

LetzPower! - Designing for Impact: How Data Can Drive Dynamic Tariff Adoption

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FINATRAX / UBIX
Research Groups

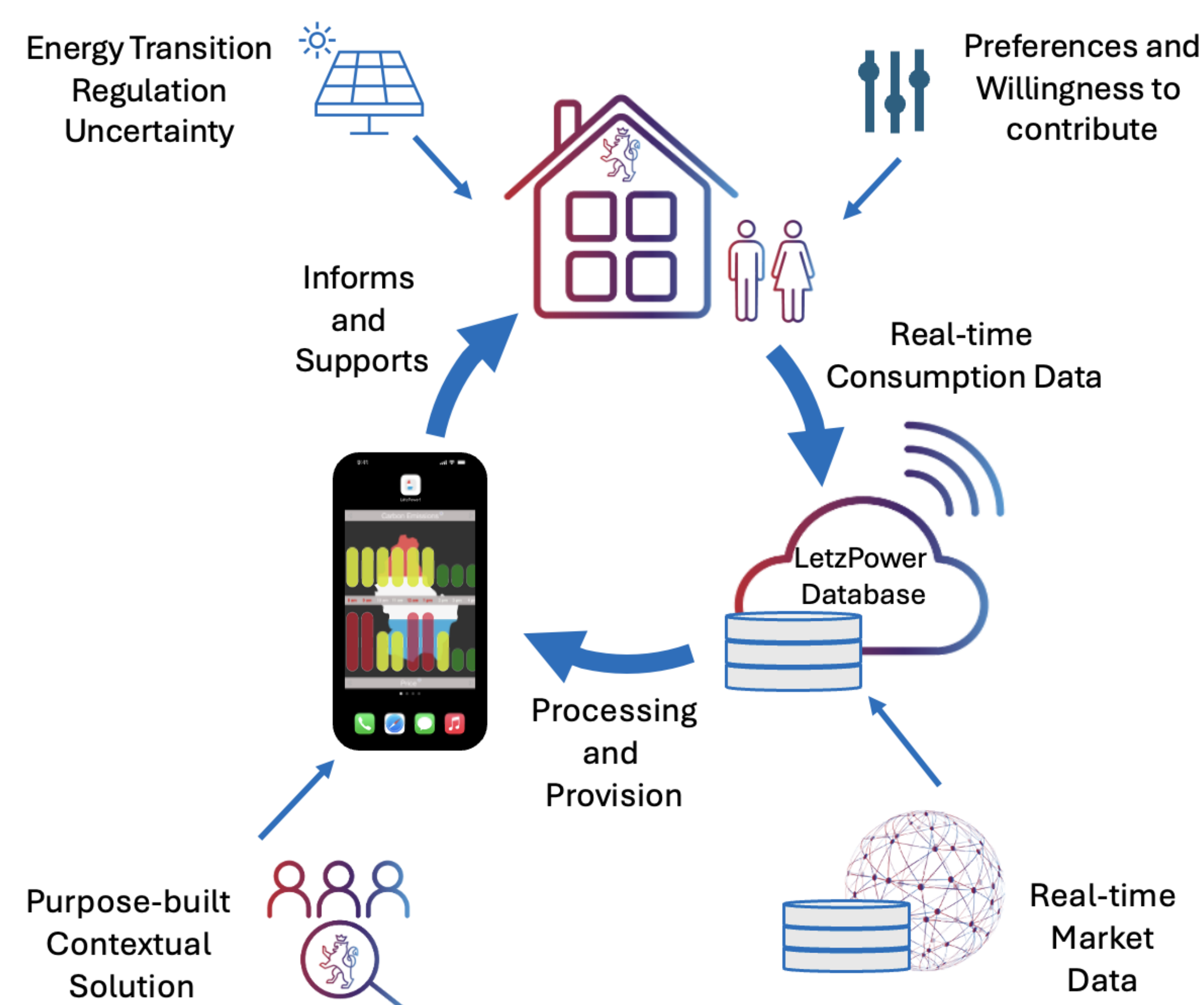
A “Wicked Problem” in Electricity Retail

Demand-side flexibility, especially via dynamic tariffs, arises in a multi-stakeholder environment shaped by interdependent social, economic, and technological dimensions - constituting a “wicked problem”.

- ✗ Stakeholder misalignment
- ✗ Socio-technical complexity
- ✗ Regulatory and market uncertainty
- ✗ Electricity as a heterogeneous good

A Data-Driven Design Science Approach

Design Science Research is a problem-solving research paradigm that systematically **designs, builds, and evaluates innovative IT artifacts** to address complex socio-technical challenges, while contributing to both practical impact and theoretical knowledge.



Objective: a **decision support system** that ...

- delivers relevant, understandable, and customisable consumption recommendations (traffic light approach).
- promotes flexibility and safeguards consumer interests.
- serves as a foundation for future home automation.

I. Stakeholder Co-creation

- Identifying and challenging the “Peak-to-Bill Anxiety”.



- The “Wicked Problem” Space: Qualitative analysis of hurdles in the electricity retail environment.



II. Prototyping

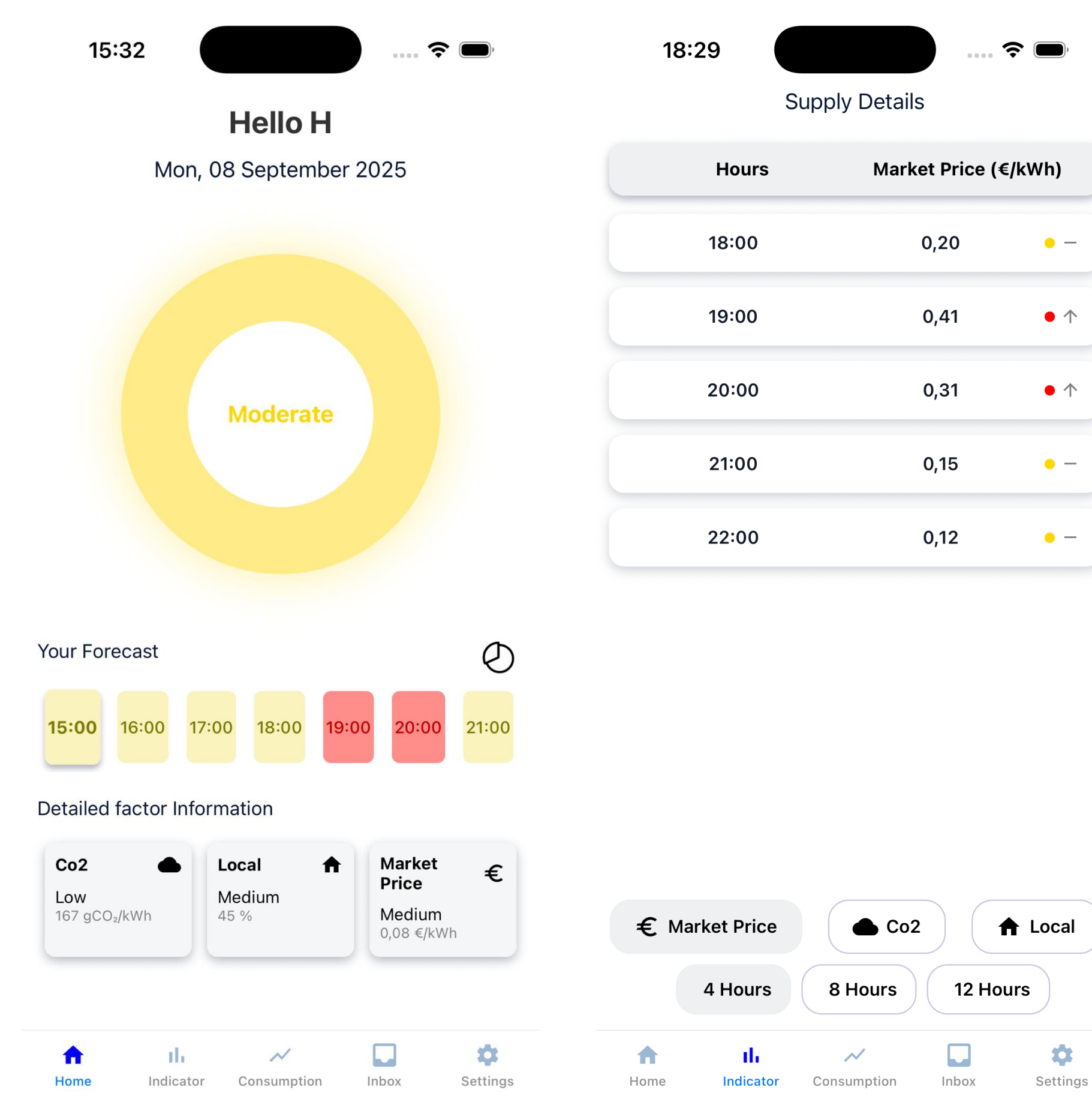
- **Design Principle and Artifact Development**



- **Expert Workshops** to evaluate the design, data pipeline, and backend processing.
- **User Focus Groups** to evaluate the UX design and interface.

III. Field Study

- Testing the application in the field with residential electricity users (October-December 2025)



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