METHODS AND MEANS FOR AUTOMATED ANALYSIS OF STATE BUDGET EXPENDITURES FOR SUSTAINABLE DEVELOPMENT

Nataliya Pinchuk
NTUU "KPI", Kiev, Ukraine

Current realities of the world need an adequate understanding of the future, monitoring the current situation, monitor the set of environmental factors, assess potential threats and risks. The difficult socio-political and economic situation in the world, increasing competition in various sectors of society require the heads of various organizations to improve the quality of management decisions. Can't make the right decision without having diverse information about explicit and implicit processes in controlled structure and the environment.

Model Verification and analysis of the state budget is based on multidimensional data represented. The basic concept of multidimensional data model is the concept hypercube of data is a set of cells $H(P^i, M_i)$, that meet a set of measurements and set the values $P^i = \{p_1, p_2, \ldots p_z\}$ of measurements

$$M = M_{p_1} \cup M_{p_2} \cup \ldots \cup M_{p_z} \tag{1}$$

where $M_{p_z} = \{m_{1_z}, m_{2_z}, \ldots, m_{kz}\}$ - set of labels expressed p_z (for example, the set of labels measuring M_{p_z} the financial and economic indicators that define the regions in areas of the country, with the values of measurements monthly, quarterly, annually

$$M_{p_z} = \{m_{1_z}, m_{2_z}, \ldots, m_{kz}\} \tag{2}$$

Based on multidimensional data representation model for monitoring and analysis of the budget process consists of a set of financial and economic indicators $\{P_z^{fep}(D,V)\}$, where D - the set of indicators of income, V - set spending parameters set of macroeconomic indicators - P_z^{mep} and the balanced solutions - F^{scd} based on specialized software analysis - Pr_m° that is, specialized (or adapted to the requirements of the domain) information technology.

$$P_z^{fep} = \{P_{pl}^{fep}(D,V) \bigcap P_r^{fep}(D,V) \bigcap P_{op}^{fep}(D,V) \bigcap P_{fo}^{fep}(D,V) \bigcap P_{ac}^{fep}(D,V)\} \tag{3}$$

where - $\{P_{pl}^{fep}(D,V)\}$ budget targets contained in the relevant annexes to the law "On State Budget" (planned value of income - D and expenditure-V);

$\{P_r^{fep}(D,V)\}$ - Painting the budget - a detailed plan that defines the actual order of performance (monthly, quarterly or annual) in different sections;

$\{P_{op}^{fep}(D,V)\}$ - Set of indicators that are formed on the basis of financial reporting of budget funds Φ_η^{fin};

$\{P_{fo}^{fep}(D,V)\}$ - Data on the financial performance under accounting fiscal authorities - Φ_η^{fo};

$\{P_{ac}^{fep}(D,V)\}$ - Data on cash performance-based treasury reporting - Φ_η^{ac}

The idea of monitoring and analyzing performance is compared to the universal indicators (indicators) that define the industry and come from various sources, with those calculated directly in the system. The main tasks are:

• monitoring the current state of the set P_z^{fep}, including regional and branch cuts - a group of functions F_{mf}^{scb};

• control of banking and credit institutions, including regional breakdown - a group of functions F_{bnk}^{scb};

• organization of checks - a group of functions F_{ac}^{scb};

• Generation of report forms - a group of functions F_{rp}^{scb} that take into account the specific subject area.

Examples of use scenarios in the development process depends on the methodology development. In some methodologies for the development of all that is required is a brief overview of the scenario. In other scenarios are complicated and vary during development. In some methodologies, they may start as a brief business scenario, develop a detailed system use cases, and then grow into a very detailed and exhaustive tests.

References:
1. Koval O., Senchenko V.The system of monitoring of financial-economic and macro-economic indicators as an effective tool for management decisions // Coll. sciences. works of young scientists Ternopil National Economic University "Science is young", no. 9, 2008. - Pp. 132-136.