Facility Construction and Operation is a Complex Process

Companies struggle with people, operational processes and systems to build assets faster and at higher margin

engineering   procurement   contracting   construction   operate

People

Processes

Define »»» Engineer   Procure »»» Construct »»» Support

Technology

Product Life Cycle Management   Supply Chain Management   Enterprise Resource Management   Plant Maintenance

Internal   Customer
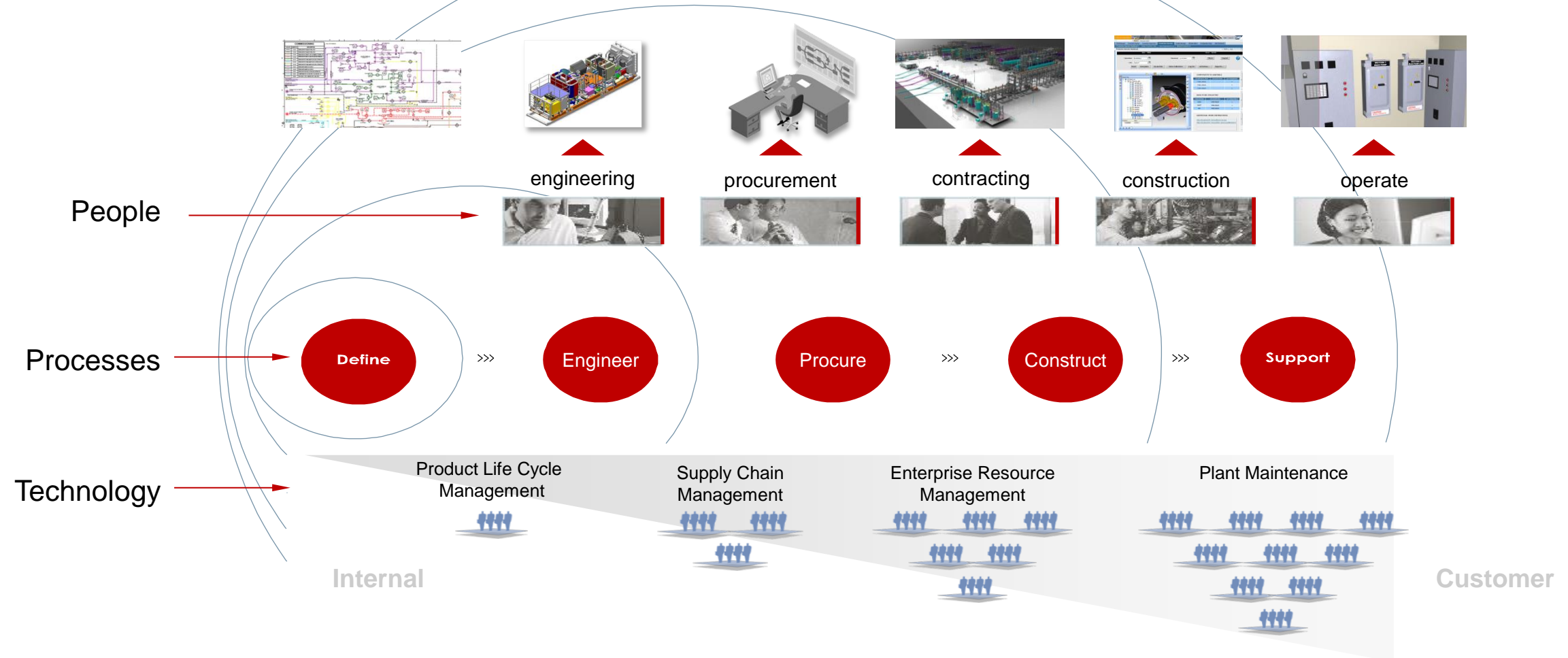
What is Facility Lifecycle Management?

FLM covers automation and management of all digital facility information from the Engineering and Construction phase into Operational status to support Operational Excellence

| Preliminary Engineering | Detailed Engineering | Procurement/ As-Built Construction | | Handover and Commissioning | As Maintained Operations |

Asset Creation / Project Delivery Phase → **Asset Operation Phase**

Contractors & Subcontractors

Owner/ Operators

[*Virtual Design and Construction*]

[*Building Information Management*]
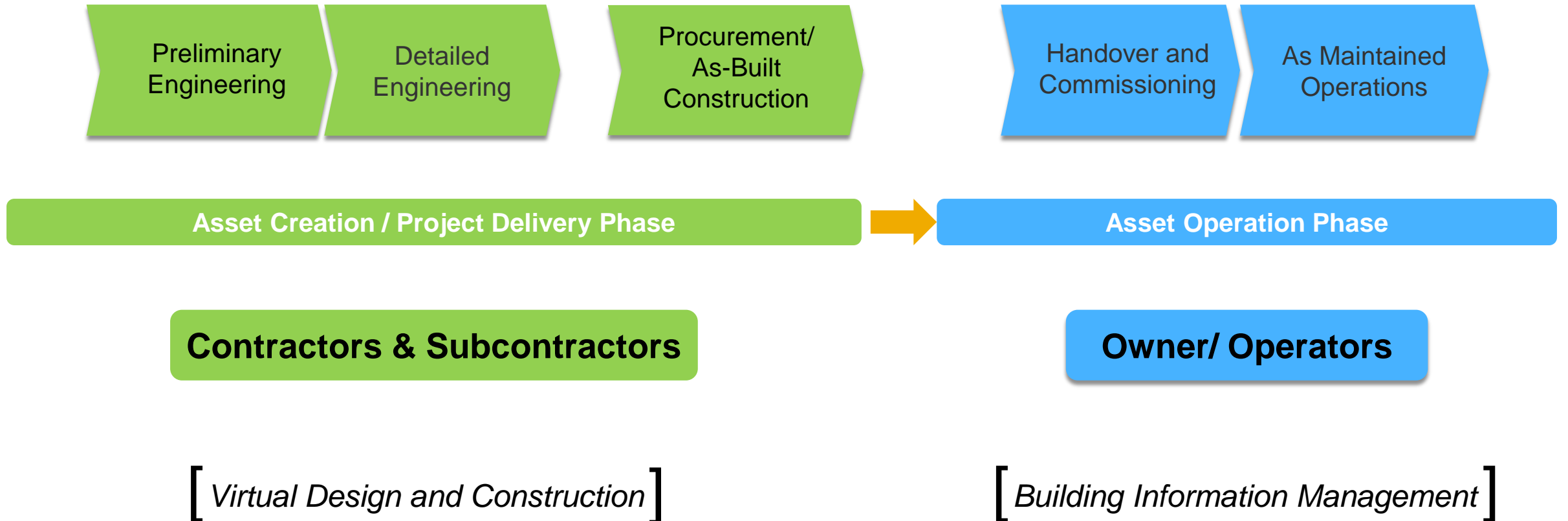
Engineer to Operate Digital Integration
Engineering System Of Record To Master Data Creation For EPC And O/O

✓ Engineering is the primary source of truth for material, manufacturing and construction data stored in Intelligent Plant Models.
✓ Engineering Data (120+ formats) is extracted, mapped and published into SAP master data under Change Control
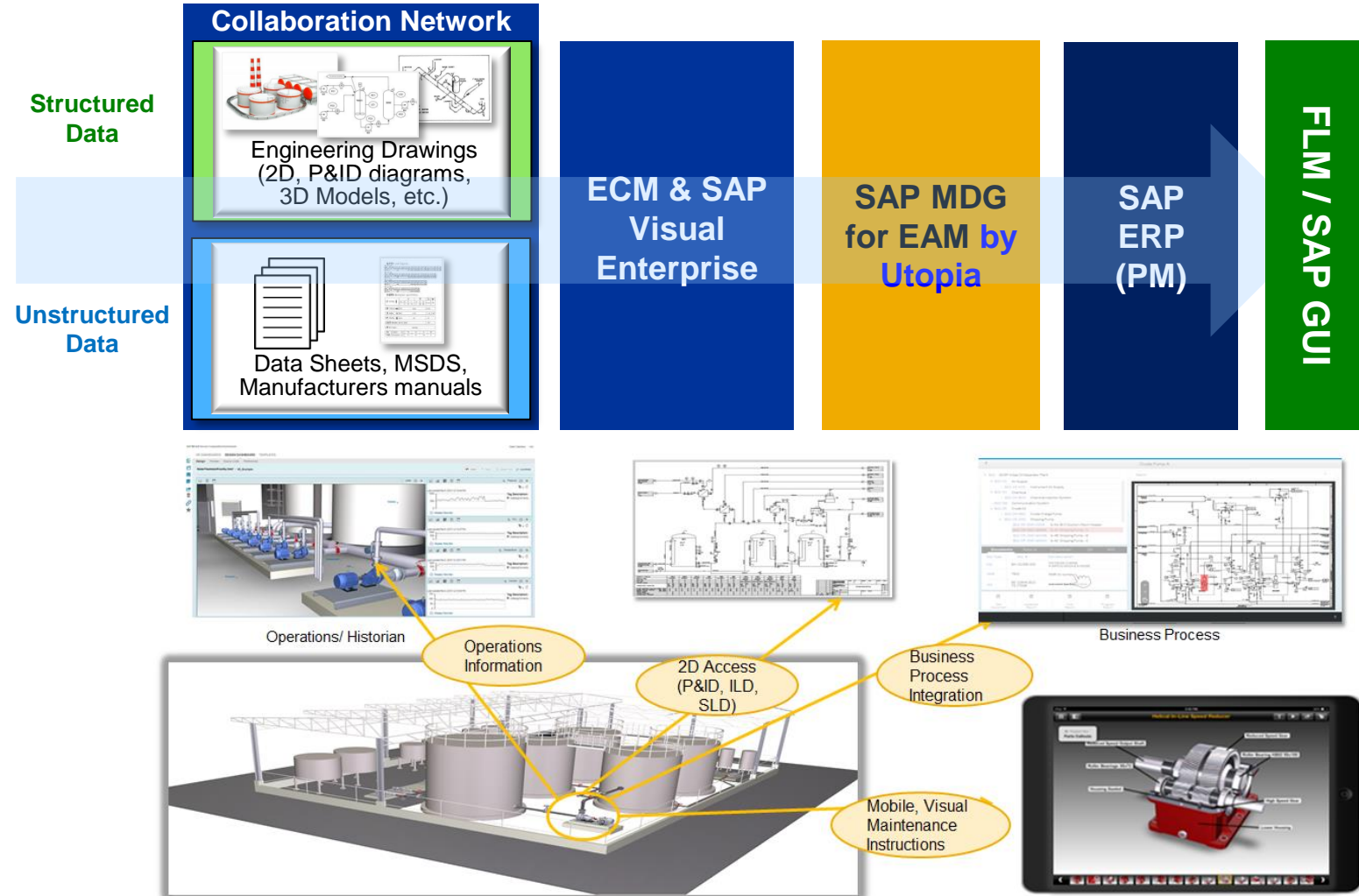✓ VE automation populates ECC MM, ERP, EAM and PM modules used during asset Construction and Operations.
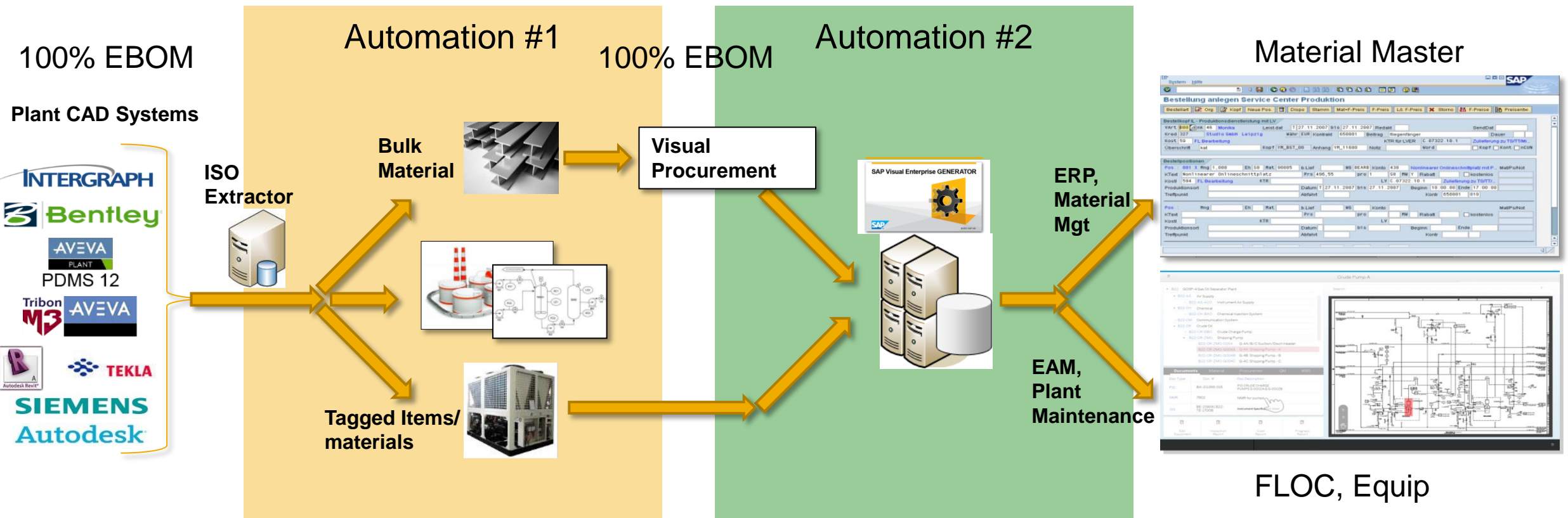
What is Facility Lifecycle Management for O/Os?
Business Benefits during Integrated Asset Operations

Accurate, as-built, asset master data for operational excellence

- ❑ **Eliminate** information loss by combining unstructured and structured data of the facility

- ❑ **Automate, Manage** unstructured data and place them into MDG 'staging area' and document management

- ❑ **Augment** harmonized data during change management workflow

- ❑ **Visualize and Transact** on as-built information for Plant Maintenance

Collaboration Network

Structured Data — Engineering Drawings (2D, P&ID diagrams, 3D Models, etc.)

Unstructured Data — Data Sheets, MSDS, Manufacturers manuals

ECM & SAP Visual Enterprise

SAP MDG for EAM by Utopia

SAP ERP (PM)

FLM / SAP GUI

Operations/ Historian

Operations Information

2D Access (P&ID, ILD, SLD)

Business Process Integration

Business Process

Mobile, Visual Maintenance Instructions

Thank you