How to Get Started – Level 2 Model Centric

Neutral Model CAM- Disconnected Enterprise

The chart below defines the Model Based Enterprise Capability Level 2:

Design Data (CAD)	Technical Data Package	Change and Configuration Management Data	External and internal Manufacturing Data Exchange	Quality Requirements, Planning, and Inspection Code Generation	Enterprise Collaboration and data Exchange

-2D drawing creation & information content.
  - Defines most or all part annotations. Presents geometry from the model
3D model creation & information content
  - Defines all part geometry May define some part annotations
Model/drawing associatively
  - 3D model & 2D drawing are associated
Supplementary Data (Notes, Parameters, non-geometric data)
  - Notes are defined as text on the 2D drawing
Checking & Model Quality
  - 2D drawing annotations validated. 3D model geometry validated
BOM
  - eBOM managed in PLM eBOM linked to CAD models
	-Collection of elements into TD
	  - Ad-hoc, Manual collection of TDP data (digital and physical data)
	-Management of TDP
	  - Manual physical delivery of TDP data
		-Release and change processes
		  - Drawing Based
		-Element Management (supplementary data, 3Dmodels/Drawing)
		  - 3D model is managed in sync with 2D drawing
		-Authority
		  - 2D drawing
			-Process for providing PMI Data to Mfg and inspection and any other groups that may need PMI
			  - 2d drawing viewable, eBOM and native 3D CAD model (or exported 3D neutral model) manually sent to mfg supplier
			-Mfg Process Generation (Process Plans & Work instructions)
			  - Exported 3D neutral models used to generate process plans and work instructions
			-Mfg Code Generation
			  - Manufacturing code is generated by using 2D drawing or regenerated using a model as reference only. Code is stored independent from 2D drawings and/or models.
			-Mfg Data Management (Process plans & work instructions)
			  - Managed in separate mfg database
			-Mfg Process Associatively (Process Plans & Work Instructions, tooling)
			  - No associatively to design models
				-Quality/Inspection Code Generation
				  - Use copies of native 3D design models to generate NC/CMM programs
				-Quality Requirement Data Management
				  - Managed in separate database outside of PLM
					-Design Data provided to internal enterprise
					  - Internal PLM access to native 3D CAD model, 2D drawing viewable and eBOM. Exported 3D CAD neutral model provided by engineering as requested. This will be given to all internet users of the system with little regard to their role.
					-Design Data use by the internal enterprise
					  - Product data inputs are re-mastered or exported 3D neutral model used
					-Design Data provided to external Design Authority
					  - 2D drawing viewable, eBOM and exported 3D CAD neutral model manually sent to external enterprise

This capability level is essentially the same as Level 1 except instead of using neutral files it centers on the reuse of the native CAD data. They also made available to the extended enterprise by request. Access to these models becomes more important when the enterprise uses a homogenous product suite that can fully utilize the models without translation. This further reduces the chance of error and time to mission.

Summary:

- Drawings are the master
- 3D models are associated to the drawing
- Initial reuse of the model data through native formats
- The TDP is manually created
- There is little or no connectivity with the extended enterprise