

SYSTEM-OF-SYSTEMS THAT ACT **LOCALLY** FOR OPTIMIZING **GLOBALLY**

EU FP7 - SMALL/MEDIUM-SCALE FOCUSED RESEARCH PROJECT (STREP)
FP7-ICT-2013.3.4: ADVANCED COMPUTING, EMBEDDED AND CONTROL SYSTEMS
D) FROM ANALYZING TO CONTROLLING BEHAVIOUR OF SYSTEM OF SYSTEMS (SOS)

Consortium Meeting

WP7.2: Standardization, Business Model & Exploitation

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October 9, 2014

Eibar, Spain

Local⁴Global

Contact Information

For information regarding this Project: Check the Project Web-Site: <http://local4global-fp7.eu>

Participants	
1	CERTH - Centre for Research and Technology
2	ETHZ – Eidgenössische Technische Hochschule Zürich
3	RWTH – RWTH Aachen University
4	IK4 – IK4 TEKNIKER
5	TRV – TRANSVER GmbH
6	TUC – Technical University of Crete
7	TUM – Technische Universität München

Project Acronym: Local4Global

Project Number: 611538

Project Start Date: October 2013

Duration: 3 Years

Funded by: EU FP7

Program Name:

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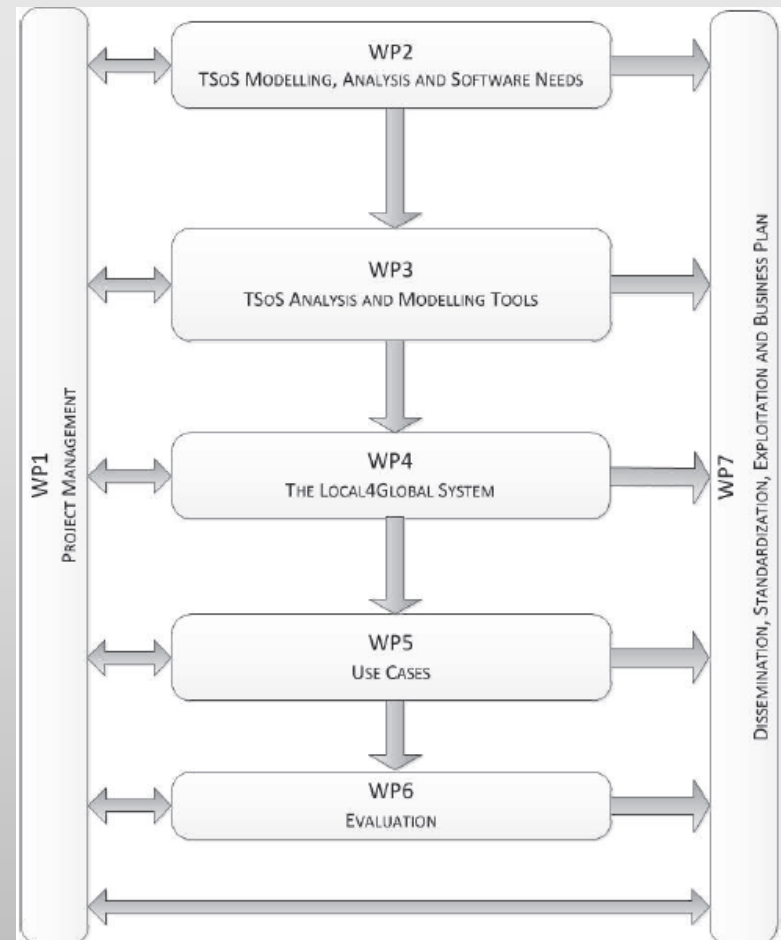
Introduction - Presentation

- Work Package 7 objective & tasks
- Standardisation
- Exploitation plan
 - Exploitable results
 - Exploitation strategy
 - IPR management
 - Market Analysis
 - Stakeholder Analysis & Target groups
 - Business Model

WP7 Dissemination, Standardization, Business Model and Exploitation

Leader: IK4 Tekniker

Main Objective: To develop a string awareness of Local4Global project at European level, with the aim to increase the impact and the exploitation opportunities

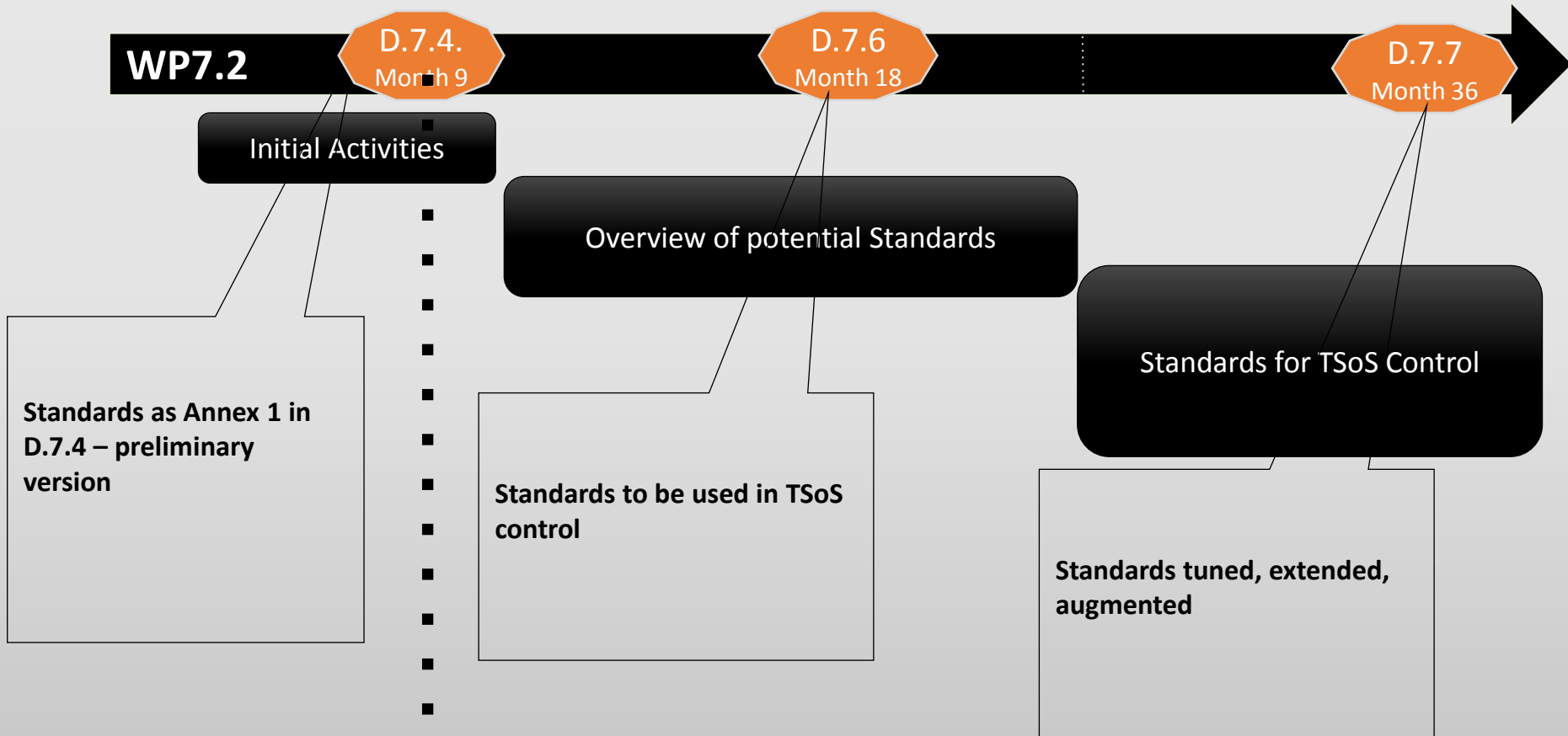


WP7 Task 2

Task 7.2: Standardization, Business Model & Exploitation (Task Leader IK4)

- Aspects relative to exploitation and commercialisation of the project results and the overall economic viability of the initiative in the mid-term. It will describe how the consortium members intend to take forward the work of Local4Global project.
- Deliverables:
 - D.7.4: Initial Exploitation Plan (M9)
 - D.7.5.1 L4G Business Models and Update of Exploitation Plan (1st version) (M18)
 - D.7.5.2 L4G Business Models and Update of Exploitation Plan (final version) (M36)
 - D.7.6. Overview of Potential Standards for TSoS Control (M18)
 - D.7.7 Standards for TSoS Control (M36)

Task 7.2.* Standardisation



WP7 Task 2 Standardisation


Task 7.2: Standardization, Business Model & Exploitation (Task Leader IK4)

Review meeting conclusions STANDARDISATION

- There is a good synopsis of the relevant standardisation initiatives **but no indication of a strategy for addressing them**. A clear plan for the strategy with regard to standardisation should be presented at the next review.

WP7 Task 2 Standardisation

- D7.6 Overview of Potential Standards for TSoS Control
 - Standards selected for Local4Global product:
 - Software specifications: UML
 - Cloud infrastructure: SOA
 - Services interoperability: HTTP, WDLS, SOAP
 - Data interoperability: XML, OWL, SensorML
 - Monitoring/controlling:
 - OPC-UA
 - BACnet
 - Modbus TCP
 - IEC 61850
 - DLMS/COSEM
 - KNX
 - M-Bus (wired)
 - eHz meters
 - CANopen
 - IEC 62056-21
 - S7 PLC protocol
 - SNMP

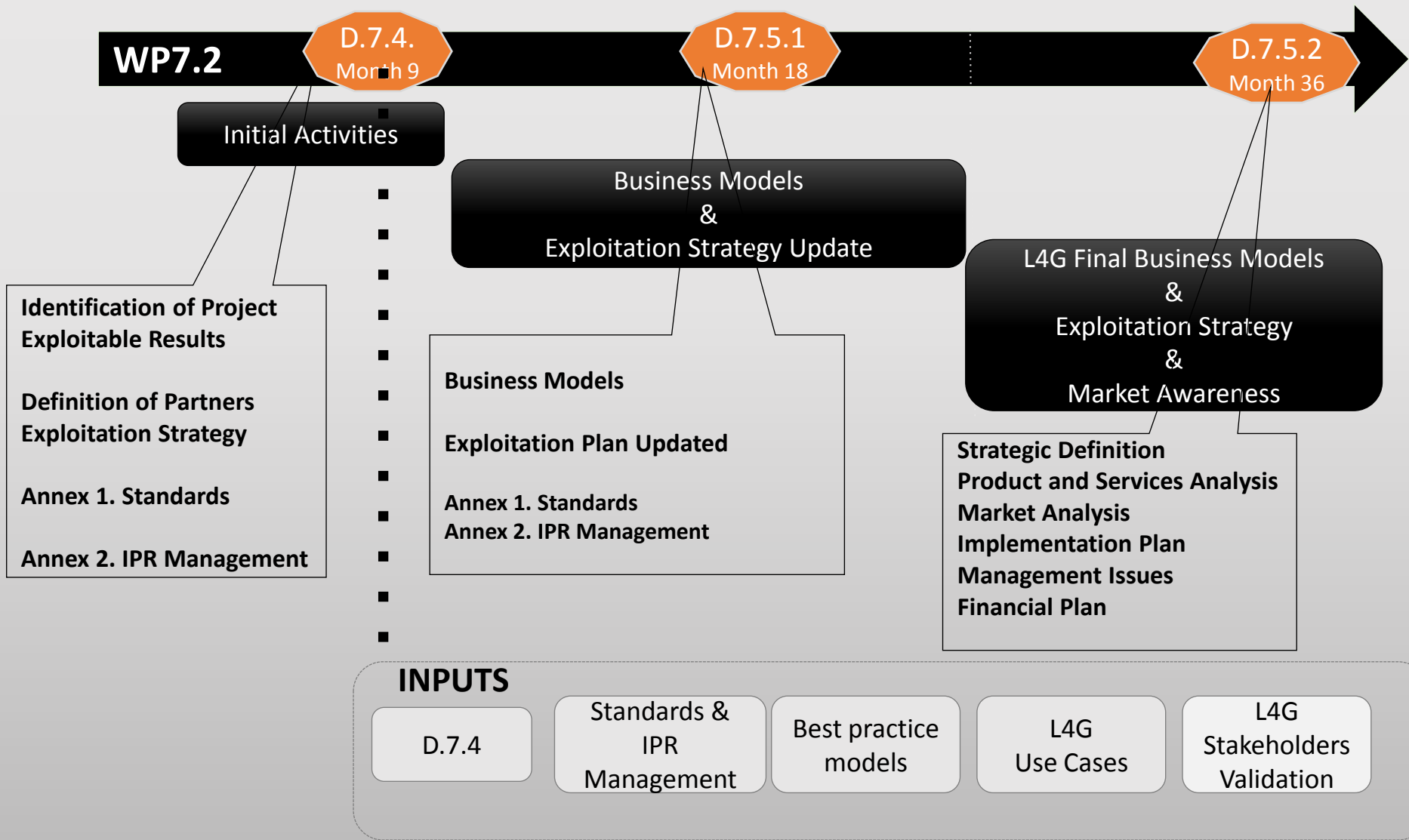


OpenMUC

WP7 Task 2 Standardisation

- D7.7 Standards for TSoS Control
 - Standards previously selected will be tuned, extended, augmented during project's lifetime so as meet requirements for TSoS locally-activated control
 - Define a **strategy** to address the extension of standards. Collaboration?
 - W3C
 - OASIS
 - Other standard organisation

Task 7.2.* Exploitation



WP7 Task 2

Task 7.2: Business Model, Standardization & Exploitation (Task Leader IK4)

Review meeting conclusions

1 st period (0 – 9 months)	FUTURE WORK
<p>The exploitation plan at present is quite generic in form and this part of the project needs <u>to be taken seriously over the next reporting period.</u></p> <p>The market needs are not yet understood and the consortium does not seem to be aware of what needs to happen to ensure that the outputs of this project deliver commercial products.</p> <p>The exploitation plan is quite vague at present and this need serious attention if the consortium is serious about exploiting the outcomes of this project</p> <p>At this stage, stakeholders are sufficiently involved but to ensure the results are exploited it is important that stakeholder engagement increases.</p>	<p>It is recommended that in the forthcoming deliverable D7.5.1:</p> <ul style="list-style-type: none">✓ An analysis be included which identifies the precise products and services to be commercialized.✓ For each of these, a survey of the competitive scenario should be presented, together with the relevant channels to market.✓ The role that each stakeholder has in achieving introduction to the market for the technology from this project should also be detailed.

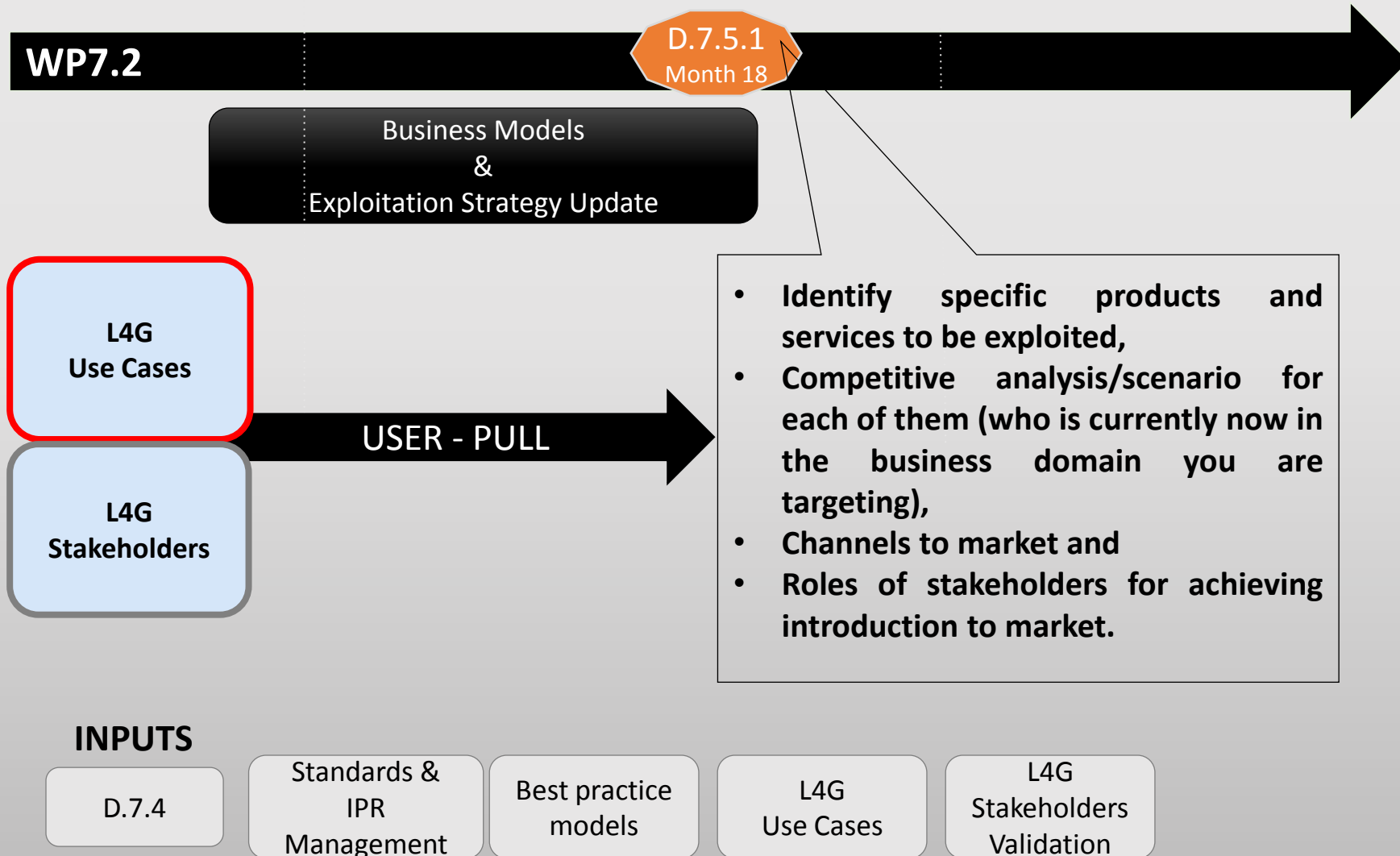
WP7 Task 2

Task 7.2: Business Model, Standardization & Exploitation (Task Leader IK4)

Review meeting conclusions

- This project has good potential impact both in the applications related to the **use cases** and in **many other SoS scenarios**.
- D7.4 Initial Exploitation Plan goes some way to setting out relevant **exploitation channels** and defines **ownership criteria for IPR**. However, there is a presiding assumption that exploitation will be driven by the results of the project (**supplier push**) and it takes no account of the desirability of allowing user business cases to shape the direction of the project and its commercializable outputs (user-pull).
- A **useful template** for **individual business plans** is provided.

Task 7.2.* D.7.5.1 Approach



Task 7.2. BM & Updated Exploitation Plans

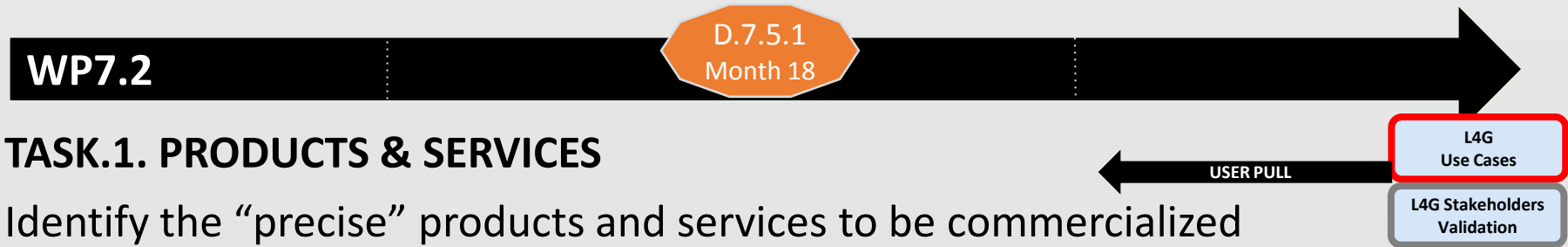
WP7.2

D.7.5.1
Month 18

TASKS

1. Identify the “precise” products and services to be commercialized and
2. Market Analysis
3. Define the Exploitation Plan x Product
4. Define the Exploitation Plan x Partner
5. Business Model x Product
6. IPR Management

Task 7.2. BM & Updated Exploitation Plans



Identified Results (D.7.4)		
Nº	Exploitable Result	PRODUCTS & SERVICES
1	Local4Global framework system SOLUTION (software + hardware)	L4G Solution for Management and Control Systems
2	Local4Global personalized to Climatic building case	L4G Solution for Climatic Building Management
3	Local4Global personalized to Traffic management case	L4G Solution for Traffic Management
4	Optimization algorithm	Optimization algorithm
5	Cloud services for embedded systems	Cloud services for embedded systems

Task 7.2. BM & Updated Exploitation Plans

WP7.2

D.7.5.1
Month 18

TASK.1. PRODUCTS & SERVICES

Identify the “precise” products and services to be commercialized

RESULTS	PRODUCTS & SERVICES
L4G Solution for Traffic Management	Traffic management software
	Applications for traffic information (e.g. smart phone-apps)
	Quality Assessment and evaluation of traffic management systems

Work to be done:

- Translate the results into products and services
- Detailed description of the products and services and commercialisation strategy

An updated version of the template will be provided to **Characterise each Exploitable Product**

Task 7.2. BM & Updated Exploitation Plans

WP7.2

D.7.5.1
Month 18

TASK.2. MARKET ANALYSIS

A Deep analysis of the market of each domain will be carried out to provide a general outline of the market size, growth forecast and competitors.

The goal is to understand the potential acceptance or rejection of the L4G products and services and to plan accordingly.

Market Analysis x Domain		
Nº	PRODUCTS & SERVICES	DOMAIN
1	L4G Solution	Smart Cities
2	L4G Solution for climatic Building Management	Climatic Building Management
3	L4G Solution for Traffic Management Software, Applications and Quality Assessment and evaluation of traffic management systems	Traffic Management
4	Optimization algorithm	Academic & Industrial
5	Cloud services for embedded systems	Academic & Industrial

Task 7.2. BM & Updated Exploitation Plans

WP7.2

D.7.5.1
Month 18

TASK.2. MARKET ANALYSIS

The survey to describe the **competitive analysis/scenario** for each domain will consider the following elements:

- ❑ Market size (current and future)
- ❑ Market growth rate
- ❑ Market profitability
- ❑ Target Groups
- ❑ Industry cost structure
- ❑ Distribution channels
- ❑ Market trends
- ❑ Roles of stakeholders for achieving introduction to market.
- ❑ Key success factors

Task 7.2. BM & Updated Exploitation Plans

WP7.2

D.7.5.1
Month 18

TASK.2. MARKET ANALYSIS

Regarding the **Stakeholder Analysis and Target Groups**, An initial identification of possible target groups addressed by Local4Global solution (possible partners, possible customers) has been carried out in D.7.4. and results are presented as follows.

- Public authorities, in particular those involved in:
 - Traffic/Transport management and information systems
 - Energy generation and distribution, operators and providers/developers of industrial management systems
- Industrial management systems sector, including developers and operators of:
 - Traffic/transport management systems,
 - Building operators and providers/developers of Building Management Systems
 - Large scale manufacturing and production plants
 - Airports and seaports
 - Internet services, computer and communication networks
 - Robotic teams
 - Water distribution
- Automation industry and system integrators
- The Civil society

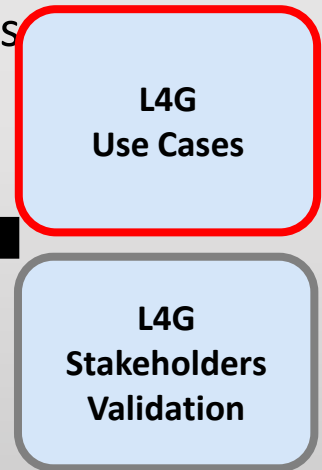
Task 7.2. BM & Updated Exploitation Plans



TASK.2. MARKET ANALYSIS

Sources for the market analysis:

- Data collection, accomplished by mining data from published sources (public domain)
- Industry partners (members of the Local4Global consortium)
- Advisory Board
- Target Groups



Work to be done:

- Based on the updated version of the products and services characterisation a **survey** will be prepared to describe the **competitive analysis/scenario**

Task 7.2. BM & Updated Exploitation Plans

WP7.2

D.7.5.1
Month 18

TASK.3. Exploitation Plan x Partner

Each partner will develop a detailed exploitation strategy and this will contain a plan on how they intend to exploit the knowledge from this project.

Work to be done

- Update the exploitation plan based on the initial Exploitation Strategy defined in D.7.4.
- Each partner defines for each exploitable results its participation to the results, and its interest for exploitation even though he has not contributed to the results
- Analysis of each partner Exploitation claims - (The intention of a partner to exploit the result by :
 - **M** : Manufacturing and selling them,
 - **U** : Using them internally to make something else for sale. U applies also to universities and research centre willing to use the result in a new research project
 - **L** : Licensing them to 3rd parties
 - **O** : Providing services such as consultancies, training, etc

Task 7.2. BM & Updated Exploitation Plans

WP7.2

D.7.5.1
Month 18

TASK.4. Exploitation Plan x Product

It has to be emphasized that as the area of TSoS is quite wide and it is probably not possible to develop an exploitation plan that covers each and every possible area where Local4Global can be exploited, different exploitation key areas will be identified (e.g., transport and traffic systems, energy systems, etc) and detailed exploitation plans for these key areas will be developed.

Work to be done:

Define a L4G Exploitation plan for each domain

Task 7.2. BM & Updated Exploitation Plans

WP7.2

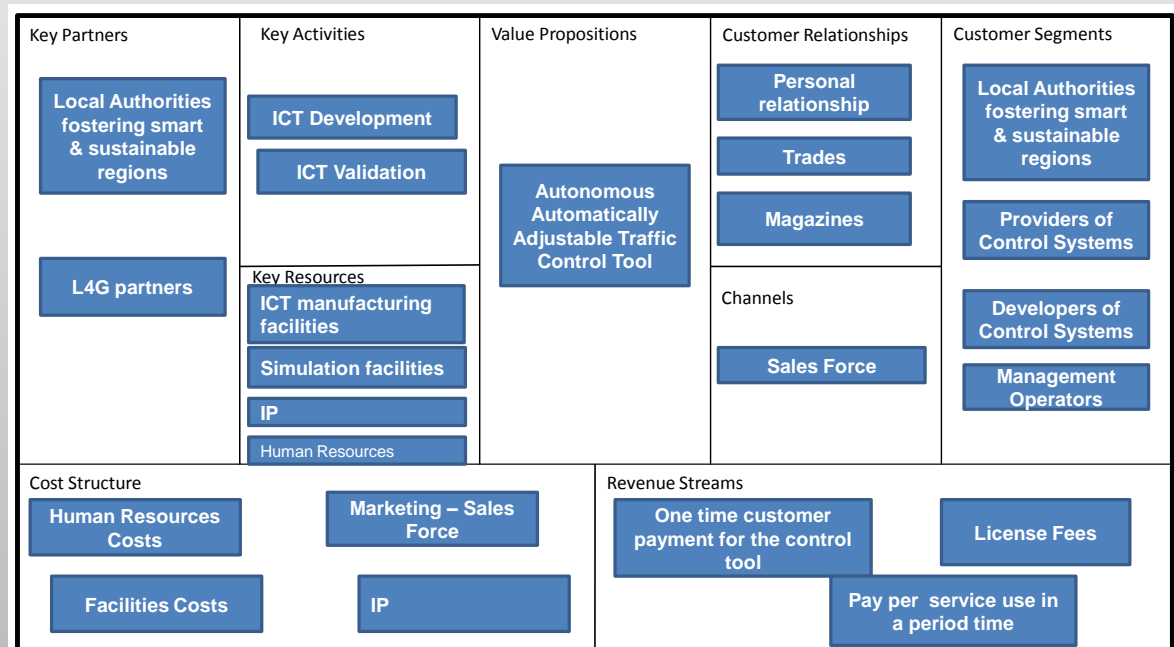
D.7.5.1
Month 18

TASK.5. Business Model x Product/ Market

The development of the business models will focus in the key areas identified by the Local4Global partners and the developed business models will be refined and finalized based on the inputs and opinions of stakeholders of these key areas.

Work to be done:

Define the BM for each domain



Task 7.2. BM & Updated Exploitation Plans

WP7.2

D.7.5.1
Month 18

TASK.6. IPR Management & Monitoring

Rules for IPR Management are defined in C.A. (D.7.4)

Work to be done:

- Collect the background knowledge and identified the foreground
- Monitor 3rd parties IPR
- “Defined IP Strategy”: Identify the most relevant areas to protect the exploitable L4G results and adopt an IPR strategy taking in consideration market aspects and partner’s preferences together with pertinent actions for non-infringement of existing patents.

Task 7.2. BM & Updated Exploitation Plans

WP7.2

D.7.5.1
Month 18

DELIVERABLE D.7.5.1 Structure

1. INTRODUCTION
 2. L4G BUSINESS MODELS
 - 2.1. PRODUCTS & SERVICES
 - 2.1.1. L4G solution
 - 2.1.2. Traffic
 - 2.1.3. Energy
 - 2.1.4. Algorithm
 - 2.1.5 Cloud Services for E.S.
 - 2.2. MARKET DOMAIN x PRODUCTS & SERVICES
 - 2.2.1. Market for L4G Solution
 - 2.2.2. Traffic
 - 2.2.3. Energy
 - 2.2.4. Algorithm
 - 2.2.5 XXXX
 - 2.3. MARKET DOMAIN Exploitation Plans (9 blocks)
 3. IPR Management
 4. CONCLUSIONS
- Annex:
- Individual Exploitation Plans
 - Exploitation Templates x Partners
 - CANVAS x DOMAIN

Task 7.2. BM & Updated Exploitation Plans

Action plan for the next period

TASK	Description	PARTICIPANTS	DEADLINE for D.7.5.1	Updated for D.7.5.2
1.	Describe the products and services and commercialisation strategy An updated version of the template will be provided to Characterise each Exploitable Product	Every partner involved	7/11/2014	YES
2.1	Define the a survey to describe the competitive analysis/scenario		7/11/2014	YES
2.2	Involve the Advisory Board & the Targets Group		7/11/2014	YES
2.3	Describe each Market Domain		15/02/2015	YES

Task 7.2. BM & Updated Exploitation Plans

Action plan for the next period

TASK	Description	PARTICIPANTS	DEADLINE for D.7.5.1	Will be Updated for D.7.5.2
3	Exploitation Plan x Partner Update the exploitation plan based on the initial Exploitation Strategy defined in D.7.4	Every Partner	31/12/2014	YES
4	Exploitation Plan x Product/ Market	Every partner involved	28/02/2015	YES
5	Business Model x Product/ Market	Every partner involved	28/02/2015	YES
6.1	Collect the background knowledge and identified the foreground and defined exploitation aims	Every partner involved	7/11/2014	
6.2	Monitor 3rd parties IPR	Every partner involved	28/02/2015	YES
6.3	Draft L4G IP Strategy	Every partner involved	28/02/2015	YES

Thank you for your attention

Itziar Alonso & Eduardo Gilabert (IK4-Tekniker)