TODOS

ONTOLOGICAL INFORMATION AND ANALYTIC EXPERT SYSTEMS IT-PLATFORM

Innovative and technology solution for corporate information and analytic systems creation
(from the information resources multidimensional analysis to the collective decision-making ontological system and knowledge management)

Information. Search. Analysis. Ontology. Knowledge. Rating. Evaluation. Analysis. GIS. Solution

TODOS is an innovative complex of software and information, methodological tools for knowledge management with the use of ontological management approaches to corporative information resources, where a man is to be considered like a resource of a new knowledge generation to transfer it as own knowledge through the TODOS tools which are an unique integrated access point – "single window" – to information and system applications to provide the interaction with users.

TODOS principle is a "Situational awareness" by providing users with the necessary information regarding areas of their activity and sufficient for effective decision making:

- **Easy, intuitive, multidimensional representation of an analytical information;**
- **Providing the work with the unstructured and semi-structured data;**
- **Work with the information and analysis data from any network access point;**
- **Providing the search and requests of users – knowledge removal;**
- **Content processing and analysis, aggregation and ranking;**
- **Support of decision making grounded on the analysis of big volumes of information;**
- **From data – to GIS — from GIS – to information;**
- **Providing the interaction and feedback.**

TODOS concept:

- consolidation and integration of all present corporative information and its transfer through the system of "single window", due to this the level of awareness of all categories of users in their activities increases;
- provision of the seamless system integration of information technology and innovations with the aim of creation of information and analytic resources to implement in the business processes of organization;
- creation of conditions of "situational awareness" for all interested categories of users with multifaceted analysis of document files, their analysis, comparison, ranking and presentation of analysis data, and reports;
- provision of ontology management of information volumes which are united in a single corporative information space – ontology managed system of corporative knowledge;
- search in the Internet and file electronic collections of text documents which are relevant to the research subject and expertise;
- automatic processing of natural language texts with the highlighting of surface semantic relations and its further analysis;
- removal from the plurality of documents which are relevant to the subject area, their system and ontological organization and formal and logical presentation, and construction, visualization and verification of semantic items of text documents and category knowledge of a given subject area in the form of ontology graph;
- automated construction of ontology and thesauruses of subject areas for organization of knowledge management system;
- automated analysis and creation of the rating system of research items and related processes taking into account all multiplicity of factors which influence the relevant items and processes;
- provision of multifaceted research of items and processes with the aim to identify the influence of parameters on their condition, development and relevant decision making.

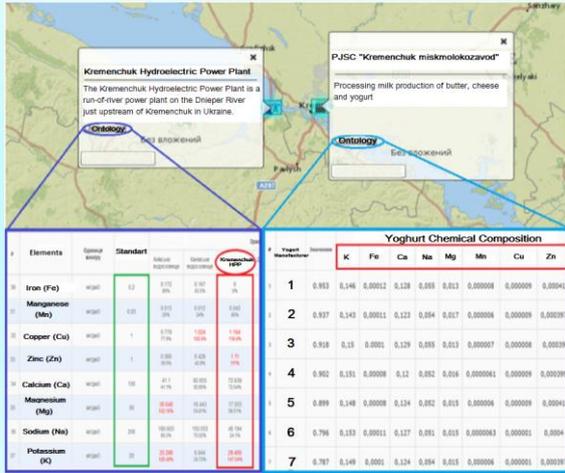### *TODOS:*

Module *ABSTRACT* – contest and semantic analysis of natural language text and document taxonomy building;
Module *CONFOR* – classification and generation of subject area ontology;
Module *EDITOR* – interdisciplinary ontology designing;
Module *ALTERNATIVE* – ontology of choice task for information-analytic support of decision making and provision of multivariate analysis and ranking;
SEARCH ENGINE – search of lexical structure based on the linguistic processing of a big number of distributed web text volumes;
LINGUISTIC CORPUS – digital library with the tools of associative search of semantically related information collections;
Module *KRYPTO* – protection of information collections from an unauthorized access.

ENERGY USE AND ENERGY EFFICIENT TECHNOLOGIES

Incoming data:
- the list of energy companies, their requisites, peculiarities and types of activity;
- types of energy efficient technologies, their characteristics and usage peculiarities;
- the packet of standards, laws, regulations, instructions etc.;
- reports about types of business activity of a company in a form of tables and texts.

Result: the support of the decision making in regard to energy efficient technologies introduction efficiency on specific areas.

MULTICRITERIA ANALYSIS OF COMPANY'S PRODUCTION QUALITY

Incoming data:
- the list of subjects of the economic activity included in the Register of certified producers of milk, milk primary products and dairy products;
- USSt 4343:2004 Yogurts. General technical conditions;
- Yougurt chemical composition (producers' official technological data);
- the National standard of Ukraine «Potable water. Requirements and quality control methods»;
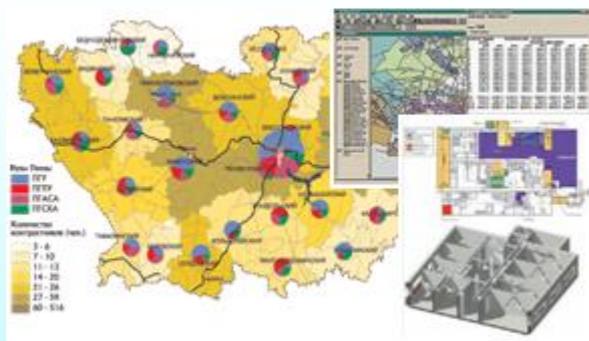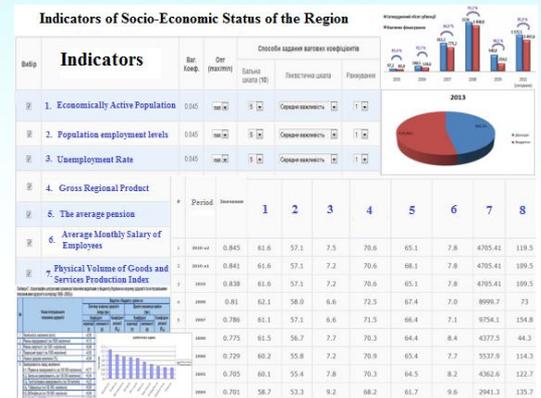- Information about a surface water quality (Ukraine State Water Enterprise data).

Results:
- the list of factors influencing on the quality of primary materials, technological processes and production of a company;
- the rating of companies regarding the production quality, findings about the production profitability.

REGION DEVELOPMENT EVALUATION

Incoming data: Ukraine State Committee for Statics' data, regional and local data in different areas, production and industry types and state authorities, companies and society activities.

Results:
- the creation of an integrated base of rates and factors influencing on the region development;
- the provision of an access and comfortable tools set for work with information to experts;
- the obtaining of integral criteria and rates of conditions and perspectives of development of research objects: villages, cities, districts and region in general;
- the finding of factors influencing on the region development;
- the stating of priorities and "narrow areas".

LAND AND REAL ESTATE INVESTMENT ATTRACTIVENESS

Incoming data: The information from open sources about land and real estate objects.

Results:
- expected advantages for a state, owners and investors;
- the register of investment objects with interactive presentation of their characteristics and peculiarities;;
- the multi aspect analysis of conditions and factors influencing on the investment attractiveness of an object;
- ratings and investment attractiveness rates for a region, city, district, object, area making.

RISE OF ATTRACTIVENESS AND TOURISM DEVELOPMENT

Incoming data: The information from open sources of state authorities, travel companies, tour operators and agencies.

Results:
- expected benefits for a state, travel agencies and customers of travel services both local and international;
- the tour operators and travel agencies register creation including the whole list of offered services;
- the creation of one, competitive informational centre of the whole range of travel services provision;
- the creation of a unique base of informational, reference and analytical materials – multimedia interactive system "Fascinating Ukraine" with the description of villages, cities, resorts, travel itineraries, health improvement centres, places of interest, historical monuments etc.