



## **PD782**

### **3D Model-Based Enterprise (MBE) and Model-Based Definition (MBD)**

#### **Day 1**

- History and evolution of product definition – Why are we where we are today?
- Why MBD and MBE are How Your Company Will Be Doing Business
- What’s Wrong with Using Drawings?
- MBD and MBE Vocabulary, Terminology, and Concepts
- Types of Model-Based Definition
  - Model-Based Product Definition
  - Model-Based Process Definition
- Presentation Data and Representation Data
- Standards and Development in MBD and MBE
- Product Definition Datasets and Process Definition Datasets
- Technical Data Packages (TDPs)
- Content and Structure of Models, Datasets, and TDPs
- Dataset Classes 1-5
  - Drawings, Models, and Combinations
  - Pros and Cons of Dataset Classes 1-5
- How to Develop and Work with Annotated Models
- Product and Manufacturing Information (PMI)
- The Role of GD&T in MBD

#### **Day 2**

- MBD for Part and Assembly Definition
- ASME Y14.41
- Native and Derivative Data Formats (CAD, 3D PDF, STEP, QIF, JT, etc.)
- Pros and Cons of Derivative Datasets
- Managing Derivative Data and Datasets
- Eliminating Disconnected Derivative Data
- 3D Model Data Schema and Structure
- MBE Capability Index
- Where to Start with MBD and MBE



- Implementing MBD and MBE
- Transitioning to Higher Levels of Model-Based Capability
- Recommendations and Best Practices
- Streamlining Model-Based Processes
- New Ways of Thinking About Business
  - Hidden Costs of the Status Quo and Business as Usual
- Payback, Reasons, Justification, and Business Cases for MBD and MBE
- Culture Change Required for MBD and MBE
- Model Quality and Data Quality For MBE
- MBD and MBE Workflows
- Tools, Methods, Use Cases, and Examples