# Master Data Management for Supply Chain Excellence

Nov 21, 2024



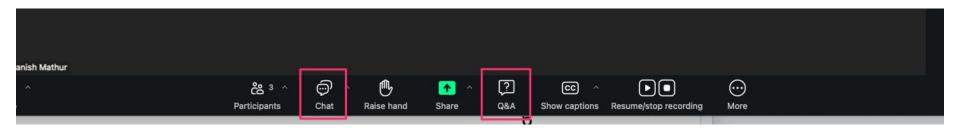


# Agenda

- Panelists
- Brief Intro
- Master Data and the Supply Chain
- Materials Management and Supply Chain
- Supporting Global, Regional and Business Specific Master Data Needs
- Pursuit of Perfect Master Data
- Making Master Data Management Integral to Engineering and Supply Chain Processes
- Q&A



### **Zoom Logistics**



Recording and Presentation will be sent after the session is completed



### **Panelists**

# Kris Gorrepati VP of Product Management

- 20+ years experience in New Product Development and Introduction and Supply Chain Manufacturing
- SAP, Samsung, Ford, Caterpillar
- Auto, High-tech, Software
- Michigan Tech (Mech Engg.), UCLA (MBA)

# Manish Mathur VP of Engineering

- 20+ years experience in PLM, Business Analytics, Software Engineering
- GM, Ford, Siemens PLM, Cap Gemini
- · Auto, High-tech, Software
- Michigan Tech (Elec Engg), Walsh College (MBA)



### **About Cambrian Lab**

Mission: To Provide Effective and Practical Solutions for Supply Chain Excellence

### Team

Supply Chain, New Product Development and Technology Experts from SAP, Samsung, Siemens, GM, Ford, Applied Materials

### **Industries**

Automotive, High-tech, Semiconductor Equipment, Medical Devices, Consumer Products, Food and Beverage, Chemicals...

### Locations

SF Bay Area, Detroit, Boston, Houston, Hyderabad

### **Expertise**

- New Product Introduction, Supplier Development and Master Data Management
- Enterprise and Supply Chain Technology (ERP, SCM, Manufacturing, CRM, Sourcing, Finance)



# Examples of Our Work with Different Industry Customers

# Embedded Systems, Memory and HPC Computing Systems Manufacturer

NPI Engineering, Master Data Management

### Global Network Equipment Manufacturer

Supplier Development and Collaboration

### **Global Industrial Manufacturer**

Master Data Management (Materials, NPI)

### **Global CPG Company**

Master Data Management (Materials, Costing, PLM)

### Tier 1 Global Automotive Supplier

NPI Product Release, Materials, BOM

### **Specialty Chemicals Leader**

Master Data Management (Materials, Customers, Suppliers)



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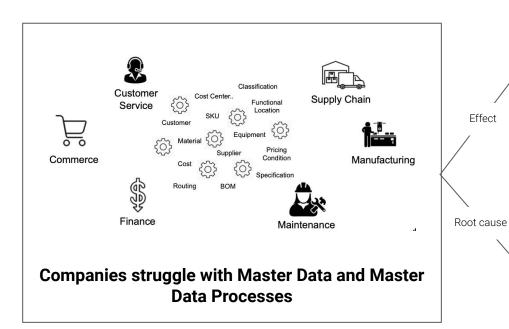


# Master Data and the Supply Chain





# Poor Master Data and Master Data Processes are an Obstacle to Supply Chain Excellence



New Product Product Launch Supply Chain Delay Delay Disruption

Poor Supplier Poor Product and Service Quality

High Sales Operations Cost

Uniformly bad consequences

- Nothing exists in most cases (Email, Excel..)
- Even for companies that have an MDM solution rely on master data processes have too much non-value added work, takes too long, and are expensive
- Business stakeholders are not directly involved

Because Master Data processes are poorly supported

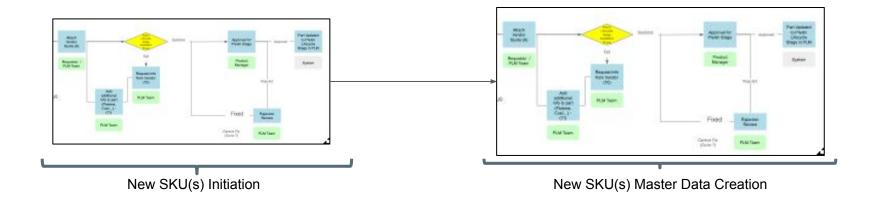


### New Product Introduction and Master Data

### **Master Data** Material Master, BOM, Routing, Supplier/Manufacturer, Lead Time, MOQ, Pricing/Cost, Quality Inspection.... Concept Program Initiation and Approval Prototype Pilot Launch Approval Requirements **Design Specification** Process Plan Production Trial Run Continuous Management Process Improvement **Quality Deployment Plan** Process FMFA Processes Quality Production Control Function Design FMEA Process Control Corrective Action Plan Process Deployment Plan Control Plan Measurement Concept Measurement Systems Evaluation **Engineering Change FMEA** Design Verification Plan System Plan Management Production Part Function Test Plan Approval Process **Process Change** Trees Management Preliminary Bill of **Quality Planning** Material Sign-off Process Design Plan and Define Product Design and **Product & Process** and Development **Development Verification** Program Validation Verification



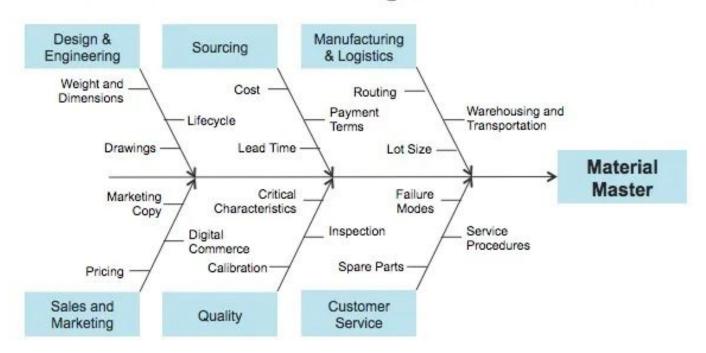
# SKU Introduction and Master Data Management





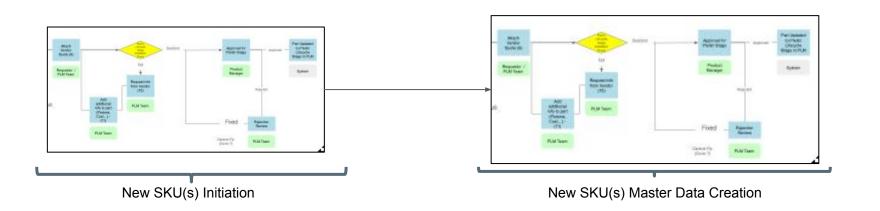
### Material Master and the Supply Chain

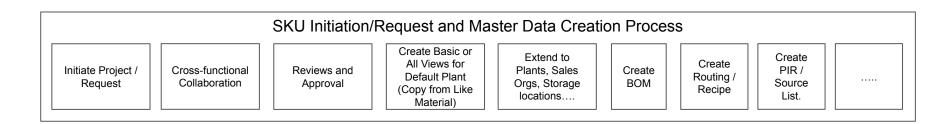
### Stakeholders and Decision-making for Materials Master Data





### SKU Introduction and Master Data Management - Demo





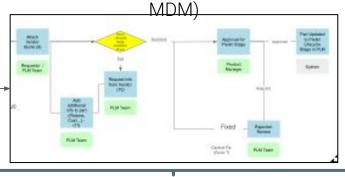


### Before (traditional approach)

10-20 days (email, Excel, meetings, Sharepoint..)

Sharepoint...)

10-15 days (manual, traditional



New SKU(s) Master Data Creation

After (Digital Workflow)

New SKU(s) Initiation

3-5 days

### SKU Initiation/Request and Master Data Creation Process Create Basic or Extend to Create All Views for Create Initiate Project / Cross-functional Reviews and Plants. Sales Create PIR / Default Plant Routing / Request Collaboration Approval Orgs, Storage BOM Source (Copy from Like Recipe locations.... List. Material)

# Agenda

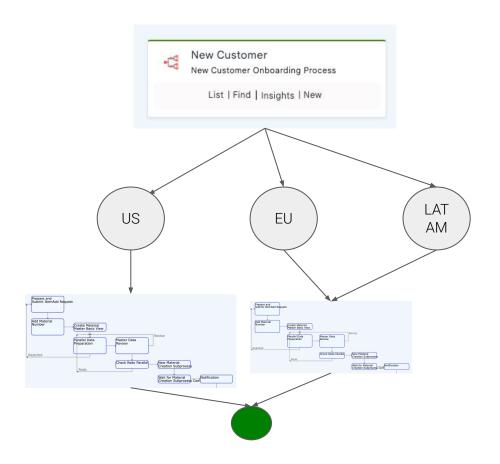
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# Addressing Global, Regional and Business-specific Master Data Process Needs

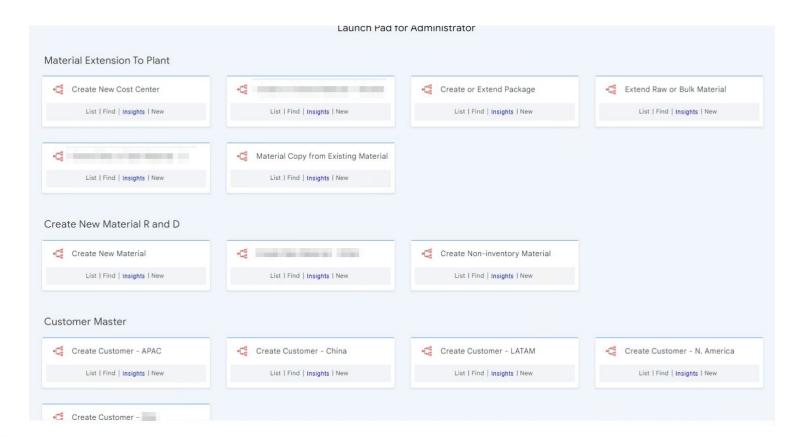


# Single Workflow that Supports All





### Different Workflows for Different Needs





# Single Workflow vs Multiple Workflows

- Based on our experience you should lean strongly towards different workflows for different needs (materials types, regions, businesses..)
- Flexibility and Agility requirements lead to multiple workflows
- Multiple workflows are non-disruptive from an operations perspective
- Better for information security and compliance

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### Pursuit of Perfect Master Data

The Ideal Number of Master Data Errors is Zero

### **Pursuit of Perfect Master Data**

Error-proofing (Create/Update Master Data)



Error-proofing is better and cheaper than Error correction



Google -



















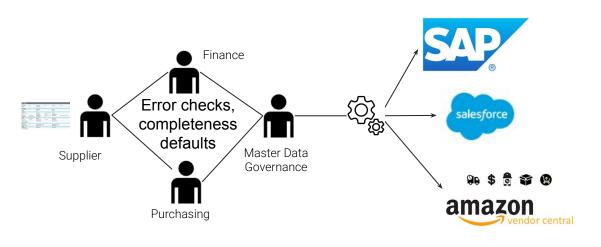




Error correction (Existing Master Data)



# Using Poka-Yoke Principles for Error Proofing



Simplified and Minimal Input

**Default Values** 

Drop-downs

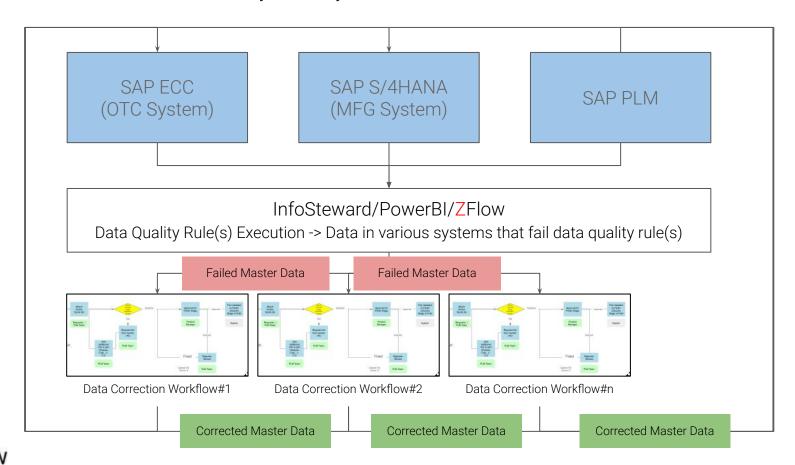
Dependent auto-selection of values based on logic

Calculated values

Type, Min-Max....

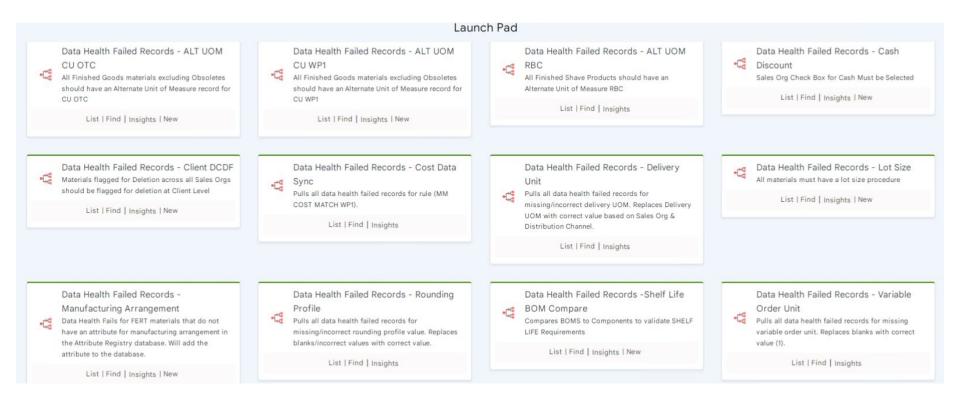


### Continuous Data Quality Analysis and Error Correction





### **Error Correction Workflows**





### **Error Correction Workflows**

	Start	Process Start	1
	Get Delivery Unit Failures	Special Function SQL-	
	Verify Failures Exist	Go To	
	Calculate Changes Required	Special Function CallUserDefinedFunction	
	Enter Correct Data	Data Preparation	
	Validate & Approve Updates	Approval	10
	Update SAP	Special Function - DeliveryUO	М
	Review SAP Errors	Review	
	Send Confirmation Notice	Notification	1
9	End	Process End	



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### Master Data is Integral to NPI and Supply Chain Readiness

### New Product Introduction

New Part Request

Part Release

**Engineering Change Notice** 

Engineering Change Order Implementation

### Component Engineering

New Component Manufacturer PCN Impact Analysis

Component Manufacturer Change

### **NPI** Sourcing

New Supplier Onboarding

Supplier Selection

### Supply Chain Readiness

Purchasing Agreement

Supply Change

### Master Data

New Material(s)

Material Change

Bill of Material

MRP Data

Supplier

Source List

Manufacturer Part

Purchase Info Record

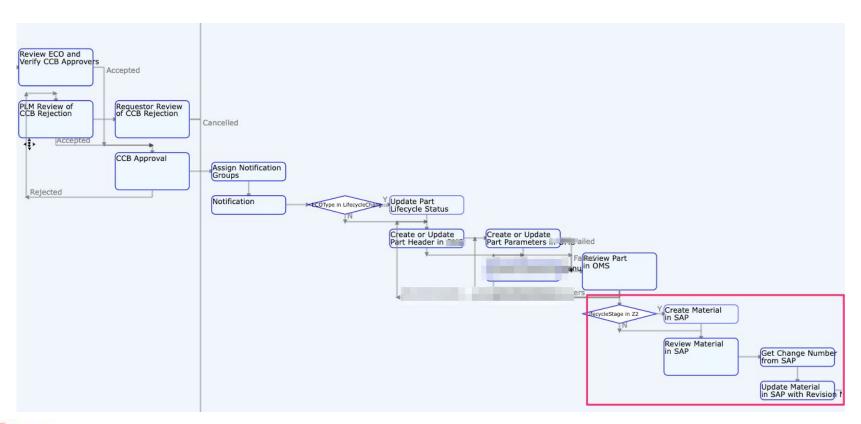
Routing

Quality Inspection

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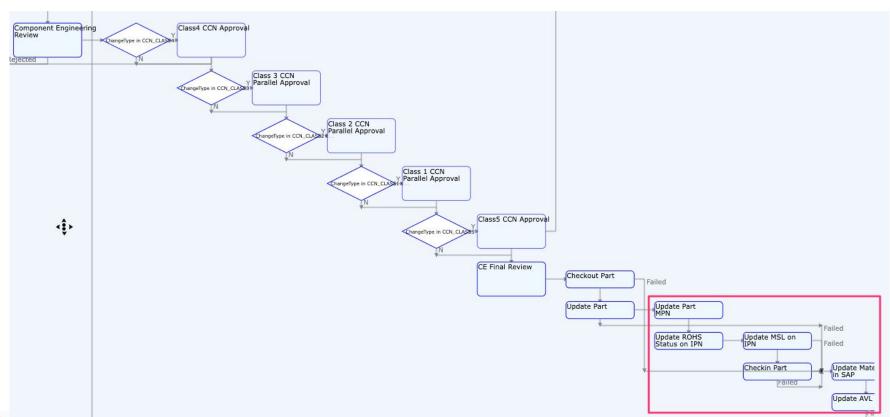


### **ECO Example**





### Component Change Example



### Summary

- Proven success in many industries
- ☐ Easy to adopt and loved by users
- ☐ It only takes minutes to get started

Test Drive

Free Pilot



### For More Information

More about ZMDM

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