FlexMeasures Technical Steering Committee

November 3rd 2022

Agenda

- Welcome & Short introduction to FlexMeasures
- Version 0.12 is about to be released
- Lessons learned from using FlexMeasures as simulation tool
- Roadmap: Support out-of-the box cases (90%) as well as power users
- Q&A

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FlexMeasures is the intelligent & developer-friendly EMS to support real-time energy flexibility apps.

Go green in daily operations, stay in control.

- Smart industry
- Smart city

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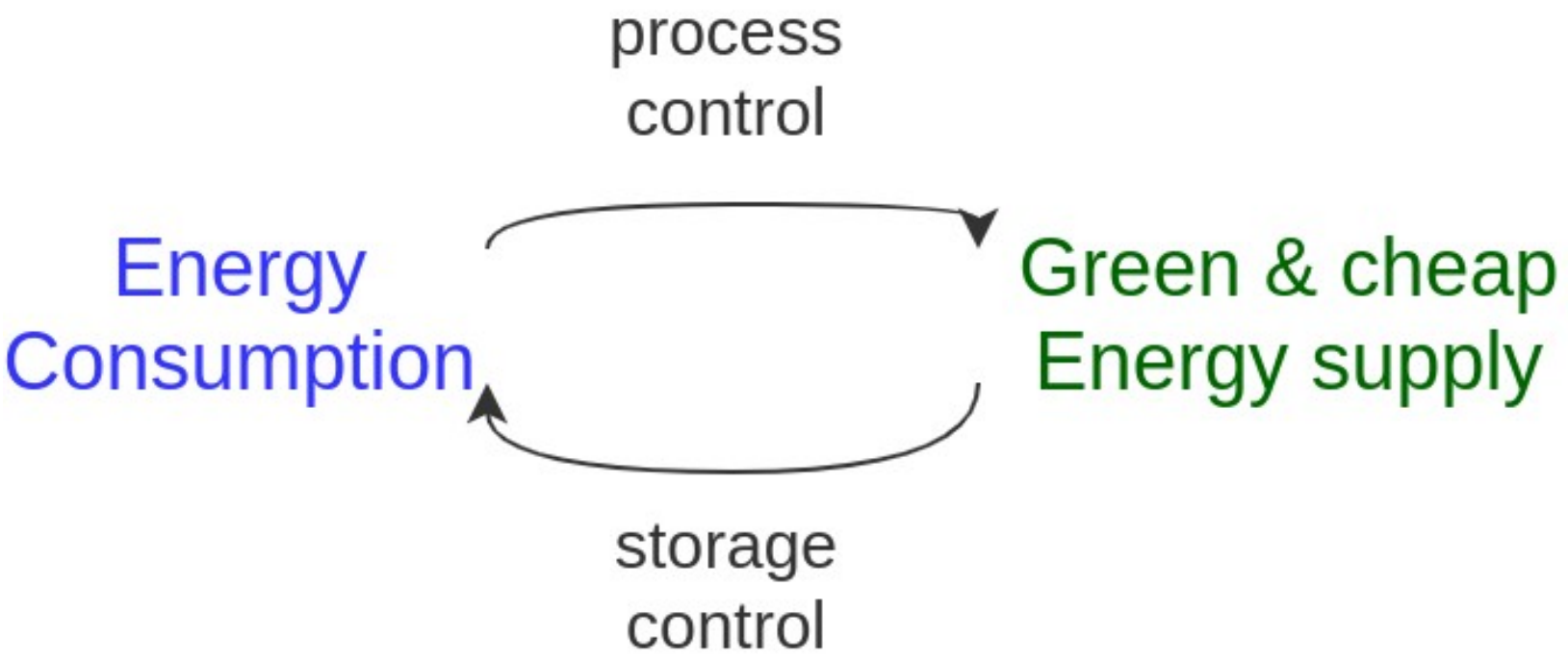
The matching challenge



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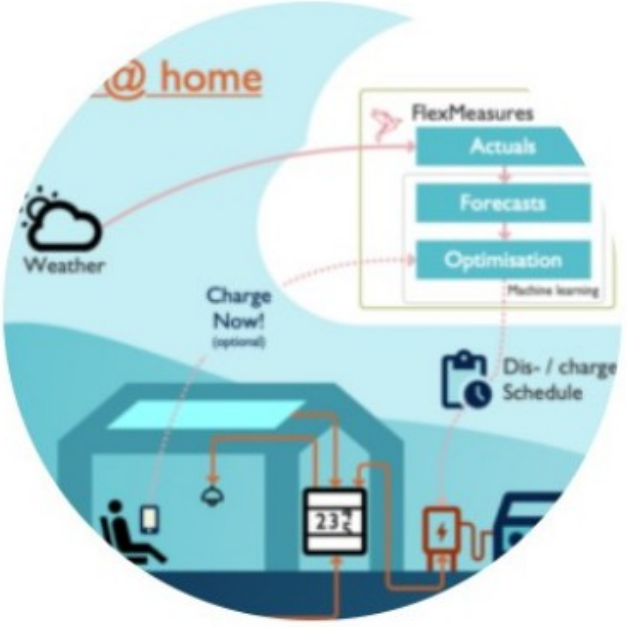
Use case: SteerOnCO_2 at Rijnland Water Board

We help water board Rijnland to only run their centrifuges for sludge dehydration when the CO_2 footprint in the grid is low.

Use case: SteerOnPrice & SteerOnSolar at V2G@Home

We optimize (dis)charging of Nissan Leaf cars with Wallbox chargers to save costs and use solar power, with zero user interaction needed.



FlexMeasures - simple

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Developer support

- I need help with integrating real-time data and continuously computing new data
- It's hard to correctly model data with different sources, resolutions, horizons and even uncertainties
- I want to build new features quickly, not spend days solving basic problems

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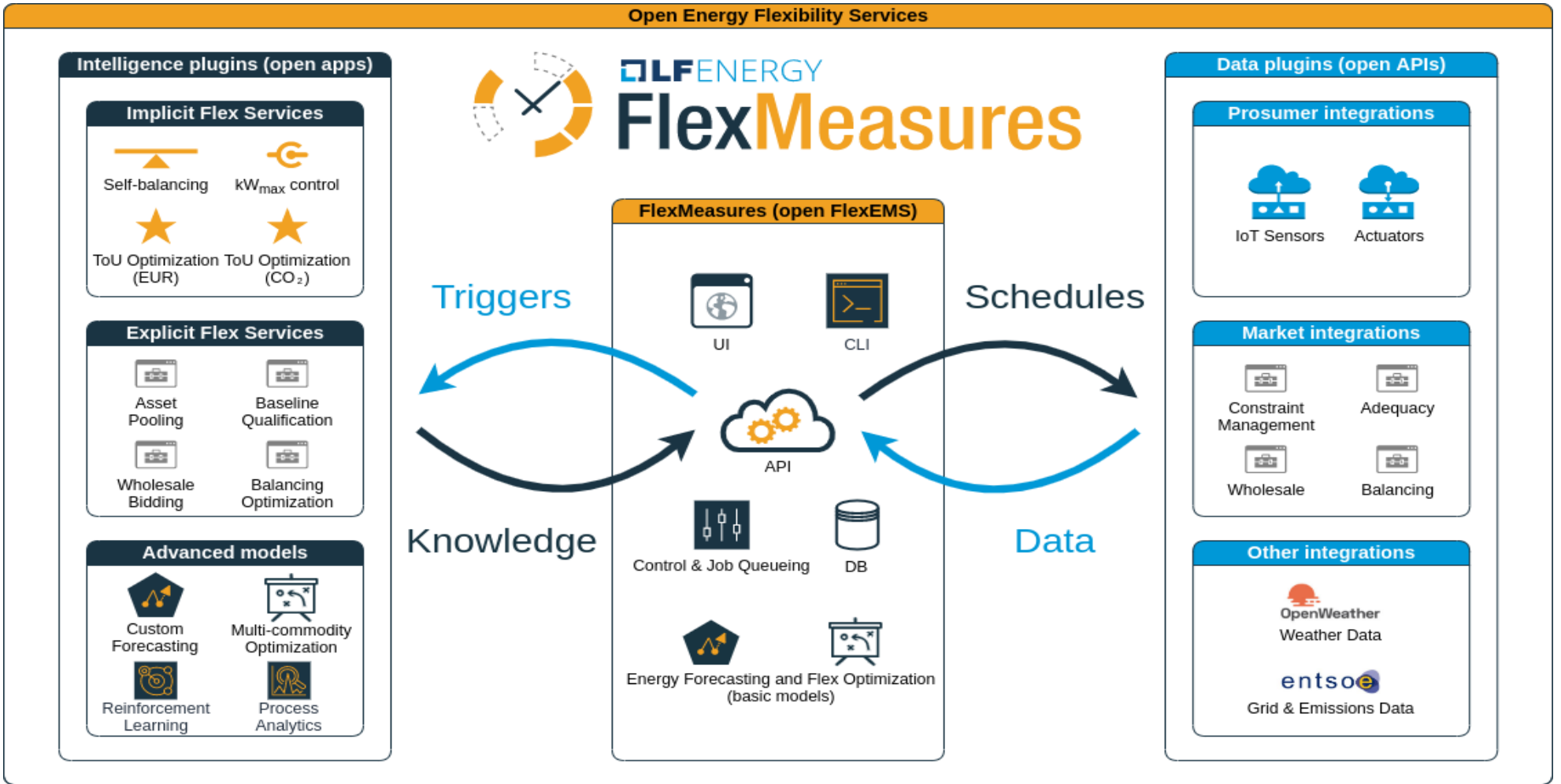
FlexMeasures - integration



Version 0.12 approaches

- Customisable scheduling & scheduling API
- Replay button
- Forecasts visually distinguished
- Improvements on data import/export & scheduling

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Preview 0.12: Customisable schedules

Use case:

- Power users building their own solution
- E.g. researchers, startups
- Begin work in function store (for plugin development)

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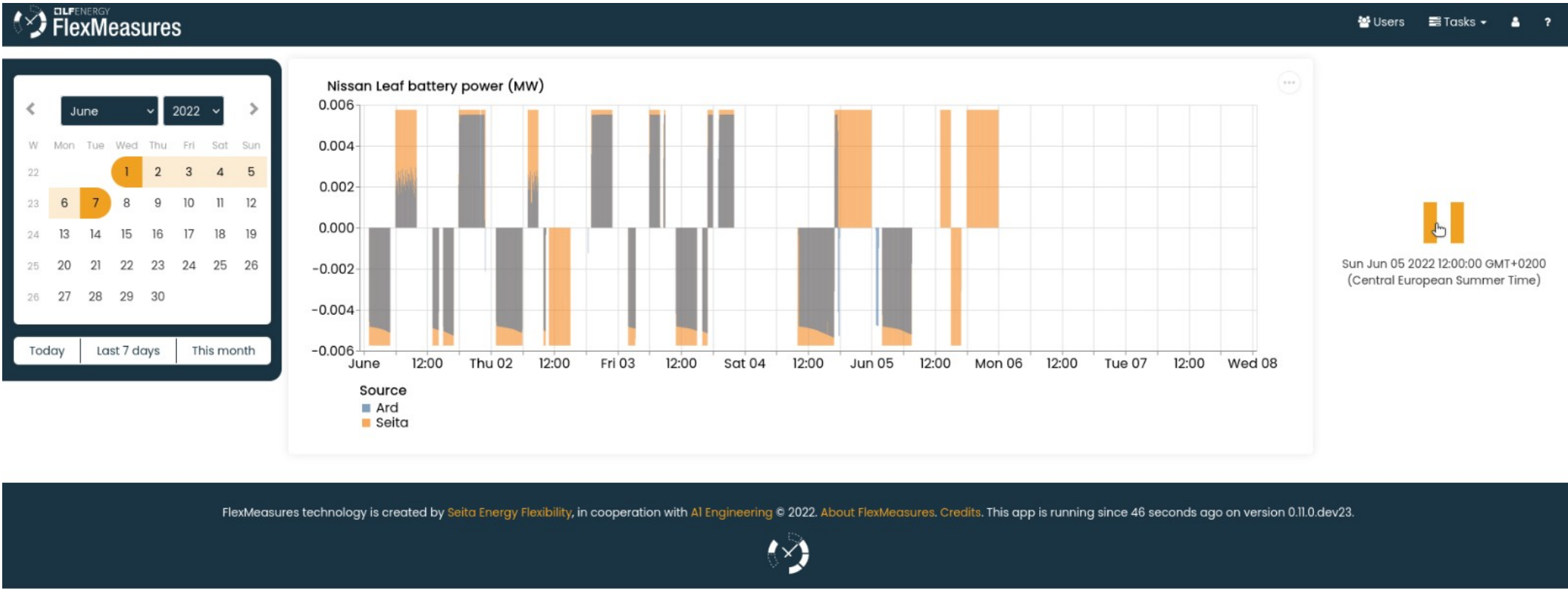
Preview 0.12: Replay



https://twitter.com/flexmeasures/status/1551841500815695875

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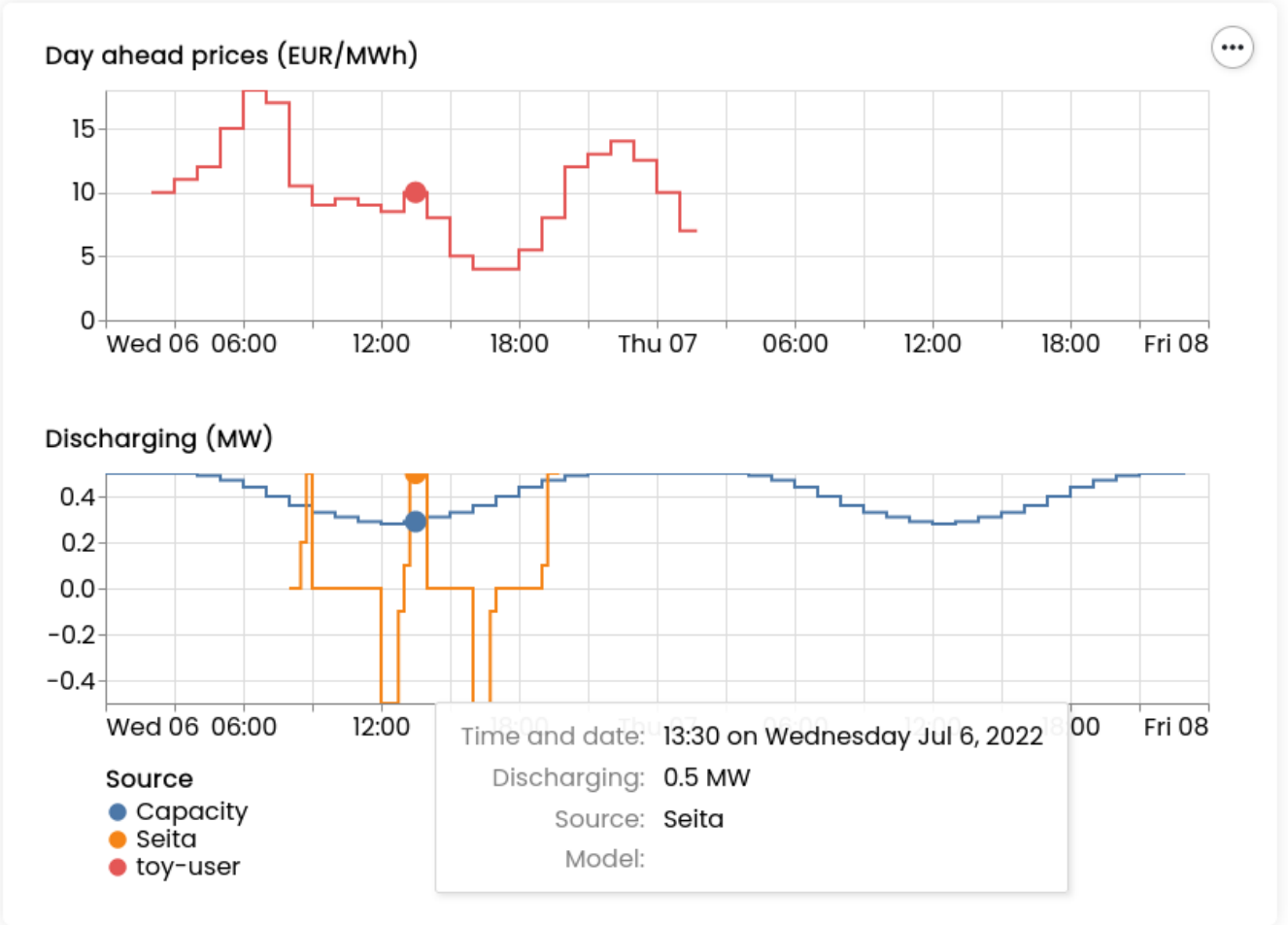
Preview 0.12: Towards 1st out-of-the-box use case: Battery plus solar & network constraint

Use case:

- Battery
- Solar power
- (network constraint)
- (prices)

TODO: Tutorial



Preview 0.13: KPIs

Use case:

- Report hourly/daily outcomes in separate sensor
- Support basic computations using sensors
- Allow custom KPIs (function store)

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Roadmap: Out-of-the-box use cases vs power users

Out of the box – the 90 % cases

- Battery/EV + solar (self-consumption)
- Battery/EV + solar + congestion (also grid support)
- Solar + Heat pump (self-consumption & comfort)
- ...
- FM: Pre-made schedulers, Setup wizard, excellent tutorials

Power users – bring your own

- Simulations (researchers, investment decision moments)
- New services (e.g. startups) with custom scheduling
- Microgrids
- Industry
- FM: Examples, support

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Roadmap: More details

https://flexmeasures.io/roadmap/

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Q&A

- What are you working on?
- What is unclear?

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Resources – do get in touch!

- https://github.com/FlexMeasures/flexmeasures/
- https://www.flexmeasures.io
- https://lists.lfenergy.org/g/flexmeasures
- https://twitter.com/flexmeasures
- LF Energy Slack: #flexmeasures

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