FlexMeasures Technical Steering Committee
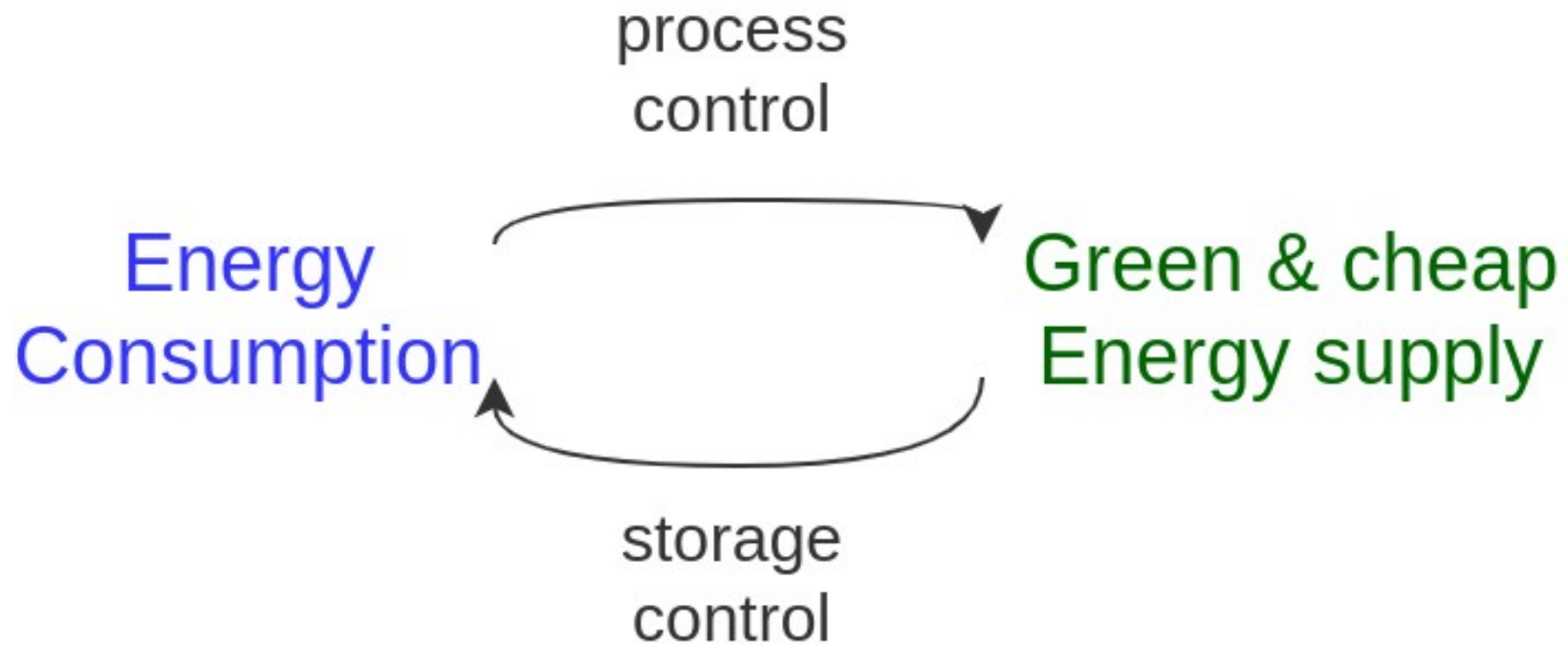
September 1st 2022

Agenda

- Welcome & Short introduction to FlexMeasures

- Version 0.11 is out!

- Preview: Replay, 1st out-of-the-box case

- Roadmap: Support out-of-the box cases (90%) as well as power users

- Q&A

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

Go green in daily operations, stay in control.

- Smart industry
- Smart city

The matching challenge

process
control

Energy
Consumption

Green & cheap
Energy supply

storage
control

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FlexMeasures

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.
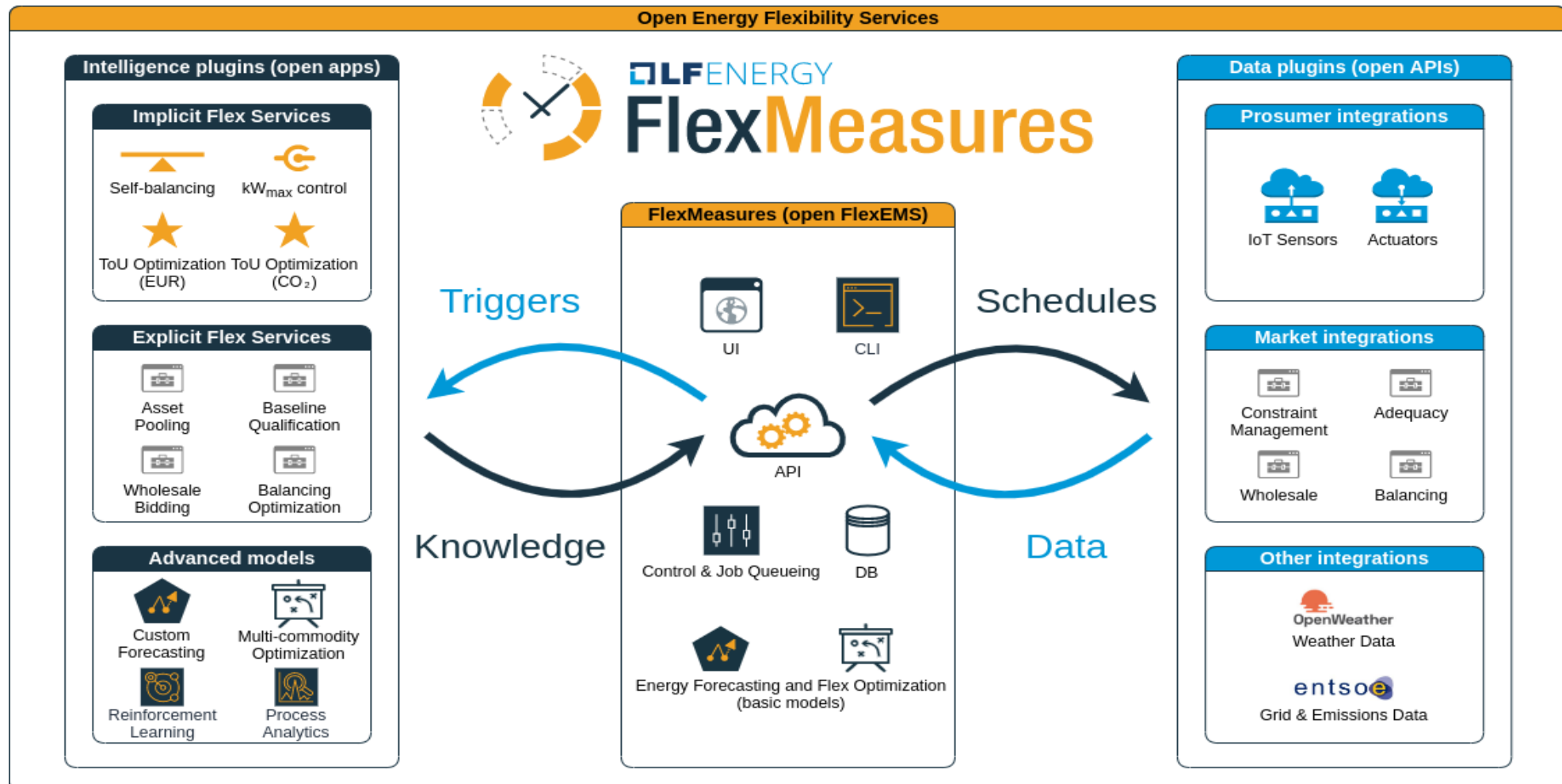
FlexMeasures - simple

Developer support

- I need help with <u>integrating real-time data</u> and continuously <u>computing new data</u>

- It's hard to <u>correctly model data</u> with different sources, resolutions, horizons and even uncertainties

- I want to <u>build new features quickly</u>, not spend days solving basic problems

FlexMeasures - integration

Version 0.11 is out!

- More useful & customizable data views

- Completed the Docker-compose stack (background job workers)

- Get data in any resolution (API)

https://flexmeasures.readthedocs.io/en/latest/changelog.html#v0-11-0-august-28-2022

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New asset page

Docker compose stack with worker

		NAME		IMAGE		STATUS		PORT(S)		STARTED		
☐		flexmeasures 5 containers		-		Running (5/5)		-			‖ ↻ ■ 🗑	
☐		server-1 ce16e6510132 ⧉		lfenergy/flexmeasures		Running		5000		13 hours ago ⧉ 🖥 ‖ ↻ ■		
☐		worker-1 350afcf0afcb ⧉		lfenergy/flexmeasures		Running		-		27 seconds ag 🖥 ‖ ↻ ■		
☐		dev-db-1 fba827e5755d ⧉		postgres		Running		-		13 hours ago 🖥 ‖ ↻ ■		
☐		test-db-1 e6f902e70e74 ⧉		postgres		Running		-		13 hours ago 🖥 ‖ ↻ ■		
☐		queue-db-1 0d70a03933ef ⧉		redis		Running		-		13 hours ago 🖥 ‖ ↻ ■		

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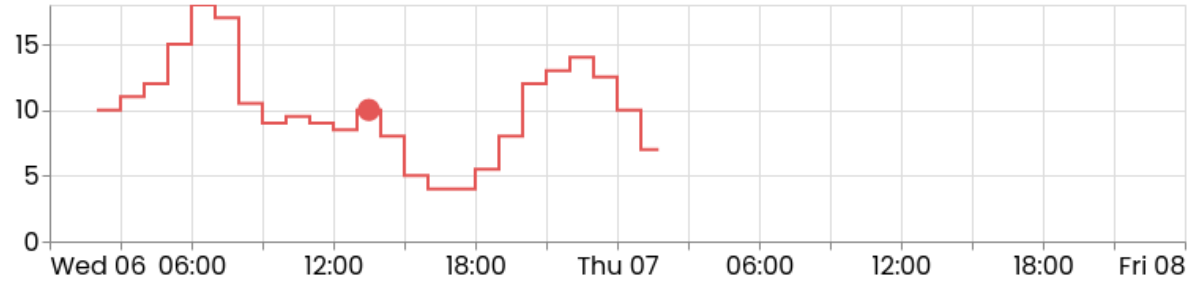FlexMeasures

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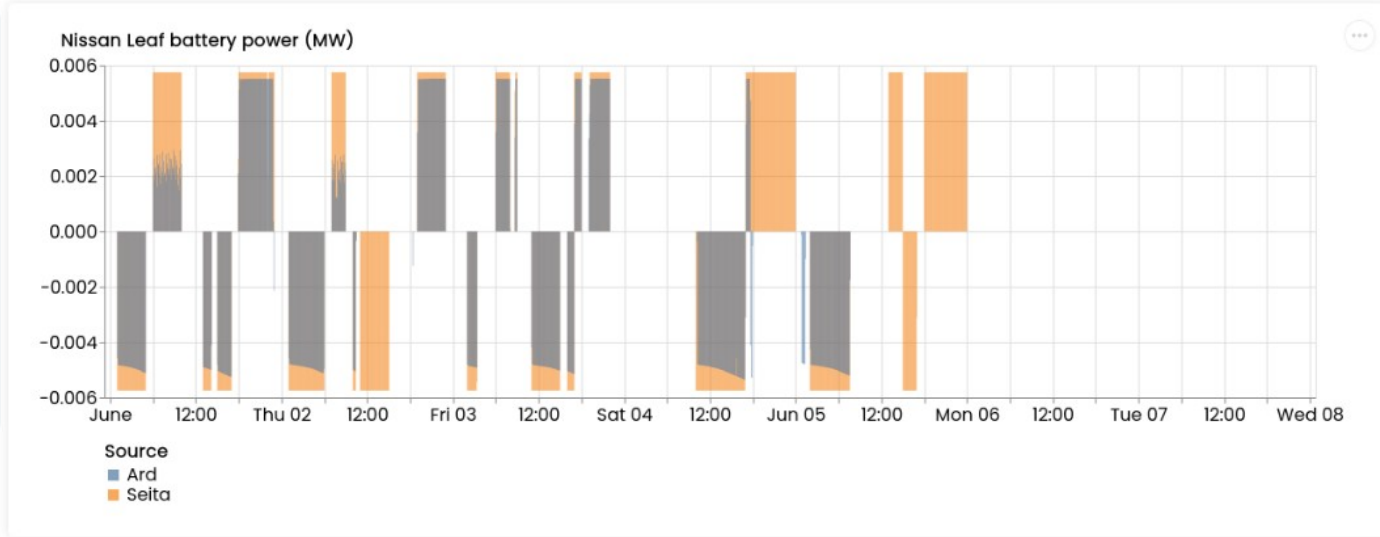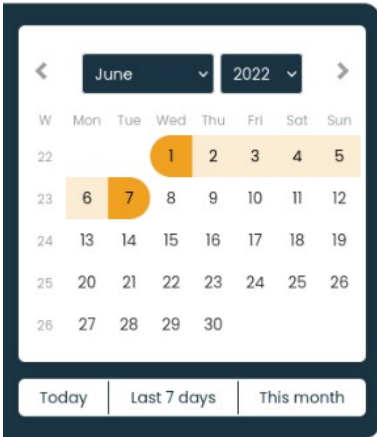
Preview 0.12: Towards 1ˢᵗ out-of-the-box use case: Battery plus solar & network constraint

Use case:

- Battery
- Solar power
- (network constraint)
- (prices)
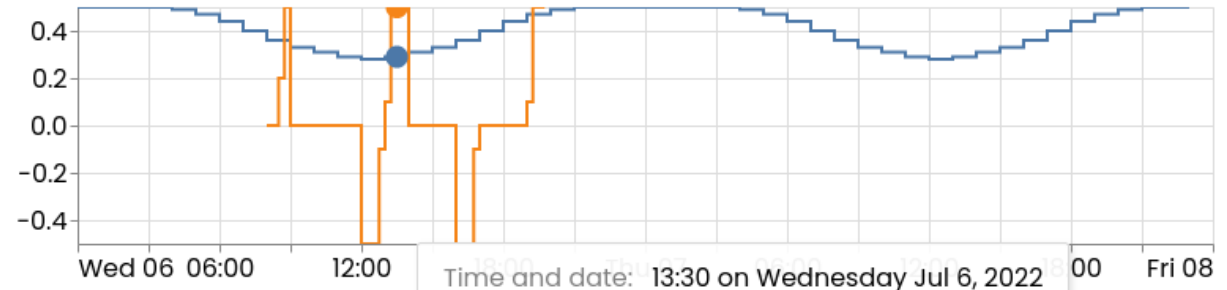
TODO: Tutorial

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/

FlexMeasures

Q&A

- What are you working on?

- What is unclear?

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