Business Vision Architecture
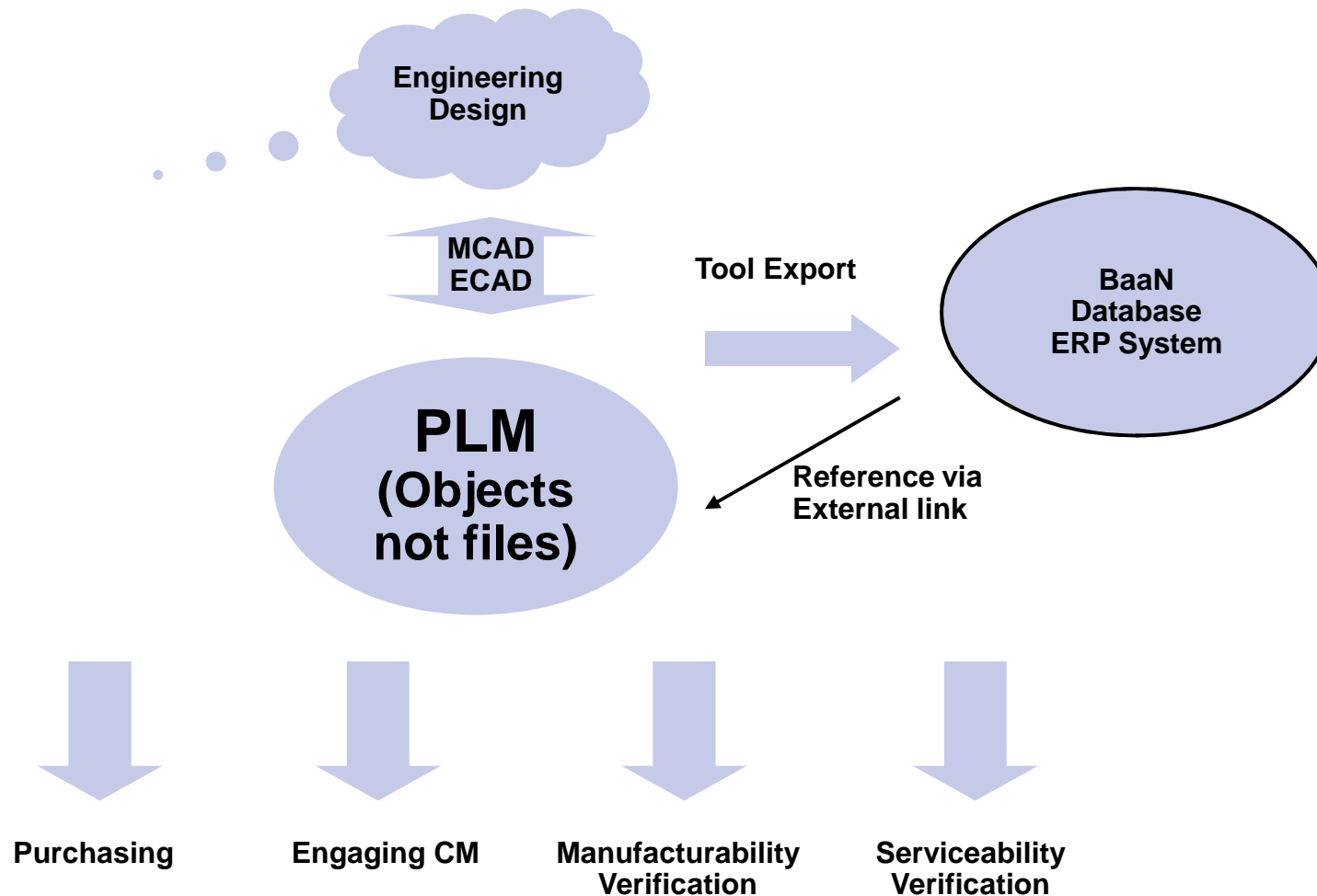
Windchill® @ COM DEV

Objective

A "to be" vision of a complete business system encapsulating ERP and PLM systems in COM DEV.

Current Process

Engineering Design

Manual required entry data →

Excel Spreadsheets

Import tool & Manual entry of data →

BaaN Database ERP System

MCAD ECAD

Acceptance EDR

CAD Database →

L-Drive Flat File System

Manual manipulation of PDF files by DO office

Released Design Documents DO

Reference via naming convention

Manual extraction throughout project

Manual information Exchange logging, Version tracking, PO issuing

Manual Data Exchange with Contract Manufacturer

Windchill ® @ COM DEV

Process After Stage 2 with PLM

Engineering
Design

MCAD
ECAD

Tool Export

BaaN
Database
ERP System

PLM
(Objects
not files)

Reference via
External link

Purchasing

Engaging CM

Manufacturability
Verification

Serviceability
Verification

Windchill® @ COM DEV
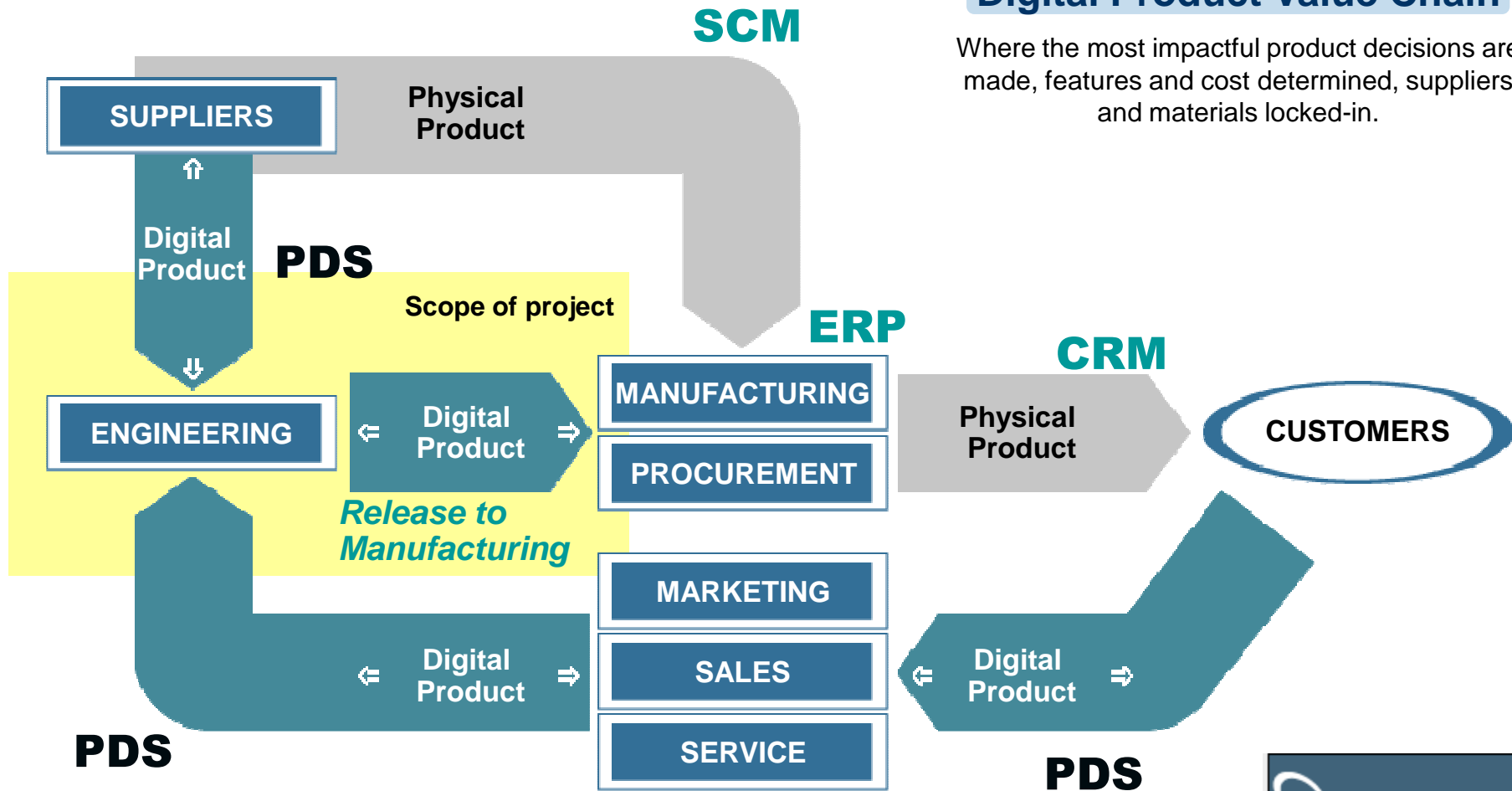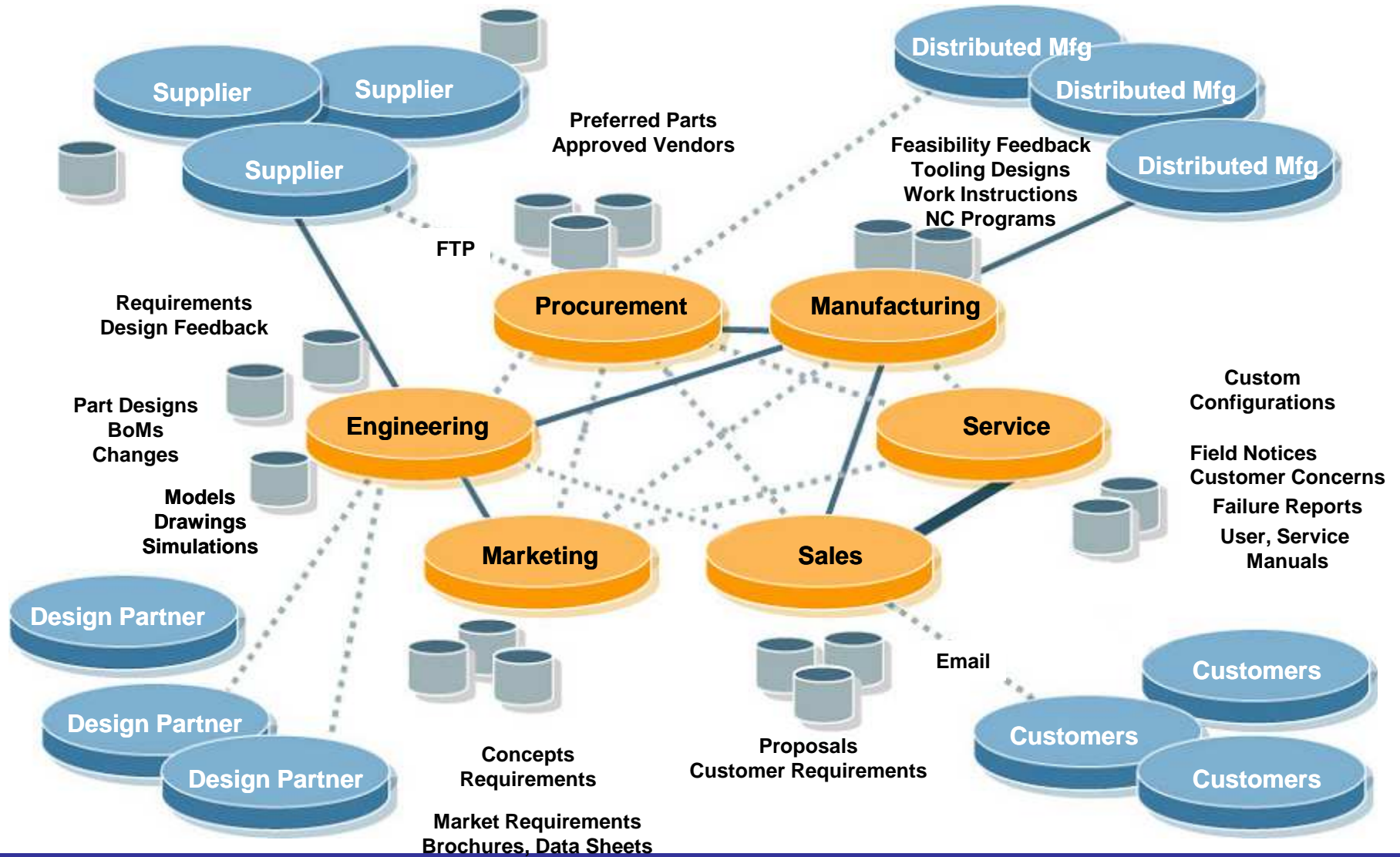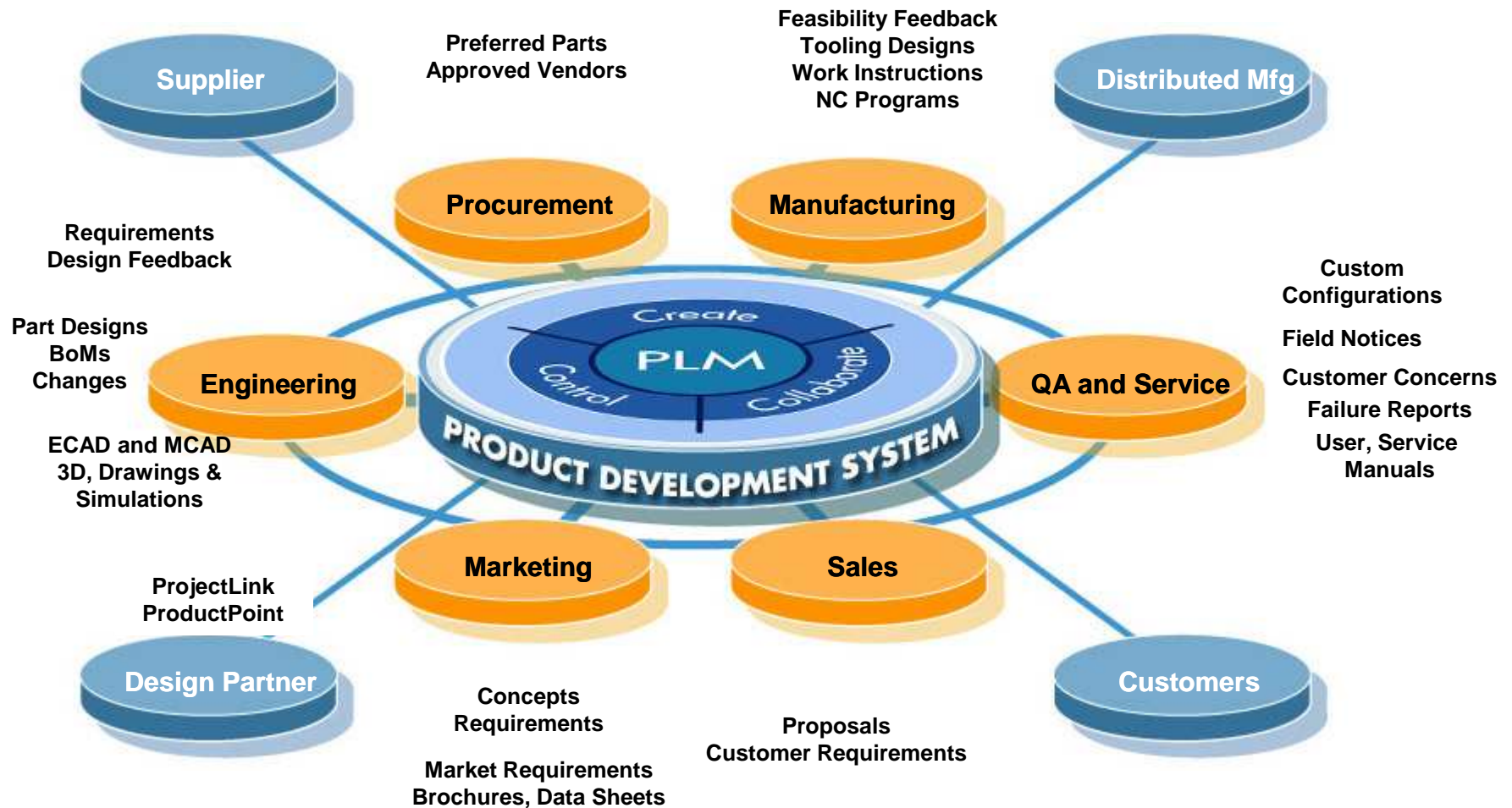
Completely in Sync with PTC Vision

Digital Product Value Chain

Where the most impactful product decisions are made, features and cost determined, suppliers and materials locked-in.

SCM

SUPPLIERS

Physical Product

Digital Product

PDS

Scope of project

ERP

CRM

ENGINEERING

Digital Product

Release to Manufacturing

MANUFACTURING

PROCUREMENT

Physical Product

CUSTOMERS

MARKETING

SALES

SERVICE

Digital Product

Digital Product

PDS

PDS

PTC
The Product Development Company

Windchill® @ COM DEV

Product Development Today

Supplier

Supplier

Supplier

Preferred Parts
Approved Vendors

Distributed Mfg

Distributed Mfg

Distributed Mfg

Feasibility Feedback
Tooling Designs
Work Instructions
NC Programs

FTP

Requirements
Design Feedback

Procurement

Manufacturing

Custom
Configurations

Part Designs
BoMs
Changes

Engineering

Service

Field Notices
Customer Concerns
Failure Reports
User, Service
Manuals

Models
Drawings
Simulations

Marketing

Sales

Design Partner

Design Partner

Design Partner

Email

Customers

Customers

Customers

Concepts
Requirements

Proposals
Customer Requirements

Market Requirements
Brochures, Data Sheets

Windchill @ **COM DEV**

Optimized Product Development System

Supplier

Preferred Parts
Approved Vendors

Feasibility Feedback
Tooling Designs
Work Instructions
NC Programs

Distributed Mfg

Procurement

Manufacturing

Requirements
Design Feedback

Custom
Configurations

Part Designs
BoMs
Changes

Engineering

PLM

Create

Control

Collaborate

QA and Service

Field Notices

Customer Concerns

Failure Reports

ECAD and MCAD
3D, Drawings &
Simulations

PRODUCT DEVELOPMENT SYSTEM

User, Service
Manuals

Marketing

Sales

ProjectLink
ProductPoint

Design Partner

Customers

Concepts
Requirements

Proposals
Customer Requirements

Market Requirements
Brochures, Data Sheets

Windchill® @ **COM DEV**

Optimized Engineering Application Focused

Asain Offices (i.e. India, China)

Europe

Ideas

Mentor Graphics

ProE

PLM

Create

Control

Collaborate

AutoCAD

PRODUCT DEVELOPMENT SYSTEM

Specifications Documents BOMs

RF Analysis

South American Offices

North American Offices
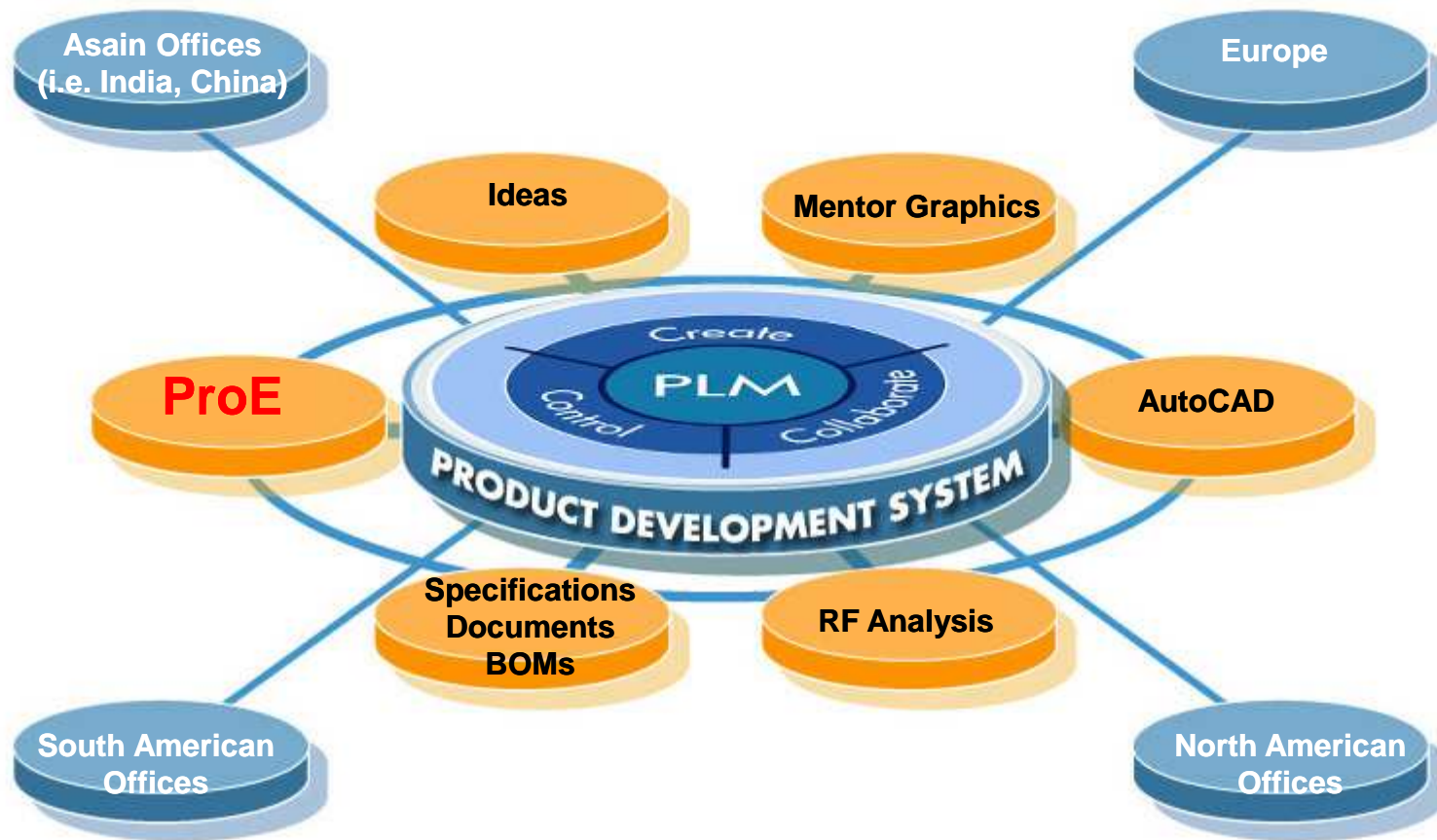
Windchill® @ COM DEV

Com Dev 3 Top PTC Windchill Issues

- **Duplication between Project and PDMLink allowed for Parts, Documents and CAD data**

- **Part BOM Management not based on revisions but just number. Product structure will always show latest not baselines of release**

- **Change management does not release Top Down. Only releases what is in the resulting table of the ECN**

Duplication between Project and PDMLink

- Duplication is due to the fact that ProjectLink and PDMLink started and can be sold as separate systems. The duplication was allowed to make migration of the solutions easier. But it does not follow the business enterprise solution.

- All Com Dev IP Part information is properly numbered and checked into the common PDMLink. There cannot be duplication of Part Numbers.

- ProjectLink is used as a collaboration sharing portal for external ODMs for intellectual property. ODMs can create designs to be approved and checked back into/"SEND TO PDM" the common PDMLink.

- Depending on CAD tool and author, CAD files are numbered according to the Part Number

- With various CAD tools of Ideas, ProE and Mentor, the files are numbered according to the Part Number

- There can only be one unique number per CAD/DOC type that corresponds to COMDEV Part.

Part BOM Management

- **WTPart BOM Management is based on WTPartmaster which only shows the latest**

- **Must show differences in BOMs between Released BOMs and inwork according to ECN effectivity dates**

Top Down Release of Change Management

- **Change management does not release Top Down. Only releases what is in the resulting table of the ECN**

- **Not according to most Change Management Rules to release the children items before the parent. There is no forced top-down release.**

- **Issue will occur in CAD if only drawings or assemblies are released. Detail components can be modified.**