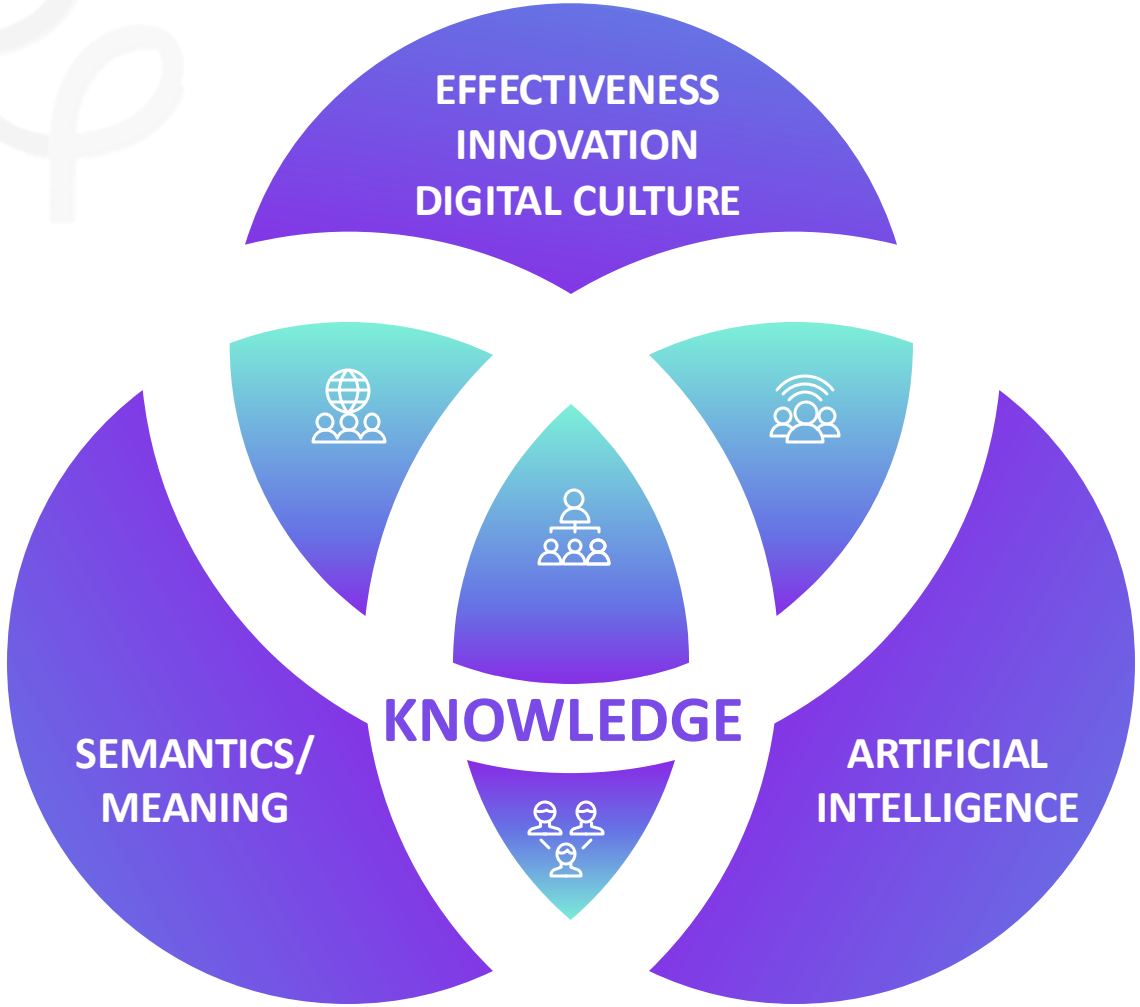
ЭЛЕКТРОННОЕ
ПРОЕКТИРОВАНИЕ

E-PROJECTING

# SEMANTIC INTELLIGENCE PLATFORM




# SEMANTIC INTELLIGENCE PLATFORM

A unique combination of knowledge management technologies, semantic networks and artificial intelligence to improve the efficiency of the enterprise

*Capitalization of knowledge, digitalization of knowledge management, precise comprehension of meanings (semantics)*

*Performance management based on knowledge-related KPIs. Using AI to support decision-making and promote innovation*

*Improving corporate culture and facilitating staff adaptation, while preserving investments in a rapidly transforming business environment*

SEMANTIC INTELLIGENCE PLATFORM

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# SEMANTIC INTELLIGENCE PLATFORM FOR BUSINESS DEVELOPMENT

## IMPROVING PRODUCTIVITY AND EFFICIENCY

Simple and convenient retrieval of semantic information, minimization of task execution time, reduction of the risk of errors due to misinterpretation of knowledge. Using semantically formalized knowledge to build a system of key performance indicators (KPIs)

## FACILITATING DECISION-MAKING

Formalization and semantic modeling of knowledge to support more accurate and reasonable decision-making

## COST REDUCTION

Saving resources, preventing loss of knowledge, reducing duplication of information, compatibility (interoperability) of information systems

## ACCELERATING STAFF TRAINING AND ADAPTATION

Development of professional skills, increase of staff satisfaction and motivation, new abilities to fasten the adaptation of new employees. Sharing and deep understanding of the accumulated experience

## EFFECTIVE KNOWLEDGE MANAGEMENT AND PROMOTION OF INNOVATION

Accessibility of formalized knowledge, effective management, classification and on-demand provision. Preventing the loss of competencies. Sharing knowledge and ideas to stimulate innovation

## COMPETITIVENESS AND SUSTAINABILITY

Semantically oriented knowledge management for rapid adaptation to changes, development of competitive advantages and improvement of customer service

## IMPROVING CORPORATE CULTURE

Development of a digital corporate culture based on cooperation, best practices sharing and the collaboration of domain experts with IT specialists in a semantically structured information environment

# SEMANTIC INTELLIGENCE PLATFORM


SEMANTIC KNOWLEDGE MANAGEMENT SYSTEM

CATALOG OF SEMANTIC ASSETS

INTEROPERABILITY SERVICES

VIRTUAL AI EXPERTS

SEMANTIC REQUIREMENTS MANAGEMENT

# SEMANTIC KMS

## TO CAPITALIZE ON THE KNOWLEDGE OF THE BEST SPECIALISTS

**DOCUMENT LIBRARY**

**STRUCTURED DOCUMENTS**

**GLOSSARIES**

**HARMONIZATION**

### KNOWLEDGE SYSTEMATIZATION

Cataloging and structured presentation of various types of information materials based on templates. Building a semantically structured information environment using hypertext markup linking documents, glossary terms, classifiers, vocabularies or code lists elements.

### SEMANTIC KNOWLEDGE NETWORK

Formalization (conceptualization) of knowledge using semantic models. A consistent structured representation of complex relationships and hierarchies. Extracting corporate knowledge based on Knowledge Graph.

### THE UNITY OF TERMINOLOGY & CLASSIFICATIONS

Formation of glossaries, classifiers and their semantic models. Supporting harmonization carried out by the expert community. Building the foundation for a semantically structured information environment.

### COLLABORATION

Collaboration of domain experts and IT-specialists on systematization, formalization, semantic modeling and the presentation of knowledge for a wide range of employees.

# SEMANTIC KMS

TO FORMATE SEMANTICALLY DESCRIBED INDICATORS (KPIs)

"SMART METADATA" & LINKED DATA

**SEMANTIC MODELS**

**INDICATORS (KPIs)**

**LINKED OPEN ENTERPRISE DATA**

**MULTIDIMENSIONAL VISUALIZATION**

## DOMAIN CONTEXT

The formation of "smart" metadata and linked data enriched with the meaning (semantics). The semantically structured information environment reflects the context of the subject area (domain) and supports a consistent (inextricable) environment for linked data interpretation

## SEMANTIC MODELLING

The formation of a strict indicators (KPIs) system, justified by the document requirements and formalized in the form of semantic models. Building a consistent framework for KPIs and corporate data in the domain context.

## VIZUALIZATION

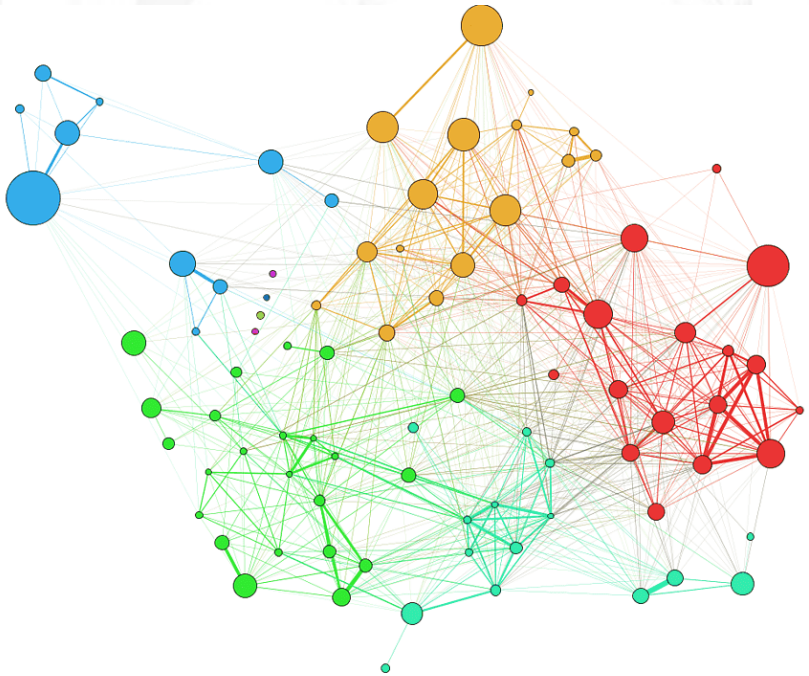
Visualization of linked corporate data in the form of OLAP tables.
Automatic configuration of OLAP tables based on "smart" metadata.

## PUBLICATION

Publishing KPIs descriptions and linked corporate data extended with semantically rich metadata for unambiguous interpretation of data by consumers – information systems and people.

# CATALOGING SERVICE

FOR THE MANAGEMENT OF SEMANTIC MODELS AND LINKED OPEN DATASETS IN COMPLIENCE WITH FAIR PRINCIPLES



**CATALOGS OF SEMANTIC ASSETS**

**CATALOGS OF LINKED OPEN DATASETS**

**VIZUALIZATION OF SEMANTIC ASSETS AND LINKED OPEN DATASETS**

**TOOLS FOR DISSEMINATION AND ACCESS**

## INTERNATIONAL STANDARDS

The powerful tool for cataloging and distributing reusable linked open datasets and models(semantic assets) describing them.
The Asset Description Meta Schema and Data Catalog Vocabulary are the standards ensuring catalogs compatibility and the implementation of FAIR principles – (F)indability, (A)ccessibility, (I)nteroperability, (R)euse.

## VIZUALIZATION AND VALIDATION

Variety of visualization methods for working with data and controlling their semantics – identifying inaccuracies of meaning due to divergence in terminology, classification or interpretation.

## DISSEMINATION OF DATA AND SEMANTIC ASSETS

The technology for linked datasets dissemination using "smart" metadata for search engines indexing. Providing SPARQL Endpoint for accessing graph database and models.

## INTEGRATED WORKSPACE

Support tools for expert community working on creation and dissemination of semantic models, preparing linked datasets. Collaboration of IT specialists and domain experts.

# VIRTUAL AI EXPERTS

## FROM CHATBOTS TO PROFESSIONAL AI ASSISTANTS

### VIRTUAL AI DOMAIN EXPERT

### VIRTUAL AI TUTOR FOR EMPLOYEES

### VIRTUAL AI ASSISTANT FOR SKMS EXPERTS

### VALIDITY AND RELIABILITY OF ANSWERS IN THE DOMAIN CONTEXT

Using RAG technology, the LLM answer for the user's question is enhanced by the relevant domain context, integrating the knowledge of experts, formalized and verified in SKMS, indicating the trusted sources justifying the results.

### PROFESSIONAL DISCOURSE

The accuracy of terms and definitions ensures the linking of context levels of understanding.
Using the knowledge of experts eliminates the "common" understanding of terms and guarantees the reliability of definitions at the level of the Russian scientific community.

### QUICK IMMERSION INTO THE SUBJECT AREA

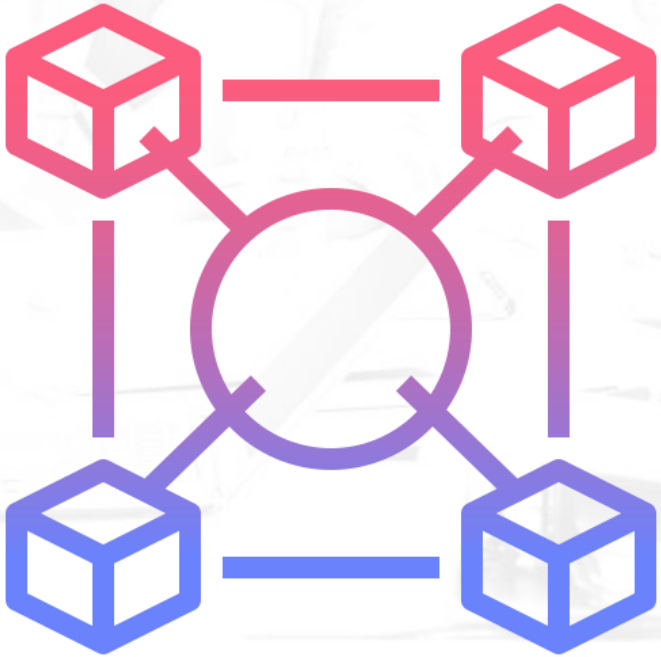
Efficient personnel training using interactive format on the entire volume of corporate knowledge. Intelligent search, selection and updating of materials. Detection of non-obvious connections and patterns in data. Support for decision-making based on corporate and industry knowledge.

### CONTINIOUS UPDATING AND DEVELOPMENT CYCLE

Improving SKMS and speeding up the work of experts by using a virtual AI assistant to annotate materials, highlight terms, propose candidate terms, and select relevant documents from external sources.

# INTEROPERABILITY SERVICES

FOR SEAMLESS INTEGRATION OF CORPORATE SYSTEMS & SERVICES, BUILDING DIGITAL ECOSYSTEMS



## SERVICE FOR BUILDING EXCHANGE MODELS

## SERVICE FOR GENERATING INTERACTION INTERFACES

## NOTIFICATION SERVICE FOR INFORMATION SHARING PARTICIPANTS

## REENGINEERING OF CORPORATE SYSTEMS

Consolidation of knowledge about the existing corporate systems and enterprise services using SKMS to analyze the possibilities of implementing seamless interaction and ensuring interoperability.

## UNIFIED INFORMATION ENVIRONMENT

Extension of SKMS templates to describe the data involved in the information exchange. Building a unified data model (UDM) as a semantic model and providing it to participants of interaction.

## INCORPORATION AND ALIGHNMENT OF DATA MODELS

Building information exchange packages based on UDM, including exchange model and relevant auxiliary documentation. Extension of UDM following the proposals from information sharing participants.

## INTERACTION INTERFACES GENERATION

Semantic annotation of interaction interfaces (e.g. web services) based on prepared exchange models. Ensuring the persistence of linked UDM elements. Dereference of URIs for provision in machine-readable and human-readable format.

# SEMANTIC REQUIREMENTS MANAGEMENT

APPLICATION OF SEMANTIC TECHNOLOGIES FOR EFFECTIVE SYSTEM DESIGN AND DEVELOPMENT

**REQUIREMENTS REPOSITORY**

**CONTROL AND ANALISYS TOOLS**

**DOCUMENTATION GENERATOR**

**INTEGRATION SERVICES**

## QUALITY AND CONSISTENCY

Formalization of requirements based on semantic models reduces the risk of misinterpretation and ensures a common understanding of the project goals by all participants. Identifying contradictions, duplications and missing elements using semantic links improves the quality of requirements and reduces the probability of errors at all stages of the project.

## AUTOMATION OF ROUTINE TASKS

Automated generation of requirements when analyzing materials consolidated in SKMS, using virtual AI experts. Automatic filling of the repository using semantic models for classifying requirements. Formation of reports (tracing, task execution control) based on semantic properties and relationships. Generation of draft documents such as technical specifications, programs and methods of testing.

## CHANGE CONTROL

Tracking the impact of changes in requirements on other stages of the project implementation – design, development and testing. The use of semantic links provides the possibility to assess the consequences of changes more precisely and make informed decisions.

## INTEGRATION

Interaction with corporate systems and services is simplified using machine-readable formats for distributing requirements.

# ABOUT US

## LLC «E-PROJECTING»

Our team is constantly working to improve and expand the capabilities of the platform, based on the latest achievements in science and technology.
We are open to the most daring projects, bringing together innovators and experts!

**MORE THAN 15 YEARS OF RESEARCH & DEVELOPMENT AS THE BASIS OF THE PLATFORM**

**MORE THAN 20 YEARS EXPERIENCE IN LARGE-SCALE INFORMATION SYSTEMS DESIGN AND CREATION**

**INTEGRATION OF BEST PRACTICES AND INTERNATIONAL EXPERIENCE TO IMPLEMENT UNIQUE SOLUTIONS**

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# CONTACT US

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