TransitionZero

Platform-Scale Systems Modelling

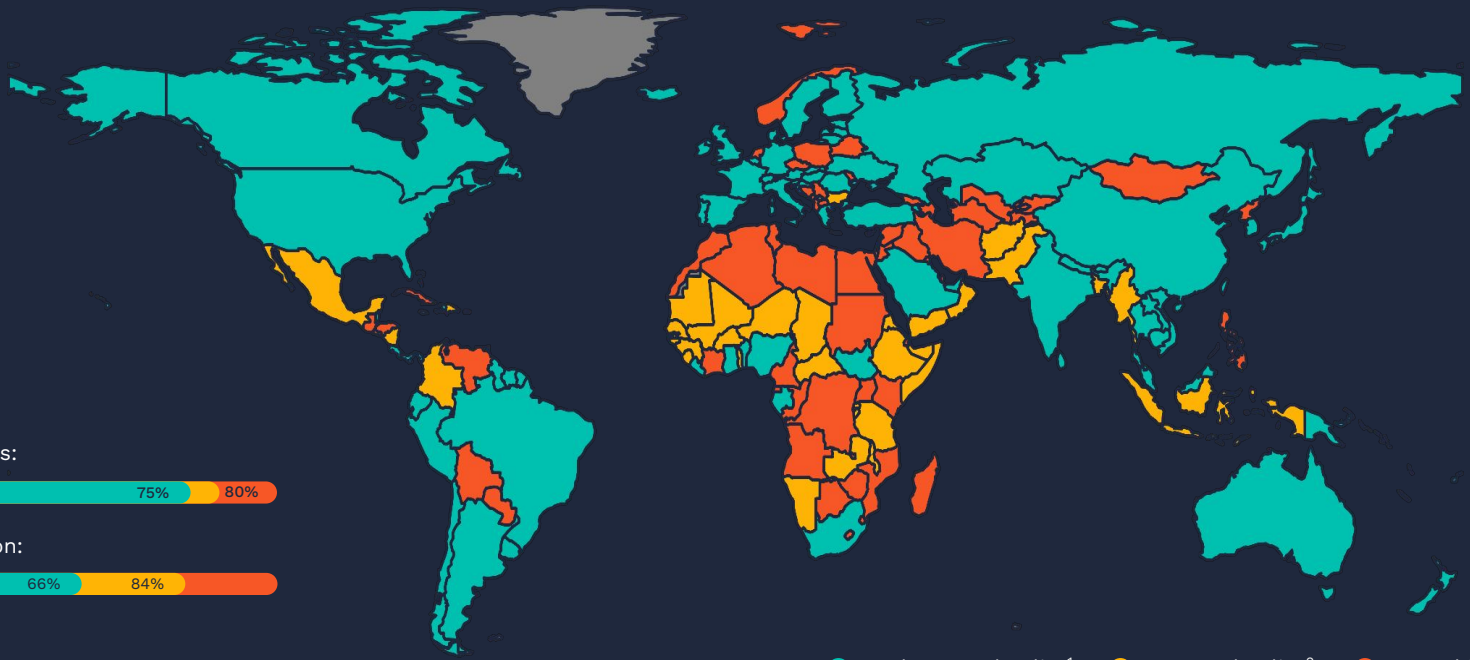
Lightning Talk

OpenMod Workshop
Lucas Kruitwagen, CTO
2024-03-27

@transitionzero

Net zero ambition

Most of the world now has pledged to be net zero



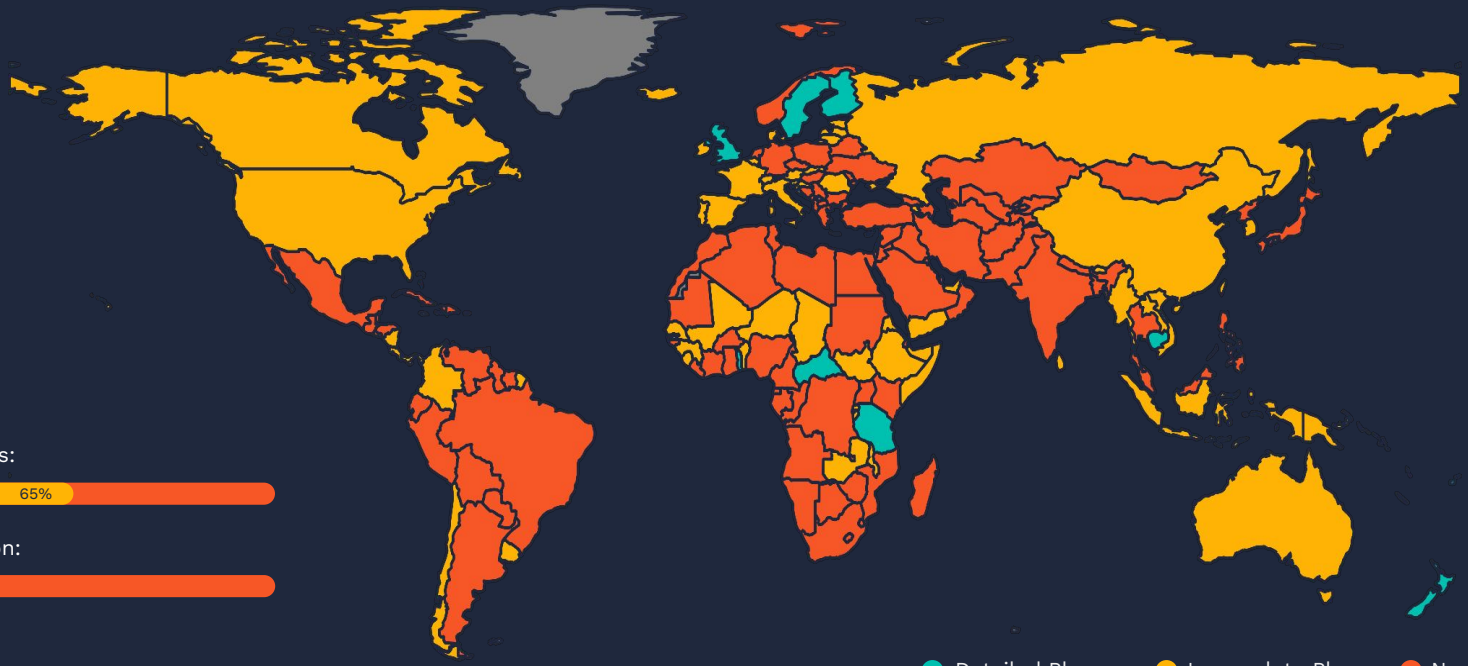
Coverage of Global Emissions:

Coverage of Global Population:

Data from Net Zero Scorecard (2023) Energy & Climate Intelligence Unit: [1]: "Declaration/pledge", "In Policy Document", and "In Law" categories; [2]: "Proposed/In Discussion" category; [3]: No data

Net zero reality

But most of the world doesn't have a plan for getting there



Coverage of Global Emissions:

Coverage of Global Population:

Data from Net Zero Scorecard (2023) Energy & Climate Intelligence Unit

“Platform-scale” - solving 10,000s of models in parallel

Change the paradigm from  to 

Productisation

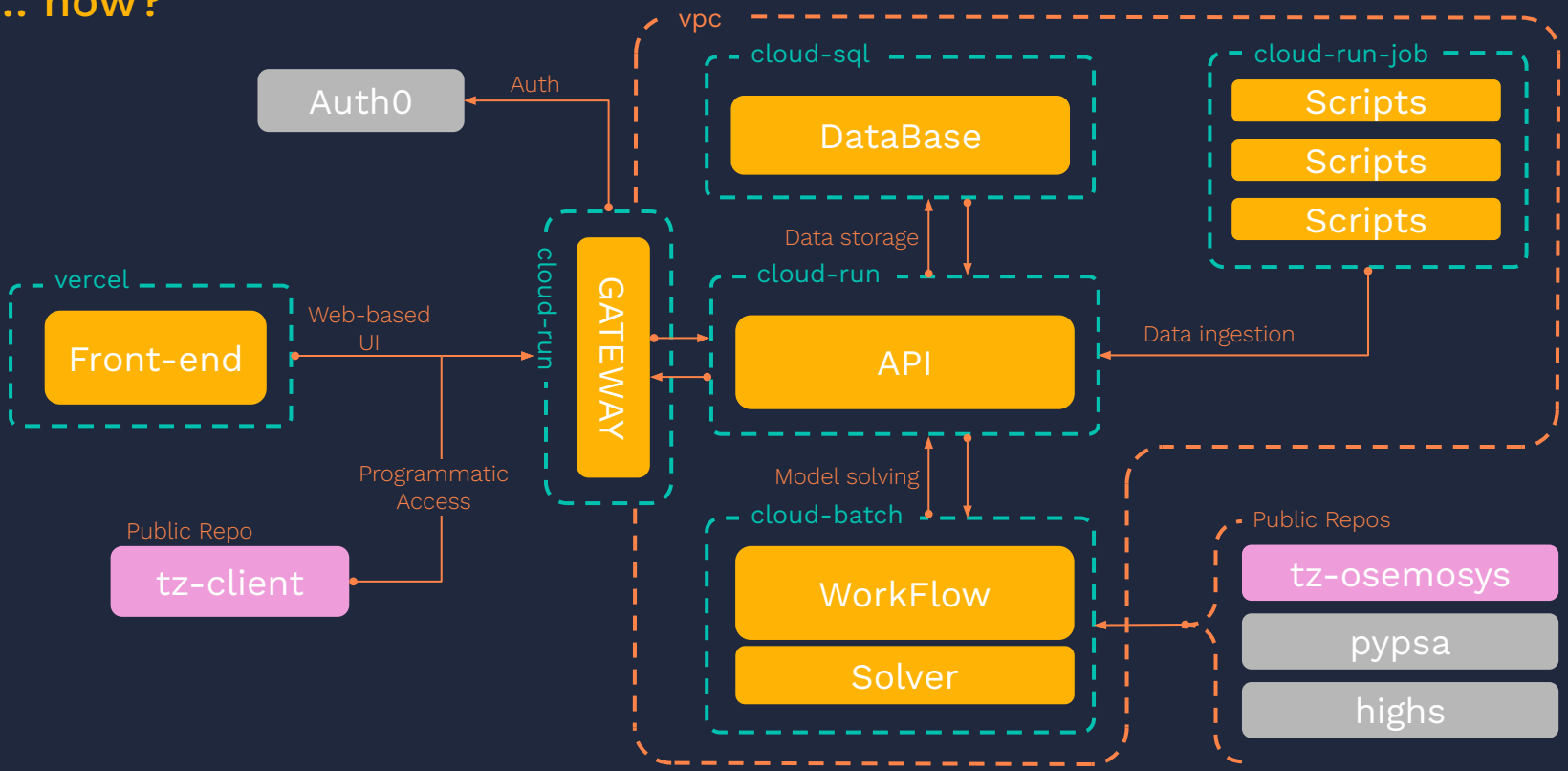
- Make systems modelling accessible to a whole new set of browser-based analyst users
- Build community and comparability
- No environments, no WOMM*, no data munging. A pleasant walled garden where things ‘just work’.

Research

- Scale-up hyperparameter search
- Facilitate boundary exploration (spatial, temporal, technology fidelity)
- Sensitivity analysis
- Solver tuning & ML-boosting

* Works On My Machine

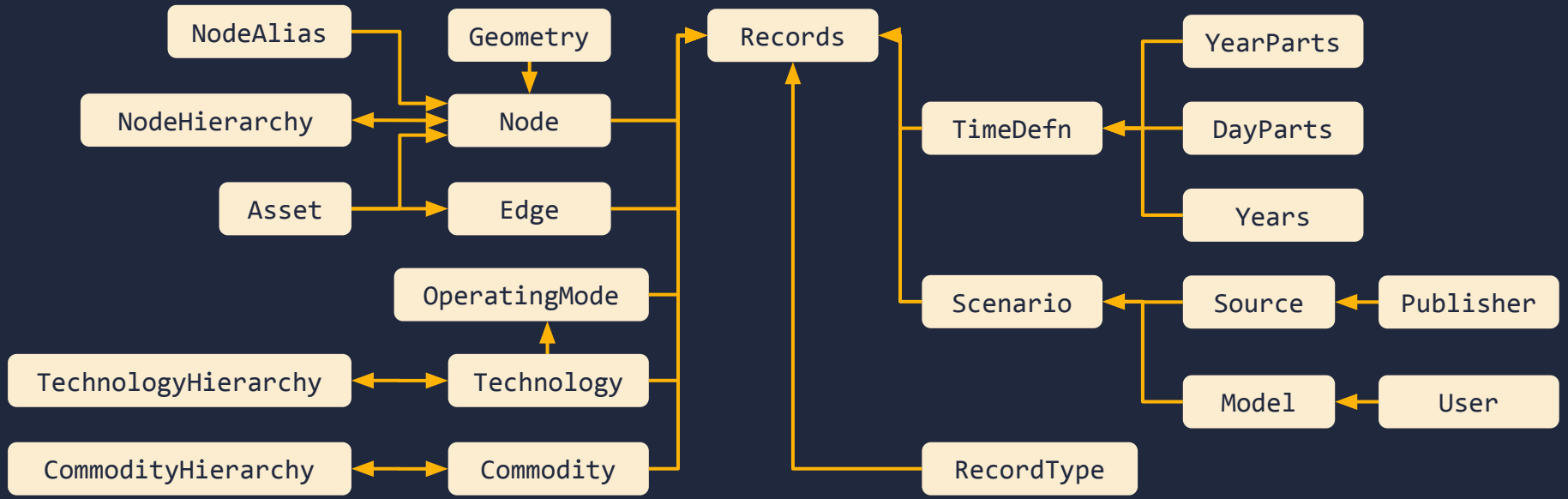
... how?



... not the hard part...

A framework-agnostic schema for systems transition

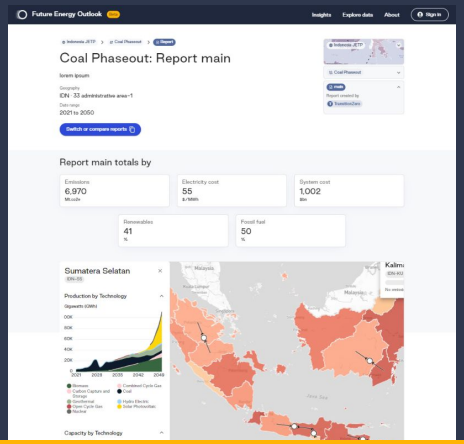
Resulting graph-based data model



TransitionZero Platform Today

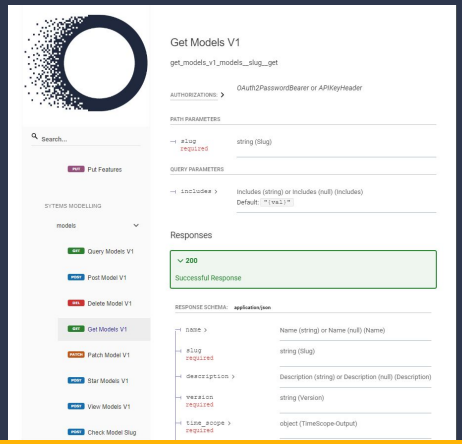
Results Viewer UI

https://feo.transitionzero.org



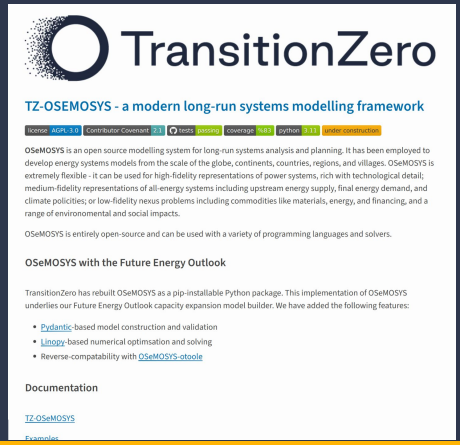
API & Python Client

pip install tz-client



TZ-OSeMOSYS

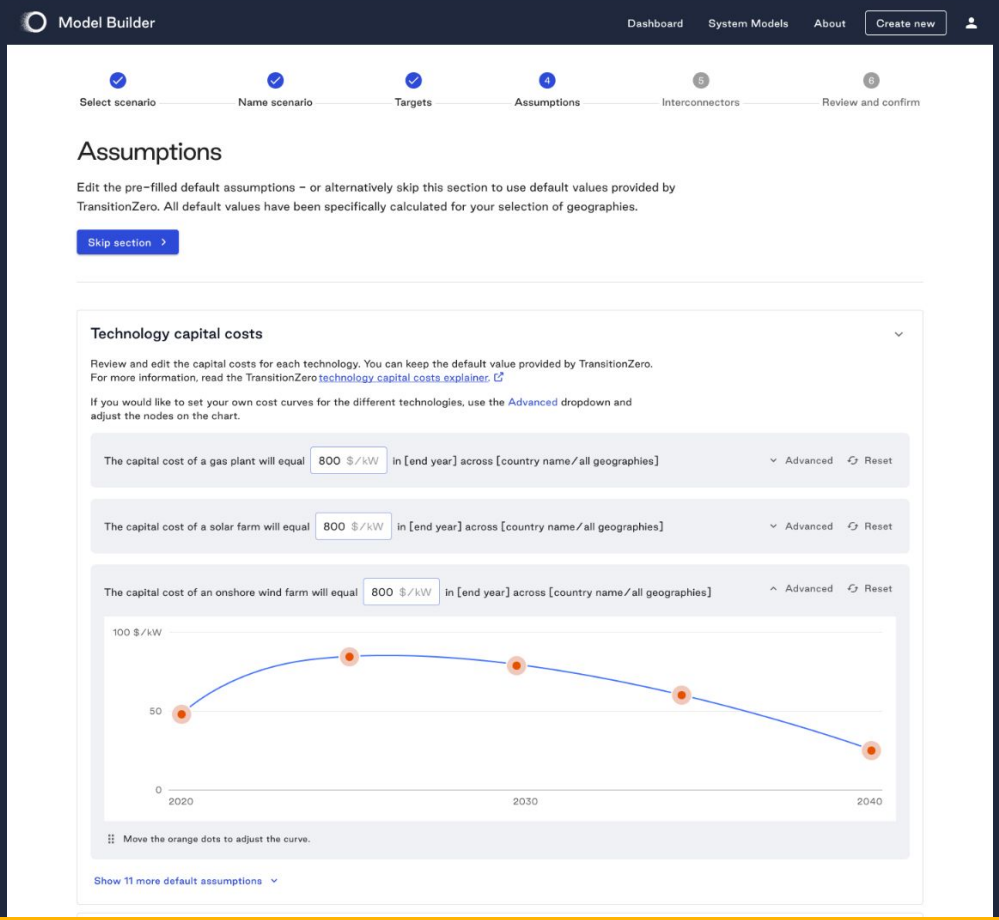
pip install tz-osemosys



Coming Soon

Model Builder UI

- Build models with full selection of geographic, spatial, and sectoral fidelity.
- ‘Fork’ existing scenarios, and/or use TZ’s default assumptions.
- Add key targets and assumptions.
- Trigger runs right from the UI. Make yourself a tea while you wait.
- Publish the results and share with other users.



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Stay Tuned!

Public beta June/July

Reach out at:

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