

# Flexible Services

Eden

## WP1 D1.3.2 Key Enablers pilot cases document

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## List of Acronyms and Abbreviations

EU	European Union
FP6	Framework Programme 6
WWI	Wireless World Initiative

### 3. Executive summary

The WP objectives according to the project plan are;

Identification of key service management aspects in FSE environment including runtime monitoring, provisioning, deploying, orchestration, and configuring services. Distributed service and component installation, configuration, and reconfiguration are crucial research items in this work package. Key enabling components will be experimented as pilot cases. Experimenting and piloting will exploit available test beds from project partners.

This document lists the pilots for the use cases defined by the associated projects. Key technology components and enablers are listed and mapped to the pilot cases to verify that the pilot cases has enough coverage.

The results of the pilots will be aggregated and analysed with respect to their suitability and completeness to act as part of the ecosystem. The key enablers must not only provide for a certain service but also be a natural fit into the set of chosen enablers. The analysis results will in turn be used as input as the reference architecture evolves.

### 4. Architecture components

#### 4.1. *Key components*

The FSE Architecture Document, [FSECO], outlines the following key components of the ecosystem

- Security
  - Confidentiality
  - Integrity
  - Availability
  - Authentication
  - Authorization
  - Access Control
  - Non-repudiation
  - Accountability
- Service provisioning
- Discovery
- Management

In the listed pilot cases, all of the key components and enablers should be verified and tested. The purpose with the pilot cases is to validate that the chosen technical enablers suite the purpose and bring added value to the architecture and ecosystem.

[FSEUC] lists the common architectural enablers;

- Identity management
- Media and Content Management
- Service and Process Lifecycle Management
- Context Awareness
- Payment

The pilot cases should cover these aspects of the architecture and validate that the chosen technology enabler satisfies the needs of the enablers.

## **5. Pilot cases**

This list is a summary of pilots cases defined by the projects within Flexible Service program. Each pilot case is described in more detail in the project specific project plan or case document.

Each pilot case should test various aspects of the architecture and in some cases the listed pilot cases overlap.

### **5.1. *Lucre Wedding pilot***

#### **5.1.1. Description and purpose**

The purpose with the pilot is to create an environment for everyday services. Wedding service will be used to trial the components, as it uses a rich set of interactions and sub-services.

Used technical enablers;

- Microsoft Popfly (MP)
- Yahoo Pipes! (YP)
- IBM Mashup Center (IMC)
- Google Mashup Editor (GME)
- Serena Mashup Composer (SMC)
- Intel MashMaker (IMM)

#### **5.1.2. Piloted enablers and components**

- Authentication.
- Authorisation and access right management.
- User management.
- Media management.

- Context-awareness.
- Planning and scheduling.
- Coordination and execution.
- Service monitoring.
- Recommender systems.
- Service composition.

## **5.2. *EnviTori Air Quality***

### **5.2.1. Description and purpose**

The purpose of the pilot case is to develop and deploy a market place for monitoring air quality.

Used technical enablers;

- Helsinki Testbed
- user observation database and air quality prediction model (by FMI)
- data source by SYKE (water quality, water temperature, algae data)
- Zircle platform (Elisa)
- Hubi platform (VTT)
- Google Earth

### **5.2.2. Piloted enablers and components**

- Adaptation; client adaptation, UI adaptation
- Security; trust, privacy, AAA
- Information; validity, access to, metadata, presence, context awareness, IPR
- Service; dynamic agreement, service descriptions/discovery/integration, recommender, management
- Compensation; payment broker, virtual currency, compensation to user

## **5.3. *UDOI Augmented Reality***

### **5.3.1. Description and purpose**

Integrating real world with virtual world, i.e. applications have contextual information about the surrounding world as experienced by the user.

Used technical enablers;

- Positioning (GPS)
- Sensor data (Embedded motion detection)

### **5.3.2. Piloted enablers and components**

- Location services, both indoors and outdoors
- Sensors for 3D modelling and positioning
- Adaptation of information to presented on various terminals
- Advanced embedded audio-visual solutions
- Content management
- Information metadata
- Widgets for service creation

## **5.4. *MoFS Mobile ticketing***

### **5.4.1. Description and purpose**

A target of mobile ticketing work package is to develop mobile ticketing application for NFC capable mobile phones that will be later trialed in selected cities. In this pilot scenario, the user buys a ticket to a transportation of choice. For a more detailed description, see [MOFSTICK].

Used technical enablers;

- NFC capable mobile phones
- Etuile! service (Tieto); a web service for travel ticket management.

### **5.4.2. Piloted enablers and components**

- Authentication.
- Authorization.
- Security and trust.
- Data validation.
- Service monitoring.

## **5.5. *Eden WP3 Xforms portal***

### **5.5.1. Description and purpose**

The purpose of the pilot is create a portal based on XformsDB. The portal enables self-contained components to be developed for the portal. XformsDB wil provide mechanisms for identity management.

Used technical enablers:

- OpenID
- Publish/Subscribe
- XML

### **5.5.2. Piloted enablers and components**

- Authentication
- Authorization
- Trust
- Information sharing
- Context awareness

## **6. Conclusion**

The pilots covers the key enablers according to the following list;

	Lucre Wedding	Envitori Air Quality	UDOI Augmented Reality	MoFS Mobile Ticketing	Xforms Portal
Key components					
Access Control	X	X	X	X	X
Accountability					
Accounting		X		X	
Authentication	X	X	X	X	X
Authorization	X	X	X	X	X
Availability		X		X	
Compensation		X			
Confidentiality					
Content Adaptation		X	X		X
Context awareness	X	X	X	X	X
Coordination	X				
Data validation		X		X	
Discovery		X			
Execution	X				
Information Management		X	X		X
Integrity					
Media and Content Management	X	X	X		X
Metadata Management		X	X		
Micro/Macro payment		X	X	X	
Non-repudiation					
Planning	X				
Positioning		X	X		
Privacy		X		X	
Recommender Systems	X	X			
Scheduling	X				
Sensor Data		X	X	X	
Service Composition	X				
Service Management		X	X		
Service Monitoring	X				
Service Provisioning					
Trust		X		X	X
User Management	X			X	
Web-based Payments		X	X		

Table 1: Enabler matrix

## **7. Next steps**

Piloting the various technologies is an iterative process and refinements in the list of used technologies need to be done continuously throughout the project. Also, emerging technologies need to be evaluated to find synergies with the ecosystem.

## **8. References**

[FSECO] Flexible Services Ecosystem Architecture

[FSEUC] FSE Use Case and Architectural Enabler Analysis

[MOFSTICK] Mobile ticketing application UI design document, MoFS WP4