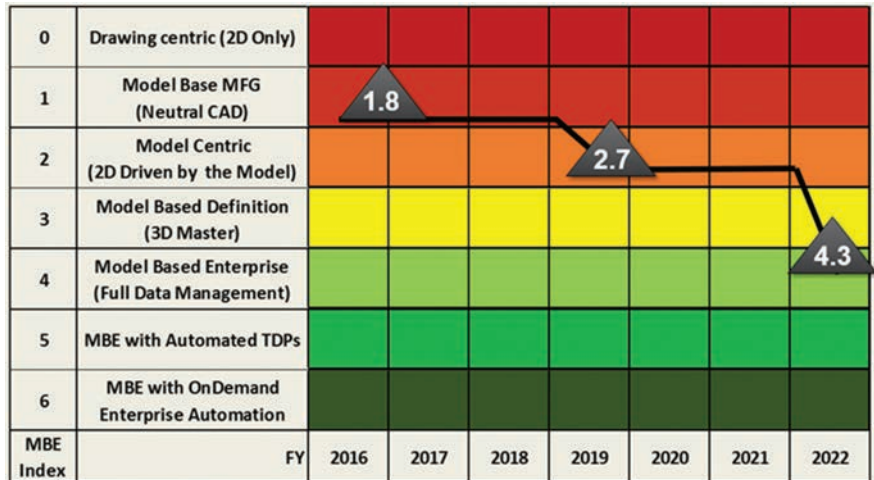


Net-Centric Mode Based Enterprise (MBE) Phase II

OBJECTIVE/SOLUTION:

Net-Centric Model-Based Enterprise Phase 2 (NCMBE2) seeks to define, develop, and demonstrate Model Based Enterprise (MBE) technologies and processes within the Army's organic base and private industry to reduce acquisition costs, risks and lead times by expanding Army's capabilities in MBE techniques to capture, standardize and reuse tech data across disciplines and lifecycle milestones. Project will develop standard processes and identify infrastructure for Arsenals and PMs to acquire and utilize government-owned 3D TPD, develop Standard Parts Library for common hardware and fasteners to eliminate redundant models, integrate Army/DoD requirements into MBE-related industry standards (e.g., ASME Y14.41 & Y14.41.1, MIL-STD 31000, S1000D, and the various ISO STEP Application Protocols).



Current State: 1.8 - TDPs reside at ESAs, Drawing centric with model remastering within manufacturing
 Planned State: 2.7 - TDPs reside within LPDM, Model Centric with reuse within manufacturing
 Desired State: 4.3 - TDPs reside within LPDM with digital linkage to LMP, Model is the master driving downstream processes.

Roadmap depiction for digital manufacturing model based enterprise capability level for Rock Island Arsenal demonstration

Achievements:

- Performed preliminary assessment using updated MBE Capability Index Tool at Rock Island Arsenal
- Detailed baseline assessment planned for summer 2016 to determine MBE technology implementation plan
- Initial planning underway for informing MBE related standards writing bodies on DoD issues associated with utilizing Model-based Definition (MBD) data
- Initial investigation underway for Standard Parts Library

Benefits:

- Arsenals and PMs will have capability to fully utilize MBD data to reduce costs and improve cycle times
- Updated key MBE standards that reflect DoD needs for using MBD data
- Standards Parts Library that DoD and contractors can utilize that eliminates redundancy and misinterpretation

Benefits (cont):

- Will provide an array of tools used in end-to-end demonstration of MBE in the organic industrial base which include the following:
 - Basic 3D TDP structure and best practices
 - Preliminary contracting language
 - Certificates of Net-worthiness for tools prototyped under ManTech
 - Proof of concept linkage between two Product Data Managers (PDM)
 - MBE processes for the prototyping processes
 - Processes for the creation of a 3D TDP
 - Processes for reverse engineering
 - Model Based Work Instruction tool set
 - Manufacturing planning tool set
 - Prototype of a Machine Tooling Library
 - Prototype producibility analysis tools

Transition and Weapon Systems/Secondary Items Impacted:

- Direct transition to Rock Island Arsenal of MBE related tools and technologies developed previous ManTech efforts

Point of Contact: Army ManTech Manager, U.S. Army Research, Development and Engineering Command (RDECOM), Armament Research, Development and Engineering Center (ARDEC), Munitions Engineering and Technology Center (METC), ATTN: RDAR-MEM-L, Picatinny Arsenal, NJ 07806-5000