Bentley Infrastructure Cloud + ProjectWise Drive

Hans Koorneef,
Director Solution Engineering, Bentley Infrastructure Cloud.

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Disclaimer Statement

Release plans and timelines are forward-looking estimates and projections only.

There can be no assurance that Bentley will be able to meet such estimates or projections by the dates specified or at all.

Do not make purchase decisions based on forward looking roadmaps.

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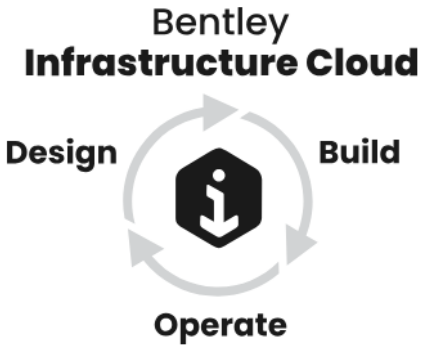
Agenda



Bentley Infrastructure Cloud - Introduction

ProjectWise Licenses - Overview

ProjectWise Drive Use Case
MicroStation Workspaces

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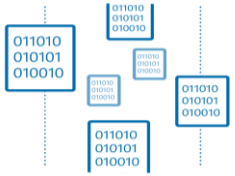
Bentley

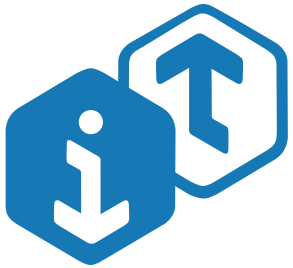
ProjectWise evolving technology to deliver value faster

ProjectWise Design Integration Foundation



File based

+



Data Centric

=

ProjectWise, powered by iTwin

Data Centric AND File Friendly

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Bentley

ProjectWise, powered by iTwins

Rebranding

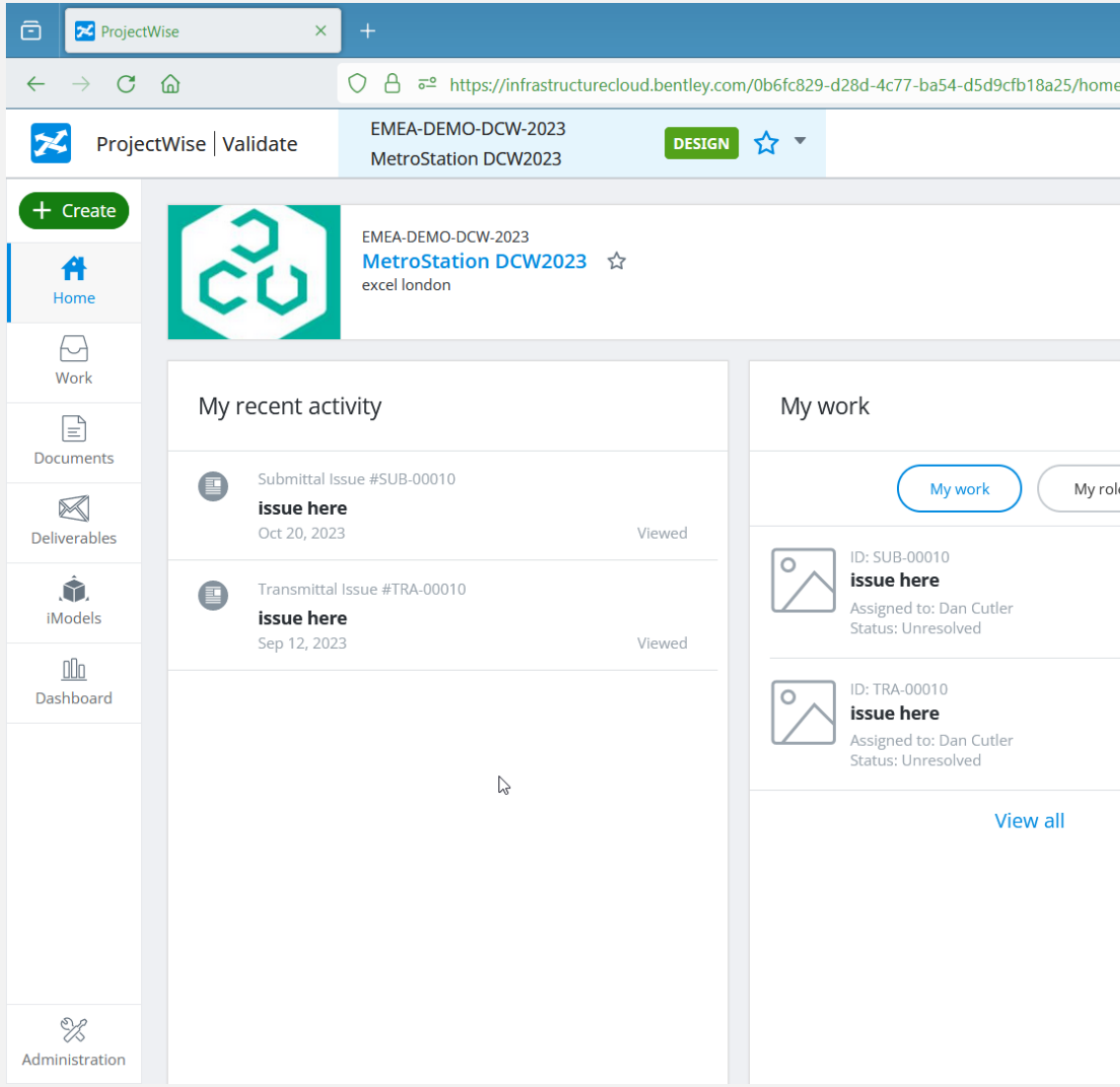
- ProjectWise Design Integration Connect Edition to ProjectWise 2023

New Unified Portal

- Consolidation of products and functionality
    - ProjectWise 365 / CONNECT
    - iTwin Design Review

Persona Licensing and Entitlements

- Manage
- Engineer
- Validate



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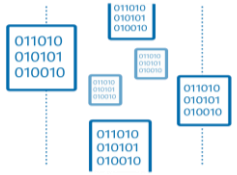
Bentley

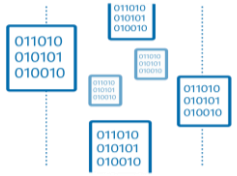
ProjectWise evolving interfaces

UX to drive increased productivity

ProjectWise Explorer Client 2023



ProjectWise Drive



InfrastructureCloud .Bentley.com

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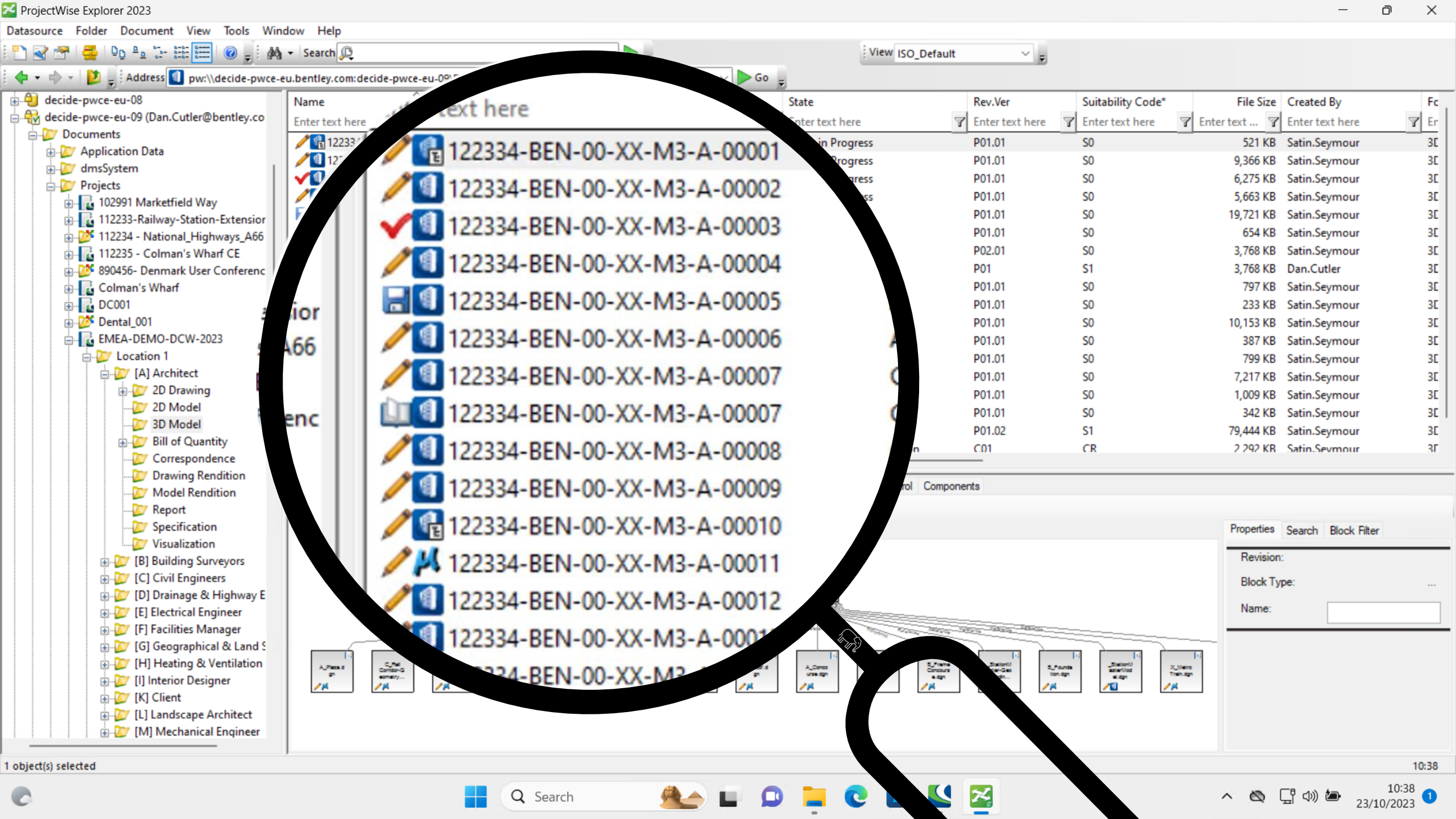

ProjectWise Explorer 2023
Datasource Folder Document View Tools Window Help
Search
View ISO_Default
Address pw:\\decide-pwce-eu.bentley.com:decide-pwce-eu-09
Go
decide-pwce-eu-08
decide-pwce-eu-09 (Dan.Cutler@bentley.co
Documents
Application Data
dmsSystem
Projects
102991 Marketfield Way
112233-Railway-Station-Extensior
112234 - National_Highways_A66
112235 - Colman's Wharf CE
890456- Denmark User Conferenc
Colman's Wharf
DC001
Dental_001
EMEA-DEMO-DCW-2023
Location 1
[A] Architect
2D Drawing
2D Model
3D Model
Bill of Quantity
Correspondence
Drawing Rendition
Model Rendition
Report
Specification
Visualization
[B] Building Surveyors
[C] Civil Engineers
[D] Drainage & Highway E
[E] Electrical Engineer
[F] Facilities Manager
[G] Geographical & Land S
[H] Heating & Ventilation
[I] Interior Designer
[K] Client
[L] Landscape Architect
[M] Mechanical Engineer
Name
State
Rev.Ver
Suitability Code*
File Size
Created By
Enter text here
122334-BEN-00-XX-M3-A-00001
122334-BEN-00-XX-M3-A-00002
122334-BEN-00-XX-M3-A-00003
122334-BEN-00-XX-M3-A-00004
122334-BEN-00-XX-M3-A-00005
122334-BEN-00-XX-M3-A-00006
122334-BEN-00-XX-M3-A-00007
122334-BEN-00-XX-M3-A-00007
122334-BEN-00-XX-M3-A-00008
122334-BEN-00-XX-M3-A-00009
122334-BEN-00-XX-M3-A-00010
122334-BEN-00-XX-M3-A-00011
122334-BEN-00-XX-M3-A-00012
P01.01 S0 521 KB Satin.Seymour
P01.01 S0 9,366 KB Satin.Seymour
P01.01 S0 6,275 KB Satin.Seymour
P01.01 S0 5,663 KB Satin.Seymour
P01.01 S0 19,721 KB Satin.Seymour
P01.01 S0 654 KB Satin.Seymour
P02.01 S0 3,768 KB Satin.Seymour
P01 S1 3,768 KB Dan.Cutler
P01.01 S0 797 KB Satin.Seymour
P01.01 S0 233 KB Satin.Seymour
P01.01 S0 10,153 KB Satin.Seymour
P01.01 S0 387 KB Satin.Seymour
P01.01 S0 799 KB Satin.Seymour
P01.01 S0 7,217 KB Satin.Seymour
P01.01 S0 1,009 KB Satin.Seymour
P01.01 S0 342 KB Satin.Seymour
P01.02 S1 79,444 KB Satin.Seymour
Components
Properties
Search
Block Filter
Revision:
Block Type:
Name:
1 object(s) selected
10:38
Search
10:38
23/10/2023

My projects | Favorites

Register a project

Recent

DESIGN

20230516SEASIA-SALES-DEMO-DECIDI

20230516SEASIA-SALES-DEMO-...

Singapore

Created on: May 16, 2023

DESIGN

DECIDE-PLANT-PWDM-DEMO

DECIDE-PLANT-PWDM-DEMO

Created on: Nov 10, 2023

DESIGN

INDIA-DEMO-AMK-PW2023-Dec

INDIA-DEMO-AMK-PW2023

Created on: Sep 25, 2023

EXTERNAL DESIGN

EMEA-DEMO-ME-B0001

Bentley PW365 Demo

Created on: Sep 23, 2020

DESIGN

2021-04-05-KKC-Dec

2021-04-05-KKC

Created on: Oct 11, 2023

DESIGN

890456

Denmark User Conference

Created on: Oct 30, 2023

DESIGN

202401

Newcity - Forest Road - West 2...

Created on: Jul 4, 2023

EXTERNAL DESIGN

EMEA-DEMO-DCW-2023

MetroStation DCW2023

excel london

Created on: Apr 26, 2023

ProjectWise

https://infrastructurecloud.bentley.com/0b6fc829-d28d-4c77-ba54-d5d9cfb18a25/home

ProjectWise | Validate

EMEA-DEMO-DCW-2023
MetroStation DCW2023

DESIGN

1

DC

+ Create

Home

Work

Documents

Deliverables

iModels

Dashboard

Administration

EMEA-DEMO-DCW-2023

MetroStation DCW2023

excel london

WEDNESDAY, NOV 1	THU	FRI	SAT	SUN
14°C	12° 8°	12° 8°	12° 8°	12° 7°
14° 12°				
Mostly Cloudy	Rain / Wind	Showers Late	Showers Early	Partly Cloudy

My recent activity

Submittal Issue #SUB-00010
issue here
Oct 20, 2023 Viewed

Transmittal Issue #TRA-00010
issue here
Sep 12, 2023 Viewed

My work

My work | My role

ID: SUB-00010
issue here
Assigned to: Dan Cutler
Status: Unresolved

ID: TRA-00010
issue here
Assigned to: Dan Cutler
Status: Unresolved

View all

Create

Technical Query

ProjectWise

https://infrastructurecloud.bentley.com/0b6fc829-d28d-4c77-ba54-d5d9cfb18a25/documents/files/?project=f9071fc5-6d8

ProjectWise | Validate

EMEA-DEMO-DCW-2023
MetroStation DCW2023

DESIGN

Create

Home
Work
Documents
Deliverables
iModels
Dashboard
Administration

Documents | Media explorer

- Documents
- ProjectWise Design Integrati...
  - Out to me [9]
  - Location 1
    - [A] Architect
      - 2D Drawing
      - 2D Model
      - 3D Model
      - Bill of Quantity
      - Correspondence
      - Drawing Rendition
      - Model Rendition
      - Report
        - Audit Reports
      - Specification
      - Visualization
    - [B] Building Surveyors
    - [C] Civil Engineers
    - [D] Drainage & Highway E...
    - [E] Electrical Engineer
    - [F] Facilities Manager
    - [G] Geographical & Land ...
    - [H] Heating & Ventilation ...
    - [I] Interior Designer

ProjectWise Design Int... > Location 1 > [A] Architect > Report

View: Default

New

Search in Report and all su

Name	Version	Description	File nam
Audit Reports		RP	
122334-ARI-00-XX-RP-A-00001	1	New report	122334-A
122334-ARI-00-XX-RP-A-00002	1	Calculation - CopyÖ	122334-A
122334-BEN-00-XX-RP-A-00001	P01.01	Constructability Assessment - T	122334-B
122334-BEN-00-XX-RP-A-00002	P01.01	Track Berd Investigation & Re...	122334-B
122334-BEN-00-XX-RP-A-00003	1	Audit Report	122334-B

122334-BEN-00-XX-RP-...

Details | Attributes | Audit trail

Name: 122334-BEN-00-XX-...
Description: Audit Report
Version: 1
Sequence: 0
Status: Checked in

Checked out to:
Created by: Satin.Seymour
Created on: 25 Oct 2023, 09:42
Updated by: Satin.Seymour
Updated on: 25 Oct 2023, 09:42

Workflow: Drawings / Docum...
State: Work in Progress

Deliverables Management

ProjectWise Deliverables Management

New

Incoming | Outgoing (1) | Drafts

Acknowledge selected | Show all types | Show assigned to me

Subject	Classification...	Issued	Purpose	Status	Progress	Actions
Mechanical 2D Drawing - Review ID EMEA-DEMO-DCW-2023-TR-0000003 From Satin Seymour, Bentley Systems Inc Package ID EMEA-DEMO-DCW-2023-TR-0000003		03/05/2023 16:50	For Review	You have acknowledged Due date: 05/05/2023 16:50 168 days response overdue Due date: 17/05/2023 16:50	Acknowledg... 2 / 2 Responses 1 / 2	Respond
Approval ID EMEA-DEMO-DCW-2023-TR-0000012 From Satin Seymour, Bentley Systems Inc Package ID EMEA-DEMO-DCW-2023-TR-0000012	Discipline Lead Approval	14/09/2023 11:53	For Approval	47 days acknowledgement ov... Due date: 16/09/2023 11:53 44 days response overdue Due date: 19/09/2023 11:53	Acknowledg... 0 / 1 Responses 0 / 1	Acknowledge
Content Check ID EMEA-DEMO-DCW-2023-TR-0000015 From Satin Seymour, Bentley Systems Inc Package ID EMEA-DEMO-DCW-2023-TR-0000015	Formal Check & Review	20/10/2023 11:56	For Content Check	11 days acknowledgement ov... Due date: 22/10/2023 11:56 8 days response overdue Due date: 25/10/2023 11:56	Acknowledg... 1 / 2 Responses 1 / 2	Acknowledge
please review and accept ID EMEA-DEMO-DCW-2023-TR-0000006 From Dan Cutler, Bentley Systems Inc Package ID EMEA-DEMO-DCW-2023-TR-0000006		23/08/2023 11:39	For Review	You have acknowledged Due date: 25/08/2023 11:39 You have responded	Acknowledg... 1 / 1 Responses	

ProjectWise

https://infrastructurecloud.bentley.com/0b6fc829-d28d-4c77-ba54-d5d9cfb18a25/manage-imodel

ProjectWise | Validate

EMEA-DEMO-DCW-2023
MetroStation DCW2023

DESIGN

1

DC

+ Create

Home

Work

Documents

Deliverables

iModels

Dashboard

Administration

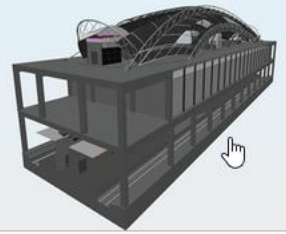
Manage iModel

Create iModel

Search...

CSVT

Synced on: Aug 24, 2023 3:25 PM

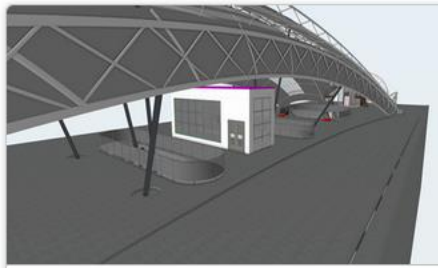


Metro Station

Synced on: Jun 23, 2023 11:12 AM

Metro Station - SS

No content

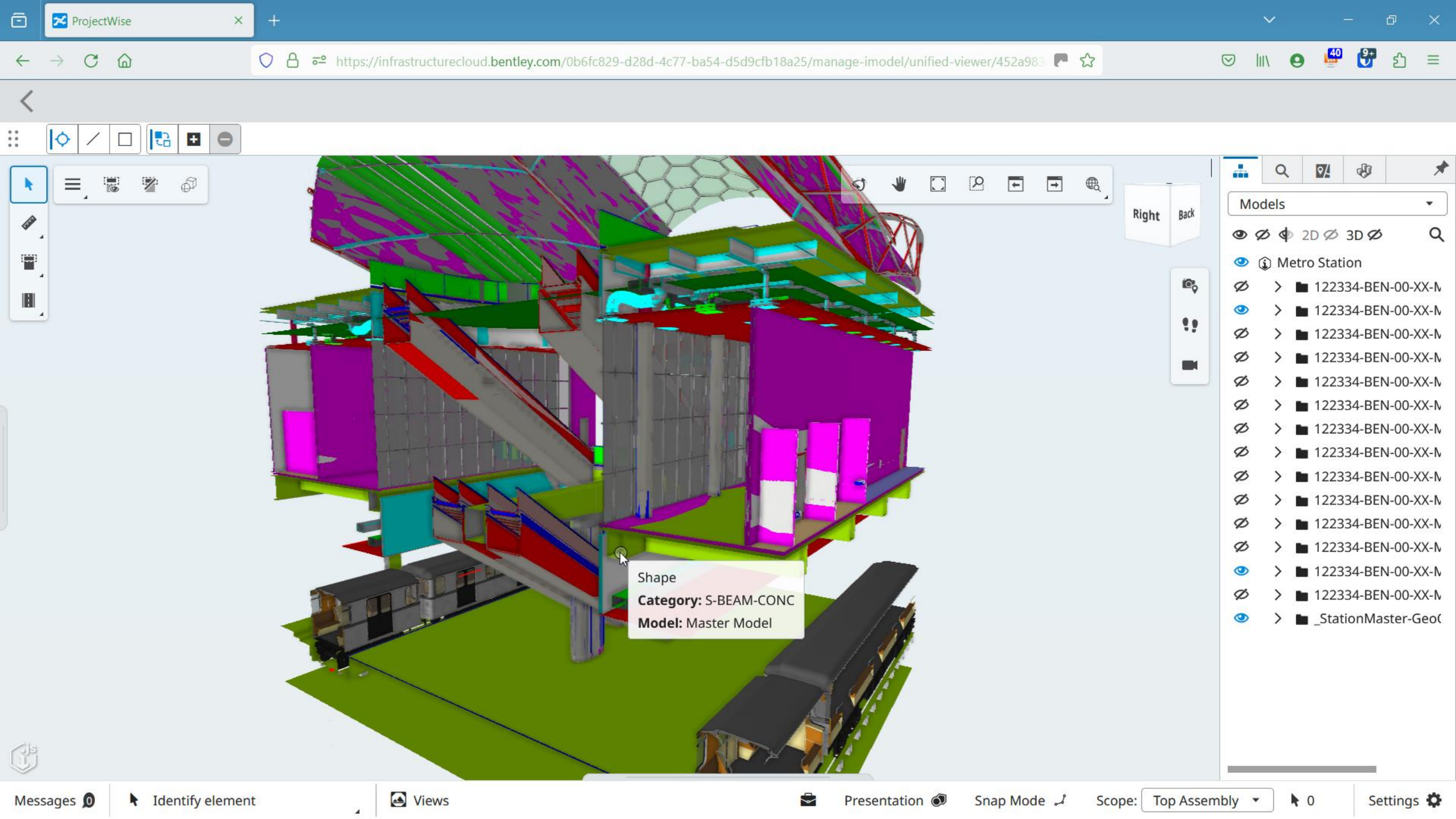


METROSTATION

No content

US PA Exton - Digital Twin

No content

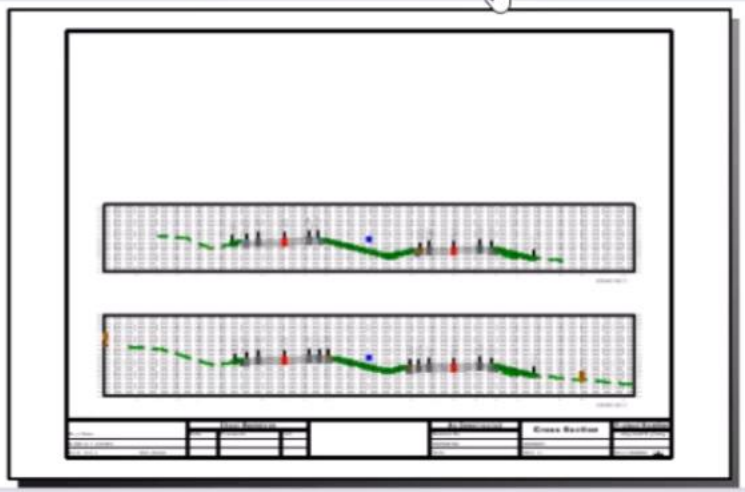

ProjectWise
https://infrastructurecloud.bentley.com/0b6fc829-d28d-4c77-ba54-d5d9cfb18a25/manage-imodel/unified-viewer/452a983
Right
Back
Models
2D
3D
Metro Station
122334-BEN-00-XX-M
_StationMaster-Geo(
Shape
Category: S-BEAM-CONC
Model: Master Model
Messages
Identify element
Views
Presentation
Snap Mode
Scope:
Top Assembly
Settings

Index Map

525+00.00 [Sheet]
527+00.00 [Sheet]
530+00.00 [Sheet]
533+00.00 [Sheet]
536+00.00 [Sheet]
539+00.00 [Sheet]
542+00.00 [Sheet]
Plan & Profile
Plan 1 [Sheet]
Plan 2 [Sheet]
Plan 3 [Sheet]
Abbreviations Sheet
Plans Legend Sheet
TITLE SHEET

Sheet Viewer

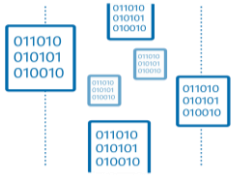
542+00.00 [Sheet]



Messages 0 | Identify element | Views | Presentation | Snap Mode | Scope: Element | 0

ProjectWise Design Integration 2023

Increased agility to deliver updates faster



File based

- Enhanced cloud-first hosting
- Release early release often
- Cloud based (SES) licensing
- Continuous performance enhancements
- Power Platform 2023 Integration
- Upgrade to ProjectWise Design Integration 2023 not required to enable some data centric workflows

2023 | Q2 — 2023 | Q3 — 2023 | Q4 — 2024 | Q1 . . .

Incremental Release Upgrades (Hosted only)

General Upgrades (Hosted and on prem)

User success will contact you when its your time to upgrade

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ProjectWise meets the needs of everyone, from your CEO to your project team members

Manage

For project team and partner ecosystem members needing managed collaboration on documents and insights

Engineer

For engineers and designers collaboratively processing infrastructure models

Validate

For engineering leadership requiring the most advanced engineering validation and analysis capabilities

- ✓ Provides better alignment across both file-centric document and data-centric digital twin workflows
- ✓ Flexible access governance at the project or enterprise level
- ✓ Users can be assigned different access roles across projects

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ProjectWise Capabilities Matrix – Legacy Comparison

Capabilities	ProjectWise Visa Level (Legacy)			ProjectWise, powered by iTwin		
	365	Design Integration	4D Design Review	Manage	Engineer	Validate
Auditable document control for infrastructure design	✓	✓	✓	✓	✓	✓
Microsoft Office work-sharing for infrastructure design	✓	✓	✓	✓	✓	✓
Issue review and approval with PDF	✓	✓	✓	✓	✓	✓
Standards based (ISO19650) workflows	✓	✓	✓	✓	✓	✓
Project Insights	✓	✓	✓	✓	✓	✓
Manual PDF generation and plotting	✓	✓	✓	✓	✓	✓
iTwin viewing				✓	✓	✓
Issue review and approval with iTwin				✓	✓	✓
Intuitive Infrastructure Cloud web interface				✓	✓	✓
Engineering work-sharing & standards management for infrastructure design		✓	✓		✓	✓
Automated PDF renditioning		✓	✓		✓	✓
Digital component-based design		✓	✓		✓	✓
Advanced document control for infrastructure design		✓	✓		✓	✓
Automated synchronization to IoT-ready iTwin for digital design delivery			✓		✓	✓
Issue creation and resolution using PDF and iTwin			✓		✓	✓
GeoSpatial iTwin reality mesh capture and management					✓	✓
Infrastructure design validations: BIM rules, clash detection with iTwin			✓			✓
Interdisciplinary, IoT ready iTwin administration for infrastructure design			✓			✓
Visual interdisciplinary change analysis			✓			✓
Design process definition and alignment						✓
Advanced iTwin-based civil design validations						✓

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License update

Erwin van Meurs

Enterprise Account Manager

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On March 22, 2023, administrators and fulfillment contacts at PW accounts received an email tailored to their enterprise tier (i5 or i7).

Subject Line: Important enhancements to your ProjectWise offering

Learn about the latest evolution of ProjectWise, now powered by iTwin

Dear Valued ProjectWise Users,

Project delivery is more complex. To make it easier for you, at the 2022 Year in Infrastructure Awards, we announced the Bentley Infrastructure Cloud and exciting enhancements to ProjectWise, now powered by iTwin. We've heard you. From product enhancements and success

services, to simplified pricing and packaging, Bentley is making it easier for users like you to have the right tool at the right time for the right cost.

To better meet the unique needs of different sizes of infrastructure design firms, ProjectWise, powered by iTwin now features tiered enterprise offerings. Based on your current level of investment in ProjectWise, we are pleased to announce that your ProjectWise Enterprise

Tier will be i5.

What can you expect from ProjectWise, powered by iTwin?

• **New Capabilities**: Build on the work you're already doing with ProjectWise to manage your engineering work-in-progress (WIP) to benefit from evolving capabilities in portfolio intelligence, digital design delivery, and extended data governance.

No foundation update is required (see below).

• **Simplified Packaging**: In addition to tiered enterprise offerings, ProjectWise, powered by iTwin features new user levels to better meet the needs of everyone, from your CEO to your project team members. Reporting will be updated to reflect this after Quarter 1

invoices have been issued.

• **Foundation Update**: Upgrading to ProjectWise 2023, when available to you, provides benefits like performance enhancements, Subscription Entitlement Service licensing, more frequent updates, and support for OIDC federated identity.

Users will see no interruption in their existing workflows. Click here to learn more about the new enhancements in ProjectWise, powered by iTwin.

Lori Hufford

Vice President, Engineering Colboration for Bentley Systems

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ProjectWise i3

- Replacement for PW365
- i3, Available under E365 or SELECT via CSS funding

Not available – in development!

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ProjectWise i5

- i5, Available under Enterprise or SELECT via CSS;
- CSS funding with a minimum spend of $50K.

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ProjectWise i7

- i7, Available exclusively under the E365/EPS commercial model with a minimum ARR spend of $350K.

ProjectWise i7

Capabilities Matrix & Pricing – Legacy Comparison

COMPARE

Capabilities	ProjectWise Visa Level (Legacy)			ProjectWise, powered by iTwin Enterprise Tier i7		
	365	Design Integration	4D Design Review	Manage	Engineer	Validate
Auditable document control for infrastructure design	✓	✓	✓	✓	✓	✓
Microsoft Office work-sharing for infrastructure design	✓	✓	✓	✓	✓	✓
Issue review and approval with PDF	✓	✓	✓	✓	✓	✓
Standards based (ISO19650) design workflows	✓	✓	✓	✓	✓	✓
Project Insights	✓	✓	✓	✓	✓	✓
Manual PDF generation and plotting	✓	✓	✓	✓	✓	✓
iTwin Viewing			✓	✓	✓	✓
Issue review and approval with iTwin				✓	✓	✓
Intuitive Infrastructure Cloud web interface				✓	✓	✓
Governed standards-based supply chain information exchange				✓	✓	✓
Portfolio intelligence tools: querying and project classification				✓	✓	✓
Engineering work-sharing & standards management		✓	✓		✓	✓
Automated PDF renditioning		✓	✓		✓	✓
Digital component-based design		✓	✓		✓	✓
Advanced document control for infrastructure design		✓	✓		✓	✓
Automated synchronization of iTwin for digital design delivery			✓		✓	✓
Issue creation and resolution using PDF and iTwin			✓		✓	✓
GeoSpatial iTwin reality mesh capture and management					✓	✓
Infrastructure design validations: BIM rules, clash detection			✓			✓
Interdisciplinary, iTwin administration for infrastructure design			✓			✓
Visual interdisciplinary change analysis			✓			✓
Design process definition and alignment						✓
Advanced iTwins-based civil design validations						✓
Quarterly Pricing in USD E365 / SOA	$55 / $65	$185 / $200	$500 / $500	$58 / $68	$190 / $205	$500 / $500

Effective April 1, 2023

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Commercial model

- Cloud Services Subscription (**CSS**)
- **Enterprise** is op uitnodiging & voor grotere afnemers (E365&EPS)

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Cloud Services Subscription, Wat is Cloud Services Subscription?

- Visas
- Monthly term licenses MTL i.p.v. QTL
- CONNECT Edition cloud services
- Success Plans and Recurring Services

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Voordelen van een CSS?

- Monthly term licenses, exclusive to CSS and the most cost-effective way to pay for term licenses
- Funding can be aligned to annual budgets
- No “use it or lose it” policy
- Users only pay for software they use
- No expiration date for CSS funds
- CONNECT Edition Passports and Visas
- CONNECT Edition cloud services
- Success Plans and recurring services

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Hoe wordt het CSS bedrag bepaald?

- Eerst wordt er een schatting gemaakt wat het gebruik zal zijn over de komende 12 maanden door te kijken naar het gebruik uit het verleden.
- We kijken naar het totaal gebruik van licenties & Visa, hierbij opgeteld eventueel andere aangesproken Cloud Services.
- Er wordt samen met de klant gekeken naar gebruik van nieuwe technologien in het komende jaar en een prognose gemaakt van wat dat zal zijn. Hierbij kunnen ook workshops, implementatie of training trajecten w orden opgenomen.
- Op basis van bovenstaande informatie wordt het gebruik / bedrag voor komende 12 maanden bepaald en als uitgangsbedrag van het CSS gebruikt.

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Replenishment or Cancellation

- Replenishment :
- Cancellation :

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Discussie & Vragen

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ProjectWise Drive and MicroStation Workspaces

Bentley®

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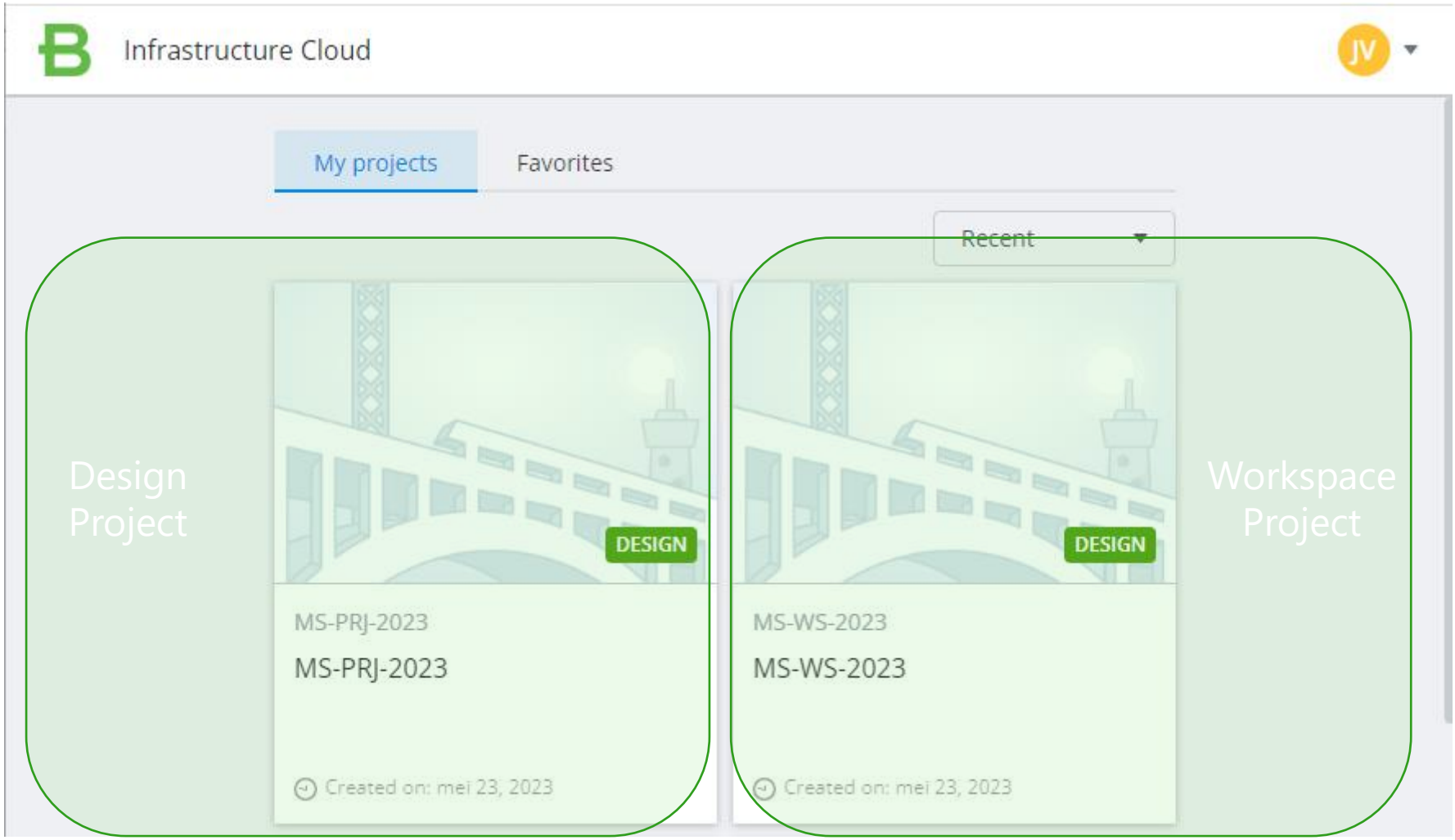
Setup project(s)



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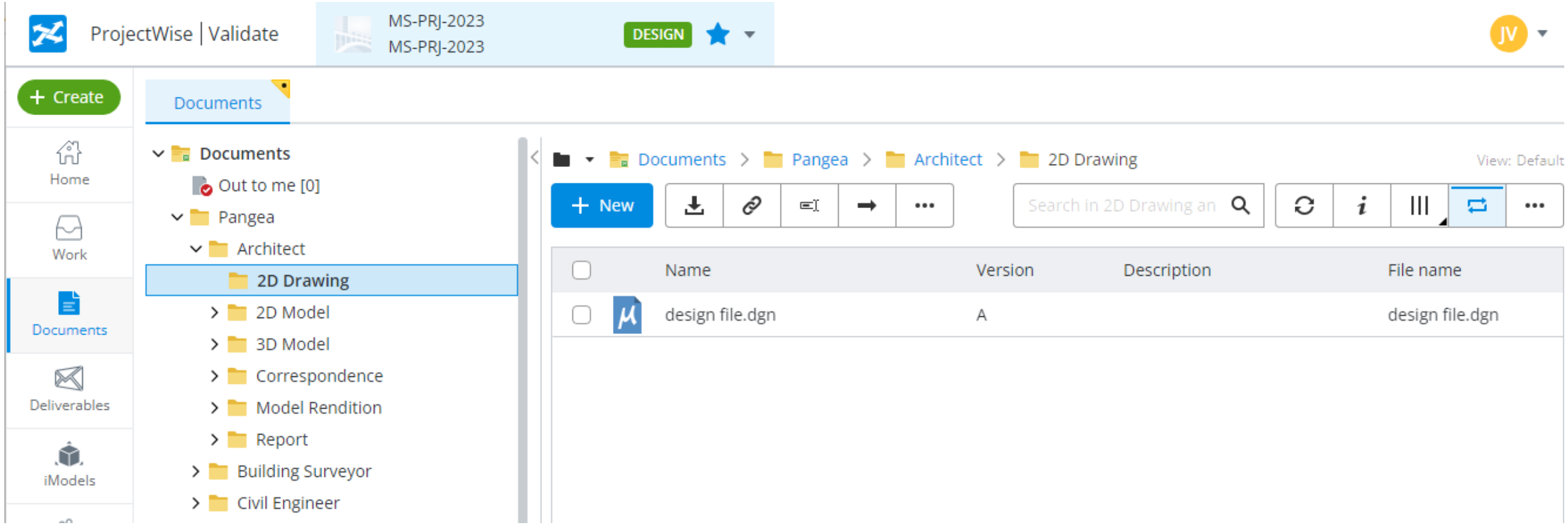
Design Project



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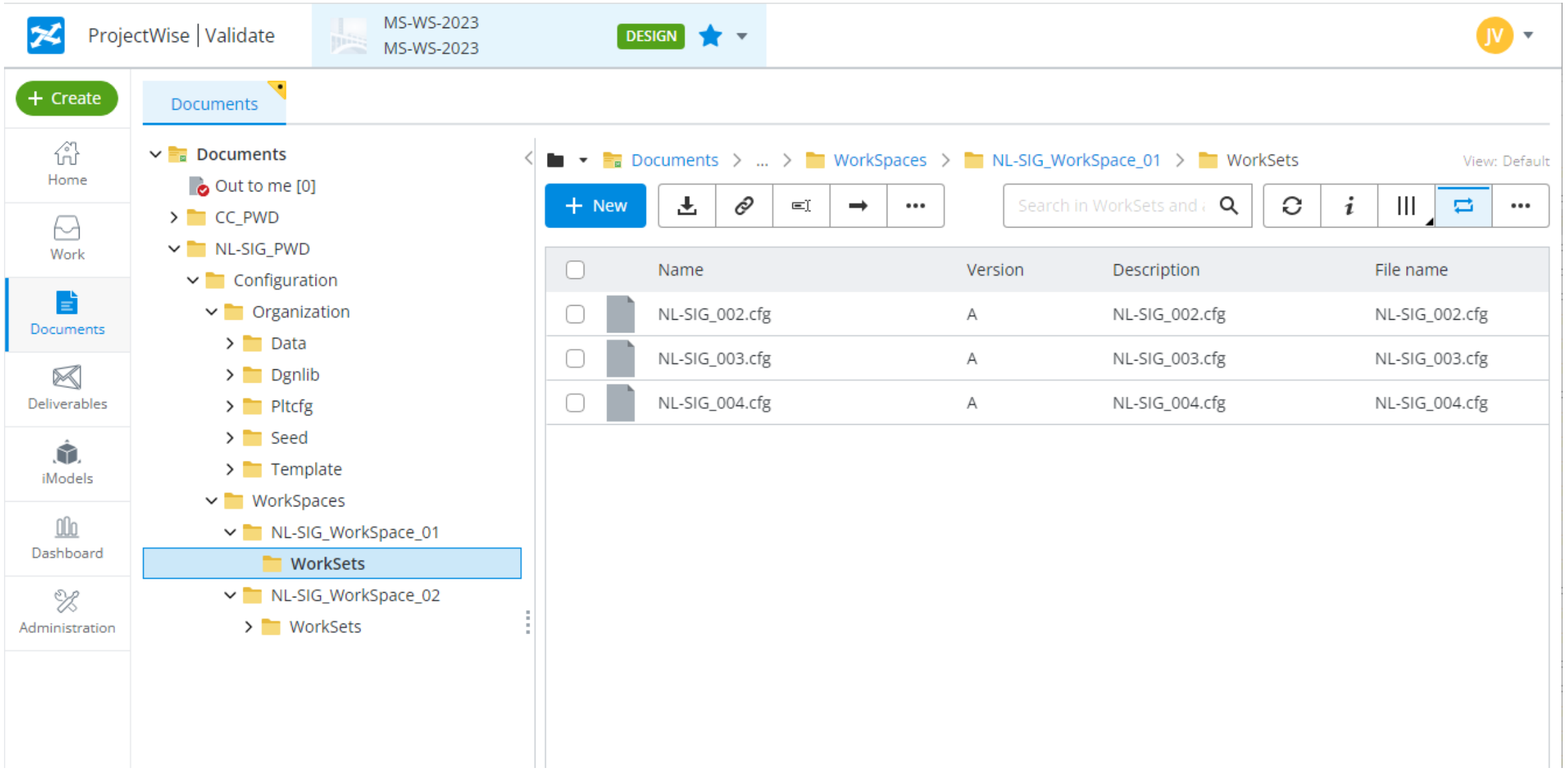
Workspace project



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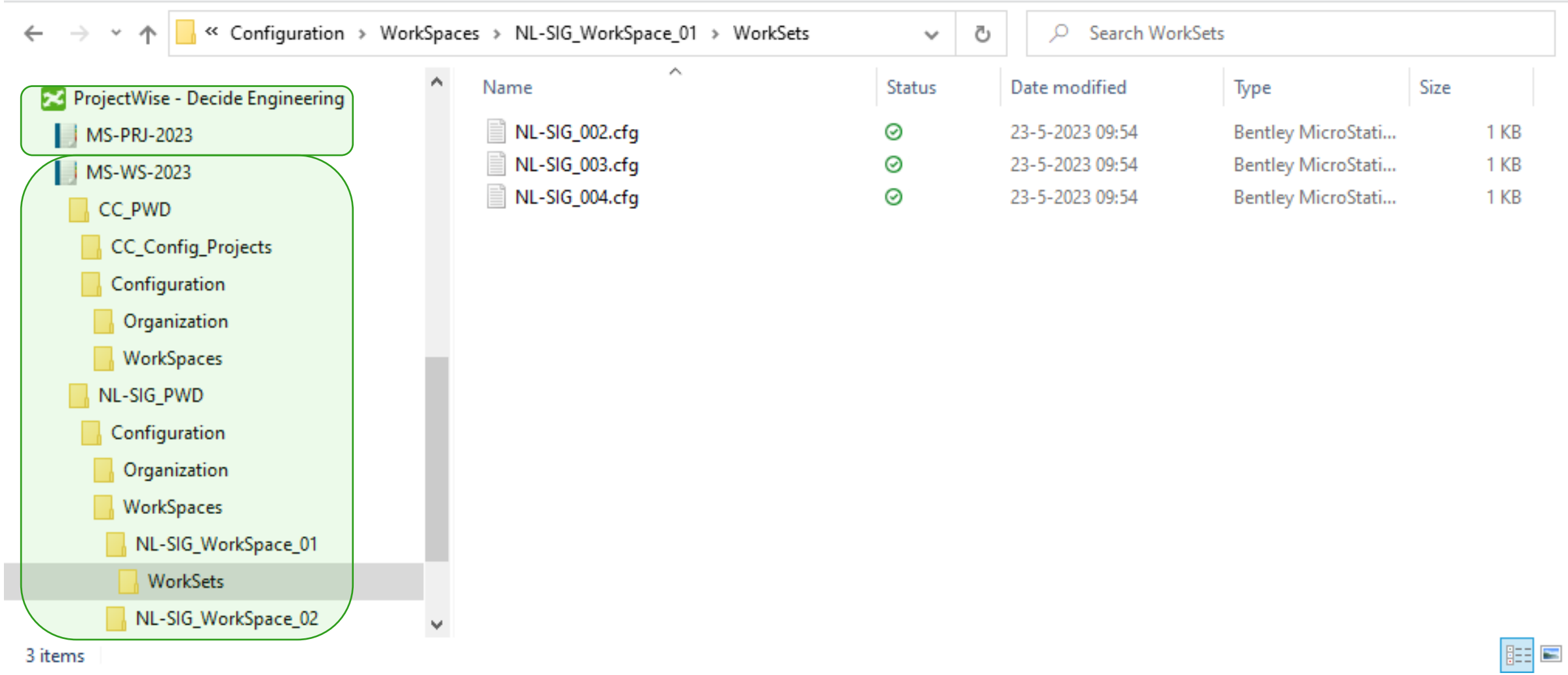
ProjectWise Drive – Windows Explorer view



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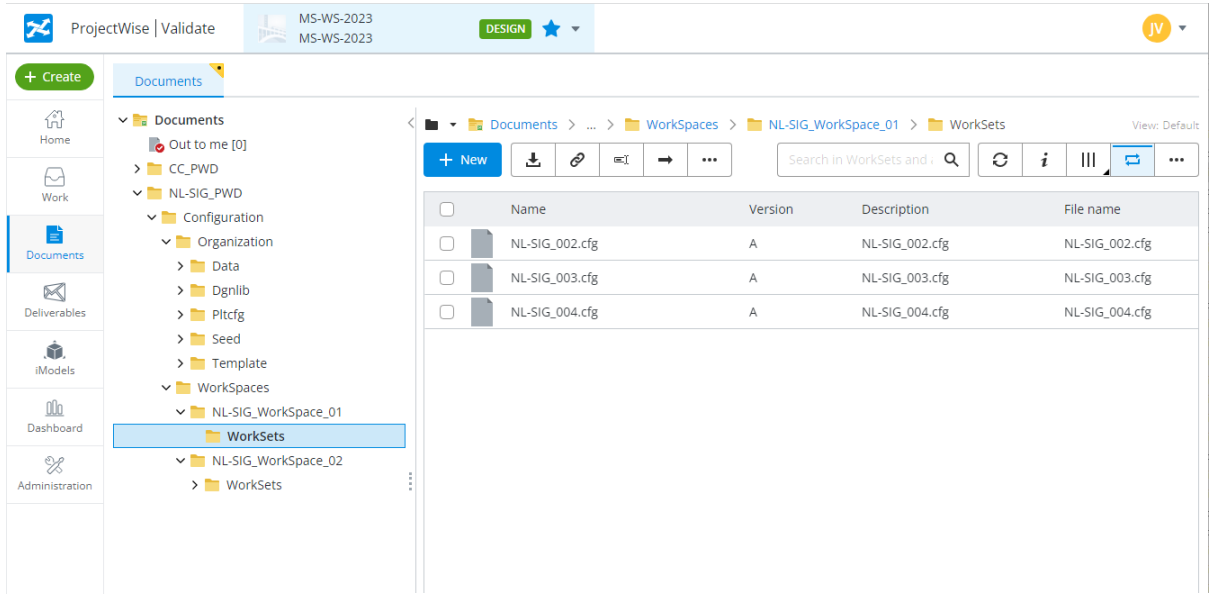
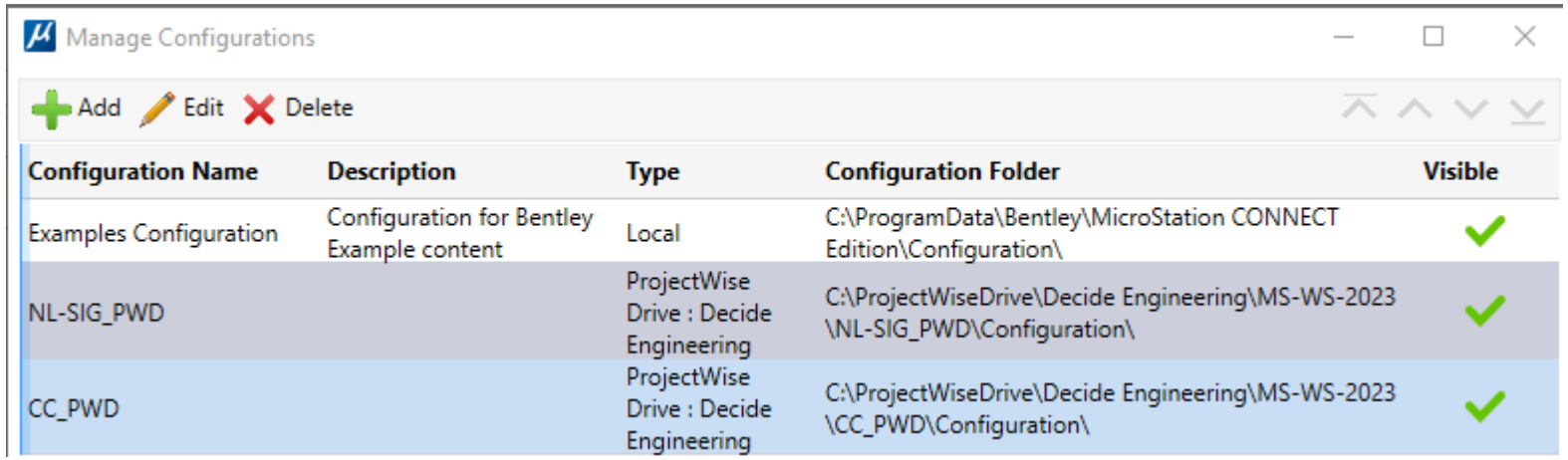
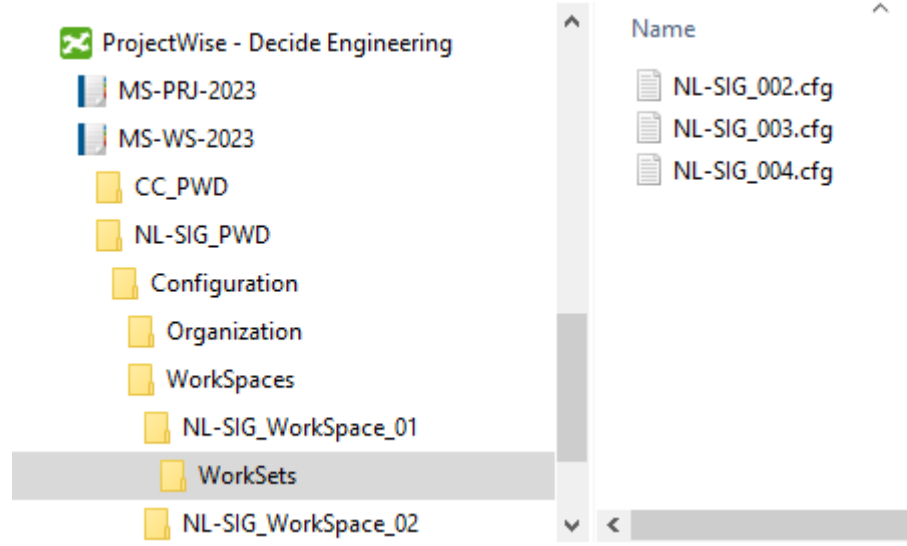
ProjectWise Drive – integration with MicroStation 17.1 / 17.2

- Setup tasks:
  - Prepare a ProjectWise work area with the MicroStation workspace.
    - Example: MS-WS-2023
  - Enable ProjectWise Drive



- MicroStation / Bentley View 17.x. add a configuration with ProjectWise Drive
- Select the folder where the Workspaces are stored





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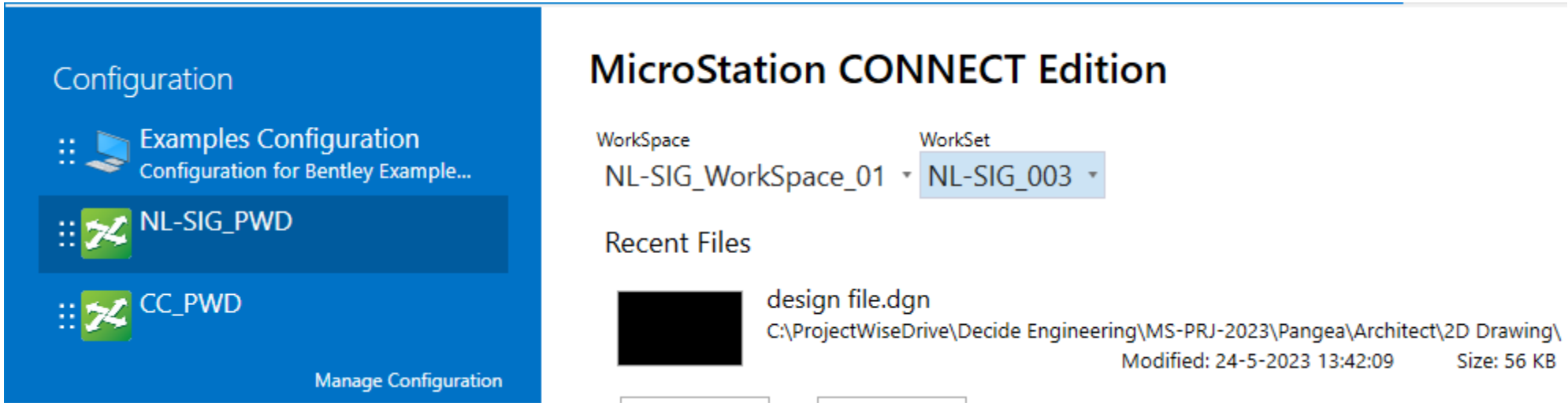
MicroStation Workspace configuration



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New
Open
Save
Save As
Save Settings
Send Mail
Close
Tools
Settings
Properties
Print
Import
Export
Publish iModel
Help
Feedback
Exit

Settings

- User
- System (PC)
- File
- Configuration

Configuration Settings

- Configuration Variables — Edit, define, save and delete configuration variables
- Configuration Assistant — Migrat
- Customize — Add ar
- About Configuration — Displa

About Configuration

WorkSpace: NL-SIG_WorkSpace_01
...\MS-WS-2023\NL-SIG_PWD\Configuration\WorkSpaces\NL-SIG_WorkSpace_01.cfg

WorkSet: NL-SIG_003
...\NL-SIG_PWD\Configuration\WorkSpaces\NL-SIG_WorkSpace_01\WorkSets\NL-SIG_003.cfg

Preferences: Default Preferences
C:\Users\Hans.Koorneef\AppData\Local\Bentley\MicroStation\10.0.0\prefs\Personal.upf

CONNECTED Project: No Project

About Workmode:

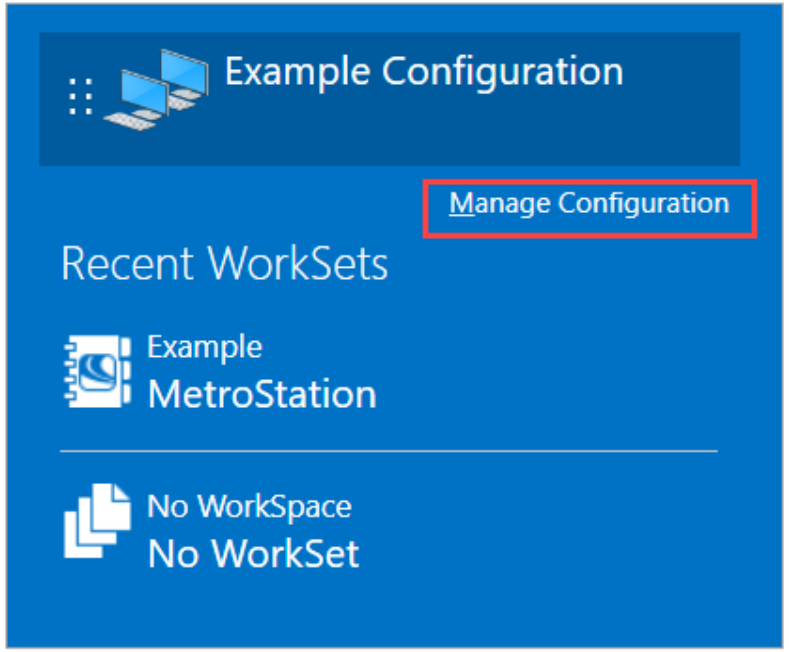
You are in DGN Workmode.
The full functionality of MicroStation is available, including:
- DWG referencing and editing
- AccuSnap and AutoLocate
- Visual Basic for Applications
- Design History
- View Volumes
- Level Filters
- DGN Libraries
- Associations across references

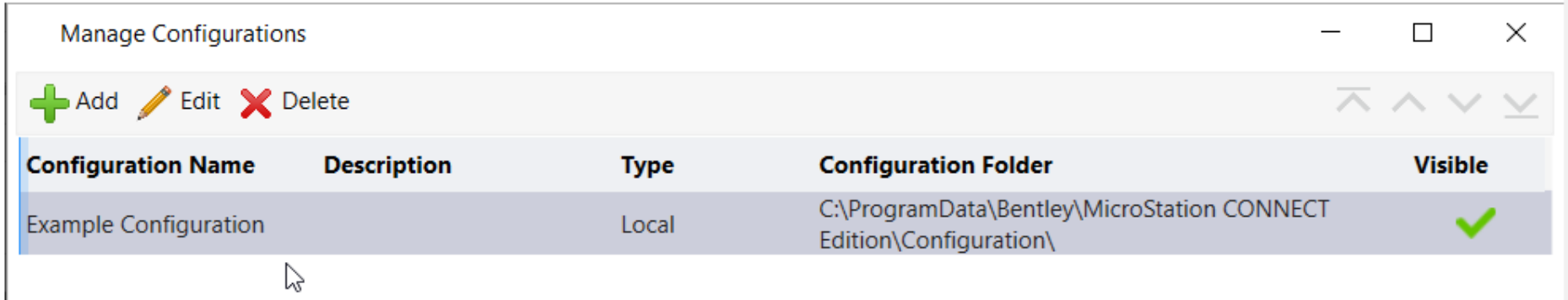
Close

- Setting Up the Environment
  - Configuration
  - The Level System
  - Creating Sheet Models for Drawing Production
  - Building DGN Libraries
  - Managing WorkSet Data with Explorer
  - ProjectWise Drive Integration with MicroStation
    - ProjectWise Drive Configuration in MicroStation
      - To Create a ProjectWise Drive Configuration
  - Design History
  - External Database Interface
  - Using DWG and Other File Formats
  - Geo-Coordination
  - Ensuring Standards Compliance
- AccuSnap and AccuDraw
- Creating Drawing Elements
- Working with Existing Elements
- References, Raster Images, Point Clouds, and Reality Mesh
- 3D Design and Modeling
- Drawing Composition
- Working with Complete Designs
- Programmed Customizations
- Deprecated Features

To Create a ProjectWise Drive Configuration

1. Select Manage Configurations on the MicroStation home page.



MicroStation help Guide on docs.Bentley.com

2. The Manage Configuration dialog opens.