MICHIGAN STATE UNIVERSITY

Alpha Presentation

Investment Portfolio Construction

The Capstone Experience

Team Principal IPC

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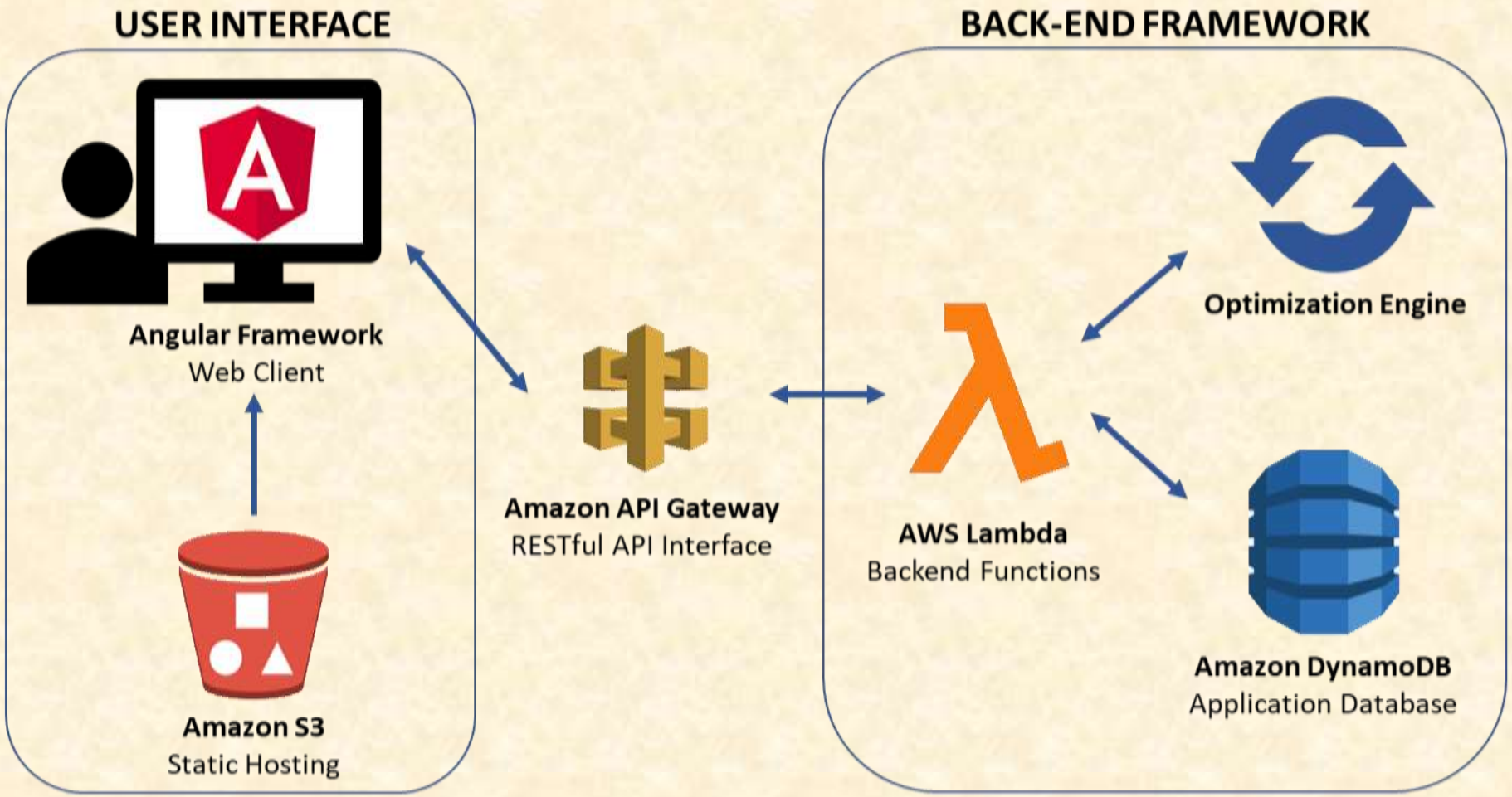
Spring 2020

From Students…
…to Professionals

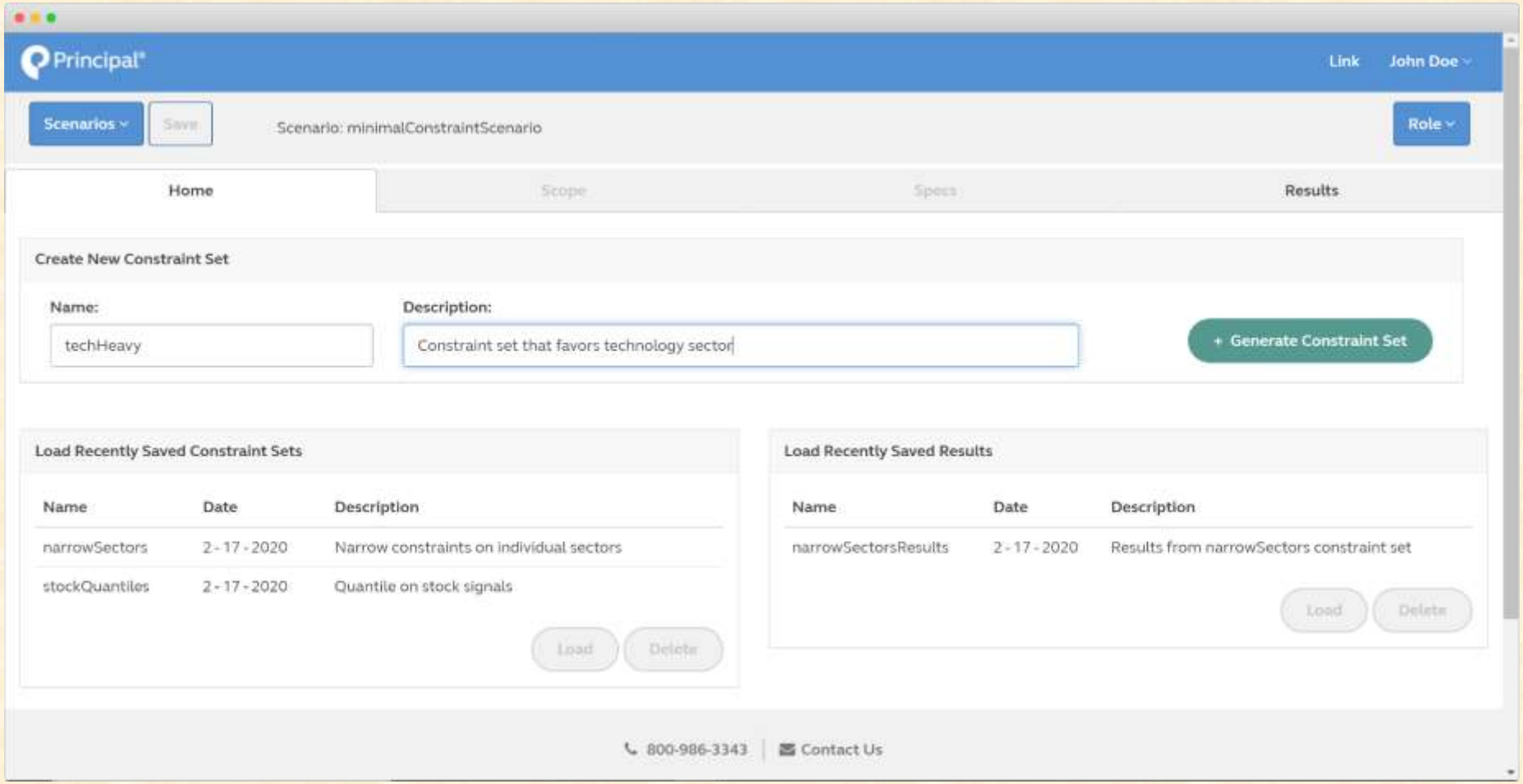
Project Overview

- Principal's current process involves hard-coding parameters to generate a single type of investment portfolio construction
- Our application provides a user interface for saving and loading optimization parameters and passing them to Principal's existing optimization engine
- The application assigns groups to its users, providing them with the ability to construct a variety of portfolio constructions based on custom-built portfolio-level and quantile-level constraints

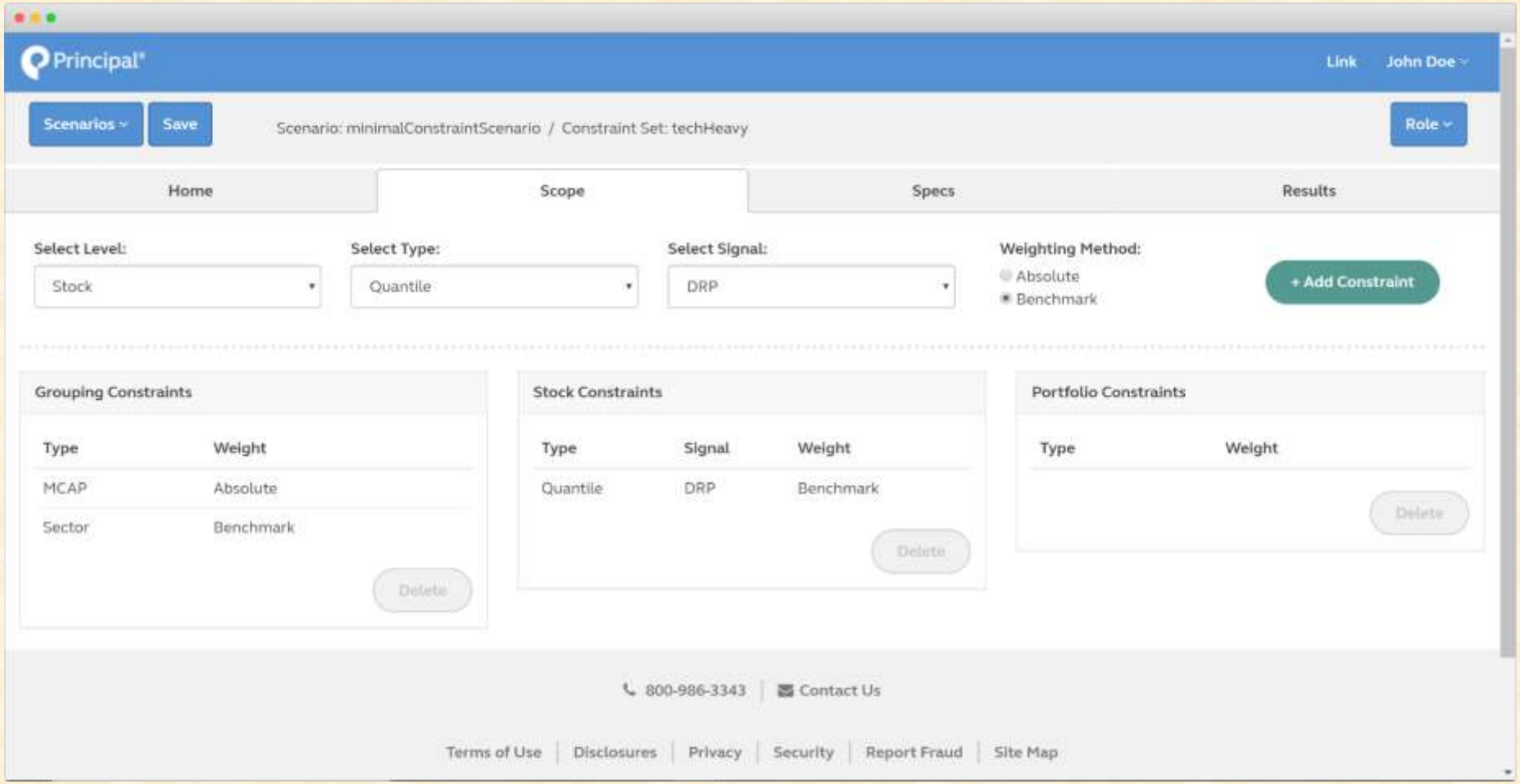
System Architecture



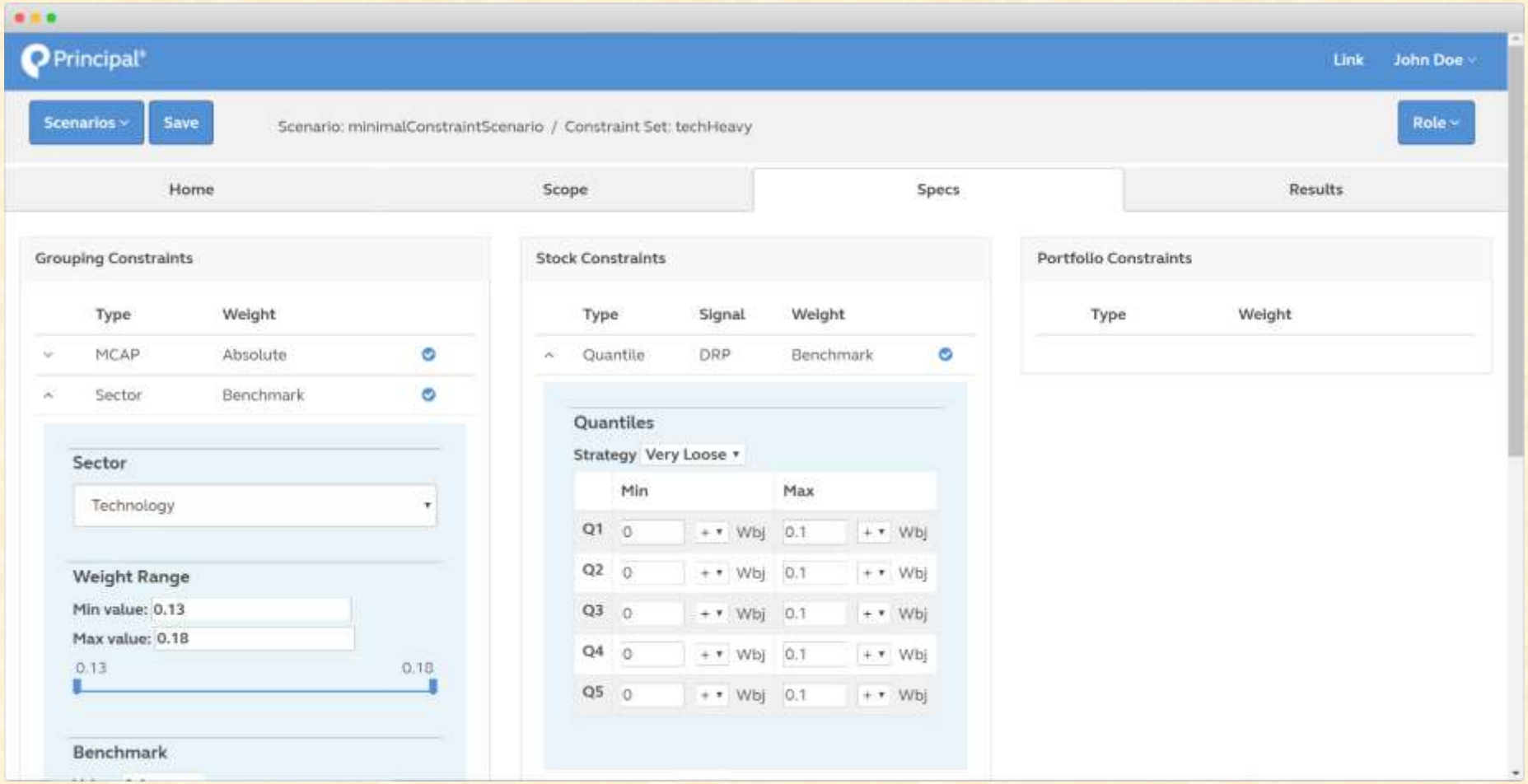
Home Page


Principal
Link
John Doe
Scenarios
Save
Scenario: minimalConstraintScenario
Role
Home
Scope
Specs
Results
Create New Constraint Set
Name:
techHeavy
Description:
Constraint set that favors technology sector
+ Generate Constraint Set
Load Recently Saved Constraint Sets
Name
Date
Description
narrowSectors
2 - 17 - 2020
Narrow constraints on individual sectors
stockQuantiles
2 - 17 - 2020
Quantile on stock signals
Load
Delete
Load Recently Saved Results
Name
Date
Description
narrowSectorsResults
2 - 17 - 2020
Results from narrowSectors constraint set
Load
Delete
800-986-3343
Contact Us

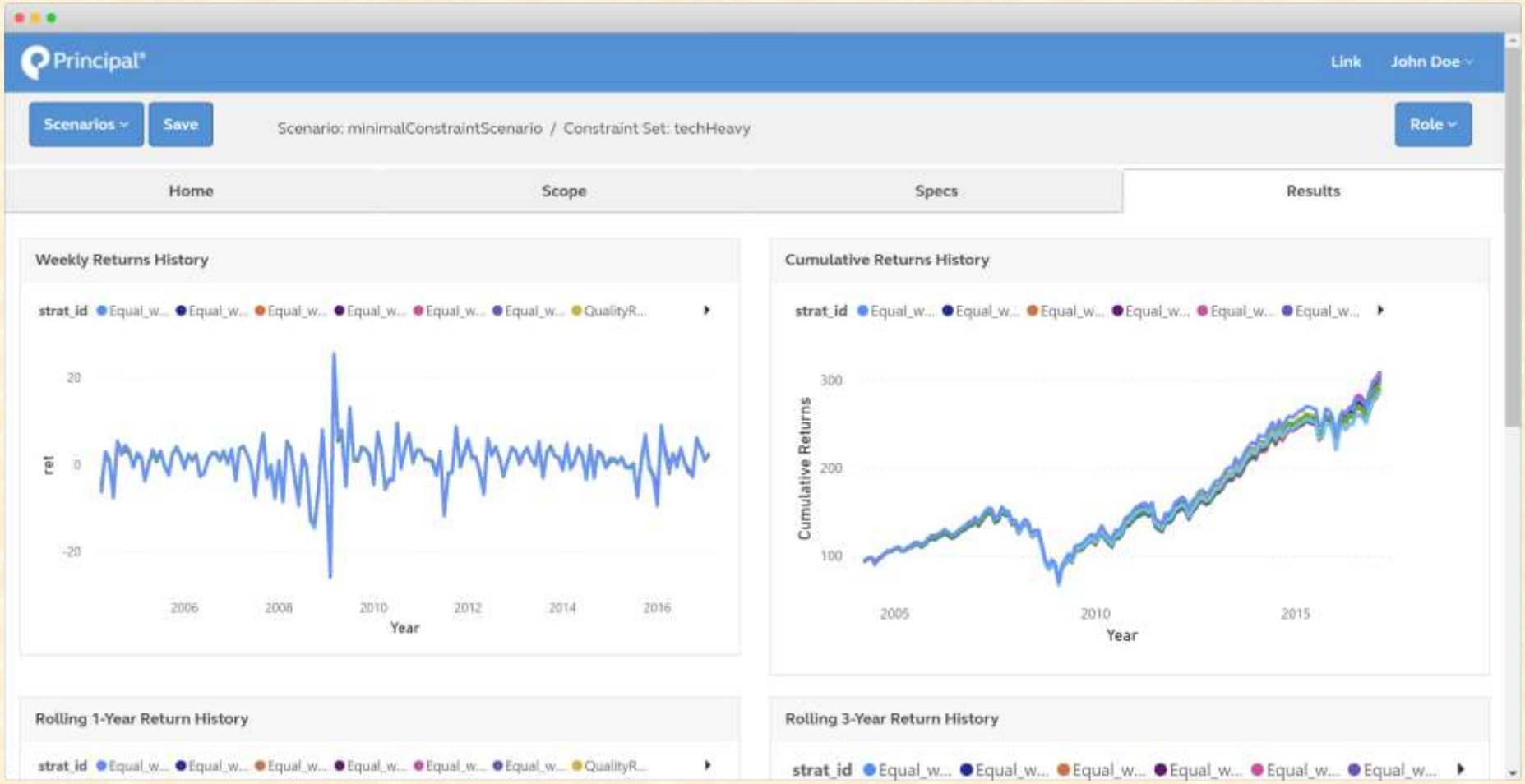
Constraint Scoping Page



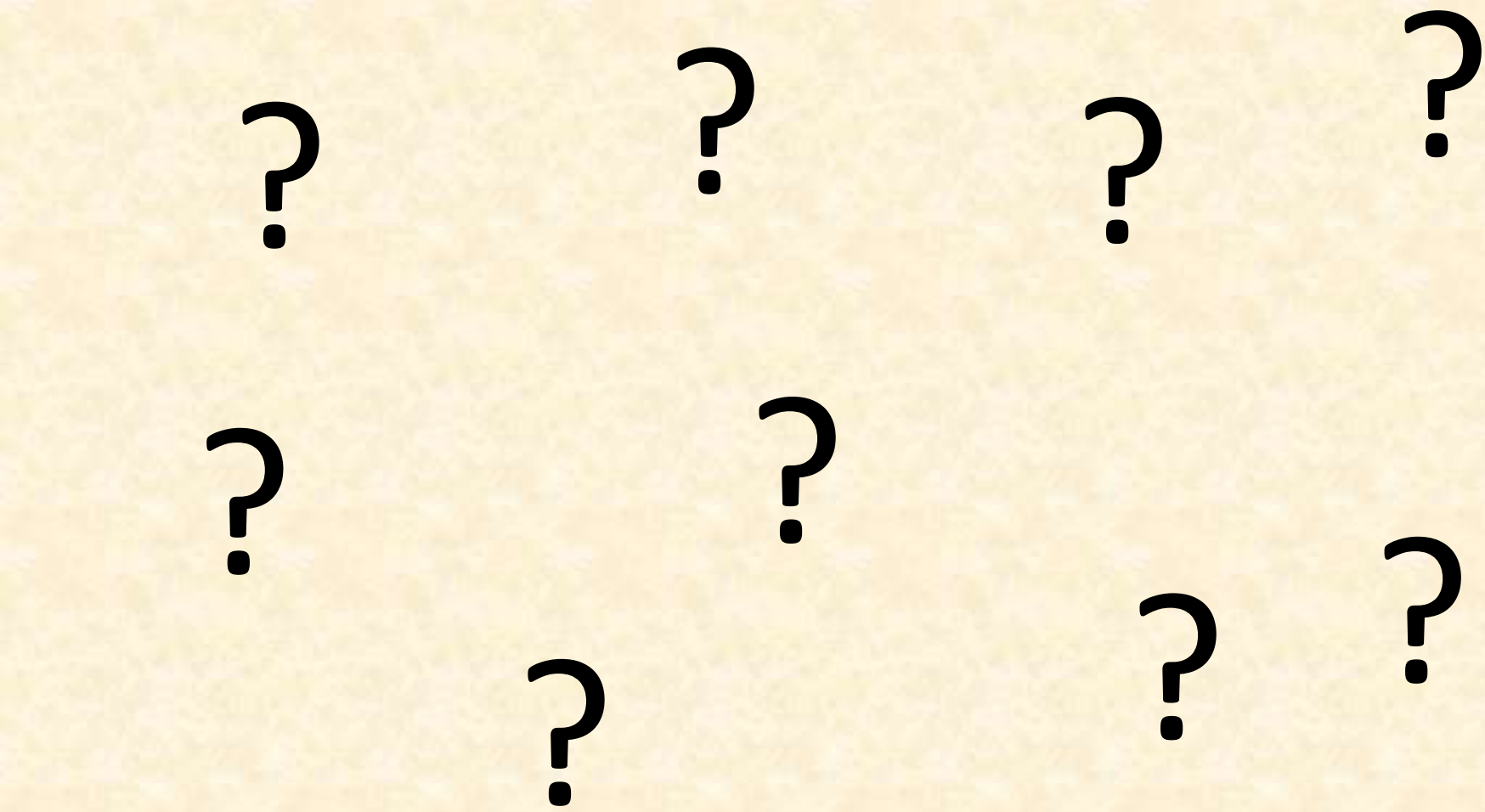
Constraint Specification Page



Results Page



What's left to do?

- Finish results page by generating a graphical summary of the data format received from the optimization engine
- Create "Admin" page for defining constraint conditions for different world views
- Create interface and logic for navigating between scenarios and world views based on user permissions
- Implement component for checking the feasibility of a constraint set prior to sending it to the optimization engine

Questions?