



Jim Sweeney

Senior Director Solution Management

19 years with PTC

Responsible for PTC's solution management for Windchill
Product Analytics and Component & Supplier Management

BS Mechanical Engineering – UMass Lowell

MBA – Babson College

Fun Fact – Only have one Original Six Team left



**Why
Classify**



**Determining
ROI**



**Maximizing
Design
Reuse**

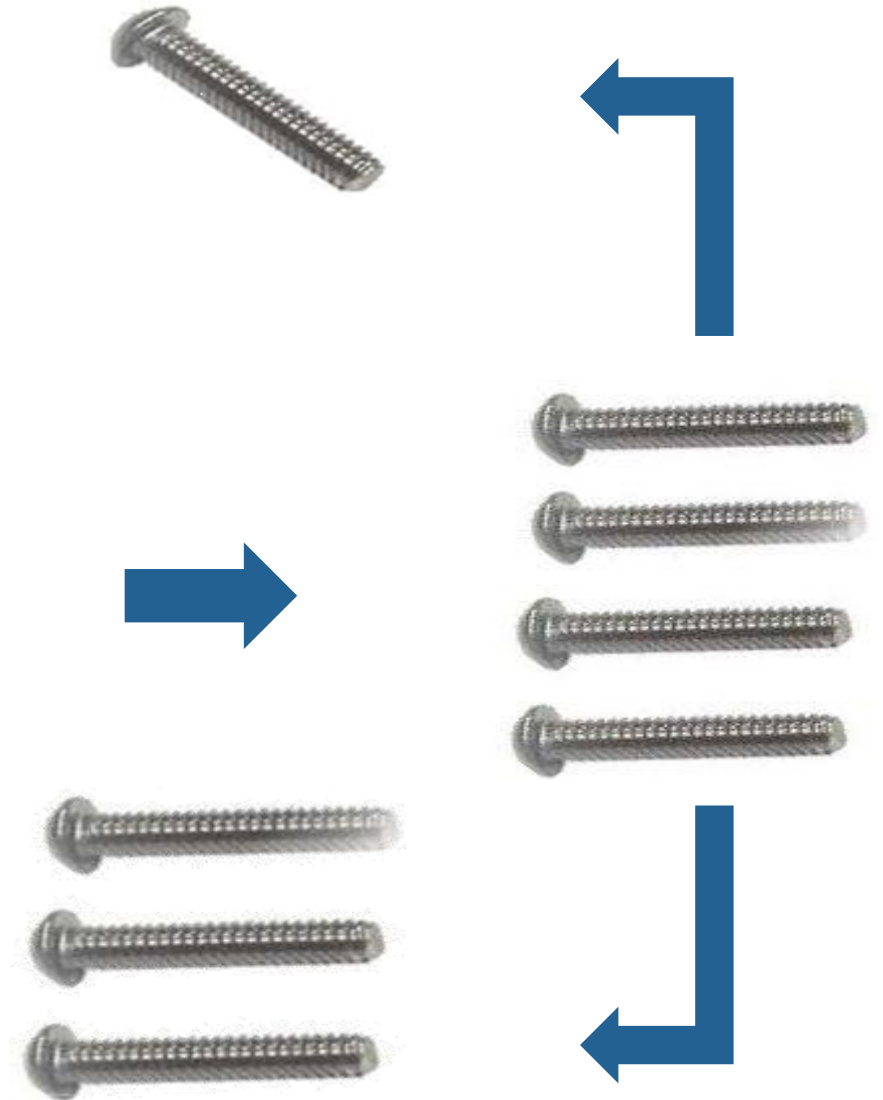
1 Broken Bolt



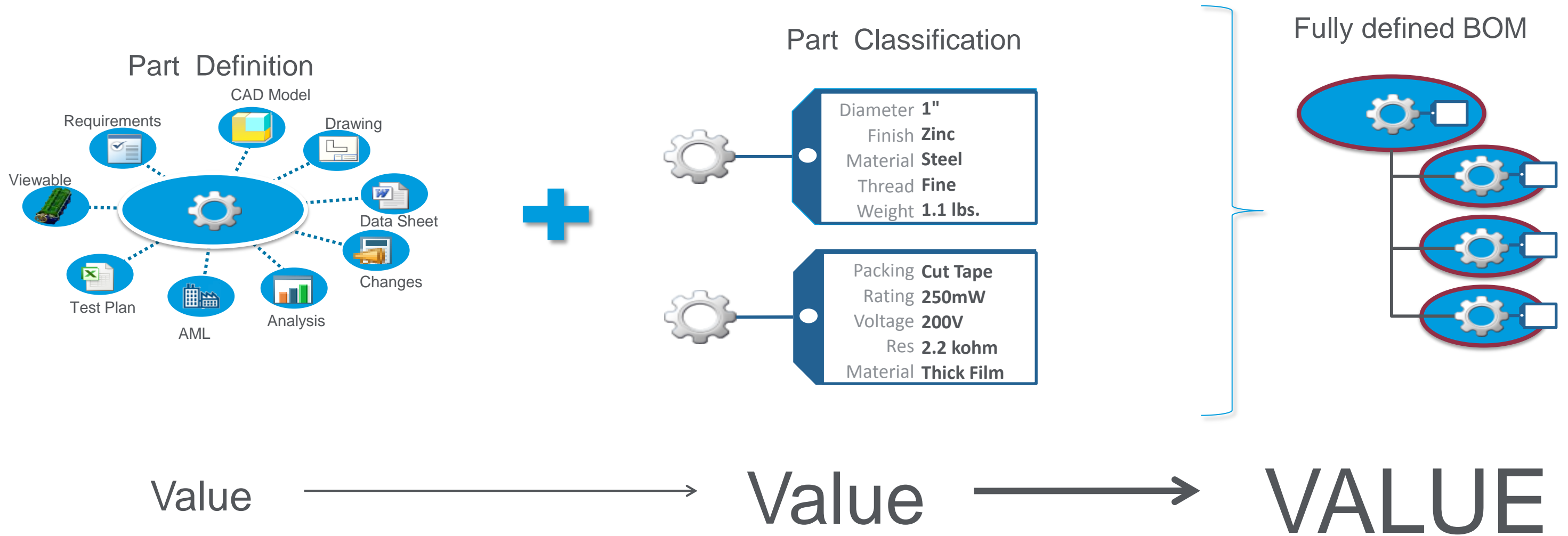
2 Search



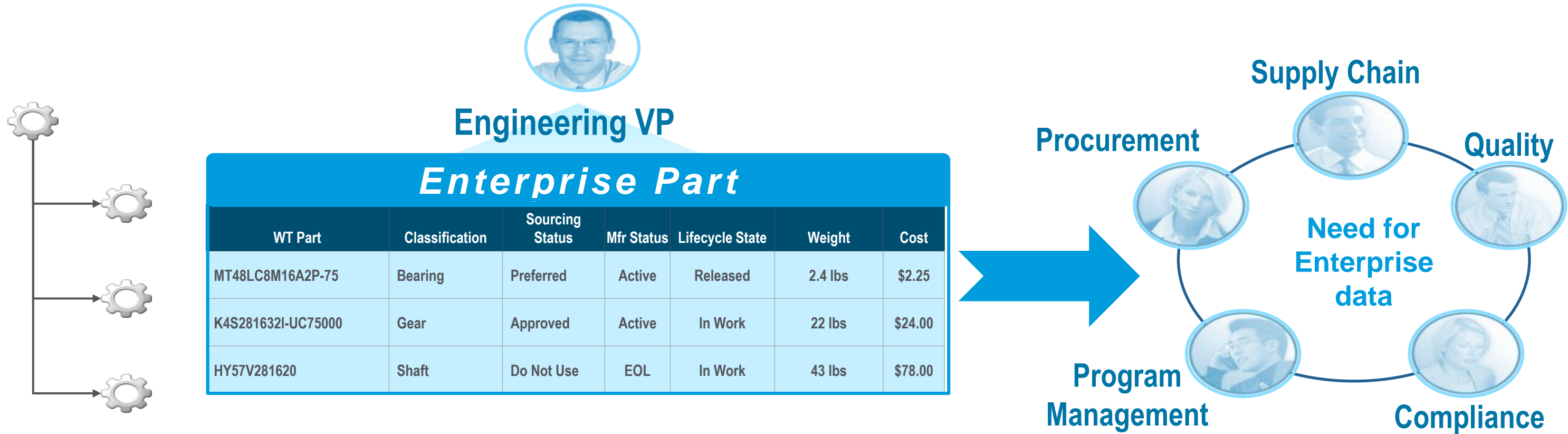
3 Purchase



Improving Find-ability



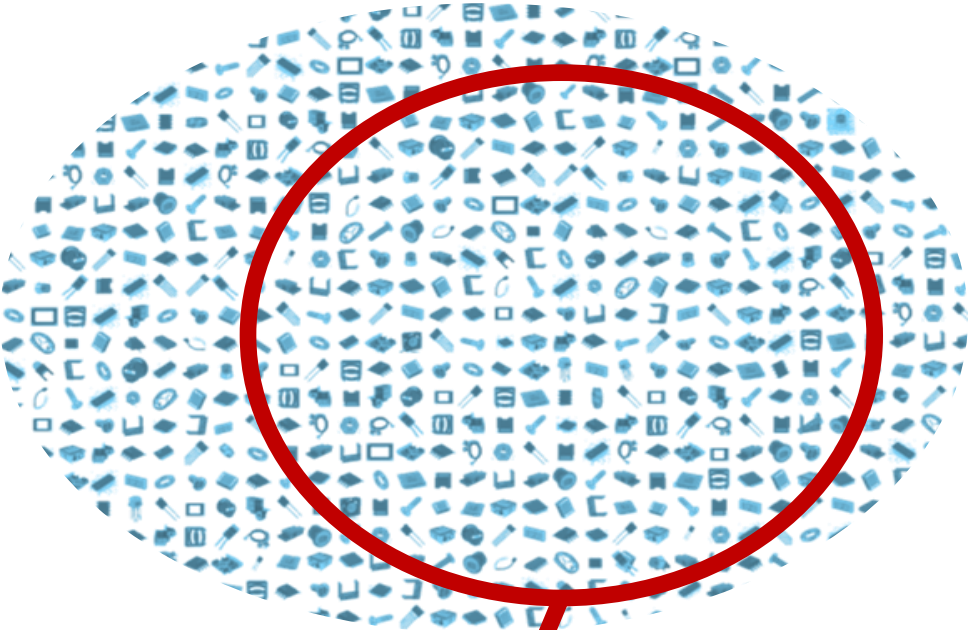
Classification is the foundation for driving part re-use



Classification provides value to groups outside engineering

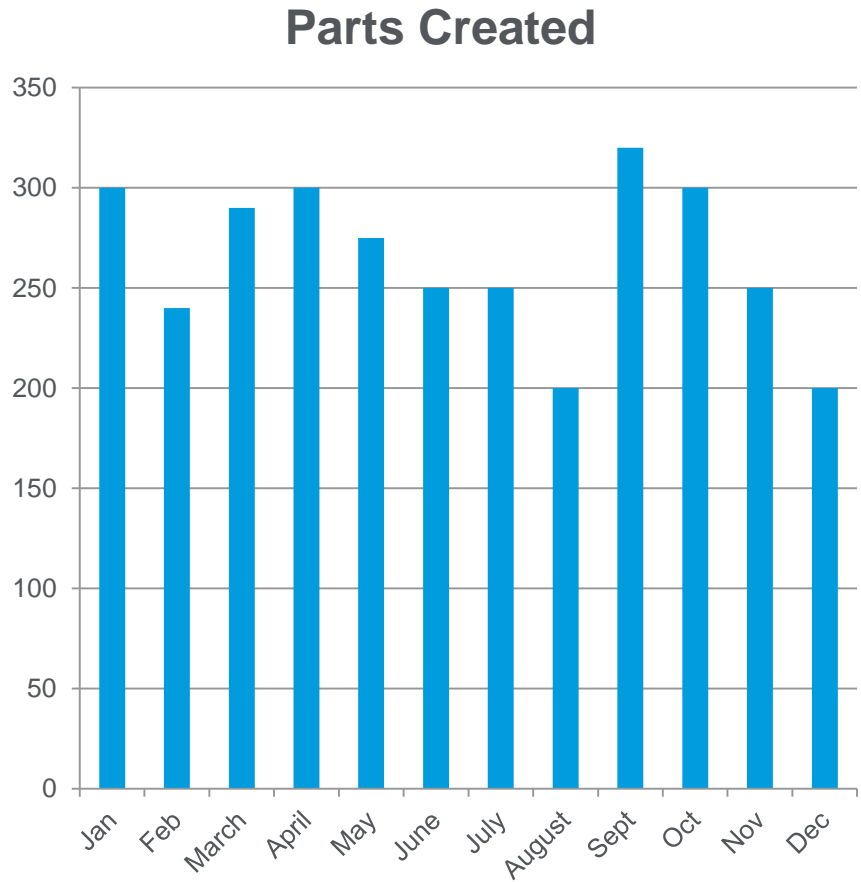
Determining ROI

Company Parts

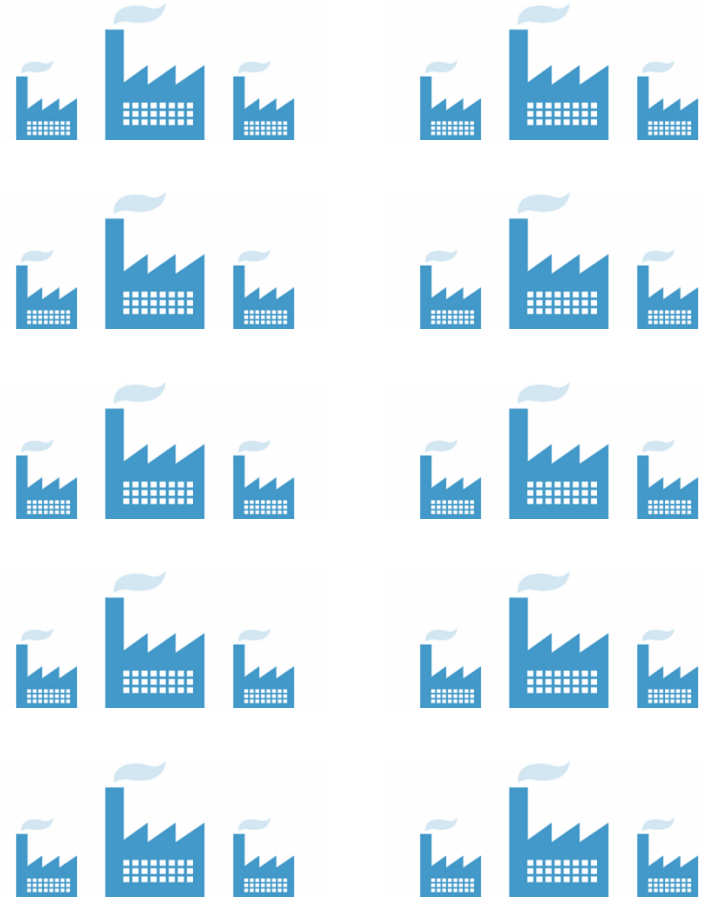


Active Parts

Part Introduction Rate

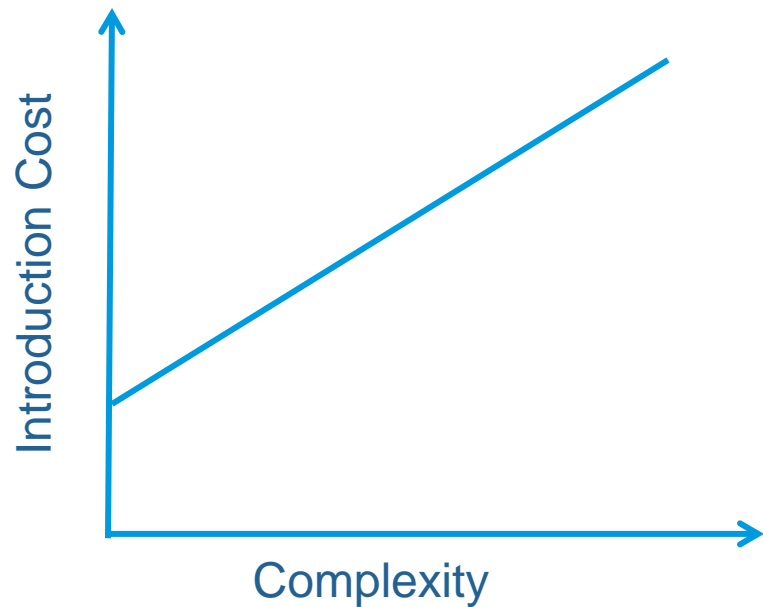


Suppliers



Part Introduction Cost

| TASK | Estimate |
|--------------|----------|
| Engineering | \$1200 |
| Sourcing | \$3000 |
| Transactions | \$100 |
| Logistics | \$500 |



Processes Impacted

New
Part Request

Search

Supplier
Qualification

Part Sourcing

Supplier Spend



Supplier A
\$12.75
Volume – 10,000



Supplier B
\$20.20
Volume - 500



Supplier C
\$15.80
Volume = 2500

$$P^i \times 12 \times D\% \times P^{ic}$$

P^i – Part introduction rate (#/months)

12 – months

$D\%$ - estimated duplicate part percentage (2% - 10%)

P^{ic} – Part introduction cost

$$P^i \times 12 \times D\% \times P^{ic}$$

P^i – 3000

12 – months

$D\%$ - 2%

P^{ic} – \$4000

\$2,880,000 / year

Determining ROI – Sample Spreadsheet



WINDCHILL CSM INVESTMENT SUMMARY

INVESTMENT SUMMARY

Calculation

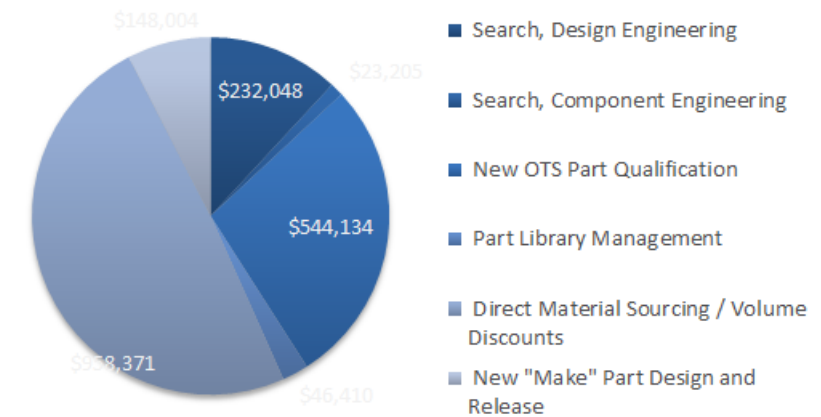
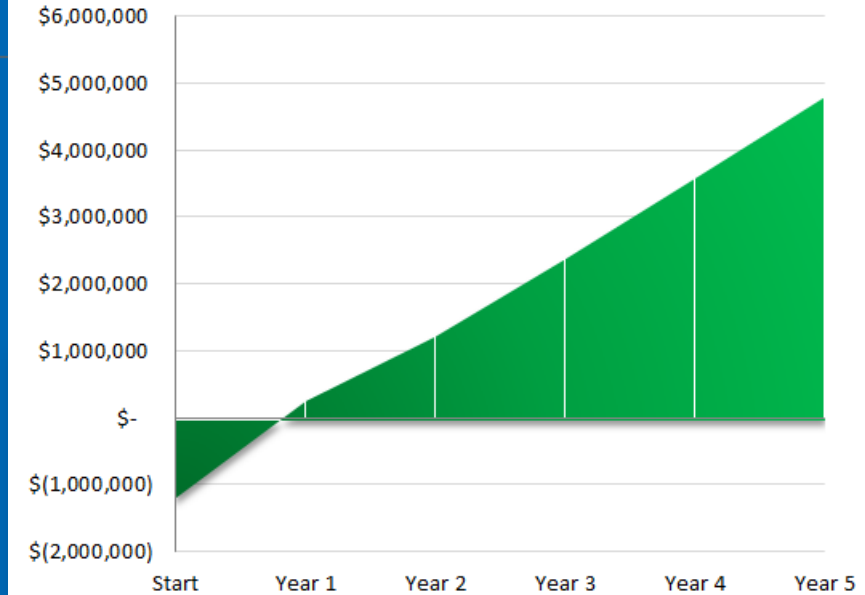
| | |
|-----------------------------------|------------|
| 5-Year Return on Investment (ROI) | 605% |
| Internal Rate of Return (IRR) | 104% |
| 5 Year Total Investment | \$ 980,000 |
| Payback Period (mo) | 141.9 |

ESTIMATED COSTS

| | Start | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Total |
|--------------------------|----------------|--------------|--------------|--------------|--------------|--------------|----------------|
| CAPITAL | | | | | | | |
| PTC Software | \$ (1,000,000) | | | | | | \$ (1,000,000) |
| Hardware | \$ 20,000 | | | | | | \$ 20,000 |
| EXPENSE | | | | | | | |
| PTC Services | | \$ 1,000,000 | \$ - | \$ - | \$ - | \$ - | \$ 1,000,000 |
| PTC Software Maintenance | \$ (200,000) | \$ - | \$ (200,000) | \$ (200,000) | \$ (200,000) | \$ (200,000) | \$ (1,000,000) |
| TOTAL COST | \$ (1,180,000) | \$ 1,000,000 | \$ (200,000) | \$ (200,000) | \$ (200,000) | \$ (200,000) | \$ (980,000) |

ESTIMATED BENEFITS

| | Included? | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Total |
|---|-----------|--------------|--------------|--------------|--------------|--------------|--------------|
| 1 Search, Design Engineering | Yes | \$ 52,305 | \$ 160,052 | \$ 218,728 | \$ 225,290 | \$ 232,048 | \$ 888,423 |
| 2 Search, Component Engineering | Yes | \$ 5,230 | \$ 16,005 | \$ 21,873 | \$ 22,529 | \$ 23,205 | \$ 88,842 |
| 3 New OTS Part Qualification | Yes | \$ 852,022 | \$ 403,290 | \$ 512,898 | \$ 528,285 | \$ 544,134 | \$ 2,840,630 |
| 4 Part Library Management | Yes | \$ 10,461 | \$ 32,010 | \$ 43,746 | \$ 45,058 | \$ 46,410 | \$ 177,685 |
| 5 Direct Material Sourcing / Volume Discounts | Yes | \$ 25,750 | \$ 851,295 | \$ 903,356 | \$ 930,457 | \$ 958,371 | \$ 3,669,229 |
| 6 New "Make" Part Design and Release | Yes | \$ 25,750 | \$ 109,695 | \$ 139,508 | \$ 143,694 | \$ 148,004 | \$ 566,651 |
| 7 Part Inventory Management | Yes | \$ 42,601 | \$ 20,165 | \$ 25,645 | \$ 26,414 | \$ 27,207 | \$ 142,031 |
| 8 - | No | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| 9 - | No | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| 10 - | No | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| 11 - | No | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| 12 - | No | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| TOTAL BENEFIT | | \$ 1,014,119 | \$ 1,592,513 | \$ 1,865,754 | \$ 1,921,727 | \$ 1,979,378 | \$ 8,373,491 |



Maximizing Design Re-use

- **Define and Manage Classification**

- Define tree structure with attribute, images and schematics
- Integral with Windchill

- **Classify**

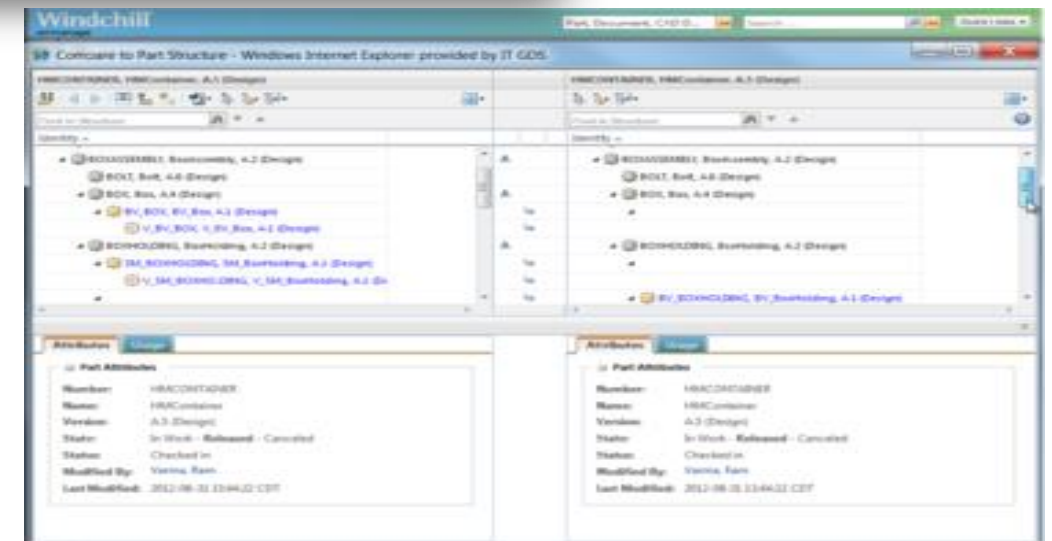
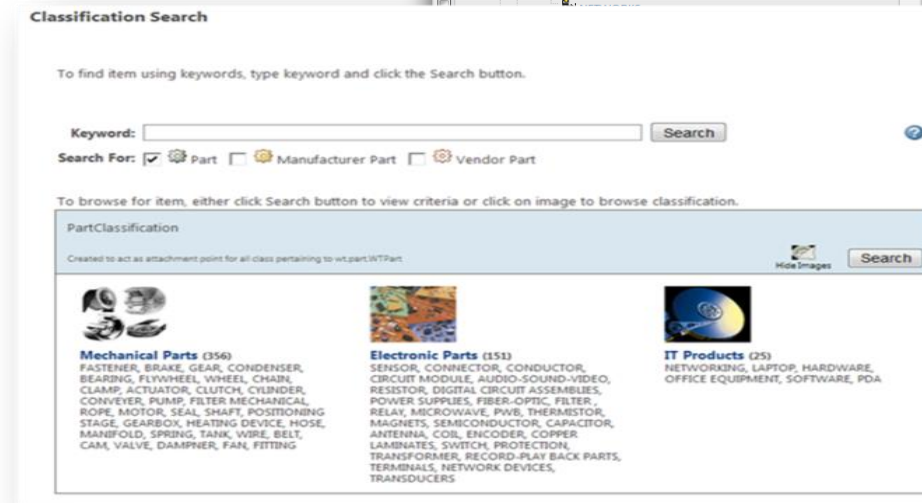
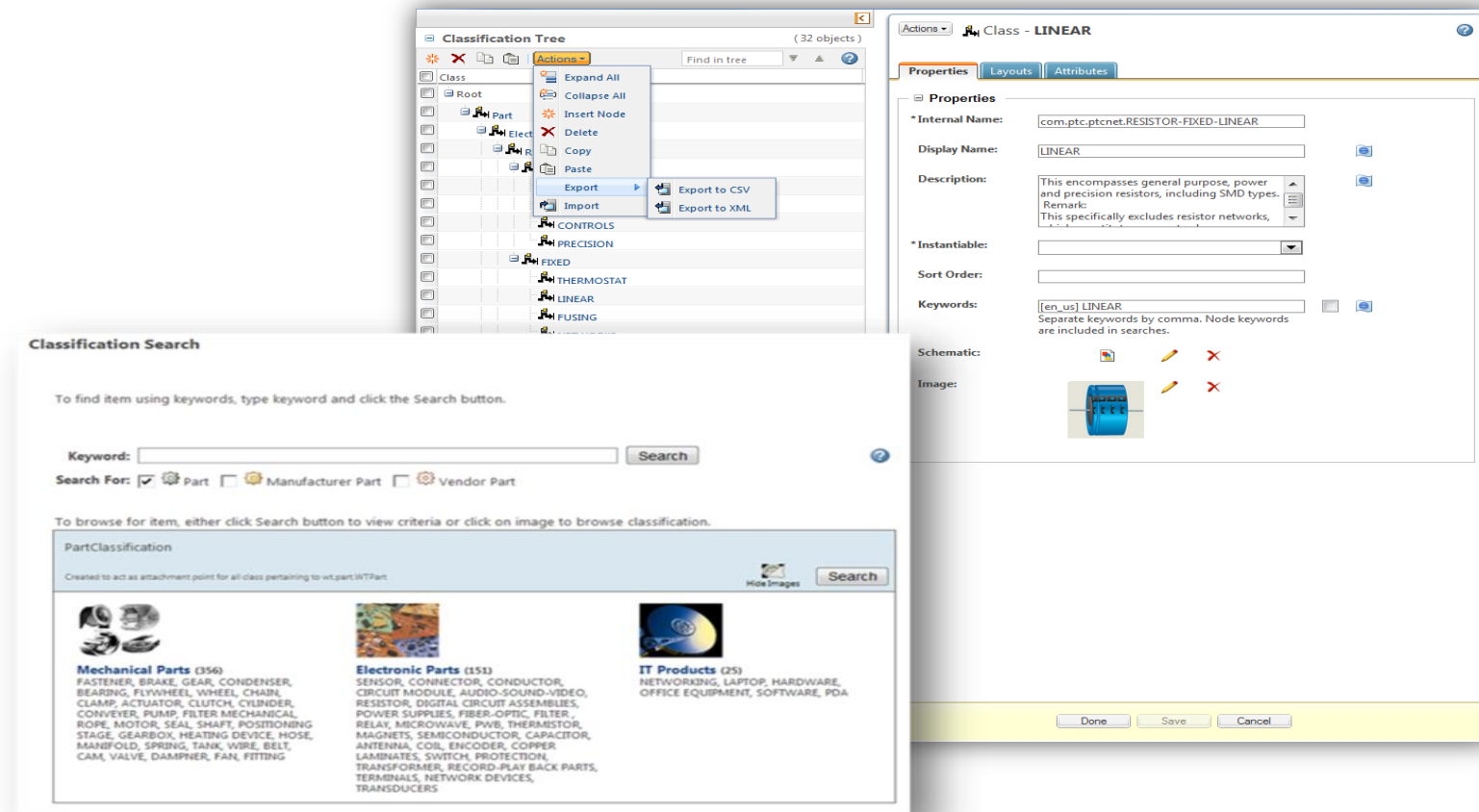
- Apply classification attribute to parts
- Required constraints to enforce classification

- **Find and Compare**

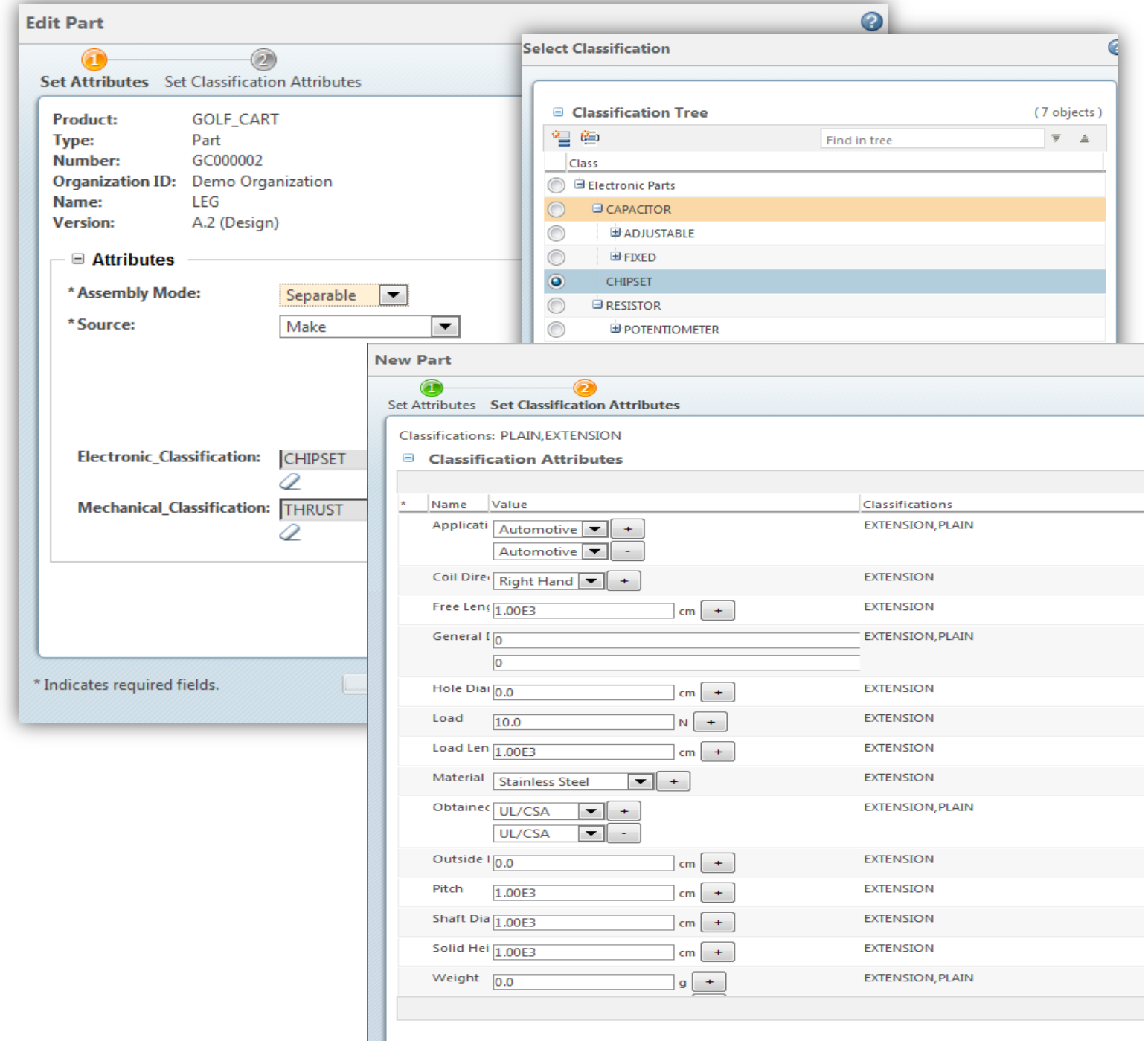
- Free form search
- Browse classification structure
- Find and compare similar parts

- **Optimize Supplier and Component selection**

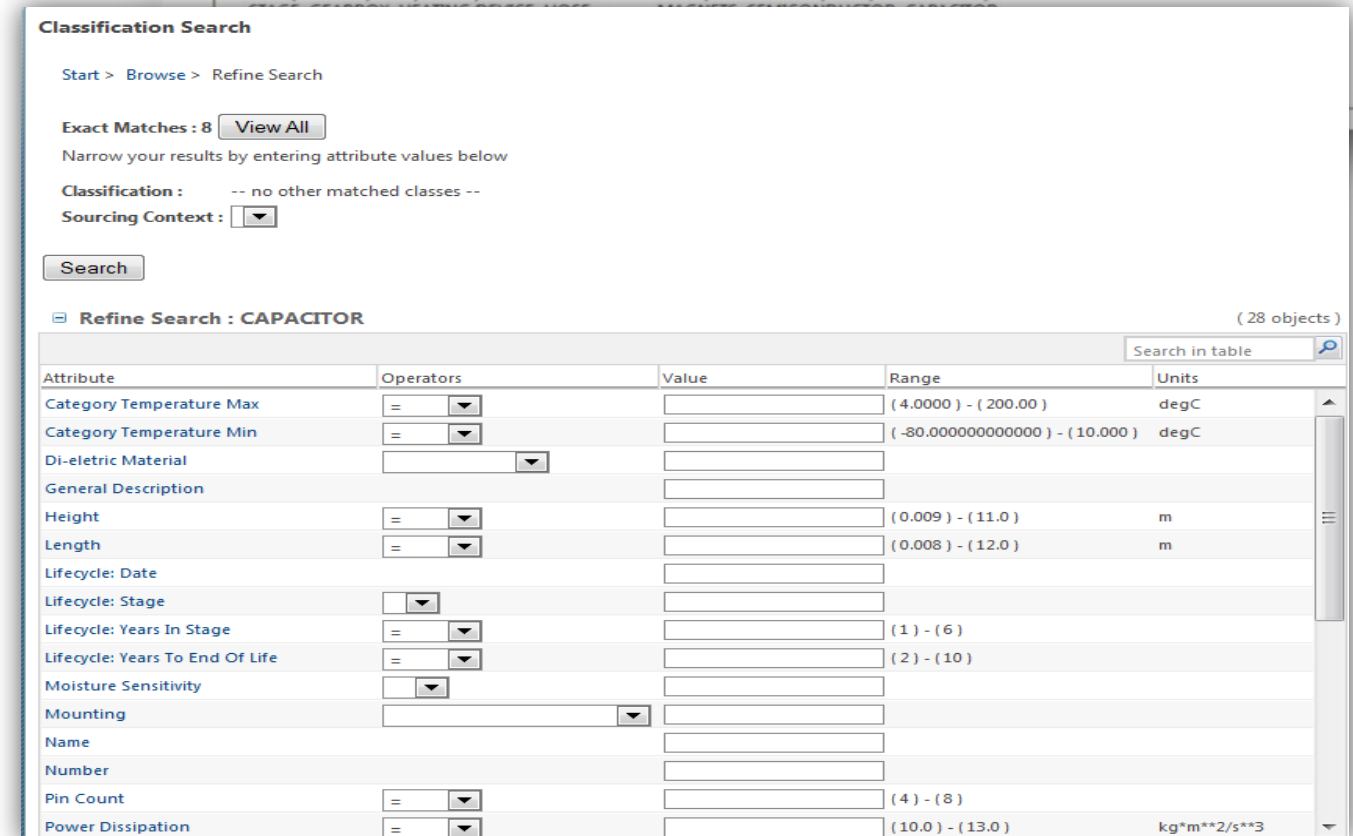
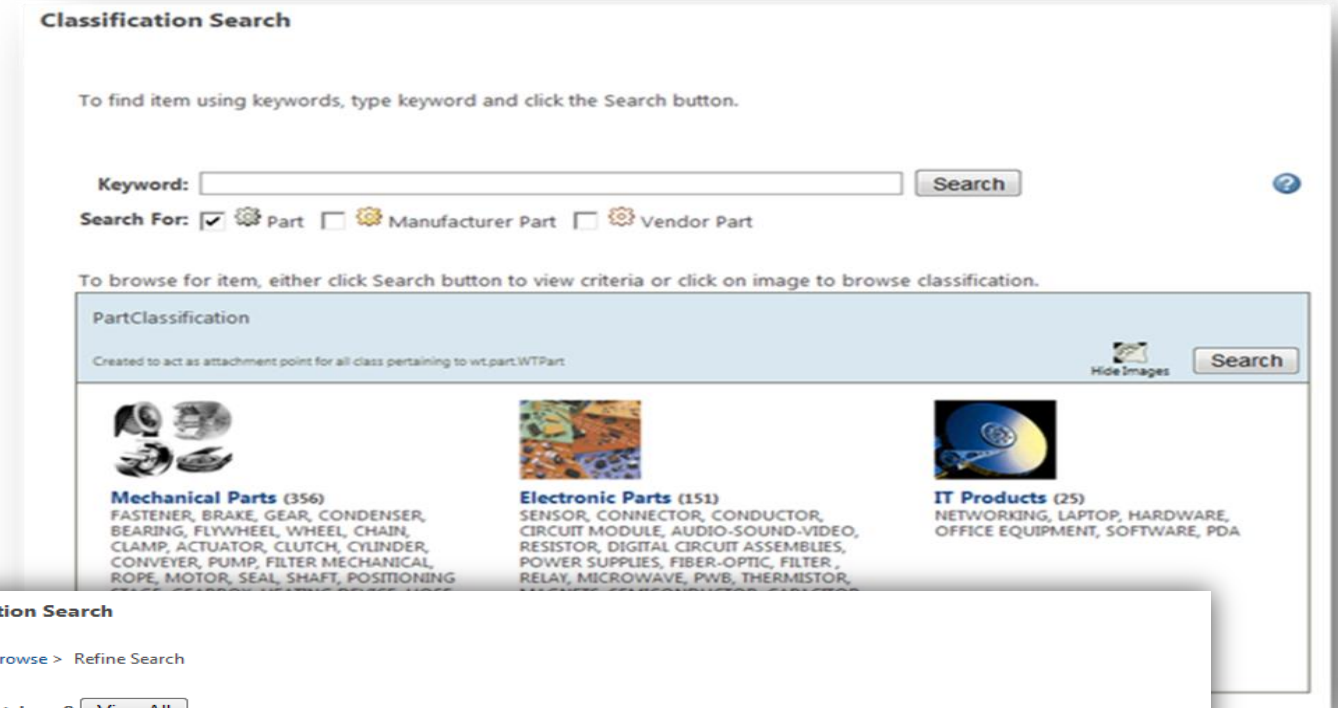
- Display AML and AVL through PTC Windchill PDMLink
- Standardize supplier and component introduction process



- **Constraints**
 - Required classification
 - Required attributes
- **Visibility**
 - Use of Profiles
- **Attribute Grouping**
 - Use of Layouts



- **Free form search**
 - Free form query combining node, attributes and values
- **Browse**
 - Navigate the taxonomy to find all parts classified against specific node class
- **Refine Search**
 - Narrow search results by refining search criteria
- **Find Similar**
 - Perform search for similar part by modifying one or more classification attribute value



- **Sourcing Status Visibility**
 - Provides access and context
 - Flexibility for multiple contexts
- **New Product Introduction Process**
 - Sample process to create consistent approach to introducing new parts
 - Reports to track progress
- **Supplier Information**
 - Understand all parts provided by a supplier

The image displays two overlapping screenshots of the PTC Windchill software interface. The top screenshot shows a search results page with a table of parts. The bottom screenshot shows a task monitor for a 'Part Request Workflow'.

Search Results Table:

| Number | Name | Context | Sourcing Status | Version | Organization ID | State |
|-------------|-----------------------|-------------|-----------------|------------|-----------------|--------|
| OTS-0001064 | USB2412_QFN28_MK... | Beagleboard | Approved | 1.4 (EBOM) | OEM | Design |
| OTS-0001034 | IND_2.2uH_2.6A_10%... | Beagleboard | Approved | 1.3 (EBOM) | OEM | Design |
| OTS-0001002 | CAP_470pF/5%/50V/... | Beagleboard | Approved | 1.4 (EBOM) | OEM | Design |
| OTS-0001004 | CAP_0.01uF_X7R_16V... | Beagleboard | Approved | 1.3 (EBOM) | OEM | Design |
| OTS-0001006 | CAP_0402_0.1uF_X5R... | Beagleboard | Approved | 1.3 (EBOM) | OEM | Design |
| OTS-0001007 | CAP_0402_100pF_CO... | Beagleboard | Approved | 1.3 (EBOM) | OEM | Design |
| OTS-0001008 | CAP_1.0uF_X5R_10V... | Beagleboard | Approved | 1.5 (EBOM) | OEM | Design |
| OTS-0001016 | CAP_4.7uF_X5R_50V... | Beagleboard | Approved | 1.4 (EBOM) | OEM | Design |
| OTS-0001065 | XTAL_12MHZ_HC-49... | Beagleboard | Approved | 1.3 (EBOM) | OEM | Design |
| OTS-0001010 | CAP_10uF_Y5V_10V... | Beagleboard | Approved | 1.3 (EBOM) | OEM | Design |
| OTS-0001057 | RES_4.7K_0402 | Beagleboard | Approved | 1.3 (EBOM) | OEM | Design |
| OTS-0001011 | CAP_18pF_COG_50V... | Beagleboard | Approved | 1.4 (EBOM) | OEM | Design |

Task Monitor Details:

- Subject:** Part Request - 00001, Version: A.3
- Instructions:** Your PR has been routed for review and implementation. This task will allow you to monitor the PR process. The PR can be cancelled by checking the Cancel checkbox, and completing the task.
- Process:** Part Request Workflow_00001, Version: A.1
- Process Initiator:** Peter Project Manager
- Process Initiated On:** 2015-01-06 10:01 EST
- Assignee:** Peter Project Manager
- Role:** Assignee
- Priority:** Highest
- Deadline:**
- Status:** Potential

The bottom screenshot also shows a network diagram of the part request workflow, with nodes representing different stages and tasks.

Live Webinar: June 23, 2015 at 11AM (ET)

HARMAN Shares How to Use PTC Windchill as
A Central Source for Product Information

▶ REGISTER NOW

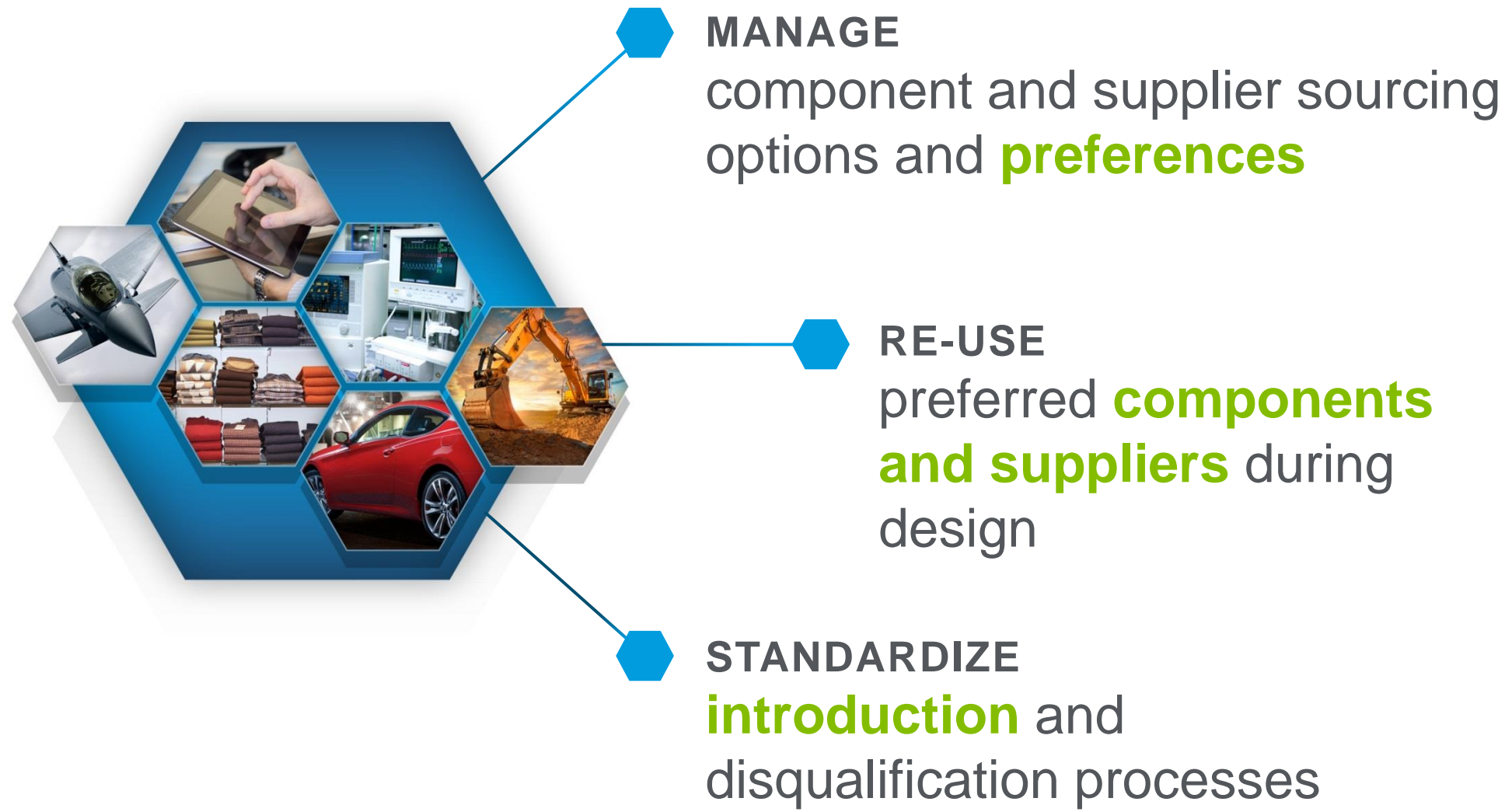


Join [Michelle Worthington](#) from HARMAN and [Jim Sweeney](#) from PTC to learn the value that comes with managing a central source of product information. Harman International is the parent company of the brands JBL, Crown Audio, Harman Kardon, Martin Lighting, Soundcraft and many more.

Learn:

- About HARMAN's approach to deploying data management, classification, change and vendor management in a single, comprehensive rollout
- How a central source of classified information drives greater part reuse
- How better cost analytics improves product development decisions

[Watch a Demonstration](#) showing how HARMAN manages the product definition, change management, classification and costing decisions with PTC Windchill and PTC Windchill Cost Analytics.



Positive Outcome

**Less time
searching for
parts**

**Reduce
Duplicate
parts**

**Common view
of part
information**

Delivering Business Value with each release

- **Integrated Classification Admin in Windchill**
- **Modernize Classification Admin UI**
- **Classification Search with Solr**
- **Multi Dimensional Classification**
- **Classification Structure Mapping to Classification Binding Attribute**

- **Auto naming based on classification**
- **Unify Classification and Advance Search**
- **Facet Searching**
- **Improve Classification Explorer**
- **Enhanced Results Table**
- **Complex Search Query**

10.2

X-26

2015

Future

Classified

- Your feedback is valuable
- Don't miss out on the chance to provide your feedback
- Gain a chance to win an instant prize!
- Complete your session evaluation now

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