ARCADIA

A novel reconfigurable by design highly distributed applications development paradigm over programmable infrastructure
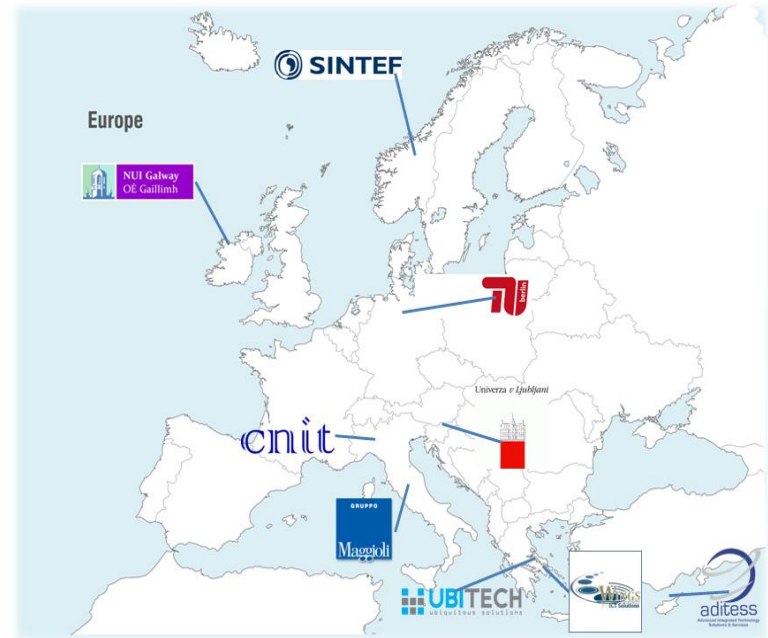
PROJECT OVERVIEW

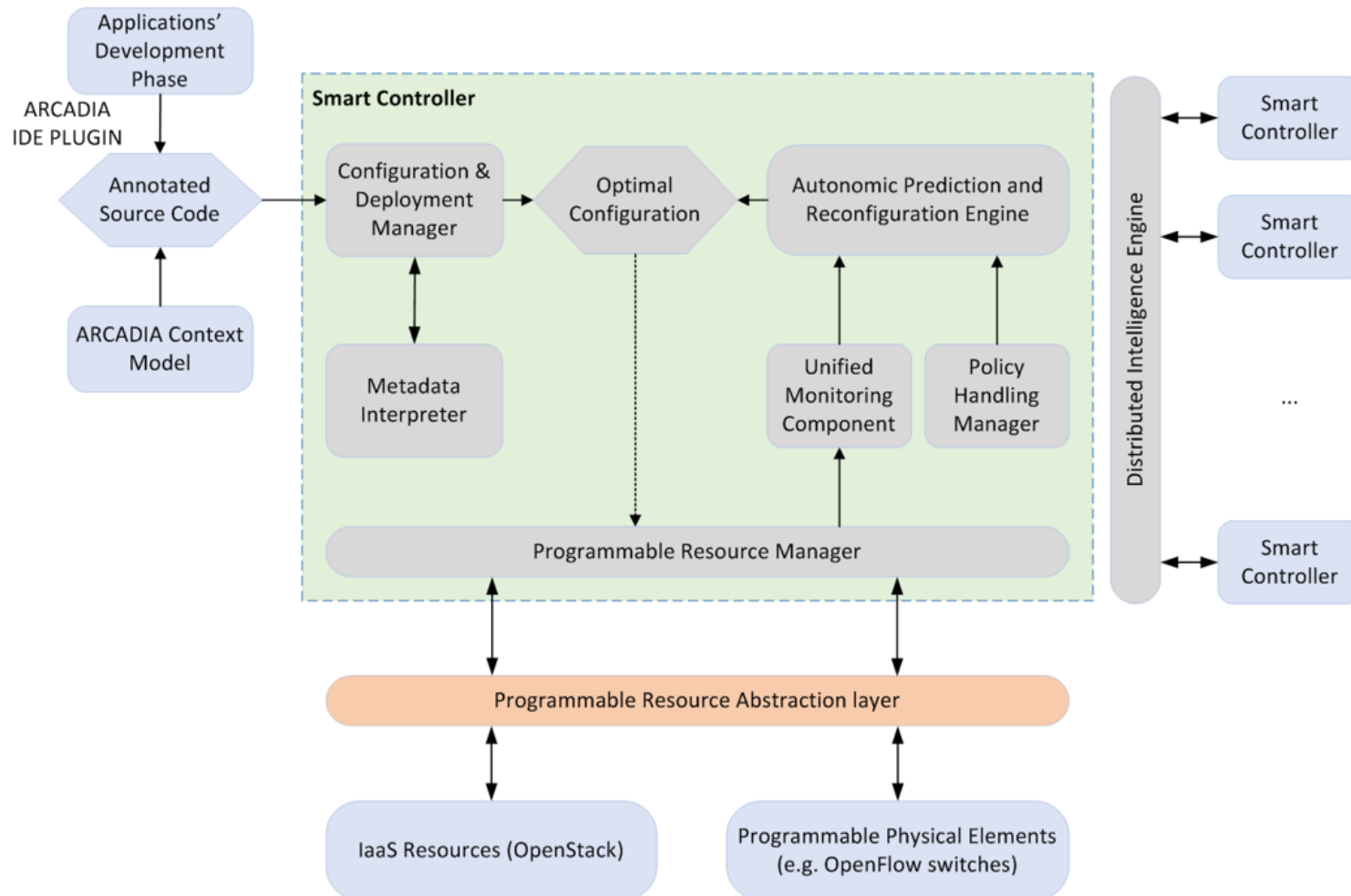19-Dec-16

The Project in Numbers

- 9 partners
- 7 countries
- 36 months
- Started in January 2015
- 6 work packages
- 19 deliverables
- 3,543,864 Euros of EU funding
- More information www.arcadia-framework.eu

Architecture

Objectives

Within in the framework of the project the consortium shall tackle the following objectives:

- **Objective I**: to leverage the re-configurability aspects of highly distributed applications, incorporating technological and business requirements coming from the industry, the research community, the software development enterprises and application users into a flexible and scalable framework for developing and deploying highly distributed applications over programmable and re-configurable infrastructure.

- **Objective II**: to facilitate the design of highly distributed applications over programmable infrastructure, by designing and incorporating a sophisticated Context Model that will conceptualize dynamic configuration and programmable aspects of underlying resources that are required by HDAs along with the associated IDE plugin that will assist Developers use the Context-Model in a "proper" way.

- **Objective III**: to facilitate the development, deployment and dynamic configuration of highly distributed applications over programmable infrastructure based on the conceptualization and instantiation of a Reference Framework.

- **Objective IV**: to prove the applicability, usability, effectiveness and value of the ARCADIA concepts, models and mechanisms in industrial, real-life networking and computational infrastructures, services and applications, demonstrating and stress-testing the developed ARCADIA artefacts under pragmatic conditions against a predefined set of use cases.

- **Objective V**: to ensure wide communication and scientific dissemination of the innovative ARCADIA results to the research, academic, and international community as well as efficient exploitation and business planning of the ARCADIA concepts and tools to the market in order to identify end-users and potential customers.

Energy Efficiency vs. Quality of Service (QoS) trade-off Use Case

☐ We will use the DROP distributed software router for the implementation of this use case. DROP is a prototype implementation and it is available by the involved TNT lab (www.tnt-lab.unige.it) from CNIT within the framework of the ECONET project.
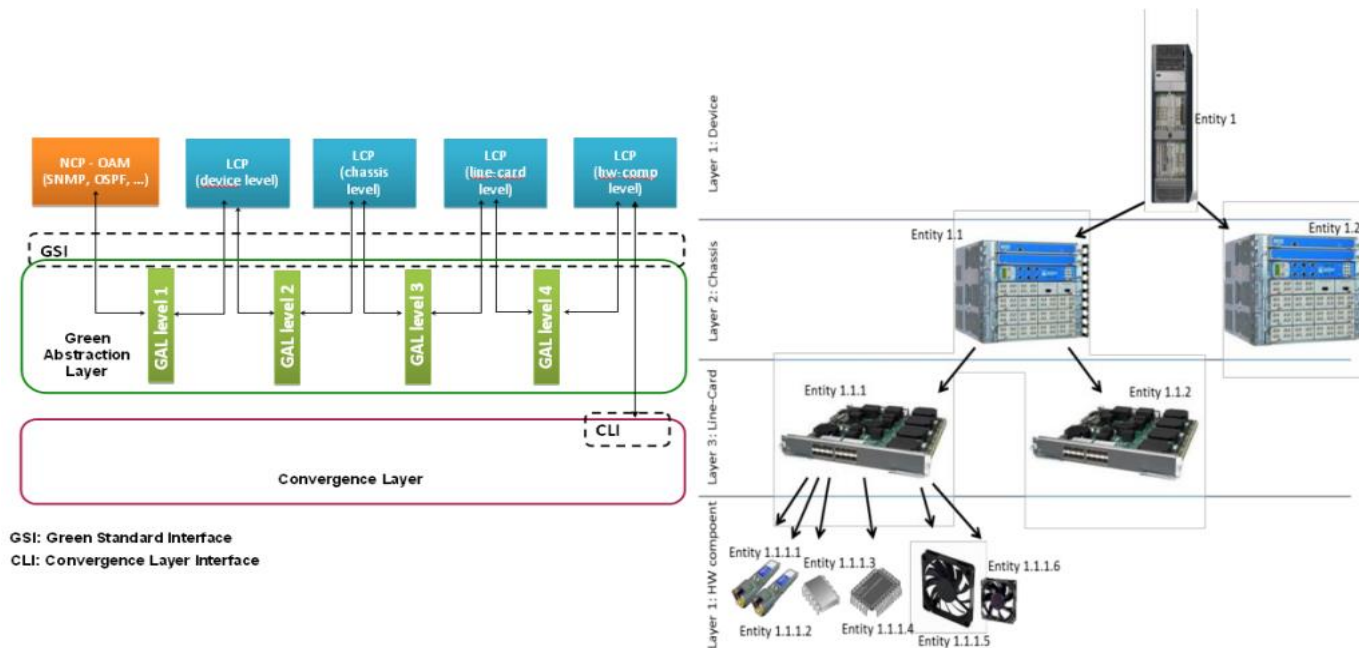
High Performance Survivable Communications in Distributed IoT Deployments Use Case

☐ The High Performance Survivable Communications in Distributed IoT Deployments Use Case is based on the implementation of the 6inACTION PPDR technology (www.6inaction.net) that will be made available to the ARCADIA project by University of L
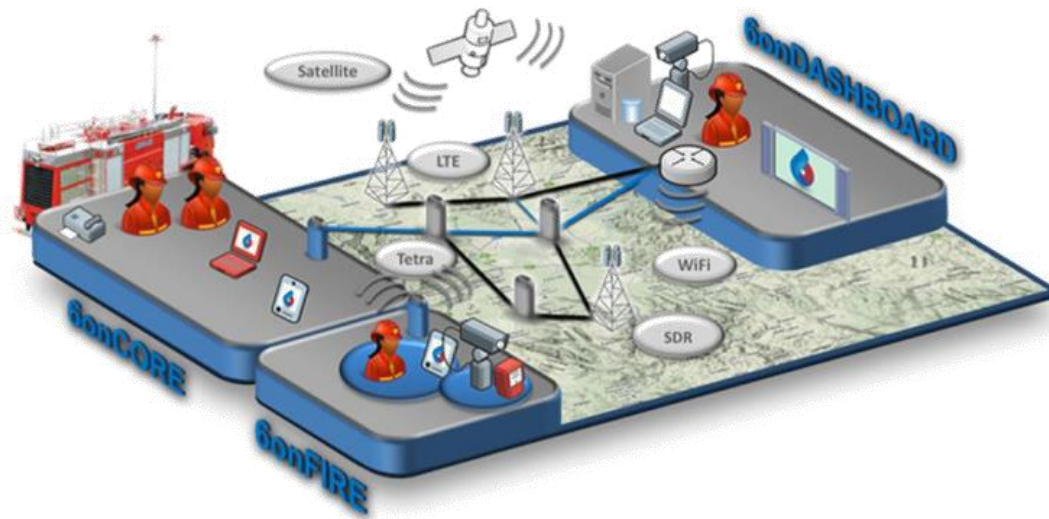
Security and Privacy Support in the FI-WARE Platform Use Case

- FI-WARE (http://www.fi-ware.org/) is an innovative, open cloud-based infrastructure for cost-effective creation and delivery of Future Internet applications and services, at a scale not seen before. This data center includes virtualized network resources and network services based on the multi-RAT and on the mobile core (EPC) testbed of Deutsche Telekom

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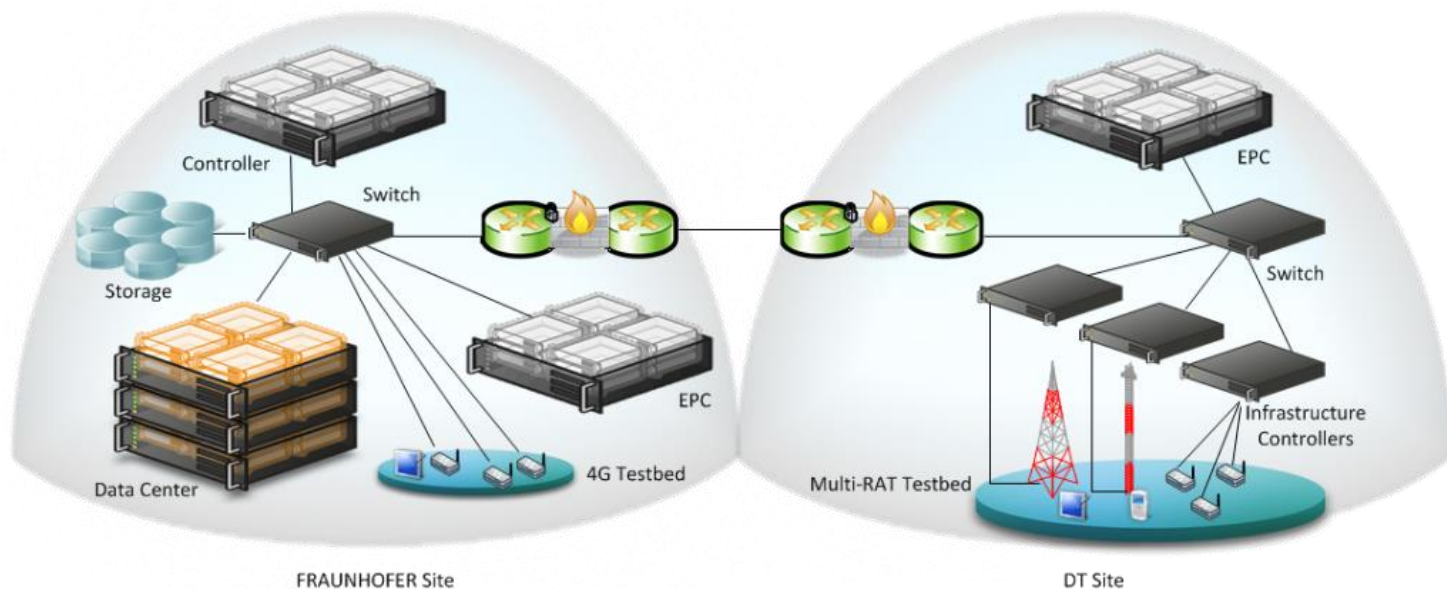
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