FUTURE INTERNET SMART UTILITY SERVICES

FINESCE

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in a nutshell

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FI-PPP Family of projects

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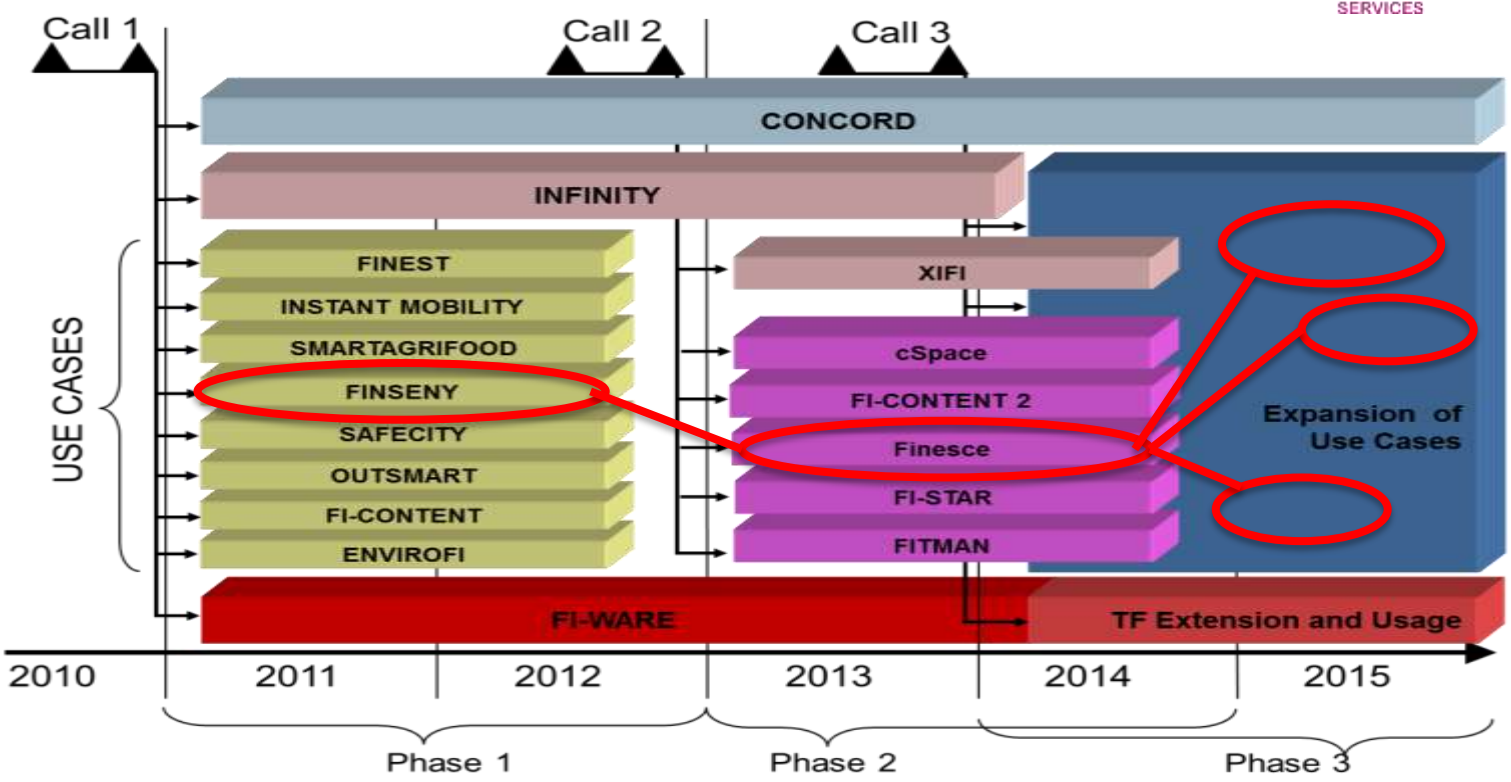

FINSENY Partners

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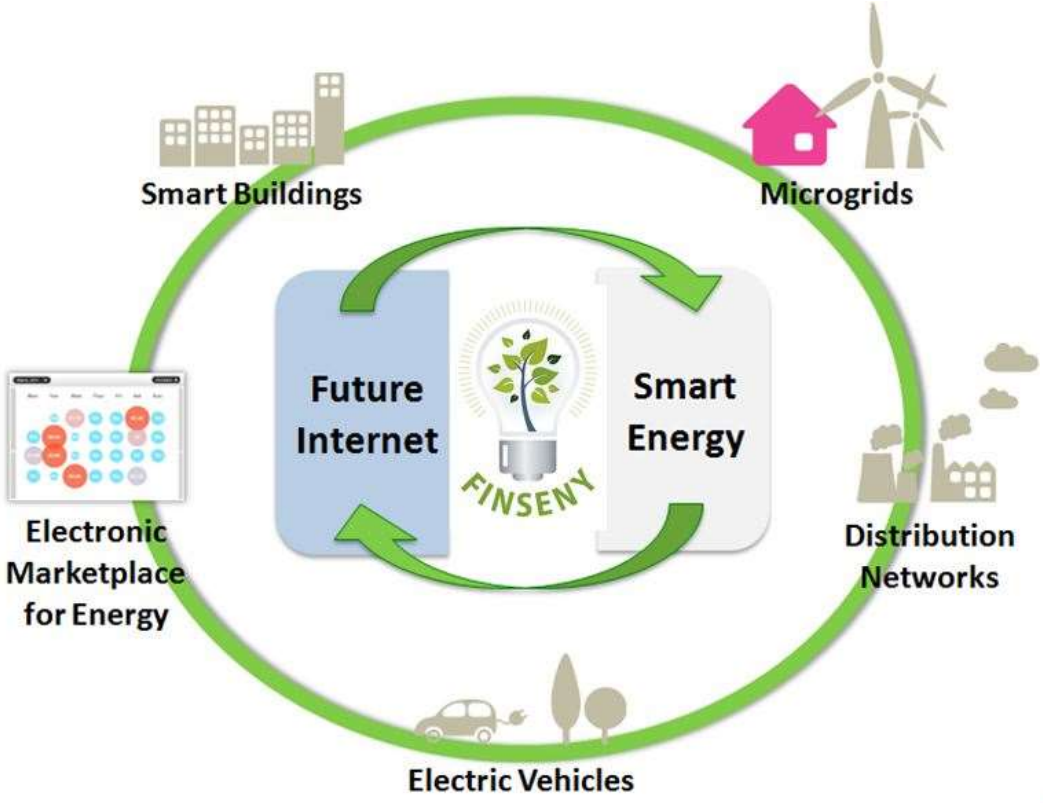
FINSENY Use Cases



FINSENY‘s 4-Step Approach

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1. Scenario description

   Identify use cases and actors (market roles as well as systems & devices) according IntelliGrid method

2. ICT requirements

   Define requirements for communication & information flows as well as services and middleware

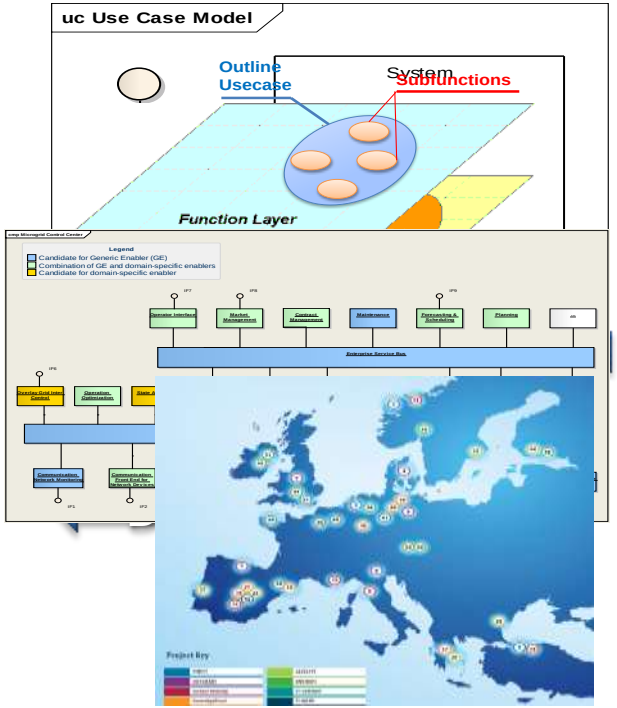
3. Functional Architecture

   identify key functional building blocks and interfaces, specify data models and communication protocols

   develop ICT architecture based on common and domain specific enablers

4. Trial candidates

   identify trial candidates taking into account relevance, trial setup and reuse of existing trials



FINESCE partners and trial sites

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ERICSSON
fir RWTH AACHEN
DEVELCO
devolo
acciona
DUNAV NET
Alcatel·Lucent
INSERO
EC Network
ALSTOM
QSC
SMB
ASM
RWTH AACHEN UNIVERSITY
laSalle
BAUM
SYNELIXIS
SEnerCon
orange
soptim
TeamWare
ENGINEERING
TSBG
XLAB
e·on
INSERO
yucca

Trial 1 Sustainable Smart City Malmö, Sweden

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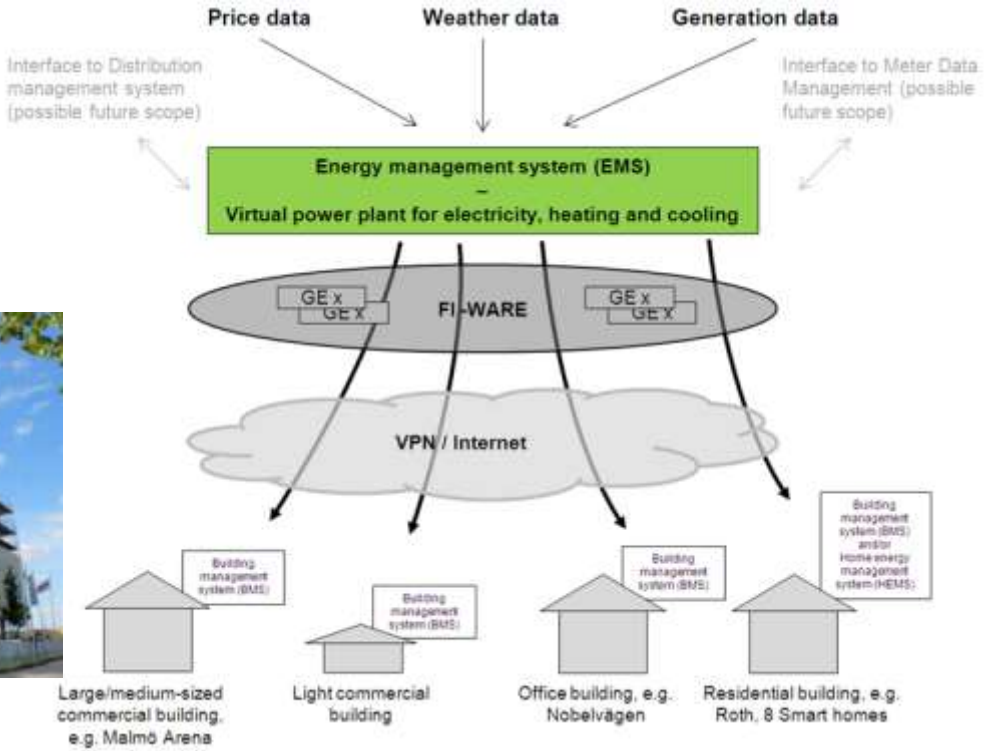
- Using Future Internet as an enabler for innovation and opening of closed systems
- Demonstrate optimization of supply and demand across different energy carriers, such as electricity, heat and cooling



Trial 2 – Smart Region Horsens & Madrid

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Two trial sites/streams of activities

1. Trial site Horsens: Energy management in a community of 20 single family houses in a village
2. Trial site Madrid: Energy management in a commercial office building

WP 2 objectives

- Enable value added services through an open FI based platform with FINESCE APIs, offering rich data on energy needs and consumption patterns.
- Promote energy efficiency via incentives from the energy market place and dynamic tariffs.

Trial 3 Cross-border Virtual Utility

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Motivations

- Combine renewable Energy production with Demand Site Management to a Virtual Utility
- Combine different volatile energy production to guarantied CO2 free certified energy

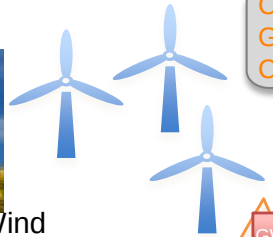
Objective

- Increase the part of renewable Energy of the consumption of electrical Energy

Scope

- Trial installation in Belgium and Germany
- ~10 Renewable energy sources
- ~1 Demand Site

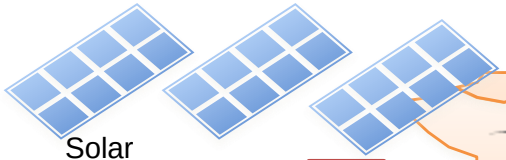
Wind



GW

Connectivity Management
GE
Connectivity Manager

Virtual Power Plant
Control



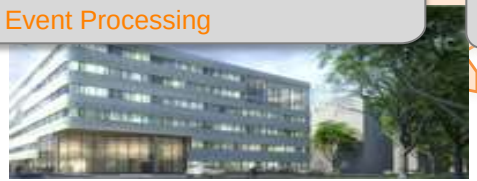
Solar

GW

Bio Mass

GW

Smart Energy Solution
GE:
Complex Event Processing



TSO

Trial 4 Energy Marketplace in Terni, Italy

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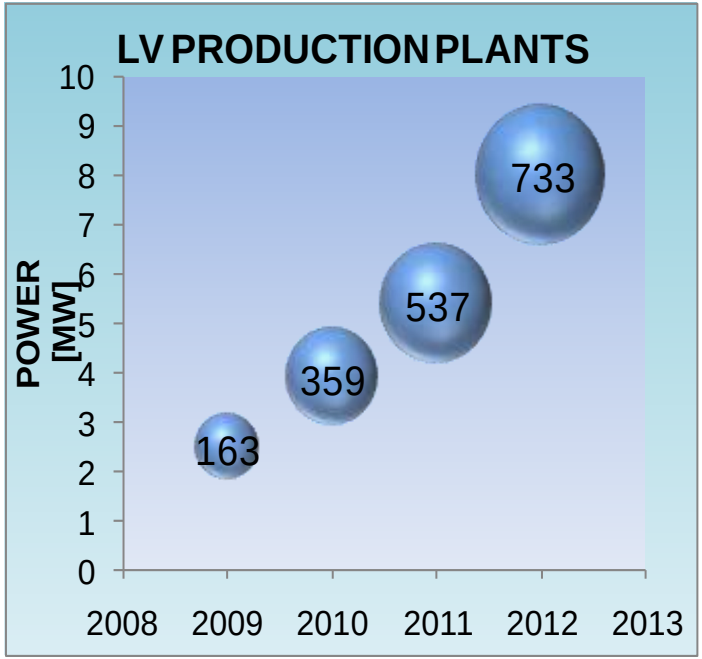
- Trial site: Terni (Italy)



Trial 5: Power management in Ireland

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Objectives:

- eCar batteries as interruptible loads to balance the power grid
- Substation communication for power management
- Simulation at RWTH to scale up results

Utility 4.0

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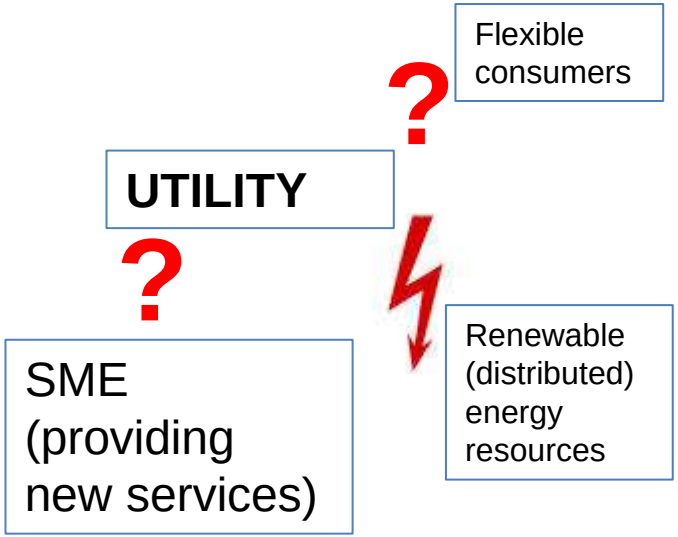
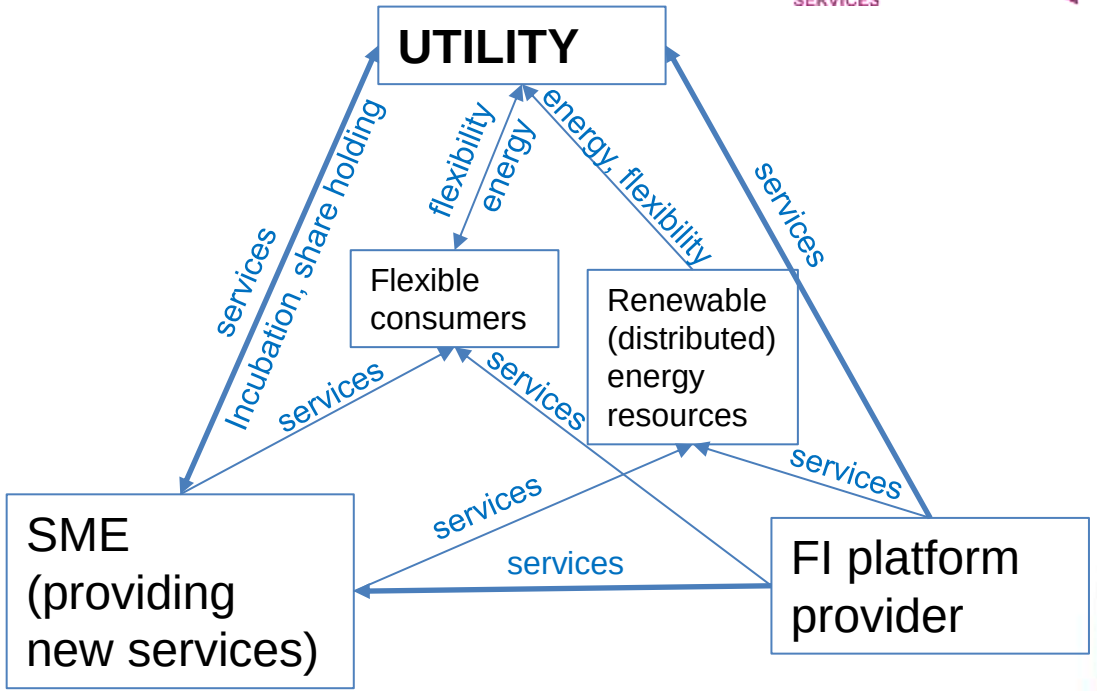
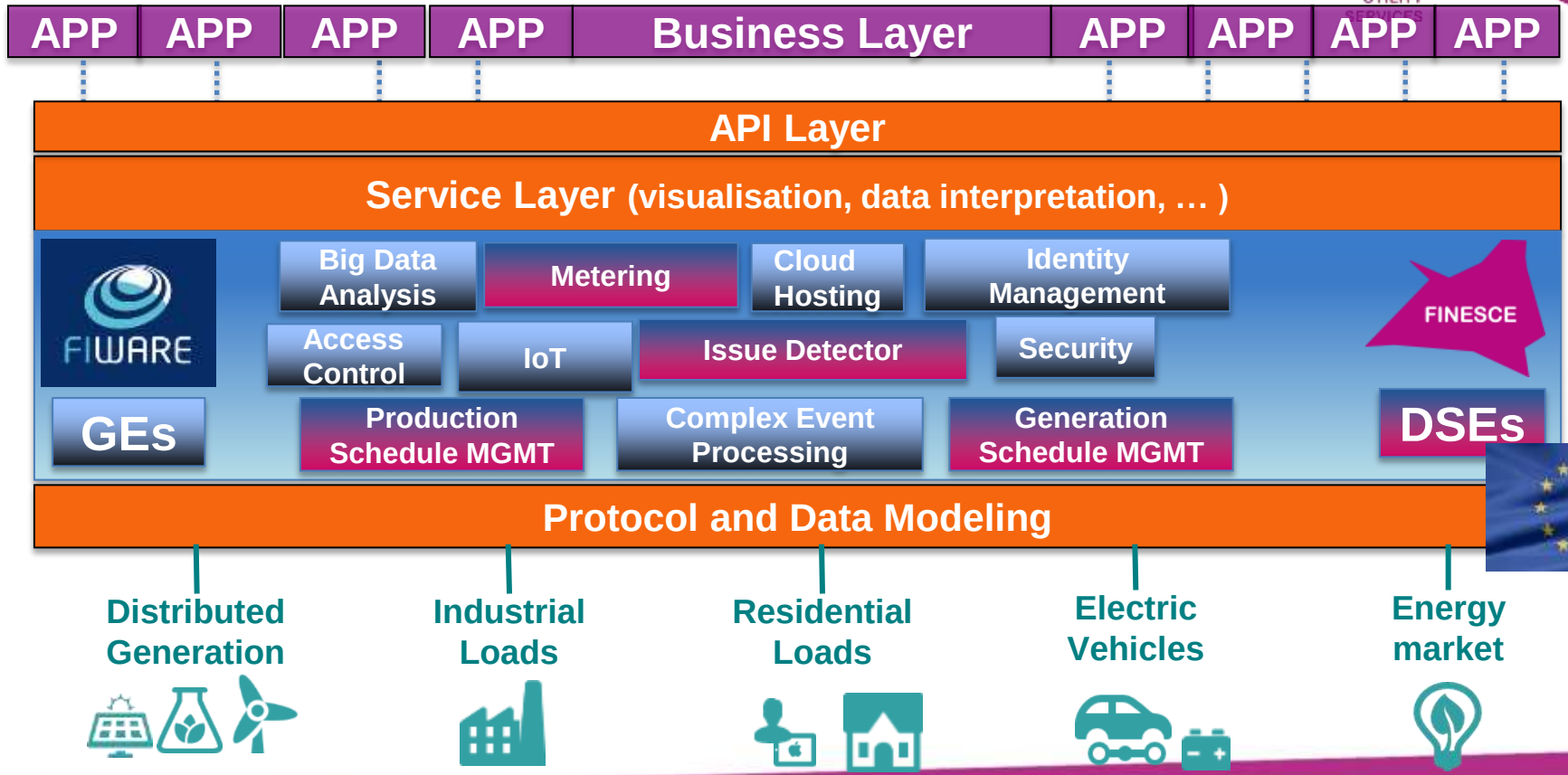




FINESCE Smart Energy Platform



Handover FINESCE -> FEN

"Forschungscampus
Flexible Elektrische Netze"

RWTH AACHEN UNIVERSITY

"Future Internet PPP"

FEN GmbH
(15 years contract, industry-driven)

FIWARE Lab

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- **Utilities**
- **Engineering Companies**
- **ICT Companies**
- **Smart Energy Service Providers**
- **Research institutes**
- **Start-ups**

FEN User Community

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APP

(API)

FIWARE

External System Interfaces

Infrastructure

User Community

Development & Test | **Events** | **Workgroups**

Applications

(API)

FIWARE

External System Interfaces

Device

Services

Helpdesk | **FIWARE Support** | **Training** | **Community Management** | **Event Management** | **EU Office** | **Marketing**

FINESCE final event

FUTURE INTERNET SMART UTILITY SERVICES

- When: 15.-16.Sept 2014
- Where: Berlin
- Working title: **Utility 4.0**

- Scope: Collaboration of Smart Energy Platforms (FINESCE, Deutsche Telekom, Bosch, MVV)

- New utility business models based on the Smart Energy Platform
- Collaboration with International (ISGAN)