



## DOE ENERGISE Program

# Electric Access System Enhancement (EASE)

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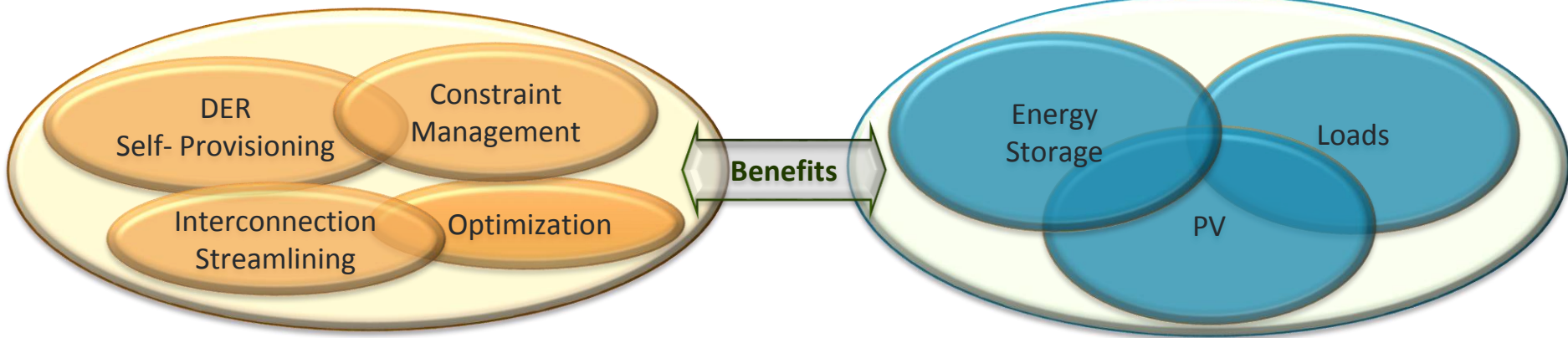
# EASE Project

## Key Idea

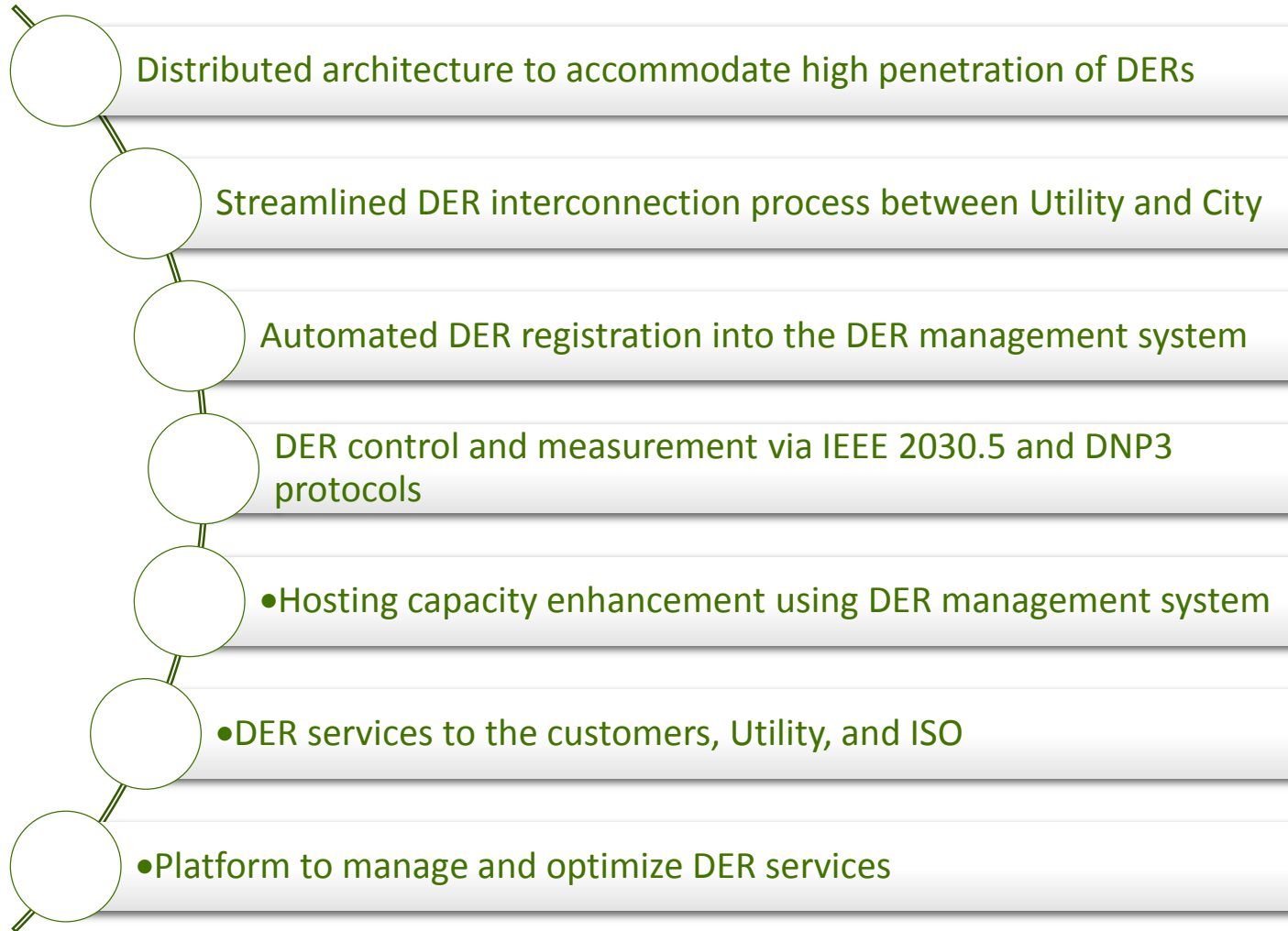
Enhance access to DER information, ability to provide services and optimization of resources by demonstrating an interoperable distributed control architecture leading to higher penetration of solar PVs.

## Power Grid

## Resources

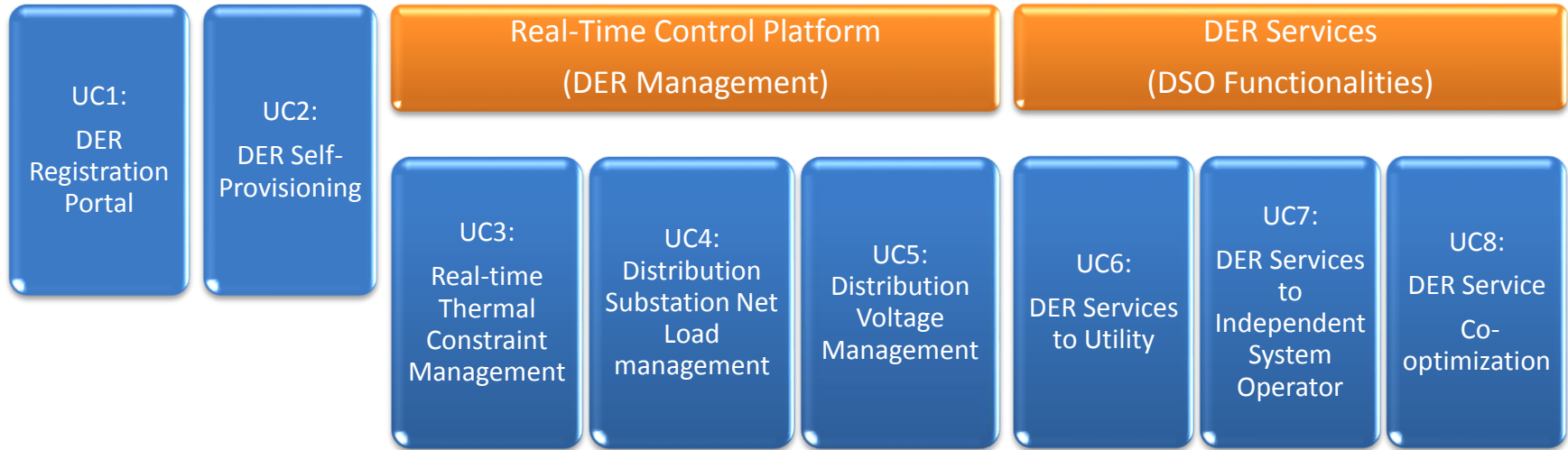


# Project Objectives



# Use Cases

EASE



BP1  
Lab  
2017-2018

- Interconnection Streamlining
- Control System Interoperability Testing
- DER Self-Provisioning

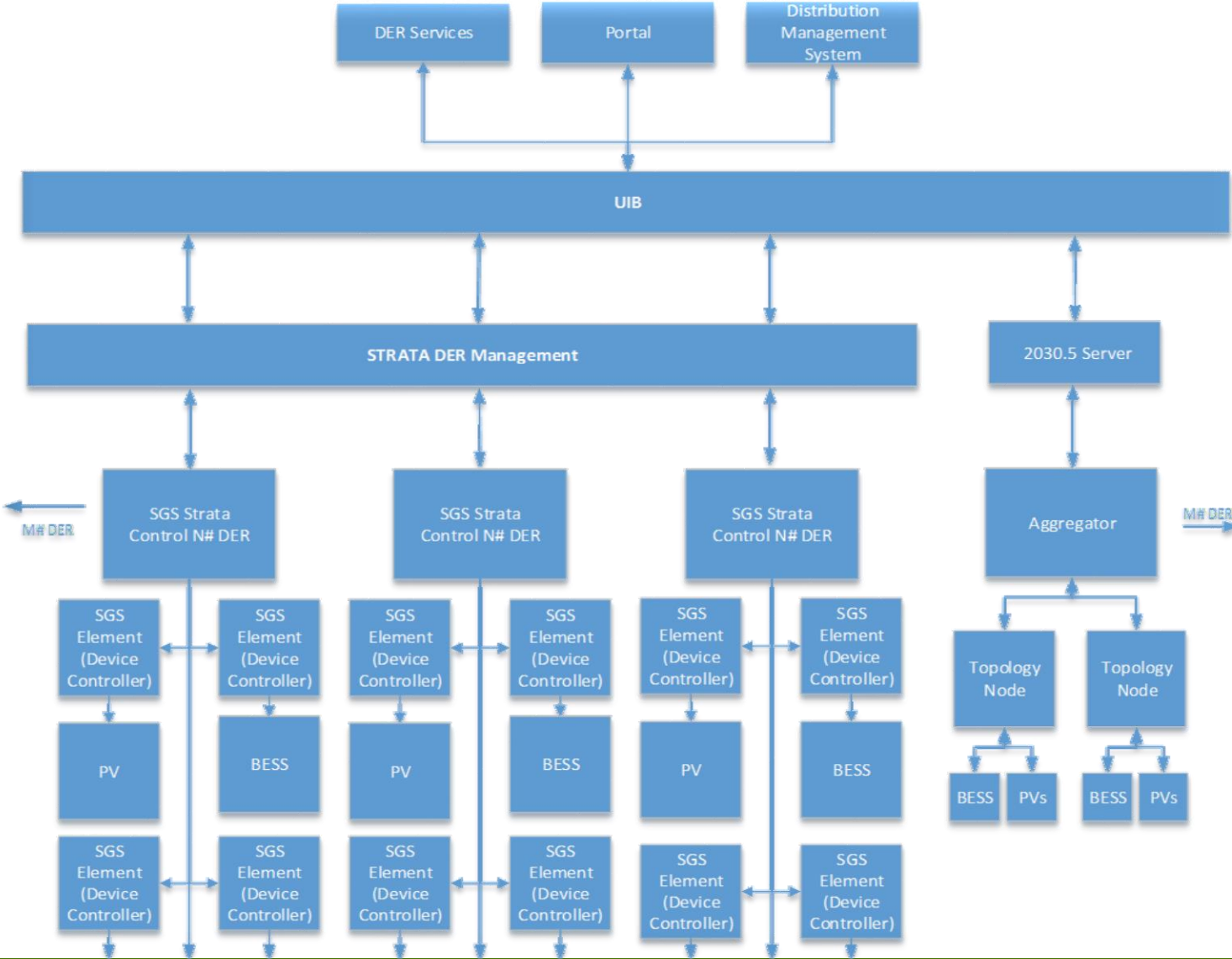
BP2  
Lab  
2019

- Lab Testing with 10,000 Simulated DERs
- Use Cases Demo in the Lab

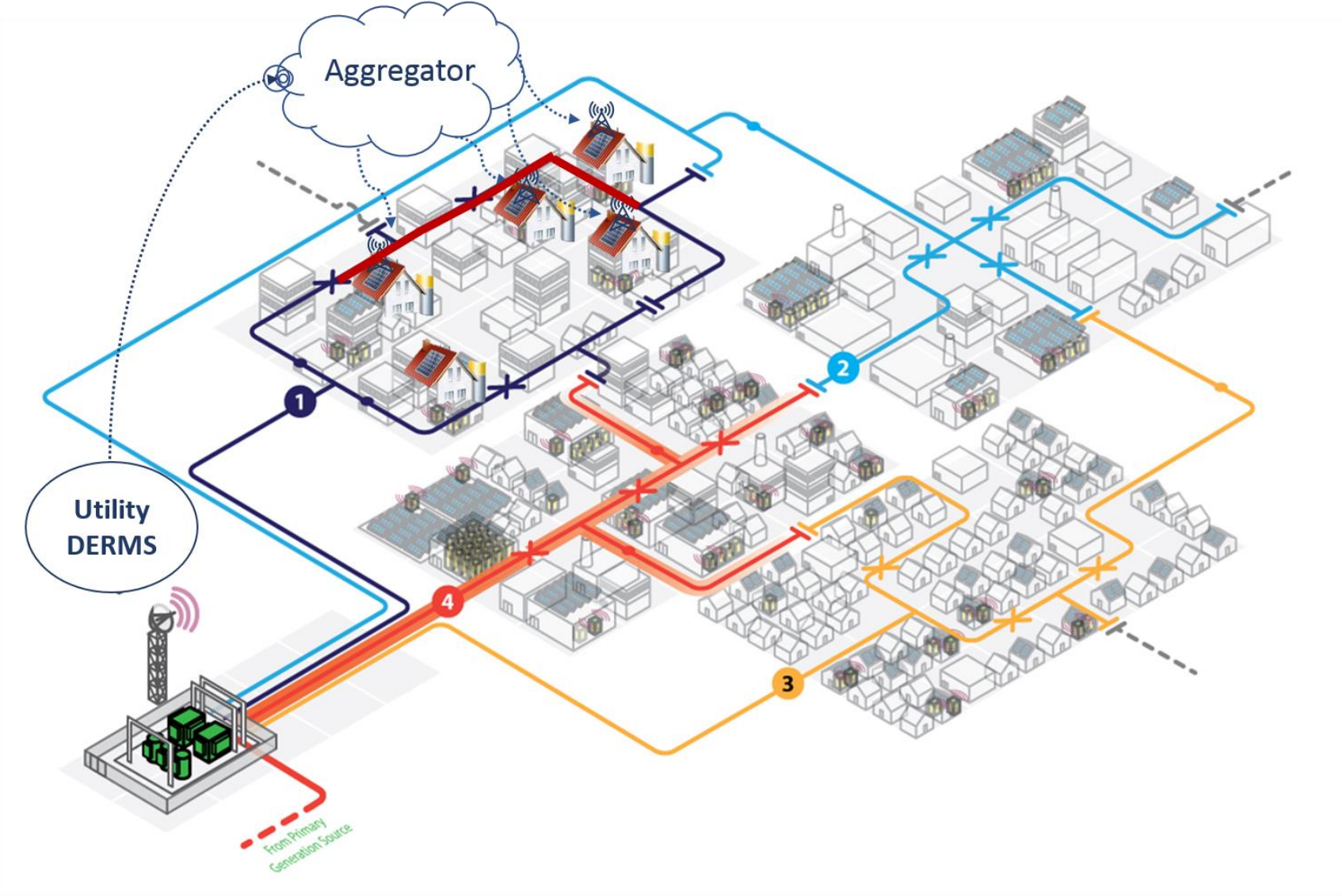
BP3  
Lab/Field  
2019-2021

- DER services to the Utility and ISO
- 100 DERs in the Field
- Use Cases Demo in the Field

# Challenges: Scalability



# Challenges: DER Management



# Challenges: DER Services

- Formation of a business model with financial motivation for DER participation
- Provision of services considering DER technology constraints
- Communication architecture and cyber security
- Short-term forecasting of generation and demand
- Optimization with multiple objective functions
- Avoiding double counting of benefits and costs
- Scalability of the solution

