



Human Capital  
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# Global Trends and Human Capital: First Results of a Delphi Study

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Moscow, 2021

## Relevance and purpose of the research

Rapid development and  
implementation of new technologies

Rising influence of new technologies on  
socio-economic transformations

Major global shifts (population  
growth, climate change etc.)

Absence of complex scientific researches  
devoted to human potential development

COVID-19 pandemic

**The purpose** is to assess the effects of global trends and grand challenges as well as the impact of the COVID-19 pandemic for human development, using a comprehensive methodology, including intellectual big data analysis and expert methods

# Methodology of research combines intellectual big data analysis and expert-based methods

IFORA

ISSEK TREND DATA BASE

ISSEK EXPERT DATA BASE

## STEP 1: Big data analysis

- Text-mining
- Statistical analysis
- Patent analysis
- Bibliometric analysis

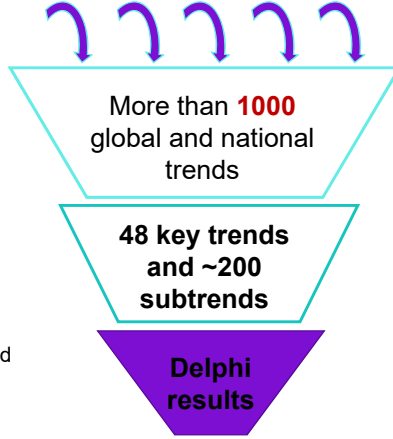
## STEP 2: Expert verification

- Foresight sessions
- Delphi
- Expert panels
- Trends classification

## STEP 3: Effects assessment

- Analysis of trends' effects, drivers and barriers, risks and opportunities
- Analysis of wild cards and weak signals

450 millions of documents



TRENDS DATA BASE

**RESULT:** semantic and trends maps in Russian and English, trends life-cycle diagrams etc.

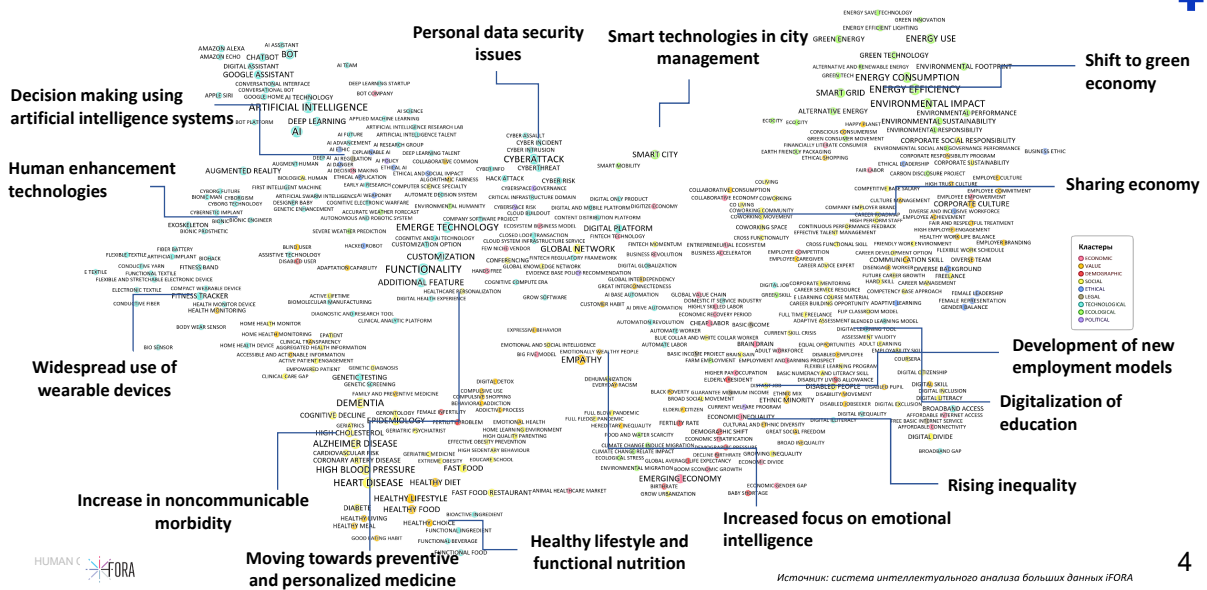
**RESULT:** Assessment of trend influence on human potential, trend changes as the result of COVID-19, time of wide trend realization, the most important sub-trends etc.

**RESULT:** Unique public data base of global trends and challenges in human potential

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# World human potential development agenda (semantic map in english)

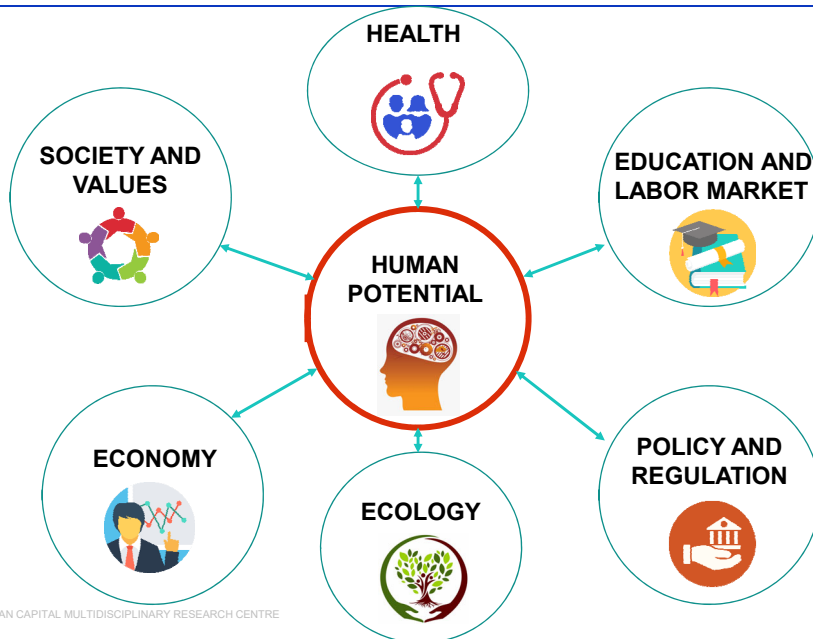


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Источник: система интеллектуального анализа больших данных IFORA

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# Global trends classification



## Types of global trends:

- Demographic
- Social
- Value
- Ethical
- Economic
- Political
- Regulatory
- Technological
- Environmental

**48 key trends  
and ~200  
subtrends**

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# Survey design



## 2-steps online Delphi survey

The 1<sup>st</sup> step: questions on key characteristics of trends and their effects

The 2<sup>nd</sup> step: results of all the experts who answered before, experts had the possibility to change their first answers

Evaluate the extent of influence of the trend on human development:

- High
- Medium
- Low
- No effects

Evaluate the time period of the trend to reach its maturity (peak):

- 2021-2025
- 2026-2030
- After 2030

Evaluate the impact of the COVID-19 pandemic on the trend's dynamic:

- Trend appeared as an aftermath of the COVID-19 pandemic
- COVID-19 pandemic has accelerated the trend's development
- COVID-19 pandemic has not affected the trend's development
- COVID-19 pandemic has hampered the trend's development

Evaluate the intensity of trend realization in Russia compared to the whole world:

- In Russia the trend is more intense
- In Russian the trend is equally intense
- In Russia the trend is less intense

Evaluate the extent the trend will facilitate/hinder increase of healthy life expectancy and reduction of mortality:

Evaluate the extent the trend will facilitate/hinder reduction of morbidity:

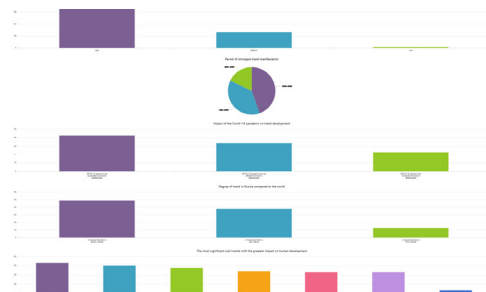
Evaluate the extent the trend will facilitate/hinder reduction of inequality:

Evaluate the extent the trend will facilitate/hinder protection of human rights and freedoms:

Evaluate the extent the trend will facilitate/hinder creation of comfortable living conditions:

Evaluate the extent the trend will facilitate/hinder provision of personal security:

Evaluate the extent the trend will facilitate/hinder decrease of environmental impact:



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## Experts

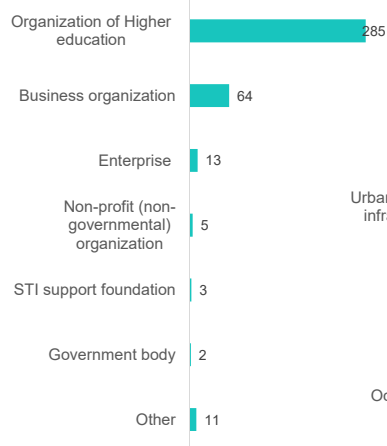


**388** experts

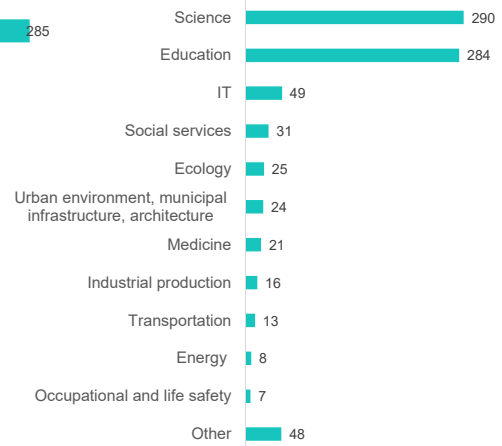
### Countries:

Russia	Finland
USA	Switzerland
China	Portugal
Republic of Korea	Poland
Japan	Italy
United Kingdom	Estonia
India	Romania
Vietnam	Bulgaria
Pakistan	Kazakhstan
Sweden	Qatar
Spain	Brazil

### Type of organizations



### Areas of interests



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## Top-10 trends with high impact on human capital



- |  |   |   |
|--|---|---|
|  | 2.2. Transition to lifelong learning                        | ↑ |
|  | 5.7. Expansion of digital control                           | ↓ |
|  | 2.4. Online education and digital technologies in education | ↑ |
|  | 2.3. Growth of digital literacy                             | ↑ |
|  | 1.2. Spread of unhealthy lifestyles                         | ↓ |
|  | 3.6. Rising inequality                                      | ↓ |
|  | 2.5. New employment models                                  | ↑ |
|  | 1.6. Transition to preventive and personalised medicine     | ↑ |
|  | 2.7. Strengthening competition for talents                  | ↑ |
|  | 2.1. Expansion of new educational methods and practices     | ↑ |






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## COVID-19 impact on the trend's dynamic



Trends which development **has been accelerated** to the greatest extent due to the COVID-19 pandemic:

-  2.4. Online education and digital technologies in education
-  2.5. New employment models
-  4.3. Evolution of low-contact economy
-  1.3. Increasing pathogenicity of infectious diseases
-  1.10. Increasing importance of biosafety











The only trend which **development was slowed down** by the COVID-19 pandemic:

-  3.2. Strengthening migration processes











## Intensity of trend realization in Russia



Trends which are **more intense** in Russia compared to the whole world:

-  3.6. Rising inequality 
-  5.7. Expansion of digital control 
-  1.2. Spread of unhealthy lifestyles 
-  5.9. Growing influence of social networks 
-  5.6. Increasing attention to digital security and dissemination of personal data 









Trends which are **less intense** in Russia compared to the whole world:

-  5.2. Increasing attention to human rights issues 
-  5.3. Development of gender, ethnic, religious, and socio-cultural diversity 
-  3.9. Moving towards conscious consumption 
-  4.5. Increasing corporate social responsibility 
-  1.9. Digital technologies in healthcare 









## Key effects (1)



### Increase of healthy life expectancy and reduction of mortality

-   1.6. Transition to preventive and personalised medicine
-  1.9. Digital technologies in healthcare
-  1.7. Transition to participatory medicine
-   1.4. Increasing incidence of non-communicable diseases
-  1.2. Spread of unhealthy lifestyles
-  1.3. Increasing pathogenicity of infectious diseases

### Reduction of morbidity

-   1.6. Transition to preventive and personalised medicine
-  1.9. Digital technologies in healthcare
-  1.7. Transition to participatory medicine
-   1.4. Increasing incidence of non-communicable diseases
-  1.3. Increasing pathogenicity of infectious diseases
-  1.2. Spread of unhealthy lifestyles

## Key effects (2)



### Reduction of inequality

-   5.3. Development of gender, ethnic, religious, and socio-cultural diversity
-  5.2. Increasing attention to human rights issues
-  4.5. Increasing corporate social responsibility
-   3.6. Rising inequality
-  3.2. Strengthening migration processes
-  1.4. Increasing incidence of non-communicable diseases

### Protection of human rights and freedoms

-   5.2. Increasing attention to human rights issues
-  5.3. Development of gender, ethnic, religious, and socio-cultural diversity
-  3.5. Increasing role of civil society
-   5.7. Expansion of digital control
-  3.6. Rising inequality
-  5.4. Polarisation of society

### Provision of personal security

-   4.3. Evolution of low-contact economy
-  5.2. Increasing attention to human rights issues
-  6.3. Introduction of intelligent technologies in city/house/infrastructure management
-   5.7. Expansion of digital control
-  5.8. Fragmentation of the Internet and technological ecosystems
-  3.6. Rising inequality

## Key effects (3)



### Creation of comfortable living conditions

-   6.3. Introduction of intelligent technologies in city/house/infrastructure management
-   1.8. Progress in human recovery and enhancement
-   2.3. Growth of digital literacy
-   3.6. Rising inequality
-   1.10. Increasing importance of biosafety
-   5.7. Expansion of digital control













### Decrease of environmental impact

-   5.1. Transition to sustainable development
-   3.9. Moving towards conscious consumption
-   6.3. Introduction of intelligent technologies in city/house/infrastructure management
-   1.3. Increasing pathogenicity of infectious diseases
-   3.2. Strengthening migration processes
-   1.2. Spread of unhealthy lifestyles

## Key effects (4)



### Decrease of unemployment

-   2.2. Transition to lifelong learning
-   2.5. New employment models
-   2.1. Expansion of new educational methods and practices
-   3.6. Rising inequality
-   5.4. Polarisation of society
-   2.8. Labour automation and robotisation

### Increased requirements to the level of education and competences

-   2.2. Transition to lifelong learning
-   2.7. Strengthening competition for talents
-   2.3. Growth of digital literacy
-   5.4. Polarisation of society
-   1.2. Spread of unhealthy lifestyles
-   5.7. Expansion of digital control

### Creation of conditions for professional fulfilment

-   2.2. Transition to lifelong learning
-   2.1. Expansion of new educational methods and practices
-   2.3. Growth of digital literacy
-   3.6. Rising inequality
-   1.4. Increasing incidence of non-communicable diseases
-   1.2. Spread of unhealthy lifestyles

## Key effects (5)



### Increase of the level of trust in society



5.2. Increasing attention to human rights issues



4.5. Increasing corporate social responsibility



3.5. Increasing role of civil society



5.7. Expansion of digital control



3.6. Rising inequality



5.4. Polarisation of society

### Formation and development of social connections



2.2. Transition to lifelong learning



5.3. Development of gender, ethnic, religious, and socio-cultural diversity



3.5. Increasing role of civil society



5.4. Polarisation of society



3.6. Rising inequality



5.8. Fragmentation of the Internet and technological ecosystems