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MANTECH/BMPCOE

• MANTECH
  – Strengthens the U.S. industrial base by further broadening the reach of BMP's core competencies throughout government, industry, and academia
  – Focal point for developing, promoting and implementing policies that ensure a strong technologically superior defense industrial base
  – Sound link to industry and academia to improve manufacturing practices and train students

• The BMP Center of Excellence (BMPCOE)
  – Established in 1993 to foster Best Practices collection and implementation
  – Consequently, we have strong systems engineering, risk management, and production strengths
  – One of nine ONR Centers of Excellence under Manufacturing Technology (MANTECH) Program
  – Partnership among Dept of Commerce, University of Maryland and Office of Naval Research
  – Located on Campus at University of Maryland
BMP Core Competencies

- Best Practices Surveys - conducted to identify, validate, and document best practices, and encourage government, industry, and academia to share information and implement the practices.

- Systems Engineering - facilitated by the Program Manager's WorkStation (PMWS), a suite of electronic tools that provide risk management, engineering support, and failure analysis through integrated problem solving (latest version and tutorial available at www.bmpcoe.org).

- Web Technologies - offered through the Collaborative Work Environment (CWE) to provide users with an integrated digital environment to access and process a common set of documents in a geographically dispersed environment.

- Risk Management – Through TRIMS we conduct detailed process oriented risk assessments.

- Production Support – support design reviews, design efforts for producibility (a design term), and production lines.
Red Teams

“We’re here to help!” – sure
“We’re happy to see you!” – right

• We are not a government auditor
• BMP Red Teams **assess** risks to manufacturability:
  – Documents Review
  – Personal Interviews
  – Systems Hardware/Software
  – Overlay Analysis with BMP Systems Engineering Model
  – Baseline Risk Assessment
  – Contractor Review Process
  – Producibility Analysis
  – Risk Mitigation
  – Monitoring

*We really are here to help!*
TRIMS Systems Engineering Knowledge Base Template

**DESIGN**
- Design Ref Mission Profile
- Design Requirements
- Trade Studies
- Design Policy
- Design Process
- Design Analysis
- Parts, Material Selection
- Software
- CAD
- Design for Testing
- Built-in Test
- Config Control
- Design Reviews
- Design Release
- Bread Board Development
- Brass Board Development
- Spec Dev/Allocation/Validation
- Prototype Dev Review
- Design for Assembly

**TEST**
- Integrated Test
- Failure Reporting System
- Uniform Test Report
- Software Test
- Design Limit
- LIFE
- Test Analyze & Fix (TAAF)
- Field Feedback
- Temp Development/Execution
- Software Simulator

**PRODUCTION**
- Manufacturing Plan
- Quality Manufacturing Process
- Productivity Center
- Subcontracts/Site Surveys
- Spares
- Technical Manuals
- Logistics Analysis Documentation

**FACILITIES**
- Modernization
- Factory Improvements
- Facilities/Site Surveys
- Support & Test Equipment
- Training Materials & Equipment
- Spares
- Technical Manuals
- Logistics Analysis Documentation

**MANAGEMENT**
- Manufacturing Strategy
- Personnel Requirements
- Data Requirements
- Technical Risk Assessment
- Production Breaks
- Determining Defining Need for System
- Prepare Requirement Documents
- Quality Assurance
- Design Milestone Review Planning
- Make or Buy Decisions

**LOGISTICS**
- Logistic Support Analysis
- Manpower and Personnel
- Support & Test Equipment
- Training Materials & Equipment
- Spares
- Technical Manuals
- Logistics Analysis Documentation

* Example

Blank background = not evaluated
BMPCOE SBIR Assistance

• Supporting ONR’s SBIR Office
  – Initial Risk Assessment and Product Maturity Review – scaled down Red Team process focused on Small Business risk reduction
  – Completely funded by ONR
  – Initial phone calls/site visits
    • Govt reps (TPOC, Requirements and Resource Sponsors)
    • Specifically tailored team of 3 or 4 BMPCOE engineers conduct SBIR company site visit to assess risk to manufacturability
    • Follow-up as necessary

• BMPCOE Report to ONR – ONR may share some or all of team report with SBIR company
  – Product Description
  – Company Description
  – Risks
  – Programmatics (contract value, spending history, current status)
  – Observations
  – Conclusions – issues preventing forward progress
  – Recommended Way Ahead

• Assistance as desired by SBIR company as approved by ONR
Point of Contact

BMPCOE

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