



T7: Enhancements to Fuel Cycle and Independent Spent Fuel Storage Installation Oversight Programs

Enhancements to the Fuel Cycle Oversight Program

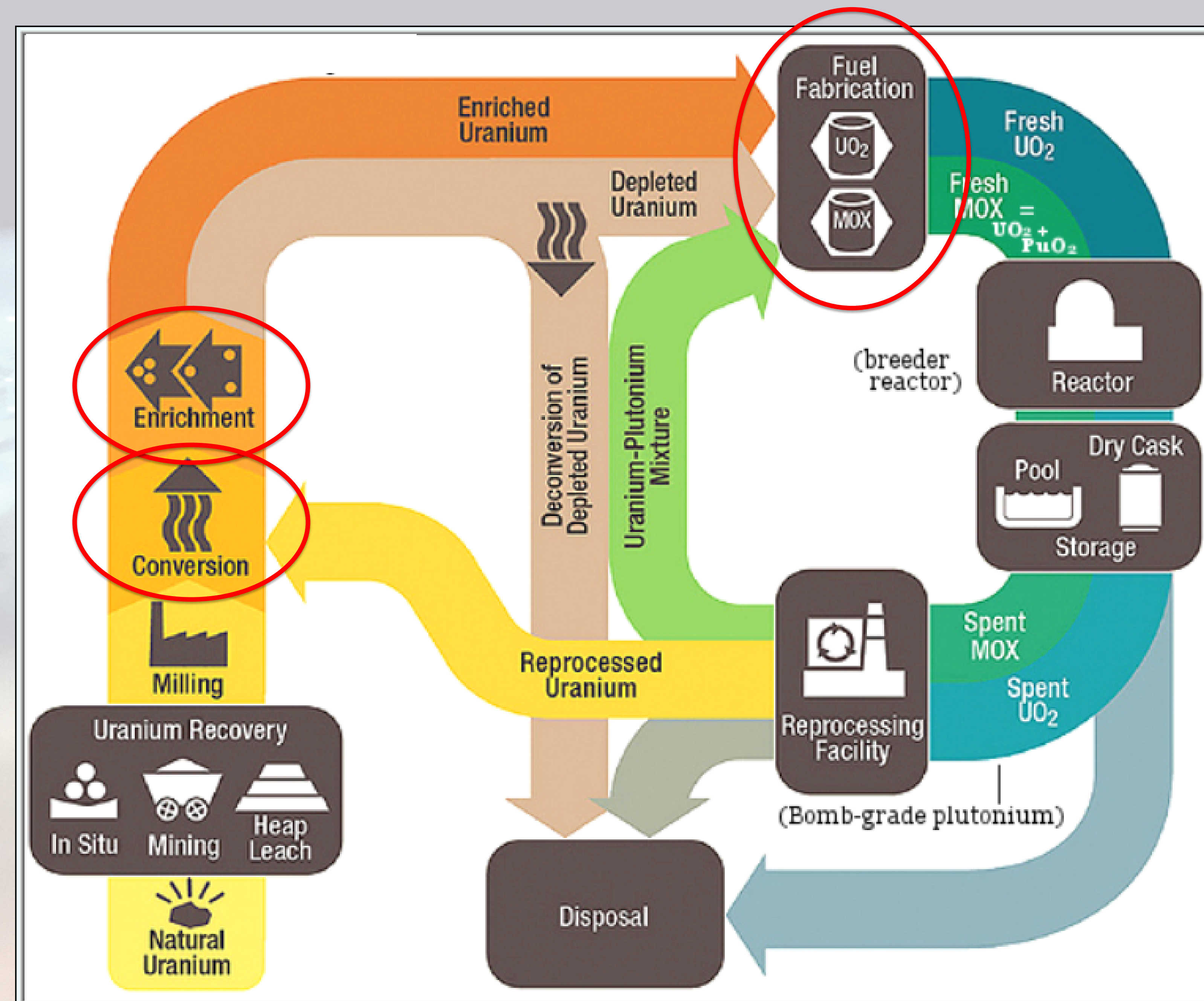
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Region 2/Division of Fuel Facility Inspection



Orientation

- 10 CFR Part 40 and 10 CFR Part 70 licensees
 - Conversion
 - Enrichment
 - Fabrication





Drivers for Change

- The industry continues to evolve
- Historic changes implemented incrementally

Evolution of industry
Holistic review



Fuel Cycle *Core* Inspections





Smarter Inspection Program

- Fast Facts:
 - Working Group established and charter issued in April 2019
 - Collaboration between Headquarters and Region 2 staff



Smarter Inspection Program

- Fast Facts:
 - Physical security and information security areas omitted
 - Sought significant feedback from stakeholders
 - 10 public engagements
 - Current program adequate

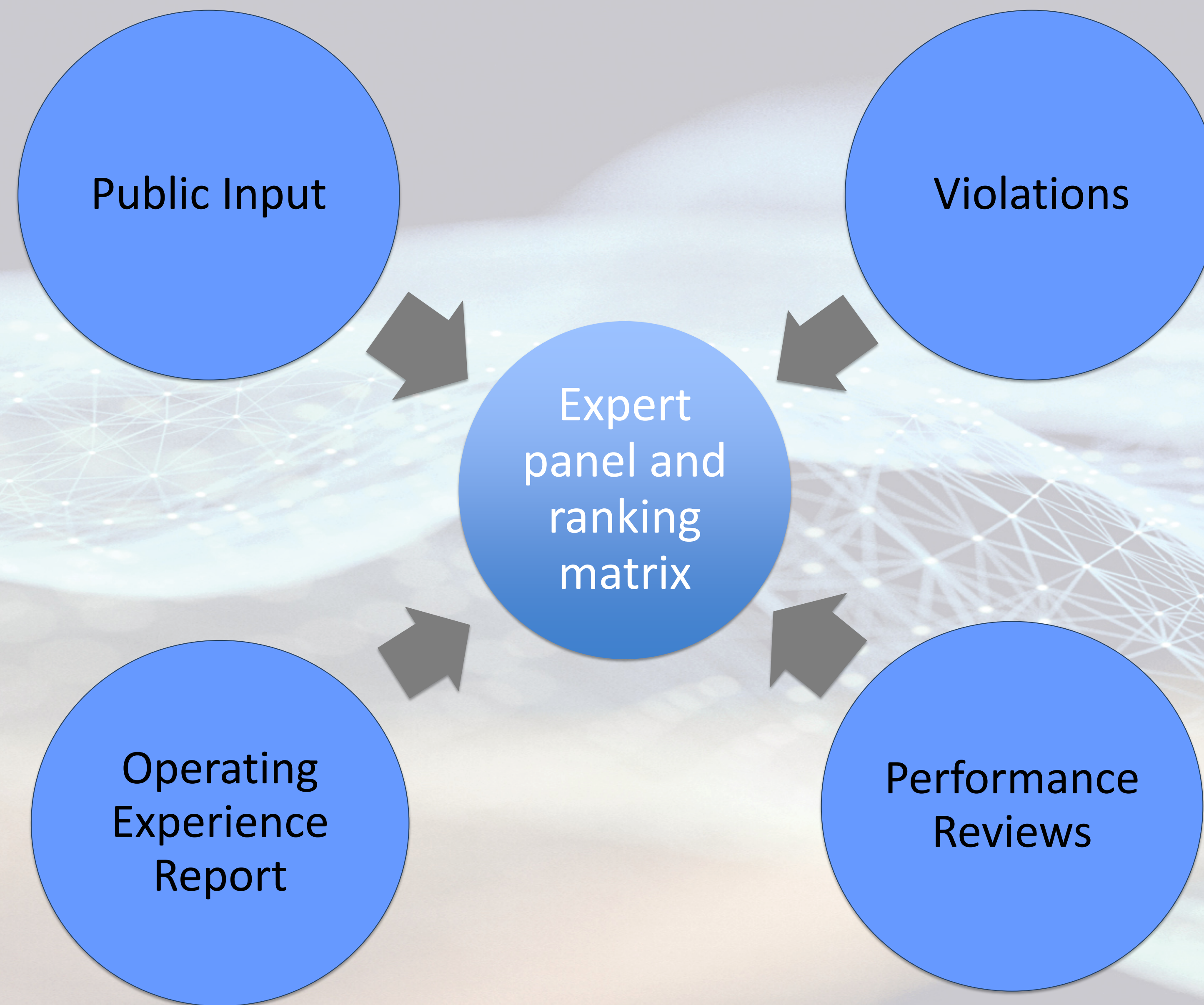


Considerations

- Principles of Good Regulation
 - Efficiency
 - Independence
 - Openness
 - Clarity



Evaluation—Information Gathering





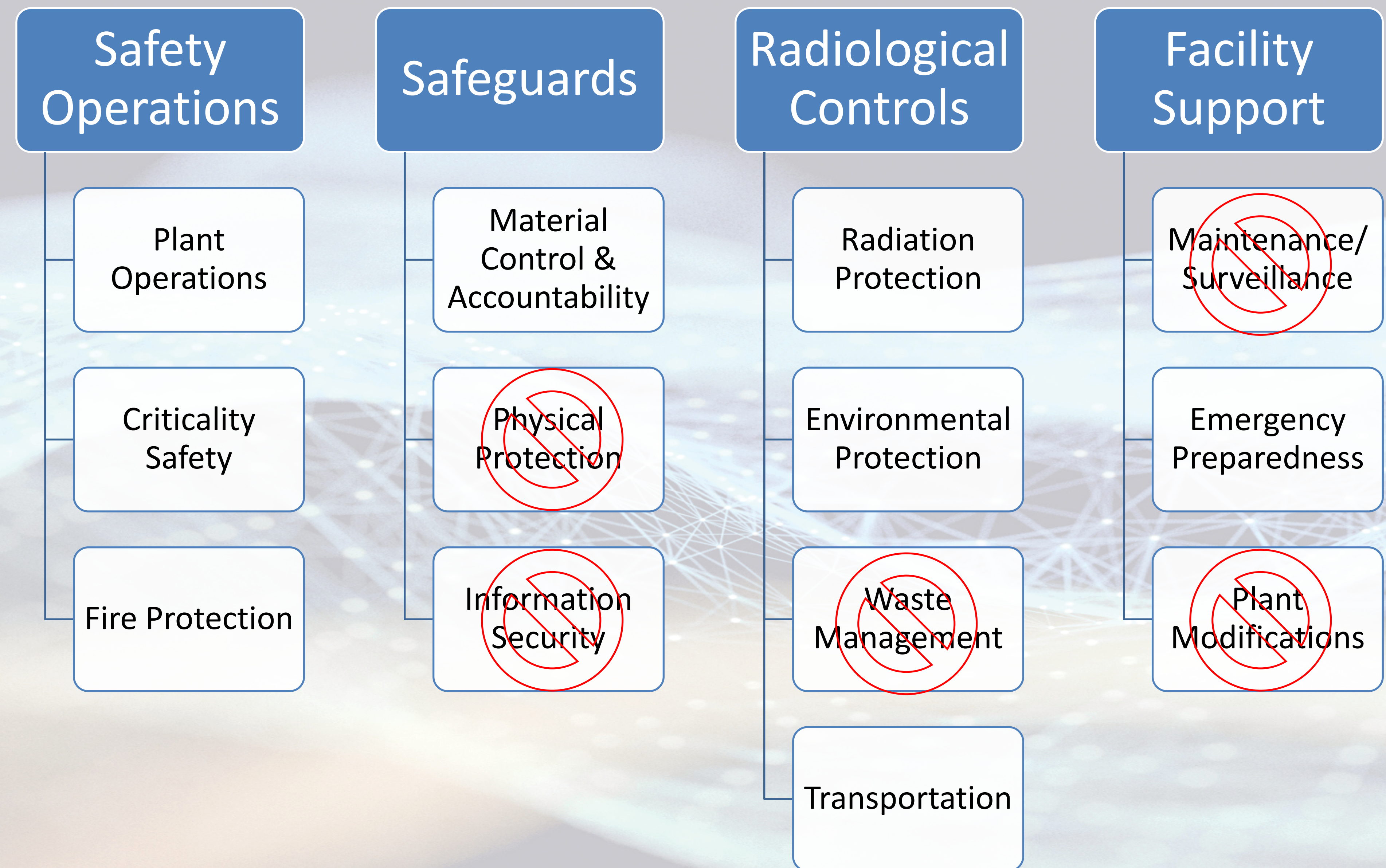
Evaluation—Expert Panel

- Reviewed inspection procedures and manual chapters for:
 - Redundancies and gaps
 - Opportunities for more efficient use of resources



Evaluation—Prioritization and Ranking

- Evaluated eight program areas





Evaluation—Prioritization and Ranking

- Evaluated eight program areas against four criteria
 - Accident sequences
 - Operating experience
 - Complexity of regulatory requirements
 - Public interest
- Factors were weighted



Topics for Consideration

- Reactor engineering inspection benchmarking
 - System of annual, focused, and comprehensive inspections designed to increase program flexibility
- Resident inspectors
 - Shift some inspection from the region to the senior resident inspectors



Topics for Consideration

- Approved Corrective Action Program (CAP)
 - Reduce inspection resourcing based on an approved CAP
- Integrated Safety Analysis (ISA)
 - Modify the core based on each plant's ISA



Recommended Tiering

Technical Areas (Safety)	
Criticality Safety	Tier 1
Chemical Safety	
Fire Safety	Tier 2
Emergency Preparedness	
Radiation Protection	
Transportation	Tier 3
Environmental	

Technical Areas (Safeguards)	
Material Control and Accounting	Tier 1/Tier 2*

*Category 1 facilities ranked Tier 1; Category III and Gas Centrifuge facilities ranked Tier 2



Example Recommendations

- Operations (Category 1 facilities)
 - Reassigned hours from residents, criticality safety and maintenance, re-emphasized chemical sequences
 - Resourcing change: 25 hours/year to 90 hours/year
- Fire Protection (Category 1 facilities)
 - New biennial procedure
 - Resourcing change: 50 hours/year to 15 hours/year



Overall Recommended Results

Annual Hours Direct Inspection

	Category I	Category III	Uranium Conversion	Gas Centrifuge	Gas Centrifuge w/CAP	Laser Enrichment
Current	1672	500	364	708	708	136
Proposed	1502	397	277	573	520	136
% Change	-10.2%	-20.6%	-23.9%	-19.1%	-26.6%	0.0%



Next Steps, and Timeframe

- The NRC will make a final decision and issue a tasking memorandum with the final recommendations report
- Program documents will be revised consistent with the final decision.
- Implement revised program—calendar year 2021