

# NWie/PRIDE Information Briefing

## SNL AWE Conference: November 8, 2007

Presenters: Rick Harris, 2990

The product of Sandia's NWSMU, by and large, is the information to build, maintain, and qualify the stockpile. We partner with the complex to deliver the end products.

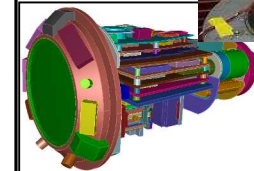
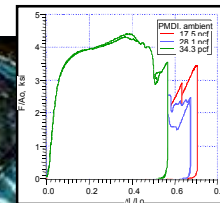
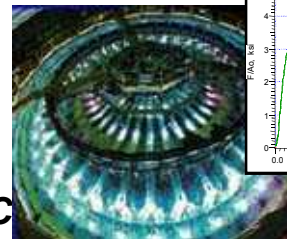
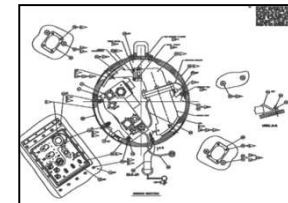
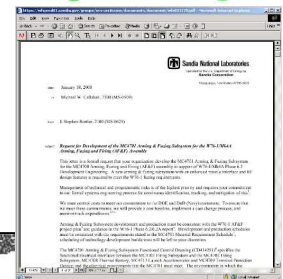
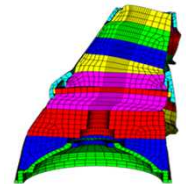
## Products of NWC

- Gravity Bombs
- Warheads
- RVs and RBs
- JTA Devices
- Nuclear Explosive Packages
- Non-Nuclear Components



## Products of SNL NWSMU

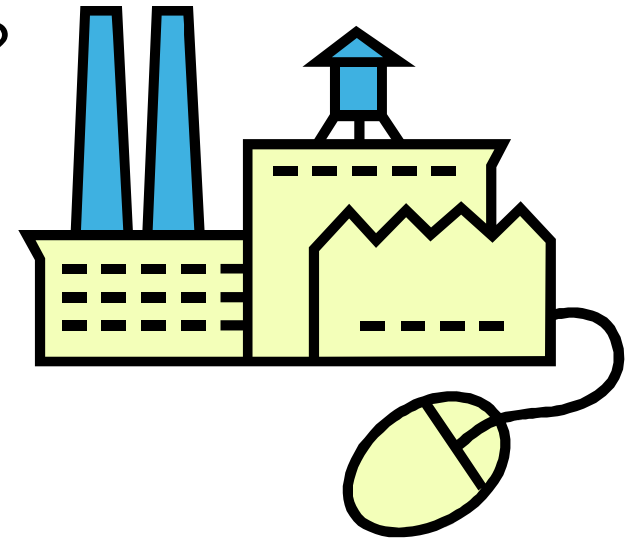
- Neutron Generators
- Development Test Units
- Test Devices
- Product Models
- Design Definition
- Test Data
- Analysis Data
- Reports





Given that information is our *product* the following questions come into play:

- What tools are we using to make our *product*?
- Where is our *product inventory* stored?
- Are individuals programs duplicating efforts to produce our *product*?
- Is our *factory* managed in a way to increase yield and reduce costs?
- Are *supply chain management* processes up to date?
- Is our *factory* responsive?





# The NWie Initiative was formed in FY2000 to better manage our *factory*

## At the end of the initiative NWie shall:

- Be the standard for information management within the NWSMU
- Be a model for the nuclear weapons complex
- Be a valued and trusted source for nuclear weapons information
- Be an integrated & secure information resource
- Have automated critical processes that are aligned with NWSMU business goals and easily adaptable to changing business needs
- Support the kinds of decisions we need to make
- Encompasses a suite of self-sustaining core capabilities, processes, and products necessary to ensure an available, functioning, and continually improving information system environment

## We are doing this by:

- Gaining a thorough understanding of user needs
- Understanding the business drivers for IT
- Creating a comprehensive accounting of all the IT capabilities out there
- Identifying Gaps and Disconnects
- Advising NW and IES Program Managers on Portfolio decisions
- Creating portal applications that integrate our disparate information systems together

NWIE is enabling the transformation of our engineering practices. Modeling, Simulation, and information are key to this *transformation*

Time measured in months

Time measured in months

Analysis feedback impacts design

Finite Element Mesh is created from design solid model

Simulations are run and results are post-processed for visual representation

Design product structure is understood within analysis results

Simulation supports product certification as well as experimental design and configuration

Information flows seamlessly between applications

Information flows seamlessly between our partners

Product information is readily available for Stockpile Stewardship

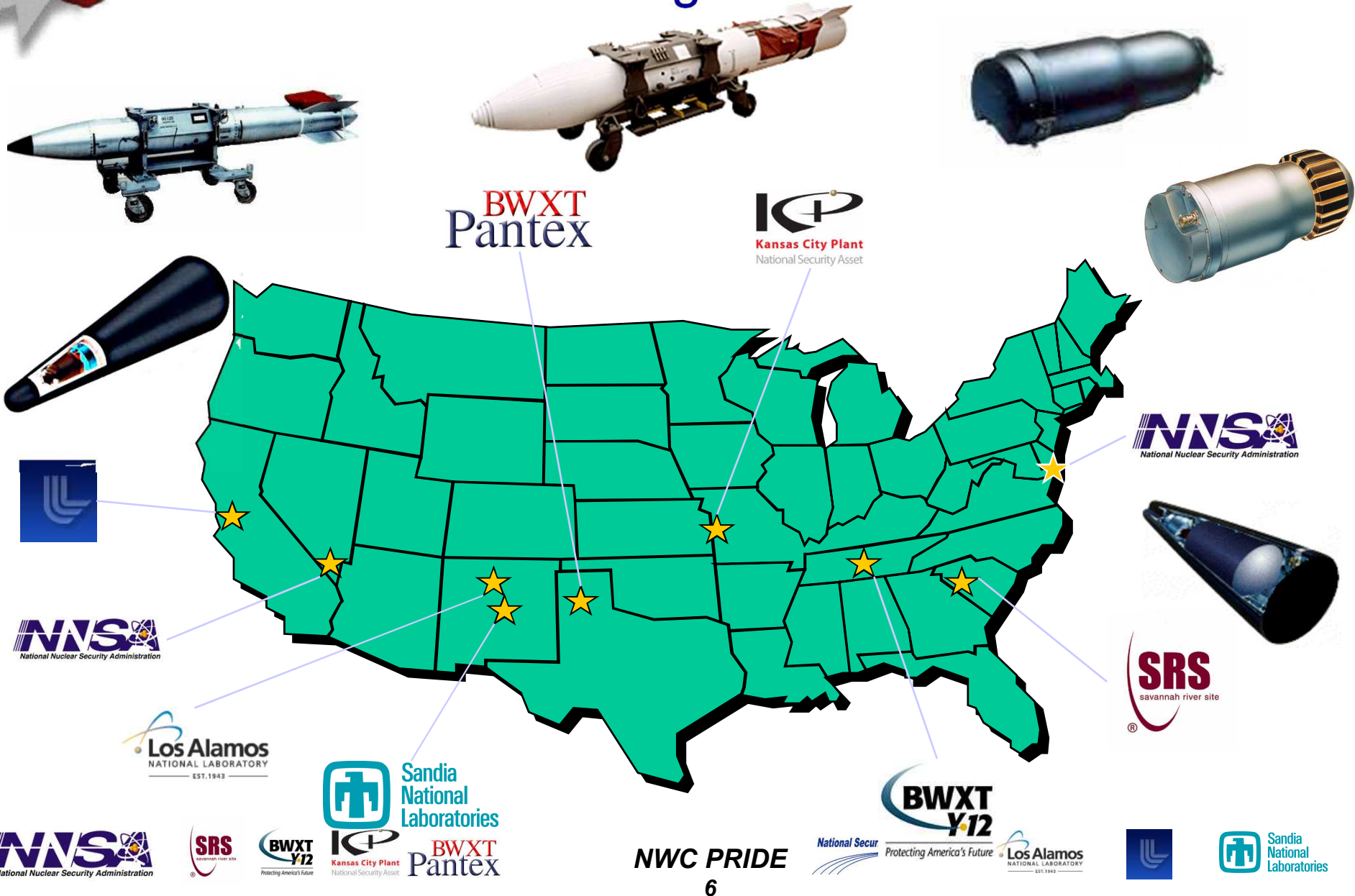
Processes

Models support Manufacturability

High quality products are delivered on time, the first time



# We did it for Sandia - Now PRIDE is doing it for the NWC





# NWC PRIDE

## Mission Statement

*Establish an NWC Integrated Digital Enterprise (IDE) that provides timely access to weapon product information (with appropriate need to know control).*

## Strategic Goal

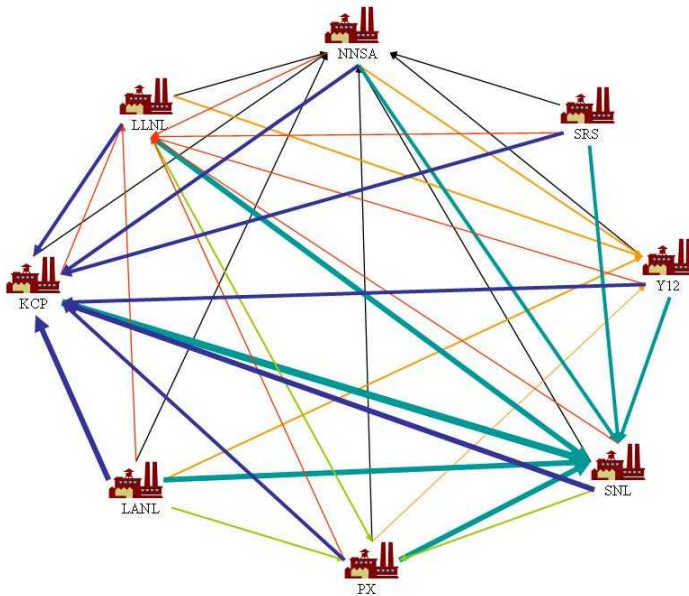
*The goal of this program is to **revolutionize** the way we manage and share information throughout the NWC to support product realization processes which establish an agile and responsive enterprise.*

# Transformation of the NW Complex Information Environment

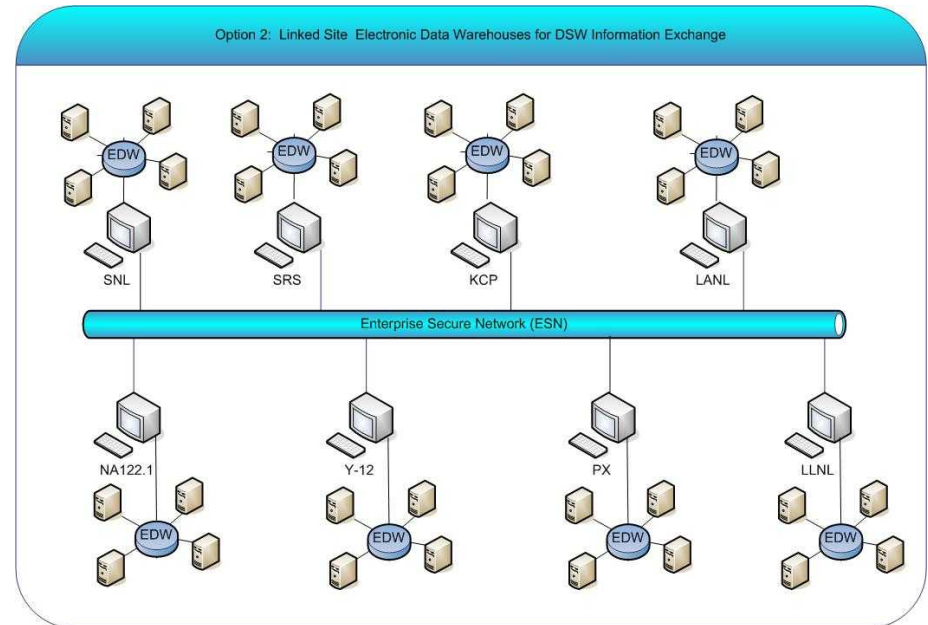
Today



Desired Future



- Independent Site Information System Architectures
- Data Shared thru pair-wise site to site agreements



- Complex Wide Information Architecture
- Data Shared throughout the NWC using common business rules



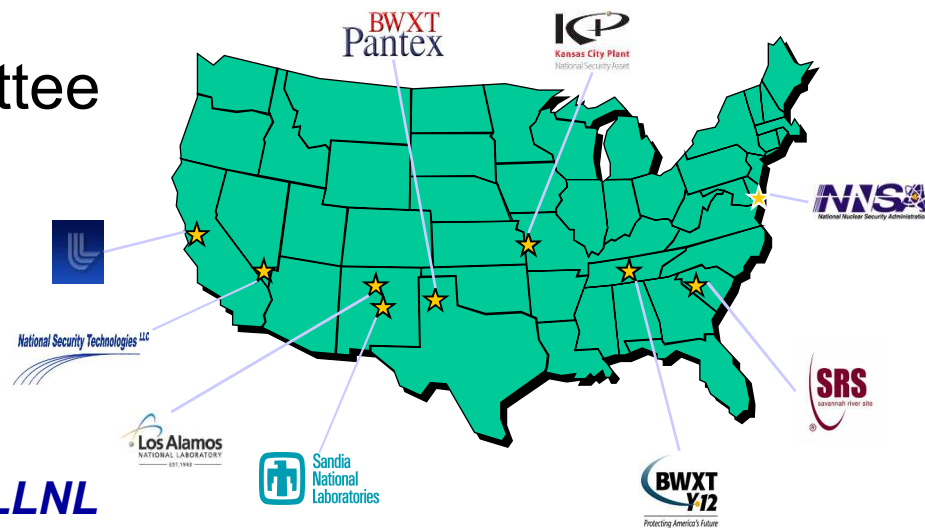


# PRIDE Program Approach

- Establish the Team
- Define the Scope
- Understand the Environment
- Identify the Dependencies and Partners
- Develop & Deploy Improved Applications
- Operate & Maintain Existing Applications

# PRIDE Executive Team

- Funding Customer: DSW, sponsored by NA122.1 (Joe Gazda)
- NWC Pride Executive Committee
  - **Paul Krumpe, NA-122**
  - **Carol Combs, NA-122**
  - **Brad Harshman, NA-65 EA**
  - **Patrick Edgerton, NA-65 ICSI**
  - **Bob Berglin, Nevada Test Site**
  - **Jean Biesiada, (Benjamin Grover) LLNL**
  - **James Davis, SRS**
  - **John Hudson (Perry Kent), PX**
  - **Mark McLean (Malcolm Green & Rob Mandl), KCP**
  - **Bob Shoup, (Chris Scully) LANL**
  - **Jim Snyder (Jim Parker), Y12**
  - **Rick Harris, SNL (Chair) (Fran Current & Patti Sanchez)**



# PRIDE Program Governance

## NWC PRIDE Guiding Principles

*In order to optimize the NWC PRIDE benefit to the overall NWC enterprise and its missions, we, the undersigned agree:*

**To ensure NNSA mission alignment and customer value is our focus...**

- The NWC PRIDE executive team will make project selection and funding decisions based on its established criteria that reflect NNSA mission and enterprise user information requirements.

**To ensure PRIDE policies, processes and tools are available to support the Product Lifecycle...**

- Standards, procedures and tools shall be established to support shared product definition that will enable a models based product life cycle.

**To enable better and more efficient decision making through access to accurate information...**

- Enterprise information stewardship will reside with the single designated authoritative source. Multiple authoritative sources will not be promoted or valued, and
- Access to PRIDE information will be extended to users based on a common secure infrastructure with need to know controls in a usable format.

**To promote integration and the realization of a true NNSA Integrated Digital Enterprise...**

- NNSA Enterprise-centric, rather than site-centric, focus will be applied in making Stockpile Services investment decisions related to PRIDE,
- Ease of integration is favored over best-of-class functionality, and
- COTS-based, minimally customized solutions are valued over in-house developed or highly customized solutions to leverage best practices, promote sustainability, drive interoperability, and achieve solution reuse.

**To manage resource accountability PRIDE shall...**

- Mitigate technology-based risks and dependencies by striving to be industry-current, bleeding-edge aware, appropriately secure,
- Utilize common enterprise architecture,
- Apply commonly agreed to technologies, and
- Leverage best-practices to the fullest extent possible.

**PRIDE Exec Team  
defined our Guiding  
Principles that defined  
the context for making  
investment decisions and  
established program  
priorities  
“To ensure NNSA mission  
and customer value is our  
focus”**



# The PRIDE Program Scope includes:

- PRIDE Executive Management Team -- coordinates/governs Complex-wide solutions to help ensure the “job gets done”....including RRW, LEPs, and Complex 2030 Transformation
- Complex-wide Electronic Information Management Systems (Both Product Realization & Information Management Systems)
- Development/upgrades and Complex-wide deployment of current and planned systems
- Integration/deployment of Complex-wide applications for all appropriate users (NTK controls)
- Operations & Maintenance (recurrent costs) of existing systems/software at all sites

**Emphasize Classified Environment**