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SYSTEM OF TECHNICAL REGULATION AND STANDARDIZATION AS OBJECT FOR RISK MANAGEMENT

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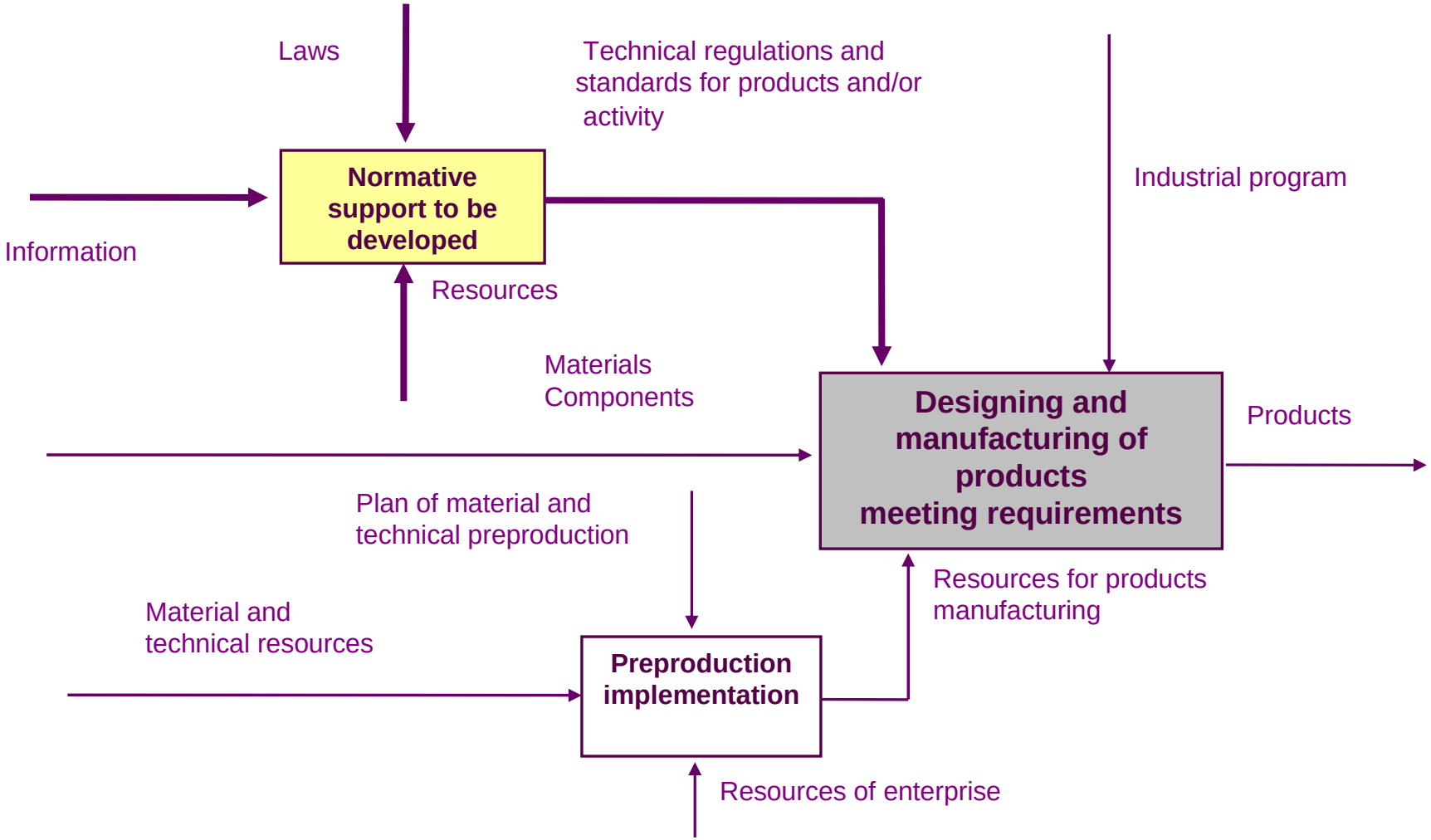
SYSTEM OF TECHNICAL REGULATION – SOURCE OF SYSTEMS RISK FOR SPECIFIC KINDS OF ACTIVITY



TECHNICAL REGULATION AND STANDARDIZATION – SYSTEM-DEFINED SOURCE OF RISKS FOR ALL KIND OF ACTIVITIES

Technical regulation and standardization – particular typical risk in integrated risk of the result of specific kind of activity

- machine building
- energy saving
- banking
- …..

Necessity to develop unified mechanism for

- identification
- assessment
- processing and acceptance of risks, stipulated by technical regulation

On basis of risk management system

Management system for specific kind of activity

Financial management | **Quality management** | **Risk management** | **…**

ISO 31000

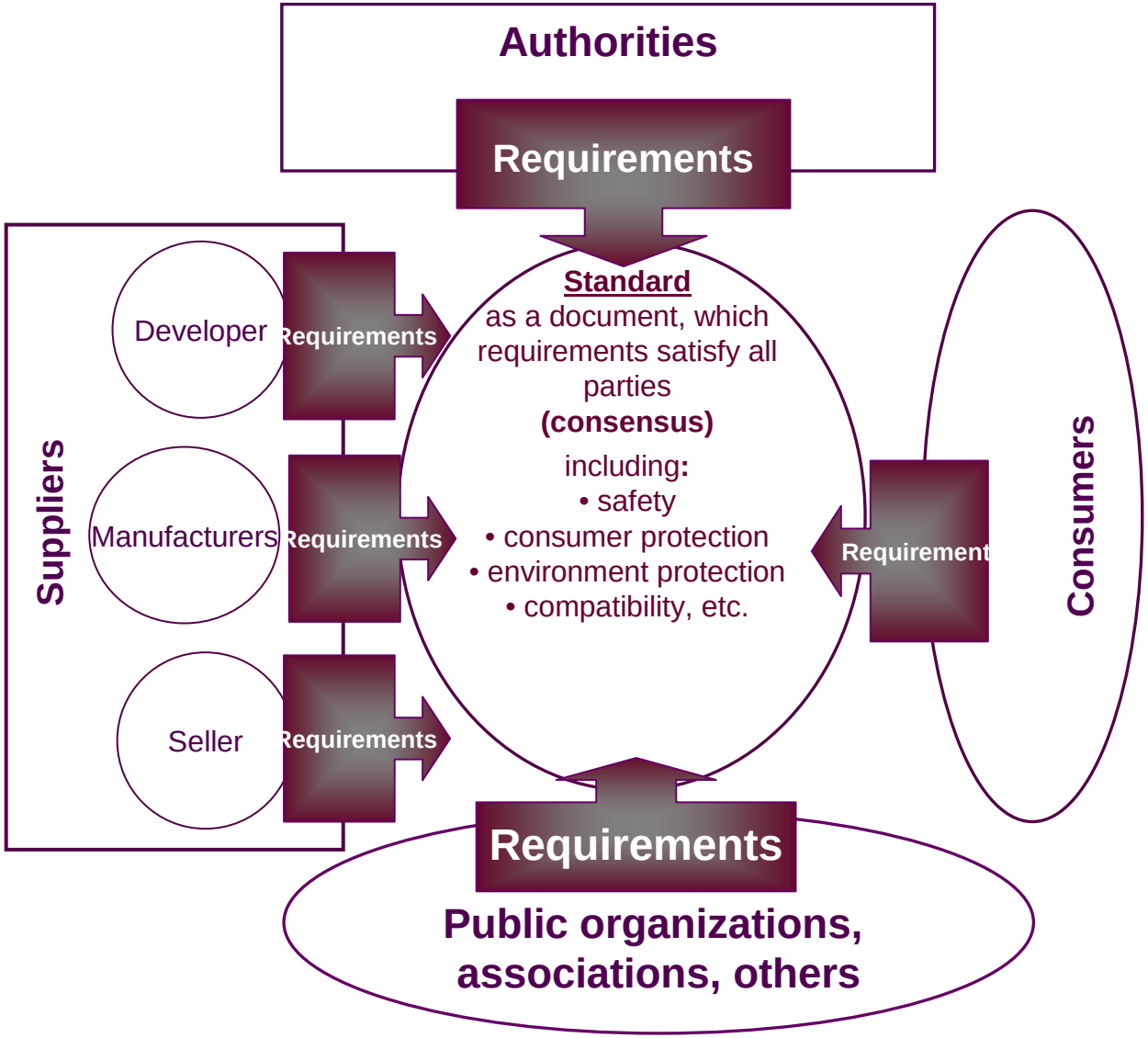
Main subsystem- risk management system

Ordering of relations between all interested parties

Methodology of risk management in sphere of technical regulation

Structure | **Algorithm** | **Methods and means**

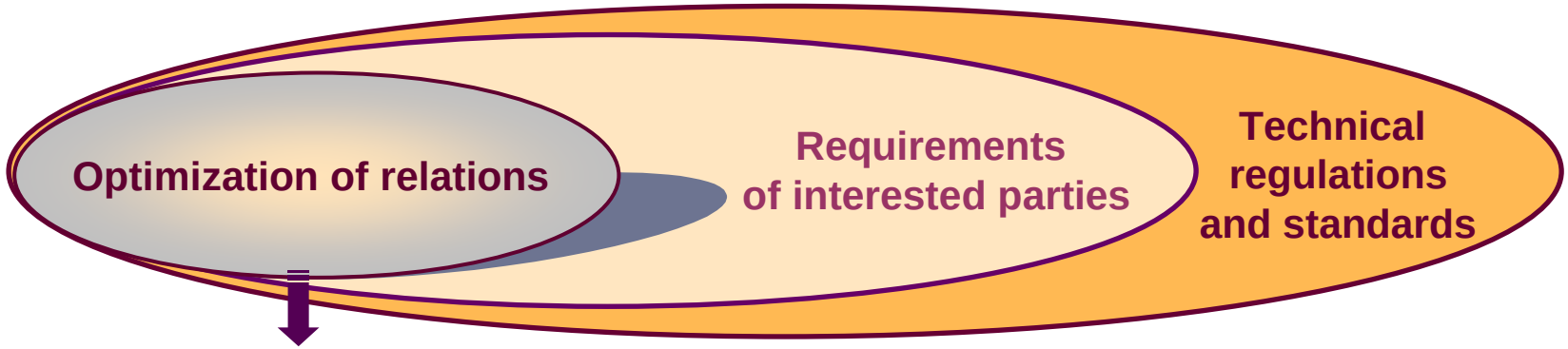
Scope, objects and interested parties in standardization



RISK – INDICATOR OF EFFECTIVENESS OF TECHNICAL REGULATION AND STANDARDIZATION

ACTIVITY WHICH REQUIRES SYSTEMS APPROACH

result



from disorder (conflict of parties) → **to ordering (harmonization of relations)** → **optimum balance**

ordering of diversity is based on principles of standardization

- consensus
- openness
- availability
- transparency
- publicity
- optimality

RISK –

measure for assessment of optimum balance attaining

MODEL OF TECHNICAL REGULATION AND STANDARDIZATION – AS A SOURCE OF SYSTEMS RISK

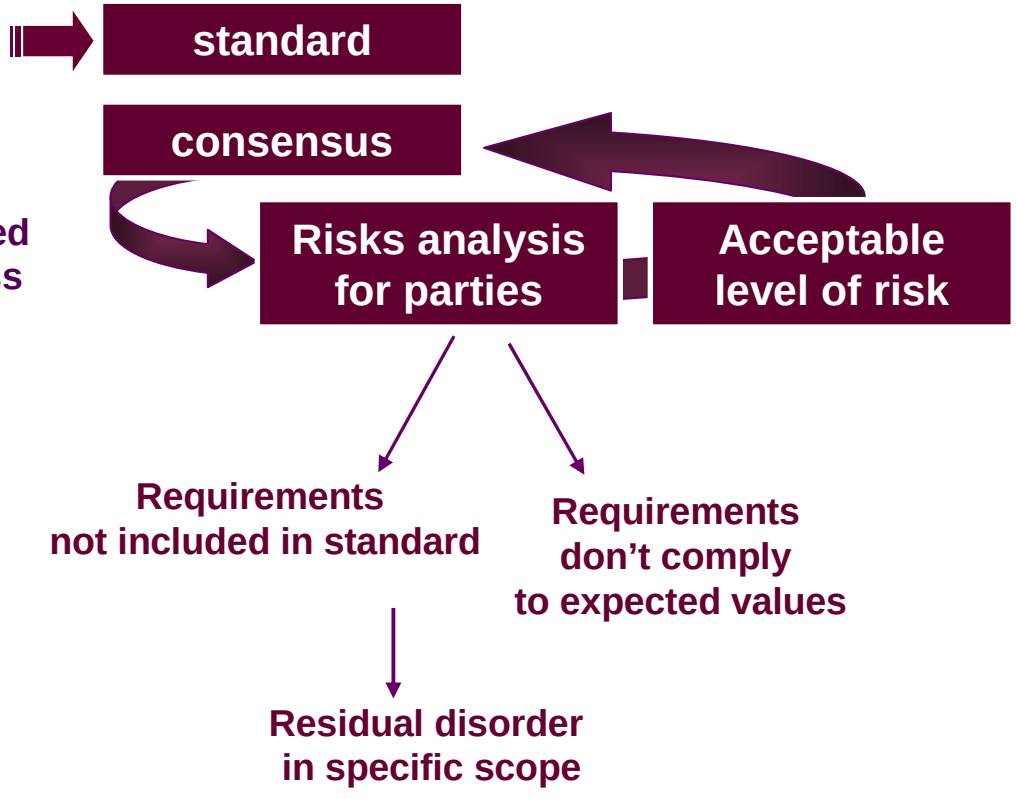
Optimum level of requirements ordering in specific scope

- **Maximal level of satisfaction of all interested parties taking part in standardization process**

$$\sum_{i=1}^{n} U_{удовл.i} \longrightarrow \max$$

- **Minimization of total losses for all interested parties taking part in standardization process**

$$\sum_{i=1}^{n} P_{потр.i} \longrightarrow \min$$



$$P_{потр.i} = T_{треб.станд.i} - S_{треб.станд.}$$

SYSTEMS APPROACH –
METHODOLOGICAL BASIS FOR RELIABLE ASSESSMENT AND RISK MANAGEMENT IN STANDARDIZATION

COMPLICATED ORGANIZATIONAL AND TECHNICAL SYSTEM

Realization of process approach in detection of sources of effectiveness losses in the model of risk management in technical regulation

- **Evaluation of sources of risks in technical regulation**

Building of structure for particular risks

- **Evaluation of the function of relation between resulting risk and particular risks**
- **Calculation and analysis of risks and decision making on risks acceptability or on necessity to implement measures to reduce risks**

Concept
for building a system of technical regulation
in specified sphere of activities,
based on principles of systems and process approach
using model of risk management

Stage 1. ALGORITHM OF STANDARDIZATION PROCESSES MODELING for the purpose of integrated risk assessment and management

1. Development of a model concept:
- ✓ **Type of model;**
- ✓ **Definition of process structure;**
- ✓ **Classification of processes in QMS process network;**
- ✓ **Rules of processes interaction within the network**

2. Development of process modeling (presentation) language

3. Development of a model of QMS process network «as is» using the procedure of functional modeling

4. Analysis of model «as is» on the conformity to the requirements (criterion of correctness)

5. Development of a model of process network «as necessary»

FUNCTIONAL MODEL OF SYSTEM OF TECHNICAL REGULATION AND STANDARDIZATION

Principle of total conformity to ISO 9001 requirements → Every process, group of processes and the whole network of processes → Deming cycle P-D-C-A

Principle of maximum usefulness of the model for the purposes of risk management → For every process and the whole network of processes

Deming cycle P-D-C-A → Continuous improvement of system

- system of responsibility and authorities allocation
- system for structuring of risk assessment function in the whole hierarchy of processes and responsibility
- system for data collection, registration and analysis on effectiveness in the whole hierarchy of process network
- system for adoption of management decisions, relate to the structure of process network

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Functional model of the system for particular object of technical regulation and standardization

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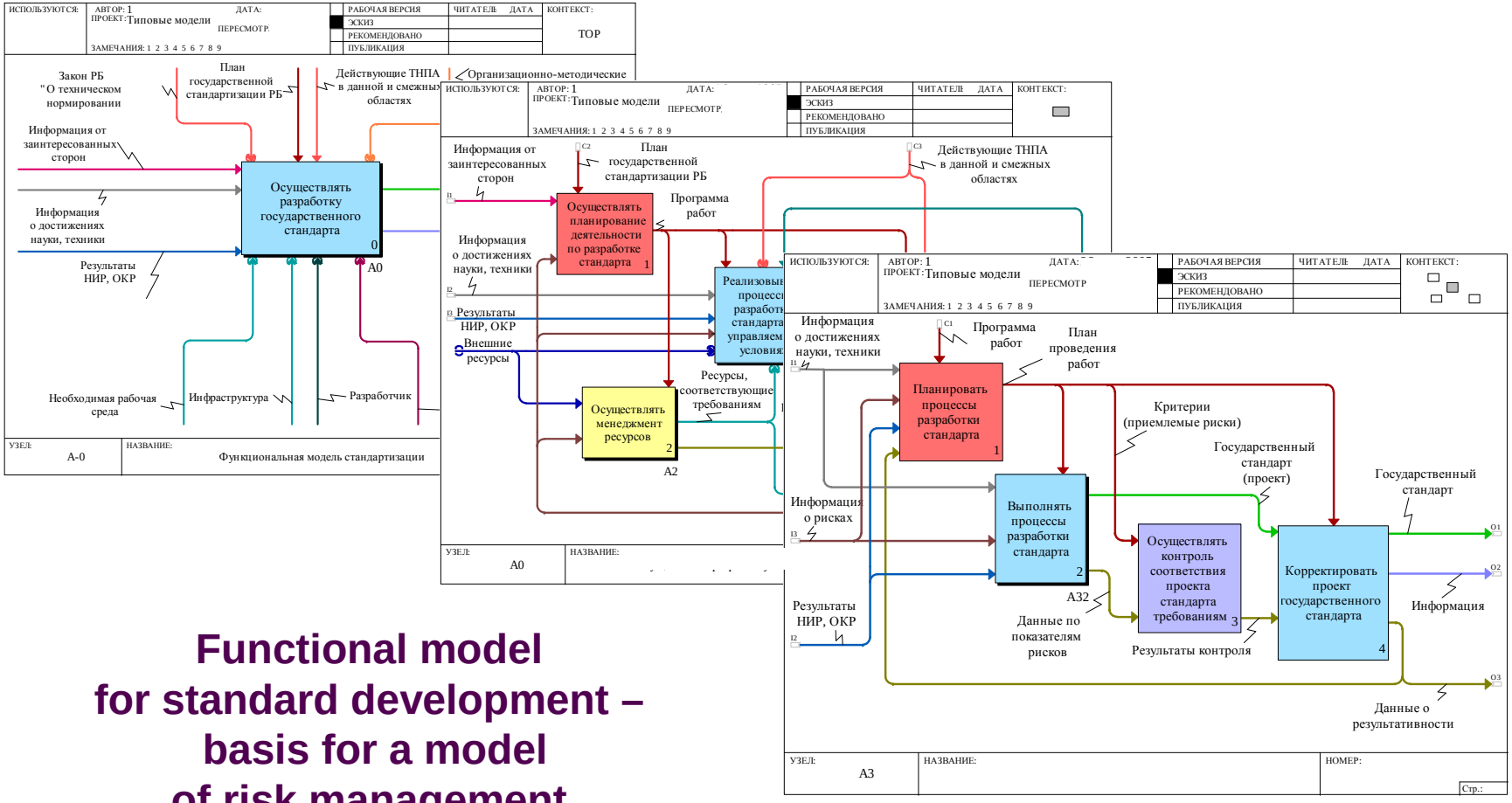
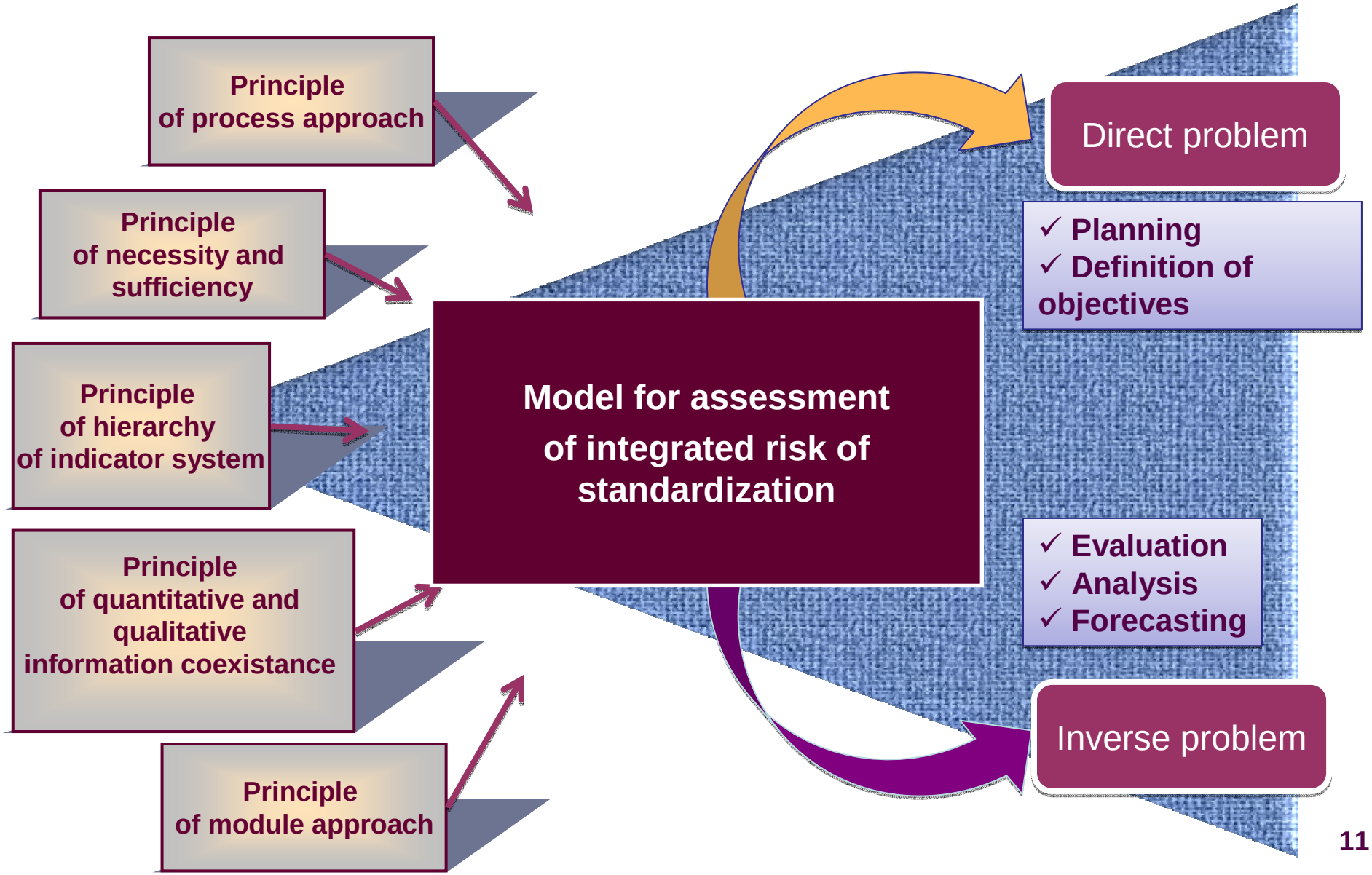
Criterion of specified risk level Rs

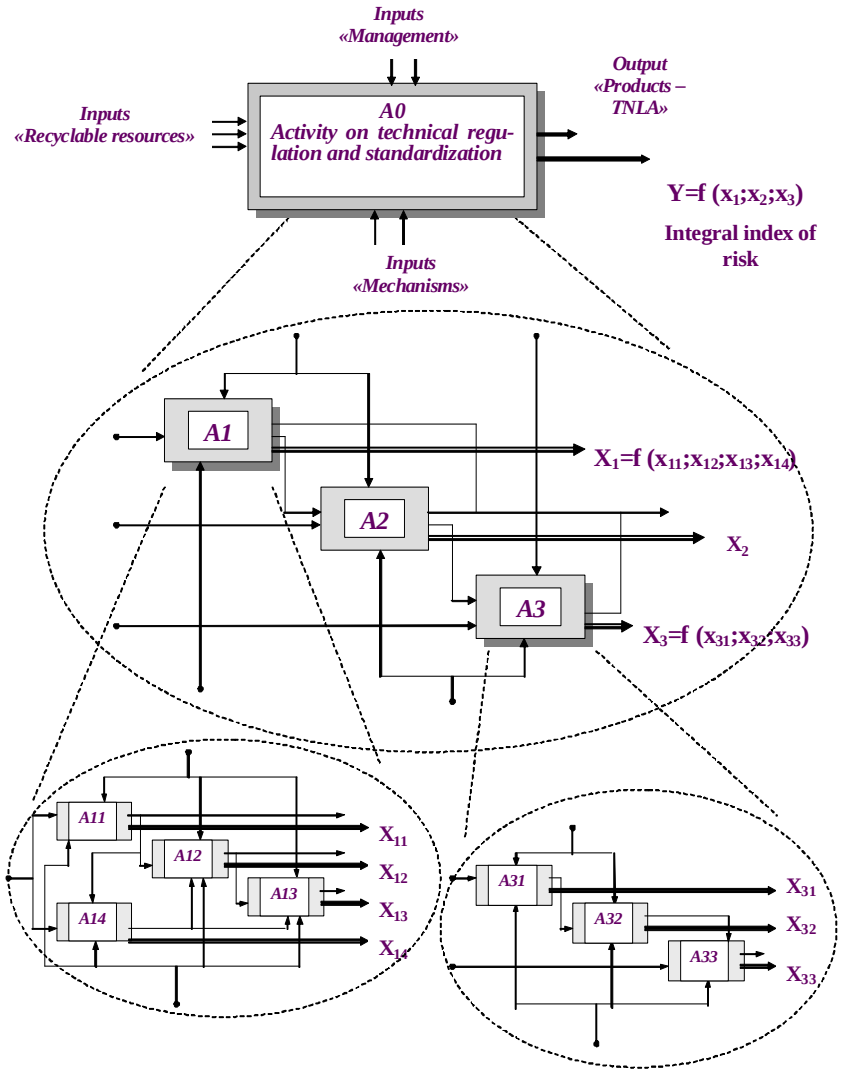


Functional model for standard development – basis for a model of risk management

Stage 2. PRESENTATION of a model for support decision making



CONCEPT OF MODEL FOR ASSESSMENT OF INTEGRATED RISK OF STANDARDIZATION

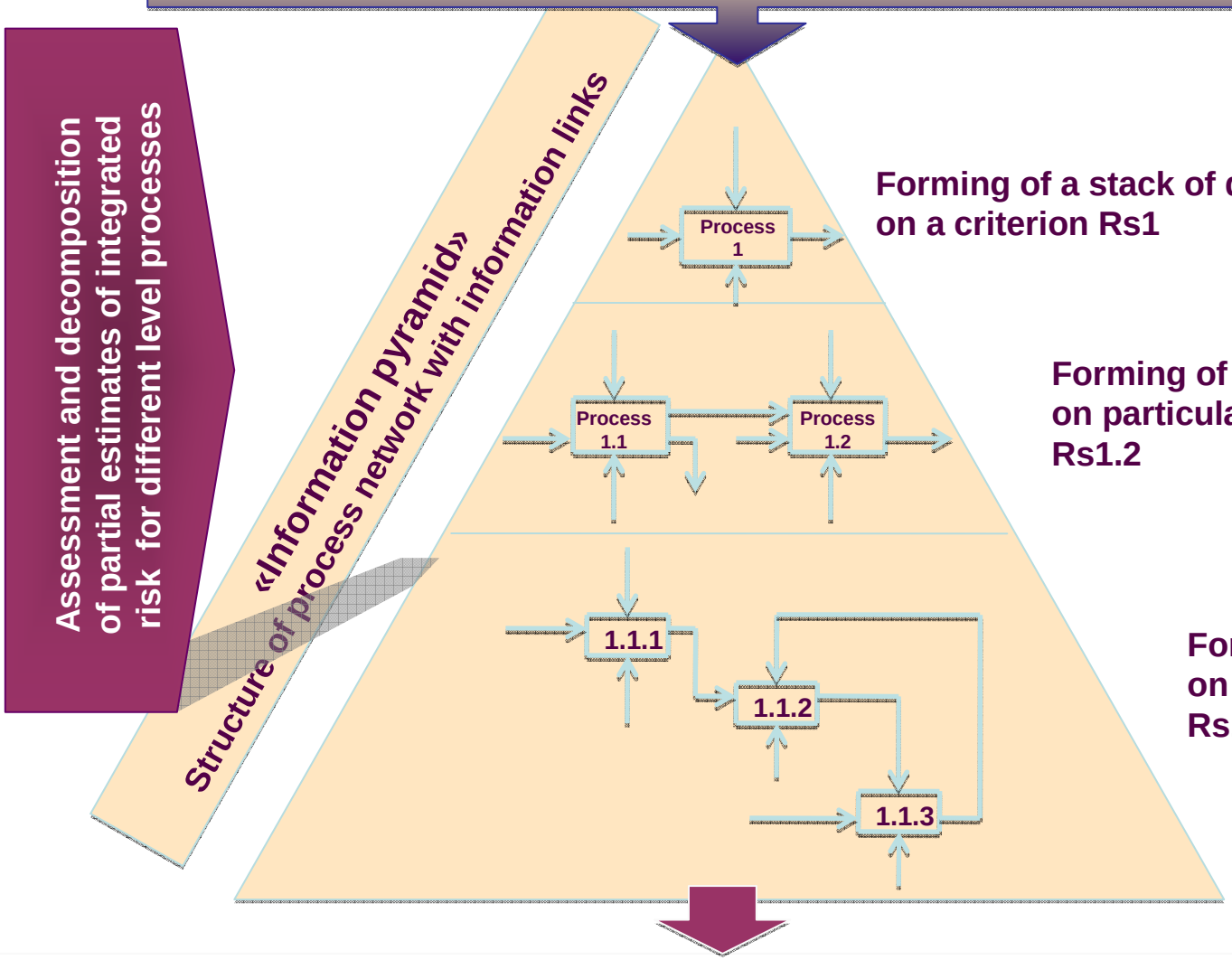


Model of function Y structure for risks assessment as a function of effectiveness assessment of complex process

Function of effectiveness losses for complex process in technical regulation – indices of particular risks, identified at the outputs of all processes

Stage 3. Presentation of a model for support decision making

Purpose: Criterion of specified risk level Rs



Forming of a stack of decisions on a criterion Rs1

Forming of a stack of decisions on particular criteria Rs1.1, Rs1.2

Forming of a stack of decisions on particular criteria Rs1.1.1, Rs1.1.2, …….

Building of the model for support decision making

Thank you for your attention!