

ROSATOM Innovative Approaches and Technologies for Back-End Options

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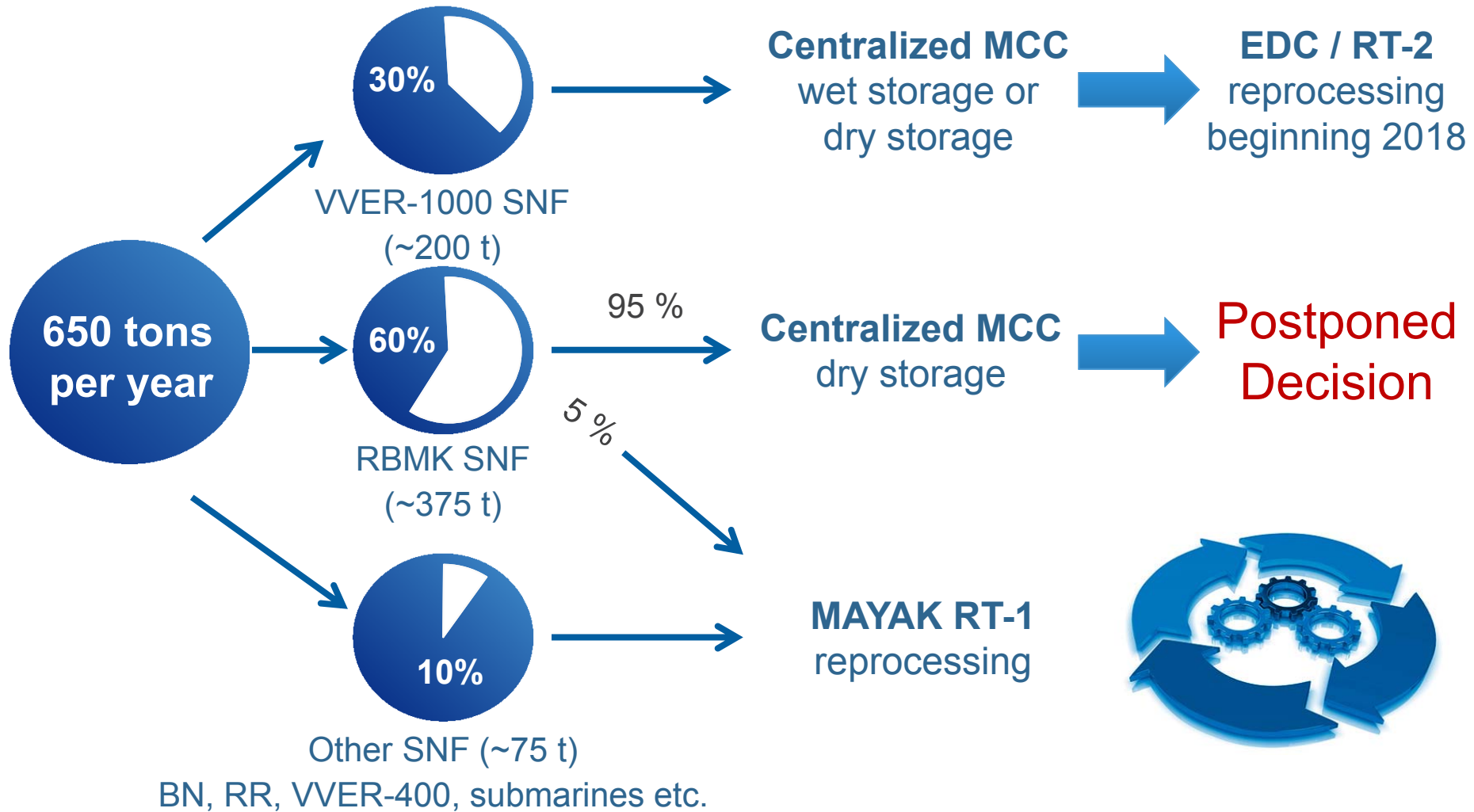
International Atomic Energy Agency Scientific Forum

**RADIOACTIVE WASTE:
MEETING THE CHALLENGE**

Science and Technology for
Safe and Sustainable Solutions

23–24 September 2014, Vienna, Austria

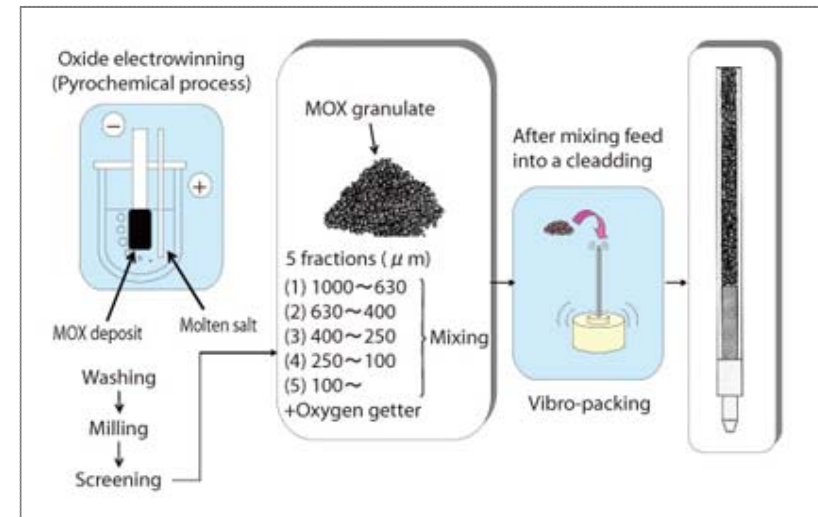
SNF Management in Russia: Current State



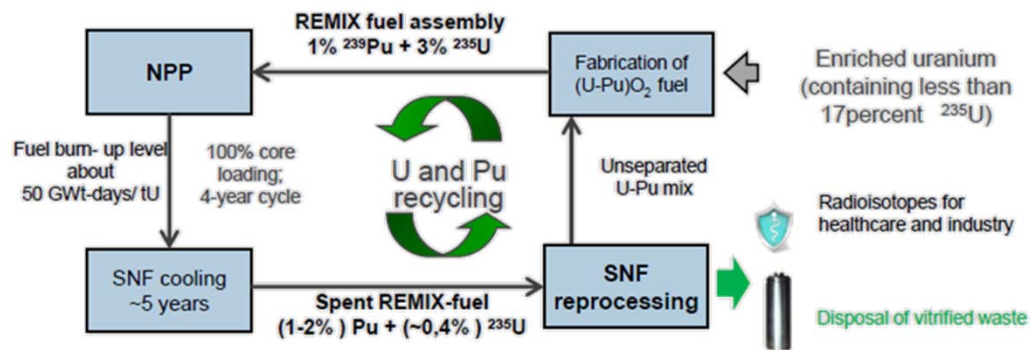
ROSATOM Search for Innovative Solutions



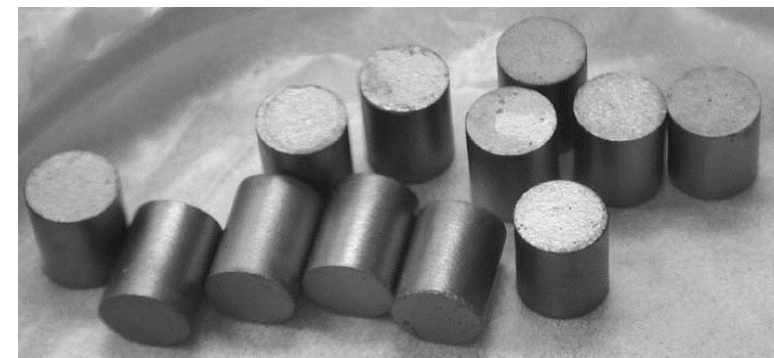
LWR MOX-fuel



Fast reactor MOX-fuel

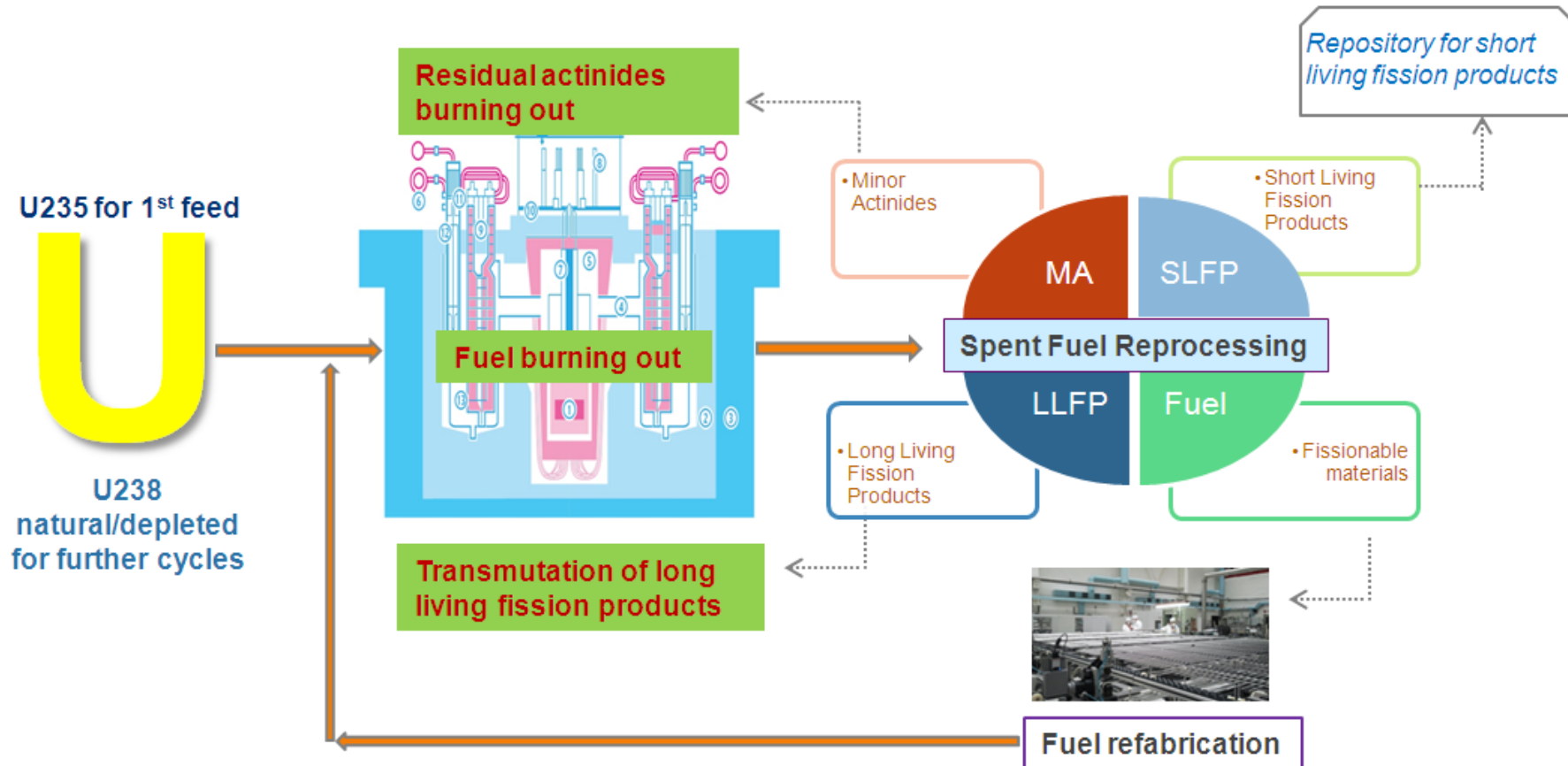


REMIX-fuel



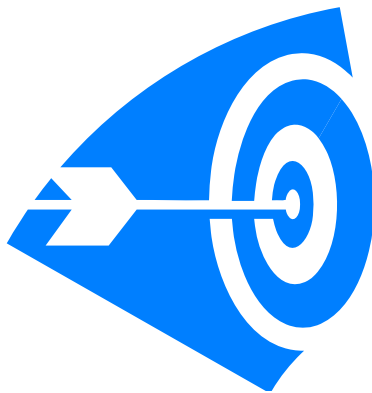
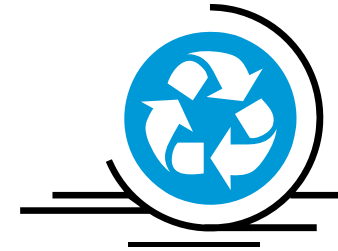
Mixed nitride (dense) fuel

Closed Nuclear Fuel Cycle Philosophy



Imperatives

- ✓ Safety
- ✓ Ecological suitability
- ✓ Economical efficiency



Challenges

- ❖ Proliferation risk mitigation
- ❖ Significant waste reduction
- ❖ Raw material self-sustainability
- ❖ Minor actinides utilization