

R E P O R T

The role and importance  
of the internet according to residents,  
local governments, businesses

#RegionyNEXERY2019

NEXERA





## T A B L E O F C O N T E N T S

4	About
6	Introduction
8	PART 1: Residents
16	PART 2: Business
24	PART 3: Local Government
30	PART 4: #RegionyNEXERY2019
31	Łódź Region
35	Świętokrzyskie Region
39	Kujawy, Pomorze & Mazovia Region
42	Warmia & Mazury Region
46	Summary

# NEXERA

NEXERA is the first Polish wholesale operator developing a large-scale, high-bandwidth (**min. 100 Mb/s**) fiber optic network (Next Generation Access, NGA). NEXERA shareholders are companies that have been long active on the global telecommunications market: **Infracapital and Nokia**. In 2017-2018, NEXERA won tenders for the construction of an optical fiber network in **14 areas** of central and north-eastern Poland as part of the **Operational Programme Digital Poland (POPC)**, which is the largest Polish digitization project to date. The goal of the program is to eliminate the so-called “NGA white spots” in Poland, i.e. areas where there is no access to very fast internet, and to prevent digital exclusion of citizens of European Union Member States.

As the result of NEXERA activities, over **530,000 households** and nearly 3,000 schools and educational institutions will be within range of the most modern fiber optic network by **2021**. Schools and over **311,000 households** in this group (households in white address spots) will be covered by the network thanks to the co-financing under the POPC in the amount of over **PLN 597 million**. The remaining funds come from NEXERA shareholders, and the total value of the investment is about **PLN 1.5 billion**.

**80%**  
finance,  
know-how

 **Infracapital**



**20%**  
technology  
and hardware

**NOKIA**

## NEXERA eliminates internet “White Spots”

According to the guidelines of the Digital Agenda for Europe, by **2020** every EU citizen should be within the range of an internet connection not slower than **30 Mb/s**, and at least half should have access to speeds of **100 Mb/s** or more.

In Poland, these goals are achieved, among others, via the Operational Programme Digital Poland (POPC) whose purpose is to strengthen the digital foundations of the country.

As a beneficiary of the program, NEXERA implements its premises by eliminating “NGA white spots” and providing residents of Poland with fast internet access at a speed of at least 100 Mbps.

NEXERA will also extend the access network to **all schools** in the regions covered by the project, giving students and their teachers access to the internet at a speed of at least **100 Mb/s**.

## Projects developed within POPC by NEXERA

Region	School	Household
elcki (3.6.28.55)	141	11 631
olsztyński (3.56.28.56)	308	26 882
elbląski (3.6.28.54)	256	23 383
<b>Total Warmia &amp; Mazury Region</b>	<b>705</b>	<b>61 836</b>
grudziądzki (3.6.04.07)	229	15 387
bydgosko-toruński (3.6.04.06)	121	15 352
inowrocławski (3.6.04.67)	197	13 116
płocki (3.1.14.70)	245	29 190
<b>Total Kujawy, Pomorze &amp; Mazovia Region</b>	<b>792</b>	<b>73 045</b>
skierniewicki (3.1.10.19)	211	19 268
sieradzki (3.1.10.18)	270	30 556
piotrowski A (3.1.10.17a)	163	19 475
<b>Total Łódź Region</b>	<b>644</b>	<b>69 299</b>
kielecki A (3.3.26.52a)	160	25 545
kielecki B (3.3.26.52b)	172	34 714
sandomiersko-jędrzejowski A (3.3.26.53a)	167	17 937
sandomiersko-jędrzejowski B (3.3.26.53b)	262	29 436
<b>Total Świętokrzyskie Region</b>	<b>761</b>	<b>107 632</b>
<b>Total Projects NEXERA POPC</b>	<b>2 902</b>	<b>311 812</b>



Unia Europejska  
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## INTRODUCTION

# The role and importance of the internet according to residents, local governments, businesses

Education, work, keeping in touch with friends, shopping, culture and entertainment. The internet has become an integral part of our lives. It affects almost all of its areas. This was clearly demonstrated a few years ago by the results of a Cisco study - Connected World Technology Report. It showed that over 80% of respondents considered the internet to be a “basic necessity”, just as important or almost as important as water, air or shelter.

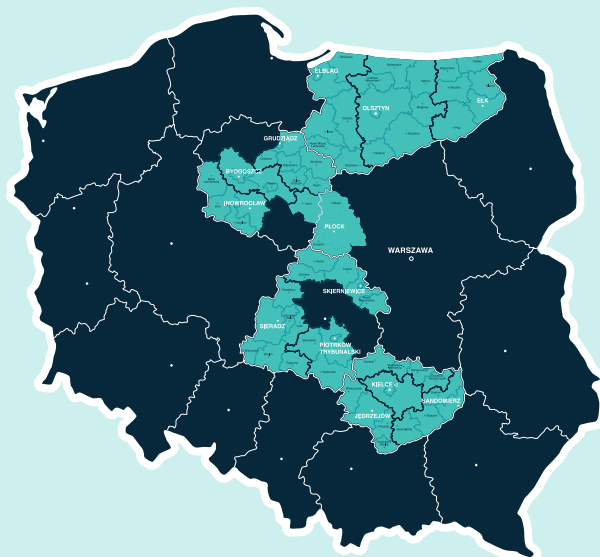
Communication today is mainly based on online channels and social media. The web creates better and better perspectives in the field of education and self-improvement, it becomes the main avenue for trading products and services, a hub for new forms of entertainment, as well as the basic source of information on every topic. With the importance of the internet increasing, the use of the global network increases as well. Back in 2002, only 17% of respondents replied in the affirmative when asked, “Do you use the internet at least once a week?” by the Centre for Public Opinion Research (CBOS). In the last edition of the “Internet usage” report, published in July 2019, this number increased to nearly 70%.

The global network is used not just by individuals, but has also become the basis for the operation of companies and organizations. It is used not only to communicate with customers, but also to collect and analyze data and automate business processes. Businesses strive to become data-driven companies, i.e. companies powered by data that are automatically obtained from the global network. To this end, they leverage Business Intelligence, Cloud Computing and Big Data solutions.

The internet is also becoming a tool for establishing interaction between residents and offices. Increasingly, there is talk not only about e-government itself, but also about record-breaking interest in e-services offered by public administration.

All the uses of the global network mentioned above have one common factor – a fast and stable internet connection, which is the basis for the effective use of the internet. This is confirmed by the results of our study conducted in cooperation with GfK research agency, which were used to create this report.

## NEXERA fiber network coverage



As NEXERA, we are building a fiber optic network, co-financed by the EU, in 4 NEXERA REGIONS:

- **KUJAWY, POMORZE & MAZOVIA REGION**
- **WARMIA & MAZURY REGION**
- **ŁÓDŹ REGION**
- **ŚWIĘTOKRZYSKIE REGION**

<sup>1</sup> Cisco Connected World Technology Report, November 2014

<sup>2</sup> CBOS, Korzystanie z Internetu (Internet Usage), Research Brief No 62/2018

As a result of our work, over 530 thousand households located in places where stable and fast internet access has been limited and difficult will soon be within the range of the fiber optic broadband network. Thanks to our infrastructure, almost 3,000 schools will be able to change the approach to the educational process and expand it with digital content available online. While implementing this investment of fundamental social and business importance, we decided to check whether and how the internet is used today in regions which are generally recognized as less digitized, but have significant potential for using it to improve the quality of life or business efficiency.

Does access to high-speed networks really matter for residents, entrepreneurs and local government employees? What are their expectations and preferences regarding access to the internet? How do they perceive remote work, online business, e-administration, e-shopping? Have they heard about these possibilities, or maybe they are already taking advantage of them? These are just some of the questions we decided to answer in the study.

Based on the interviews, we were able to determine distinctive features of each of the 4 NEXERA Regions. It turned out that they are different in terms of using the global network in everyday life, in business and in dealing with public administration. 1,649 residents from 4 NEXERA Regions, 403 representatives of local enterprises and 187 employees of local government units were invited to the study.

The collected data reveal a fascinating picture of residents, companies and local government officials living and working in areas that can already be looked at with interest and pride, and which the fiber network we are building will change into more attractive places to live, work, relax or do business. We wanted to share this information with you. We are pleased to present the first edition of the annual report analyzing the role and importance of the internet for residents, business and local governments in the 4 NEXERA Regions.

We hope you enjoy reading the report!



**Jacek Wiśniewski**  
Chief Executive Officer, NEXERA

PART 1

# Residents



## Research methodology

The study was carried out using direct CATI interviews and included 1649 residents living in the area covered by the NEXERA network.

### In total, 1649 interviews were completed in four regions:

Kujawy, Pomorze  
& Mazovia Region  
**n=419**

Warmia & Mazury  
Region  
**n=406**

Łódź Region  
**n=412**

Świętokrzyskie Region  
**n=412**

The results of the study were weighted by the number of residents in each region.

Study period:

**June 2019**

Do the residents of the NEXERA Regions use digital resources as much as people living in areas with better, faster internet access infrastructure? Do they take full advantage of possibilities offered by the web: are they regular users of e-banking, e-shopping, and e-government services? Do they work remotely, or are they just starting to explore the possibilities of the digital world?

Before starting the research, we assumed that our role as a telecommunications operator implementing a socially and economically important fiber optic network construction project would largely be to educate residents about using the internet. This assumption resulted primarily from the fact that our task is to fill the so-called “NGA gaps”, i.e. building a modern and fast telecommunications infrastructure where there is no fast broadband internet access or where it is very limited. Research results have not fully confirmed our expectations. The residents of the NEXERA regions not only are already living in the digital world, but also use its resources comprehensively and consciously.

Despite the use of mostly slow and unreliable technologies, access to the internet turns out to be even more important for them than access to transport to nearby cities and towns.

### Internet access

According to our research, only 16% of the inhabitants of 4 NEXERA Regions do not use global network resources. How does this compare to the total population of Poland? According to current Central Statistical Office (GUS) data, the number of households with internet access is 84.2% nationwide, which is almost the same result as in the examined regions. These numbers are surprising, considering that the fiber optic infrastructure that ensures the best comfort and efficiency of using the internet, and which many residents and schools did not have access to, is still under construction.

### Internet users GUS vs NEXERA Regions

**84.2%** vs **84%**  
GUS vs NEXERA

This is perfectly clear if we analyze the types of connections to the global network. Although the vast majority, as much as 87% of the residents of the NEXERA Regions, use internet access at home, the speed and stability of data transmission leaves a lot to be desired. According to GUS data, 79.3% of households access the internet via broadband connections in Poland. According to our analysis, this number is noticeably lower in the NEXERA Regions and amounts to 64%.

### Internet users via broadband connections GUS vs NEXERA Regions

**79.3%** vs **64%**  
GUS vs NEXERA

### Percentage of rural population in Poland



Source: CONTEMPORARY PROCESSES OF CHANGES IN RURAL POPULATION IN POLAND, Andrzej Rosner, Agriculture and Rural Development Institute of the Polish Academy of Sciences in Warsaw



### Paweł Hordyński

Management Board Member,  
Chief Financial Officer, NEXERA

The vast majority of the residents of the NEXERA Regions use the internet, both landline and mobile. It is very good news, meaning that not only there is no digital exclusion, but the network access rate is almost the same as for the whole country. A cause for concern, however, is the fact that due to the noticeably worse telecommunications infrastructure, residents of the NEXERA Regions may have problems accessing some services that require a stable and fast internet connection. Thus, the use of video streaming applications, such as instant messengers transmitting live images used e.g. in education, or VoD services, may be limited. In some cases, the lack of broadband infrastructure may hinder or even prevent remote work. The development of broadband infrastructure in the Regions is therefore necessary for residents to be able to take full advantage of the opportunities offered by the digital world, to have access to better education and gain more employment opportunities. On a larger scale, this can be an important factor in increasing the attractiveness of regions and reducing the problem of migration. The GUS data shows that the population of the four NEXERA Regions decreased by over 21 thousand in years 2018 – 2019. The loss of human capital is today one of the biggest challenges facing regions that are away from the largest agglomerations. However, contrary to appearances, the number of people living in rural areas is expected to increase in the near future, which will certainly be influenced by new possibilities related to the availability of high-speed internet.

## The importance of internet access

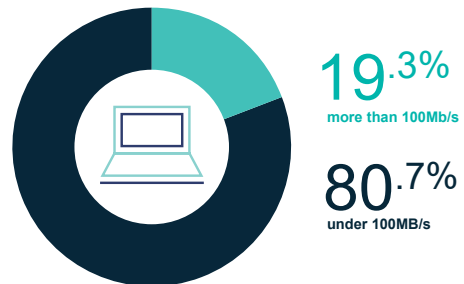
The potential for development of digital services in the NEXERA Regions is huge. Almost half (47%) of the survey participants said that high-speed internet is more important to them than the number of available transport connections.

This definitely shows the changes that are taking place in the minds of residents as they are becoming aware of the benefits of access to the digital world. For one thing, internet access eliminates communication barriers – more and more matters that traditionally required visits to offices, bank branches or shops can be settled online today. The internet also provides access to cultural resources and creates new job opportunities. From this perspective, attributing greater importance to internet access than to the road infrastructure should not come as a surprise. The web is becoming a highway to a better life in many dimensions. Due to the communication in the digital space, geographical boundaries and distances between cities and small towns cease to be relevant.

47%

High-speed internet is more important than the number of available transport connections

## Percentage of households with more than 100Mb/s internet connection



Source: UKE, December 2018

## Average connection speed

20Mbps is the most frequently used internet connection speed in the NEXERA Regions. Therefore, the vast majority of people living in the NEXERA Regions do not have access to connections that meet the challenges posed e.g. by the new generation of digital entertainment, such as 4K video streaming, or virtual and mixed reality solutions. Remote work is also a big challenge for users of low-bandwidth connections. It is worth mentioning here that according to a Panwybierak.pl study, high-bandwidth connections – 500Mbps and above – are mainly chosen by people using the internet for work, particularly by creatives, e.g. graphic designers.

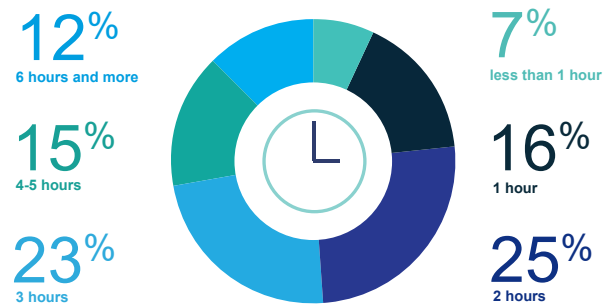
## Internet connection speed



## Time spent online

Internet users from the NEXERA Regions spend a lot of time online. They usually spend 2 to 3 hours a day exploring the resources of the global network. In the youngest age group (18-25 years), it is as much as 6 and more hours a day. In the light of the CBOS research, it turns out that internet users from the NEXERA Regions are more active on the internet than an average resident of Poland. According to this research, the nationwide average is 13 hours a week, which is less than 2 hours a day. It may be important that the nationwide CBOS survey also includes the largest cities, where there are definitely more possibilities of spending free time offline than in small towns. However, activity of the internet users in the NEXERA Regions can be considered very high.

## Time spent online a day



## „You have a message...”

According to Kantar Polska and the Ministry of Digitization, instant messengers are the most-used mobile applications in Poland. Our survey confirms this conclusion - in the NEXERA Regions, as many as three in four residents declare active use of messengers.

This is another proof of the comprehensive use of the internet in the Regions. However, looking at the data from the perspective of the availability of high-speed internet, it is clear that some residents cannot use the full functionality of messengers, such as video calls

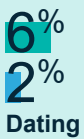
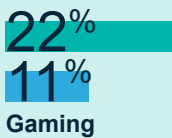
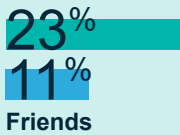
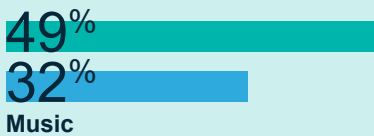
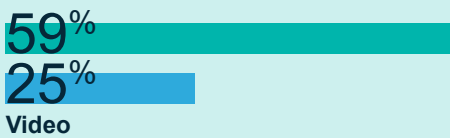
via e.g. Messenger, Skype, WhatsApp or Snapchat. According to a Gartner study of 6,500 people from the U.S. and Germany, internet users prefer video chatting to text communication. The preliminary condition, however, is access to a fast network.

Residents of the NEXERA Regions use more than just instant messengers. Nearly 60% of internet users watch movies available on streaming and VoD platforms. Almost half regularly listen to music available via apps such as Spotify or Tidal. On the other hand, there is also a lot of untapped potential – a significant proportion of residents do not yet use all the opportunities offered by the internet. This is good news not only for operators of streaming services or content providers, but also for internet providers, who can provide services for the residents of the Regions via the broadband infrastructure that ensures comfortable access to digital entertainment.

According to the study, making new friends online is less popular among internet users in the NEXERA Regions. Online games that bring together players from all over the world also have less fans, although this largely depends on the resident's age. Among the available online services, betting sites are the least popular in the Regions.

It is worth noting that the residents engage in online communication regardless of age group. As many as 58% of residents aged 61 and more regularly use instant messengers. 25% watch videos, 32% stream music, and 11% play online games and make new friends on the internet. Research shows that using the internet is definitely not limited to young people.

## Entertainment use of the internet everyone and 61-75 years old



74%

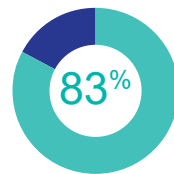
Percentage of internet users who use messenger apps

## Online banking

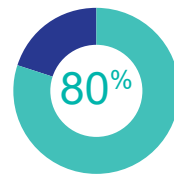
Residents of the NEXERA regions use the internet not only for communication and entertainment. The study shows that the web also significantly facilitates dealing with matters that consume a significant amount of time on a daily basis. 83% of respondents use electronic banking, 80% pay bills online, and 72% make online purchases. Slightly less, 41% of respondents handle official matters remotely, and 20% use the internet for educational purposes.

The research clearly shows that the residents of the NEXERA Regions use the internet intensively and consciously. In comparison with nationwide data, however, it is clear that investments in fiber optic infrastructure can open up new opportunities for banks, insurance companies and other e-service providers. For example, a nationwide Mastercard survey shows that as much as 96% of Polish internet users are actively using electronic banking. This is 16% more than in the NEXERA Regions. Additionally, according to Polish Bank Association's NetB@nk report, the number of online banking contracts exceeded 38 million at the end of last year.

## Online banking



I use electronic banking

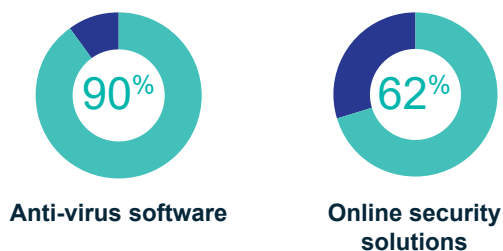


I pay bills online

## Digital security

Our research also touched on the issue of security. It turns out that residents of the NEXERA Regions are mostly aware of the dangers associated with accessing the global network. As many as 9 out of 10 surveyed internet users use anti-virus software, but only 62% use solutions that increase online security. Most likely this is due to the fact that the internet is not yet sufficiently used for professional purposes, such as processing and transferring important information that require secure file transfer. This is well illustrated by the answers to the question about remote work.

### Digital security



## David Leverett

Management Board Member, Head of Engineering and Construction, NEXERA

Remote work is growing quite dynamically in our country. This year, the number of freelancers in Poland who can work independently of geographical location is expected to reach half a million. So while the current number of residents of the NEXERA Regions working fully remotely is very low, with better access to fast internet, we can expect a noticeable increase in the near future.

Better access to the internet can also accelerate the process of so-called deglomeration, i.e. leaving metropolises and large urban centers and settling in smaller towns, where living costs are lower and housing conditions are often more favorable. This is a global trend – in a Citrix study, as many as 70% of U.S. employees stated that they would gladly leave large cities and move to smaller towns or rural areas, if only they had the opportunity to continue working remotely. Among our respondents, this number is 55%!

## Positive opinions about remote work by regions

53%

Kujawy, Pomorze & Mazovia Region

63%

Warmia & Mazury Region

54%

Łódź Region

51%

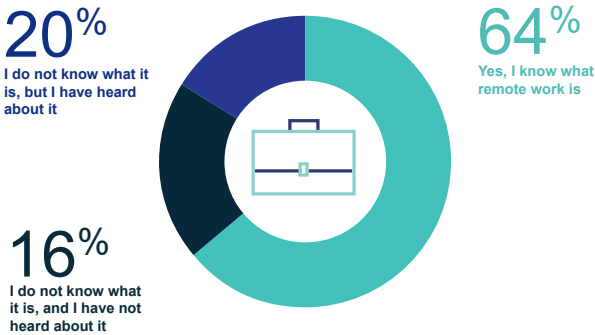
Świętokrzyskie Region

55%

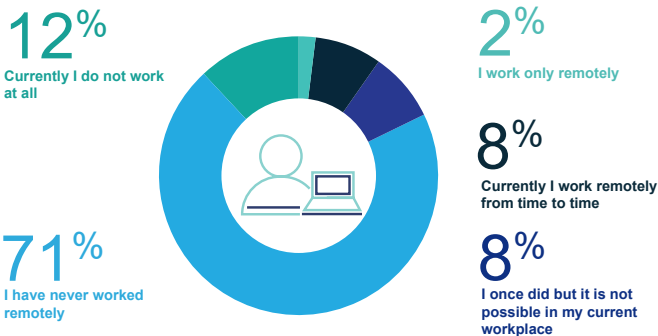
“If I could, I would like to work remotely”



## Familiarity with the remote work concept



## Using remote work



## Remote work

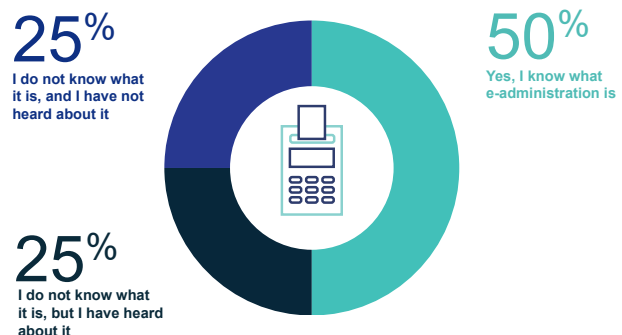
Remote work is a trend that is slow to develop in the NEXERA Regions, although there are some exceptions that we present later in the report. Overall, over 60% of the surveyed residents know the essence and principles of remote work. At the same time, nearly three-quarters of them have never worked remotely. This may be due to the fact that excluding freelancers, employers often deny full-time employees the opportunity to perform their duties remotely. The report "Remote work market and employee expectations" created by Kantar TNS on behalf of Remote-How shows that only one three companies in Poland is willing to let the employees work remotely, although 76% of respondents stated that they would not hesitate to switch to this model if they only could.

## E-government

One half of the participants in our study have never come across the concept of e-government. Another one quarter of the residents of the NEXERA Regions have heard about this concept, but they are unable to say what it actually means. At the same time, over 70% of respondents believe that handling administrative matters in government offices takes far too long. This proves that the handling of civil affairs requires changes and education. The potential for development of e-government in the NEXERA Regions is significant.

E-services are definitely a simpler, more convenient and faster form of handling administrative matters, which has been successfully implemented in many European countries. NIFO, the analytical body of the European Commission, has recently published an analysis of the use of e-government in EU countries. Poland was classified below the average in each of the four categories. However, the situation is improving. This is due to a record interest in e-services such as e-PIT or a very dynamic increase in the number of people visiting the portal.gov.pl website, which will have over 10 million visitors this year. Extending the reach of fiber optic networks and providing high-speed connectivity to the internet where it has been impossible or difficult so far is of great importance for the development of e-administration.

## Familiarity with the e-administration concept



## S U M M A R Y

The vast majority of residents of the NEXERA Regions use the internet. A very good news is that many seniors also take advantage of access to the global network. In the NEXERA Regions, the network access rate is almost the same as in the whole country. What sets the NEXERA Regions apart from more urbanized areas today is the inability to use the most modern fiber optic telecommunications infrastructure, which certainly causes problems with access to some services requiring stable and fast internet connection. Thus, the use of video streaming, and therefore also online educational content or VoD services, may be limited. In some cases, the lack of broadband infrastructure may hinder or even prevent remote work.

The construction of fiber optic networks in the NEXERA Regions will therefore provide their residents with the opportunity to take full advantage of the digital world, including access to better education, better employment options and the use of e-services. On a larger scale, this may be an important factor in increasing the attractiveness of these regions and limiting the problem of migration or depopulation.



**Paweł Biarda**

Management Board Member,  
Head of Sales and Business  
Development, NEXERA



PART 2

# Business

## Research methodology

The study was carried out using direct CATI interviews and included 403 Companies operating in the area covered by the NEXERA network.

### In total, 403 interviews were completed in four regions:

Kujawy, Pomorze  
& Mazovia Region  
**n=100**

Warmia & Mazury Region Łódź Region  
**n=101 n=101**

Świętokrzyskie Region  
**n=101**

The gathered data were weighted by the share of the regions in the research area at the municipality level and by the employment level. The source of the weighting structure is GUS data (May 2019).

Study period:

**June 2019**

- **Do the companies in the NEXERA Regions take advantage of the possibilities offered by the internet?**
- **Do they do so to the same extent as companies operating in large urban centers?**
- **What kinds of connections do the entrepreneurs use?**
- **What is the deciding factor when choosing the internet service? How important is access to the global network?**

These were the questions that we asked over 400 business professionals who operate in the area where NEXERA is building its fast fiber optic network. It turns out that business appreciates the importance of the internet even more than the residents. This is equally true for companies generating revenues from e-services and for traditional businesses. The role of fast network access can be seen, among others, in the approach to selecting offers of internet providers. It is so important for enterprises that the main factor when choosing a provider is no longer price, but speed.

## Connection types

According to the research, 91% of companies in the NEXERA Regions have internet access. This is a good result, but not all companies are able to use the full potential of the global network due to limited access to fast fiber optic infrastructure. On the one hand, almost 70% of enterprises use fixed, wired internet connections. This is the prevailing form of network access, regardless of the size and location of enterprises. On the other hand, it is worth noting that a significant proportion of them also use mobile (54%) and radio (15%) communications. This may be due to the location of enterprises in the Regions – those who are based far from larger urban centers in areas not covered by high-speed fiber optic networks usually have no choice but to use the internet through other, less effective access technologies.

## Ways of using the internet

69%

Fixed wired connection

15%

Radio connection

54%

Mobile internet

9%

Our company does not have access to the internet

According to the whitepaper “Out with the old, in with the new: FTTH Council Europe calls for copper switch-off strategy”, the energy efficiency of fiber optic links is from 40% up to 60% greater than copper. Their reliability and resistance to transmission interference exceeds copper networks by up to 80%, not to mention the maximum speed of internet signal transmission, which is capped at 10 Gb/s in the case of “traditional” infrastructure, and virtually unlimited for fiber optic links.

Interestingly, companies in different NEXERA Regions have slightly different preferences for technologies used as the main internet access link. For example, in the Warmia & Mazury Region there are no companies using mobile network access, while in the Świętokrzyskie region 96% use fixed connections only.

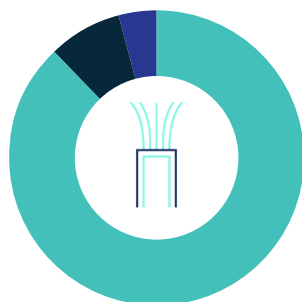
## Ways of using the internet

4%

Mobile internet

8%

Radio connection



88%

Fixed wired connection

## Ways of using the internet firms 51-250 workers

96%

Fixed wired connection

30%

Radio connection

68%

Mobile internet

0%

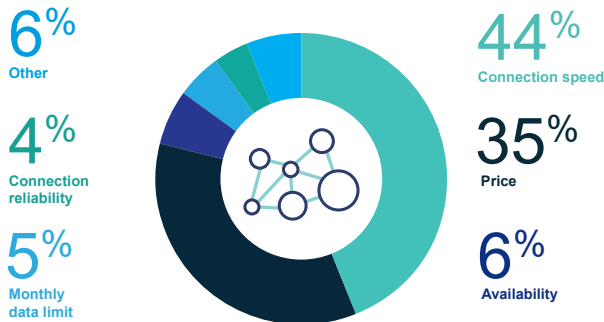
Our company does not have access to the internet



## Speed first

It turns out that price is not the most important factor when choosing an internet provider. More significant is the connection speed, as indicated by 44% of business sector representatives from the NEXERA Regions. Interestingly, 29% of companies employing over 250 people would like to change their connection to a faster one. This means that entrepreneurs understand the importance of broadband internet access, they need it for business activities and in the near future they want to make more use of the possibilities offered by the digital world.

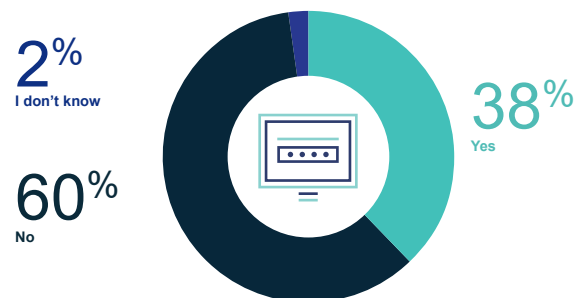
## The top reason to choose an internet provider



## IT outsourcing

IT outsourcing is certainly not a solution used exclusively by large enterprises or corporations from the largest urban centers in Poland. Our study shows that nearly 40% of all companies in the NEXERA Regions are supported by third parties in managing their processes and business applications. For comparison, according to GUS data, 71% of companies used at least one service provided by an external supplier last year, nationwide. This is a significant difference, related largely to the availability of high-speed internet infrastructure in the NEXERA Regions. Its development may increase the interest of companies in IT outsourcing in the coming years and thus lead to a reduction of their operating costs. It is also an opportunity for new companies from the NEXERA Regions, which will be able to significantly shorten time to market by resigning from purchasing and maintaining expensive IT equipment in favor of using resources provided by third parties via the internet.

## Using third parties for IT support





## Jacek Wiśniewski

Chief Executive Officer, NEXERA

The connection speed and reliability are key parameters that determine the ability to use modern technologies, such as cloud computing. IT outsourcing has many advantages: it eliminates the need to purchase your own ICT equipment and software, as well as reduces the need to hire additional IT specialists. This, as many analyses have shown, may lead to significant savings over the years and decades. The problem is that the constant transfer of huge amounts of data, and computing power provided “on demand” put very high demands on internet connections. Enterprises that do not have access to high-performance networks are often unable to operate in the outsourcing model. In the long run, this may have a negative impact on their market position.



Poland is an outsourcing hub of Europe

According to ABSL, the number of people working in the modern business services sector will reach 340,000 by the first quarter of 2020

# 340<sup>K</sup>



More than half of Polish companies is already using or plans to use cloud-based business solutions

Source: – „Public cloud in Poland” by IDG and Oktawave

## Online Marketing

The global network has already become the main channel of promotional and marketing communications. Companies and institutions spend much more on online advertising than in traditional channels. In Poland, according to IAB and PwC analysis, online advertising spending in Q3 2018 amounted to almost PLN 4.5 billion, compared to 3.96 billion in Q3 2017.

Meanwhile, according to the study, less than half of the companies from the NEXERA Regions use internet channels for promotion. Considering the fact that today's consumers usually start their "shopping journey" by searching the web for goods and services, the lack of online marketing means losing an opportunity to increase consumer interest in the company's offer, and thus losing profits to companies who invest in promotion in digital channels.



As demonstrated by the Salesforce and Publicis Sapient analysis, nearly 90% of consumers interested in a product or service start by searching for it on the internet. Note that this number was 71% just a year ago.

## Media used to advertise company's services

47%

Internet

24%

Points of sale

20%

Trade fairs

16%

Press

10%

By recommendation

4%

TV

3%

Flyers, posters

PART 3

# Local Government

## Research methodology

The study was carried out using direct CATI interviews and included 187 Representatives of local government at the district and municipality level in the area covered by the NEXERA network.

### In total, 187 interviews were completed in four regions:

Kujawy, Pomorze &  
Mazovia Region  
**n=46**

Warmia & Mazury Region  
**n=47**

Łódź Region  
**n=47**

Świętokrzyskie Region  
**n=47**

Study period:

**June 2019**

As mentioned above, 41% of the residents of the NEXERA Regions handle official matters remotely, while many more would like to do so if they could. So we decided to check how the subject of e-administration looks from the perspective of local governments.

In the last part of our study, we asked representatives of local government about their opinions on e-administration, the impact of fast internet infrastructure availability on the attractiveness of regions, as well as their interest in new forms of working. Slightly surprising is the fact that local government officials, contrary to common stereotypes, are largely willing to work remotely, although they are usually unable to perform their duties using this model.

### Availability of e-services

Interest in e-administration is growing rapidly in Poland. In just the first 5 months of this year, 1.1 million Trusted Profiles were registered – almost as many as during the entire 2017. In total, 3.8 million Polish citizens already have Trusted Profiles. The second successful online public service is certainly the e-PIT service. Over 7 million Poles submitted their tax declarations using this tool. In turn, the EU program presented in the eGovernment Action Plan assumes that by the end of next year all public

administration institutions should provide citizens with personalized and intuitive digital public services. And how are things today in the analyzed area?

Although residents of the NEXERA Regions often have the ability to handle all official matters online, according to local government officials, they use it to a limited extent. In the vast majority of offices, residents submit only some applications via the internet. And there is a good reason for it.

**89%**

The percentage of official matters handled by the residents via the internet

The availability of e-government services for residents of the NEXERA Regions is generally quite high. In theory, local governments have already entered the e-office era. Almost all (96%) offices allow citizens to handle official matters online. As for the number of offices that allow residents to submit every official matter, however, it turns out that it is lower by almost half.

### The percentage of official matters handled by the residents via the internet

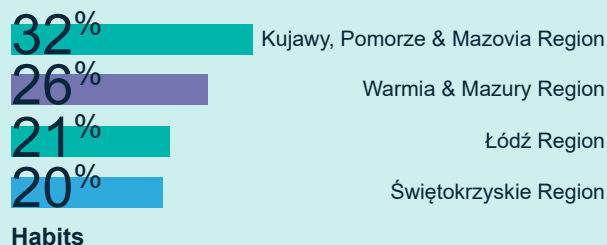
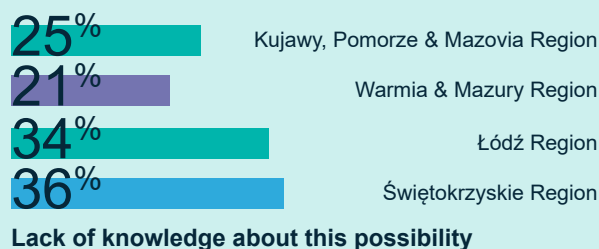
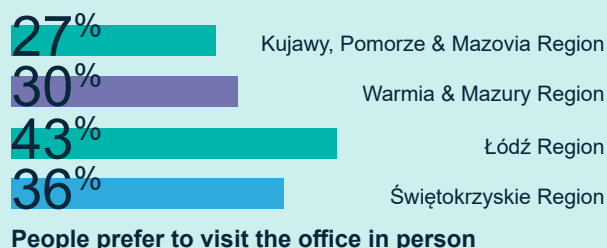
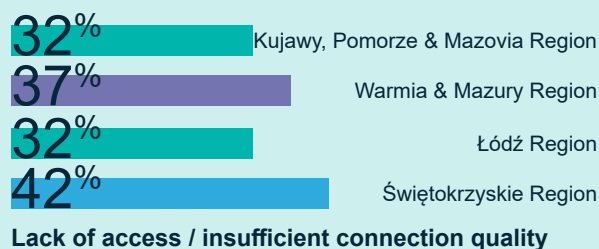


### What hinders e-administration?

Barriers to the development of e-government in the NEXERA Regions can be divided into three areas: technological, educational and procedural. According to the employees of local government units, the biggest obstacle to popularization of handling official matters via the internet, as indicated by 32% of respondents, is limited access to the global network. This barrier will largely disappear soon due to the expansion of fiber optic access networks.

Other important issues are habits of residents, who are used to visiting traditional offices, and the lack of knowledge about the possibility of using e-services. State and local government programs focused on education and computerization of society can be helpful here. Complicated procedures and forms may also be a significant obstacle. It is necessary to develop more effective and user-friendly solutions.

### Top barriers to handling official matters via the internet







## Paweł Hordyński

Management Board Member,  
Chief Financial Officer, NEXERA

Lack of knowledge about the ability to handle official matters online is still very apparent. However, it is the lack of internet access or poor connection parameters that are most pronounced here – it is the biggest barrier in two out of four NEXERA Regions. E-administration is developing very dynamically in Poland, there are more and more enthusiasts of this solution, not only among residents, but also among office employees. This, combined with ongoing investments in the broadband network, may mean that statistics regarding the use of e-government services in the Regions will significantly improve in the coming years.

# 94%

Administration officials are strongly for developing possibilities for residents to handle official matters online

# 55%

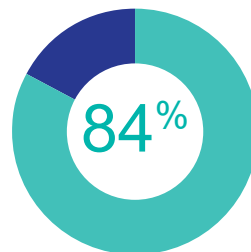
Over half of administration officials are convinced that handling of official matters online (in stead of in person) would greatly optimize the office work flow.

## Fast network and the attractiveness of the region

The employees of LGU (Local Government Units) agree that the construction of a high-speed internet network will increase the attractiveness of the region. As many as 84% of them think so. There are many aspects of this attractiveness – it is about increasing the quality of life, opening new business opportunities as well as increasing the interest of investors, including developers.

The opinion of local government officials is confirmed by external studies. One of the Savills analyses points out that the limited internet access speed is an obstacle for up to 70% of customers interested in renting or buying real estate in small towns and villages. This is not surprising, considering the remote work trends, deglomeration process or even the desire to have access to all forms of new digital entertainment.

## Will the construction of a high-speed internet network make the region more attractive?



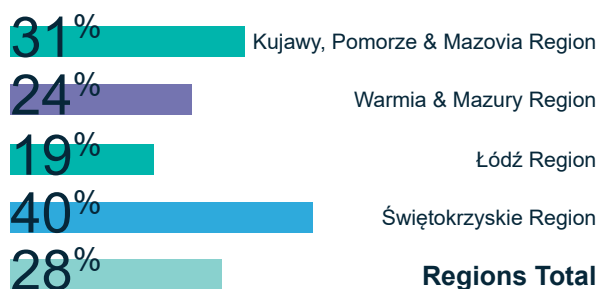
Yes

## Remote government officials

Contrary to common stereotypes, there are plenty of office workers willing to work remotely. Almost 30% of the local government officials surveyed declared interest in working remotely, and in the Świętokrzyskie Region this percentage reached 40%. The problem is that the procedures used by local governments in all the Regions prevent even partial transition to the remote work model. This is the main barrier reported which will likely require regulatory changes in the future.

The telework option was introduced a few years ago in the Lublin Marshal's Office. In 2014, 46 people employed by the Office worked this way. Damian Miechowicz, an employee of the promotion and tourism department at the local Municipal Office, when listing the main advantages of remote work in a statement for the Lublin edition of Gazeta Wyborcza, pointed out the savings resulting from not having to commute to the office, and being held accountable for completed tasks, not hours spent at the desk.

## Government officials interested in remote work



## S U M M A R Y

Residents of the NEXERA Regions are interested in e-administration. More than 40% of them handle official matters online, and nearly 100% of offices provide e-services. However, there are large barriers that hamper the digitization of administration and further popularization of e-services among residents. The biggest one is the lack of fast and stable internet access. Fortunately, it will change soon. A positive fact is that the officials are aware of the impact of access to the global network on the attractiveness of the Regions. Together with their willingness to work remotely, this makes them advocates for investment in fiber optic broadband networks.



**Jacek Wiśniewski**

Chief Executive Officer, NEXERA

# #RegionyNEXERY2019

- Are there differences between NEXERA Regions when it comes to internet usage and perception of the importance of the global network and digital services?
- Do local residents, entrepreneurs and local government officials express similar opinions on this topic?

At the outset of the study, we predicted that each of the Regions would probably demonstrate unique and distinctive features. It turns out that our expectations were confirmed.

Below is the analysis of each NEXERA Region in terms of preferences, role and importance of the internet.

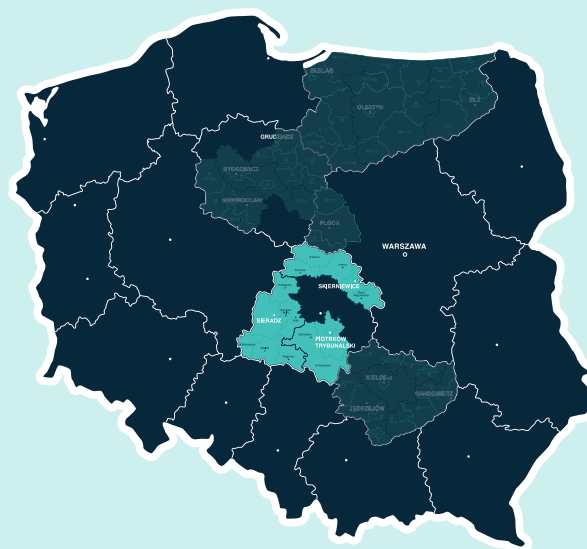
# Łódź Region

According to the GUS data, almost 1.1 million people live in this NEXERA Region. Investment expenditures of enterprises operating in the province were recently estimated at PLN 7.55 billion. Our research shows that the number of internet users is highest among the residents of this region. They are also most likely to exceed quotas of mobile internet access, and the Region itself is characterized by the highest availability of public e-services. Additionally, it is here that most companies are registered. The research reveals a portrait of a region that is very entrepreneurial and aware of the new possibilities created by the digital world, a region whose inhabitants use the internet intensively and appreciate the importance of access to a fast network.

## Internet user population

It is among the residents of the Łódź Region that we identified the largest proportion of internet users – 9 out of 10 residents use the global network every day. A similar percentage of residents use both fixed and mobile connections – 87% of people from the Region declare using the internet both via a landline at home and via a telephone. This confirms the important role of the internet in the lives of the residents of the Łódź Region.

It is worth noting that 87% is a figure much higher than reported by GUS for the Łódź Province. According to GUS data, 56.4% of the residents use fixed broadband connections, while almost 37% use mobile networks. The relatively low use of mobile communications is, however, related to the fact that GUS takes into account the capital of the province, Łódź, where fast fixed internet is widely available. In the districts of the Łódź NEXERA Region, the high usage of mobile internet is probably due to the insufficient availability of fiber optic infrastructure.



## Internet usage

87%

## Place of using the Internet

87%

I use the Internet at home

87%

I use the Internet on my smartphone

31%

I use the Internet at work

4%

I use the Internet outside the home (e.g. in a library)

5%

I use the Internet at school

## Comfort of entertainment consumption

The importance of the internet for the residents of the Łódź Region is also confirmed by other data. 40% – more than in any other Region – state that watching movies and listening to music on popular streaming services can be difficult when using mobile internet. For comparison, this opinion is expressed by 34% of residents of all the NEXERA Regions. For Kujawy, Pomorze & Mazovia Region it is 31%, for Warmia & Mazury Region it is 34%, while in the Świętokrzyskie Region 35% of people are of a similar opinion.

Note that the maximum speeds of mobile internet – using the LTE standard – usually reach about 25-30Mbps. However, this technology is not yet available everywhere, especially in areas located away from larger towns. With older technologies – including 3G – the bandwidth usually drops to a few Mbps. This significantly reduces the comfort of using streaming platforms, which automatically reduce the quality of streamed content. For comparison, the bandwidth of fixed fiber optic connections currently reaches 1 Gb/s or more. In fact, one can say it is virtually unlimited.

# 39%

Listening to music on Spotify platforms or watching movies on vod platforms is difficult if you use a mobile connection.



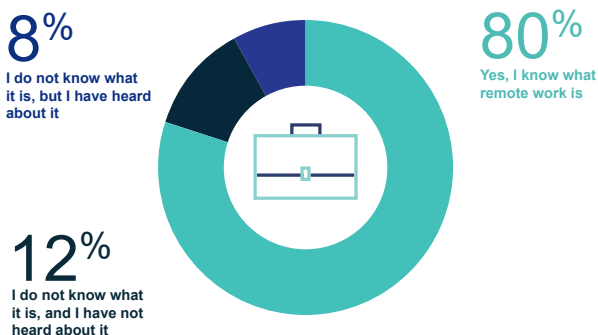
At 100 Mbps, an episode of your favorite series can be fully downloaded in just 16 seconds! If the connection speed drops to 10Mbps or 1Mbps, the time to download the same file significantly increases, respectively to 3 and 20 minutes.

	4-minute song	45-minute tv episode	2-hour HD movie
1Mb/s	30 sec	20 minutes	6 hours
10Mb/s	3 sec	3 minutes	60 minutes
100Mb/s	0,3 sec	16 sec	4,5 minutes

## Remote work

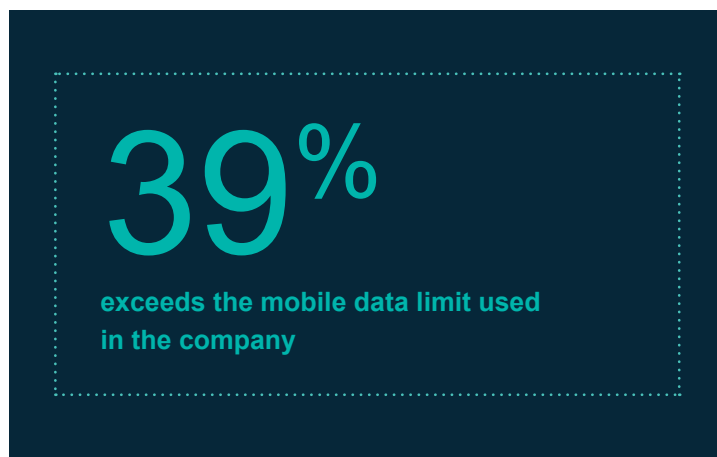
Study participants living in this region are most familiar with remote work – 8 out of 10 respondents have heard about this concept. This is noticeably more than the average for all regions, which is 64% – 61% for Kujawy, Pomorze & Mazovia Region, 60% for Warmia & Mazury Region, and 56% for the Świętokrzyskie Region. Note that the Łódź Region is the most urbanized, which in the light of the growing deglomeration trend may translate into increased interest in remote work. This is well illustrated by the analysis of internal migration for cities located in the Łódź Province. According to GUS analyses, for Łódź the outflow of residents was 4,725, while the inflow was 3,536 in 2017. For Piotrków Trybunalski, it was 686 and 491, respectively. 439 people left Skierniewice and 286 took permanent residence there.

## Familiarity with the remote work concept in Łódź Region

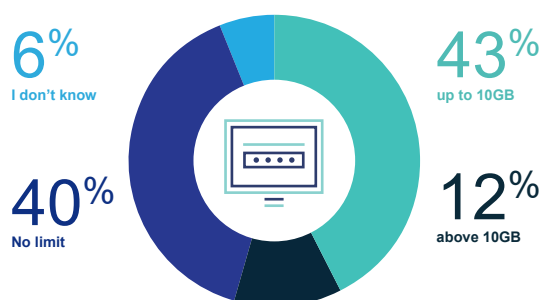


## The significance of a reliable and fast network for business

According to our research, companies in the Łódź Region often base their internet connectivity on mobile networks. Over 40% of companies in the Region – more than in any other regions – declared having a monthly data limit of 10GB. At the same time, businesses based in the region usually exceed this limit. 39% of the surveyed companies point to this fact. For comparison, this percentage was only 2% in the Świętokrzyskie Region, 15% in Kujawy, Pomorze & Mazovia Region, and 22% in Warmia & Mazury Region. This is certainly due to the lack of access to fixed, broadband infrastructure, and the number of businesses using new technologies, including cloud computing solutions based on the continuous transfer of large amounts of digital data. According to GUS data, there are 649 such companies in the Łódź Province, 386 in the Kuyavian-Pomeranian Province, 174 in the Świętokrzyskie Province, and 184 in the Warmian-Masurian Province.

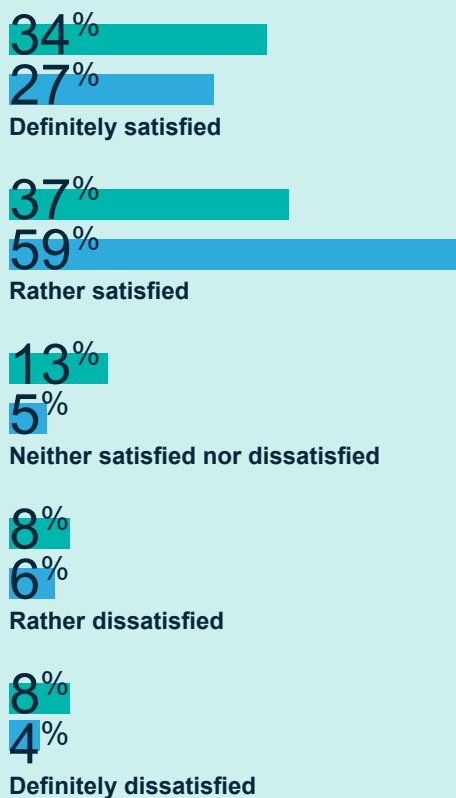


## Mobile data limits used in firms



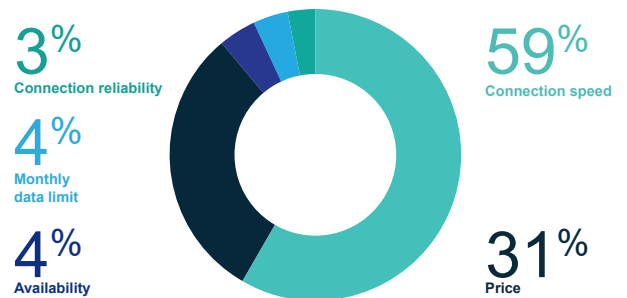
Entrepreneurs recognize the important role of the internet. Almost 90% of representatives of companies from the Łódź Region, unsatisfied with the present quality of communication with the global network, believe that poor connection parameters have an impact on doing business. This is significantly more than in other Regions. Overall, more than half of companies from all NEXERA Regions hold this view. In the Świętokrzyskie Region, the relation between poor connection parameters and lower business efficiency is noticed by 70% of enterprises, compared to 52% in Kujawy, Pomorze & Mazovia Region, and 28% in Warmia & Mazury Region.

### The satisfaction with the internet connection among firms, Regions Total and Łódź Region



It should not come as a surprise then that for enterprises from the Łódź Region, connection speed is the most important factor when choosing an internet provider, as indicated by almost 60% of local companies. In the Świętokrzyskie Region, speed is a key parameter determining the choice of the provider for 52% of enterprises, compared to 35% in Kujawy, Pomorze & Mazovia Region, and 41% in Warmia & Mazury Region.

### The top reason to choose an internet provider among firms in Łódź Region



### Strong e-administration

The Łódź region is also characterized by the largest e-service coverage among local government units. Only here all offices allow handling official matters via the internet. It should be emphasized, however that the difference is not significant in relation to other regions. Some or all types of official matters can be handled online in 96% of local government offices in Kujawy, Pomorze & Mazovia Region and in the Świętokrzyskie Region, and in 91% of local government units in Warmia & Mazury Region.

In the Łódź Region, 42% of residents handle official matters online. This result is 10 percentage points higher than indicated by GUS data on the use of e-administration services by residents of the Łódź Province (32.3%). However, the GUS data also includes the city of Łódź, where making a personal visit to the office is much easier than in low-urbanized areas.

**100%**

In all offices in the Łódź Region  
it is possible to report cases online.



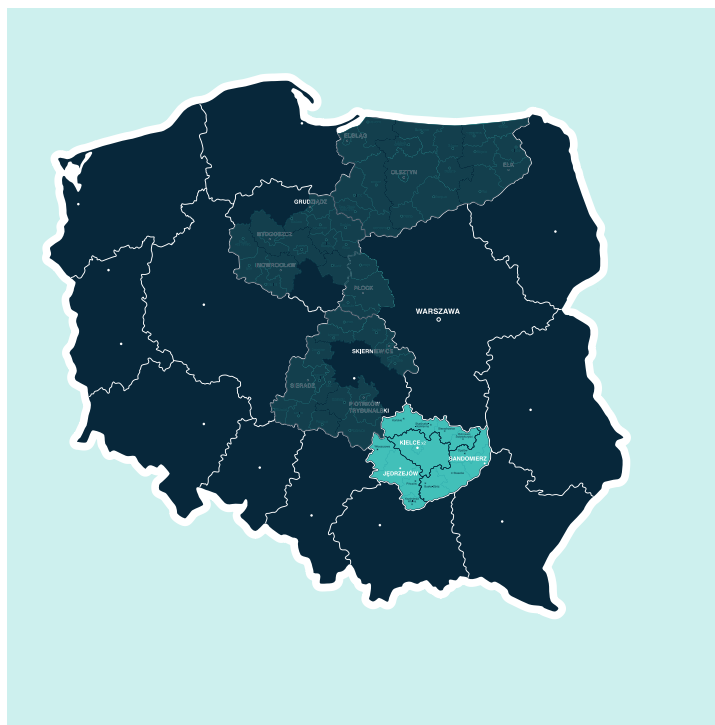
# Świętokrzyskie Region

According to GUS, nearly 1.25 million people live in this NEXERA Region. This is one of the least urbanized regions of the country. 55.2% of residents live in rural areas. In absolute numbers, it is over 550,000 people. Investment expenditures of local companies amount to over PLN 3.37 billion.

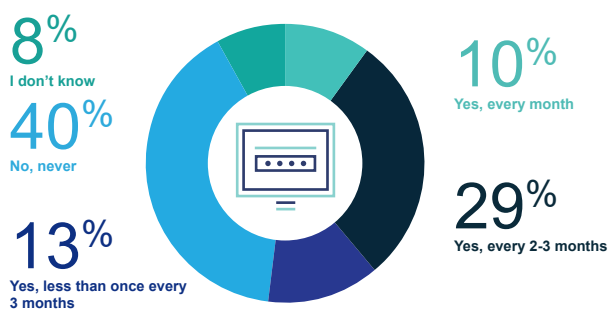
What distinguishes this Region in the context of research results? First of all, the highest level of landline usage by businesses. IT outsourcing is most popular here by far. The study also shows that the residents of the Świętokrzyskie Region are least satisfied with dealing with official matters in the traditional way, i.e. in offices. The situation could be improved by the development of public e-services. A fast fiber optic network, which will soon be widely available for the residents of the Region, will improve contact between the citizen and the administration.

## Demanding internet users

According to NEXERA research, internet users from this region have the greatest needs in the area of data transfer. Over half (52%) of internet users from the region state that they exceed their mobile data limits regularly. For nearly 30% of respondents, this occurs once every 2 or 3 months. Only 40% of study participants are able to meet their network exploration needs without exceeding the data limit. In Kujawy, Pomorze & Mazovia Region, 61% respondents never exceed the limits, compared to 67% in Warmia & Mazury Region and 69% in the Łódź Region.



## Exceeding mobile data limits (residents)



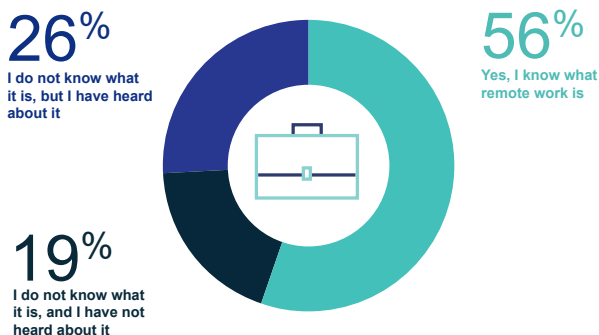
## More traditional work style

10% of the residents of the Świętokrzyskie Region work remotely. As many as three quarters have never done it, which is a few percentage points more than in other Regions. There is also a relatively high percentage of people who do not understand the concept of remote work (45%). In the remaining Regions, this percentage does not exceed 40%. This may be due not only to the limited access to fast internet, but also to the professional structure.

According to GUS data, 38.6% of the residents of the Świętokrzyskie Province work in broadly understood agriculture. The region is also struggling with a quite high depopulation rate. In 2018, the population of Świętokrzyskie decreased by 8,396 people. Nearly 100,000 people have left the region since 1999.

Note, however, that the Region is attractively located between two large business and academic centers: Warsaw and Krakow. The development of fiber optic access networks can positively influence the region's depopulation trend, while contributing to business development and greater professional diversity of the residents.

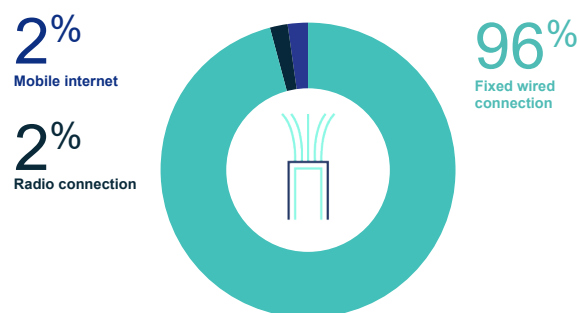
## Familiarity with the remote work concept



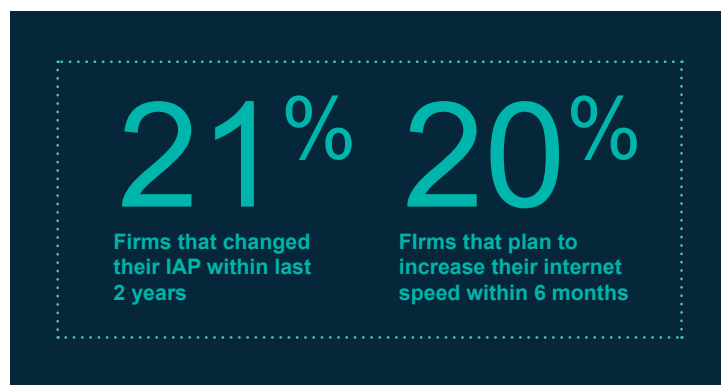
## Internet in enterprises

Companies based in the Świętokrzyskie Region are most likely to use fixed, wired internet connections – this is the main method of accessing global network for 96% of enterprises. In Kujawy, Pomorze & Mazovia Region, fixed connections are the basic form of internet access for 90% of enterprises, compared to 84% in Warmia & Mazury Region, and 85% in the Łódź Region.

## Ways of using the internet

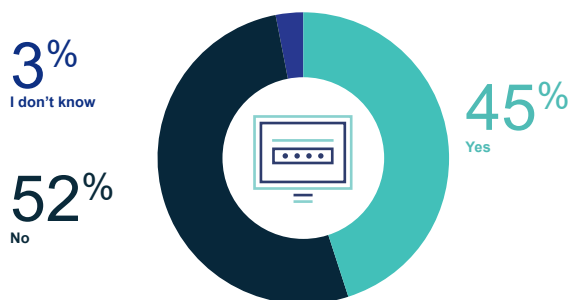


Companies operating in the Świętokrzyskie Region most often change their internet access provider - every fifth company has changed the supplier in the last two years. Almost as many plan to do it over the next six months, which means that a fairly large group of enterprises is constantly looking for the best internet access.



Out of all analyzed companies, those from the Świętokrzyskie Region are most interested in IT outsourcing. 45% of companies here use third party support and/or cloud-based management support tools and applications. Kujawy, Pomorze & Mazovia Region was ranked second in this respect (41%), the Łódź Region third (36%), and Warmia & Mazury Region last (30%). This is another proof of the relationship between access to a fast, stable internet connection and greater use of new technologies in business.

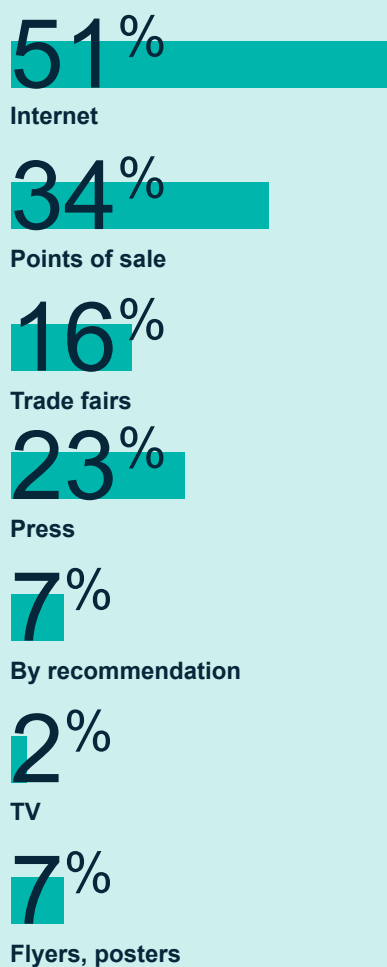
### Using third parties for IT support



Enterprises from the Świętokrzyskie Region also most often use online promotions in their marketing activities – online marketing is most popular here (51%), although the difference is only one percentage point compared to the Łódź Region. 49% of companies in Kujawy, Pomorze & Mazovia Region and 37% in Warmia & Mazury Region use digital channel advertising.

The survey results also show great potential in this area. Nearly half of the Region's companies still do not use online marketing, thus losing the opportunity to attract new customers and increase their revenue. However, network presence requires access to high-speed broadband internet.

### Media used to advertise company's services

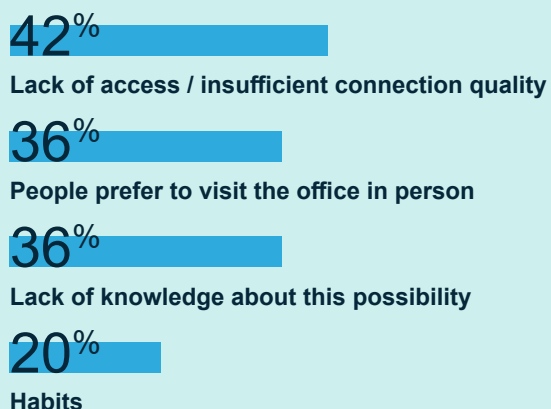


## Official contradictions

According to 42% of local government officials in this region, lack of internet access and poor connection parameters are the main barrier to the use of public e-services. The same opinion is expressed by 37% of local government employees from Warmia & Mazury Region, and 32% from Kujawy, Pomorze & Mazovia Region and the Łódź Region. It is worth relating this insight to GUS data regarding the use of the internet by households – 21% of residents in the Świętokrzyskie Province still do not have access to the internet, which is the worst result among all NEXERA Regions and second to last for all 16 provinces of Poland. Therefore, investments in fiber optic network will certainly have a positive impact on the popularization of e-administration, especially considering that research indicates that residents would be happy to use it.

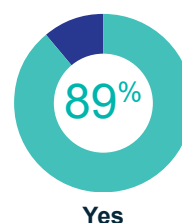
Almost three quarters of residents (74%), more than in any other Region, say that personal visits to offices take far too long. The same proportion of local government officials are convinced that e-services provided through government portals are easy to use. For comparison, using them is not difficult for 71% of public administration employees from Kujawy, Pomorze & Mazovia Region, 70% from the Łódź Region and 63% from Warmia & Mazury Region. The disproportion between the desire to handle official matters online and the lack of ability to do so because of the limited internet availability is therefore most visible here.

### Top barriers to handling official matters via the internet



Local government officials are also the most unanimous to the fact that increasing the range of high-speed internet in the Region will have a positive impact on its attractiveness. 89% of them say so. Interestingly, the willingness of officials to work remotely is also highest (40%) in the Region. This is over 2 times more than in the Łódź Region.

### Will the construction of a high-speed internet network make the region more attractive?



# Kujawy, Pomorze & Mazovia Region

According to GUS data, this NEXERA Region has over 1.43 million inhabitants. The inflow of population is higher than the outflow in the case of three districts – Bydgoszcz, Toruń and Płock. Investment expenditures of companies located in this area were recently estimated at over PLN 4.5 billion.

The residents of Kujawy, Pomorze & Mazovia Region are the biggest supporters of network communication. They use electronic banking most often. An interesting insight is that the inhabitants prefer fast network connections over the number of available transport connections.

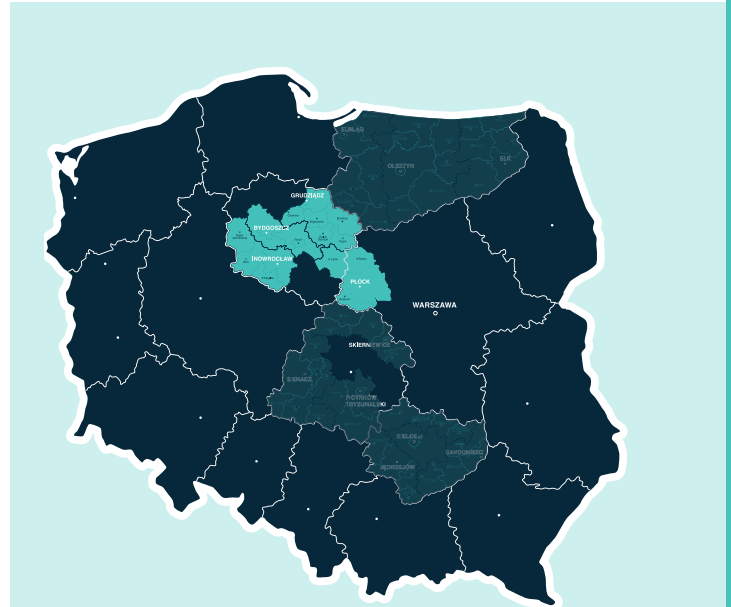
The importance of the internet can also be seen in business. The study has not identified a single company in the Region that is not connected to the internet. These are the most important conclusions from the study conducted on a group of representatives of the most urbanized area among all NEXERA Regions.

## Messenger, WhatsApp, Skype

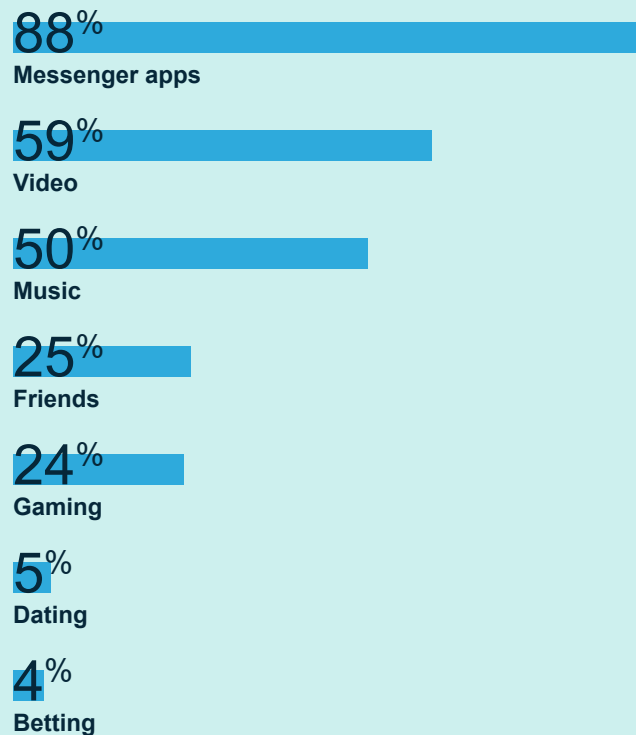
In Kujawy, Pomorze & Mazovia Region, internet use does not differ much from other areas in which NEXERA is building its fiber optic network. What is unique, however, is the almost ubiquitous use of instant messengers – nearly 90% of respondents declare using Messenger, WhatsApp or Skype. In this respect, the residents of the Region do not differ from people living in the most digitized areas.

In Poland, several million people use messengers and the number is constantly growing. Experts predict that messengers will soon replace out other communication methods, such as text messages.

Worldwide, 2.6 billion<sup>1</sup> people use Facebook, Messenger, Instagram and WhatsApp every month. According to a 2018 Nielsen research, 64 percent people prefer using messengers to phone or email. Companies are also increasingly using messengers, treating them as a new way to operate and develop a business.



## Entertainment use of the internet by residents



<sup>1</sup> Zuckerberg Plans to Integrate WhatsApp, Instagram and Facebook Messenger, New York Times

## What is really needed for development?

As much as 53 percent survey participants from Kujawy, Pomorze & Mazovia Region are convinced that fast internet connectivity is more important today than good road infrastructure and the number of transport connections. This may be related to the relatively good road infrastructure in the Region – a section of the A1 motorway, S5 and S10 express roads as well as 5 and 10 national roads. However, this result, higher than in any other Region, shows how important is the nationwide expansion of the internet fiber optic network for the development of regions. Residents of the Region are aware of the importance of access to the global network in the modern world. It is not just about entertainment today, but also about education, development, remote work and doing business. In other words, a road to new opportunities.

53%

The access to high-speed internet at home is more important than more transport connections to a nearby city.

## Remote banking

Residents of Kujawy, Pomorze & Mazovia Region are the strongest supporters of online banking among the NEXERA Regions. As much as 90 percent of them regularly use e-banking, and 85% pays their bills online.

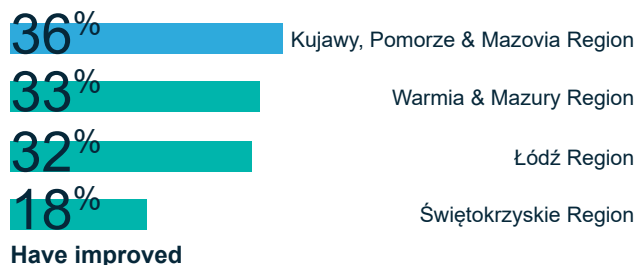
90% I use e-banking

85% I pay bills online

## Higher quality of life

It is the residents of Kujawy, Pomorze & Mazovia Region who most often declare that their living and working conditions have recently improved. 36% of study participants from the Region have noticed a visible improvement in their quality of life over the past three years, which should affect the phenomenon of deglomeration. This is an interesting conclusion also from the perspective of the growing popularity of remote work, and freelancers who are not limited by the place of residence. Investments in broadband internet may further popularize working online.

## The change in living conditions in the last 3 years



What is more, this is the only Region where absolutely all the companies surveyed have access to the internet.

# 100%

Yes, we have internet in our office

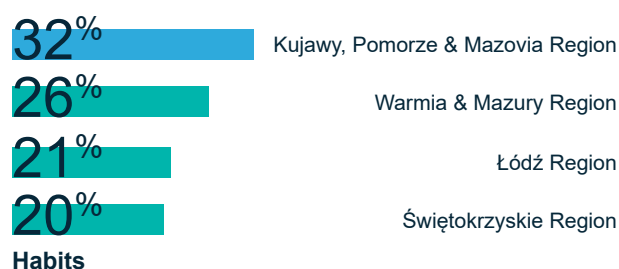
## To the office or e-office?

According to surveyed local government officials, the use of e-administration by the residents of Kujawy, Pomorze & Mazovia Region is also hindered by habits – almost every third respondent from this region indicates the habits of residents as a barrier for the popularization of online public services. Quite a large part of the population, despite the opportunities already provided by many offices today, personally visits selected local government institutions. The important role of communication and education is obvious here, especially in the context of the rapid development and availability of official e-services.

Polish citizens can now use several hundred public e-services provided on various government platforms and portals. These are, among others: Electronic Platform of Public Administration Services (ePUAP), Electronic Services Platform of the Social Insurance Institution (PUE ZUS), [obywatel.gov.pl](http://obywatel.gov.pl) portal and [biznes.gov.pl](http://biznes.gov.pl) portal. According to Ministry of Digitization, by mid-July 2019 four million Poles have already created their individual Trusted Profiles, which enable them to handle many official matters online.

Currently, work is underway to create the Portal of the Republic of Poland (Portal RP) - [gov.pl](http://gov.pl), which will ultimately be the gateway to all public information and e-services. It is expected to integrate the websites of ministries, central offices and province offices and facilitate access to digital services that the state offers to citizens.

## Top barriers to handling official matters via the internet



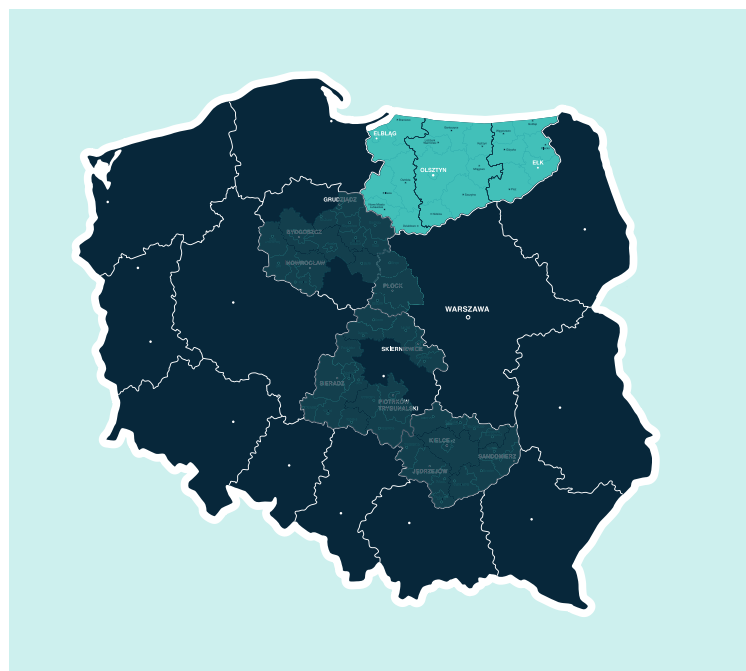


# Warmia & Mazury Region

According to GUS, 1.43 million people live in this Region. The annual investment expenditures of regional companies exceed PLN 4.2 billion. At the same time, it is the region with the largest number of supporters and practitioners of remote work, fans of online shopping and people who regularly handle official matters via the internet.

## Digital public services in the eyes of the residents

According to the declarations of the residents of Warmia & Mazury Region, almost half (47%) of them handle official matters via the internet. This is 6 percentage points more than the average for the four Regions.



**47%**  
e-government users

Comparing the NEXERA report data with the results of the Digital Economy and Society Index (DESI) published by the European Commission, it turns out that the percentage of e-government users in the Region is similar to the percentage for the whole country. According to the DESI Index, 49% of Poles submitted forms via the internet and were users of e-administration in 2018.

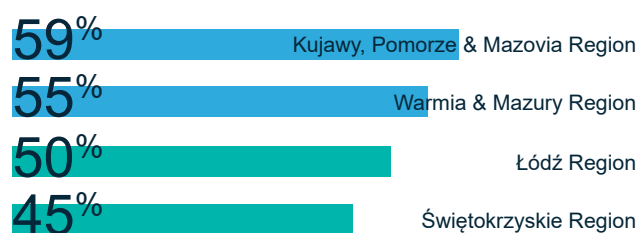
## The essence of removing barriers

According to the survey, the percentage of people who declare that they would handle official matters over the internet, if they were able to do so (55%), is 8 percentage points higher than the percentage of residents who already use e-administration. Note

that this is another category in which the statistics for Warmia & Mazury Region are higher than the average for all Regions (53%). Only Kujawy, Pomorze & Mazovia Region is better in this area (59%).

The development of e-government, which is one of POPC's priorities, may improve the quality and efficiency of public services, as well as make them more accessible for people from rural areas who have more difficult access to offices for logistical reasons.

## Residents: If I could, I would like to work remotely





## E-administration in practice

In 56% of offices, residents of Warmia & Mazury Region can submit applications regarding all or most of the official matters via the internet. This is the worst result of all the areas studied. In other Regions it is at least 64% (Świętokrzyskie, Łódź). In one of the Regions, three out of four Local Government Units (LGU) give e-customers the opportunity to submit most or all applications. The region also has the highest percentage of offices that do not allow any matter to be handled remotely. There are 9% of such offices in Warmia & Mazury Region. This shows that there is still much to improve for the local governments in the Region. This is very important especially in the context of the population structure.

The Warmian-Masurian Province is the fourth largest in the country (24,000 km<sup>2</sup>), but has only 1.436 million residents - the 12th result in Poland. According to GUS data, the population density in 2018 was 59 people per 1 km<sup>2</sup>, more than twice less than the national average (123 people/km<sup>2</sup>). On average, there are 1,410 people/km<sup>2</sup> living in cities and 25 people/km<sup>2</sup> in the countryside. This data shows that the ability to handle official matters remotely can be of much greater importance for residents of rural areas than one would expect.

The development of fiber optic infrastructure should affect not only the development of e-services, but also forms of employment of government officials. Note that both the Marshal's Office and the Provincial Office subordinate to the Chancellery of the Prime Minister have no employees working remotely.

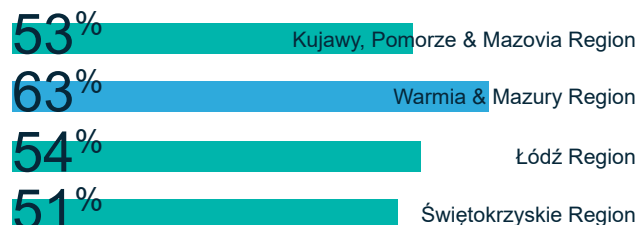
## The possibility to settle matters online



## Residents of Warmia & Mazury Region want to work remotely

63% of the surveyed residents of Warmia & Mazury Region would like to work remotely, if only they had the opportunity. This is the highest result among the four NEXERA Regions. It is also much higher than the average for all areas studied, which is 55%. Young residents aged 18-25 have the most positive attitude towards remote work. What is more, residents not only would like to work remotely, but also say that it would increase the attractiveness of smaller towns.

## Residents: If I could, I would like to work remotely



## More independence

The NEXERA study shows that three out of four of the Region's residents believe that remote work increases the attractiveness of living in smaller towns. This can help to stop the process of depopulation in north-eastern Poland. The GUS analyses show that the number of inhabitants of the Warmian-Masurian Province decreased by 4,962 people between 2018 and 2019. Infrastructure investments in high-speed fiber optic network can help stop this trend and in the long run even reverse it, providing residents with an effective tool for remote work.

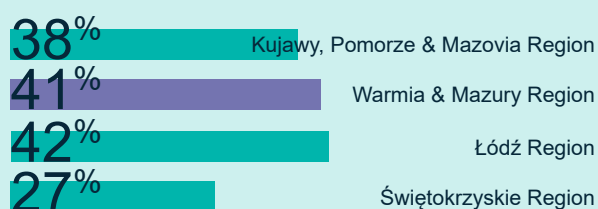
75%

Remote work increases the attractiveness of living in smaller towns

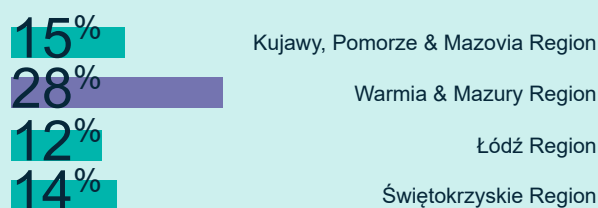
## Mobile employees

As much as 70% of mobile employees in Warmia & Mazury Region work partially or fully remotely. According to the collected data, this is much more than in other Regions and 15 percentage points more than the average value for all NEXERA Regions (55%).

## Residents using remote work



## Currently I work remotely from time to time



## I work only remotely

The study also shows that 28% of people who work remotely in this Region do it exclusively this way, while the percentage of such employees does not exceed 15% in other Regions.

The introduction of remote work opportunities, in the opinion of residents, would be the best solution to the problem of unemployment in the Region.

According to GUS data, the unemployment rate in the Warmian-Masurian Province is highest in the country. In June 2019, there were 45,000 unemployed people in the fourth largest province in Poland, which corresponds to 8.8% of the employed. The access to a fast and efficient fiber optic network, which is necessary for efficient remote work, will undoubtedly be a big advantage for the Region and its residents.

## The e-shopping land

Residents of Warmia & Mazury Region spend most on one-off online purchases. Every third survey participant from this region (33%) declares spending over PLN 200 on one-off online purchases. However, the potential for e-commerce development seems to be significantly greater. It is worth mentioning that Warmia & Mazury Region is inhabited by over 1.4 million people, and the urbanization rate is below 60%, according to GUS data. This means that over 500,000 thousand citizens there live in the countryside, where there are usually no shopping malls. In order to get the same consumer goods which are often within the reach of urban residents, they turn to the digital market, and this trend will certainly continue.

## Online shopping frequency



## S U M M A R Y

The main conclusion combining numerous insights from our study is as follows: residents and businesses from areas which so far have not been covered by high-speed internet network are already using the web and are aware of its potential, but to use it fully is still difficult or even impossible due to the lack of proper infrastructure. We believe, however, that this will gradually change. We intend to verify it in subsequent editions of the **#RegionyNEXERY2019** study, which will allow us to understand how we are actually changing the Regions by opening up new opportunities of the digital world for their residents.

Comfortable use of new forms of digital entertainment and education, popularization of e-administration or creating the right conditions for enterprises to keep up with the development of the digital economy would not be possible without access to a fast and stable internet connection. Hence we believe that our actions are necessary and that their timing is right. The next editions of the **#RegionyNEXERY2019** study, which we intend to carry out each year, will

be an excellent benchmark for our activities and will allow us to illustrate how areas located away from large cities, previously far beyond the reach of fast internet connectivity, are closing the distance to large cities and metropolises. The next editions of the **#RegionyNEXERY2019** report may be extended with further parameters allowing for the most detailed assessment of the impact of our activities on the quality of life of residents, business perspectives and the quality of relations between citizens and local governments.

Thank you for reading our report.  
See you next year!



**Paweł Biarda**

Management Board Member,  
Head of Sales and Business  
Development, NEXERA



