

Maximizing the Safety Benefit of FLEX Equipment

Michael Tschiltz
Director, Risk Assessment, NEI

RIC technical session on crediting Mitigating Strategies in RIDM

Use of FLEX – Value Proposition

- Improve safety and reduce risk
- Maximize operational flexibility
- Minimize regulatory burden and uncertainty

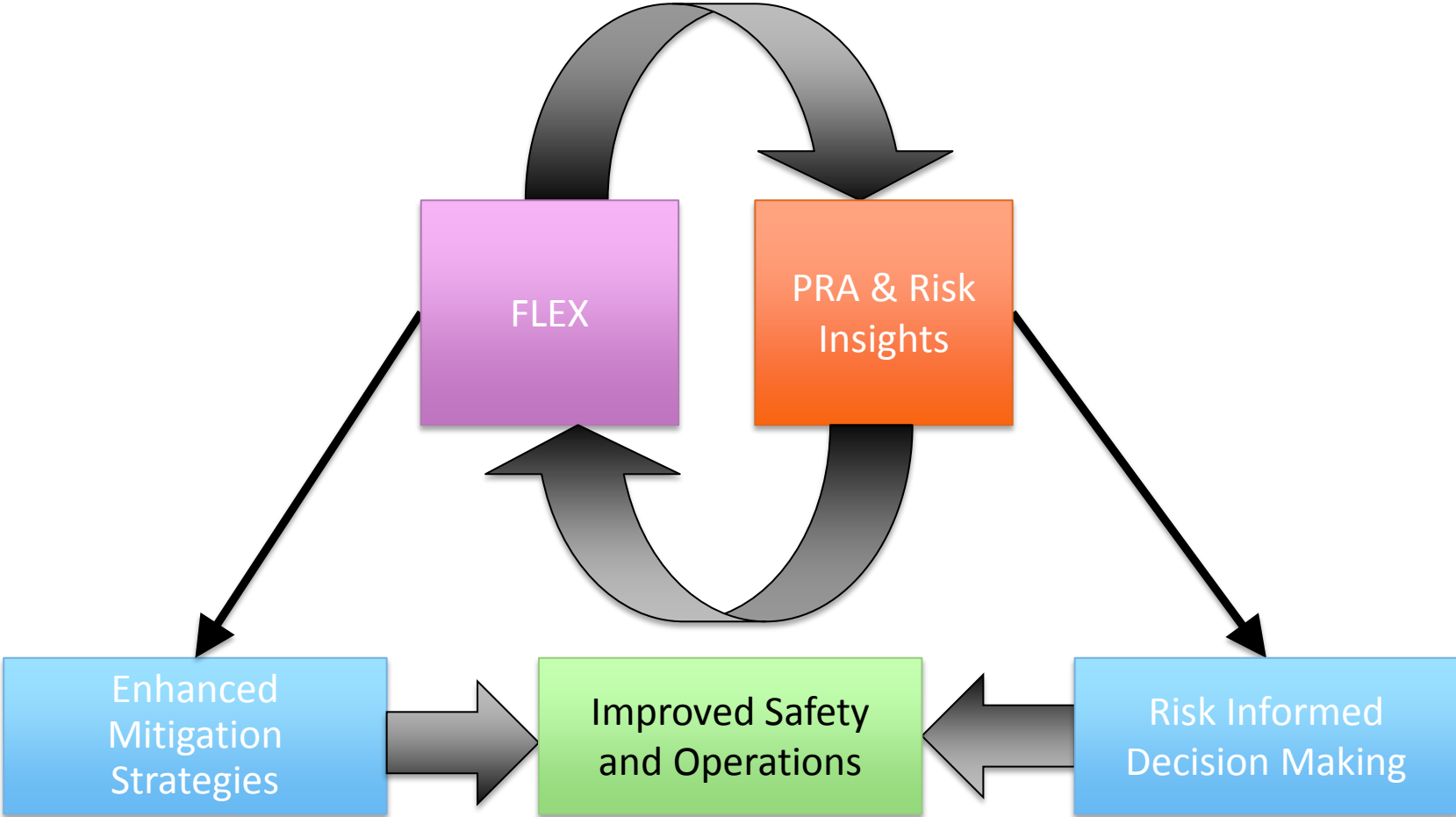
Potential Uses of FLEX

- **Reduce outage risk and duration**
 - Provide additional alternatives for maintaining functions while performing maintenance
- **Risk reduction during on-line maintenance**
 - Planned and unplanned Maintenance
 - NOEDs – compensatory actions
- **Crediting FLEX in the PRA and/or for defense-in-depth is beneficial for:**
 - **ROP processes:**
 - Significance Determination Process
 - Mitigating Systems Performance Indicator
 - Security
 - **Risk Informed Licensing activities:**
 - Risk-Informed Tech Specs
 - NFPA 805
 - Risk Informed Special Treatment
 - Other Technical Specification changes

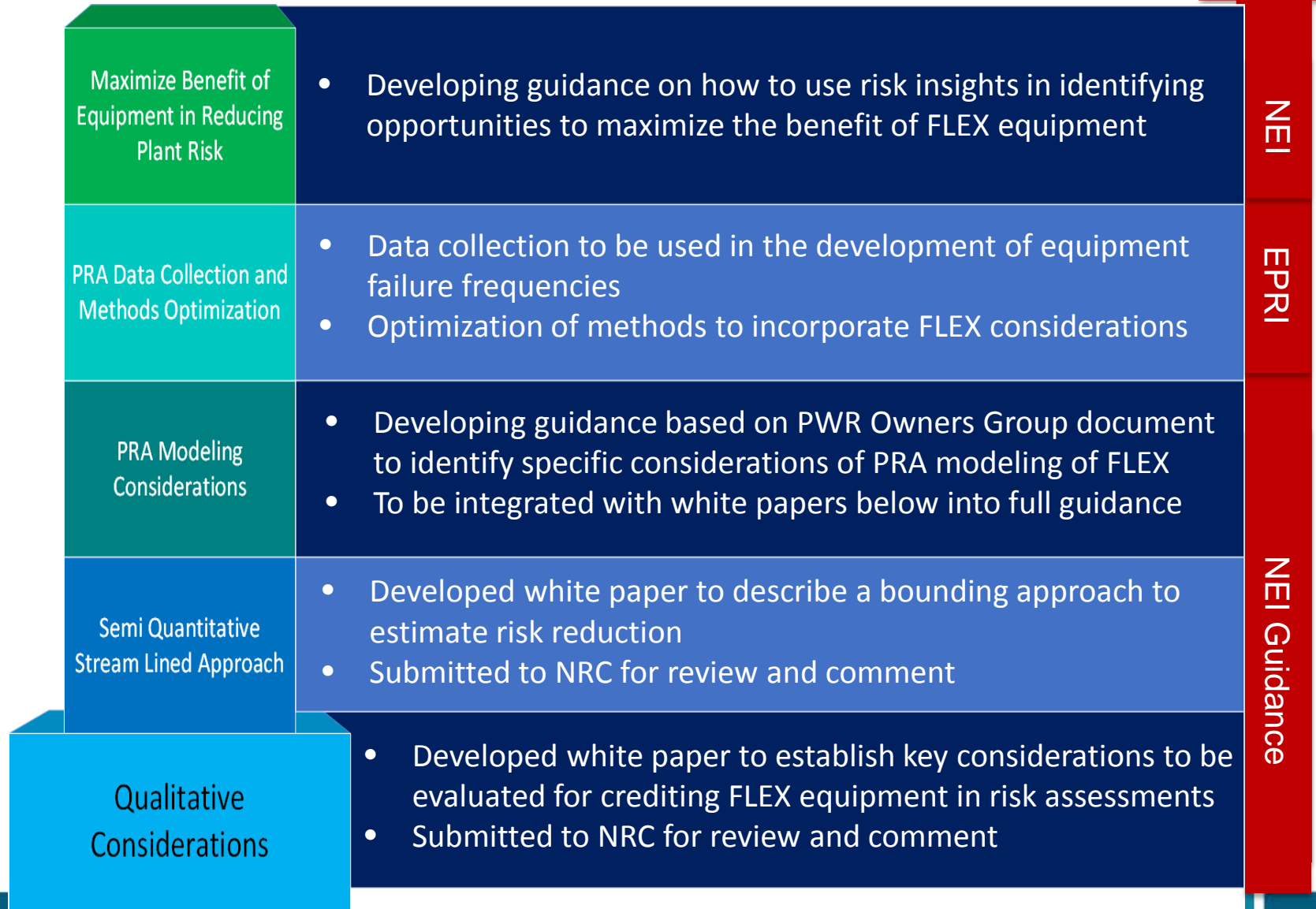
Considerations for the use of FLEX

- Consistency in use and treatment
 - Develop common industry methods for use in risk-informed regulatory activities endorsed by NRC
- Minimizing regulatory burden/uncertainty/risk associated with the use of FLEX
 - Treatment under the Maintenance Rule
 - Potential overlap with MBDBE rulemaking

FLEX and Risk Insights



FRIDM Task Force Activities



Potential Benefits of Activities

Activity	Areas of Potential Benefit						
	SDP	NOEDs	MSPI	Maintenance Rule (a)(4)		RG 1.200 Applications	
				Defense in Depth	Risk Calculations	Defense in Depth	Risk Calculations
White Paper Defense in Depth Approach to Crediting FLEX	X	X		X		X	
White Paper on Bounding Assessment to Estimate Risk Benefits	X	X			X		
Developing Guidance for Existing Methods on PRA Modeling	X	X	X		X		X
Refinement of Data to Model FLEX in PRA	X	X	X		X		X
Expansion of FLEX Strategies	X	X	X	X	X	X	X

Ongoing Activities

- FLEX in Risk Regulations Task Force
 - Developing guidance for accepted methods
 - Identify uses, associated requirements, guidance documents and potential issues/concerns
- Maintenance Rule – Draft Revision to NUMARC 93-01
- Risk Informed Steering Committee
 - Treatment of FLEX identified as one of top two risk informed regulatory activities for the industry and NRC