2025

# Digital and AI Literacy

## Ukraine

The study was initiated by the Ministry of Digital Transformation of Ukraine with the support of the Swiss-Ukrainian EGAP Program, implemented by the East Europe Foundation and financed by Switzerland. The fourth wave of the research aims to track the dynamics of digital competence development among Ukrainians, analyze the impact of the war, assess the relevance of digital learning, and explore public attitudes towards artificial intelligence. The ability to compare results is based on structural questions and indicators that were part of the comprehensive study.

Ministry of Digital Transformation of Ukraine

Diia Education

Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra
За підтримки Швейцарії

EGAP PROGRAM

East Europe Foundation

MLS group

**Mykhailo Fedorov**

First Deputy Prime Minister of Ukraine – Minister of Digital Transformation of Ukraine

“We devote considerable attention to improving the digital skills of Ukrainians, as the modern economy is undergoing constant transformation driven by technology.

For six years, we have been developing the Diia.Education project, and already today, according to research, 58% of the adult population has at least a basic level of digital literacy.

AI is a separate focus area. The findings show that 42% of adults and 70% of teenagers are already using AI tools, and every second Ukrainian has made at least one decision based on interaction with artificial intelligence.

This dynamic is creating conditions for the development of IT, digital entrepreneurship, the creative industries, and the high-tech sector.”

**Valeriya Ionan**

Advisor to the First Deputy Prime Minister – Minister of Digital Transformation of Ukraine on Innovations, Digitalisation and Global Partnerships

“To build an effective digital state, every Ukrainian must possess at least basic digital skills. That’s why, since 2019, we have taken a systemic approach to developing digital education: Diia.Education, the Digital Competence Framework, digital education hubs, the Digigram assessment, and many other initiatives.

We also conduct the national Research on digital skills of Ukrainians every two years. As of today, 95.5% of Ukrainians have digital skills, and over the past six years, the overall level of digital literacy has increased by 10.5%.

Crucially, the share of people without any digital skills has dropped significantly – a sign that Ukraine continues to demonstrate competitiveness in an era of rapid technological change.

As emerging technologies give rise to new professions in data, AI, and cybersecurity, strengthening digital skills remains a strategic priority.”

**Viktor Liakh**

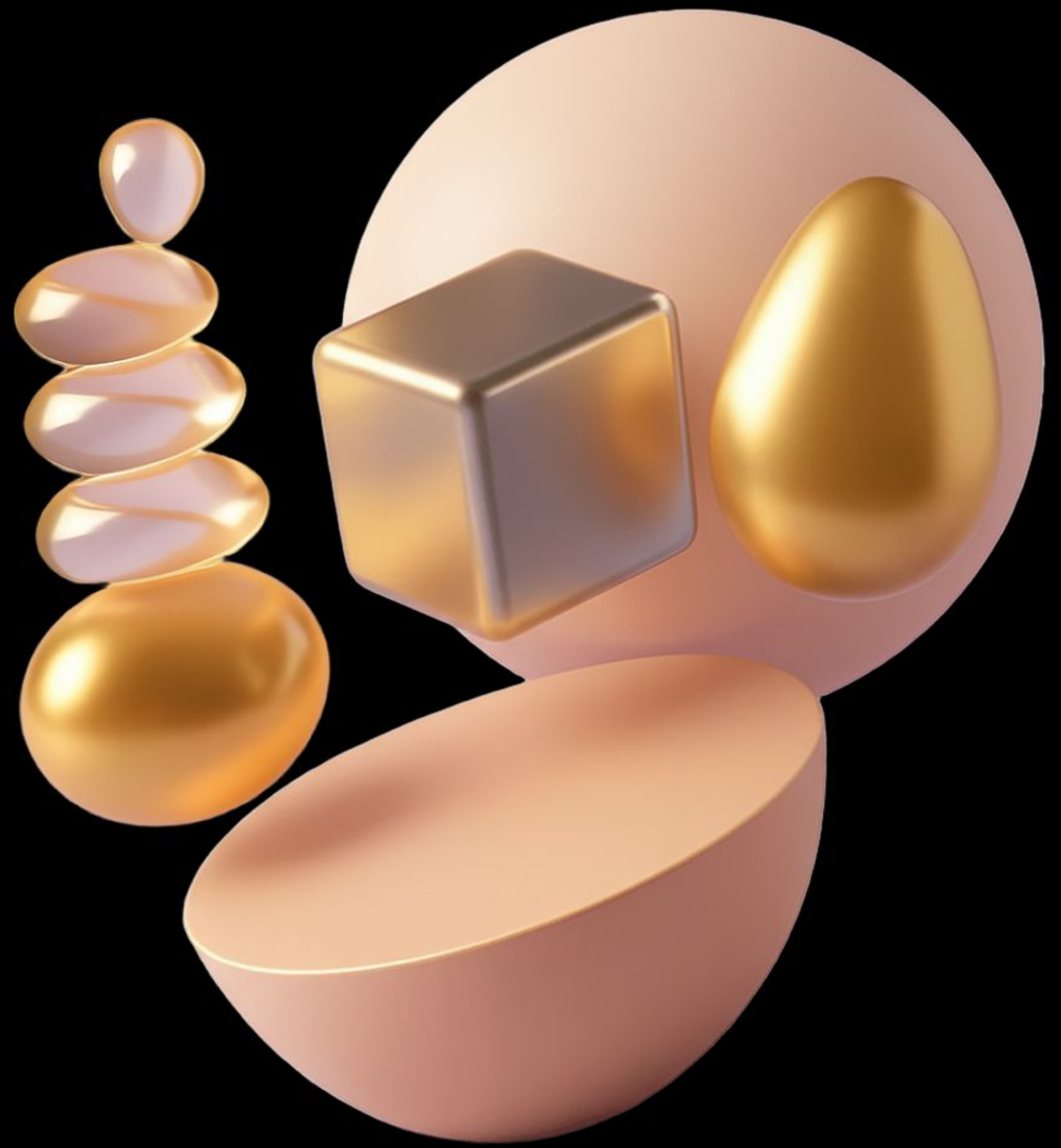
President of East Europe Foundation

“Digital skills are a gateway to opportunities. In just six years, Ukrainians have made remarkable progress: 96% are now digitally engaged, and over half have achieved at least a basic level of digital literacy.

This signals a society prepared to work, learn, and grow within an new digital landscape. At East Europe Foundation, we are committed to ensuring that every individual – regardless of age, profession, or physical ability – can fully participate in this transformation. That is why we view digital education as a core component of Ukraine’s resilience.”

# Contents

# Executive summary



## Internet access and digital inequality

1

The share of the adult population with internet access has increased by 8% compared to 2019, reaching almost 97%. The pace of internet accessibility growth among the population is largely consistent with the trend observed in European countries. According to Eurostat, the share of internet users in the European union increased by 7% between 2019 and 2024 — from 84% to 93%.

2

The expansion of internet access is accompanied by an increase in user activity: since 2019, the share of those who use the internet daily has risen by more than 11%, reaching almost 92%. Six years ago, “non-users” accounted for 11% of the population, whereas today this share has dropped to slightly below 4%. The social portrait of “non-users” remains unchanged – the core remains people over 60 and residents of rural areas. At the same time, a certain differentiation within the 60+ age group can be observed. Among respondents aged 60–65, 8% report not using the internet, compared to 19% among those aged 66–70.

## Digital skills of the population

1

The overall inclusion of Ukrainians in digital practices remains high. At one level or another, digital skills are possessed by:

| 96% | 99% | 99% | 100% |
|---|---|---|---|
| adult population of Ukraine aged 18–70 | adolescents aged 10–17 | people with hearing impairments aged 18–59 | people with visual impairments aged 18–59 |

Between 2019 and 2025, the share of the adult population aged 18–70 without digital skills decreased by 11%, while among people with hearing impairments this decline reached 16%.

2

The share of the adult population in Ukraine with at least a basic level of digital literacy (basic + above basic skills) (58%) is comparable to the EU average of 56%. Countries with the most similar shares of the population possessing at least basic digital skills include Portugal (56%), Hungary (59%), Belgium (59%), and Croatia (59%).

# Digital skills of the population

3

The structure of digital literacy levels is most similar among the adult population and people with hearing impairments. **Adolescents demonstrate more advanced digital competences, whereas people with visual impairments predominantly have basic skills.** At least a basic level of digital literacy is demonstrated by:

**58%**
of adult population of Ukraine aged 18–70

**81%**
of adolescents aged 10-17

**60%**
of people with hearing impairments aged 18-59

**79%**
of people with visual impairments aged 18-59

At the same time, the distinction between basic and above basic skills highlights the digital divide among groups. Among adults, 36% have above basic skills; among adolescents — 63%; among people with hearing impairments — 33%; and among people with visual impairments — only 3%.

4

The data indicate a stabilization in the level of digital skills among Ukrainians following a period of active growth. While digital inclusion among the population aged 18–70 continues to expand – with the share of those with no skills decreasing by 3 percentage points and the share of low-skill users increasing by 5 percentage points compared to 2023 – no significant changes were recorded in the basic and above basic skills categories compared to the previous wave.

Among people with hearing impairments, the most notable increase in the share of individuals with low-level digital skills was recorded in 2021, likely reflecting the impact of the covid-19 pandemic as a catalyst for digitalization within this group. Following the start of the full-scale invasion, there has been further deepening of digital competences — with intensive growth in the share of people possessing basic and above basic digital skills. The 2025 data do not show statistically significant differences compared to the previous period, which may indicate a stabilization of the population's digital literacy level.

A similar trend is observed among adolescents. While the period up to 2023 was marked by an increase in the share of individuals with above basic skills due to upward movement from lower categories, 2025 instead shows a spike in the low-skill segment. However, this does not indicate a decline in skills but rather reflects changes in digital practices. While the pandemic and the early phase of the full-scale invasion were characterized by widespread online learning among children, this trend has since receded. Consequently, the reduced frequency of performing certain digital activities has affected the measurement of the overall level of digital literacy.

# Digital skills of the population

5

**The level of digital literacy remains largely determined by socio-demographic factors.** Digital skills are strongly influenced by age, education, income level, and type of residence. The highest levels of digital literacy are observed among young people, the working-age population, and individuals with higher education. Conversely, the groups most excluded from the digital environment continue to be older adults, people with low income, and residents of rural areas.

6

**Digital competencies are gradually deepening, yet gaps persist across different domains.** Information and communication skills remain the most developed, with 97% of the population possessing them at least at a basic level. The weaker area is digital content creation, with 60% of adults demonstrating the relevant skills. This likely reflects lower motivation or limited access to tools for the creative use of technology.

7

According to respondents' **self-assessments, the greatest improvement in digital skills over the past year is observed among adolescents — three quarters of them reported positive changes** in their digital competences. **People with hearing impairments** also demonstrate strong progress, with **59% reporting improvements in their digital practices.**

**Within the adult population, a certain polarization is observed:**


Within the **adult population, a certain polarization is observed:** 51% believe their skills have improved, while 43% report no change. Another 2% indicate a decline, and the remaining 4% were unable to assess their skills.

In contrast, the group of people with visual impairments shows a greater degree of stability — 87% of respondents stated that their level of digital competences has remained unchanged.

**In contrast, the group of people with visual impairments shows a greater degree of stability**

87%

of respondents stated that their level of digital competences has remained unchanged

# Artificial intelligence: perceptions and usage practices

1

The widespread availability of artificial intelligence technologies for mass consumers in 2022–2023 led to a surge in the number of users, including among Ukrainians, making this topic an important area of study within the context of digital competences. Trends observed in 2023 and 2025 indicate a gradual expansion of AI usage practices across different social groups.

**Among the adult population, the share of users increased from**


**Among adolescents, the share of users increased from**


For **people with hearing impairments**, the indicator remained unchanged, while among **people with** visual impairments, only around 1% reported having experience using AI.

2

Overall, Ukrainians demonstrate a good understanding of basic concepts related to artificial intelligence technologies. **More than half of respondents clearly understand what a "deepfake"** is, while phenomena such as "digital twin," "AI agent," and "virtual influencer" are mostly familiar only by name.

3

**Approximately 23% of Ukrainians reported encountering cyberattacks** involving artificial intelligence technologies over the past six months. Such cases were more frequent among people with higher digital skills, which can be explained by their greater engagement in the digital environment and better ability to recognize technological threats.

**A more common phenomenon is "AI hallucinations", experienced by about 35% of the adult population and 43% of adolescents.** This negative phenomenon was also frequently mentioned by participants in group discussions, who emphasized the need to critically assess the information received and verify it through additional sources.

**~23%** Approximately of Ukrainians reported encountering cyberattacks

**A more common phenomenon is "AI hallucinations", experienced by**

👩‍💻 **~35%** of the adult population

👫 **~43%** of adolescents

# Digital learning: needs and demands

1

**Over the six-year period (2019–2025), the share of Ukrainians who consider learning digital skills relevant increased from 47% to 56%,** indicating the gradual development of a culture of lifelong learning. At the same time, young people remain the driving force behind digitalization: more than 70% of individuals aged 18–29 consider the development of digital skills important. Among adolescents, interest in digital learning increases with age – from 65% among those aged 10–12 to 83% among those aged 16–17.

**Among adults, half of respondents consider learning about artificial intelligence relevant**


aged 18–29

**~70%**

consider the development of digital skills important

2

Training in ai-related skills and the demand for reskilling remain highly relevant for the Ukrainian population. **Among adults, half of respondents (50%) consider learning about artificial intelligence relevant,** while 44% are considering reskilling in the field of modern technologies. These figures are lower than the level of interest in basic digital learning, suggesting a still limited understanding of ai's potential in everyday life and professional activities.

3

The dynamics of reasons why Ukrainians do not consider learning digital skills relevant indicate a shift from external barriers to internal beliefs. Whereas earlier the main obstacles were a lack of time or technical capabilities, today more than half of respondents (55%) believe they already possess all the necessary skills, reflecting growing confidence in their own digital abilities. At the same time, the increasing share of those who do not understand how or why to learn – from 9% in 2019 to 18% in 2025 – points to the emergence of a "digitally disengaged" group that requires accessible and easy-to-understand learning formats.

Overall, this underscores that the **focus of digital education in Ukraine should shift from expanding access toward strengthening motivation and the practical value of learning.**

**The "digitally disengaged" group that requires accessible and easy-to-understand learning formats**

# Role of digital skills in achieving success

1

**The majority of the adult population (59%)** agree that **developing digital skills contributes to professional growth and improved financial well-being.** The highest level of agreement is observed among **people with visual impairments (85%),** whereas among people with hearing impairments, skepticism prevails – one in four respondents **(27%)** share this view. Overall, there is a clear correlation between age and perceptions of the impact of digital competences: the younger the respondents, the more likely they are to consider digital skills a key to career opportunities and economic well-being.

agree that **developing digital skills contributes to professional growth and improved financial well-being**

59%

of the adult population

85%

of people with visual impairments

2

The majority of respondents believe that the development of digital competences has a positive impact on the national economy and creates new opportunities for business and employment. This view is shared by **more than three quarters of the adult population (76%)**, as well as by **86% of people with visual impairments**, who note increased economic activity resulting from digitalization. At the same time, among **people with hearing impairments**, the share of those who agree is lower – **43%.**

3

**Among the adult population, 43% reported that effective measures to protect confidential information are applied in their workplace** – 10% lower than in 2023. Individuals with higher levels of digital competences are significantly more likely to recognize the presence of modern technological approaches and cybersecurity practices in their professional environment.

4

**Among adolescents,** the perception of the role of the internet in their lives remains largely stable. A positive trend is observed in their self-assessment of digital skills and perceptions of online safety, showing an increase of 5% compared to the 2023 wave. Nearly two thirds of adolescents (+8% over two years) reported that the internet has become a safeguard against feelings of loneliness.

# Internet safety

1

**Every third respondent** among adults, people with hearing impairments, and people with visual impairments **reported feeling safe when using the internet. Among adolescents,** this share is at least 1.5 times higher, **reaching 57%.** The observed correlation between the level of digital competences and the sense of security demonstrates that the higher the level of digital skills, the greater the confidence in one's own cybersecurity.

2

**Every fourth adult Ukrainian does not take any measures to protect their data online,** whereas among adolescents and people with hearing impairments, this share is almost twice as low — 13% and 12%, respectively. Respondents with visual impairments demonstrate the highest level of digital security practices, with only 4% reporting not using any protective measures.

3

**Adult users and adolescents apply, on average, about five different data protection measures, whereas people with hearing or visual impairments typically limit themselves to around three practices.** The level of digital competences proves to be a key factor: individuals with no skills usually employ only one protection method, while respondents with above basic skills use an average of six measures. This indicates a direct correlation between digital literacy and a more conscious, multi-layered approach to online security.

4

Ukrainians frequently encounter online security challenges: 67% of adult users and 78% of adolescents have faced at least one data security issue. The most common incidents remain fraudulent messages (phishing), requests from friends or acquaintances to transfer money through hacked accounts, and redirections to fake websites requesting personal information (pharming).

5

Over the past two years, the use of parental control applications has become more widespread – in 2025, 31% of adolescents reported that their parents use or have used such apps, which is 6% higher than in 2023. At the same time, there is a clear age gap: parental control is most commonly applied to children aged 10–12, with 30% of adolescents in this group reporting the use of such applications. Among older adolescents (aged 16–17), however, the use of parental control tools drops to 1%.

# Online public services

1

**60% of Ukrainians use online public services.** Among people with hearing impairments and people with visual impairments, the share of users is even higher – 70% and 94%, respectively. A steady increase in the use of digital public services has been observed: since 2021, the usage rate has risen by 24% among the adult population aged 18–70, and by 26% among people with hearing impairments.

**60%**
of Ukrainians use online public services

**70%**
Among people with hearing impairments

**94%**
Among people with visual impairments

2

The main reasons for not using electronic public services include a lack of perceived need, a lack of awareness of such opportunities, complex procedures, and concerns about reliability. **There are notable differences among target groups.** People with hearing impairments and people with visual impairments more often cite the complexity of procedures, and people with hearing impairments, more than other groups, express doubts about the security of online services.

Block 1

# Internet access and digital inequality

# Internet accessibility in ukraine and worldwide

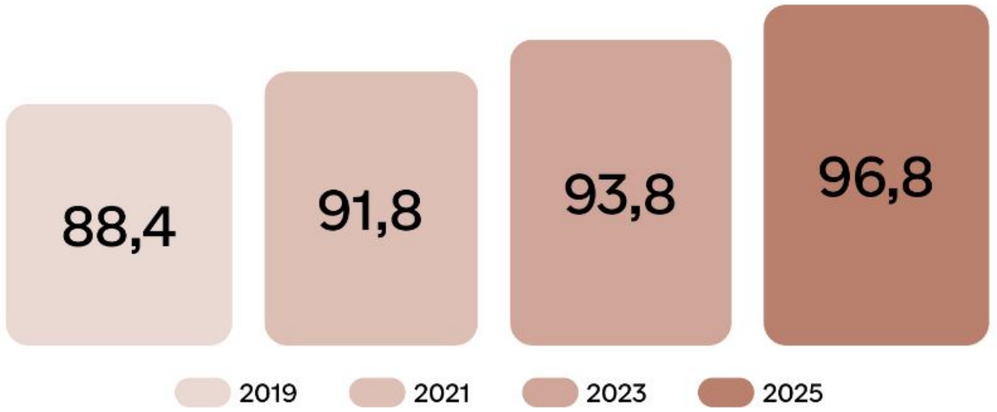
According to the Digital 2025 Global Statshot Report (July 2025), the global average Internet usage rate stands at 69%.Naturally, this indicator varies greatly across continents and countries. For example, in Eastern Africa, only one in four residents (26%) uses the Internet, while in Northern Europe, the user penetration rate is among the highest in the world, reaching almost 98%.

## Access to the internet is available to...

- 96,8% adult population of Ukraine aged 18–70
- 98,3% adolescents aged 10–17
- 99,5% people with hearing impairments aged 18-59
- 100% people with visual impairments aged 18-59

## Internet access among adults, 2019–2025

(y %)




The share of the adult population with Internet access is gradually increasing. Since 2019, an increase of approximately 2–3 percentage points per wave has been recorded, which is within the statistical margin of error (2.2%).However, overall, during the six years since the launch of the National Survey on Digital Literacy in Ukraine, the share of Ukrainians aged 18–70 with Internet access has grown by 8 percentage points. A similar 8% increase is observed among people with hearing impairments. These growth rates are largely consistent with the trend recorded by Eurostat, whose data indicate an increase in the share of Internet users from 84% to 93% between 2019 and 2024 (+7 percentage points).

It should be noted that Eurostat's data refer to Internet use within the previous three months among individuals aged 16–74, while in the current study, the term "adult population" refers to those aged 18–70.

People online in 2024 - News articles - Eurostat

## Types of internet access

- 95,7% Mobile Internet via SIM card
- 81,0% Fixed broadband connection

# «non-users»

adult population aged 18–70

**3,5%** No Internet access any type

**4,3%** No access to the Internet through **mobile connection SIM card**

**19,0%** No access to the Internet through **fixed broadband connection**

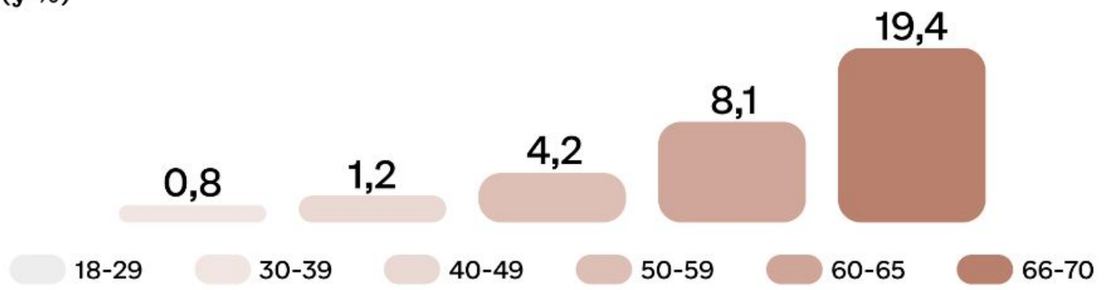
The social profile of the “non-user” of the Internet remains largely unchanged — **the highest rates of non-use are still observed among people aged over 60 and residents of rural areas.**

Let us take a closer look at these trends:

- Correlation between Internet use and age. As previously noted, the share of Internet users decreases with age, with the largest proportion of non-users found among those aged over 60.At the same time, there are significant differences within this age group. Among individuals aged 60–65, the share of non-users is 8%, whereas among those aged 66–70, it reaches 19%.
- The use of the Internet remains correlated with the type of settlement. Traditionally, residents of rural areas are less engaged in Internet use compared to other population groups. While only 2% of urban residents report not using the Internet, this figure rises to 6% among those living in rural areas.

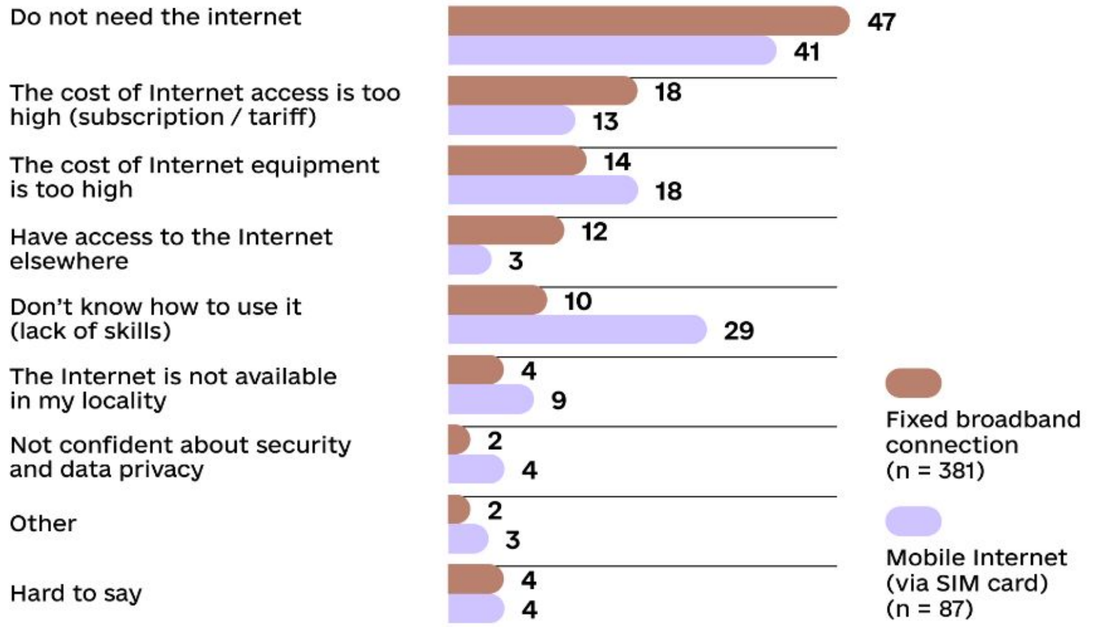
**Non-internet users among adult population by age group**

(y %)



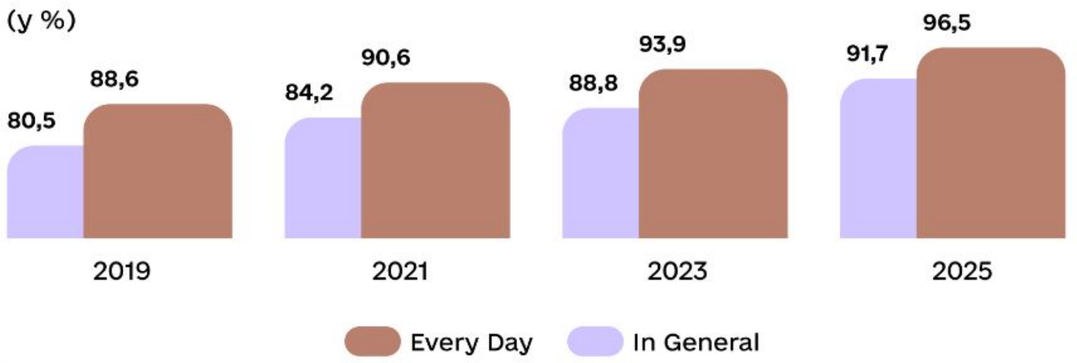

**Reasons for having no internet connection among the adult population**

(y %, multiple response questions)



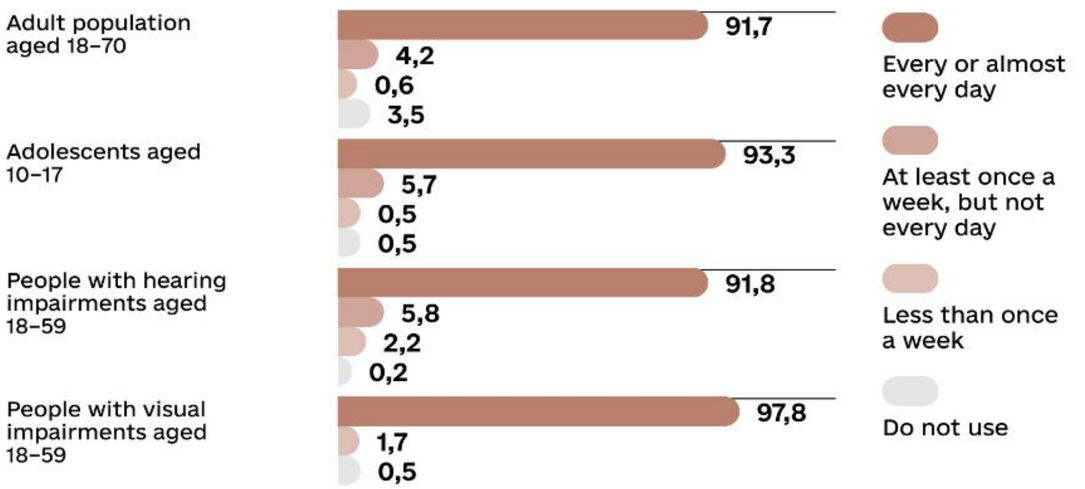
# Frequency of internet use and satisfaction with its quality

## Internet use among adults, 2019–2025

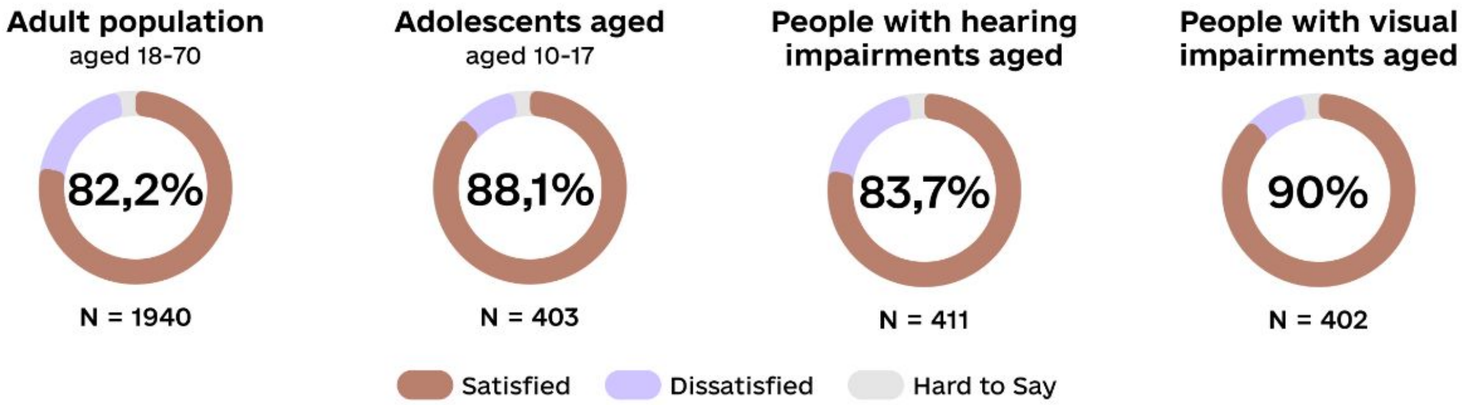



Since 2019, the share of “non-users” of the Internet has decreased from 11% to slightly below 4%. At the same time, the share of those who use the Internet on a daily basis has increased by 11% - from around 81% to nearly 97%.

## Frequency of internet use in the last three months




## Satisfaction with the quality of internet services (fixed and mobile)



# Availability of devices for personal use

**Which of the following devices do you personally own? (Adult population aged 18–70)**

Smartphone
87,8%

Laptop
48,4%

PC
29,3%

Tablet
25,2%

Smart-watch
16,1%

Phone
(not a smartphone)
14,7%

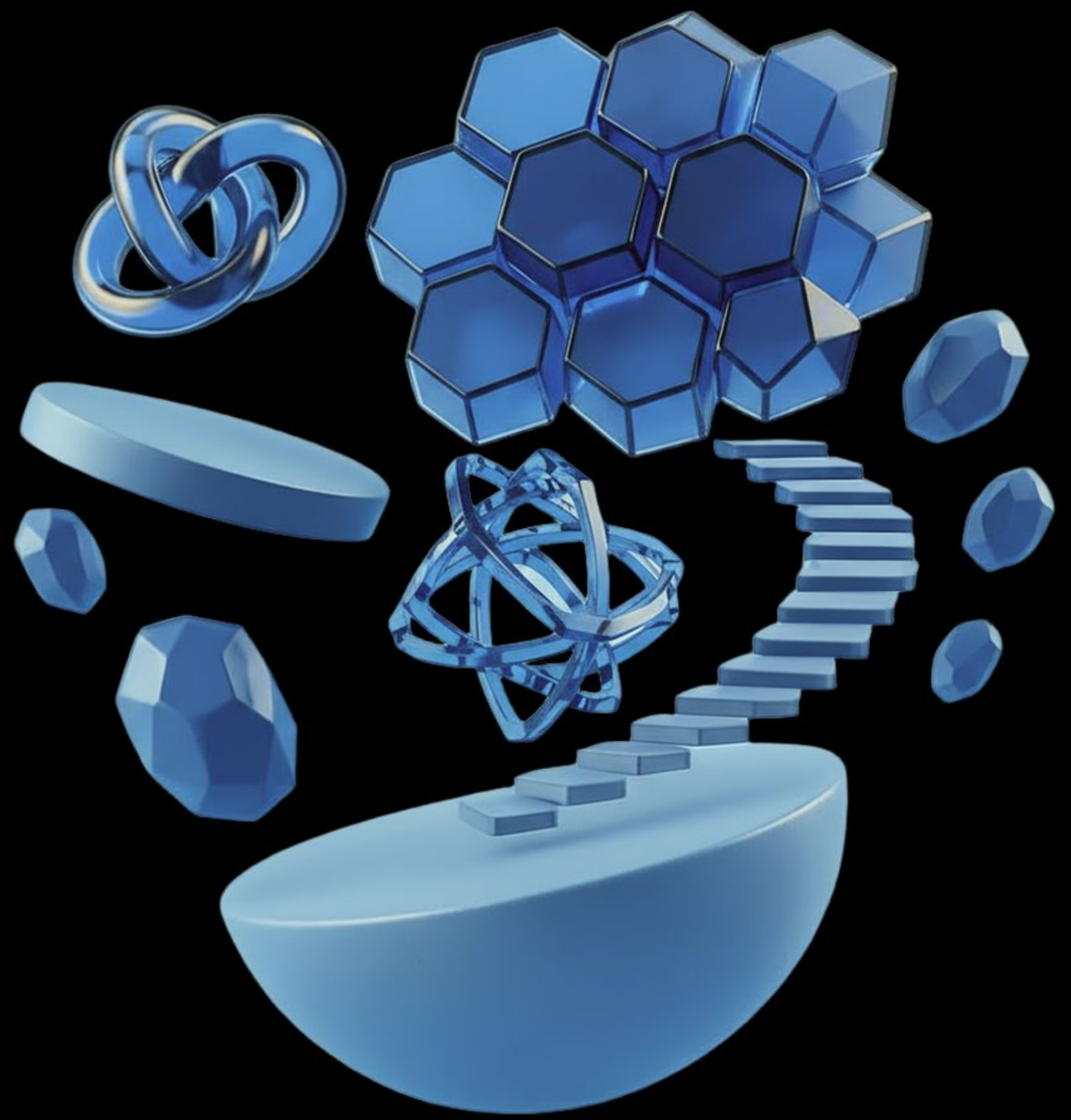
E-book
3,5%

Smart-ring
1,2%

None
0,4%

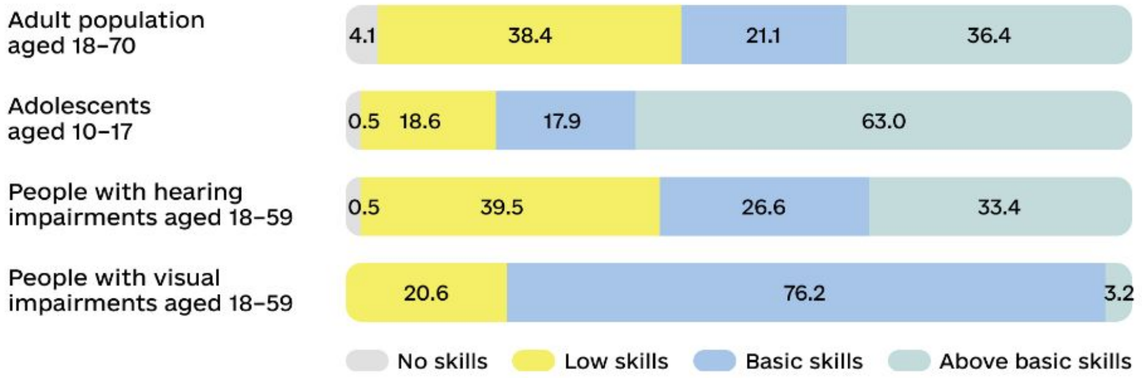
Block 2

# Digital skills of the population



# Overall digital skills

**Overall digital skills assessment 2025,** (y %)



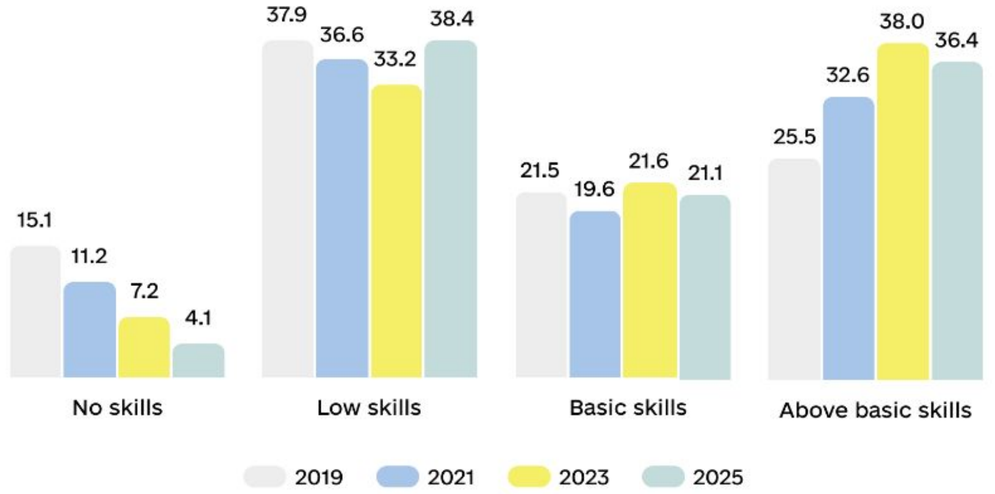

**Approximately 58% of Ukrainians possess at least a basic level of digital skills in 2025**

Approximately 58% of Ukrainians possess at least a basic level of digital skills in 2025.This figure remains unchanged compared to 2023. According to the Eurostat report “Skills for the Digital Age” (2024), 56% of EU residents have digital skills at a basic level or higher. Across countries, this indicator ranges from 28% in Romania to 83% in the Netherlands. Overall, Ukraine’s results are close to the EU average, with Portugal (56%), Hungary (59%), Belgium (59%), and Croatia (59%) showing similar proportions of the population with at least basic digital skills.

**Key trends in digital literacy among the adult population aged 18–70:**

- **People with no digital skills (No skills) – this category is shrinking.** While 15% of respondents had no digital skills at all in the first wave of the study (2019), this figure fell to 4% in 2025.
- **People with low digital skills (Low skills) — the previous downward trend has shifted toward growth.** Between 2019 and 2023, the share of the population with this level of skills decreased by nearly 5%. However, after 2023, the “low skills” category increased by 5%. This may indicate the inclusion of new Internet users who are just beginning to acquire basic digital competences.
- **People with basic digital skills (Basic skills)** represent a relatively stable category, maintaining a consistent level of around 20–21%.
- **The “above basic skills” category – the previous growth trend has shifted toward stabilization.** Between 2019 and 2023, an increase of 5–7% per wave was recorded, whereas in 2025, no statistically significant changes were observed compared to 2023. This may indicate a stabilization of the trend toward deepening digital skills following a period of active growth.

**Overall digital skills assessment 2019-2025 (adult population aged 18-70),** (y %)



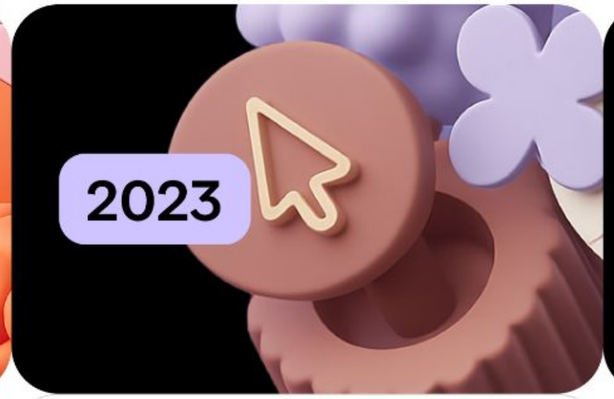
## The overall level of digital literacy of Ukrainians


**84,9%**
of Ukrainians that have some digital skills (low + basic + above basic)

**47,0%**
of Ukrainians that have basic or above-basic digital skills


**88,8%**
of Ukrainians that have some digital skills (low + basic + above basic)

**52,2%**
of Ukrainians that have basic or above-basic digital skills




**91,8%**
of Ukrainians that have some digital skills (low + basic + above basic)

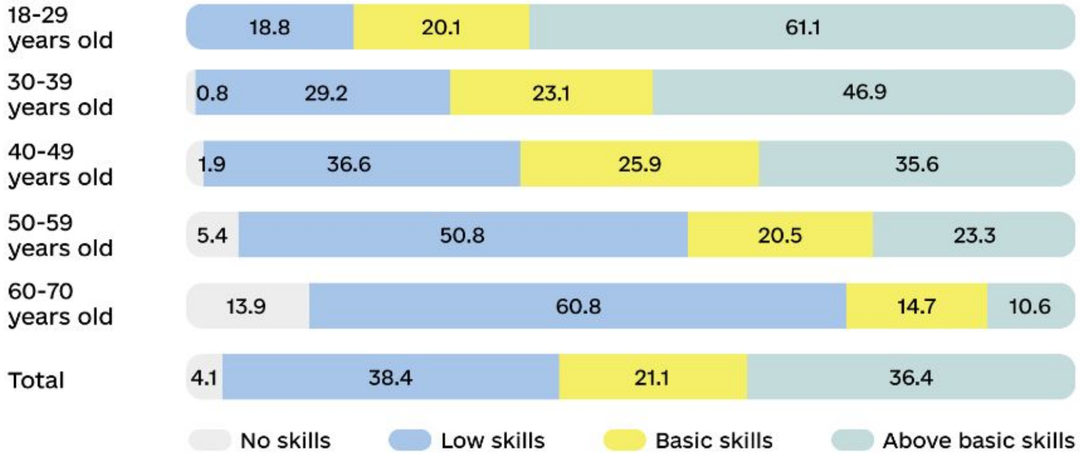
**59,6%**
of Ukrainians that have basic or above-basic digital skills


**95,9%**
of Ukrainians that have some digital skills (low + basic + above basic)

**57,5%**
of Ukrainians that have basic or above-basic digital skills

# Overall digital skills among the ukrainian population aged 18–70 by socio-demographic characteristics

## Overall digital skills 2025 by age groups (adult population aged 18-70), (y %)




## Overall digital skills 2025 by gender (adult population aged 18-70), (y %)


## Overall digital skills 2025 by educational level (adult population aged 18-70), (y %)

| Digital skills level | Incomplete / complete secondary education | Secondary special education | Incomplete higher / higher education |
|---|---|---|---|
| No skills | 10,7 | 5,0 | 1,3 |
| Low skills | 50,9 | 55,3 | 21,9 |
| Basic skills | 15,9 | 21,2 | 22,7 |
| Above basic skills | 22,5 | 18,5 | 54,1 |
| Total | 100 | 100 | 100 |

## Overall digital skills 2025 by employment status (adult population aged 18-70), (y %)

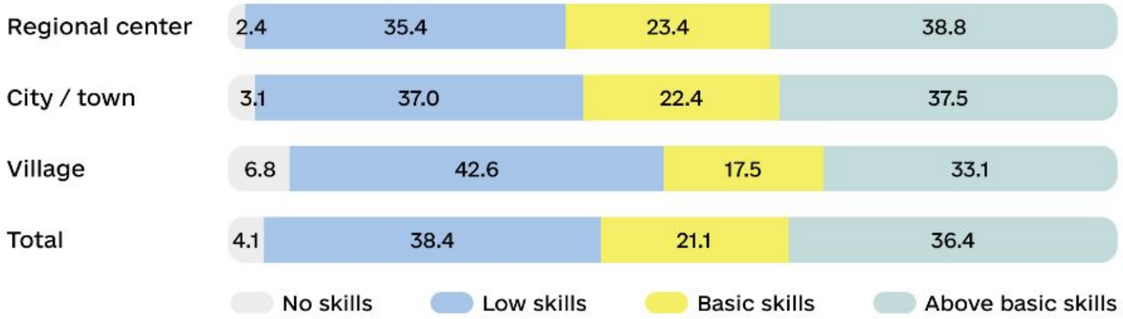
| Digital skills level | Working people | Students | Non-working population | Senior citizens / unemployed due to health conditions |
|---|---|---|---|---|
| No skills | 1,2 | - | 3,0 | 18,7 |
| Low skills | 32,4 | 10,2 | 49,2 | 66,9 |
| Basic skills | 23,8 | 16,1 | 23,9 | 9,8 |
| Above basic skills | 42,6 | 73,7 | 23,9 | 4,6 |
| Total | 100 | 100 | 100 | 100 |

# Overall digital skills among the ukrainian population aged 18–70 by socio-demographic characteristics

## Overall digital skills 2025 and Average Income (UAH) (adult population aged 18-70)

| Digital skills level | Average Income (UAH) |
|---|---|
| No skills | 4 507,33 |
| Low skills | 13 105,88 |
| Basic skills | 18 280,74 |
| Above basic skills | 22 461,74 |
| Total | 17 152,95 |

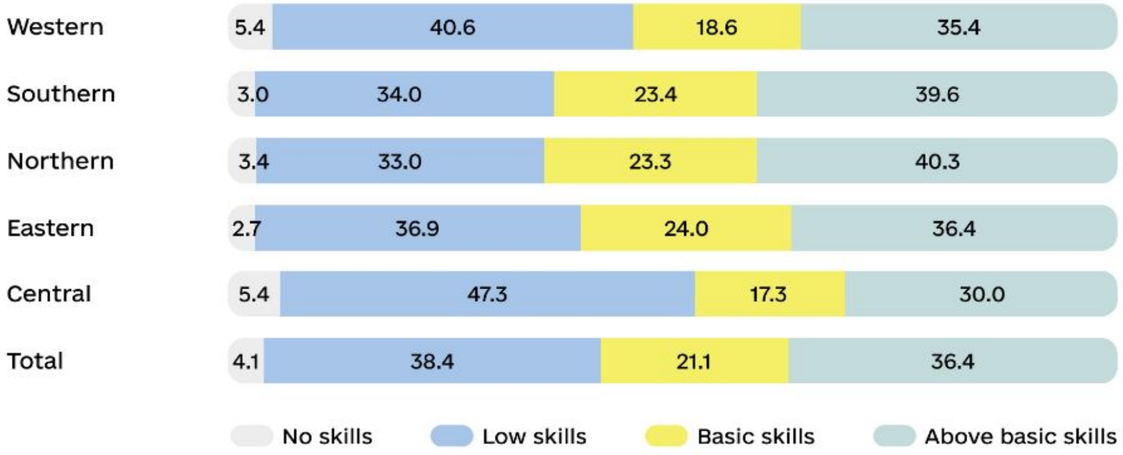
## Overall digital skills 2025 by place of residence (adult population aged 18-70), (y %)




## Overall digital skills 2025 by income (adult population aged 18-70), (y %)

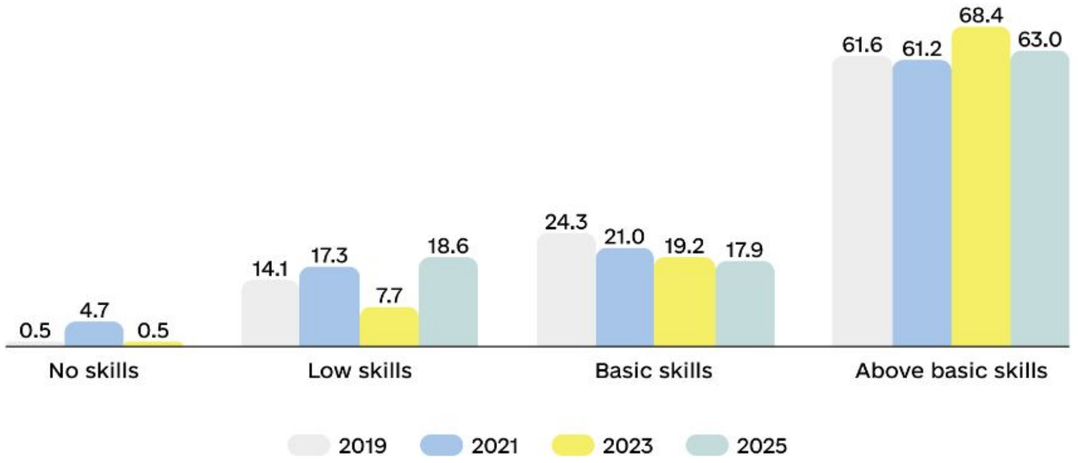
| Digital skills level | Below average income | Average income | Above average income |
|---|---|---|---|
| No skills | 10,1 | 2,1 | 0,3 |
| Low skills | 55,1 | 35,6 | 21,5 |
| Basic skills | 17,6 | 22,5 | 22,7 |
| Above basic skills | 17,2 | 39,8 | 55,5 |
| Total | 100 | 100 | 100 |

## Overall digital skills 2025 by microregion (adult population aged 18-70), (y %)

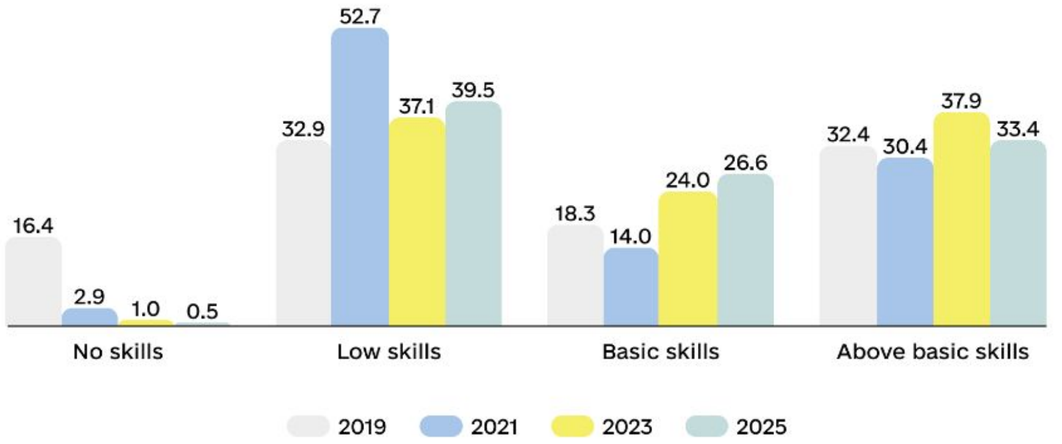


# Trends in digital skills

**Digital skills of adolescents aged 10–17**
(y %)




**Digital skills of people with hearing impairments aged 18–59**
(y %)




## Digital skills assessment by target groups in 2025, (y %)

| Options | Adult population | Adolescents | People with hearing impairments | People with visual impairments |
|---|---|---|---|---|
| Digital skills were increased | 50,8 | 75,2 | 59,1 | 9,0 |
| Without changes | 42,6 | 20,1 | 19,6 | 86,8 |
| Digital skills were decreased | 2,1 | 1,2 | 2,4 | 2,5 |
| Hard to say | 4,5 | 3,5 | 18,9 | 1,7 |

# Digital skills by areas of competence

**Over the past six years, the level of digital literacy among Ukrainians has improved.** As already noted, since 2019, the share of people with digital skills has increased by 11% among the adult population and by 16% among people with hearing impairments.

## The methodology for assessing digital skills is based on four domains of digital competences:

- Information skills
- Problem-solving skills
- Communication skills
- Digital content creation skills

This section examines which digital competences are more developed and which require further improvement, as well as the factors contributing to the overall progress in digital skills.

**Indicator of digital skills in 2023 by target groups and areas of competence, 2025** (y%, for basic and above basic skills)

| Target group | Areas of digital competence | | | |
|---|---|---|---|---|
| | Information skills | Communication skills | Problem-solving skills | Digital content creation skills |
| Adult population aged 18–70 | 96,5 | 97,4 | 92,5 | 60,1 |
| Adolescents aged 10–17 | 93,5 | 99,3 | 95,3 | 84,8 |
| People with hearing impairments aged 18–59 | 95,8 | 99,6 | 95,7 | 61,0 |
| People with visual impairments aged 18–59 | 99,5 | 100,0 | 96,7 | 81,1 |

# Digital skills by areas of competence: Adult population aged 18–70

Throughout all waves of the study, a consistent gap between areas of digital competence has been observed. While information and communication skills remain closely aligned (in 2025, at least basic skills in these areas are demonstrated by 97% of the population), problem-solving skills are somewhat lower (93%), and digital content creation remains the least widespread — only 60% possess at least basic skills in this area. It is also worth noting that improvements in information and communication skills have occurred more intensively (an increase of +15% and +17%, respectively, since 2019).

Problem-solving and content creation skills have developed more slowly and in parallel, with an increase of 12–13% over six years. This may be explained by the greater complexity of digital operations involved in problem-solving and content creation, on the one hand, and by the lower demand for the use of digital technologies in these areas, on the other.

## Key changes in digital practices:

1. **Banking via smartphone is becoming the norm for most adult Ukrainians.** The share of internet banking users has increased by nearly one third. While in 2019 such applications were used by 55% of respondents, this figure has now reached 84% - an increase of 29 percentage points.

2. **Although digital content creation is the least widespread skill, in 2025 four in ten Ukrainians (41%) use photo, video, or audio editing tools.** In terms of user growth, this activity ranks second. Over six years, the indicator has grown by almost 16%.

3. **Online public and municipal services are becoming more popular.** The share of the population who have downloaded or printed official forms has grown from 14% in 2019 to 29% in 2025 – an increase of 15%.

4. **The pandemic and the full-scale invasion have contributed to the spread of online learning practices among adults.** While in 2019 only 10% of respondents reported such experience, in 2023–2025 this share reached 25–28% (an increase of 18% in 2023; in 2025, the figure declined by 3%, resulting in a total growth of 15% over six years).

5. **Internet security is drawing increasing attention among Ukrainians.** While in 2019 a quarter of the population (26%) adjusted security-related settings in any software (including operating systems), by 2025 this share had risen to 41% - an increase of 15%.

6. **Email as a means of communication is losing relevance.** In 2019, 60% of respondents sent or received emails, while in 2025 this share has dropped to 54% — a decrease of 6%.

| Digital skills 2025 | No skills | Basic skills | Above basic skills |
|---|---|---|---|
| Information skills | 96,5 | 97,4 | 92,5 |
| Communication skills | 93,5 | 99,3 | 95,3 |
| Problem-solving skills | 95,8 | 99,6 | 95,7 |
| Digital content creation skills | 99,5 | 100,0 | 96,7 |

# Digital skills by areas of competence: Adolescents aged 10-17

The data continue to indicate that Ukrainian adolescents are leading the way in the digitization of the population. Regardless of the area of digital competence, most young users demonstrate above-basic skills. However, while the proportion of those with at least basic digital skills for solving everyday problems has improved by 6% over six years, the area of digital content creation has declined by 8%. It is important to note that this does not reflect a degradation of skills but rather a change in digital practices — certain operations are simply losing relevance.

## Key changes in digital practices:

1. **Online learning gained momentum until 2023 but is now declining.** Between 2019 and 2023, the share of adolescents who had experience with online learning increased from 41% to 83%. Currently, such practices are reported by 63% of respondents (a growth of 42% by 2023, followed by a 20% decrease).

2. **Online banking is not just for adults.** More than half of adolescents (52%) use online banking in 2025. Six years ago, this figure was 35% (an increase of 17%).

3. **Adolescents are interested in news.** Since 2019, the share of adolescents receiving news online has grown from 47% to 63% (an increase of 16%).

4. **Copying or transferring files to flash drives is becoming a thing of the past.** In 2019, 75% of respondents performed the operation “copying and/or moving files or folders,” while in 2025 this share fell to 60%. A similar trend is observed in the operation “transferring files between computers/laptops and other devices (e.g., computer–flash drive)” - the share of users dropped from 71% to 60% over six years, reflecting a general decline of 10–15% in the use of these operations.

| Digital skills 2025 | No skills | Basic skills | Above basic skills |
|---|---|---|---|
| Information skills | 6,5 | 10,7 | 82,8 |
| Communication skills | 0,7 | 2,0 | 97,3 |
| Problem-solving skills | 4,7 | 8,0 | 87,3 |
| Digital content creation skills | 15,2 | 11,0 | 73,8 |

# Digital skills by areas of competence: People with hearing impairments aged 18–59

The most dynamic growth in the number of people with digital skills occurred among the category of people with hearing impairments — over six years, this group made a “digital leap” of 16%, which is 5% higher than among the adult population aged 18–70.

**Across different areas of competence, the following dynamics were observed:**

- ℹ️ Information skills — an increase of 18%
- 💡 Problem-solving skills — an increase of 20%
- 💬 Communication skills — an increase of 17%
- 📎 Digital content creation skills — a 5% decrease, explained by the declining relevance of certain operations

**Key changes in digital practices:**

1. **Digital democracy is developing – political participation among this category has increased.** The share of those engaging in online consultations or voting on social or political issues (such as signing petitions, voting for community budget projects, or participating in electronic consultations) has nearly doubled — from 24% to 46% (a 22% increase).
2. **Information from websites and applications has become more in demand.** The share of those obtaining information from websites or apps has increased from 30% in 2019 to 52% in 2025 (a 22% increase).
3. **Digital interaction with public services is also growing.** Downloading official forms and submitting completed ones online is becoming a widespread practice. Six years ago, 13% of respondents searched for forms on the Internet, while today this figure has reached one third (33%). A similar trend is observed with submitting electronic forms – the share of those performing this operation has increased from 21% to 40% (an increase of 19–20%, depending on the operation).
4. **Online banking continues to expand.** As in other population groups, the share of online banking users has increased. While in 2019 70% of people used such services, by 2025 this figure has risen to 89% (a 19% increase).
5. **Online shopping is developing.** In 2019, 60% of respondents purchased or sold goods or services online, whereas by 2025 this share has grown to 76% (a 16% increase).
6. **Interest in social media is declining.** Six years ago, 80% were active social media users, while now this figure stands at 70% (a 10% decrease).
7. **Routine digital file operations are losing relevance.** The share of those transferring files between computers, laptops, or other devices (e.g., computer–flash drive) and those copying and/or moving files or folders has decreased by 10% — in 2025, these figures stand at 63% and 59%, respectively.

| Digital skills 2025 | No skills | Basic skills | Above basic skills |
|---|---|---|---|
| Information skills | 4,2 | 5,3 | 90,5 |
| Communication skills | 0,5 | 1,5 | 98,0 |
| Problem-solving skills | 4,4 | 26,5 | 69,1 |
| Digital content creation skills | 39,1 | 26,5 | 34,4 |

# Digital skills by areas of competence: People with visual impairments aged 18–59

This category was included in the study for the first time in 2025; therefore, tracking the dynamics of digital skills development will only be possible in the context of future research. At the same time, people with visual impairments demonstrate a high level of digital inclusion, with well-developed information and communication skills, but more superficial abilities in problem-solving and digital content creation.

The likely reason for this digital gap may be the lack of accessibility and adaptability of software, applications, and other digital services to the needs of people with visual impairments, including incompatibility with assistive technologies.

## This issue requires further research in the following areas:

1. **Exploring barriers to digital use from the perspective of the target group.** Currently, no specialized research on this topic has been conducted in Ukraine. References to the Barriers to Digital Inclusion Survey (2023) highlight the challenges faced by people with hearing impairments when using digital technologies – such as difficulties purchasing bus tickets, ordering food, or accessing information about children's academic performance on school websites. It is likely that digital inclusion trends in Ukrainian society follow similar patterns, and the wartime context further underscores the relevance of this issue. As long as hostilities continue and territories remain contaminated with mines, both military personnel and civilians face the risk of injury. Ultimately, as noted by focus group participants, in times of war, access to digital technologies becomes a component of personal safety and should therefore be considered a basic necessity.
2. **Analysis of the assistive technology market and its accessibility –** whether user-friendly and affordable plugins or screen readers are currently available on the Ukrainian market.
3. **Assessment of the accessibility and compatibility of key digital resources with various assistive technologies –** government portals and services, as well as major everyday digital platforms.
4. **Analysis of best regulatory practices in different countries and adaptation to the Ukrainian context.** Ukraine has already adopted several regulatory documents on accessibility. For instance, Resolution of the Cabinet of Ministers of Ukraine No. 757 of July 21, 2023 requires that all websites, mobile applications, and electronic documents of executive authorities comply with the national standard DSTU EN 301 549:2022. However, questions remain regarding the actual compliance of these resources with the standards, mechanisms for monitoring implementation, and additional steps needed to enhance digital accessibility.

| Digital skills 2025 | No skills | Basic skills | Above basic skills |
|---|---|---|---|
| Information skills | 0,5 | 1,2 | 98,3 |
| Communication skills | - | 0,2 | 99,8 |
| Problem-solving skills | 3,2 | 91,1 | 5,7 |
| Digital content creation skills | 18,9 | 74,9 | 6,2 |

# Digital skills by areas of competence: People with visual impairments aged 18–59

At the analysis stage, the digital practices of people with visual impairments were compared with those of the “adult population aged 18–70” and “people with hearing impairments.”

**When discussing the performance of various digital operations, attention should be paid to the following aspects:**

1. **Very low level of engagement in operations related to public services.** Only 4% of respondents reported downloading or printing official forms. For comparison, this figure stands at 28% among the adult population and 33% among people with hearing impairments. This suggests that for people with special needs, digital tools – when accessible – enable easier access to essential services.

2. **Very low level of political participation.** Participation in online consultations or voting on specific social or political issues (such as signing petitions, voting for community budget projects, or participating in electronic consultations) among this group stands at 5%. This figure is almost ten times lower than among people with hearing impairments (45%) and six times lower than among the adult population aged 18–70 (29%).

3. **Low level of engagement in digital content creation.** 4% of respondents share digital content created by themselves (operation – uploading self-created material such as text, photos, music, videos, or software to any website that allows sharing). For other categories, this figure is twelve times higher – 48% among both the adult population and people with hearing impairments.

4. **Isolation from online education practices.** 4% of respondents reported having taken online courses, compared to 27% among Ukrainians aged 18–70 and 21% among people with hearing impairments.

5. **Significant gap in app installation practices compared to other groups.** Only 2% of respondents reported installing software or applications during the past three months. For other categories, this figure stands at 46% for the adult population and 54% for people with hearing impairments. This may indicate both a lack of such skills and a lack of demand, particularly due to insufficient adaptation to users’ needs.

6. **Digital security among people with visual impairments requires attention.** Only 2% of respondents reported changing security-related settings in any software (including operating systems), while among other categories this figure stands at 41–42%.

Block 3

# Artificial intelligence: perceptions and usage practices

# Awareness of artificial intelligence technologies

**Self-assessment of awareness of artificial intelligence (AI) by target groups** (y %)

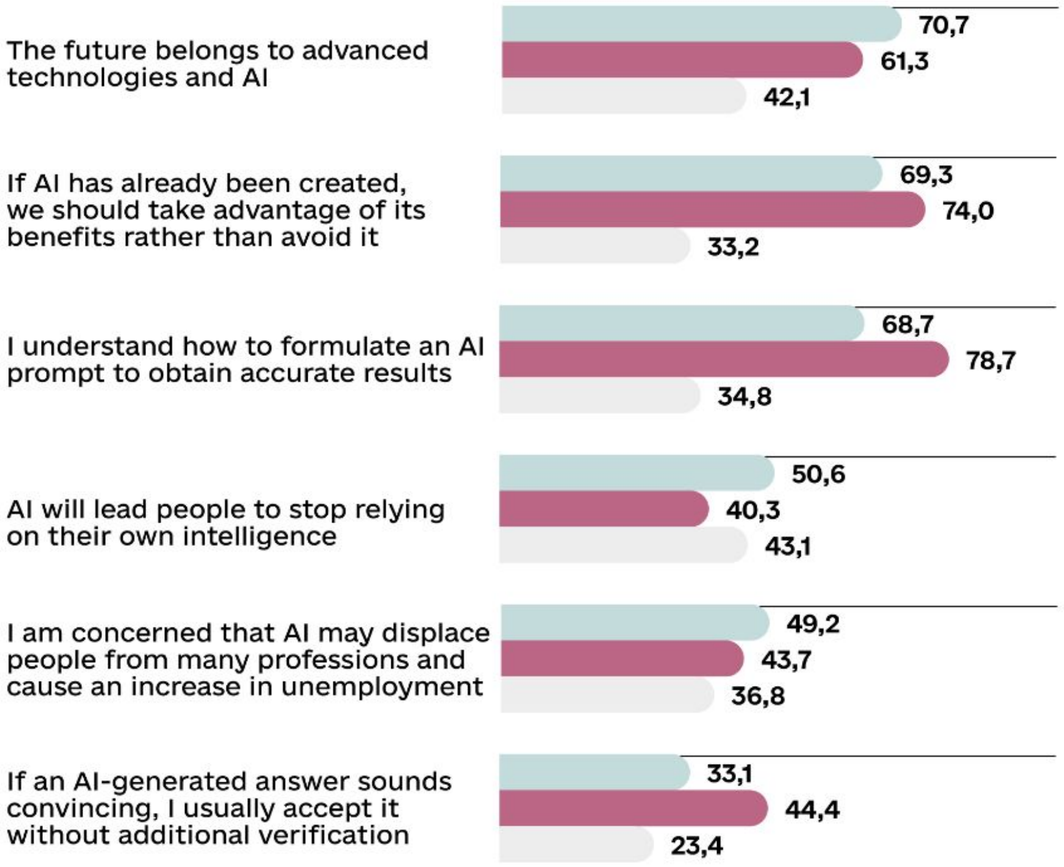

**Self-assessment of awareness of artificial intelligence (AI)** (y %)

| Options | Adult population | Adolescents | People with hearing impairments | People with visual impairments |
|---|---|---|---|---|
| Have never heard of artificial intelligence and have no idea what it is | 14,7 | 7,4 | 16,7 | 33,6 |
| Have heard something about artificial intelligence but do not understand how it works or where it is used | 32,5 | 18,1 | 26,9 | 64,2 |
| Have a general understanding of AI as computer systems that can learn or make decisions | 26,3 | 29,3 | 19,1 | 1,2 |
| Have a good understanding of what AI is and can give examples of its use in everyday life | 14,1 | 30,8 | 15,7 | 0,2 |
| Understand how modern AI tools work and can consciously assess their advantages and risks | 11,5 | 9,4 | 9,4 | 0,2 |
| Hard to say | 0,9 | 1,2 | 12,1 | 0,5 |

# Perception of AI and awareness of basic concepts

## Level of agreement with statements about artificial intelligence (AI) by target groups

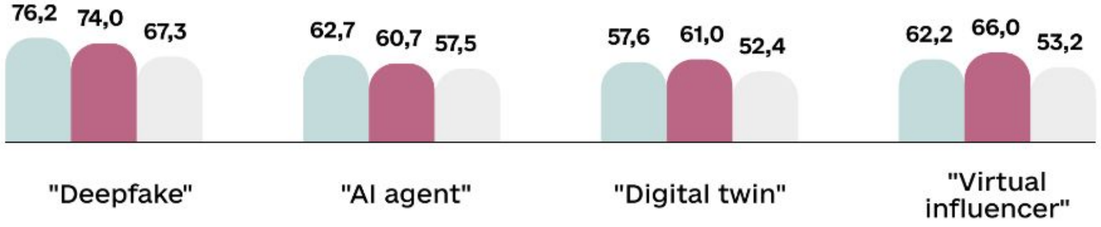
(%, for “rater agree”)




Adult population aged 18–70, n = 1059
Adolescents aged 10–17, n = 300
People with hearing impairments aged 18–59, n = 233

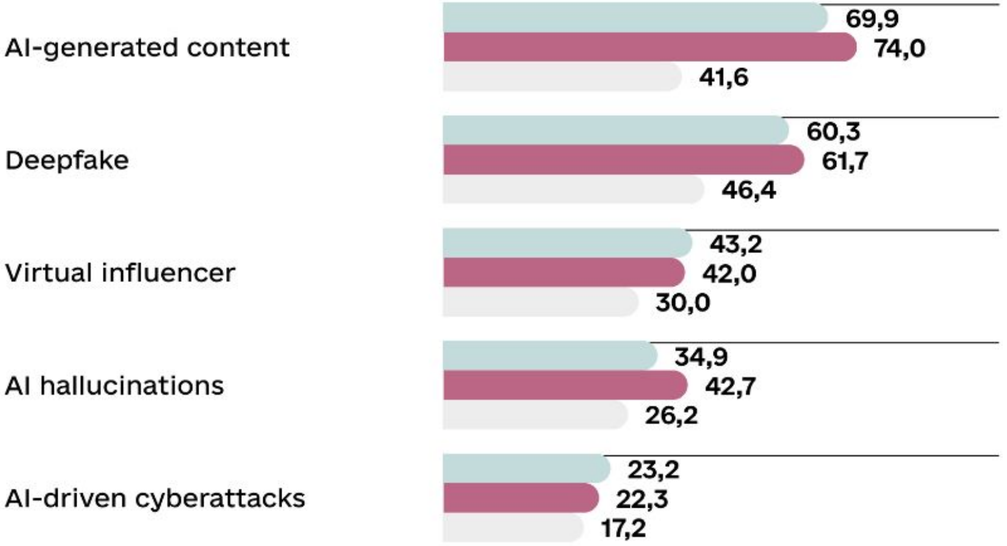
## Knowledge of artificial intelligence (AI) concepts

(%, for “have heard of it but have little understanding” and “yes, understand it well”)




## Situations or phenomena related to AI encountered in the last 6 months

(%, for “yes”)



# Practices of using AI in general and for decision-making

## Purpose of AI Use Among the Adult Population
(y %, n = 1059)

Searching for information or answers to questions (e.g., AI chatbots, Copilot, Perplexity)
**61,2%**

Planning or organizing tasks (e.g., scheduling, writing emails, creating plans using AI tools)
**14,3%**

Creating texts or translations (e.g., ChatGPT, DeepL, Grammarly)
**45,1%**

Other
**0,1%**

Generating images, videos, or music (e.g., DALL·E, Midjourney, RunwayML, Suno)
**30,3%**

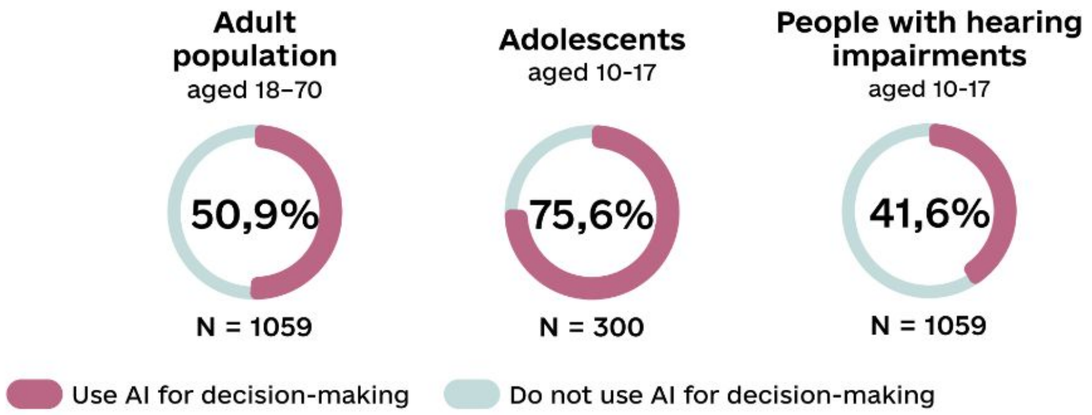
Have not used
**18,1%**

Online learning or self-study with AI assistance (e.g., AI tutors, personalized recommendations, automated tests)
**22,5%**

Do not know if have used
**1,5%**

Work-related tasks (e.g., process automation, report writing, coding, data analysis, marketing content creation, etc.)
**22,4%**

## Purpose of AI Use Among the Adult Population (y %, n = 1059)




## AI use practices for decision-making by target groups(y %)

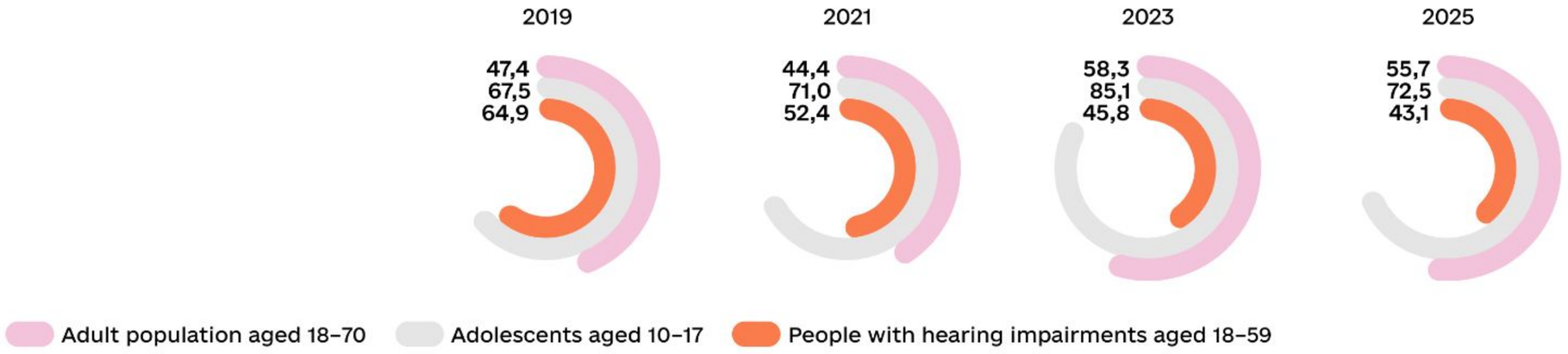
| Options | Adult population aged 18–70 n = 1059 | Adolescents aged 10–17 n = 300 | People with hearing impairments aged 18–59 n = 233 |
|---|---|---|---|
| Yes, very often | 7,6 | 15,7 | 3,4 |
| Yes, sometimes | 27,1 | 39,2 | 16,7 |
| Rarely | 16,2 | 20,7 | 21,5 |
| No, I use AI only to assist with routine or secondary tasks | 13,8 | 9,7 | 16,8 |
| No, I don’t use it at all | 35,3 | 14,7 | 41,6 |
| **Total** | **100%** | **100%** | **100%** |

Block 4

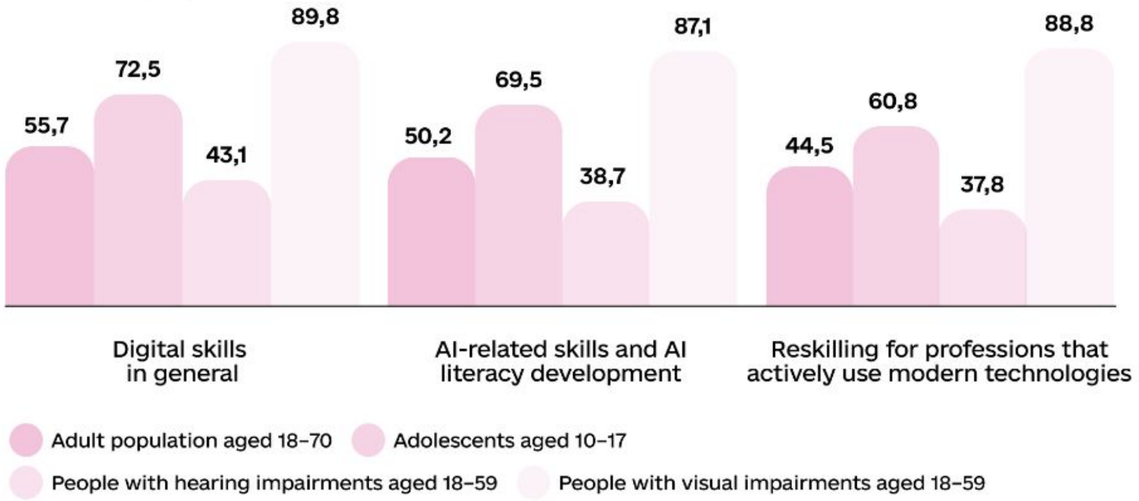
# Digital learning: needs and demands

# Relevance of digital skills training

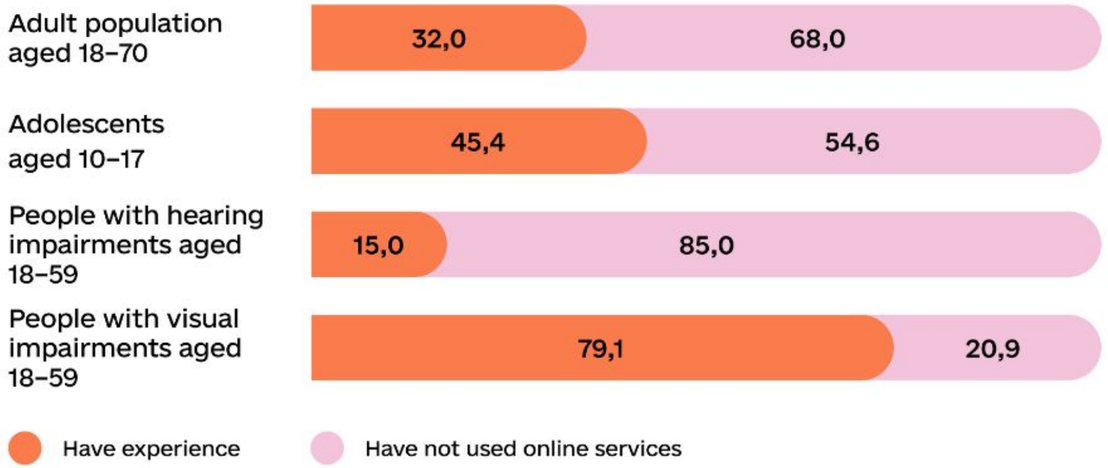
**Dynamics of relevance of digital skills training by target groups** (%, for “highly relevant” and “rather relevant”)




**Assessment of the relevance of training in...**
(%, for “highly relevant” and “rather relevant”)




**Experience with online self-learning services**
(%)



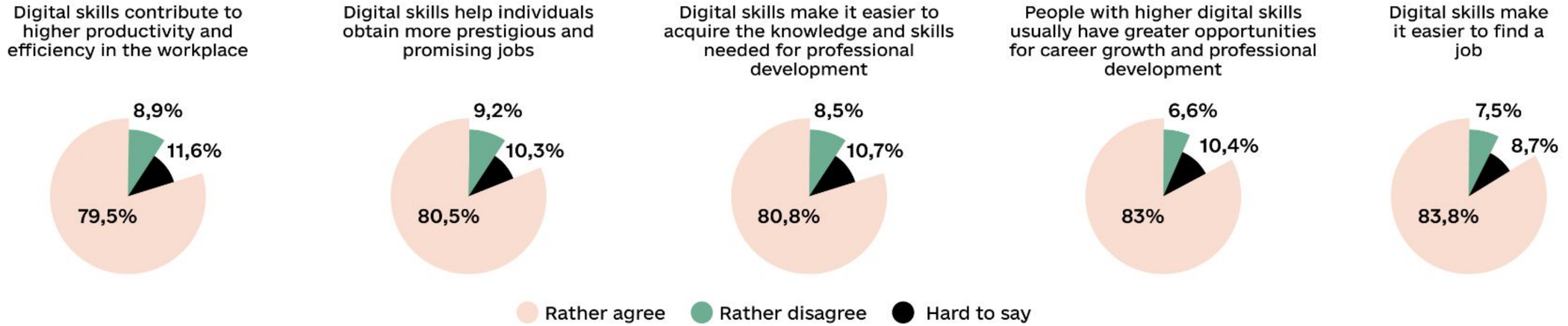
Block 5

# Role of digital skills in achieving success

# Role of digital skills in professional life

## The impact of digital skills on career development

(%)




**58,6%**

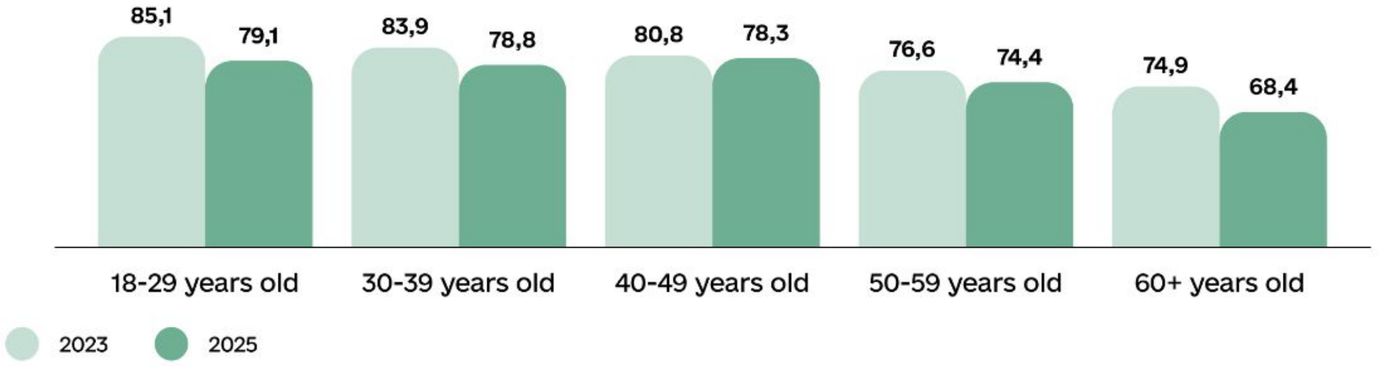
adult population agree that digital skills have a positive impact on professional opportunities and economic growth

**76,1%**

of the adult population agree with the statement

## Level of agreement with the statement: «An increase in digital skills among the population can have a positive impact on the Ukrainian economy overall» by age group and digital skills

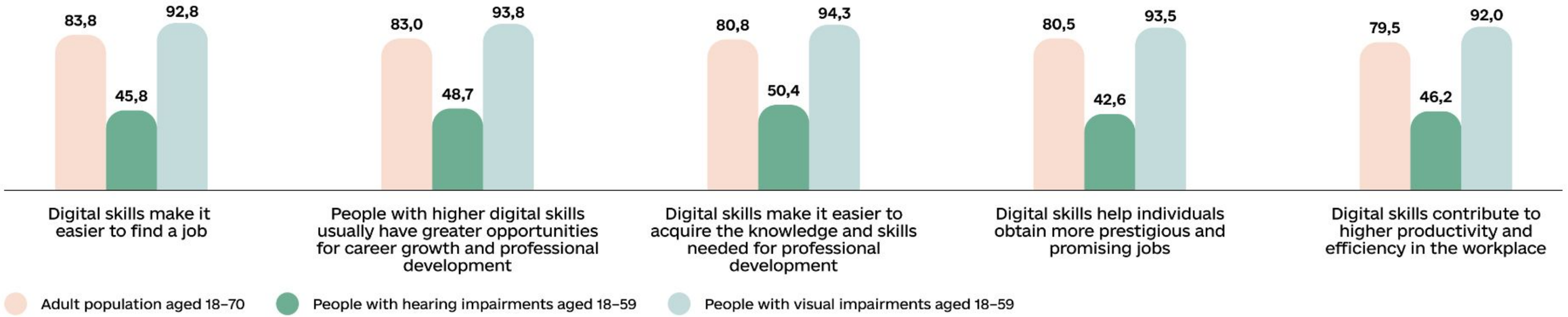
(%, for “rather agree”)



# Role of digital skills in professional life

## The impact of digital skills on career development

(%, for “rather agree”)




## Level of agreement with the statement: «An increase in digital skills among the population can have a positive impact on the Ukrainian economy overall» by age group and digital skills

(%)

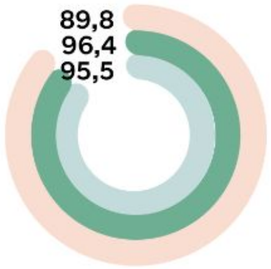
| Options | No skills | Low skills | Basic skills | Above basic skills |
|---|---|---|---|---|
| Rather agree | 59,8 | 69,7 | 80,1 | 82,2 |
| Rather disagree | 12,2 | 10,3 | 8,5 | 6,0 |
| Hard to say | 28,0 | 20,0 | 11,4 | 11,8 |
| **Total** | **100** | **100** | **100** | **100** |

# The role of digital technologies in the lives of adolescents

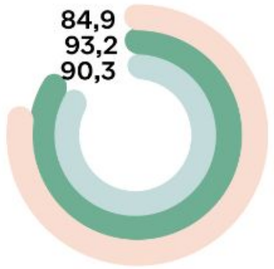
## Level of agreement with statements on internet use among adolescents

(%, for “rather agree”)

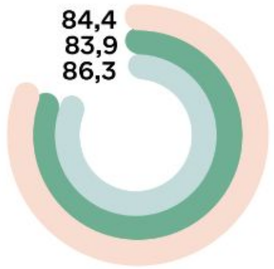
Using the Internet helps me stay in touch with my family and friends



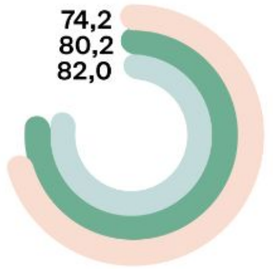

I find it easy to learn how to use new apps or programs



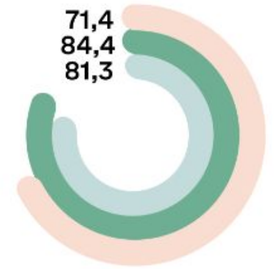

Using the Internet has more advantages than disadvantages



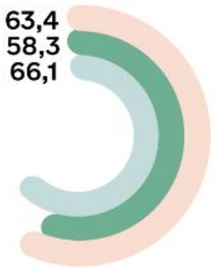

The Internet helps me save time (for example, I can do my homework faster)




I spend a lot of time online

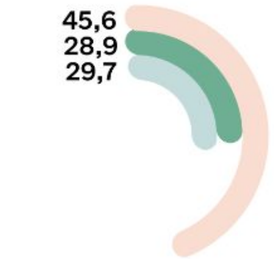



The Internet helps me feel less lonely

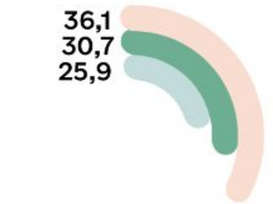



I am concerned that my digital skills are not sufficient


When I don’t have access to the Internet, I feel anxious




I don’t know how to protect my data when using the Internet

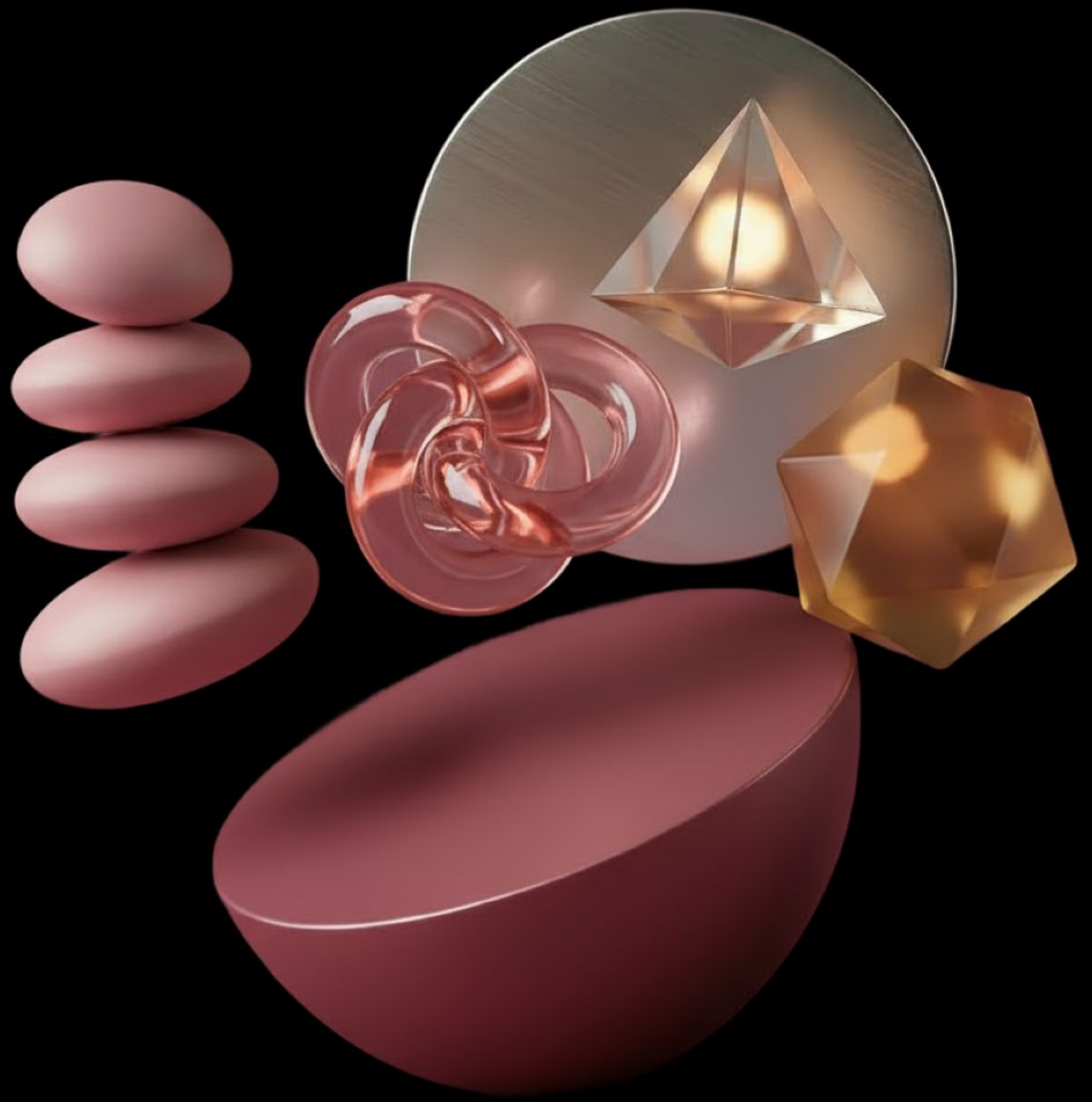



I use the Internet for entertainment but not for learning


2021 2023 2025

Block 6

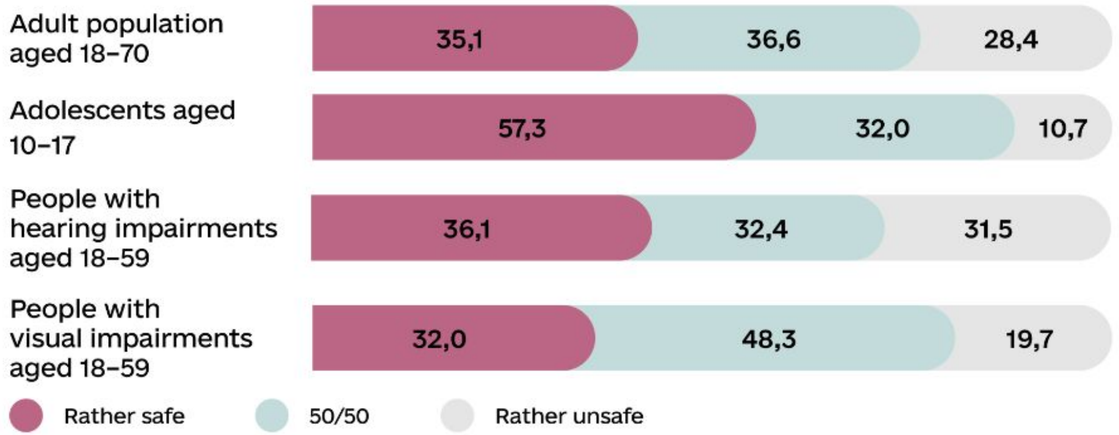
# Internet safety



# Sense of safety online

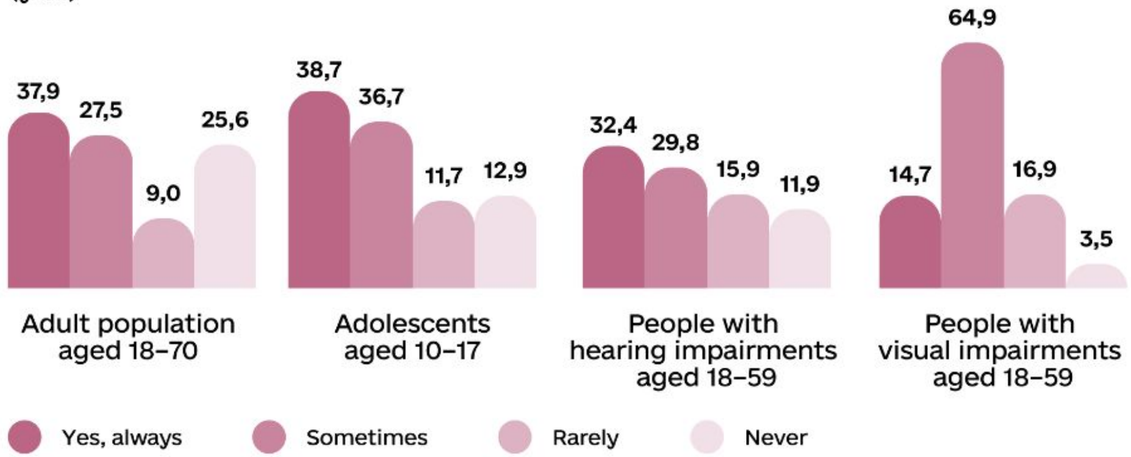
## Assessment of personal safety online

(y %)



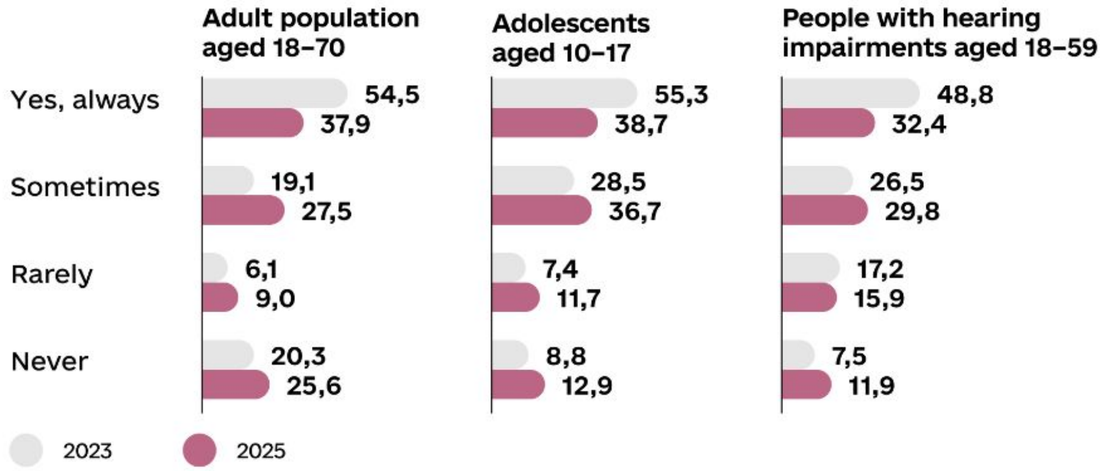

## Use of data protection measures online

(y %)



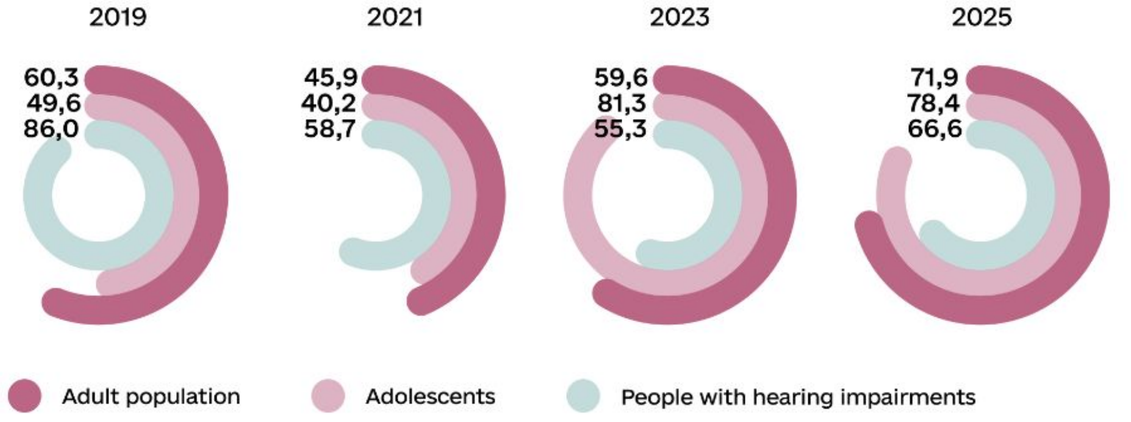

## Dynamics of data protection practices online

(y %)




## Dynamics of the presence of security problems due to the use of the internet in the last 12 months

(y %)



# Sense of safety online

## Top 10 protection measures by target groups

(%, multiple response questions)

| Options | Adult population aged 18–70 n = 1492 | Adolescents aged 10–17 n = 351 | People with hearing impairments aged 18–59 n = 364 | People with visual impairments aged 18–59 n = 388 |
|---|---|---|---|---|
| Using strong (complex) passwords | 55,9 | 58,4 | 51,4 | 12,9 |
| Changing passwords regularly | 42,4 | 39,9 | 23,1 | 8,2 |
| Using unique passwords for each account | 36,7 | 42,5 | 23,9 | – |
| Restricting access to personal information on social media | 34,0 | 33,0 | 22,0 | 4,9 |
| Using two-factor authentication | 32,7 | 37,6 | 18,4 | 0,5 |
| Using antivirus software and/or a firewall | 31,2 | 33,0 | 15,9 | 2,3 |
| Carefully checking emails and links for signs of fraud | 28,3 | 30,2 | 18,7 | 86,3 |
| Installing mobile apps only from official app stores | 27,9 | 30,2 | 19,8 | 80,4 |
| Creating data backups | 24,8 | 21,4 | 11,0 | 0,8 |
| Installing software on a computer/laptop only from official sources | 22,2 | 21,9 | 15,7 | 17,5 |

# Sense of safety online

## Internet security issues in the last 12 months

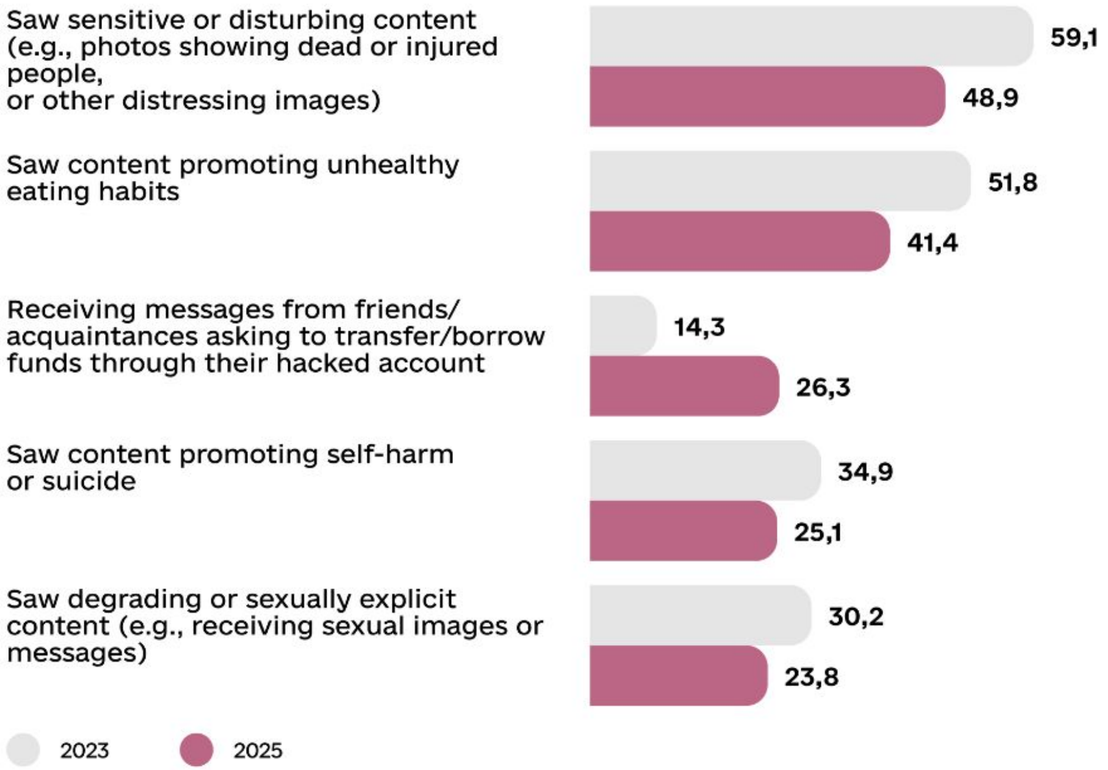
(%, for “yes”)

| Options | Adult population aged 18–70 | Adolescents aged 10–17 | People with hearing impairments aged 18–59 | People with visual impairments aged 18–59 |
|---|---|---|---|---|
| Receiving fraudulent messages ("phishing") | 46,7 | 35,2 | 42,1 | 2,0 |
| Receiving messages from friends/acquaintances asking to transfer/borrow funds through their hacked account | 43,9 | 25,1 | 56,4 | 1,7 |
| Redirects to fake websites requesting personal information (“pharming”) | 21,8 | 12,4 | 16,9 | 1,5 |
| Receiving viruses | 18,8 | 16,1 | 23,2 | 1,5 |
| Experiencing financial losses due to theft, fraudulent messages, or redirects to fake websites | 11,8 | 8,7 | 14,0 | – |
| Having social media or email accounts hacked | 11,8 | 17,4 | 12,8 | 1,0 |
| Data loss caused by a virus | 8,7 | 8,9 | 12,3 | 0,7 |
| Losing a physical device (e.g., smartphone, laptop) followed by unauthorized use of data stored on it by third parties | 7,5 | 12,9 | 8,7 | – |
| Children’s access to undesirable or inappropriate websites | 7,2 | 22,1 | 16,9 | 0,7 |
| Online identity theft (someone stole your personal data and performed actions online on your behalf, e.g., made purchases) | 5,8 | 8,7 | 7,7 | – |
| Misuse or improper use of your personal information available online, resulting in discrimination, bullying, threats, or harassment | 4,4 | – | 5,6 | – |

# Adolescents’ online safety

## Internet security issues in the last 12 months among adolescents

(%, for “yes”)




## Dynamics of adolescents’ experience with the use of parental control by their parents

(y %)


## Adolescents’ experience with the use of parental control by their parents by age group

(y %)

| Options | 10-12 years old | 13-15 years old | 16-17 years old | Total |
|---|---|---|---|---|
| Yes, currently used | 29,6 | 5,6 | 1,0 | 13,9 |
| No, not used now but used before | 16,4 | 19,4 | 15,0 | 17,1 |
| No, never used | 50,9 | 71,5 | 84,0 | 66,5 |
| Don’t know | 3,1 | 3,5 | - | 2,5 |

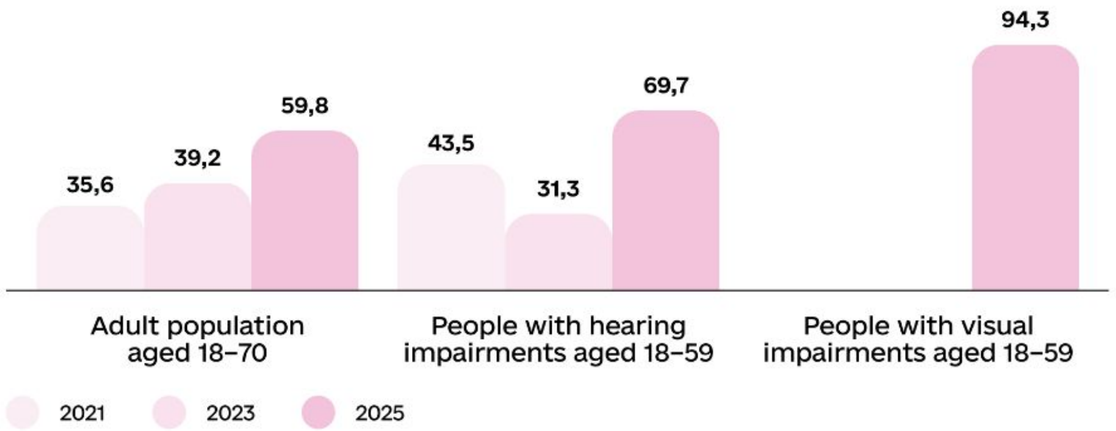
Block 7

# Online public services

# Use of online public services

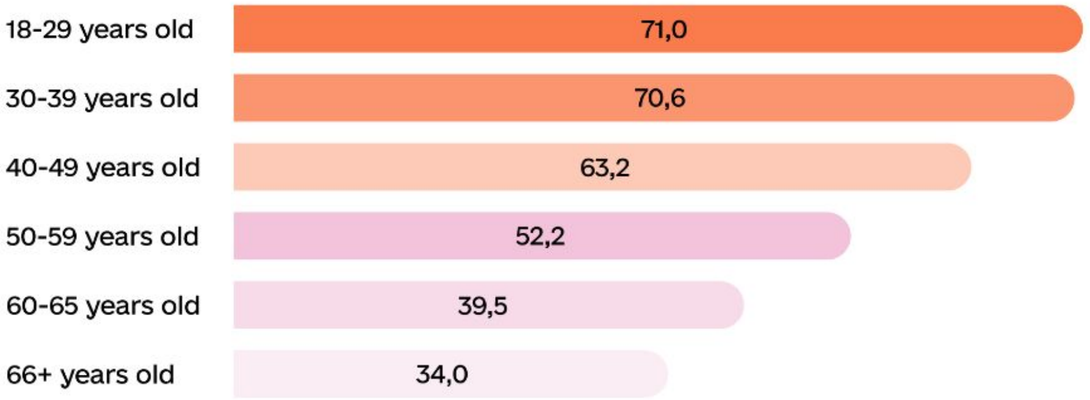
## Use of online public services, 2021-2025

(%, for “yes”)




## Use of online services in the past 12 months by age group

(y %)

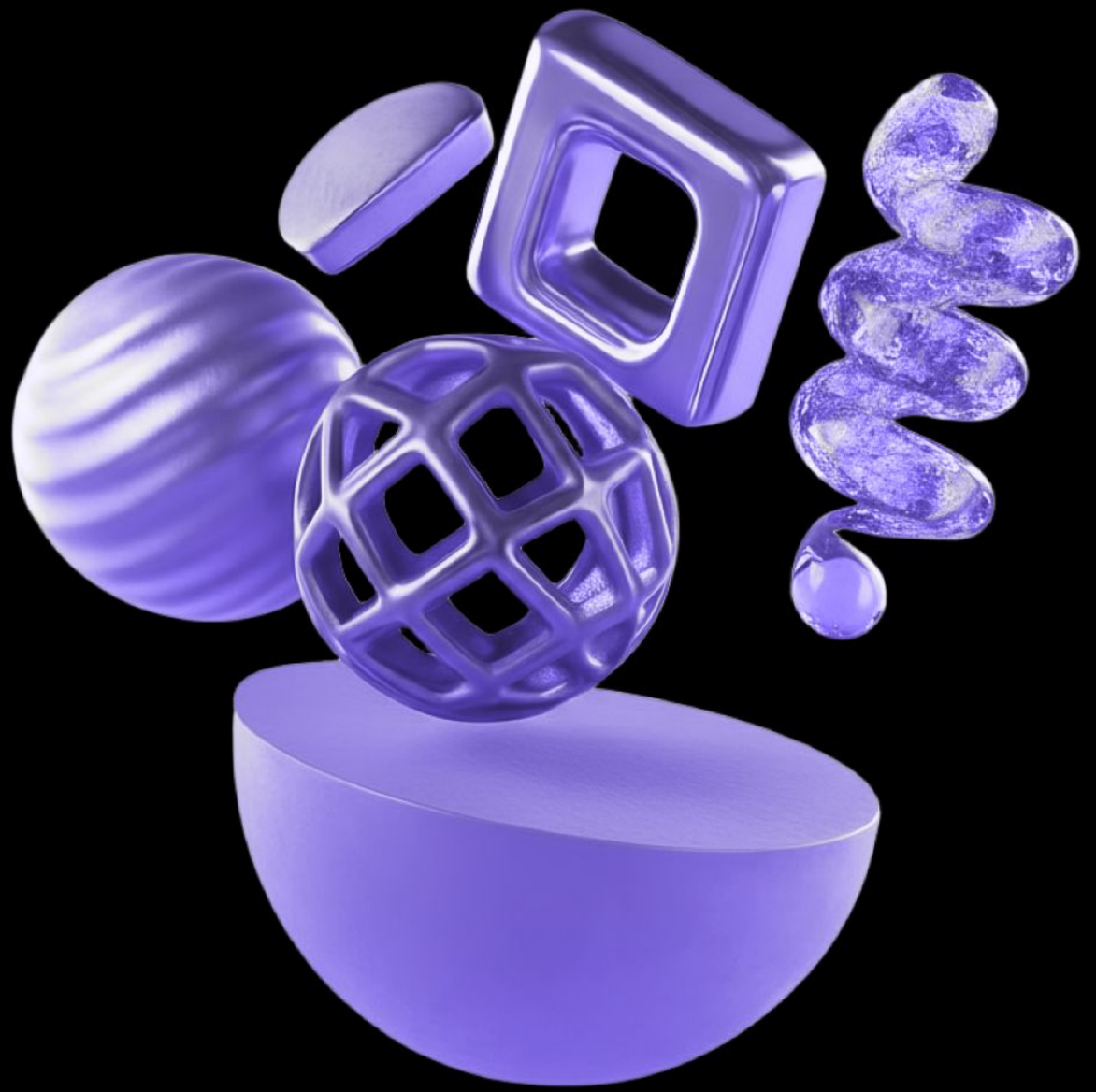



## Reasons for not using online services in the last 12 months

(%, multiple response questions)

| Options | Adult population aged 18–70 N=806 | People with hearing impairments aged 18–59 N=125 | People with visual impairments aged 18–59 N=23 |
|---|---|---|---|
| No need to use such services | 84,1 | 63,2 | 52,2 |
| Was not aware of this possibility | 8,4 | 12,0 | – |
| The procedure is too complicated for me | 5,1 | 9,6 | 21,7 |
| Do not know how to use the service online | 4,8 | 5,6 | 4,3 |
| Do not understand how it works | 4,5 | 7,2 | 8,7 |
| Not confident in the reliability of online resources (fear of disclosing personal data) | 4,2 | 4,0 | 13,0 |
| The services I need are not available online | 2,0 | 1,6 | 4,3 |
| Do not have Internet access | 1,7 | 1,6 | – |
| Cannot track or monitor the progress of service delivery | 1,2 | 1,6 | – |
| Other | 0,5 | – | – |
| Hard to say | 1,9 | 8,0 | 8,7 |

# Methodology



# Methodology

**Methodological framework for measuring digital literacy**

The assessment of digital skills is based on the European Commission's methodology for calculating the Digital Economy and Society Index (DESI), specifically the Digital Skills Indicator (DSI) (2017 methodology), which draws on the Digital Competence Framework (Digital competence Framework).

According to this framework, digital skills proficiency contains four areas of competence:

- Information skills
- Communication skills
- Problem solving skills
- Software skills for content manipulation

Within the survey, data are collected on operations and tasks that respondents performed during the previous three months. It is assumed that individuals who performed certain actions from the proposed list possess the corresponding skills. Based on the variety and complexity of the activities performed, three proficiency levels are calculated for each of the four dimensions:

- no skills
- basic skills
- above basic skills

An overall level of digital skills is then derived by combining the results across all four competence areas. More detailed information is available in the full version of the study.

| Research components | Цільова аудиторія<br>населення України | Data collection method | Sample | Reliability parameters |
|---|---|---|---|---|
| Survey of the adult population | adult population aged 18–70 | face-to-face interview | 2005 people | Confidence level: 95%<br>Confidence interval (margin of error): ±2,2% |
| Survey of adolescents | adolescents aged 10–17 | face-to-face interview / self-completed questionnaire using an online link | 403 people | Confidence level: 95%<br>Confidence interval (margin of error): ±4,9% |
| Survey of the people with hearing impairments | people with hearing impairments aged 18–59 | survey (questionnaire) | 402 people | Confidence level: 95%<br>Confidence interval (margin of error): ±4,9% |
| Survey of the people with visual impairments | people with visual impairments aged 18–59 | survey (questionnaire) | 413 people | Confidence level: 95%<br>Confidence interval (margin of error): ±4,8% |

Excluded regions: Donetsk and Luhansk regions, as well as the Autonomous Republic of Crimea
Partially excluded regions: Communities of Zaporizhzhia and Kherson oblasts that have been under occupation since February 24, 2022