

iFORA[®]

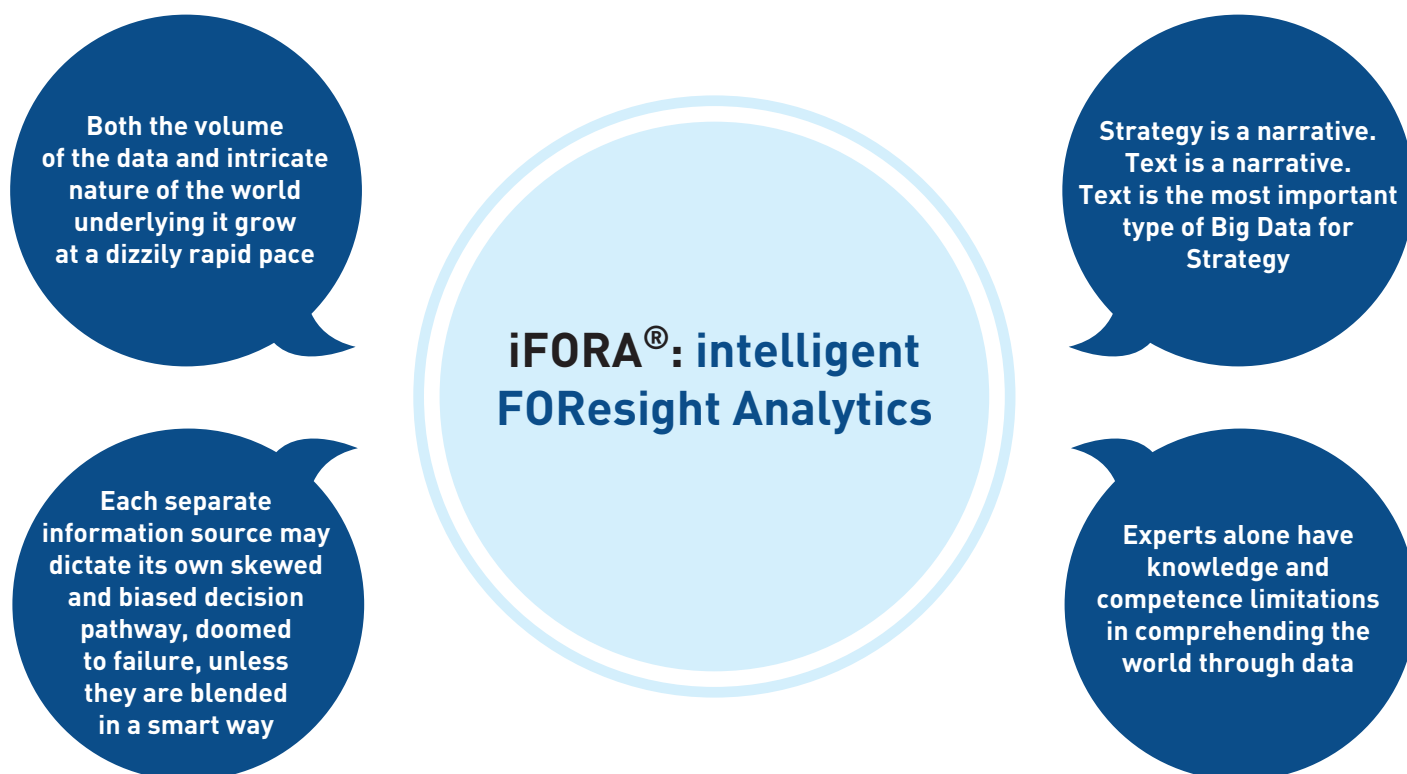
Radically New Approach to Strategic Consulting



HIGHER SCHOOL OF ECONOMICS
NATIONAL RESEARCH UNIVERSITY
INSTITUTE FOR STATISTICAL STUDIES
AND ECONOMICS OF KNOWLEDGE

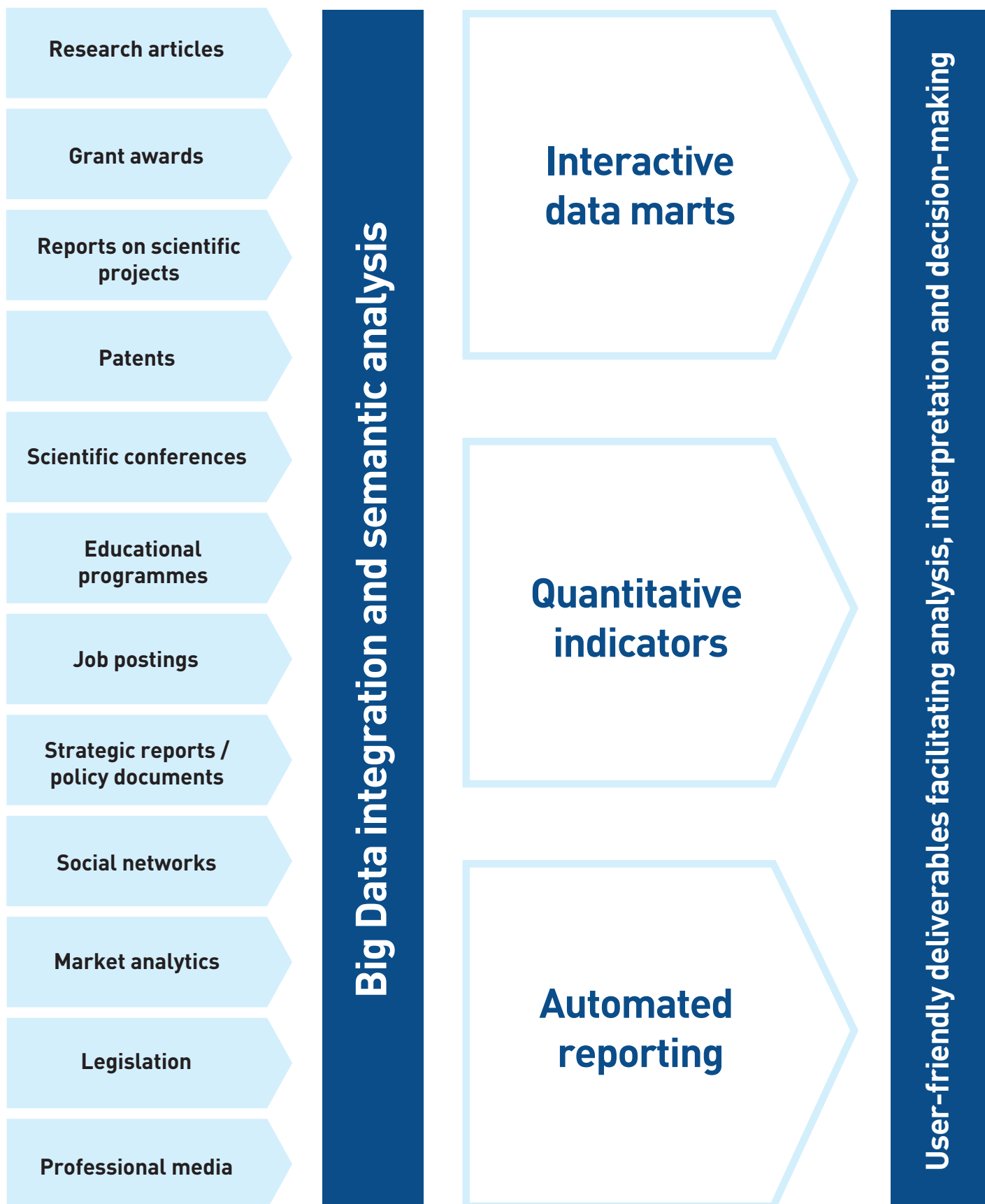
Why Big Data analysis matters?

We provide our clients from various industries with effective decision-making solutions based on high-quality actionable intelligence. They enable our clients to navigate with ease through the complexity of the Digital Age. To achieve best results, we apply cutting-edge Big Data Mining, Semantic Analysis and Text Mining techniques



What is iFORA®?

It is a data analysis tool which creates a product of direct value for decision-making and knowledge management



What are the key iFORA® functionalities?

We use advanced semantic analysis, machine learning and AI algorithms and solutions to provide recommendations for government agencies, companies, universities and research centres in various areas

Trends

- Trend spotting and trend response
- Mapping strategic structural shifts in S&T, innovation, education, markets, industries
- Lifecycle and latent change analysis
- Identification of S&T contribution to tackling the Grand Challenges
- Measurement of technology impact on the economy sectors and organisations

Markets

- Quantitative market estimates and forecasts
- Technology maturity measurement
- Technology and product portfolios
- Emerging market segments discovery
- Discovery of new segments in emerging markets
- Digital tracing of regional and local markets
- Start-ups discovery and mapping

Project management

- Operative competitive intelligence for project decision-making
- Evaluation of projects and bids
- Identification of individuals and teams for project implementation
- Technology and management roadmaps

Benchmarking and risk assessment

- Assessment of competitiveness and performance across various types of entities
- Fact-based reputation analysis
- Sentiment and content analysis
- Media impact performance indicators
- Risk management
- Independent rankings

Forecasts

- Future events and emerging alternatives
- Critical timelines to 2100
- Textual extraction and summarization of expert opinions
- Quantitative consensus forecasts
- Tracing and projecting properties of products and technologies

Networks

- Network analysis
- Identification of competence carriers
- Cross-sectoral interlinking
- Cooperation and affiliation analysis

Policy evaluation

- Recommendations on government programmes
- Ontologies of national strategic planning
- Legal AI, gap analysis
- Comparative agenda analysis
- Procurement mapping

iFORA® has been successfully used

In dozens of projects for companies, public authorities, research centres and universities



Long-term forecasts of scientific, technological, innovative, social and economic development



Risk assessment and management



Research fronts, patent landscapes



Marketing strategies



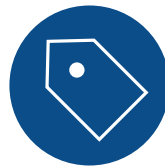
Science, technology and innovation policies



Reputation assessment for partnership and contractual decisions



Strategies, programmes and roadmaps of industrial and regional development



Companies and brands valuation



Strategic foresight and corporate planning



Investment analysis and portfolio management



Performance and efficiency of countries, markets and companies



Procurement analysis, assessment of suppliers and contractors



Personnel training and skill adaptation programmes



Validation of research findings, forecasts and projects

How does iFORA® work?

1

iFORA® integrates diverse information sources into systemic semantic representations for specific industries and domains

Open Data,
Administrative
Data, Full Texts,
Metadata,
Ontologies

Various data
formats and
sources
seamlessly
blended

Source trust-
worthiness
constantly
checked

Constant
cross-
validation and
self-learning

Advantages



- Immediate competitive intelligence on-demand
- Objectiveness and quantitative evidence
- From the Big Picture to Minor Details in a second
- Filter the Important from the Noise in a second
- Unique insights unattainable through experts

2

It extracts knowledge and projects key semantic points to answer practical questions of decision-makers

Universal text processing
workflow on a supercomputer
data cluster

Comprehensive distributed
syntactic-semantic models
for each key language

Artificial Intelligence,
Machine Learning,
Neural Networks

Ontological Engineering

Computational Linguistics

Distributive Semantics

Rule-Based Facts Handling

Unique combination of approaches towards text-mining

3

A team of computer scientists and engineers produces new software modules on-demand to answer narrow client-specific questions

Transparent and repeatable methods (multiple international and national testing exercises)

Mitigation of risks related to human unreliability

Quick delivery of meaningful results

Advantages



- Validated analysis method
- Immediate advice What to Ask
- Instantly grasping Key Facts to Make Decisions
- Seeing instead of Reading
- Saving time for managerial creativity

4

A team of analysts ensures highly-qualified expert validation, interpretation and recommendations

Primary interpretation of dashboards

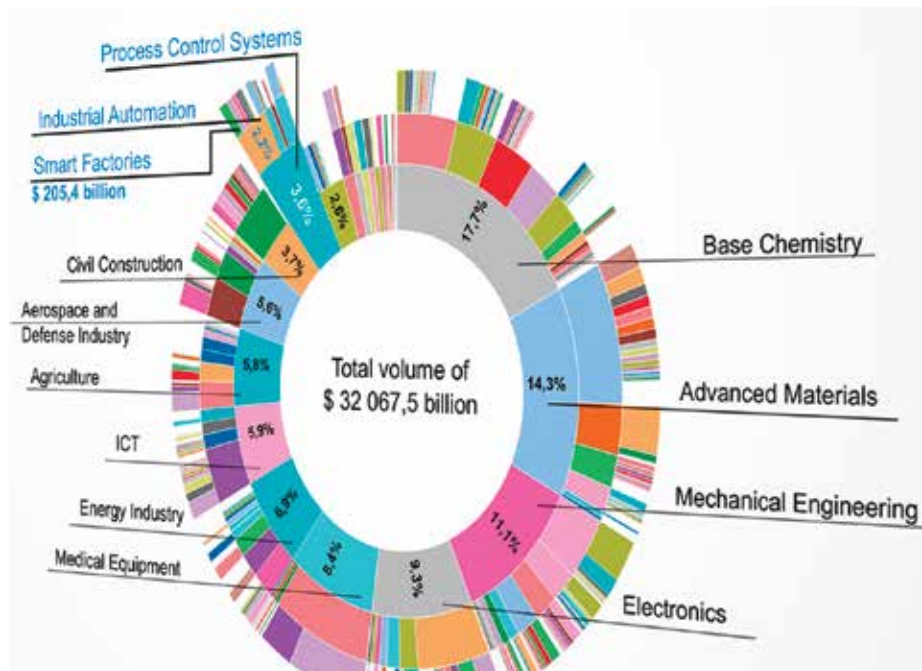
Deep analysis of detailed data

Inter-corpora cross-validation

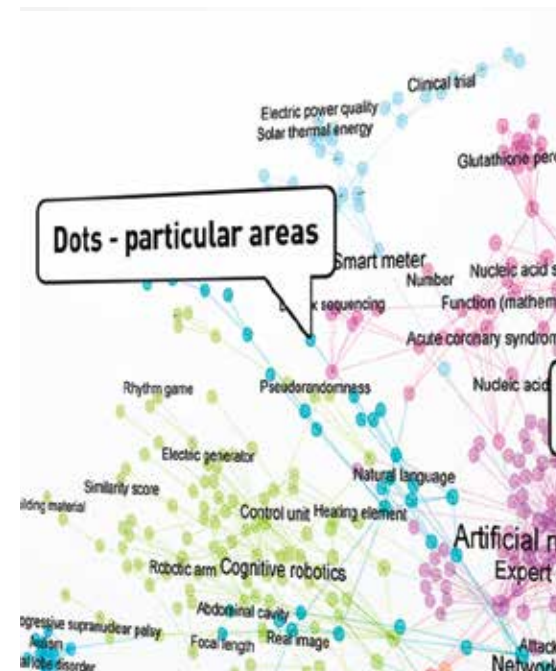
Operational competitive intelligence and recommendations

What does iFORA® show?

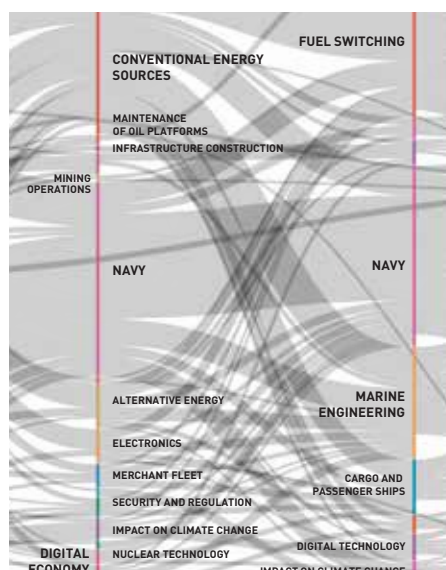
Quantitative Market Estimates



Semantic Maps



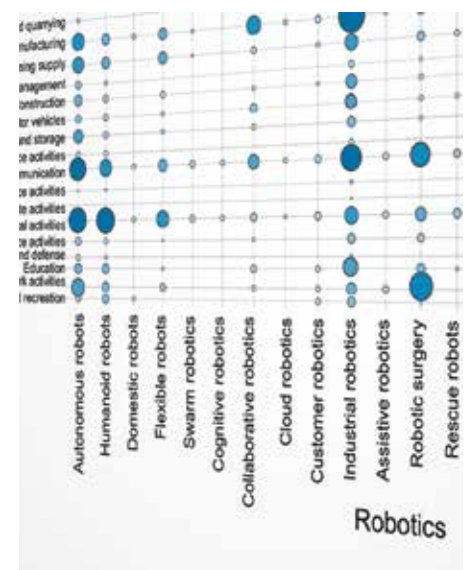
Shift-maps (structural change analysis)



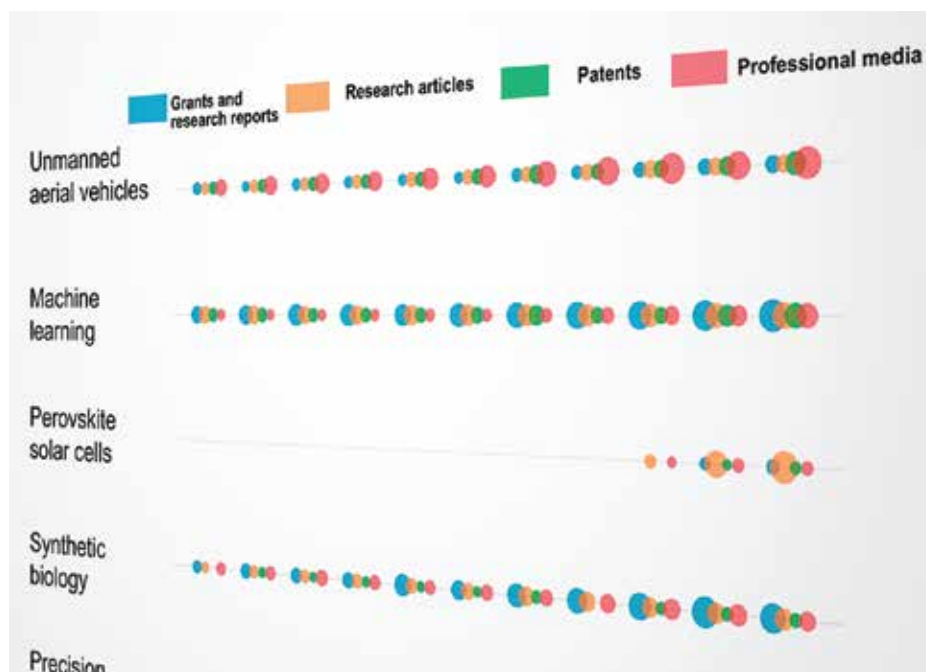
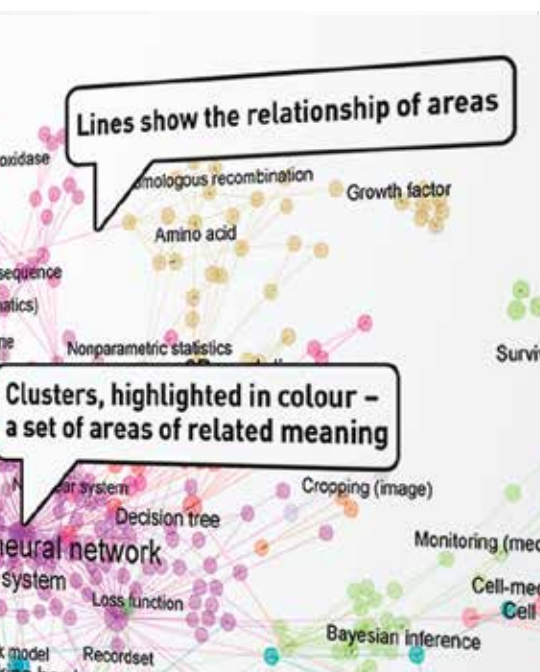
Trend-maps (emerging, mature and stagnating trends identification)



Effect Matrix (latent functional relations among various domains, markets, technologies, actors)



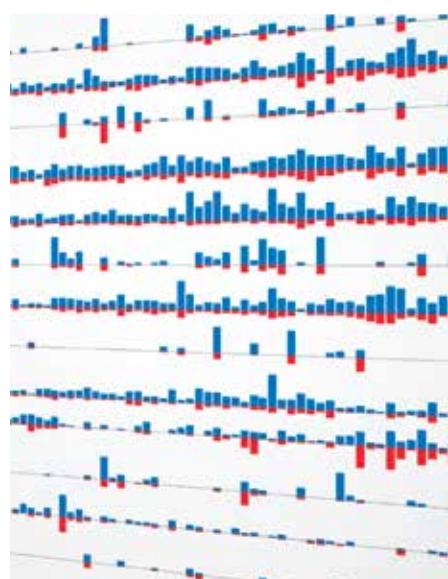
Lifecycle Maps (detecting and tracking radically new S&T, innovation, economic and social phenomena)



Maps of competence carriers

Reputation Analysis

Start-up Profiles



Start-up	Degree of positivity of mentions	Degree of negativity of mentions
tabricks	37	2
inbase	23	4
chstars	26	5
inDesk	57	12
larketer	9	2
utterstock	62	16
ntinelOne	29	8
Hub	6518	2062
ctica	11	4
ulus	54	20
Trust	737	344
cuSign		

About the developer

iFORA® was developed by the leading Russian research centre – the Institute for Statistical Studies and Economics of Knowledge (ISSEK) at the National Research University Higher School of Economics

Our specialisation is Strategic Analytics / Strategic Consulting for government agencies, businesses, research centres and universities. Today we quickly adjust our analytical products in response to the new needs of our clients dictated by the emerging challenges. We are constantly evolving to deliver the New Generation of Strategic Decision-Making Support based on Big Data

ISSEK specialises in:

- Research in statistics, science, technology, innovation, education and training, information society and digital economy
- Long-term foresight, quantitative forecasts, strategic planning and project management, technology roadmapping
- Legal and regulatory, methodological and analytical support of science, technology, innovation, industrial and cluster policies
- Analytical and consulting support of national and regional public authorities, development institutions, businesses, research centres, universities, international organisations
- Information systems development

International partnership

- ISSEK is integrated into the global academic community, has strong partnerships with international organisations (OECD, Eurostat, European Commission, UNESCO, UNIDO, UNCTAD, APEC, the World Bank, IMF, the International Science and Technology Centre, the International Telecommunication Union, etc.), leading universities and research centres in more than 20 countries worldwide. It participates in international research networks and collaborations (ERA.Net RUS, Globelics, MEIDE, UniDev, etc.)
- Key staff of the Institute are engaged in expert groups and committees of international organisations, take part in the development of statistical standards (Frascati Manual and Oslo Manual) and the preparation of landmark analytical reports (OECD Science, Technology and Innovation Outlook, UNESCO Science Report: towards 2030, Global Innovation Index (Cornell University/ INSEAD / World Intellectual Property Organisation), etc.)
- ISSEK is actively involved in the development of international S&T cooperation between Russia and the EU, as well as with the countries of near and far abroad, through several institutions incorporated into its structure: The Centre for International Projects, OECD – HSE Partnership Centre and National Contact Points 'Mobility', 'Societies (INCO)', and 'Science with and for Society' of the EU Framework Program 'Horizon 2020'
- Every autumn, it hosts the International academic conference 'Foresight and STI Policy', which have been recognized by the OECD as one of the most reputed forums on this issue. As part of the annual April International Academic Conference on Economic and Social Development held in HSE, ISSEK organises specialised events dedicated to discussion of the current agenda and the latest research tools applicable in science, technology and innovation both in Russia and abroad

In the OECD Science, Technology and Innovation Outlook 2018, the **iFORA[®]** system was referred to as an example of a successfully applied initiative in the field of digital science and innovation policy



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