

# ACCELERATE NOV 11-12, 2019 | Vejle, Denmark ProjectWise



## Lead Your Firm Into The Era of Digital Project Delivery

ProjectWise 2019 Product Strategy  
Sam Stuart



# ProjectWise Portfolio



<b>Design Integration</b>	<b>Automated Publishing</b>	<b>Project Share (Web)</b>	<b>Deliverables Management</b>	<b>Project Insights</b>	<b>Issues Resolution</b>	<b>Forms Management</b>
Application Integration Dependencies Workflows (BS 1192) Reference Files Workspace Mgmt Geospatial Management	On-demand PDFs Automated PDFs Automated iModels Intelligent Deliverables	Secure, PW DI access Easy content, file exchange Timely reviews / approvals PDF Markup Office 365 integration	Transmittals Submittals RFIs General Correspondence	Project Analytics Document trends Planned vs Actual CAD QA checks	Identify Issues Track / assign BIC Resolve Issues Integrated Applications and Apps	Configurable and standard forms Integrated reporting & dashboards

Microsoft 365

---

# Team Coordination and Collaboration



Continued Investment in ProjectWise Design Integration & ProjectWise Explorer

NEW: Secure Web Access for Reviewers and Contributors

Streamline Collaboration with Extended Team through Microsoft 365 Integration



# PWDI Update

# What's new in PWDI 3.0 and later

## PW Server enhancements

- Workflow Rules Engine – full support for server side processing.
  - Enables WRE for PW 365 services
- Updated OS and DB support
  - Current SQL version support: SQL 2017
  - Current OS level Support: Win 10 and Win Server 2016

## PW Admin enhancements

- Storage Area white list (security)
- Installer updates, including scripting improvements
- PowerShell

## PW Explorer Enhancements

- Time zone conversion to user local time
- Network control panel – Force use of encrypted protocol
- Deleted Items Folder

## Application Integration

- MicroStation Update 13
- Autodesk 2020

# Application Integration

## MicroStation and Design Engineering Applications

- Full support for Item Types
- DGN Indexing
- Sheet Indexing
- Managed workspace performance

## Autodesk products

- AutoCAD
  - Profile support
- AutoCAD Civil 3D
  - View Frame groups- Sheet sets
- Revit
  - Project Creation Wizard

## Office 365

- WOPI Integration for PW Explorer
  - Seamless user interface integration
  - Multi file edit
  - Improve handling of Office 365 update streams

# PWDI Update 3.3

## Planned Released modules

- PW Explorer
- PW WSG Plugin for PW Web and Web View service

## Feature list :

- PDF markup service integration
- Column Filters (progression of version toggle)
- Continued improvements to MicroStation integration

## Target release

- Q4 2019

# iCS for PDF 3.2

- Remote Administration
  - Improved access to Advanced Configuration Properties
  - Better admin visibility of active jobs on the server
- Better output filename control
- Partial Folder Mirroring
- Recursive Folder Input
- Incremental Job Change Criteria
- Updated ProjectWise InterPlot Organizer for Bentley Hosted Implementations
  - Support iCS for PDF and Office Attribute Exchange when Microsoft Office is not loaded. ProjectWise Design Integration 3.2 required.



# Bentley Automation Service 3.2

- iCS for iModels
  - Remote Admin
    - Improved access to Advanced Configuration Properties
    - Better admin visibility of active jobs on the server
  - Additional job monitoring details
    - Queue Name, Queue Position, Message Processing Time, Is Service Running, Memory, CPU Time, Request ID
    - Color coded job status

# Bentley Automation Service – iModel Bridge Automation

- Automates the ‘bridging’ of project data managed in ProjectWise to a project Digital Twin
  - Detects incremental changes
  - Transforms data into aligned structure
  - Aggregates changes from many sources into a single, consistent iModel
- Users can contribute digital engineering models without any change to existing applications or formats
- Bentley Hosted only – Allows for continual updates to BAS and iModel Bridge, including the addition of new iModel Bridges
- Requires iTwin Service Subscription

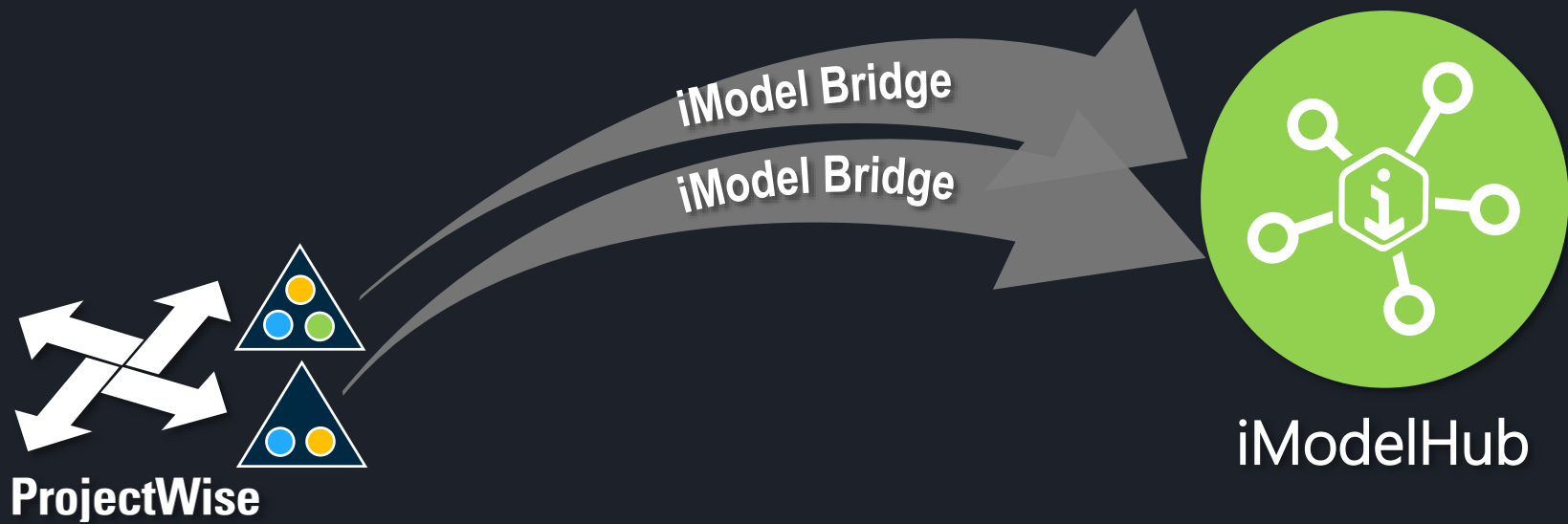
**SmartPlant**  
3D

**Bentley**<sup>®</sup>

- OpenRoads Designer
- OpenBuildings Designer
- MicroStation
- ...

AUTODESK<sup>®</sup> DWG<sup>™</sup>

AUTODESK<sup>®</sup> REVIT<sup>®</sup>



# Azure Search

- ProjectWise Design Integration will utilize the Azure Search Service for full text and metadata queries from ProjectWise Explorer
  - Solves issues with current Windows Search technology, including failures with large amounts of data and inconsistent results
- Leverages ProjectWise FTR extraction
  - Utilizes iFilters and MicroStation for text extraction processing
  - Azure Search Indexing happens in the cloud
- No changes in the ProjectWise Explorer search experience
- Microsoft Search Server is still an option for non-CSS users
- Undergoing performance testing



# PROJECTWISE WEB

- REPLACEMENT FOR PW WEB SERVER
- ENABLE WEB ACCESS TO PROJECTWISE DATA
- CONNECT TO WORK AREA VIA CONNECTED PROJECT
- PROJECT-BASED ENVIRONMENT
- SAFER TECHNOLOGY, NO RISKY ACTIVEX CONTROLS
- NO CLIENT INSTALLS OR ONSITE CONFIGURATION



# PRIMARY USERS

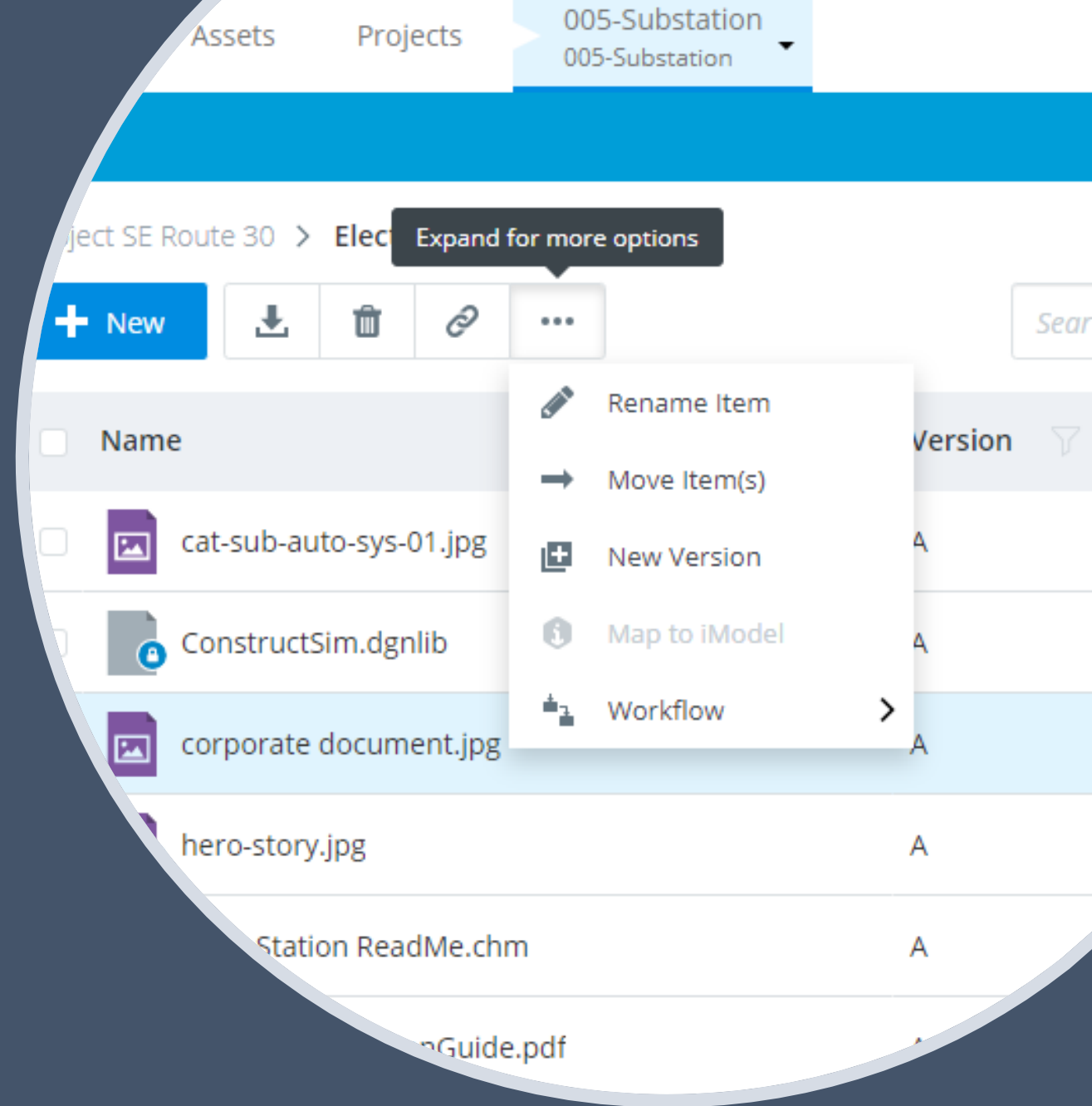
- NON-CAD BIM USERS
  - USERS WHO DO NOT AUTHOR DESIGN FILES
  - USERS WHO DO NOT WORK WITH DESIGN FILES ALL DAY
  - USERS WHO NEED TO REFERENCE FILES FOR INFORMATIONAL PURPOSES – NO BIM/REVIEW WORKFLOWS
- WHO NEED TO ACCESS:
  - OFFICE365 FILES
  - PDF FILES
  - IMAGE FILES
  - DESIGN FILES (DOWNLOAD ONLY)



# PROJECTWISE WEB

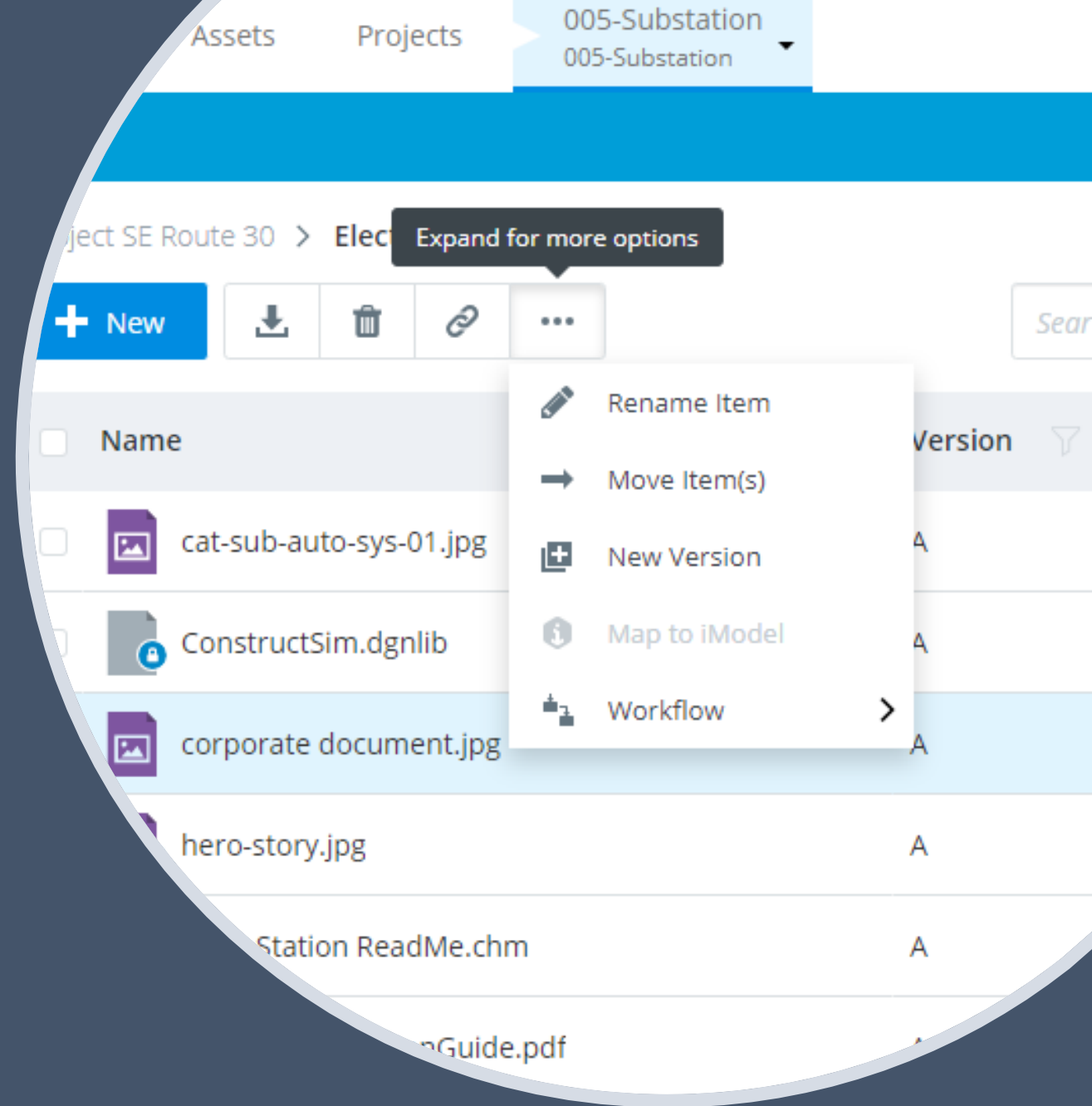
## AVAILABLE NOW!

- ALLOW MULTIPLE WORK AREA CONNECTIONS
- OFFICE 365 INTEGRATION
- DOWNLOAD MASTER FILES WITH REFERENCES
- PDF REVIEW AND MARKUP
- CREATE/MOVE NEW FILES AND FOLDERS
- CREATE NEW VERSION WITH COMMENTS
- DOWNLOAD MULTIPLE FILES
- LINK TO FOLDER OR DOCUMENT
- LOCK/UNLOCK – LOCKED TO USER
- PROJECTWISE STATE WORKFLOW
- REVIEW FILE PROPERTIES
- EXPORT AUDIT TRAIL INFORMATION
- DRAG & DROP FILES FOR UPLOAD
- PROJECTWISE SAVED SEARCHES
- SHOW ALL VERSION OR LATEST VERSION
- PROJECTWISE SET SUPPORT
- FRIENDLY ATTRIBUTES IN GRID COLUMNS
- OPEN IN PROJECTWISE
- ...AND MORE



# PROJECTWISE WEB *CONTINUOUS* UPDATES ROADMAP

- [TILE ON CONNECTION CENTER](#)
- DESKTOP SYNCHRONIZATION
- ADVANCED SEARCH
- [EDIT ATTRIBUTES](#)
- [DOCUMENT CODING/WIZARD](#)
- REVIEW CAD FILES
- [MARKUP DRAWING FILES](#)
- CREATE ISSUES ON DRAWING FILES
- PROJECTWISE LINKS
- THUMBNAILS





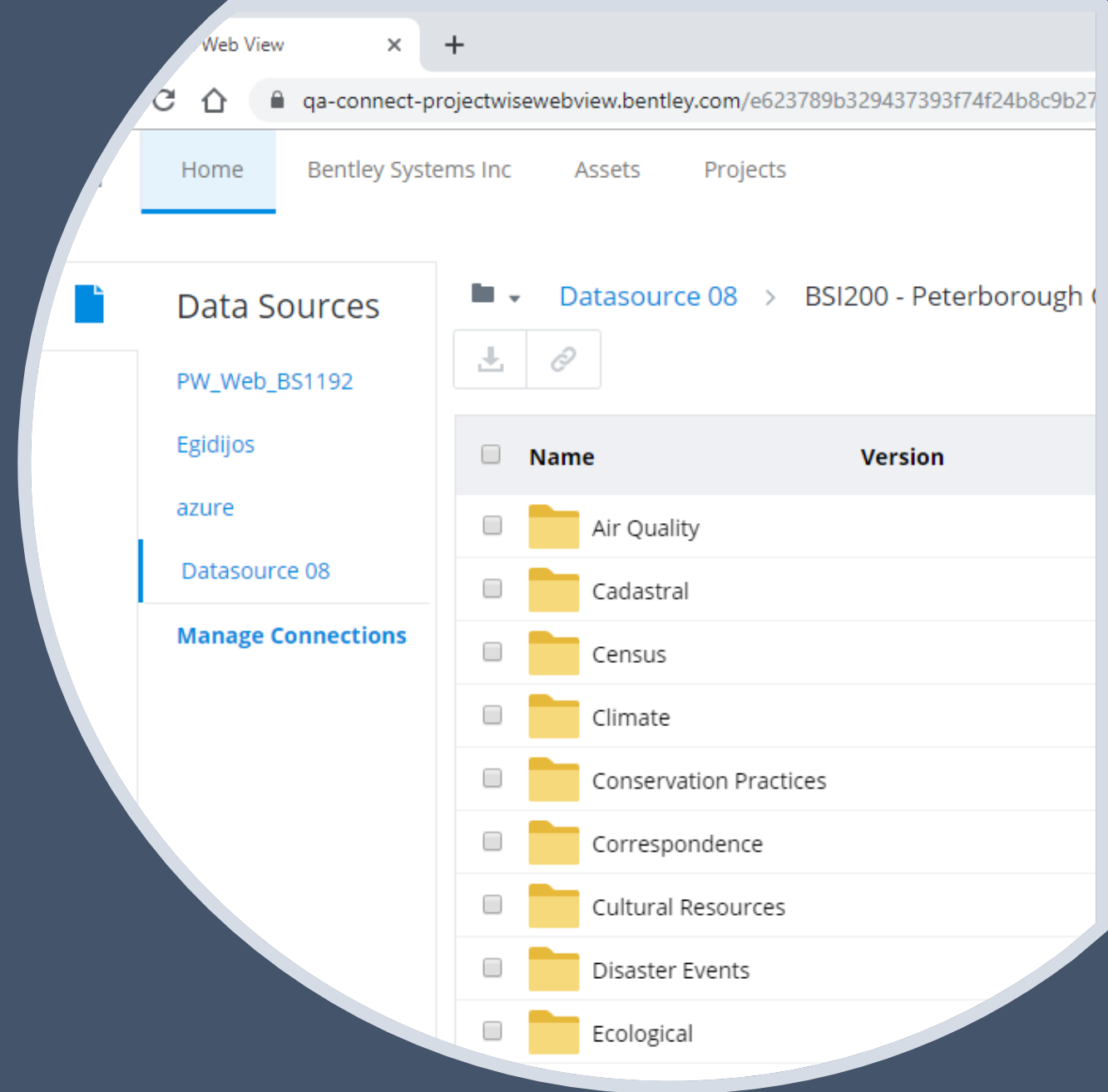
# PROJECTWISE WEB VIEW

- ENABLE READ-ONLY WEB ACCESS TO PROJECTWISE DATA
- PROVIDE DATASOURCE LEVEL NAVIGATION
- SAFER TECHNOLOGY, NO RISKY ACTIVEX CONTROLS
- NO CLIENT INSTALLS OR ONSITE CONFIGURATION
- NOT PROJECT BASED, NO INVITATIONS NEEDED



# PROJECTWISE WEB VIEW

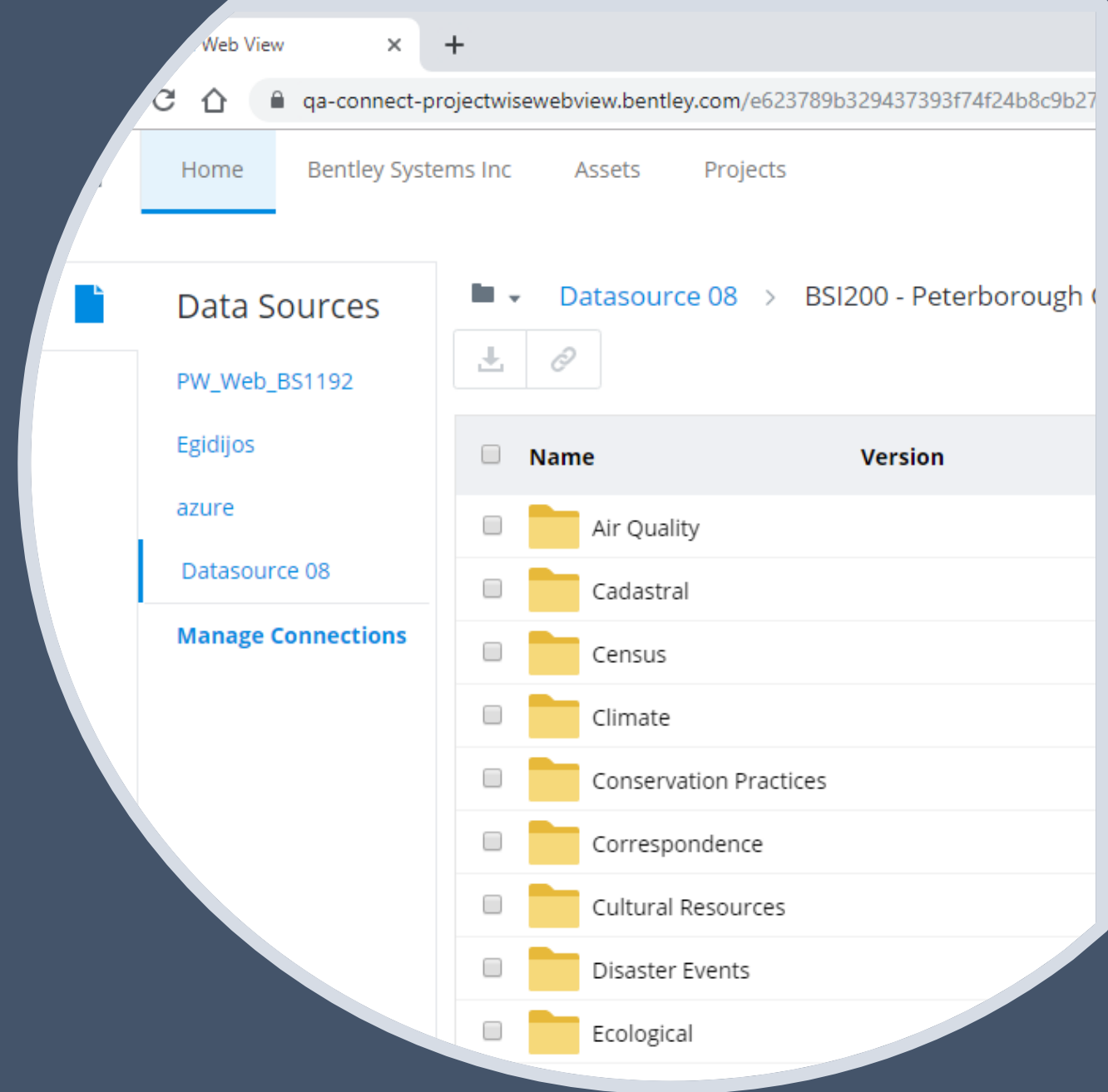
- DATA SOURCE LEVEL ACCESS
- NEW TILE/PORTAL ON CONNECTION CENTER
- IMS ACCOUNT / LOG IN
- READ-ONLY ACCESS
- NAVIGATE FOLDER STRUCTURE
- BASIC SEARCH
- OPEN PDFS, OFFICE DOCUMENTS AND IMAGES
- DOWNLOAD MASTER FILE WITH REFERENCES
- VIEW PROPERTY PANEL WITH PROPERTIES, ATTRIBUTES AND AUDIT TRAIL
- CONTROL VERSIONS
- SHARE A LINK TO A DOCUMENT



# PROJECTWISE WEB VIEW CONTINUOUS UPDATE

## RELEASED AS DEVELOPED:

- SAVED SEARCH
- ADVANCED SEARCH
- ATTRIBUTE LAYOUT
- CUSTOM COLUMNS BASED ON ATTRIBUTES
- VIEW DGN AND DWGS



# PROJECTWISE WEB SERVICES



## PW WEB

IN PROJECTWISE SHARE WORK AREA CONNECTION **NOW**  
AS TILE ON CONNECTION CENTER – Q4

READ-WRITE ACCESS TO WORK AREA DATA

PROJECT-BASED ENVIRONMENT



## PW WEB VIEW

**AVAILABLE**  
**Q4**

READ-ONLY ACCESS OF DATA

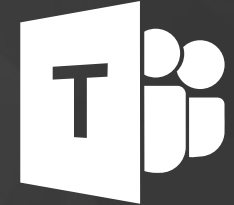
DATASOURCE-LEVEL ENVIRONMENT



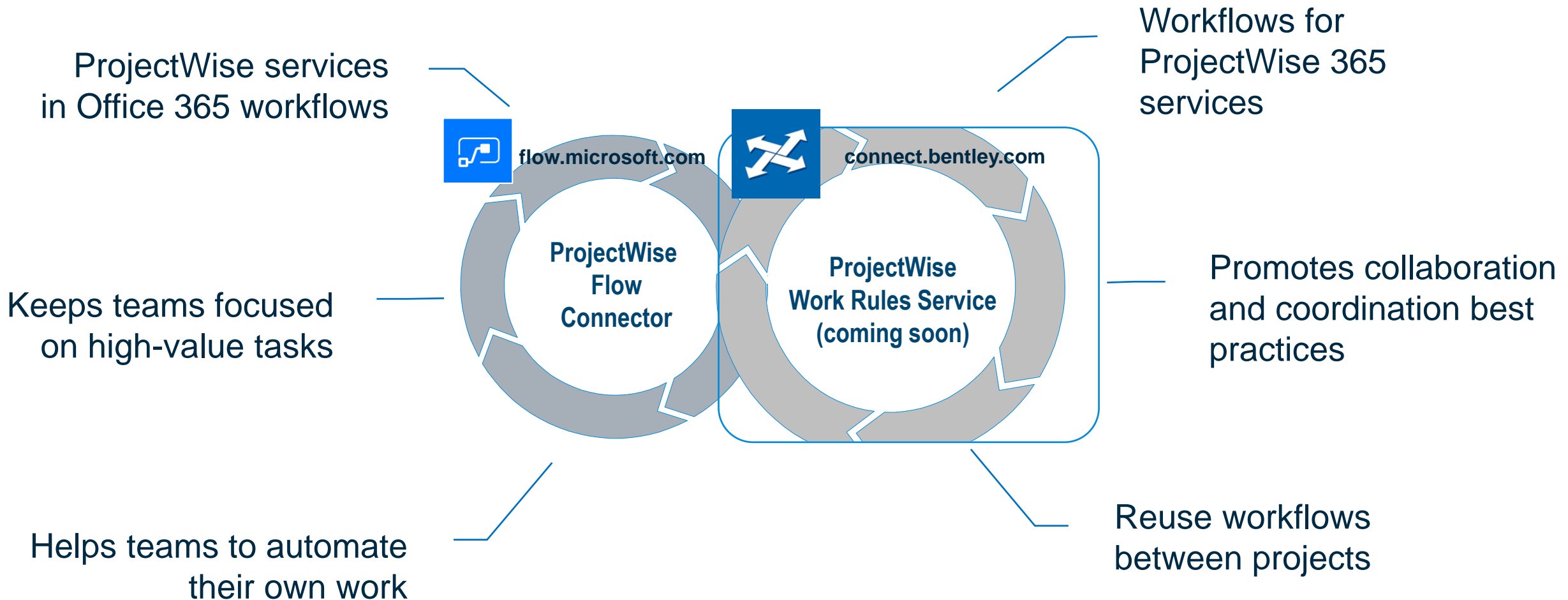
# Advancements Team Coordination and Collaboration

## ProjectWise

## Microsoft 365



# ProjectWise Workflow Services



# ProjectWise DI Flow Connector Roadmap

- Monthly updates
- Recent Additions:
  - Get Document File (with large file support)
  - Change Document State
  - List documents in a Folder
  - List subfolders
  - List documents in a set
- September release
  - Invoke WRE by label
  - Update document file (with large file support)
- October
  - Execute WSG request
- Later...
  - Document set management

# Work Rules Service Roadmap

- Limited Early Access
  - Looking for partners
  - ETA November 2019
- Prerequisites
  - ProjectWise DI 3.2
  - PW DI 3.3 is nice to have
- Scope
  - Workflows for PW DI and Office 365
  - Use “unmanaged” Office 365 Flows
- Future releases (2020)
  - Use Logic Apps managed by WRS
  - Flows managed by WRS
  - Onboarding other cloud services



# NOW Available: ProjectWise Project Insights



Project  
Insights

Leverage automated up-to-date dashboards of design work-in-progress status and trends

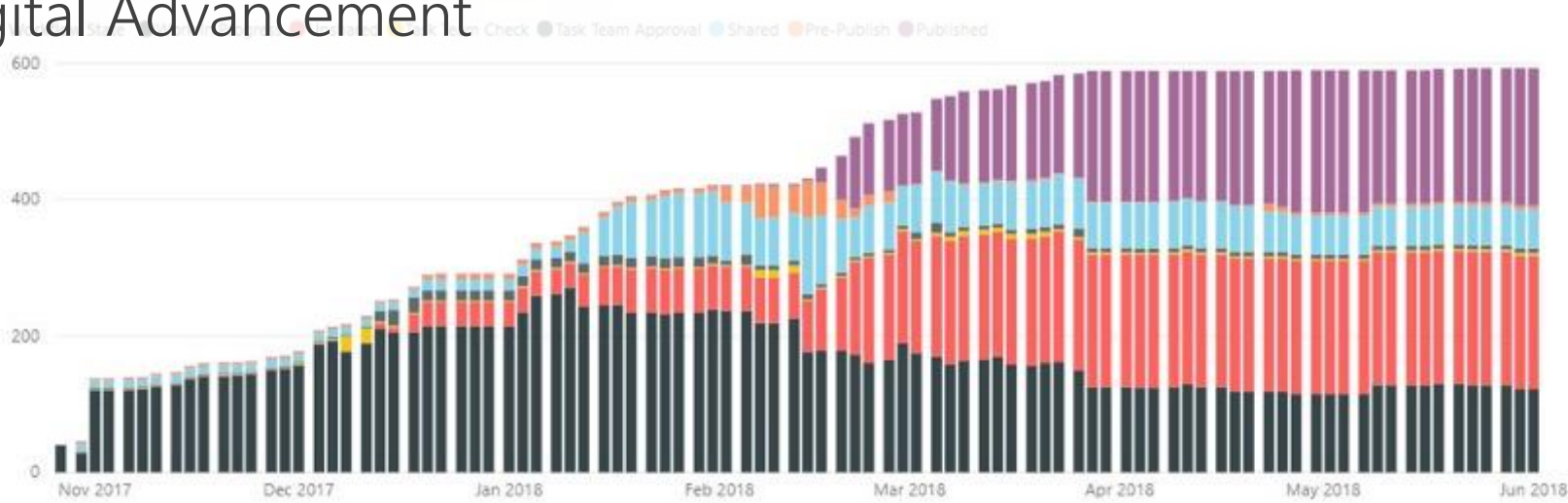
Spot potential issues and address them before they impact the project

Identify and monitor best practices that improve project outcomes

# Enable Near Real-Time Analytics

Leverage Project Insights to Accelerate Digital Advancement

Document Count Over Time Shown by Workflow State



Select a Date Range to Filter

10/27/2017 6/1/2018

Select Document Type to Filter

All

Select Document Subtype to Filter

(Multiple Selections)

Select Workflow State to Filter

All

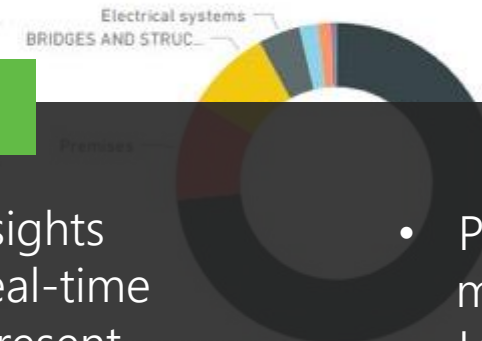
Select a Discipline to Filter

All

Document Count by Discipline and Workflow State



Document Count by Discipline



## Challenge

Time-consuming, narrowly focused, and rearward-looking reports did not satisfy increased client demands for project performance transparency

## Solution

ProjectWise Project Insights enabled automated, real-time dashboards on past, present, and future project performance

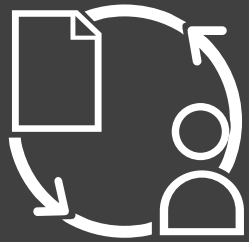
## Outcomes

- Proactive project management
- Increased stakeholder engagement
- Increased best practices adoption

# Project Insights – Next

- Tracking PW document WIP states is important, but it's really Done only when Accepted by client - improve **tracking of client Accepted docs count and work/re-work remaining** (PWDM and IRS data).
- PMs are busy and need a way to assess project health at a glance – want to **add KPIs page** to Project Insights
- Not all project docs are equally important – introduce **Master Deliverables Register (MDR) service** to help focus dashboards and KPIs on deliverables
  - Enable Project Insights for data centric projects - **integrate MDR with iModelHub components/systems**
- Project Insights is becoming one of core project services – needed support for **data residency restrictions** and global deployments

# Digital Workflows



365  
Services

Supply Chain Invitation Services

New: PDF Review and Markup

New: Configurable forms for content capture

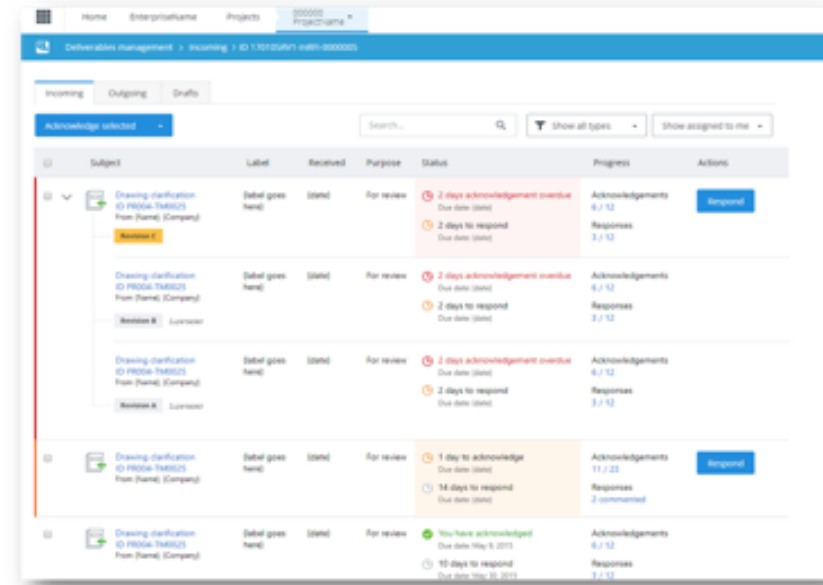
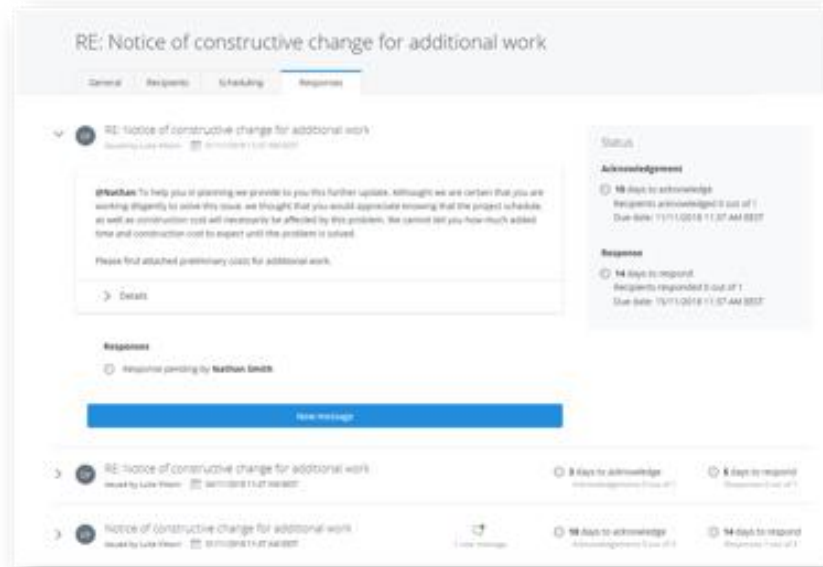
# Deliverables Management – Update5 release

---

- New package for **General correspondence management** (portal only)
- Allow Doc Controller **assign Consolidator and Additional Reviewers at once** for submittals.
- Document Distribution Matrix extensions to help **automate vendor submittal documents review**
- **Unify numbering** for incoming/outgoing packs (single ID for both packs by default)
- Allow **IMS Admin** to change PWDM permissions for any PWDM project

# NEW: General Correspondence Package

## Manage all contractual communication (letters, memos, instructions)



### User Request

Ability in Deliverables Management to capture general communications

### Solution

New Package Type: General correspondence package type for meetings, letters, superintendent instructions

### Outcomes

- Better than project email to
- Threaded discussions and part of your project record
- Includes due dates and BIC responsibilities

# Deliverables Management – Next

---

- **PDF review/markup integration with PWDM** for closed loop external review process:
  - Help Client organizations create PDF markups/issues when reviewing vendor drawings
  - Send PDF issues to vendor for fixing
  - Help vendor send updated drawings for re-review. Allow verify & close or re-open the PDF issues
- Allow **adding PW documents** to a package **via Deliverables Management web portal UI**
- **General correspondence** management in PWE (web driven plug-in)
- **Send link** to a package via email
- **Responses visible for cc** recipients from other orgs
- **Supply Chain** improvements:
  - Project Based Billing extended and standardized
  - On-boarding of unaffiliated users streamlined



# PDF Markup Service

The screenshot shows a web browser window displaying a PDF markup service interface. The main content is a technical drawing of a road project, labeled "I-9 NORTHBOUND" and "I-9 SOUTHBOUND". The drawing includes a plan view with various lines and markers, and a cross-section view below it. A "View Issue Details" dialog box is open over the drawing, showing options for "Style" and "Line". To the right of the drawing is an "Issues" panel with three items:

- Re-Design Grading** (October 22, 2018) - Draft
- Wrong Name** (September 23, 2018) - Draft
- Basin Removal** (September 25, 2018) - Draft

Below the issues panel is a "Participants" list:

- Teresa: Civil
- Manish: Earthwork
- Mary: Project Controls
- Robert: Planning
- Steve: Construction Planning

There is also a "Notes" section and a "Next Steps" list:

1. Redesign Grading
2. Redesign Storm Water

The bottom of the screen shows a Windows taskbar with various application icons and a system tray with the time 12:49 PM and date 10/27/2018. At the very bottom, there is a video conference interface with several participant avatars.

Standard PDF  
manipulation and  
markup functions

Automated workflow  
to track and manage  
issues



# PDF Markup Service – Coming Soon

- Enhanced Localization for optimized performance
- Better integration with DI authentication
- Generation 1 integration directly from DI Explorer
- Better inter-PDF movement directly within Markup
- Hiding the .XFDF in consuming services
- PDF review/markup integration with
  - ProjectWise Deliverables Management

# PDF Markup Service – Next

- Enhanced PDF Manipulation
  - PDF Compare
  - Split/Merge Files
- Added PDF tools
  - Measure
  - Signature
- User-Based Filtering/Sorting of Markups
  
- **FUTURE**
  - Integration with Design formats, DGN, etc.
  - Mobile Integration with new Field App

# ProjectWise Forms – Coming Soon








- Enhancing Forms Management
- Form Reporting
  - Updated Configurable Graphics
  - Enhanced Filtering
  - Project Reporting Tabs created by Admin

# ProjectWise Forms – Next


- Clearer Forms Library/Templates
- First Generation Workflow
  - Simple approval process
  - Form based locking by role/assignee
- Introducing "Tags" into Forms and Issues
- Broader Integrations with Design applications for easier creation of issues across the management process

# ProjectWise Portfolio



 <p><b>Design Integration</b></p> <ul style="list-style-type: none"> <li>Application Integration</li> <li>Dependencies</li> <li>Workflows (BS 1192)</li> <li>Reference Files</li> <li>Workspace Mgmt</li> <li>Geospatial Management</li> </ul>	 <p><b>Automated Publishing</b></p> <ul style="list-style-type: none"> <li>On-demand PDFs</li> <li>Automated PDFs</li> <li>Automated iModels</li> <li>Intelligent Deliverables</li> </ul>	 <p><b>Project Share (Web)</b></p> <ul style="list-style-type: none"> <li>Secure, PW DI access</li> <li>Easy content, file exchange</li> <li>Timely reviews / approvals</li> <li>PDF Markup</li> <li>Office 365 integration</li> </ul>	 <p><b>Deliverables Management</b></p> <ul style="list-style-type: none"> <li>Transmittals</li> <li>Submittals</li> <li>RFIs</li> <li>General Correspondence</li> </ul>	 <p><b>Project Insights</b></p> <ul style="list-style-type: none"> <li>Project Analytics</li> <li>Document trends</li> <li>Planned vs Actual</li> <li>CAD QA checks</li> </ul>	 <p><b>Issues Resolution</b></p> <ul style="list-style-type: none"> <li>Identify Issues</li> <li>Track / assign BIC</li> <li>Resolve Issues</li> <li>Integrated Applications and Apps</li> </ul>	 <p><b>Forms Management</b></p> <ul style="list-style-type: none"> <li>Configurable and standard forms</li> <li>Integrated reporting &amp; dashboards</li> </ul>
---	--	--	--	---	---	---

**Microsoft 365**



---

