. Katarzyna Śledziewska,
Dr. Renata Włoch,
University of Warsaw, DELab

Fot. Limonca Iwonka

” The pandemic reinforces digitisation trends in business. Industries heavily dependent on the web, such as e-commerce, have grown precipitously over the last twelve months. It applies to products and services which can be much more personal based on data and algorithms. Companies that had used a limited number of electronic tools, e.g. only to manage their websites, had to go through an accelerated digitisation process. For example, the survey conducted by University of Warsaw DELab among financial institutions suggests that digitisation has rapidly accelerated in the industry and home working was a test of digital maturity. Companies in NEXERA Regions are part of the digitisation mega-trend yet reveal some worrying symptoms. Higher speed connectivity and fibre optic will definitely boost digital rivalry among businesses. Failure to secure connectivity by smaller companies and a high percentage of traditional forms of business are hardly optimistic in the context of digital future. Authors of the Digital Economy and Society Index are pointing out that Poland reported rather troublesome businesses digitisation statistics before the pandemic”.



Online Business Still Niche But Companies Use Web in Daily Operations

In the NEXERA Regions, running a fully web-based business still remains niche. In contrast, for almost half of the companies, part of their business requires the use of the web. In the meantime, the Internet and related business trends allow for a competitive advantage.

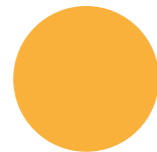
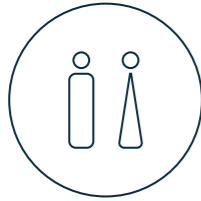
In their reports, Digital Economy Lab analysts from the University of Warsaw point out that thanks to the use of the Internet and online platforms, companies gain access to national, regional and even global markets without incurring huge expenses that would be necessary in the case of traditional business expansion. However, this does not mean a complete absence of costs.

“Digital business also requires considerable investment in technology, organisational changes, digital competences of employees and the development of new business models” – Katarzyna Śledziewska and Renata Włoch from DELab UW.



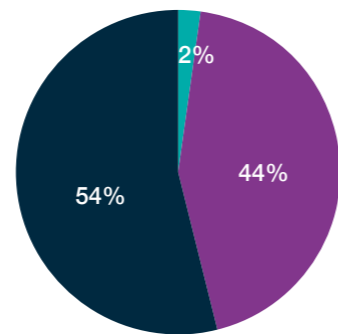
In NEXERA Regions, a very small percentage of companies have online activities that are entirely based on the use of the Internet, such as e-commerce or IT. When asked why they do not use the Internet in their company, business representatives most often, 97% of indications, answer that they do not need the web to run their business.





Slightly less than 50% of companies conduct business partly online.

Is your business a typical online business that depends entirely on the Internet?



- Yes, our business is a typical online business, it is fully dependent on the Internet
- We run a traditional business, but part of our business is Internet-based
- We run a traditional business and do not conduct any business on the Internet

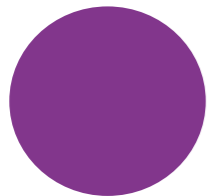
Karol Gębka,
Commercial Director, Świętokrzyska Farm

“ Our company operates in the Świętokrzyskie Voivodship, including areas outside the main clusters of buildings where access to fast and reliable Internet required unconventional solutions. We feel strongly attached to the Świętokrzyskie Voivodship. With a large number of clients and business partners and an online store we run, a reliable Internet network has for a long time been at the core of day-to-day business. Like anyone else, we have experienced occasional connection issues, yet we have quickly fixed them. When we used mobile Internet we would experience slower speeds in bad weather. The area is undulating which may have caused problems with signal reception. Since last January, we have used a radio link which is nearly as effective as fibre. Yet we are looking forward to the NEXERA fibre, which is already there in nearby communities. We are hoping the project will be implemented efficiently for us to be able to use the connectivity in about 12 months. We run a certified farm in the Świętokrzyskie Voivodship, we grow over 30 organic fruits and vegetables, and produce over 70 products in our own processing facility. We work with retail chains and other customers, we run an online store – it doubled its revenue last year. Nearly all customer and business partner orders are processed online. We are one of Poland largest companies to offer fresh and processed organic fruit and vegetables but we are feel strongly attached to the Świętokrzyskie Voivodship and it is here we want to grow our business. A reliable high-speed Internet is and will be the lifeline for our business”.



Small Businesses Increasingly Less Online

In the NEXERA Regions, the percentage of companies that do not have Internet has definitely increased compared to 2020. This problem practically affects only the smallest workplaces. It may be due to spending constraints, related to the pandemic, but if this trend were to continue, it will threaten the competitiveness of these companies.

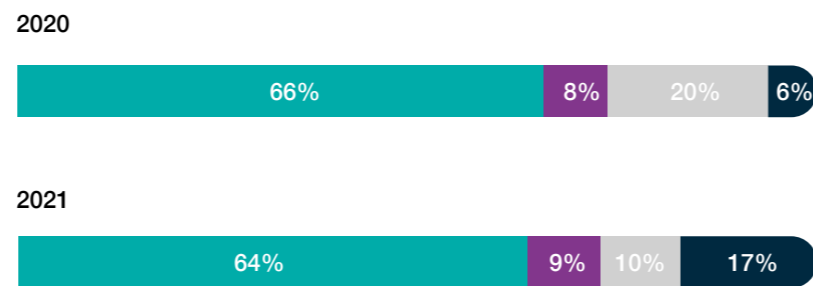


The abandonment of Internet access by companies contradicts global trends in the area of business development. Researchers from the interdisciplinary Digital Economy Lab at the University of Warsaw describe the directions in which the most innovative companies and the global economy are developing as the “digital economy”. The basic condition and tool for taking advantage of development opportunities opened up by the digital economy is the use of the Internet. This applies not only to large corporations, but also to smaller companies, as the Internet removes many physical barriers to their development.

There have been big changes in the companies in the NEXERA Regions compared to 2020 in terms of on-site Internet access. There has been virtually no change in the percentage of companies with a fixed wired or wireless connection. In contrast, far fewer companies report using mobile Internet on their phones, and a larger percentage have given up on web access altogether. Thus, it can be seen that entrepreneurs who used mobile Internet in 2020 have abandoned this option in 2021.

The percentage of companies without access to the Internet.

Does your company use Internet access?



- Yes, we have a FIXED WIRED Internet connection in the company
- Yes, we have a FIXED RADIO Internet connection in the company
- Yes, we use mobile Internet via mobile telephony
- No, we do not have access to the Internet at all in the company

Not all companies chose to go without Internet access. The key variable here was the size of the company. Practically only micro and small enterprises currently do not have access to the net. It is possible that the smallest entities were cutting expenses that were not necessary for the company's operation and gave up the connection in the first place.

66% of companies with a fixed connection use optical fibre. Among micro-enterprises, this percentage is 64%, and among the largest enterprises it is 92%.

Micro and small companies have given up access to the Internet.

Does your company use Internet access?

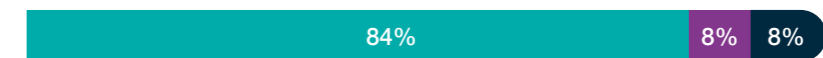
251 employees and more



51-250 employees



10-50 employees

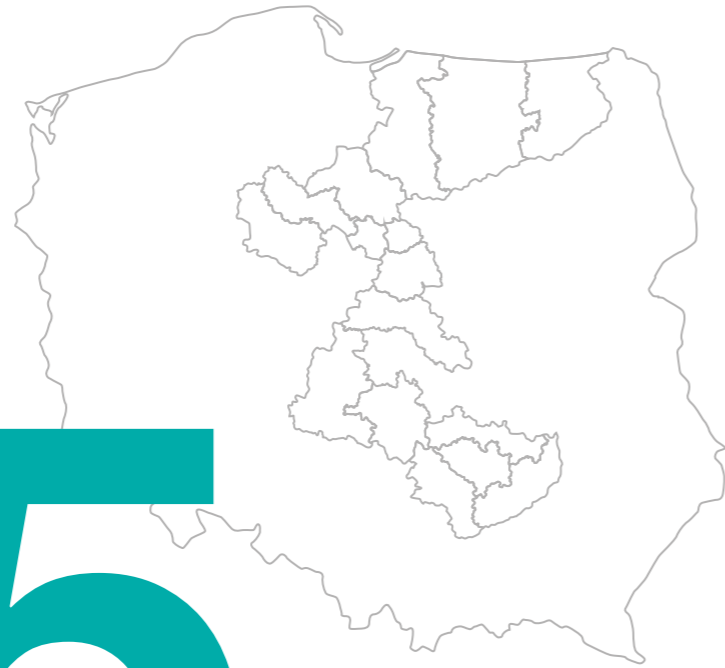


Up to 9 employees



- Yes, we have a FIXED WIRED Internet connection in the company
- Yes, we have a FIXED RADIO Internet connection in the company
- Yes, we use mobile Internet via mobile telephony
- No, we do not have access to the Internet at all in the company

05



High-speed Internet as a Basic Tool for Distance Education



High-speed Internet as a Basic Tool for Distance Education

Fast and stable Internet is becoming increasingly important in education, as it ensures uninterrupted transmission during videoconferences. Teachers also benefit from other opportunities provided by a fast connection. The vast majority of schools have electronic journals and the Librus system. Teachers also improve their qualifications thanks to online training. Still more than half of the teachers are satisfied with the functioning of the Internet at school, but compared to last year, there are slightly fewer of them. One of the reasons for this may be the increasingly frequently declared problems with broken video connections.



2 out of 3

teachers believe that fibre optics opens up new learning opportunities.

According to
52%

of teachers, video messaging is now a key application of high-speed Internet in education.

42%

of teachers participate in online courses. This is the most frequently indicated way of improving competences.

9 out of 10

teachers have the possibility of electronic contact with parents of their students via e-mail or Librus type applications.

9 out of 10

teachers declare that their school has an electronic diary.

56%

of teachers are satisfied with the Internet at school. Last year it was 61%.

45%

of teachers point out that due to slow Internet, connections are broken when using instant messaging. This problem has started to bother teachers the most over the last year.

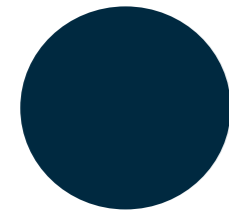
Video Messaging and High-speed Internet Are Key to Learning

The importance of video communicators in teaching is growing and 2 out of 3 teachers believe that fibre optics opens up new educational opportunities. High-speed Internet is particularly important for Polish students and teachers because in our country remote education will take longer in 2020 than in other countries in Europe.



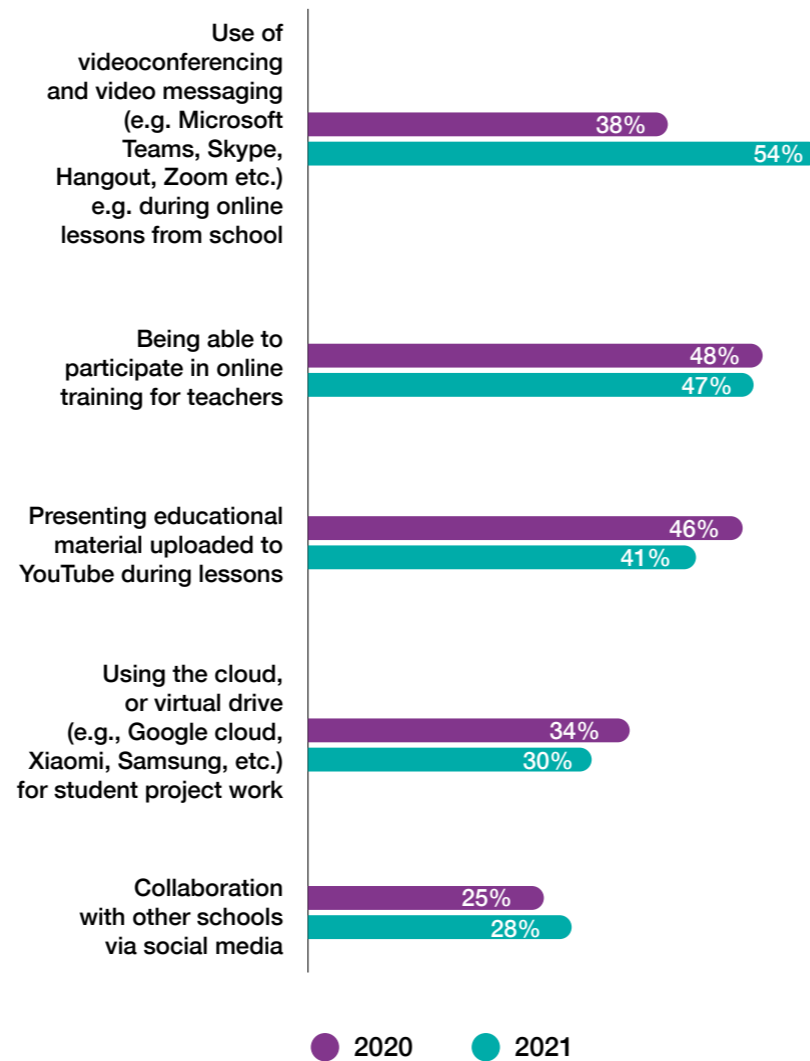
According to the OECD, in 2020, Polish primary schools were closed the longest in Europe due to the pandemic, almost **80 school days**. In secondary schools, on the other hand, remote teaching lasted more than **100 school days**, the second longest after Slovakia. The average for OECD countries was around **60 school days** for both types of school.

For more than half of the teachers in the NEXERA Regions, the use of video messaging is a key use for high-speed Internet at school. Last year, only 38% of those surveyed expressed this opinion. This means that the role of video messaging in teaching is increasing. All the more so as the other uses of high-speed Internet have either remained at a similar level or are indicated by educators less frequently.



The importance of video messaging in teaching is growing. According to teachers, this is now a key application of high-speed Internet in education.

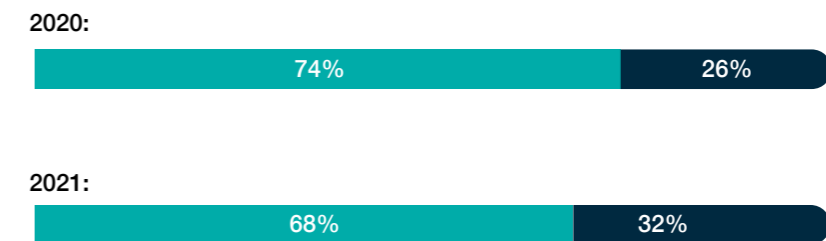
Assuming that the Internet is absolutely stable and very fast, in which areas (school work) would it be most helpful? Please select two of these most important areas:



2 out of 3 teachers in the NEXERA Regions agree with the statement that the connection of fibre optics enables the school to use educational tools that were not possible before. Last year slightly more educators subscribed to this statement, but it is still the vast majority. The everyday nature of remote education has forced teachers and students to incorporate educational tools that they have not used as much before. The Digital Centre survey shows that YouTube has become the main source of materials in remote education (84% of indications). 75% of teachers positively evaluate MS Teams as a platform for remote education and 64% have a good opinion about live online lessons (e.g. via Zoom or Skype).

Two out of three of teachers believe that fibre optics opens up new educational opportunities.

In your opinion, does the connection to fibre optic enable the school to use educational tools which were not possible before?



● Yes ● No



Paweł Biarda,
Member of the Board, Commercial, NEXERA

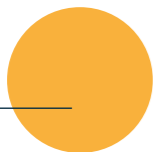
“The constraints imposed on schools during the coronavirus pandemic have put an enormous strain on the entire education system. The key question is whether we have succeeded in delivering quality education online. The pandemic has unveiled the importance of Internet connectivity in modern education and has exposed a number of deficits which had not been felt so painful before. Limited access to computer hardware (PCs and laptops) among children and teachers and unreliable links which could not support several home users' uninterrupted participation in online video conferences and remote classes are but an example of many challenges to online education. We have noticed that not all teachers and children have the skills to operate online messaging platforms, which has been an additional challenge to effective classes. We have learned a great deal over this period and the most important is that we should apply the lessons learned to adapt Polish schools, teachers and students to digital education. We know only too well that a brick and mortar school cannot be transferred online but we have also learned that access to ICT infrastructure may open up new opportunities for education that can take to a higher level”.

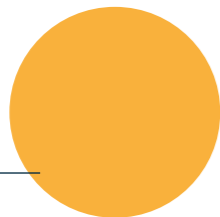
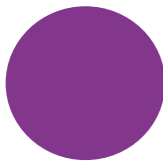
Online Connection Dropouts Increasingly Bothering Teachers

Connection breakdowns while using instant messaging are the problem that has started to bother teachers the most over the past year. This may be one of the reasons why educators' satisfaction with the available Internet is slightly lower than a year ago.

In the survey of the Digital Centre, teachers among the problems of remote education related to technology, mentioned most often the lack of equipment of students (87% of indications) and the problem with the Internet connection (58%).

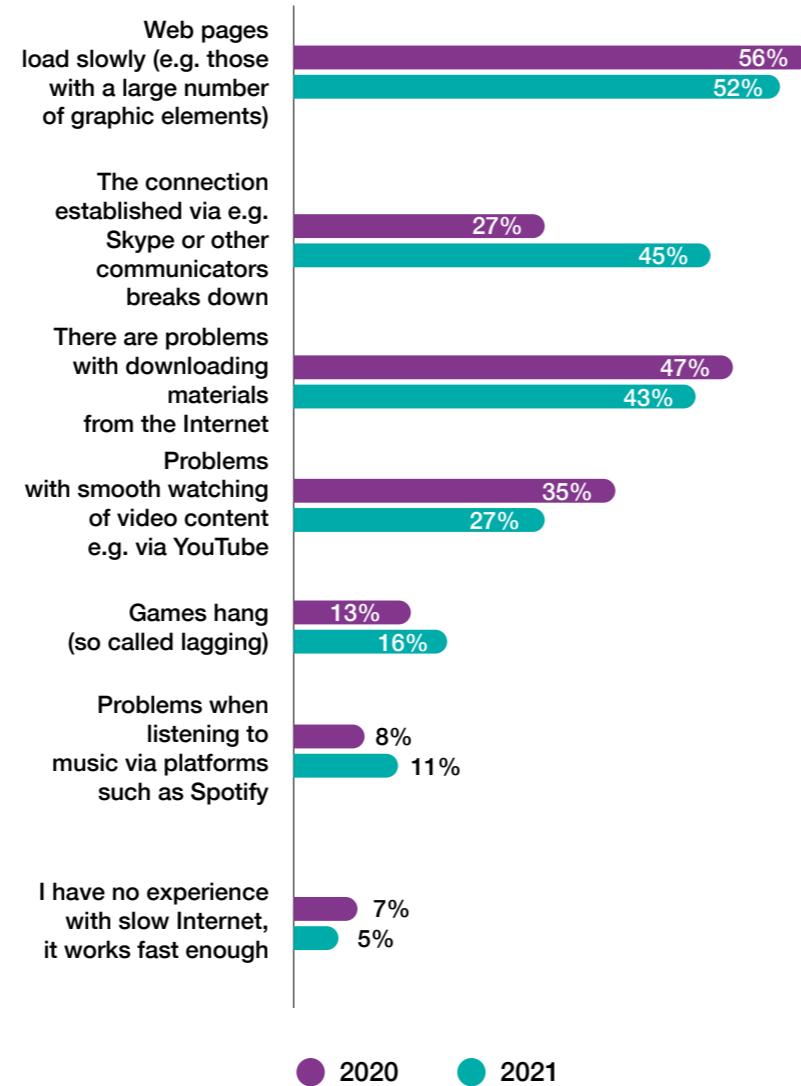
Half of the teachers in the NEXERA Regions indicate, like a year ago, loading websites with a lot of graphic elements as the main problem resulting from slow Internet. The second problem is connection breakdown when using instant messengers. Now 45% of teachers complain about it, while a year ago it was only 27%. The greater prevalence of problems with instant messaging connections is most probably a consequence of remote education and the much more intensive use of the Internet for learning, e.g. in online lessons.





Disconnection while using instant messaging is a problem that over the past year has started to bother teachers.

What kind of problems caused by too slow Internet are most bothersome for you at school? Please choose the problems you find most bothersome from the list below:

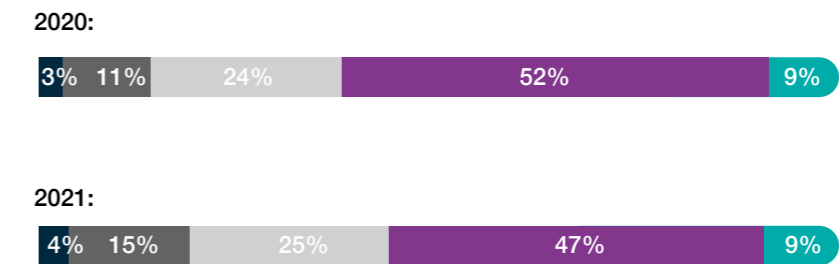


Most of teachers (56%) are satisfied with the Internet access at school. Every 5th respondent is “definitely” or “rather” dissatisfied. Compared to 2020, slightly fewer teachers declare satisfaction and slightly more have a critical attitude. It is possible that one of the reasons for this change may be the increasingly often indicated problem of broken connections when using instant messaging.



More than half of teachers are satisfied with the Internet in their school, but slightly less compared to last year.

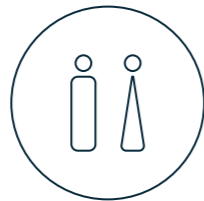
Are you satisfied with your school's current main Internet access?



- Strongly dissatisfied
- Rather dissatisfied
- Neither satisfied nor dissatisfied
- Quite satisfied
- Definitely satisfied

Teachers in Constant e-Contact with Students' Parents

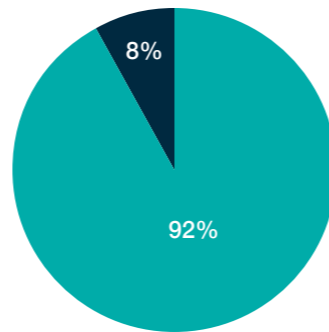
9 out of 10 teachers are able to use electronic tools like Librus to contact parents of their students. Electronic diaries are also the norm in schools in the NEXERA Regions. Experts stress the importance of communication between teachers and parents during a pandemic.



92% of teachers in the NEXERA Regions have the possibility to communicate with their students' parents via the Internet via e-mail communication or Librus-type applications. Only 8 out of 100 educators do not have such a possibility. Experts from UNICEF believe that especially during the pandemic period it is important for parents to be involved in their children's school matters. Communication between teachers, parents and pupils is crucial so that all parties know exactly what responsibilities they have. Experts from UNICEF suggest that one way to increase the exchange of information between teachers and parents is through various online groups.

9 out of 10 teachers have electronic contact with parents of their students.

Do teachers have the possibility to communicate with parents via the Internet via e-mail communication or Librus-type applications?

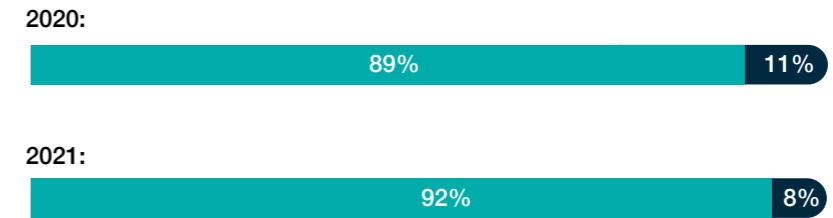


● Yes ● No

The same data as in the case of electronic means of communication with parents result from the question about the electronic journal. 9 out of 10 teachers answer that such a solution is used in the school they work in, and only 8% state that they do not use such a tool. UNICEF experts point out that in the relationship between teachers and parents, depending on the needs of the guardians, various channels of communication should be used, and sometimes several at once.

More and more schools are using an electronic diary.

Does the school have an electronic diary?



● Yes ● No

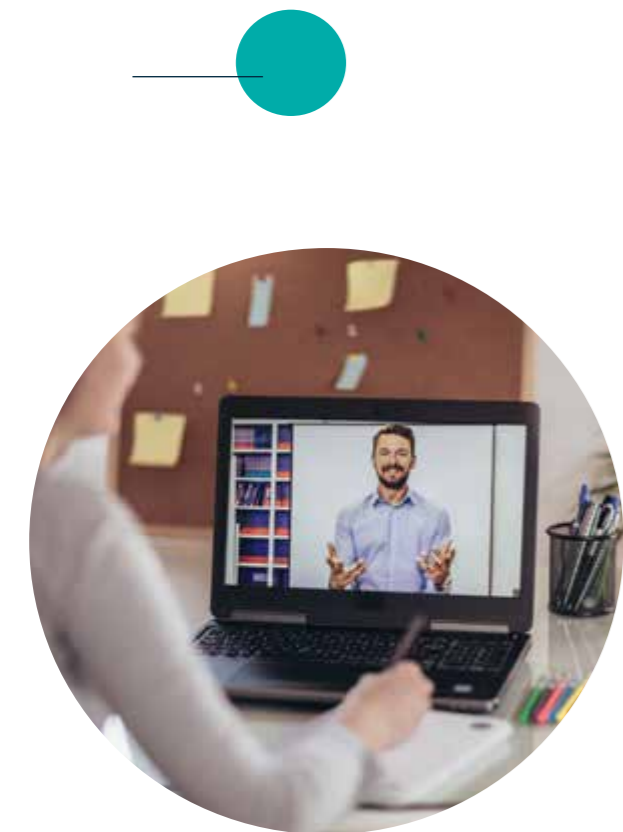


Paweł Wypych,
Headmaster of Polish Olympic Athletes Primary School in Tur

“ In the school where I am the headmaster, all teachers feel that our school should have access to fast and stable Internet. This view is strongly affected by the pandemic, home schooling and the use of electronic class register. Fibre optic connectivity gives education institutions more opportunities to use a variety of education tools, especially in remote classes, giving students a chance to develop holistically. Modern schools should be progressive and provide opportunities to students. I believe that students should enjoy high-speed connectivity both at home and at school”.

Online Courses Are the Main Way to Improve Skills

Online courses for teachers and self-study were the two most frequently indicated ways for teachers in the NEXERA Regions to improve their skills. They were used by 4 out of 10 teachers. Teachers in Poland slightly less often than in other countries obtained external support during distance learning.



According to a survey conducted by the Digital Centre, 76% of teachers in Poland received content-related support while teaching remotely. Most often this support came from other teachers at school (56% of indications), from the headmaster (50%), as well as from other teachers outside the school, e.g. via Facebook groups (40%). According to the authors of the report, Facebook groups were a space where teachers shared interesting materials and ideas used in lessons.

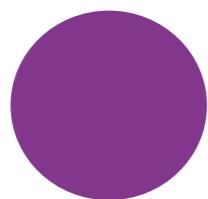
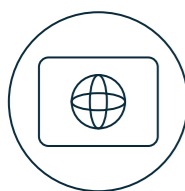
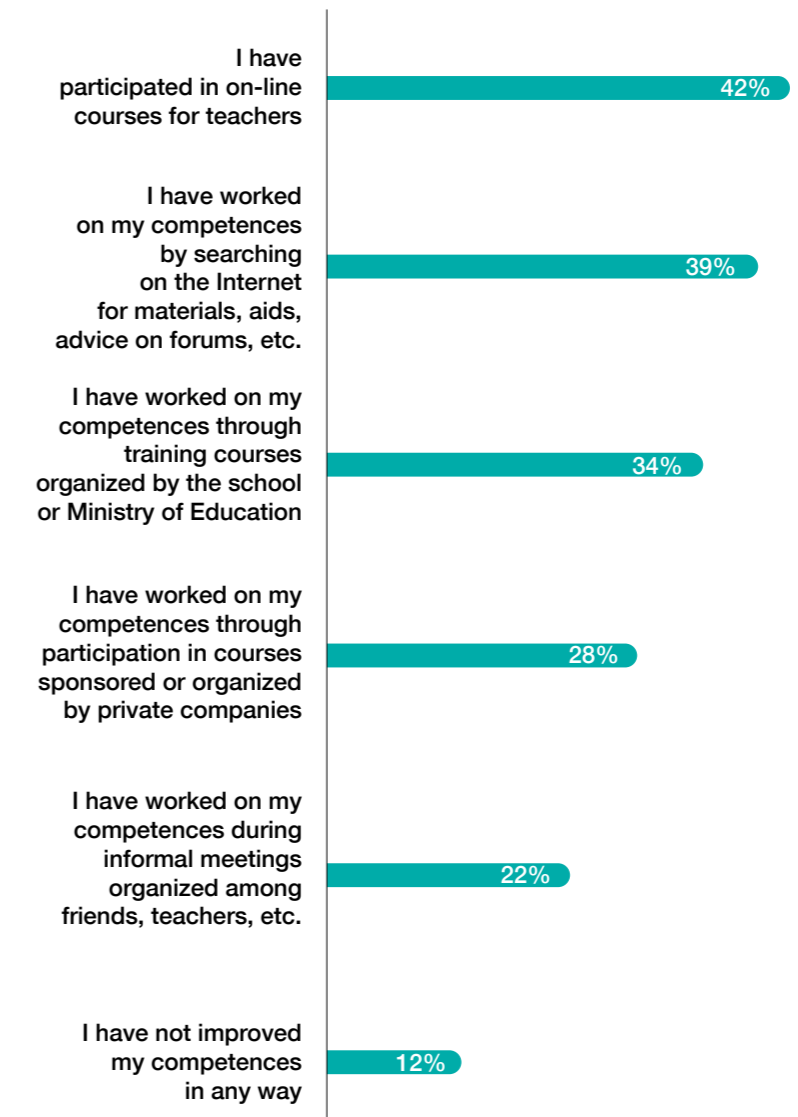
In contrast, according to an international OECD survey, during the pandemic 87% of teachers could count on the support of other teachers from the same school, while 50% used teachers from other schools, 26% received financial support for further training and 21% could not count on any support for competence development.

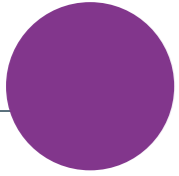
In the last 12 months, teachers in the NEXERA Regions have most often improved their competences by participating in online courses and through self-study. 4 out of 10 educators gained knowledge in this way. Only 1 in 10 teachers surveyed did not improve their competences at all.



Teachers most often improve their competences by participating in online courses and self-study.

Have you improved your competences as a teacher in any way in the last 12 months? Please tick the areas that apply to you.

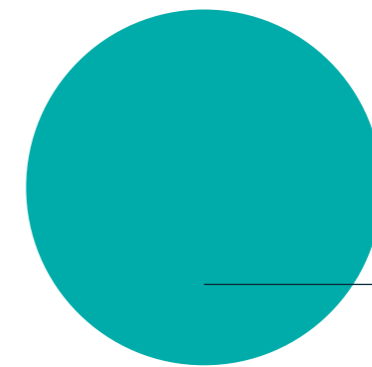




06



**Officials Have
a Positive Attitude
towards e-Government**





Officials Have a Positive Attitude towards e-Government

Submitting cases via the Internet is easy and offices are ready to work online, these are the conclusions of the NEXERA study. Practically in all offices, there is a possibility to process matters via the Internet. Most often, residents use e-administration to apply for an ID card and for access to public information. According to officials, however, the possibilities of e-offices are not used to the full extent, some issues are preferred to be handled in person. A lack of Internet access or a poor-quality connection is also a real barrier to switching to e-government.

9 out of 10

officials are satisfied with the Internet in the office.

99%

of offices enable online processing of cases.

86%

of officials say residents report only some issues online.

2 out of 3

officials assess the willingness of public authorities to carry out activities via the Internet as sufficient.

42%

of officials believe that residents do not use e-government because they prefer to come to the office in person.

4 out of 10

civil servants would like to work remotely. Last year, more than half of those surveyed said they would like to work from home.

Civil Servants Satisfied with Internet in Public Offices

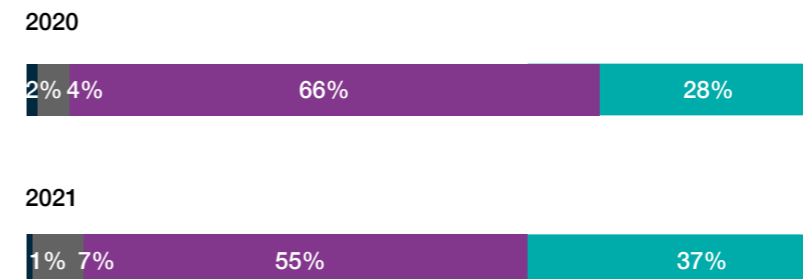
9 out of 10 civil servants in the NEXERA Regions are satisfied with the Internet in the office, and almost half do not experience problems resulting from a too slow connection.

According to the UN, in 2020 Poland will be **24th place** out of 193 countries in terms of e-government development. In an earlier edition of the survey (2018), Poland was ranked **33rd**.

More than 90% of civil servants in the NEXERA Regions are “definitely” or “rather” satisfied with Internet access in the office. Compared to 2020, 9 p.p. more respondents are “definitely” satisfied.

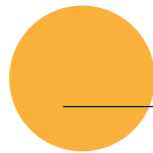
9 out of 10 civil servants are satisfied with the Internet in the office. Increased number of the most satisfied.

How satisfied, in terms of the needs of your office, are you with the current Internet access in your office?



- Strongly dissatisfied
- Rather dissatisfied
- Rather satisfied
- Quite satisfied



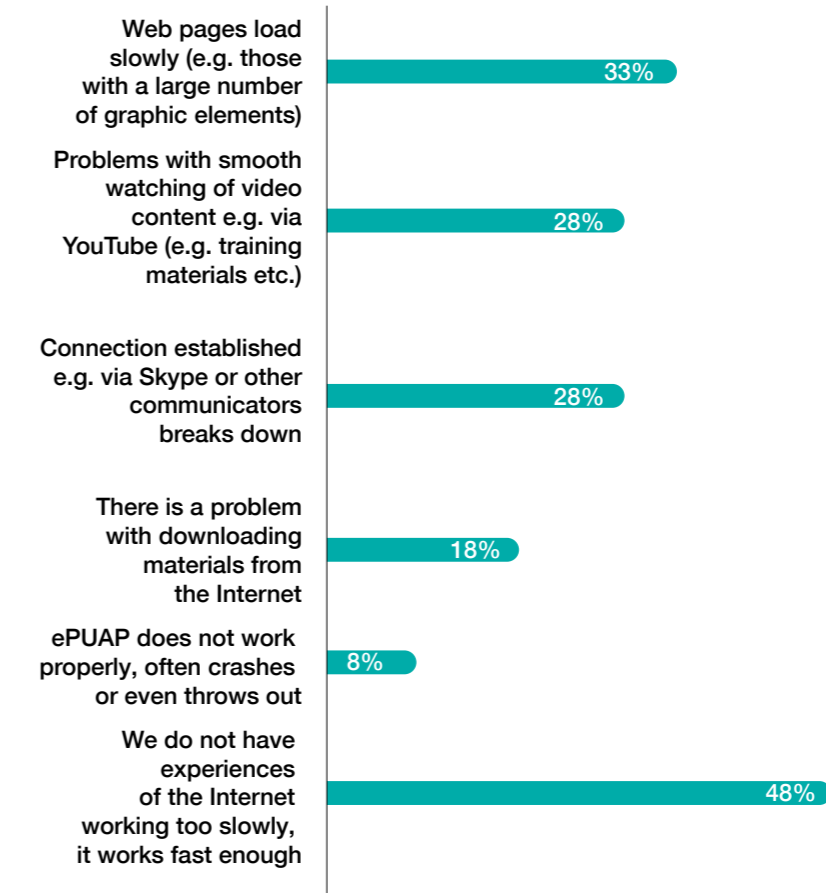


Almost half of the civil servants declare that they have no experience with slow Internet connections. However, if they have to point to a specific problem resulting from low bandwidth, it is most often difficulties loading pages. Slightly less frequently, they complain about problems with smooth viewing of video content and broken Internet connections.



Officials most often indicate that they have no experience with the slow Internet.

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



How Many Official Matters Can be Processed by Authorities Online?

In the NEXERA Regions, almost all offices have the possibility to report matters online. In half of them, residents can report all matters online, but in practice they use the existing possibilities only partially.

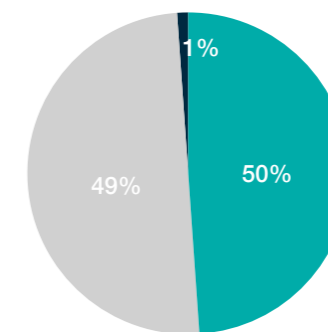


According to the Statistics Poland, in 2020 99% of public administration units made it possible to handle matters online. 62% of them made it possible to submit the application Family 500+ via the Internet, and 26% of offices provided online participation in voting or social consultations.

In the NEXERA Regions, practically all offices offer residents access to online interaction. In half of them, this applies to all types of issues, and in 49% only to some of them.

Praktycznie we wszystkich urządach istnieje możliwość zgłaszania spraw przez internet.

Czy w Państwa urzędzie mieszkańcy mają możliwość zgłaszania spraw do urzędu za pośrednictwem internetu?



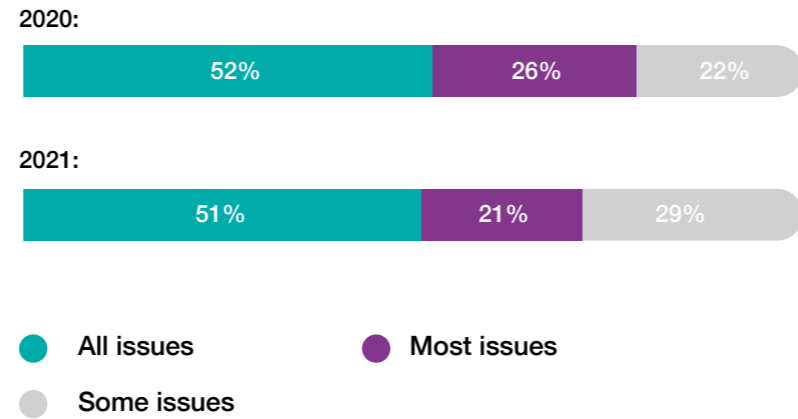
- Tak - wszystkie rodzaje spraw.
- Tak - ale tylko wybrane rodzaje spraw.
- Nie - nie ma w ogóle takiej możliwości.



The comparison with 2020 shows that there have been more places where residents can use e-office services only to a limited extent.

Half of the authorities allow residents to report all kinds of matters online.

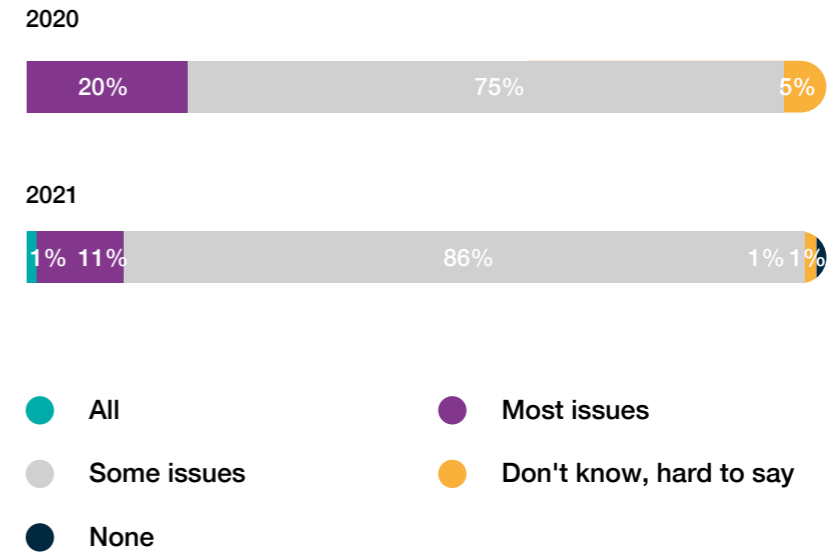
Considering all matters under the authority, what percentage of them can residents report to the authority online?



The NEXERA survey shows that the opportunities offered by offices are not fully utilised by residents. Currently, the vast majority of officials, 86%, say that petitioners only report certain issues online. The declarations of office workers show that compared to 2020, the number of residents who report most issues online has decreased.

In the vast majority of authorities, residents report certain matters online.

What proportion of matters in your office do residents report online?



Officials Have a Positive Attitude towards e-Government

9 out of 10 officials support the development of e-government, but only half believe that online filing would be more efficient than traditional procedures. According to those surveyed, online filing of official matters is easy, and the readiness of offices to implement online activities is sufficient.



The vast majority of officials agree that residents should be able to do things online. Making this possibility available means the development of e-government. However, far fewer of those surveyed, only about half, are of the opinion that service in an office would run more efficiently if traditional procedures were replaced with online applications. Why do officials think that a virtual visit to the office, at least for the time being, will not replace dealing with issues “at the counter”? Some conclusions emerge after analysing subsequent questions of the survey.

9 out of 10 officials support development of e-government, but only half believe that online filing would be more efficient than traditional procedures.

I am strongly in favour of providing residents with the opportunity to handle issues via the Internet:



Service in our office would be more efficient if traditional reporting procedures were replaced with online submissions:



● Strongly/very much agree ● Other answers

More than 2/3 of civil servants consider it “definitely” or “rather” easy to report official matters via the Internet. However, 32% consider the process “fairly” or “definitely” complicated. Perhaps because of these difficulties, some office workers are cautious about replacing visits to the office with online filing.

More than 2/3 of civil servants believe it is easy to report official matters online.

How would you rate the difficulty of reporting to the office online?



● Definitely easy ● Rather easy
● Quite complicated ● Definitely complicated

Another reason why civil servants do not agree on the replacement of face-to-face visits by e-government services may lie with offices. While 2 out of 3 officials positively assess the readiness of public offices to carry out tasks online, 33% think there is still a lot of work to be done in this area.

2 out of 3 officials assess the willingness of public offices to carry out activities online as sufficient.

In your opinion, how ready do offices currently are to carry out official activities online in your own office?



● Definitely not sufficient ● Rather not sufficient
● Rather sufficient ● Definitely sufficient



Piotr Wiczorkiewicz,
Member of the Board, Operations, NEXERA

“ We are increasingly moving our daily routines to the web. No wonder we gladly give up those trips to government offices having the perfect online alternative. However, the e-government boom is still ahead of us. It seems some of us are highly unlikely to go back to the old habits even after the pandemic ends. The biggest challenge to e-government is not the low level of digitisation of government offices but the lack of tools for remote processing of administrative affairs. Government offices appear to be increasingly advanced on this front and some of them offer citizens all their services online. The issue is unequal access to Internet infrastructure, which means that not all residents can use remote services. The rollout of e-government may benefit from the rollout of the broadband network and the introduction of digital workflow in government offices, which will encourage residents to go online, improve the quality of administrative processes in local offices and attract new business”.

What Types of Issues Do Residents Deal With Online Most Often?

In the NEXERA Regions, submitting an application for an ID card is, just like last year, the most frequently handled matter in offices via the Internet. However, there have been big changes in the next places and a significant number of issues are indicated by officials much more often.

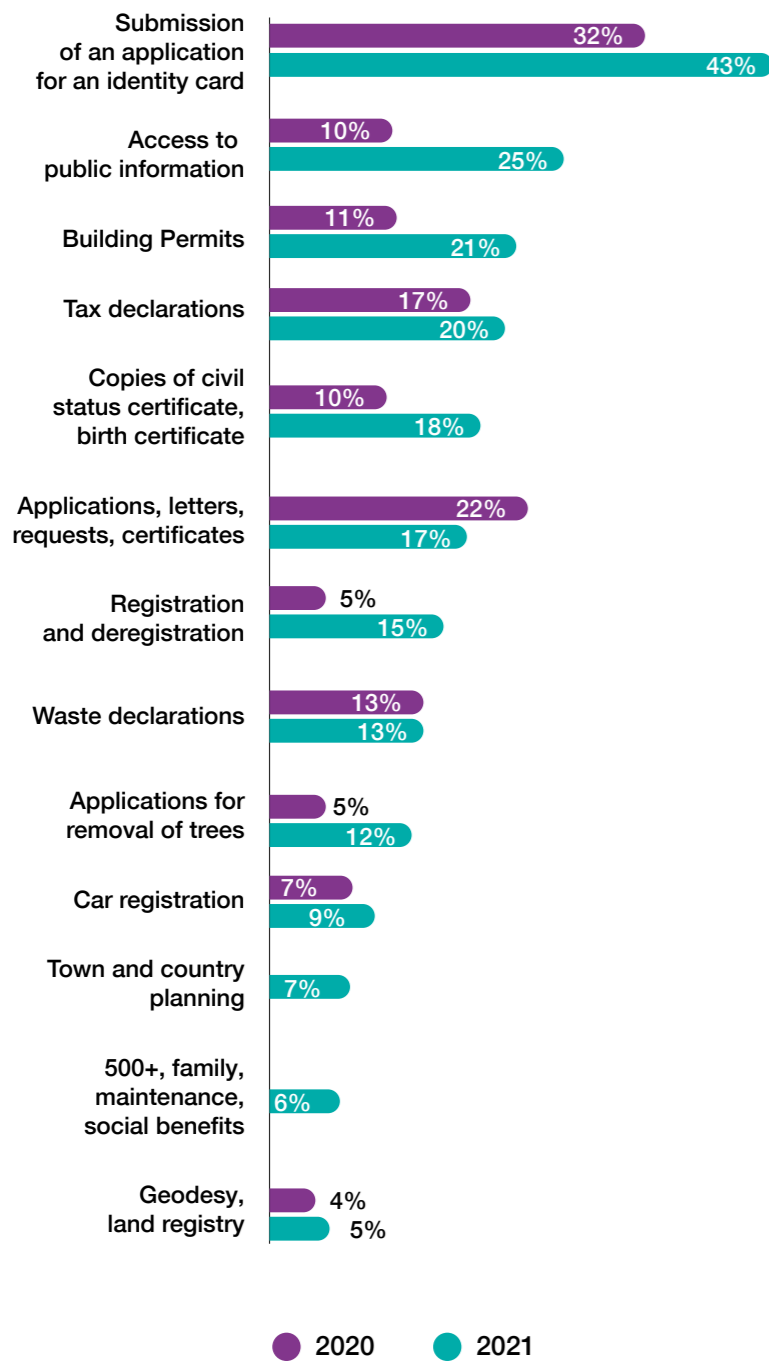
According to Statistics Poland data, **42%** of Poles used public administration services via the Internet in 2020. **34%** sent filled forms over the Internet, **27%** searched for information on public administration websites, and **25%** downloaded official forms.

According to officials in the NEXERA Regions, the most common matter dealt with online is the submission of an application for an identity card. This was followed by requesting access to public information and a building permit. Compared to 2020, these two matters are indicated by officials significantly more often. A similar trend can also be seen in most other categories.



Residents are most likely to apply electronically for an ID card and for access to public information.

What is currently the most popular matter handled online at your office? Please name no more than two most popular issues.



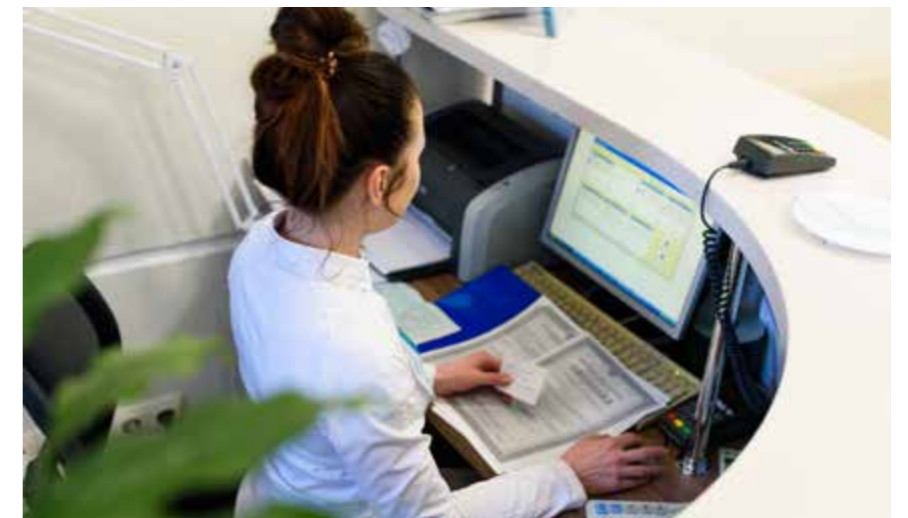
Why Do Residents Not Want to Use e-Government?

According to officials from the NEXERA Regions, residents do not use e-government services because they prefer to visit the office in person. The second most frequently cited reason is the lack of or too poor Internet, and the third is habit.



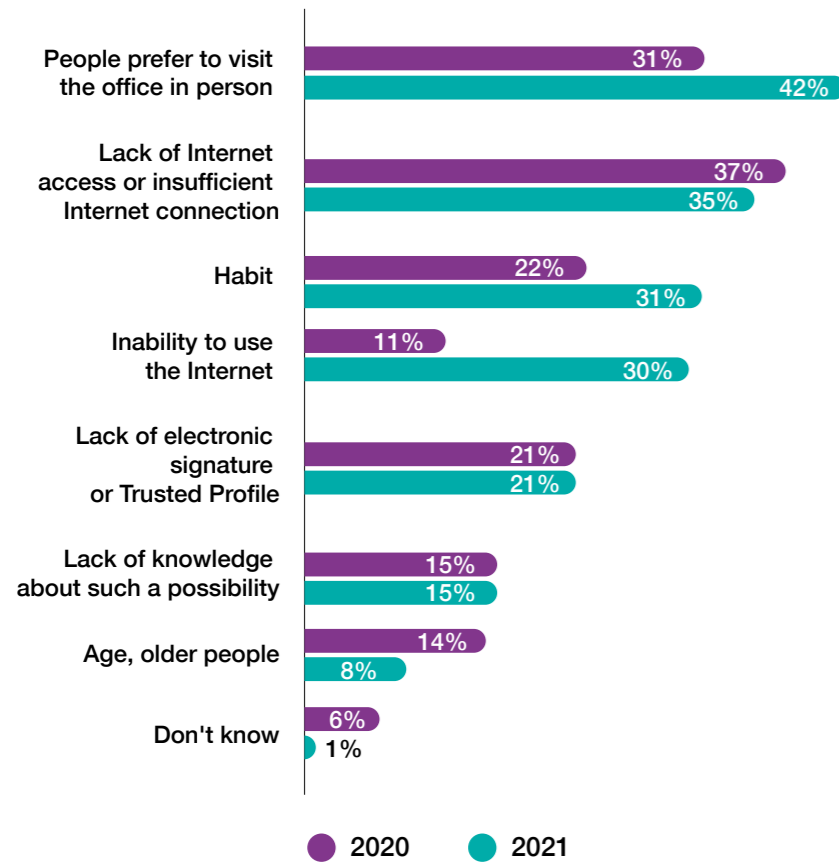
According to Statistics Poland data, in 2020 51% of Poles have not sent an online form to a government office. 30% did not have such a need, 3.6% did not have the appropriate skills, and 1.6% were concerned about the security of their data.

Among the reasons for residents not using e-government, civil servants mention in the first place the desire to handle matters in person at the office. This is followed by lack of Internet access or a poor connection, the habit of residents to deal with issues in person and lack of digital skills. The last two reasons, as well as the desire to run an errand in person, are indicated much more often than in 2020. The survey shows that among the four most common reasons for residents not using e-government, officials cite two related to digital exclusion and two related to residents' traditional habits.



According to officials, residents do not use e-government because they prefer to come to the office in person or do not have access to the Internet.

What, in your opinion, is the main obstacle of not using the Internet to handle matters in your office? Please list no more than two main obstacles.



Less Enthusiasm about Remote Working Among Civil Servants

4 out of 10 civil servants would like to work remotely. However, enthusiasm for carrying out professional activities from home is waning. In 2020, more than half of officials would like to work in this way.



Officials from the NEXERA Regions have changed their attitude towards remote working over the course of the year. Some of those who said they would like to work remotely in 2020 are now among the opponents. 57% of civil servants would “definitely” or “rather” not want to work from home. This is 12 p.p. more than in 2020. In contrast, 40% are in favour of home office, down 12 p.p. from a year ago. Meanwhile, in January 2021, Marek Zagórski, Secretary of State for Digitalisation at the Chancellery of the Prime Minister (KPRM), declared that work on the Remote Work and Learning System (SZPoN) for officials and citizens would be completed in September 2021. The platform is to be used, among other things, to facilitate remote work for officials and improve online contacts between officials and citizens.

4 out of 10 officials would like to work remotely. Last year, more than half of those surveyed said they would like to work from home.

Please tell me, would you be willing to work remotely, i.e. from home, if the office where you currently work offered this possibility?

2020:



2021:



- Definitely not
- Rather not
- Do not know, hard to say
- More likely yes
- Definitely yes

07



**Residents in Regions
Want to be Green**



Residents in Regions Want to Be Green

Residents of the NEXERA Regions care about the environment in their daily lives and describe themselves as committed to environmental issues. Similar attitudes prevail in all Regions, but the older the respondents are and the more they earn, the more important eco-friendly solutions are for them. A large group of respondents answered truthfully that fibre optics is good for the environment. Experts explain that this is due to lower energy consumption and lower maintenance costs than in the case of traditional technology. Besides, fibre optics enables lifestyle changes, e.g. less car use. The main source of knowledge on environmental issues for all respondents is the Internet. Older residents draw their knowledge about pro-environmental solutions more often from television and press, while younger residents rely on opinions of influencers, friends and family.

4 out of 10

inhabitants know that fibre optics is a green solution.

More than half

of the residents rate their involvement in environmental issues as at least 7 points (on a scale from 1 to 10).

83%

of residents segregate their waste. Among people aged 61-75, 94% do it, while in the youngest age group (18-25), only 71%.

For almost 3/4

of the inhabitants, the Internet is the primary source of knowledge on environmental issues. Both among the oldest (75%) and the youngest (80%) inhabitants of the Regions.

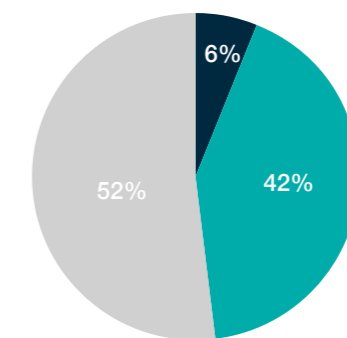
Optical Fibre Is an Environmentally Sound Solution

4 out of 10 residents of the NEXERA Regions know that fibre optics is green. Higher earners are more likely to give the correct answer. According to experts, solutions based on fibre optic technology are definitely more environmentally friendly than e.g. traditional copper cables in terms of, among others, energy efficiency, low failure rate, consumption of materials necessary for their construction. What is important, in fibre optic transmission there is no electromagnetic radiation, so this type of technology in no way threatens human health or life.

42% of NEXERA Regions residents know that fibre optic Internet is environmentally friendly. Only 6% of those surveyed are of the opposite opinion. However, still about half of those surveyed are unaware of the environmental impact of fibre optics. Meanwhile, data presented at the FTTH Virtual Conference 2020 shows that fibre is more environmentally friendly than traditional technologies. Fibre optic investments consume 60-75% less energy compared to those based on copper cables. When compared to coaxial cables, savings generated by optical fibre are even greater and reach 70-85%. The construction of optical fibre networks uses only 1/3 of the materials needed to build networks based on copper cables.

4 out of 10 inhabitants of NEXERA Regions know that fibre optics is eco.

In your opinion, is fibre optic Internet eco-friendly?



● Yes ● Don't know ● No

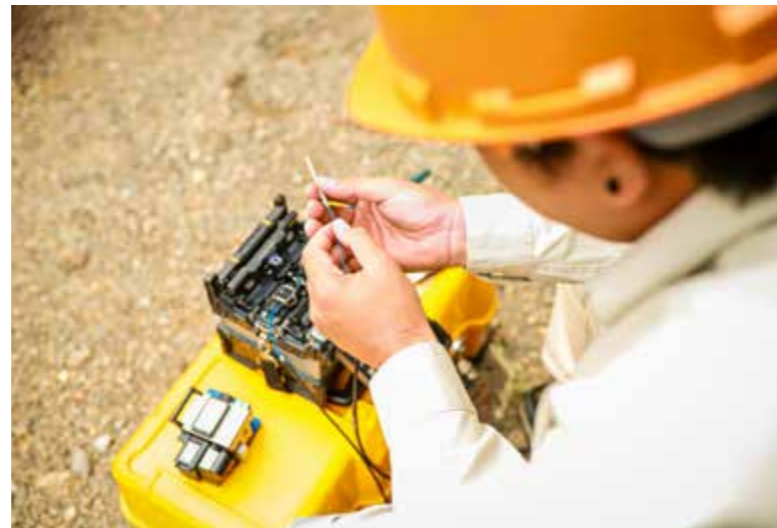
Optical fibre is currently the fastest transmission medium in the world and the most reliable technology. Due to its low failure rate, it does not require frequent visits by support staff commuting to the place of failure. Thanks to this technology, we are seeing the development of remote working and online education, which makes it possible to reduce the use of private cars for daily commuting to offices and schools.



Jacek Wiśniewski,
President of the Management Board, NEXERA

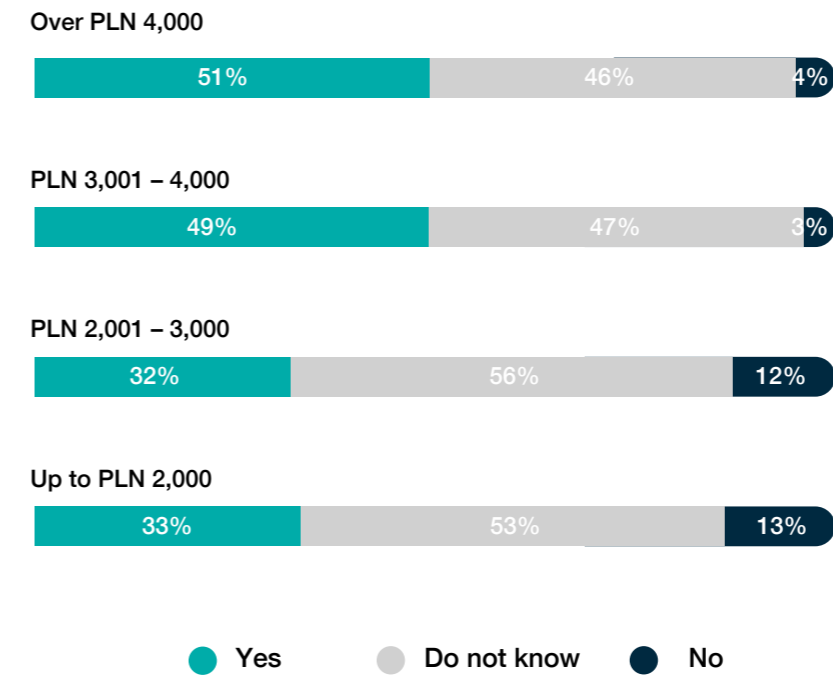
“ Environmental awareness is growing among NEXERA Regions residents. We are committed to using solutions, products and services in daily lives that have a positive impact on the environment. Note that a number of behaviours we have developed in the pandemic make us ‘greener’. The shift to home working and education has reduced commuting, the wide use of e-government and online medicine solutions has reduced the amount of paper applications, prescriptions and files. The ‘new’ reality has often proven not only more comfortable and efficient but also more environmentally sound. This is of paramount of importance since the fight against the climate crisis is one of the biggest challenges faced by our society today. According to the European Green Deal, we should achieve climate neutrality by 2050 and digitisation is key to the success of the mission in the long term. Without equal access to a reliable and fast Internet, the digitisation process may slow down, especially in areas where no broadband infrastructure has been built yet. Limited Internet access or a low-throughput connectivity will make some residents return to traditional habits and give up many digital and environmentally-friendly ways of completing their daily chores. We should ensure that the digitisation potential that we discovered during the pandemic does not become oblivious when it ends”.

Residents of the different Regions have similar levels of knowledge about how fibre optics affects the environment. Only the Świętokrzyski Region is distinguished by a higher number of respondents (49%) who are aware that this is an ecological solution. However, income is the factor that more strongly influences the respondents to indicate the correct answer.



Higher earners more likely to know that fibre optics is green.

Do you think fibre optic Internet is environmentally friendly?
Monthly income and take-home pay of the whole household.



Residents Committed to the Environment

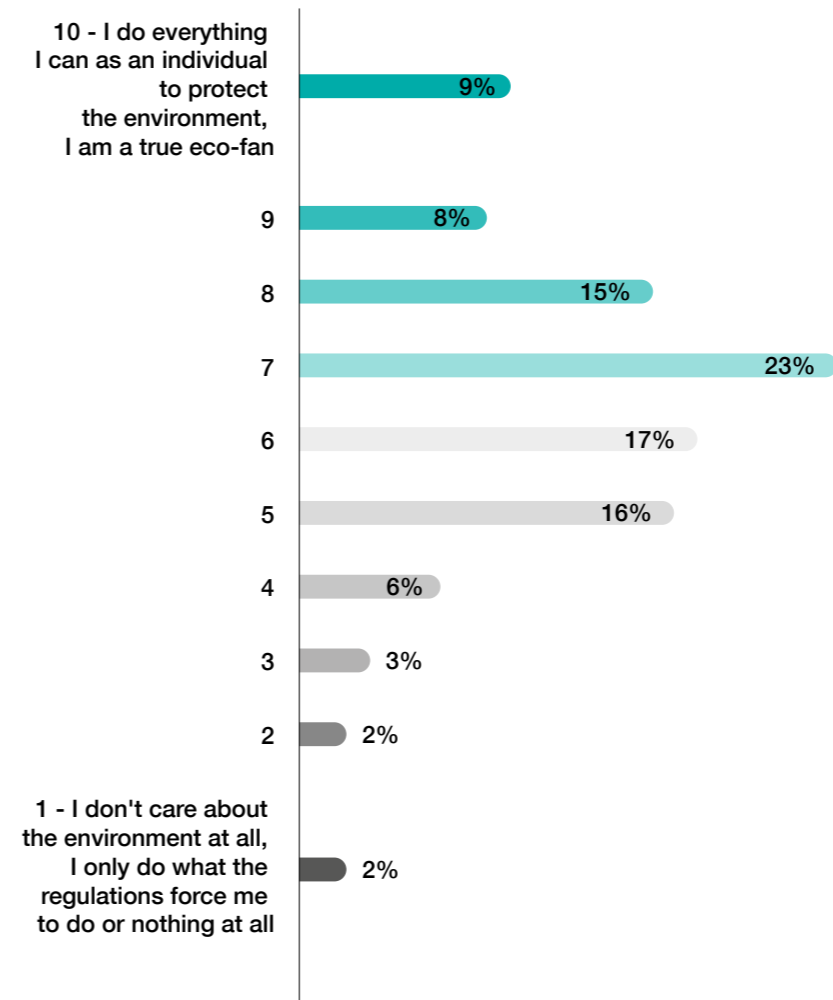
Residents of the Regions care about the environment. More than half of the respondents rate their involvement in ecological issues as at least 7 points on a 10-point scale. The InsightOut Lab study also shows that Poles take environmental issues seriously.

Residents of the NEXERA Regions were asked to rate their involvement in environmental issues on a scale of 1 to 10 points, where 1 means "I don't care about the environment at all, I only do what the regulations force me to do or nothing at all" and 10 means "I do everything I can as an individual to protect the environment, I am a true eco-fan". It turned out that as many as 55% of respondents rated their environmental commitment at 7 points at least. However, 1 in 3 respondents gave themselves a score of 5-6, meaning that they are not indifferent to environmental issues.

A similarly high prevalence of pro-environmental attitudes can be seen in a survey conducted by InsightOut Lab and Continental in early 2021. The study shows that 60% of Poles consider global warming to be one of the most important global problems, while 58% of Poles pay attention to the environmental impact of the products they buy.

More than half of the residents describe their involvement in environmental issues for at least 7 out of 10 points.

How would you describe your personal involvement in ecology, climate protection?



Saving and Segregating. This Is How Residents Take Care of the Environment

Segregating rubbish and saving water and energy are the most popular ways of taking care of the environment among the residents of NEXERA Regions. Fewer people choose more active forms of action, such as switching from car to bicycle or public transport.

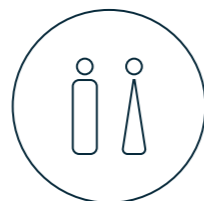
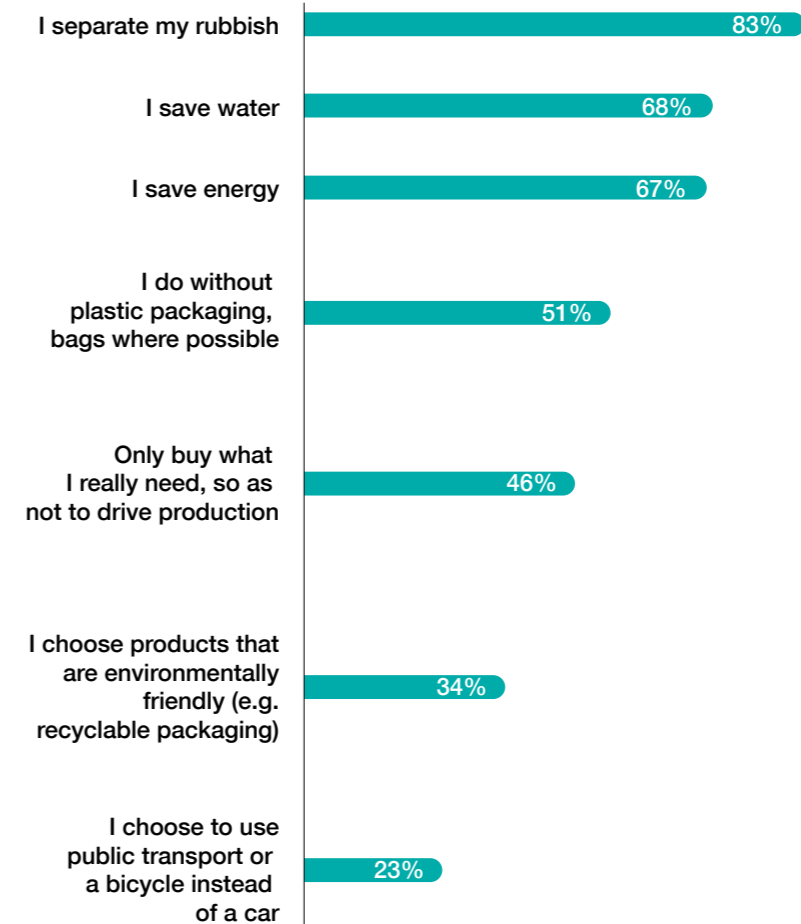


According to CBOS, **95%** of Poles segregate household waste, **93%** do not waste food, **90%** reduce electricity consumption, **89%** save water, **47%** give up a car in favour of a bike or public transport.

By far the most frequent pro-environmental activity undertaken by the inhabitants of the NEXERA Regions is waste segregation. It is followed by water and electricity saving. However, less popular are activities that require a bit more commitment and initiative. Half of the respondents give up plastic packaging, and slightly less buy only what they really need. Only 1 in 4 respondents decided to use a bicycle or public transport instead of a car.

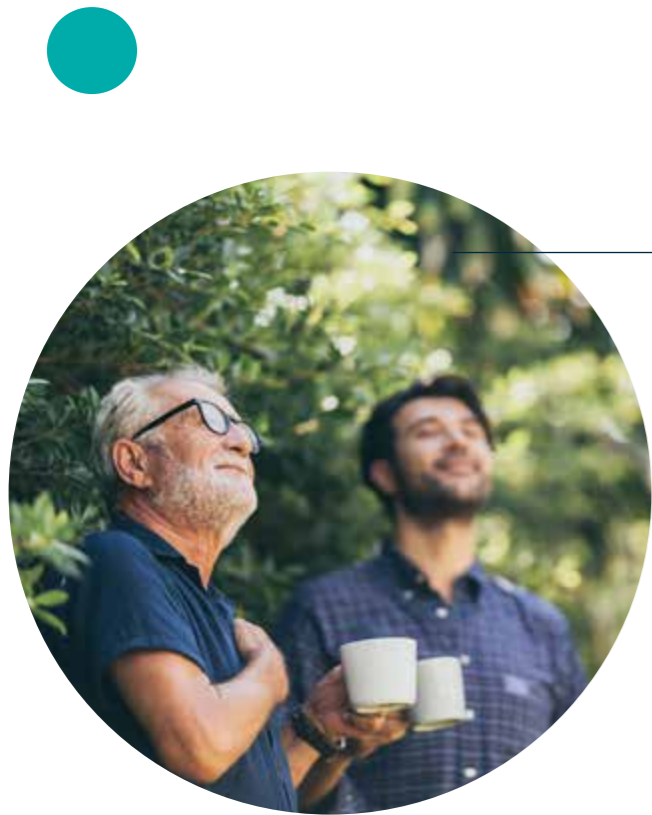
Segregation of waste and saving water and energy are the most popular ways of taking care of the environment among the inhabitants of the NEXERA Regions.

Do you try to support the environment in your daily life in any way? Please mark only activities you do regularly.



Older People Are More Environmentally Conscious than Youth

People over 50 are more likely than younger people to care about the environment. This is especially true for those activities that are directly related to paying bills, sorting waste, and saving water and electricity. In other areas, the differences are not as pronounced.



“The average value of the index of pro-environmental behaviour is 4.99. This index is not strongly socially differentiated, but it can be noted that on average it takes higher values among older respondents, the average value of the index in the 18-24 age group is 3.85, while among respondents aged 55 and over, 5.38-5.44”.

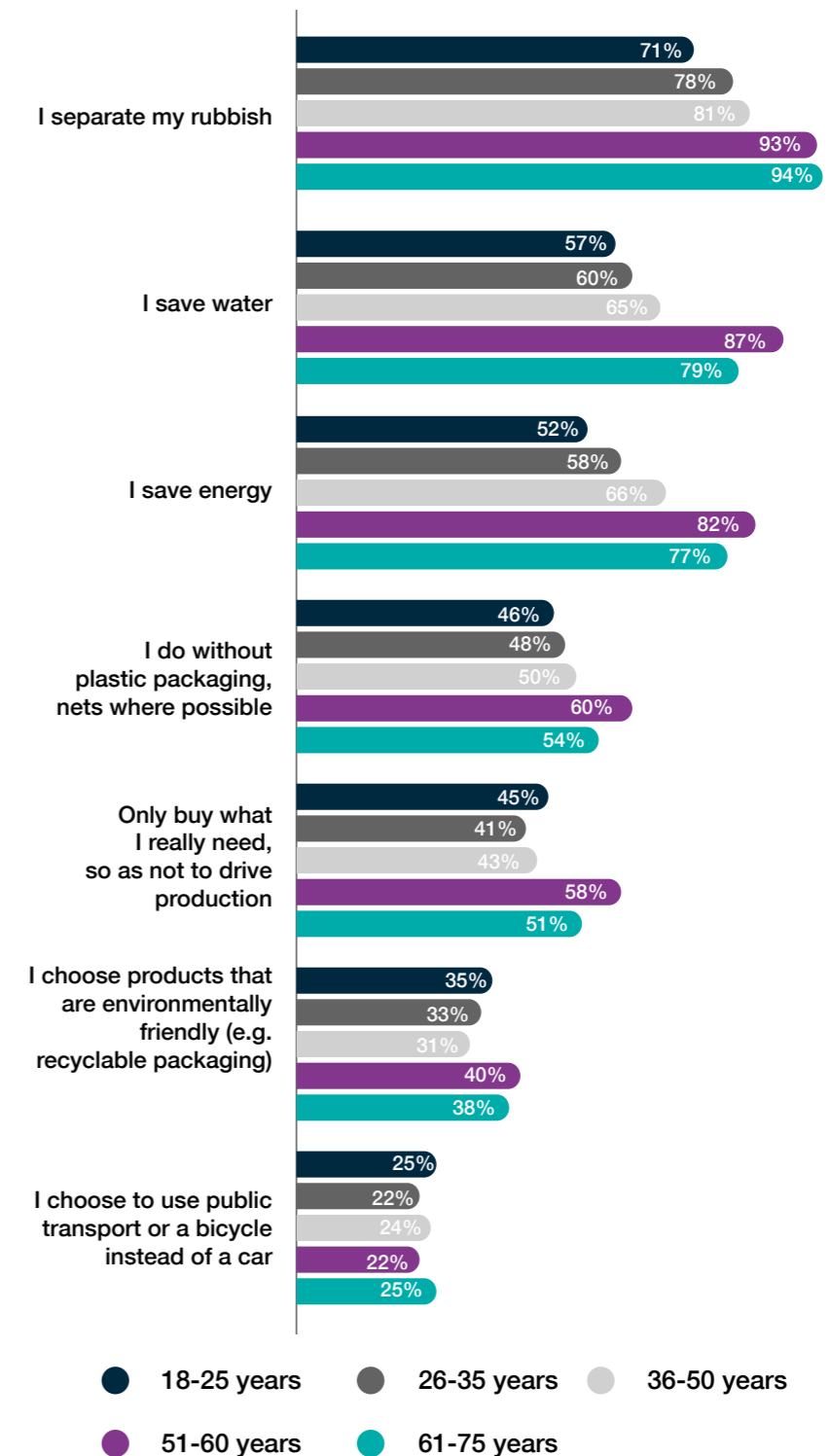
Source: CBOS, Poles’ environmental awareness, December 2020.

Among the surveyed residents of the NEXERA Regions, more than 90% of those over the age of 50 segregate waste. Younger people segregate less frequently, with less than 3/4 of respondents aged 18-25 doing so. Similar differences between age groups can also be seen in the case of water and energy savings. They may result from the fact that some of the youngest respondents do not pay their bills with their own money. Disparities between older and younger respondents decrease when it comes to consumer choices, such as giving up plastic packaging or reducing consumerism. On the other hand, they become completely blurred when replacing a car (which some of the youngest may not own) with a bicycle or public transport.



People over 50 are more likely to care about the environment than younger people.

Do you try to support the environment in your daily life in any way? Please tick only activities you do regularly.



Internet and TV Are the Main Sources of Knowledge on Environmental Protection

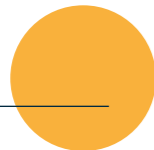
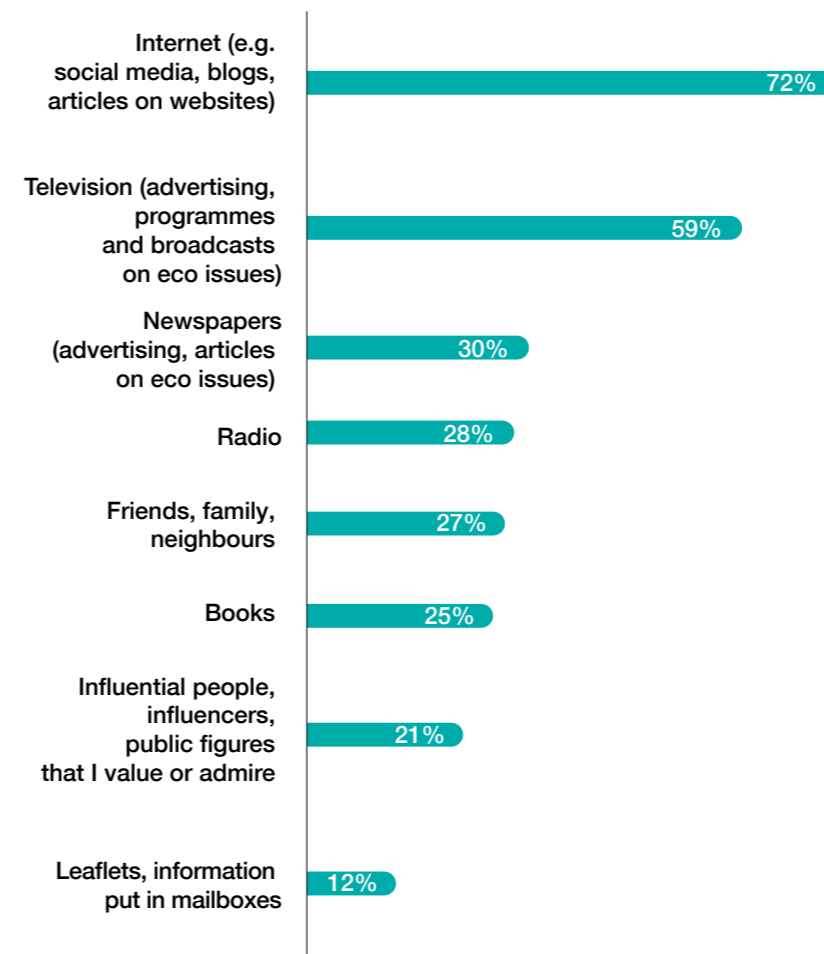
The main sources of environmental knowledge are the Internet and television. While the residents of each NEXERA Region do not differ in this respect, their age and wealth dictate slightly different choices of main sources of information.

Regardless of the Region of residence, the most frequently mentioned sources of knowledge on environmental protection are the Internet and television. Other traditional media, press, radio and books, are mentioned much less frequently. Surprisingly, only one in five respondents declares to derive knowledge on ecology from publicly known persons.

While residents of each NEXERA Region answer questions about sources of ecological knowledge in similar ways, age and wealth are important variables. Only just over half (53%) of 18-25-year olds get their environmental knowledge from TV. Meanwhile, TV is the main source of information for 72% of 61-75-year olds. The youngest are much more likely than the oldest to rely on the opinions of influential people (37% vs. 20%) and the opinions of family or friends (34% vs. 21%). On the other hand, older people are more likely than younger people (36% vs. 22%) to read press articles on environmental issues. Earnings are another variable that influences the choice of source of knowledge on environmental topics. People from households with an income of up to PLN 2,000 net are much more likely than the highest earners (19% vs. 9%) to read leaflets and information put in letterboxes. They also rely more frequently on the opinion of family and friends (32% vs. 23%).

The Internet and TV are the most frequently indicated sources of knowledge about environmental protection.

Which media or other sources of knowledge have the greatest influence on you in terms of knowledge about environmental protection, climate change ecology? Please choose the 3 most important.

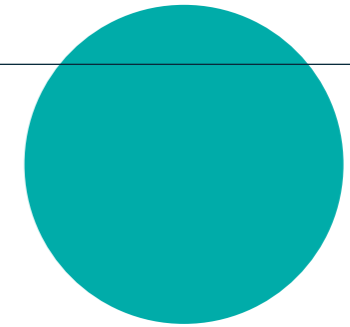




08



**High-speed Internet
Improves Attractiveness
and Quality of Life
in NEXERA Regions**



High-speed Internet Improves Attractiveness and Quality of Life in NEXERA Regions

Residents are most appreciative of leisure opportunities and life in general in their Region. Other key areas, such as tourism and education, and especially work and business, are rated slightly lower. Respondents agree with the statement that fibre optic infrastructure could improve the attractiveness of NEXERA Regions in key aspects. In smaller towns, it would be the first step towards realising the Smart Village concept. Its aim is sustainable development through the use of digital tools and to stop young people leaving rural areas. So far, the younger inhabitants of the Regions are thinking about leaving their places of residence. High-speed Internet is important for them, but will it be enough to make those who have already left want to return to their hometowns?

1 in 2

residents and teachers (50%) believe that high-speed Internet can give a positive boost to the local economy and community, through remote working and more attractive working conditions.

More than half

of the inhabitants (53%) rated their Region as attractive in terms of leisure activities and 51% in terms of life in general. The best rated in these categories is the Warmia & Mazury Region.

53%

of respondents believe that civil servants in small towns have the same chances to use high-speed Internet as in big cities. As far as entrepreneurs are concerned this opinion is shared by only one in four respondents (25%).

6 out of 10

residents consider it important to have a fibre connection at their new residence.

Almost 1/3

of residents aged 25-40 plan to change their place of residence within the next 3 years.

50%

of respondents believe that high-speed Internet will make young people more likely to spend their days off in their small hometowns.

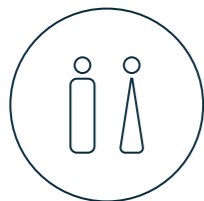
Between 72% and 92%

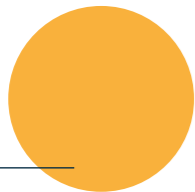
of officials (depending on the area of life covered by the question) believe that the construction of a fibre optic network will have a positive impact on the attractiveness of the Region.

Residents Appreciate Living and Resting in the Region

Residents appreciate life in their Regions and leisure opportunities. The tourist and educational offerings continue to score highly, although they fall slightly behind in the ranking. However, when it comes to work and business, criticism prevails. The NEXERA Regions differ in terms of the inhabitants' assessment of their attractiveness.

Respondents do not have the same opinions about the different areas of life in the NEXERA Regions. In the case of leisure activities and life in general, the positive opinions are about three times more numerous than the critical ones. Less clear-cut, although still positive, are the assessments in the category of tourist and educational opportunities. In the first category, 42% of the inhabitants consider their Region attractive and 29% as unattractive. In the case of education, these indicators are 39% and 23% respectively, while work and doing business in the NEXERA Regions are assessed as unattractive. In the case of work, this is the opinion of 41% of respondents (compared to 28% of positive ratings). On the other hand, 38% of respondents are not satisfied with business opportunities (compared to 27% positive ratings).





Residents appreciate the Regions for leisure opportunities and life in general, but otherwise do not find them particularly attractive.

Is the Region where you currently live an attractive place in the following areas:

Spending leisure time



Living in general



Use of tourist facilities



Learning



Working



Running a business



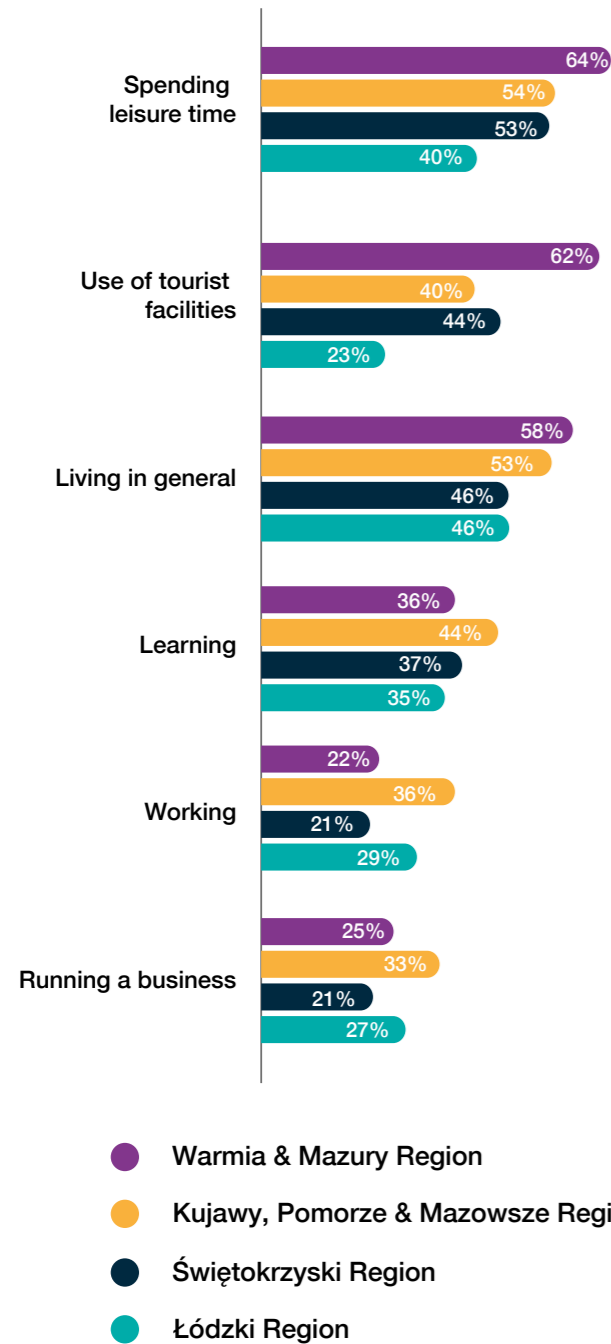
- Definitely unattractive
- Rather unattractive
- Neither attractive nor unattractive
- Rather attractive
- Definitely attractive

NEXERA Regions differ in terms of the inhabitants' assessment of their attractiveness. The greatest disproportions can be seen in the area of tourist offer. Here, by far the largest number of positive ratings was recorded for Warmia & Mazury Region, which is not surprising, given its touristic character. The lowest rating was given to Łódzki Region, which less than every fourth resident considers attractive in terms of tourism. In the category of leisure activities, the Warmia & Mazury Region is also rated best, but its advantage over the others is not so significant. In terms of quality of work and business, the Kujawy, Pomorze & Mazowsze Region received the most positive ratings. The Łódzki Region, which in other areas is rated the worst, in this case took the position of runner-up.



In terms of attractiveness the Warmia & Mazury Region and the Kujawy, Pomorze & Mazowsze Region stand out.

Is the Region where you currently live an attractive place in the following areas (percentage of answers 'definitely' and 'rather' attractive):



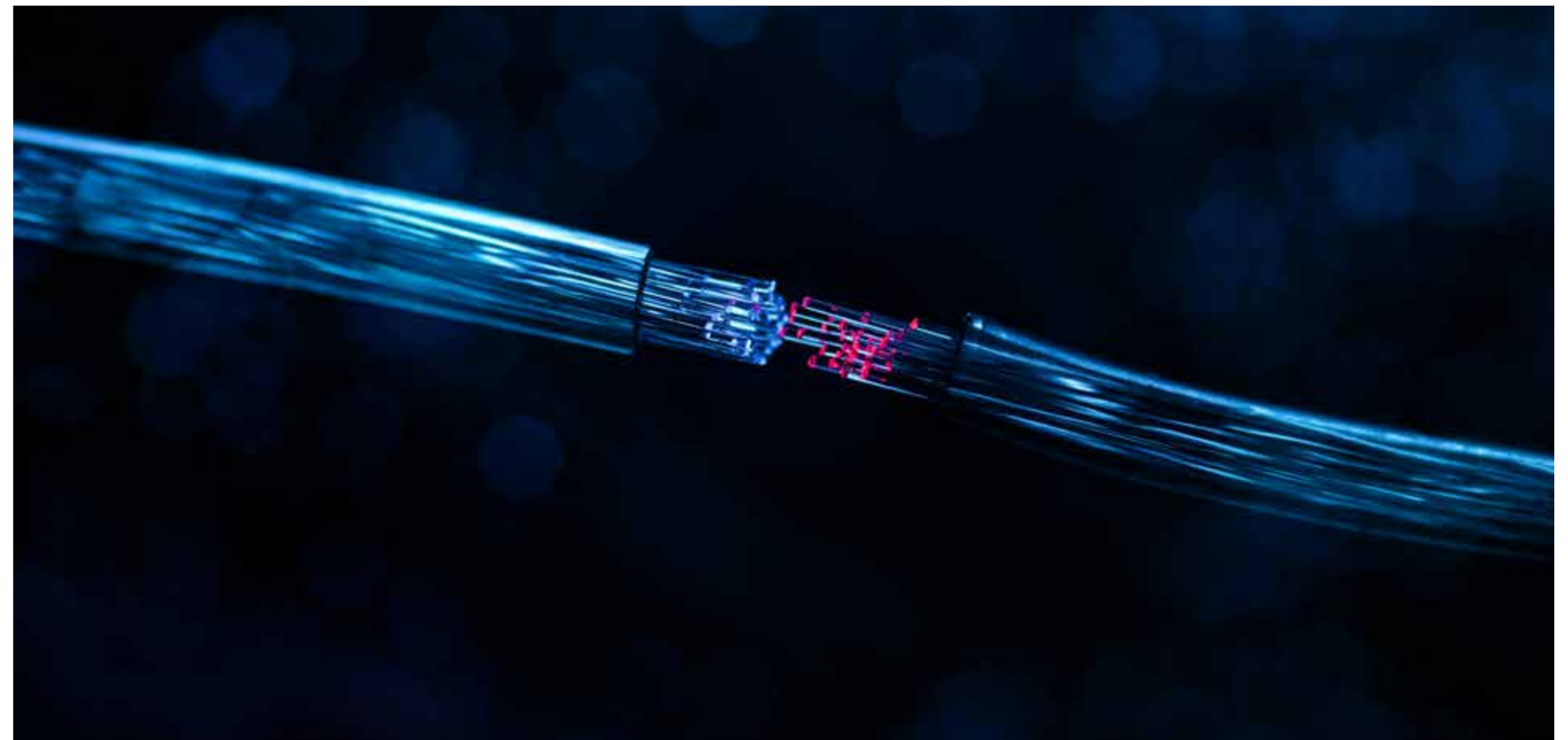
Fibre Optics Make Regions More Attractive

Officials from the NEXERA Regions believe that fibre optics positively influences the attractiveness of localities in terms of quality of life for residents, investment, work and tourism. Access to fast and stable Internet is important especially for residents. For more than half of them it turns out to be even more important than the number of local transport connections.

Experts surveyed by the Pew Research Center predict that digital development will lead to longer lives, more free time, a more equitable distribution of wealth and power, and other opportunities to improve people's well-being.

Officials have no doubt that fibre optics increases the attractiveness of NEXERA Regions in the key areas of quality of life, investment, work and tourism. Depending on the area of life covered by the question, between 72% and even 92% believe that the construction of a fibre optic network will have a positive impact on the attractiveness of the Region. The answer to this question is particularly important in the context of rather low ratings of attractiveness of the Regions by inhabitants. The optical fibre network may therefore increase the attractiveness of the locality and better meet the expectations of people who live there every day.

Officials have no doubt that the fibre optics will have an impact on the lives of residents. 9 out of 10 employees of local government institutions think that this impulse will be positive. Relatively the greatest doubts are expressed about the potential benefits of high-speed Internet for the tourist industry. Every fourth official is of the opinion that the fibre optic cable will not increase the tourist attractiveness of the Region. However, almost ¾ do not share this opinion.





According to officials, the construction of the fibre optic network increases the attractiveness of the Region in key areas.

In your opinion, will the construction of an optical fibre network in the Region increase attractiveness in the following areas:

Residents' life



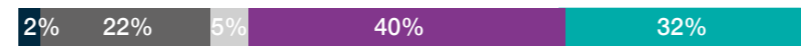
Investments



Jobs



Tourism



- Definitely not
- I don't know/it's hard to say
- Definitely yes
- Not likely
- Rather yes

There are sometimes quite large discrepancies between officials from different NEXERA Regions in their assessments of the impact of fibre optics on the attractiveness of particular areas of life. An example is the attitude towards increasing the attractiveness of residents' work. High-speed Internet will bring positive changes in this area according to 69% of officials from the Warmia & Mazury Region and as much as 93% from the Kujawy, Pomorze & Mazowsze Region.



The impact of the fibre optics in making work more attractive for residents are assessed by officials in Kujawy, Pomorze & Mazowsze Region.

In your opinion, will the construction of a fibre optic network in the Region make work more attractive?

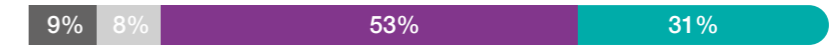
Kujawy, Pomorze & Mazowsze Region



Świętokrzyski Region



Łódzki Region

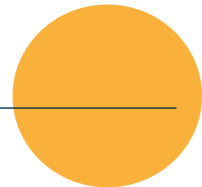


Warmia & Mazury Region



- Definitely not
- I don't know/it's hard to say
- Definitely yes
- Not likely
- Rather yes

Officials unanimously confirm that the fibre optic cable will make life more attractive for residents of the NEXERA Regions. Also, when asked about the importance that high-speed Internet has in their daily lives, residents respond overwhelmingly (53%) that it is more important than the number of transport links in the area.



For residents, access to high-speed Internet is more important than the number of transport links.

High-speed Internet access at home is more important to me than a greater number of public transport connections:



● I strongly agree/rather agree ● Other answers

High-speed Internet Can Improve Job Market

The majority of residents and teachers in the NEXERA Regions believe that high-speed Internet can ignite positive momentum in the local economy and community, through remote working and more attractive working conditions for teachers.

Residents of NEXERA Regions believe that remote work, made possible by fast and stable Internet, increases the attractiveness of living in a small town or village. This is confirmed by 61% of respondents. Only 18% of residents are of the opposite opinion. The same is true of the positive impact of remote working on unemployment in the Region. In this case, a slightly smaller number, 53%, believe that teleworking would help solve the unemployment problem in the Region, while slightly more, 20%, believe that it would not change the situation in the Region. In contrast, 54% of teachers agree that access to high-speed Internet at school is an argument to encourage teachers to take up teleworking.



Piotr Wieczorkiewicz,
Member of the Board, Operations, NEXERA

“ There is no doubt that high-speed Internet adds value to homes and workplaces thus improving the quality of life for local communities and business prospects for entrepreneurs. Universal access to education and the ability to work from any location in Poland bridge gaps between rural areas and cities for young people. There has been an interesting development in NEXERA Regions - smart villages driven by digital technology where residents are better positioned to use the available resources to grow their businesses or add value to their communities. The Internet is a tool that helps access information quickly, create space for learning and sharing of experience, and build an engaged civil society”.

More than half of residents and teachers agree that high-speed Internet and related opportunities can improve the job market.

How much do you agree with the following statements?

The ability to work remotely, i.e. work from home, significantly increases the attractiveness of living in a smalltown or rural area?



Introducing the possibility of remote work, i.e. working from home, would help to solve the unemployment problem in the Region?



Access to high-speed Internet can be an important consideration in teacher recruitment?



● Strongly disagree ● I tend to disagree
 ● Neither agree nor disagree ● I tend to agree
 ● Strongly agree



Szymon Ciupa,
Smart City Expert

“ Accelerated by the pandemic, digital transformation has revealed the benefits of remote work which can largely be as effective as traditional work. This is a growth opportunity for small and medium towns which have delivered quality municipal services but have not offered few career opportunities in digital, technology or creative industries. It is no longer necessary to reside in a major city to pursue a career and you can enjoy the peace and lower cost of living in a smaller community. Moreover, this offers opportunities to many companies looking for talent outside their area”.

Fibre Optics Level the Playing Field and Support Smart Village

Differences between large and smaller towns in access to certain services and in the standard of living are still visible. According to the respondents of the NEXERA Regions, however, the inequalities rather do not include access to high-speed Internet. The fibre optic cable, which is the foundation of the Smart Village idea, is also a factor that helps to reduce these disparities.

Smart Villages are a concept in EU policy-making. In Smart Villages, traditional offline activities are supported by digital and telecommunications technologies. The aim is to improve the quality of life for residents, benefits for businesses and sustainable rural development. The Smart Village model is flexible, tailored to the needs and opportunities of specific local communities. The main objective of developing the Smart Village is to prevent depopulation and improve the quality of life in rural areas. In Poland, the concept is developed by the Polish Smart Villages Centre, which has been operating since 2016. According to Polish Economics Institute experts, innovation and the Smart Village concept can be pursued if rural areas have access to the Internet. Equal access to quality online connectivity is one of the critical dimensions of the level playing field between rural and urban areas.





Representatives of different groups in the NEXERA Regions believe that in smaller and larger cities the chances of accessing high-speed Internet are the same for different groups. This is especially true for civil servants. More than half of them believe that civil servants can use high-speed Internet regardless of the size of the town they work in. In other groups, fewer respondents do not perceive differences between large and smaller towns. However, they still outnumber those for whom these differences are clear.¹ The exception are entrepreneurs, among whom only 1 in 4 agrees with the thesis of equal opportunities between large and small cities in terms of access to high-speed Internet.

Examples of smart solutions in localities of the NEXERA Regions:

Wiązownica-Kolonia, Municipality of Staszów, Świętokrzyski Region

- E-training, e-counselling and assistance in solving technological problems for residents.
- The village leaders in the municipality are notified about the sessions of the municipality and receive the necessary materials electronically.
- 10 villages in the municipality have their own websites and community pages.
- The first village in the district to install a camera system with Internet connection. Authorised persons can view the village premises.

Organic Farm Ostoja Natury, Municipality of Olsztynek, Warmia & Mazury Region

Organic Farm Ostoja Natury is a cooperative producing healthy food, combining modern technologies and management and promotion systems.

- E-distribution system for own agricultural products, mobile application, e-shop.
- YouTube channel.
- Organic farming.
- Use of RES.

Innovative solutions in the Municipality of Szadek, Łódzki Region

- Roll out of a broadband network for residents.
- Free Internet access for residents in 20 public venues.
- Use of Internet and technology in modern agriculture.

Computer training for adults, Marshal Office in Toruń, Kujawy, Pomorze & Mazowsze Region

- Basic computer and Internet literacy course including the use of e-mail, word processor, spreadsheets, multimedia presentation applications and computer design.
- Over 3,000 residents of the Region have attended the course.



¹ Basic computer and Internet literacy course including the use of e-mail, word processor, spreadsheets, multimedia presentation applications and computer design. Over 3,000 residents of the Region have attended the course.





Artur Ławniczak,
Mayor of Szadek

“ We built a broadband network for all Szadek residents wherever they live several years ago. We rolled out innovative network solutions in the community in the form of 20 free hotspots, including the community centre, watch-tower, all education institutions and libraries. While this was a major technology breakthrough we need much more stable high-capacity links in the Region today to foster economic growth of the community. We are thinking of smart solutions in agriculture and food processing to improve efficiency and profitability. This could generate tangible savings in fuel consumption, workload and inputs, not to mention environmental gains. With an integrated sensor system, we could accurately identify the number of crops and estimate and plan the exports of Polish products. In order to do this, we would need a robust fibre optic infrastructure backbone and high-speed Internet connection in order to transfer the information captured by modern devices efficiently to distributed and national analytical centres (such as MINROL, ARiMR, PIORIN). I mean data in a macro scale that would have an unprecedented impact on the economic growth of the country. We hope fibre optic networks will soon reach all communities in the area. We believe this could be to the next economic booster and a savings opportunity for government and all taxpayers”.

Respondents believe that the chance for access to fast Internet is the same in small and big cities. The exceptions are entrepreneurs.

To what extent do you agree that the following groups in a small town have the same chances of using fast, stable and reliable Internet as in a big city?

Officials



Teachers



Residents



Students



Companies



● I strongly agree/rather agree ● Other answers





Teachers from NEXERA Regions are convinced that high-speed Internet can reduce disparities between large and small cities. 65% of them agree that fibre optics can play a positive role in levelling out opportunities between metropolises and provinces. Only 14% of the surveyed educators are of the opposite opinion.



Nearly 2/3 of teachers agree that fibre optics can narrow the gap between schools in small and large towns.

To what extent do you agree or disagree that fibre optics can narrow the gap between schools in small and large towns?



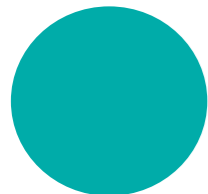
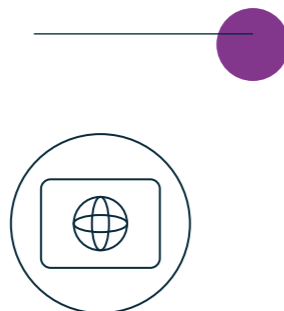
- Strongly disagree
- I tend to disagree
- Neither agree nor disagree
- I tend to agree
- Strongly agree

Will Young People Return to Small Towns Due to High-speed Internet?

Respondents in the NEXERA Regions attach great importance to high-speed Internet. It can increase the attractiveness of Regions in key aspects of living and working, as well as bridging the gap between residents of smaller and larger cities. However, respondents are unsure whether high-speed Internet will contribute to young people returning to small towns.

According to Professor Piotr Szukalski, in Poland in 2019, a decrease in population was recorded in 295 counties and an increase in only 84. The largest number of inhabitants was lost in Łódź (4,914 people), Częstochowa (2,006) and Sosnowiec (1,972). In general, most people leave peripheral areas, away from large urban centres, while the number of inhabitants increases in suburban areas, surrounding large cities or belonging to agglomerations. Polish rural areas present a huge potential, however. According to Statistics Poland, 40% of Polish citizens live in rural areas and 12% in small and medium-sized towns. In contrast, only about 20% of the population of developed countries live in rural areas. Unlike in the 1990s, the population of rural areas has grown steadily in Poland since the start of the 21st century. Rural areas have gained 4.9% residents during the economic and political transition since 1989. The growth rate of in rural population was higher than that in the general population.

Respondents in the NEXERA Regions were asked whether high-speed Internet could be an argument for young people to return to their small hometowns. Only 4 out of 10 officials and slightly more residents think that it can encourage young people to return. When asked about spending their free time in their small hometown, slightly more respondents, around half of the officials and residents, said yes.



Respondents are not convinced that the offer of fast Internet and its benefits are enough to bring young people back to their small towns.

How much do you agree with the following statements:

Good high-speed Internet offer may make young people more willing to return to their small towns.

Officials



Residents



Good high-speed Internet offer could make young people want to spend their days off in their home town.

Officials



Residents



● I strongly agree/rather agree ● Other answers

Young People Consider Moving

1 out of 3 residents of the NEXERA Regions aged 25-40 is planning to move within the next 3 years. The greatest number of those willing to relocate come from the Warmia & Mazury Region.

Nearly 1/3 of NEXERA Region residents aged 25-40 plan to move within 3 years. This is 4 p.p. higher than last year, but at the same time the number of respondents who say they “rather” do not plan to move has fallen from 34 to 26%. Slightly more residents than in 2020 are unsure of their plans.



1 in 3 younger residents in the NEXERA Regions plan to move. Over the year, those willing to relocate have increased slightly.

In the next 3 years, do you plan to leave your current place of residence and move somewhere else? Applies to residents aged 25-40.

2020:



2021:



- Definitely not
- Not likely
- Not sure yet/it depends
- Rather yes
- Definitely yes



Sylwia Jaskulska,
Deputy Marshal of the Warmia & Mazury Voivodship

” The intention to move home among residents of Warmia & Mazury may result not so much from the deficits in the quality of life and work but the level of wages. Working from home is an opportunity for the residents of our Region. You no longer need to leave the country to be an analyst in an international bank or a software development in a multinational corporation. All you need is high-performance online connectivity. The project funded by the Warmia & Mazury Regional Government will ensure that high-speed Internet will be available in small lakeside villages. We wish to ensure that our residents have as many tools as possible to allow all kinds of well-paid jobs to be available to them. Speaking of investment projects, I mean the broadband network project which allows residents to work from home often for international companies. Higher wages will be more available for people who choose to stay in their current communities. This is the largest but the only ICT project in in our Region. We invest in new technologies. The pipeline includes a Gaming University and New Technology Sandbox. We wish to retain as many young, creative and entrepreneurial people in the Region. They will be the driving forces of the regional economy. We wish to demonstrate that technology development brings new opportunities and it is possible here in the North-Eastern Poland. Delivering tools to young people and individuals who transition to the labour market we are in a position to fight to prevent them from emigrating. We are organising workshops on the Future Professions such as Drone Operator and training people to in new professions in the gaming and e-sports industry”.

There are significant differences between the NEXERA Regions in terms of plans to change the place of residence. The least willing to leave their small homelands are respondents from the Kujawy, Pomorze & Mazowsze Region, where only every fourth resident aged 25-40 has such plans, and more than half declare that they are not thinking about moving. At the other extreme in this respect is the Warmia & Mazury Region. Here 39% of younger residents want to change their place of residence within 3 years, and 40% have no such plans.



Depending on the Region even more than 1/3 of young residents want to change their place of residence. Most in the Warmia & Mazury Region.

In the next 3 years, do you plan to leave your current place of residence and move somewhere else?
For residents aged 25-40.

Warmia & Mazury Region



Świętokrzyski Region



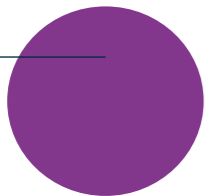
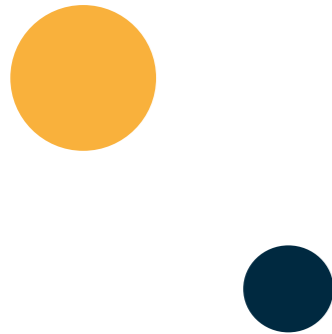
Łódzki Region



Kujawy, Pomorze & Mazowsze Region



- Definitely not
- Not likely
- Not sure yet/it depends
- Rather yes
- Definitely yes





Fibre Optic Cable Matters in New Homes

6 out of 10 residents think it is important for their new residence to be connected to a fibre optic cable. This is not just theoretical speculation, since every third young resident of the NEXERA Regions plans to move there within the next 3 years. For most entrepreneurs, fibre optic infrastructure is also important.

59% of NEXERA Regions residents would like to have high-speed fibre optic Internet in their new residence. Only 14% of respondents say that it does not matter to them. However, for 1 in 4 people the issue of access to optical fibre in a new house or flat is indifferent. In the case of entrepreneurs, the proportions are slightly different. First of all, they have much more precise views on the subject. Only 8% have no opinion regarding the possibility of installing a fibre optic cable in the new company premises, 42% think it is unimportant and 49% that it is important.

More than half of residents and almost half of entrepreneurs would like to have fibre optics at their new residence/business premises.

When choosing your place of residence or business premises, to what extent would it be important to you that the new location be covered by high speed fibre Internet?

Residents



Entrepreneurs



- Definitely irrelevant
- Rather irrelevant
- Neither relevant nor irrelevant
- Rather relevant
- Definitely relevant

Entrepreneurs in the NEXERA Regions differ in their opinions on fibre optics in a new company premises. In the Kujawy, Pomorze & Mazowsze Region this possibility is important for 57% of respondents, and unimportant for 36%. The opposite opinion is held by entrepreneurs in the Warmia & Mazury Region, where almost 6 out of 10 respondents consider the possibility of fibre optic connection as unimportant, and 37% as important.

Optical fibre in the new company headquarters is most important for entrepreneurs from the Kujawy, Pomorze & Mazowsze Region.

To what extent do you think it would be important for your new premises to be in a location covered by fibre optic Internet?

Kujawy, Pomorze & Mazowsze Region



Łódzki Region



Świętokrzyski Region



Warmia & Mazury Region

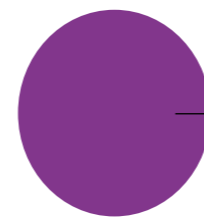
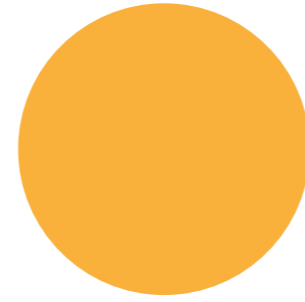


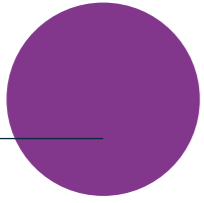
- Definitely irrelevant
- Rather irrelevant
- Neither relevant nor irrelevant
- Rather relevant
- Definitely relevant



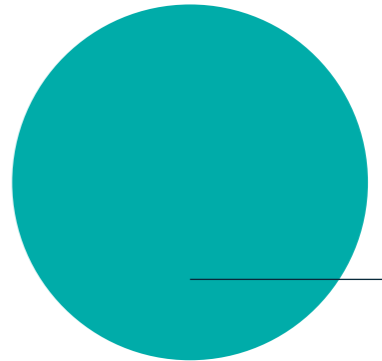
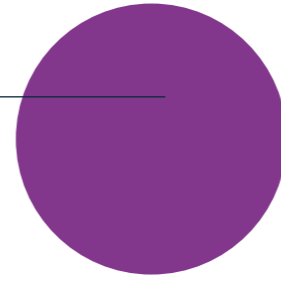
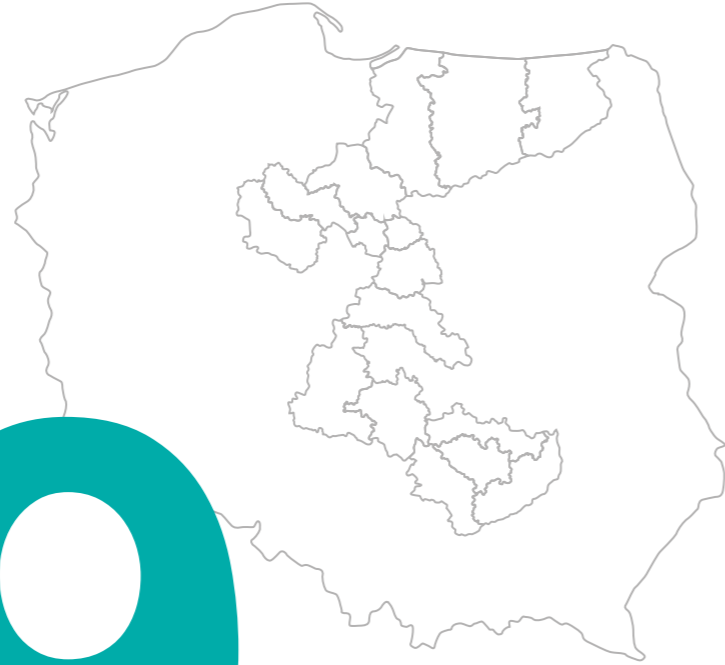
Wiesław Skop,
Mayor of Pacanów

” A vast majority of our residents will agree that a high-speed Internet network will improve the quality of life and work, improve the appeal of the community to businesses and facilitate access to e-services”.





09



**Outstanding
NEXERA Regions.
What Makes Them Different?**



Outstanding NEXERA Regions. What Makes Them Different?

NEXERA builds fibre optic cable in four Regions of Poland, covering with broadband Internet access households, companies, offices, educational units and many other places in the Kujawy, Pomorze & Mazowsze, Świętokrzyski, Łódzki and Warmia & Mazury Regions. NEXERA Regions are exceptional places, they are distinguished by their landscape and tourist values as well as unique culture, history and folklore. Thanks to access to modern telecommunications infrastructure, small towns and rural areas located in NEXERA Regions make it possible to combine the charm of living close to nature with the possibilities of big cities. NEXERA Regions are unique in many respects.

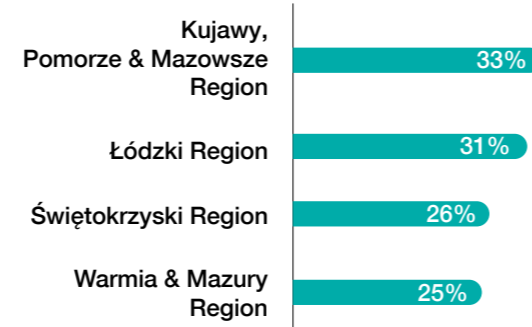


Kujawy, Pomorze & Mazowsze Region

In the Kujawy, Pomorze & Mazowsze Region the highest number of inhabitants use the optical fibre. At the same time, schools and educational institutions lag behind in terms of access to a fixed line compared to schools in the other Regions, and teachers are least satisfied with the Internet at school. Most companies run traditional businesses, which are also partly based on online activities.

The highest percentage of residents use fibre optic cable.

Residents using fibre optic cable:



Gems in the Region

Lake Koronowskie is located about 25 km from Bydgoszcz. It is a popular tourist and recreational attraction in the area. It is distinguished by numerous bays, islands and wild beaches. The area of the reservoir is over 1500 ha and the length of the coastline is 102 km. A seasonal ferry crossing, which connects Tuchola and Bydgoszcz counties, is a great attraction and facility for the inhabitants.

[Source: Wikipedia, Radio PIK]

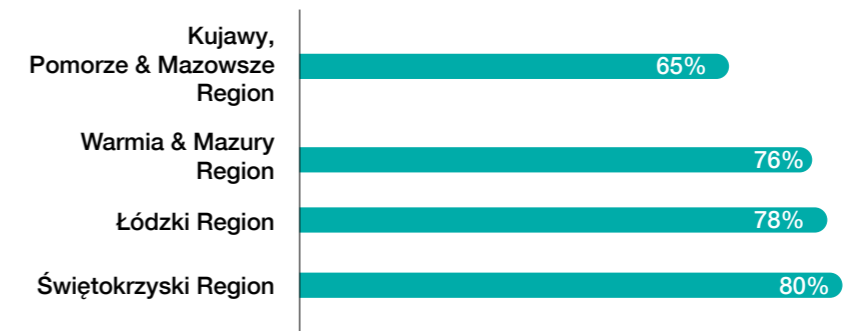


Paweł Hordyński,
Member of the Board, Financial, NEXERA

“NEXERA Regions are exceptional spots with an immense potential on the map of Poland. However, experts from the Polish Economics Institute emphasise there is a wide gap between rural areas and cities with respect to access to and the use of the Internet. In cities, 9 out of 10 households have online access. In contrast, slightly more than 8 households out of 10 have an online connection in rural areas. Access to broadband Internet is a major growth impulse for small and rural communities. Digitisation helps unleash the potential of these communities, improve their appeal to visitors and businesses, stop depopulation and improve the quality of life of the local people”.

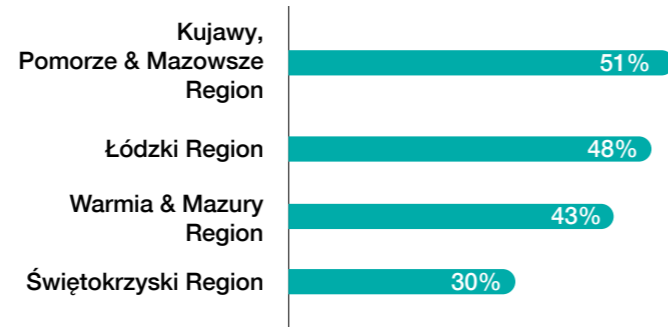
The lowest percentage of schools have fixed wired Internet connection.

Schools with fixed wired Internet connection:



The highest percentage of companies run a traditional business that is partly based on online activities.

Traditional business companies in which part of the activity is based on the Internet:



Gems in the Region

The Culture Park in Bydgoszcz Rother's Mills has gone online, even though its official opening is scheduled for 2022. Thanks to a grant from the National Centre for Culture, the Bydgoszcz institution has implemented the project 'Knots: a city on the web'. The initiative is inspired by the history of the Rother's Mills and the Bydgoszcz Water Junction. The narration of cultural heritage and the history of the city is a proposal to build local identity. The institution is also working on the creation of a Social Archive of Mill Island. Information from residents is collected by e-mail and will soon be digitised.

[Source: Gazeta Wyborcza Bydgoszcz]



Zbigniew Ostrowski,
Deputy Marshal, Kujawy & Pomorze Voivodship

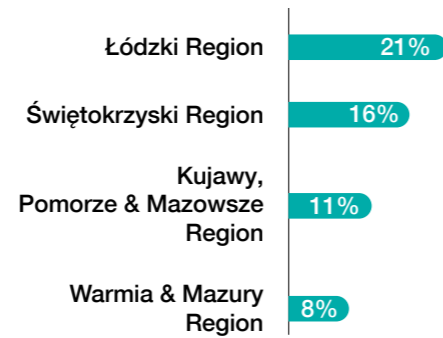
“The Kujawy & Pomorze Voivodship has been committed to foster modern technologies for a while now. Depending on the level of development in communities and the needs of the local residents we take measures to ensure access to amenities in the Region. Secure high-speed Internet connectivity, wherever and whenever it is possible, is key to improving the quality of life. With our efficient ICT network, we have successfully implemented a number of e-services at the municipal, county and regional level. Our geoportal offers access to data registers and we have digitally transformed many schools and education institutions in our Voivodship; we have also enlarged and upgraded a number of regional hospital and medical service units. The continuous long-term transformation process is about adapting systems to evolving education solutions. Embracing modern technological, business and social realities is essential for products and services to be relevant. At the onset of the pandemic, all digital projects implemented by the Kujawy & Pomorze Voivodship helped ensure uninterrupted operations in a number of key areas of the Region. First, we focused on securing the continuity of education provision for students of all types of schools in the Voivodship. The Kujawsko-Pomorska Internet School was launched a day after the first lockdown was announced in March 2020. The e-school is immensely popular with tens of thousands of impressions of the platform. This would not be possible without an efficient, fast and high-capacity broadband network that has reached every little community in the Region. Initiatives such as the NEXERA fibre optic network expansion project are key for the full availability of all digital content and services for residents in the Region. I have watched NEXERA's operation in our Voivodship with respect and it enables our plans to digitise the Region and find customers for our modern products and services on the other end of the line”.

Łódzki Region

In the Łódzki Region, most residents make friends online. Most teachers are satisfied with the Internet at school and the highest percentage of officials find it easy for residents to apply online.

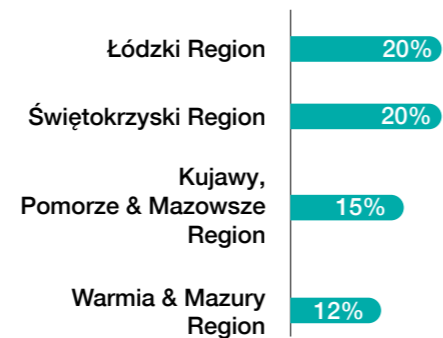
In the Łódzki Region, the highest percentage of inhabitants learned about the possibility of using optical fibre from the local government.

Residents learned about the possibility of fibre optics from the local government:



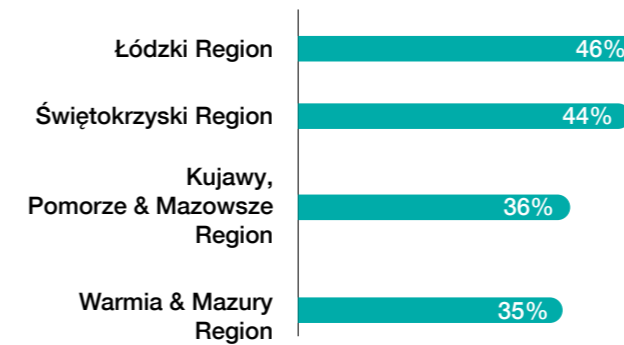
The shared highest percentage of residents use dating sites.

Residents who use dating sites:



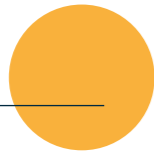
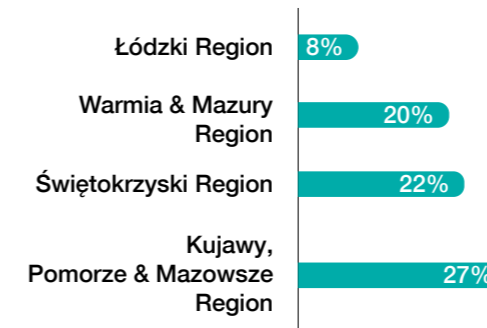
The highest percentage of residents make friends online.

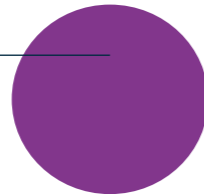
Residents who make friends online (outside of dating sites):



The highest percentage of teachers satisfied with the Internet in their schools.

Teachers dissatisfied with the Internet at school:





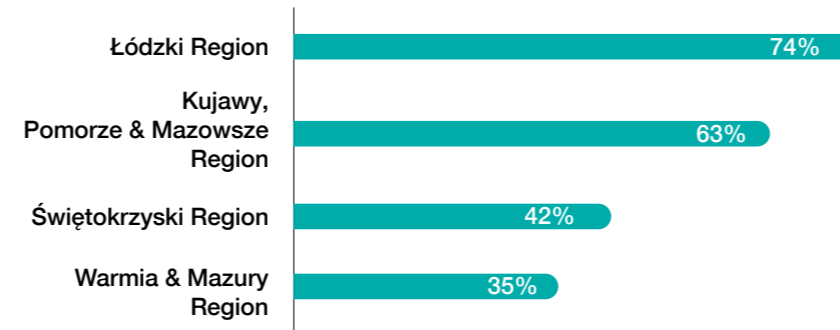
Gems in the Region

In 2020, School Complex No. 1 in Wieluń recruited students into its first Accounting Technician class. Students will develop advanced user skills in HR and payroll and accounting software. The five-year programme also includes an extended mathematics curriculum.

[Source: School Complex No. 1 in Wieluń]

The highest percentage of companies use e-invoicing.

Companies using e-invoicing:



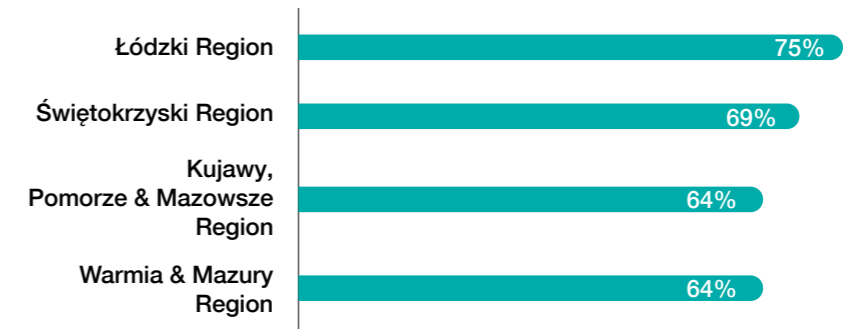
Gems in the Region

OSM Łowicz is the first dairy company in Poland to implement environmentally friendly packaging for UHT 3.2% milk, which consists of 88% renewable raw materials. CO2 emissions associated with the production of this packaging have been reduced by 21%. 69% of the carton is made of paper made from wood fibres from FSC-certified forests and other controlled sources, and the cap is made from sugarcane bioplastic. Essentially, the packaging is fully recyclable.

[Source: OSM Łowicz]

The highest percentage of officials find it easy for residents to apply online.

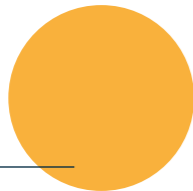
Officials who think it is easy for residents to apply online:



Gems in the Region

The City Hall of Zduńska Wola has developed an online survey asking local community activists about their development plans and how the city can support them in implementing their ideas. Local government officials want to develop a support strategy. Support will be provided by a specialised municipal unit, Social Initiative Incubator, based on the actual needs of the respondents. Filling in the online form takes no more than five minutes.

[Source: Zduńska Wola Local Government]

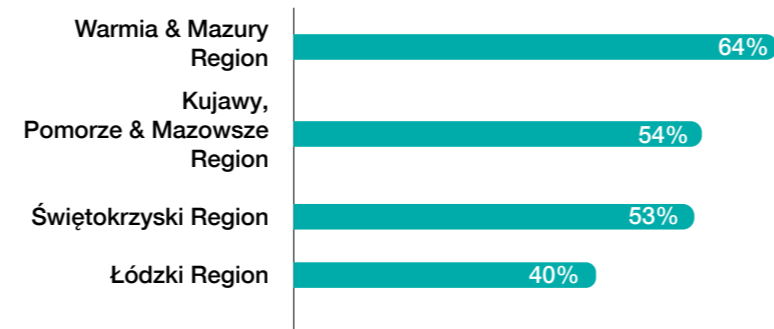


Warmia & Mazury Region

Warmia & Mazury is assessed by its inhabitants as an attractive place to spend free time and in terms of tourist offer. On the other hand, it is the least active in terms of using fast Internet. Most companies, which are not connected to the network, are located in the Warmia & Mazury Region. Also, here there are the fewest companies with fixed wired and optical fibre connections.

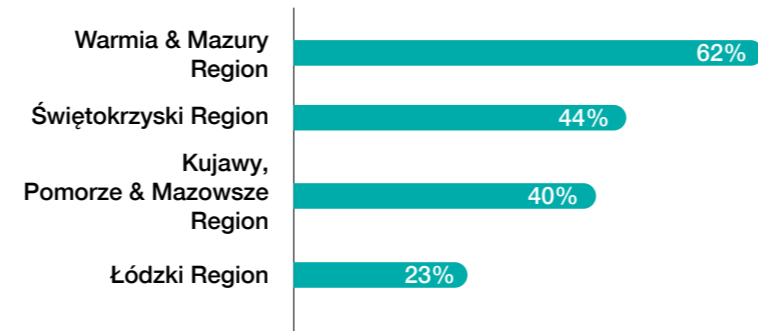
The most attractive Region for leisure activities.

Residents rating the Region as attractive for leisure activities:



The most attractive Region in terms of tourist offer.

Residents rating the Region as attractive in terms of tourist offer:



Gems in the Region

The Digital Mazury project is a project implemented by 12 local governments in the Great Masurian Lakes area in 2014-2020. The main objective was to build e-government solutions in the area and to build hot-spots to provide residents with free access to e-government services. The implementation of the project helped integrate tourist information systems and the implement joint online promotion activities. The value of the project was about PLN 8.3 million.

[Source: Digital Mazury]

Least companies use optical fibre.

Companies that have a fixed wired connection and use optical fibre:





Gems in the Region

Cheese from Komorowo is produced by the farm owned by Mr and Mrs Palinski in Komorowo Żuławskie. In a modern-style video, the owners present their innovative farm. The project has been completed in the framework of the EIT FOOD SUDAPS, which aims to support cattle breeders and dairy producers in solving problems faced by the dairy sector, as well as analyse trends and preferences of consumers of milk and dairy products.

[Source: FB Ser z Komorowa, EIT FOOD]

Gems in the Region

The Museum of the Kielce Village in Tokarnia, which has more than 14,000 fans on Facebook, has made available a virtual walk through an old village. The tour allows visitors to get to know the history and folk culture of the Region. Online users have access to more than three hours of broadcasts and music and more than 3,000 photographs. Each object can be carefully assessed visually during your walk.

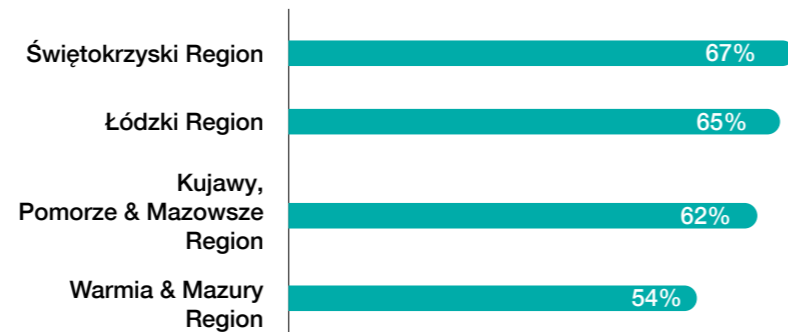
[Source: Radio Kielce]

Świętokrzyski Region

The Świętokrzyski Region stands out for the number of residents who use dating portals, as well as for the high level of high-speed Internet usage in businesses. The Świętokrzyski Region has the highest number of companies with a fixed wired connection, using fibre optics and being satisfied with the performance of their Internet. This area also has the highest percentage of businesses conducting their business online.

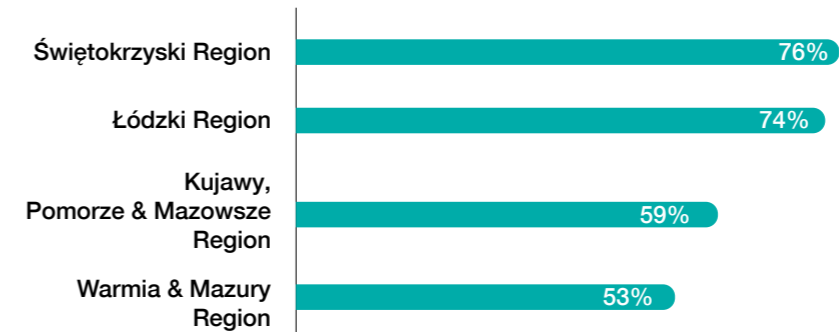
The highest percentage of residents are interested in connecting a fibre optic cable at their own expense.

Residents who are interested in connecting a fibre optic cable at their own expense:



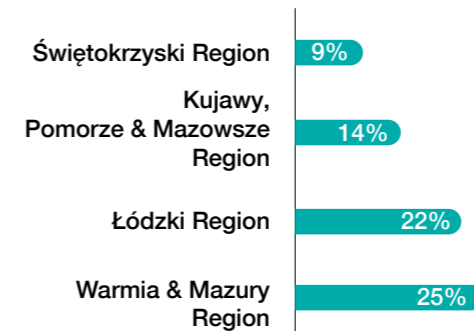
The highest percentage of companies have a fixed wired Internet connection.

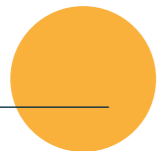
Companies that have a fixed wired Internet connection:



Least companies do not have access to the Internet.

Companies that do not have Internet access at their premises:





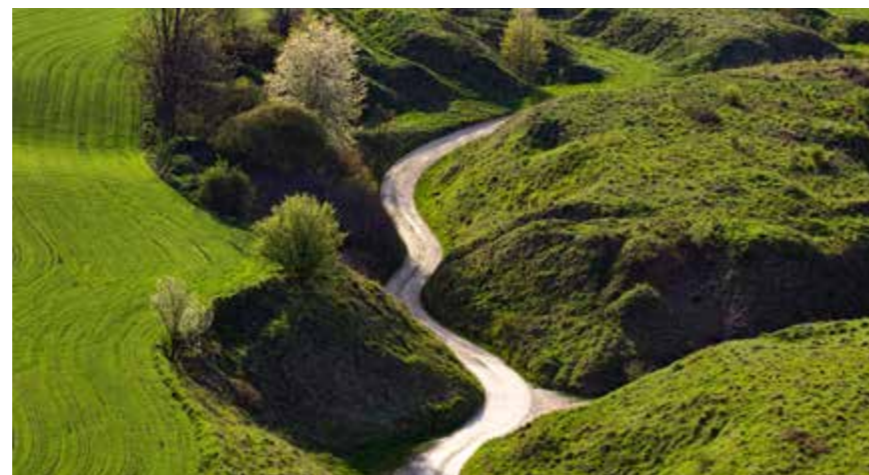
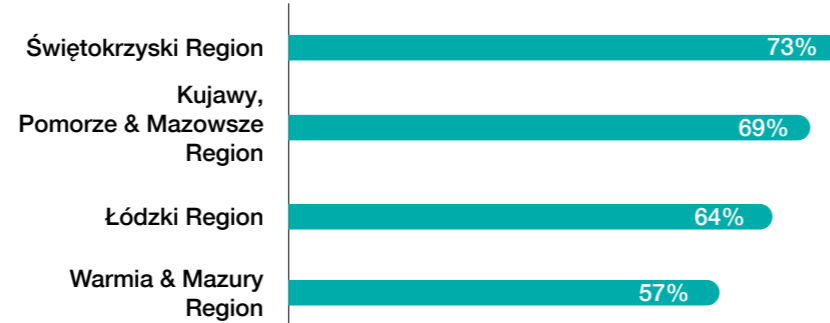
Gems in the Region

Gucci in Pińczów. Santi Gucci was an architect and sculptor, born in Florence, who came to Poland after 1550. The craftsman ran a stone workshop in Pińczów, making mainly tombstones, portals and fireplaces. The place continued to operate after his death, training new artists and extending the tradition of Gucci's distinctive Mannerist style. Santi Gucci's most important works include the reconstruction of the castle and St. Anne's Chapel in Pińczów. However, the most outstanding work of the artist is the tombstone and stall in the burial chapel of Stefan Batory in Wawel Cathedral.

[Source: Wikipedia, Encyklopedia PWN]

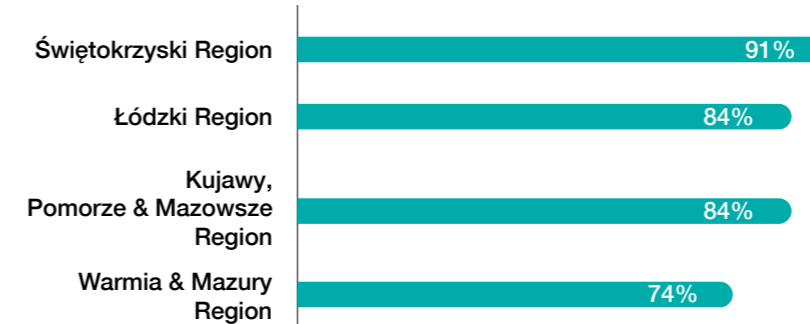
The highest percentage of companies use fibre optics.

Companies that have a fixed wired connection and use optical fibre:



Companies most satisfied with the Internet.

Companies satisfied with the Internet performance at their premises:



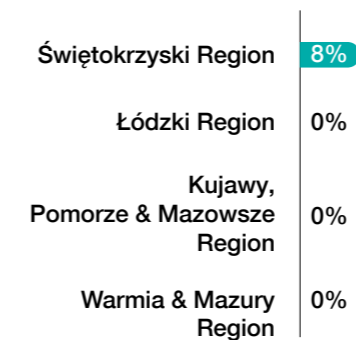
Gems in the Region

Questing in Świętokrzyskie! Questing is an outdoor educational game. It consists in taking an unmarked tourist trail through unique, but often forgotten, places. The aim is to learn about the heritage of a place, its forgotten legends, stories and history. The Świętokrzyskie adventure trails available in the game include the historical and landscape curiosities in places such as Bałtów, Oblęgorek, Morawica and Strawczyn.

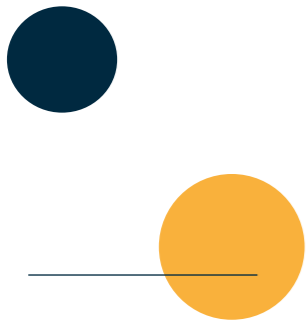
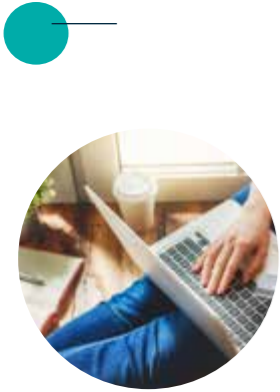
[Source: Questing.pl]

The highest percentage of companies do business online.

Companies with online business fully dependent on the Internet:



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Methodology

The #RegionyNEXERY2021 Report is the third edition of the proprietary NEXERA study, which was conducted by GfK in March 2021. It is one of the most cross-sectional sources of knowledge about Polish Internet users in areas where access to broadband Internet is lacking or limited.

The survey was conducted among four target groups: residents, teachers, entrepreneurs and officials.

The survey among residents was carried out using the CAWI Internet interview technique. All respondents were Internet users residing in the area covered by the NEXERA network. A total of 1600 interviews were conducted.

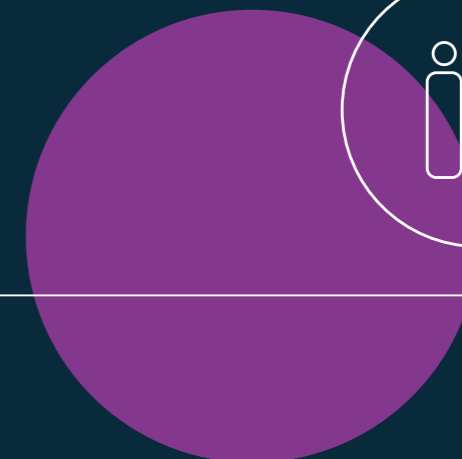
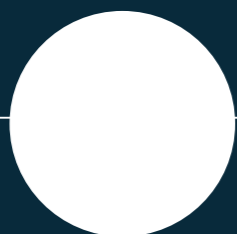
The survey among teachers was carried out using the CAWI web interviewing technique on the GfK Access Panel. It covered teachers working in schools operating in the area covered by the NEXERA network. A total of 320 interviews were conducted.

The survey among entrepreneurs was carried out by telephone (CATI). It covered companies operating in the NEXERA network area. A total of 400 interviews were conducted.

The survey among officials was carried out by telephone (CATI). It covered representatives of county and municipal level self-governments in the NEXERA network area. A total of 273 interviews were conducted.

The #RegionyNEXERY2021 Report also uses data from publicly available sources and analyses by the InsightOut Lab team. All data presented in the document have been rounded to whole numbers, so on some charts may not add up to 100%.





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