Case Study / Arcesium

Systematic Risk Filing

Regulatory filing portal design

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Project Date

March-July 2021

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Application Overview

Systematic Risk Filing (SRF) aimed to optimize and efficiently submit most regulatory reporting requirements for asset management firms.

Problem Description

The compliance frameworks of investment firms are tightly regulated, with requirements of various reports needing to be submitted at different times. These reports and their schedules vary from region to region, and missing any filing or reporting inaccurate data can lead to fines or even termination of trading license.

e.g. In US, the SEC and CFTC requires hedge funds to file Form PF for hedge funds and private equity funds, CPO-PQR for their commodity pools,13F for trading huge volume listed securities. Similarly, In EU, hedge funds are required to report AIFMD to the relevant marketed jurisdiction in which they are marketing their funds.

Business Goals

With an aim to minimize client pain points and drawbacks associated with regulatory filing processes, two goals were defined for this project:

Improve operational efficiency by

- creating a reporting infrastructure to connect existing information/files from different systems
- automating data inputs to eliminate manual uploads
- allowing the users to create custom status/rules to reduce time spent on manual reviews
- setting up user alerts to highlight report creation, changes, overrides, submissions, etc.

Improve transparency by

- allowing the users to view drill-down of any calculation to the underlying raw data/configuration
- commenting on and maintaining audit history for questions
- establishing multiple levels of audit for tracking changes made to the reports

Design Process

Research → **User Journey** → **Wireframes & Whiteboarding** → **Prototyping & Review Meetings** → **Final Deliverable**

Research

Interviews were conducted with existing users to understand the current process, and their pain points.

User Journey

User journey was mapped to understand the flow of information across different user groups, and to understand their needs.

Wireframes & Whiteboarding

Wireframes were created and later discussed in a whiteboarding session. Focus of this session was to pull the ideas from our research to improve the same, as well as to ensure parity with the rest of the platform in terms of layout and interactions.

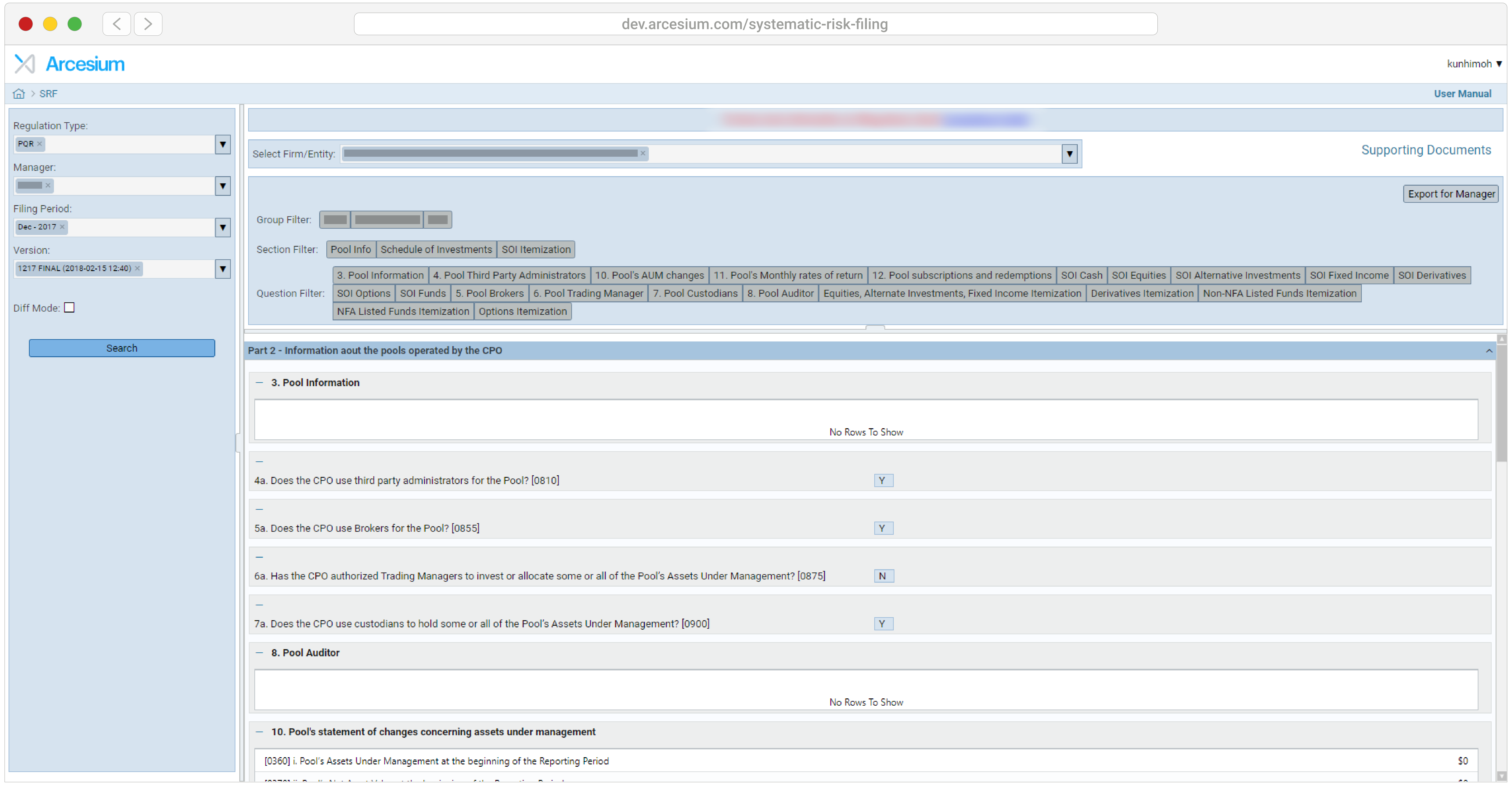
Prototyping & Review Meetings

Prototype was created and iterated upon using a custom prototyping setup[1]. Meetings with various stakeholders were held to gather their feedback and improve upon the iterations.

1. I created a template based prototyping tool using HTML, CSS & JS. I chose to do this over using available tools like Figma, because I was also assisting the frontend development team with the HTML/CSS code of our in-house component library. This method allowed the developers to extract the DOM and CSS styles directly from the mockup.

Final Deliverable

A final version of the prototype was presented to the stakeholders to get a sign-off before handing it over for development. Non-critical feedback was documented as notes for developers to incorporate during implementation.



Snapshot of current application. The search panel is available on the left, and the filter for questions on the top.

Current Application Analysis and Feedback

Layout was unoptimized

- Users would typically spends upwards of an hour on each filing per session. This meant that once the user selected the filing, the entire search panel on the left was rendered virtually useless. To add to this, the users had to make several clicks in order to select the target filing.
- The filter panel above the questions allowed users to select the entities as well as filter the questions by groups or individual questions. However, this took up a lot of space in the UI, leaving very little for the core content. While this panel was collapsible, the ensuing interaction made it very cumbersome to filter the questions and view them at the same time.

Lack of transparency

- Users didn't have a summary of the filing, which forced them to go through the entire form in order to determine the current state.
- There were no indicators for which questions have been reviewed, and thus, they had to maintain a list of reviewed questions offline.
- All communication regarding the filing happened offline, which became an issue when it was being reviewed, due to the lack of an audit trail.

User Archetypes

Interviews were conducted with the current users to understand their needs and current usage patterns. Based on these interviews, three user archetypes were created to help understand the information and actionable items required by each archetype.

Operations Analysts
(Internal Users)

Operations analysts are the first point of contact and responsible for data quality issues, tracking filing progress and getting any reported issues resolved by reaching out to the correct teams who provided the underlying data.

Interview Notes:
Would like to see summary of data quality checks, impacted questions, assigned tasks. Want to create notification events and configure review levels based upon client requirements.

Review Analysts
(Internal/External Users)

Depending upon the client's needs, there can be one or more levels of reviews, which are typically split into different groups (viz., Risk, Compliance, Management Reporting, etc.) responsible for reviewing the various questions. Multiple levels of reviews correspond to the management levels within the firm (e.g. level-1 review is handled by analysts, while level-2 reviews are handles by senior analysts).

Interview Notes:
Would like to filter by categories, questions, funds, assigned tasks. Bulk sign-off, historical views and drill-downs would be useful. Would like to configure reminders to ensure that deadlines are met.

CCO/Directors
(External Users)

The last level of reviewers who are responsible for signing off on the filing before it's uploaded to the regulator's portals.

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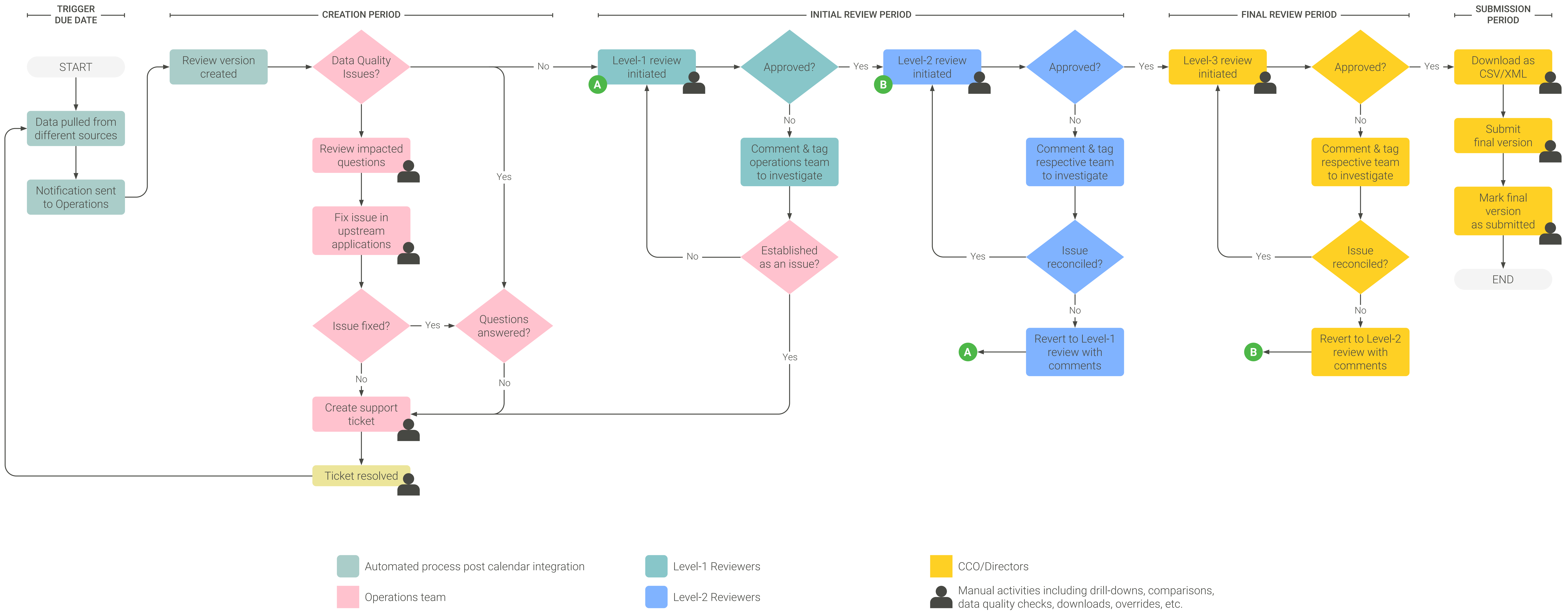
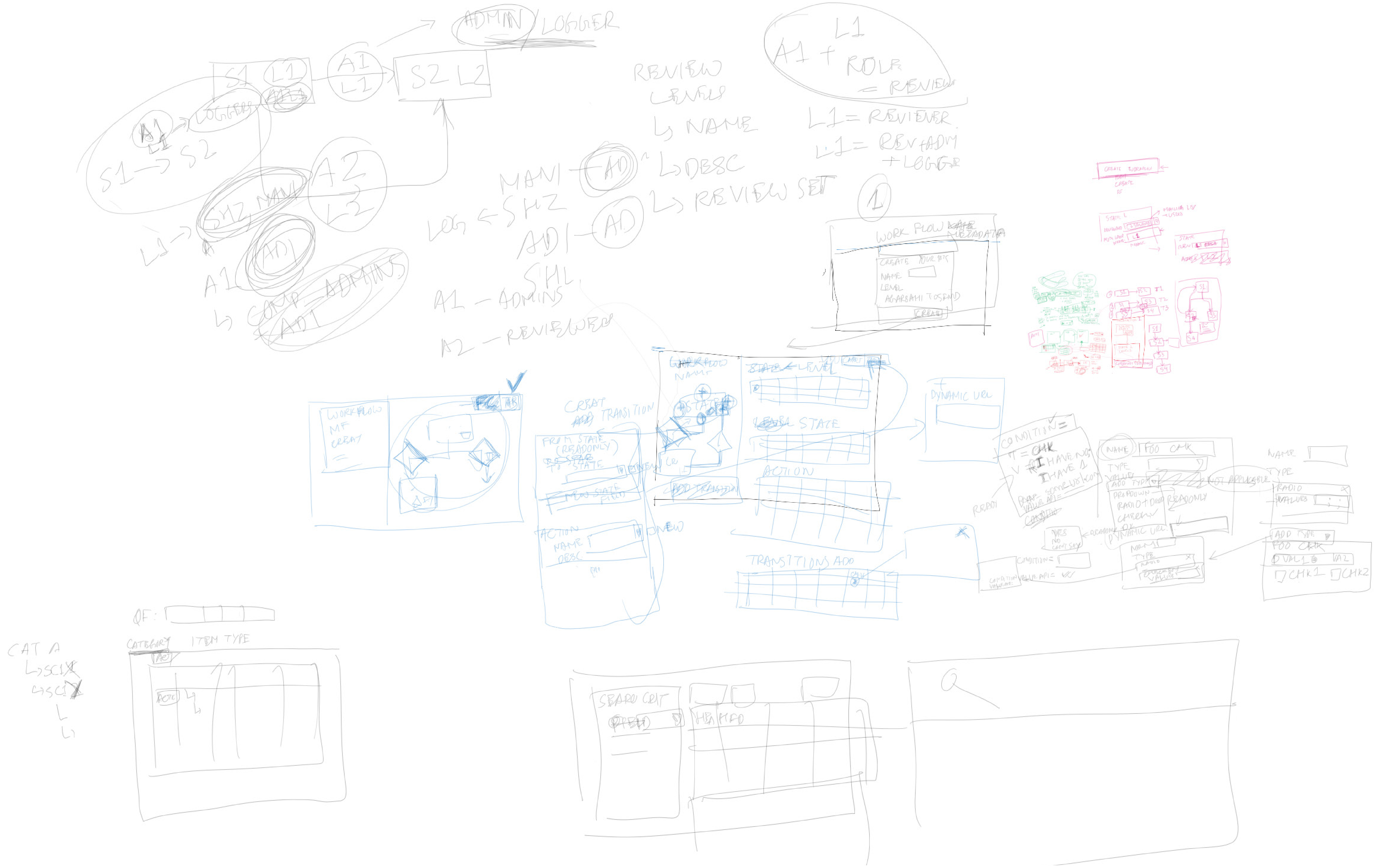
User Journey

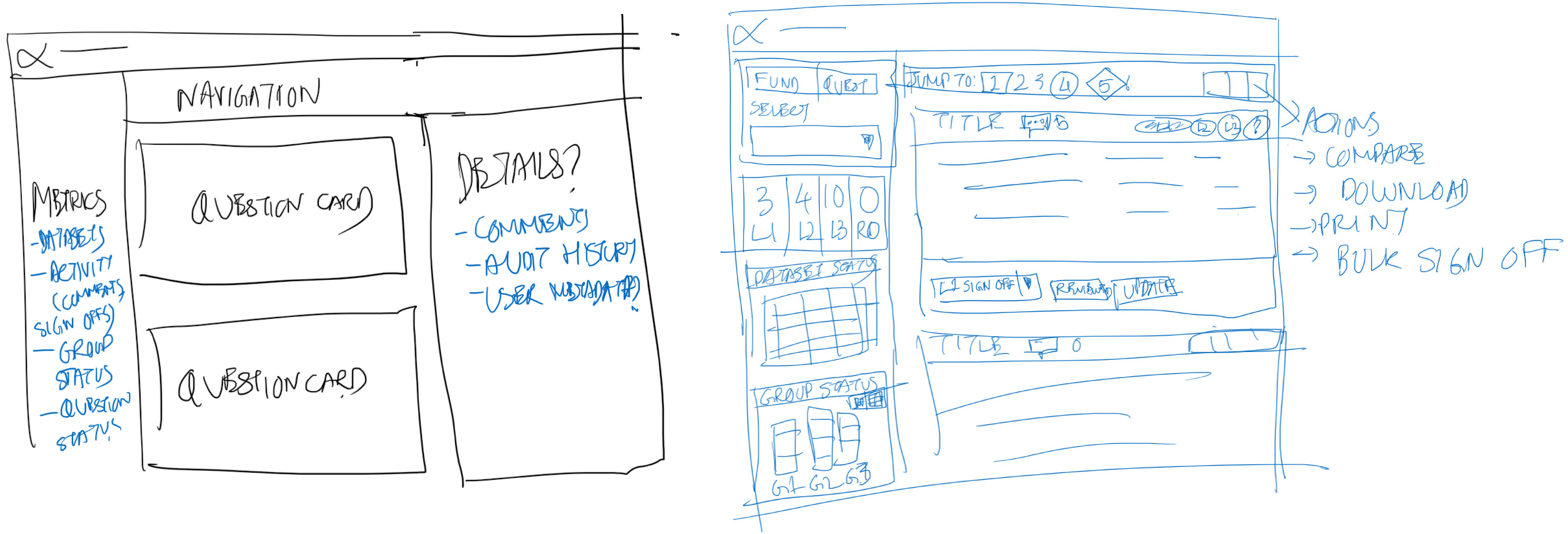


Whiteboarding Session (1 / 3)



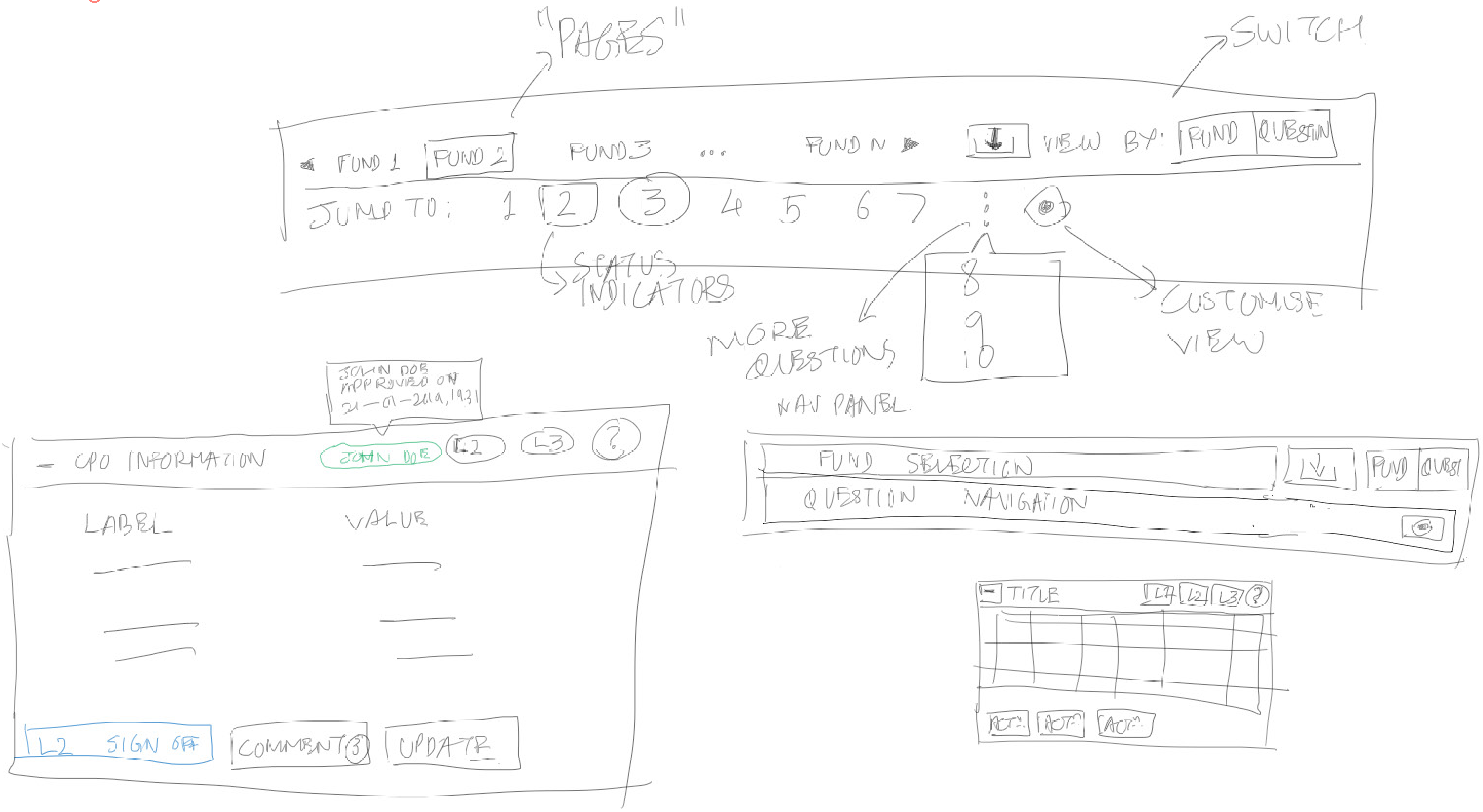
Whiteboarding session for review level configuration for clients

Whiteboarding Session (2 / 3)



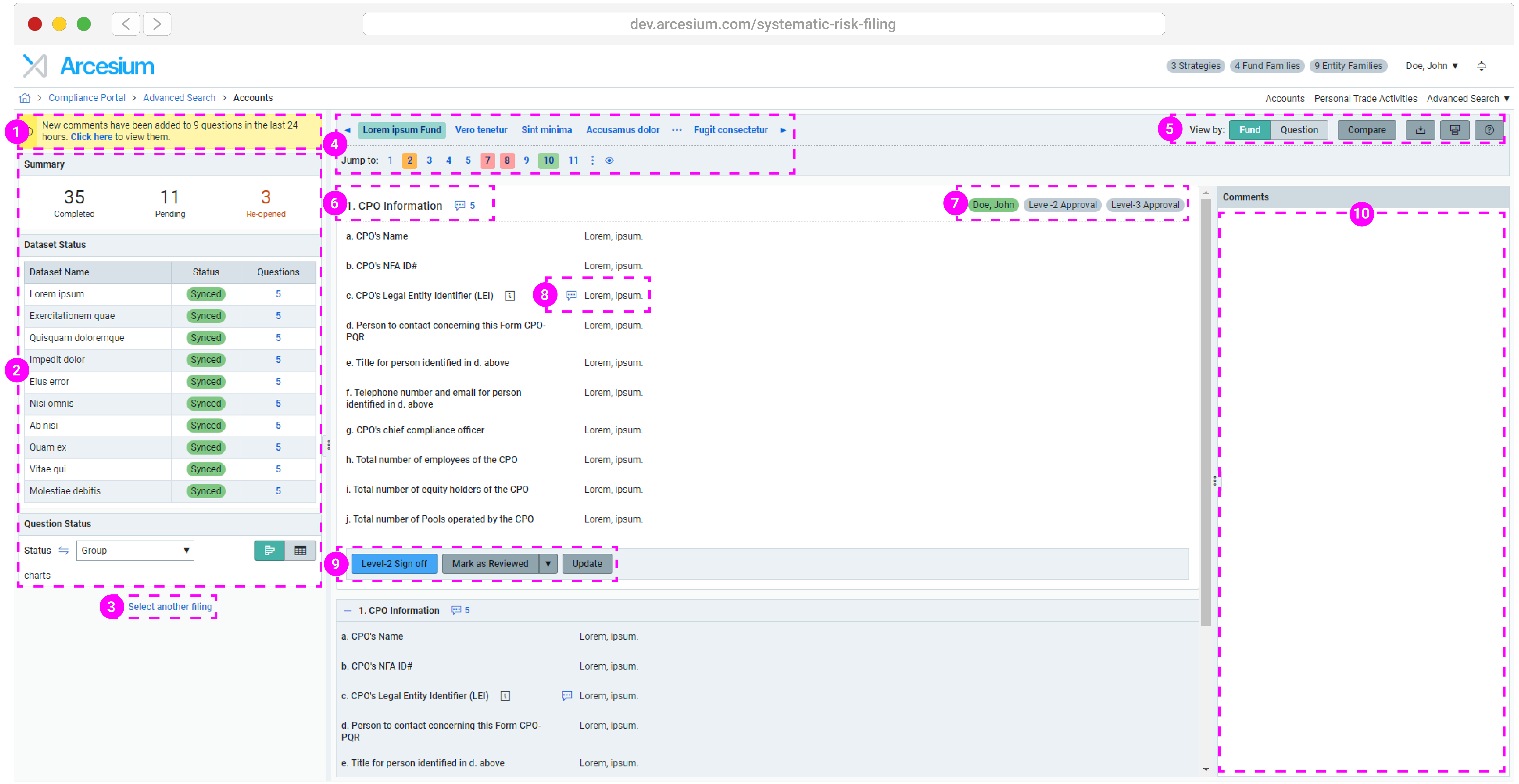
Whiteboarding session for review screen

Whiteboarding Session (3 / 3)



Exploring alternate views and adding details to different sections of the screen

Prototyping & Feedback (1 / 3)

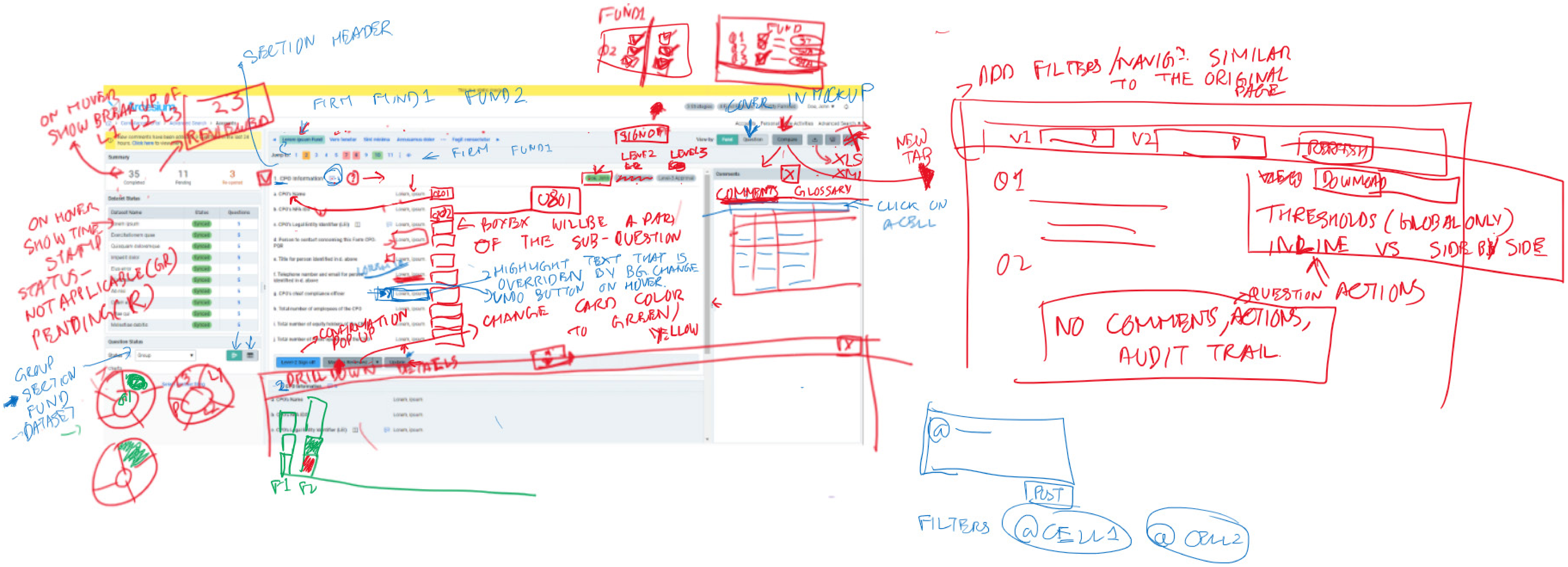


Version 1 of the review page

Design Decisions

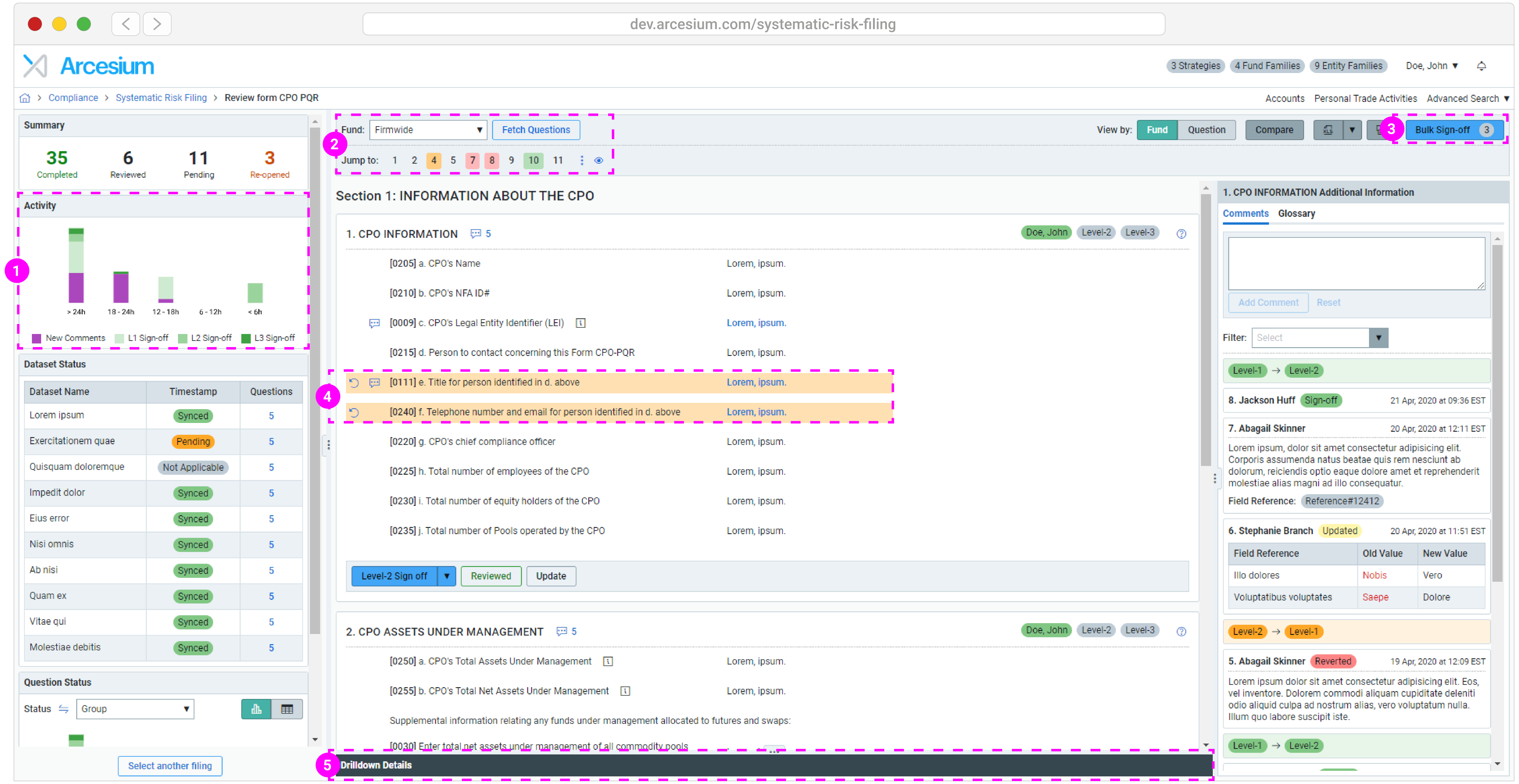
1. Message notifying the users about questions that were updated/ re-opened, along with a way to filter said questions directly.
2. Placeholder containers for the current filing summary .
3. Replaced the search panel in the existing application with a button which will open a dialog box to select the another filing.
4. Applicable funds are displayed on the top, and the applicable questions for the selected fund (highlighted in teal) show up below. Questions are highlighted to indicate their status (approved, reviewed, re-opened, etc.) The question cards displayed below this show answers for the selected fund.
5. Ability to toggle between fund and question view. In question view, the position of the funds and questions shown in point#3 are swapped. This lets the users review the answers for a single question for multiple funds. Other global actions associated with the filing are also placed here.
6. Mentions question card title and total number of comments added in this card across all questions.
7. Shows approval levels required, and the name of the person who has approved at a particular level (if applicable).
8. Indicates that a comment was added on this question.
9. Card level actions.
10. Placeholder for showing comments.

Prototyping & Feedback (2 / 3)



Whiteboard discussion around version 1 of the prototype

Prototyping & Feedback (3 / 3)



Version 2 of the review page

Design Changes

1. As the filing activity takes place over the course of several days, an interactive activity summary was added to allow the users to track the progress.
2. The top level selection (fund or question depending upon the view type) was changed to a dropdown, because the users wouldn't be switching this selection frequently during a single session. Switching them to a dropdown allowed for a cleaner and more focused view.
3. Bulk sign-off was added to allow the user a quick way to approve the questions they have marked as "Reviewed"
4. Overridden questions were highlighted and an "Undo" button was added to revert to its default value.
5. Placeholder section for viewing underlying data for a particular value in a question.

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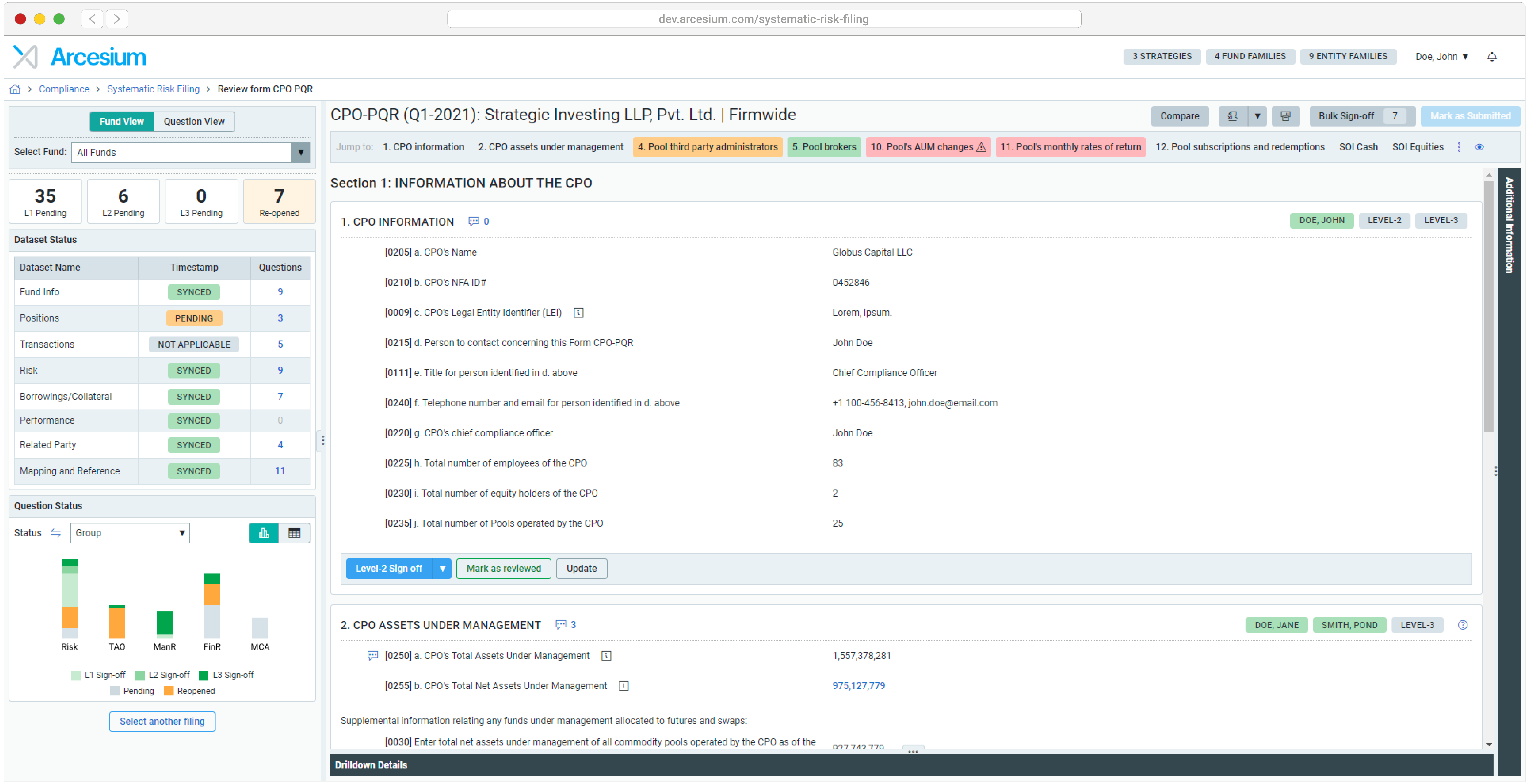
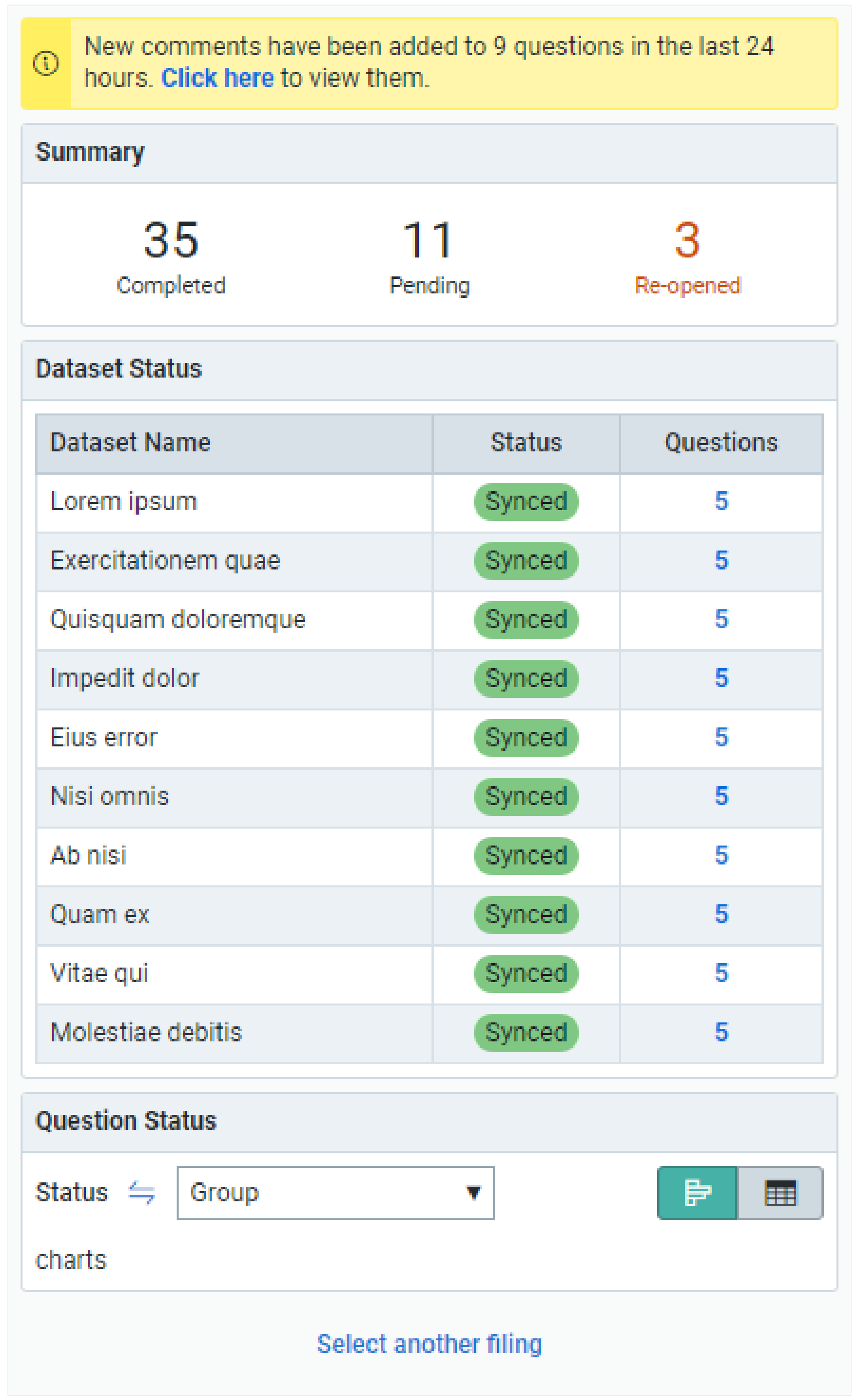
Final Prototypes - Review Screen (1 / 7)

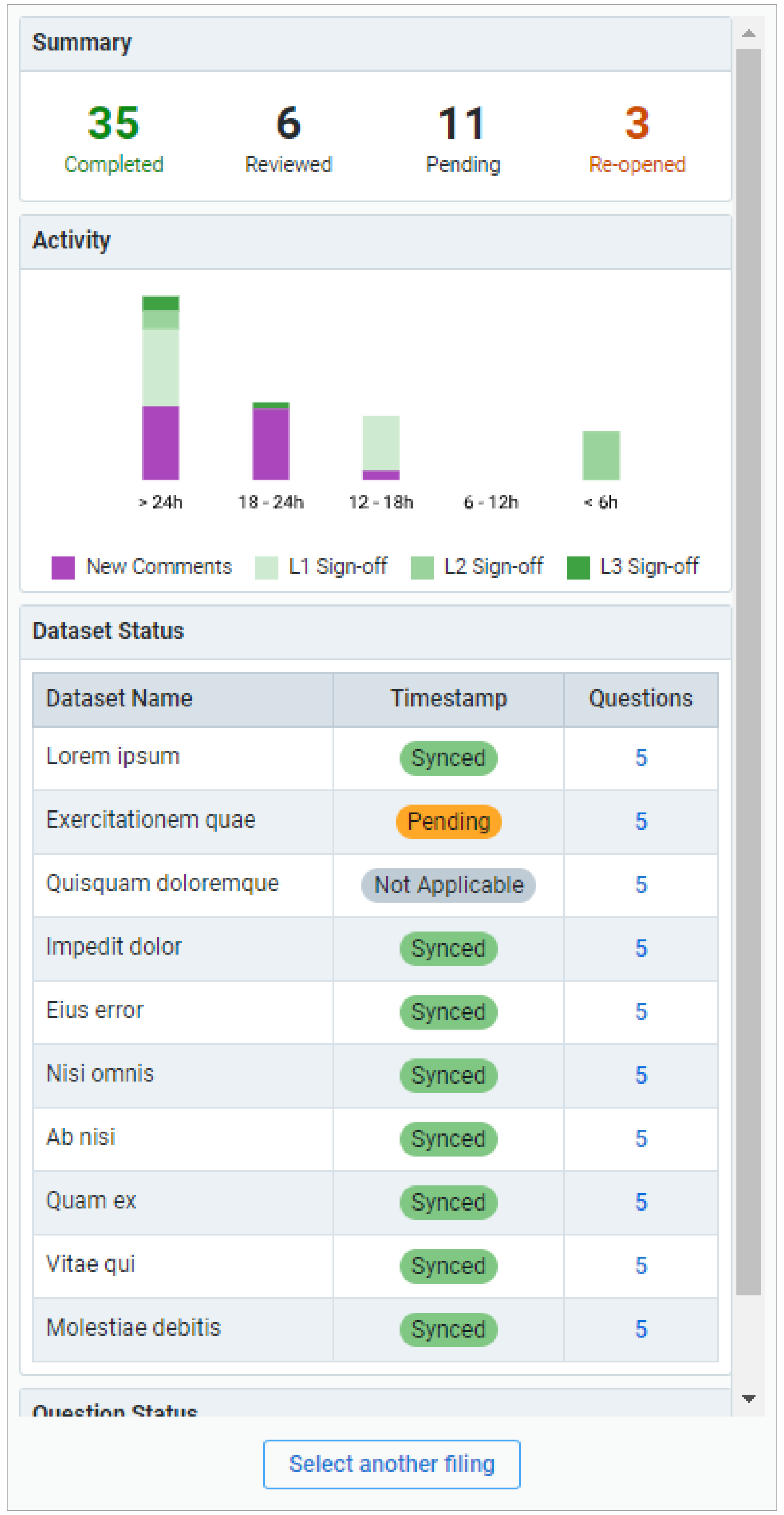


Snapshot of the final version

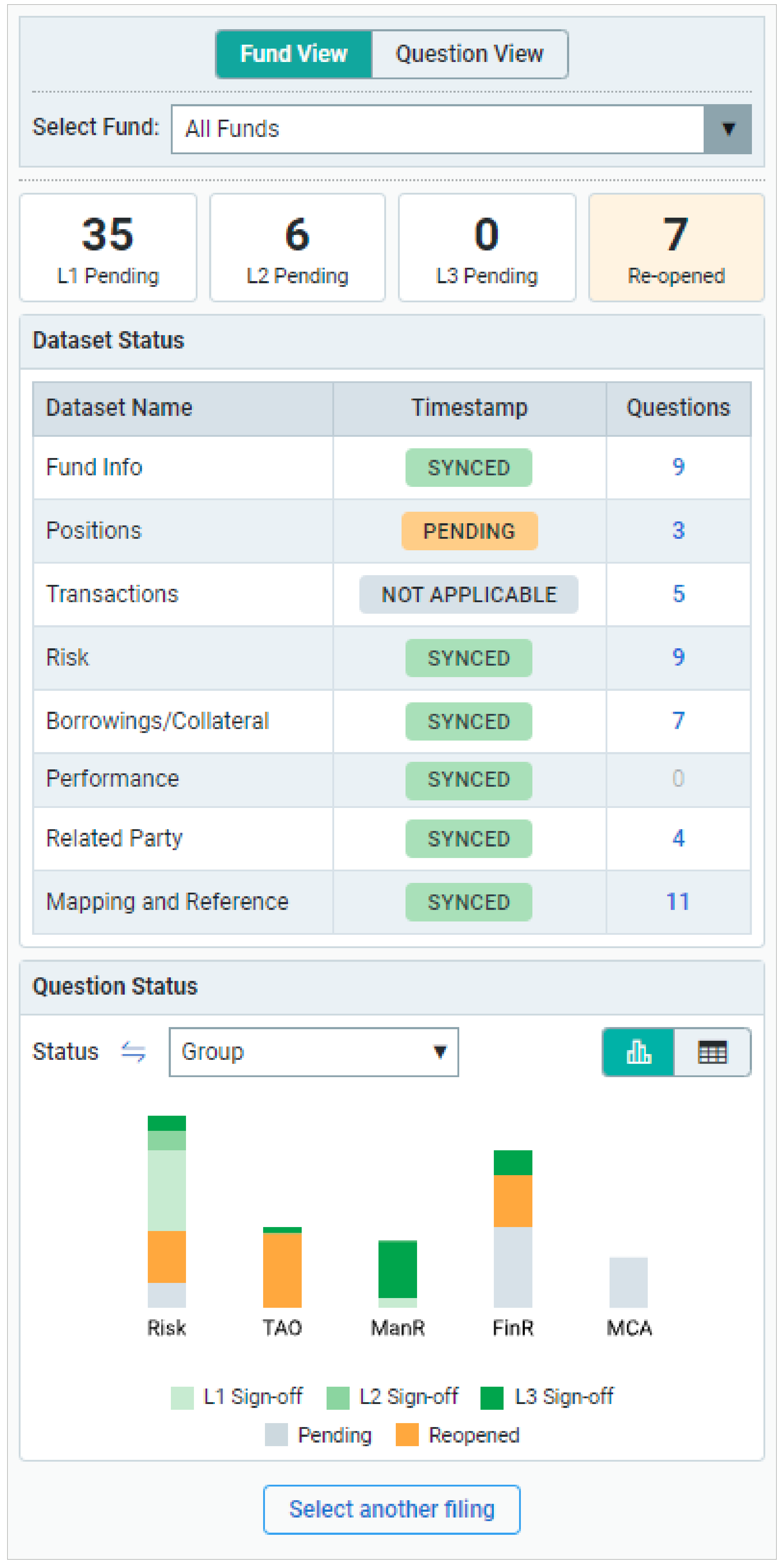
Final Prototypes - Review Screen (2 / 7)



Version 1



Version 2



Final Version

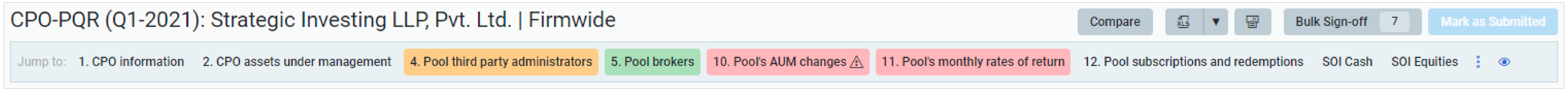
Summary Panel

- The option to toggle between views was moved to the summary panel. An additional filter was added to allow the users to select particular fund(s) or question(s), depending upon the view selected.
- The metrics below the view selection gets updated based on the selected fund(s) or question(s).
- Re-ordered the sections within the summary panel based on the priority of the information needed by the users.

Final Prototypes - Review Screen (3 / 7)

Version 1

Version 2

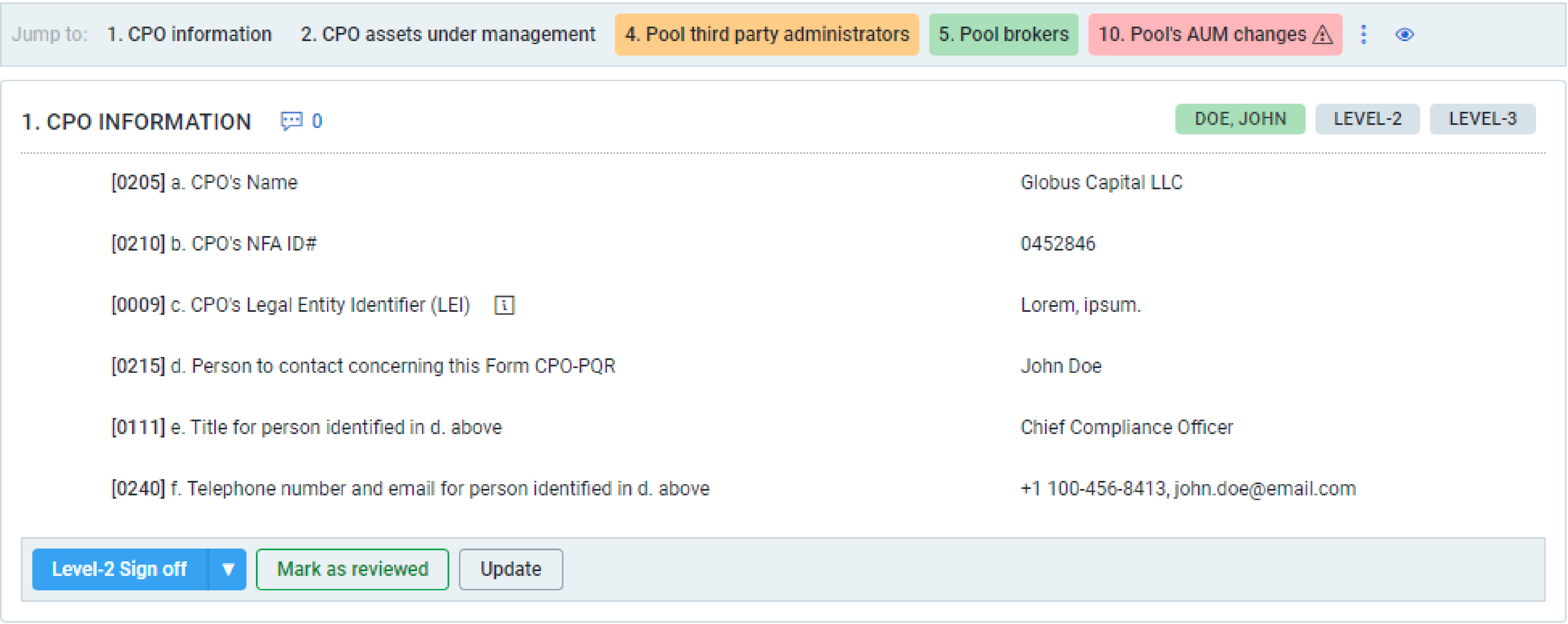


Final Version

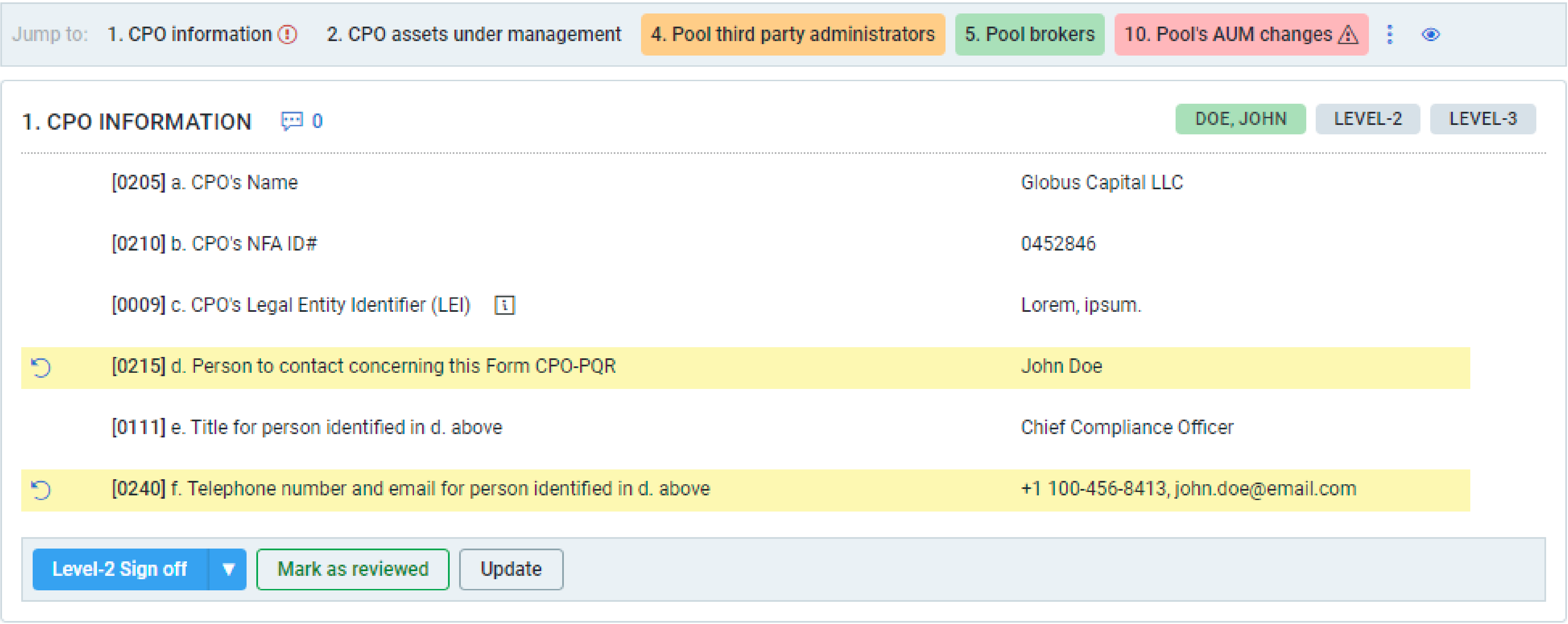
Toolbar

- Added form, entity and selected fund or question name for easy identification
- Question card titles (while in fund mode) now show the complete name.

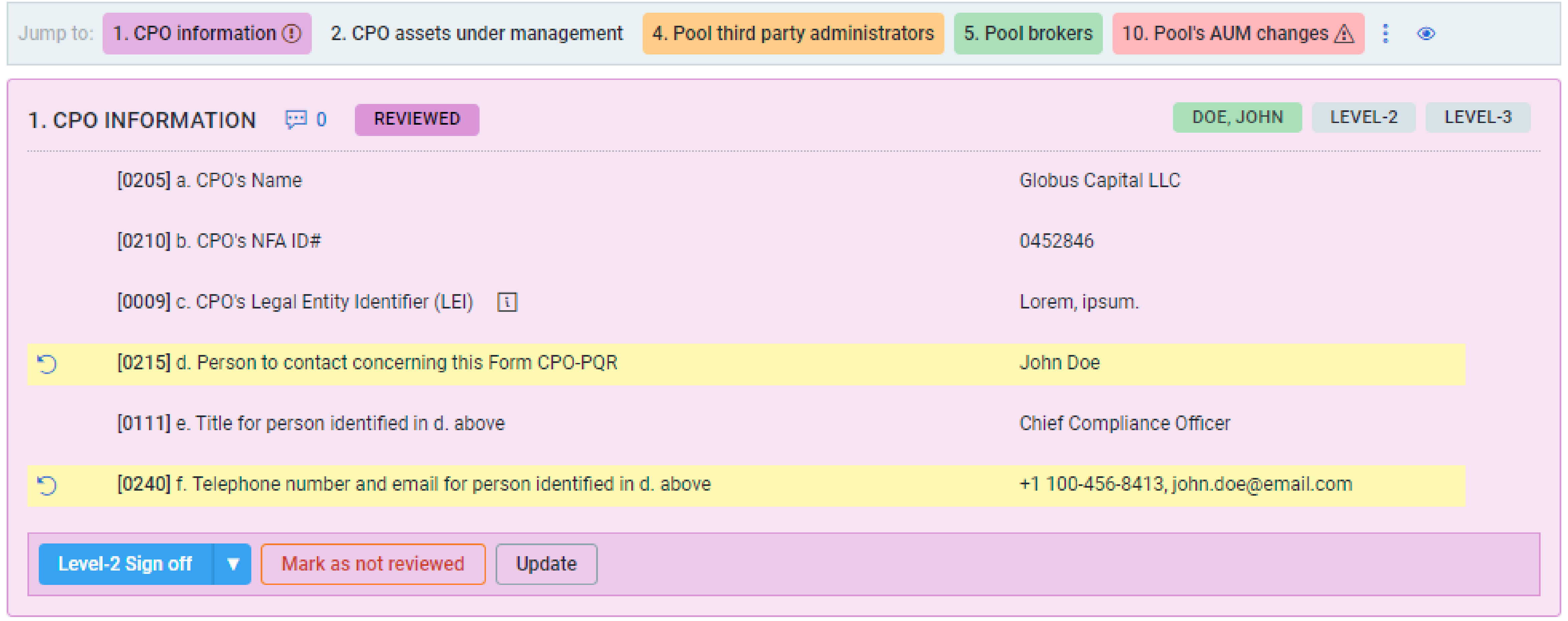
Final Prototypes - Review Screen (4 / 7)



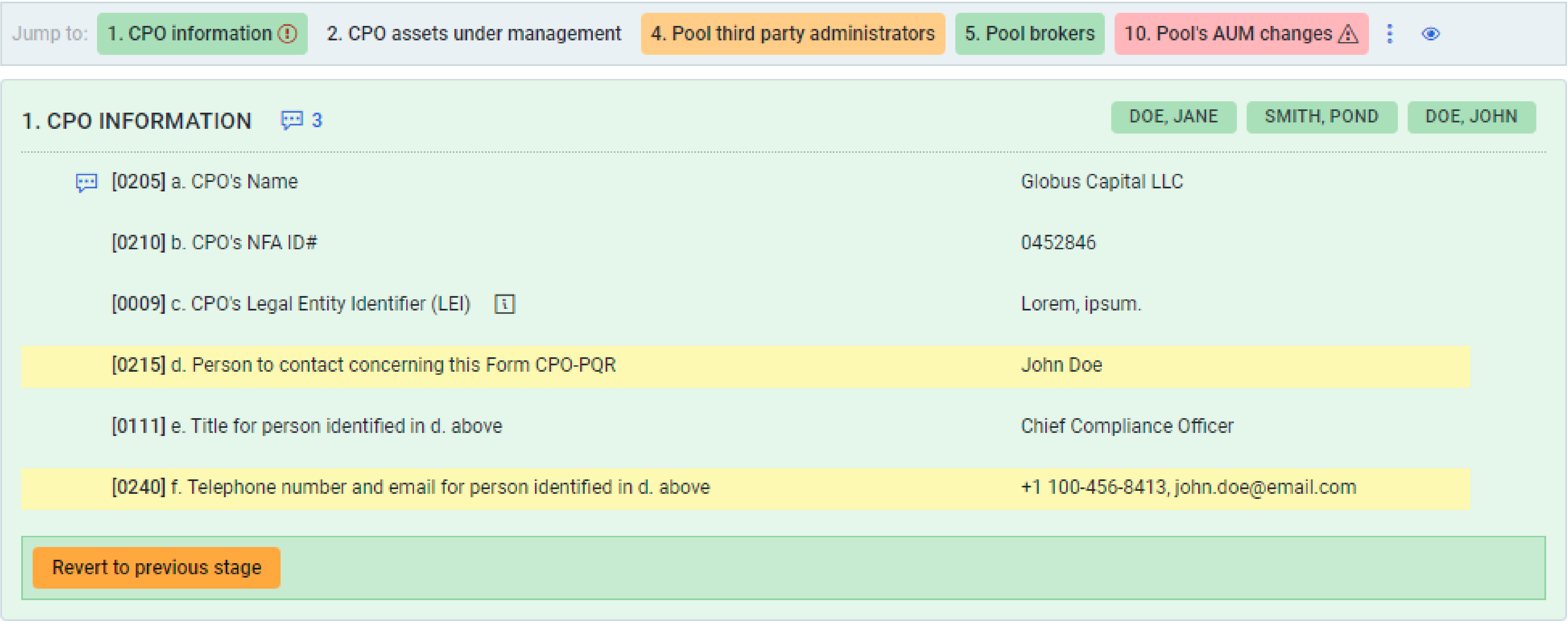
Question card and header - default state with level-1 signed off



Question card and header - updated state



Question card and header - marked as reviewed state



Question card and header - all levels signed off state

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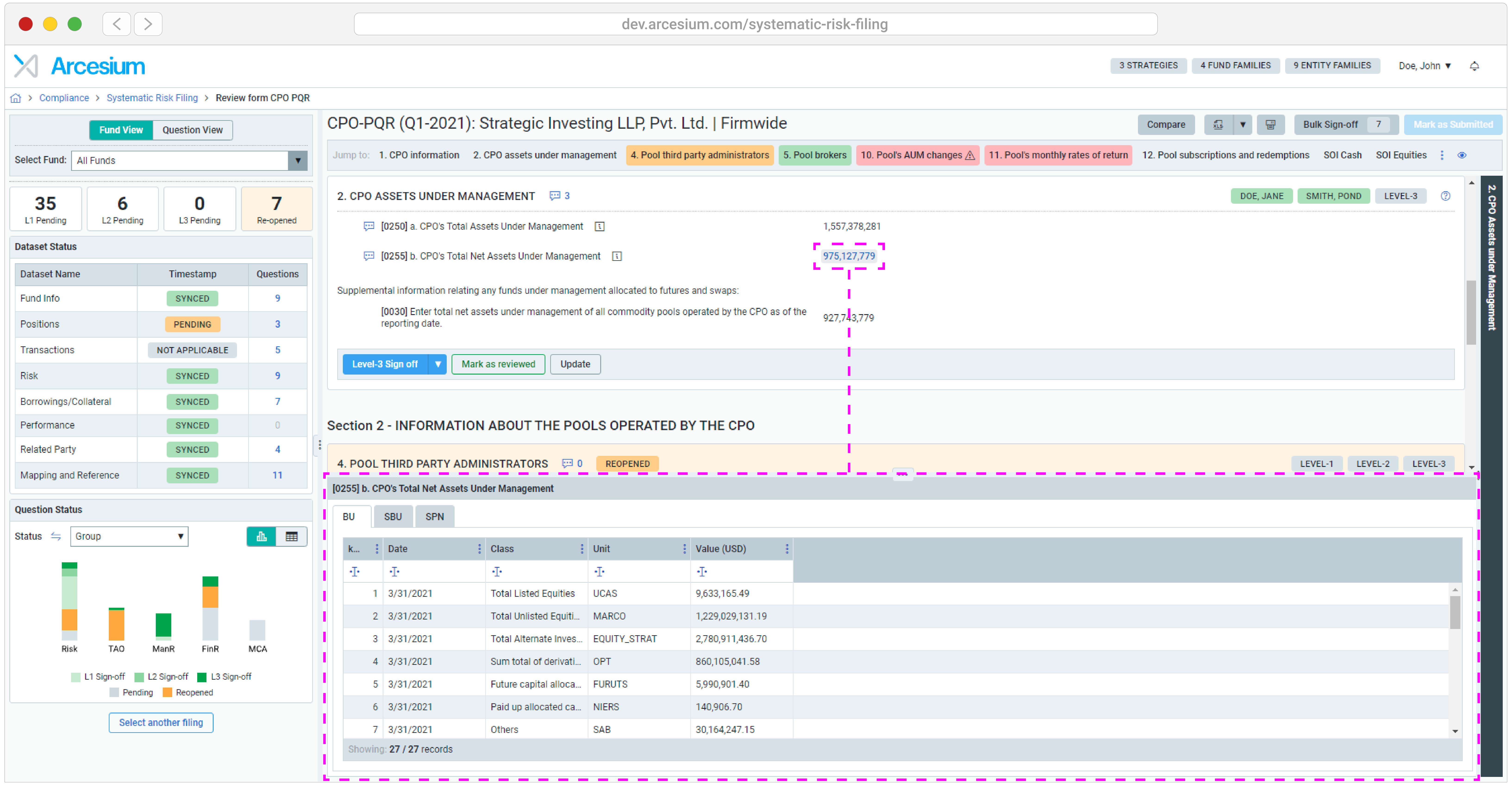
Final Prototypes - Review Screen (5 / 7)

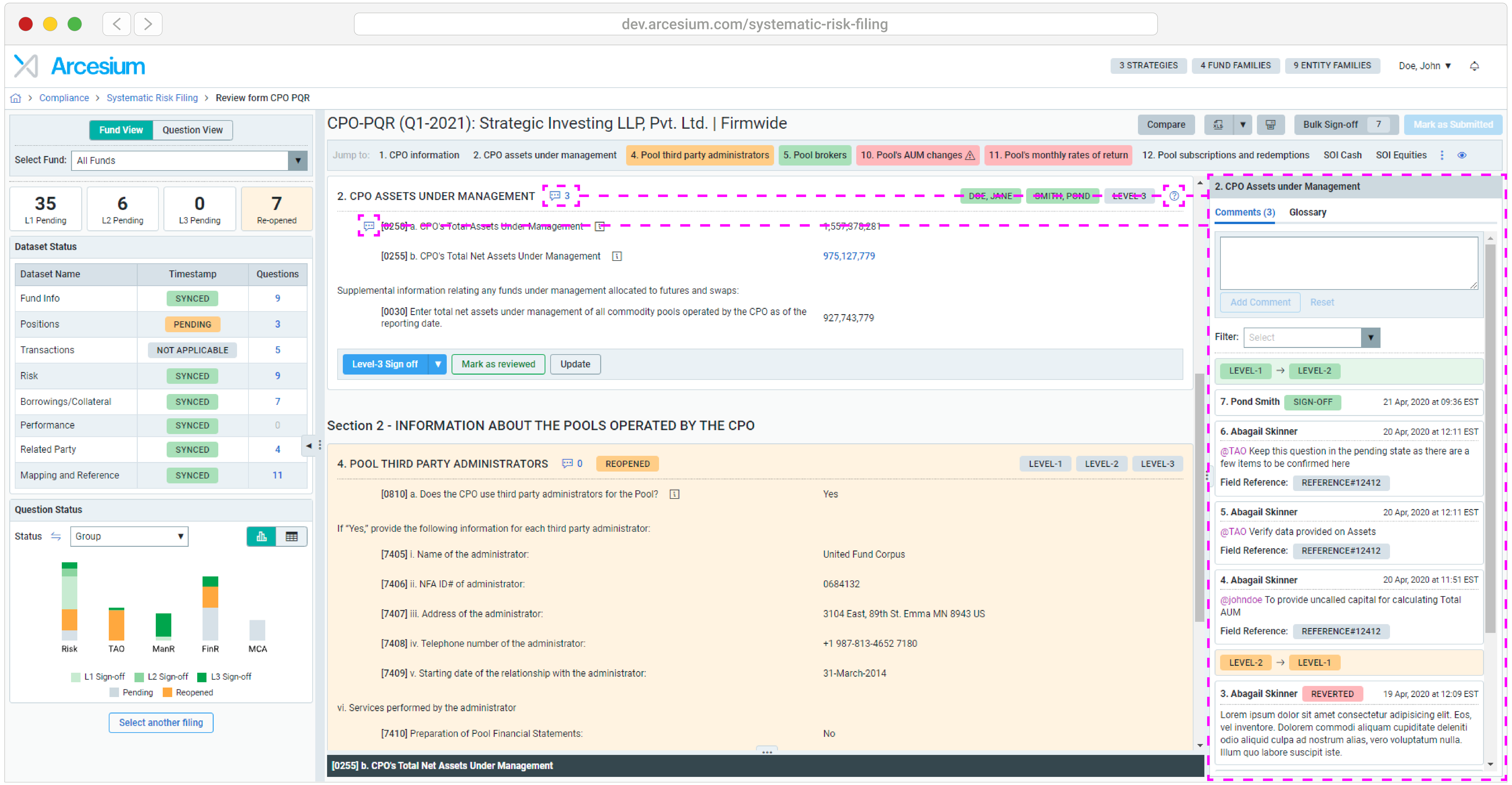


Drill-down Details Panel

Drill-down Details Panel

When the user clicks on a hyperlinked value, drill-down details panel opens up to show the underlying data

Final Prototypes - Review Screen (6 / 7)



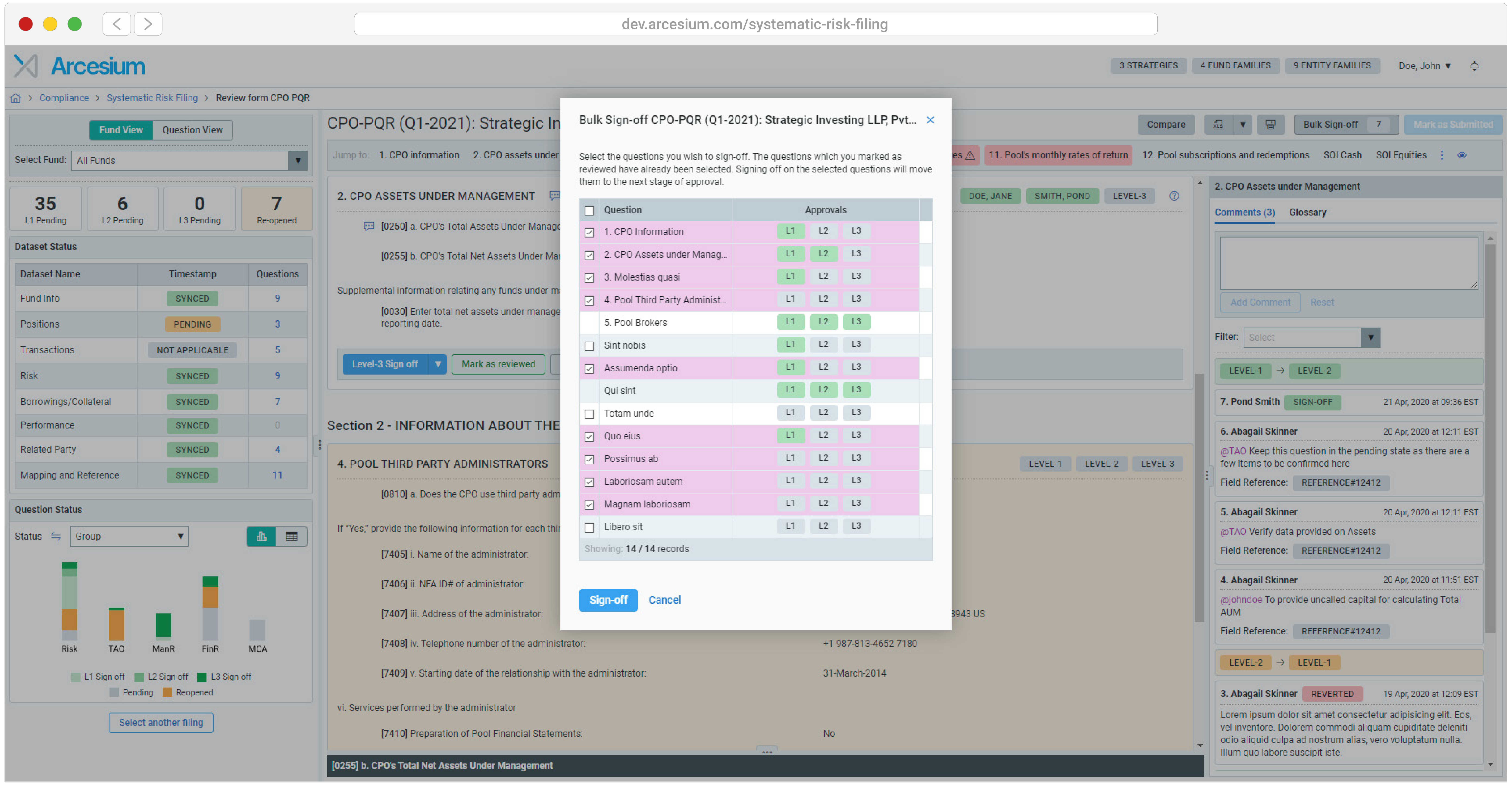
Additional Details Panel

Additional Details Panel

When the user clicks on the comment icon (shows up while hovering over the question, or if a comment has already been added), additional details panel opens up to show the existing comments.

If the user clicks on the help icon (top right corner of the question card) instead, the additional details panel opens up with “Glossary” as the active tab.

Final Prototypes - Review Screen (7 / 7)



Bulk Sign-off dialog box

Bulk Sign-off

When the user clicks on the “Bulk Sign-off” button, a dialog box opens listing all the available questions, along with their current sign-off statuses.

Question cards that were marked as reviewed, are automatically selected. Question cards that are completely signed off can’t be selected.

Once the user clicks on sign-off, the applicable sign-off level is given to the selected question cards.

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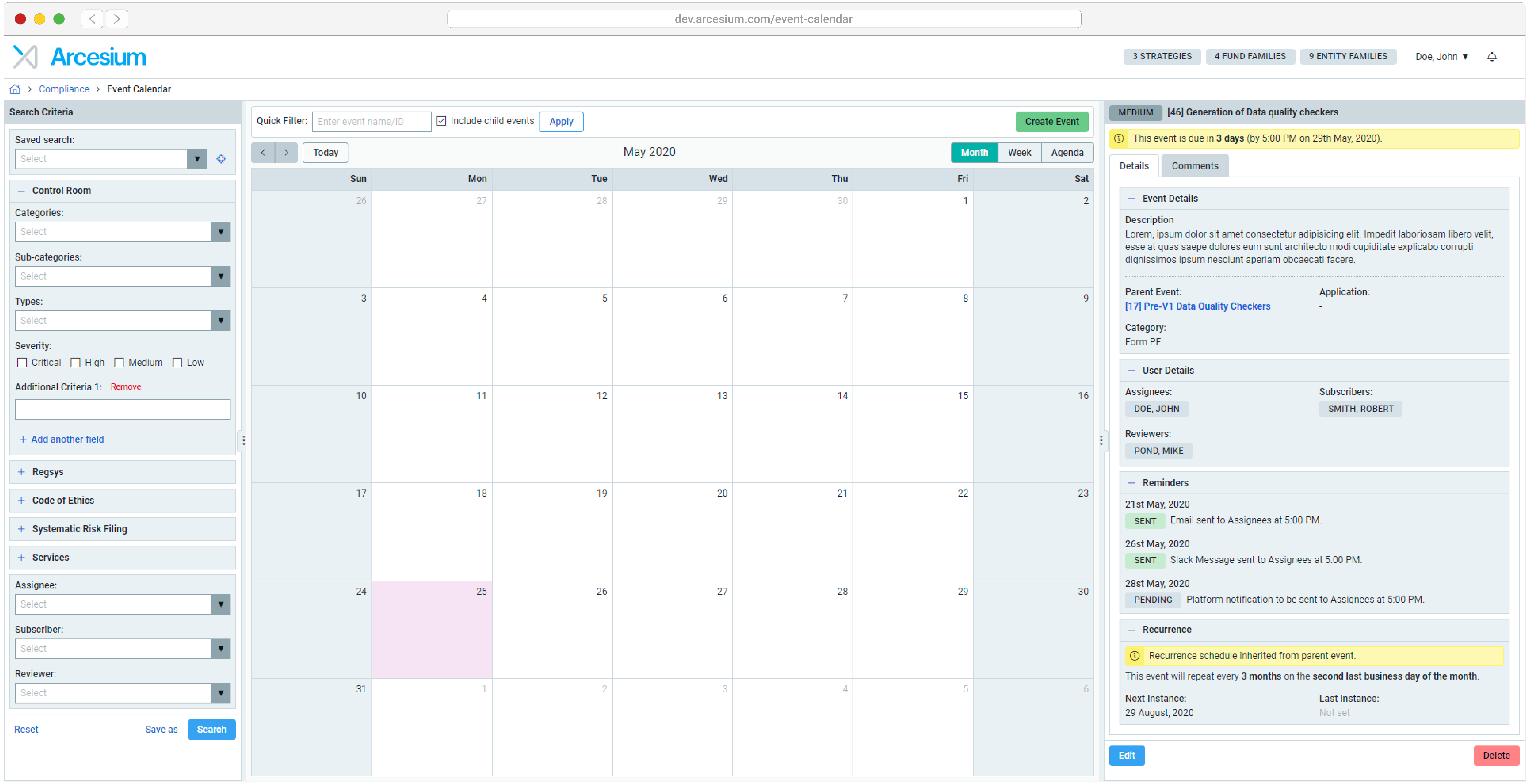
Related Project - Event Manager



While not covered in the current case study, the event manager was created as a part of this project to allow the users to create filing events and manage user notifications.

Related Project - Workflow Manager

dev.arcesium.com/workflow/create

Arcesium

3 STRATEGIES | 4 FUND FAMILIES | 9 ENTITY FAMILIES | Doe, John ▾

Compliance > Configuration > Workflows > Create New Workflow

Workflows | Reference Data

New Hire Section Compliance RS

Switch View: Table | Flowchart

Lorem ipsum dolor sit amet consectetur adipisicing elit. Deserunt vel odio nisi quibusdam quia asperiores earum veniam et ab, officia consectetur beatae eius voluptas neque perferendis ad impedit ut facere.

Level
Add New Level

ID	Name	Description	Reviewer
513	Compliance	Compliance CAR team in DESIS	COMPLIANCE@EMAIL.COM JOHN.DOE@EMAIL.COM 3 more
381	Compliance NYC	CoE Compliance NYC team	COMPLIANCE-NYC@EMAIL.COM

Status
Add New Status

ID	Name	Description	Mapped State	Checkpoint	Level
153	Pending Compliance Action	Lorem ipsum, dolor sit amet consectetur adipisicing elit. Eius obcaecati quibusdam eum sed incidunt quod nobis quasi aliquid. Sit beatae in provident voluptatibus molestias. Voluptatibus consequatur corrupti atque cupiditate iure.	Open	YES	Compliance
815	Pending Employee Acknowledgement	Voluptatibus consequatur corrupti atque cupiditate iure.	Active	YES	Compliance
851	Employee Acknowledgement Completed	Corrupti atque cupiditate iure.	Active	YES	Compliance
798	No Action Required	Corrupti atque cupiditate iure.	Closed	NO	Compliance
799	Onboarding Completed	Iste quia laudantium est cupiditate beatae, accusantium architecto.	Closed	YES	Compliance

Action
Add New Action

ID	Name	Description	Time Taken	Help Text	Level
1154	Send Employee Acknowledgment Email	-	NOT REQUIRED	Alias magnam dolore similique possimus!	Compliance
971	Acknowledgment Email Sent Manually	-	NOT REQUIRED	Excepturi nobis nesciunt quae blanditiis.	Compliance
341	Revert Acknowledgment	-	REQUIRED	Nisi quis expedita perferendis quibusdam.	Compliance
554	YES, to one or more questions	-	NOT REQUIRED	Porro laudantium culpa placeat iure.	Compliance
652	All tasks Completed	-	NOT REQUIRED	Lorem ipsum dolor sit amet.	Compliance

Transition
Add New Transition

ID	Starting Status	End Status	Action	Override Reviewer Role	Condition API

Created by:	Created on:
John Doe	2021-02-28
Last updated by	**Laste updated on**
Pond Smith	2021-05-21

LINKED MAPPINGS (2)

Category	Item Type
Short Sale	
Europe Short	Data Issues
Japan Short	Data Issues

While not covered in the current case study, the workflow manager was created to allow the users to customize the approval stages for their filing needs