



Enable Proactive Design Workflows: Getting Started with Project Insights Dashboard

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Advancing Infrastructure

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Agenda

- Target persona and challenges
- Project Insights overview
- Configuration and editing
- Setup cheat-sheet
- Summary



Philip Mills

Design Project Manager

"I need to deliver quality product on budget and on time."

Project Insights Scenario

Philip is a design project manager in a big engineering consultancy firm and is responsible for a new roadway design. He has a team of engineers that works on different areas (disciplines) of the roadway. Philip needs to make sure that everybody within his project has all needed information to accomplish their tasks on time. This requires a lot of communication and coordination between different project members as well as their schedule tracking. If unexpected problem occurs it causes delays in schedule and burns project's budget down.



Goal 1

Philip wants to have **on-demand access** to the project status and progress data that is always **current** and **accurate** (based on data, not guesstimates) so that he could rely on it when evaluating project health and making decisions.

Goal 2

Philip wants **help identifying urgent project issues** and have the data needed for **root cause analysis** to make timely and appropriate decision.

Goal 3

Philip wants **help calculating amount of chaos and identifying main sources** of it in his project compared to other similar projects in his company and/or industry, so that he could **proactively improve processes** to prevent issues before they start affecting his project.

Questions to help answer

- **Are models/drawings produced at the planned pace?**
 - Documents breakdown by workflow state and by discipline
 - Adding milestone markers overlay
 - Displaying Planned Hours and Actual hours per discipline
- **What is the quality of deliverables produced?**
 - Trends: model/drawing size growth rate vs. Number of clashes? Number of clashes between disciplines?
 - How many models and drawings ran and passed CAD QA per discipline? What were the key reasons for failing CAD QA checks?
 - What is the quality of deliverables that we send to external parties? Issued vs Rejected docs?
- **Who is following the best practice guidelines?**
 - Who is sharing models frequently and on time?
 - Who is sending good quality deliverables for external review?

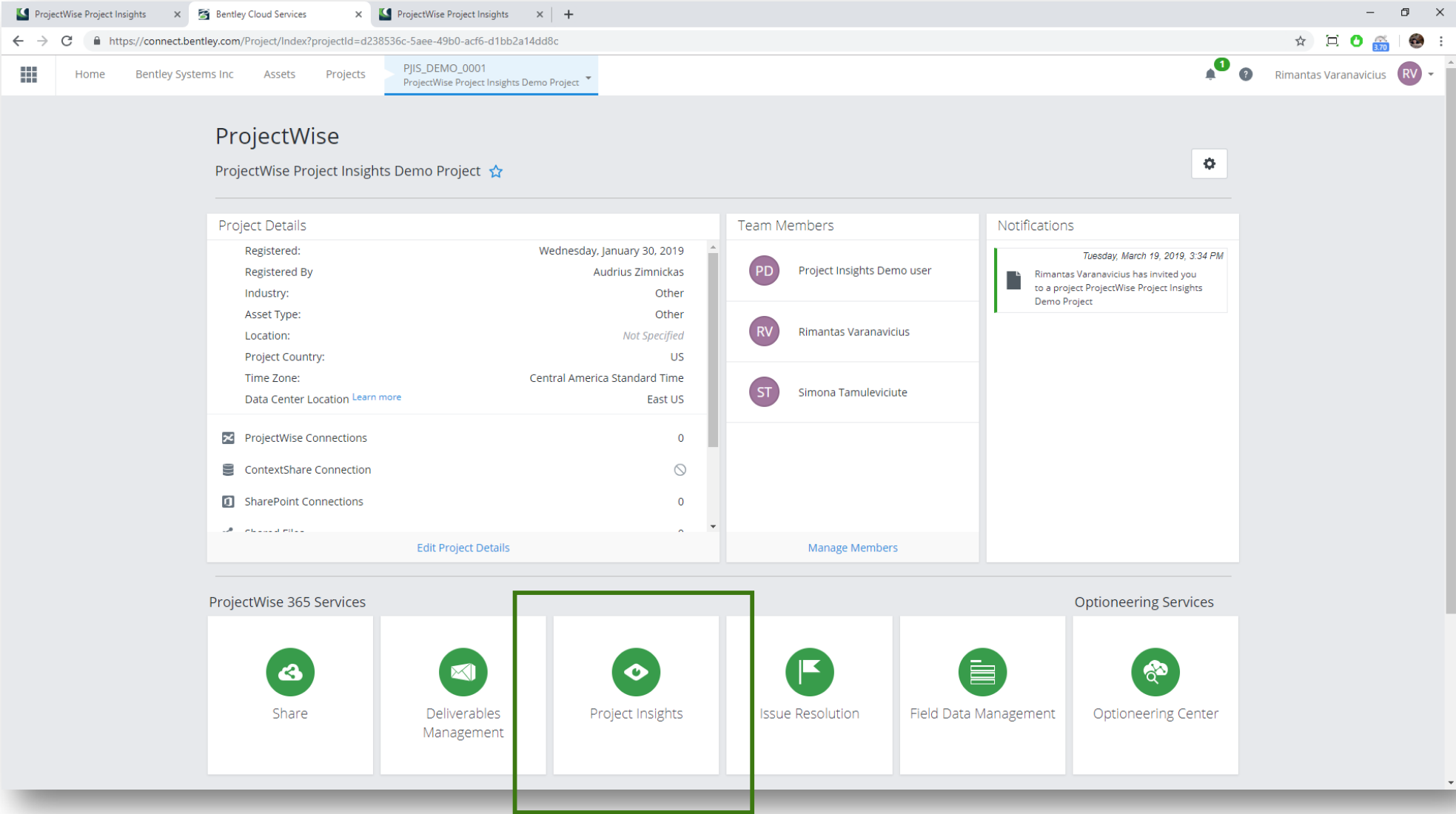
ProjectWise Portfolio



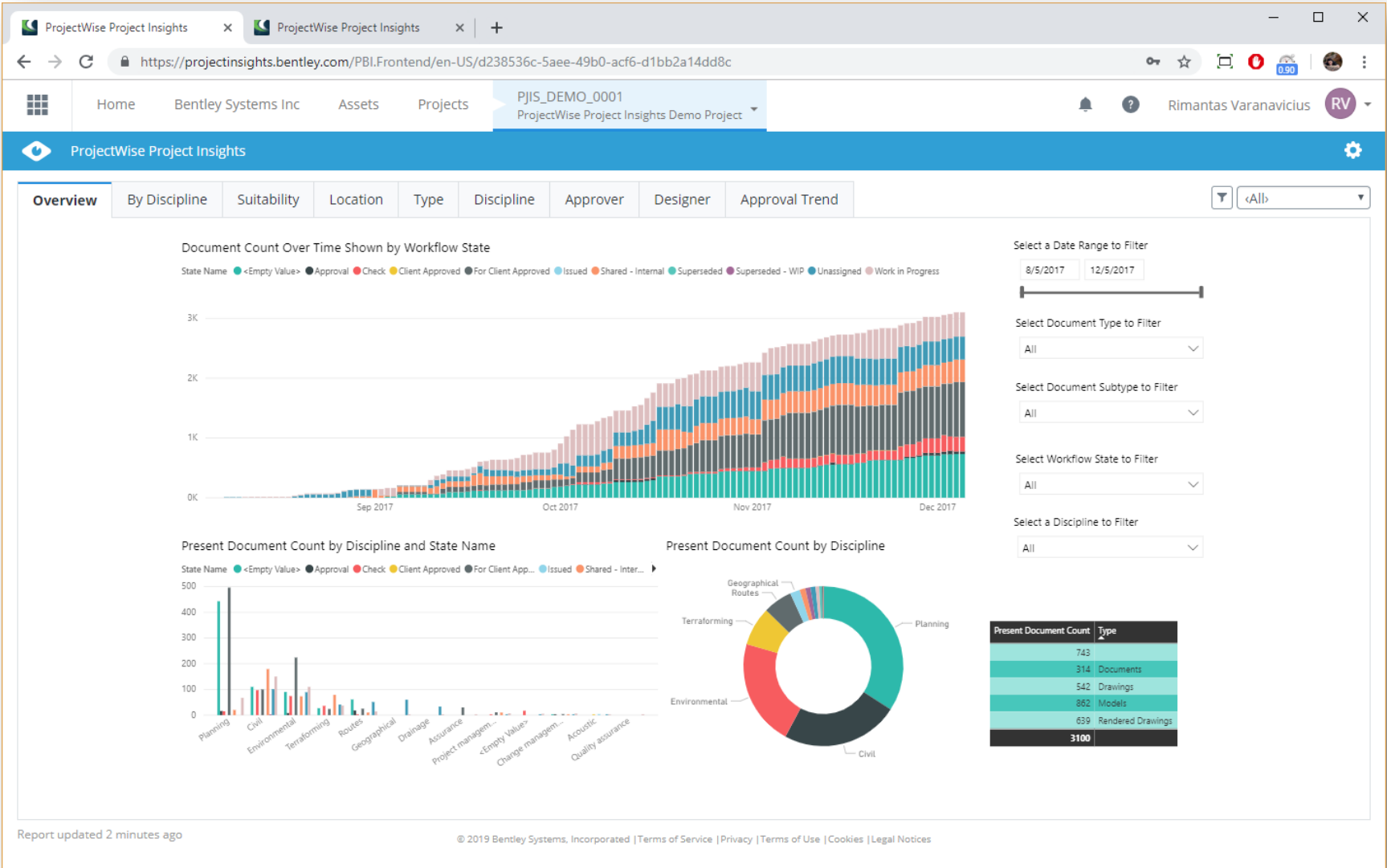
ProjectWise Portfolio



ProjectWise 365 service



Project Insights – landing page with project overview



ProjectWise Project Insights overview

- [Project Insights dashboards demo page](#)
- There's a link to demo dashboard on BE Communities:
 - Go to <https://communities.bentley.com/>
 - Search for Project Insights
 - Use provided link and login credentials

Going Digital: Advancements in
PROJECT DELIVERY

AECOM Imagine it.
Delivered.

Gaining New Perspective through Project Insights

Mike Clarke & Gareth McClimonds



2018 Year in Infrastructure Awards Winner



Early adopters feedback

The Year In Infrastructure 2018 Project Delivery award

"AECOM - Gaining New Perspective through ProjectWise Project Insights"

<https://yii.bentley.com/en/awards-video-gallery-2018?videoid=5850794318001>

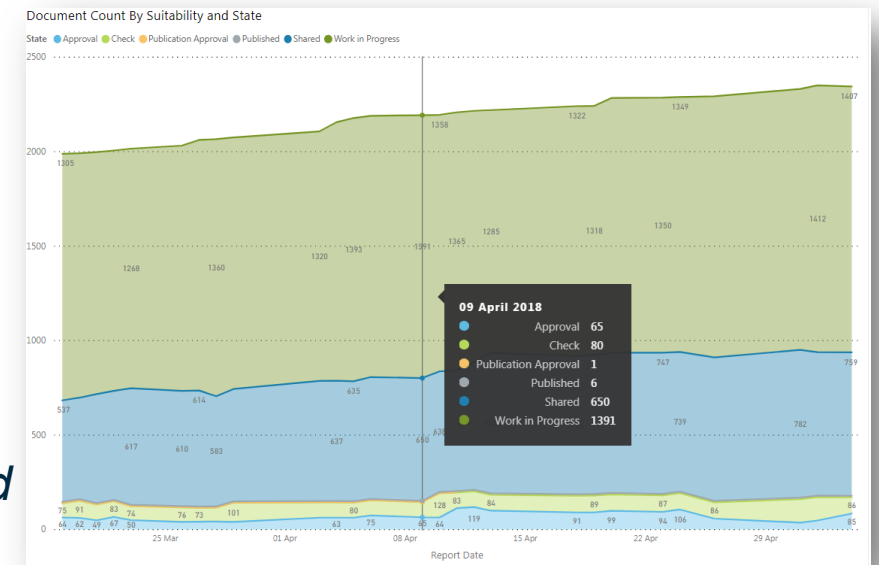


ProjectWise Insights

*“**ProjectWise Insights** is delivering a new perspective to Leadership and Project Management on the benefits of the CDE. It is promoting more informed conversations at meetings and encouraging collaborative behaviours from all project stakeholders...”*

*“If ProjectWise is a 2D Drawing, then **ProjectWise Insights** is the 3D Model that has illuminated ‘all of that dull ProjectWise information...’*

...as a Project Manager I now see the value of the CDE and how accurate metadata can help me to identify trends in performance and provide the information I need to pro-actively influence better outcomes...”



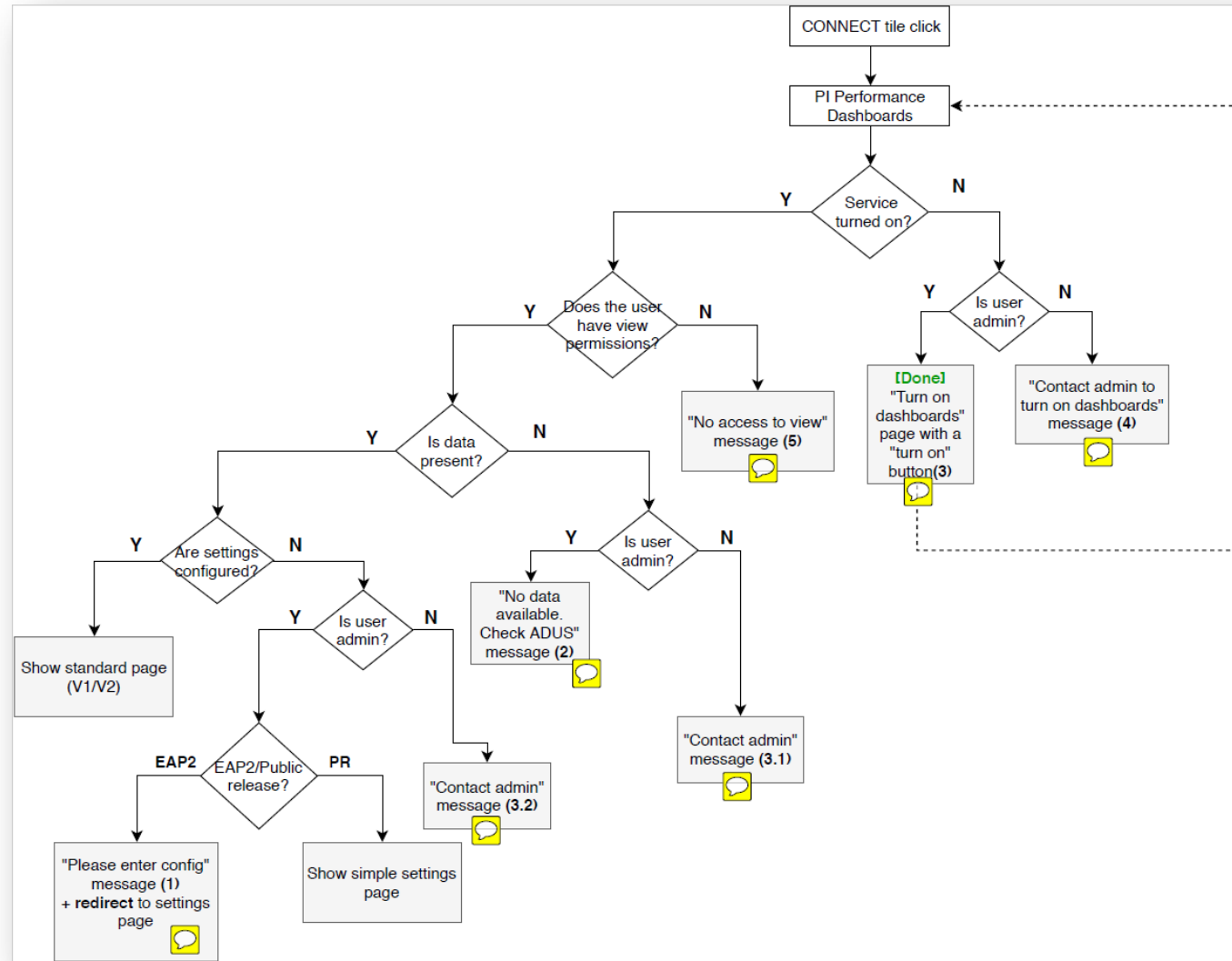


Project Insights configuration and editing

Project Insights configuration and editing

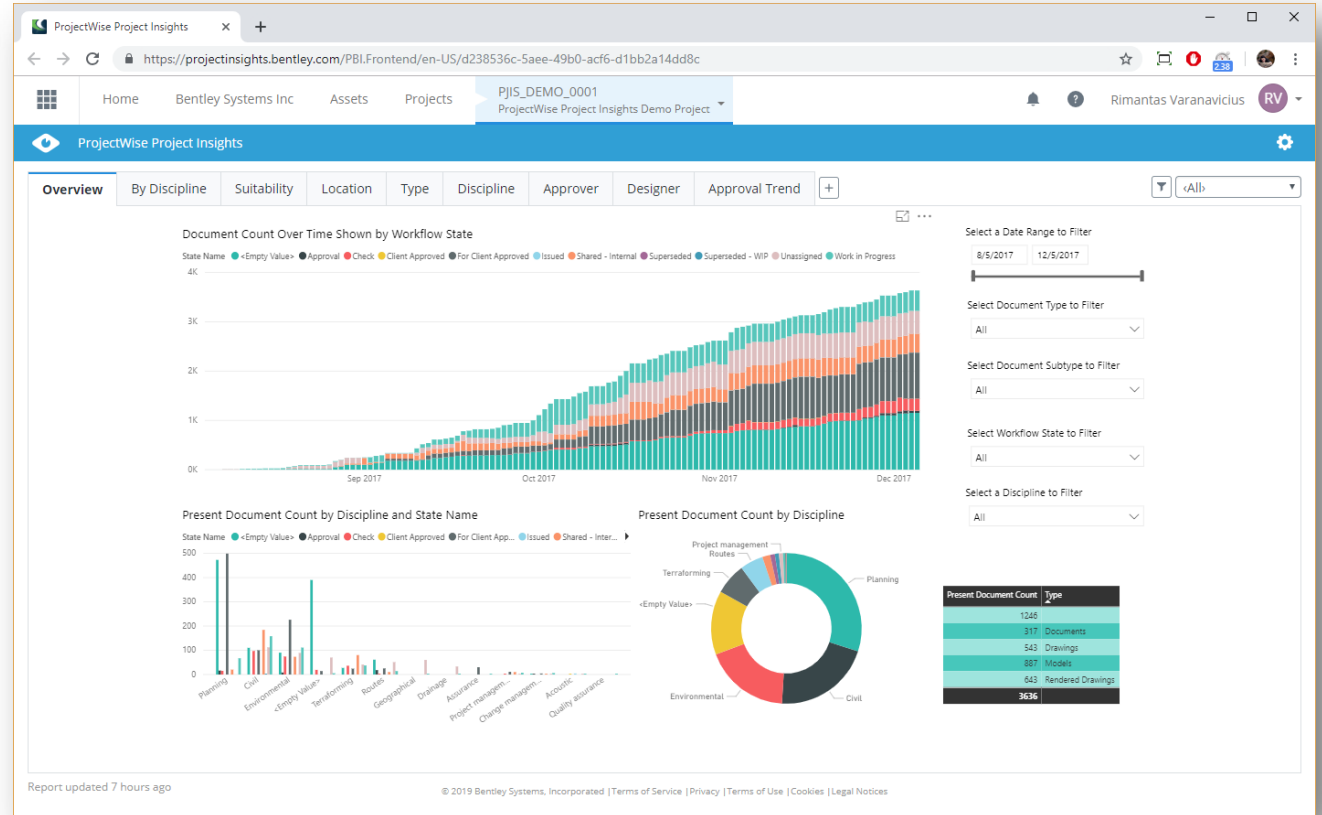
- Getting started with Project Insights
- Level1 modifications (basic) – filter what is shown
- Level2 modifications – clone and edit standard tabs
- Level3 modifications – create new dashboard tabs from scratch
- Level4 modifications (advanced) – add custom information into your dashboard
- Continuous dashboards improvement cycle

Setup cheat-sheet



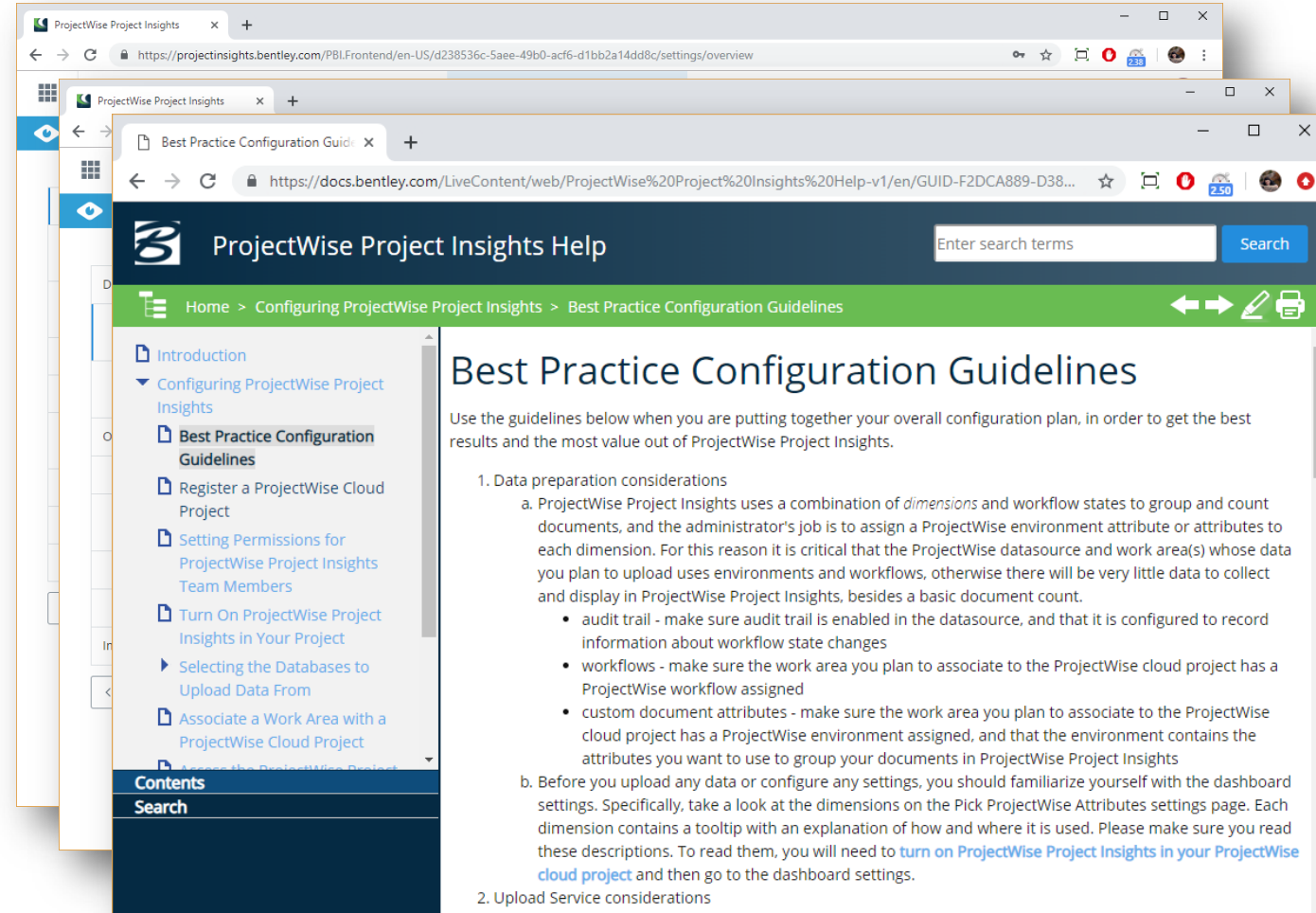
Getting started with Project Insights

- 9 standard dashboard pages
- Based on design projects best practice guidelines
- Allows to track document status and trends
- Filter documents by type, discipline, design status, location, and more
- Dashboards editing is optional



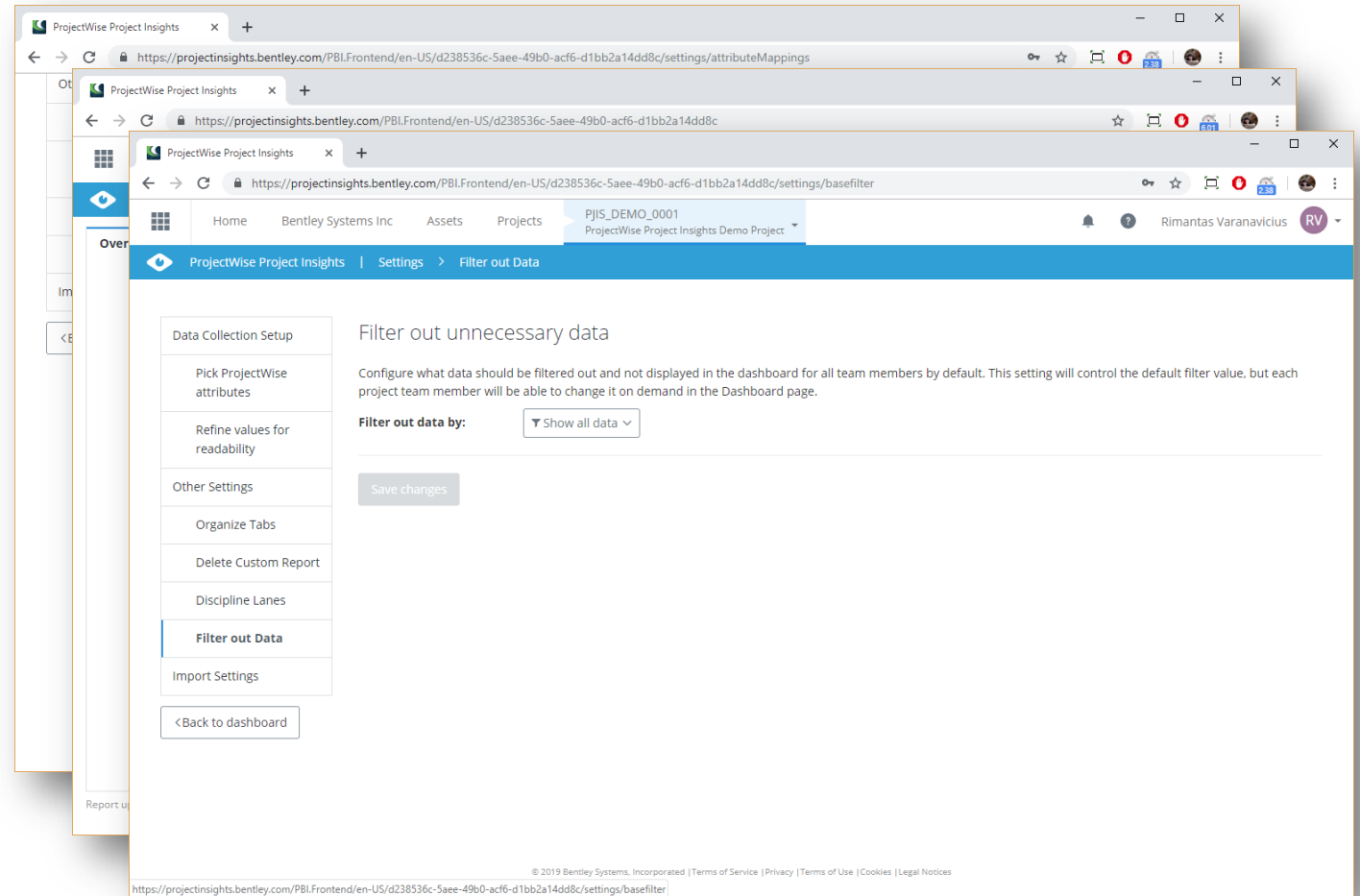
Standard configuration best practice guidelines

- Document status tracking and trend reports based on workflow states are automatically ON
- **Required!** Define the **source PW attributes** - to filter/slice ProjectWise documents by document type, discipline, location, design status, and more
- **First, only setup source PW attributes** and then let it run for some time to get data collected and displayed
- Important to pick appropriate source PW attributes. Better skip, than pick random.
- “Configure Project Insights Dashboard” - permission required



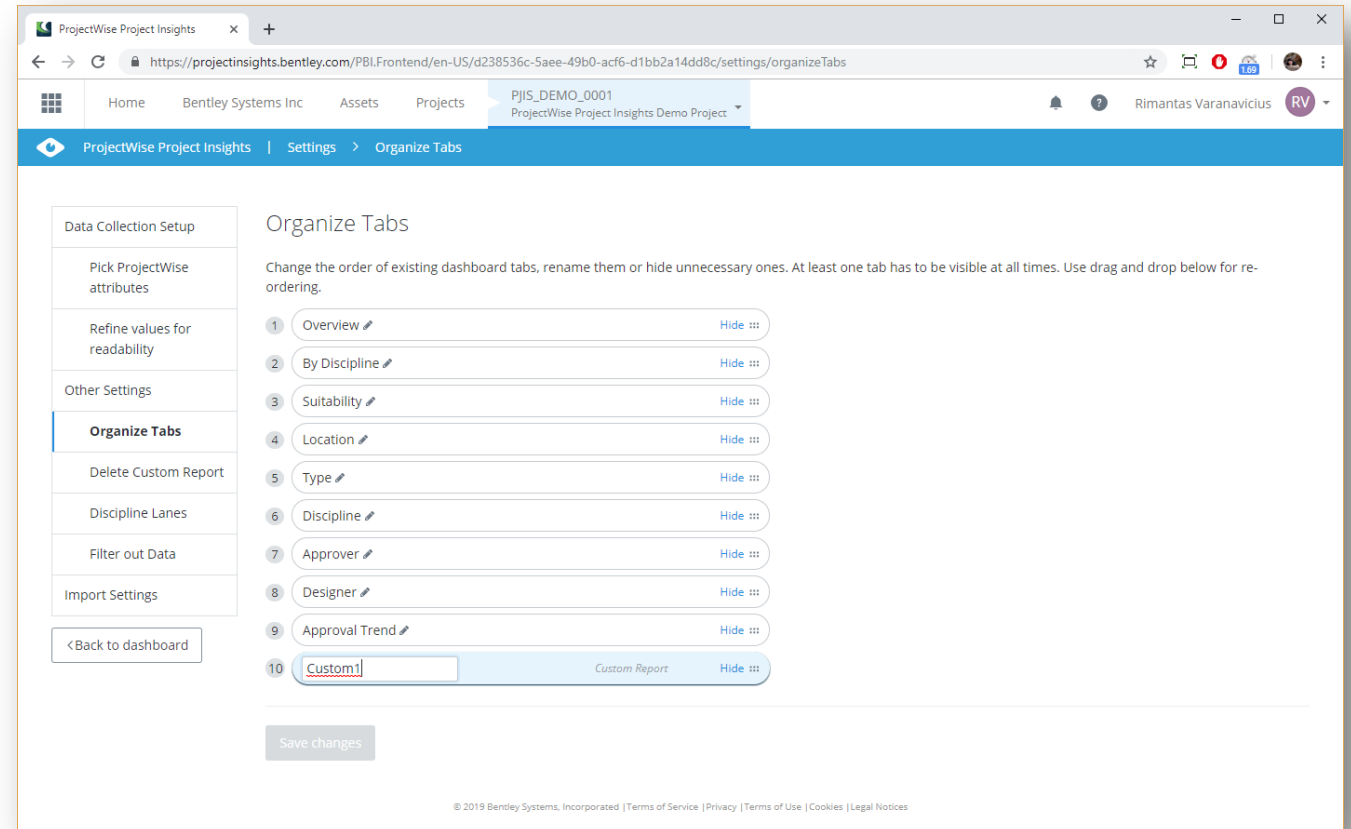
Level1 modifications – filter out “noise”

- After dashboards ran for some time it is **very important to filter out the "noise"** – documents that are not important to track in the dashboards
- Be careful when hiding data
 - First, configure the filter values, test it out
 - Then, set the default filter for all team members



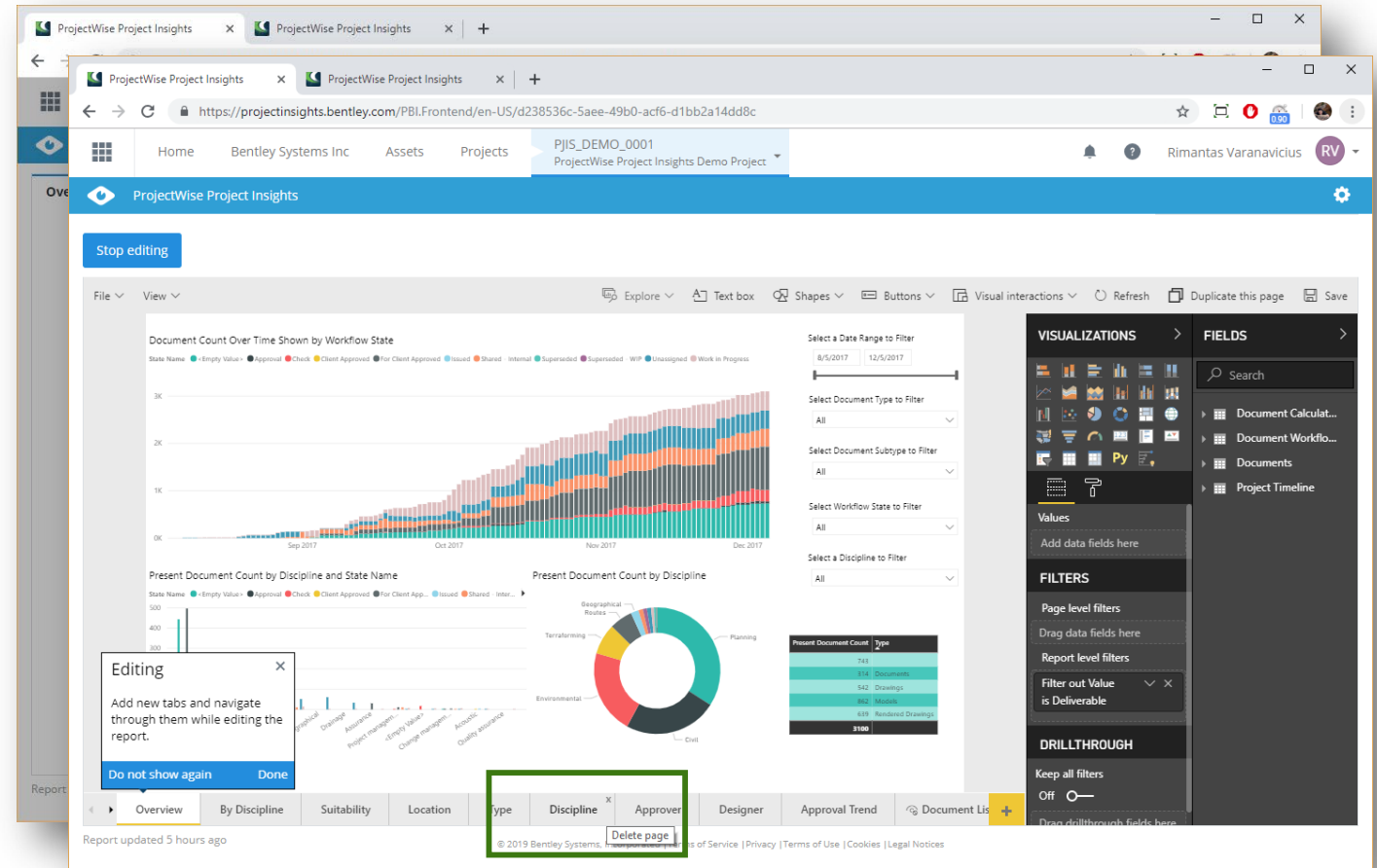
Level1 modifications – edit, hide, rename tabs

- Any of the dashboard tabs can be:
 - Re-ordered
 - Renamed
 - Hidden
- Applies for the 9 standard tabs + any custom tab



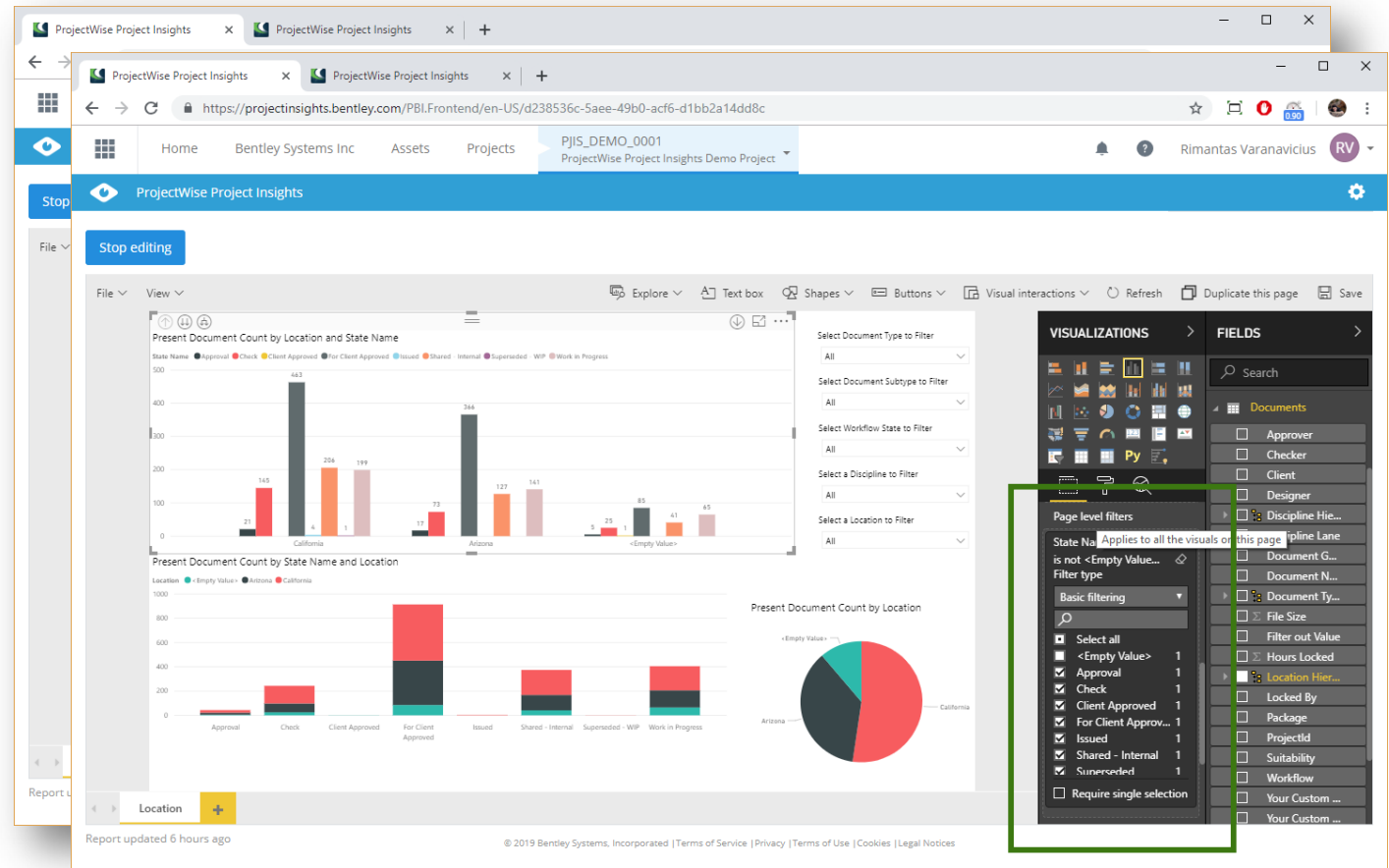
Level2 modifications – copy & modify one of existing tabs

- Copy and modify one of standard tabs
- To modify only one tab
 - copy all tabs and then delete unnecessary



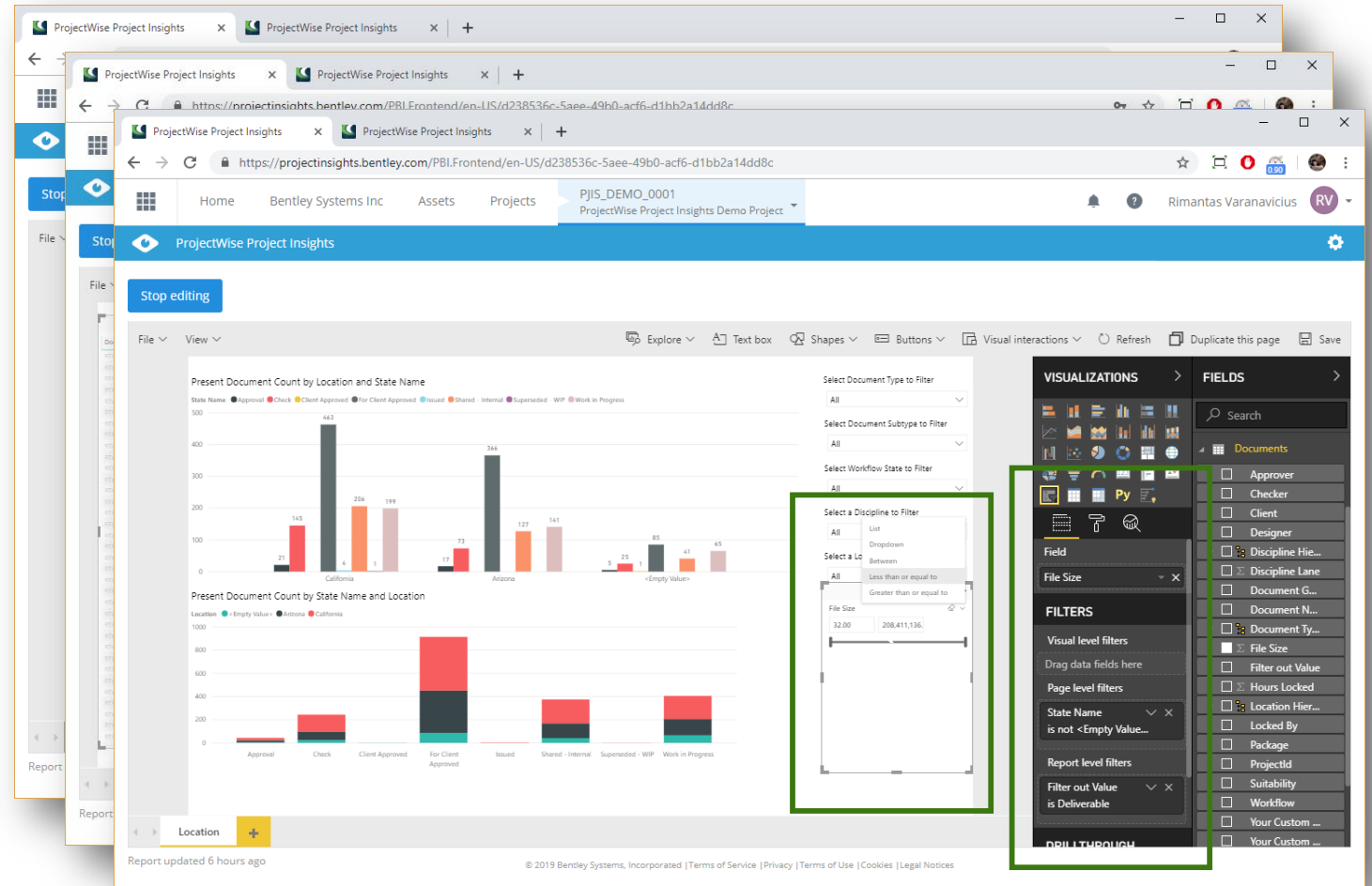
Level2 modifications – copy & modify one of existing tabs

- Reorganize charts on a tab page
- Change the chart type (ex. change stacked chart to a bar chart)
- Exclude some data by applying hardcoded page level filter (ex. exclude <Empty value>)



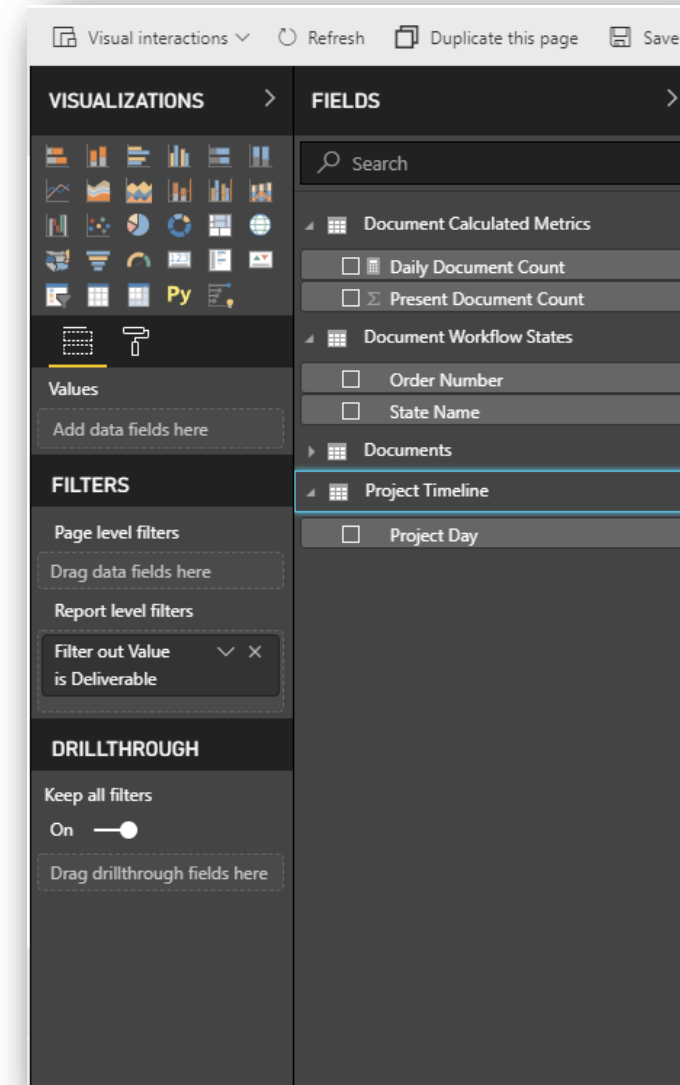
Level3 modifications – create new tab from scratch

- Create new tab from scratch
- Add some typical charts into the new page (table, matrix, pie chart, bar chart, filter)
- Exclude some data, by adding Slicers – non-hardcoded, end user modifyable data filters
 - Slicer affects all charts on a page



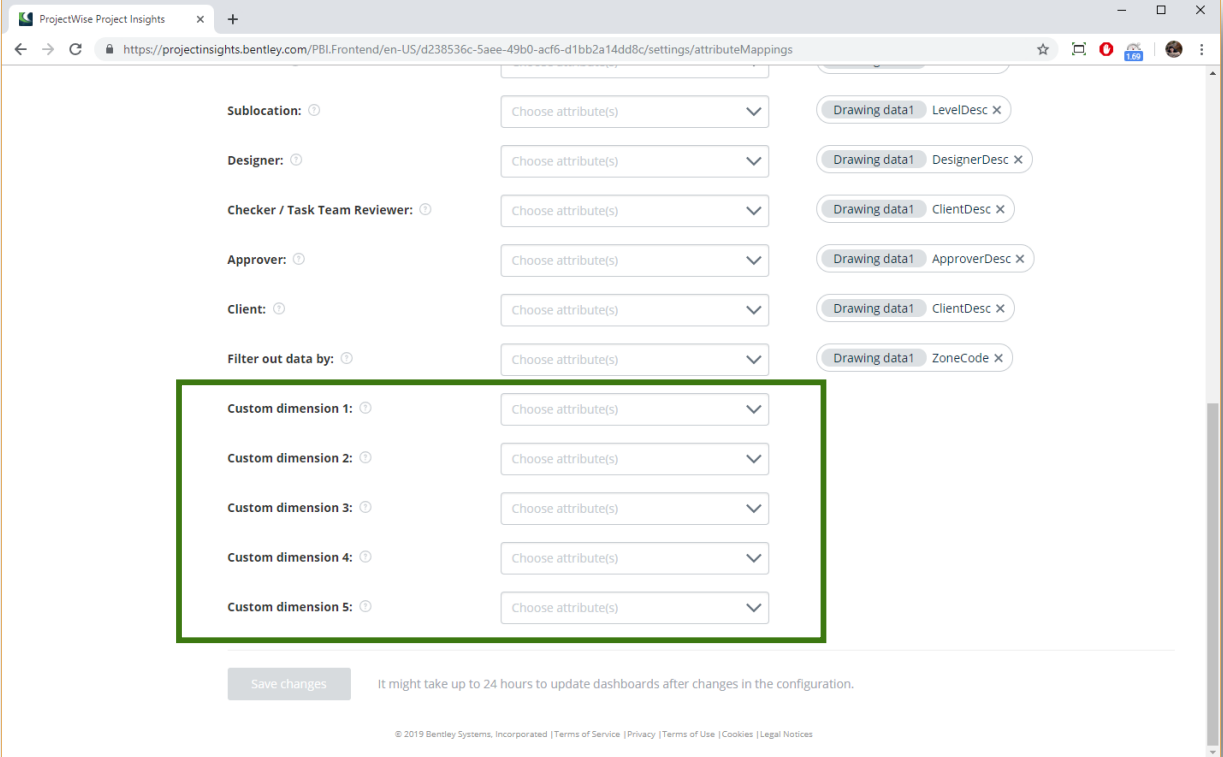
Level3 modifications – data schema for charts

- Data tables and fields:
 - ProjectWise document attributes
 - ProjectWise document workflow states
 - ProjectWise document calculated metrics
 - Project timeline days



Level4 modifications – custom data dimensions

- 5 custom dimensions available
- If you have more PW attributes to include in dashboards
- Allows to group/count/filter your PW documents based on those custom attribute values
- Not visible in any of standard tabs – create your custom tab to include it
- Change chart title

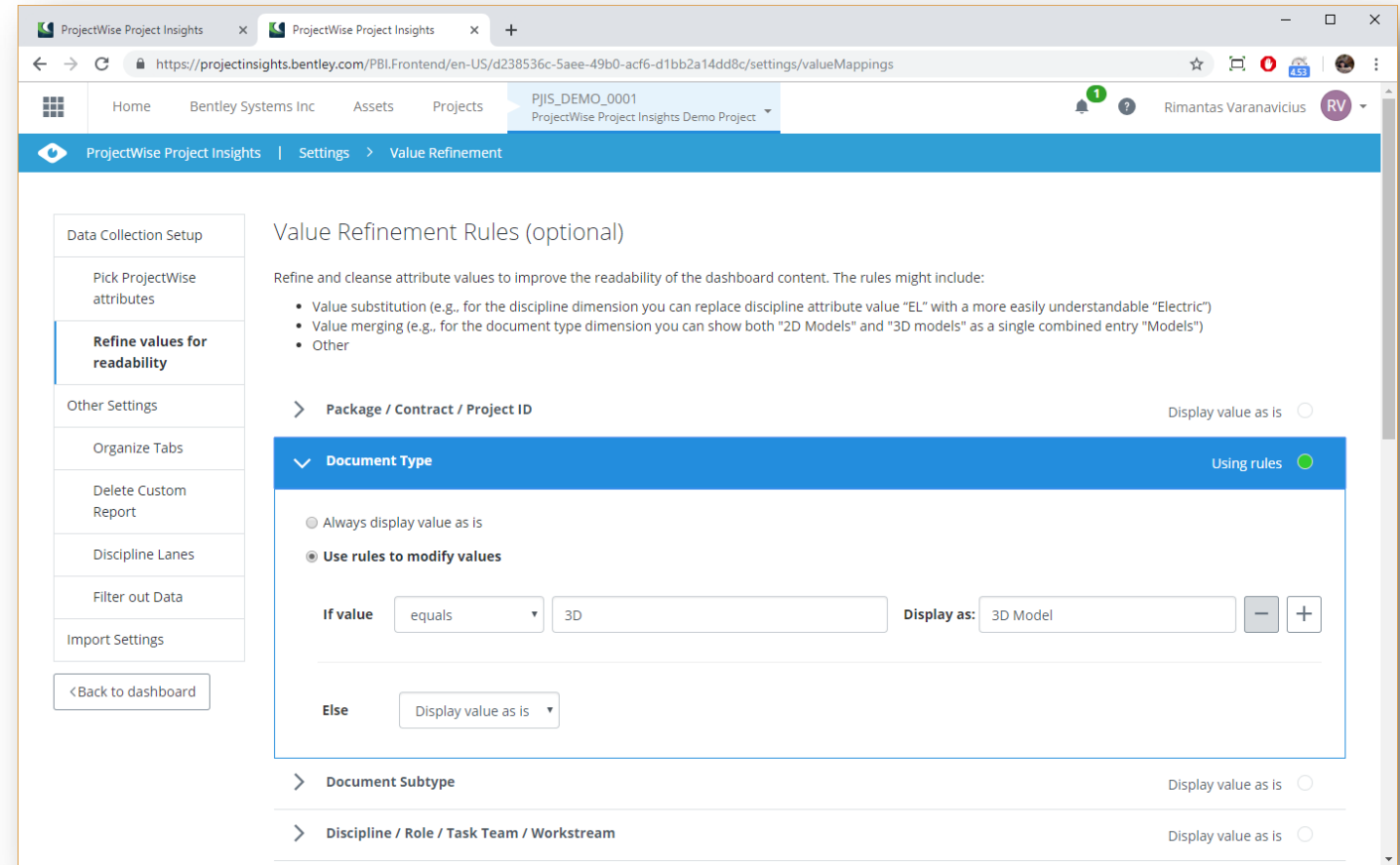


The screenshot shows the 'ProjectWise Project Insights' settings page for 'attributeMappings'. The page is divided into two main sections. The top section contains standard attributes: 'Sublocation', 'Designer', 'Checker / Task Team Reviewer', 'Approver', 'Client', and 'Filter out data by'. Each attribute has a dropdown menu labeled 'Choose attribute(s)' and a corresponding 'Drawing data1' button with a close icon. The bottom section, highlighted with a green border, contains five 'Custom dimension' entries (1 through 5), each with a 'Choose attribute(s)' dropdown. At the bottom of the page, there is a 'Save changes' button and a note: 'It might take up to 24 hours to update dashboards after changes in the configuration.' The footer includes copyright information: '© 2019 Bentley Systems, Incorporated | Terms of Service | Privacy | Terms of Use | Cookies | Legal Notices'.

Level4 modifications –

Configure value refinement rules to improve data readability

- Merge multiple attribute values into one
- Translate some less clear attribute values into easier readable
- Be careful. Might create inconsistency between source data and dashboards. Difficult to troubleshoot and resolve

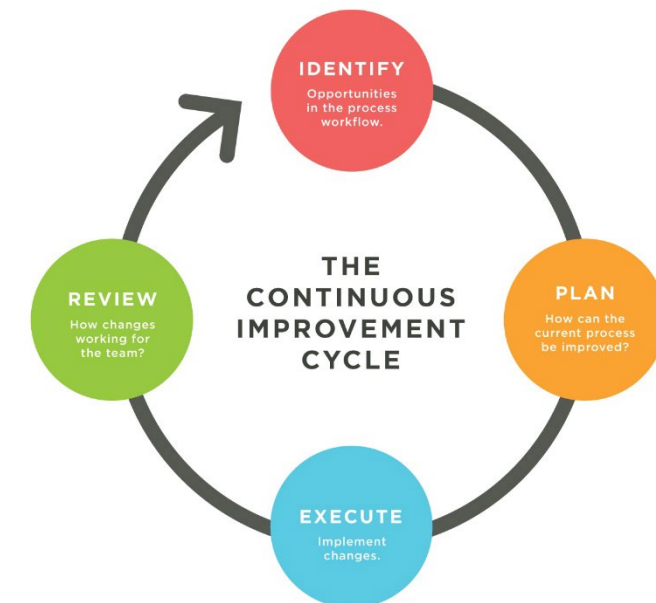


Project Insights configuration and editing - recap

- Getting started with Project Insights
 - Before editing - setup and use standard Dashboards for some time
 - Standard configuration best practice guidelines
- Level1 modifications (basic)
 - Filter out “noise” data from standard dashboards
 - Edit the order, hide or rename tabs
- Level2 modifications
 - Copy and modify one of standard tabs
 - Add/modify charts
 - Add additional filters
- Level3 modifications
 - Create new tab from scratch
 - Add some typical charts into the new page (table, matrix, pie chart, bar chart, filter, slicer)
 - Create slicer to filter out specific data
- Level4 modifications (advanced)
 - Have your custom PW data/attributes available for dashboards.
 - Create new tab to include your custom data in the dashboard
 - Configure value refinement rules to improve data readability

Continuous cycle of Dashboards data improvement

- Tweak data, adjust dashboards, repeat
- Think about how you need to change PW environment/attributes to have more and better quality data available for analysis:
 - What additional business attributes would help better group and sort documents by?
 - Change PW attributes configuration, collect more data
 - Adjust dashboards
 - Review. Repeat



New project vs. Existing project

- Existing ProjectWise projects are great because they already have data/docs in them and readily available for processing/analysis.
 - Project Insights looks into audit trail and tries to visualize what was happening before PWPI was enabled, so that trends could be seen
 - However existing projects might have less flexibility in what could be changed in PWDI to have better attributes/values for Dashboarding/Analysis
- New ProjectWise projects enables more flexibility:
 - Will allow do some PWDI configuration adjustments, to configure attributes and workflow to have data easier consumable for Project Insights
 - But they will have less data/docs, so it will take some time to get docs created and before getting the value out of Project Insights

ProjectWise Project Insights dashboard editing limitations

Same as Microsoft Power BI embedded limitations:

Possible:

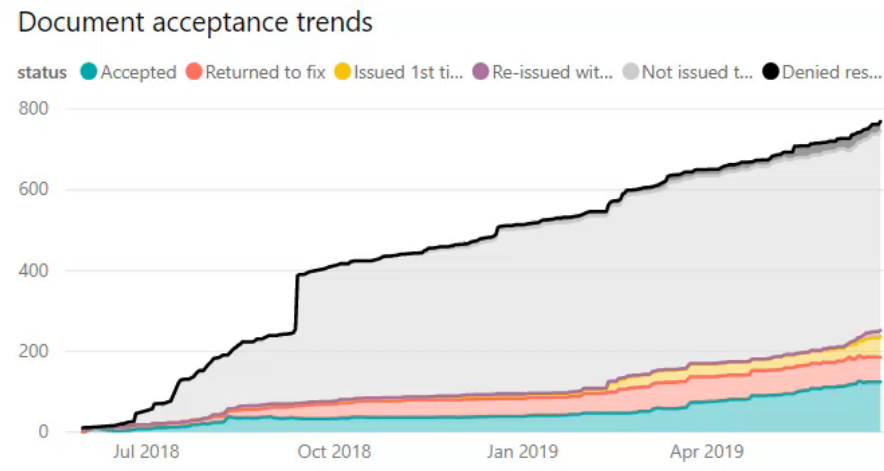
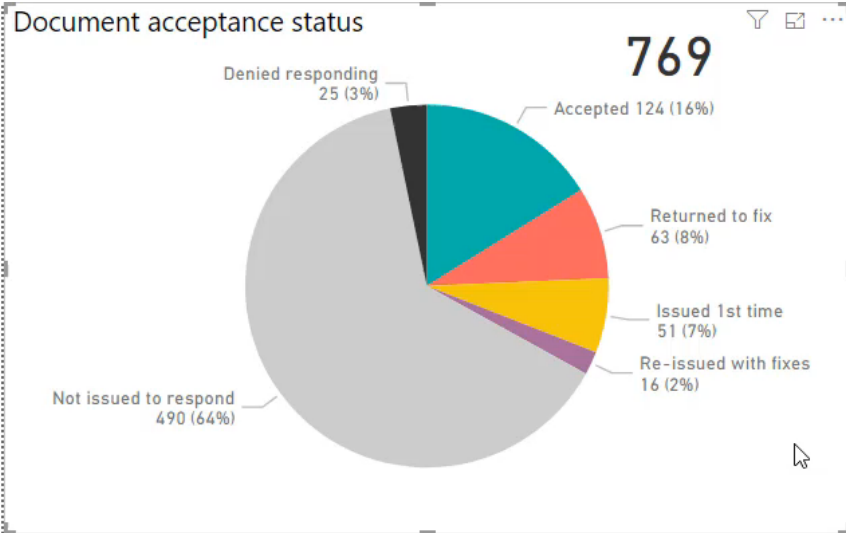
- Create/delete/modify pages
- Create/delete/modify charts
- Combine existing tables and columns
- Export data (snapshot)

Not possible:

- Add new datasources
- Modify underlying data model
 - Tables
 - Columns
 - Measures
- Custom Visuals
- Create new dashboard
- Print

How to get started with ProjectWise workflows and attributes?

- Sample workflow states:
 - Not started
 - Work in progress
 - Sent for internal review (Shared)
 - Sent for client review
 - Issued for construction/information/purchasing
- Sample ProjectWise document attributes:
 - Package (if project is divided into several work packages, contracts or sub-projects)
 - Discipline (Civil, Environmental, Architectural, Structural, ...)
 - Document type, sub-type (Model, Drawing, Office document)
 - Document sub-type (2D Model, 3D Model, etc)
 - Suitability (Issued for coordination, Issued for information, Issued for Review, Issued for Construction, ...)
 - Location, sub-location
 - Designer
 - Checker/Reviewer
 - Approver

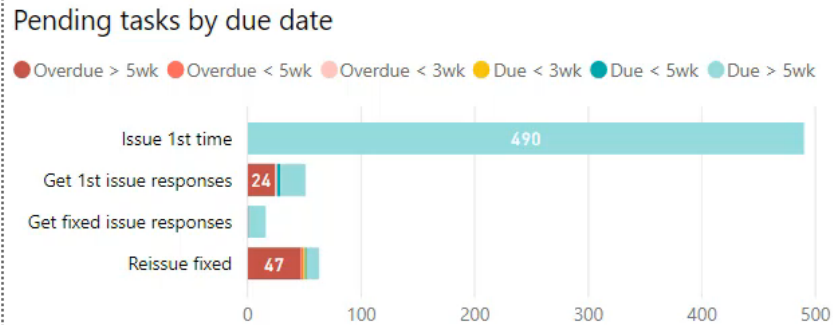


Filter by Issue purpose

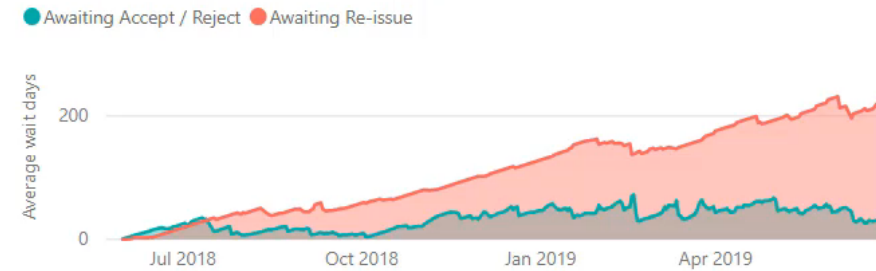
- ☐ For Acceptance
- ☐ For Coordination
- ☐ For Information
- ☐ For Review

Filter by status

- ☐ Accepted
- ☐ Returned to fix
- ☐ Issued 1st time
- ☐ Re-issued with fixes
- ☐ Not issued to respond
- ☐ Denied responding



Ongoing task average duration (in days)



Filter by Sent to Organization

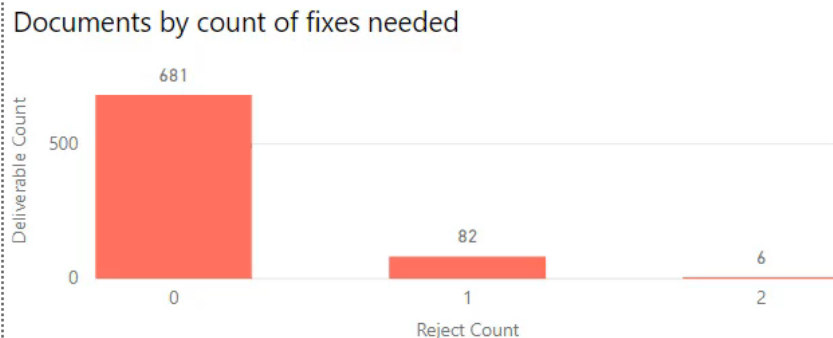
All

Filter By Sent to Recipient

All

Filter by Classification

All



Accepted documents, by weeks it took from the 1st issue





ProjectWise Project Insights

Overview By Discipline Suitability Location Type Discipline Approver Design Approval Trend

Data-Driven Decisions for Better Outcomes

Document Count by Suitability and Workflow State

Select Document Type to Filter

Workflow State ● Unassigned ● Work in Progress ● Check ● Approval ● Shared - Internal ● For Client Approved ● Client Approved



- Project Insights enables:
 - Automated dashboards for engineering projects status and trends tracking
 - Helps spot potential issues and address them before they impact the project
 - Identify and monitor best practices that improve project outcomes