AUTODESK UNIVERSITY

Thinking Outside the Box with Autodesk Fusion 360 Manage

Dr. Scott Hoover, PhD.
Solutions Consultant – IE/PLM

INTRODUCTIONS

Dr. Scott Hoover, PhD
- Solutions Consultant – IE/PLM
- 10+ years at IMAGINiT
- Autodesk Certified Fusion 360 Manage Implementor
- Earned Doctorate in IE from the University of Louisville

Learning Objectives

- Discover how different customers were able to use Autodesk Fusion 360 Manage to manage outside-the-box workflows.
- Learn about the challenges, solutions, and outcomes these customers realized by implementing these business processes.
- Assess which nontypical workflows you may be able to manage within Autodesk Fusion 360 Manage.
- Determine how to calculate a return on investment to justify the addition of these types of workflows to their tenant.

Autodesk® Fusion 360 Manage

Autodesk® Fusion 360 Manage makes processes more efficient across your entire organization by providing a complete set of ready-to-use applications and templates

WHAT IT DOES ...

Item & BOM Management

Change Management

New Product Introduction

Quality Management

Supplier Collaboration

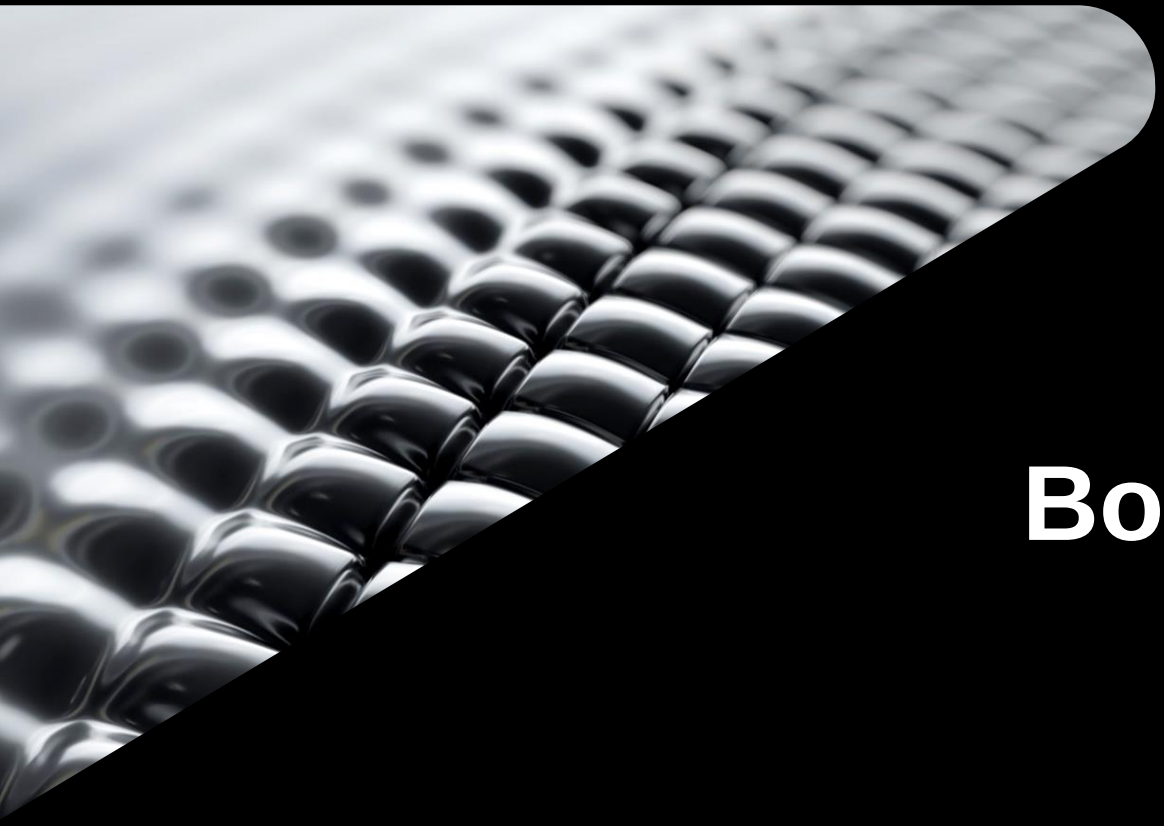
Configurable Templates

- *Accident Reports*
- *Asset Management*
- *CE Marking / Compliance*
- *Customer Management*
- *Deviation / Waiver Request*
- *Engineering Order Mgmt.*
- *Engineering Product Mgmt.*
- *Field FMEA Failure Analysis*
- *Return Merchandise Auth.*
- *Supplier Audits*
- *and more ...*

HOW IT DOES IT ...

Modern **cloud platform** built for security, configurability and scale

- Interactive Workflow Engine
- Drag & Drop Form Builder
- Role-Based User Interface
- Granular Access Control
- Dashboards and Reporting
- Task and Deliverable Tracking
- Lifecycle Stage Management
- Version Control and History
- Fast Search
- Classification / Data Standardization
- Document / File Management
- Elastic eCommerce Scalability
- Open Integration API
- Collaboration / Contextual Messaging



Boa Technology

Molds

Color Samples

Fusion 360 Manage Scripts

Managing Molds

The Challenge:

- Vendor knowing when a mold needed to be scrapped and when new molds needed to be created

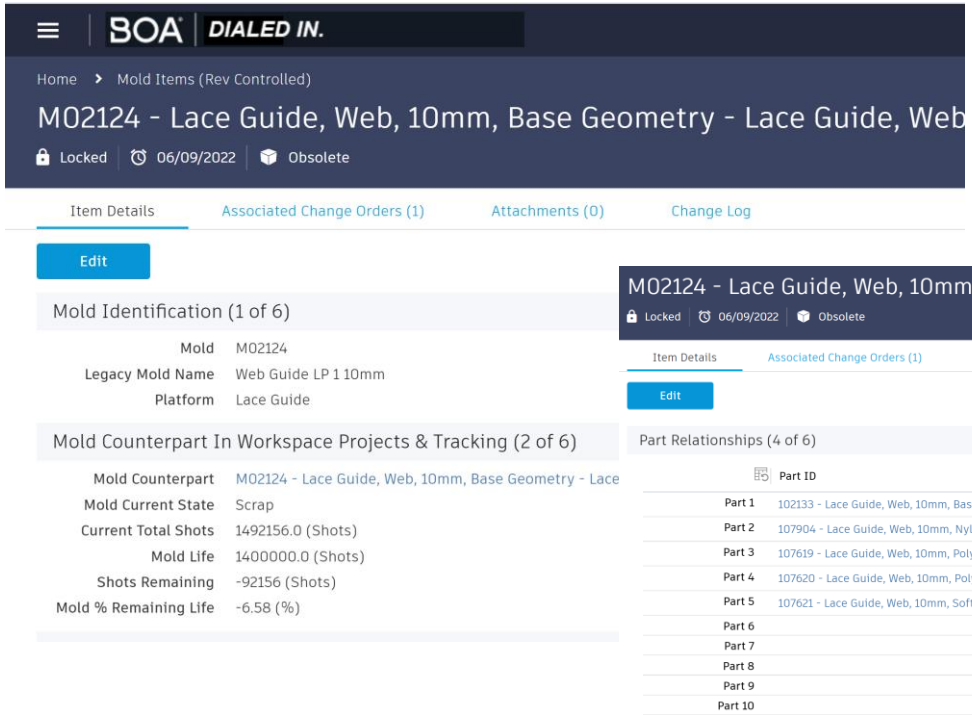
The Solution:

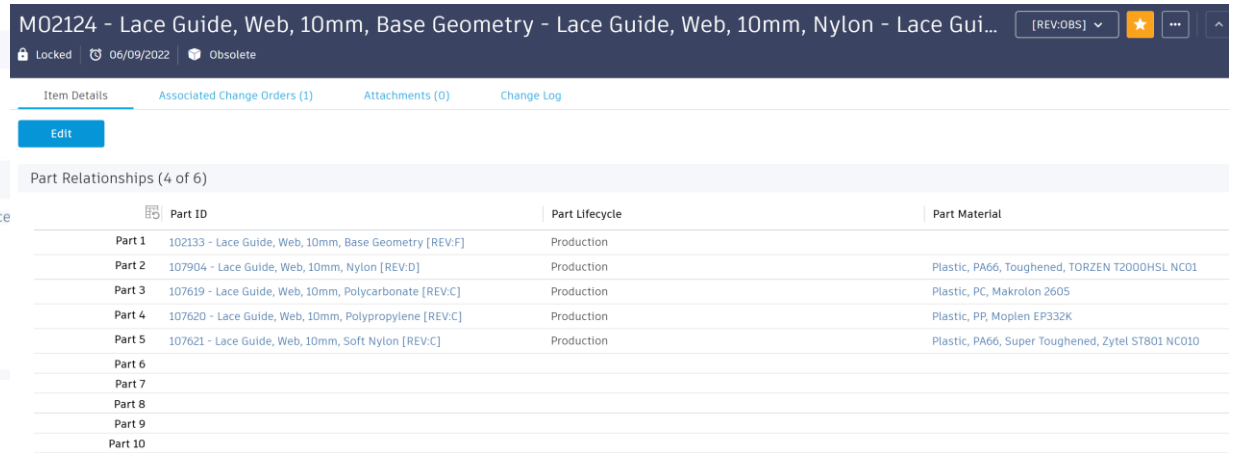
2 Workspaces used to manage production molds:

- Mold Items (Revision Controlled WS)
  - Establishes all physical parameters of the mold
  - Relates the mold to the parts that it forms in the Parts & Assemblies WS
- Molds Project & Tracking (Basic Workspace with Workflow)
  - 1-to-1 relationship with Mold Item
  - Record created once Mold Item is released to In Design
  - Tracks mold lifecycle from Purchase Order release, construction & testing, until it is Production Certified
  - Captures daily Shot Counts of the mold via Grid Tab

Managing Molds

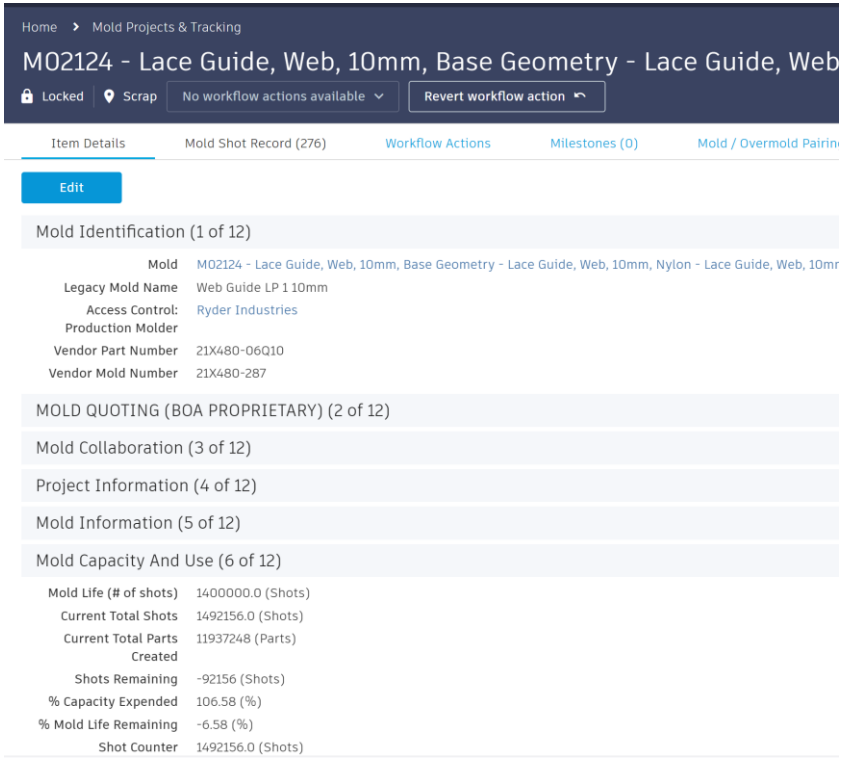
Mold Items (Rev Controlled)

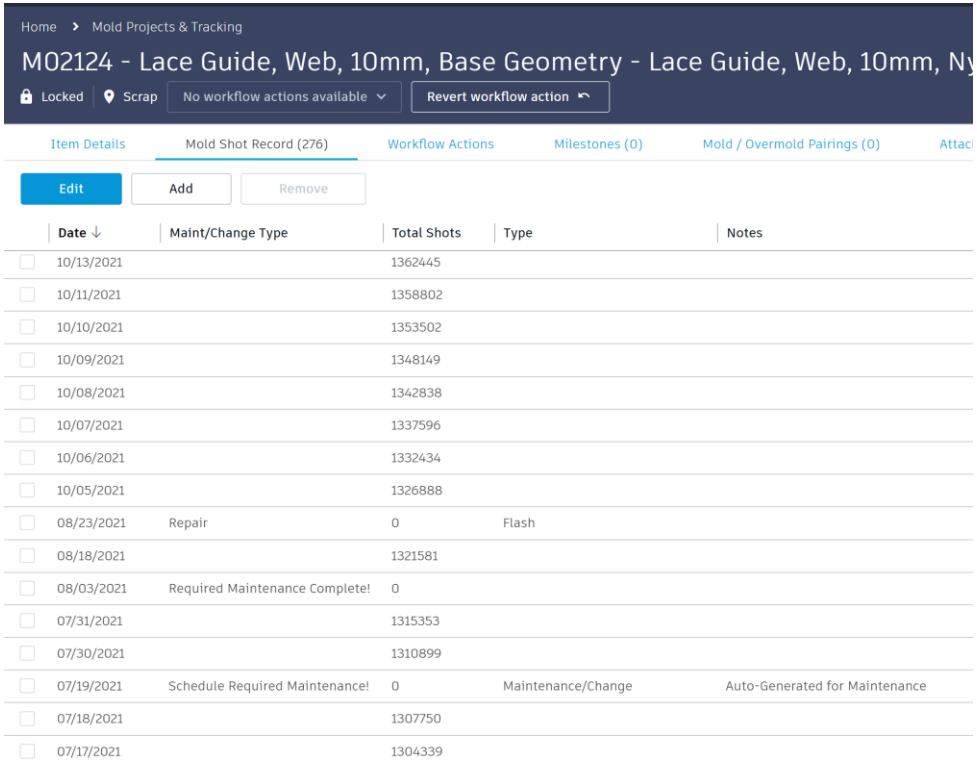




Managing Molds

Molds Projects and Tracking





Color Samples

The Challenge:

- The Boa team needed a new way to manage approved combinations of materials and colors

The Solution:

3 workspaces used to manage Color Samples

- Color Samples (Basic Workspace with Workflow)
  - Derives data from the Color Target and Material workspaces
  - Record is a unique combination of the 2 selections
- Color Target (Basic Workspace)
  - Contains the metadata associated to the different colors
  - Captures RGB values to be able to show a color preview
- Materials (Basic Workspace)
  - Contains the metadata associated to the different materials

Color Samples

Home › Color Target/Standard

17-1537 TPG

Item Details | Approved Materials in this Color (1

Edit

Color Details (1 of 3)

Color Standard Target	17-1537 TPG
Color Standard Type	Pantone
Color Reference Book	PANTONE FHI Paper TPG
Color Preview	

Color References (2 of 3)

Color Hue Family	Brown
Color Appearance Category	Opaque
Standard Color Palette	Yes

Plastic, POM, Iupital F20-

Item Details | Relationships (108)

Edit

Material Details (1 of 3)

Part Material	Plastic, POM, Iupital F
Material Category	Plastic
Generic Material Classification	POM
Material Trade Name	Lupital
Vendor Description	F20-03

RSL Compliance (2 of 3)

RSL Material Name	POM
Material Supplier	Mitsubishi
Sample Color	Natural
Sample Amount	100g
Test Report No.	A2210361392121 2021-
	A2200138611155 2020
	A2190253174122 2019
	A2180198392129 R1 2(
	A2180198392177 -POM
	A2170051817104O1 20
Expiration Date	10/01/2022
Test Lab	CTI
RSL Status	Compliant

CSA0005448 - 17-1537 TPG - Brown - POM

Sample Approved & Standard Created | No workflow actions available | Rev

Item Details | Workflow Actions | Attachments (1) | Change

Edit

Create New Color Request (Boa) (1 of 9)

Color Sample ID	CSA0005448
Sample Supplier	Ryder
Sample Request Date	08/09/2022
Sample Target Date	08/12/2022
Sample Delivery in Days	-2
Submitted By	Zhou, Carol
Requested Boa Item Number	

Select Color Target (Boa) (2 of 9)

Color Standard Target	17-1537 TPG
Color Hue	Brown
Color Preview	
Standard Color Palette	Yes
RGB Value	175,91,95

Select Material (Boa) (3 of 9)

Part Material	Plastic, POM, Iupital F20-03
Material Category	Plastic
Material Type	POM
Material Trade Name	Lupital
Vendor Description	F20-03
Impact Test Requirement	17500.0

Fusion 360 Manage JavaScript Code

The Challenge:

- As Boa Technologies continued to grow Fusion Manage, it become difficult for the Admin to keep up with changes being made to different JavaScript code for different workspaces.

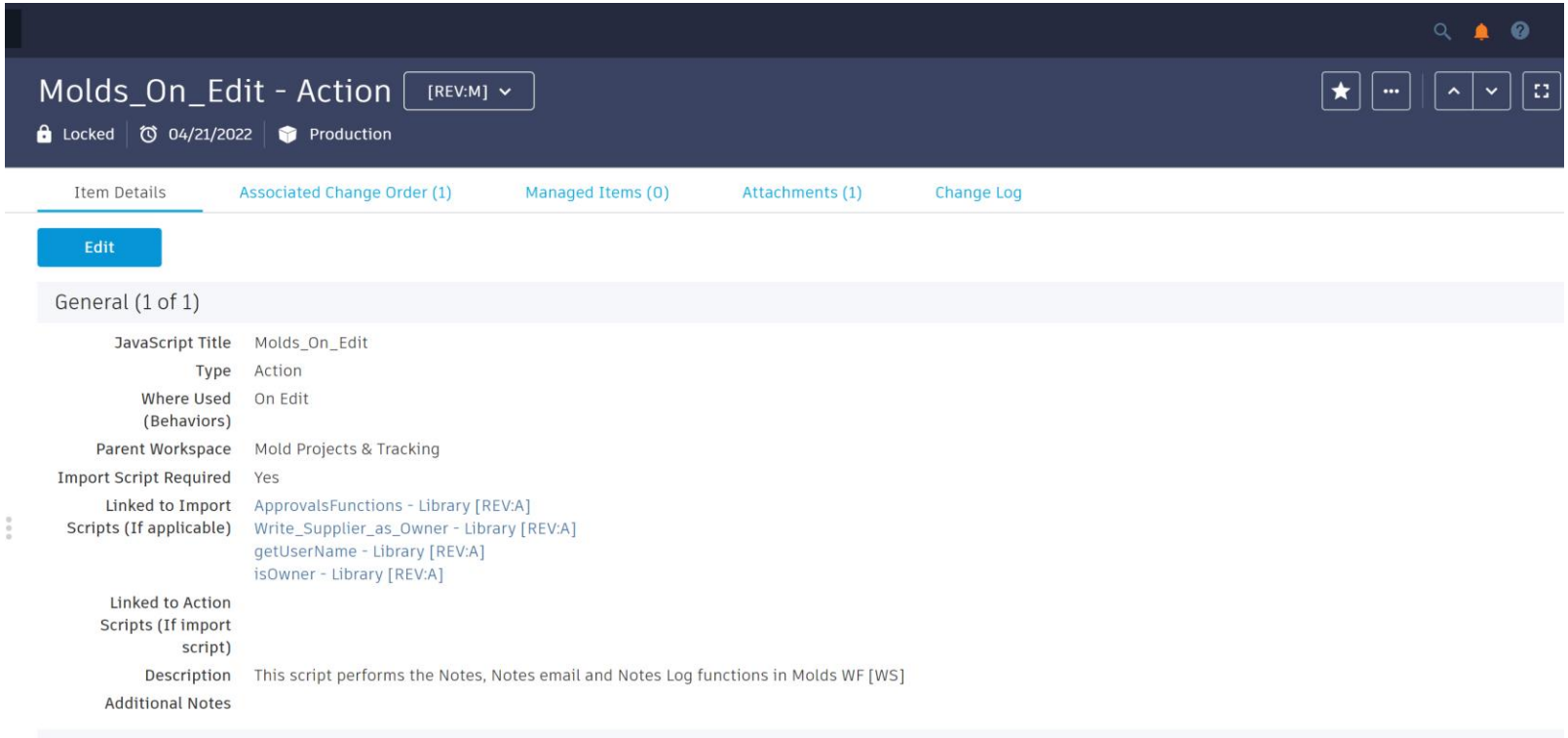
The Solution:

- A revision-controlled workspace that manages each script that has been created in the system

- Attached a .js file to the record on the attachments tab

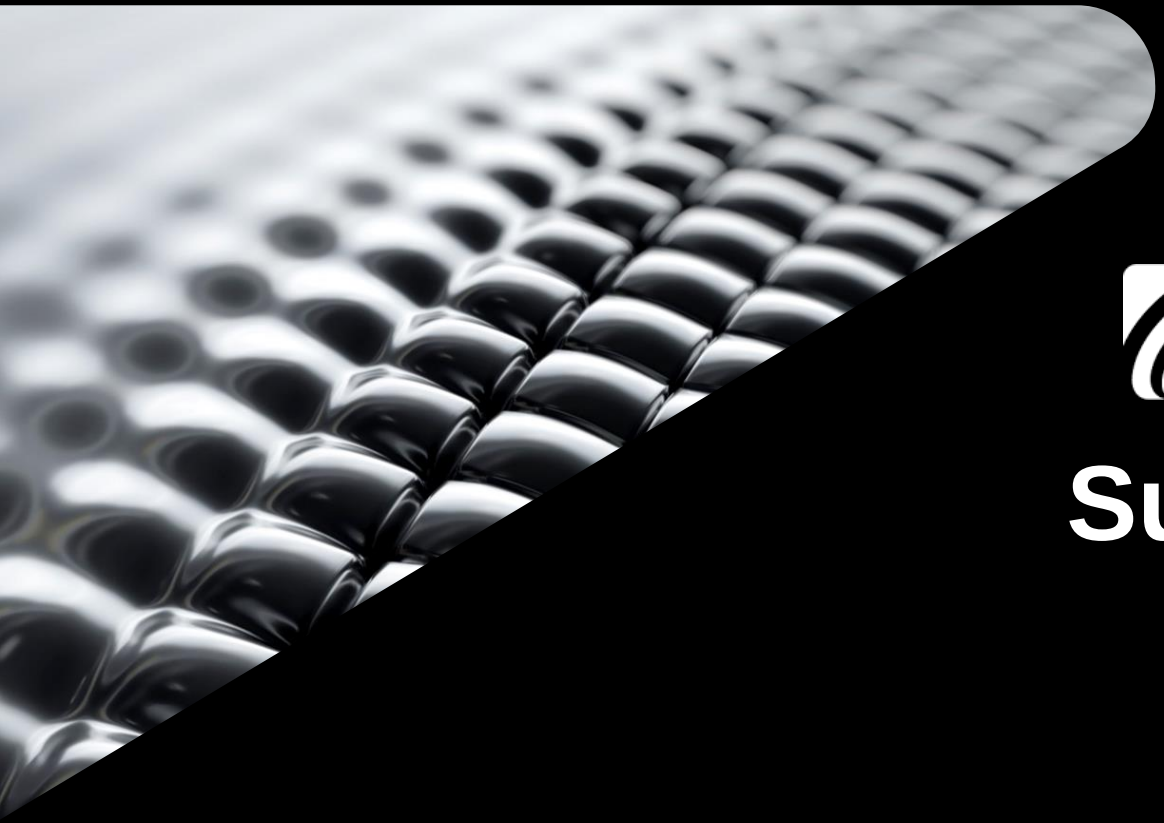
- Utilize the existing Change Order workspace to rev the script any time a change is made

Fusion 360 Manage JavaScript Code



Boa’s Outcomes

- Managing Molds
  - Proactive vs. Reactive
  - Reduce waste
- Color Samples
  - Eliminate software
- JavaScript Code
  - Revision Tracking



Superior Essex

Test Requests & Tests

Test Requests

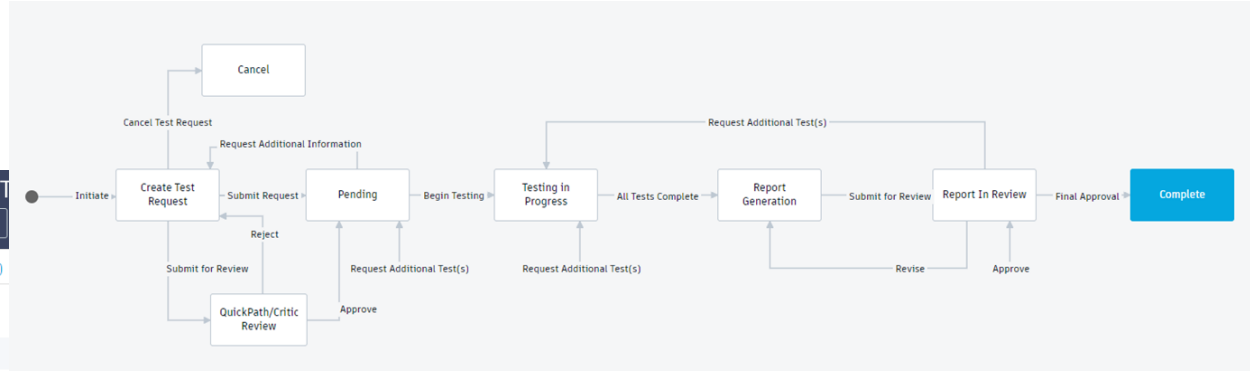
The Challenge:

- Superior Essex's previous system for Test Requests and tracking the Tests was an antiquated system that no one within the organization knew how to update
- Were not able keep up with changes to business
- Uploaded documentation tended to get corrupted
- Were not able to report on any KPIs

The Solution:

- 2 Separate workspaces were created
  - Test Request
  - Tests

Test Requests



TR07483 - PRJ-22021600114 - Miscellaneous PDC T

Locked | Complete | No workflow actions available | Revert workflow action

Item Details | Test Requested (5) | Workflow Actions | Relationships (1)

Edit

Details (1 of 4)

Number	TR07483
Related Project	PRJ-22021600114 - Miscellaneous PDC Testing
Related Trial	
Description	Item #1 - Plastic pellets. Item #2 - Lot# MHC-000038462 plastic pellets with processing issues
TR Author	Kron, Rodney
Sample Retention	Return to Sender
Sample Disposition	
Print String (For Lab)	NA
Notes	
Class	Critical
Submit Date	

Priority

Priority Info	62

Approvals (2 of 4)

Predefined Approvers

Report Review	Kron, Rodney

Home > Test Request

TR07483 - PRJ-22021600114 - Miscellaneous PDC Testing

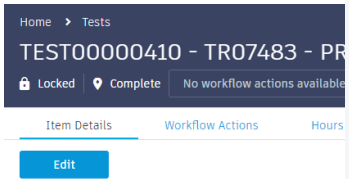
Locked | Complete | No workflow actions available | Revert workflow action

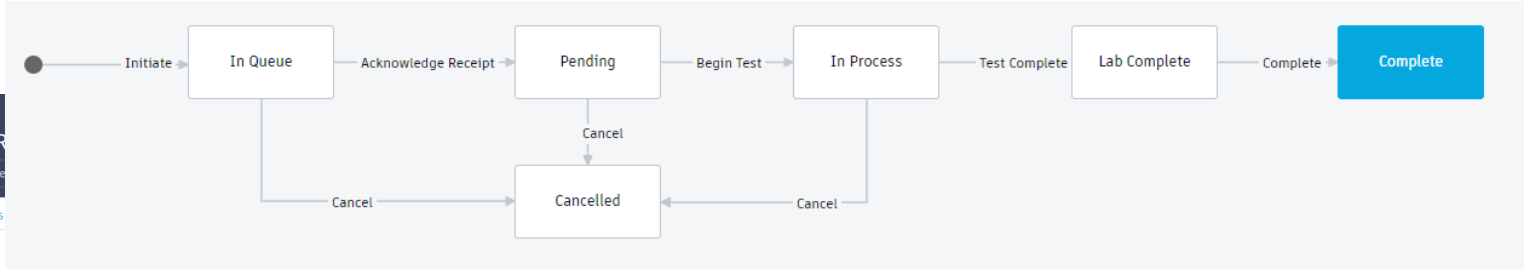
Item Details | Test Requested (5) | Workflow Actions | Relationships (1) | Attachments (1) | Change Log

Edit | Add | Remove

Rank	Test Requested	Details	Test Record	Status	Wait Time Before Test Began (Days)
1	- FTIR		TEST00000410 - TR07483 -	Complete	0.00
2	- ED XRF Qualitative Elemental Analysis		TEST00000413 - TR07483 -	Complete	0.00
3	ASTM D 3418 - DSC: Transition Temperatures, Er		TEST00000409 - TR07483 -	Complete	0.00
4	- TGA (Requester must specify test method.)	Standard run.	TEST00000411 - TR07483 -	Complete	0.00
5	ASTM D 3835 - Capillary Rheometer	Temperatures to be determined by FTIR results.	TEST00000412 - TR07483 -	Complete	4.00

Tests





Details (1 of 2)

Number	TEST00000410
Test	- FTIR
Details	
Test Request	TR07483 - PRJ-22021600114 - Miscellaneous PDC Testing
Related Project	PRJ-22021600114 - Miscellaneous PDC Testing
Related Trial	
Notes	
Class	Critical
Priority	
Priority Info	62

Statistics (2 of 2)

In Queue	0.00 (Days)
Pending	0.00 (Days)
In Process	0.00 (Days)
Total Cycle Time	0.00 (Days)
Date Created	02/16/2022
Date Completed	
Age	68

Home > Tests

TEST00000410 - TR07483 - PRJ-22021600114 - Miscellaneous PDC Testing - - FTIR

Locked | Complete | No workflow actions available | Revert workflow action

Item Details | Workflow Actions | Hours Reporting (1) | Attachments (3) | Change Log

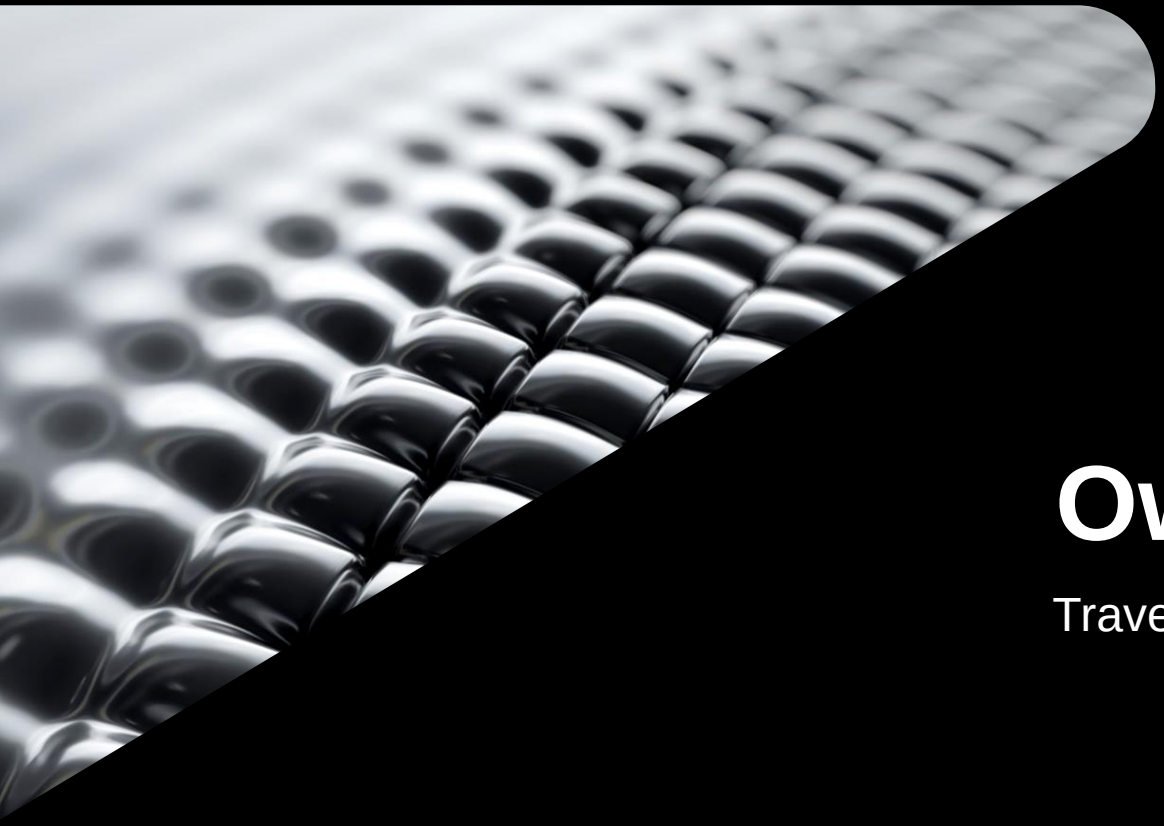
Edit | Add | Remove

Date	Resource	Hours	Comments
02/16/2022	Walters, Scott	1.00	testing and comparison

Total: 1

Superior Essex’s Outcomes

- Easy to Update
- Fear of lost data
- Continuous Improvement



Owens Corning

Travel Request (Passport, Stamps, & Visa)

Time Sheets

Travel Request & Passport, Stamps, & Visa

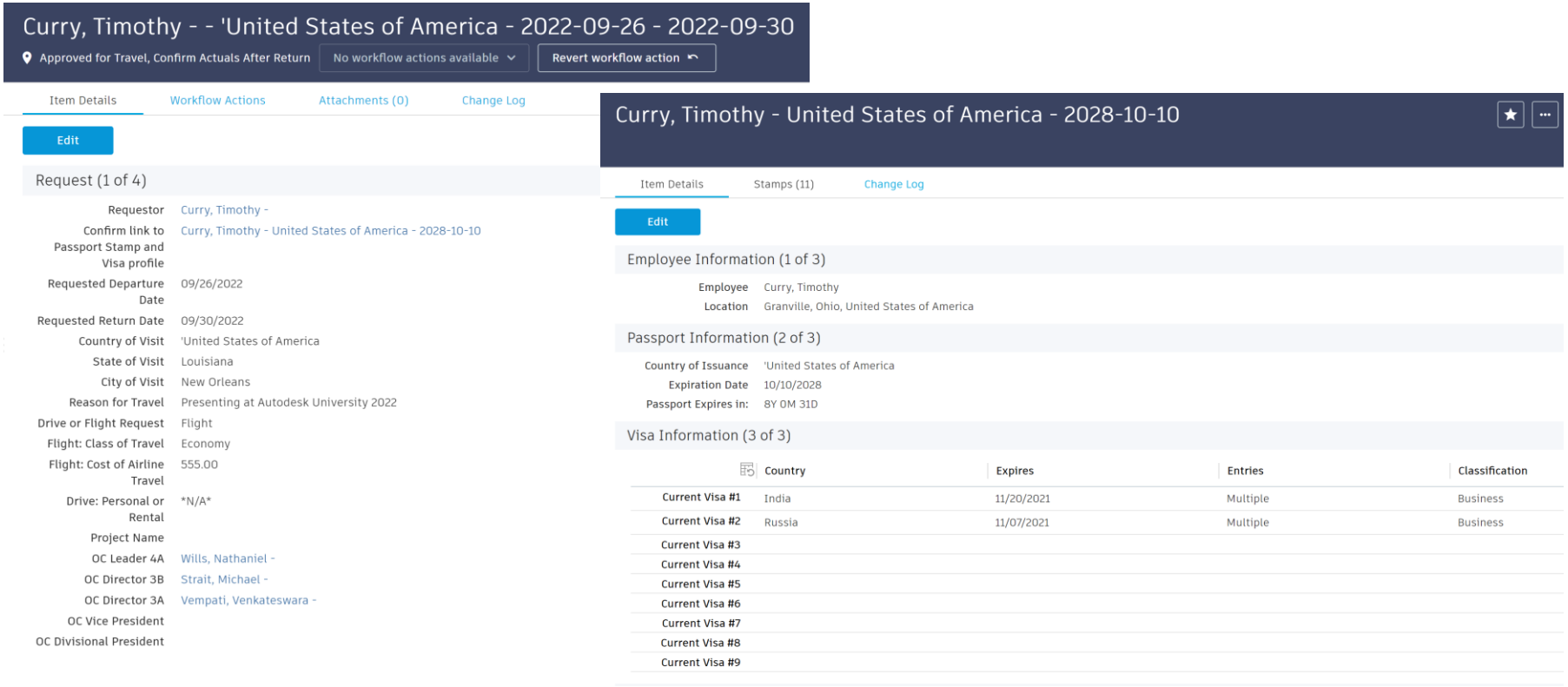
The Challenge:

- Due to project requirements, many OC resources are required to travel both domestically and internationally
- Needed a process to track request for travel
- Also needed a way to track travel visas to ensure resources are not spending too much time in a single country

The Solution:

- 3 Separate workspaces were created
  - Travel Request
  - Passport, Stamps, & Visa
  - Passport Request and Renewal

Travel Request & Passport, Stamps, & Visa



Time Sheets

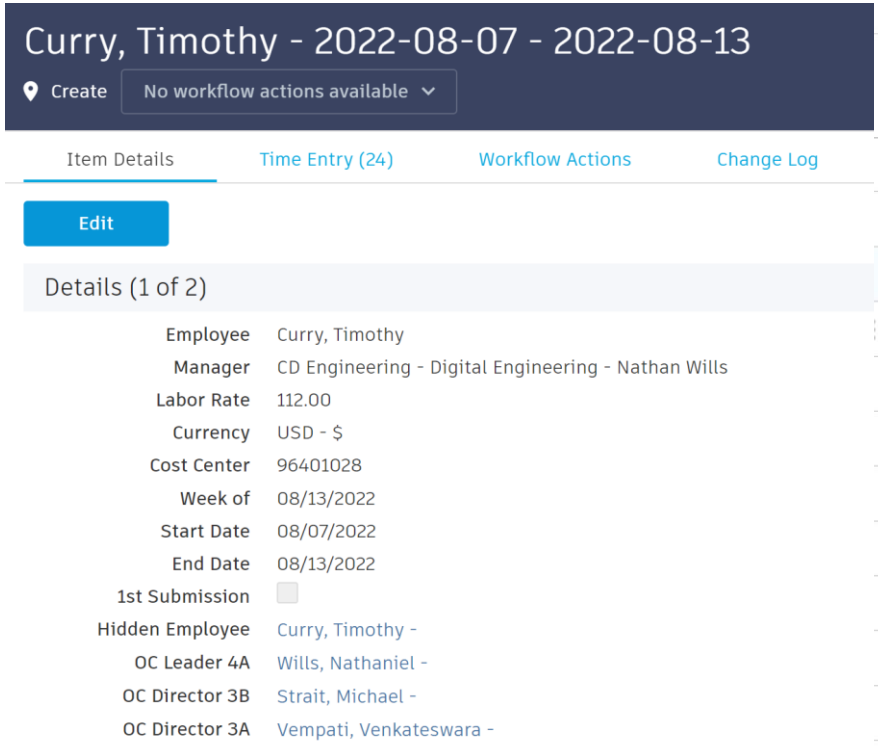
The Challenge:

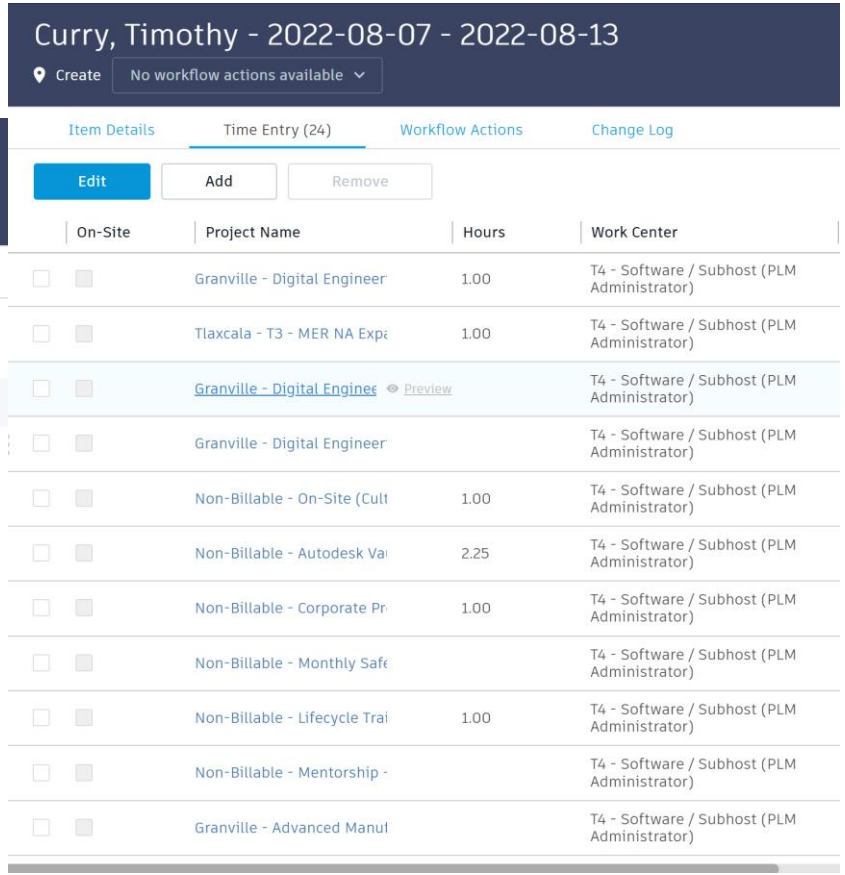
- The Owens Corning team needed a way to capture the amount of effort of resources being used on Capital Projects

The Solution:

- 1 workspace was created
  - Utilizes the Grid Tab to capture time entries for specific projects

Time Sheets


Curry, Timothy - 2022-08-07 - 2022-08-13
Create
No workflow actions available
Item Details
Time Entry (24)
Workflow Actions
Change Log
Edit
Details (1 of 2)
Employee Curry, Timothy
Manager CD Engineering - Digital Engineering - Nathan Wills
Labor Rate 112.00
Currency USD - $
Cost Center 96401028
Week of 08/13/2022
Start Date 08/07/2022
End Date 08/13/2022
1st Submission
Hidden Employee Curry, Timothy -
OC Leader 4A Wills, Nathaniel -
OC Director 3B Strait, Michael -
OC Director 3A Vempati, Venkateswara -


Curry, Timothy - 2022-08-07 - 2022-08-13
Create
No workflow actions available
Item Details
Time Entry (24)
Workflow Actions
Change Log
Edit
Add
Remove
On-Site
Project Name
Hours
Work Center
Granville - Digital Engineer 1.00 T4 - Software / Subhost (PLM Administrator)
Tlaxcala - T3 - MER NA Expa 1.00 T4 - Software / Subhost (PLM Administrator)
Granville - Digital Engines Preview T4 - Software / Subhost (PLM Administrator)
Granville - Digital Engineer T4 - Software / Subhost (PLM Administrator)
Non-Billable - On-Site (Cult 1.00 T4 - Software / Subhost (PLM Administrator)
Non-Billable - Autodesk Va 2.25 T4 - Software / Subhost (PLM Administrator)
Non-Billable - Corporate Pr 1.00 T4 - Software / Subhost (PLM Administrator)
Non-Billable - Monthly Safe T4 - Software / Subhost (PLM Administrator)
Non-Billable - Lifecycle Trai 1.00 T4 - Software / Subhost (PLM Administrator)
Non-Billable - Mentorship - T4 - Software / Subhost (PLM Administrator)
Granville - Advanced Manuf T4 - Software / Subhost (PLM Administrator)

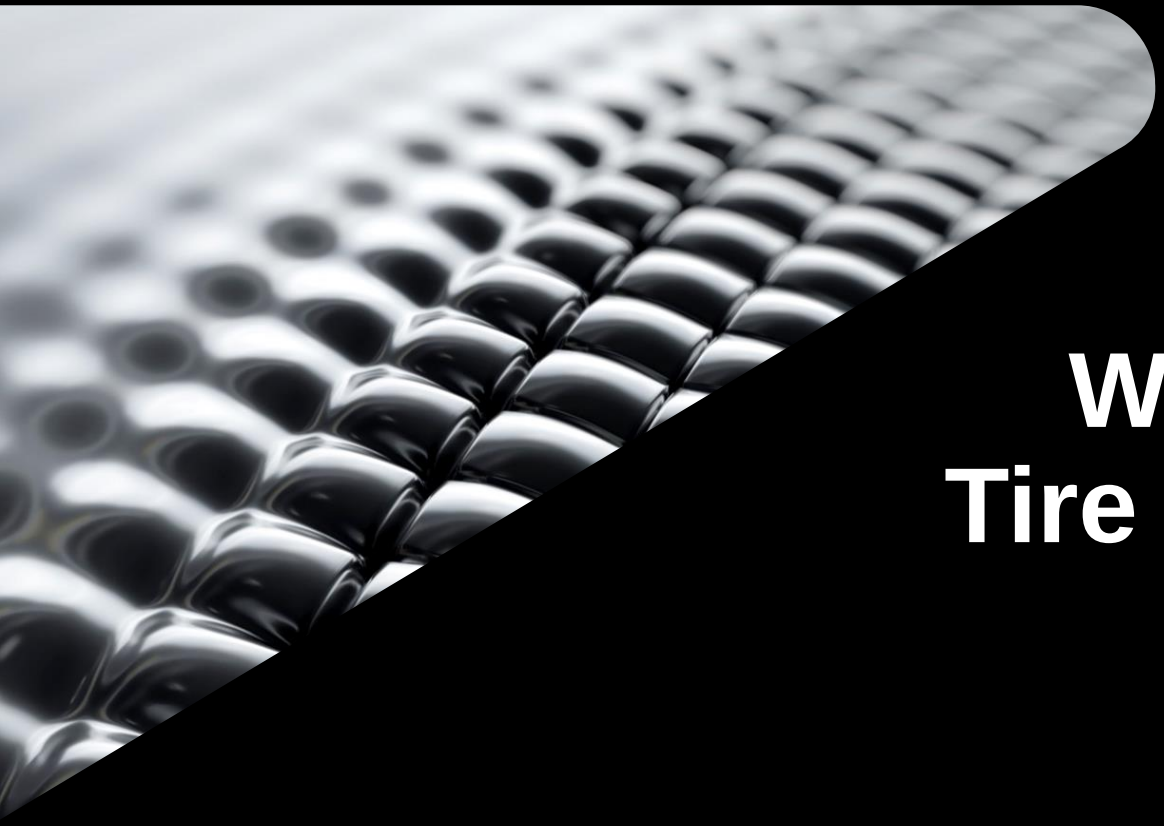
MFG501232 - The Office Space: Utilizing “Other” Areas of Your PLM System

- **Learning Objective 1**: Learn how to view and manage the inner connectivity of workspaces.
- **Learning Objective 2**: Learn how to run reports developed to aid other departments in their requests for information.
- **Learning Objective 3**: Start thinking about which areas can be built for your company to use.
- **Learning Objective 4**: Learn about creating additional workspaces for ease of office management.

Tomorrow – 1:30 PM

Timothy Curry

PLM Systems Lead, Owens Corning



Worlds Largest Tire Manufacturer

Vault Access

Compliance Workflow

Vault Access

Sample blank slide — subtitle (sentence case)

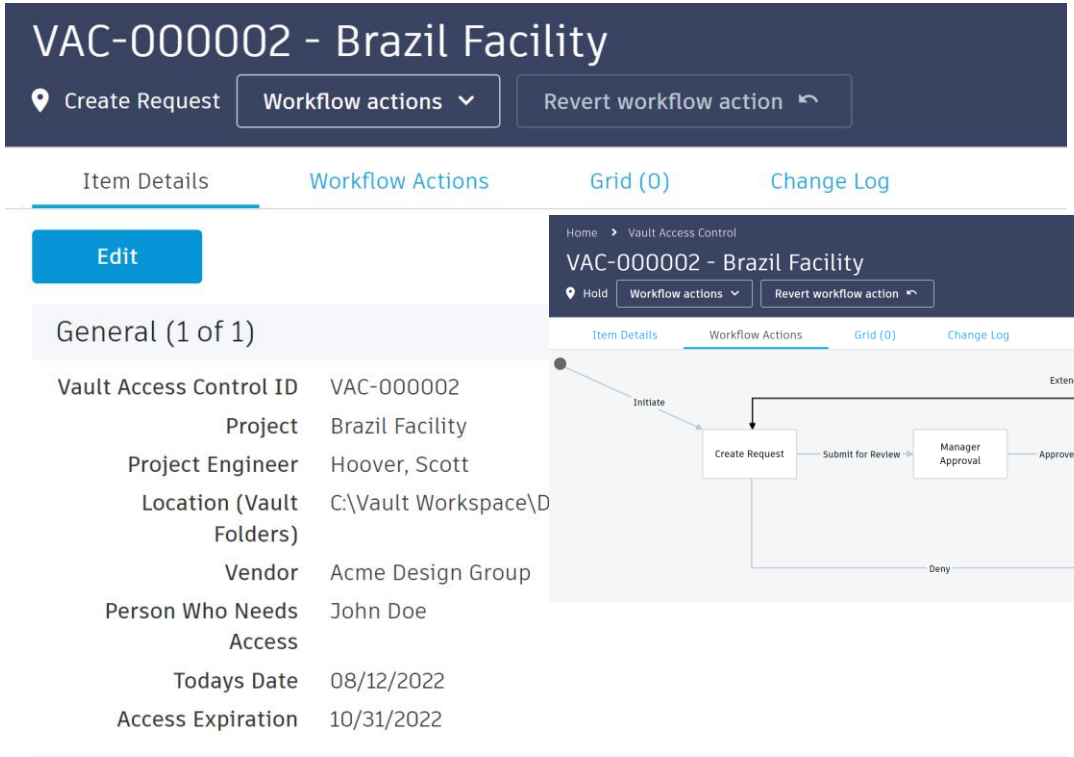
The Challenge:

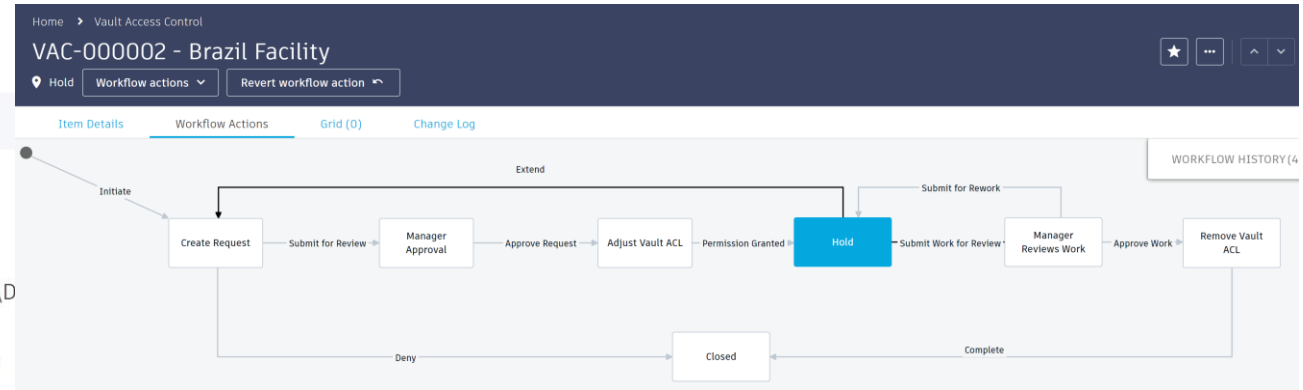
For certain projects, the Customer utilizes outside contractors to work on CAD models. This requires the customer to give the contractors access to their Vault. There was difficulty keeping up with who had access to the Vault and when their access should be removed.

The Solution:

- 1 workspace was created
  - This workspaces has a countdown field that updates daily. Once it reaches 0, the workflow is automatically moved, and a notification is sent to an individual to remind them to go into Vault and remove the users access unless an extension is needed.

Vault Access





Record Retention

The Challenge:

The customers corporate policy requires that employees on a yearly basis remove any IP documents from their computers. They used to manage this process in a sharepoint workflow that had an IT incident.

The Solution:

- 1 workspace was created
  - This workspaces has a countdown field that updates daily. Once it reaches 0, the workflow is automatically moved, and notifications are sent to each employee to notify them that they need to perform this task.

Record Retention

RR-000003

In Compliance | Workflow actions | Revert workflow action

Item Details | Workflow Actions | Change Log

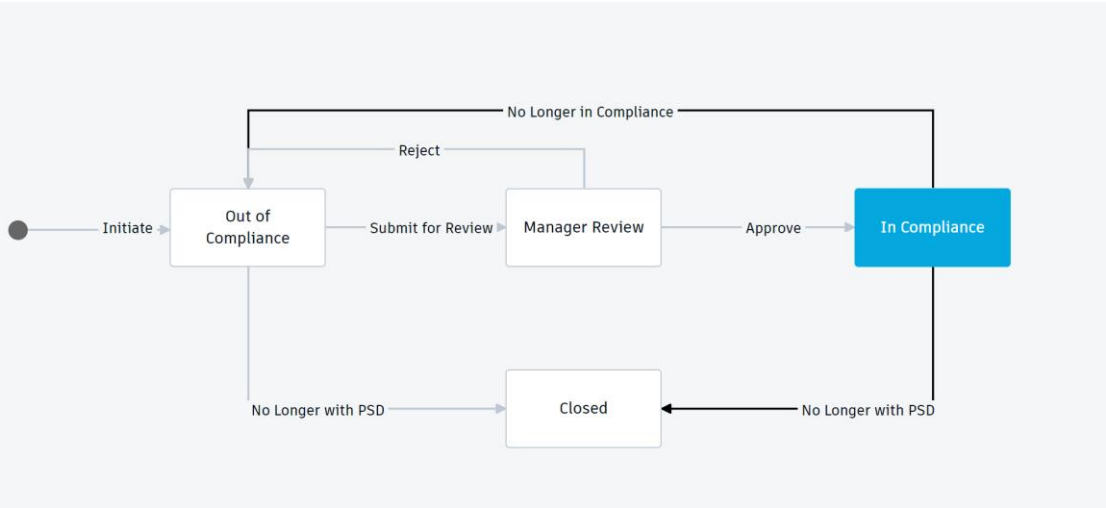
Edit

General (1 of 2)

Record Retention ID	RR-000003
Name	Hoover, Scott
Manager?	✔
Manager Name	Hoover, Scott

Admin (2 of 2)

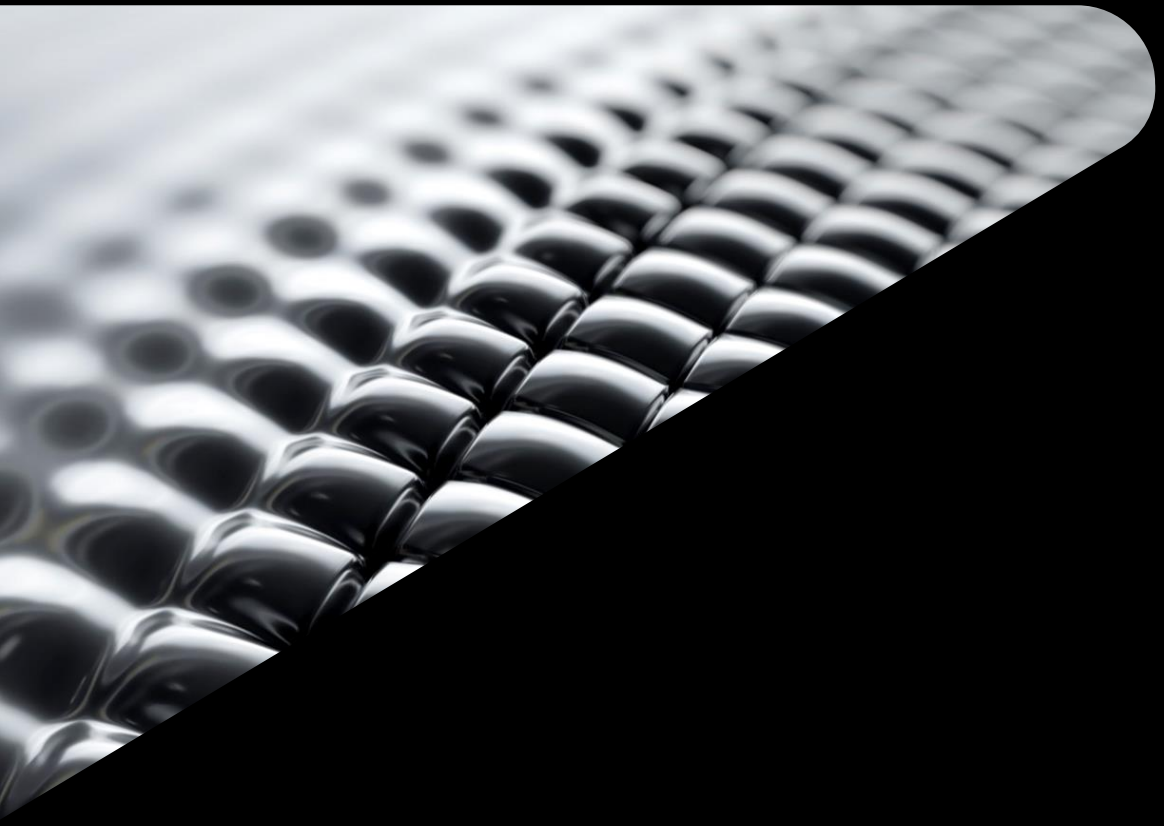
Days Remaining In Compliance	175.0



Outcomes

- Managed a business process that could be used by anyone within the organization

- Allowing Users to get into the system before the organization begins utilizing the system for more complex workflows



Shutterfly

Request for Quote (RFQ)

RFQ

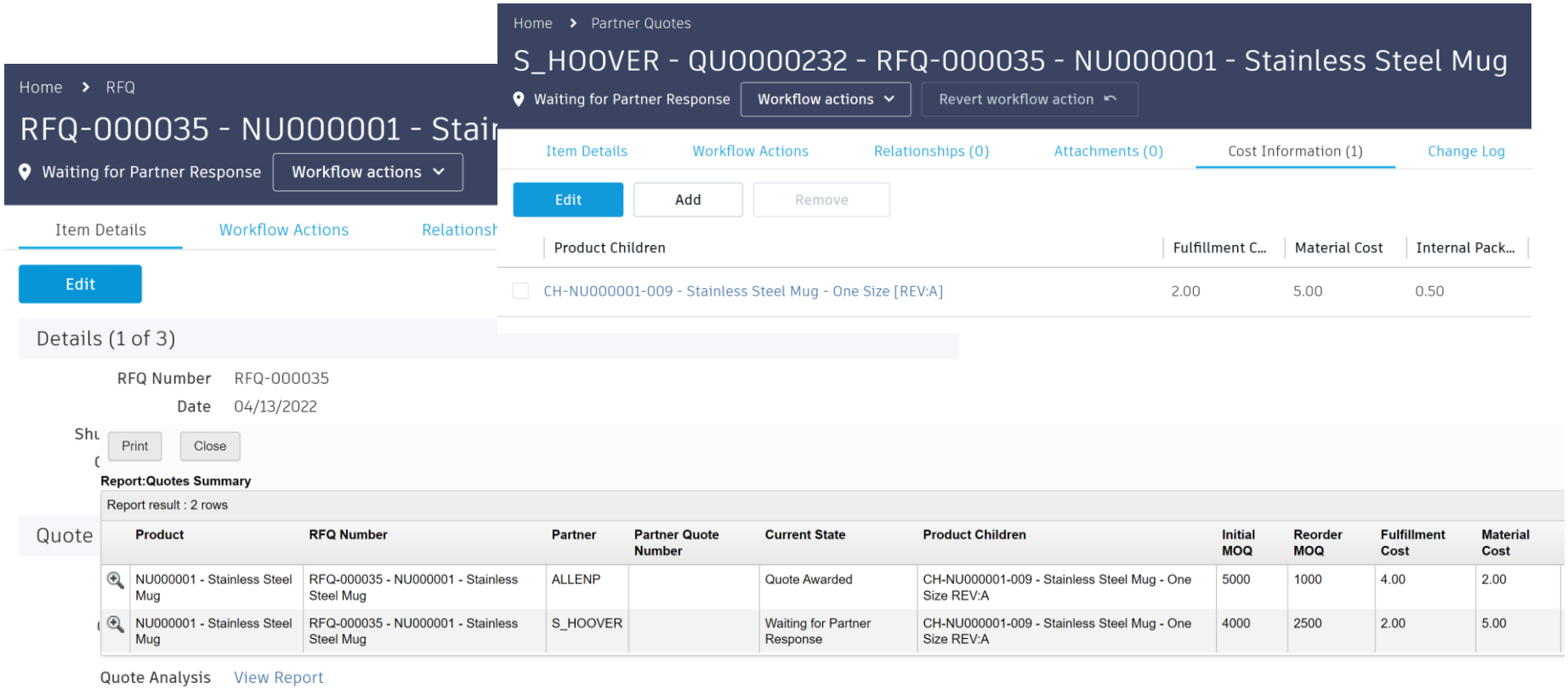
The Challenge:

- Shutterfly's previous tools for sending out Requests for Quote was a time consuming, manual process
  - Required gathering data from multiple Google Sheets
  - Required drafting individual emails to each partner they wanted to submit the quote to

The Solution:

- 2 Separate workspaces were created
  - RFQ Workspace
  - Partner Quote Workspace

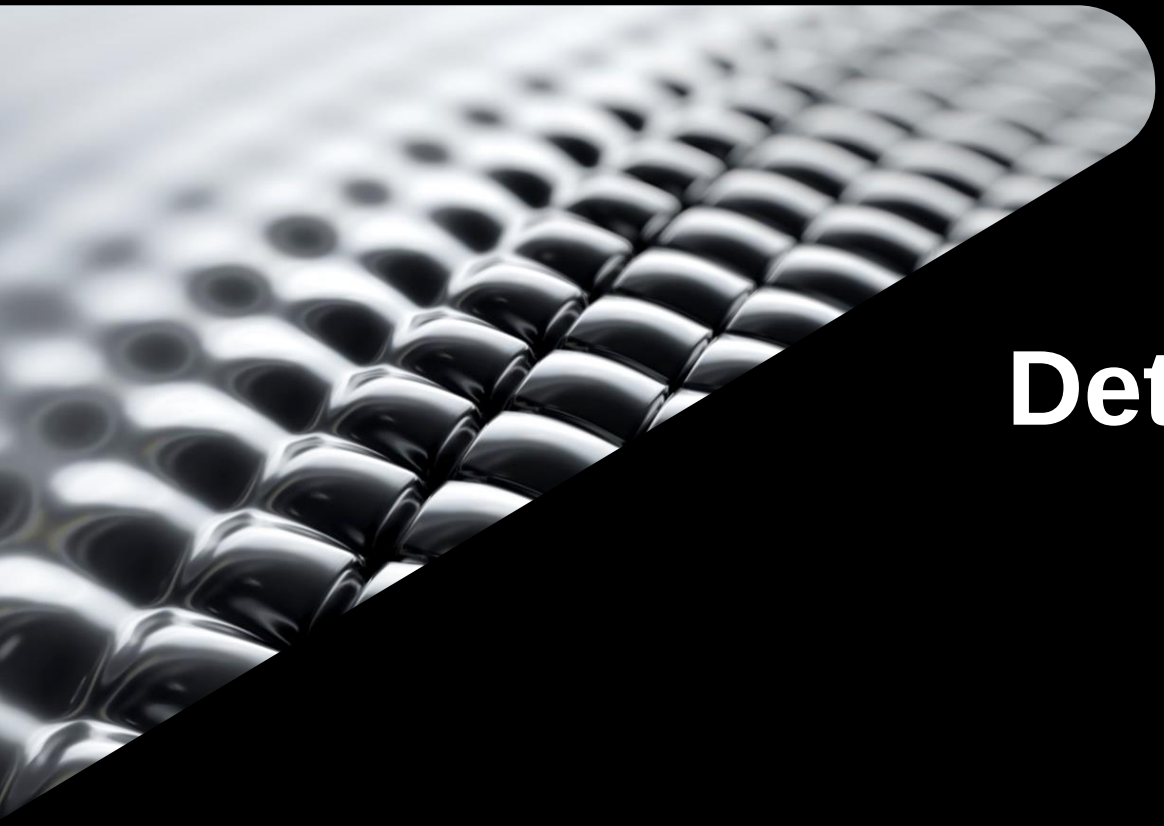
RFQ


Home
RFQ
RFQ-000035 - NU000001 - Stain
Waiting for Partner Response
Workflow actions
Item Details
Workflow Actions
Relationsh
Edit
Home
Partner Quotes
S_HOOVER - QU0000232 - RFQ-000035 - NU000001 - Stainless Steel Mug
Waiting for Partner Response
Workflow actions
Revert workflow action
Item Details
Workflow Actions
Relationships (0)
Attachments (0)
Cost Information (1)
Change Log
Edit
Add
Remove
Product Children
Fulfillment C...
Material Cost
Internal Pack...
CH-NU000001-009 - Stainless Steel Mug - One Size [REV:A]
2.00
5.00
0.50
Details (1 of 3)
RFQ Number RFQ-000035
Date 04/13/2022
Print
Close
Report:Quotes Summary
Report result : 2 rows
Quote
Product
RFQ Number
Partner
Partner Quote Number
Current State
Product Children
Initial MOQ
Reorder MOQ
Fulfillment Cost
Material Cost
NU000001 - Stainless Steel Mug
RFQ-000035 - NU000001 - Stainless Steel Mug
ALLENP
Quote Awarded
CH-NU000001-009 - Stainless Steel Mug - One Size REV:A
5000
1000
4.00
2.00
NU000001 - Stainless Steel Mug
RFQ-000035 - NU000001 - Stainless Steel Mug
S_HOOVER
Waiting for Partner Response
CH-NU000001-009 - Stainless Steel Mug - One Size REV:A
4000
2500
2.00
5.00
Quote Analysis
View Report

Outcomes

- Brought all information into one location to manage the RFQ process

- Reduced the effort required to pull all the information together to not only send out the RFQ, but to review and compare the Quote from the Partners



How To Determine Other Workflows

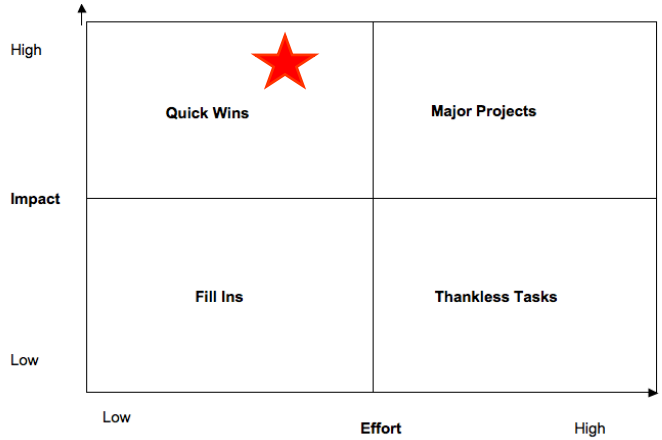
Other Business Areas to Consider

- Office procedures
  - Employee Training
  - On Boarding New Hires

- Other Business Workflows
  - Proposal/Contract Workflows
  - Inspections
  - Artwork/Packaging

Quick Wins

- A process in the system that can be used quickly
  - Retain Stakeholder interest early
- Low Configuration
  - Simple to build and use
- Global Process
  - If you start with 10 licenses, ensure all 10 users can participate



Return on Investment

- Understand the amount of time and effort required for the current process
  - Throughput
  - Cycle Time
  - Bottlenecks?
- Implement statistic tracking within the workspace to track Key Performance Indicators
- Proactive vs Reactive

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