

# PL2772-P – Beyond (Traditional) PLM

**Michelle Stone**  
Product Manager, PLM 360

**Kevin Robinson**  
Business Development Manager

# Confidentiality

- **Today's discussion is covered under the non-disclosure section of the Autodesk Participation Agreement.**
- **The information we will be sharing is highly confidential, and is to be shared within your company on “need to know basis” and to no one outside your company.**

# No Reliance

- Autodesk makes no guarantees that anything presented or discussed today will actually appear in the future.
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- *These statements are being made as of today and we assume no obligation to update these forward-looking statements to reflect events that occur or circumstances that exist or change after the date on which they were made. If this presentation is reviewed after today, these statements may no longer contain current or accurate information.*

# Your Instructors



**Michelle Stone**  
Product Manager, PLM 360

Michelle is a Product Manager with Autodesk® PLM 360 working out of Autodesk office in Lake Oswego, OR. She is focused on managing the development of PLM Business Process Applications and helping customers expand their use of Autodesk PLM solutions to help drive greater return-on-investment and process improvements.

She enjoys sharing product knowledge and expertise with the community via Twitter (@stoneformation), Facebook, blogging, and the PLM Talk webinar series.



**Kevin Robinson**  
Business Development Manager

For more than 15 years, Kevin Robinson has been absorbing, applying and evangelizing CAD/PDM/PLM technologies as an end user, administrator, manager, technical support, trainer, consultant, demo guy, marketing, and sales engineering.

Kevin has helped customers to realize their potential by creating technology awareness, discovering needs, collecting requirements and providing technical proof that investing in technology will help them become successful in meeting those needs.

Here at Autodesk, Kevin is currently responsible for the Autodesk Vault Business worldwide.



# Your Instructors' Schedules



Michelle Stone




Kevin Robinson

Time	Event
Tuesday 1:30 pm	Autodesk® PLM 360: The Bits and Pieces
Tuesday 3:00 pm	Start Spreading the News: Notifications in Autodesk® PLM 360
Wednesday 1:00 pm	Beyond (Traditional) PLM
Wednesday 2:30 pm	Project Management 101 with Autodesk® PLM 360

Time	Event
Tuesday 11:30 am	360 Lounge
Wednesday 11:30 am	360 Lounge
Wednesday 1:00 pm	Beyond (Traditional) PLM
Thursday 11:30 am	360 Lounge

# PLM 360 Power Track – Where Have you Been? Where are We Going?


- PLM 360 - The Bits and Pieces!
- Workspace Features in Autodesk PLM 360 Standard Solutions
- BOM Management with PLM 360 - Configuration Management
- **Beyond (Traditional) PLM** 
- PLM 360 Automation Solutions with Scripting

# Class summary

- Many projects using traditional PLM software never make it past CAD data management and outside of the engineering department.
- Autodesk PLM 360 has benefits for everyone in your organization, not just engineering!
- Learn more about the preconfigured apps that come with PLM 360 for areas like quality management, procurement, manufacturing asset management, sales and marketing, service and support, and more.



# Inspiration












## Autodesk PLM 360 with Mike Watkins

[Home](#)[About Autodesk PLM 360](#)[My YouTube Channel](#)[Autodesk PLM 360 Website](#)[Contact us](#)


Monday, 8 April 2013

### Autodesk Launches the PLM 360 App Store

So I'm really excited to announce the launch of the Autodesk PLM 360 App Store !!




#### Autodesk PLM 360 App Store




#### Search This Blog


#### Try it Now




PLM IN THE CLOUD  
TRY IT NOW

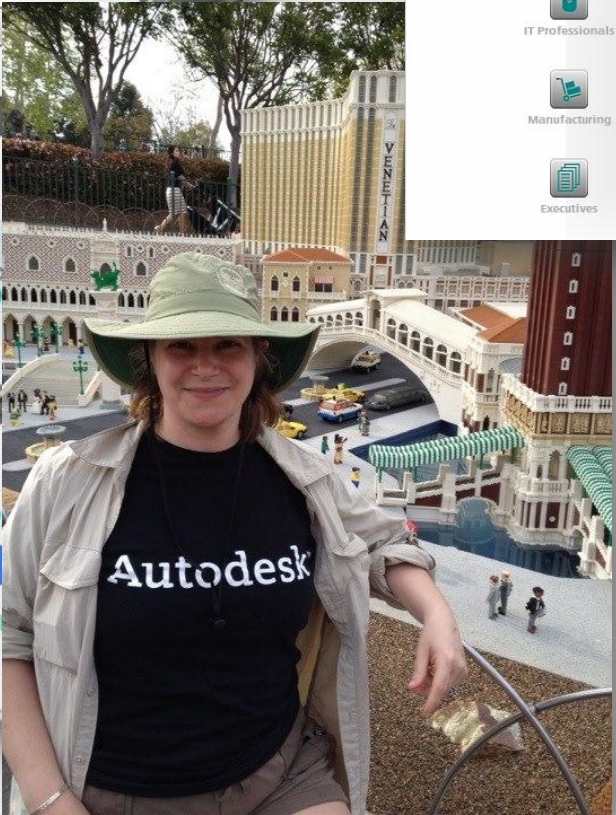
#### Blog Contributors




 Mike W

 1 circle

[View my profile](#)







## PLM for Everyone

Autodesk® PLM 360 is transforming traditional Product Lifecycle Management with an easy-to-configure, people-centric solution that can extend the benefits of PLM to everyone in your organization.


[DISCOVER IT NOW](#)




Engineering




Program Management



IT Professionals



Manufacturing




Executives


### Quality Management

For Quality Management, Autodesk PLM 360 provides a clear view into the decisions that impact cost, quality, and customer satisfaction.


[Overview](#)[Resources](#)

Apps







Quality Management




Supplier Management



Service & Support



Operations



Sales & Marketing





# Autodesk Uses PLM 360

- ✓ Consulting Engagements
- ✓ Market Surveys
- ✓ Marketing Assets
- ✓ Partner Certification
- ✓ PLM App Development
- ✓ Program Management
- ✓ Software Development
- ✓ Tenant Management
- ✓ Training and Logistics
- ✓ Vendor Management



*“The ability to put everything related to the PLM 360 business in one tool that’s flexible enough to meet every department’s needs and manage process changes as they arise is something we’ve never had before.”*

**Brian Roepke**

*Director of Product Lifecycle Management and  
Data Management  
Autodesk, Inc.*



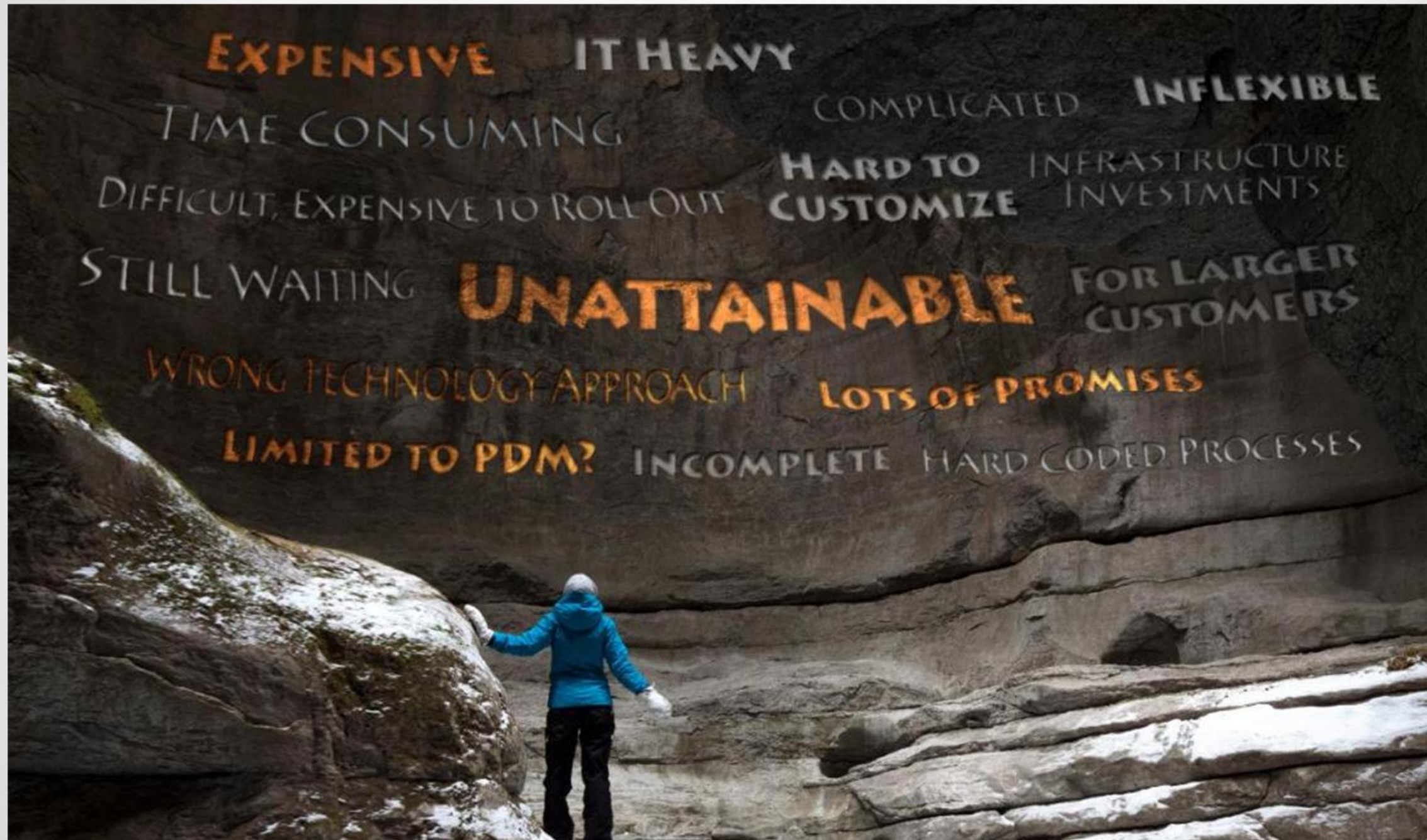
An aerial perspective of a city landscape. In the foreground, a multi-lane bridge with a rainbow-colored line along its edge spans a river. A red car is visible on the bridge. To the right of the bridge is a green park area with a blue oval field and some trees. In the background, a large stadium with a circular roof is visible, surrounded by various city buildings and a dense skyline of skyscrapers under a clear blue sky.

# Traditional PLM

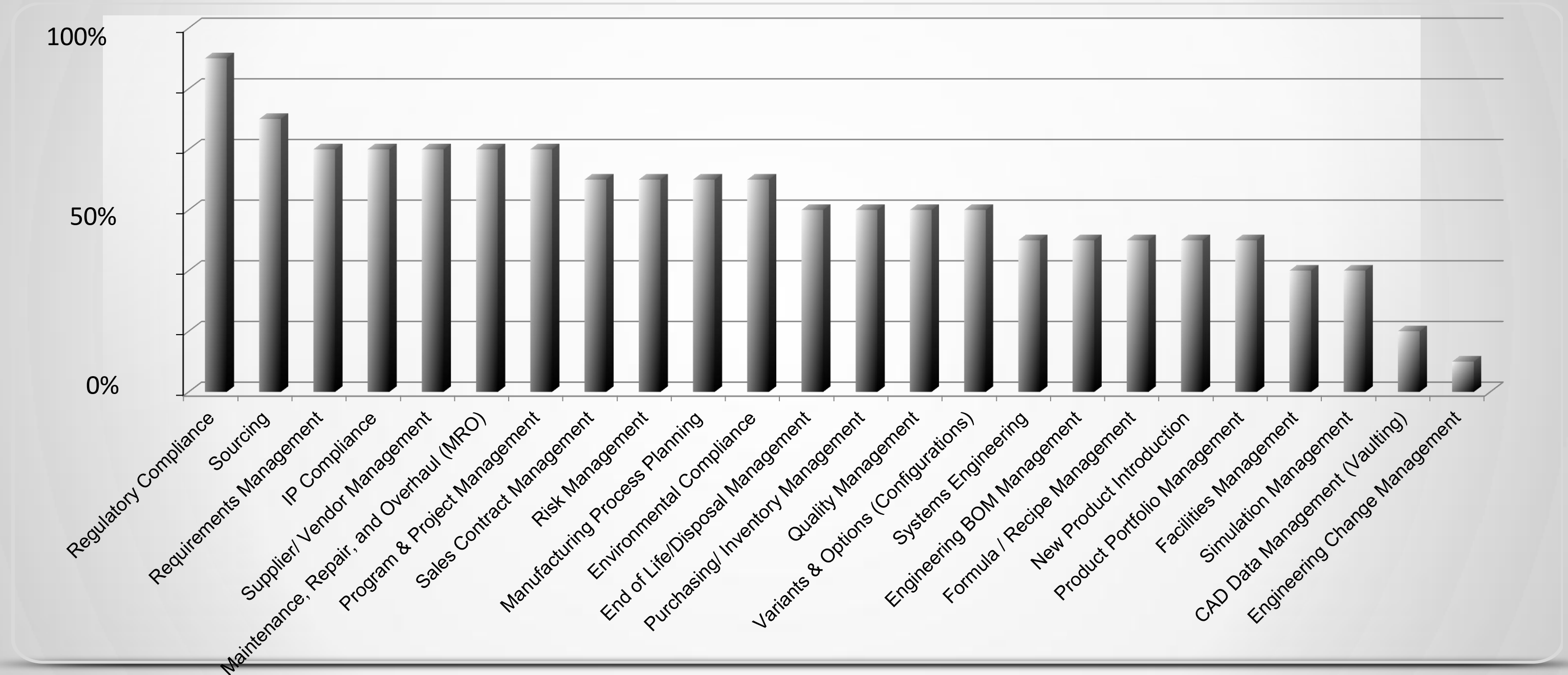




# PLM has traditionally been...



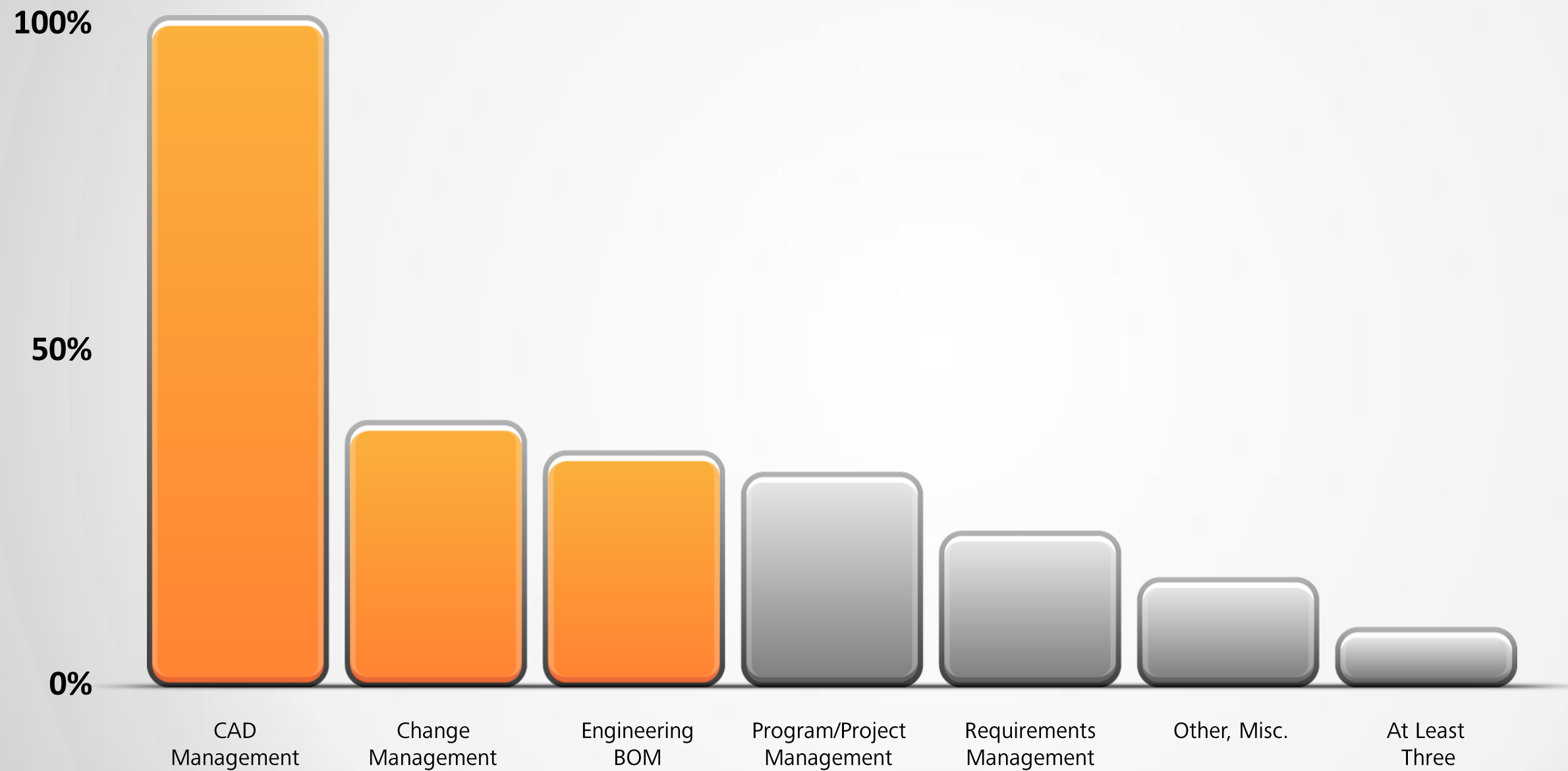
# Customers are looking to PLM to help...





# The Result

Limited to only an engineering solution



PLM Capabilities Implemented

Source : PLM Community Study



An aerial perspective of a cityscape. In the foreground, a multi-lane bridge with a rainbow-colored line along its edge spans a wide river. A red sports car is driving on the bridge. To the right of the bridge is a green park area with trees and a blue oval-shaped pond. In the background, a large stadium with a circular roof is visible, surrounded by various city buildings and a dense skyline of skyscrapers under a clear blue sky.

# Beyond (Traditional) PLM



# PLM for Everyone



# Apps for Everyone



## Program Management

- Project Management
- Project Costing
- New Product Introduction
- Tasks
- Requirements



## Engineering

- Items and BOMs
- Change Request
- Change Orders
- Material Specifications
- Design Review



## Supply & Procurement

- Suppliers
- RFQ
- Warranty Recovery



## Quality

- Inspections
- Non Conformances
- Corrective / Preventative Actions
- Audits
- Procedures, Guidelines, & Specs
- Document Change Order



## Asset Management

- Equipment Library
- Equipment
- Equipment Service Request



## Sales & Marketing

- Customers
- Sales Quotes
- Marketing Assets



## Service & Support

- Service Request
- Return Merchandise Authorization

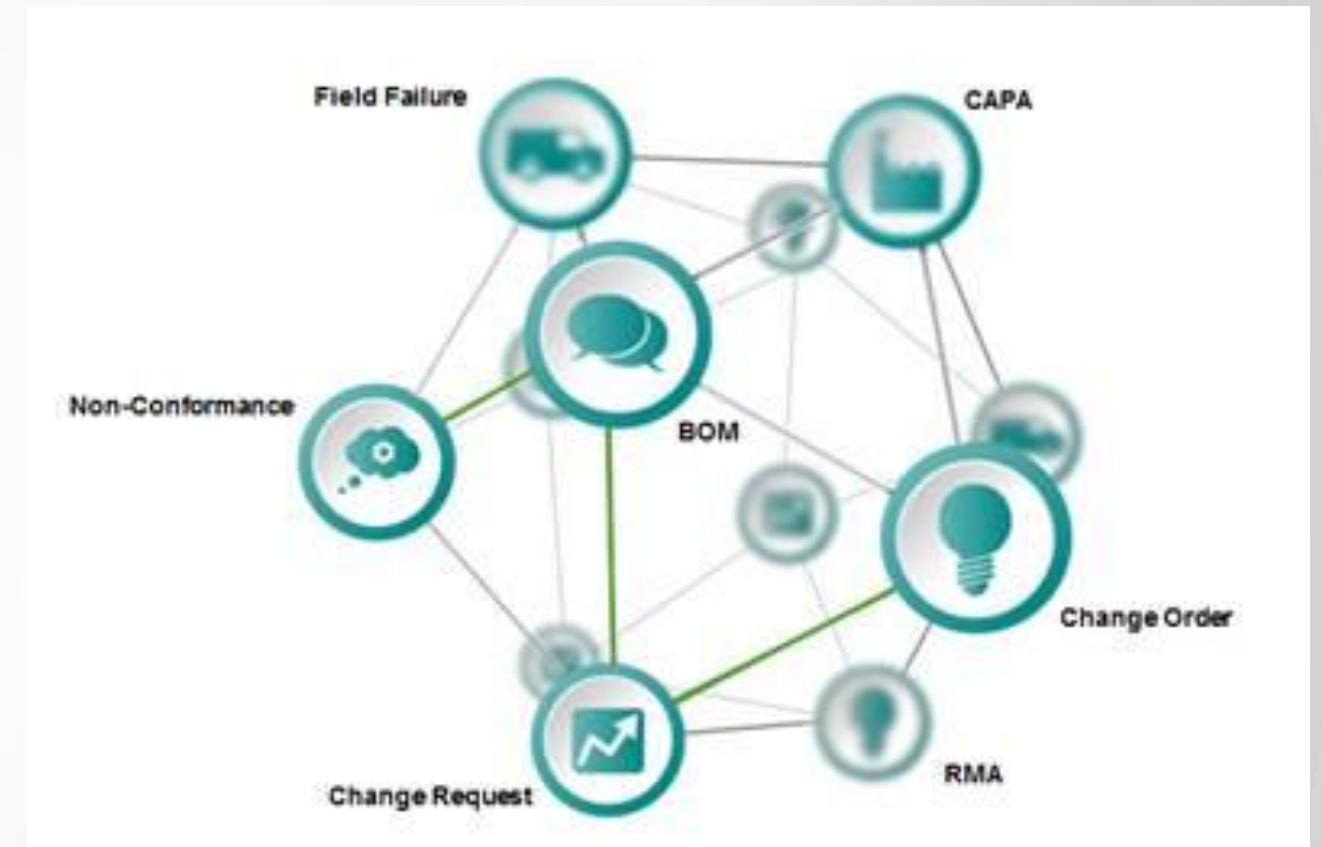
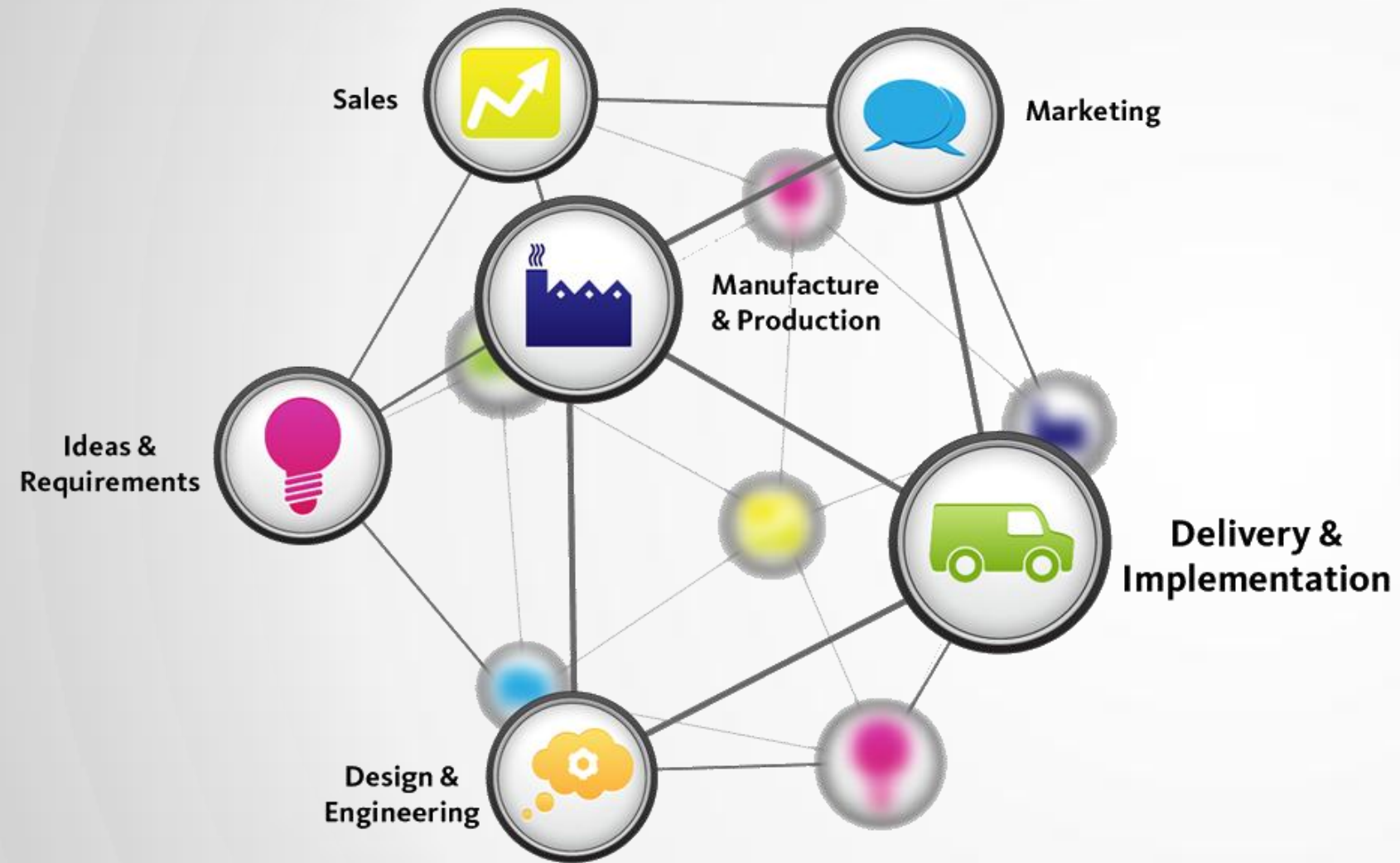


## Classification & Reference

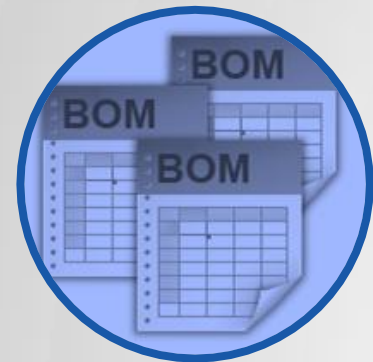
- Approval Lists
- ISO9001 Sections
- Material Properties
- Inspection Templates



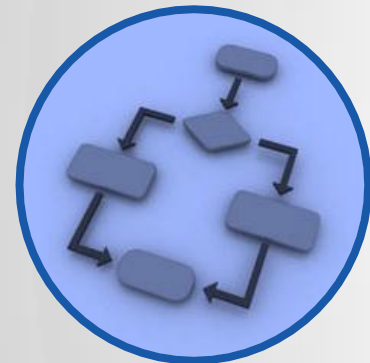
# Access to all applications...



# Core PLM



Bill of Materials

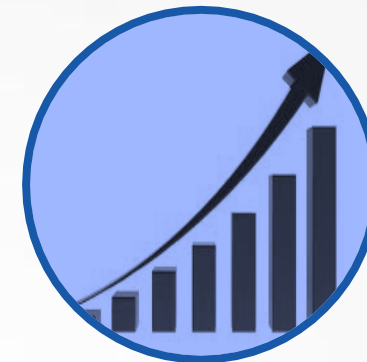


Change Management



Supplier Collaboration

# Expanding the PLM Footprint



NPI



Quality



Asset Management

*\*time permitting*



# Program Management

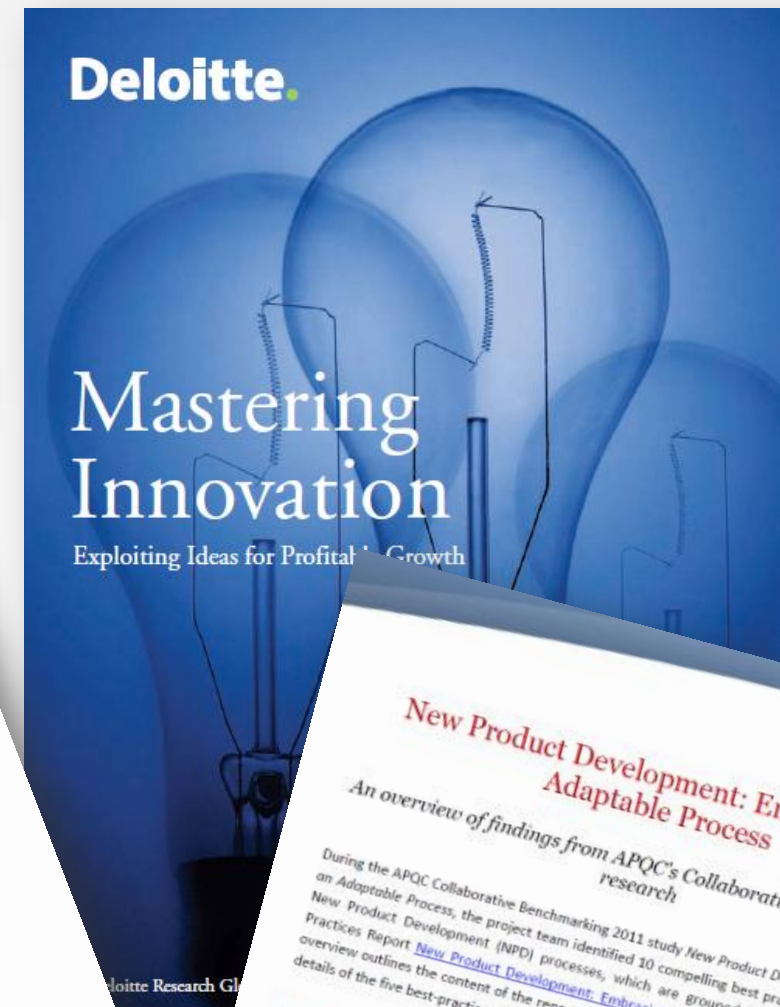


# Use Cases for Program Management

- New Product Introduction/Development
- Enhanced Change Management Controls
- Project Governance via Roles
- Metrics and KPI collection/reporting
- General Project Management
  - IT/Marketing/Procurement
- Schedule Variance via Baselines



# #1 factor for company growth : New Products



# Hard Facts

**86%** of new product ideas **never make it** to market

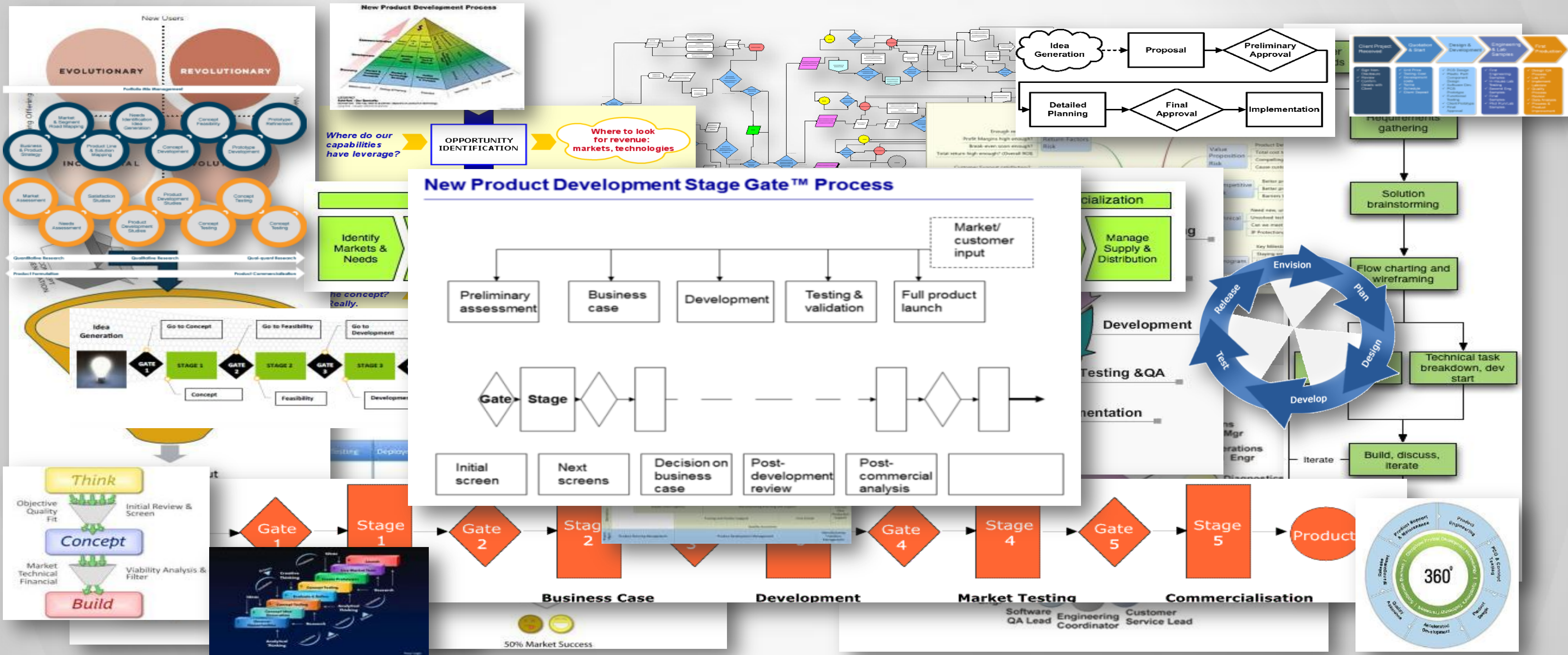
**50-70%** of new product introductions **fail**

Almost **half** of development **projects fail**  
to meet objectives

The top 25% performing companies achieve **2.5 times**  
performance of the bottom 25%



# What do your NPI processes look like?

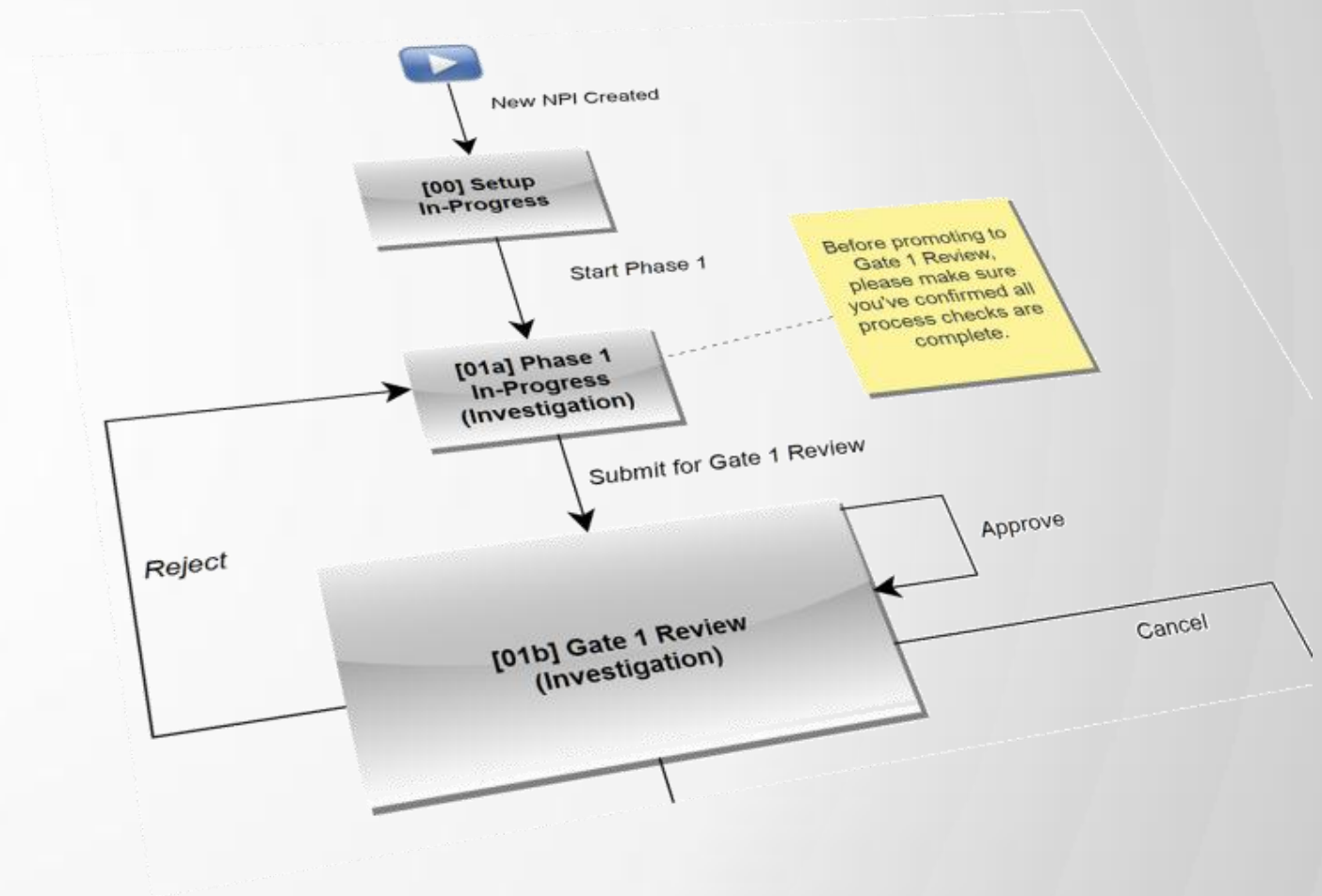




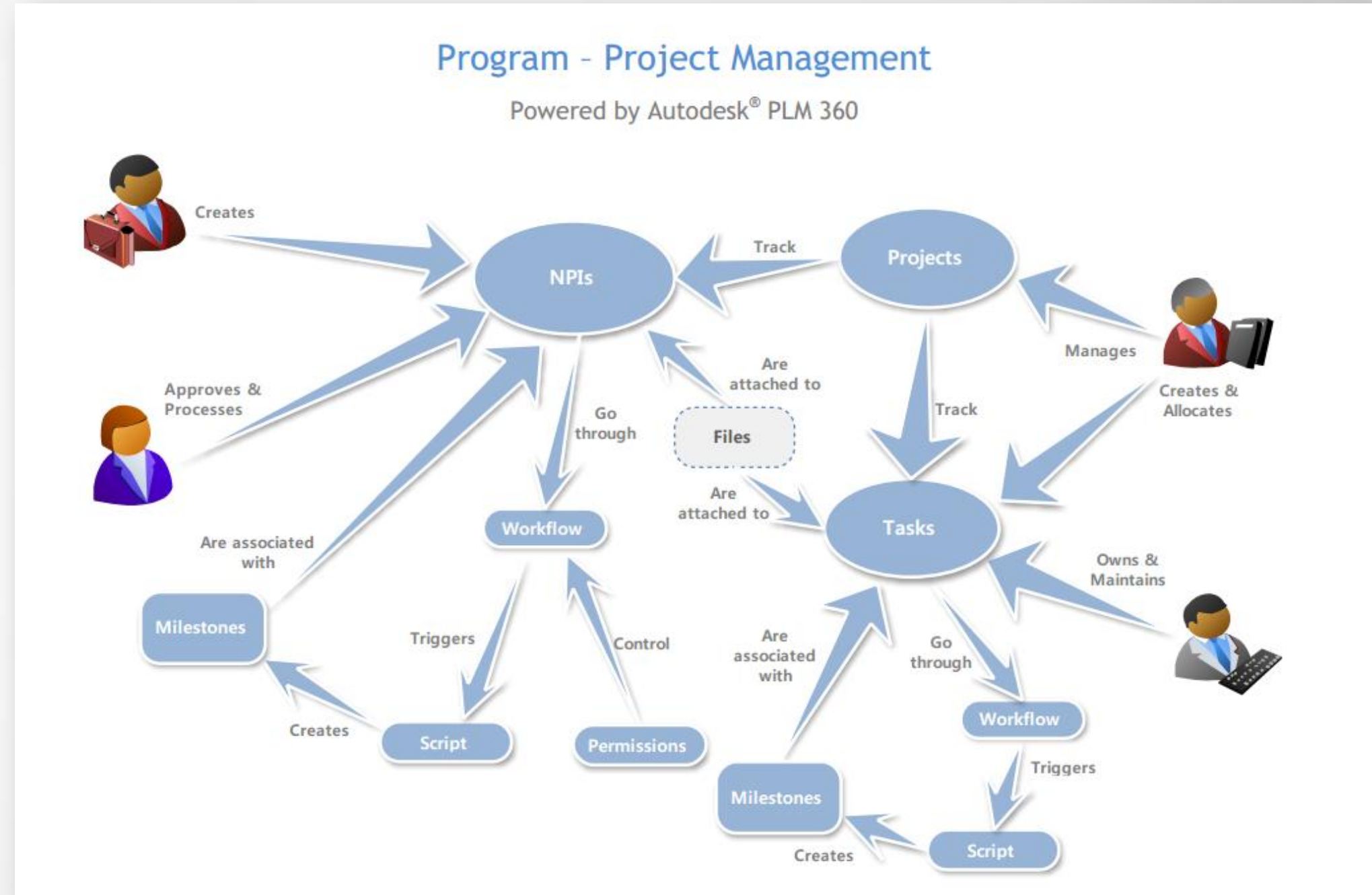
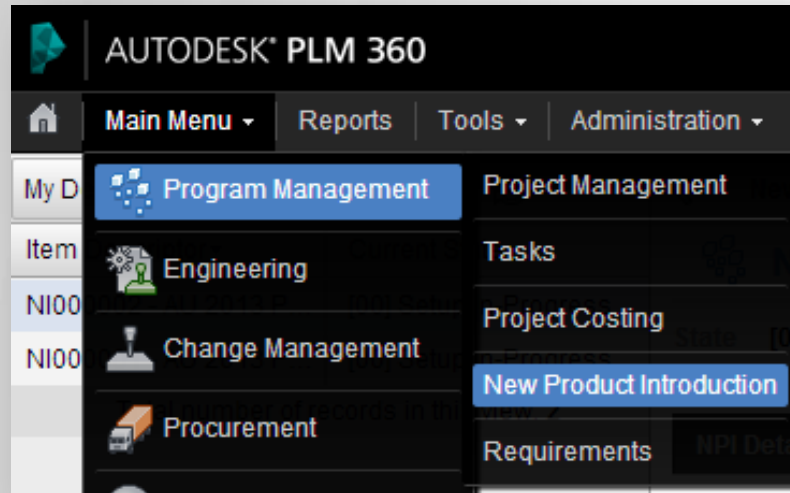
# Drive Consensus & Manage Decisions

Plans, decisions & commitments discussed, recorded, tracked & managed

- Formally define the business initiatives you need to be successful
- Create & share business plans everyone can follow to drive success across all key program phases
- Record assumptions, justifications, plans, requirements, issues & stakeholders
- Clearly drive commitment & execution



# Program Management



# New Product Introduction

- Define the details and requirements for a New Product Introduction
- Automatically create Key Milestones to track progress
- The NPI workspace is available to everyone
- Sometimes called NPI, NPD, or NPDI

## Benefits

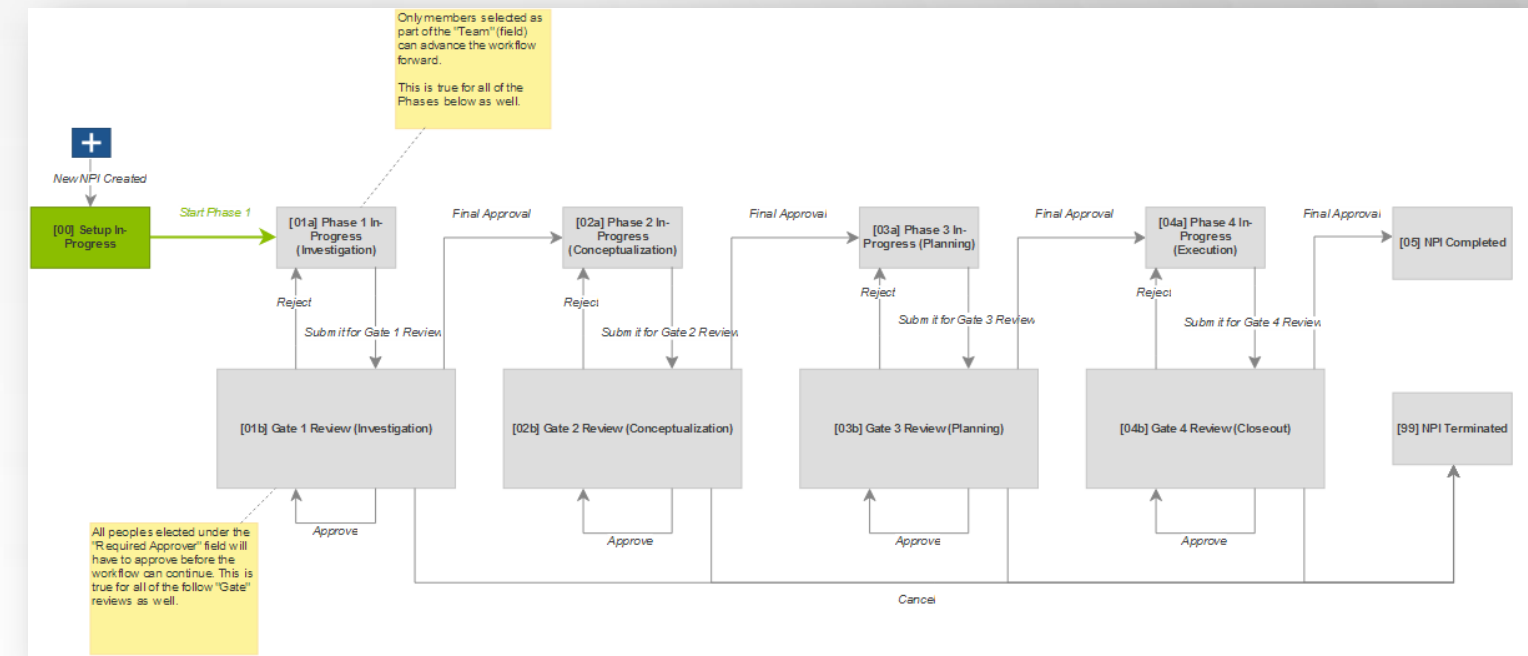
1. Provides a great starting point for the vast majority of companies development efforts
2. Structures and automates how team members work together to complete their tasks to effectively bring a product to market

"Only 56% of new product development projects achieve their financial goals, and only 51% are launched on time"  
American Productivity & Quality Center, 2003



# Stage Gate Management

- One of the most common methods to drive NPI
- Define a workflow process that determines the status of the Item and/or Project
- Use Stage Gates within the workflow process to ensure decisions are made and information is captured proactively
- Stage Gates provide a mechanism to track % complete



## Benefits

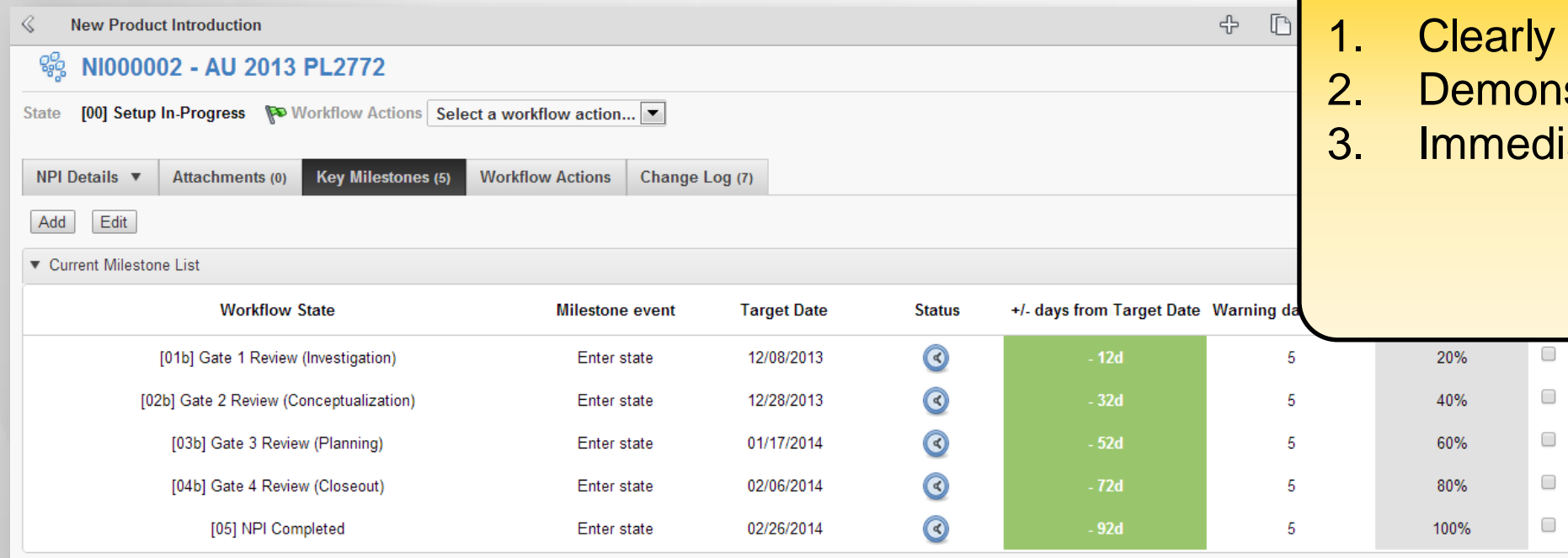
1. Provides a great starting point for the vast majority of companies development efforts
2. Structures and automates how team members work together to complete their tasks to effectively bring a product to market

Successful products have a much sharper definition prior to development and are 3.3 times more likely to succeed, have higher market share and are more profitable

Cooper, Inventor of the Stage Gate System, 1987

# Milestones

- Milestones can be added to an Item to provide date based targets and progress based on workflow actions
- Flags indicate when an Item is on\off target
- Percentage & date targets are rolled up to the Project Management workspace



Workflow State	Milestone event	Target Date	Status	+/- days from Target Date	Warning da			
[01b] Gate 1 Review (Investigation)	Enter state	12/08/2013	⏪	- 12d	5	20%		
[02b] Gate 2 Review (Conceptualization)	Enter state	12/28/2013	⏪	- 32d	5	40%		
[03b] Gate 3 Review (Planning)	Enter state	01/17/2014	⏪	- 52d	5	60%		
[04b] Gate 4 Review (Closeout)	Enter state	02/06/2014	⏪	- 72d	5	80%		
[05] NPI Completed	Enter state	02/26/2014	⏪	- 92d	5	100%		

## Benefits

1. Clearly articulates & formalizes project success criteria
2. Demonstrates progress real time
3. Immediate indication of issues, problems & risk



# Project Management

- The Project Management workspace brings all items of a project into one easy to manage area where users can track % complete, project status and timeline
- The Project Management workspace is available to everyone, by

The screenshot displays the 'Project Management' workspace for project 'PR000003 - Nerd Modders'. It features a table of project items with columns for ID, Title/Item, Start, End, Duration, Predecessors, Status, and % Complete. A Gantt chart on the right visualizes the project timeline.

#	Title/Item	Start	End	Duration	Pre	Status	% Complete
1	TK000005 - Prepare Slide Deck for presentation - Stone, Michelle	10/10/2013	10/14/2013	4d		[05] 100% Complete	100%
2	Finalized Design	10/11/2013	10/11/2013	0d			100%
3	James to add symmetry to model and send to David	10/11/2013	10/11/2013	0d	2		100%
4	James to upload to Fusion Hub	10/11/2013	10/18/2013	7d			100%
5	David to convert to polygon model	10/14/2013	10/14/2013	0d	3		100%
6	NI000001 - 2013 Design and Make Contest	10/14/2013	11/14/2013	31d		[02b] Gate 2 Review (Conceptualization)	40%
7	Jon to render is VRED	10/15/2013	10/15/2013	0d	5		100%
8	Milestone 2	10/15/2013	10/15/2013	0d	1		100%
9	TK000008 - Simulation - Thermal analysis on design - Kubli, James	10/17/2013	11/20/2013	34d		[05] 100% Complete	100%
10	TK000006 - Moldflow analysis - Kilroy, Kristen	10/23/2013	11/20/2013	28d		[05] 100% Complete	100%
11	Order components	10/25/2013	10/25/2013	0d			100%
12	TK000009 - Video Presentation - Santos, David	10/29/2013	11/26/2013	28d		[04] 75% Complete	75%
13	Project Finish	11/29/2013	11/29/2013	0d			80%
Project Summary		10/10/2013	11/29/2013	49d			81%

## Benefits

1. Easy to get started
2. Track multiple projects and programs
3. Automatically linked to underlying activities
4. No additional software required
5. Optimize the use of valuable resources

"Product lifecycles have seen a 400% reduction in the last 50 years" Von Braun, The Innovation War ,1997

## Demo: NPI



# Quality Management



# Use Cases for Quality Management

- Closed Loop Inspections/Non-Conformance/CAPA
- Regulatory Compliance (FDA, FAA, etc.)
- Supplier Quality
- Audit Trail
- Sample/Prototype/Test Tracking







# Customers Care About...

***Specification*** –  
what can I  
expect?



***Cost*** – how  
much will I have  
to pay?

***Conformance*** –  
will it do what I  
expect?

***Delivery*** –  
when can I have  
it?

***Reliability*** – will it  
continue to do  
what I expect?

**How does your organization meet customer expectations?**

# Quality Costs

**Appraisal costs** – costs of inspection & associated activities

## Costs of Conformance



**Prevention costs** – implementing, designing & maintaining a QMS



## Costs of Non-Conformance

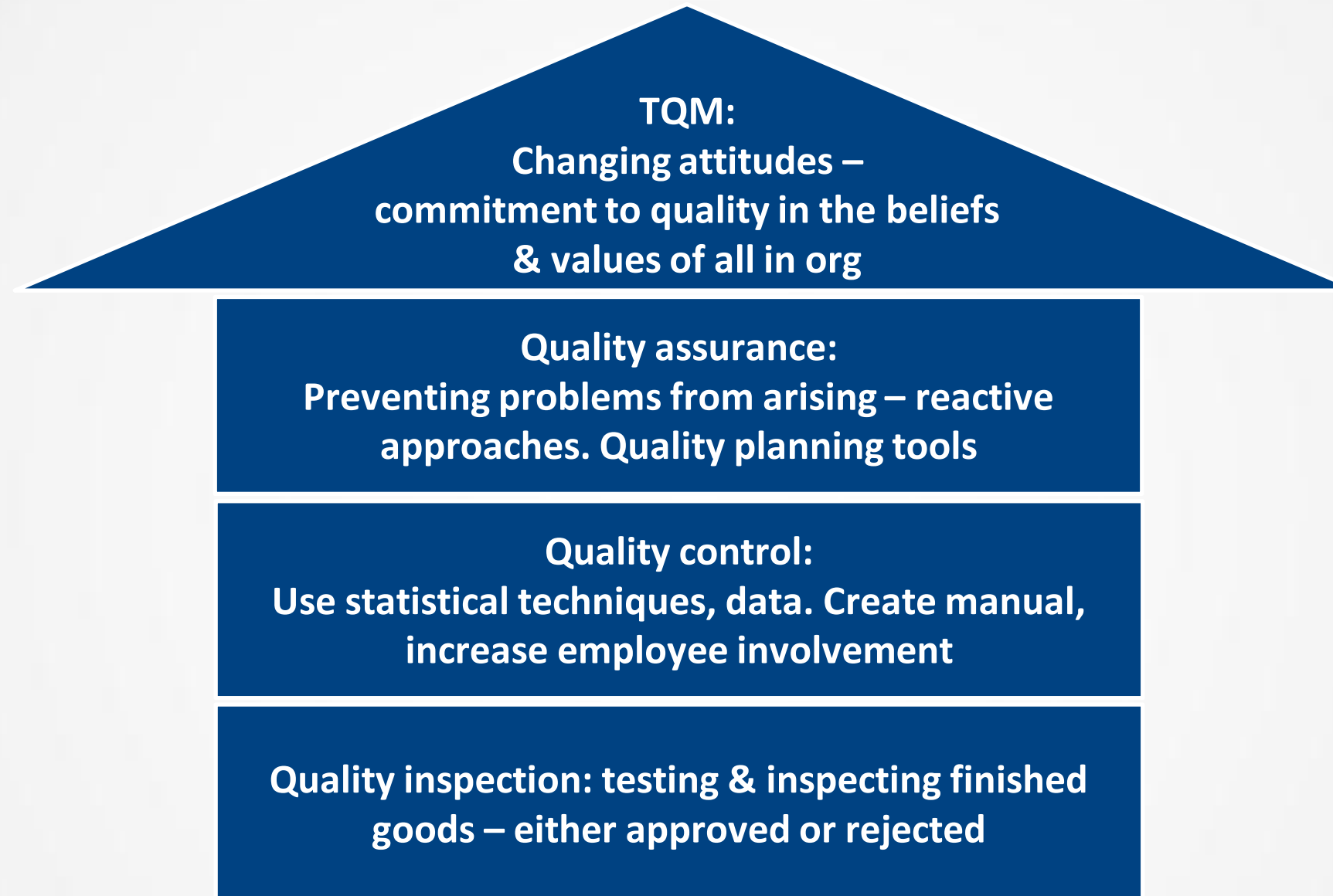
**Internal failure costs** – work fails to reach a required standard – re-work etc

**External failure costs** – poor-quality goods reach the customer - potentially most damaging

**Costs of exceeding requirements** – specification goes beyond what a customer wants

# What is the cost of quality to your organization?

# Quality Standards, Systems and Procedures

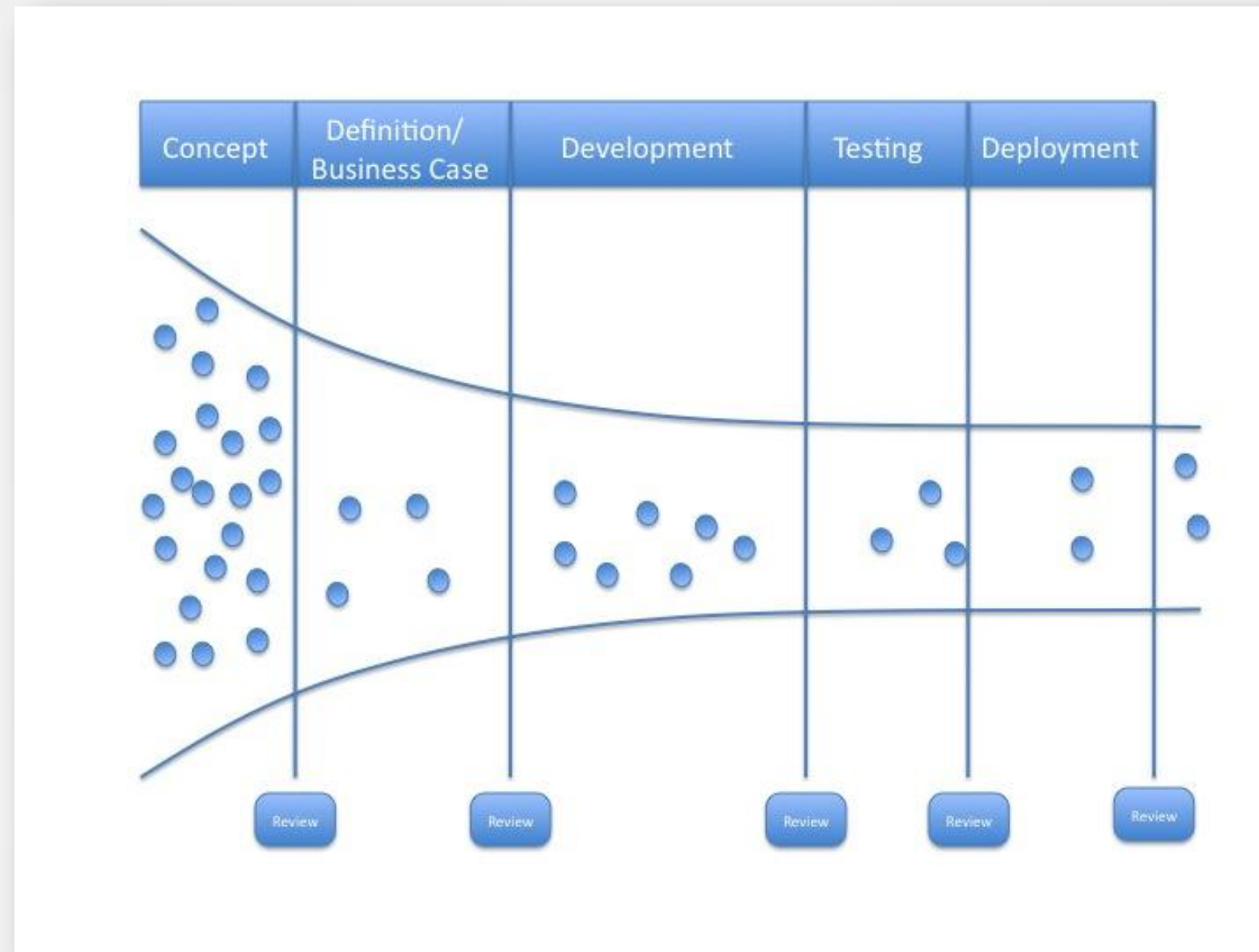


Source: Dale & Hooper – 4 stages

## What standards, systems and procedures are in place today?

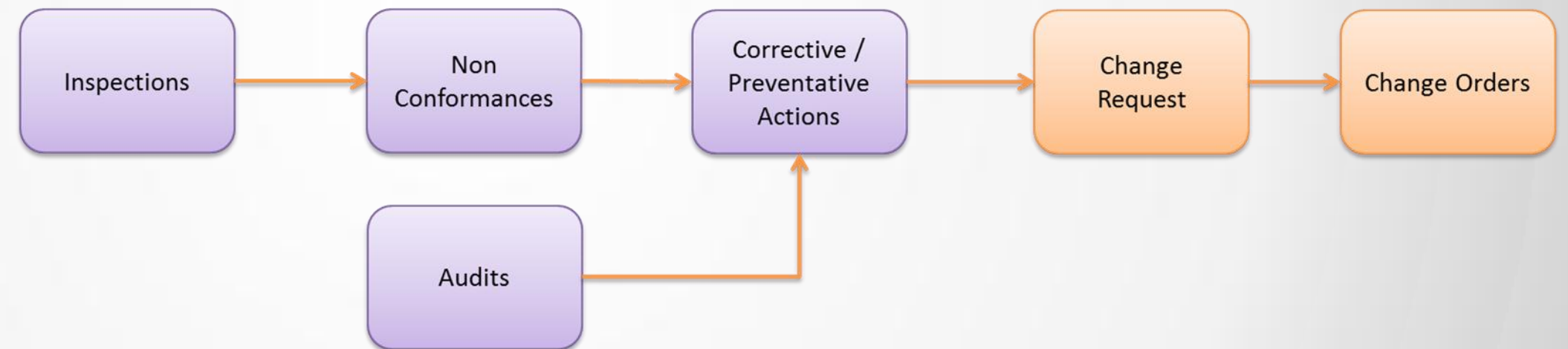
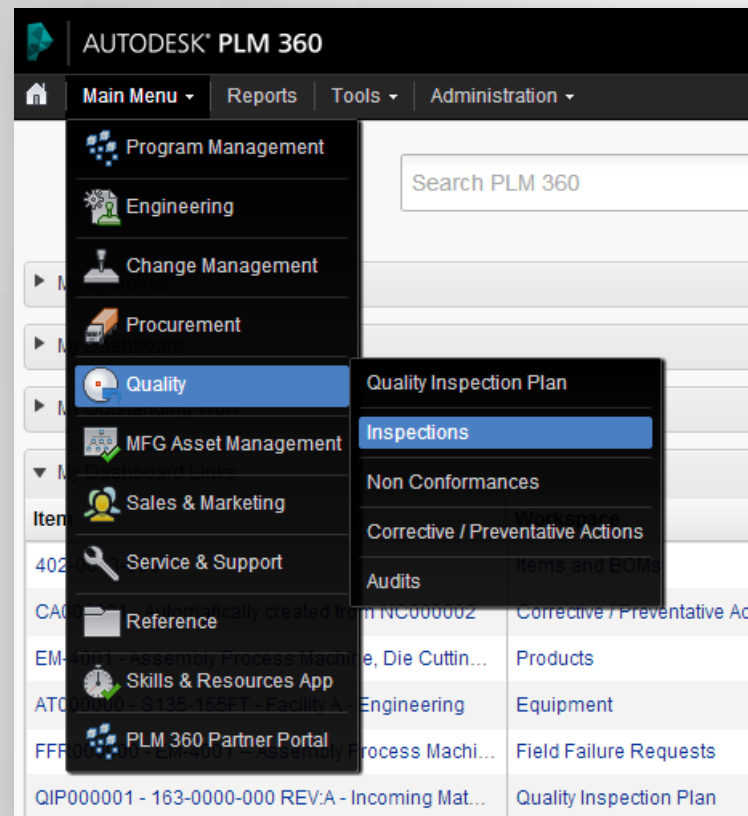


# Quality and New Product Introduction (NPI)

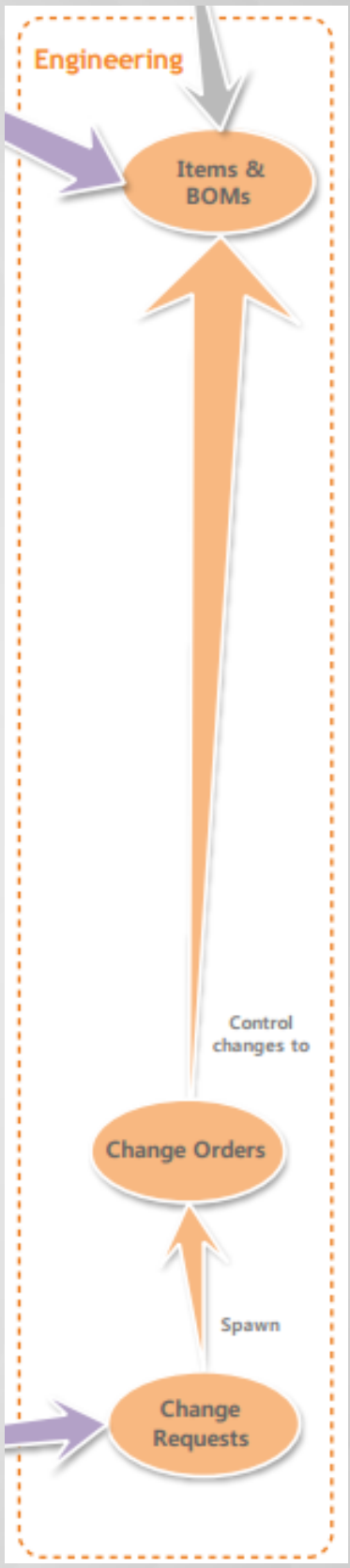
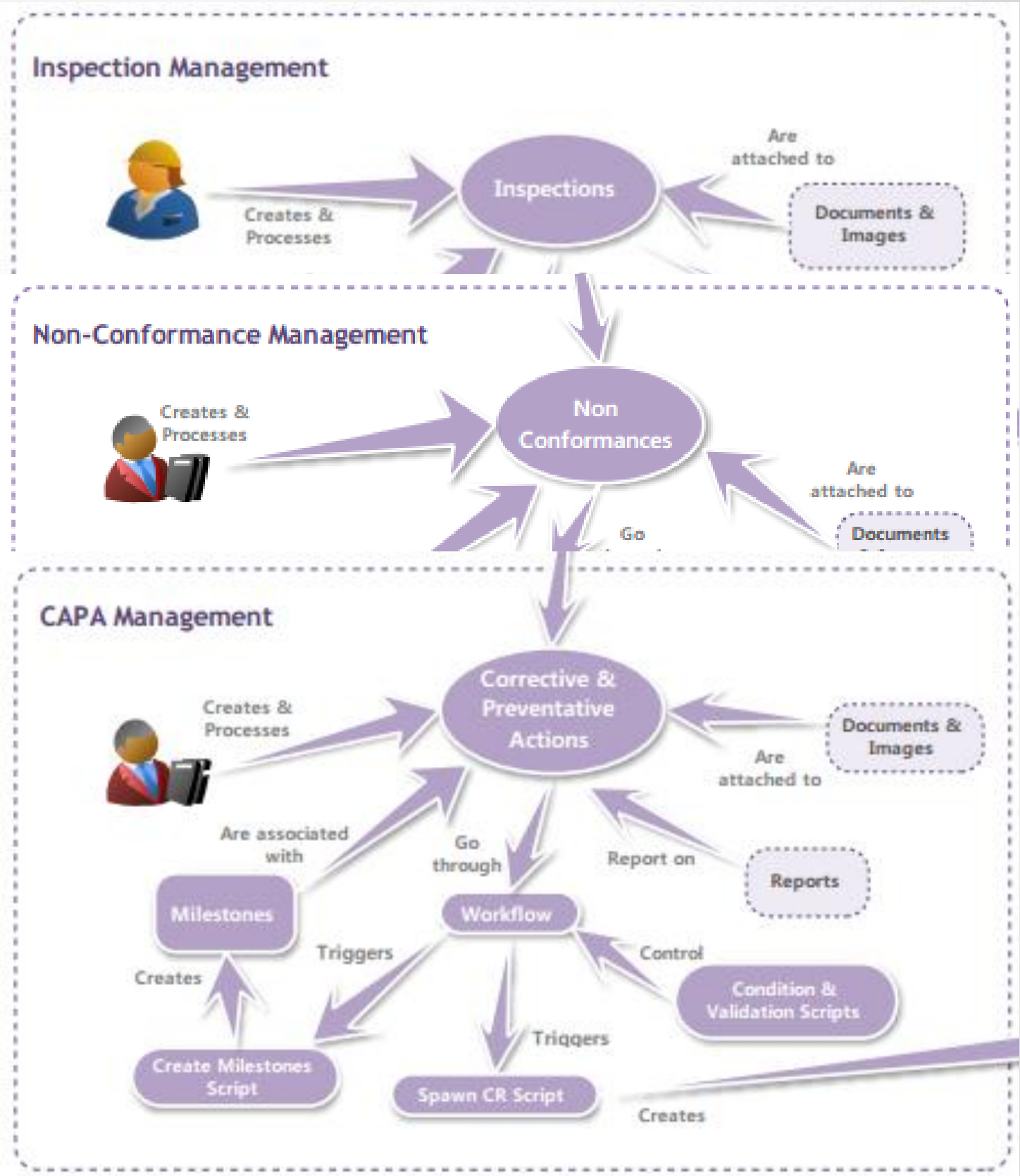
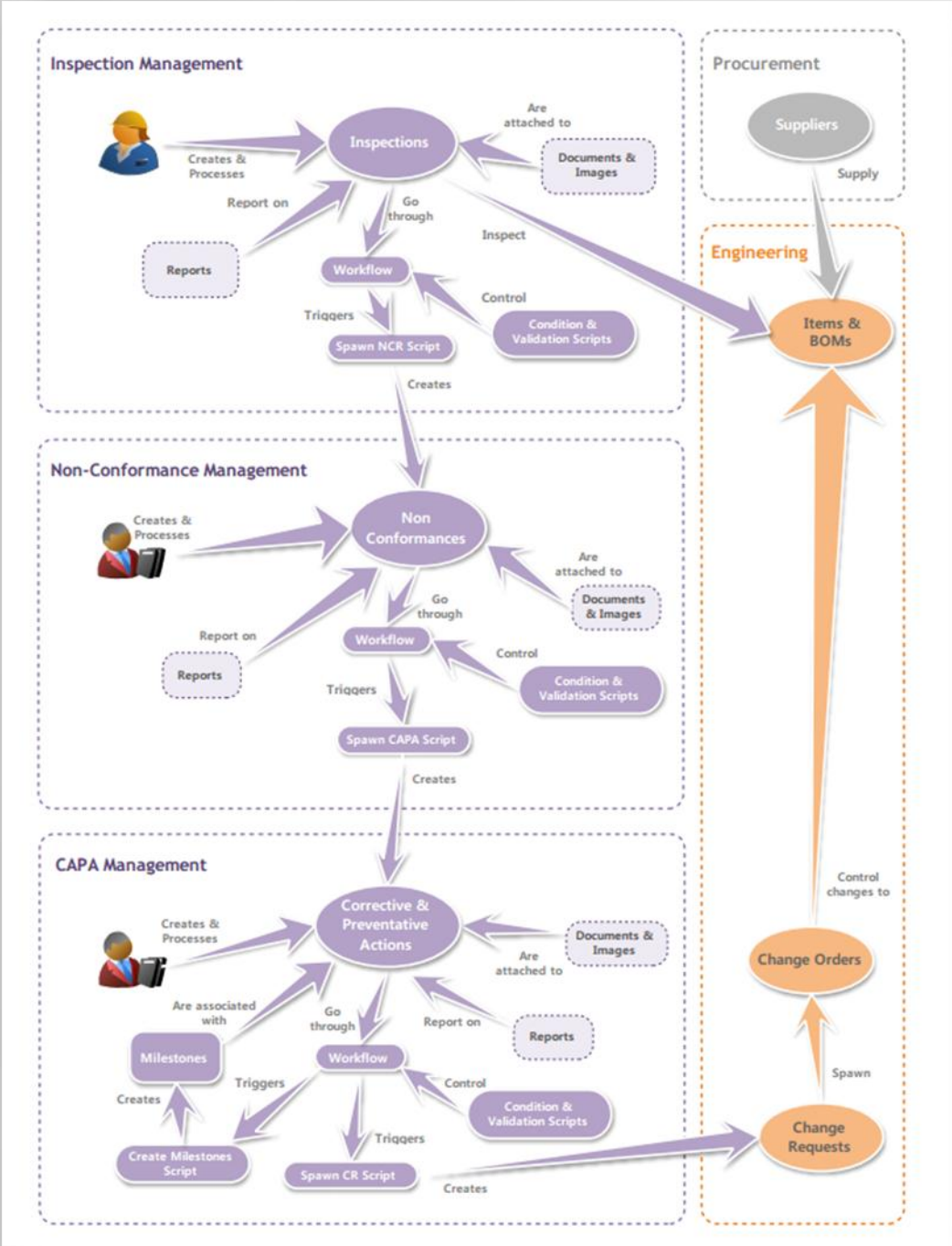


**Where does Quality Management fit in your product's lifecycle?**

# Quality Management



# Concept Map





## Demo: Quality Management

# Asset Management



# Use Cases for Asset Management

- Facilities/Equipment Lifecycle
- Maintenance/Calibration Schedules
- Manufacturing
  - Tooling, Fixtures, Processes
- As Built/As Maintained

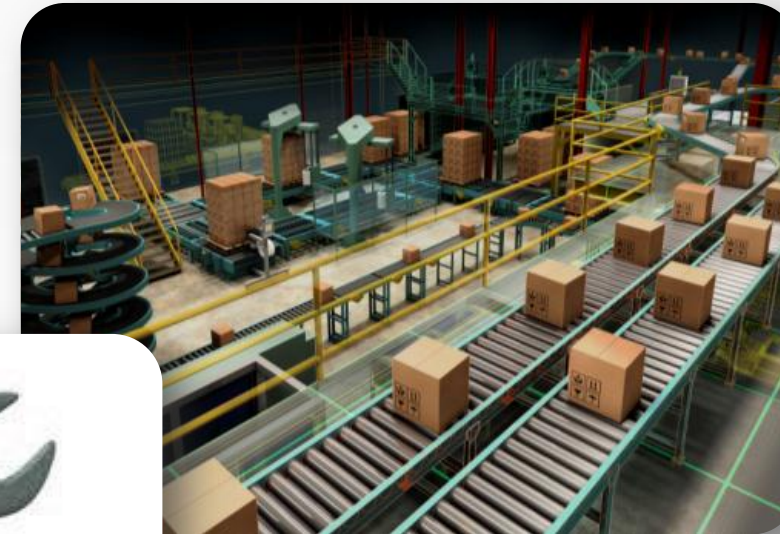
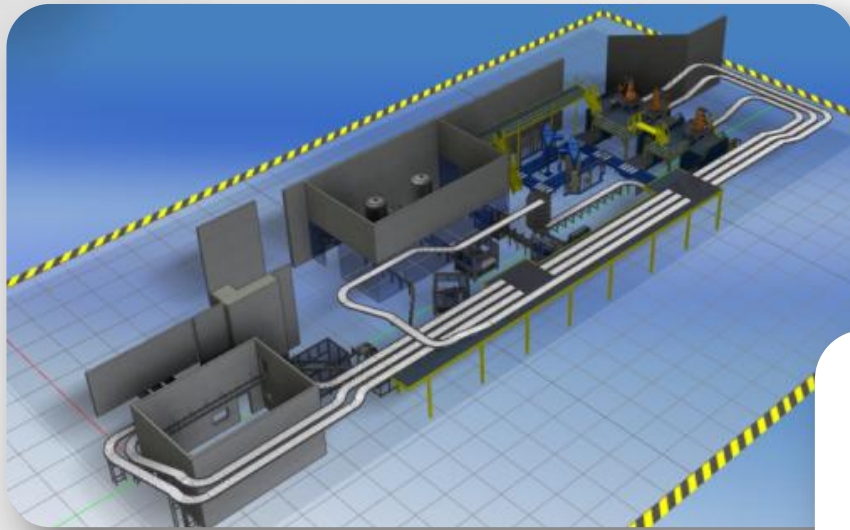




# How do your R&D, Process engineering & facilities need to interact?



# How do you optimize the use of your assets, equipment & facilities?





# Integrate Process, Equipment & Facilities

Process, equipment and facility design linked to operational excellence, from the start

- Reconcile design information from process, equipment & facility and commission into a single view
- R&D, Engineering & Manufacturing can collaborate more closely than ever before
- Track issues & drive resolution, before they become problems on site

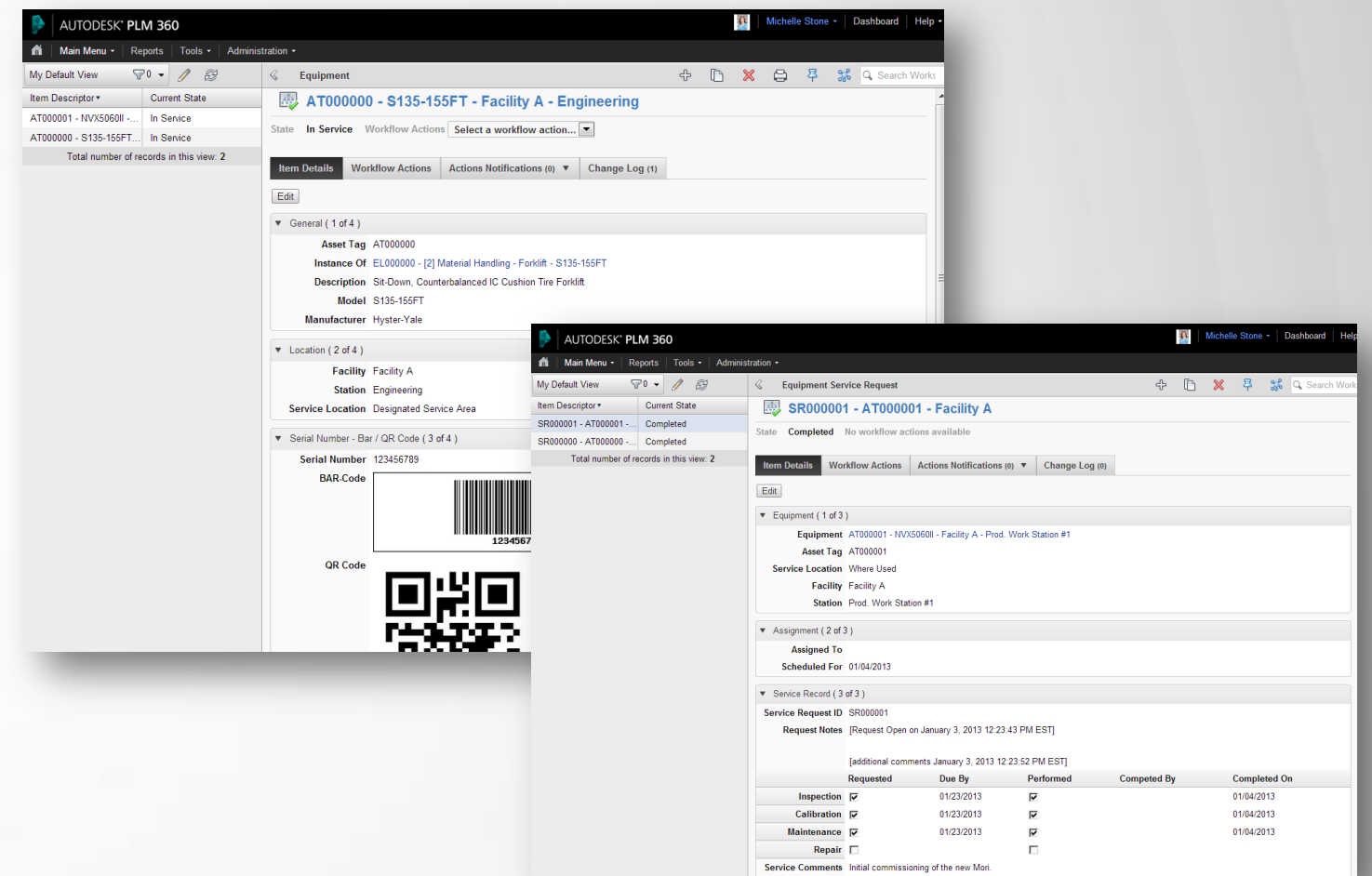




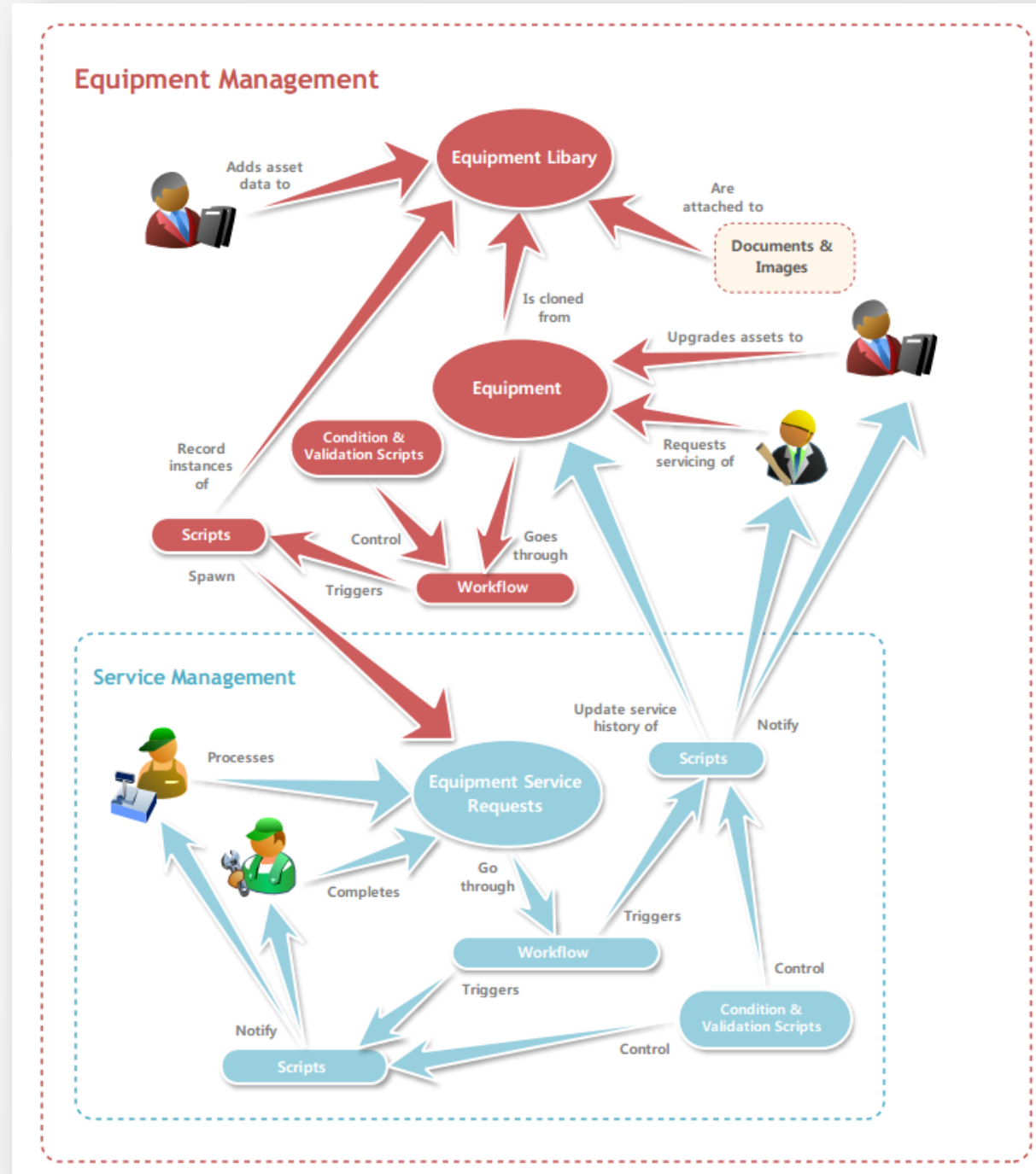
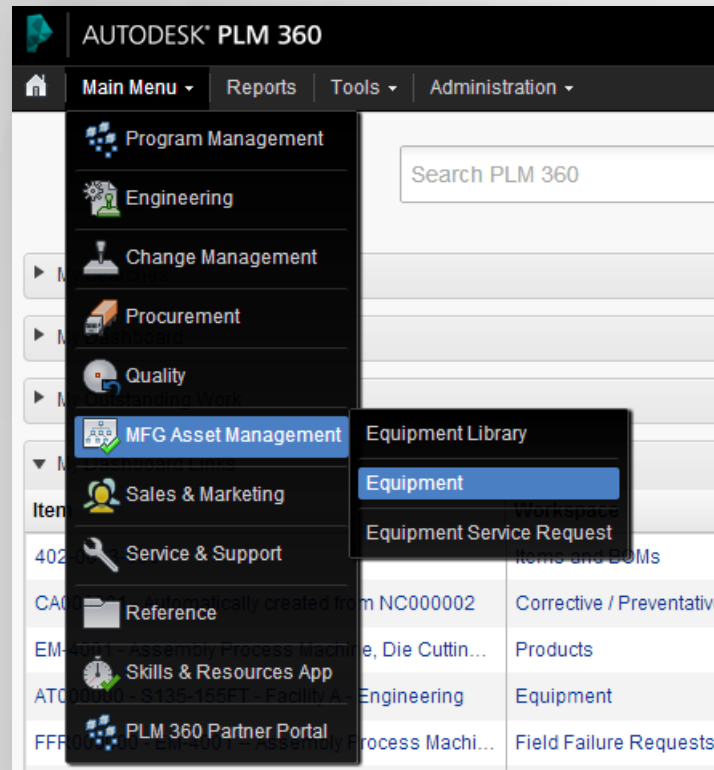
# Manage assets & facilities

The specification, construction, commissioning, operation, repair, replacement and decommissioning of assets & facilities

- Define & specify operational requirements, procedures, calibration & maintenance
- Track & manage corrective, scheduled & preventative maintenance



# Equipment/Service Management



## Demo: Asset Management



# App Store




# Use Cases for PLM 360 App Store

- Expand Footprint of PLM 360
  - Accelerate Implementation
  - Facilitate Deployment
    - Autodesk Services Implementation Tracker
  - Incorporate New Functionality
  - Explore Possibilities
- 
- *Future: Upload and Share Solutions*




# Welcome to the PLM 360 App Store


 AUTODESK® PLM 360

[Main Menu](#) [Reports](#) [Tools](#) [Administration](#)

[Administration](#) [App Store](#)

## Welcome to the PLM 360 App Store






### Engineering Product Management

The Engineering Product Management powered by Autodesk PLM 360 provides a central view into all of the processes related to your product.


[More information](#)



### Program Management

Regardless of program maturity, program management applications in Autodesk PLM 360 help managers quickly reform wayward processes, activities, and resources into efficient plans that


[More information](#)



### Supplier Management

Supply and Procurement applications in Autodesk PLM 360 help everyone in the organization involved with the negotiation, purchase, and receipt of goods and services work from Supplier information


[More information](#)



### Quote and Costing

The Quote and Costing App powered by Autodesk PLM 360 manages your Sales Quote to Project Costing process enabling you to track margin targets and actual vs. estimate analysis.


[More information](#)



### Quality Management

Quality Management Powered by Autodesk™ PLM 360 delivers the tools manufacturers need to collect and analyze quality data, define inspection standards, track and communicate non-


[More information](#)



### Octopart Electrical Components

The Octopart Electrical Components app allows you to create electrical items that link automatically to the Octopart search engine. Octopart develops search technology to help design engineers and


[More information](#)



### Engineering Change Management

The Engineering Change Management App powered by Autodesk PLM 360 provides a repeatable request, review, analysis, and change implementation process that is flexible for a


[More information](#)



### Lean 5S Auditing

The Lean 5S Audit app, helps you to check that all the 5S processes have been carried out correctly. This app helps you to audit the processes for Sort, Straighten, Shine, Standardisation and Sustain.


[More information](#)



### Manufacturing Asset Management


Get the tools you need to collect and analyze data related to assets so you can keep them available and in good shape.

[More information](#)




### MFG Costing to Engineering

The Costing to Engineering app helps with one of the most important phases of your product design. The costing, quote, order and engineering processes, use the app to track the progress at



### RFI Management

The RFI app helps to track the lifecycle of an RFI (Request for Information). The app will aid in the resolution of or clarification process by optimising coordination, management and archiving of RFIs.



### Bid & Contract Management

The Bid & Contract Management app supports the process of soliciting, submitting, and reviewing bids and awarding contracts. Defines bid scopes, invites bidders, review bids and awards contracts





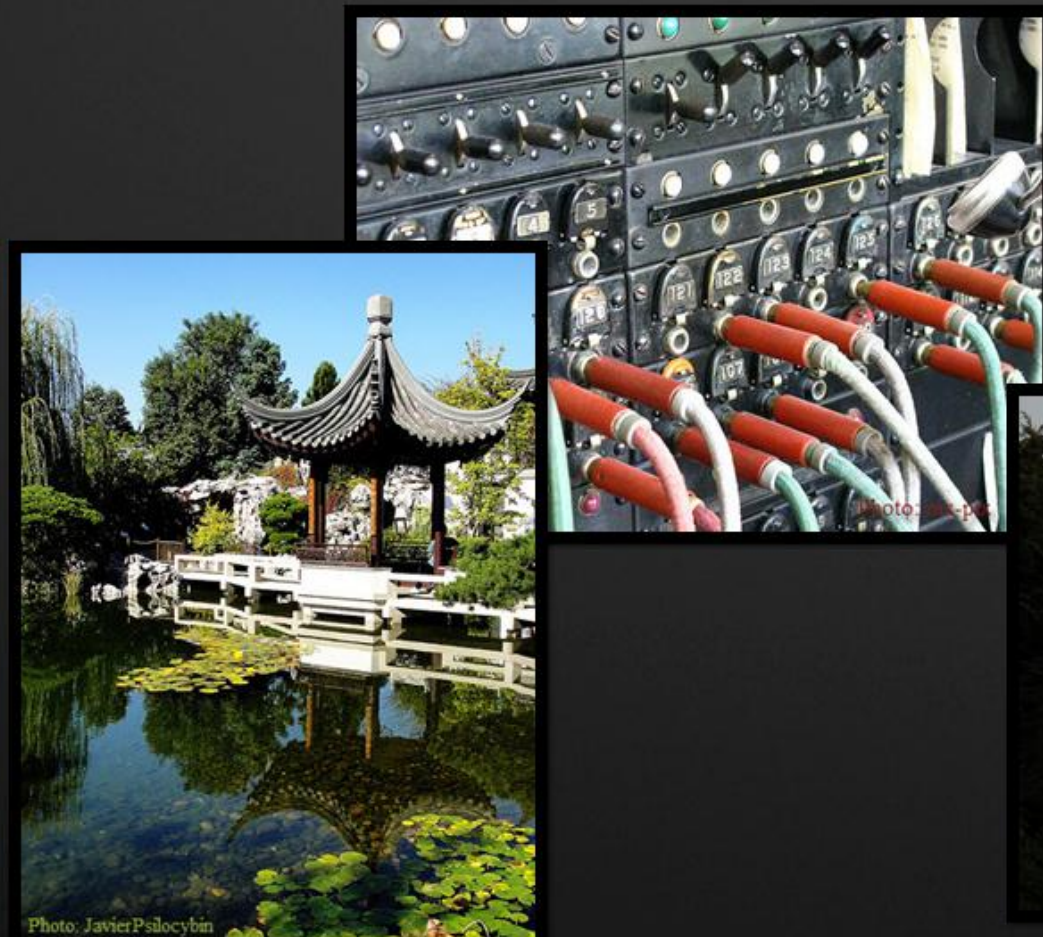
An aerial perspective of a cityscape. In the foreground, a multi-lane bridge with a rainbow-colored light strip along its edge spans a wide river. A red sports car is driving on the bridge. To the right of the bridge, there's a green park area with a blue oval field and some trees. In the background, a large stadium with a circular roof is visible, surrounded by various city buildings and skyscrapers under a clear blue sky.

# Closing



# Why did you come to #au2013?

## Making Connections



# Other Classes You May Be Interested In

wednesday

4

**BO2858 – One small Step for Man, One Giant Leap for Autodesk® PLM 360 Implementation: Sprint to the Finish**

 2:30 – 3:30 PM – Lido 3104

wednesday

4

**PL2758-P - Autodesk® PLM 360 Automation Solutions with Scripting**

 4:00 – 5:00 PM – Lido 3103

thursday

5

**PL2760-L – Autodesk® PLM 360 Developer's Delight: A Hands-on PLM 360 Scripting Overview**

 8:00 – 9:30 AM – San Polo 3501

thursday

5

**PL2024 - Choosing Autodesk® PLM 360: A Customer Perspective**

 1:00 – 2:00 PM – Lido 3006



# Additional Resources for this class

- PLM 360 App Guides
  - See 'Additional Materials' for this class
    - Concept Maps
    - Comprehensive app guides
      - Program-Project Management
      - Quality Management
      - Manufacturing Asset Management
      - Change Management
- PLM TV

# Resources Available for PLM 360

- PLM TV
- PLM 360 Forum
- Under the Hood Blog
- Autodesk® PLM 360 with Mike Watkins
- PLM 360 Home Page
- Help
- Subscription Center for Technical Support



# Learn more about Autodesk 360 Platform

- Visit the Autodesk 360 Lounge for a demo
- Drop by the Autodesk 360 Platform Pavilion, Booth 1505 to view what our Partners have created



- For more details visit: <http://www.autodesk.com/A360platform>

Also visit NetSuite, Booth 1516





# Questions



# Survey Says!

Make sure your voice is heard by completing your surveys!

Please take the time to complete your survey for this and every class you attend at Autodesk University.

Autodesk uses this information to know what classes to offer in the future.



