Acronym a Go Go
CRM, PDM, PLM & ERP - Which, Why and How

Steve Bedder
Senior Solutions Specialist

Join the conversation #AULondon #AU2018
Objectives for our Class

• Identify the key technology pillars within a manufacturing organisation
• Determine how, if and should they work together
• Share examples, experiences and best practices of integrated technology solutions
• Be interactive
• Have some fun
Steve Bedder

BSc(Hons) Computer Aided Product Design
Senior Solutions Specialist at Autodesk
20+ years working with manufacturers
Focused on design, data & process management
Based in the Peak District, UK
Aero Vs Light Vs Endurance - What Type Of Road Bike Should You Buy?

423,355 views

Shop "endurance bike"
Lightweight OR Endurance OR Aero
Which technologies do you use in your business?
Go to www.menti.com and use the code 24 57 35

1. Grab your phone
2. Go to www.menti.com
3. Enter the code 24 57 35 and vote!
Which technologies do you use in your business?

- CRM: 16
- PDM: 10
- PLM: 12
- ERP: 12
- MRP: 6
- IoT: 5
- Office: 22
- QMS: 3

Go to www.menti.com and use the code 93 34 27
What would you say is the most widely used technology within a manufacturing business?
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Morning All

I’ve found most of the items for the MW-850 BoM and put them into the attached spreadsheet, it’s not got everything in there as I could only get the mechanical/engineering items – I’m still waiting for the electrical and pneumatic items.

Whilst waiting for those can you check what I have is accurate and let me know if you notice any items that are missing or the wrong version

Thanks a lot

Steve

Steve Bedder
Senior Solutions Specialist
Autodesk

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E: steve.bedder@autodesk.com
Time Spent on Product\Project Development

75% spend more than 50% of their time
21.5

hours per person per week on potentially inefficient tasks/activities
Searching for information, data or documents
Verifying data, information or documents are correct\up to date
Updating out of date data and documents
Chasing people for review and sign off
Inputting data into different systems

21.5

hours per person per week on potentially inefficient tasks\activities
How much time do you think you and your colleagues spend on similar tasks\activities?
How many hours per week would you say you spend on potential non-value tasks?

- < 5 hours per week: 3
- 5 to 10 hours per week: 8
- 10 to 15 hours per week: 9
- 15 to 20 hours per week: 3
- 20 to 25 hours per week: 2
- > 25 hours per week: 2

Go to www.menti.com and use the code 93 34 27
Hours per person per week on inefficient tasks/activities

Loss of Sales
Loss of Reputation
Loss of Margin
Incorrect parts manufactured/purchased
Projects/products delivered late
People

• Already time pressured
• Driving process
• Chasing people
• Creating data
• Fighting fires
• Reactive
Data

- Lots of it
- Various formats
- Not always correct, complete or up to date
- Document driven
- Multiple storage locations
- Behind security
Process

- Driven by people
- Static
- High level
- Manual
- Email driven
- No validation
Technology

- Lots of it
- Mixture of focus
- Driven by multiple stakeholders
- Doesn’t always meet user needs
- Augmented with office documents
- Disconnected
- Customers
- Account Management
- Forecasting
- Sales Automation
- Opportunities
- Marketing

- Engineering Documents
- Version Control
- Document Release
- In-CAD
- Engineering Change
- Copy Design

- Accounts & Finance
- Resource Management
- Production Planning
- Warehousing
- Stock & Inventory
- Procurement
- Customers
- Account Management
- Forecasting
- Sales Automation
- Opportunities
- Marketing

- Engineering Documents
- Version Control
- Document Release
- In-CAD
- Engineering Change
- Copy Design

- Accounts & Finance
- Resource Management
- Production Planning
- Warehousing
- Stock & Inventory
- Procurement
So which one is it, which one should we be using?
- Product Management
- NPI\NPD Projects
- Change Management
- Quality Management

- Bill of Materials Definition & Management
- Supplier Collaboration
- Sales to Engineering
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<td>Ease of Use &amp; Flexibility</td>
<td>Structured</td>
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Process Driven Data with PLM

- Connected people and technology
- Ensure the right people or technology, get the right information at the right time
- Remove reliance on document silos
- Rules, validation and conditions within processes
- Continuous process improvement
- Easy to use
- Closed loop processes
- Visibility, traceability and auditability
- Role based access
Example One

Sales to Engineering
Opportunity
SLK 250 CDI Fuel Cell Pressure Test

Account Name: BeB Engineering Ltd
Close Date: 22/11/2013
Amount: £12,350.00
Opportunity Owner: Steve Bedder

Estimated Order Date:
Fiscal Order Quarter: 2015/Q3
Opportunity Step: 2. Discover Needs
Order at Risk

Sales Forecast Category: Upside
Estimated Sales Date
Fiscal Sales Quarter: 2015/Q3
Amount: £15,000.00
Amount - Equipment: £11,500.00
Amount - Service: £3,500.00

Stage: Value Proposition
Amount: £12,350.00
Expected Revenue: £6,175.00
Close Date: 22/11/2013
### Opportunity Details (1 of 3)

- **Ref**: TR0073
- **Opportunity**: SLK 250 CDi Fuel Cell Pressure Test
- **Targeted Close Date**: 22/11/2013
- **Description**: Replacement pressure test jig for a new Mercedes diesel fuel cell
- **Category**: D
- **Opportunity Owner**: Steve Bedder
- **Company**: BeB Engineering Ltd
- **Contact**: Phil Hiles
- **Site**: Glossop

### Technical Requirements (2 of 3)

- **Existing Item**: BBE2034 - 22mm Thick Clamp Assembly (4 port) [REV-A]
- **Part Number**: D-621-007
- **Purpose**: To provide internal pressure structure results based on over pressurisation of fuel tank whilst also under external load.
- **Usage**: 12 hour continuous testing of each fuel cell within internal test facility. Only to be used on fuel cell specified with maximum loading as detailed.
- **Load Max. Envelope**: 350 x 450
- **Plate Load**: 17500 (kg)
- **Plate Thickness**: 22 mm
- **Load Sensors**
- **Operating Temperature**: 50 to 100
- **Colour Scheme**: Orange
- **Additional Notes**
Example Two

Engineering Release
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BEB2003 - Pressure Test Jig

- Engineering Jig
- 10/02/2012
- CAD Item

Item Number: BEB2003

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Click to go to Vault document...
Example Three

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C0000081 - Base plate strengthening - 2 - Medium

Change Details

Affected Items  Action Plan  Attachments  Workflow Actions  Change Log

Change Header (1 of 4)

Number  C0000081
Title  Base plate strengthening
Type  1 - Engineering
Department  Hardware
Urgency  2 - Medium
Change Request  CR000012 - Automatically created from NC000070
CR Requester  Steve Bedder

Change Details (2 of 4)

Change Coordinator  Candy, Charlie
Description of Change  Re-design of the base plate to remove weight and improve weld strength
Reason for Change  Cracks in the weld and base plate mean that the test jig has to be taken out of service until it is repaired, this slows the test & validation activity down and delays customer delivery.
Engineering Change Ref  ECO-000002
ECO Link  Click here to go to Engineering Change Order...

Approvals (3 of 4)

Approval Lists
Approvals Required  Bedder, Steve
Candy, Charlie

List Of Approvers (4 of 4)
<table>
<thead>
<tr>
<th>Part class (also controls traceability)</th>
<th>Procurement code</th>
<th>Unit of measure (UoM)</th>
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<td>0. Product Type</td>
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<td>STAINLESS STEEL</td>
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Outstanding ECOs exist? [ ]
Extra text exists? [ ]
Non-stock item? [ ]
Use batch life cycle tracking? [ ]

---

Commodity code: 
Product attribute group: 
Lot attribute group: 
Integration Methods

Middleware

Source → Middleware → Target
Source → Middleware → Target
Source → Middleware → Target
Integration Methods

Source API

Web Service

Source API

API Target

Source API

API Target

Source API

API Target

Source API

API Target
Lightweight AND Endurance AND Aero
Connected People
Connected Processes
Connected Data
Connected Technology
Questions