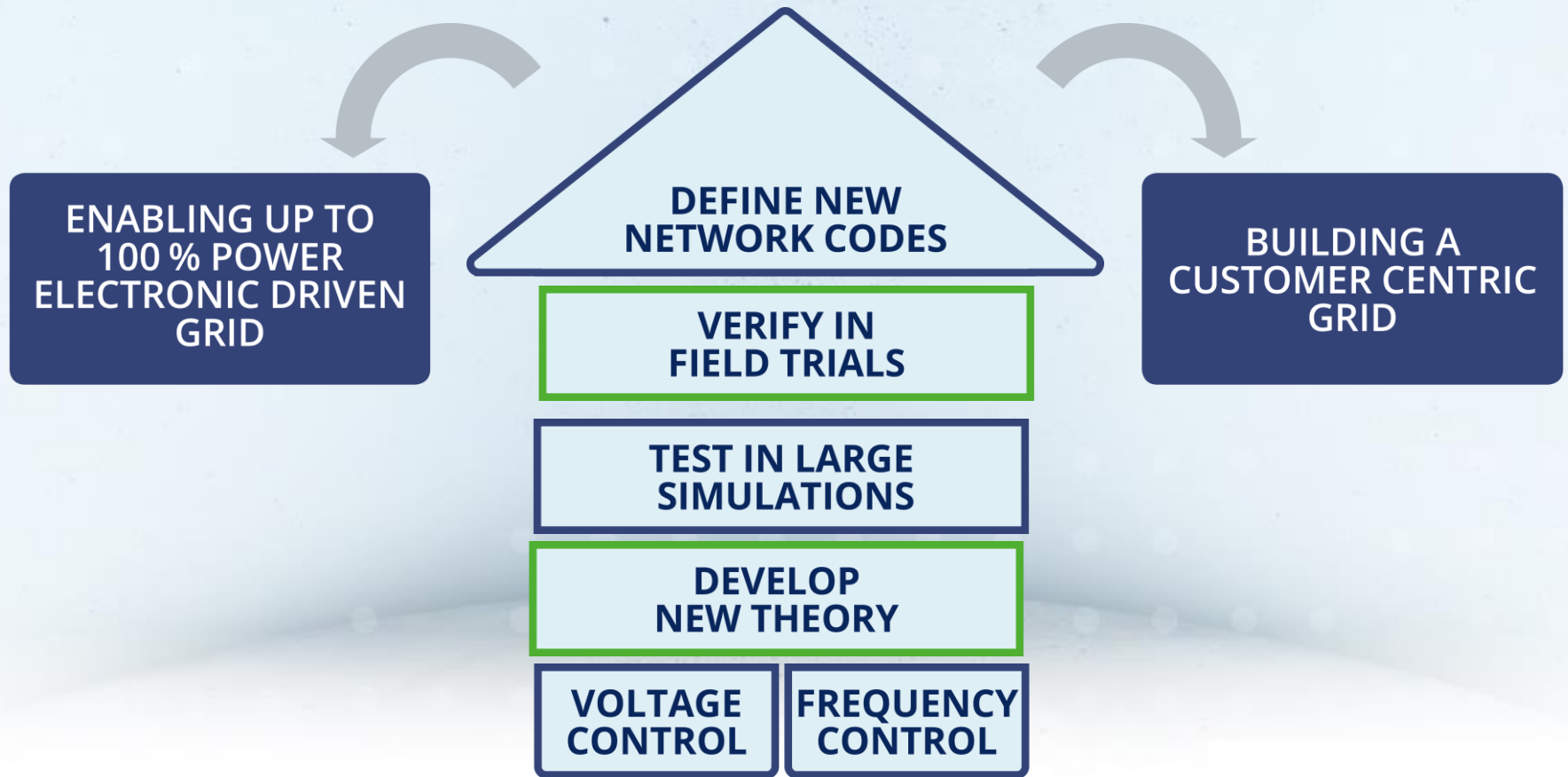


# Interoperable platforms and data exchange for energy services: practical experience from the BRIDGE projects

Steffen Bretzke | RESERVE | Utility Week – Vienna – 06 NOV 2018

# RESERVE



# Data in RESERVE



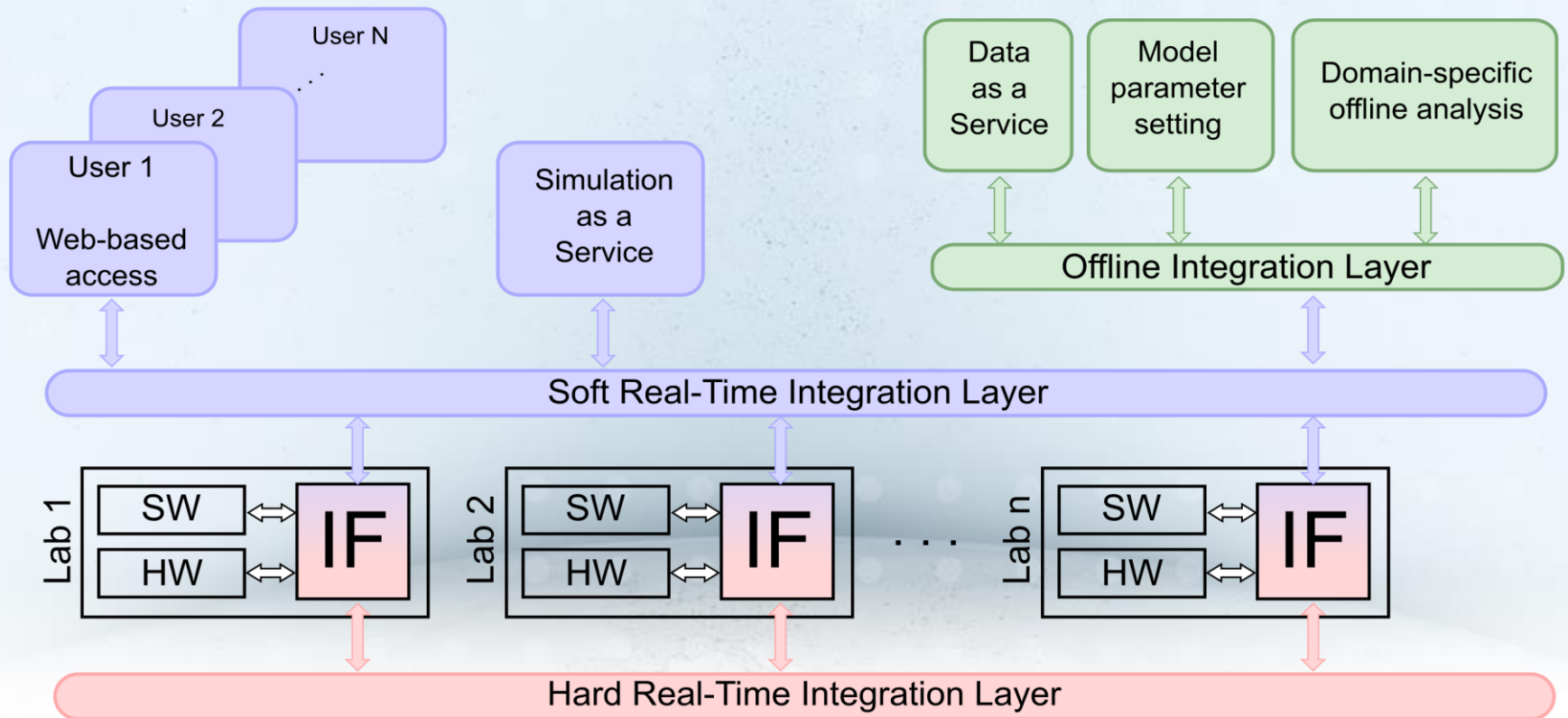
- Sharing operational grid data from our TSO and DSO partners ESB & TRANSELECTRICA
- Using data for distributed co-simulations - particularly of new techniques for frequency management in the context of increasing RES towards 100% of the energy mix without hydroelectric power

# Distributed co-simulation



- Distributed co-simulation is enabled by coupling real-time simulators and sharing simulation capacity and hardware
- Distributed simulation allows participants to keep their input data confidential
- Simulations are real-time to interface with real hardware in the loop for prototyping

# The Villas Co-Simulation platform developed in RESERVE



# Business model



- The Villas platform is currently supported by the public funding of the RESERVE project
  - After the end of the project, further public funding will be required to maintain it in its current form
  - A further option being investigated within the project is to develop the platform into a commercial simulation service offering co-simulation as a service to utilities, regulatory organisations and government departments



# Consumer involvement & benefit



- Partner ESB keeps in close contact with its many private consumer customers
  - ESB is experienced in organising field trials of such concepts with its customers
- In particular, our concepts for voltage control requiring **customers to provide access to the control** of their inverters/converters to a utility or an aggregator in order to provide a voltage management service
- **Consumers would receive payment** or other benefits in return for offering the utility limited control of their assets (whether for generation or load), and could participate in new voltage control markets through this mechanism
- These techniques have the potential to make a strong contribution to the **reduction of CO2 production** from the power generation sector which is of benefit to society and the consumer



# Regulation



- New frequency and voltage control techniques require new network codes and ancillary service definitions
- RESERVE is actively promoting changes to existing codes and services and new codes and services



# Next frontier – Regulation for services



- The frontier - enabling DSO's to offset the cost of services they purchase in the same way that they can currently offset the cost of assets they purchase
- This requires regulatory changes!
- Such a change would:
  - open up **new markets** in Europe,
  - enabling **Europe to lead** in global markets,
  - would enable the many **smaller DSO's** without an internal IT department to use leading edge services,
  - would **decrease costs for DSO's** and **improve services for consumers** reducing minutes of lost customer services due to technical and increasingly extreme weather related outages



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