2019 SPID CONFERENCE

Automotive QMS
IATF 16949 Solution

Presented by

Omnex Software Solutions

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Updated Sep-19

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OMNEX SYSTEMS

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AGENDA

ENTERPRISE AUTOMOTIVE QMS SOLUTION

- BUSINESS CHALLENGES
- ENTERPRISE APQP SOLUTION OVERVIEW
- FEATURES, BENEFITS, SOLUTION
- INTEGRATIONS

OMNEX SYSTEMS

About Us

Omnex Systems is part of Omnex Inc, *specialized in Development & Implementation of* ***Enterprise Quality Management Solutions*** *across the Globe. Inspired by pioneers of Quality Experts at Omnex, Omnex Systems solutions help customers realize their business & quality objectives through Best in Class software and first time right implementation process.*

Headquarter	Development Centers	Enterprise Solutions	Industry 4.0 Solution	Customers
Michigan, USA	• Michigan USA • Shanghai, China • Chennai, India	• APQP/NPD Solution • **APQP & Functional Safety Solution** • IMS / QHSE Solution • Supplier Quality Solution • Audit & Compliance Solution • Enterprise Quality Solution	• IIOT 4.0 Solution • PPAP Reviewer using AI (O-BOTS)	500 +Customers Worldwide including Many Fortune 50 Companies

History of Omnex

- Founded in 1985
- Headquartered in Ann Arbor, Michigan with offices in major global markets
- In 1995-97 provided global roll out supplier training and development for Ford Motor Company establishing offices in Latin America and Asia
- Headquartered in Ann Arbor, Michigan with offices in major global markets
- Former Delegation Leader of the International Automotive Task Force (IATF)
- Served on committees that wrote QOS, ISO/TS16949, ISO9001:2000, QS-9000 and it's Semiconductor Supplement, ISO IWA 1 (ISO9000 for healthcare)
- Member of AIAG manual writing committees for FMEA, SPC, MSA, Sub-tier Supplier Development, Error Proofing, and Effective Problem Solving (EPS)
- On the ISO writing committees for ISO 9001, ISO 14001, ISO 45001, and ISO 13485
- SME for AQP and PPAP to International Aerospace Quality Group (IAQG)
- One of the first to fully integrate Lean and Six Sigma
- ISO 9001-certified for training development, training delivery and consulting

WORLDWIDE OPERATIONS

International Headquarters

Regional Offices

SPID, Korea

Regional Headquarters

Delivery Associates

AMERICAS

USA - Ann Arbor, MI, San Jose, California

CANADA - Mississauga

MEXICO - Oaxaca

COLOMBIA - Bogota DC

BRAZIL - Sao Paulo

EUROPE

GERMANY - Berlin, Gosheim

FRANCE/ ITALY - Paris

EASTERN EUROPE

POLAND, RUSSIA, HOLLLAND,
CZECH REPUBLIC, HUNGARY,

ASIA-PACIFIC

INDIA - Chennai (Asia Pac HQ),
Pune, Delhi, Vadodara Bangalore

CHINA - Shanghai (Far East HQ),
Guangzhou, Wuhan, Chongqing, Suzhou

THAILAND - Bangkok

UAE - Dubai

SINGAPORE - Singapore

MALAYSIA - Kuala Lumpur (Rep)

SPID - Korea

#1803, 145 Gasan digital 1-ro, Geumcheon-gu,
Seoul, Republic of Korea (Zip Code: 08506)
Business Phone No.: +82-(0)2-3453-5345

OMNEX SYSTEMS spid

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Solution 1 : Enterprise APQP & Functional Safety Solution

Managing integrated APQP/PPAPs, Safety Plans, and Safety Cases for organization and suppliers

Manage your Voice of Customer & Requirements through out the System, Sub-System & Components – functions, requirements, and characteristics

Manufacturing Controls and Traceability of ASILs to Control Plan, Inspection Plans, and Inspection Sheets

Linked DFMEA, Test Plans, Process Flow, PFMEA, Control Plans and Work Instructions by Product and Process Families

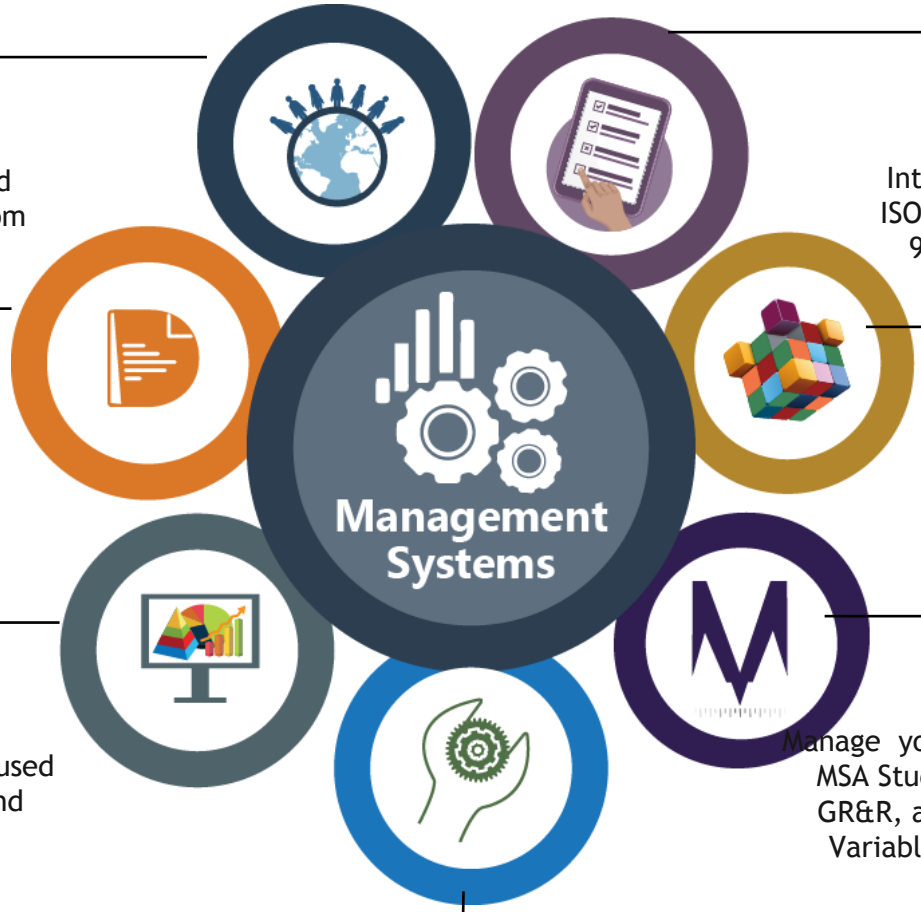
Manage your In-Process, Receiving & Final inspections

Manage your gages and performs all MSA Studies - Bias, Calibration, GR&R, and Stability Studies for Variable and Attribute gages.

Conducting integrated problem solving for internal quality, external quality, suppliers etc.

Top management in implementing customer-focused continual improvement and tracking performance

Solution 2: Enterprise Integrated Management Solution



Training management and objectives deployment from Corporate to employees

Integrated Audit Management - ISO TS/ IATF 16949, ISO 9001, AS 9100, ISO 14000, CMM, CMMI

Managing Enterprise QMS (ISO 9001 and ISO TS/IATF 16949) including Functional Safety Management System processes (ISO 26262)

Conducting integrated problem solving for internal quality, external quality, suppliers etc.

Top management in implementing customer-focused continual improvement and tracking performance

Manage your gages and performs all MSA Studies - Bias, Calibration, GR&R, and Stability Studies for Variable and Attribute gages.

Manages Total Productivity Maintenance of your plant(s). Addresses all TPM requirements

Enterprise APQP Solution

OMNEX SYSTEMS

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Solution 3 : Supplier Quality Management Solution

Challenges using Spreadsheets & Silo systems

× Lack of linkages of documents from Design to Shop-floor.

× Lack of Re-use of information from previous Launches.

× Lack of Standardization and Discipline.

× Unable to Report and Analyse FMEA.

× Reviewing the changes in the Documents.

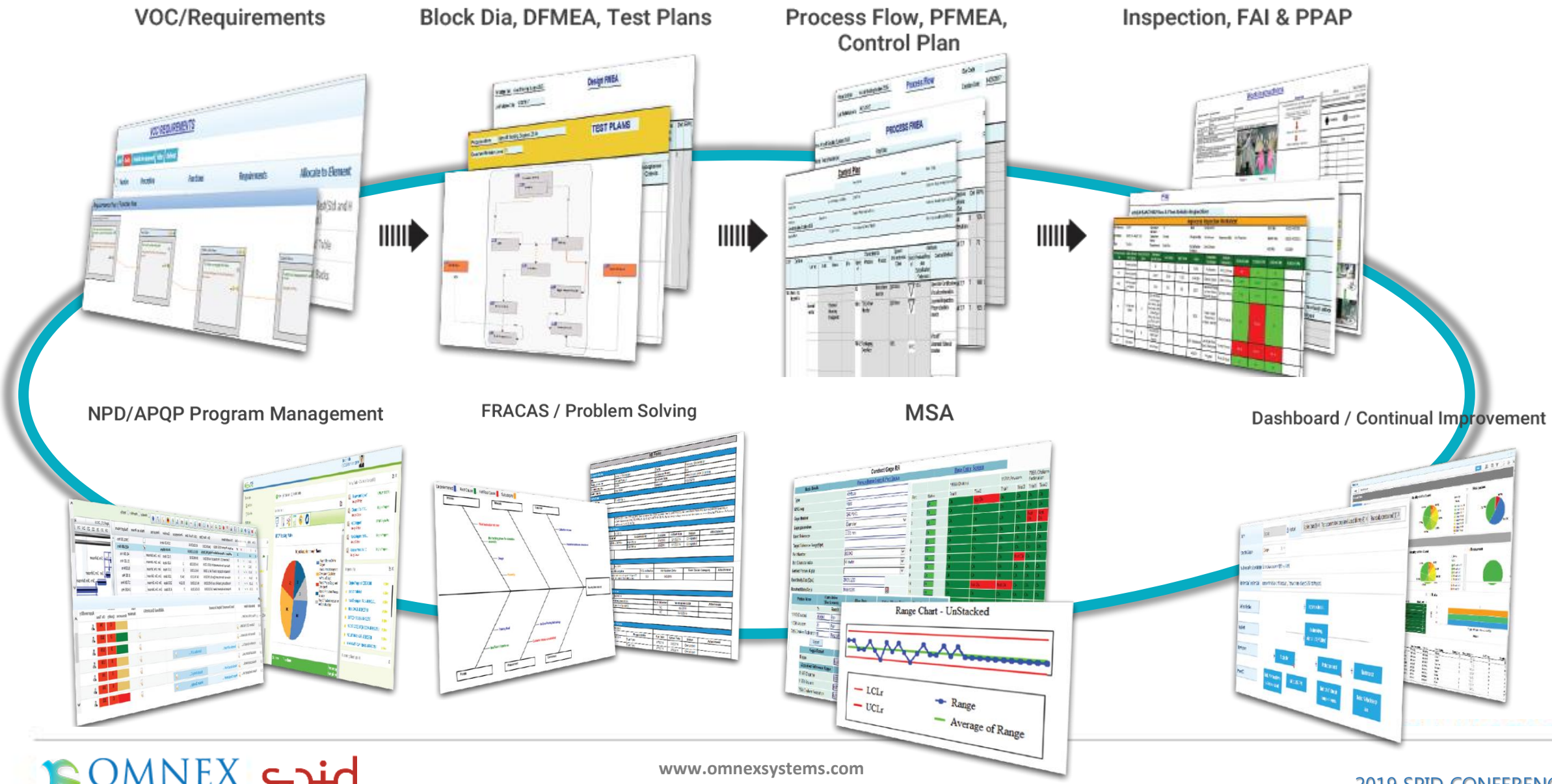
× Manual and tedious process of Revision Control & Management.

× Distribution Control of Documents.

× Lack of single window to manage APQP, PPAP Projects & Deliverables.

× Indirect Challenges like facing Audits, Compliance to Automotive Standards and more…

Enterprise APQP Solution



Project Summary (Advanced Reports)

Project Summary Reviews

Project Information

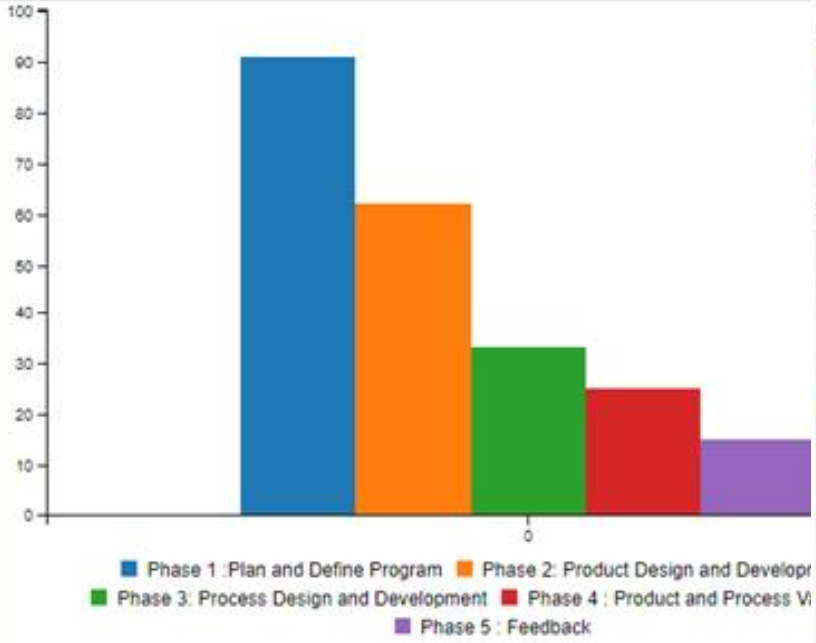
Project Name	Engine Program Delta Hawk BMX500
Site	Corporate
Pillar	NPD
Project Groups	Default
Priority	Probability*Severity

Project Details

Approval Required	No	Status	Active
Approvers	NA		
Schedule S			
Actual Sta			
Project Ma			

Forecasted Target

Progress Bar



Deliverable Summary

Search by Deliverables

Deliverable Name	Duration	Percentage	Start Date	End Date	Status	Resources	Budget	Actual Start Date	Actual End Date	BaseLine Start Date
Phase 1 :Plan and Define Program	53.00 Days	91%	10/16/2018	12/07/2018	In Progress		Above Budget	10/17/2018	NA	10/16/2018
Voice of the Customer	4.00 Days	100%	10/16/2018	10/19/2018	Completed		Above Budget	10/17/2018	01/02/2019	10/16/2018
Market Research	1.00 Day	100%	10/16/2018	10/16/2018	Completed	Ryan Peter	Above Budget	01/01/2019	01/02/2019	10/16/2018
Historical Warranty and Quality Information	1.00 Day	100%	10/17/2018	10/17/2018	Completed	Prem Prasad	With in Budget	10/17/2018	10/17/2018	10/17/2018
Team Experience	2.00 Days	100%	10/18/2018	10/19/2018	Completed	Karen williams	With in Budget	10/18/2018	10/19/2018	10/18/2018
Business Plan/Marketing Strategy	3.00 Days	80%	10/20/2018	10/22/2018	In Progress	Ryan Peter	Above Budget	01/04/2019	NA	10/20/2018
Product/Process Benchmark Data	5.00 Days	100%	10/23/2018	10/27/2018	Completed	Karen williams	Above Budget	10/23/2018	10/27/2018	10/23/2018
Product/Process Assumptions	4.00 Days	100%	10/28/2018	10/31/2018	Completed	Ryan Peter	With in Budget	10/28/2018	10/31/2018	10/28/2018

Risk(s) (2)

Search by Risk

Risk Category	Risk	Raised Date	Raised By	Impact
Benefits	The business benefits are not quantifiable		Karen williams	80
Budget	The project exceeds the budget allocated		Brad Smith	80

Showing 1 to 2 of 2 entries

Meeting(s) (2)

Search by Meeting

Meeting Subject	Deliverable Name	Meeting Date	Meeting Time
Market Research	Market Research	01/02/2019	07:00-08:00
Production Part Approval	Production Part Approval	01/16/2019	09:00-11:00

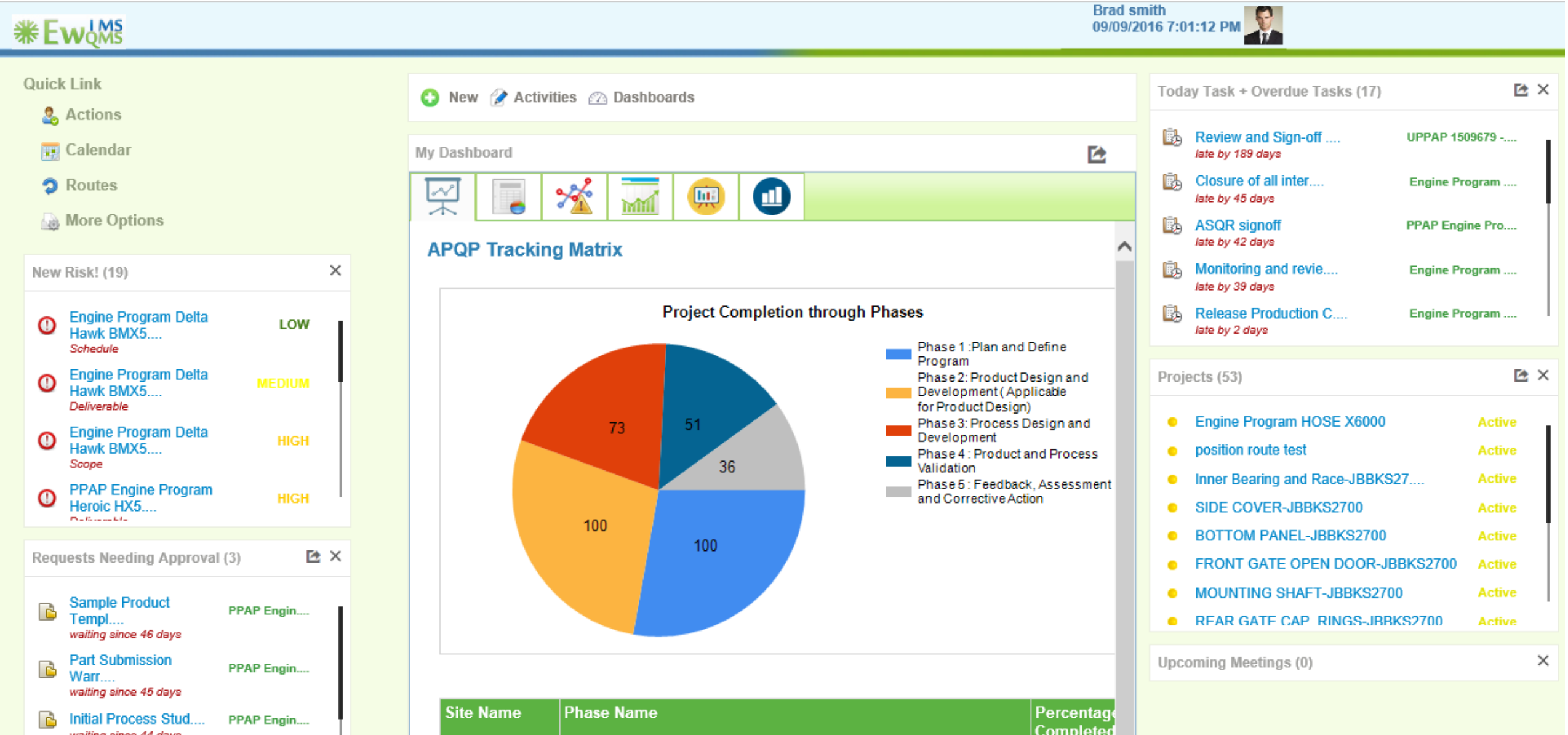
Showing 1 to 2 of 2 entries

Action(s) (4)

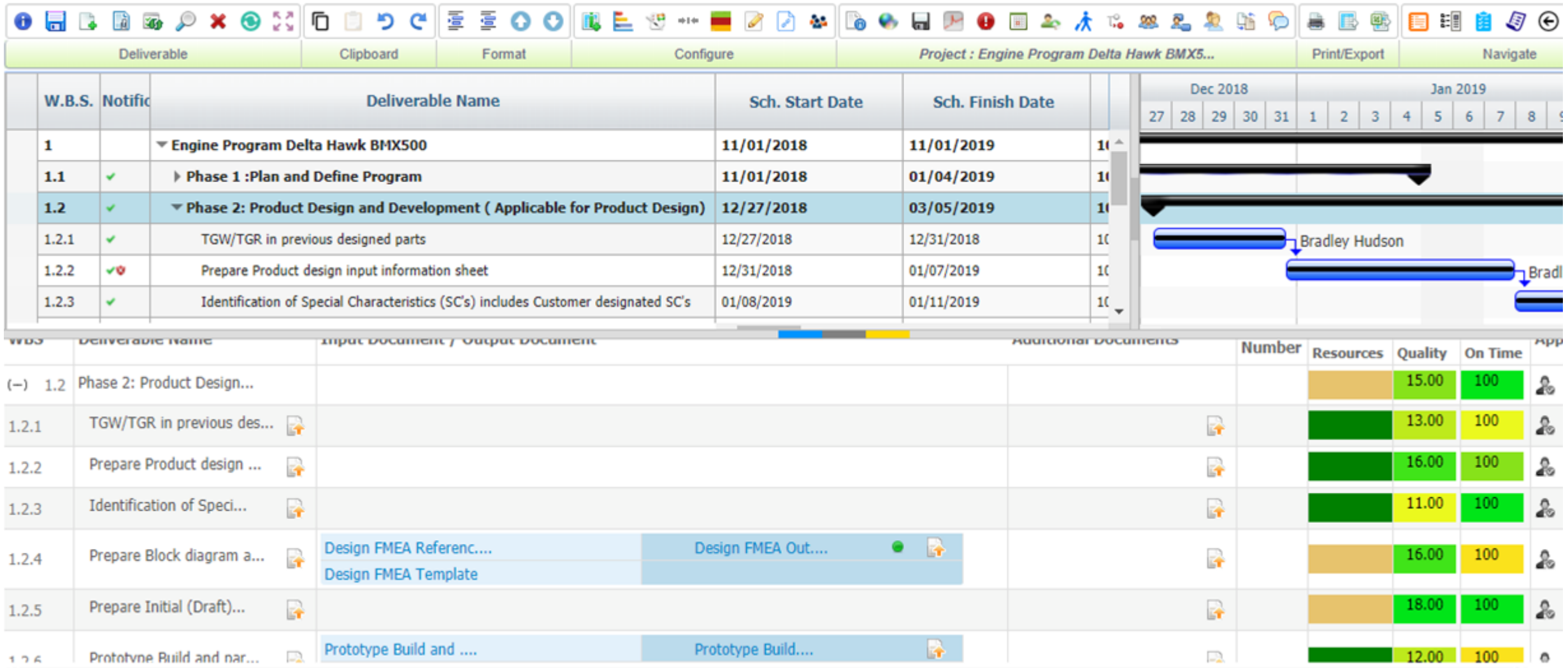
Search by Action

Action Name	Source	Name	Resources	Status
Communicate widely, consult widely and listen to the responses you get.	Risk	The business benefits are not quantifiable	Karen williams	Not Started

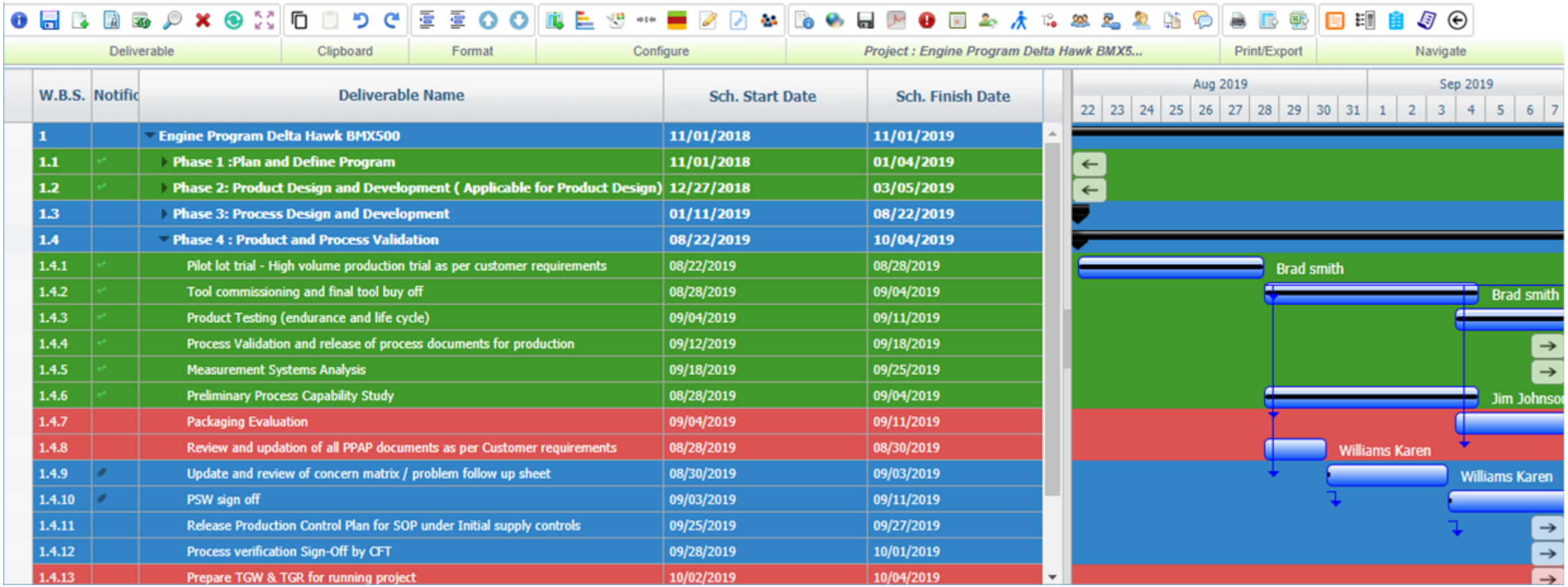
Configurable APQP Desktops



Track APQ Projects Deadlines, Documents, Quality & Resources

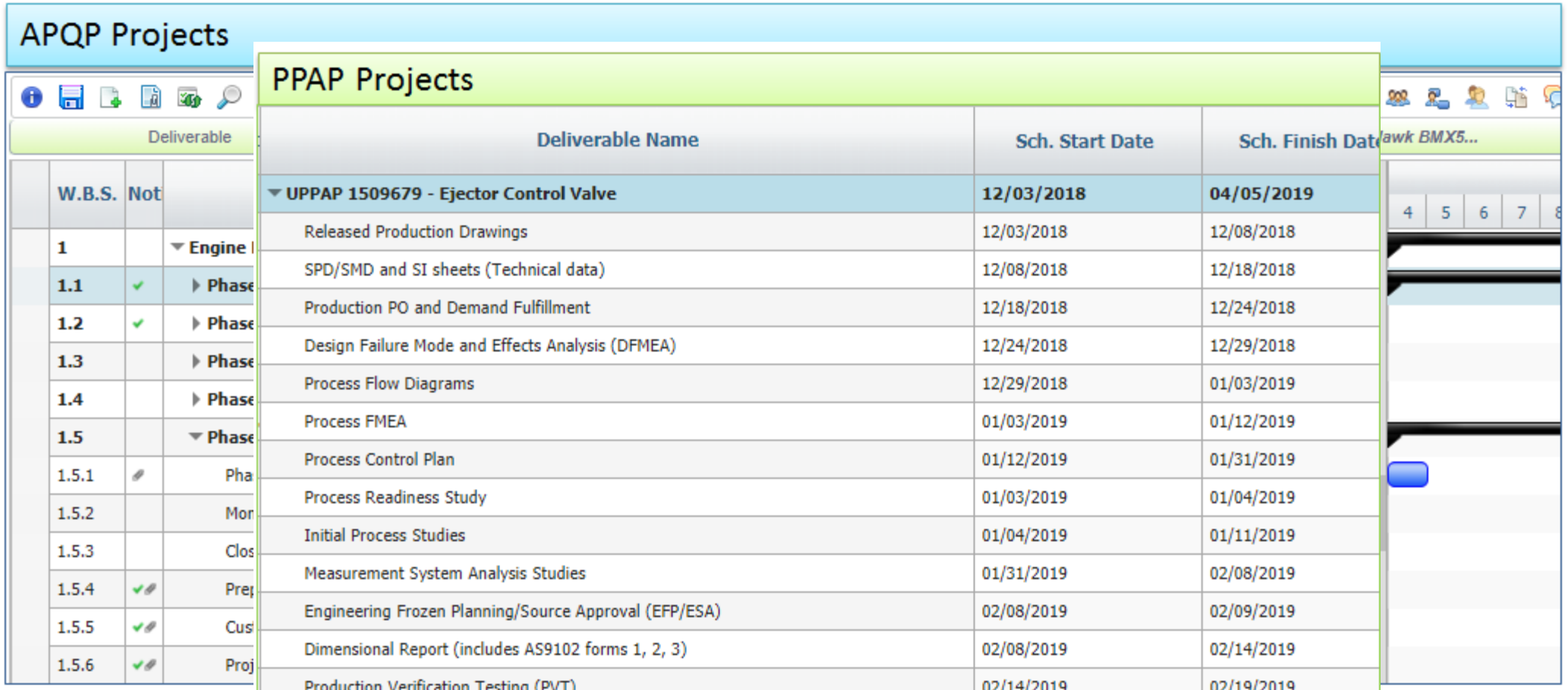


APQP Project Status



W.B.S.	Notific	Deliverable Name	Sch. Start Date	Sch. Finish Date
1		Engine Program Delta Hawk BMX500	11/01/2018	11/01/2019
1.1		Phase 1 :Plan and Define Program	11/01/2018	01/04/2019
1.2		Phase 2: Product Design and Development (Applicable for Product Design)	12/27/2018	03/05/2019
1.3		Phase 3: Process Design and Development	01/11/2019	08/22/2019
1.4		Phase 4 : Product and Process Validation	08/22/2019	10/04/2019
1.4.1		Pilot lot trial - High volume production trial as per customer requirements	08/22/2019	08/28/2019
1.4.2		Tool commissioning and final tool buy off	08/28/2019	09/04/2019
1.4.3		Product Testing (endurance and life cycle)	09/04/2019	09/11/2019
1.4.4		Process Validation and release of process documents for production	09/12/2019	09/18/2019
1.4.5		Measurement Systems Analysis	09/18/2019	09/25/2019
1.4.6		Preliminary Process Capability Study	08/28/2019	09/04/2019
1.4.7		Packaging Evaluation	09/04/2019	09/11/2019
1.4.8		Review and updation of all PPAP documents as per Customer requirements	08/28/2019	08/30/2019
1.4.9		Update and review of concern matrix / problem follow up sheet	08/30/2019	09/03/2019
1.4.10		PSW sign off	09/03/2019	09/11/2019
1.4.11		Release Production Control Plan for SOP under Initial supply controls	09/25/2019	09/27/2019
1.4.12		Process verification Sign-Off by CFT	09/28/2019	10/01/2019
1.4.13		Prepare TGW & TGR for running project	10/02/2019	10/04/2019

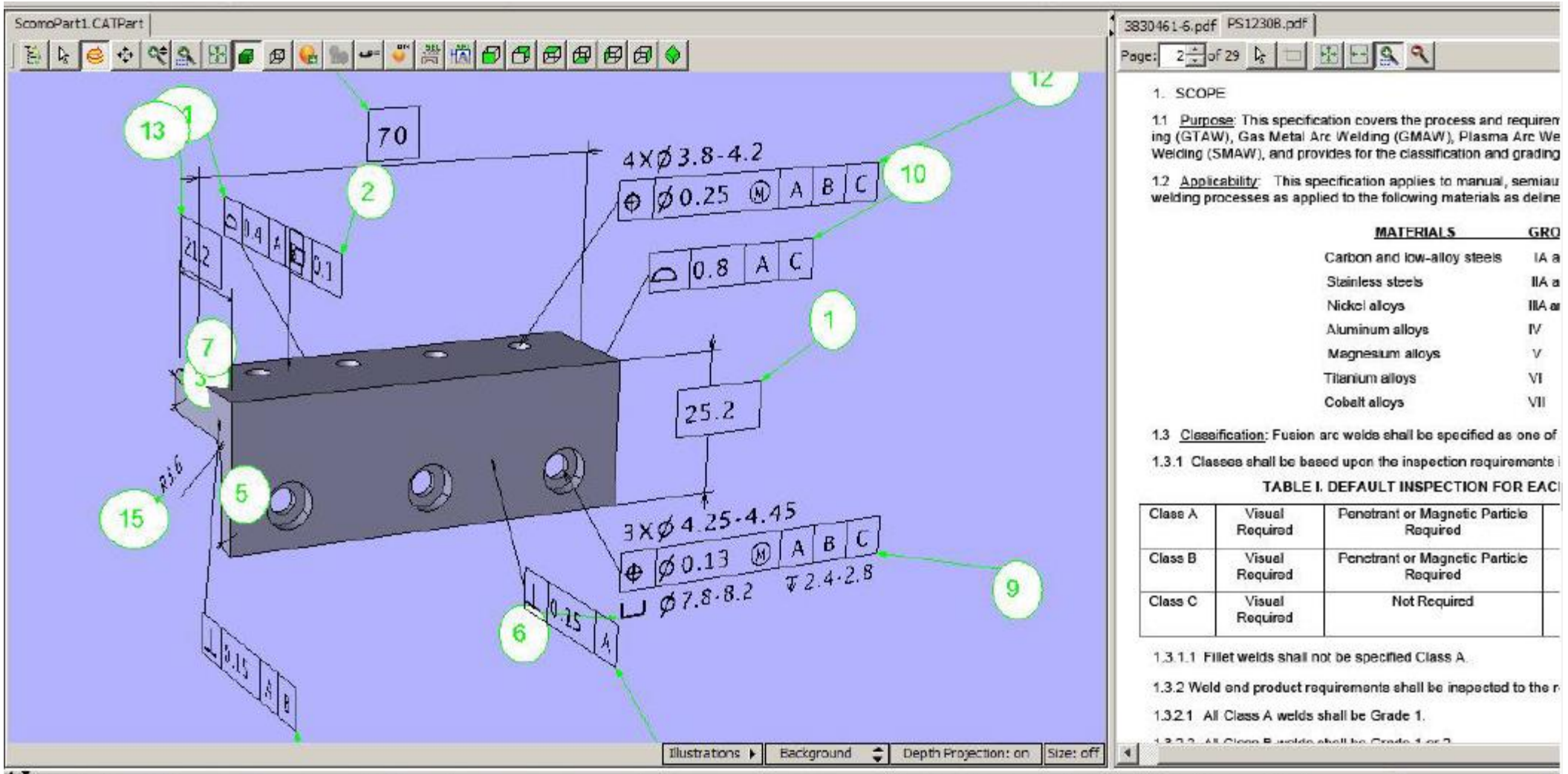
APQP & PPAP Project Templates



PPAP Projects

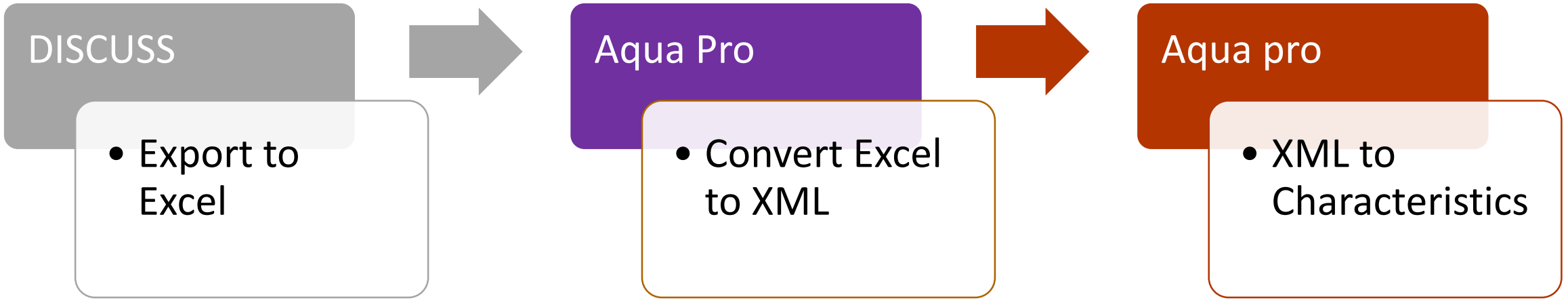
Deliverable Name	Sch. Start Date	Sch. Finish Date
UPPAP 1509679 - Ejector Control Valve	**12/03/2018**	**04/05/2019**
Released Production Drawings	12/03/2018	12/08/2018
SPD/SMD and SI sheets (Technical data)	12/08/2018	12/18/2018
Production PO and Demand Fulfillment	12/18/2018	12/24/2018
Design Failure Mode and Effects Analysis (DFMEA)	12/24/2018	12/29/2018
Process Flow Diagrams	12/29/2018	01/03/2019
Process FMEA	01/03/2019	01/12/2019
Process Control Plan	01/12/2019	01/31/2019
Process Readiness Study	01/03/2019	01/04/2019
Initial Process Studies	01/04/2019	01/11/2019
Measurement System Analysis Studies	01/31/2019	02/08/2019
Engineering Frozen Planning/Source Approval (EFP/ESA)	02/08/2019	02/09/2019
Dimensional Report (includes AS9102 forms 1, 2, 3)	02/08/2019	02/14/2019
Production Verification Testing (PVT)	02/14/2019	02/19/2019
Special Process Approval and Non destructive Test (NDT)	02/19/2019	02/25/2019
Material Certification Documentation	02/26/2019	03/05/2019

Drawing in DISCUS



CN	Belongs To	Requirement-Structured	GD&T	Location	Key	Comments	Places	Class	Reportable
1	Part1	Linear Dimension - Basic = **25.2 mm**	25.2| BASIC|	ScomoPart1.CATPart/**PMI Illus. 02c**	No		1	Minor	☐
2	Part1	Flatness <= **0.1 mm**	|⏥|0.1|	ScomoPart1.CATPart/**PMI Illus. 01d**	No		1	Minor	☑
3	Part1	Radius - Basic = **2 mm**	R2(REFERENCE)	ScomoPart1.CATPart/**PMI Illus. 01c**	No		1	Minor	☐
4	Part1	Perpendicularity <= **0.15 mm**	|⊥|0.15|A|	ScomoPart1.CATPart/**PMI Illus. 01f**	No	Measured in ...	1	Minor	☑

Data Import from Drawings



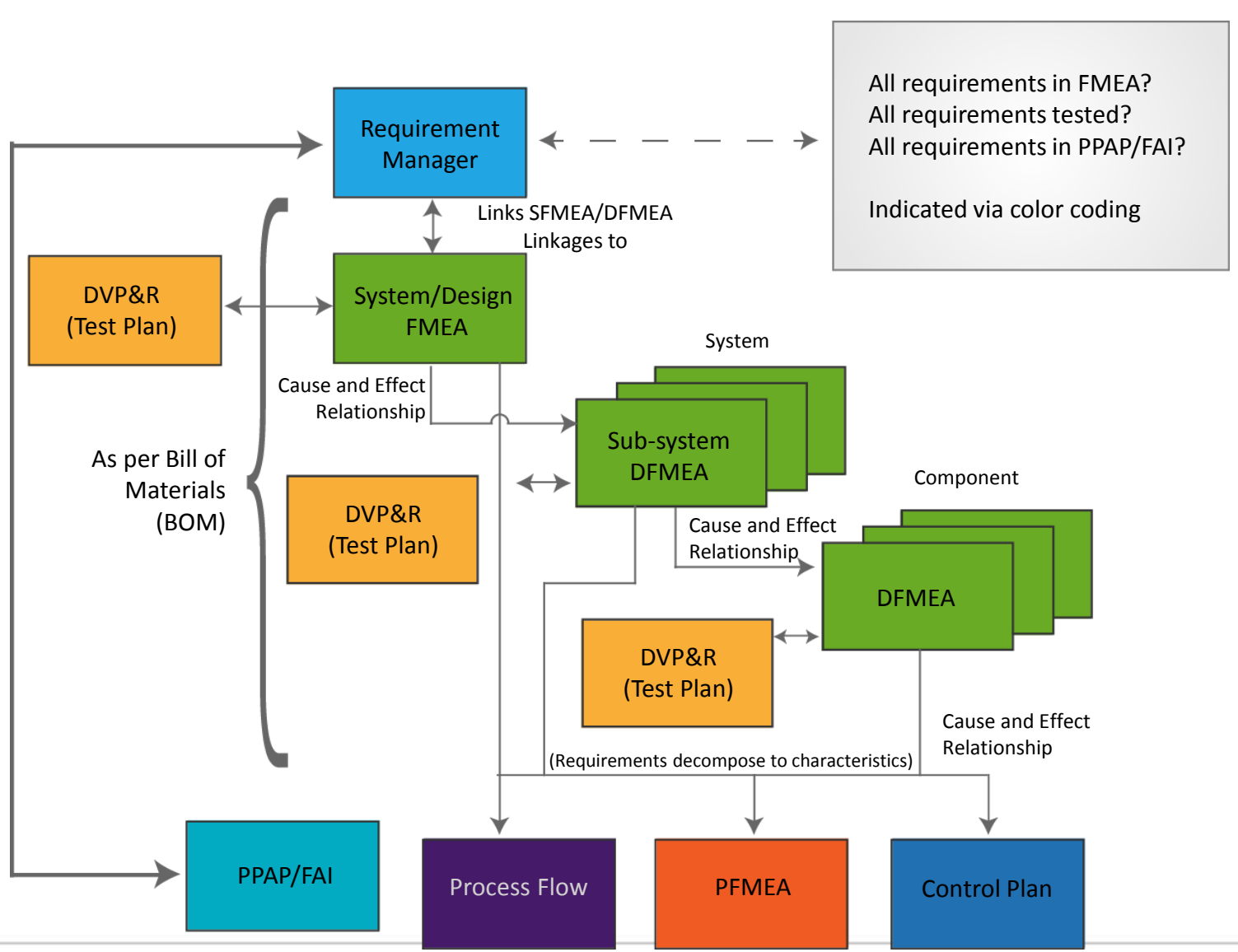
Master List of Characteristics

AQuA pro product realization software

Centralized Database of Characteristics

Owner	Name	Description	Is Product?	Characteristics Type	Characteristics Class	CRITERION	Tolerance Metric	Include in Prompt
RR Seat Assy	TB-01	TBCA Part Number	X			Per Receiving Process		X
RR Seat Assy	TB-02	Packaging Condition	X			Per receiving process		X
RR Seat Assy	TB-03	As Supplier Inspection Critera	X			Material Certification		X
RR Seat Assy	TB-04	No felt Attached	X			Not allowed		X
RR Seat Assy	TB-05	Not cover frame edge completely	X			Not allowed		X
RR Seat Assy	TB-06	Missing Bolt	X			Not allowed		X
RR Seat Assy	TB-07	No RB frame on Cushion Frame	X			Not allowed		X
RR Seat Assy	TB-08	No A/B on seat	X			Not allowed		X
RR Seat Assy	TB-09	Cross thread tightening	X			Hand Start 2-3 turns		X
RR Seat Assy	TB-10	Wrong A/B	X					X
RR Seat Assy	TB-11	Missing Nut on A/B	X			Controlled Count		X
RR Seat Assy	TB-12	A/B Module Failure	X					X
RR Seat Assy	TB-13	Damaged A/B W/H	X		FH			X
RR Seat Assy	TB-14	Missing nut on belt retractor	X					X
RR Seat Assy	TB-15	Belt retractor failure	X					X
RR Seat Assy	TB-16	Wrong Target Torque	X			6.00+/-1.2Nm		X
RR Seat Assy	TB-17	Out of standard torque	X			6.00+/-1.2Nm		X
RR Seat Assy	TB-18	DC Tool Broken	X		FH	Red Rabbit		X
RR Seat Assy	TB-19	Missing Damper	X					X
RR Seat Assy	TB-20	Wrong parts (60-40)	X					X
RR Seat Assy	TB-21	Missing nut on buckle	X					X
RR Seat Assy	TB-22	Buckle failure	X			Dropped, not allowed		X
RR Seat Assy	TB-23	Buckle harness damage	X					X
RR Seat Assy	TB-24	Wrong target torque(T40)	X			64+/-20Nm		X

Requirements Manager / Flow Down and Risk Analysis



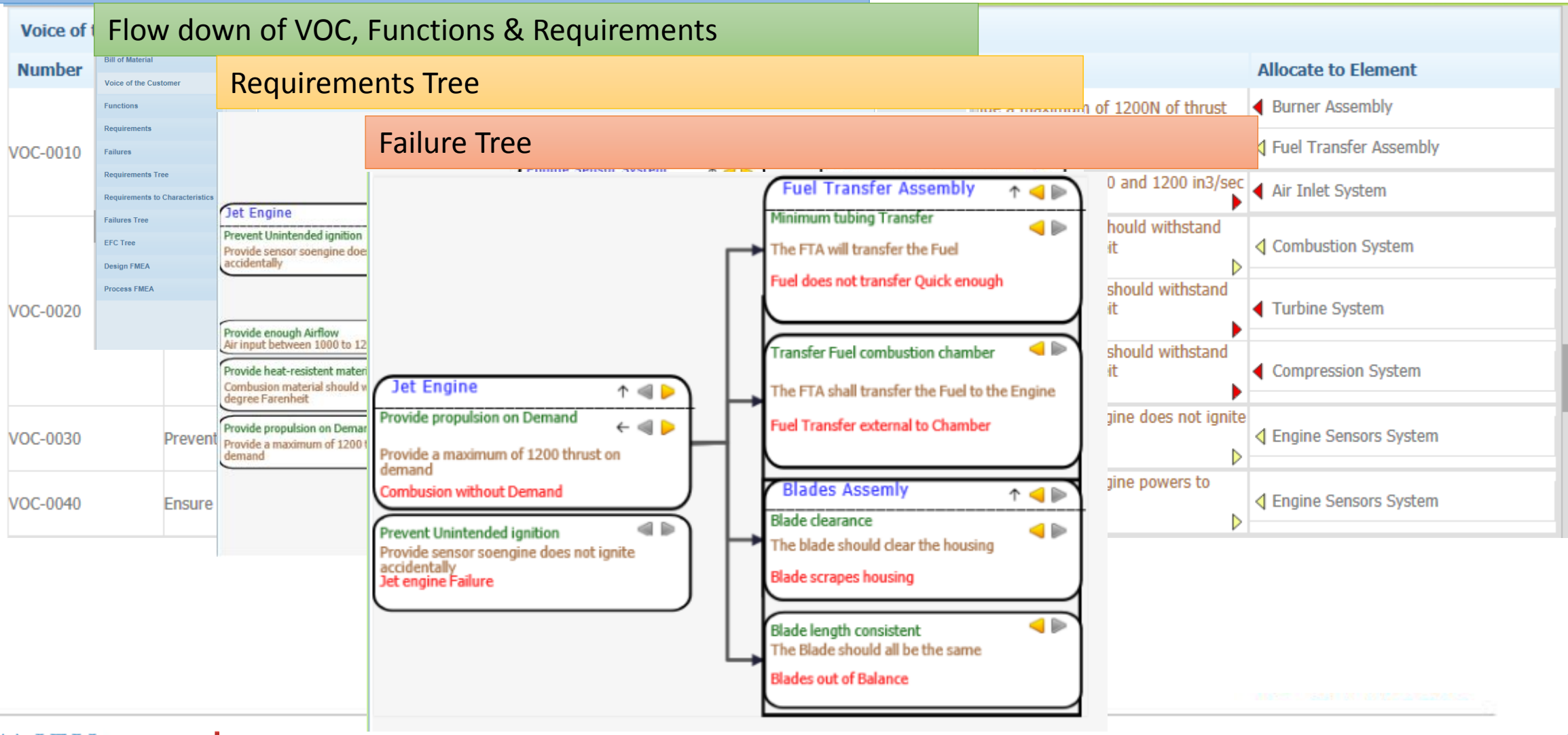
Voice of the Customer Flow down

VOC

Flow down of VOC, Functions & Requirements

Requirements Tree

Failure Tree



VOC - System

Topic Element : Aircraft Seating System Z535

Active Document : Voice of the Customer

Voice of the Cust

VOC Flowdown Functions & Requirements (System to Sub-system)

VOC – Sub System

Topic Element : Food Table

Active Document : Voice

Voice of the Customer

Add Dele

VOC Flowdown Functions & Requirements (Sub-system to Component)

Numbe ... IL Status

Topic Element : Food Table

Voice of the Customer

A

Requirement Flows Down

Element	Food Table
Function	Pull and Push the food table
Requirement	Requirement of Pull and Push the food table.

+ F + R - D

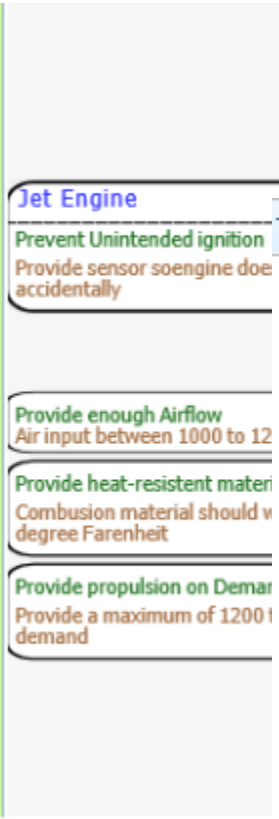
- Cup Holder Assy
- Foam Assy
- Table Latch Assy
  - F To deploy or engage the table.
    - R Should withstand 16 G and work for 35K cycles.

VOC-FT0006 Description of VOC-FT0006 Shall be able to assemble very easily. Requirement of Shall be able to assemble very easily. Foam Assy

Requirements Tree / Function Net

Failure Tree

EFC (Effect-Failure-Cause) Tree



Topic Element : Aircraft Seating System Z535

Producti Aircraft Seating System Z535

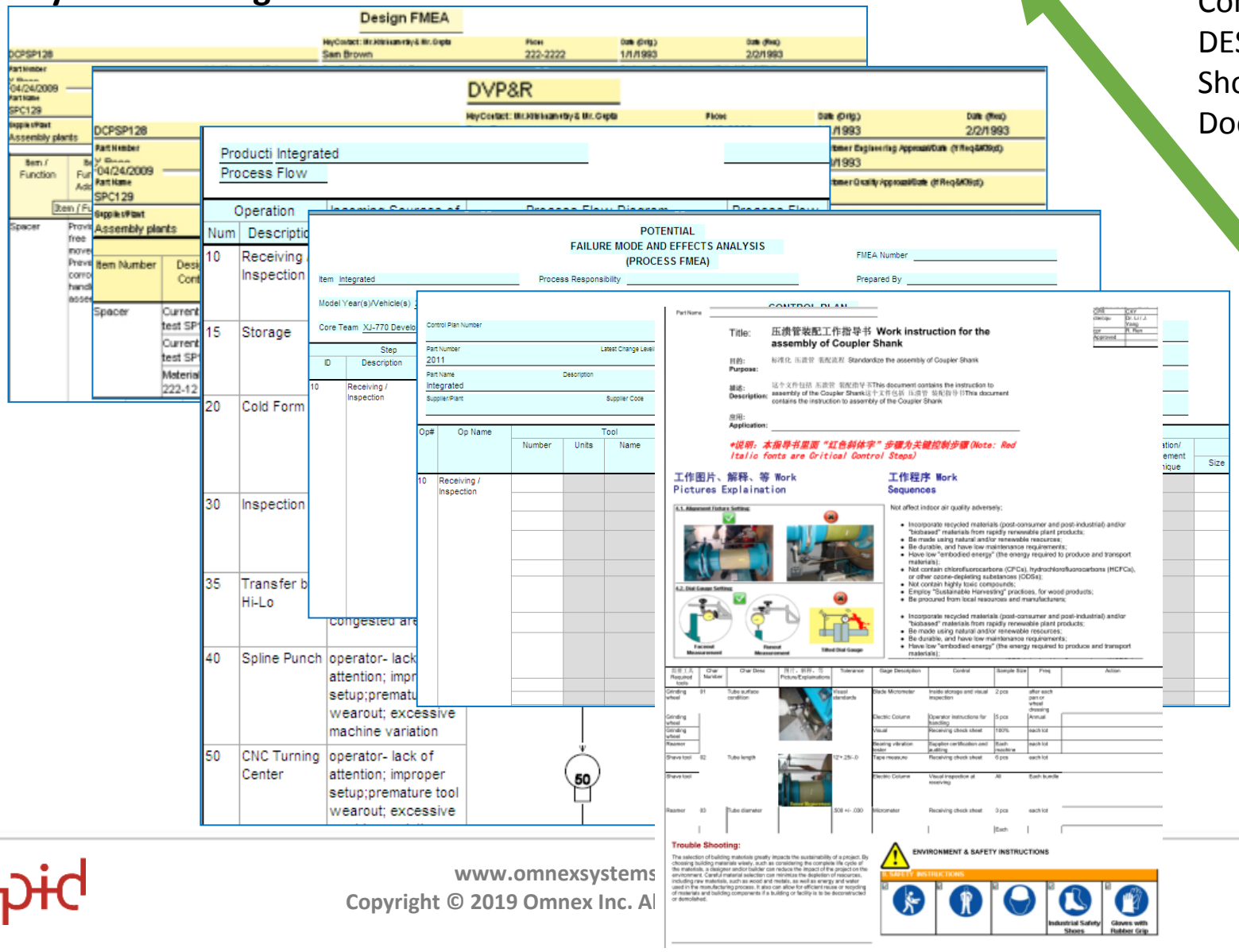
Design FMEA

Function Group	Function	Function Additional	Requirement	Potential Failure Mode	Failure Mode Additional	Potential Effects of Failure: Sev	Sev	Action Det Description	Class	Potential Cause (s)/Mechanism(s) of Failure	Occ	Preventive Design Controls	Detective Design Controls: Det	Det	RPN	Recommended Actions
Functional Requirements From Requirements Flowdown and ISO 26262	Each seat, berth, safety belt, harness and adjacent part of the aeroplane at each station designated as occupiable during taxi, take-off and landing must be designed so that a person making proper use of these facilities will not suffer serious injury in any emergency landing as a result of the inertia forces specified in CS 25.561 and CS 25.562.			The seat cannot qualify the Head Impact Criterion (HIC) Test		Seat Is not airworthy:9	9			In consistency in the composite of Seat Back and too much deflection(6 to 8 inches) of seat back.Not robust enough				10		

Design to Shop floor automation

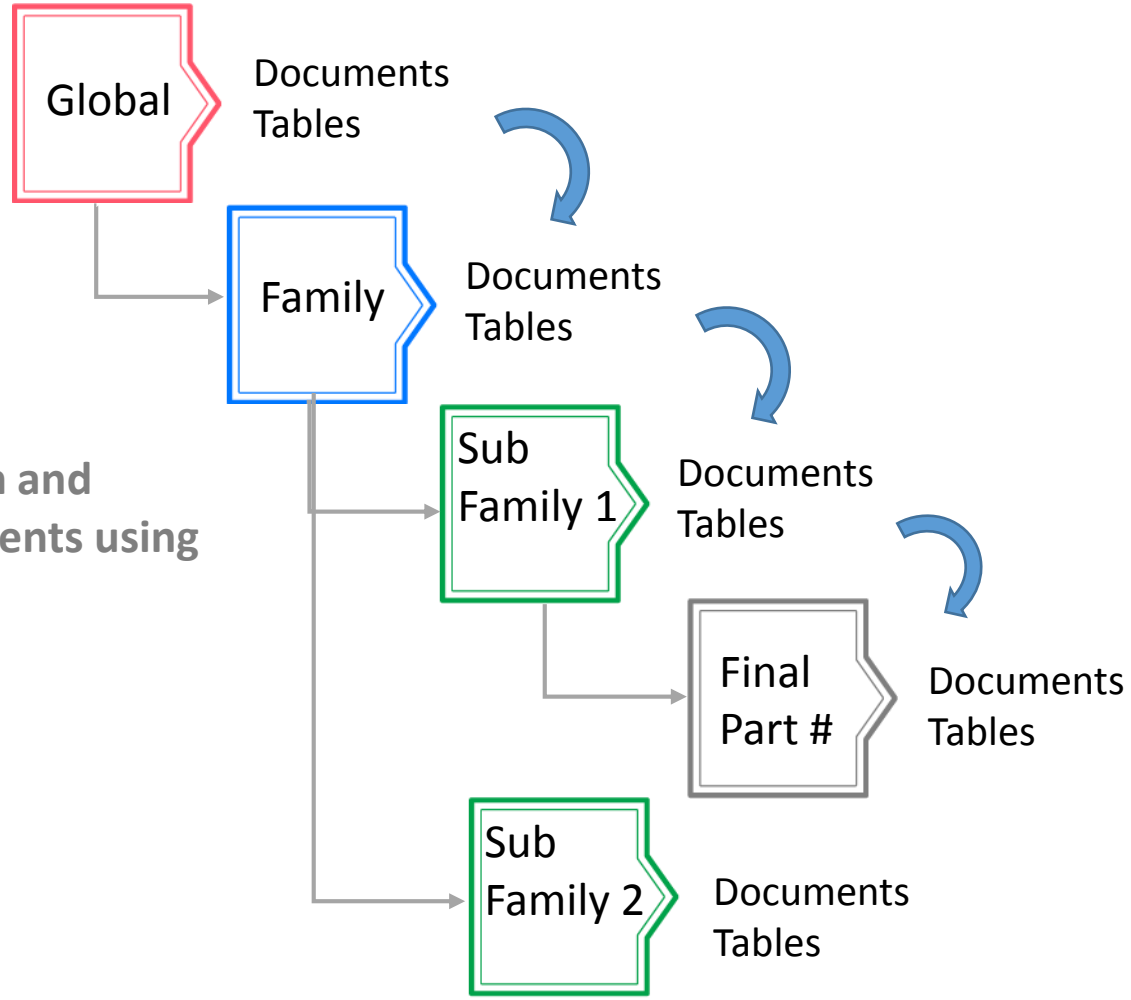
AQuA pro product realization software

Dynamic Linkage of Documents

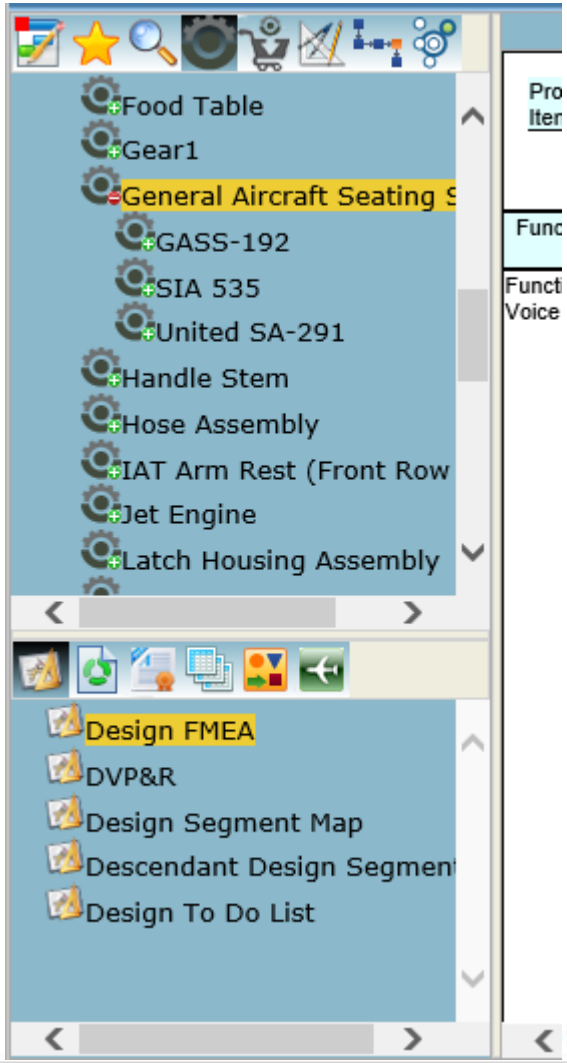


Connects DESIGN to Shop floor Documents

Process & Design reuse – using Product Families



Creating Design and Process Documents using Inheritance



Family of Parts - Inheritance

FAMILY

SUB-FAMILY

PART #

Production Item RR Seat Assy

PROCESS #	Description	Process Flow Symbol
10-5	Receiving Inspection	Decision (diamond)
10-10	Put felt sticker on frame	Operation
10-20	Pre-Tighten 60% RC x RB	Operation
10-30	Pre-tighten A/B bolt LH Only	Operation

Production Item RR - Seat Assy 700

PROCESS #	Description	Process Flow Symbol
10-5	Receiving Inspection	Decision (diamond)
10-10	Put felt sticker on frame - Family - 700 Specific Changes	Operation
10-20	Pre-Tighten 60% RC x RB - 700 Specific Changes	Operation
10-30	Pre-tighten A/B bolt LH Only	Operation
10-40	Pre-tighten ... actor	Operation

Override Level Legend -- Webpage Dialog

Production Item RR - Seat Assy 700 Process Flow

Ok

Process Flow

Production Item 700-X-100

PROCESS #	Description	Process Flow Symbol
10-5	Receiving Inspection	Decision (diamond)
10-10	Put felt sticker on frame - Family - 700 Specific Changes	Operation
10-15	Part 700-X-100 SPECIFIC OPERATION	Operation with Auto Inspection
10-20	Pre-Tighten 60% RC x RB - 700-X-100	Operation
10-30	Pre-tighten A/B bolt LH Only	Operation

Override Level Legend -- Webpage Dialog

Production Item 700-X-100 Process Flow

700-X-100
RR - Seat Assy 700
RR Seat Assy
Global

Trusted sites | Protected Mode: Off

10-20

10-30

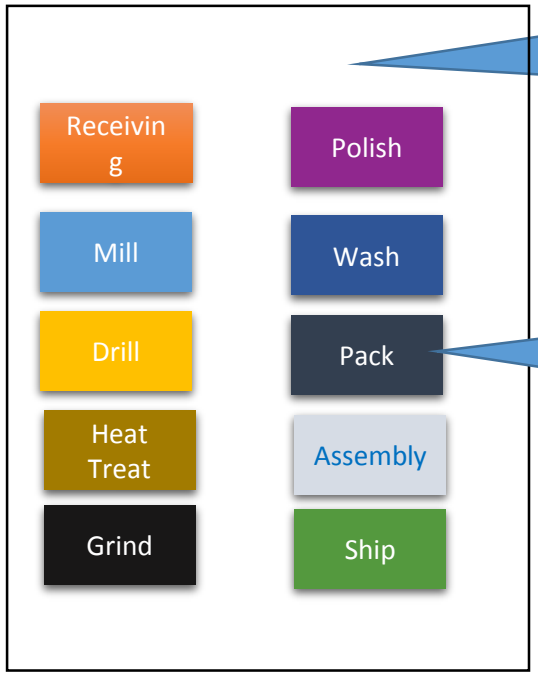
TB-07	No RB frame
TB-08	No A/B on se
TB-09	Cross thread
TB-10	Wrong A/B
TB-11	Missing Nut o
TB-13	Damaged A/B

Sub-Family specific Changes

Changes specific to Family, Sub-Family & Part # highlighted

Design & Process Reuse – using Segments (Libraries)

PROCESS EXAMPLE



1

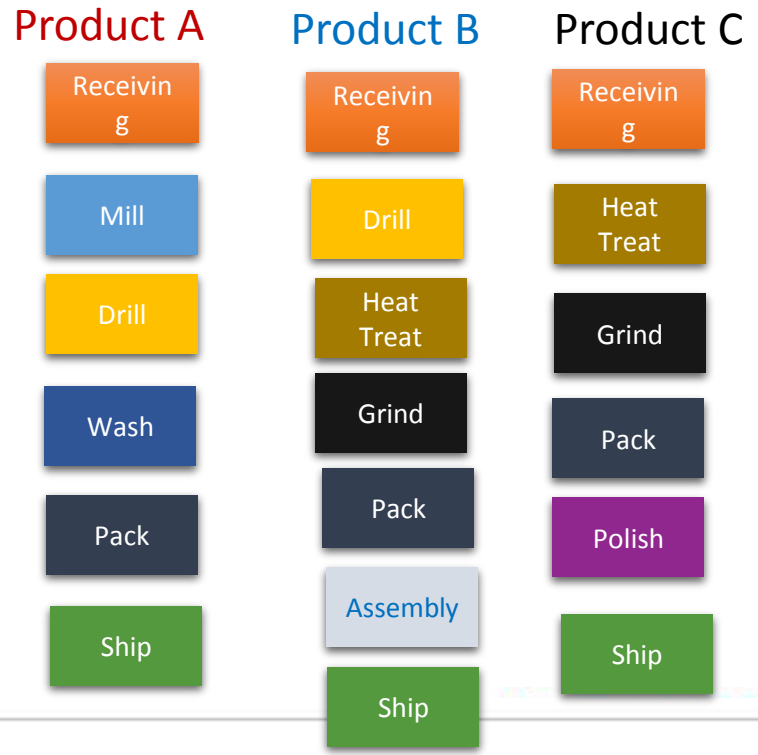
Manufacturing Process Libraries

2

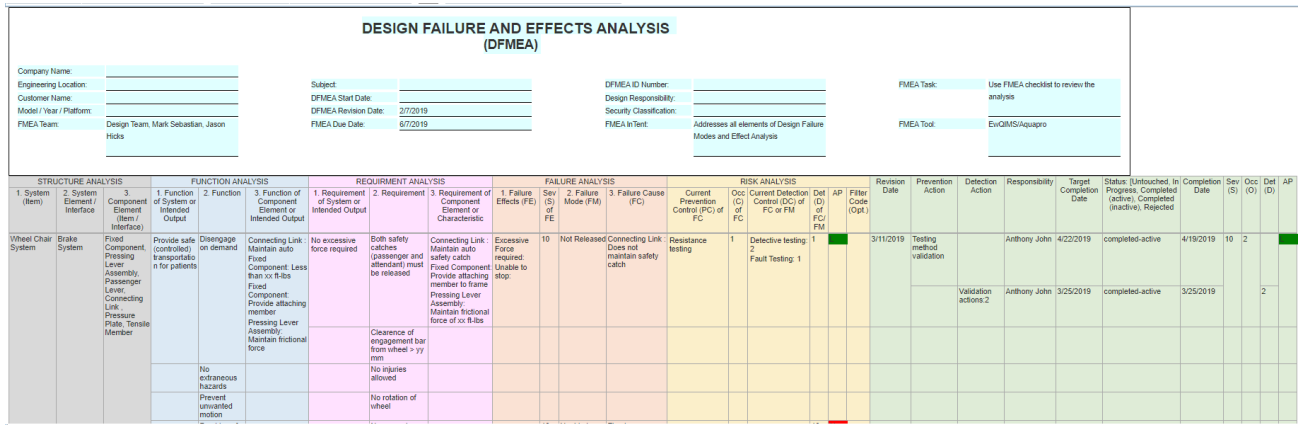
For each Process, create PFD, PFMEA, Control Plan

3

Pick the Process you need from the Library



AIAG VDA FMEA SOFTWARE



DESIGN FAILURE AND EFFECTS ANALYSIS
(DFMEA)

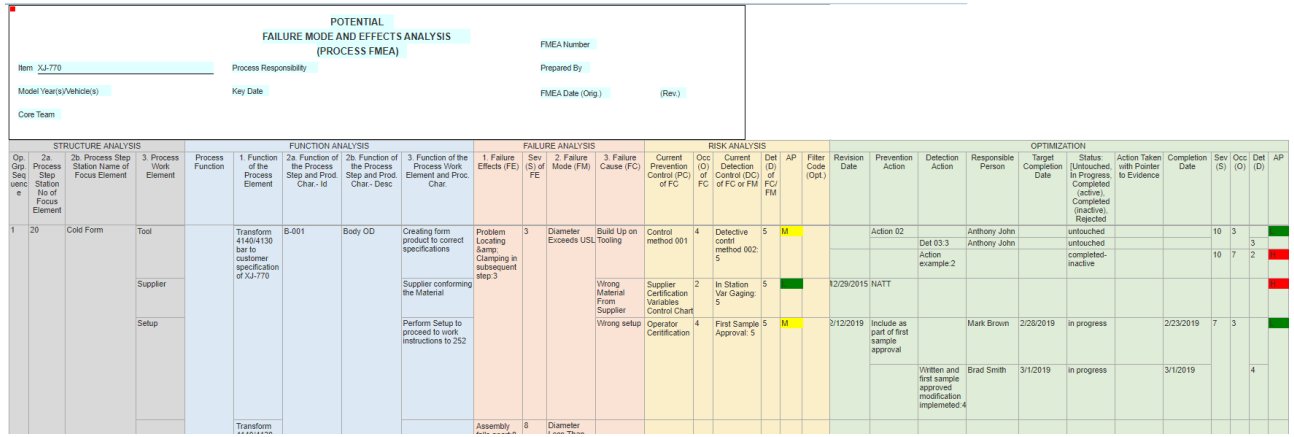
Company Name:
Engineering Location:
Customer Name:
Model / Year / Platform:
FMEA Team: Design Team, Mark Sebastian, Jason Hicks

Subject:
DFMEA Start Date:
DFMEA Revision Date: 2/7/2019
FMEA Due Date: 6/7/2019

DFMEA ID Number:
Design Responsibility:
Security Classification:
FMEA InTent: Addresses all elements of Design Failure Modes and Effect Analysis

FMEA Task: Use FMEA checklist to review the analysis
FMEA Tool: EvQlMS/Aquapro

STRUCTURE ANALYSIS			FUNCTION ANALYSIS			REQUIRMENT ANALYSIS			FAILURE ANALYSIS				RISK ANALYSIS						Revision Date	Prevention Action	Detection Action	Responsibility	Target Completion Date	Status: (Untouched, In Progress, Completed (active), Completed (inactive), Rejected	Completion Date	Sev (S)	Occ (O)	Det (D)	AP
1. System (Item)	2. System Element / Interface	3. Component Element (Item / Interface)	1. Function of System or Intended Output	2. Function	3. Function of Component Element or Intended Output	1. Requirement of System or Intended Output	2. Requirement	3. Requirement of Component Element or Characteristic	1. Failure Effects (FE)	Sev (S) of FE	2. Failure Mode (FM)	3. Failure Cause (FC)	Current Prevention Control (PC) of FC	Occ (C) of FC	Current Detection Control (DC) of FC or FM	Det (D) of FC/FM	AP	Filter Code (Opt.)										
Wheel Chair System	Brake System	Fixed Component, Pressing Lever Assembly, Passenger Lever, Connecting Link , Pressure Plate, Tensile Member	Provide safe (controlled) transportation for patients	Disengage on demand	Connecting Link : Maintain auto Fixed Component: Less than xx ft-lbs Fixed Component: Provide attaching member Pressing Lever Assembly: Maintain frictional force	No excessive force required	Both safety catches (passenger and attendant) must be released	Connecting Link : Maintain auto safety catch Fixed Component Provide attaching member to frame Pressing Lever Assembly: Maintain frictional force of xx ft-lbs	Excessive Force required: Unable to stop:	10	Not Released	Connecting Link: Does not maintain safety catch	Resistance testing	1	Detective testing: 2 Fault Testing: 1	1		3/11/2019	Testing method validation		Anthony John	4/22/2019	completed-active	4/19/2019	10	2		
																					Validation actions:2	Anthony John	3/25/2019	completed-active	3/25/2019			2	
							Clearence of engagement bar from wheel > yy mm																						
				No extraneous hazards			No injuries allowed																						
				Prevent unwanted motion			No rotation of wheel																						

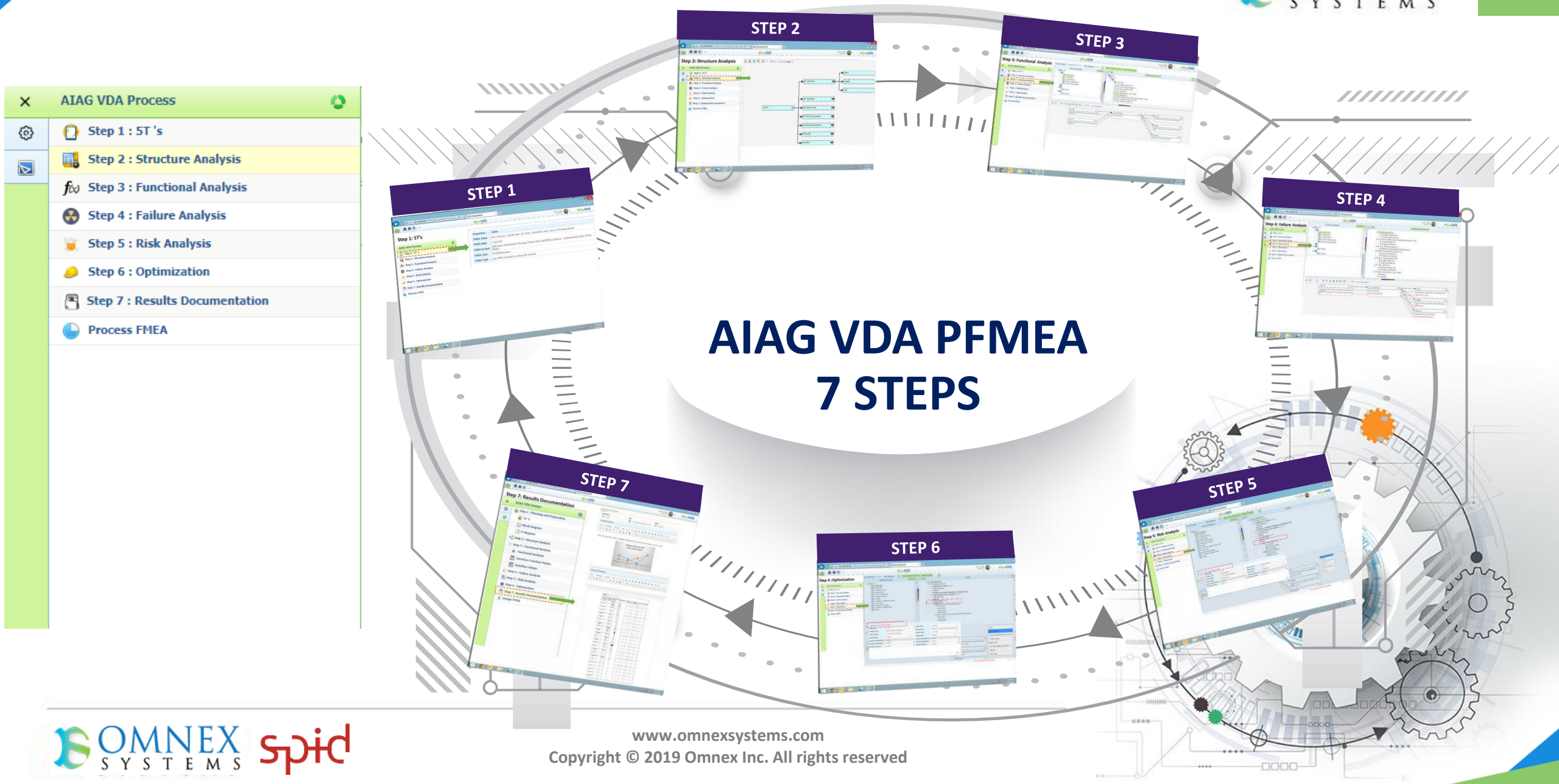


POTENTIAL
FAILURE MODE AND EFFECTS ANALYSIS
(PROCESS FMEA)

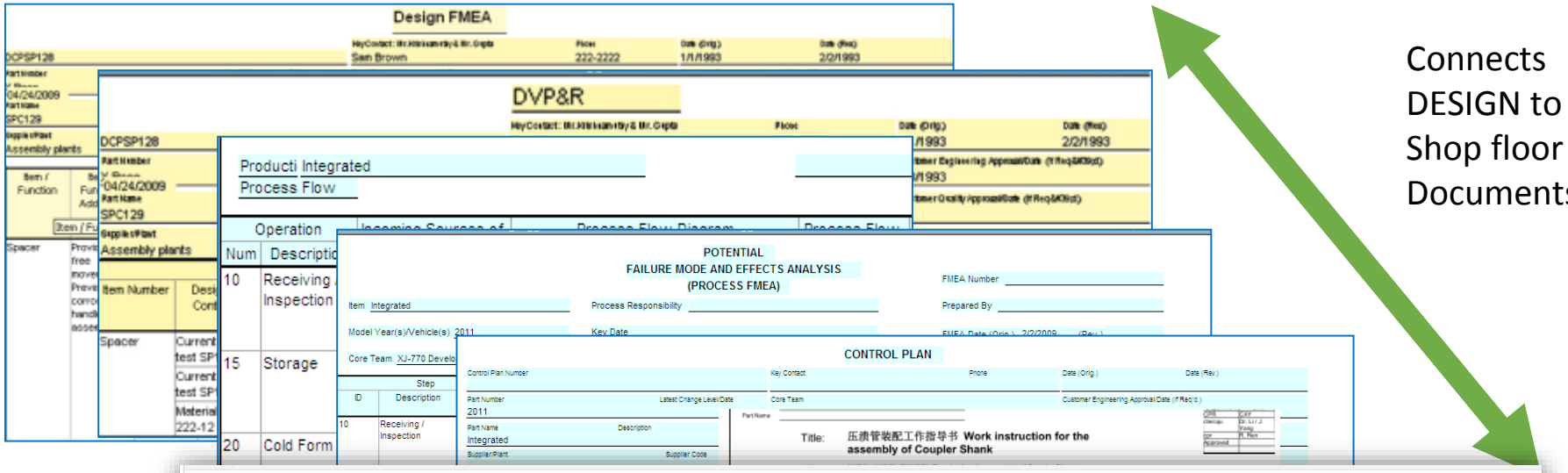
Item XJ-770
Process Responsibility
Prepared By
Model Year(s)/Vehicle(s)
Key Date
FMEA Number
FMEA Date (Orig.)
(Rev.)
Core Team

STRUCTURE ANALYSIS				Process Function	FUNCTION ANALYSIS				FAILURE ANALYSIS				RISK ANALYSIS						OPTIMIZATION											
Op. Grp. Sequence	2a. Process Step Station No of Focus Element	2b. Process Step Station Name of Focus Element	3. Process Work Element		1. Function of the Process Element	2a. Function of the Process Step and Prod. Char.- Id	2b. Function of the Process Step and Prod. Char.- Desc	3. Function of the Process Work Element and Proc. Char.	1. Failure Effects (FE)	Sev (S) of FE	2. Failure Mode (FM)	3. Failure Cause (FC)	Current Prevention Control (PC) of FC	Occ (O) of FC	Current Detection Control (DC) of FC or FM	Det (D) of FC/FM	AP	Filter Code (Opt.)	Revision Date	Prevention Action	Detection Action	Responsible Person	Target Completion Date	Status: (Untouched, In Progress, Completed (active), Completed (inactive), Rejected	Action Taken with Pointer to Evidence	Completion Date	Sev (S)	Occ (O)	Det (D)	AP
1	20	Cold Form	Tool		Transform 4140/4130 bar to customer specification of XJ-770	B-001	Body OD	Creating form product to correct specifications	Problem Locating & Clamping in subsequent step:3	3	Diameter Exceeds USL	Build Up on Tooling	Control method 001	4	Detective contrl method 002: 5	5	M			Action 02		Anthony John		untouched			10	3		
																						Det 03:3	Anthony John		untouched				3	
																						Action example:2			completed-inactive			10	7	2	
			Supplier					Supplier conforming the Material				Wrong Material From Supplier	Supplier Certification Variables Control Chart	2	In Station Var Gaging: 5	5			12/29/2015	NATT									
			Setup					Perform Setup to proceed to work instructions to 252				Wrong setup	Operator Certification	4	First Sample Approval: 5	5	M		2/12/2019	Include as part of first sample approval		Mark Brown	2/28/2019	in progress		2/23/2019	7	3		
																						Written and first sample approved modification implemeted:4	Brad Smith	3/1/2019	in progress		3/1/2019		4	
					Transform				Assembly	8	Diameter																			

- AIAG VDA Design
  - Step 1 : Planning and Preparation
    - 5T 's
    - Block Diagram
    - P-Diagram
  - Step 2 : Structure Analysis
  - Step 3 : Functional Analysis
    - Functional Analysis
    - Interface Function Matrix
    - Interface Matrix
  - Step 4 : Failure Analysis
  - Step 5 : Risk Analysis
  - Step 6 : Optimization
  - Step 7 : Results Documentation
  - Design FMEA



Design to Inspection Sheet linkage

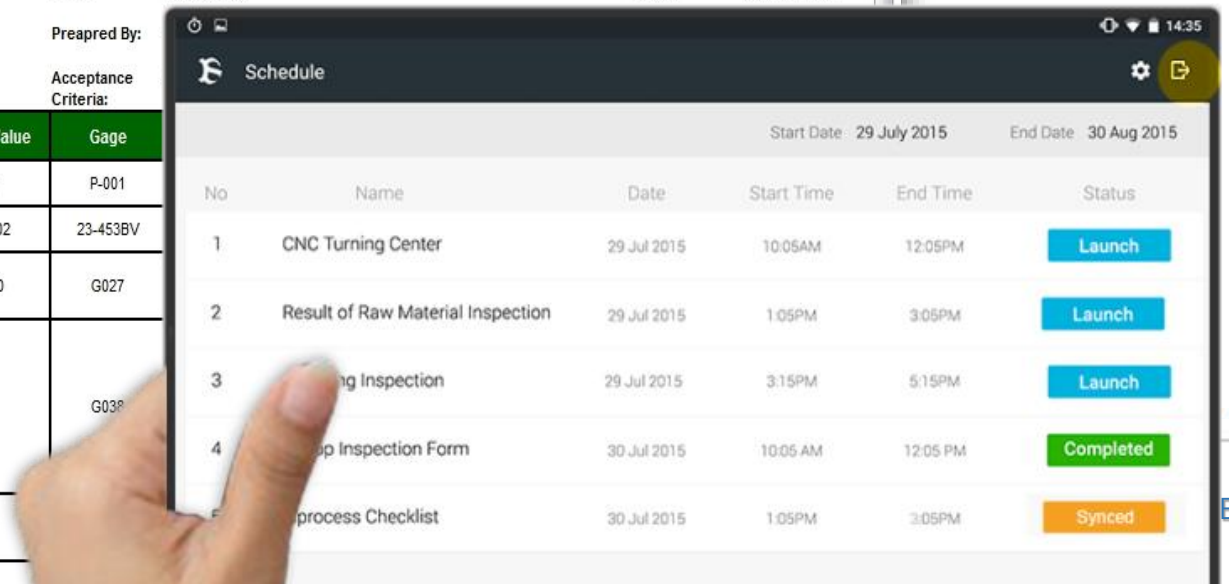


Connects DESIGN to Shop floor Documents

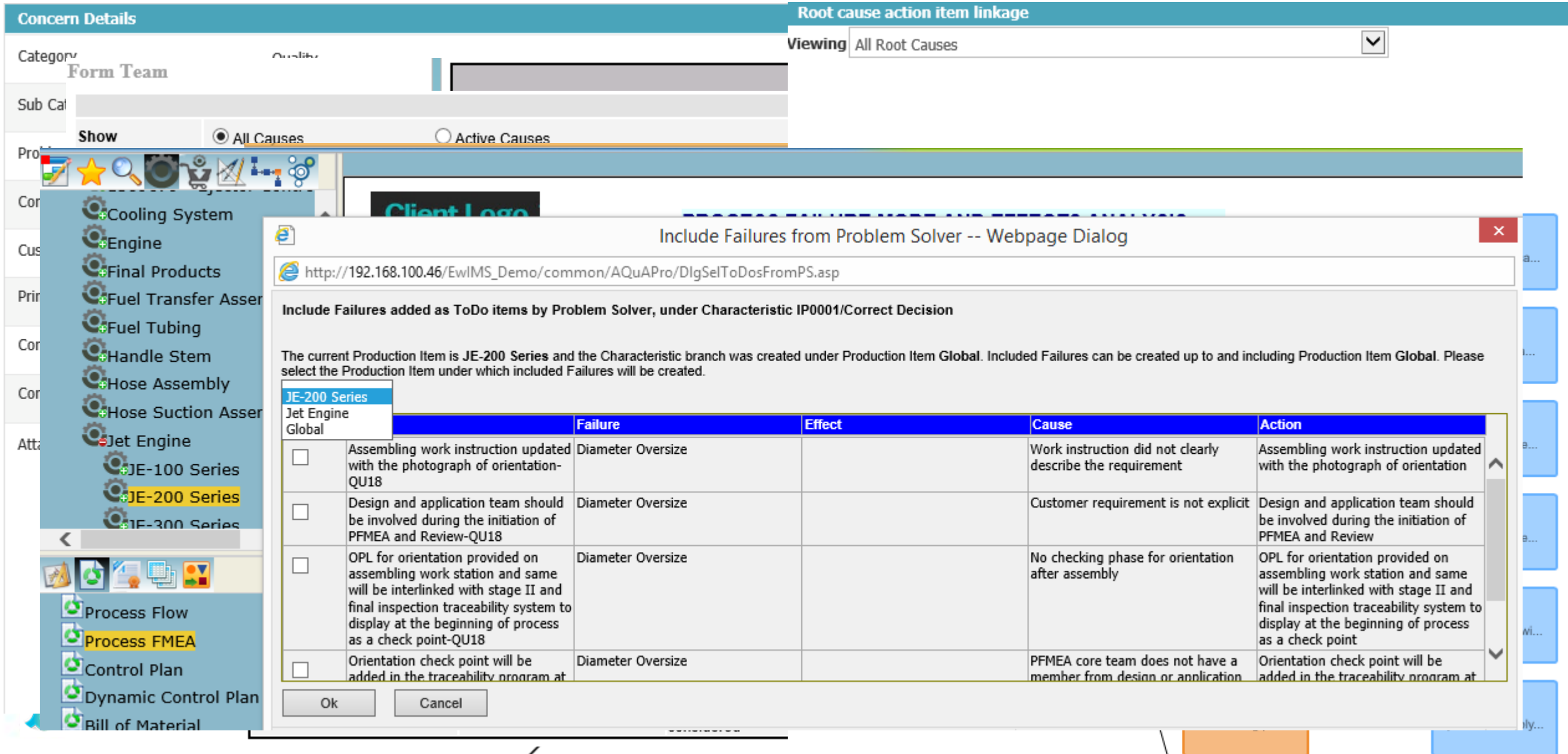
Inprocess Inspection Worksheet

Part Number:	24124/7	Operation Number:	40	Shift:	Default Shift	W.O No: WO201407005
Part Name:	m560P LW - Report Test	Operation Name:	Grinding	Preapred By:		
Date:	7/24/2014	Department:	Shaft Floor	Acceptance Criteria:		

Characteristics No	Characteristic Description	Characteristics Class	Tolerance/ Specification	Low Value	High Value	Gage
8	Finished surface		40	3	3	P-001
10	Finished diameter		0.4875	0.002	0.002	23-453BV
C002	Machine speeds and feeds		1760	100	100	G027
11	Correct resin loaded	V	ETS RHD Panel Lower Assist is3114m16, Glove Box Inner is ETS-3115m72 and Glove Box Outer is ETS-3116m77 Motan Procedures			G038
10	Resin Color	®	Per Excel Data Notes Color Masters			



Problem Solving / FRACAS



Calibration

Edit | Reset | Traceability Chain

Unit	mm
No. of Reference values	5
Number of Trials	5
Method of Calibration	MOC
Master Instrument	Mstr 048
Master Parameter to be referred	Master for oal for hand
Calibrated by(Opt.)	Select
Contact Person (Opt.)	Select
Last Calibration Date(Opt.)	06/25/2018
Date Received(Opt.)	01/24/2019
Calibration Date	01/24/2019
Frequency	1 Months
Next Calibration due on	02/23/2019
Number of Decimal(Opt)	
Temperature	
Humidity	
Import all values from Previous Study	
Work Instruction Ref.	
Master Work Instruction	

Calculate | Save | Import | Download Import Format | Export | Import Ref Value from Previous Study | Show Linearity Analysis

Ref.Val/Trial No.	Reference Value	1	2	3	4	5	Average	Bias	Standard Deviation	Upper Confidence Line	Lower Confidence Line
1	2	2.01	2	2.02	1.99	1.98	2	0	0.016	0.045	-0.054
2	4	4.01	4.01	4.01	4.02	4	4.01	0.01	0.007	0.029	-0.041
3	6	6.01	5.9	5.9	5.9	6.01	5.944	-0.056	0.06	0.021	-0.037
4	8	8	8.1	8.2	7.9	7.9	8.02	0.02	0.13	0.025	-0.045
5	10	10.01	10.02	10	10	9.9	9.986	-0.014	0.049	0.038	-0.061

⚠ This analysis is suspect since the repeatability is greater than 10% of the least tolerance.The Repeatability is 16.65%

User-defined criteria	
Confidence Level	95
Maximum Bias	0.056
Uncertainty	2.154
Result	Statistically Acceptable
Least Tolerance	2.5
Status	Active

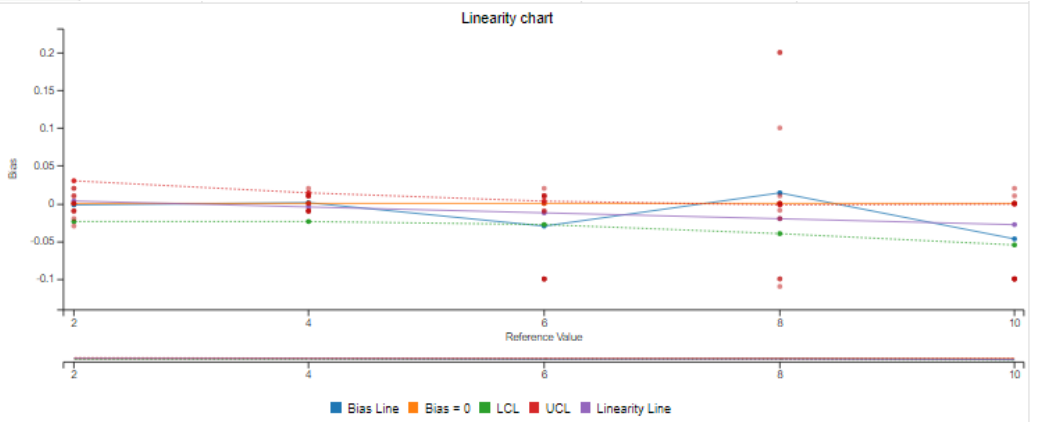
Appraiser Remarks

Approver Remarks

Acceptance Criteria(Only For Linearity)

* For the measurement system linearity to be acceptable, the 'bias =0' line mu within the confidence bands of the fitted line.
* t statistic calculated using slope and intercept should be less than T critical.

Note: As Per MSA Manual 4th Edition.

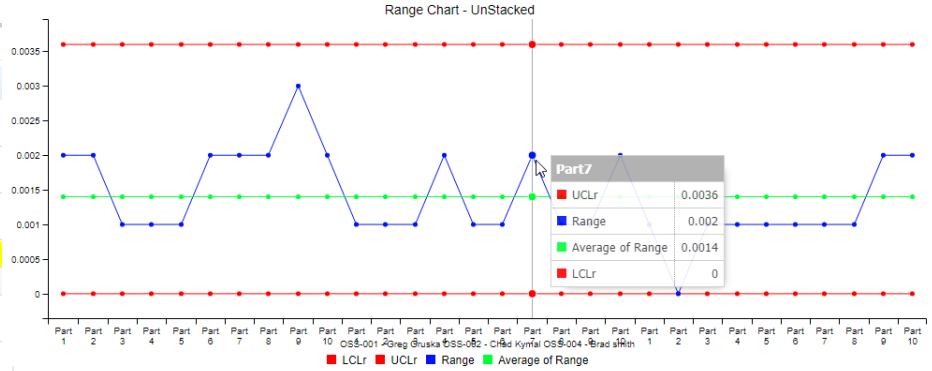


GRR - Variable

Least Tolerance	
Target Tolerance Range(Opt)	
Last Study Date(Opt.)	
Received Date(Opt.)	01/24/2019
Study Date	01/24/2019
Frequency	12 Months
Due Date	01/23/2020
Contact Person (Opt.)	Select
Part Number	X85325
Part Characteristics	MM:893294
Number of Appraisers	2
Appraisers	OSS-005 - Lynda Brown; OSS-006 - Cecilia Gomez
Number of Parts	3
Number of Trials	3
Number of Decimal(Opt)	
Include with in Part Variation	Yes / No

Calculate | Save | Import | Download Import Format | Export | Analysis & Control Chart | Acceptance Criteria Flow

Person	Trials	Part 1	Part 2	Part 3	Average
OSS-005 - Lynda Brown	Trial 1	1.132	1.2	1.3	1.2107
	Trial 2	1.4	1.5	1.6	1.5
	Trial 3	1.42	1.43	1.46	1.4367
	Average	1.3173	1.3767	1.4533	1.3824
	Range	0.288	0.3	0.3	0.296
OSS-006 - Cecilia Gomez	Trial 1	1.55	1.58	1.98	1.7033
	Trial 2	1.65	1.75	1.20	1.5333
	Trial 3	1.75	1.8	1.958	1.836
	Average	1.65	1.71	1.7127	1.6909
	Range	0.2	0.22	0.78	0.4
	Part Average	1.4837	1.5433	1.583	1.5367



Target Cp: 1.33

Intermediate Results

Rp	0.0993	X Double Bar	1.5367	R Double Bar	0.348	X-Diff	0.3084
UCLr	0.8961	LCLr	0	UCLx	1.8927	LCLx	1.1807

Average and Range | Show Crossed GRR Analysis | Show Nested GRR Analysis

Average and Range Display Fields: % w.r.t Total Variation; % Using Variances; % w.r.t Least Tolerance; % w.r.t Target Cp =

Average and Range	Value	% w.r.t Total Variation	% Using Variances	% w.r.t Least Tolerance	% w.r.t Target Cp =1.33
Equipment Variation EV	0.201	68.48	46.9	0	0
Appraiser Variation AV	0.2075	70.69	49.97	0	0
GRR RR	0.2889	98.42	96.87	0	0
Part Variation PV	0.052	17.7	3.13	0	0
Total Variation TV	0.2936	100	100	0	0
Index SD		0.2936	0.0009	0	0

No. of Distinct Data Categories: 0 | Status: Active

GRR Result: Comments: Every effort should be made to improve the measurement system.
This condition may be addressed by the use of an appropriate measurement strategy; for example, using the average result of several readings of the same part characteristic in order to reduce final measurement variation.

Remarks(Opt)

Graphical Analysis: Analysis of Results - Graphical | Show Chart

Gage RR -Attribute

Least Tolerance	1.6 mm
Target Tolerance Range(Opt)	
Part Number	X85325
Part Characteristics	Thickness
Last Study Date(Opt.)	08/09/2018
Received Date(Opt.)	08/17/2018
Study Date	08/17/2018
Frequency	5 Months
Due Date	01/16/2019
Contact Person (Opt.)	Greg Gruska_OSS-001
Number of Appraisers	3
Appraisers	OSS-003 - Williams Karen, OSS-006 - Cecilia Gomez, QA-295 - Amanda Caroline
Number of Parts	10
Number of Trials	3
Number of Decimal(Opt)	4

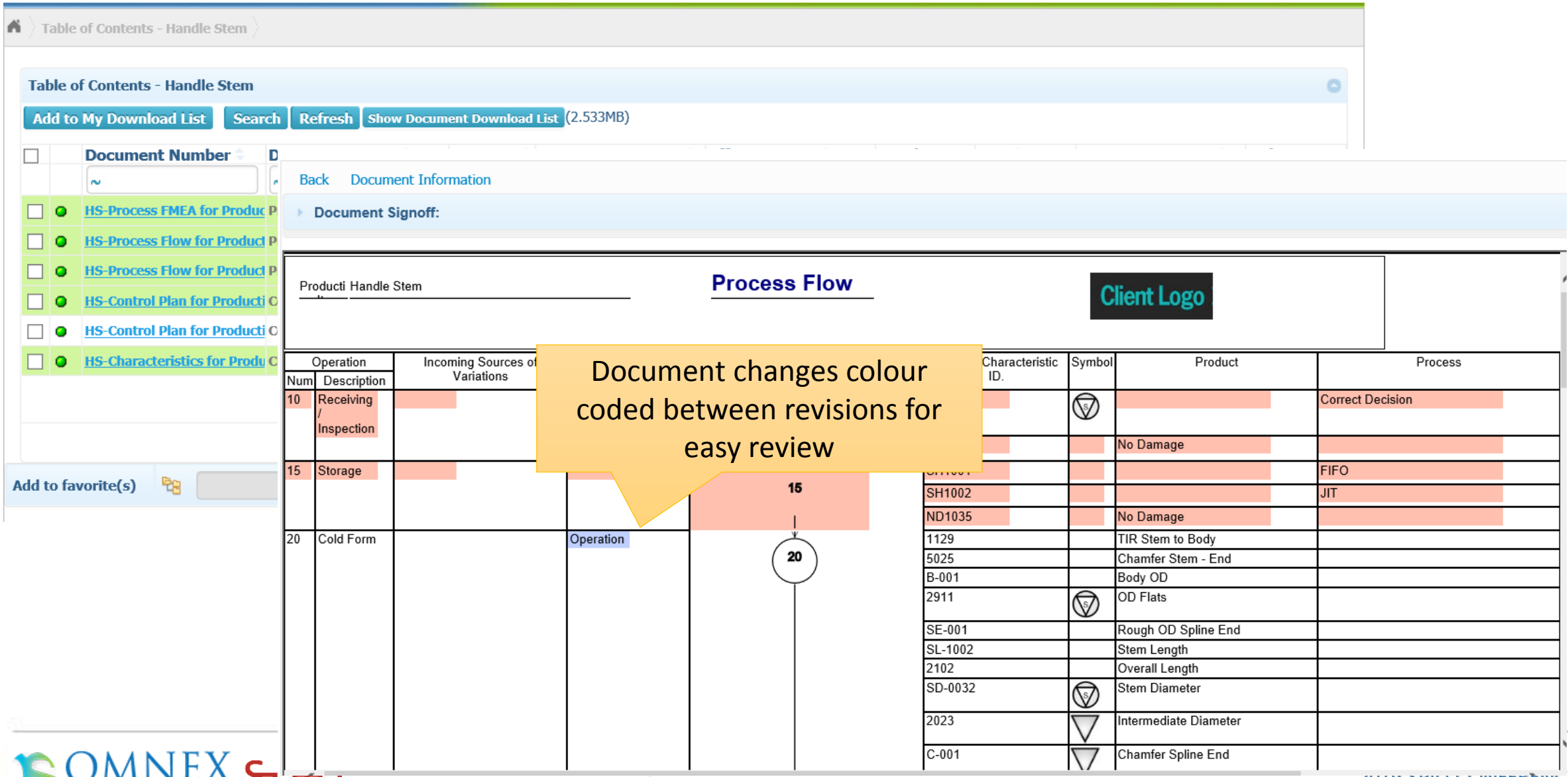
			OSS-003 - Williams Karen			OSS-006 - Cecilia Gomez			QA-295 - Amanda Caroline		
Part	Status	Defect Type	Trial1	Trial2	Trial3	Trial1	Trial2	Trial3	Trial1	Trial2	Trial3
1	Ok	Low	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok
2	Ok	high	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok
3	Not Ok	medium	Not Ok	Not Ok	Not Ok	Not Ok	Not Ok	Not Ok	Not Ok	Not Ok	Not Ok
4	Not Ok	Low	Not Ok	Not Ok	Not Ok	Not Ok	Not Ok	Not Ok	Not Ok	Not Ok	Not Ok
5	Not Ok	high	Not Ok	Not Ok	Not Ok	Not Ok	Not Ok	Not Ok	Not Ok	Not Ok	Not Ok
6	Ok	medium	Ok	Ok	Not Ok	Ok	Ok	Not Ok	Ok	Not Ok	Not Ok
7	Ok	Low	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Not Ok	Ok
8	Ok	high	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok
9	Not Ok	medium	Not Ok	Not Ok	Not Ok	Not Ok	Not Ok	Not Ok	Not Ok	Not Ok	Not Ok
10	Ok	Low	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok

Person Name	Cumulative Effectiveness		Miss Rate		False Alarm Rate		Bias Ratio	Result
	%	Result	%	Result	%	Result	Value	
OSS-003 - Williams Karen	90	Good	0	Good	5.6	Marginally Ok	undefined	Marginally Ok
OSS-006 - Cecilia Gomez	90	Good	0	Good	5.6	Marginally Ok	undefined	Marginally Ok
QA-295 - Amanda Caroline	80	Marginally Ok	0	Good	16.7	Poor	undefined	Poor

Kappa Result	Value	Result
Kappa	0.8869	Good
Appraiser-Reference Kappa	**Value**	**Result**
OSS-003 - Williams Karen	0.9315	Good
OSS-006 - Cecilia Gomez	0.9315	Good
QA-295 - Amanda Caroline	0.8	Substantial

Remarks(Opt)

Revision Control of Documents



OMNEX SYSTEMS

Customer Part Number (MPN): 24262279

Search

Documents -

- DWG
- ECD
- CEA
- DFMEA
- PFD
- PFMEA
- CP

Setting +

Attachments

1. Design Record
Output Document: 24262279_REV011_BP1.jpg
Remarks:
Submitted By: Chad Kymal
Submitted On: 05/16/2019

2. Engineering Change Documents
Output Document:
Remarks: Not Applicable
Submitted By: Chad Kymal
Submitted On: 05/16/2019

3. Customer Engineering Approval
Output Document:
Remarks: Not Applicable
Submitted By: Chad Kymal
Submitted On: 05/16/2019

4. Design FMEA
Output Document:
Remarks: Not Applicable
Submitted By: Chad Kymal
Submitted On: 05/16/2019

5. Process Flow Diagram
Output Document: 24262221_REV009_PFD.xlsx
Remarks:
Submitted By: Chad Kymal
Submitted On: 05/28/2019

6. Process FMEA
Output Document: 24262279_REV011_PFMEA.xlsx
Remarks:
Submitted By: Chad Kymal
Submitted On: 05/16/2019

7. Control Plan
Output Document: 24262279_REV011_CP.xlsx
Remarks:
Submitted By: Chad Kymal
Submitted On: 05/28/2019

8. Measurement System Analysis Studies
Output Document: 8_24262221_REV009_MSA.xlsx
Remarks:
Submitted By: Chad Kymal
Submitted On: 05/16/2019

9. Dimensional Results
Output Document: 24262279_REV011_Dimensional Tes
Remarks:
Submitted By: Chad Kymal
Submitted On: 05/16/2019

10. IMDS
Output Document: 10_24262279_REV011_IMDS.pdf
Remarks:
Submitted By: Chad Kymal
Submitted On: 05/16/2019

11. Material, Performance Test Results
Output Document: 11_2MAT_PER_TEST_RESULTS.xlsx
Remarks:
Submitted By: Chad Kymal
Submitted On: 05/16/2019

12. Initial Process Studies
Output Document: 24262279_R011_Process Capability
Remarks:
Submitted By: Chad Kymal
Submitted On: 05/16/2019

13. Qualified Laboratory Documentation
Output Document: 13_Lab.pdf
Remarks:
Submitted By: Chad Kymal
Submitted On: 05/16/2019

14. Appearance Approval Report
Output Document: 14_24262279_REV011_Appearance
Remarks:
Submitted By: Chad Kymal
Submitted On: 05/16/2019

15. Sample Product
Remarks:
Remarks:
Submitted By: Chad Kymal
Submitted On: 05/16/2019

OMNEX SYSTEMS

Customer Part Number (MPN): **24262279**

Search

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- DWG
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Setting +

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Output Document	24262279_REV011_PFMEA.xlsx
Remarks	
Submitted By	Chad Kymal
Submitted On	05/16/2019

Stitch & Export

Digital PPAP Review

AI

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Stitch & Export

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Selected Documents Size 27.091MB

Documents Selected 6

	Document Name	Document #	Revision	Revision Date	File Type	Level	Site	Order
☒	Ballooned Dwg.	PPAP-5.1	1	09/06/2019	PDF	PPAP Doc	Corporate	
☒	Dimension Results	PPAP-10	1	09/06/2019	HTML	PPAP Doc	Corporate	
☒	Design Record	PPAP-5.1	1	09/06/2019	HTML	PPAP Doc	Corporate	
☐	Summary Inspection Result	PPAP-5.1	1	09/06/2019	HTML	PPAP Doc	Corporate	
☒	Process Flow	PPAP-5.1	1	09/06/2019	TXT	PPAP Doc	Corporate	
☐	FMEA	PPAP-5.1	1	09/06/2019	TXT	PPAP Doc	Corporate	
☒	Weight Loss Test	PPAP-5.1	1	09/06/2019	XLS	PPAP Doc	Corporate	
☒	Dimension 200 2hr Cav1	PPAP-5.1	1	09/06/2019	XLS	PPAP Doc	Corporate	

Page 1 of 1 10 View 1 - 8 of 8

APQP SOLUTION : SUMMARY

Manage Voice of Customer (VOC) Requirements

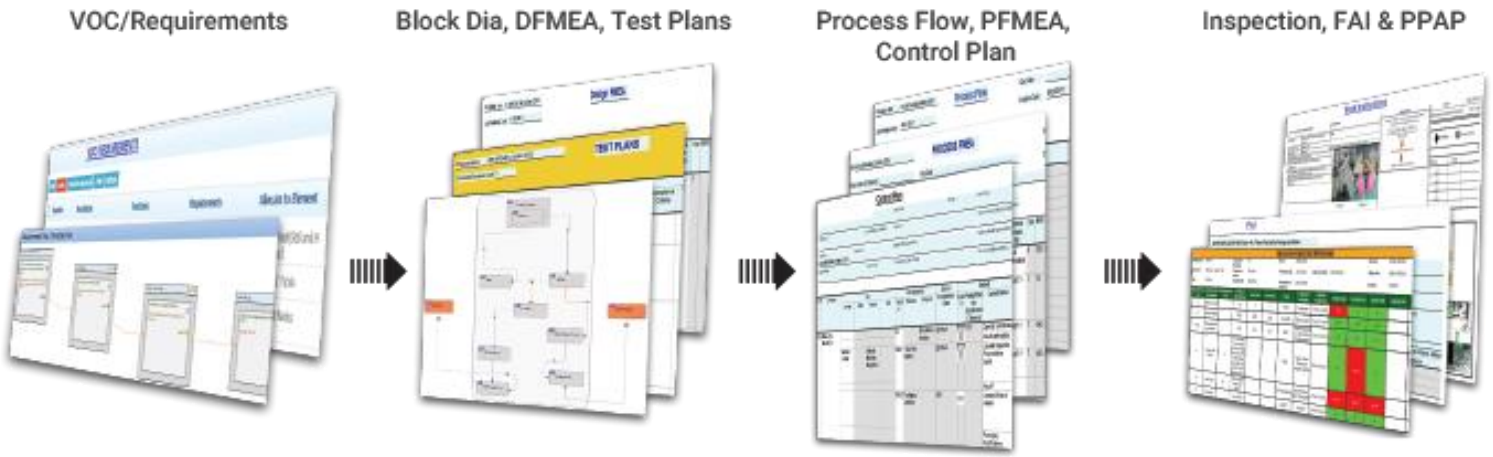
Build Block Diagrams, P-Diagram, DFMEA and Test Plans

Automate Process Flow, PFMEA and Control Plan, Check sheets & Work Instructions

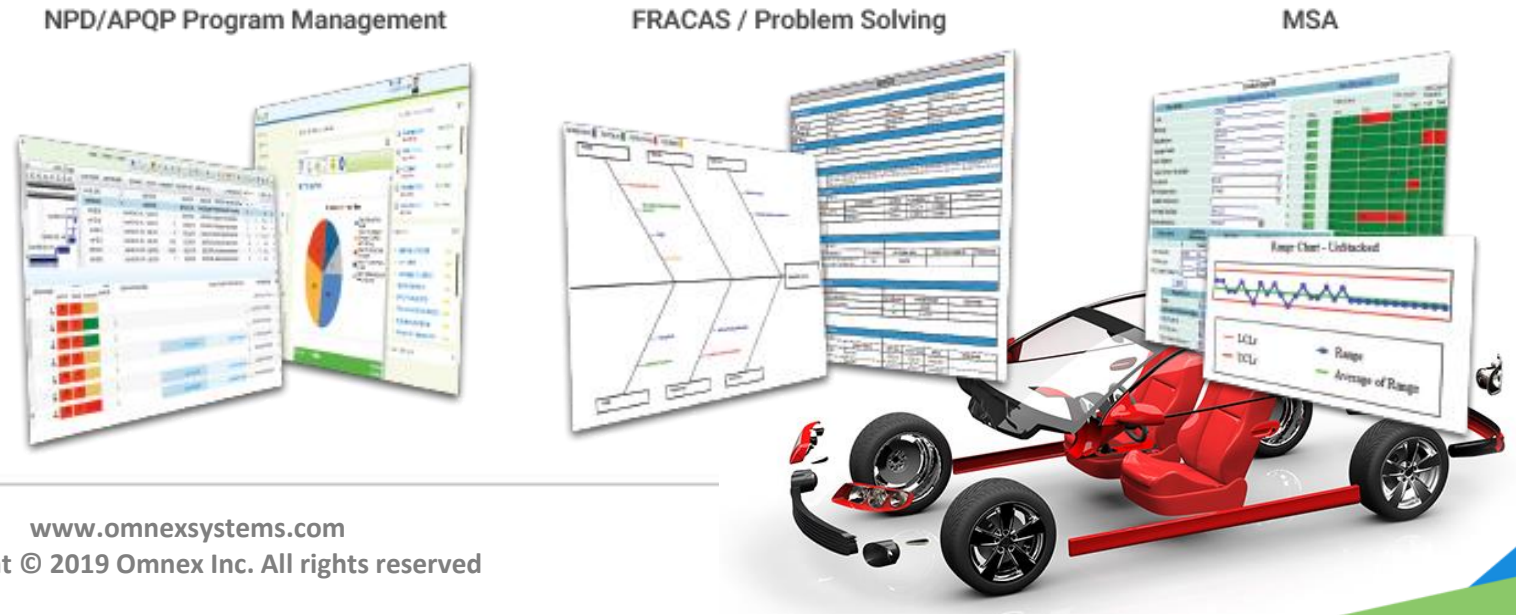
Link to Inspection, First Article and PPAP Documents

Drive effective problem solving, failure analysis and feedback at all stages of development.

Effectively Track Entire Lifecycle VOC to FAI & PPAP



Manage New Product Introduction with a structured approach, concept to problem solving



Reporting- Standard SSRS Reporting

Overall Project Dashboard

Project Summary Report from 1/21/2015 to 7/21/2019

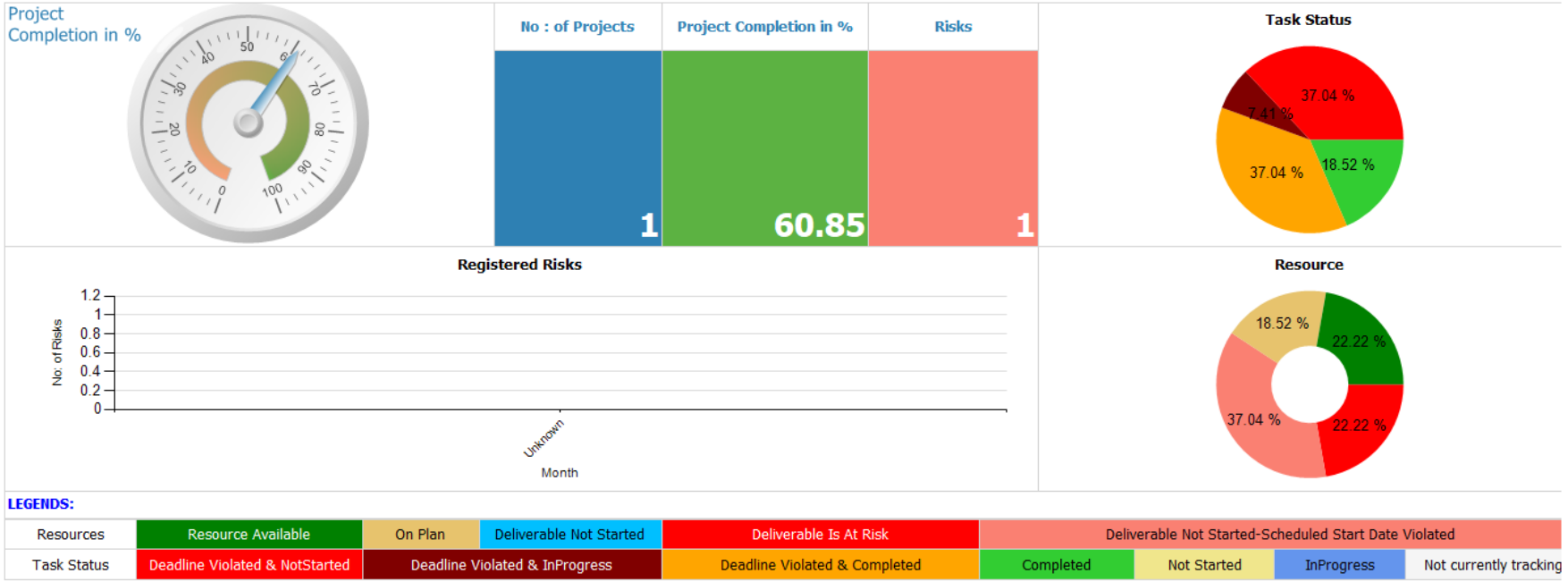
Project Name	Days to Target	Percentage Completed	Resource Availability		On Time	Planned Finish Date
Vibrant NXT Q1 2016-17	-837	60.85 %	100 %			Oct 6 2016
Proceed Q1 2016-17	-825	62.00 %	100 %			Oct 18 2016
Team-up Q2 2016-17	-825	61.73 %	100 %			Oct 18 2016
2 Seater SDCB Performer Q2 2016-17	-823	61.92 %	100 %			Oct 20 2016

Click to reset task details...

Clicking the Project name leads to the specific Project dashboard
Shown in next Slide

Individual Project Dashboard

Project Summary Report from 1/21/2015 to 7/21/2019



Project Name	Days to Target	Percentage Completed	Resource Availability	On Time	Planned Finish Date
Vibrant NXT Q1 2016-17	-837	60.85 %	100 %		Oct 6 2016

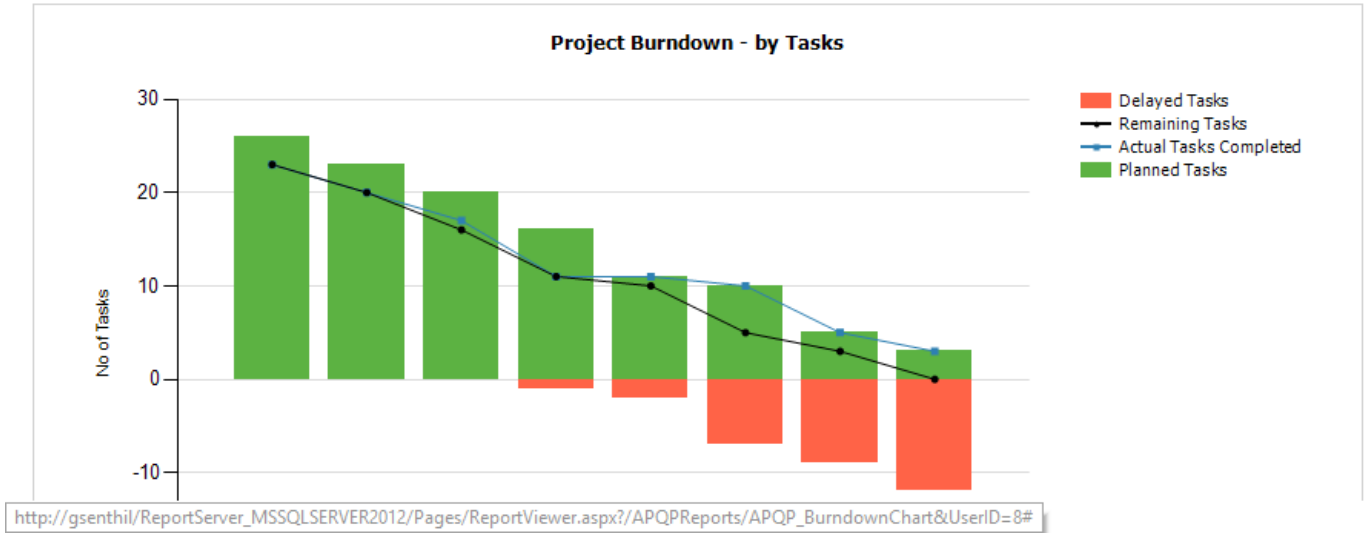
Click to reset task details...

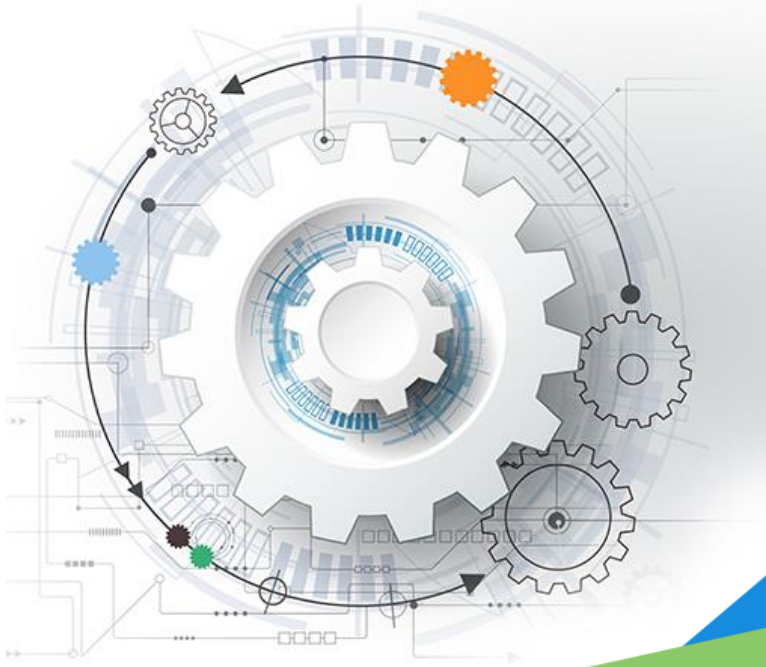
Project Name	Project Start Date	Project Finish Date	Project Actual Start Date	Project Actual Finish Date	Task	Start Date	Finish Date	Actual Start Date	Actual Finish Date	On Time
Vibrant NXT Q1 2016-17	15 Mar 2016	06 Oct 2016	15 Mar 2016		CFT Formation	15 Mar 2016	15 Mar 2016	15 Mar 2016	15 Mar 2016	0
Vibrant NXT Q1 2016-17	15 Mar 2016	06 Oct 2016	15 Mar 2016		Design Review CFT Sign-off	15 Mar 2016	17 Mar 2016	24 Mar 2016	26 Mar 2016	0
Vibrant NXT Q1 2016-17	15 Mar 2016	06 Oct 2016	15 Mar 2016		Design Refinement	18 Mar 2016	27 Mar 2016	24 Mar 2016	06 Apr 2016	0

Clicking the Pie Cart leads to the Information on Specific Tasks Shown in the next Slide

Project Burn down Reports

Project Burndown





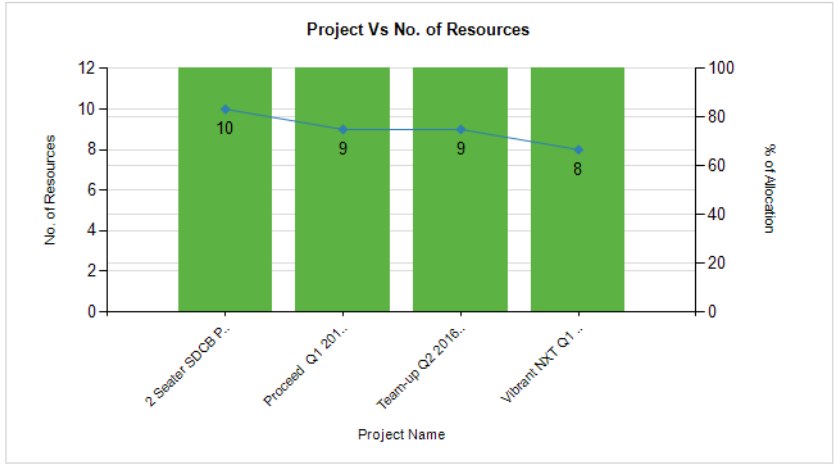
Project Tracking Matrix

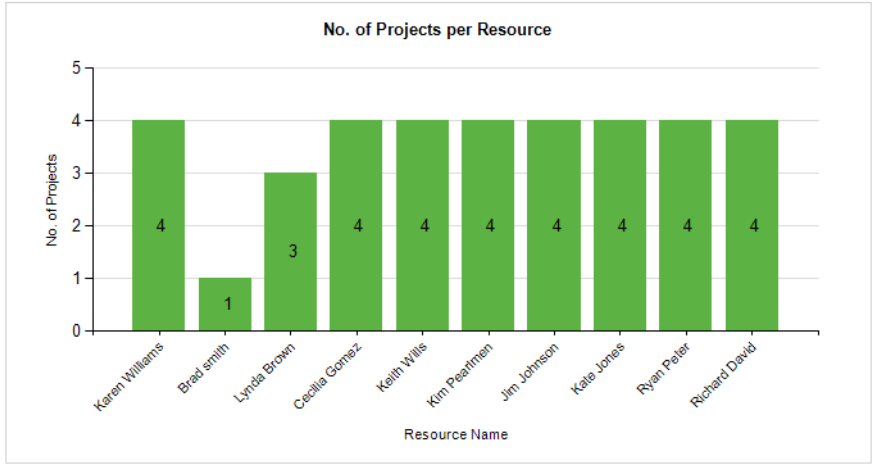
Project Tracking Matrix

Site Name	Group	Pillar	Project Name	2 Seater SDCB Performer Q2 2016-17	VIBRANT NXT Q1	Proceed Q1	Team-UP Q2	Product Planning					Cocept Prototype						Final Prototype & Release			Vendor and Tooling				Devlopment release for Pilot			
				Seater SDCB P 2	VIBRANT NXT Q1	Proceed Q1	Team-UP Q2	Product Brief	Research and An	Design Brief	CFT Formation	?? Deliverable	Conceptualizati	Design detailin	1st Cut Costing	Design Review C	Prototyping	Design Refineme	Final Prototype	Development Dra	Tool Planning a	2nd Cut Costing	Capex Approval	Tooling Develop	Tooled-up Mocku	Testing	QA Plan and App	
Production	Default	NPI Product Management	2 Seater SDCB Performer Q2 2016-17	58	0	0	0	100	100	100	100	0	100	100	100	100	100	100	100	100	100	90	100	70	50	0	0		
			Proceed Q1 2016-17	0	0	58	0	100	100	100	100	0	100	100	100	100	100	100	100	100	100	96	98	78	40	0	0		
			Team-up Q2 2016-17	0	0	0	57	100	100	100	100	0	100	100	100	100	100	100	100	100	100	100	100	60	45	0	0		
			Vibrant NXT Q1 2016-17	0	60	0	0	100	100	100	100	0	100	100	100	100	100	100	100	100	100	100	100	83	60	0	0		

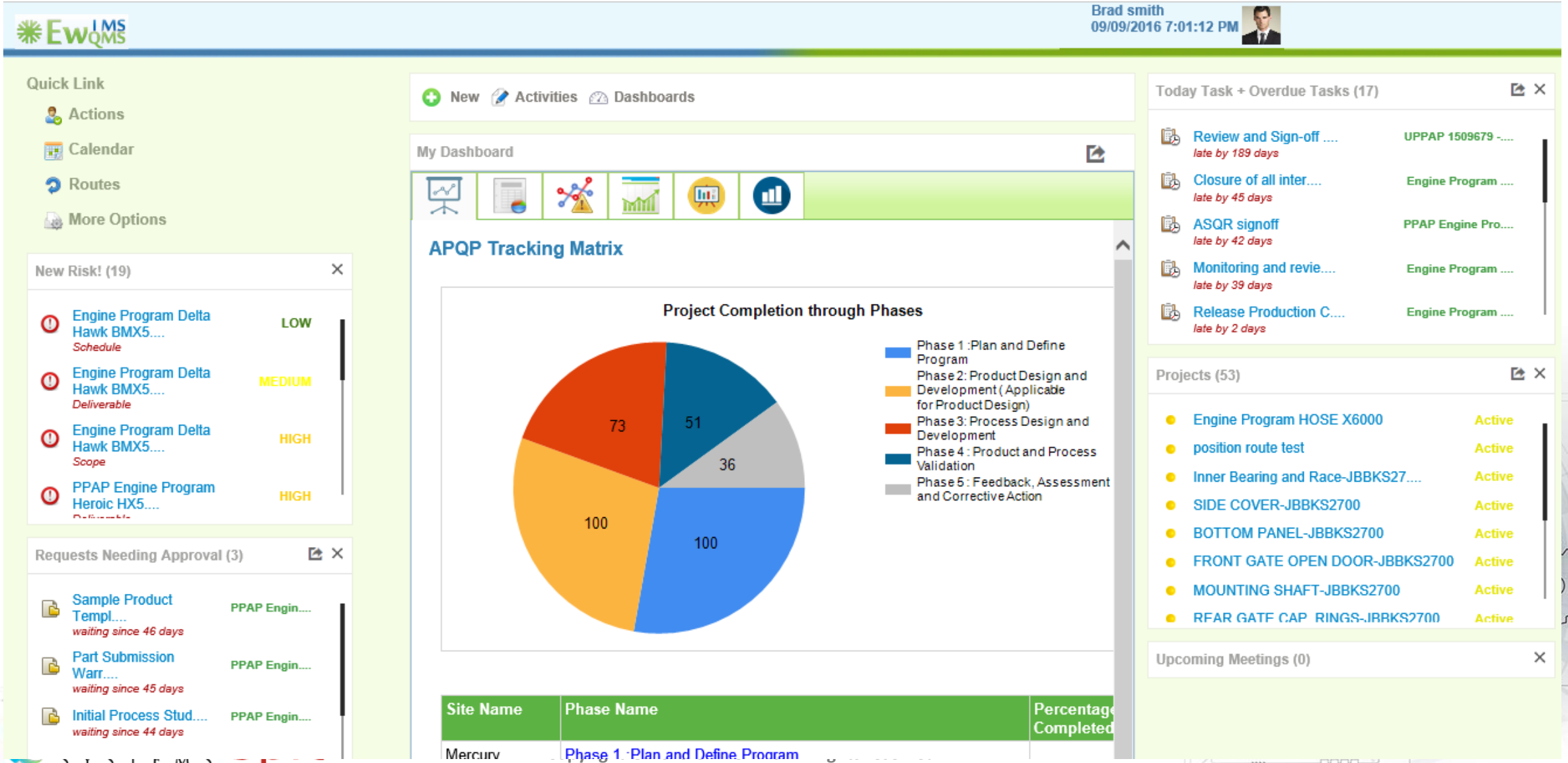
Resource Tracking

Resource Tracking



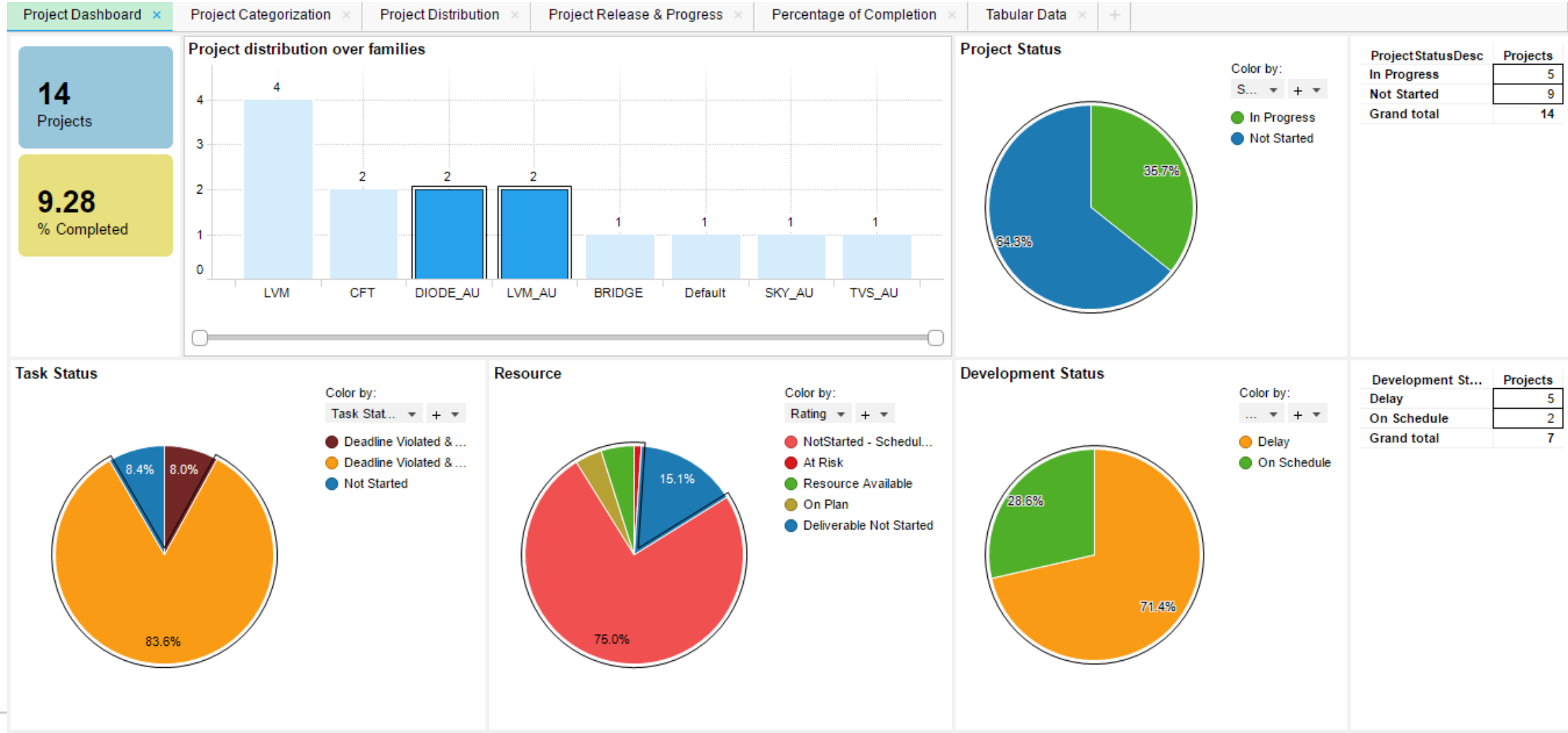


Configurable Dashboard View for all Users



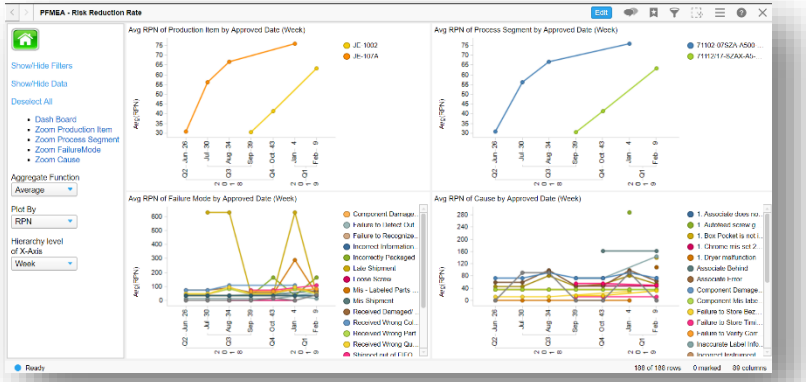
Advanced Reporting
(Should be opted additionally)

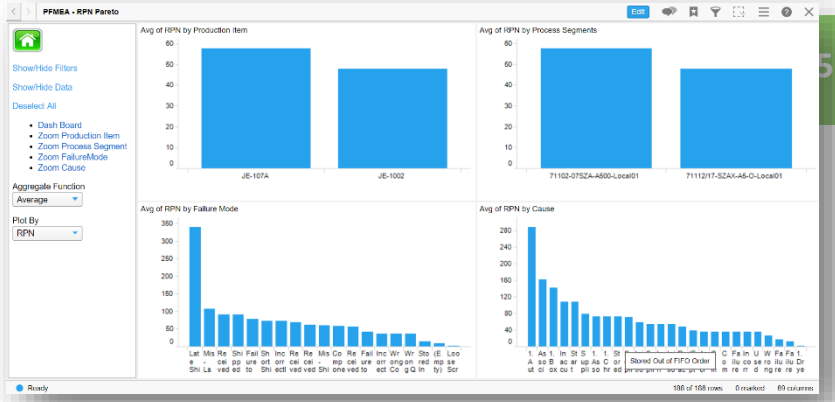
APQP Dashboard

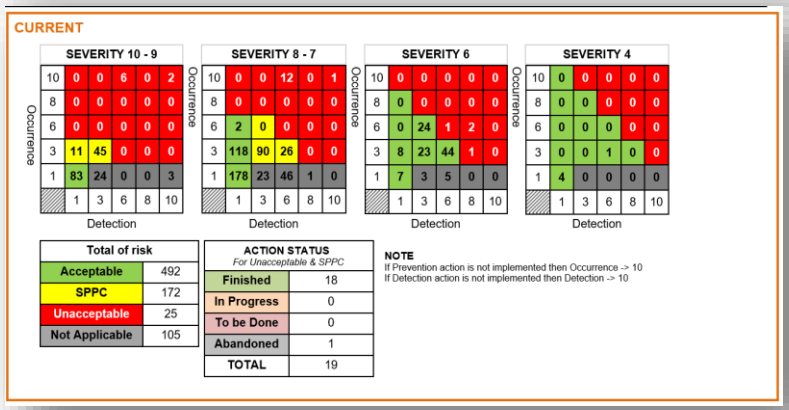


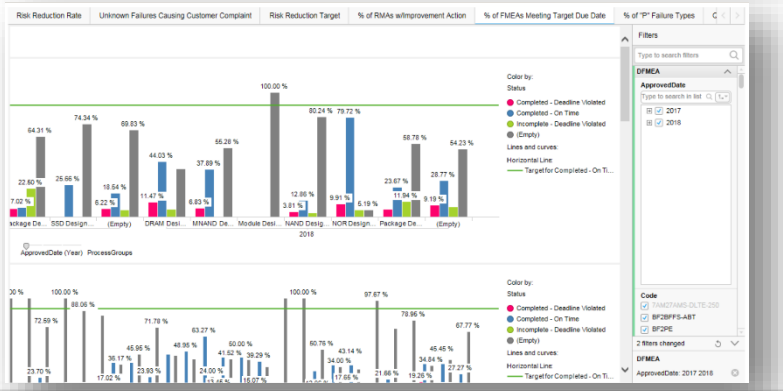
FMEA Analysis (Advanced Reports)

- Risk Reduction Rate
- RPN Pareto
- Current vs Original RPN/SOD
- New Failures overtime
- Compliance to Due Dates
- Top Failure Modes.
- SOD Matrix



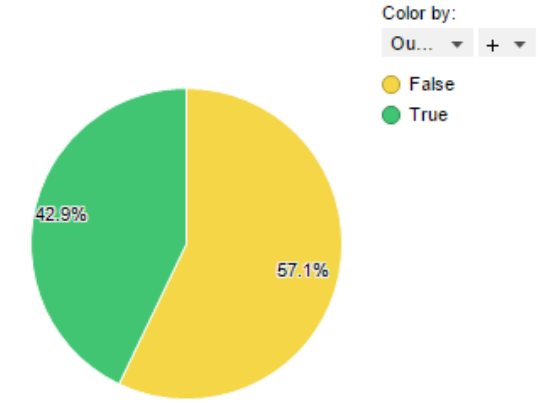






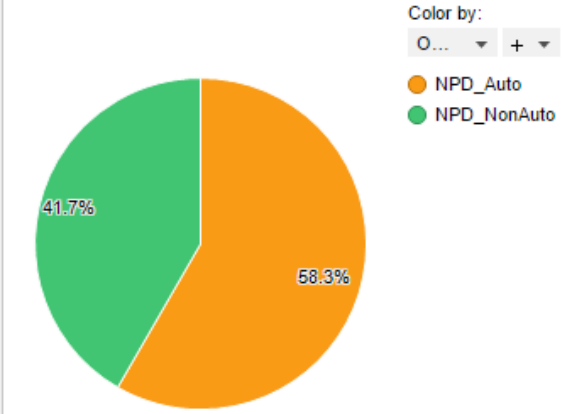
Project Categorisation

Outsource FG



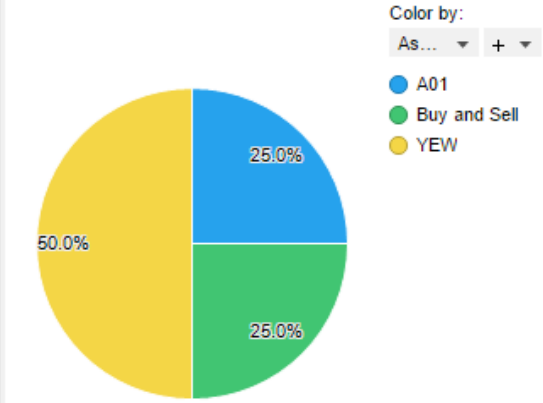
Outsource FG	Projects
False	8
True	6
Grand total	14

AECQ



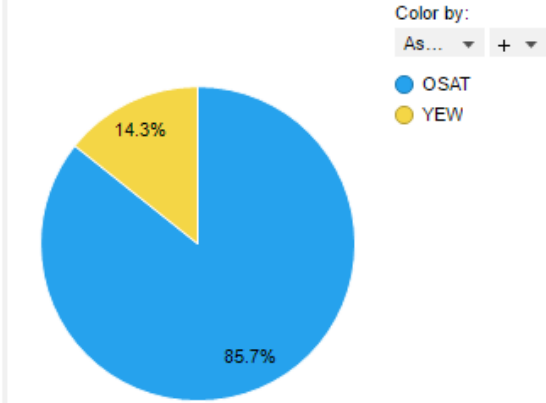
Pillar	Projects
NPD_Auto	7
NPD_NonAuto	5
Grand total	12

Assembly



Assembly	Projects
A01	1
Buy and Sell	1
YEW	2
Grand total	4

Foundry

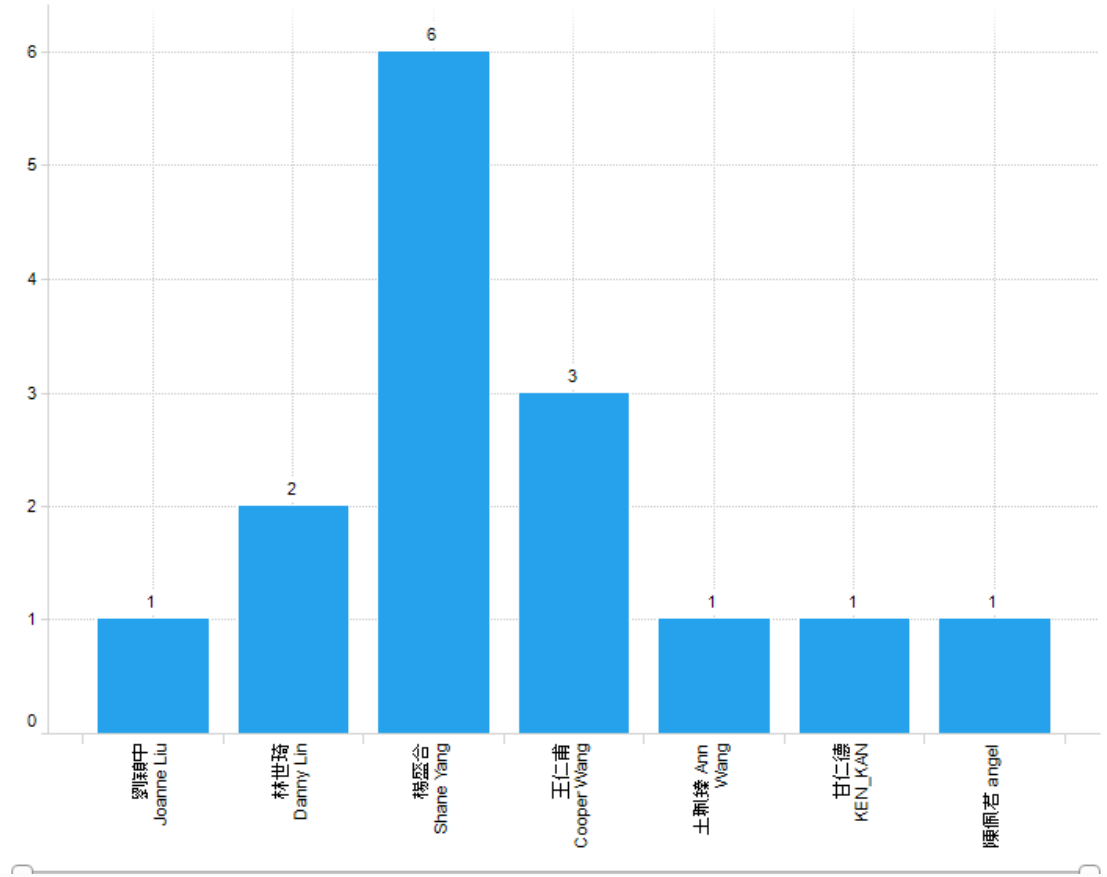


Assembly	Projects
OSAT	6
YEW	1
Grand total	7

Project Distribution

Project Dashboard | Project Categorization | Project Distribution | Project Release & Progress | Percentage of Completion | Tabular Data

Project distribution by Manager

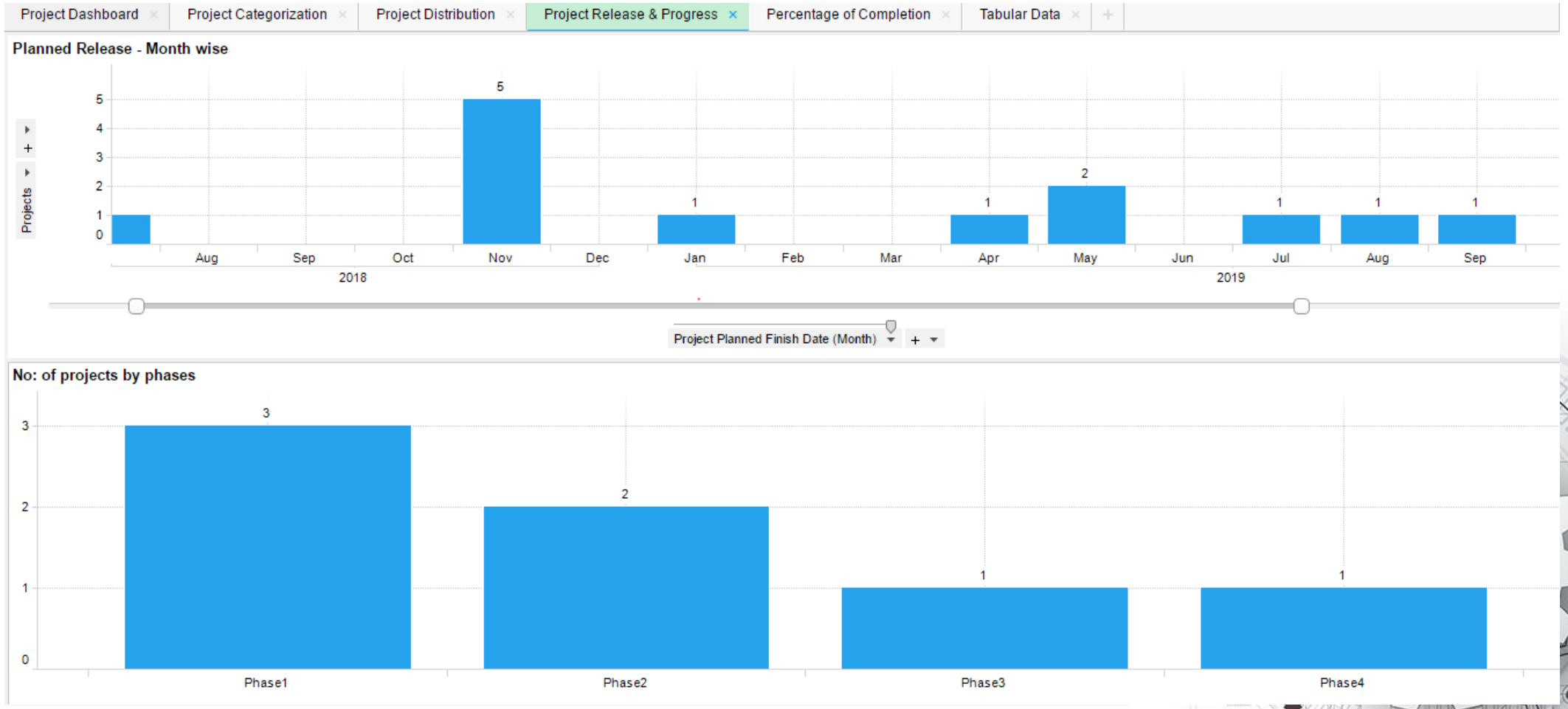


Projects by Manager

FullName	Projects
劉穎中 Joanne Liu	1
林世琦 Danny Lin	2
楊盛合 Shane Yang	6
王仁甫 Cooper Wang	3
王佩臻 Ann Wang	1
甘仁德 KEN_KAN	1
陳佩君 angel	1
Grand total	15

FullName	C	D	N/A	(Empty)	Grand total
劉穎中 Joanne Liu	-	1	-	-	1
林世琦 Danny Lin	-	-	1	1	2
楊盛合 Shane Yang	-	-	-	6	6
王仁甫 Cooper Wang	-	-	-	3	3
王佩臻 Ann Wang	-	-	-	1	1
甘仁德 KEN_KAN	1	-	-	-	1
陳佩君 angel	-	-	-	1	1
Grand total	1	1	1	12	15

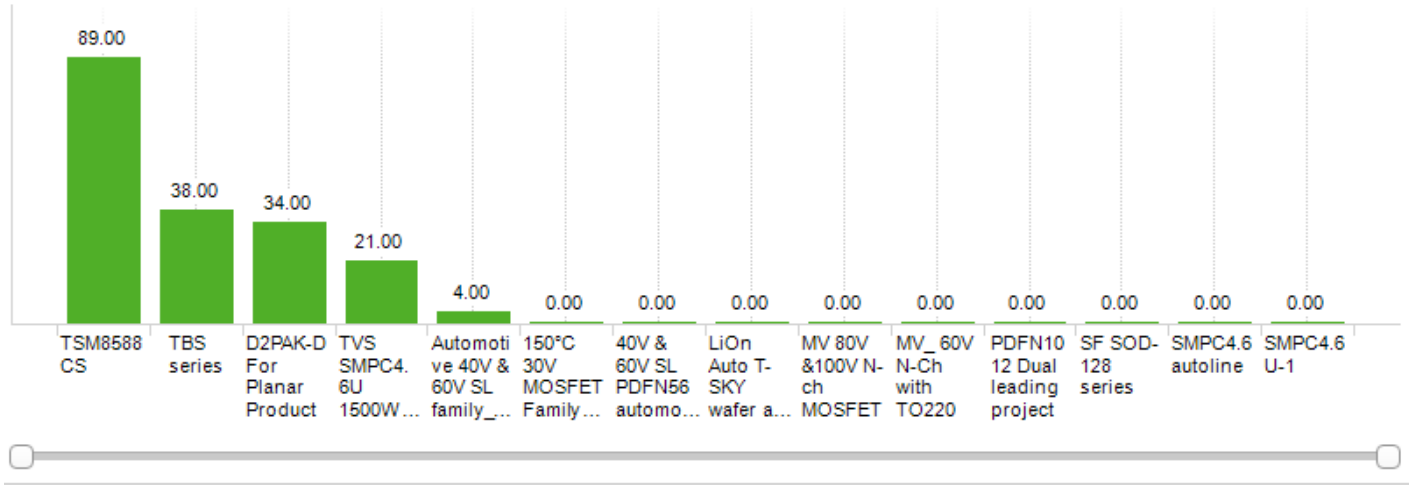
Project Release



% Of Completion

Project Dashboard | Project Categorization | Project Distribution | Project Release & Progress | Percentage of Completion | Tabular Data

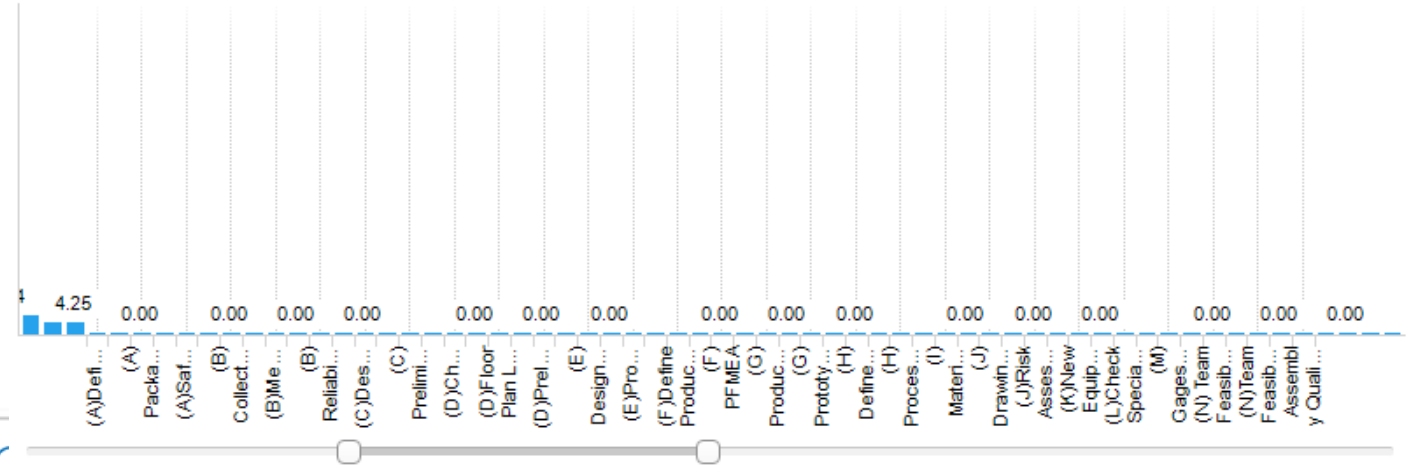
Project Completion in %



Project Completion in %

Project Name	Percentage of Completion
150°C 30V MOSFET Family Project	0.00
40V & 60V SL PDFN56 automotive MOSFET	0.00
Automotive 40V & 60V SL family_GEM	4.00
D2PAK-D For Planar Product	34.00
LiOn Auto T-SKY wafer and YEW	0.00
MV 80V &100V N-ch MOSFET	0.00
MV_ 60V N-Ch with TO220	0.00
PDFN1012 Dual leading project	0.00
SF SOD-128 series	0.00
SMPC4.6 autoline	0.00
SMPC4.6U-1	0.00
TBS series	38.00
TSM8588CS	89.00
TVS SMPC4.6U 1500W 1K5SMPCxxPH	21.00

Task Completion in %



Task Completion in %

TaskDesc	Percentage of Completion
(A)Define Design Goals	0.00
(A)DFMEA	0.00
(A)Packaging Standards and Specifications	0.00
(A)Production Production Run	0.00
(A)Safe Launch Plan	0.00
(A)VOC	0.00
(B)Collect Business Plan/Marketing Strategy	0.00
(B)Design For Manufacturability and Assembly	0.00
(B)Measurement Systems Evaluation	0.00
(B)Product/Process Quality System Review	0.00
(B)Reliability and Quality Goals	0.00
(C)Collect Product/Process Benchmark Data	0.00
(C)Design Verification	0.00
(C)Initial process study	0.00
(C)Preliminary BOM	0.00

$avings & Benefits

- 70% reduction in time and effort for APQP PPAP Documentation
- 90% reduction in time and effort by the reuse of best-in-class Design & Process documentation
- 50% reduction in managing change Control Process
- Knowledge Management and Best practises sharing across
- 20% savings on Communication management

$avings & Benefits…

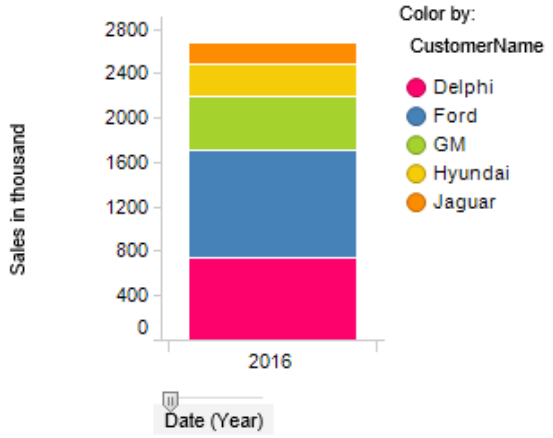
- Software makes processes to be followed in a disciplined fashion.
- Increases Operational Efficiency
- Eliminates Paper Documentation
- Reduces Product Development Lead Time
- Improves Product Quality and Reduces Cost
- Contributes to Continuous Improvement Methodologies
- Easy to Use, Available with Security (rights assignment) anywhere using a browser across the organization

QMS/QHSE KPI Dashboard for MRM

Management Dashboard | Downtime Bar Chart | Downtime trend | Delivery | Quality | Sales | Co2 emissions | Health & Safety

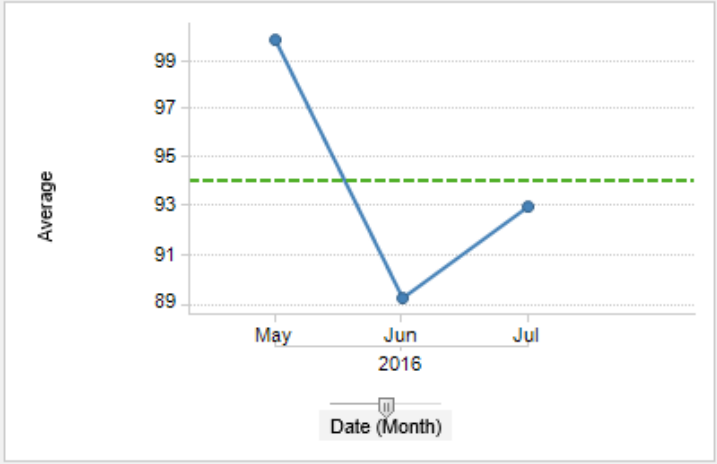
Sales (Revenue)

More



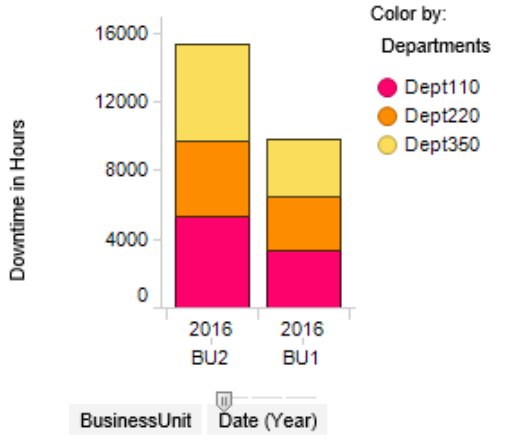
Delivery (On Time)

More



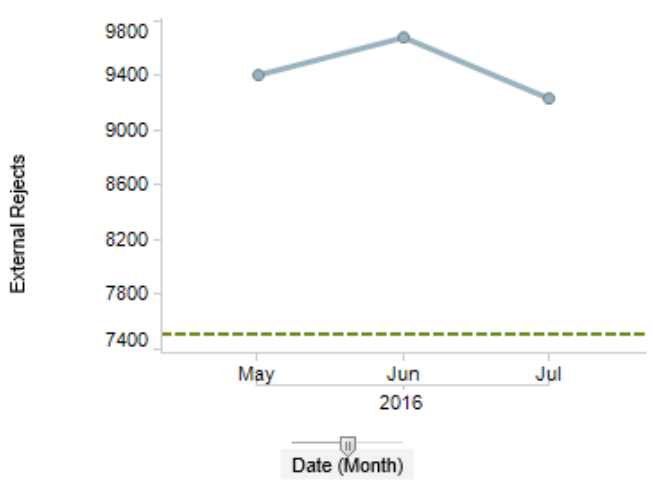
Delivery (Downtime)

More



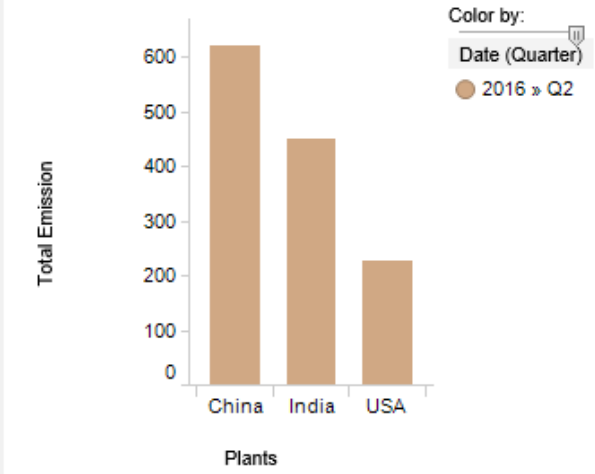
Quality (Rejects)

More



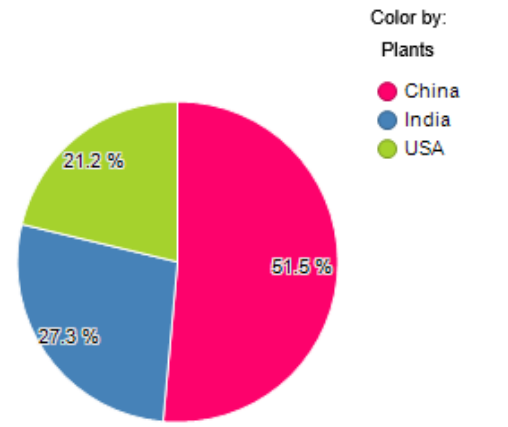
Environmental (Co2 emissions)

More

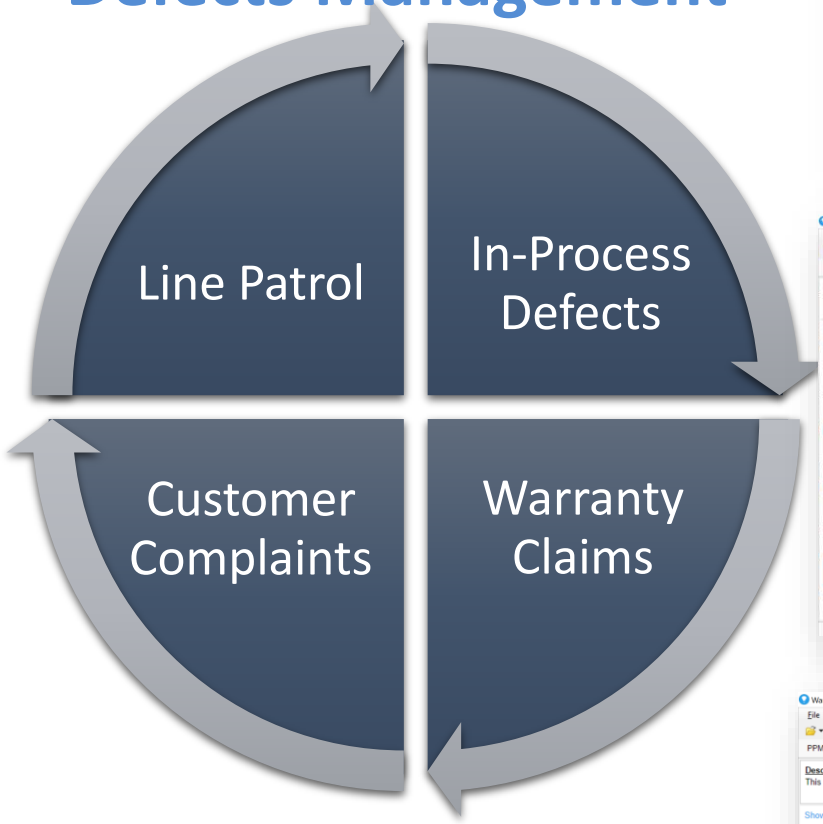


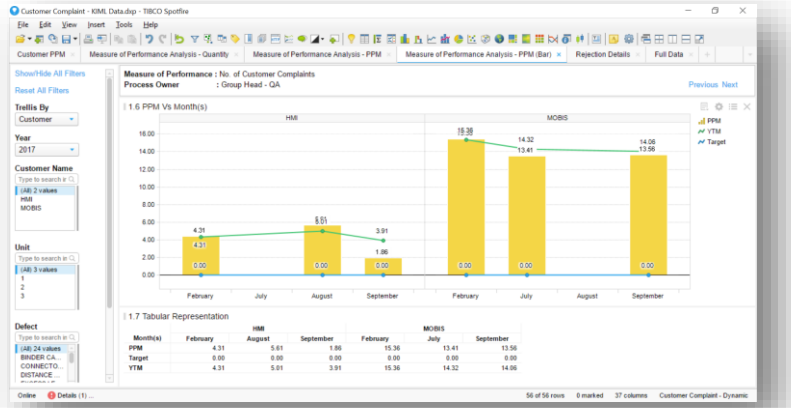
Health & Safety (Accidents)

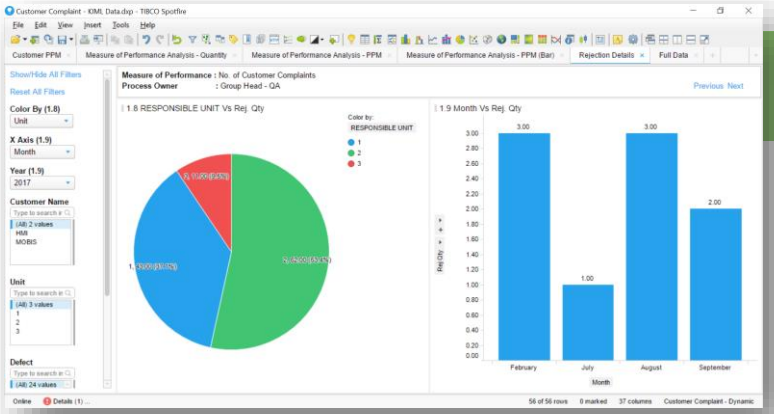
More

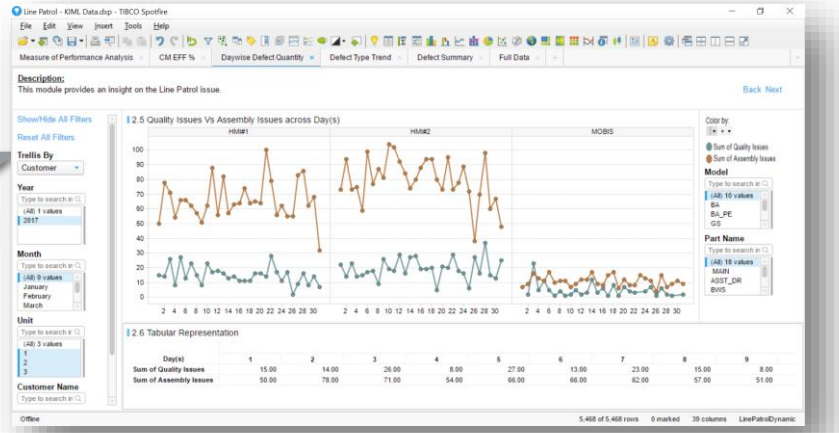


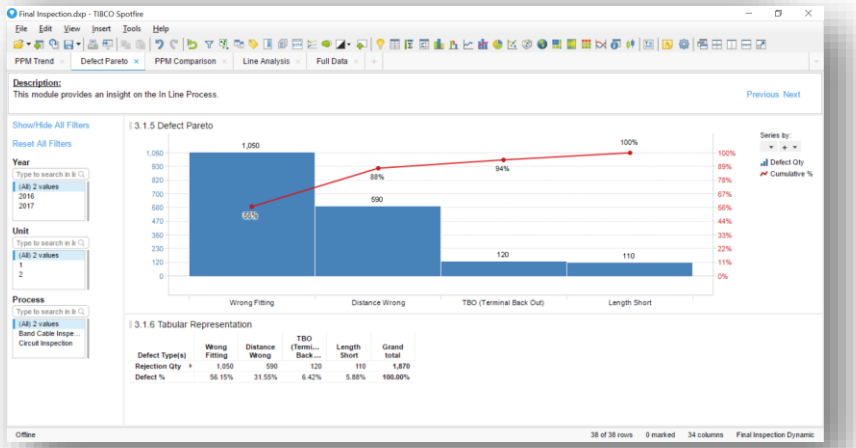
QMS/QHSE Dashboard Defects Management

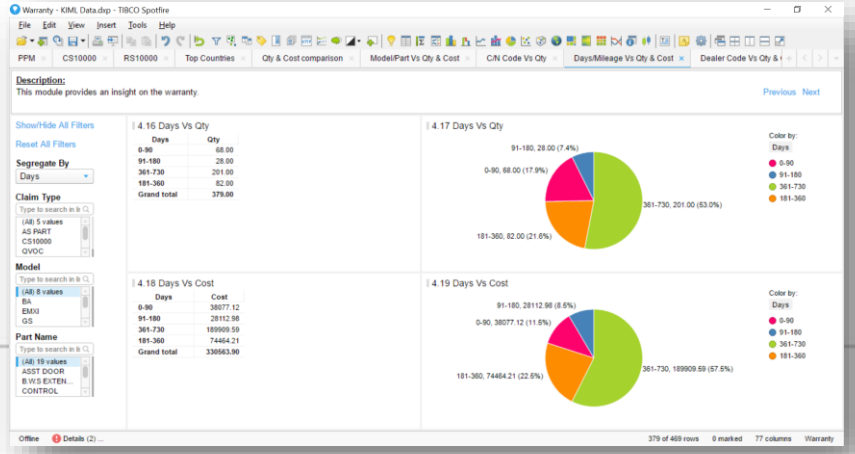


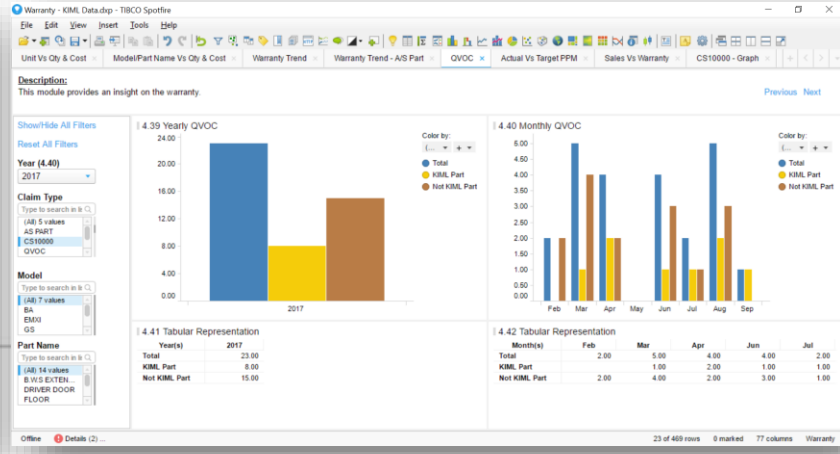












OMNEX SYSTEMS spid

Supplier Management : Dashboard

SupplierName	SupplierAddress	SupplyingLocation	Parts	# of Parts
01 Supplier	Ddfdf, Country: United Stat...	Electronics Division	Engine Block	1
	NMChennai, Country: Unite...	Electronics Division	Engine Program Turbo-500	1
	NO 23/1, 1ST STREET, PONNUSWAMY NAGAR, ...	Electro Mechanical Division	Delta 2	1
		Electronics Division	Engine Block	1
	NO 23/1, 1ST STREET, PONNUSWAMY NAGAR, ...	Electro Mechanical Division	Delta 2	1
		Electronics Division	Piston	1
	Test 2, Country: , State: , Ci...	Electronics Division	Delta 2	1
	test 34, Country: , State: , C...	Electro Mechanical Division	Piston	1
	tswt, Country: United State...	Electronics Division	Engine Block	1
	(Empty)	(Empty)	C/C ASSY, COVER, COMPRESSOR, Engine Block, Engine block1, ...	8
02 supplier	0- Ring, Country: , State: , ...	Electronics Division	O-RING	1
	Completed VAM audit detail...	Electronics Division	PIN	1
	ring2, Country: , State: , Cit...	Wires and Cables Division	O-RING	1
	test , Country: , State: , City...	Wires and Cables Division	O-RING	1
	test 2345, Country: , State: ,...	Electronics Division	O-RING	1
	test 45, Country: , State: , C...	Wires and Cables Division	PIN	1
3D Scanners (Thailand) Co.,Ltd	test 1, Country: , State: , City: , ZipCode: 600011	Corporate	PIN	1
		Electronics Division	INSERT, Spark Plug	2

Integrations

OMNEX SYSTEMS

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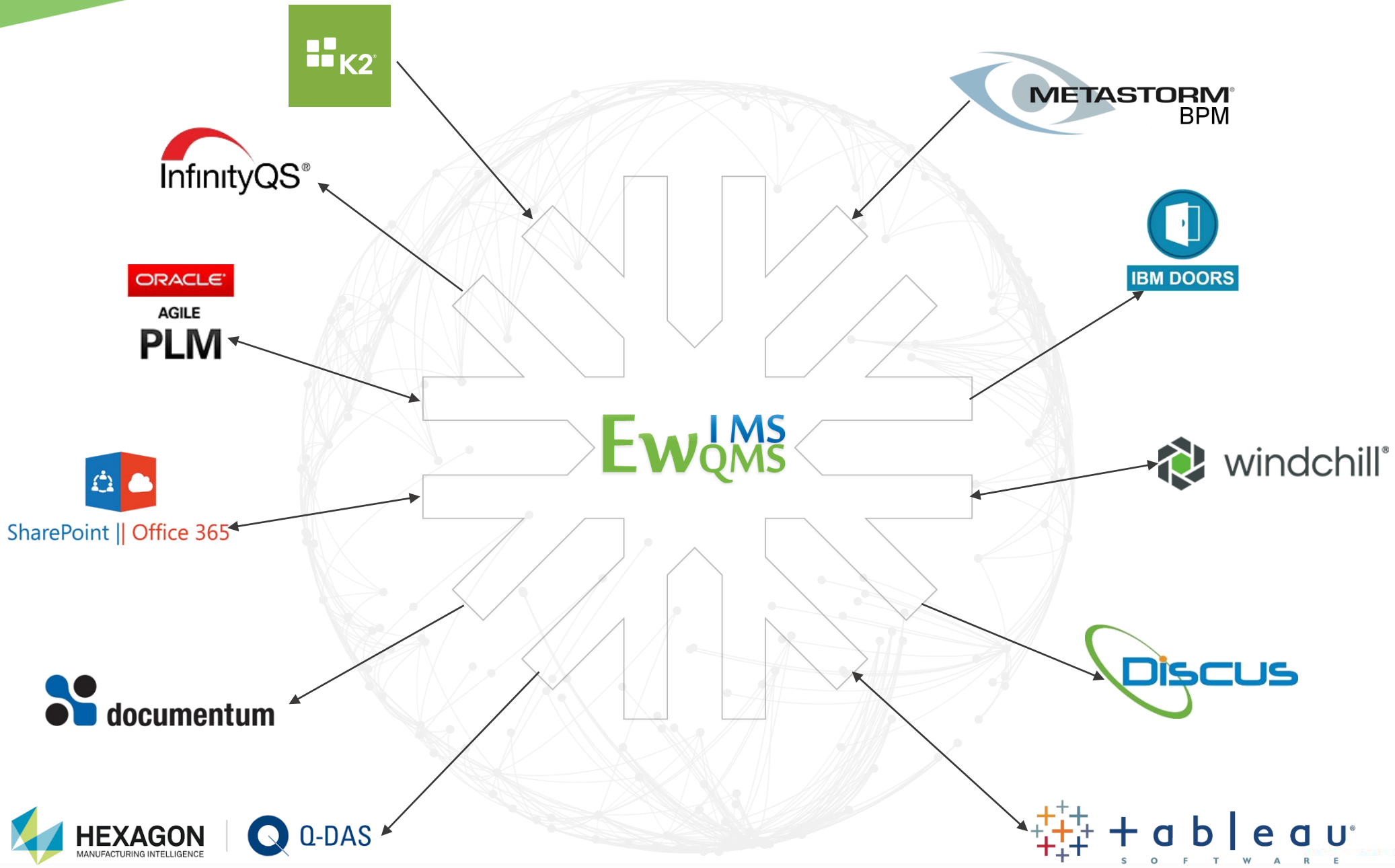
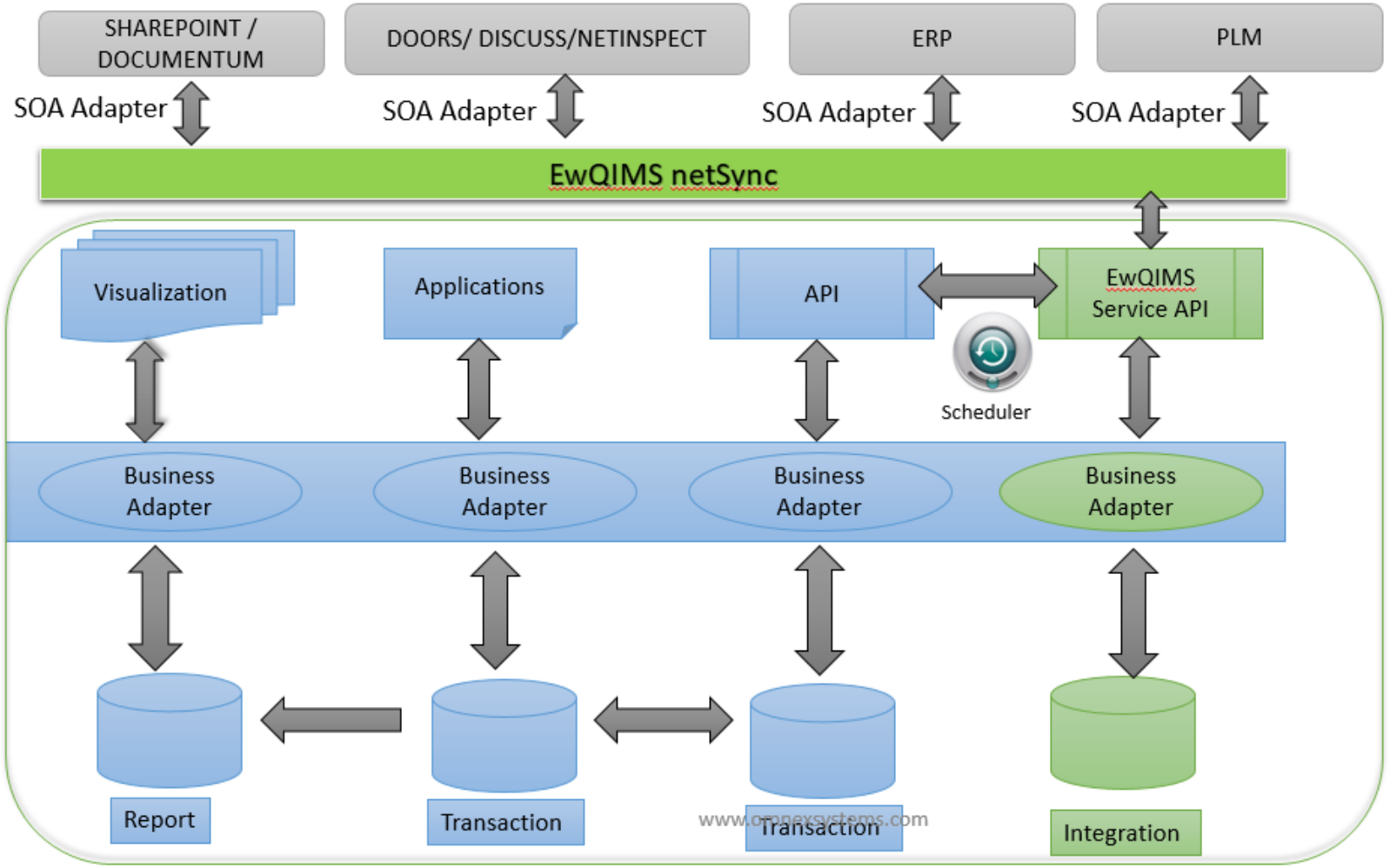
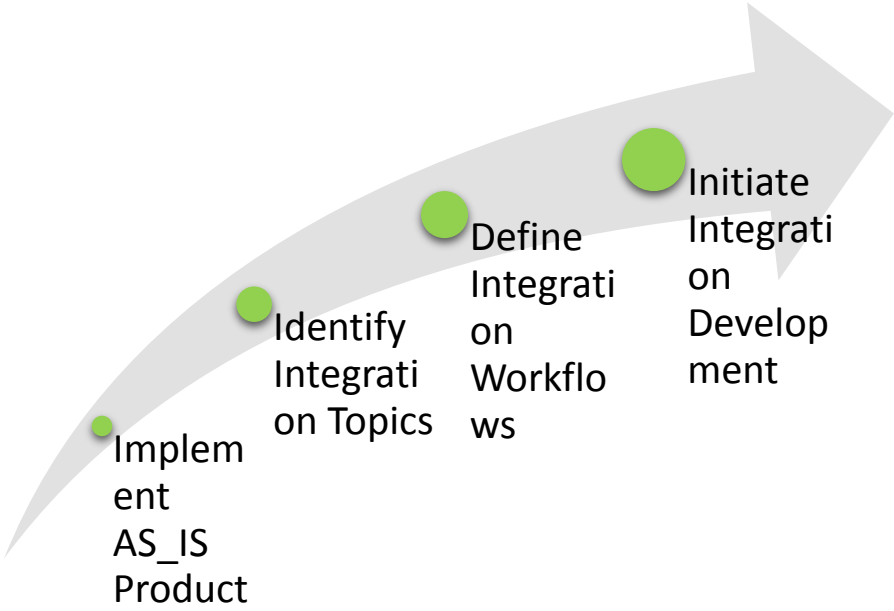


EwQIMS - netSync Architecture

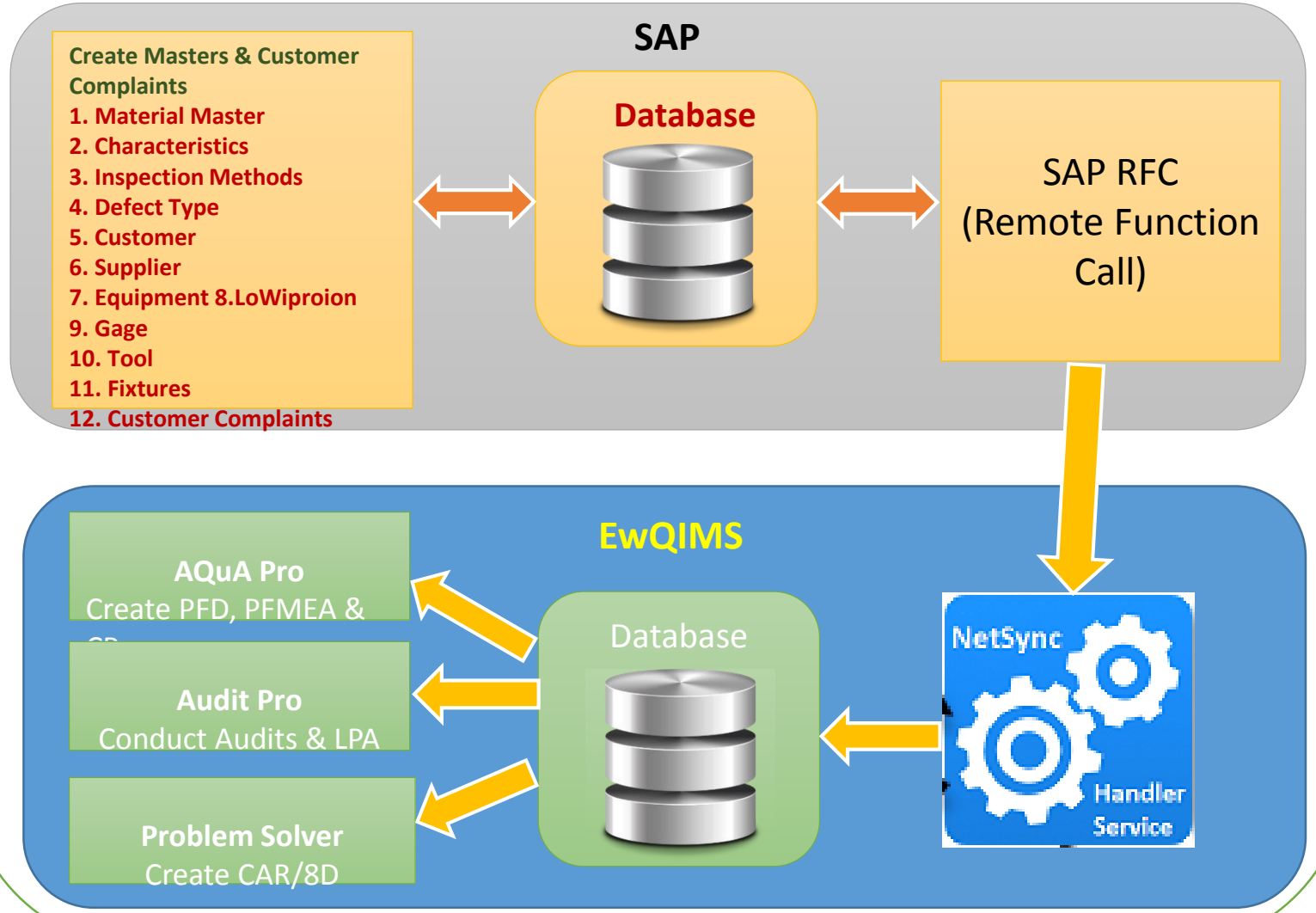




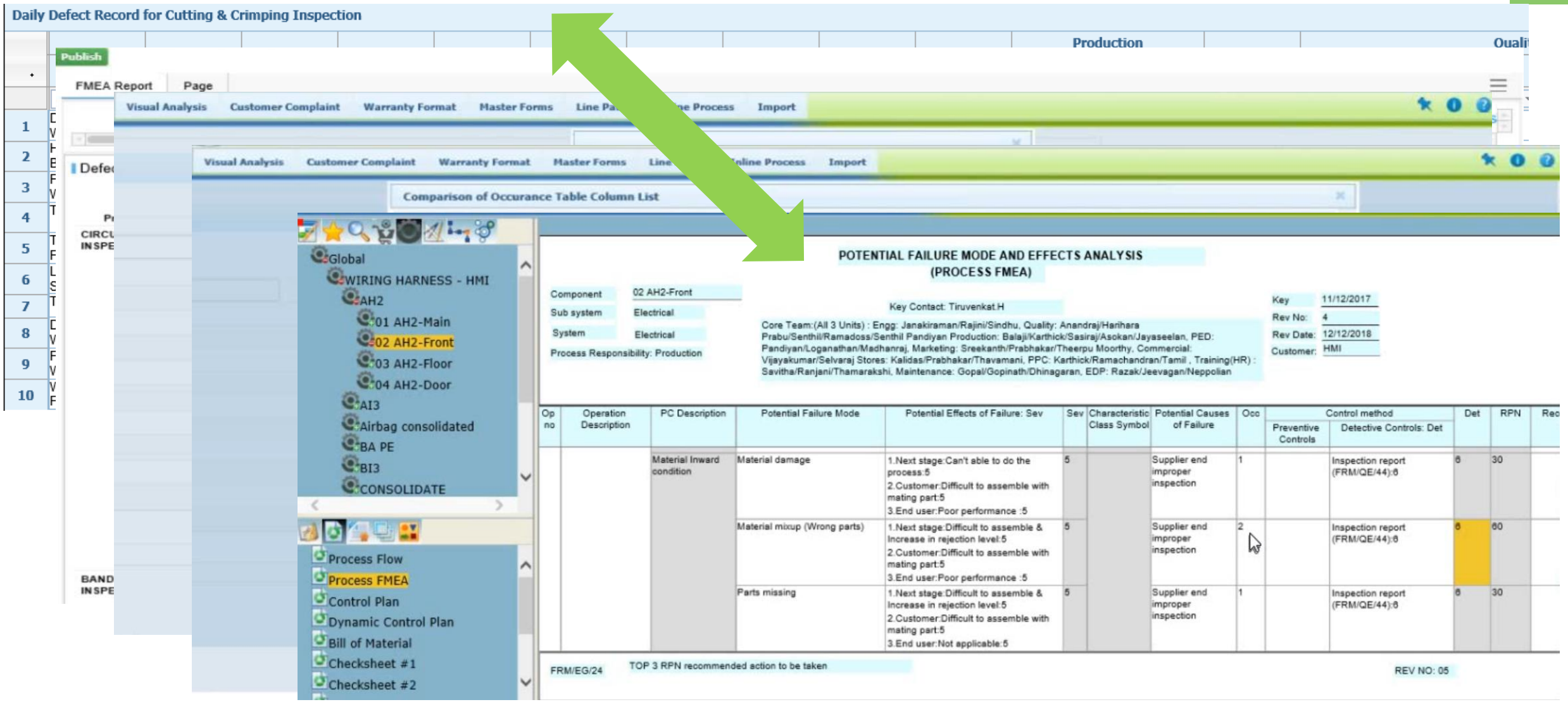
Integration Topics

- Connectivity with Processing software (reduce ME over-processing and live documents updates – (Pushing info from SAP/CBS or Siemens VPPA to Omnex)
- Connectivity with quality system to drive failure modes and occurrence updates live with shop floor AQE inputs (Pulling info from the Shop floor to Omnex)
- Connectivity between detection/preventions controls to quality systems such as pin point (Pushing info from Omnex to Shop Floor)
- Reporting/Alert capacities – live information on high risk areas from Quality data inputs in the shop floor (Risk management tools – eliminating data mining)

EwQIMS – SAP Integration High Level Architecture



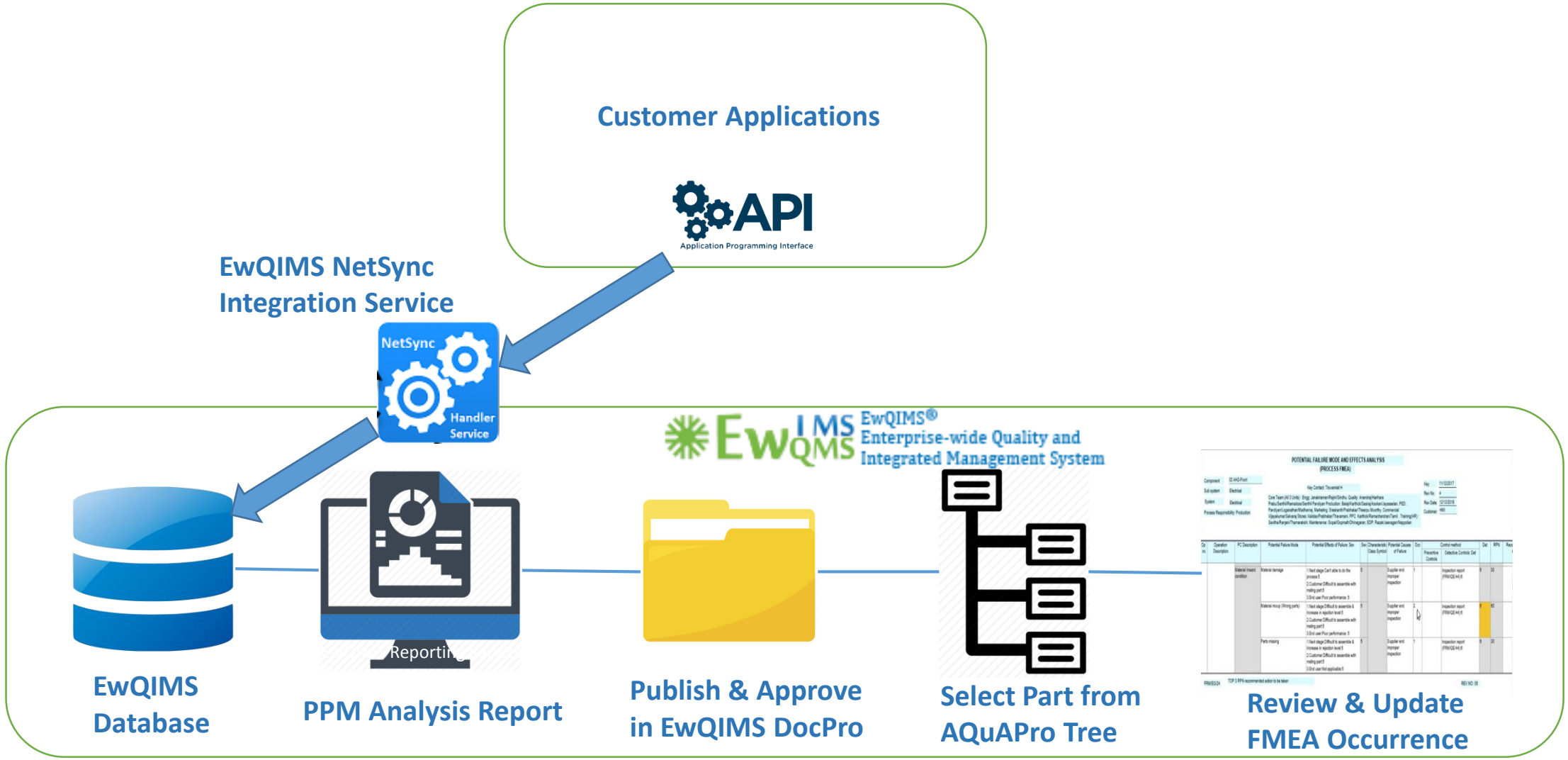
PPM Occurence Update in FMEA



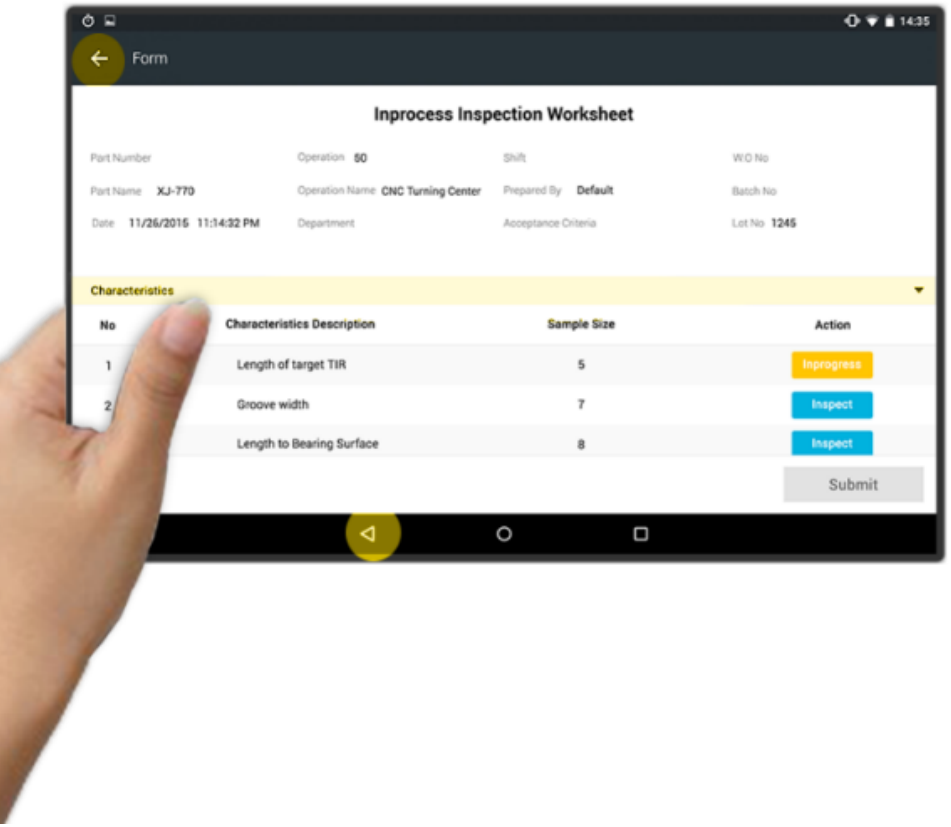
EwQIMS Inspection/Defect Data Entry Options and FMEA Occurrence Update

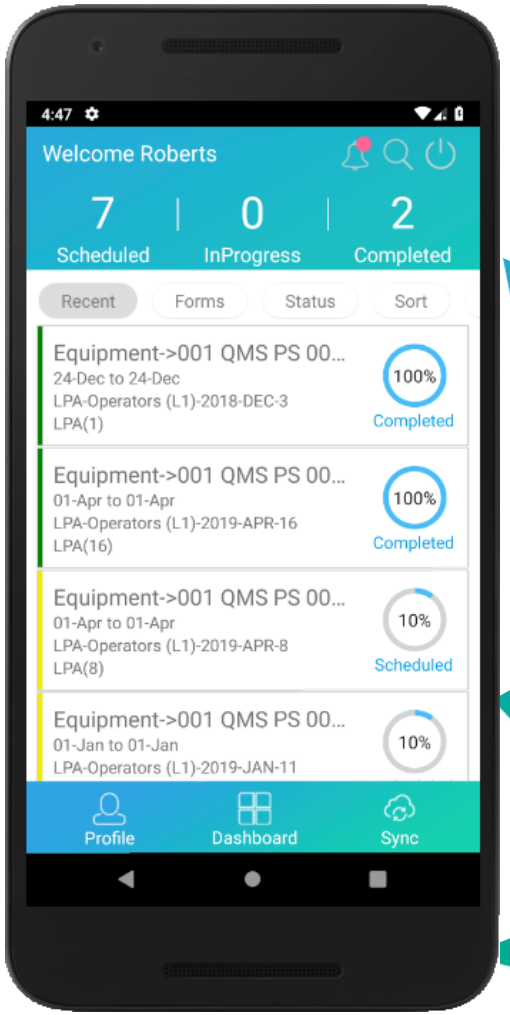
EwQIMS Inspection/Defect Data Entry Options

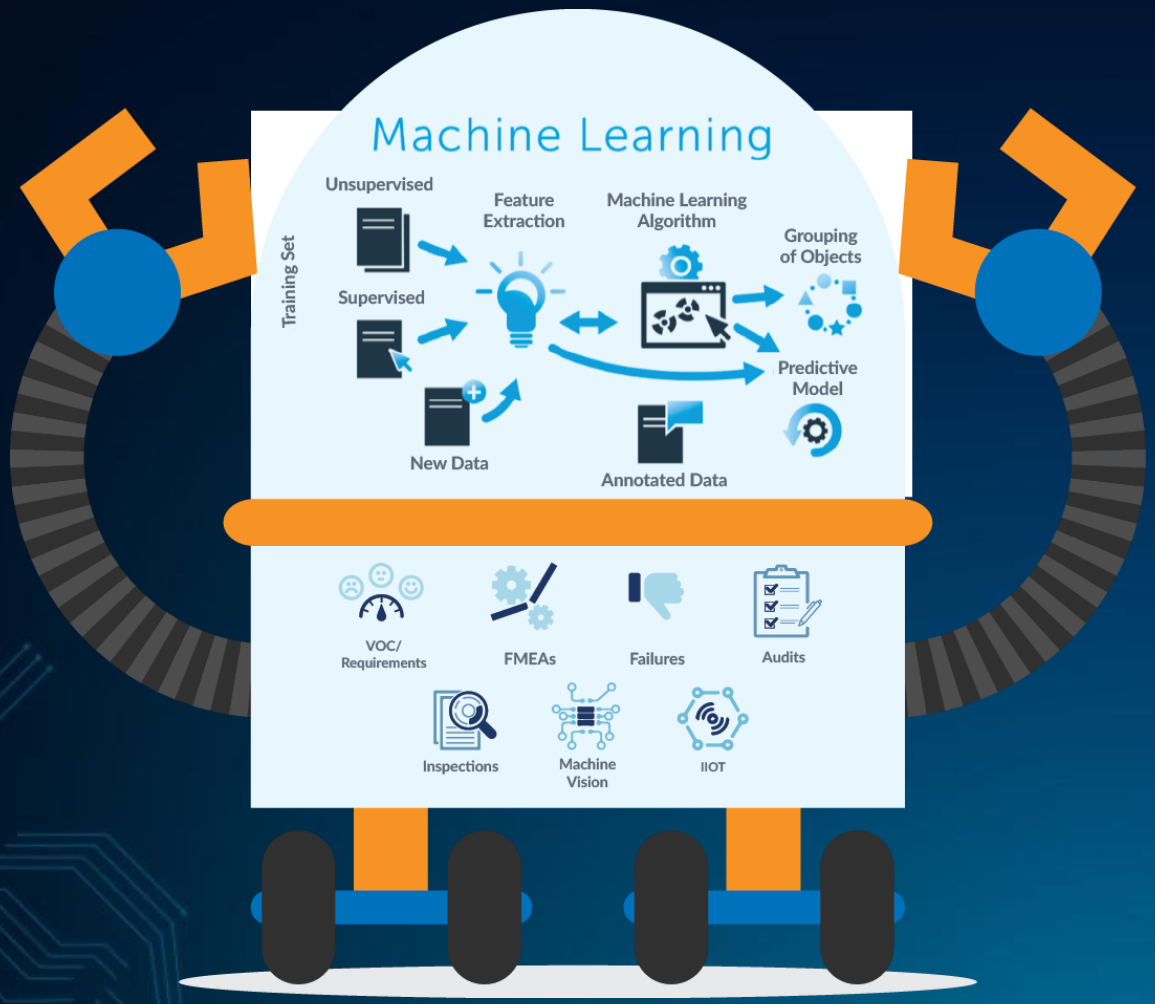
Integration with Existing Apps and FMEA Occurrence Update



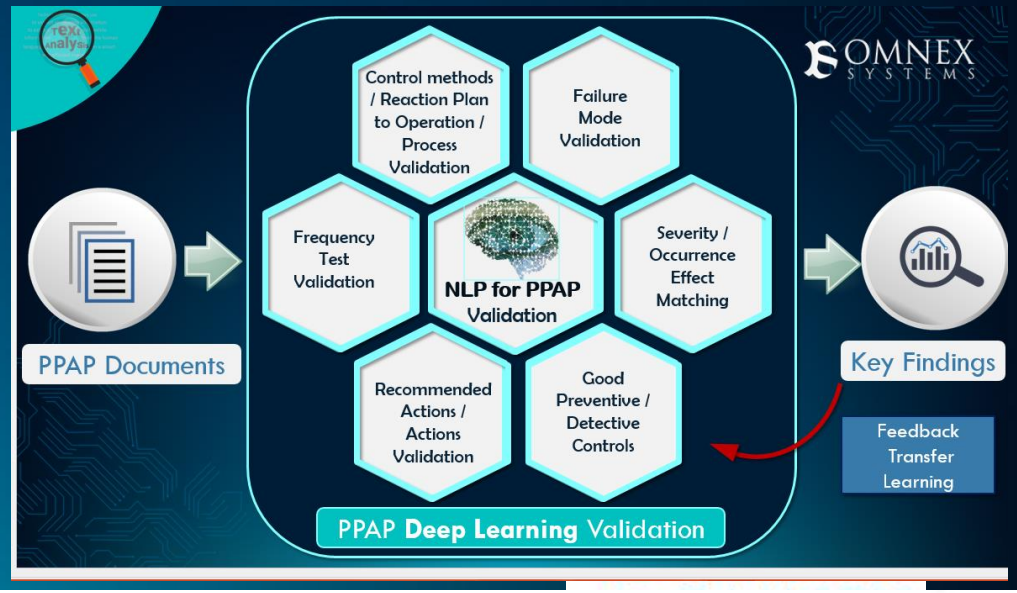
Mobility







AI BASED PPAP REVIEWER



Q & A

Thank you

Info-kr@Omnexsystems.com