



Cloud Infrastructures for Smart Scenarios
IOT/Cloud - EU-Japan Symposium on New Generation Networks
and FutureInternet
Tokio

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- ▶ Annual revenues of €8,7 billion (pro-forma 2010)
- ▶ Over 78,500 business technologists worldwide in 42 countries
- ▶ Atos was established on 2011, following the successful integration of Atos Origin and Siemens IT Solutions and Services



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Technological Development**

- ▶ Atos R&D&I hub
- ▶ Source of innovative assets and ideas to be used by the company's sales and technical staff
- ▶ Combination of advanced technological developments with commercial exploitation of project outcomes
- ▶ Coordination of international partnerships

Smart Cities. Atos dimensions and projects



SMART LIVING

Leisure, Media, Tourism, Efficient Consumption

SMART WORKING

Business Innovation & Competitiveness

SMART CONSUMING

Energy, Food, Environment

SMART MOVING

Transport, Logistic, Mobility

SMART GOVERNANCE

City Services, Participation & Co-creation, Safety, Open Data

Cloud/IoT complex scenarios: Smart Stadium

Basic Information

This is a research initiative aimed at building:

- A secure infrastructure for the stadium
- A media framework
- A business ecosystem built upon the football club momentum

...which in turn covers the whole set of Future Internet technology pillars:

- Internet of Things
- Internet of Networks
- Internet of Contents
- Internet of People
- Internet of Services
- Secure Internet



MATERIALIZING SMART SCENARIOS

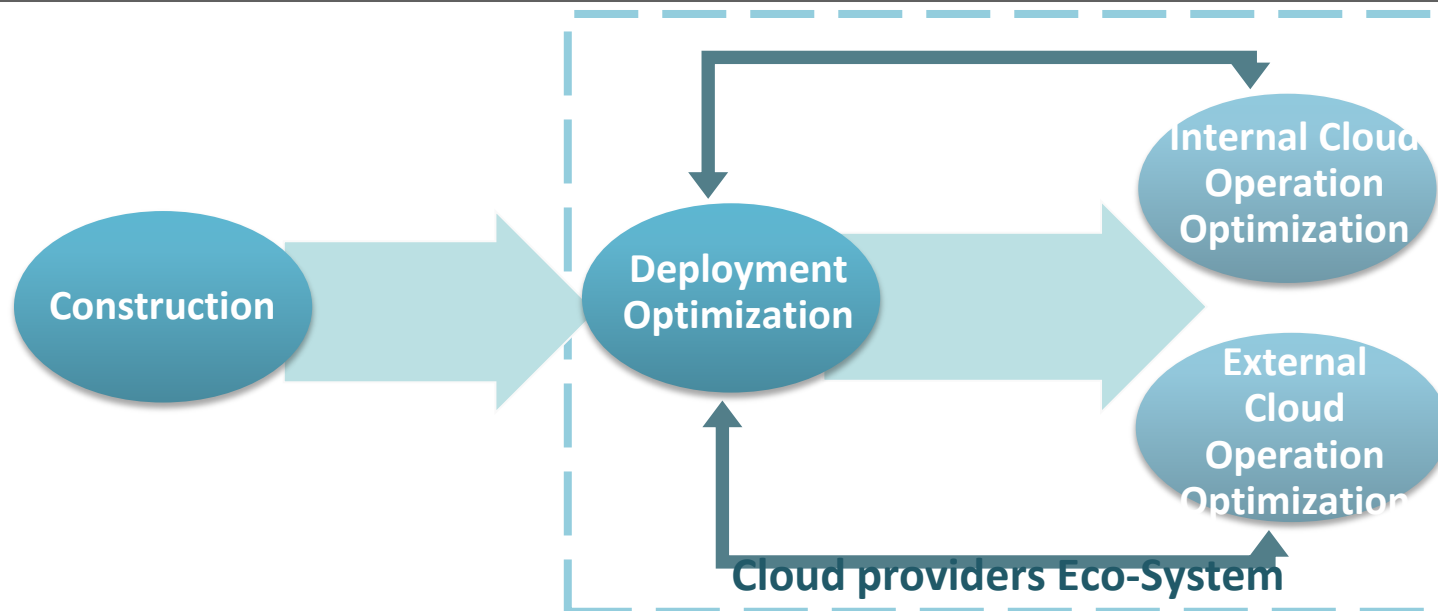
OPTIMIS PROJECT



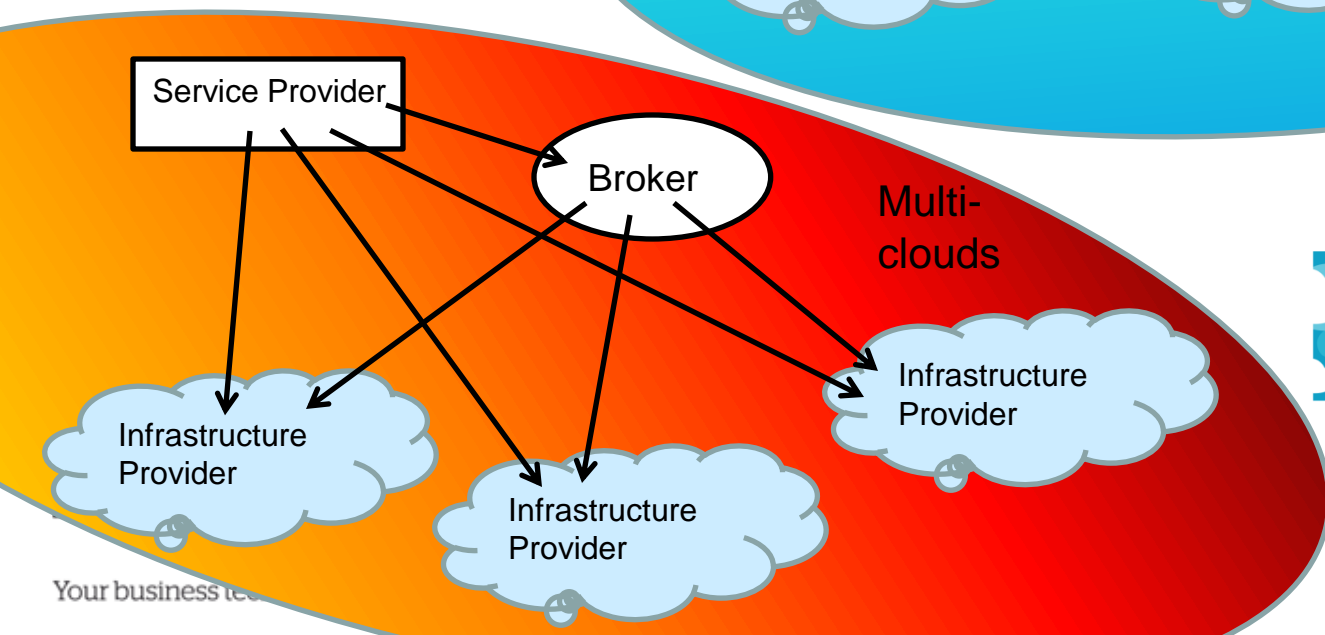
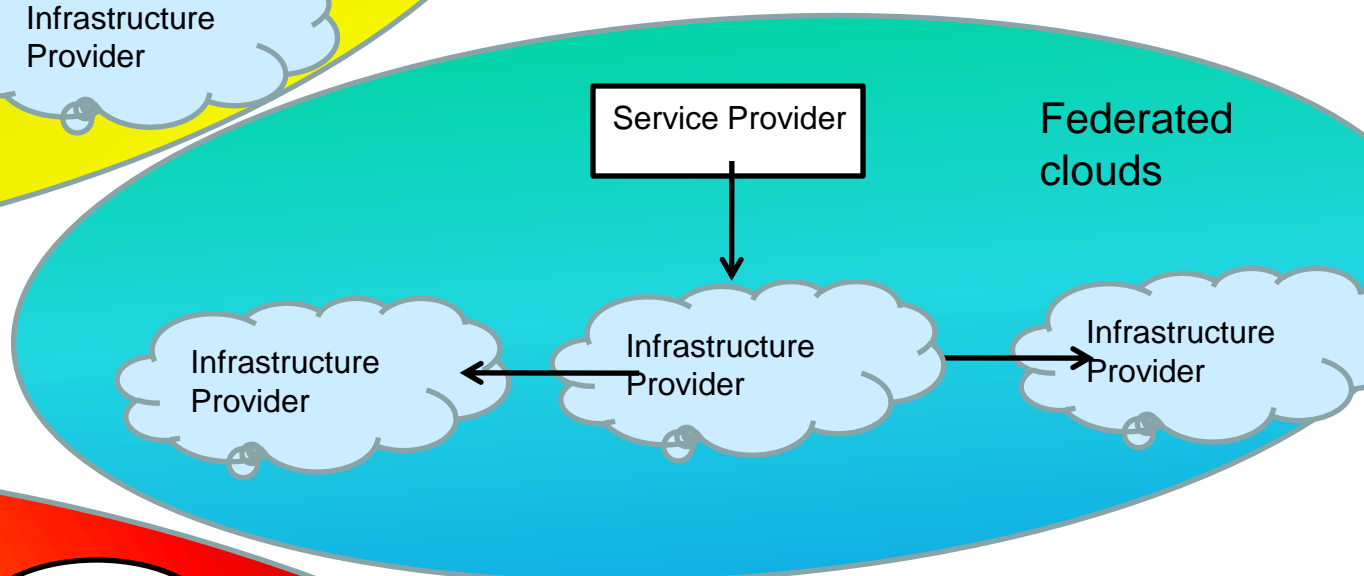
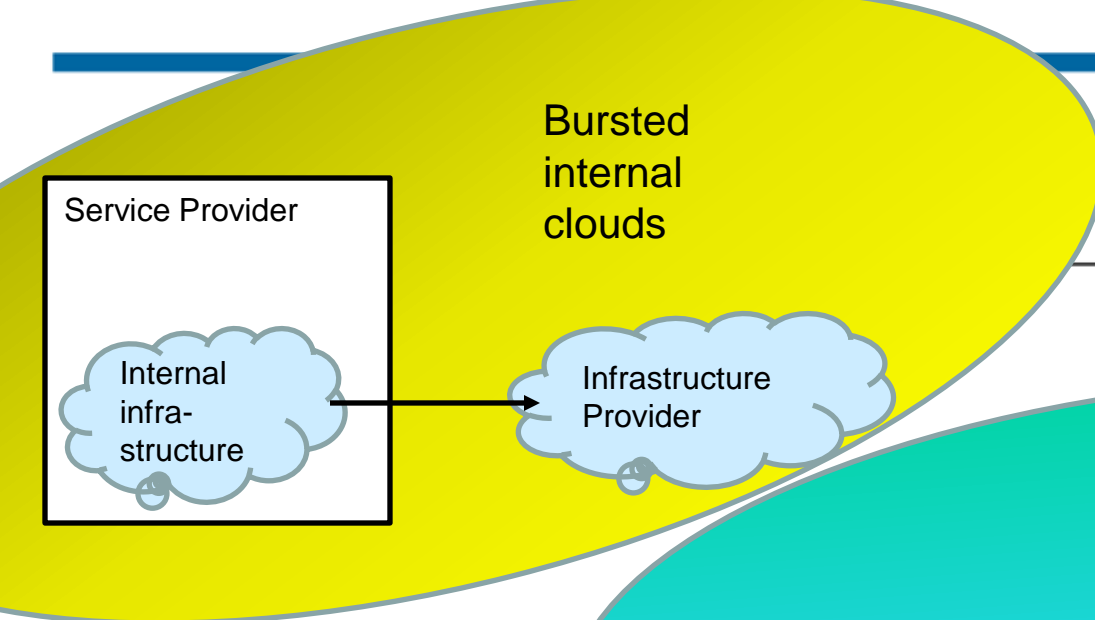
Optimis

OPTIMIS aims at a market where providers are fungible, transparent and compliant, and consumers can easily and efficiently use cloud functionality to their best advantage.

OPTIMIS addresses the **scenario of 2013+** where most companies use private and public clouds in combination



Optimis: Basic deployment scenarios



Source: FP7 OPTIMIS project

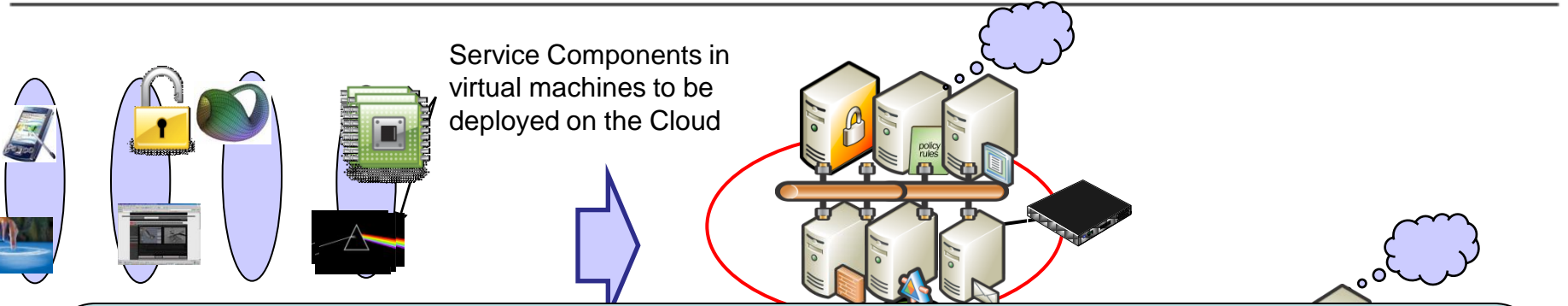
MATERIALIZING SMART SCENARIOS

BonFIRE Project

Testing experiments selected in open calls

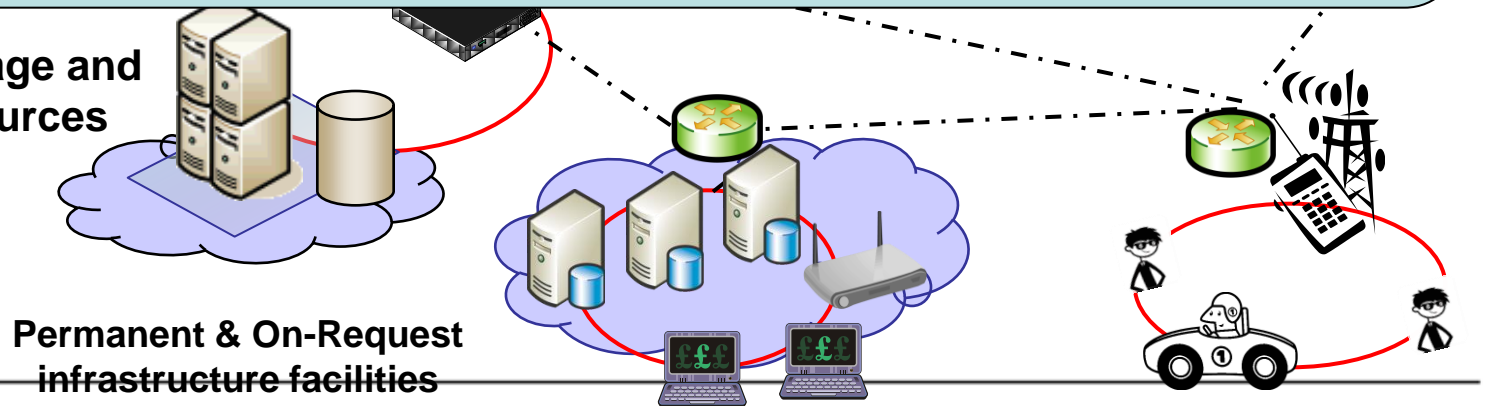
BonFIRE
Building service
testbeds on FIRE

Service Components in virtual machines to be deployed on the Cloud



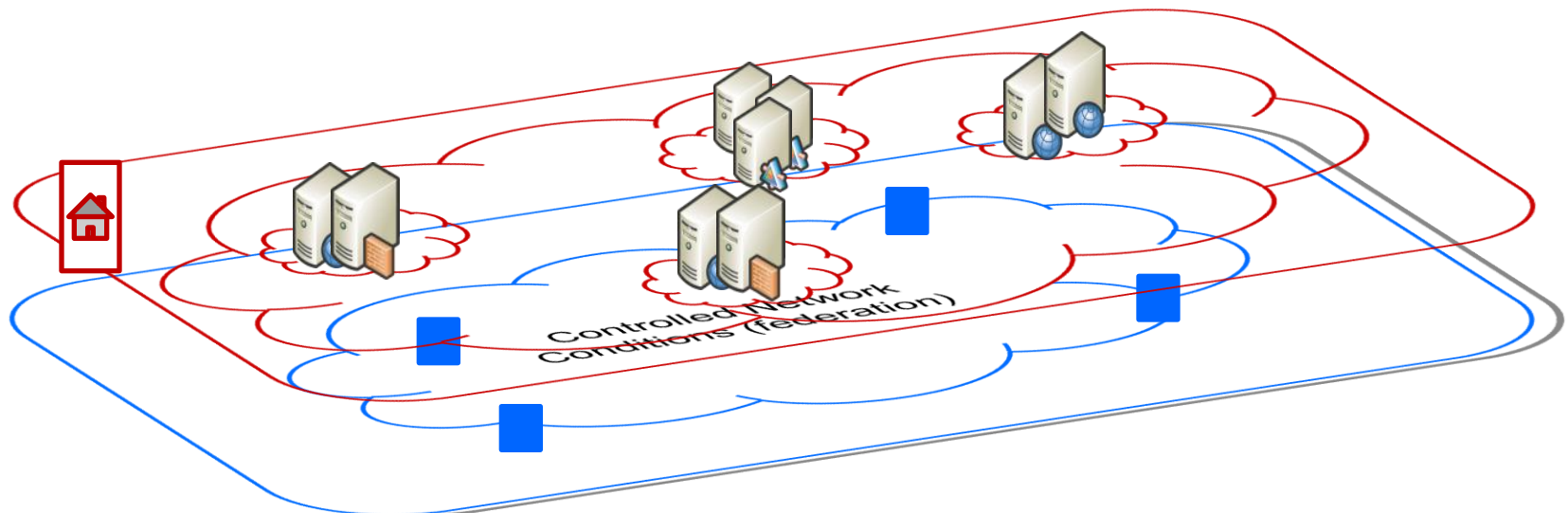
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- The **BonFIRE** (*Building service testbeds for Future Internet Research and Experimentation*) project is designing, building and operating a multi-site cloud facility to support research across applications, services and systems targeting services research community on Future Internet.

- Compute, storage and networking resources

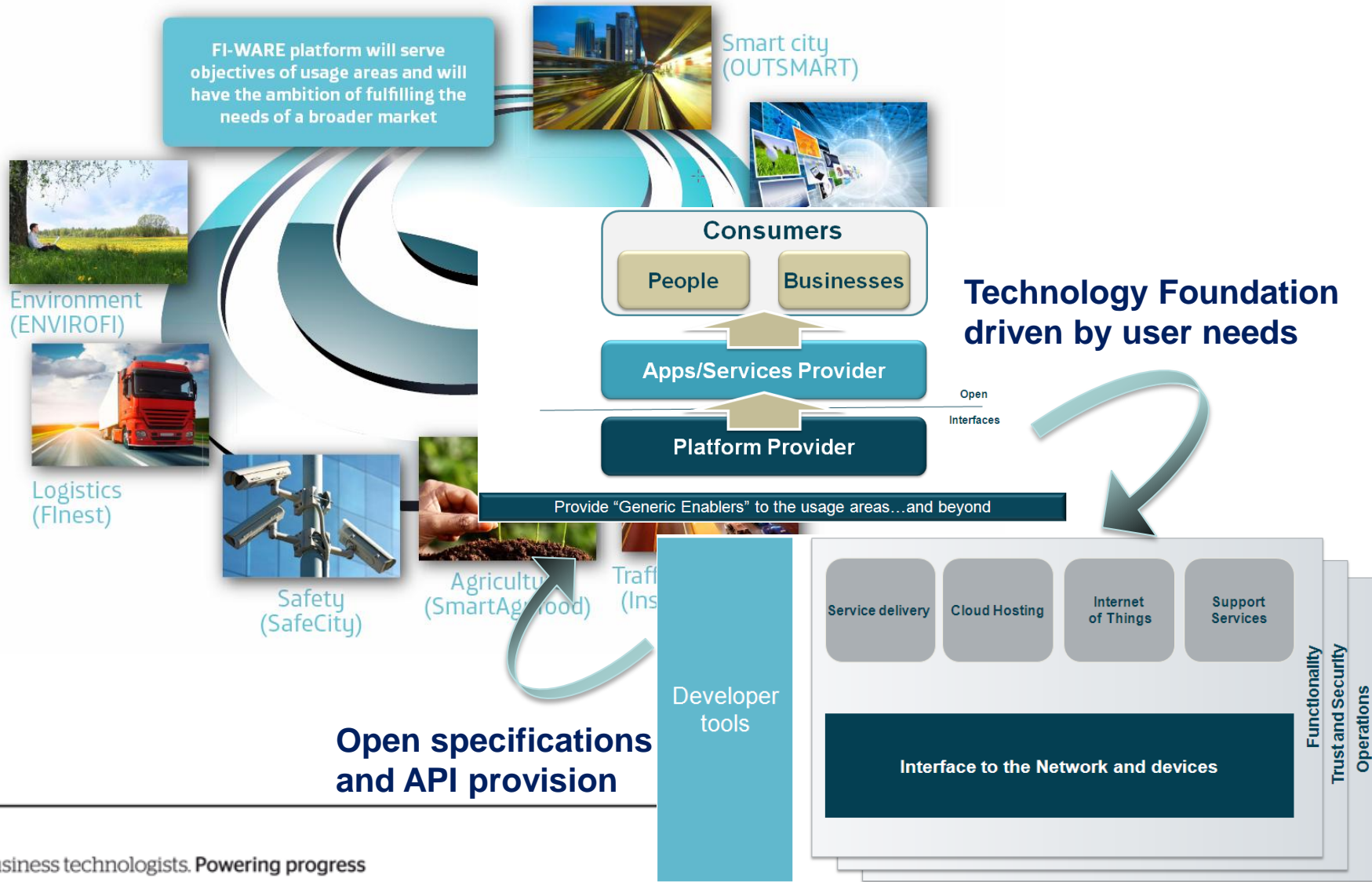


Bonfire Scenarios

1. Extended multi-site clouds connected through normal internet
2. Cloud scenario with emulated network
3. Extended Cloud scenario with controlled network (implies *federation* with network facility)



MATERIALIZING SMART SCENARIOS FIWARE PROJECT



MATERIALIZING COMPLEX CLOUD/IoT SCENARIOS

OTHER CLOUD CHALLENGES ON ARI RESEARCH AGENDA

- ▶ Better integration of IoT (sensors, devices, etc) capturing reality in management of IoS/Cloud infrastructures.
- ▶ Interoperability, portability and security in hybrid multi-clouds
 - Open Cloud Interfaces to alleviate the lock-in problem
- ▶ Certification, reputation and legal aspects in Cloud ecosystems.
 - Continuous revision and harmonization of legal directives: EMEA, ASPAC, etc.
- ▶ Network convergence in Cloud management :NaaS
 - Interface Cloud-to-Network
- ▶ Eco-efficiency in Cloud deployed application life-cycle

Thank you

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