Product Lifecycle Management

Product information backbone for a company
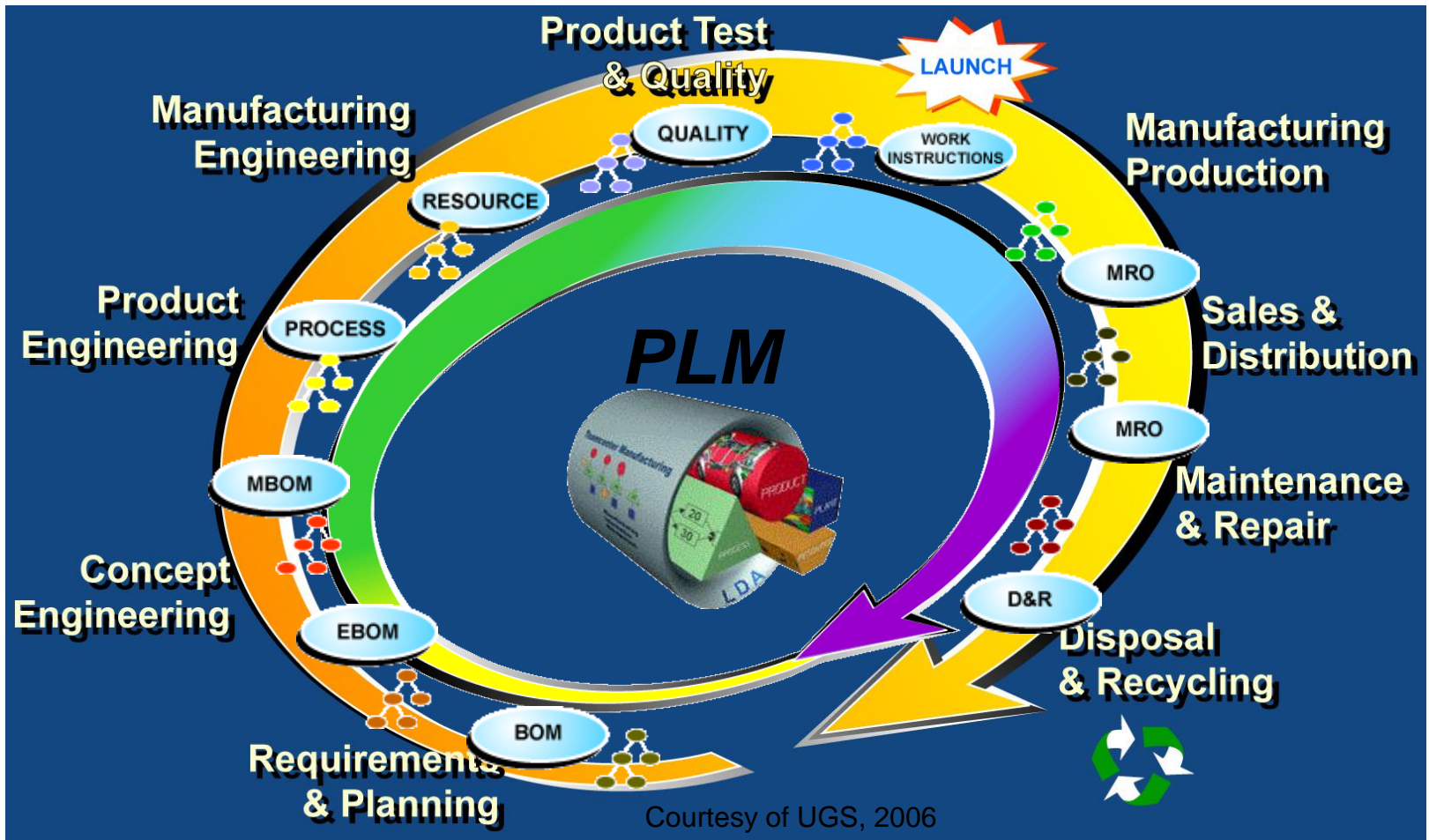
Shuning Li

Product Lifecycle
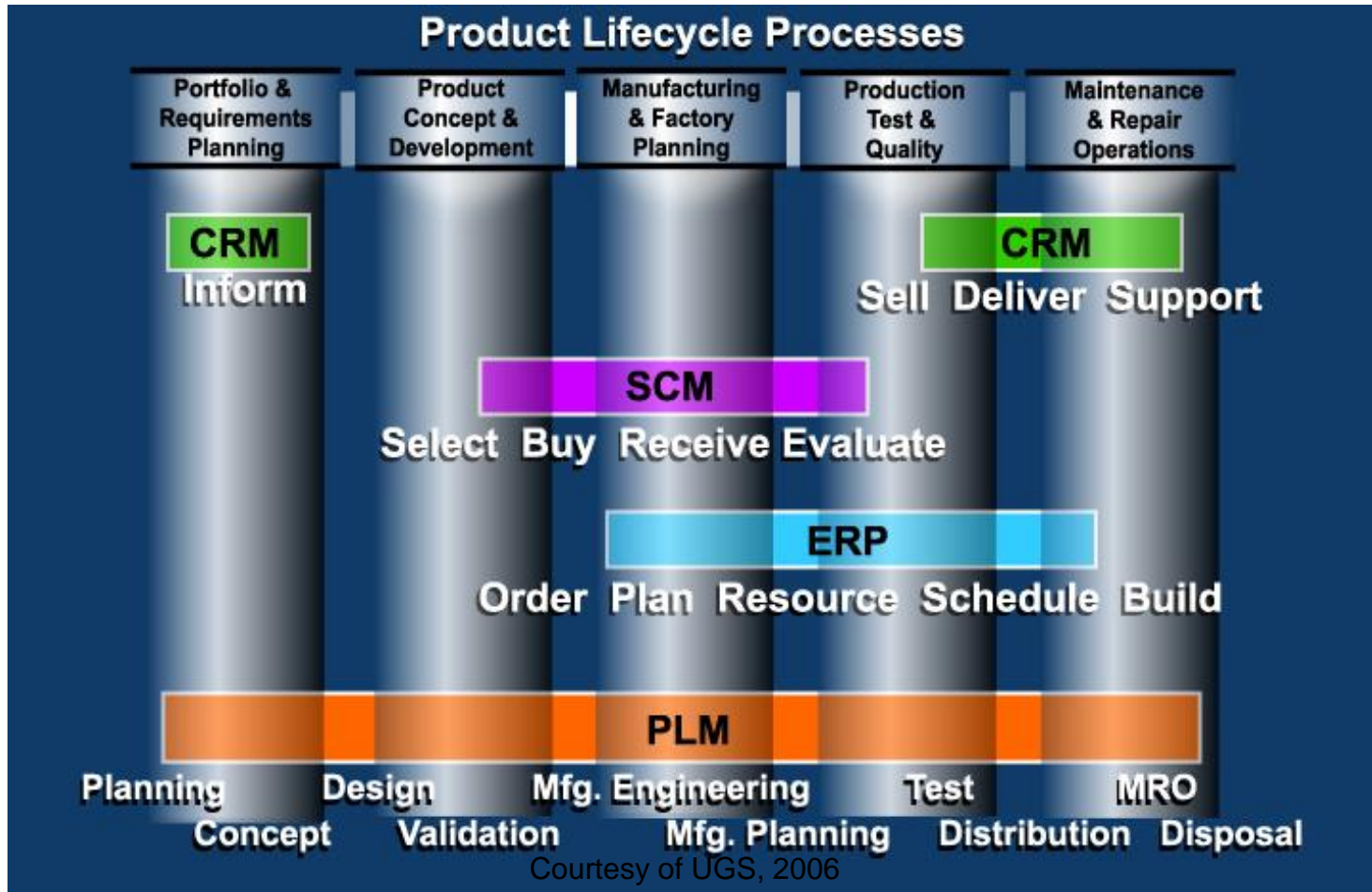

Courtesy of UGS, 2006

Product Lifecycle Management
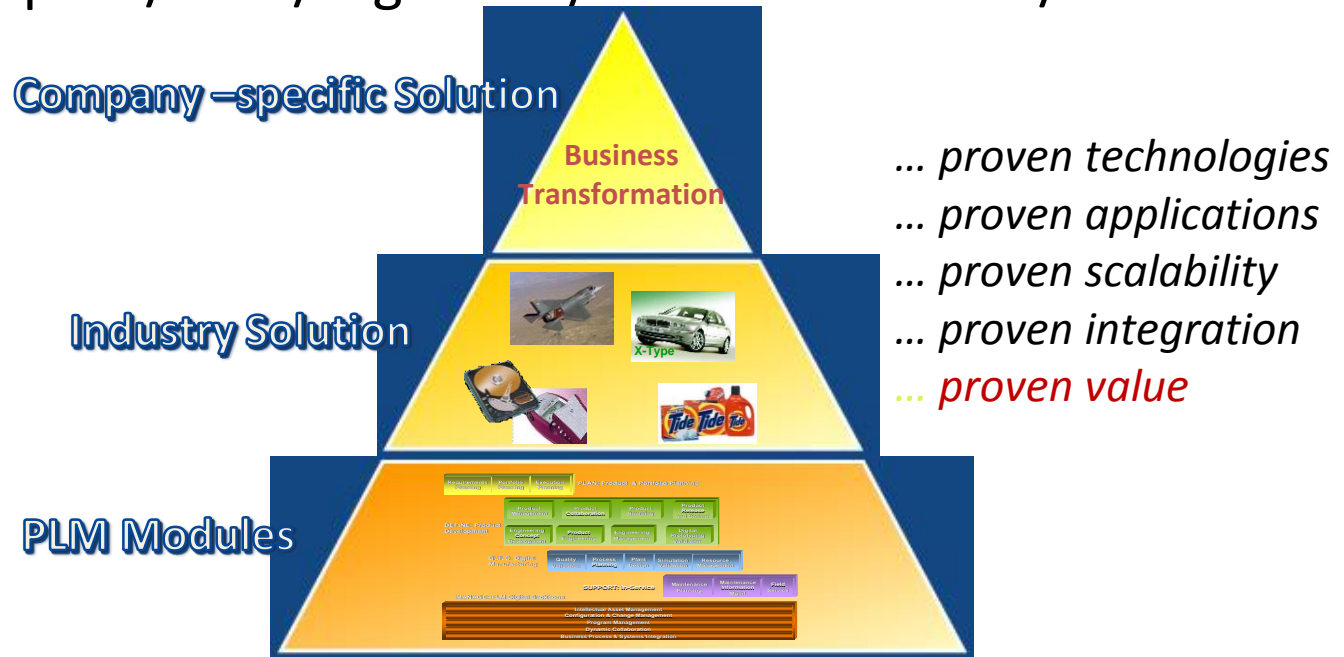

Courtesy of UGS, 2006

Product Lifecycle Processes

Courtesy of UGS, 2006

❖ **Customer Relationship Management (CRM)**
❖ **Supply Chain Management (SCM)**
❖ **Enterprise Resource Planning (ERP)**
❖ **Product Lifecycle Management (PLM)**

PLM Solutions

- Based on Industry
  - Aerospace/Auto/High Tech/Consumer Goods/etc.

Company –specific Solution

Business Transformation

… proven technologies
… proven applications
… proven scalability
… proven integration
… proven value

Industry Solution

X-Type

PLM Modules

- Based on the size of the company
  - Large size/Medium to small size company solutions

Vision

Implementation
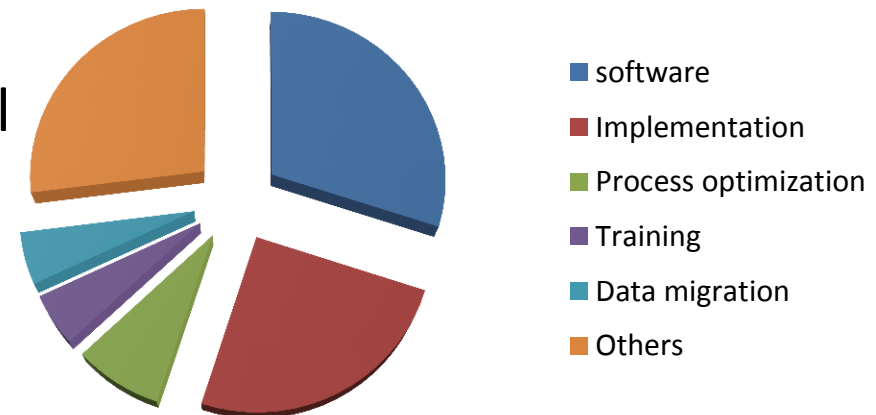
Success

PLM SYSTEM IMPLEMENTATION
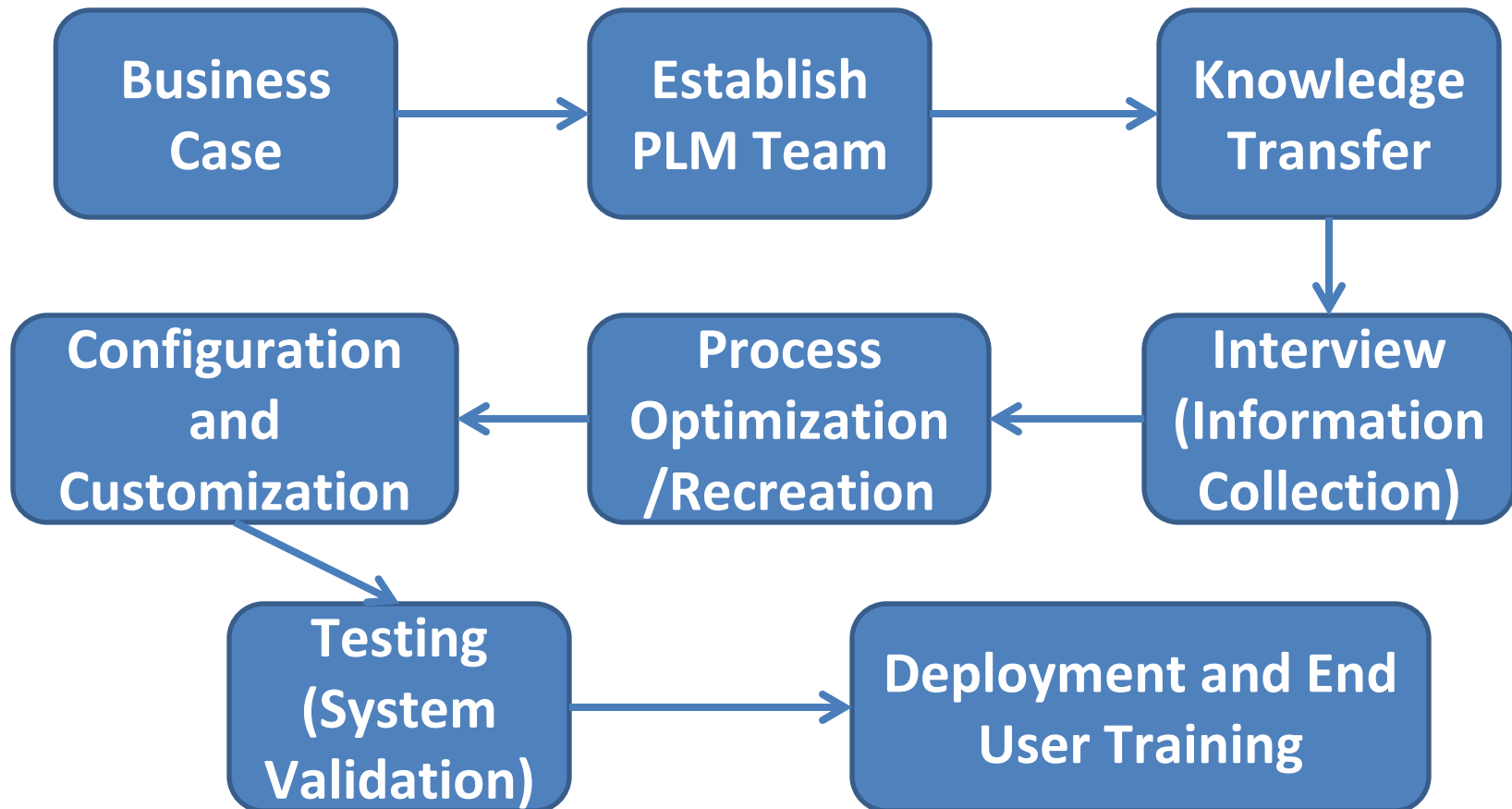
PLM System Implementation

- Implementation is one of the most important issues in PLM.

  – A successful PLM system needs systematic implementation processes; and Out-Of-The-Box PLM software cannot be used directly;

  – Implementation services cost about 40% of overall PLM solution cost.
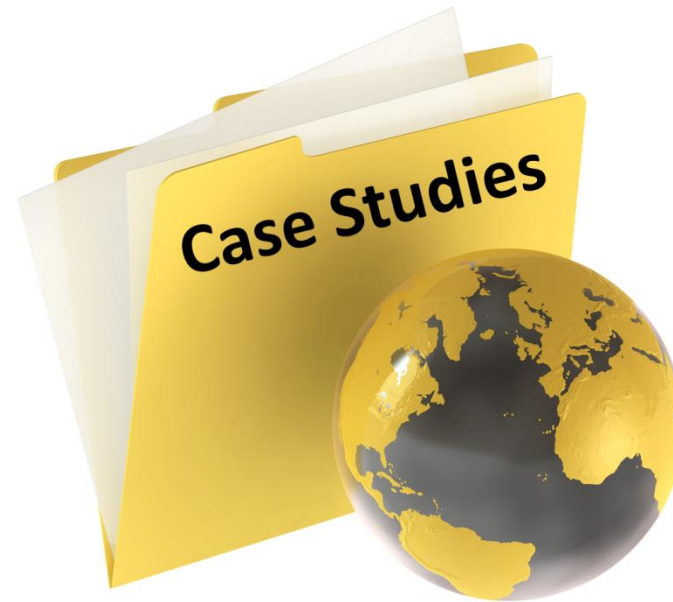
PLM Solution Costs

- software
- Implementation
- Process optimization
- Training
- Data migration
- Others

Source: PLM Technology Guide. http://plmtechnologyguide.com/site/?page_id=1184

PLM System Implementation

Business Case	→	Establish PLM Team	→	Knowledge Transfer

Configuration and Customization	←	Process Optimization /Recreation	←	Interview (Information Collection)

Testing (System Validation)	→	Deployment and End User Training

Success Stories and Challenges in PLM Implementation

CASE STUDIES

Deutsche Blisterunion

- **Industry:** Packaging in Pharmaceutical Industry
- **Business Challenges :**
    - Logistics of supply chain, particularly the signatory specialists (regulated industry, quality control)
    - Electronic signature (must be accepted by regulatory body)

Deutsche Blisterunion

- **Solutions:**
  - Standardized and simplified manufacturing, logistics and quality control processes;
  - New electronic signature process, and signature by smartcard and reader
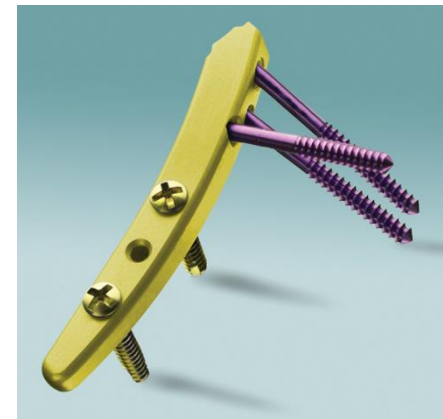- **Results:**
  - Increased process speed due to central process control (PLM is hosted centrally, reduced cost);
  - New process completely compliant with quality regulations;
  - QP (person with signature authority) can work several manufacturing centers; and orders can be fast transferred in case of sickness and vacation of QP

WRIGHT Wright Medical Technology

- **Industry:** Medical Devices
- **Business Challenges :**
  - Speed and confidence in designing and producing medical devices
  - Compliance with FDA and other applicable requirements
  - Ability to continually innovate Effective management of product and process data

Wright Medical Technology

- **Solutions:**
  - CAD software for digital product development
  - PLM software for digital data management
  - Data access/re-use across decades
  - Virtual prototyping
  - Collaboration across departments, distributors and customer
- **Results:**
  - New Product brought to market in record time
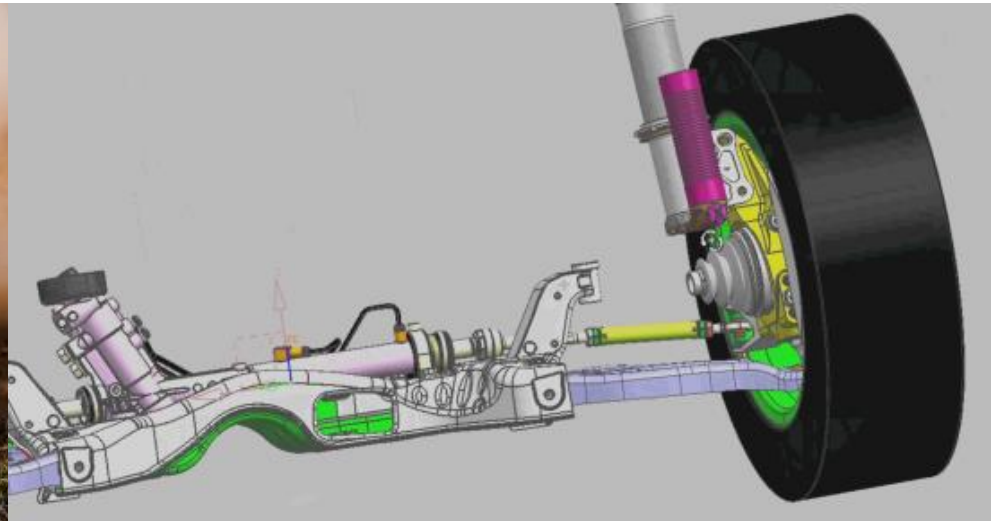 - More efficient design turnaround

Volkswagen Group South Africa

- **Industry:** Automotive

- **Business Challenges:**

  – Tight timeframe for making changes to race cars

Volkswagen Group South Africa

- **Solutions:**
  - Tight integration of CAD and PLM systems
  - Kinematics analysis and finite element analysis
  - CAD software with synchronous technology

- **Results:**
  - Fast changes to existing geometry
  - Even complex parts can be redesigned in half a day
  - Fast searches through thousands of drawings
  - Entire team, suppliers and sponsors kept in the loop

Haier Group

- **Industry:** Consumer Electronics
- **Business Challenges:**
  - New product development Value chain synchronization
  - Commonization and re-use Knowledge and IP management
  - Regulatory compliance
  - Speed the pace of innovation

Haier Group

- **Solutions:**
  - Easy-to-use part library
  - Digitally managed approval/release processes
  - Improved project visibility and monitoring
  - Platform that supports global design and supply chain
- **Results:**
  - 15 percent faster to market;
  - Accurate drawings virtually eliminate rework and erroneous purchases
  - 29 percent part reduction through standards/re-use; cost reduction from high-volume purchases 80 percent reduction in non-value-added collaboration

Challenge Case I

- Industry: Industrial machinery and equipment

- Challenges:

  – Paper based documents and design data;

  – Product development highly relied on a few senior engineers;

  – Bad experiences from previous information system implementation

- Solutions:

  – Comprehensive history data reorganization and migration plan;

  – One-on-one talks with key personal and higher management;

  – Additional trainings

Challenge Case II

- Industry: Hi-tech electronics

- Challenges:
  - Unregulated and unstandardized processes;
  - Lack of trust to implementation team when project started;
  - Conflicts between design and manufacturing departments

- Solutions:
  - Education and training about information system before project started;
  - More flexible workflows;
  - Had the end-users get involved more during implementation

Challenges in PLM Implementation

- Setup an appropriate project scope
  - Needs to be done as early as possible
  - Step-by-step implementation
- Software integration and interfaces
  - Vault/Visualization/Structure Level integration
- Data migration
  - Data migration plan
  - Coding system and Old data transfer

Challenges in PLM Implementation

- Conflicted interests
  - Between different departments or business units
  - Between higher and lower level managements
  - Between IT support team and the end users
- Bad experiences from previous information system implementation
- Security concerns
  - Data security within the system
  - Important information exposure during interviews or system configurations

Thank you!

Questions?