

# My Experience with FIWARE

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# Agenda

1. Introduction
2. Usage of FIWARE Generic Enablers
3. Benefits of using FIWARE
4. Summary

# Introduction

## Who we are

- **Mona Scholl and Felix Holzäpfel-Stein**
- **Studied,Scientific Programming‘ at the FH Aachen University of Applied Sciences**
- **Working at SOPTIM AG**
  - IT-service provider for the energy industry
  - Products and individual solutions for all market roles
- **First contact with FIWARE during academic research**
- **Participated at the Aachen trial site**

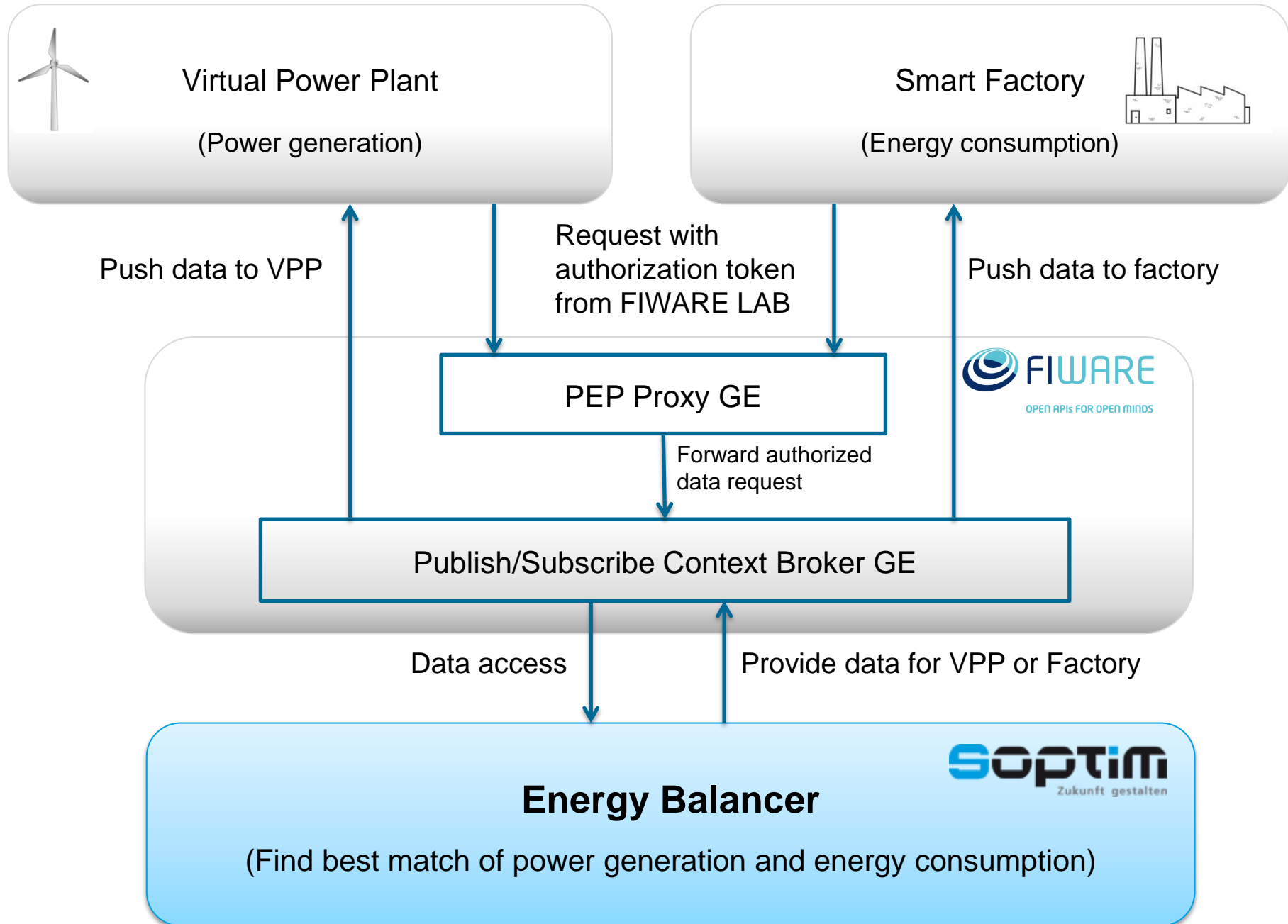
# Introduction

## Aachen Trial Site

- **Aachen trial site implements „Demand Side Management“**
  - Power generation by renewable energy sources
  - Energy consumption by Smart Factory building e-vehicles
- **Demand Side Management**
  - You cannot fully control generation of renewable energy
  - Demand Side Management tries to adapt the energy consumption to the power generation



# Aachen trial site architecture



# Usage of FIWARE Generic Enablers

- **Identity management of FIWARE LAB**

- Managing user information
- Managing user roles



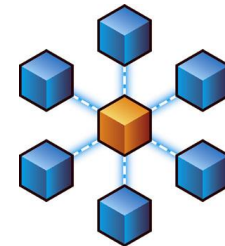
- **PEP Proxy to secure our application**

- Uses the Usermanagement of FIWARE LAB to authenticate users
- Authorizes users to perform actions depending on user roles



- **Publish/Subscribe Context Broker**

- Providing a defined interface for data operations
- Handling the data based on defined entities
- Managing subscriptions
- Notifying subscribers on creation or changes



# Benefits of using FIWARE

## Provided Architecture

- **FIWARE Catalogue**

- Collection of all available Generic Enabler implementations
- Documentation and Downloads for all available Generic Enabler implementations

- **FIWARE Lab**

- Providing free instances to install and test Generic Enabler implementations
- Predefined instances with installed Generic Enabler implementations
- Infrastructure to host your applications
- Selectable storage location for your application



OPEN APIs FOR OPEN MINDS

# Benefits of using FIWARE

Generic Enablers provide well defined APIs

- **Following the principles of REST Architecture**
  - Easy to learn and to use
  - Efficient regarding data volume
- **The GE implementations for one GE are interchangeable**
  - Accessible over the same Interfaces
- **GEs are free to use components**
  - Ease costefficient construction of new applications
  - Reference implementations support creation of own GE implementation



OPEN APIs FOR OPEN MINDS



# Summary

| Reasons to use FIWARE                                | Possible improvements   |
|--|---|
| Free usage of Generic Enabler implementations        | Expansion of FIWARE nodes for worldwide storage and computing power |
| Easy integration in existing projects                |   |
| Selectable location of data storage for applications |   |

**Thank you for your attention!**