



ATOMENERGOPROEKT
ROSATOM

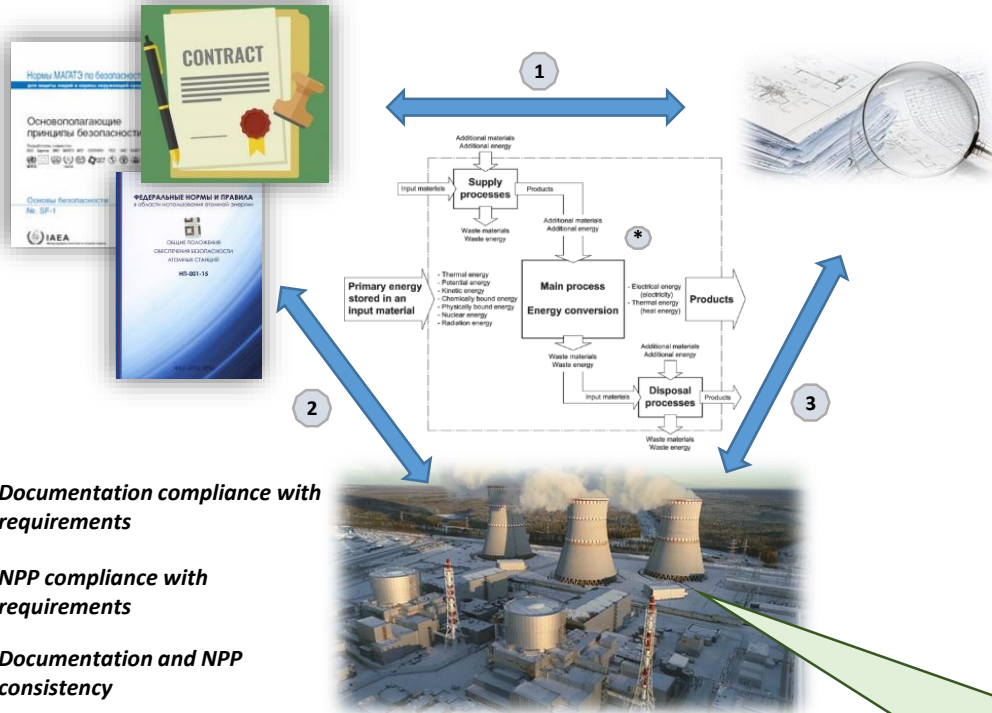
Design Evolution and Changes during Construction

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Mandatory Equilibrium in the Course of NPP Construction



Design Change Reasons:

- *Changes in laws, codes and regulations on assurance of various safety aspects (including security, non-nuclear health hazards, sanitary standards, or social rules)*
- *Nonconformities identified in nuclear radiation safety assurance as per codes and regulations*
- *Noncompliance with the contract for NPP design*
- *Changes in design solutions:*
 - *Equipment design*
 - *Systems and buildings*
 - *Process technology (structures, adjustment, operation, including maintenance and repair)*
- *Changes in the Operator structure (shop/non-shop, Build-Qwn-Operate...)*

All-time Equilibrium, including the NPP construction period

* Notation of ISO 81346-2015 Part 10 . NPP processes

Aspect-Focused Design*

Design documentation consists of text and graphic parts both including texts, graphic materials and/or an information model

The aspect-focused approach to shaping Project structures is a way to reach Equilibrium.

The aspect-focused approach enables multi-faceted review of significant Project tasks in the course of Changes.

The Change degree and the total NPP cost are continuously monitored.

Requirements are formalized, assigned to Organizations to be implemented through performing Functions at Plants by means of Works with mandatory records in Documentation

Aspect

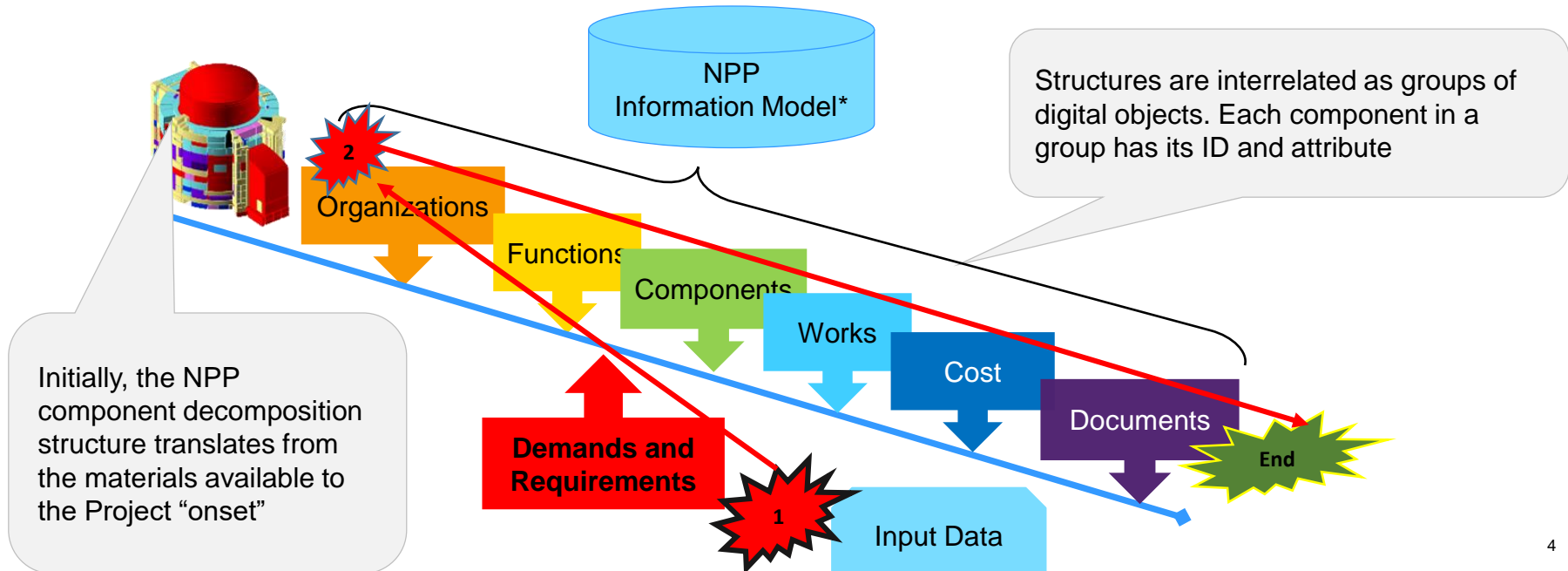
Structure

1 Demands	RBS Requirements
2 Creative	OBS Organizations
3 Function	FBS Functions
4 Plant	PBS Plants
5 Implementation	WBS Works
6 Cost	CBS Cost
7 Documentation	DBS Documentation



*Ontological representation of a comprehensive engineering product through subject matter structural decomposition using flexible arrangement of designing

Change Management through Structure Decomposition and IM



*Ontological representation as a graph (tips are structure elements and sides and properties and relations)



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**Thank you
for your attention**