



EXCELERATE '22

NO LIMITS

Tracing the Value of Solumina: MRO Best Practices

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Recap & How We Got Here

- How a Value Gets Realized
- Yesterday, Quality Management & SIM Process
- Today, Kathryn discussed with you "A Day in the Life" of many MRO Roles
- Now, a conversation about best practices that help define "A Day in the Life"
- Robot, Inc. in full production; values relayed to Customer Care



How a Value is Realized



Identification



Representation



Realization



Indoctrination

NO LIMITS

Today we will conclude a series of presentations identifying value drivers, how they are represented in our implementation methodology, and how they translate to meaningful Best Practices.

Today's Agenda

- Value's path to Customer Care
- A Value's Journey to Indoctrination
- Value Realization
 - Best Practices for MRO
- Time for Questions

A Value's Path to Customer Care

- Value Identification – Presales & Sales
- Value Representation – Process Maps & User Stories
- Value Realization – Executing User Stories
- Value Indoctrination – Services to Customer Care
 - CSD Document

Services to Customer Care Handoff

- Conceptual Solution Design Document (CSD)
- Used to capture everything about an implementation
 - Build Version
 - Configurations
 - Anything else that will help in transition
- Meeting held with Customer Care to discuss, in depth, the implementation and customer values

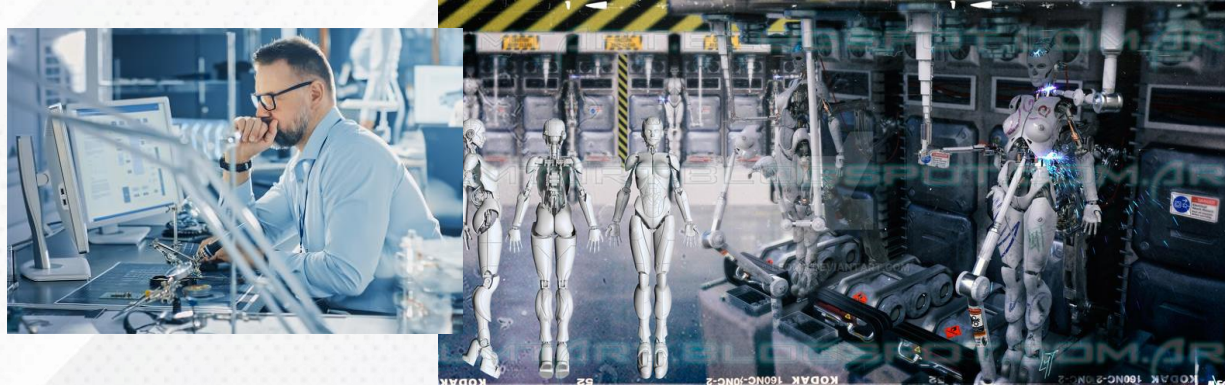
Customer Example

- Robot, Inc. – from paper to paperless
- Key Values – reduce repair and maintenance time
- Full Production for a while, units now need repairs
- Indoctrinating Solumina at Robot, Inc.



Value Indoctrination

- User Story Mastery
- Using MES, Quality, and MRO
- Solumina becomes second nature
- Hard to remember a time without Solumina





Value Realization

Value of MRO Planning



Solumina's Process Planning sets the MRO team up for success

- Detailed, organized & controlled work instructions based on inclusion and exclusion of work scope through the effective use of task groups
- Incorporation of all Solumina resources for repair, overhaul and upgrades – making the work order a one-stop-shop for execution
- Controlled libraries for commonly used standard items:

The image displays four screenshots of the iBASEt software interface:

- Top Screenshot:** Shows the 'Task Groups' table with columns for Task Group No, Task Group Rev, Auto Status, Obsolete?, and Task Group Title. It lists tasks like 'Standard Maintenance Tasks', 'Resurface Nose', 'Replace Radar', and 'Repair Tail Fins'.
- Middle Screenshot:** Shows 'Task Group Operations' with a table of operations (Oper No, Oper Rev, Oper Title) such as '0010 Inspect for Defects', '0020 Remove O-Rings', '0030 Install O-Rings', '0040 Test Batteries', and '0050 Touch-Up Markings'. Below it is a 'Task Group Item No' flow diagram showing the sequence of operations: Oper 010 Intake Inspection, Oper 020 Safety, Oper 030 Remove components, Oper 040 Prepack and Install Shims, Oper 050 Reinstall Prep, Oper 060 Reinstall Wing, Oper 110 Touch Up, and Oper 120 INSPECTION.
- Bottom Left Screenshot:** Shows a 'Plan Title: Part 003 Build' with a 'FOOD CONTAMINATION AREA' warning and 'PERFORM OPERATION IAW FOD PREVENTION'. It includes a 'CAUTION' box stating 'Gloves required' and a note about 'BMS-129 adhesive to Upper Skin per BACS317-2'.
- Bottom Right Screenshot:** Shows a 'Data Collections' window with a table of 'BOM Of Resources' listing parts like 'SKIN UPPER-SPOILER #5,8', 'DOUBLER LOWER-SPOILER #1,3,4,5,8,9,10,11', and 'SKIN LOWER-SPOILER #5,8'.

- Data Collectors
- Illustrations/Specs
- Standard Text
- Standard Operations

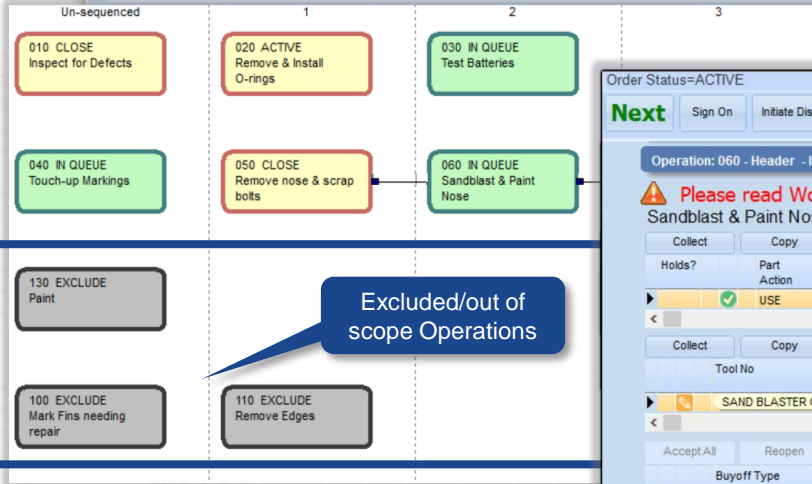
Value of Task Groups in Execution

Task Group No	Task Group Rev	Task Group Title	Notes Disc ID	Line No	Update UserID	Update Time
1	2	Standard Maintenance			ERIN	10/27/2022 2:21:42 PM
2	1	Resurface Nose			ERIN	10/27/2022 2:29:38 PM
4	1	Repair Tail Fins			ERIN	10/27/2022 2:21:42 PM

Included/Excluded	Standard?	Oper No	Oper Title	Oper Status	Update UserID	Update Time
INCLUDED	Y	010	Inspect for Defects	CLOSE	ERIN	10/27/2022 3:28:22 PM
INCLUDED	Y	020	Remove & Install O-ring	ACTIVE	ERIN	10/27/2022 3:58:33 PM
INCLUDED	Y	030	Test Batteries	IN QUEUE	ERIN	10/27/2022 2:22:40 PM
INCLUDED	Y	040	Touch-up Markings	IN QUEUE	ERIN	10/27/2022 2:22:40 PM

Include Exclude

Adjust & review scope on the fly



Excluded/out of scope Operations

Order Status=ACTIVE

Next Sign On Initiate Discrepancy Display Print Label Scrap Units Need Assistance

Operation: 060 - Header - IN QUEUE - Sandblast & Paint Nose

Please read Work Instructions!
Sandblast & Paint Nose prior to reinstall

Collect	Copy	Display	Skip	Ack All Parts
Hold?	Part Action	Part No	Part Rev	Part Title
	USE	PANT	2	Paint

Collect	Copy	Display	Skip
Tool No	Tool Rev	Tool Title	
SAND BLASTER GUN	N/A	Sand Blaster Gun	

Accept All Reopen Display Skip Partial

Buyoff Type	Buyoff Title	% Complete/ Complete Qty
TECH	Complete	

- Dynamically determine Task Groups and/or Operations to Include / Exclude based on determined work to be performed
- Control of standard Repair tasks for entire families of Parts/Assemblies
- Capture labor, consume parts, collect data, view models, standard documents, select bulk processing, etc. as authored in MRO Plans to efficiently execute work
- Embedded quality through validated Data Collections

Value of Findings Management

- Raise issue directly from Task Card with visibility through Disposition & automatic holds
- Proactive course correction with Artisan skills + certifications, Artisan-Inspector Audits and Stamps
- Over and Above Alerts & Authorizations
 - Utilize workflows for customer approval before spend
 - Utilize standard repair tasks
 - Plan on the fly for non-standard tasks
- Beyond Ethical Repair (BER) Management

Order Status=ACTIVE

Next Sign Off Initiate Discrepancy Display Print Label Scrap Units Need Assistance Partial Completion

Rework Cause

Disc ID, Line No, Status	Discrepant Feature	Order No
DISC0000024, 1, DISPOSITIONED	issue with o-ring	WO0000050

Operation: 020 - Header - ACTIVE - Remove & Install O-rings

Please read Work Instructions!

Compare Operation Alteration

Disposition Instructions for Discrepancy Item DISC0000024-1

Collect	Copy	Display	Skip	Ack All Parts			
Hold?	Part Action	Part No	Part Rev	Part Title	Ref Des	UOM	BOM Line N
	REMOVE	O-RINGS	01	O-Rings	N/A	EA	

Collect	Copy	Display	Skip	Ack All Parts			
Hold?	Part Action	Part No	Part Rev	Part Title	Ref Des	UOM	BOM Line N
	USE	O-RINGS	01	O-Rings	N/A	EA	

Operation Planning Instructions

Work Instructions display w/ link to Findings

History Create Hold Close Hold In Work Display

Oper No	Stop Type	Hold Status	Hold Type	Update User ID	Update Time	Ref1
ORDER COMPLETION	OPEN	DISCREPANCY LIEN	ERIN	10/27/2022 4:13:17 PM	Disc ID: DISC000	
ORDER STOP	CLOSED	WORK SCOPE HOLD	ERIN	10/27/2022 3:23:57 PM		

Order Notes Holds Discrepancies Alternate Items

Instructions Header Order Alterations Task Groups Operations

Clearly displays hold information and prevents work from being performed

Operation: 060 - Header - ACTIVE - Sandblast & Paint Nose

Please read Work Instructions!

Sandblast & Paint Nose prior to reinstall

Collect	Copy	Display	Skip	
Tool No	Tool Rev	Tool Title	Type	Bo Lir
SAND BLASTER GUN	N/A	Sand Blaster Gun	Hand Tool	

Accept All Reopen Display Partial

Buyoff Type	Buyoff Title	Update Time	Req
TECH	Complete		

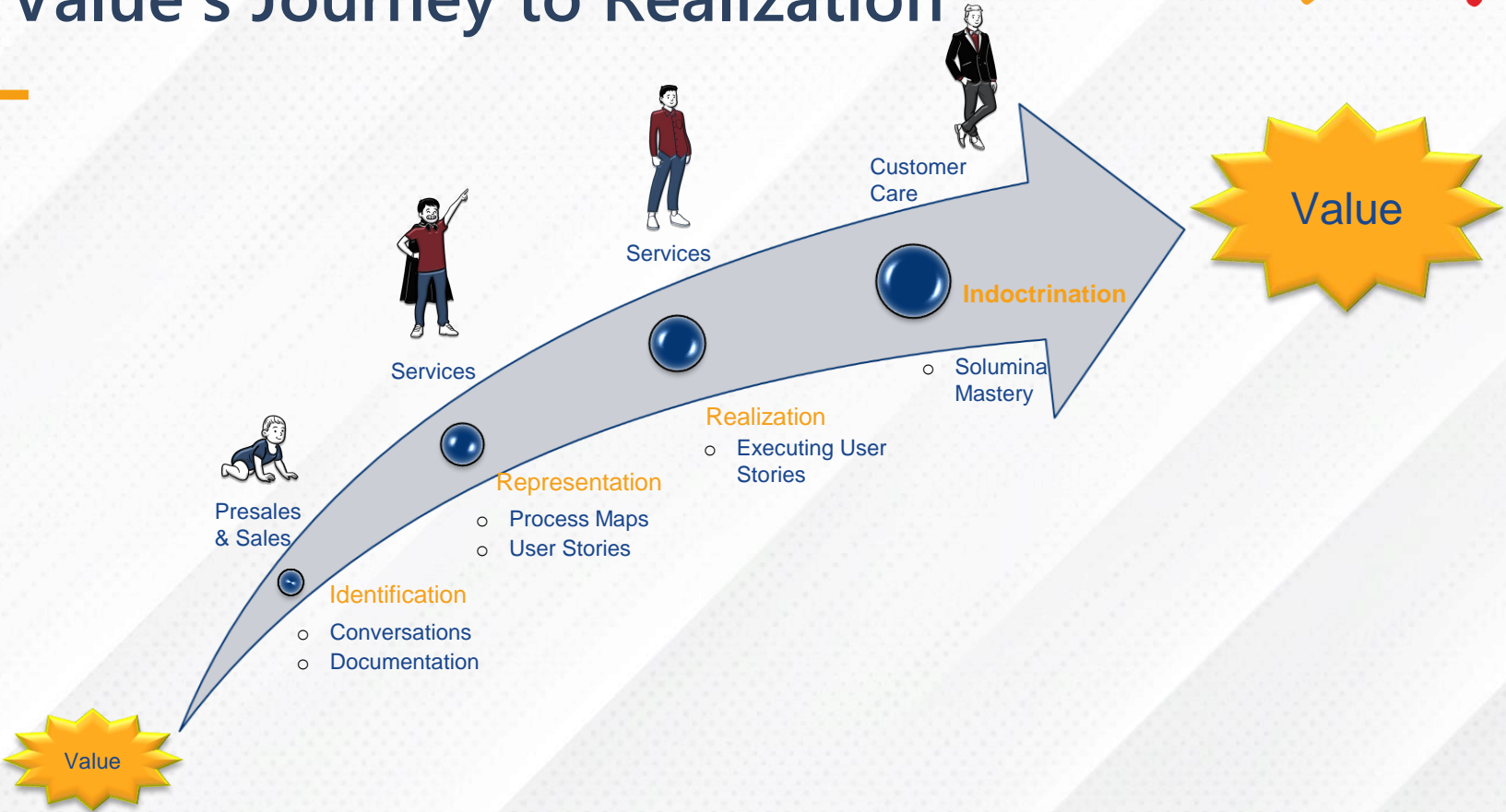
Artisan certs specific to Stamps

MRO Best Practices

- Use standard templates in authoring – Operations and Text, Illustrations, Data Collects...
- Leverage Data Collections
- Be cautious in using Buy-Off's
- Work instructions (Operations/Steps) written to a work shift or less
- Create a Style Guide
- Tasks Groups = flexibility
- Re-use, Re-use, Re-use
- Planning, Planning, Planning
- Finally... Be prepared for whatever comes through the door



A Value's Journey to Realization



Checkup on Robot, Inc.

- **VALUE REALIZED!** Robot, Inc. has reduced repair and maintenance time by using Solumina!
- Indoctrinated as best practice
- Realized all value drivers
 - Streamline the shop floor
 - Improve performance by identifying non-conformances and reducing corrective actions
 - Reduce repair & maintenance time
- In full production!



S T I M U L A T I O N

Key Takeaways

- Full Value Traceability Achieved
- Value Indoctrination through Solumina Mastery
- Follow Best Practices
- Remember, you are not alone





THANK YOU

QUESTIONS?