



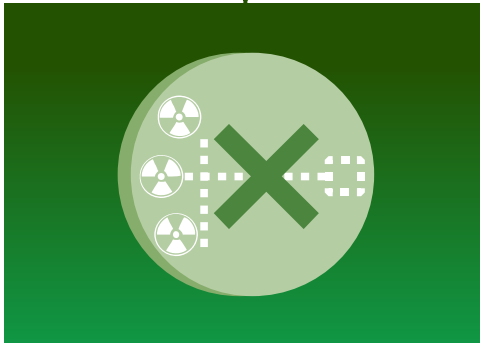
FEDERAL
CUSTOMS
SERVICE

INFORMATION TECHNOLOGY SOLUTIONS, USED IN STATIONARY CUSTOMS CONTROL SYSTEMS FOR FISSILE AND RADIOACTIVE MATERIALS. WAY OF DEVELOPMENT

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FISSILE AND RADIOACTIVE MATERIALS (FRM) AS A RISK COMMODITY

The illegal movement of FRM
is a violation of the
international nuclear non-
proliferation agreement



FRM can be used to carry out
acts of nuclear and radiological
terrorism



Illegal trafficking of FRM can
harm the health of the
population of the Russian
Federation and the environment

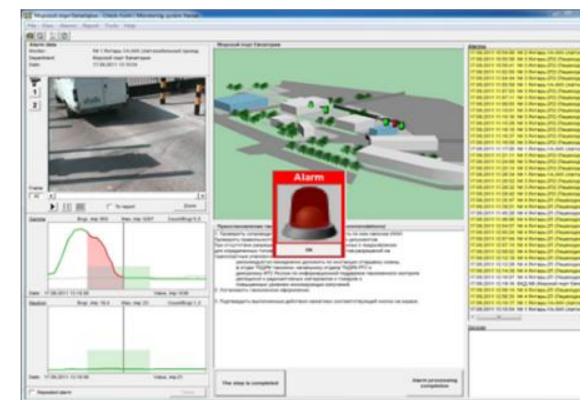
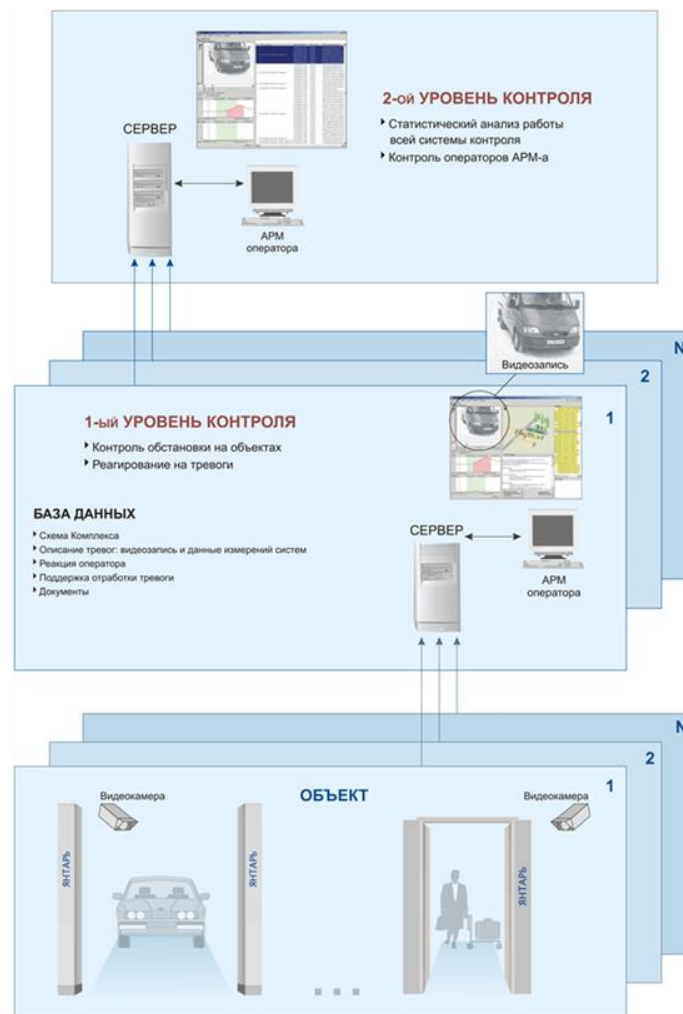


The FRM have a high
cost



- Customs code of the Eurasian Economic Union, paragraph 8, article 351
- Resolution of the Government of Russian Federation No. 456 of 19 July 2007, item 14 of the Rules for the physical protection of nuclear materials, nuclear installations and nuclear material storage facilities

SOFTWARE AND TECHNICAL COMPLEX FOR AUTOMATION OF CONTROL OVER THE MOVEMENT OF RADIOACTIVE SUBSTANCES

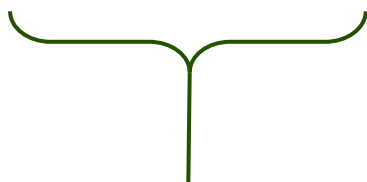




The customs authorities operate about 2,000 stationary radiation control systems and 7,000 portable radiation control equipment at checkpoints on the state border of the Russian Federation, which are external sections of the customs border of the Eurasian Economic Union

IMPROVING THE EFFICIENCY OF CUSTOMS CONTROL OF FISSILE AND RADIOACTIVE MATERIALS

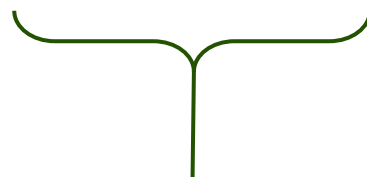
Formalization and
documentation the
actions of
officials



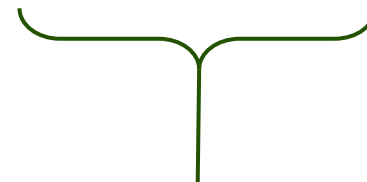
Increase of
efficiency of
operation of
technical means of
radiation control



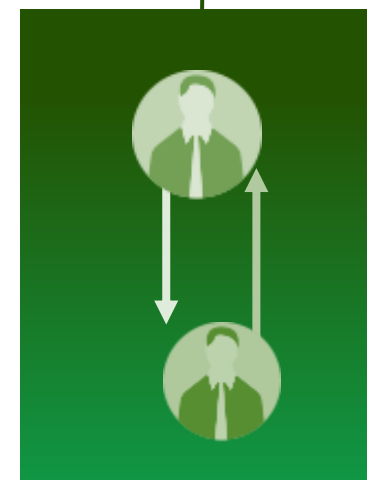
Prevention of
radiation safety
violations



Improving the
quality and
efficiency of
decision-making



Improving the
coordination
the actions of
officials



TECHNIQUE OF PREVENTION OF ILLICIT TRAFFICKING CUSTOMS INSPECTION

RPM Alarm



Radiation
Hazard
Signs



Information
From
Special
Services



Customs
Inspection
Procedure



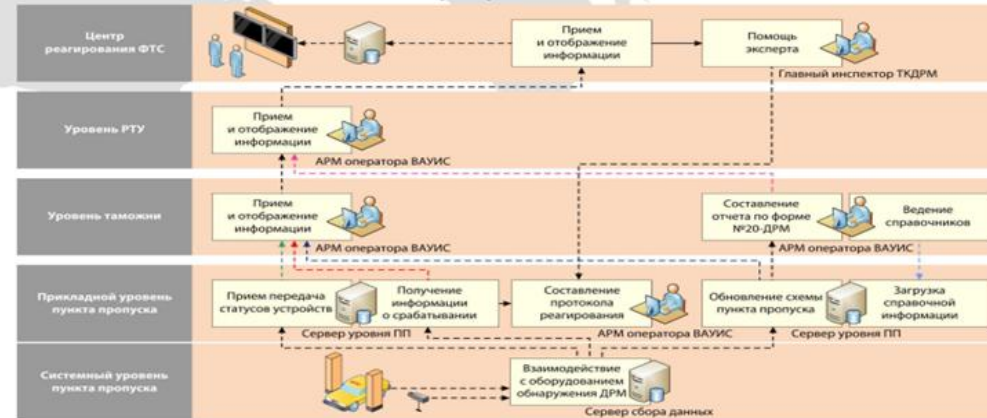
Deep
Customs
Inspection
Procedure



THE SCHEME OF THE DEPARTMENTAL AUTOMATED MANAGEMENT INFORMATION SYSTEM

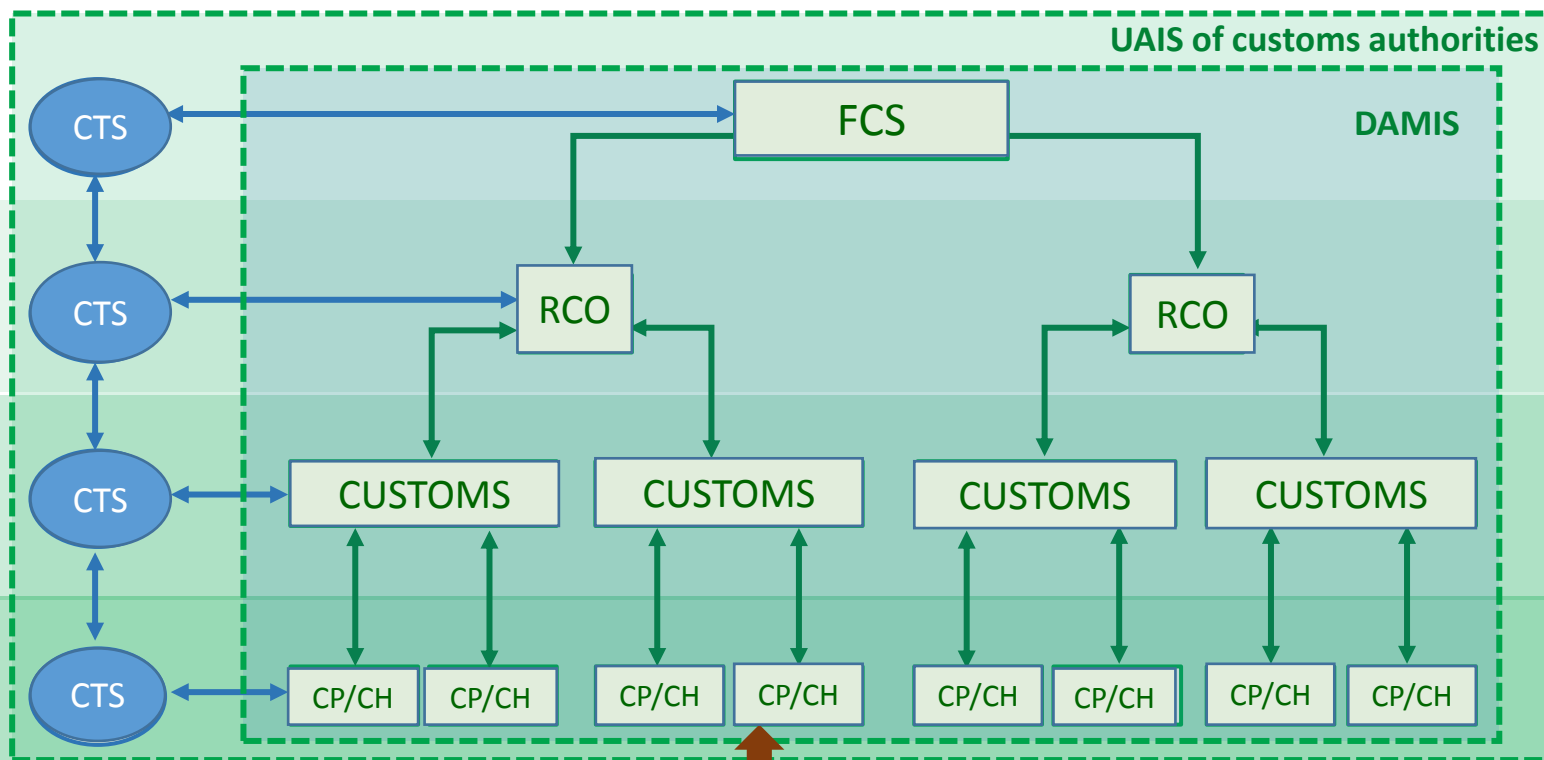


Алгоритм работы системы



- > Форма 20
- > Статусы устройств
- > Стыкивание + видеоряд
- > Схема расположения устройств
- > Профили рисков, должности

THE STRUCTURE OF THE DEPARTMENTAL AUTOMATED MANAGEMENT INFORMATION SYSTEM



The level of the FCS of Russia Selective

Selective control of response and technical condition of STC AC FRM

The level of the RCO

Full control over the response and technical condition of STC AC FRM

The level of customs

Full control over primary response technical condition of STC AC FRM, inspection and localization of IRS, maintenance of STC AC FRM

Checkpoint level

Primary response to FRM detection (inspection) and daily maintenance of STC AC FRM

Operations of SCRCs
«Yantar»

Locally placed at checkpoints software and technical complex of automated control of fissile and radioactive materials (STC AC FRM) on the basis of stationary customs radiation control system «Yantar»



THE MOST IMPORTANT TECHNOLOGICAL SOLUTIONS FOR THE DIGITAL TRANSFORMATION OF CUSTOMS CONTROL OF FISSILE RADIATION MATERIALS

★ Artificial INTELLIGENCE – the science and technology of creating intelligent machines, especially intelligent computer programs; the property of intelligent systems to perform creative functions that are traditionally considered the prerogative of man. Artificial intelligence is associated with the similar task of using computers to understand human intelligence, but is not necessarily limited to biologically plausible methods;



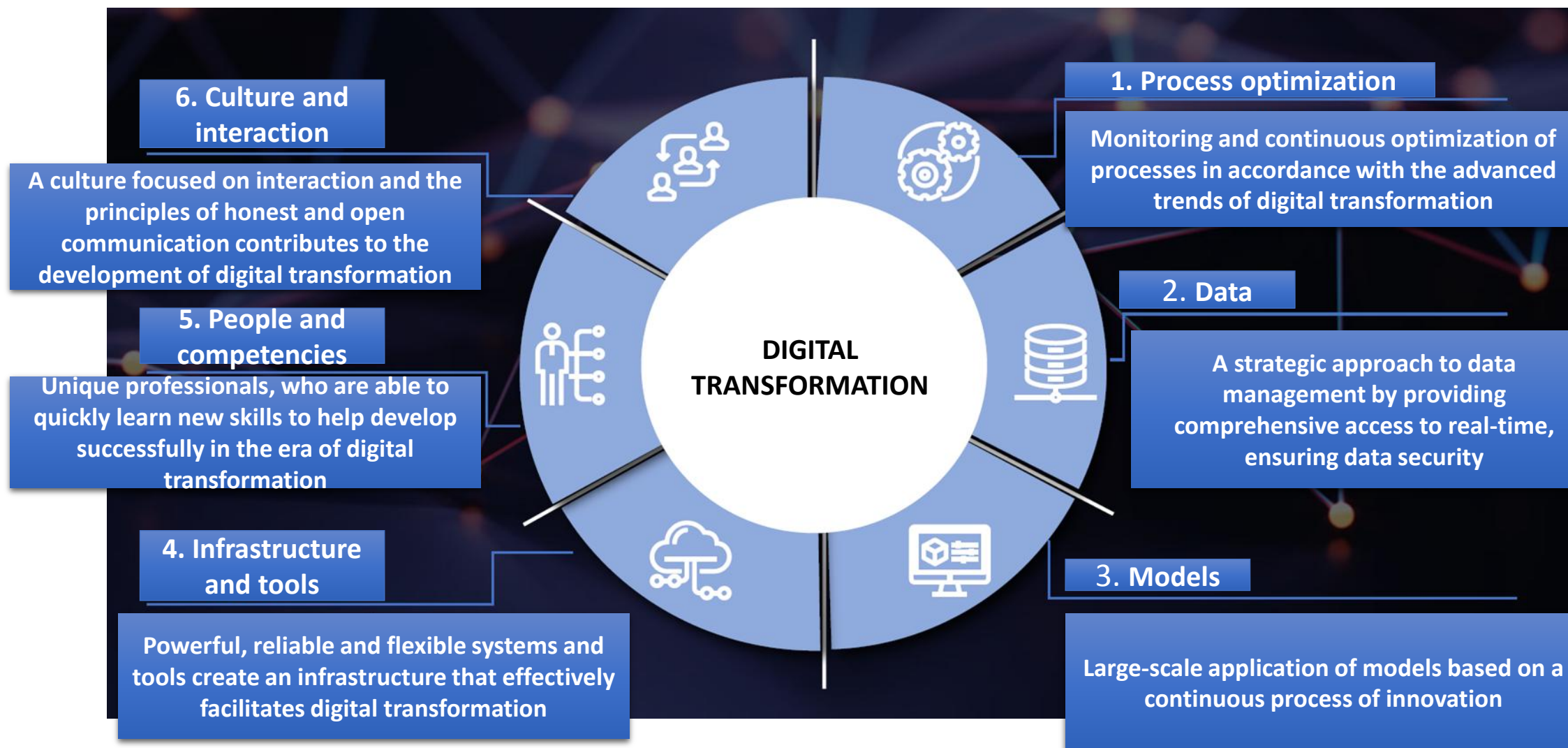
★ End-to-end TECHNOLOGIES are a set of processing methods, which consist of a set of specialized programs on the basis of one system, independent of specific techniques and allowing for interactive data exchange. Primary data can be generated by both automatic systems and manual input, but their subsequent transmission and processing is completely automatic.



★ BLOCKCHAIN TECHNOLOGIES are multifunctional and multilevel information technologies designed for reliable accounting of various types of assets (Melanie Swan). Blockchain is a distributed database that contains a continuously increasing set of ordered records (blocks), each block contains a timestamp and a link to the previous block. Blockchains are open, distributed registers can record transactions between two participants in a reliable and reliable manner;

★ Internet of things-the concept of a computer network of physical objects ("things") equipped with built-in technologies to interact with each other or with the external environment





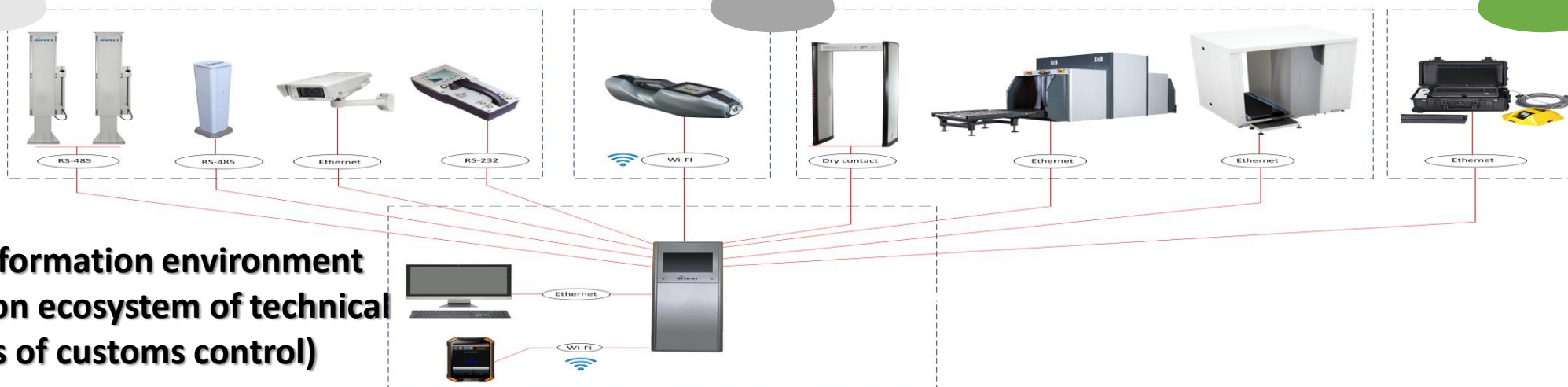
use of intelligent technical means of control

organization of modern network technologies of data collection control

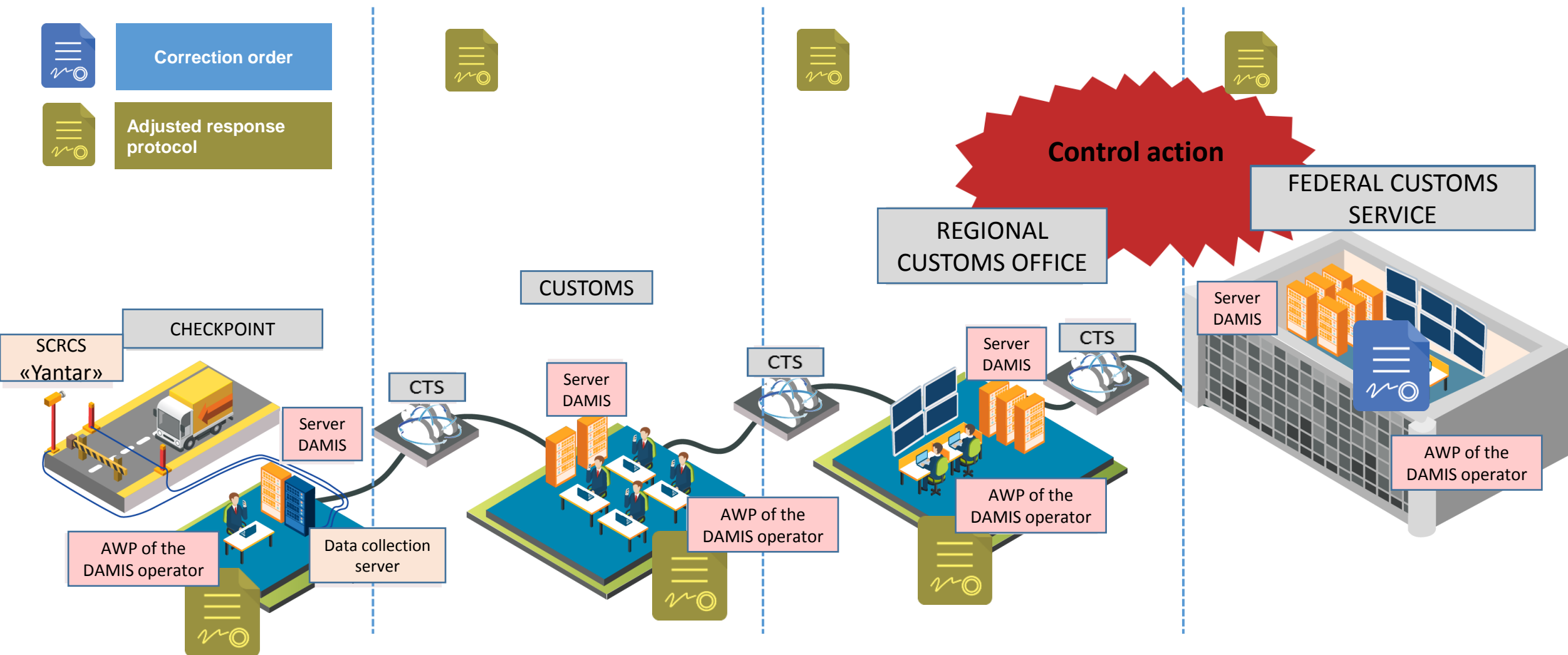
the use of technology blockchain




automatic execution of target functions

implementation of software access to operating parameters and measurement results of technical means of control



THE SCHEME OF FUNCTIONING OF THE DAMIS



-  **Improve the quality and efficiency of decisions**
-  **Will allow for an early analysis of possible action scenarios**
-  **Will reduce the material costs of maintaining an appropriate level of security**

