

iFORA

Intelligent *FO*Resight
Analytics





iFORA MINIMISES RISKS OF TRADITIONAL ANALYTICS

Traditional manual analytics

Biased sampling of data sources

- Large volume of data that is impossible to process manually
- Random sampling
- In the public domain
- Not always of good quality
- Obsolete

Analyst

- Overly narrow specialisation, conservatism, limited knowledge of global agenda
- Rushes and makes mistakes
- Lobbies particular interests

Untrustworthy information

- Misinformation risks because of widespread introduction of generative AI

Development of automated data analysis systems



Analytics based on emerging NLP technology

All available sources

- Many millions of documents
- Full texts
- Various data formats
- Selection based on unified objective quality criteria
- Continuous additions

Automated analysis

- Transparent, reproducible, validated methodology
- Lower human factor risks
- High analytic output rate

Trustworthy conclusions

- High quality and trustworthiness of data
- Lower risk of false reports dissemination



iFORA – INTELLIGENT FORESIGHT ANALYTICS

UNLOCKS ADVANTAGES OF AUTOMATED ANALYTICS



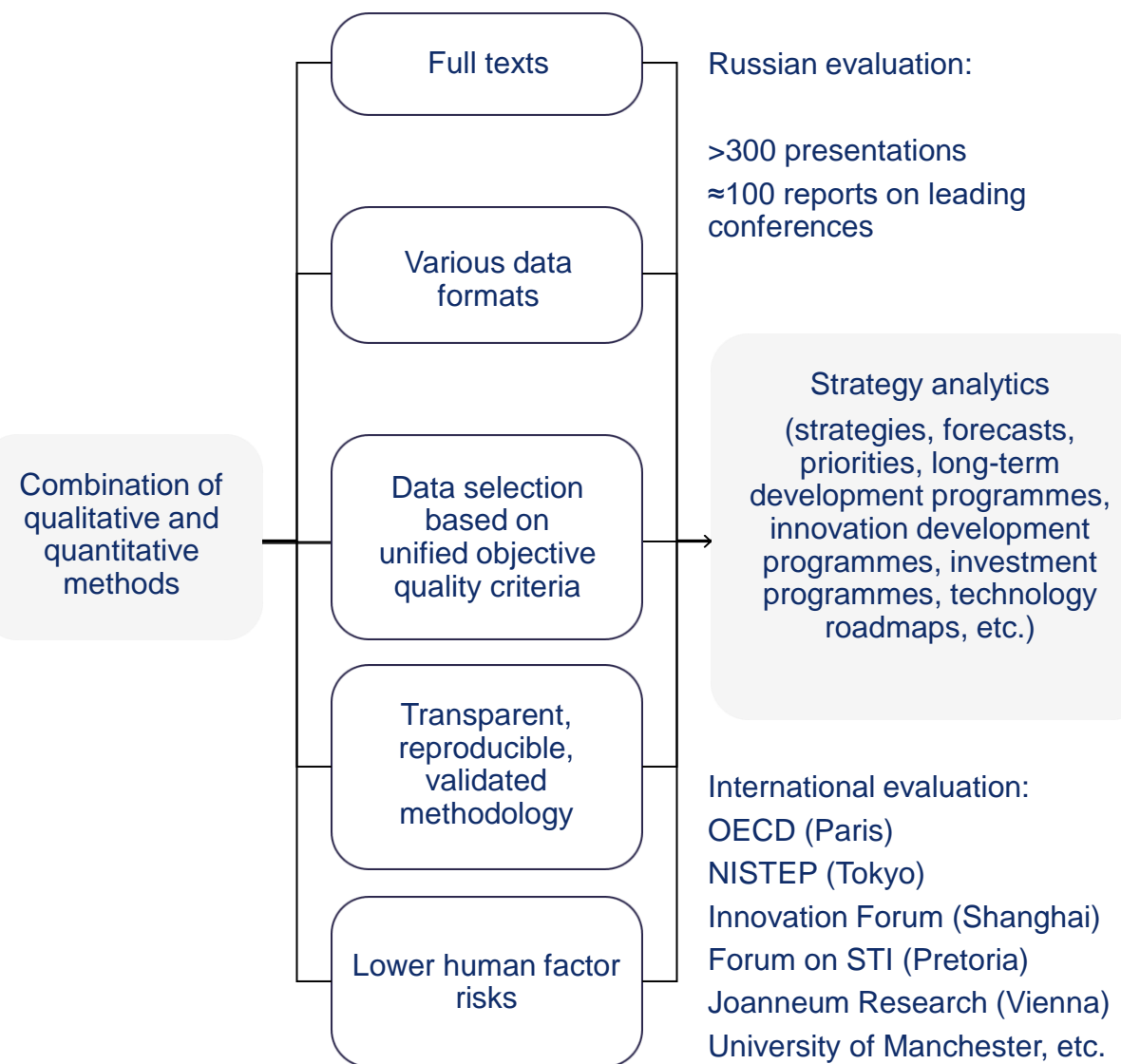
>800m documents

+30k documents daily

Languages

- Russian
- Roman
- English
- Cyrillic
- Chinese

- >4m R&D reports
- >500m Scientific publications
- >10m Research projects / grants international and national programmes / foundations
- >100k Scientific conferences
- >170m Patents
- >3.5m Clinical trials
- >5m Educational programmes
- >6m Vacancies
- >10m Documents of international organisations, consulting companies
- >28m Market analytics and professional media
- >55m Popular science media
- >3.5m Social networks
- >3.5m Public procurement data
- Other text documents



>100 projects under contracts with largest companies, including global



iFORA™ mentioned in *Nature* as an effective support tool for decision-making (Nature, 2020, Vol. 583)



iFORA™ featured by OECD as an example of successful initiative in science digitalisation (OECD Science, Technology and Innovation Outlook 2018)



HSE supercomputer CHARISMa received a Priority 2020 reward in advanced technology implementation.

Peak performance as of 2023: 2 petaflops.



≈40 Special iFORA Issues (operational analytics)



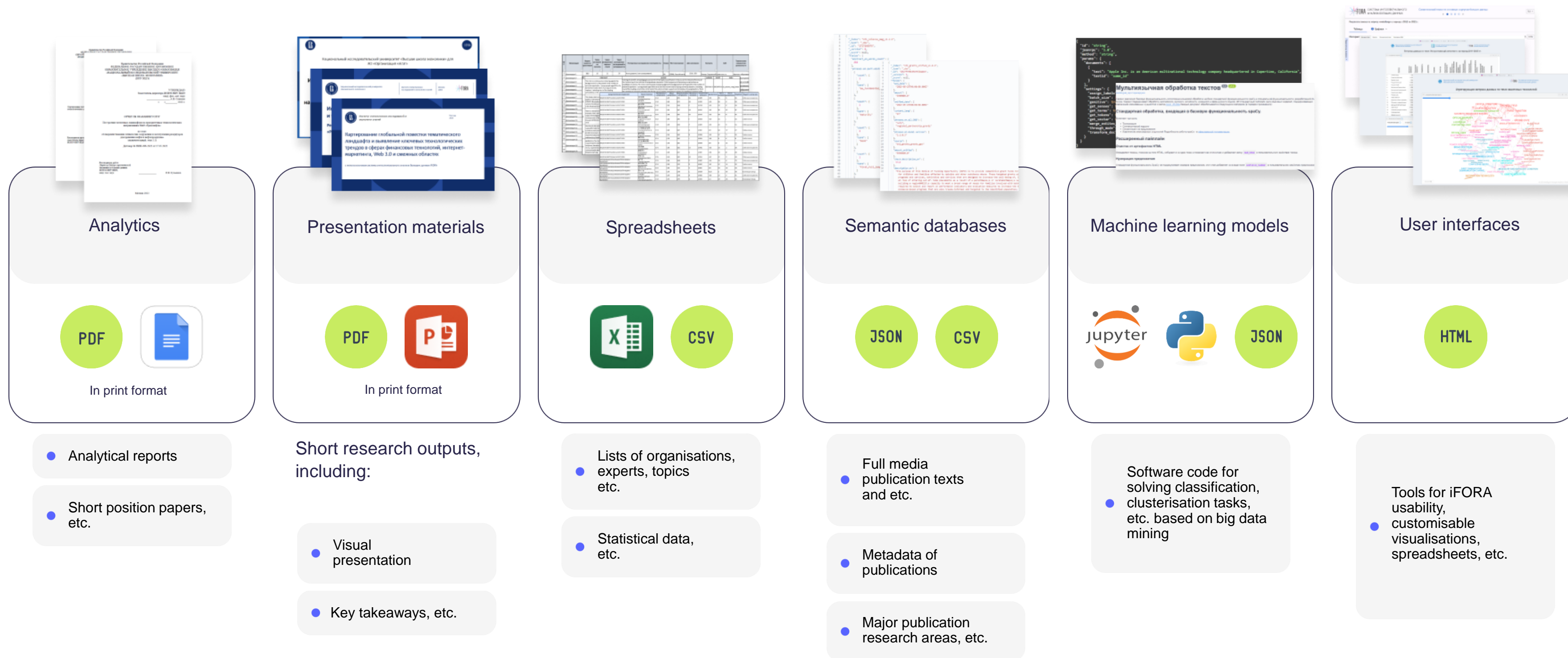
iFORA IS BASED ON MODULAR APPROACH

AND COMBINES SPECIALIZED MODULES FOR SPECIFIC TASKS

Trends	Technology development analysis	Technology independence assessment	Market assessment	Forecasts	Risk assessment	Legal environment analysis	Regional analysis	Identification of competence networks and competences	Analysis and prediction of professional competences	Emerging NLP solutions / services
Trend fitting	Science and technology landscape mapping	Calculation of technology importance and dynamics in the country and globally	Qualitative market assessment	Consensus forecasting	Competitiveness analysis	Analysis of legal framework, standards	Identification of development barriers for regional business	Identification of enterprise' networks	Identification of promising professions related to emerging technologies	Automated summarisation of texts
Assessment of importance and dynamics of trends	Technology life cycle analysis	Identification of different selected technology development levels in the country and globally	Market maturity assessment	Building of timelines of the future	Reputation analysis	Priority identification	Analysis of reputation in media spaces	Identification of enterprise's specialisation	Identification of most promising competences	Profile document analysis based on NER models
Structural changes analysis	Technology sector impact analysis	Support measures selection	Procurement analysis	Selection of product development areas	Identification of strategy development directions and threats	Comparison of national and international agenda	Calculation of independent rankings	Analysis of educational programmes	Formation of project teams, experts selection	Development of interactive interfaces and data marts
Hype mapping	Technology readiness level determination	Identification of possible growth points	Building of technology and product portfolios	Identification of possible growth points	Risk systematisation and mapping	Analysis of gaps in legal framework	Identification of key trends to work "blank spots"	Expert landscape analysis	Juxtaposition of trends and demand on personnel competences	Development of customised machine learning models
Identification of emerging trends	Identification of media and advertising impact	Identification of professional community leaders
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iFORA HELPS GET RESULTS IN VARIOUS FORMATS





TRENDS

- Science and technology landscape mapping
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- Structural changes analysis and priority setting
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- Technology trend importance and dynamics assessment
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- Identification of most promising science and technology trends and evaluation of their dynamics

- Technology and product trend funnel
-

- Comparative analysis of S&T landscapes in the country and globally
-

- Identification of emerging areas in science and technology
-

- Agenda comparison
-

- Matrices of interdisciplinary networking in science



TECHNOLOGICAL DEVELOPMENT ANALYSIS

- Thematic analysis

- Technology life cycle analysis

- Comparative analysis of science and technology policy in the country and globally

- Identification of technology readiness level



MARKET ASSESSMENT

- Qualitative market assessment
-

- Technology market maturity assessment
-

- Technology impact on economy sectors
-

- Market demand analysis
-

- Assessment of the enterprise's need for solutions based on digital technologies

- Assessment of procurement and its scientific content
-

- Regional procurement analysis
-

- Procurement volume and structure
-

- Buyers and suppliers connections
-

- Identification of emerging markets and technologies



IDENTIFICATION OF COMPETENCE NETWORKS AND CENTRES

- Identification of enterprise's specialisation

- Identification of enterprise's networks

- Identification of competence centres

- Identification of professional community leaders

- Analysis of competence networks

- Mapping of best R&D researchers

- Assessment of countries and companies ranking positions



ANALYSIS AND PREDICTION OF PROFFESIONAL COMPETENCES

- Identification of promising professions related to emerging technologies

- Identification of most promising competences

- Formation of project teams, experts selection

- Juxtaposition of trends and demand on personnel competences



RISK ASSESSMENT

- Competitiveness analysis

- Reputation analysis

- Identification of strategy development directions and threats

- Risk systematisation and mapping

- Sentiment and content analysis

- Identification of media and advertising impact indicators



EMERGING NLP SOLUTIONS / SERVICES

- Automated summarisation of trends

- Profile document analysis based on NER models

- Development of interactive interfaces and data marts

- Development of customised machine learning models

- Generation of contextual responses to user queries (RAG)

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