Getting Actionable Data from Fusion Lifecycle

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Meet the Speakers

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In God we trust;
all others must bring data!
Why Think Data

*If data accuracy levels are low at the start of this process, the insight will be lacking* and the decisions it influences are likely to be poor and costly as a result.
Why Data Driven Transformation
Transparency with FLC

Legacy Data – Catalyst for Business Change
What We’ll Cover

• Getting data in the right shape
• Data quality assurance
• Reporting Basics
• Leverage JavaScript to capture system data
• Interpret Information from the System
• Drive business change based on data
• Finding patterns – Power BI
Measures of Data – 6 Dimensions

- Validity
- Completeness
- Accuracy
- Timeliness
- Consistency
- Integrity
Measures of Data – Completeness
Measures of Data – Validity

<table>
<thead>
<tr>
<th>Validation</th>
<th>Description</th>
<th>Variable Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Required</td>
<td>Validates that the value for a given field is entered.</td>
<td></td>
</tr>
<tr>
<td>Unique</td>
<td>Checks that this field is unique among all non-deleted records of this workspace</td>
<td>Name of the field to be validated against.</td>
</tr>
<tr>
<td>Decimal Number</td>
<td>The value entered must be a valid positive or negative decimal number.</td>
<td></td>
</tr>
<tr>
<td>Regular Expression Input Mask</td>
<td>Validates format according to a regular expression.</td>
<td>Regular expression of the mask to be evaluated against.</td>
</tr>
</tbody>
</table>

**Format Validation**

<table>
<thead>
<tr>
<th>Validation</th>
<th>Description</th>
<th>Variable Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Credit Card</td>
<td>Validates credit card number format.</td>
<td></td>
</tr>
<tr>
<td>CSV Value Count</td>
<td>Validates the number of entries in the CSV.</td>
<td>Int or field containing an Int that equals the length of the CSV</td>
</tr>
<tr>
<td>Date</td>
<td>The field value entered must conform to a valid date format.</td>
<td>Date pattern String to be validated against.</td>
</tr>
<tr>
<td>E-Mail</td>
<td>Validates email address format.</td>
<td></td>
</tr>
<tr>
<td>Each CSV Entry Must Have Identical Alpha Characters</td>
<td>Validates that each designator in a comma separated list begins with the same characters. Eg. R1, R12, R13</td>
<td></td>
</tr>
<tr>
<td>Integer</td>
<td>The field must be a positive or negative integer number.</td>
<td></td>
</tr>
<tr>
<td>Mask For CSV Field</td>
<td>Validates each substring in a CSV String with a mask.</td>
<td>Regular expression of the mask to be evaluated against.</td>
</tr>
<tr>
<td>Maximum Length</td>
<td>Validates that input data doesn't exceed a specified maximum length.</td>
<td>Value of the maximum number.</td>
</tr>
<tr>
<td>Minimum Length</td>
<td>Validates that input data isn't less than a specified minimum length.</td>
<td>Value of the minimum length allowed.</td>
</tr>
</tbody>
</table>
Measures of Data – Timeliness

- Milestones
- Escalations
Shape your Data with FLC

• Take the opportunity to improve and standardize
• Question every attribute – ask why
• Build with the end in mind – what are the outputs
Reporting Basics

- Built into Fusion Lifecycle
- Useful for:
  - Dashboarding, Charting, KPI’s
  - Auditing, retrospective
  - Data extraction
  - Ad-hoc searching
Report Types

- HTML
- Microsoft Excel
- Charts
Reports – HTML type

- HTML report has tool to navigate to source record
- On the HTML report use the magnifying glass to quickly open a new window / tab with the selected item
- Can be used as a powerful work list
- Hit the F5 key to re-run the report (e.g. checking off items you're working on)
### Reports – Excel

- Ideal for data extraction
- Time/Date stamp
- Round trip updating

<table>
<thead>
<tr>
<th>Related Supplier</th>
<th>Non-Conforming Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rencom</td>
<td>155-00001 - SCREW 4-40 x 0.375 In Long Phillips Pen Head Steel Plated Nickel RE: B</td>
<td>Poor plating coverage</td>
</tr>
<tr>
<td>CoolerMaster</td>
<td>151-0323-058 - BRACKET SGL WIDE SS TAB DVI (3.152) DVI (1.552) RE: A</td>
<td></td>
</tr>
<tr>
<td>CoolerMaster</td>
<td>367-00001 - ENCLOSURE Injection Molded PC Black Raw Gloss RE: A</td>
<td>Enclosures small scratch</td>
</tr>
<tr>
<td>VX/Kyocera</td>
<td>001-00001 - GPU SMT FCBGA 1360MHz RE: A</td>
<td></td>
</tr>
<tr>
<td>VX/Kyocera</td>
<td>035-00002 - CAP C0G 0402 SMT 22pF 5% 50V RE: A</td>
<td></td>
</tr>
<tr>
<td>VX/Kyocera</td>
<td>035-00002 - CAP C0G 0402 SMT 22pF 5% 50V RE: A</td>
<td></td>
</tr>
<tr>
<td>VX/Kyocera</td>
<td>001-300-A1 - GT216-300-A1 DT ROHS 969FCBGA 29x29 RE: A</td>
<td></td>
</tr>
<tr>
<td>VX/Kyocera</td>
<td>035-00004 - CAP C0G 0402 SMT 47pF 5% 50V RE: A</td>
<td></td>
</tr>
<tr>
<td>Kracon</td>
<td>035-00001 - CAP C0G 0402 SMT 220pF 5% 50V RE: A</td>
<td></td>
</tr>
<tr>
<td>Kracon</td>
<td>035-00002 - CAP C0G 0402 SMT 22pF 5% 50V RE: A</td>
<td></td>
</tr>
</tbody>
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Reports – Charts

- Graphical representation of data
- Runs and renders on demand
- Interactive, image exportable
- Show on dashboard (up to 9)
Building Reports – General Information

- Workspace-specific
  - Actually building a query
  - Set logical name, always add Description
  - Results – usually unlimited, unless...
  - Suppress duplicates (nice option)
- Report Access
  - Private | Public | Shared
Building Reports – Grouping

- Enabled = Charts (and HTML + XLS)
- Disabled = HTML, XLS
Building Reports – Display Columns

- Choose Aggregation Type
- Select from Tabs, Sections, Fields available*

*Security applies here
Building Reports – Filters

- Set conditions on Fields
  - System, user defined
- AND / OR logic supported
- Runtime filter*
Building Reports – Sort Order

- Just what you think it is…
- For HTML, Excel export
- Up to 4 fields

<table>
<thead>
<tr>
<th>Sort Order</th>
<th>First Sort</th>
<th>Second Sort</th>
<th>Third Sort</th>
<th>Fourth Sort</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Related Supplier</td>
<td>Impact</td>
<td>Sort by ...</td>
<td>Sort by ...</td>
</tr>
<tr>
<td></td>
<td>ascending</td>
<td>descending</td>
<td>ascending</td>
<td>descending</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>ascending</td>
<td>descending</td>
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<tr>
<td></td>
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</table>
Building Reports – Chart (if Grouping Enabled)

- Multiple chart types
- Title (needed)
- Set X, Y axis
- Add labels
- Baseline – nice option
Cloning Reports

• Best Practice
  o Start with a wide-net base report
  o Ensure it fires properly
  o Clone & pivot report, tuned to meet criteria
  o Share with appropriate Groups
Changing Report Ownership

• On shared reports
• Admin feature
• Change ownership of custom reports
Cross Workspace Reporting – What's available

• Derived fields
  o Derived fields are a special sort of picklist where you can display data from a linked record.

• Scripting
  o Action scripts can be triggered on edit/save, workflow actions

• Don’t bloat workspaces!
JavaScript for Reports

• JavaScripting can be used to enhance reports and report across multiple workspaces

• Examples of JavaScripting for reports:
  o Workflow metrics (process time)
    ▪ Average cycle times, maximum cycle times, minimum cycle times
  o Re-route count
  o Tracking exceptions
Why are Reports Important?

• Reports provide insight on process performance, trends, exceptions, and more.
• Through reporting, we can identify bottlenecks and target improvement opportunities.
• If we don’t measure, how can we improve?

“Without data, you’re just another person with an opinion.”
External Reporting/ BI

• Deeper Insights

• Custom calculations –statistical modelling

• Consolidating PLM data with data from other systems; ERP, CRM....
The Process – FLC – Power BI

1. Define Reports (FLC Admin)
2. Create Reporting database
3. Utilising API
4. Check out the tables and data has created

To deploy:
- (Configure to run Windows Task Scheduler)
- FLC Administrator configured more reports as needed
- Data appears magically in the reporting DB
More Questions? Visit the AU Answer Bar

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