



# WP-TNT<sup>SM</sup>

## Weapons Production Technology & Nuclear Training

Minds Meet. Technology Develops. Networks Form.



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### **Minds Meet. Technology Develops. Networks Form.**

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**WP-TNT is a cutting-edge university R&D and manufacturing network that has reinvigorated the relationship between the nuclear enterprise and modern university system. It was created to partner with the NSE to:**

- Develop, Mentor and Hire the next generation of scientists, engineers and technicians
  - Early engagement while at university through directly applicable R&D
- Early investment in students delivers effective, trained and cleared personnel on day 1
  - Investment promotes long term retention of employees
- Leverage university network facilities, faculty, and selected SMEs, to facilitate rapid innovation and directly enhance manufacturing capabilities
- Leverage TechSource strategic integration and process agility to facilitate agreements/partnerships/SMEs
- Network promotes the academic foundation to sustain the long-term capabilities needed for the NSE
- Broader engagement within the NSE and recent inquiries in related industries outside the NSE

**BRIGHAM YOUNG UNIVERSITY**

- Fundamental electrochemical properties of NaCl-KCl electro-refining cells
- Back electromotive force (bEMF) optimization
- Effect of high viscosity salts on current efficiency



**UNIVERSITY OF MICHIGAN**

- Corrosion in molten salts for all materials operations
- Capabilities of detecting moisture concentrations through electrochemical methods



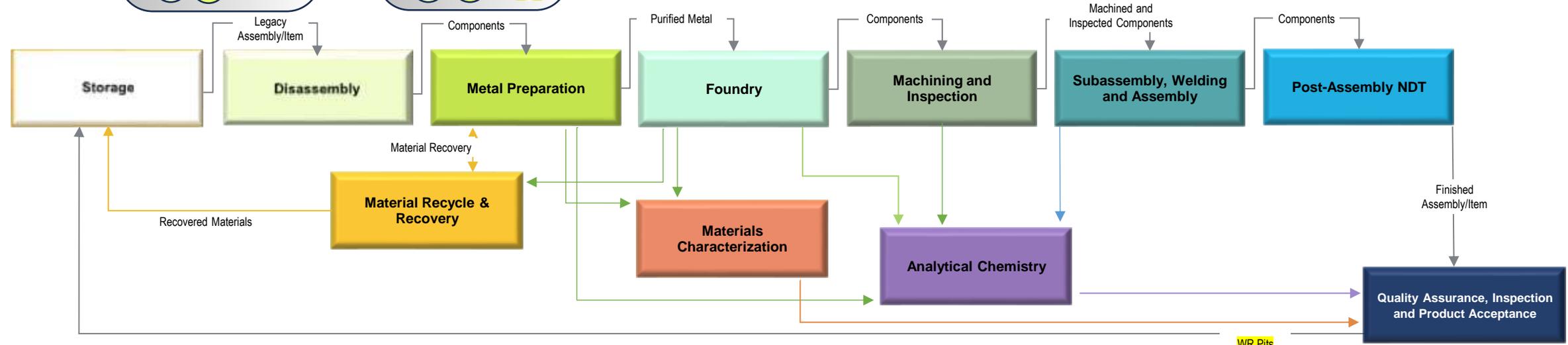
**UNI. TEXAS RIO GRAND VALLEY**

- Establish research-based activities and projects to prepare students for the LANL environment. Product and quality engineers and Inspectors
- Capstone projects



**MONTANA STATE UNIVERSITY**

- Non-contact Optical dimensionnel inspection technologies
- Future Advanced Machining Platform (FAMP) development
- Senior Design Projects

**AUBURN UNIVERSITY**

- Data capture system solutions
- Tag item specifications
- State of the RFID Industry – Annual Reports
- Data Standards, Data Integration, and Trust in Translation
- Capstone projects



**TEXAS A&M UNIVERSITY**

- High fidelity Monte Carlo N-Particle (MCNP) radiation transport simulations related to the 40mm Gun dynamic test facility
- ARIES Direct Metal Oxidation furnace and pyrochemical operations
- Capstone projects



**UNIVERSITY TEXAS EL PASO**

- Material engineering and additive manufacturing of advanced materials for nuclear energy needs
- Engineering advanced mold materials
- 3D printed electrochemical flow cells for capacitive deionization (CDI)
- Automation of Handheld Laser Induced Breakdown Spectroscopy (LIBS) System
- Capstone projects



**ARIZONA STATE UNIVERSITY**

- LANL sponsorship of up to 3 Capstone projects out of each of the Polytechnic campus and the Tempe campus in engineering (a total of 6) per year for the three-year intent
- ASU Polytechnic will partner with LANL ALDWP to enhancement of training functions for the initial training, continuing training, and workforce development of workers in the manufacturing environment of the LANL Plutonium Facility
- Develop a risk model related to LANL's high hazard, technically complex, and regulatory compliant operations



# The Integrated Network