

LORD Corporation



**BUSINESS-DRIVEN DOCUMENT MANAGEMENT
WITH ARAS INNOVATOR**

Nate Ouellette

LORD

LORD Corporation

Founded in 1924, LORD Corporation is a diversified technology and manufacturing company commercializing highly reliable adhesives; coatings; vibration control and motion management devices and systems; and sensing technologies.

“ Hugh Lord did not invent the LORD Mount to sell a product, but to solve a problem.”

— **Donald M. Alstadt**
LORD Chairman Emeritus
1967-2007

Creating Valued Solutions

Working across diverse sciences and technologies to solve customer needs

Major Markets Served

Aerospace & Defense
Automotive
Electronics
Energy
Industrial
Marine
Oil & Gas

Solution Platforms

Elastomer Adhesives & Coatings
Structural Adhesives
Protective Coatings
Electronics
Motion and Vibration Control
Assemblies
Electro-Mechanical Motion and
Vibration Control Systems
Sensing Systems

Core Sciences & Technologies

Surface Science
Polymer Science
Material Science
Mechanical Design
Dynamic Systems
Control Systems
Wireless Sensing
Energy Harvesting
Inertial/Orientation Technologies
Displacement Sensing

Serving the World's Leading Companies

CATERPILLAR



JOHN DEERE



TRELLEBORG

SPACEX

CHRYSLER



BRIDGESTONE



VISHAY



United Technologies



HONDA



Bell Helicopter



BOEING

LOCKHEED MARTIN



LEONARDO

AIRBUS



Ri



Mercedes-Benz

Nate Ouellette

Technical Project Manager, Global Technology & Quality

- Mechanical Engineer by Education
- PLM Consultant for 5+ years
- Joined LORD Corporation March 2016
- Using Innovator for Document Management in Production today
 - Next phases include expanded Document Management Functionality including Export Controls and CAPA (Corrective Action Preventive Action)
 - Innovator 11.0 SP8 with Office Connector 11.0R3



LORD Document Management Overview

QUALITY AND TECHNICAL DOCUMENT MANAGEMENT

- Configured Workflows
 - Change Management
 - Automatic Review Periods
- Business Logic Driven by Aras Innovator
- Integration with Microsoft Office Suite
 - Document Updates
 - PDF Viewable Generation
 - Automatic Blackline/Differential Creation
- Workflow Voting from Email Notifications
- Workflow & Task Assignment Reporting
- Custom Dashboards
- Export Classification Security

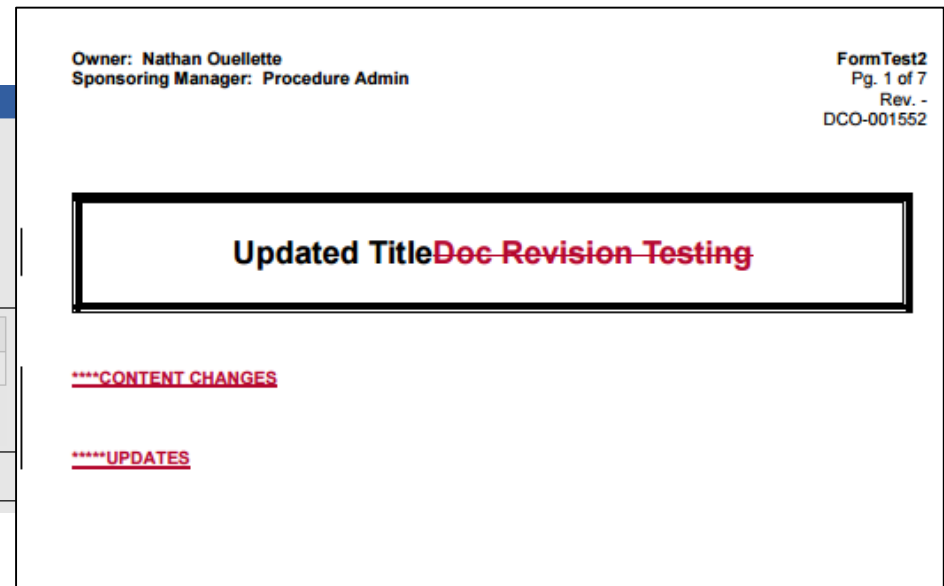
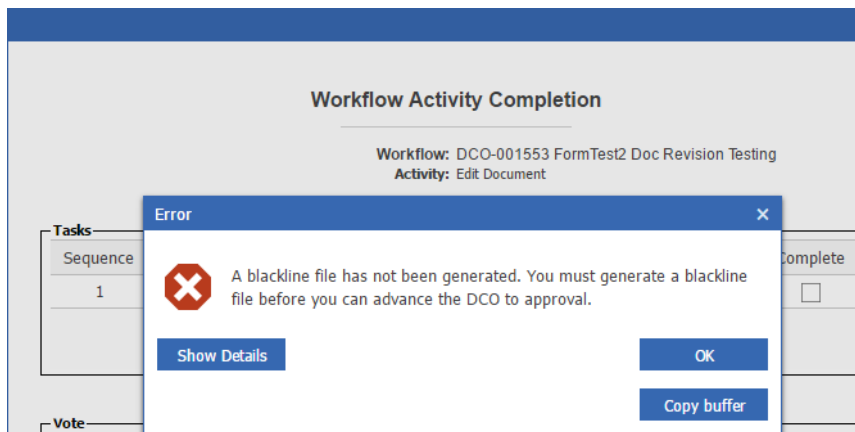


Business Rules

INTELLIGENT PROCESSES THAT ALIGN WITH CUSTOMER GOALS

Blackline Creation & Validation

- Utilize Office Connector with Microsoft Word to capture document changes version to version and store as a PDF in Innovator
- No need to track changes in the documents themselves
- Workflow is configured to confirm latest blackline that has been generated includes the most recent changes

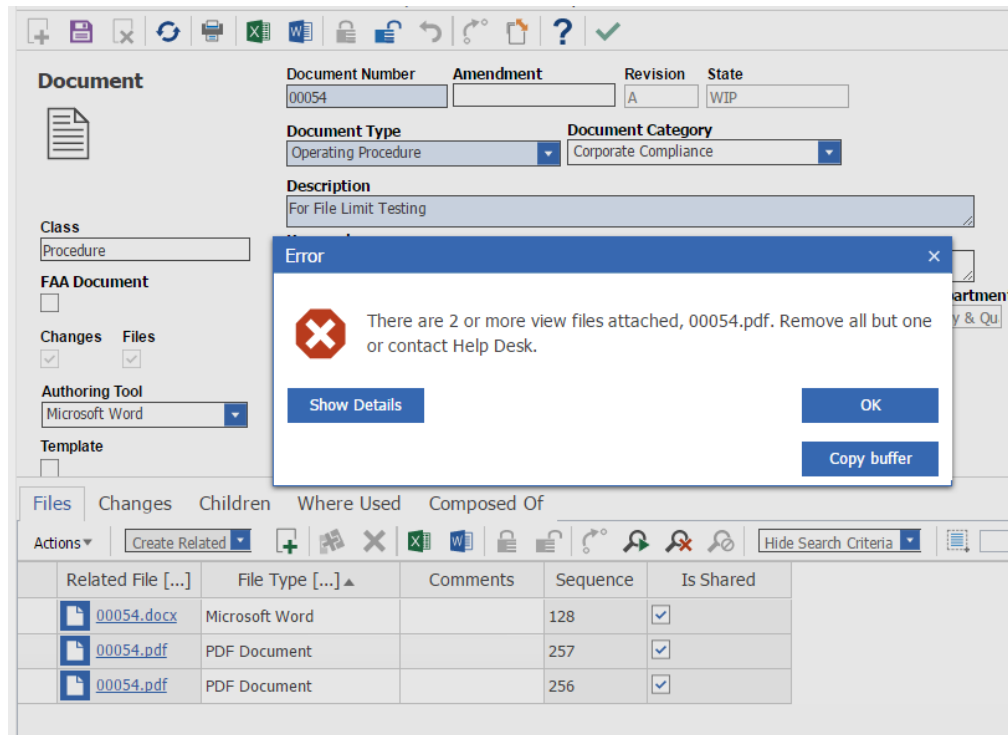


Business Rules

INTELLIGENT PROCESSES THAT ALIGN WITH CUSTOMER GOALS

Document File Limit Validation

- Logic in methods are configured to run validation checks on certain events in the UI – like on Save – to check for data quality issues
- Checks are configured to verify if duplicate blackline or viewable files have been attached in error



The screenshot displays a document management system interface. An error dialog box is overlaid on the main window, indicating a validation failure. The dialog box contains the following text: "Error: There are 2 or more view files attached, 00054.pdf. Remove all but one or contact Help Desk." Below the text are three buttons: "Show Details", "OK", and "Copy buffer".

The background interface shows the following details for a document:

- Document Number:** 00054
- Amendment:** (empty)
- Revision:** A
- State:** WIP
- Document Type:** Operating Procedure
- Document Category:** Corporate Compliance
- Description:** For File Limit Testing
- Class:** Procedure
- FAA Document:**
- Changes:** **Files:**
- Authoring Tool:** Microsoft Word
- Template:**

At the bottom of the interface, there is a table with the following data:

| Related File [...] | File Type [...] | Comments | Sequence | Is Shared |
|----------------------------|-----------------|----------|----------|-------------------------------------|
| 00054.docx | Microsoft Word | | 128 | <input checked="" type="checkbox"/> |
| 00054.pdf | PDF Document | | 257 | <input checked="" type="checkbox"/> |
| 00054.pdf | PDF Document | | 256 | <input checked="" type="checkbox"/> |

Business Rules

INTELLIGENT PROCESSES THAT ALIGN WITH CUSTOMER GOALS

Document Creation Based on Role

- Document Creation is dictated by the type of document mapped to appropriate roles in the system
 - Tied to Active Directory Groups
- Permissions enforce who is able to search for and find documents

| Server Events Actions Life Cycles Workflows TOC Access TOC View Client Events Can Add Permissions Reports Poly Sources | | |
|---|-------------------------------------|------------|
| Actions ▾ Pick Related ▾ [Icons] Hide Search Criteria ▾ [Icons] | | |
| Name ▾ | Can Add | Class Path |
| Lord Procedure Admin | <input checked="" type="checkbox"/> | Form |
| Lord Procedure Admin | <input checked="" type="checkbox"/> | Procedure |

Permission



Created By:
Created On: 6/24/2016
Modified By:
Modified On: 12/14/2016
Locked By:
Major Rev: A
Generation: 1
State:

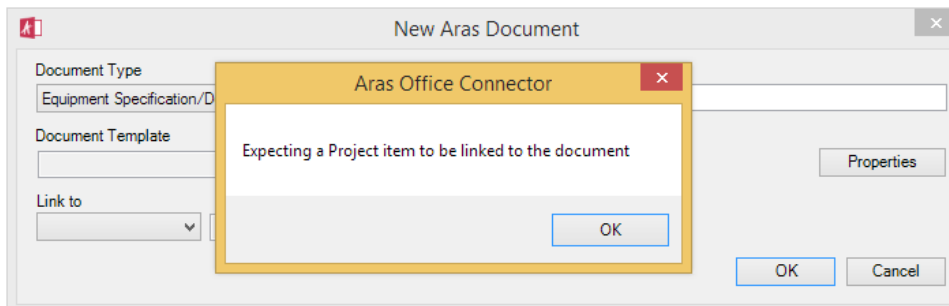
| Name |
|-------------------------|
| Lord Document Review |
| Lord In Review Document |
| Lord New Document |
| Lord Released Document |

Business Rules

INTELLIGENT PROCESSES THAT ALIGN WITH CUSTOMER GOALS

Document Link to Related Item Checking

- Preference Configurations allow for controlling the types of linked objects that are allowed per Document Type
 - Parts (Items) and Projects
- Tied to integrations with SAP and our internal Project Management System
- Linking is configured to validate the linked item is of the expected type



| | LPD Project Nu... | LPD Project ID | Name | Status | Customer [...] |
|--|-------------------|----------------|------------------------------|--------|----------------------|
| | PROD120096 | 120096 | Subsea Flexible Pipe Bend... | New | LORD |

Business Rules

INTELLIGENT PROCESSES THAT ALIGN WITH CUSTOMER GOALS

Document Relationship Constraints based on Type


- Custom method blocks child relationships from being created for documents that are to be children only

Files Changes Children **Where Used** Composed Of Items Projects

+ - ↻ 📄

| Document Number | Revision | State | Type | Description |
|-----------------|----------|----------|-----------|------------------|
| QualFAATest | - | Released | Procedure | Quality FAA Test |
| QualDocsTesting | B | | | |

Error [X]

 Documents of type Form cannot have children.

Show Details OK Copy buffer

Reporting and Configured Notifications

KEEPING PROCESS OWNERS AND STAKEHOLDERS ENGAGED

Automatic Review Cycle for Documents

- Documents that require reviews after a specified duration are automatically initiated by Innovator
- Use RemoteInBasket application for voting directly from email notifications

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Hello:

The document identified as NPO - Review Test with the title 'for email voting testing' is now due, or possibly overdue, for review. This document should be reviewed at least every 12 months.

1 - Please REVIEW the document using the following Aras Innovator link.

[NPO - Review Test](#)

2 - After reviewing the document, submit your document review vote by completing the appropriate task found in your Aras Innovator InBasket. Valid voting options include:

[Remote InBasket](#)

Ok As Is

Should Be Revised

Should Be Made Obsolete

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Workflow Activity Completion

Workflow: REV-001034
Activity: Review Document
State: Closed
AssignTo: Test User2
Closed By: Remote InBasket
7/27/16 11:13 AM
Vote: Should Be Revised
Comment:

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Reporting and Configured Notifications

KEEPING PROCESS OWNERS AND STAKEHOLDERS ENGAGED

Document Change Order (DCO) PDF Reports

- Reports automatically generated and attached to completed DCOs that can be utilized directly by customers

| LORD Document Change Order | | | | | |
|----------------------------|-------------------------------------|------------------|-----------------------------|---------------------|----------------------|
| DCO Number | DCO Title | | New Revision | Document Type | |
| DCO-001626 | ProcedureTest ACE Presentation Prep | | - | Procedure | |
| Change Reason | | | | | |
| New document | | | | | |
| Signoffs | | | | | |
| Role | Name | Title | Department | Action | Date |
| Document Owner | Nathan Ouellette | Sr IS Specialist | Global Technology & Quality | Submit for Approval | 3/15/2017 3:50:55 PM |
| Sponsoring Authority | Procedure Admin | | | Delegate | 3/15/2017 3:51:28 PM |
| Sponsoring Authority | Nathan Ouellette | Sr IS Specialist | Global Technology & Quality | Approve | 3/15/2017 3:52:10 PM |
| Approver | Nathan Ouellette | Sr IS Specialist | Global Technology & Quality | Approve | 3/15/2017 3:52:21 PM |

Reporting and Configured Notifications


KEEPING PROCESS OWNERS AND STAKEHOLDERS ENGAGED


Active DCO Report

- Custom email reports sent to managers outlining active tasks in Innovator of their direct reports
- Automatically sent weekly using the Scheduler Service

Reply Reply All Forward IM

Mon 2/13/2017 3:32 PM

 Innovator Admin <innovatordev@lord.com>
Your Team's DCO Activity Summary

To  Ouellette, Nathan

Your Team's DCO Activity Summary

| Name | DCO Title | Document | Activity Name | Due Date |
|------------------|--|---------------------------------|------------------|-----------|
| Nathan Ouellette | LOP-242 Inspection Certification Program | LOP-242 | Approvers Review | 2/18/2017 |
| Nathan Ouellette | QualTestForm3 Quality Doc Test Form 3 | QualTestForm3 | Edit Document | 3/16/2017 |
| Nathan Ouellette | QualDocsTesting Title | QualDocsTesting | Edit Document | 3/16/2017 |

Reporting and Configured Notifications

KEEPING PROCESS OWNERS AND STAKEHOLDERS ENGAGED

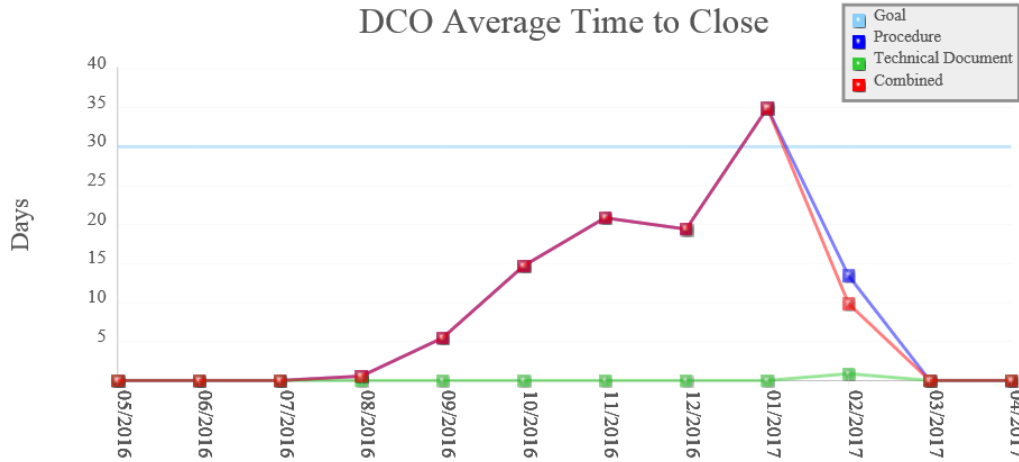
Custom Security Report Available On-Demand

- Custom security report generation that displays permissions in Innovator based on Active Directory group membership
- An audit requirement that is easy to produce through Innovator
 - Excel format that is sortable
 - Available on-demand by Administrators; Always current

| Identity | Item Type | Export Class | Access (Discover includes Get) | Assigned to Identity |
|------------------------------|--------------|--------------|--------------------------------|--|
| ActiveDirectoryGroup-Example | Item-Example | EXAMPLE | UPDATE | ItemType_EXPORT CLASSIFICATION_LIFECYCLE STATE |
| ActiveDirectoryGroup-Example | Item-Example | EXAMPLE | GET | ItemType_EXPORT CLASSIFICATION_LIFECYCLE STATE |
| ActiveDirectoryGroup-Example | Item-Example | EXAMPLE | UPDATE | ItemType_EXPORT CLASSIFICATION_LIFECYCLE STATE |
| ActiveDirectoryGroup-Example | Item-Example | EXAMPLE | GET | ItemType_EXPORT CLASSIFICATION_LIFECYCLE STATE |
| ActiveDirectoryGroup-Example | Item-Example | EXAMPLE | GET | ItemType_EXPORT CLASSIFICATION_LIFECYCLE STATE |
| ActiveDirectoryGroup-Example | Item-Example | EXAMPLE | UPDATE | ItemType_EXPORT CLASSIFICATION_LIFECYCLE STATE |
| ActiveDirectoryGroup-Example | Item-Example | EXAMPLE | GET | ItemType_EXPORT CLASSIFICATION_LIFECYCLE STATE |
| ActiveDirectoryGroup-Example | Item-Example | EXAMPLE | DISCOVER | ItemType_EXPORT CLASSIFICATION_LIFECYCLE STATE |
| ActiveDirectoryGroup-Example | Item-Example | EXAMPLE | UPDATE | ItemType_EXPORT CLASSIFICATION_LIFECYCLE STATE |

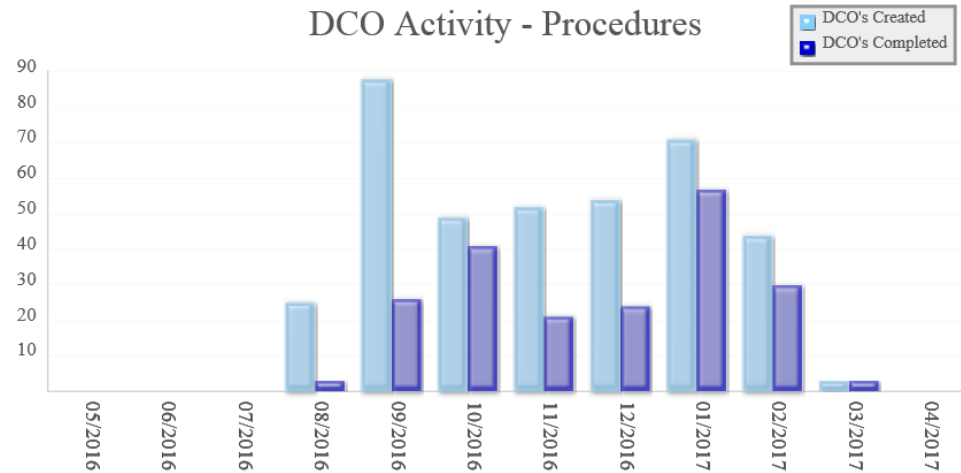
Dashboards

TAILORED VISUALS OF KEY PERFORMANCE INDICATORS



Overall Document Change Efficiency View

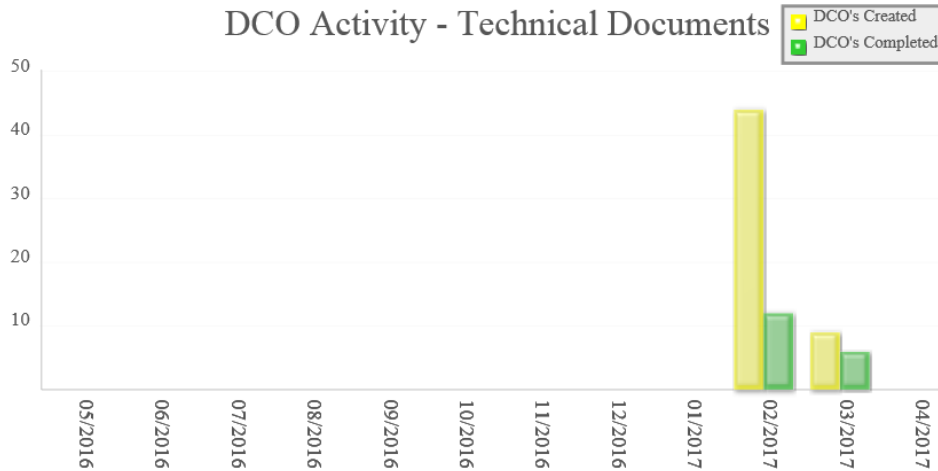
Document Type Activity Breakdown – Quality Documents



Dashboards

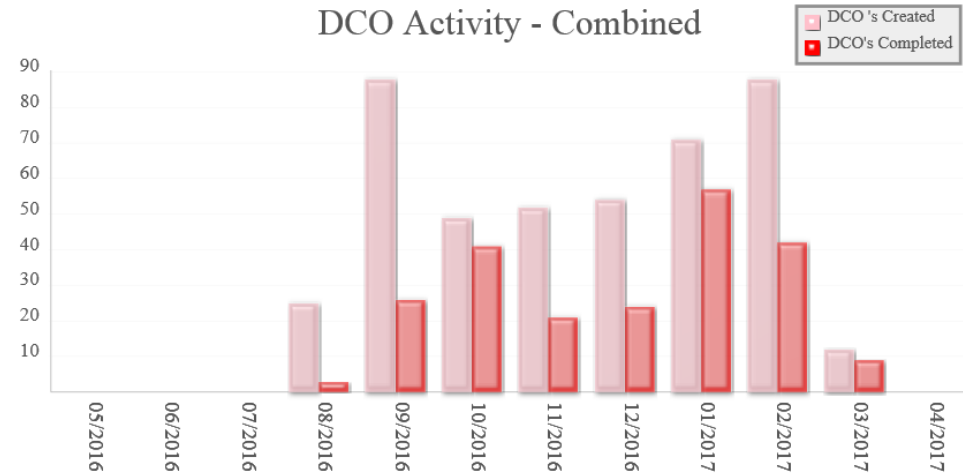
TAILORED VISUALS OF KEY PERFORMANCE INDICATORS

DCO Activity - Technical Documents



Document Type Activity Breakdown – Technical Documents

Combined Document Change Activity Per Month



THANK YOU

Nathan_Ouellette@lord.com