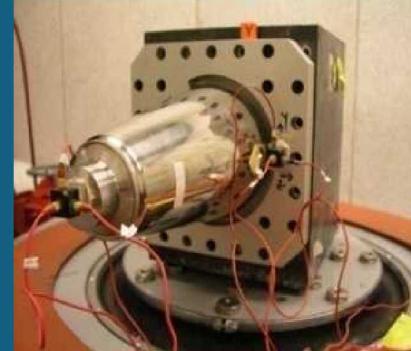


MBSE & Sandia Nuclear Weapons Product Realization System



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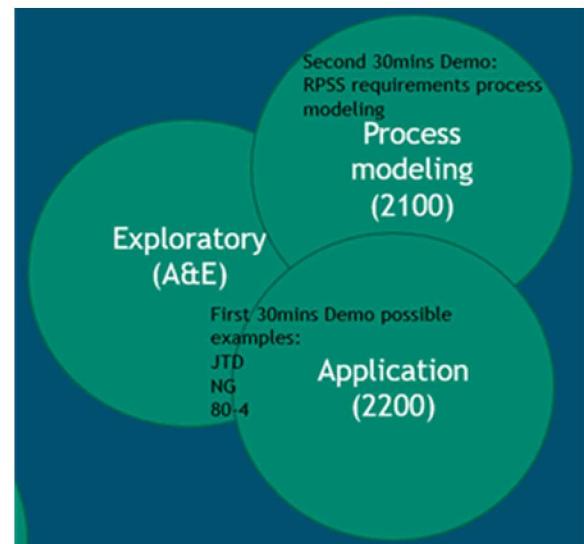
David Sais – ND Systems Engineering



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Agenda

- ***Understanding of MBSE architecture and principles***
- ***Synergies with Project Management and Systems Engineering***
- ***The power of model integration***
- ***SNL NW process modeling***
- ***Value proposition MBSE development and integration***
- ***Genesys MBSE demo - SNL NW Process Modeling***
- ***Q&A***





MBSE architecture and principles

How does MBSE fit into Program Management and Process Modeling

- Understand and improve the current system
- Build a foundation for the future
- Implement this system on a NW project



RPSS - Requirements Flow-Down

All NW process requirements on SNL's prime contract are funneled into our system and realized through Realize Product Procedures (RPPs)

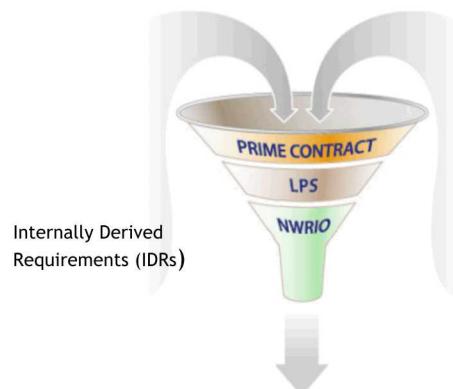
Management System: Requirements Framework

The Requirements and Standards listed below indicate those currently mapped to Nuclear Deterrence Portfolio Implementing Documents

Federal Requirements
▶ 10CFR830
▶ DOE Orders
▶ US Codes

Industry Standards
ISO 9001:2015(E) Quality management systems — Requirements
AS9100D (QMS Aerospace Standard) (For reference only)

Implementing Documents
Corporate Procedure Documents
RPSS Procedures (RPPs/BMPs)
Weapons Quality Assurance Program (WQAP)



136 RPPs specific to how SNL realizes NW product

Advantages of Applying MBSE with RPSS

- Understand and improve the current system
 - Visualize interactions and system complexity.
 - Identify RPP areas of redundancy and/or gaps.
- Build a foundation for the future
 - Understand cause and effect of cycle time reduction efforts.
 - Understand, quantify, and communicate risk
 - Build efficiency into the SNL site impact analysis process.
 - Visual and model-based engagement with PRTs, improving the end user experience





Demo slides in Genesys

Q & A





Thank You!