

## **State of the Panel**

### **Welding Technology Panel**

**Paul Hebert, Panel Chair**

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# Welding Technology Panel - Scope

To bring together technical expertise from across industry, aimed at improving the technology and efficiency associated with welding and allied processes:



Forming



Post Weld Heat Treatment



Weld Joint Preparation

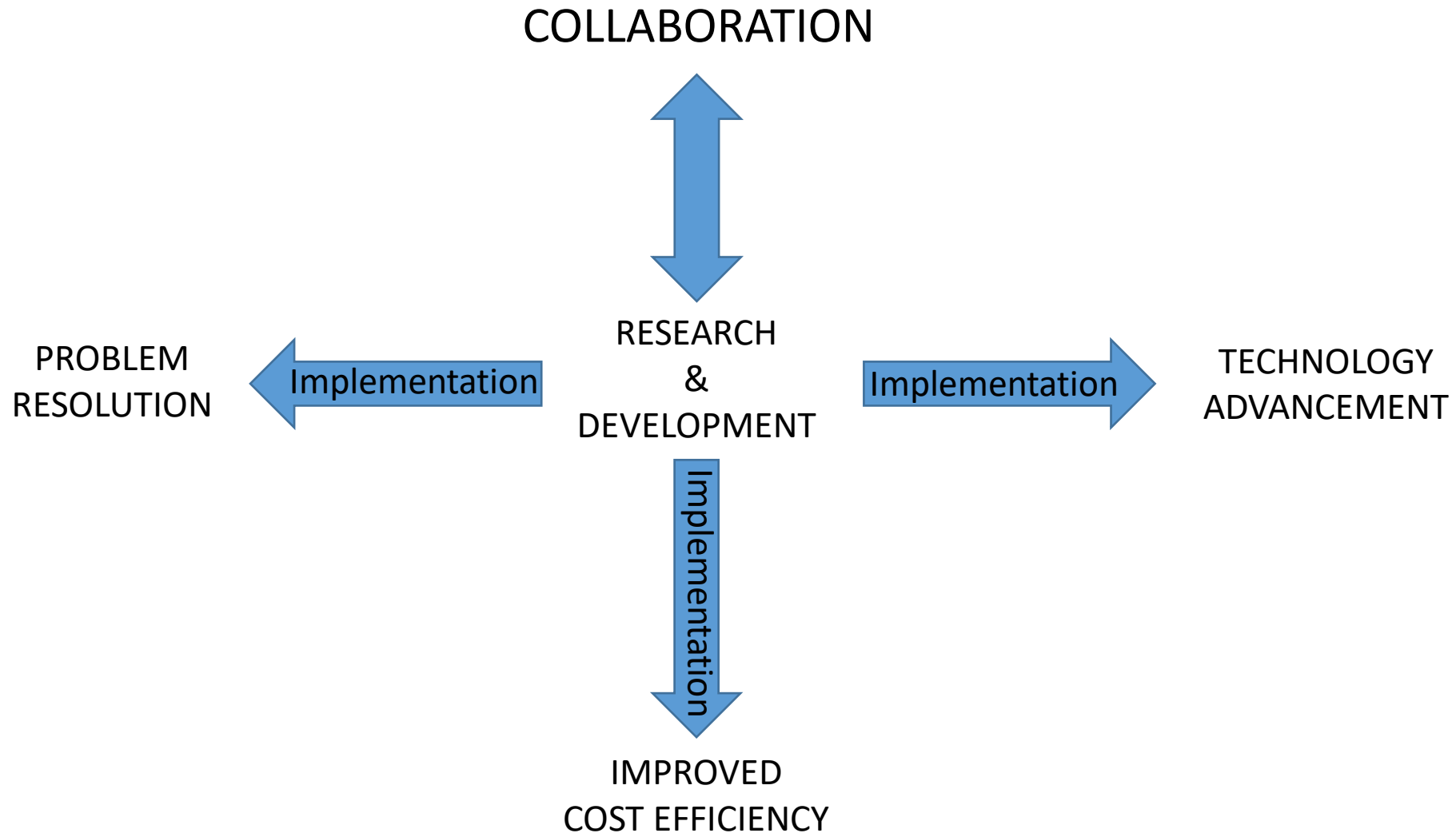


Welding and Other  
Material Joining  
Technologies



Inspection Methods

# Welding Technology Panel - Purpose



# Welding Technology Panel - Projects

*Recently Complete:*

- **Portable Buried Arc Welding**

- **Description:** A variation of the GMAW process that enhances weld penetration to enable full penetration welds in a single pass for material up to 3/4" thick. This project was aimed at retrofitting this process onto a portable mechanized tractor.
- **Benefits:**
  - Minimal joint prep
  - Reducing the number of weld passes
  - Reduced distortion

- **Optimized Weld Records**

- **Description:** Adapt existing industry software to optimize electronic weld records that satisfy Navy specification requirements. This software would enable passing down the relevant Welding and NDT requirements and capturing the essential elements related to the accomplishment of work.
- **Benefits:**
  - Enhance the decision making process and overall compliance by making the requirements readily available to those responsible for executing the work.
  - Provide a consistent and user friendly format for documenting accomplishment of work
  - Enable easy access to Weld and NDT data for efficient planning and process improvements

# Welding Technology Panel - Projects

*Working:*

- **Next Generation Double Electrode GMAW**
  - **Description:** Evaluate and benchmark the latest advanced double electrode GMAW processes and consumables for high speed fillet welding.
  - **Benefits:**
    - Faster Weld Speeds
    - Reduced distortion
- **Breakthrough Welding Process for Pipe and Plate**
  - **Description:** Develop the data and procedures needed to implement K-TIG for welding single-sided, single-pass square butt joints in pipe and panels
  - **Benefits:**
    - Reduce or eliminate joint prep operations
    - Reduce arc-on time
    - Reduce risk of rework due to multiple passes
- **GMAW Electrode and Procedure Technology for Silicate-free Weld Deposition**
  - **Description:** Evaluate GMAW electrode technology that offers silicate free deposition and acceptable properties.
  - **Benefits:**
    - Reduce interpass cleaning
    - Enable uninterrupted multi-pass welding

# Welding Technology Panel - Meetings

## **Welding Technology Panel typically meets twice each year:**

- Excellent technical agendas including welding, inspection, materials and processes
- Each meeting typically includes an industry tour

## **Recent Meetings:**

- Nov/2021 – Hanover, PA – Hosted by ESAB
- Aug/2022 – Traverse City, MI – Hosted by AlcoTec

## **Future Meetings:**

- Thursday, Mar 30 – 8:00 AM – Noon
  - 6 technical presentations/discussions
  - Mini-Robotic workshop
- Late Summer/2023
  - TBD

# Questions?

