Process and use cases

Concept
Simulation
Definition
Manufacturing
Support

Domains

Product specification
Configuration
Document structure
Effectivity
Delta change
Physical structure
Part, version, view identification
Geometric shape
Transformation
Person, organization and address
Date and time
Approval, contract and project
Activity
Work management
Requirement
Property
Breakdown
Identification
Name and description
Multi linguism
Material
Classification
Information right
Process plan
Part occurence
Assembly structure

Concerns

Translations (languages not geometry !)
Materials
Prices
Tolerances
Coatings
Composites
Simulations
Units
Suppy / suppliers
Tooling
3D exact vs 3D tesselated vs 3D history/parametric
Production checks / metrology
Manufacturing / CAM files
External references
Parts libraries
Dimensions
Annotations
Kinematics / Joints
Anchors
Electrics / electronics
BOMs

https://www.cax-if.org/documents/AP242/AP242_mim_lf_1.36.htm

Constructing an information system around a product is a data modeling problem

Text only → versionnable

20% of a complex model (e.g. AP242) should cover 80% of the needs (Pareto)

Topology and geometry handled by scripts and neutral files

The single location of truth is the data model and its content, scripts and Uis only act on the model and its content

Some parts of the data model are specific to a project, others are generic
(e.g. languages, units, materials ...)