

## DIGITALIZATION READINESS INDEX METHODOLOGY

The index takes into account **the general level of development and awareness of digitalization**, as well as the development of dialogue between the state and citizens **in three key areas**: feedback, media activity and public services.

The index takes into account **objective indicators** (statistics data) and **subjective indicators** (survey results).

Objective assessments and subjective assessments for each of the areas are calculated as the arithmetic mean of the indicators included in them.

The assessments of the development of dialogue in each of the areas are calculated as the geometric mean of objective and subjective assessments.

The overall assessment of the development of the dialogue is calculated as the average of the assessments for each of the areas.

The result is multiplied by a coefficient that is an indicator of the general level of development and perception of digitalization.

$$RDI = K * \frac{1}{3} \sum_{i=1}^3 X_i$$

where:

*K is a coefficient-indicator of the general level of development and perception of digitalization*

*X<sub>1</sub> is the geometric mean of objective and subjective feedback ratings.*

*X<sub>2</sub> is the geometric mean of objective and subjective assessments of media activity.*

*X<sub>3</sub> is the geometric mean of objective and subjective assessments of public services.*

$$X_i = \sqrt{O * S}$$

where:

*O - objective assessments*

*S - subjective assessments*

$$S, O = \frac{1}{n} \sum_{i=1}^n x_i$$

where:

*x<sub>i</sub> - indicators*

*n - number of indicators*

The coefficient-indicator of the general level of development and awareness of digitalization is calculated by the formula:

$$K = 0,5 + 0,5 * \frac{1}{200} (O_k + S_k)$$

where:

$O_k$  - objective assessments,

$S_k$  - subjective assessments.

## OBJECTIVE INDICATORS

### 1. Feedback.

#### 1.1. Availability of national / regional platforms and tools for communication between the state and citizens:

1.1.1. feedback platforms

1.1.2. platforms for petitions and legislative initiatives

1.1.3. platforms for public discussion and voting for projects

1.1.4. initiative budgeting platforms

1.1.5. automated search and response tools

*Each type of platform is evaluated.*

*If there is a national platform, it is estimated at 100 points.*

*In the presence of regional platforms and the absence of a national one, it is calculated as multiplied by 100 the proportion of citizens living in the region (s) on the territory of which the platform operates.*

*In the absence of regional and national platforms - 0 points.*

#### 1.2. Remote electronic voting (online).

##### 1.2.1. Access to the platform for remote electronic voting

*If there is a national platform, it is estimated at 100 points.*

*If there are regional platforms or the platform operates in a limited area, it is calculated as multiplied by 100 the proportion of voters living in the region (s) on the territory of which the platform operates, of the total number of voters.*

##### 1.2.2. Proportion of voters who voted in the most recent national elections by means of a remote electronic voting platform

*The proportion of voters who voted in the most recent national elections by means of a remote electronic voting platform multiplied by 100 of the total number of voters who were eligible to vote through such a platform.*

### 2. Media activity.

#### 2.1. Official websites of federal ministries.

*The proportion of federal ministries with an official website multiplied by 100 in the total number of federal authorities.*

## **2.2. Ministries on social media:**

### **2.2.1. The presence of accounts of federal ministries in the most popular social networks in the country, taking into account the importance of social networks.**

The sum of the shares of federal ministries that have an account in each of the most popular social networks in the country multiplied by 100, multiplied by the importance of social networks.

$$X_{2.2.1} = 100 * \sum_{i=1}^n M_n S_n$$

where:

$n$  – number of evaluated social networks

$M_n$  – share of ministries with an account on the social network

$S_n$  – the significance of the social network

The significance of a social network ( $S_n$ ) is calculated as the share of social network users in the total number of users of the assessed social networks.

### **2.2.2. Subscribers to the accounts of the ministries in each of the most popular social networks in the country per 1000 users of social networks.**

The indicator for one social network is calculated as the share of subscribers to the accounts of all ministries among the users of the corresponding social network multiplied by 1000. The maximum rating value for one social network is 100.

The overall score is calculated as the arithmetic mean of the scores of all considered social networks.

$$X_{2.2.2} = \frac{1}{n} \sum_{i=1}^n 1000 * \frac{M_n}{S_n}$$

where:

$n$  – number of social networks assessed

$M_n$  – the sum of subscribers of all accounts

$S_n$  – number of social network users

### **2.2.3. User engagement – the total number of all user activities in the accounts of ministries in the most popular social networks in the country over the past six months.**

Engagement in one social network is calculated as the ratio of the total number of user activities in the accounts of all ministries over the past six months to the total number of subscribers of these accounts, multiplied by 100. The maximum rating value for one social network is 100.

The overall score is calculated as the arithmetic mean of the scores of all considered social networks.

#### **2.2.4. Participation of ministries in communication with users in the comments.**

The sum of the share of ministries multiplied by 100, in whose accounts on social networks over the past six months there are 10 or more ministerial comments per 1000 user comments in aggregate, and half of the share of ministries, in whose accounts there are in aggregate from 1 to 9 per 1000 user comments ministry comments.

$$X_{2.2.4} = 100 * \frac{K_{100} + 0,5 * K_{1000}}{N}$$

where:

$N$  – total number of ministries

$K_{100}$  – the number of ministries with 10 or more ministry comments per 1000 user comments in their social media accounts over the past six months

$K_{1000}$  – the number of ministries with less than 10 and at least 1 ministry comment per 1000 user comments.

#### **2.2.5. Social media mentions**

The ratio of the total number of mentions of ministries in social networks for the last six months, multiplied by 1000, to the sum of users of these social networks. The maximum value of the indicator is 100.

### **2.3. The presence of parliamentary accounts on the most popular social networks in the country, taking into account the importance of social networks.**

The sum of the significance of the most popular social networks in the country, in which the parliament has an account, multiplied by 100. In countries with bicameral parliaments, each chamber is assessed separately, and the overall parliamentary grade is calculated as the arithmetic mean of the assessments of both chambers.

The significance of a social network is calculated as the share of social network users in the total number of users of the assessed social networks.

## **3. Public services.**

### **3.1. Citizens' access to the Internet portal of public services.**

In the presence of a single national Internet portal of public services - 100 points.

In the presence of regional Internet portals and the absence of a national one, it is calculated as the share of citizens living in the region (regions) in which the portal operates, multiplied by 100.

In the absence of regional and national portals - 0 points.

### **3.2. Share of citizens registered on the Internet portal of public services**

The share of citizens with a passport and registered on the Internet portal of public services multiplied by 100 in the total number of citizens with a passport and living in the territory of the Internet portal.

**3.3. The share of public services, the receipt of which does not require visiting government agencies.**

*The share of public services, the receipt of which does not require visiting government agencies, multiplied by 100 in the total number of public services.*

**4. General level of development and awareness of digitalization.**

4.1. Share of households with Internet access multiplied by 100.

4.2. Share of households with broadband internet access multiplied by 100.

4.3. UN Human Capital Development Indicators: Adult Literacy and Gross Learning Enrollment Ratio.

4.4. Transition to non-cash payments – the share of non-cash trade turnover for the quarter preceding the quarter in which the study is conducted multiplied by 100.

*Statistics data.*

**SUBJECTIVE INDICATORS**

**1. Feedback.**

<i>Indicator</i>	<i>Question and explanations</i>
<p>1.1. Average assessment of awareness of various platforms of communication between the state and citizens</p>	<p><b>Do you know, have heard or know nothing about the platform [NAME OF PLATFORM]?</b>  <b>For each national platform and tools.</b></p> <ol style="list-style-type: none"> <li>1. I know well</li> <li>2. Heard something, but no details</li> <li>3. I don't know anything</li> </ol> <p><i>Question for each national platform and tool related to the following types:</i></p> <ul style="list-style-type: none"> <li>▪ <i>feedback platform</i></li> <li>▪ <i>platforms for petitions and legislative initiatives</i></li> <li>▪ <i>platforms for public hearings and voting for projects</i></li> <li>▪ <i>proactive budgeting platforms</i></li> <li>▪ <i>automated search and response tools.</i></li> </ul> <p><b>Indicator</b> – <i>arithmetic mean of the percent of respondents who chose «I know well» or «Heard something, but no details».</i></p>
<p>1.2. Average rating of approval of various communication platforms of the state and citizens</p>	<p><b>Do you approve or disapprove of the use by public authorities of platforms [TYPE OF PLATFORM]?</b>  <b>[PLATFORM TYPE DESCRIPTION]</b></p> <ol style="list-style-type: none"> <li>1. Definitely approve</li> <li>2. Rather approve</li> </ol>

	<p>3. I rather disapprove 4. Definitely disapprove 5. I don't know</p> <p><i>Question for each platform and tool related to the following types:</i></p> <ul style="list-style-type: none"> <li>▪ <i>feedback platform</i></li> <li>▪ <i>platforms for petitions and legislative initiatives</i></li> <li>▪ <i>platforms for public hearings and voting for projects</i></li> <li>▪ <i>proactive budgeting platforms</i></li> <li>▪ <i>automated search and response tools.</i></li> </ul> <p><b>Indicator</b> – <i>arithmetic mean of the percent of respondents who chose «Definitely approve» or «Rather approve»</i></p>
<p>1.3. Positive assessment of the impact of the use of platforms on the quality of life</p>	<p><b>In your opinion, does the use of various platforms for communication with citizens, tools for collecting and processing complaints and appeals by the state to improve the quality of life of people or not?</b></p> <ol style="list-style-type: none"> <li>1. Definitely contributes</li> <li>2. Rather contributes</li> <li>3. Rather not conducive</li> <li>4. Definitely not conducive</li> <li>5. I don't know</li> </ol> <p><b>Indicator</b> – <i>percent of respondents who chose «Definitely contributes» or «Rather contributes».</i></p>
<p>1.4. Allow to participate in remote electronic voting sometime in the future</p>	<p><b>Do you admit or exclude the possibility of participation in elections by means of remote electronic voting at any time in the future?</b></p> <ol style="list-style-type: none"> <li>1. I admit</li> <li>2. Rather, I admit</li> <li>3. Rather exclude</li> <li>4. I exclude</li> <li>5. I don't know</li> </ol> <p><b>Indicator</b> – <i>percent of respondents who chose «I admit» or «Rather, I admit».</i></p>

## 2. Media activity.

<b>Indicator</b>	<b>Question and explanations</b>
2.1 Assessment of the activity of authorities on the Internet	<p><b>Do you think public authorities are active or inactive on the Internet?</b></p> <ol style="list-style-type: none"> <li>1. Very active</li> <li>2. Rather active</li> <li>3. Rather inactive</li> <li>4. Completely inactive</li> <li>5. I don't know</li> </ol> <p><i>Indicator – percent of respondents who chose «Very active» or «Rather active».</i></p>
2.2 Assessment of the sufficiency of information on the Internet about the work of authorities	<p><b>Do you have enough or not enough information about the activities of public authorities on the Internet, social networks and messengers?</b></p> <ol style="list-style-type: none"> <li>1. Information in abundance</li> <li>2. There is enough information</li> <li>3. Information is not enough</li> <li>4. I don't know</li> </ol> <p><i>Indicator – percent of respondents who chose «There is enough information».</i></p>
2.3 Assessment of the likelihood of receiving a response from authorities on social media	<p><b>In your opinion, when contacting government authorities in social networks, you will receive or not receive a response?</b></p> <ol style="list-style-type: none"> <li>1. I will definitely get an answer</li> <li>2. I probably will get an answer</li> <li>3. I probably won't get an answer</li> <li>4. I definitely won't get an answer</li> <li>5. I don't know</li> </ol> <p><i>Indicator – percent of respondents who chose «I will definitely get an answer» or «I probably will get an answer».</i></p>
2.4 Assessment of the likelihood of solving the problem when contacting the authorities in social networks	<p><b>In your opinion, will your problem or will not be solved when contacting government authorities in social networks?</b></p> <ol style="list-style-type: none"> <li>1. Will be exactly solved</li> <li>2. More likely to be resolved</li> <li>3. Rather it will not be resolved</li> <li>4. Will definitely not be solved</li> <li>5. I don't know</li> </ol>

	<p><b>Indicator</b> – percent of respondents who chose «Will be exactly solved» or «More likely to be resolved».</p>
2.5 Satisfaction with social media communication with authorities	<p><b>Are you satisfied or dissatisfied with your communication with government authorities on social media?</b></p> <p>Question for those who have addressed a question or problem to government authorities on social networks (in private messages or comments) over the past year.</p> <ol style="list-style-type: none"> <li>1. Completely satisfied</li> <li>2. Rather satisfied</li> <li>3. Rather dissatisfied</li> <li>4. Absolutely dissatisfied</li> <li>5. I don't know</li> </ol> <p><b>Indicator</b> – percent of respondents who chose «Completely satisfied» or «Rather satisfied» in the total number of <u>those who have addressed a question or problem to government authorities on social networks over the past year.</u></p>
2.6 Solving the problem after contacting the authorities on social networks	<p><b>After contacting government authorities in social networks, was your question / problem resolved or not?</b></p> <p>Question for those who have addressed a question or problem to government authorities on social networks (in private messages or comments) over the past year.</p> <ol style="list-style-type: none"> <li>1. Fully resolved</li> <li>2. Partially solved</li> <li>3. Not resolved</li> <li>4. I don't know</li> </ol> <p><b>Indicator</b> – percent of respondents who chose «Fully resolved» or «Partially solved» in the total number of <u>those who have addressed a question or problem to government authorities on social networks over the past year.</u></p>

### 3. Public services.

<b>Indicator</b>	<b>Question and explanations</b>
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<p>3.1 Assessment of preference for receiving public services via the Internet</p>	<p><b>Have you received public services over the past year or not? If received, please indicate in what format – online (including initial application submission) or offline?</b></p> <ol style="list-style-type: none"> <li>1. Online only</li> <li>2. More often online than offline</li> <li>3. Online and offline are about the same often</li> <li>4. More often offline than online</li> <li>5. Offline only</li> <li>6. Has not received any public services within the last year</li> <li>7. I don't know</li> </ol> <p><i><b>Indicator</b> – percent of respondents who chose «Online only» or «More often online than offline» in the total number of <u>those who have received public services over the past year.</u></i></p>
<p>3.2 Assessment of the impact of online government services on quality of life</p>	<p><b>In your opinion, does the ability to receive public services on Internet portal affect or does not affect the quality of life of people? If it does, indicate how – positively or negatively.</b></p> <ol style="list-style-type: none"> <li>1. Affects positively</li> <li>2. Does not affect</li> <li>3. Affects negatively</li> <li>4. I don't know</li> </ol> <p><i><b>Indicator</b> – percent of respondents who chose «Affects positively».</i></p>

#### 4. General level of development and awareness of digitalization.

<i><b>Indicator</b></i>	<i><b>Question and explanations</b></i>
<p>4.1 Confidence in digital technology</p>	<p><b>Do you generally trust or distrust digital technology?</b></p> <ol style="list-style-type: none"> <li>1. I completely trust</li> <li>2. I rather trust</li> <li>3. I rather do not trust</li> <li>4. I don't trust completely</li> <li>5. I don't know</li> </ol> <p><i><b>Indicator</b> – percent of respondents who chose «I completely trust» or «I rather trust».</i></p>

<p>4.2 Assessment of the impact of digital technologies on quality of life</p>	<p><b>Do you think the development of digital technologies affects or does not affect the quality of life of people? If it does, specify how – positively or negatively.</b></p> <ol style="list-style-type: none"> <li>1. Affects positively</li> <li>2. Does not affect</li> <li>3. Affects negatively</li> <li>4. I don't know</li> </ol> <p><b>Indicator</b> – percent of respondents who chose «Affects positively».</p>
<p>4.3 Assessment of online payment preference by spending category</p>	<p><b>Some people prefer to make payments via the Internet, some, on the contrary, make payments only offline: by card or in cash. How do you prefer to make the following payments and transactions: offline or online?</b></p> <p>For each category.</p> <ol style="list-style-type: none"> <li>1. I prefer to pay offline: by card or cash</li> <li>2. I prefer to pay online</li> <li>3. I do not make such payments</li> <li>4. I don't know</li> </ol> <p><b>Categories:</b></p> <ul style="list-style-type: none"> <li>▪ Payment of taxes, fines, state duties</li> <li>▪ Housing and public utilities</li> <li>▪ Payment for mobile communication</li> <li>▪ Payment for orders in online stores</li> <li>▪ Purchase of tickets to the cinema, to concerts, to the theater, to the museum</li> <li>▪ Delivery of ready-made food, groceries</li> <li>▪ Buying plane and train tickets</li> <li>▪ Taxi payment</li> <li>▪ Payment for online content (movies, music, online concerts, sports broadcasts, games)</li> </ul> <p><b>Indicator</b> – weighted arithmetic mean of the percent of respondents who chose «I prefer to pay online» in the total number of <u>those who make appropriate payments</u>.</p>
<p>4.4 Making transactions via the Internet bank</p>	<p><b>Have you made any banking operations (money transfers, account opening, etc.) during the last year or not? If you did, indicate in what format – via the Internet bank (on the website or in the</b></p>

	<p><b>mobile application) or offline (by phone, when visiting the bank branches).</b></p> <ol style="list-style-type: none"> <li>1. Only through the Internet bank</li> <li>2. More often through the Internet bank</li> <li>3. Through the Internet bank and offline about the same frequency</li> <li>4. More often offline</li> <li>5. Offline only</li> <li>6. Has not performed any banking transactions within the last year</li> <li>7. I don't know</li> </ol> <p><b>Indicator</b> – percent of respondents who chose «Only through the Internet bank» or «More often through the Internet bank» <u>in the total number of those who have made banking operations during the last year.</u></p>
4.5 Self-assessment of digital literacy	<p><b>Rate your digital literacy level on a scale of 1 to 5, where 1 is very low and 5 is very high.</b></p> <ol style="list-style-type: none"> <li>1. 1 – Very low</li> <li>2. 2</li> <li>3. 3</li> <li>4. 4</li> <li>5. 5 – Very high</li> <li>6. I don't know</li> </ol> <p><b>Indicator</b> – percent of respondents who chose «4» or «5».</p>
4.6 Digital security literacy, awareness and skills	<p><b>To what extent does each of the following statements correspond or does not correspond to you personally? Rate it on a scale of 1 to 5, where 1 is “absolutely not consistent” and 5 is “fully consistent”.</b></p> <p><b>For each statement.</b></p> <ol style="list-style-type: none"> <li>1. 1 – Absolutely not consistent</li> <li>2. 2</li> <li>3. 3</li> <li>4. 4</li> <li>5. 5 – Fully consistent</li> <li>6. I don't know</li> </ol> <p><b>Statements:</b></p> <ul style="list-style-type: none"> <li>▪ I check the accuracy of the information that I find on the Internet</li> </ul>

	<ul style="list-style-type: none"> <li>▪ <i>I never send passwords by e-mail and in private messages on social networks and messengers</i></li> <li>▪ <i>I never use simple passwords like 12345 or QWERTY</i></li> <li>▪ <i>I consider it important to install updates to the operating system, antivirus and other software for security purposes</i></li> <li>▪ <i>I am able to restrict the access of applications and sites to my location</i></li> <li>▪ <i>I can check the security of a website that asks me to provide personal information (for example, https sites, a security logo or a certificate)</i></li> <li>▪ <i>I know about reliable security systems on the Internet (for example, about two-factor authentication)</i></li> <li>▪ <i>I regularly change my mailbox and social media passwords</i></li> <li>▪ <i>I know about the possibility of stealing access to personal accounts of banks, accounts on social networks, e-mail, etc.</i></li> <li>▪ <i>I am aware that downloading or distributing digital content (e.g. music, films) can have ethical or legal implications</i></li> </ul> <p><b>Indicator</b> – percent of respondents who chose «4» or «5» for 7 or more statements.</p>
<p>4.7 Assessment of data security when using government digital services</p>	<p><b>How do you assess the security of your personal data when using government digital services? Rate it on a scale of 1 to 5, where 1 is “my data is not protected at all” and 5 is “my data is fully protected”.</b></p> <ol style="list-style-type: none"> <li>1. <i>1 – My data is not protected at all</i></li> <li>2. <i>2</i></li> <li>3. <i>3</i></li> <li>4. <i>4</i></li> <li>5. <i>5 – My data is fully protected</i></li> <li>6. <i>I don't know</i></li> </ol> <p><b>Indicator</b> – percent of respondents who chose «4» or «5».</p>