Improving User Experience with the WaterTAP UI

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Website

Motivation

Goals

- Broaden accessibility of WaterTAP models
- Simplify the process of experimenting with flowsheets

Use-Cases

- Model developers who would like to easily run their models and compare different outputs
- Anyone who would like to use and compare WaterTAP models without writing code

Features

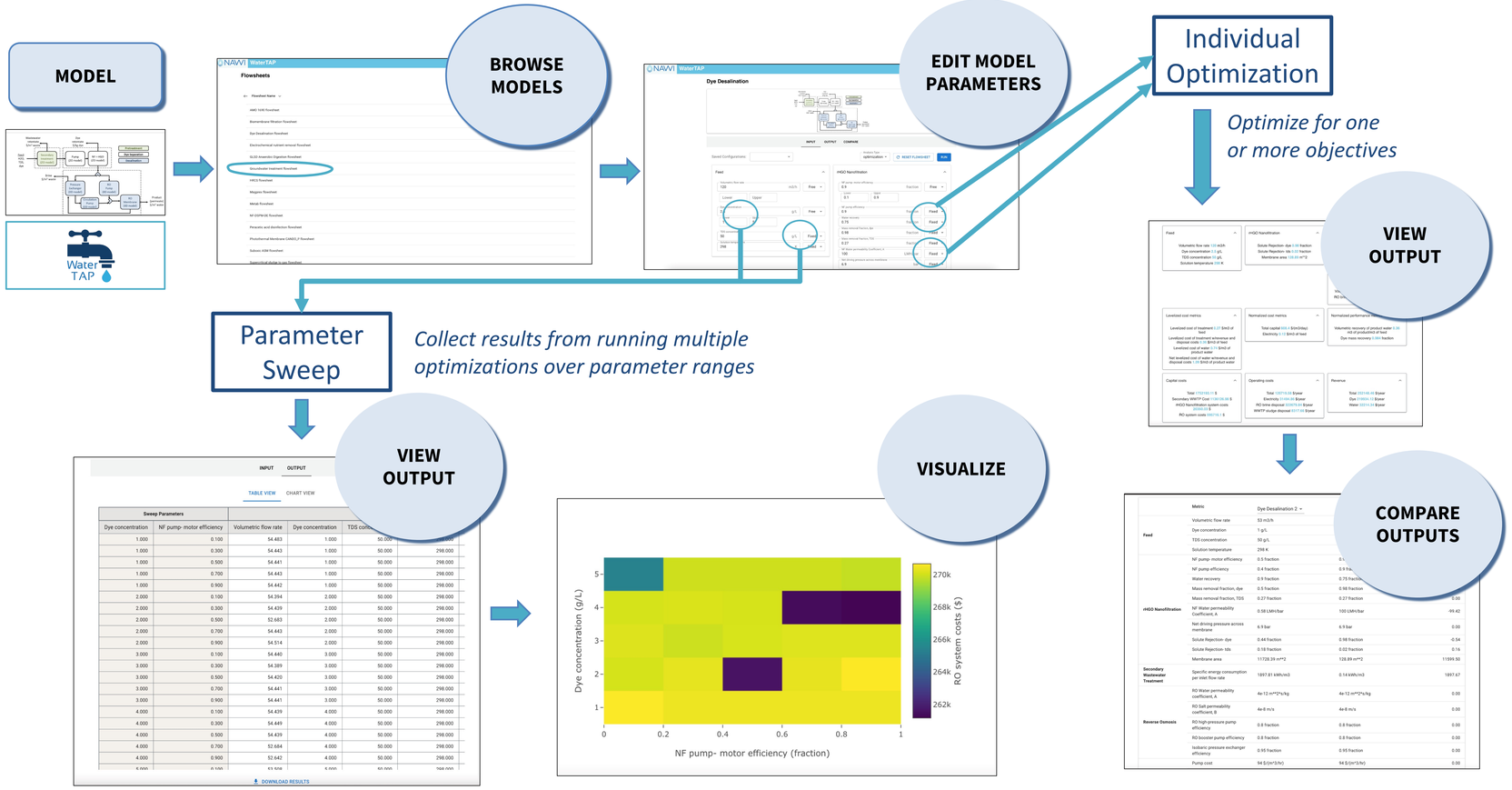
Browse Models: Users can select the flowsheet (model) they would like to work with

Edit Parameters: users can choose build options, change input values, and select the type of optimization they would like to run. This includes parameter sweeps or individual optimizations.

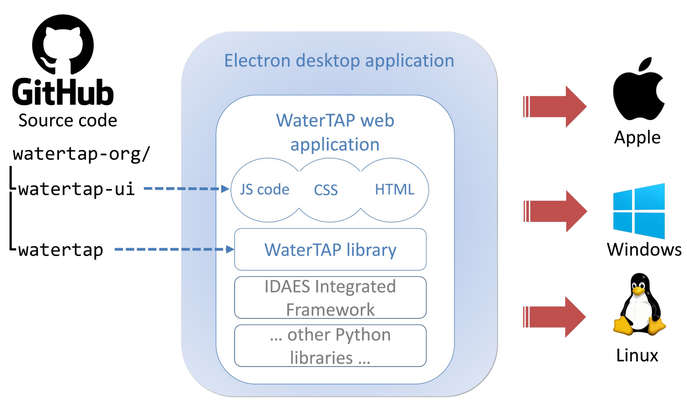
View Outputs: Result tables and visualizations that can be exported as CSV or images

Compare: Compare optimization outputs in tabular form that can be downloaded

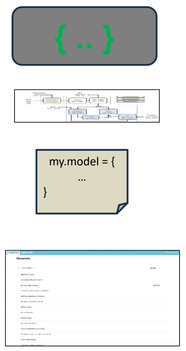
UI Workflows



Tech Stack



How to Include Your Models



- Define (in Python) the variables and constraints to be exported to the UI.
- Create an accompanying diagram
- Add configuration data for the model that includes the diagram and code locations
- Run the UI and the model will show up in the list!

This process is explained in more detail in the WaterTAP documentation.

Latest Updates & Future Work

Based on user feedback, we are developing the following features:

- Add model configuration options to allow developers to customize builds.
- Implement an automated process of adding custom flowsheets to the UI.

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