



Indicators of Processes at the Ignalina NPP

Ignalina Nuclear Power Plant

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Information about INPP

**December 31,
2004 – Unit 1
shutdown date**



**December 31,
2009 – Unit 2
shutdown date**



**Construction
1974-1987**



**Operation
1983-2009**



**Decommissioning
2010-2038**



Ignalina NPP decommissioning activities are co-financed by European Union



INPP Management System Evolution

- **QAP** – 26 activities, Management procedures
- **PBMS** – 42 processes, Management procedures, Process owners, Flow-charts, *Measurable* Indicators





Indicators of Processes at INPP (1)

- Selection and Use of Performance Indicators in Decommissioning, NW-T-2.1, IAEA, 2011
- **SMART**
- Based on strategic tasks
- Taking into account the requirements and expectations of interested parties
- Integration with other existing indicators
- Integration with indicators of projects





Indicators of Processes at INPP (2)

- In 2014: 42 processes - 187 indicators
- 4-5 indicators for every process
- Many indicators to monitor safety, but no indicators to monitor efficiency
- How to monitor efficiency of the processes
- ***Improvement of indicators***



Indicators of efficiency

Effectiveness is the level of the results achieved

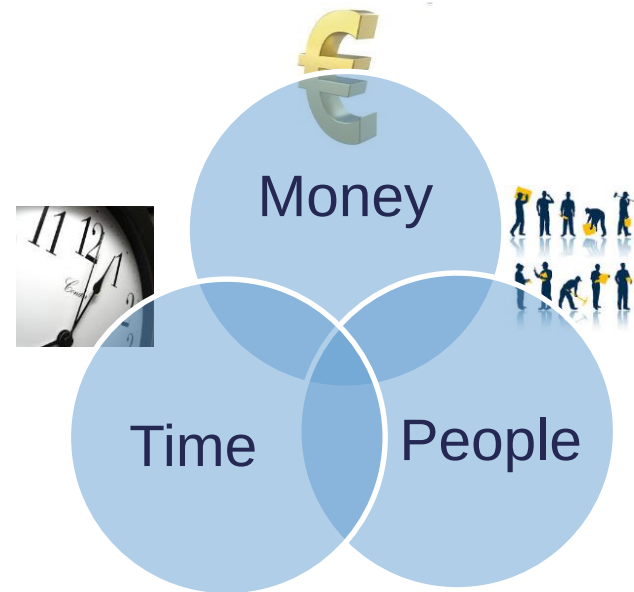
Efficiency is the relationship between the level of achieved results and the level of recourses spent for that

Indicators for Efficiency/Economy:

- Labor (Man-hours)
- Cost (Euros)

Indicators for Safety/Quality:

- Number of events;
- Number of accidents at work;
- Number of non-conformances.





INPP Dismantling Indicators

Effectiveness

Kg or tones of dismantled material

Efficiency/Economy

Labor (Man-hours)

Financial cost (Euros)

Labor intensity (Man-hours/kg or tons)

Labor productivity (kg or tones/Man-hour)

Dismantled tone cost (Euros/tons)

Progress of dismantling (% of dismantled materials compared to the total amount under the strategy)

Indicators of Program of dismantling projects (Earned Value Method)

SPI – Schedule Performance Indicator

CPI – Cost Performance Indicator

Safety/Quality

Number of events

Number of accidents at work

Number of non-conformances

The average dose per one staff member, engaged in dismantling



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Control of Indicators

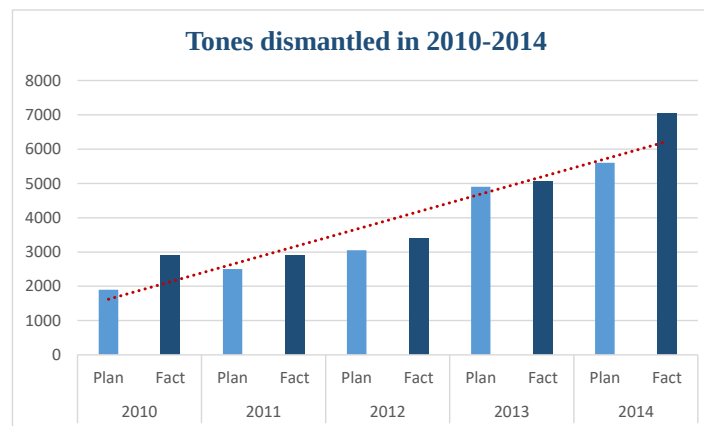
- **Graded approach**
 - Indicators of Management and Support processes - semi-annual control
 - Indicators of Main processes – quarterly control
 - Once a year - the report with all the indicators of all processes (results in the report of Management System Review).





Analysis of Indicators

- **Control and analysis are not the same**
 - Achievement (plan, fact, %)
- **Types of analysis**
 - Horizontal (comparison with previous period)
 - Vertical (components analysis)
 - Trends (several periods data on charts with trend line)



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Computerization of Indicators

Computer program under development to simplify and visualize the managing of indicators

For the top managers

Enables to manage processes and track their indicators simply, convenient and faster

For the middle-level managers

Allows to compare indicators between different processes to perform benchmarking

For the individuals

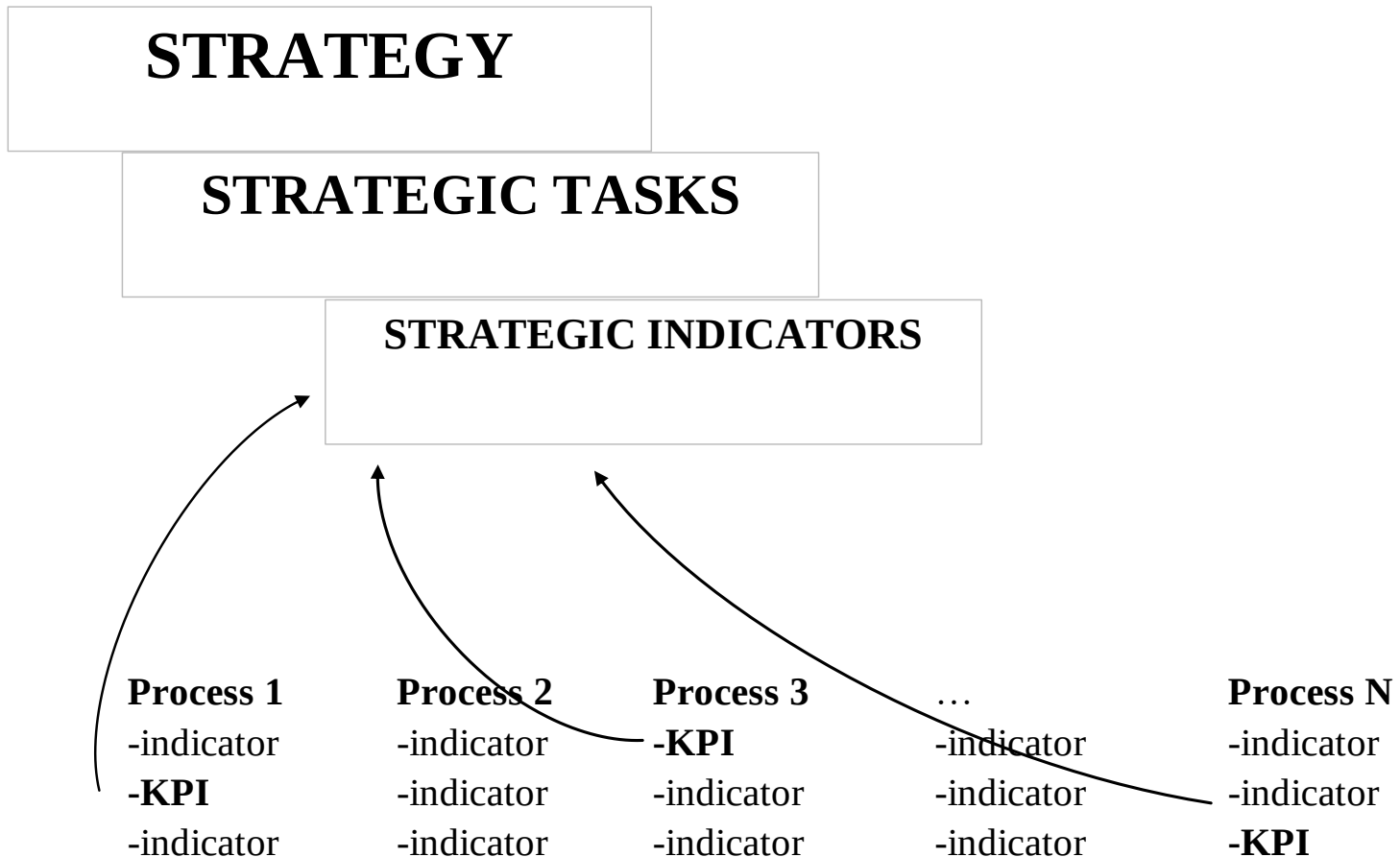
Reduces time in indicators collecting, calculating and reporting



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Hierarchy of Indicators

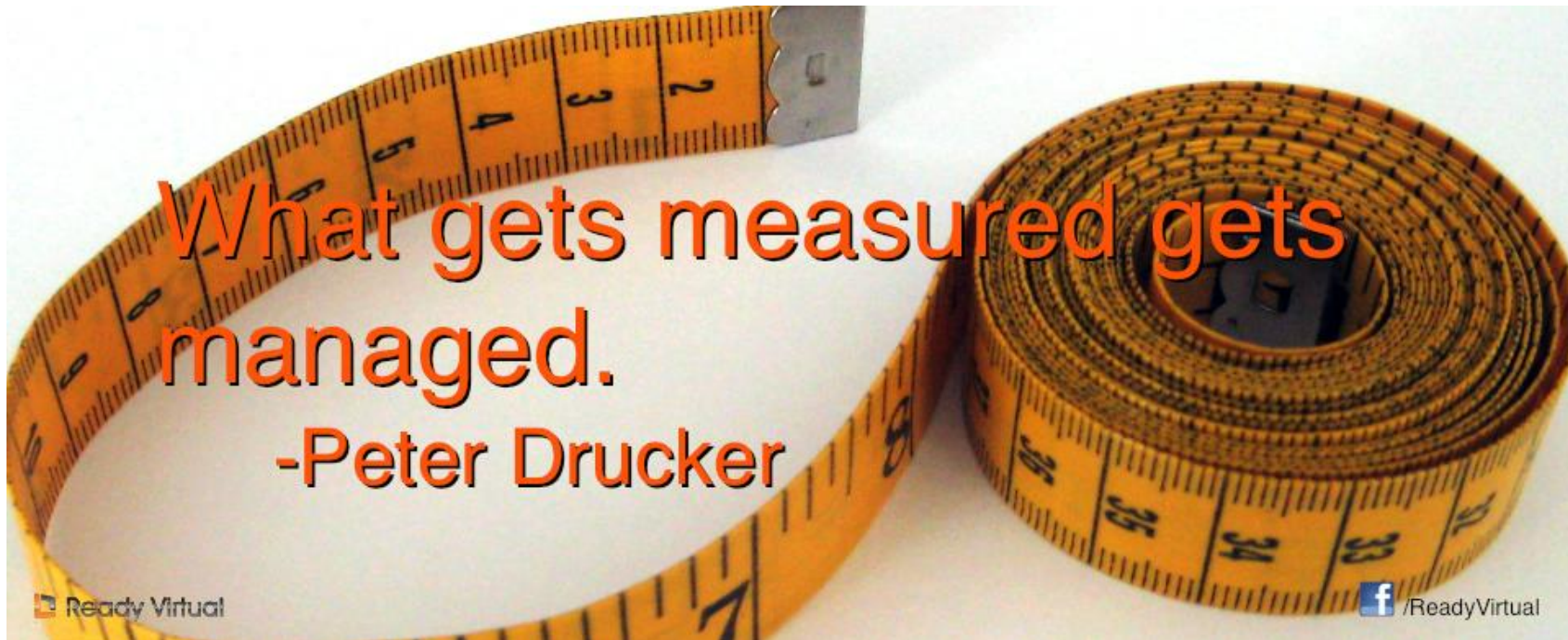




Difficulties and Challenges

- Proper and suitable ***measurable*** indicators
- Integration of indicators
- Activity based costing
- Computerization of indicators
- Indicators – ***KPIs – Balanced Score Card (BSC)***
- No system of decommissioning indicators for benchmarking (similar to WANO)
- Analysis of KPIs for timely and right decisions and continual ***IMPROVEMENT***





A photograph of the Ignalina Nuclear Power Plant. The image shows two large, light-colored concrete containment domes. Each dome has a tall, striped (red and white) cooling stack rising from its top. The sky is filled with heavy, grey clouds. The text "Thank you for attention!" is overlaid in the center in a dark blue font.

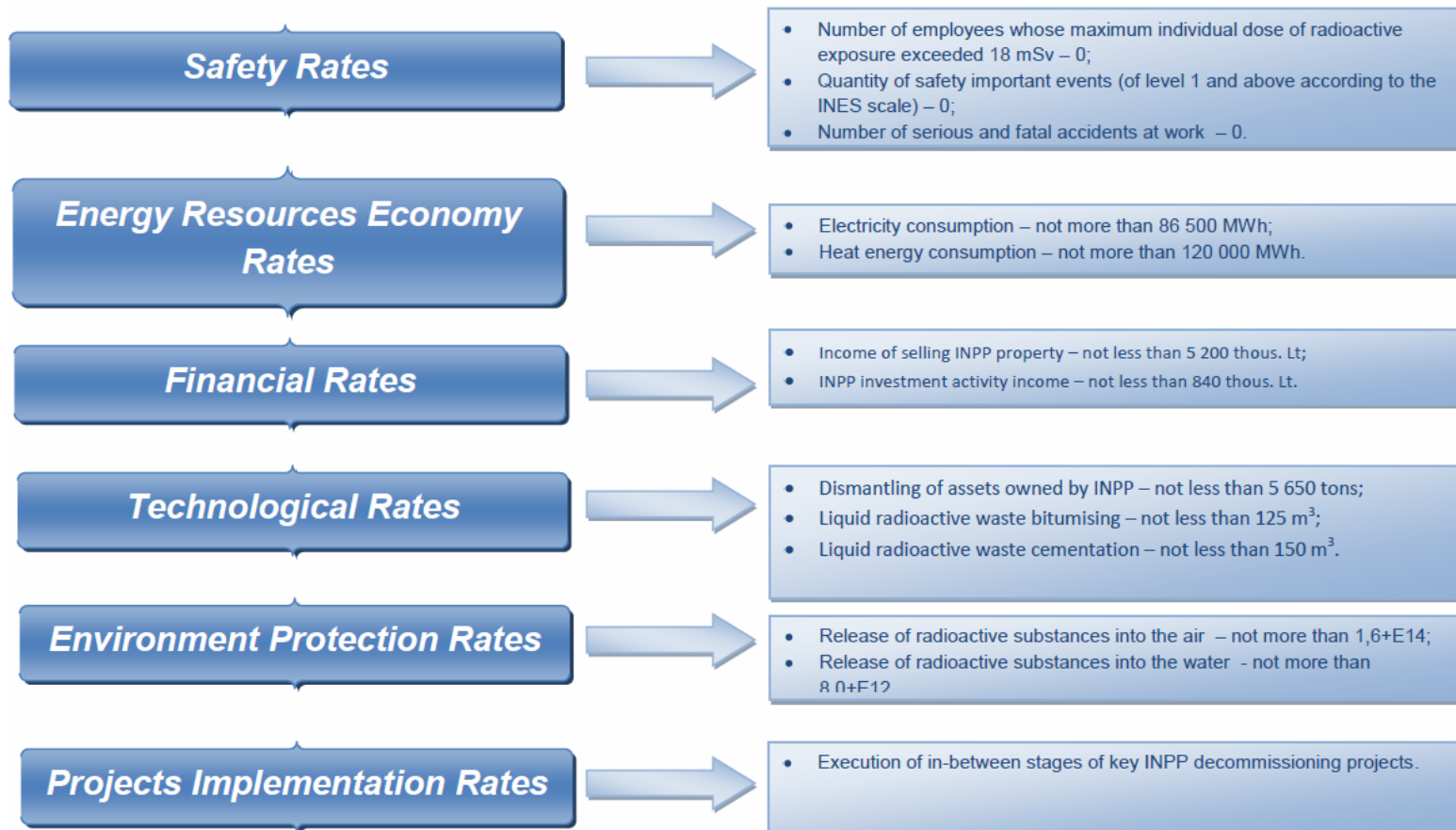
Thank you for attention!

Ignalina Nuclear Power Plant





INPP KPIs in 2014



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