

Evaluating Legacy Processes to promote new technology implementation plan

#ITCon22

Case Study: Optimizing Digital Document Management

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Manager of Project Solutions



Mortenson – Headquarters: Mpls, MN

- 17 Operating Groups – 9 Regional Offices
- Over 5000 employees, 2500 FTE Project Facing
- Diverse Markets: Healthcare, Hospitality, Stadiums, Data Centers, Solar, Wind, Battery

Alison Hart: Manager of Project Solutions

- 25 yrs in Industry: CM Degree, GC, Owners Rep, Project Mgmt
- Joined Mortenson in January 2016 – evolved department from “controls to solutions”
- Team of 3; Focus on Field facing Technology & Process alignment
- Deep understanding of construction and core applications
- Training and Change Mgmt
- Conduit between “field and IT”
- Voice of the Field to advocate for new technology, and enhancing current technology investments

Today's Discussion



EVALUATION

Looking at Systems and
Processes Holistically



USER ENGAGEMENT

Problem Statement & Ideation



METRICS

What we learned, pivot,
adjust, improve



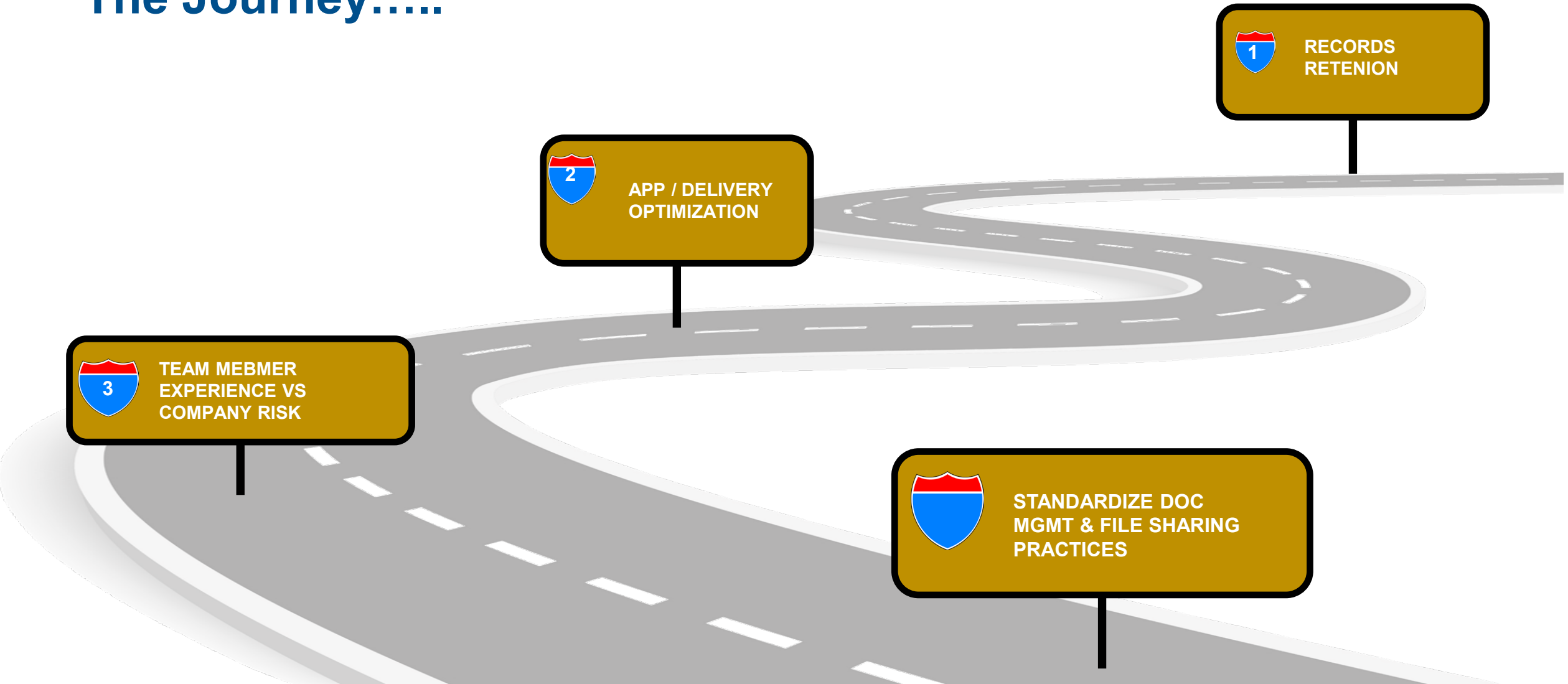
CONFERENCE

FOR CONSTRUCTION PROFESSIONALS

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The Journey.....



Evaluation

Technology needs to align with Document Management Strategy

RECORDS RETENTION

Overview:

- Decrease retention policy to reduce company risk in a digital age

Approach:

- Survey users to understand challenges
- Legal to drive policy change, while considering Team Member experience

Learnings:

- Minimal standardization across Operating Groups, in consistencies with cross functional roles
- Doc Mgmt practices do not align with core systems and processes
- Uncertainty in project archiving

APPLICATION AND DELIVERY OPTIMIZATION

Overview:

- Application Optimization will identify business processes across the construction lifecycle and tools used to support each operating group for these processes.

Approach:

- Team Member Engagement, diversity of roles through various project lifecycle in differing markets
- Review findings and prioritize opportunities for improvement. Quick Hitters vs Big Ideas

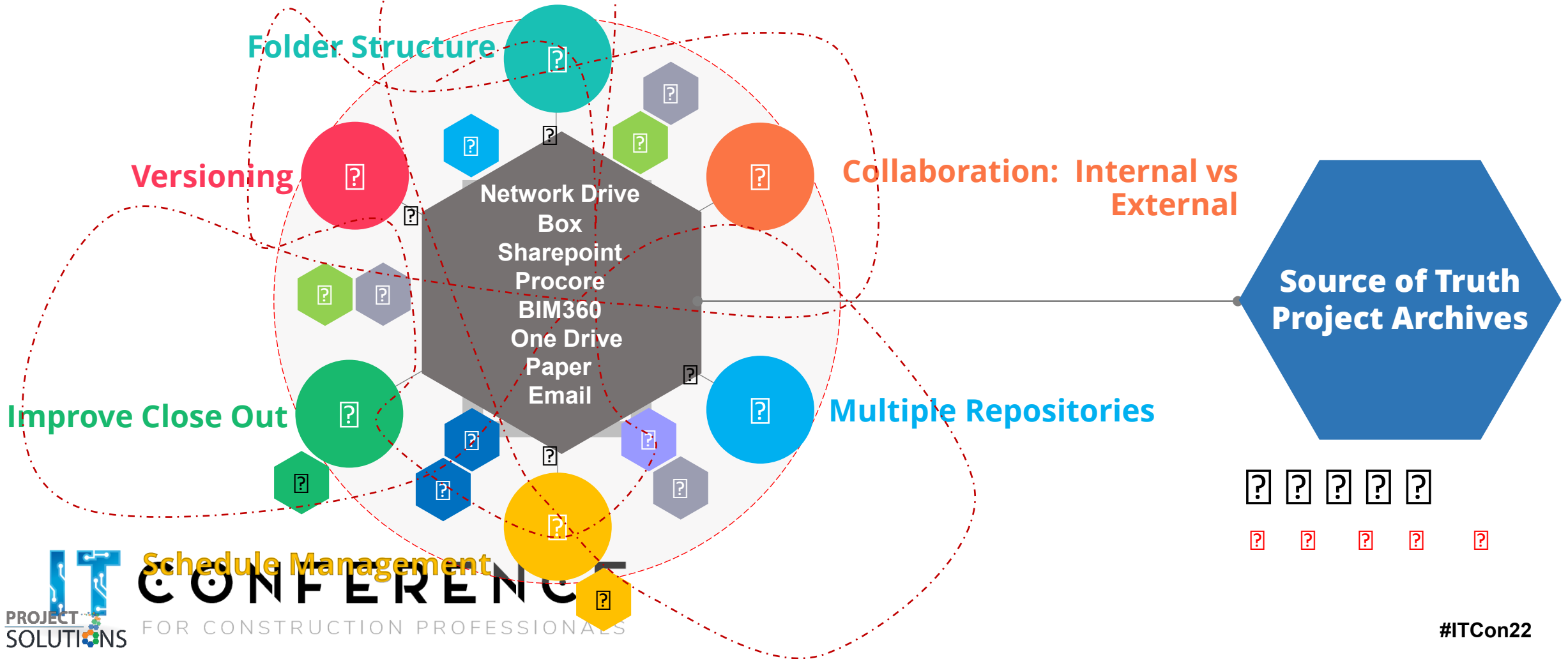
Learnings:

- Redundancies = Inconsistencies
- Simplification for the Field
- Technology Sprawl leads to data loss, reduce the stack and identify “good enough”

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What Problem are we Trying to Solve?

Simplify. Lean up our processes. Standardize (Kinda)



Challenge 1 – Timing for Core Systems Set-Up

- BD vs design phase vs construction
- Pursuit vs Selection vs Sale

Challenge 2 – External File Sharing

- Multiple options
- Microsoft vs Google: Account Set-up

Challenge 3 – Multiple Sources of Truth

- Syncing
- Internal vs external

Challenge 4 – Inconsistent Project File Structure

- Important for records retention

Challenge 5 – Access Control

- Manual and redundant efforts for permissions

Challenge 6 – Increase in Multi-Group Collaboration

Challenge 7 – Culture:

- Wants/Needs for flexibility
- Inconsistent behavior on solid organizational habits

Focus: Standardize Doc Mgmt & Project Technology Systems

Simplification Opportunity: Standardize and simplify file storage and sharing processes across various platforms, tools and operating groups..

Vision



Streamline
processes
to be **frictionless**



Support a **single source of truth** to
enable all
Mortenson
businesses



Improve the
collective team member
experience



Prepare the
organization
for the future

Case Study: Microsoft Teams during Course of Construction



Phase 1 Scope: Cloud Collaboration

Approach:

- Document storage and sharing and archival, online meetings, chat
- Standardize Folder Structure
- Defined 3rd party and/or guest access procedures
- Intake Procedure: Define Projects vs AdHoc Requests
- Clean up closed projects still on Legacy system
- Reviewing active projects for any candidates to convert to Teams without project disruption

Teams Request & Set Up

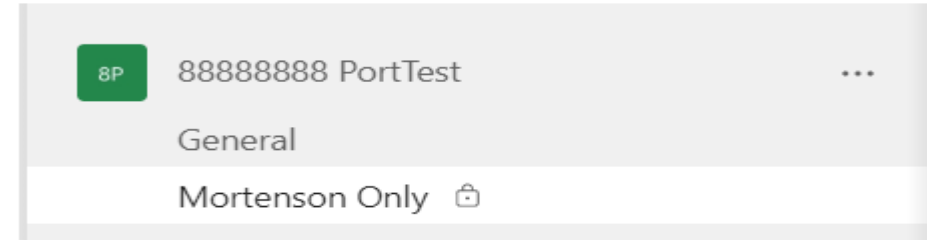
New Project Set Up Request Process:

Just like before, at the start of your project,

[Teams for Project Request Form](#)

in ServiceNow.

- Two team members to be set up as “Teams Owners”
- Team owners invite members (Mortenson and external collaborators) to the Teams site
- Set Up includes:
 - Team Site, General Channel, Mortenson Only, OG Folder Structure, Sync to Project Archive

A screenshot of the 'Mortenson Only' tab in Microsoft Teams. The top bar shows '8P Mortenson Only' with tabs for 'Posts' and 'Files'. Below the bar are action buttons: '+ New', 'Upload', 'Sync', 'Copy link', 'Download', and 'Add cloud storage'. The main area is a table titled 'Mortenson Only' with columns for 'Name', 'Modified', and 'Modified By'. The table lists 12 folders, all created by 'Teams Automation' on various dates in 2020.

Name	Modified	Modified By
00 - Team Members	August 18, 2020	Teams Automation
01-Preconstruction	December 10, 2020	Teams Automation
10-Owner Customer	December 10, 2020	Teams Automation
11-Arch Eng Consultants	December 10, 2020	Teams Automation
13-Govt Agencies	December 10, 2020	Teams Automation
21-Construction Issues	December 10, 2020	Teams Automation
25-Construction Docs	November 16, 2020	Teams Automation
26-VDC BIM	November 16, 2020	Teams Automation
32-Sub Material Contracts	December 10, 2020	Teams Automation
41-Submittals	December 10, 2020	Teams Automation
52-Mtg Minutes	December 10, 2020	Teams Automation
53-Reporting	December 10, 2020	Teams Automation
55-Personnel	December 10, 2020	Teams Automation

▶▶ Managing Access & Sharing

Channels are Sharepoint Sites

- **General Channel (Replacement for Box)**
 - External & Internal Collaboration Space
 - Adhoc Folder Street
- **Mortenson Only (K/Drive Replacement)**
 - Operating Group Folder Structure
 - Syncs weekly to Archive (Project Retention)
 - Private Channel – Mortenson Use Only
 - Requires additional access by Team Owner
 - Locked down for external access (additional security)
- **Access vs Sharing for External Partners**
- **Invite to Teams:**
 - Collaborate freely in General space: folders, docs, chats, posts
 - Risk: accidental sharing in wrong channel
- **Sharepoint – Folder / Doc Level:**
 - Restricted access control
 - Lose in total Team Collaboration

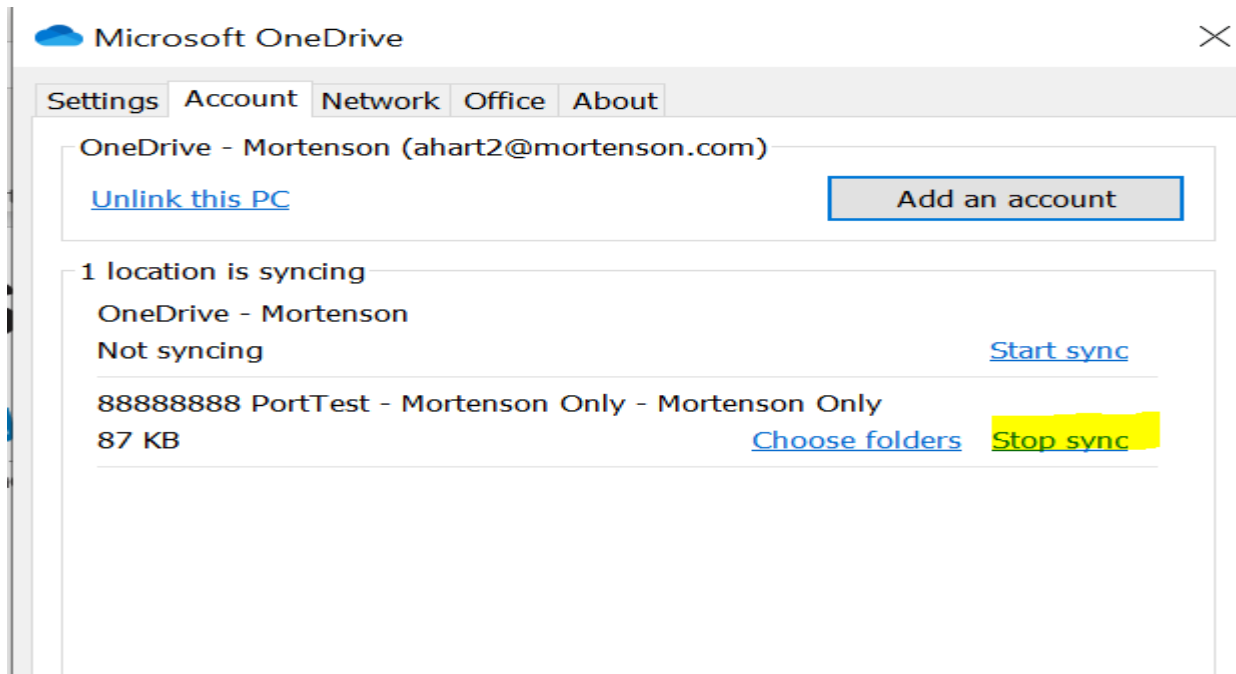
Syncing Overview

Sync from Sharepoint to Local One Drive

Benefits

- Set up One Time Sync, syncs back to Team / Sharepoint site
- JIT File Access
- Download to Device / Offline access
- File Explorer (looks like Kdrive)
- E outside of O365 tools (aka: Bluebeam)

Stop Sync before Delete



One Drive Icons:



Online-only

These files don't take up space on this device, and they download as you use them.



On this device

When you open a file, it downloads to your device so you can edit it while you're offline.



Always available

Right-click a file to make it available offline.

►► Syncing Overview

Sync from Sharepoint to Local One Drive: access

Benefits

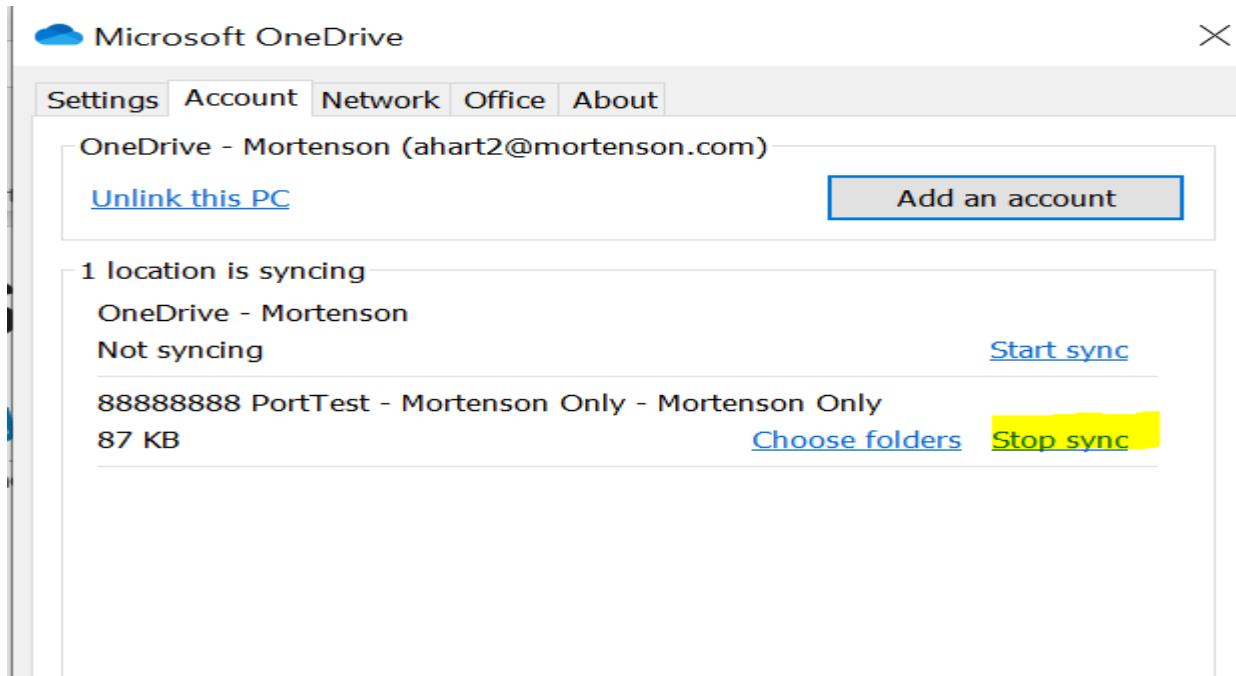
Ways to access: SP, Teams, One Drive (benefits of each)

Icons

Stop Sync process

Be

Stop Sync before Delete



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Phase 2 Scope: Advancing Teams and Reducing

Approach:

- Current state for PreConstruction Document Collaboration
- Standardize Folder Structure (Again!)
- Lean out redundancies
- Establish Close Out process

Example: Matrix

Document Storage Location Schedule

Rule of Thumb: If it's a paper process & doesn't exist electronically, it should be archived. If it exists electronically in one of the Long Term Storage (L) locations identified to the right, it should not be printed.

(L) Long Term Storage

(T) Temporary Storage (download/upload)

(S) Shared Location

(A) Archive Location

01 – Pre-construction

	Folder Owner	Salesforce	WinEst	Network Drive - Estimating	Building Connecting	Network Drive - Design Phase	Teams for Projects (Mortenson On	S:Drive (Financials)	Procore	Intelex	P6 / Asta	ArcGIS	Power
01-1 Pre-Proposal Correspondence Estimate (Original or Lump Sum Estimates for Project)	DPAT			L		S	S		L			S	S
01-2 Alternates (for specific Project)				L		S	S		L			S	S
01-3 Subcontractor Bids/Proposals/Material Supplier Quotations (In order, by CSI number)				L					L				
01-4 Unit Prices				L					L				
01-5 Value Engineering				L		S	S		L			S	S
01-6 Pre-Construction Meeting Minutes		L		T		S	S	L	T			S	S
01-7 Schedules				L		S	S		L			S	S
01-8 Interested Proposals (by CSI Section)				L					L				
01-9 Inactive/unsuccessful Proposals (by Division)				L					L				
01-10 Advertisement for Proposals				L					L				
01-11 Proposal Packages				L					L				
01-12 Documents (Contract Drawings and Specifications)		L		T		S	S	L	T			S	S

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Targeted Outcomes

- Define which Project doc's stay in system vs move or archive
- Use existing applications when possible to improve team member experience, including external partnerships
- Standardize Folder Structure across, leaving room for flexibility
- Prescriptive guidelines for what needs to be saved where and when
- Establish Close Out process, including process for core applications used during course of construction

Questions?