



D8.5 - Reports on Intellectual Property Management (a)

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Contributors:	SAGEM: Caroline Senzier		
	LUTECH: Raul Arisi		
	AIT: Gerald Schimak		
	SRDC: Mert Gencturk		
	REGIONE PUGLIA: Ivana Caputo		
	INNOVA PUGLIA: Agostino Palmitessa		
	PIAP: Jan Piwinski		
REGOLA: Biagio Lanziani			
Responsible Author	Raul Arisi		Email r.arisi@lutech.it
	Beneficiary	LUTECH	Phone 0039 335 7893249

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EXECUTIVE SUMMARY

IPR activities are performed within *WP8 Dissemination, IPR, Standardization and Innovation Related Activities*. In particular, IPR activities are ruled under *Task 8.3 - Management of Innovation and Intellectual Property*: this task covers the whole duration of the project. This document covers all activities that are planned for the first reporting period (M1-M18).

It describes the IPR Report for the C2-SENSE Project, mainly dwelling upon, on the one hand, the activities in relation to IPR carried out by C2-SENSE Partners and, on the other hand, the overall C2-SENSE IPR Management Strategy, including its vision, approach to be used, rules, methodologies, choices, principles, decision, timeline and planning of next steps, also in view of post project stage. This IPR strategy, functional to strengthen project's market exploitation streams, has been conceived for representing a reference point for the successful handling of innovation and IP activities execution, able to guide and support in an effective manner the work related to IPR that needs to be undertaken within T8.3 till the end of the project. Its structure, pivoting around the above-mentioned vision, methodological approach and tools, reflects this intent.

The main content of this deliverable can be summarized as follows:

- **Section 1** is the introductory part of the document, where scope, objectives, internal and external relations are reported;
- **Section 2, 4, 5 and 6** respectively linger over the delivery date, the references, consortium contacts, definitions and acronyms;
- **Section 7** provides the IPR Reference Framework for C2-SENSE by giving an overview of the internal organization of the consortium, in order to effectively implement its IPR Management Strategy. It mainly consists of:
 - a brief description of T8.3 "Management of innovation and Intellectual Property";
 - the main points relevant for IPR Management in C2-SENSE of both the Grant Agreement and the Consortium Agreement;
 - the description of IPR Team, consisting of IPR Manager and IPR Focal Points;
 - the description of IPR Flowchart and IPR Sheet
- **Section 8** focuses on the IPR Management Strategy, and in particular on:
 - *IPR Vision and methodological approach*, including:
 - its objectives in C2-SENSE;
 - flexible, integrated and structured approach to IPR management, giving rise to an hybrid IPR system, pursuing a resource-effective management of intellectual assets, and driven by a market-driven and business-oriented underlying paradigm;
 - The description of the key points of such comprehensive strategy in the different project's stages (Proposal stage, Development stage, Post project's end stage);
 - The suite of *tools and processes* for implementing the strategy, ranging from the IPR Repository and updates, to "freedom of use" search, to the tracking models for IPR, to the model of Joint Ownership Agreement;
 - *IPR of project's results*, where both the overall project's value proposition and the summary of results and owners are depicted;
- **Section 9** describes in detail the licensing vision of the Consortium: it reflects the common approach to licensing, which also envisions the potential implications of the current obligations imposed by the main type of existing software licenses, for instance, in relation to background. Nonetheless, despite the elaboration of the common C2-SENSE policy framework for licensing, that may be

considered as a recommended default option, each of the Partners, in its role of IP owner or co-owner, preserves its own position and freedom on the concrete IPR license to adopt;

- **Section 10**, reports next steps and future plans related to IPR issues;
- **Section 11**, finally, draws the main conclusions.

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1 PURPOSE

The purpose of this deliverable is to describe the IPR Strategy, Actions and Achievements at M18 for the C2-SENSE Project.

1.1 SCOPE AND OBJECTIVES

This deliverable aims at describing in detail the activities concerning IPR Management carried out by the Partners within T8.3 “Management of Innovation and Intellectual Property” in view of maintaining a schedule of knowledge developed in the framework of C2-SENSE and assessing the opportunity for applying for patents or declaring copyrights. D8.5 is likewise directed to provide an overview and common understandings in relation to project’s IPR Policy.

D8.5 goals are therefore to establish the overall project’s IPR system underpinning C2-SENSE IPR –related work at large, also in view of the phase after project end, and to describe Partners’ down streaming activities in relation to IPR handling.

On the other hand, D8.5, as depicted in this deliverable and its next release (D8.6 “Report on Intellectual Property Management b)”) are functional to strengthen project’s market exploitation strategies, with the effect of making the exploitation of its results more convenient and industry-oriented.

1.2 RELATION TO INTERNAL C2-SENSE ENVIRONMENT

D8.5 and the work performed/to be performed under T8.3 are closely interrelated to the other tasks of WP8 “Dissemination, Exploitation, Standardization and Innovation Related Activities”, in particular to T8.1 “Exploitation”: an efficient IP and innovation management is vital for identifying and valorizing the business and market opportunities arising from C2-SENSE value proposition, thus securing to project’s consortium a competitive advantage.

In fact, by properly conceiving, planning and executing IP-related activities, successful exploitation paths may emerge and be implemented, thus strengthening the industrial or commercial application of C2-SENSE expected exploitable knowledge at the end of the project, both for the first 2 years after the end of the Project (1st Apr 2017- 31st Mar 2019) and after the first 2 years after the end of the Project (starting 1st Apr 2019). The hints relevant for the future routes for exploitation and marketing strategy, laying on IP concerns, will enhance the market power of the new knowledge produced by the C2-SENSE project -either proprietary, open source or otherwise as appropriate- consisting of methodological, technological and applicative assets, and consequently facilitate their full further utilize and uptake. In fact, the management and protection of IP is key to be able to bring new solutions faster to the market and, therefore, to create significant value. This, together with the proper organization of knowledge and innovation management throughout the project life and with the adoption of the most suitable protection, dissemination and utilization tools, will allow achieving the potential impact of C2-SENSE, as well as long-lasting sustainability of its results.

On the other hand, this document presents strong connections also with RTD (Research and Technological Development)/Innovation work-packages, where the C2-SENSE exploitable results, as preliminarily described in D8.1 “First Exploitation and Dissemination Plan a)”, are and will be originated, and particularly with:

- WP3 “Technical and Semantic Interoperability”
- WP4 “Organizational Interoperability”
- WP5 “Integration of the Research Results and Implemented Systems”
- WP6 “Conformance and Interoperability Testing Mechanisms and Certification”.

1.3 RELATION TO EXTERNAL C2-SENSE CONTEXT

This deliverable is mainly related to the major standardization groups, that are being contacted to execute the standardization of C2-SENSE profile based Emergency Interoperability Framework:

- European Committee for Standardization (CEN) eBusiness Interoperability Forum
- OGC's Emergency Response and Disaster Management Working Group
- OASIS Emergency Management Technical Committee
- OASIS Semantic Support for Electronic Business Document Interoperability Technical Committee

In fact, there is an intrinsic dependence between standardization activities and IPR management and, more in general, exploitation. As widely recognized¹, standardization:

- contributes to: "...the exploitation of funded research results, including intellectual property rights, which are integrated into standards..." and
- facilitates "...the transfer of knowledge and technology into marketable products and services; the dissemination and exploitation of research results; leveraging licensing revenues of own patents by referencing them into standards" and, more in general, especially for industry, "licensing of patents by referencing them into standards".

Similarly, it is important liaison with ETPs related or linked to the theme of the project, like, for instance, NESSI, Networked European Software and Services Initiative <http://www.nessi-europe.eu>). In fact, ETPs encourage industry participation in research and innovation and are able to boost knowledge transfer in relation to C2-SENSE results.

2 DELIVERY DATE

The Delivery Date for the present deliverable D8.5 is M18 (30th September 2015).

¹ E.g. "STAIR – An Integrated Approach for Standardization, Innovation and Research". STAIR (Standardization, Innovation and Research) is a dedicated joint working group created to provide strategic advice to the CEN and CENELEC Technical Boards on synchronizing standardization with innovation and research.

3 IPR REFERENCE FRAMEWORK

3.1 OVERVIEW

As explained in § 3.2.3. *Management of Intellectual Property* of project proposal, the C2-SENSE consortium has agreed in principle to manage the knowledge and intellectual property rights as indicated in the following subsections.

We have complied with the model contract provided by the European Commission. Primarily, the project aims to enrich and expand the state-of-art and state-of-practice crises management by using the Interoperability Profiling approach in order to foster and ease the interaction and knowledge-sharing. In order to carry out the work, the Partners will develop and share know-how and technologies in many forms, including, but not limited to, algorithms, tools, experiences and methodologies. The know-how exchanged between the Partners may include, in certain cases, *background knowledge*. The Consortium Agreement has been written in such a way that it is possible for all Partners to carry out their project work whenever it is dependent on transfer of knowledge from other Partners, whether this is *foreground or background knowledge*.

All knowledge will be managed in accordance with both the Grant Agreement and the additional Consortium Agreement signed by all consortium members: here below the main points from both documents are reflected.

In addition to that, it's necessary to define:

- *IPR Team (IT)*
- *IPR Flowchart (IF)*

It is also necessary to properly create the *IPR Sheets* and a larger and more comprehensive Consolidated IPR Sheet, where we can find:

- *Background Knowledge*: Reusable and non-reusable pre-existing know-how declared in CA - *Annex 1*.
- *Background*: Reusable and non-reusable pre-existing know-how NOT previously declared in CA - *Annex 1*, but declared into *WP2 – D2.1 – State of the art*
- *Foreground*: INNOVATIVE project knowledge/results/outcomes/know-how.

3.2 T8.3 “MANAGEMENT OF INNOVATION AND INTELLECTUAL PROPERTY”: MAIN POINTS

WP8 focuses on the careful handling of IPR issues in C2-SENSE project, that are of strategic importance in order to facilitate the exploitation of its solutions.

T8.3 “Management of Innovation and Intellectual Property” key content is as follows:

- it is necessary to:
 - o maintain a schedule of innovation produced during the project and assess the opportunity for applying for patents or declaring copyrights;
 - o create a living IPR management database during the execution of the project, that, starting from the initial list of reusable and non-reusable pre-existing know-how (background knowledge), has to be updated with new pre-existing know-how (background) and knowledge (foreground) contributions as project development advances;
 - o conceive an optimal patent search and filing strategy;
- description of the innovative elements of the work performed in the Technological R&D;
- reporting to the Project Executive Board and to the Technology R&D teams about the “innovation” status and proposing registration of patents;
- decision upon the treatment of the identified innovative asset, depending on the decision of the Project Executive Board and of the involved Technology R&D teams, with mainly three options:
 - o Dissemination without registration as a patent
 - o Registration as a patent by the Consortium member which has developed the innovation
 - o Registered as a patent by the WP2 Leader on behalf of the Consortium for joint innovations

§ 3.2.3 of the project proposal integrates these characterization by briefly describing the main principles agreed upon by the Partners regarding the management of knowledge and IPRs in accordance with the Grant Agreement and Consortium agreement. These documents include description of a number of issues, and above all: access rights to background knowledge and related background lists, transfer of knowledge (both foreground and background knowledge) necessary to carry out Partners’ own project work, the need-to-know or need-to-use limits to access rights, scientific publications pursued by commercial Partners, ownership of the generated knowledge and joint ownership, including the need for an further agreement between joint owner for the allocation and terms of exercising such joint ownership, personnel claiming rights to foreground, transfer of foreground ownership and right of objection, the ways and modalities of protection of the foreground capable of industrial or commercial application, including, for instance, the case in which a Partner does not intend to protect its foreground in a specific country, publication of data concerning foreground and related other Partners’ right of objection.

The aim of the description contained in the proposal and of the overall C2-SENSE IPR framework is to create a favorable environment for respecting intellectual property rights (IPR) and to guarantee a uniform approach by the C2-SENSE participants, as well as to foresee the permanent monitoring of IPR issues during the project. The IP-related management structure, workflows and tools are designed with the protection and exploitation of knowledge in mind.

3.3 GRANT AGREEMENT: MAIN POINTS

Both the Grant Agreement and the Consortium Agreement include IPR regulations for the project and therefore represent the contractual basis for IPR within C2-SENSE

The Grant Agreement is a European standard contract that sets out the key conditions for the project financing and therefore represents the main contractual basis for the European Commission (EC) funded project C2-SENSE.

The main points and sections concerning IPR are as follows:

SECTION 1 – FOREGROUND

II.26. Ownership

1. *Foreground* shall be the property of the *beneficiary* carrying out the work generating that *foreground*.
2. Where several *beneficiaries* have jointly carried out work generating *foreground* and where their respective share of the work cannot be ascertained, they shall have joint ownership of such *foreground*. They shall establish an agreement.

II.27. Transfer

1. Where a *beneficiary* transfers ownership of *foreground*, it shall pass on its obligations regarding that *foreground* to the assignee including the obligation to pass those obligations on to any subsequent assignee.

II.28. Protection

1. Where *foreground* is capable of industrial or commercial application, its owner shall provide for its adequate and effective protection, having due regard to its legitimate interests and the legitimate interests, particularly the commercial interests, of the other *beneficiaries*.
2. Patent applications relating to *foreground*, filed by or on behalf of a *beneficiary* must include the following statement to indicate that said *foreground* was generated with the assistance of financial support from *the Union*:

The work leading to this invention has received funding from the European Union Seventh Framework Programme (FP7/2007-2013) under grant agreement n° [607729].

All patent applications relating to *foreground* filed shall be reported in the plan for the *use* and *dissemination* of *foreground*, including sufficient details/references to enable the *REA* to trace the patent (application).

II.29. Use

1. The *beneficiaries* shall *use* the *foreground* which they own or ensure that it is used.
2. The *beneficiaries* shall report on the expected *use* to be made of *foreground* in the plan for the *use* and *dissemination* of *foreground*.

II.30. Dissemination

1. Each *beneficiary* shall ensure that the *foreground* of which it has ownership is disseminated as swiftly as possible.
4. All publications or any other *dissemination* relating to *foreground* shall include the following statement to indicate that said *foreground* was generated with the assistance of financial support from *the Union*:

The research leading to these results has received funding from the European Union Seventh Framework Programme (FP7/2007-2013) under grant agreement n° [607729]

Any *dissemination* activity shall be reported in the plan for the *use* and *dissemination* of *foreground*

SECTION 2 – ACCESS RIGHTS

II.31. Background covered

Beneficiaries may define the *background* needed for the purposes of the *project* in a written agreement and, where appropriate, may agree to exclude specific *background*¹⁶.

II.32. Principles

1. All requests for *access rights* shall be made in writing.

II.33. Access rights for implementation

1. *Access rights* to *foreground* shall be granted to the other *beneficiaries*, if it is needed to enable those *beneficiaries* to carry out their own work under the *project*.
2. *Access rights* to *background* shall be granted to the other *beneficiaries*, if it is needed to enable those *beneficiaries* to carry out their own work under the *project*

II.34. Access rights for use

1. *Beneficiaries* shall enjoy *access rights* to *foreground*, if it is needed to use their own *foreground*.
2. *Beneficiaries* shall enjoy *access rights* to *background*, if it is needed to use their own *foreground*.

3.4 CONSORTIUM AGREEMENT: MAIN POINTS

The Consortium Agreement is signed between the project Partners and fine-tunes the Grant Agreement, establishing provisions related mainly to consortium management, the distribution of the Community financial contribution and IP. It sets out the internal management rules for the consortium including structures, conditions and processes for handling IPR. Here following the main points and sections concerning IPR:

Section 8: Foreground

Regarding Foreground, EC-GA Article II.26. - Article II.29 shall apply with the following additions:

8.1 Joint ownership

Where no joint ownership agreement has yet been concluded:

a) each of the joint owners shall be entitled to Use their jointly owned *Foreground* on a royalty-free basis.

Section 9: Access Rights

9.1 Background covered

9.1.1 The Parties shall identify in the Attachment 1 the *Background* to which they are ready to grant Access Rights.

9.1.4 In addition, if a Party wishes to list specific *Background* as excluded, it shall identify such Background in the Attachment 2.

[Attachment 1: Background included]

Access Rights to Background made available to the Parties.

[Attachment 2: Background excluded]

Background excluded from Access Rights.

3.5 IPR TEAM (IT)

The IPR Team ensures efficient management of IP and comprises one IPR Manager and the IPR Focal Points (one for each Partner).

The IPR Team needs to meet during every Consortium Meeting, in order to update the IPR Sheet (IS), share the updates with all the other members, collect feedbacks and eventually plan additional activities.

The meetings during which the IPR Team has met before M18 are:

- Conf calls with every Partner during Nov 2014
- Ankara (Turkey) 26th March 2015
- Warsaw (Poland) – 25-26th Jun 2015
- Milan (Italy) – 12-14th Oct 2015 (after M18)
- Brussels (Belgium) – 15th Dec 2015 (after M18)

3.5.1 IPR Manager

The IPR Manager is in charge of maintaining a schedule of innovation produced during the project and assessing the opportunity for applying for patents or declaring copyrights.

The IPR Manager:

- seeks input from all the IPR Focal Points on a regular basis on any new Foreground and IPR generated and collects and consolidates all the contributions provided by them;
- creates and updates the Consolidated IPR Sheets with the contributions of IPR Focal Points and on the basis of information provided by the Partners and collected by the IPR Focal Points;
- leads the Partners towards the execution of patent searches;
- leads the description of the innovative elements of the R&D technological activities executed, in collaboration with the Technology R&D teams and IPR Focal Points;
- reports to the Project Coordination Committee and to the Technology R&D teams about the “innovation” status;
- advises the Project Coordination Committee and the Exploitation Manager on the protection, management and routes for exploitation of Foreground generated by the Project, supporting them in better facing matters such as possible licensing, formation of spin-offs companies and joint ventures;
- proposes registration of patents and orchestrates the filing strategy implementation, according to consortium’s decisions;
- coordinates the overall implementation of C2-SENSE IPR Management Strategy, in particular IPR tracking through Laboratory Workbooks, IPR Repository updates, Joint Ownership model agreement elaboration and potential support to its customisation in relation to Partners’ needs and expectations.

3.5.2 IPR Focal Points

There must be only one IPR Focal Point per Partner, who talks to the IPR Manager, in order to have a coherent flow of information. That is: IPR Focal Point is the only contact point inside the Partner that collects internally all the information to pass to the IPR Manager.

IPR Focal Points, moreover, collaborate with the IPR Manager in the implementation of the overall project’s IPR Strategy, for instance as regards:

- IPR Repository updates;

- IPR tracking through Laboratory Workbooks;
- execution of patent searches;
- registration of patents and filing strategy implementation, according to consortium's decisions;
- description of the innovative elements of the R&D technological activities executed, in collaboration with the Technology R&D teams and IPR Manager;
- Joint Ownership model agreement elaboration and potential support to its customisation in relation to Partners' needs and expectations.

3.5.3 C2-SENSE IPR Team contact details

The resources allocated on the different roles are as follows:

Table 1 – IPR Team (IT)

IPR Team (IT)			
<i>Participant number</i>	<i>Participant short name</i>	<i>Resource name</i>	<i>Resource Role</i>
2	LUTECH	Raul Arisi	IPR Manager
1	SAGEM	Caroline Senzier	IPR Focal Point
2	LUTECH	Raul Arisi	IPR Focal Point
3	AIT	Gerald Schimak	IPR Focal Point
4	SRDC	Mert Gencturk	IPR Focal Point
5	REGIONE PUGLIA	Pierluigi Loiacono	IPR Focal Point
6	INNOVA PUGLIA	Agostino Palmitessa	IPR Focal Point
7	PIAP	Jan Piwinski	IPR Focal Point
8	REGOLA	Biagio Lanziani	IPR Focal Point

The members of the IPR Team have been identified since the very beginning of the project. In particular, C2-SENSE IPR Manager is Raul Arisi, the T8.3 Leader. He has been identified from the DoW and confirmed during the KOM (Kick Off Meeting) held in Paris (France) on 13th 14th May 2014. All the Partners have been required to identify their respective IPR Focal Point during the same KOM. All the Partners have made their proposals during the Consortium Meeting held in Valenzano (Italy) on 15th Oct 2014, and they've finally been confirmed via email by 31st Oct 2014.

3.6 IPR FLOWCHART (IF)

IPR Flowchart and IPR-related processes are as follows:

- The IPR Focal Points in every Partner are in charge of collecting all the contributions, suggestions, directives that, related to the main vision and strategy of the Partner, they consider worth candidating as an IPR object.
- The IPR Focal Point collects all the contributions in the IPR Sheets and passes it to the IPR Manager.
- The IPR Manager consolidates all the contributions in a larger and more comprehensive Consolidated IPR Sheet (CIS), to be presented to the Project Coordinator and to the Project Executive Board.
- Then the IPR Manager present the IPR Report to the Project Coordination Committee and to the Technology R&D teams, thus updating them about the “innovation” status.
- The IPR Manager, assisted by the IPR Focal Points, leads the exhaustive description of the innovative elements of the R&D technological activities executed, in conjunction with the Technology R&D teams.
- The IPR Manager, taking into account the relevant content of IPR Sheets, proposes registration of patents to Project Executive Board and to the involved Technology R&D.
- The Project Executive Board and the involved Technology R&D teams take a decision on the proposal of registration of patent.
- According to the decision of the Project Executive Board and of the involved Technology R&D teams, the identified innovative asset could be:
 - o Disseminated without becoming registered as a patent;
 - o Registered as a patent by the Consortium member which has developed the innovation;
 - o Registered as a patent by the WP2 Leader on behalf of the Consortium for joint innovations, except in case joint owners agreed to proceed in a different manner;
 - o The IPR Repository is updated with the final decision (including, in case, protection timeframe) on the form of protection chosen for every atomic item proposed.

3.7 IPR SHEET (IS)

The IPR Focal Points collect all the contributions in the IPR Sheet (IS). Here in the following a subset of the IS as fully reported in ANNEX I:

Partner	Person	Email	Name	Unique ID	Exploitable result	Description	SW License	Year of creation	Date of creation	Website	Background Knowledge	Background Knowledge	Background Knowledge	Other	TANGIBLE	Loose	Source Code	Interoperable	Other	IN TANGIBLE	Experience - Staff	Other	Methodology	SOURCES	LUTech	EPIC	REG
Feeder	Know-how										Origin				Type												
Lutech SpA [Lutech]																											
LUT	Rau	car	Security & IT Governance	LUT-INTAN-1		C2-SENSE Project: DCV		2002		www	x																
LUT	Rau	car	Security & IT Governance	LUT-INTAN-1		C2-SENSE Project: DCV		2002		www	x																
LUT	Rau	car	Enterprise Applications	LUT-INTAN-2		C2-SENSE Project: DCV		2002		www	x																
LUT	Rau	car	Enterprise Applications	LUT-INTAN-2		C2-SENSE Project: DCV		2002		www	x																
LUT	Rau	car	Process & Project Management	LUT-INTAN-3		C2-SENSE Project: DCV		2002		www	x																
LUT	Rau	car	Process & Project Management	LUT-INTAN-3		C2-SENSE Project: DCV		2002		www	x																
LUT	Rau	car	Intelligent Networks	LUT-INTAN-4		C2-SENSE Project: DCV		2002		www	x																
LUT	Rau	car	Intelligent Networks	LUT-INTAN-4		C2-SENSE Project: DCV		2002		www	x																
LUT	Rau	car	Wso2 ESB (Enterprise Service Bus)	LUT-TAN-1	EXPL-2	C2-SENSE Project: D2.1		2013				x															
LUT	Rau	car	Wso2 ESB (Enterprise Service Bus)	LUT-TAN-1	EXPL-2	C2-SENSE Project: D2.1		2013				x															
LUT	Rau	car	Kafka	LUT-TAN-4	EXPL-2	C2-SENSE Project: D2.1		2011				x															
LUT	Rau	car	Kafka	LUT-TAN-4	EXPL-2	C2-SENSE Project: D2.1		2011				x															
LUT	Rau	car	L-TMS	LUT-TAN-6	EXPL-1	Lutech Threat Manager		2010				x															
LUT	Rau	car	L-TMS	LUT-TAN-6	EXPL-1	Lutech Threat Manager		2010				x															
LUT	Rau	car	WP3 - T3.2 - Protocol Interoperability	LUT-TAN-2	EXPL-2	Achieve the protocol inte		2016	31-mar-16			x															
LUT	Rau	car	WP3 - T3.2 - Protocol Interoperability	LUT-TAN-2	EXPL-2	Achieve the protocol inte		2016	31-mar-16			x															
LUT	Rau	car	WP3 - T3.2 - Protocol Interoperability	LUT-INTAN-5	EXPL-2	Achieve the protocol inte		2016	31-mar-16			x															

Figure 1 – IPR Sheet (IPRSHEET)

The main sections of the IS are as follows:

- Feeder
 - o It's to be filled with the information regarding the main focal point of the Partner in charge of collecting all the contributions internal to the Partner
- Know-how
 - o It's the label, description and some additional info of the atomic item (know-how) to decide upon: the "Description" column should list the nature of innovation of that particular item.
- Origin
 - o It's the origin of the atomic item.
- Type
 - o It's used to map whether the atomic item is a Tangible or Intangible asset.
- Source of know-how
 - o Who is the Partner that brings the know-how into the C2-SENSE Consortium?
- Owner of know-how
 - o Who is the Partner that owns the know-how brought into the C2-SENSE Consortium?
- Scope of usage
 - o Whether the know-how can be used just internally, or even externally.
- Users of know-how (Access Rights)
 - o Who has the rights to access the know-how?
- Protection – Proposal
 - o The type of protection proposed by the Feeder.
- Protection - Final Decision
 - o Once the information has been included in the IR, all the Partners of the Consortium will decide jointly on the final form of protection chosen for every atomic item proposed.
- Time
 - o The timeframe during which the Protection should be valid.

Some of the information to be included into the IS can be found, but not only, in the following documents:

- DOW document (in particular: 2.3. *Consortium as a whole*):
 - o it's possible to find here "*Background Knowledge*"
- Consortium Agreement (in particular: Attachment 1: Background included):
 - o it's possible to find here "*Background Knowledge (INCLUDED)*"
- Consortium Agreement (in particular: Attachment 2: Background excluded):
 - o it's possible to find here "*Background Knowledge (EXCLUDED)*"
- Deliverable D2.1 "Survey of the State of the Art Technologies and Architectures":
 - o it's possible to find here "*Background*"
- DOW document, in the Tasks and Deliverables descriptions:
 - o it's possible to find here "*Foreground*"

For the current version of the IPRSHEET: please see *Annex I: IPR Sheet (IPRSHEET)*.

The information included in the Annex I are the ones shared among Partners and are current as at Sept 2015.

4 C2-SENSE IPR MANAGEMENT STRATEGY

The following chapters describe project's IPR Management Strategy, that is interconnected with project overall business and exploitation strategy, whose nucleus has been initially illustrated in the present release of D8.1, that represents the basis on which to develop our exploitation strategy for the following period of the project, to be included in D8.2. In fact, this strategy is aimed at providing hints on how to use IP to achieve success in terms of business, by focusing on whether and how IP protection and commercialization would strengthen the project to achieve its impact and value creation.

4.1 IPR VISION AND METHODOLOGY

4.1.1 Underlying IPR vision and objectives

Project IPR Policy is functional to satisfy multiple IPR objectives and balance the need to protect and later commercialize IP assets resulting from project development with the wish to contribute standard and to release some research results into the public domain. This is in coherence with the exploitation routes that are being planned for C2-SENSE results and with the combination of commercial and not-commercial exploitation channels.

IPR vision underlying C2-SENSE IPR Management Strategy recognizes the importance of IP protection, being functional to the commercialization of intangible assets and thus giving the Partners, in their role of IP holders, a competitive advantage in the market. Consortium members' paths towards the commercial use of C2-SENSE results will be driven by the value and exploitability of IP generated in it. This is related to IP protection, being IP protection essential in view of a prospective commercial or industrial exploitation. On the other hand, the Consortium is planning to contribute to standardization as one of the measures able to support C2-SENSE results' market take-up. Standardization is also expected to accelerate the time-to-market, ensuring C2-SENSE solutions' fast market introduction by shortening the cycle between initial concept and global market access. It is important to remark that, standards are not in opposition with patents: they can fit closely together. One reason lies on the fact that standards' formulation is usually in terms of results to be achieved rather than technical solutions: consequently, the patented technology represents only a way to comply with the requirement of the standard².

The elaboration and execution of project IP Management strategy is in pursuit of the following four key objectives:

- **Appropriation:** C2-SENSE Partners need to “appropriate”, in the meaning of capturing the value of, their ideas and solutions;
- **Protection:** Partners must ensure that the IP resulting from the project development is protected, fairly distributed and managed among them;
- **Freedom to operate:** Partners need to be sure to avoid infringements of third parties' IPRs, as patents, or violations of trade secret protections, in order to lower as much as possible the risk of unnecessary licensing costs and litigation;
- **Commercialisation,** including signal value to potential investors: Partners may use IPRs deriving

² An exception is represented by the so-called “essential patents”.

from the project to signal their value to investors, potential partners, competitors, and users. This is important both in the first 2 years after the end of the Project and in the following phase. Considering that C2-SENSE results will need further substantial investments to take them to market, additional activities and investments have to be pursued.

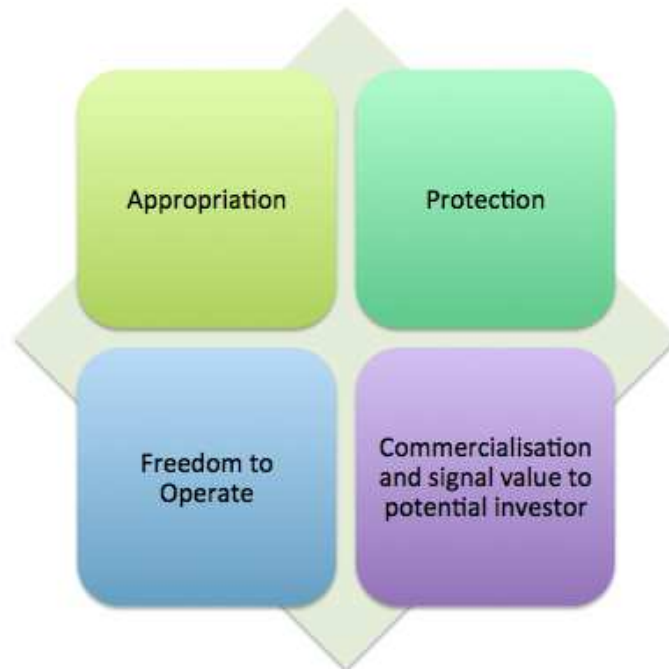


Figure 2 – Objectives of C2-SENSE IPR Management Strategy

4.1.2 Integrated and market-driven approach

Project’s approach underlying the strategic management of IP is flexible, integrated and structured, on the basis of the conviction that there is no “one-size-fits-all” solution for each IP asset. It is also characterized by a market-driven and business-oriented paradigm and gives rise to an hybrid IPR strategy pursuing a resource-effective management of intellectual assets.

Therefore the resulting IPR strategy fosters the combination of formal registered IPRs (e.g. patents) with complementary strategies (alternative appropriation methods, predominantly trade secrets), as well as public domain routes when opportune. This is also related to the strict correlation between IP management and exploitation and commercial paths: the choice of the most appropriate exploitation and business routes, like licensing, start-up, Joint Venture is affected by and has an impact on IP handling.



Figure 3 – Hybrid IPR Management Strategy

At the same time, the implementation of C2-SENSE IPR Management System will be characterized by resource-effective management of IP resulting from the project, carefully taking into account the costs related to the acquisition, maintenance and enforcement of IP, that Partners may perceive as barriers. Preference will be given, when possible and provided that this fits with business strategy's directions, to low-cost options to exploit Partners' intangible assets and therefore reap the benefits of the IP system. In particular, alternative, informal and "softer" management methods, that can be economical to use and, to some extent, embedded in the normal working routines, will be considered too, besides traditional, formal ones (e.g. patent registration).

As already highlighted, C2-SENSE IPR strategy is strongly based on a market-driven approach and has a significant business orientation, placing great emphasis on turning research outcomes and technological developments into value-creating products and/or services. For this reason, the Consortium conducted a preliminary in-depth market analysis mostly based on IoT and its application in the SENSE of Real World crisis/emergency events and in the C2 of interoperable Digital World crisis/emergency organizations, in the framework of digitalization of industry and government (D8.1). Such initial survey will be extended in the next months. In fact, in order to allow C2-SENSE IP Management Strategy to be able to move towards turning IP into business, the Consortium recognizes the importance to understand the whole environment in which C2-SENSE innovative solutions are to be employed: the market (size, growth, segments and regions), the technologies (other solutions to the same problem) and potential competitors or partners.

In this perspective, C2-SENSE IPR Framework is based on a holistic approach, combining exploitation, marketing and IP planning and management. Our IPR strategy works in line with the overall exploitation and business strategy of the project, whose initial perception has been provided by D8.1. The first exploitation findings will be deepened in D8.2 by referring to the work executed and results expected in WP5 till M30 and to the assessment of the related technological developments and their business potential mainly by the industrial Partners, thus leading to substantial concrete exploitation initiatives to SENSE and C2 stakeholders.

The preliminary achievements include the identification of two main interrelated aspects of the project that will be the basis for exploitation, respectively focusing on vertical and horizontal interoperability:

- the **SENSE** part (answering needs related to timely, reliable and intelligible management of events, data, information), and
- the **C2** part (answering needs for coordination and interoperability of diverse organizational bodies involved in crisis/emergency management)³.

It is important to keep in mind that IP system is a living work, that needs to be reviewed and adjusted according to the new modalities and conditions and previously unforeseen business and exploitation routes, in particular as to be reported in D8.2.

By continuing the joint work of T8.1 and T8.3, the Consortium will be able to state how to use IP generated during C2-SENSE to achieve success in terms of business and to decide on whether and how IP protection would strengthen the project's impact and results penetration into the market for maximizing value creation. In other words, the strategies regarding the commercial use of C2-SENSE results will be driven by the value and exploitability of IP generated in it: the sustainable and successful IP Management Strategy at project level has to derive from, and be embedded in, both the overall project exploitation strategy and Partners' individual business development strategy.

The afore-mentioned strong interdependence of the definition and implementation of C2-SENSE IPR policy with project business planning regards not only the business logic behind the commercialization plans, but also project's intellectual property (IP) and IPR-protected elements, representing the assets and resources that will make such business successful. IP assets, especially those related to C2 Centers Package, are key indicators of the commercial viability of the planned business and are able to influence C2-SENSE offer's strategic positioning inside the broader ecosystem of Internet of Things and its application to SENSE and C2 domains. In this way C2-SENSE IP, and its adequate management within the project and after its end, will pave the route to successful exploitation of C2-SENSE results.

On the other hand, though the process and success of C2-SENSE innovative solutions partially relies upon IP, that has to be handled in view of creating markets out of C2-SENSE research results, this also implies that project IP management strategy needs to be in line and complementary to C2-SENSE exploitation options and strategies.

4.1.3 A comprehensive IPR Management Framework

C2-SENSE IPR Management Strategy is addressing the different project's stages:

- Proposal stage
- Development stage
- After project's end stage

4.1.3.1 Proposal phase

At proposal stage, the basic IP and innovation management aspects and its exploitation that C2-SENSE consortium considered refer to background, foreground, sideground, ownership (including joint ownership), transfer of knowledge, dissemination, access and usage rights (with specific provisions as regards software) during and after project development, both for research and/or for commercial use. These subjects were regulated in the Consortium Agreement, that also contained as Annex the lists of background respectively included and excluded. C2-SENSE Consortium also beware of avoiding third parties' IPR infringement and made the relevant Freedom-to-Operate analysis when opportune.

³ D8.1 "First Exploitation and Dissemination Plan".

4.1.3.2 Development phase

During this phase of the project, the consortium defined and is implementing the management systems and procedures. With the start of project implementation, C2-SENSE Partners began to carefully think how to organize knowledge management throughout the project life, focusing on the tools to adopt for the protection, dissemination and utilization of the project's results, besides giving access rights to their knowledge in order for other Partners to carry out their work on the project. In this phase of the project, C2-SENSE key results and related IP are identified, captured, assessed, protected (if necessary), managed and nurtured, whilst the exploitation plans seek to select the best stream for positioning them and delivering project desirable impact.

In particular:

- The IPR tracking, flowchart and processes modalities, including IPR Sheets and Consolidated IPR Sheet, were defined and Consortium Partners are requested to recognize IP when they create it and make C2-SENSE project team aware with the system and process, in order to make it possible to take the further steps to assess, protect (if necessary) and properly exploit and disseminate such assets.
- Partners appointed the IPR Team, chaired by the IPR Manager (who in concrete also covers the role of Exploitation Manager), to help the consortium to identify and look out for IP arising from the work carried out, to provide advice and recommendations to the consortium Partners on the most suitable IP strategies, downstream activities, including modalities and tool. A role in relation to IP-related issues is also played by the Project Steering Committee.

Key IP related issues in this phase include:

- IP identification: the identification of the C2-SENSE IP assets is the first core step for IP management, allowing to draw a concrete mapping. It is therefore crucial that all IP values within the project are identified, listed, named and analysed, in a systematic way, in order to have a sort of project IP portfolio and map.
- Results' ownership: though this topic has already been dealt within the CA, considering that not all aspects are foreseeable at the start of the project, the Partners are fine-tuning its provisions. Two of the major issues arising in the execution of C2-SENSE, as of any other project, are joint ownership and transfer of ownership. In fact, many C2-SENSE results are the result of team work, in the meaning that they will have been developed by different Partners: it is important that there are no uncertainties about who is the actual owner of the IP assets, especially in view of its future commercialisation. No doubt should be raised as to which parts of the results are actually proprietary to a given Partner and what parts are accessible under (ideally already negotiated and secured) co-ownership or licensing agreements with other Partners or third parties.
- Protection of results: being IP protection vital for a prospective commercial or industrial exploitation, it is essential to select the most appropriate and effective IP protection tool, in accordance with the other Partners' legitimate interests. In this choice C2-SENSE Consortium members will adopt the methodologies and will be guided by the described approach. They have to pay attention to the future planned use of every pieces of foreground, in particular if direct commercial exploitation or further research will be preferred. In case of additional research activities, the registration for obtaining an IPR could be postponed, being more convenient keeping information confidential by means of trade secret or confidential know-how. On the other hand, in case, for instance, of lack of industrial applicability of a result, protection should be avoided, not

being always mandatory. Partners are recommended to inform other Partners about their individual protection activities plans, especially where dealing with potentially joint IP. It may happen, in fact, that a Consortium Partner that doesn't intend to protect its piece of foreground offers to transfer it to the other Partner, that might seek registration for it, thus avoiding to leave the same unprotected, to the competitors' advantage. C2-SENSE IPR Management Strategy may be classified as defensive strategy, whose main objective is to avoid or reduce risks by preventing competitors from exploiting the Partners' foreground.

- Use of foreground: also in C2-SENSE, it may consist of direct use, when the Partners, as foreground owners, intend to industrially or commercially exploit the results (production and marketing of new products and services), or indirect use, in case of transfer of the foreground to other project Partners or third parties, that will exploit such results (e.g. by means of licences). Moreover, use will also consist in the utilisation of foreground in further research initiatives, for the development or improvement of the developed outputs.
- Dissemination of results: for the disclosure of project results Partners are selecting the appropriate means (e.g. scientific publications, publication on web sites, conferences, open access, etc.) according to the conditions set forth in the CA or in other specific confidentiality agreements, in order to maintain confidentiality during and even after the end of the project. In fact, keeping information confidential is vital, especially with regard to C2-SENSE results for which registration is not planned yet. But, on the other hand, dissemination activities are often preparatory for future commercial exploitation and marketing of the IP foreground and thus for gaining financial profit from them.



Figure 4 – IP issues in the development phase

4.1.3.3 Post-project phase

At project conclusion the second and final Exploitation and Dissemination Plan (D8.2) will be submitted to illustrate the use that C2-SENSE consortium intends to make of its project results, by defining in detail C2-SENSE exploitable foreground (including its description and sector of application) and the related plans for its exploitation, besides describing the activities they have already carried out and still expect to develop for

allowing the dissemination and use of the foreground. Besides this document, but in strict interrelation with the same, the Consortium Partners will also prepare the final Report on Intellectual Property Management (D8.6, representing the second release of this paper), where they will envisage the final advanced strategy for the management of intellectual property rights after project end, including also in detail all the intellectual property rights applied for and registered, as well as the concrete chosen commercialization stream (e.g. setting up a “start-up”, creation of one or more “patent pools”).

During the Consortium Meeting in Warsaw (Poland) – 25-26th Jun 2015, the Partners discussed the opportunity that for the first 2 years after the end of the Project (1st Apr 2017- 31st Mar 2019), a case-by-case approach is followed for exploitation, also for identifying the real opportunities and exploitation streams for the C2-SENSE Framework. After this period, and considering the results of it, Partners will decide whether to continue with the same approach or with a different one, like the constitution of a stable company. These 2 proposals were further investigated, both in Consortium F2F meetings and during conf calls. The final decision on this aspect will influence and be influenced by IPR handling and IP-related roadmap.

In order to ensure that the post- project phase will proceed efficiently as regards to the effective exploitation of C2-SENSE foreground, also in terms of IPR handling, the Partners, besides taking into account the provisions contained in GA and CA (since a number of IPR provisions will remain in force, like confidentiality and use obligations), will be requested to implement their plans regarding exploitation and IPR as described in the afore-mentioned documents (D8.2 and D8.6).

In case of C2-SENSE assets to be exploited for profit, in this release of the document we may only identify that the last phase in IP lifecycle relevant for C2-SENSE consists of:

- Assessment of the value of IP assets
- Risk management
- IP commercialisation and exploitation
- IP enforcement

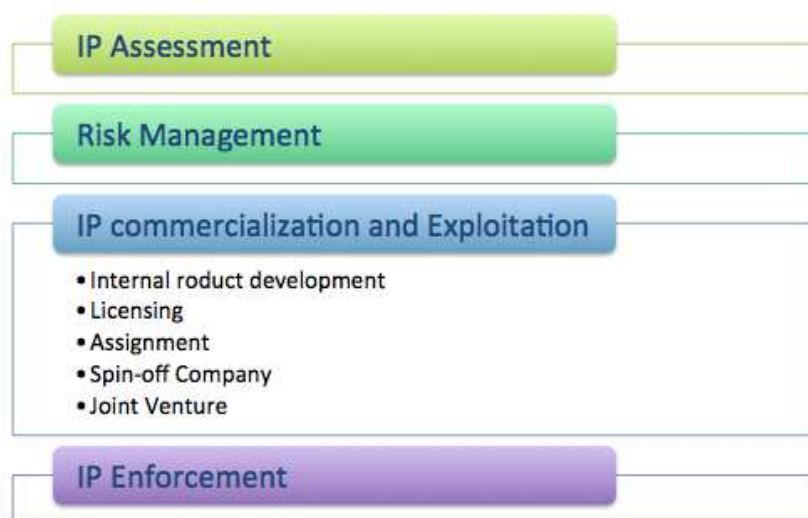


Figure 5 – IP Management after project end

More concrete hints and decisions will be included in the next release of this document, when project advancements will lead to the identification of focused exploitation streams towards SENSE and C2 stakeholders.

I. Assessment of the value of IP assets

Valuation of IPRs is part of the good management of it. In fact, IP value is important for C2-SENSE post-project phase, for coming to strategic decisions on assets, but also for facilitating its commercialization and transactions concerning IPRs and, for instance, in case the Partners plan to use their IP assets developed within the project as security for a loan. In particular, the assessment of C2-SENSE IP assets' value is significant in the following cases:

- Negotiations to sell or license IPRs, where knowing IP value is essential to reach the agreement on a price;
- Fund raising by means of bank loans, venture capital or other investors, where IP estimate may be used as security for bank loans or to attract investors or venture capital.
- Taking key decisions, concerning, for instance, the patenting strategies and country selection for registration of IPRs.
- Tax planning involving IP

Approaches of intellectual property valuation may be quantitative and qualitative. The former makes reference to numerical and measurable data to calculate the economic value of the IP. The latter is focused on the analysis of the characteristics (such as the legal strength of the patent) and uses of the asset. The methodologies used for the quantitative approach are mainly: cost-based method, market-based method, income-based method and option-based method. In order to select the most suitable method, several factors have to be taken into consideration (e.g. type of IP and purpose of valuation). The most adequate methodologies to be used in relation to C2-SENSE IP will be chosen in the second release of this paper.

II. Risk management

The preventive identification, assessment and management of IP risks should be taken into consideration in the commercialization of C2-SENSE IP, in order to have a lower exposure to risks. Risk assessment should consider the likelihood of the event occurrence (e.g. ownership disputes, third party's IP infringement) and the level of importance of associated consequences (e.g. irrelevant, moderate or important). On the basis of these considerations, adequate decisions about the risk management actions will be adopted (e.g. insurance, revise relevant clauses within contracts, etc.) or, at least, discussed in the next release of this document.

III. IP commercialization and exploitation

The most common practices to get a protected IP resulting from C2-SENSE into the marketplace that Partners will have to take into consideration at project end are as follows:

- Internal Product Development: this form is usually chosen by organisation having the skills and resources to manufacture and supply goods or services and may allow, in case of optimal management of the asset concerned, the Partner to leverage its business growth with its own development of the asset produced
- Licence agreement: this is an effective commercialisation tool, usually adopted when the Partner has

no the necessary financial or technical capability to directly exploit the IP asset. So this organisation allows a third party to have access and utilise its IP for a certain time period in return for financial compensation (e.g. royalties on products sales or payment of a lump sum). The specific conditions and terms of the license may be much diversified: e.g. providing for exclusivity or non-exclusivity of the licensed technology, or being restricted to a particular purpose (e.g. development or selling purposes).

- Transfer of ownership of the IP asset or Assignment: in this case the ownership of the IP asset is permanently transferred to an assignee, who will acquire the full rights to dispose of it. It may also happen that the assignor is licensed back. It is usually done through *ad hoc* assignment contracts but it is possible to include assignment clauses within Partnership and employment agreements. The IP transfer is done in return for a payment of a lump sum, royalties, or a combination of both.
- Spin-off Company, that are separate legal entities created to exploit IP assets: the IP concerned is transferred or licensed to the spin-off company to commercialise it.
- Joint Venture, in the general meaning of form of business association between two or more Partners to undertake a common project or to achieve a certain goal. Partners usually contribute with their IP assets towards further R&D advancements, production, marketing and commercialisation.

IV. IP Enforcement

The enforcement of IP rights refers to the case in which the IP embedded in a new service/product successfully marked is infringed by competitors: Partners should be prepared to defend their IP by the proper means existing in the juridical system, ranging from the letter of demand, to custom notice, to alternative dispute resolution mechanisms and court actions.

This enforcement is of paramount relevance to avoid losing the efforts to create the intangible asset and the investment made to commercialize the same.

4.2 IMPLEMENTING C2-SENSE IPR METHODOLOGY: DEFINING TOOLS AND PROCESSES

In this sub-section we'll describe the main features of the suite of tools and processes that will be used for implementing C2-SENSE IPR methodology and strategy.

4.2.1 IPR Repository and updates

The identification of the C2-SENSE IP assets is the first core step for IP management, allowing to draw a concrete mapping. It is therefore crucial that all IP values within the project are identified, listed, named and analysed, in a systematic way, in order to have a sort of project IP portfolio.

For this purpose we created C2-SENSE IPR Repository, consisting in the living IPR database during project's implementation. It basically identifies project intangibles and retraces their ownership, being also functional to help the Partners to identify their IP assets and ascertain the existence of third party rights. It initially arised from the C2-SENSE background lists, respectively reporting background available or not for access rights (positive and negative list), and has then been, and will be till project end, updated with sideground and, above all, foreground.

For each exploitable result key elements will be identified, like organisations directly contributing to its development, background needed and owner, rights to use such result and license scheme. The current version of the C2-SENSE IPR Repository is reported in Annex III.

We are planning to make it available as a doc, to allow a more fruitful Partners' collaboration and for further updates.

4.2.2 Patent search

In order to ensure that C2-SENSE results have an innovative nature, to be sure not to infringe existing third parties' rights and to provide the consortium with a strong basis for patenting decisions for making the exploitation of the results convenient (e.g. technology transfer, spin-off creation), the Consortium plans to conduct in-depth patent searches for ascertaining the "current state of the art", tailored to the needs of the project.

Conducting patent searches is considered very useful by C2-SENSE Partners for a set of purposes, including, for instance:

- Guiding the definition of their IP strategy (e.g. by identifying any barriers)
- Defining the state of the art by finding out already existing solutions, by understanding the surrounding IP landscape, etc.
- Checking for freedom to operate, in the meaning of assessing if the Partners are not infringing a third party's rights, including the check for validity of such third parties' IP;
- Checking if someone is not in a position of infringing project Partners' rights
- Keeping track on technology's advancements, by the continuous monitoring of patent applications filing.

A number of patent databases are available, both free/public and commercial/private, like, for instance:

Free/public patent databases: Patentscope (managed by WIPO) <http://patentscope.wipo.int/>, Espacenet (managed by the EPO) <http://worldwide.espacenet.com/>, Google patent

http://www.google.com/advanced_patent_search, USPTO <http://portal.uspto.gov/>, national databases

Commercial/private patent databases: Dialog Datastar (Proquest)

<http://support.dialog.com/publications/dbcat/>, STN <http://www.cas.org/products/stn/dbss>, Questel-Orbit

<http://www.questel.com/Prodsandservices/coverage.htm>, PatBase from MineSoft and RWS Group

<http://www.patbase.com>, Thomson Innovation <http://info.thomsoninnovation.com/>

Patent searches and, more in general, "freedom of use" search (or "infringement clearance search") will be carried out notably for taking care not to infringe existing third parties' rights, since they allow identifying third parties' patents in force and pending patent applications. The patent search's results are able to prevent or limit the exploitation of C2-SENSE results by identifying potentially relevant patents and published patent applications that may cover one or the other pieces of the expected project results. The patent search, despite they may be relatively expensive, are important for reducing potential problems and risks that could arise after project end. Therefore, in C2-SENSE, considering that patents are territorial rights⁴, we plan to carry out this assessment for all countries in which commercial exploitation or use is considered. When seeking patent protection in new countries, C2-SENSE will undertake patent searches for the concerned territories. It has also to be considered that many of the patent applications published in the databases are not "in force" (e.g. due to the application's failure, withdrawal or expiry) and, consequently, the related technology is free to use.

Besides key technical information, IP searching activities are also useful in view of commercial intelligence, for instance for learning about competitors, next customers, or suppliers, or potential Partners or infringers. Furthermore, when entering into new markets, IP searching activities can also help the Partners to identify potential competitors and infringers.

Patent documents provide important technical information and represent a unique source of information for C2-SENSE R&D Team: experts estimate that around 80% of the worldwide technical knowledge is contained in them. On the other hand patent information analysis is often complex, due to several reasons (e.g. patent documents' size, very technical language, etc.), and may be time consuming. A facilitating instrument could be represented by the use of Automatic Patent Analysis (APA). C2-SENSE Partners are considering if making use of it.

Patent searches, in their function of IP intelligence, also play the role of market analysis and competitive positioning tool in relation to C2-SENSE exploitable assets. In fact, on the one hand, they may bring flesh to the bones for the market analysis, thus allowing the mapping of the most relevant business and technological ecosystems and providing objective and neutral knowledge on the market, that is important for the market-related considerations in the framework of C2-SENSE business plan. They also allow the thorough and detailed analysis of the competition (not limited to the knowledge of market presence, but deepening competitors' strategies and strengths), that is essential for providing strong-added value to C2-SENSE business plan. This lets Partners better identity and illustrate the unique character of their results and how such results are superior to competing offers available on the market.

We intend to use especially Espacenet (<http://worldwide.espacenet.com/>) that is European Patent Office's patent search database.

⁴ This means that patents are only valid in the country or region in which they have been filed and granted.

Espacenet is one of the most used patent databases, giving access to nearly 90 million patent documents (granted patents but above all patent applications) from around the world, and includes smart and advanced search options. It provides a valuable overview of the state of the art: its EPO's Searching for patents' area groups products according to their primary use, besides providing technical, legal or business information, as well as supporting materials (e.g. simple explanations for less experienced searchers and the list of patent information centers able to offer support at local level). It provides access to patent family information, allowing to know if similar patents have been claimed in other countries, legal status information, in particular in relation to assessing whether and what countries a patent is in force and many other information. Espacenet may be accessed both the EPO, the European Commission, or one of the national patent offices.

In view of conducting a good and useful search, C2-SENSE Partners have to pay attention to the structure and forms (full text or bibliographic) of patent information and to select the right search tool available. In performing search for patents C2-SENSE Partners should pay attention to clearly formulate the search query, in order to get the most precise answer possible, leading to a search results page presenting the minimum patents possible and the most relevant answers. The limit is that the search query, to be really relevant, has to embrace also the various developments of the subject.

This choice of adopting "Espacenet" patent database is in line with the preliminary patent searches already conducted by the Partners before project start (both through "Espacenet" and "google" patent databases), that led to identify the following already existing patents relevant to C2-SENSE outputs:

- Displaying common operational pictures (Patent No: US2007208725 (A1))
- System and Method for Providing Chat-Based Crisis Management Services (US2010296641 (A1))
- Method for Dealing with and Managing Crisis in Total Digital Information Processing (JP2002123659 (A))
- System and method for emergency response (US 2004/0008125 A1))

In case of need of in-depth searches, however, Partners will seek help from a patent information expert.

Besides the patent patent and technology search, in case of need we'll also conduct additional searches for IP rights and freedom to operate searches (FTO).

4.2.3 IPR tracking model

IPR tracking system is functional at proceeding at the on-going identification and tracking of knowledge resulting from C2-SENSE as it is produced. Considering that, due to the collaborative nature of the project, the Partners are creating together the results and exchanging information within the process of performing research, keeping the workbooks is able to avoid a potential conflict between Partners on who is the actual creator of a given result.

Within the project this tool is used to record ideas' conception, development process, experimental tests and observations and represents a memory aid, able to play a role in the management and protection of IP coming from this research.

Thanks to this tool it will be possible to prove ownership, that is usually one of the basic mechanisms to

determine royalties and revenue shares, as well as the conception date of any outcome. Good documentation recording is fundamental for this purpose and therefore boosts participation, motivation, knowledge sharing and trustfulness. In the framework of C2-SENSE, the lab books is especially suitable for the IP generated, being a kind of documentary evidence which can be used to demonstrate who generated a given result. This evidence should be then transposed and kept in the IPR Repository.

C2-SENSE Partners agreed to maintain a Laboratory Workbooks (or Lab Books or Log Books), in accordance with proper standard, thus proceeding at the on-going identification, tracing, tracking, and registration of knowledge resulting from C2-SENSE as it is produced. This system, that documents each C2-SENSE IP element - is perceived by project Partners as objective and transparent in all steps, starting from contributions' recording.

Project activities last several months: project Partners have to remember all the critical details and it is almost impossible without a written record, especially because the project is carried out in large teams and it often happens that people leave it. For this reason it is important that work done, experimental details, operating procedures et is recorded and is available.

The Lab Notes allows comparing participants' contributions and the respective value in an objective way, by identifying the key ideas or crucial points of the developed result. By capturing the newly created knowledge this tool also paves the way to the management and update of the IPR Repository.

As regards the topics included in C2-SENSE Laboratory Workbooks, it is necessary that the Partners get the balance right between time spent keeping the lab book and time spent actually getting the project activities done.

For this reason we decided that, in the first 18M C2-SENSE Lab Notebooks, refers to virtual and F2F meeting minutes – including both general and WPs meetings, as well as other technical meetings-, while in the next project phase it will be kept, when necessary, in the form of google spreadsheet with an exploitable result-based structure or organized at WP level.

Though a number of key topics need to be included, the Laboratory Workbooks will not have a complex and fixed structure, but will contain key elements like: table of content (to be updated), date and time of the start and of every new entry, initial set up description and preliminary data, procedures, review, results and definitive data and their analysis, conclusions, record of the problems that Partners are trying to solve, general methods employed. It should be legible and include enough detail to allow others to perform the same procedure with only it as support.

This choice of not having a fixed structure is directed not to get slower project activities implementation. What really matters is that the Laboratory Workbooks represents a real time record of what Partners did during project implementation (what has been done, what was found out, who spoke to, etc.) as it happens by reporting key information for this purpose.

4.2.4 Model of Joint Ownership Agreement

Many C2-SENSE results will be the result of team work, in the meaning that they will have been developed by different Partners jointly.

Joint ownership, that may arise with regard to all the forms of IP (patents, copyright, trade secrets, etc.), usually occurs when the developed results have been jointly generated with other Partners and the respective share of work is not easily ascertainable. It is the first type of ownership recognized by the GA in case of

results generated by at least two participants when it is not possible to distinguish Partners' respective contributions.

In case the Partners did not signed a suitable arrangement to govern this situation, the default regime provided by the Grant Agreement (GA) is that *“in case several beneficiaries jointly carry out the work generating foreground, and where their respective share cannot be ascertained, such foreground will be held by these beneficiaries under a regime of joint ownership”*.

C2-SENSE CA is very vague regarding joint ownership, not providing for relevant further guidance on this matter, that is one of the most critical issues to resolve in the framework of any collaborative projects. In particular, it is important that there are no uncertainties about who is the actual owner of the IP assets and which is his share of ownership⁵, especially in view of its future commercialization. The common understanding of C2-SENSE Partners is to apportion jointly owned IP **in proportion to their R&D efforts** as resulting in the DoW or depending on the effective effort put by the Partners for the release of the relevant deliverables (especially those after M24), we will be fully ready to unleash our joint exploitation plans and promote our Joint Exploitation Packages.

In order to avoid or, at least, minimize the risk that C2-SENSE co-owners of IP may cause conflicts between them, thus becoming problematic, a set of possible rules with respect to their co-owned IP are being defining in detail by preparing a model of IPR Joint Ownership Agreement (JOA).

The JOA is a separate agreement in which the C2-SENSE joint owners set forth the terms of the resulting joint ownership, including the assignment of the shares between joint owners, the conditions of use and exploitation of the joint IP, the management of the jointly owned IP and, in general, the share, protection, enforcement, use and exploitation of the relevant IP asset.

Instead of elaborating a joint collaboration agreement as one-size-fits-all tool that C2-SENSE Partners can adopt to deal with joint ownership *inter alia*, we preferred let the Partner adopt separate joint ownership agreements, that may be more appropriate to regulate each specific joint ownership situation. Therefore, it will include different choices for the most significant clauses, to accelerate a common understanding and fine-tuning of IP arrangements related to co-owned results. In this way C2-SENSE Partners will be facilitated in the future agreement on the terms of exercise of their joint ownership, including how this is to be owned, protected, managed, commercialized and enforced, as well as how revenues from the commercialization have to be allocated. In other words, the option-based structure for main clauses is directed to facilitate and speed up the process for achieving a common understanding, thus strengthening a successful exploitation of project results.

The following non-exhaustive list of provisions, identifying the essential IP issues to be addressed when handling jointly owned assets in order to avoid the joint ownership pitfalls, will be included in C2-SENSE model of Joint Ownership Agreement under preparation, usually with two or three options for each of them:

- **Assignment of shares** by choosing one of the several ways to apportion jointly owned IP:
 - o equal share of foreground ownership between collaborating Partners, in line with the scope of the project;
 - o splitting the shares in proportion to the joint owners' contributions to the result (and

⁵ In the meaning of how to proportionally allocate joint developers' respective shares of ownership over the results.

accordingly apportioning all the rights and obligations deriving from the joint ownership), by referring, for instance, to R&D efforts, time spent, respective findings' relevance in the development of the result, etc. C2-SENSE Partners common understanding is towards the allocation based on R&D efforts as stated in the DoW (man-months).

- **Conditions and rights of use the jointly owned IP** : though the frequent formulation permits each party an unrestricted use of the jointly owned IP, two additional options may be envisaged, should restrictions on one party's use be preferred according to the other Partners' interests or foreground's use in further research activities:
 - o mutual restrictive conditions on the joint foreground use, with maintenance of the joint ownership regime;
 - o assignment the property of the entire asset (hence supporting all the related costs) to one of the parties concerned, with granting licenses to other Partners on an as-needed basis, taking into account the respective interests;
- **Conditions and rights of use of the background brought to the project.** Access rights should be granted by each party should to the other parties to allow them to use its background on a royalty-free basis (in case of use in accordance with the project scope) or on a royalties-bearing basis, in case of use in their business activities. In addition, contractual arrangements should also state that any subsequent agreement cannot permit the use of such background independently of the use of the joint IP.
- **Conditions and rights of exploitation,** including license and assignment rights and sharing of revenues. Through the JOA the parties concerned define the terms by which each of them can exploit co-owned foreground (e.g. assignments, licenses, etc.), including the need (or not) of other parties' consent and their compensation in respect of the exploitation of the joint foreground made by one party.
- **Dissemination and confidentiality.** Considering that disclosures and dissemination of the project research results may be an obstacle to future IP rights registration or exploitation (i.e. patents), it is possible that the parties mutually establish specific limits and means to disclose data and research materials, paying attention to confidential information used to carry out the project (know-how and other knowledge related to C2-SENSE implementation). Therefore, parties have to abide by confidentiality obligations by virtue of contractual provisions.
- **Management of the co-owned foreground,** above all, on the one hand, IP protection and maintenance and, on the other hand, IP monitoring and infringement. Contractual clauses should be set forth as regards the protection, maintenance and defence of C2-SENSE foreground, thus detailing how IP rights application filing, prosecution, costs and infringement should be dealt with by the co-owners, including, for instance:
 - o Party in charge of protecting the IP generated or keep it as a trade secret
 - o Party in charge of following the procedures to register the IP rights
 - o Party that will bear IP rights protection and maintenance costs or rules for sharing such costs
 - o Potential steps to be taken in place of the unfulfilling party by the other parties in case the designated party fail to, or decide not to, file an application for the granting of IP rights
 - o Party responsible for monitoring and policing the joint IP and modalities for the defence of the IP rights and the consequent handling of infringement claims, including bearing the expenses for any infringement in connection with such IP infringement claims, either because the jointly owned IP infringes third party IP rights, or because third party infringes the co-owned IP.
- **Governing law, jurisdiction and ADR Systems.** The parties should set forth the governing law

applying to the disputes which may arise with respect to the any matter related to the ownership, exploitation and defence of the joint foreground, as well as forum election for dealing with the hearing of such disputes. Ideally, the best solution is that the forum is in the country of the governing law. In view of fostering the rapid, cost-effective settlement of potential conflicts out of courts, it is strongly recommended to insert provisions about alternative disputes resolution (ADR) mechanisms.

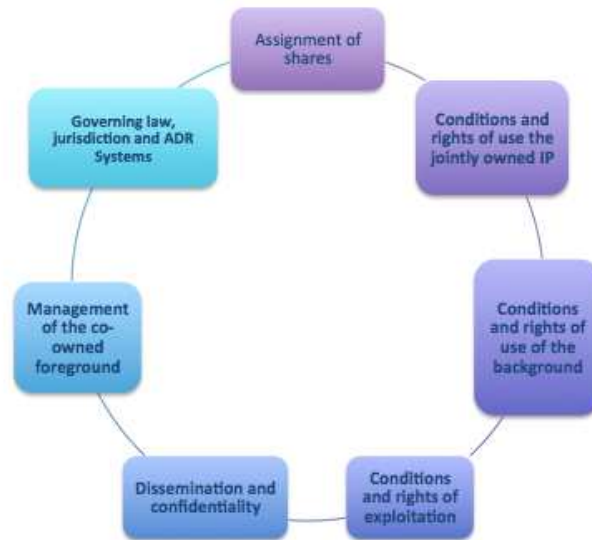


Figure 6 – JOA basic structure

4.3 IPR OF C2-SENSE RESULTS

4.3.1 C2-SENSE Value proposition – initial view

The Value Proposition of C2-SENSE is what distinguishes and makes more attractive project's outcomes and solutions from others already existing in the market.

C2-SENSE is expected to achieve interoperability of Sensor Networks and Command and Control Systems in disaster management, and thus to offer to potential clients, namely governmental institutes, emergency management system providers, healthcare institutes and public safety organizations, a good value proposition based on the right balance of quality and price. In fact, C2-SENSE solutions will allow effective response to emergencies, crises and disasters through timely available, reliable and intelligible information, achieved through effective coordination and communication among the first responders. In this way they are expected to face with crucial problems regarding the coordination and communication in crisis situations, in particular with the communication bottleneck, caused by the lack of interoperability between already existing emergency management systems.

From the technical point of view, C2-SENSE will lead to:

- a profile-based overall **Emergency Interoperability Framework** by the use of existing standards and semantically enriched Web services, which will expose the functionalities of C2 Systems, Sensor Systems and other emergency/crisis management systems. C2-SENSE Emergency Interoperability Framework will allow the cooperation of Control (C2) Systems and Sensor Systems through interoperability in view of ensuring timely information availability, reliability and intelligibility, that are key for effective management of emergencies, that are currently characterized by a crucial interoperability challenge. Seamless interoperability will be achieved by adopting a “Profiling” approach addressing all the layers of the communication stack in the security field. C2-SENSE Emergency Interoperability Framework will also be functional to one of the first full implementation of the Interoperability Stack, including a set of layers (Physical Interoperability Layer, Protocol Interoperability Layer, Data Interoperability Layer, Information Interoperability Layer, Knowledge Layer, “Harmonised Strategy/Doctrines” layer, etc.)
- **Emergency Domain Inventory**, resulting from the survey of existing standards, real life use cases of sensors, devices, C2 Systems and emergency management architectures for different scenarios in security field.
- Common, modular and focused **Emergency Domain Ontology**, functional to gather all stakeholders' knowledge in a unique and flexible data model, as well as to the development of mechanism for the interoperability of different standards/specification in the emergency domain. Such an ontology will be based on the inventory and on a prominent, well-accepted and commonly used standards in emergency management, command and control (C2) and sensor domains.
- **Emergency Interoperability Profiles**, constituting the framework to be developed by using the concepts in the ontology, that will “enable effective exchange of information among different rescue units, public safety units and information systems without requiring any special technical a priori arrangements even for the international relief operations”⁶. The profiles will also consider additional

⁶ DoW.

relevant factors, namely functional and operational requirements and the different countries' cultural, linguistic and legal issues.

- widely accepted **Certification methodologies for interoperability of Sensor Systems and C2 Systems**

C2-SENSE solution is expected to be easy and inexpensive to replicate and to be further developed in the future, consisting in highly re-usable software components and emergency interoperability profiles, already developed or to be developed by the Partners according to best practices in software engineering and interoperability profiling. That is for special interest of governmental institutes, public safety organizations and the other potential customers, that are not willing to spend a lot of money but, at the same time, are committed to respond in an effective manner to emergencies, crises and disasters.

Furthermore, C2-SENSE offering will likely have strong market power, being based on a profiling approach that has to be proven generic and applicable in a real life setting during project lifetime. This thanks to the assessment and validation of project outcomes in the realistic “Flood Scenario in Italy” pilot, where viability, usability, social acceptance and potential economic advantage of C2-SENSE solutions are demonstrated with the active involvement of emergency responders

Also Partners’ commitment in undertaking standardization activities to evolve C2-SENSE Emergency Interoperability Framework into a standard specification for interoperability between Sensor Systems and C2 Systems is a key factor in relation to C2-SENSE value proposition and is expected to contribute to foster a single EU market.

4.3.2 Summary of results and ownership

This is the core paragraph of the deliverable, representing the synthesis of the bottom-up activities for identification of results and ownership (in this task and deliverable D8.5) and the top-down activities for market identification and value proposition (in the exploitation task and deliverable D8.1), conducted in parallel in the first 18 months of the project and that will run in parallel as well till the end of the project.

Bottom-up, we started from the project deliverables and from the identified IPR assets in the IPR Sheet (and Consolidated IPR Sheet ANNEX I).

The following table indicates the project deliverables, the IPR assets included and the way we are going to address IPR consolidation and identification of Ownership and Compensation rules. It is worth to say that at M18 our visibility of the content of the deliverables is quite partial and un-conclusive, but the methodology has been defined and as soon as results will show up, we are ready to apply it and give precise indications to joint exploitation ownership and compensation rules. Ownership has been for the moment calculated in correspondence with the effort foreseen in the task by the DOW. Further investigations will better measure the effort effectively spent (actual effort) and put in place proper measures to simplify the ownership matrix, by appointing a main exploitation owner and rules for compensating the other co-owning Partners.

NOTE: In deliverables of WP3 and WP4 (M24) there is co-presence of Open Source and Proprietary assets. For IPR Management and Exploitation these two kinds of assets need to be identified, separated and properly managed

Table 2 – Project Deliverables

Asset	Date	Task of Delivery	Background needed	Owenship/ Rights to use
D2.1	M2	WP2 - T2.2 - Survey of the State of the Art Technologies and Architectures	n/a	SAGEM (12%), LUTECH (12%), AIT (17%), SRDC (12%), INNOVA (6%), PIAP (29%) , REGOLA (12%)
D2.2	M4	WP2 - T2.3 - Gathering User and Technical Requirements	n/a	SAGEM (7%), LUTECH (35%) , AIT (41%), SRDC (7%), PIAP (10%)
D2.3	M8	WP2 - T2.4 - Conceptual Design of C2-SENSE Architecture	n/a	SAGEM (7%), LUTECH (22%), AIT (22%), SRDC (26%) , PIAP (22%)
D3.1	M24	WP3 - T3.1 - Physical Interoperability	n/a	INNOVA (25%), PIAP (50%) , REGOLA (25%)
D3.2	M24	WP3 - T3.2 - Protocol Interoperability	AIT (Sensor Protocol Adapter - Anysen)	SAGEM (32%), LUTECH (52%) , AIT (16%)
D3.3	M24	WP3 - T3.3 - Data/Object Model Interoperability	SAGEM (ORTAC, ARENA), LUTECH (L-TMS)	SAGEM (67%) , LUTECH (33%)
D3.4	M24	WP3 - T3.4 - Information Interoperability	SRDC (Semantic MDR)	SAGEM (12%), LUTECH (44%) , SRDC (44%)
D3.5	M24	WP3 - T3.5 - Knowledge Interoperability - Profiles & Collaboration Environment	n/a	AIT (44%) , SRDC (17%), PIAP (39%)
D4.1	M24	WP4 - T4.1 - Aligned Procedures and Operations	n/a	SAGEM (6%), LUTECH (11%), AIT (11%), INNOVA (6%), PIAP (44%) , REGOLA (22%)
D4.2	M24	WP4 - T4.2 - Harmonized Strategy Doctrines and High Level Objectives	n/a	SAGEM (6%), LUTECH (27%) , AIT (12%), INNOVA (6%), PIAP (22%), REGOLA (27%)
D5.1	M30	WP5 - T5.1 - Integration of Layer Specific Profiles	n/a	SAGEM (24%), LUTECH (19%), SRDC (28%) , REGIONE (10%), PIAP (19%)
D5.2	M30	WP5 - T5.2 - Integration of Software Components	n/a	SAGEM (15%), LUTECH (50%) , AIT (7%), SRDC (21%), PIAP (7%)
D5.3	M26	WP5 - T5.3 - Functional Tests and End-User Validation of C2-SENSE Components (method)	n/a	SAGEM (12%), LUTECH (12%), INNOVA (26%), REGOLA (50%)
D5.4	M30	WP5 - T5.3 - Functional Tests and End-User Validation of C2-SENSE Components (results)	n/a	SAGEM (12%), LUTECH (12%), INNOVA (26%), REGOLA (50%)
D6.1	M36	WP6 - T6.1 - Conformance Testing Mechanisms	SRDC (TestBATN)	SAGEM (18%), SRDC (64%) , PIAP (18%)
D6.2	M36	WP6 - T6.2 - Interoperability Testing Mechanisms	n/a	SAGEM (10%), SRDC (70%) , PIAP (20%)
D6.3	M36	WP6 - T6.3 - Certification Guidelines	n/a	SAGEM (14%), SRDC (43%) , PIAP (43%)
D7.1	M4	WP7 - T7.1 - Requirement of C2-SENSE Pilot Application	n/a	SAGEM (5%), LUTECH (27%), REGIONE (42%) , INNOVA (5%), REGOLA (21%)
D7.2	M16	WP7 - T7.2 - Design of C2-SENSE Pilot Application - Flood	n/a	SAGEM (5%), LUTECH (21%), SRDC (4%), REGIONE (21%), INNOVA (25%) , PIAP (8%), REGOLA (16%)
D7.3	M30	WP7 - T7.3 - Deployment of C2-SENSE Pilot Application - Flood Scenario	n/a	SAGEM (4%), LUTECH (22%), SRDC (4%), REGIONE (17%), INNOVA (27%) , PIAP (9%), REGOLA (17%)
D7.4	M18	WP7 - T7.4 - Pilot Application Validation	n/a	SAGEM (8%), LUTECH (20%), SRDC (4%), REGIONE (24%) , INNOVA (4%), REGOLA (40%)
D7.5	M36	WP7 - T7.4 - Pilot Application Validation	n/a	SAGEM (8%), LUTECH (20%), SRDC (4%), REGIONE (24%) , INNOVA (4%), REGOLA (40%)

The following table maps the IPR Sheet assets with the list of deliverables as a first bridge towards the identification and consolidation of exploitation assets.

Table 3 – IPR Sheet assets

Assets (from IPR)	Deliverable	Assets (from IPR)	Deliverable
PIAP-TAN-5 PIAP-INTAN-2	D2.1	SRDC-TAN-9 SRDC-INTAN-11	D5.1
AIT-TAN-{2,3} AIT-INTAN-{6,7} SAGEM-INTAN-{1,2,3,4} LUT-INTAN-{1,2,3,4} AIT-INTAN-{1,2,3,4} SRDC-INTAN{1,2,3,4,5,6}	D2.2	LUT-TAN-3 LUT-INTAN-{7,8}	D5.2
SRDC-INTAN-6 SRDC-TAN-3	D2.3	REGOLA-INTAN-1	D5.3
PIAP-TAN-{1,2,3,4} PIAP-INTAN-1	D3.1	REGOLA-TAN-1	D5.4
LUT-TAN-2 LUT-INTAN-{5,6} AIT-TAN-4 AIT-INTAN-8 SAGEM-TAN-6 SAGEM-INTAN-{5,6} LUT-TAN-5 LUT-INTAN-{9,10}	D3.2	SRDC-TAN-10 SRDC-INTAN-12	D6.1
SAGEM-TAN-6 SAGEM-INTAN-{5,6} LUT-TAN-5 LUT-INTAN-{9,10}	D3.3	SRDC-TAN-11 SRDC-INTAN-13	D6.2
SRDC-TAN-{4,5} SRDC-INTAN-{7,8}	D3.4	SRDC-INTAN-14 PIAP-INTAN-3	D6.3
AIT-TAN-{5,6,7,8,9,11,12,13} AIT-INTAN-{9,10} SRDC-TAN-{6,7,8} SRDC-INTAN-{9,10}	D3.5	REGIONE-INTAN-{1,2}	D7.1
PIAP-INTAN-4 PIAP-TAN-6	D4.1	INNOVA-INTAN-{3,4}	D7.2
LUTECH-INTAN-11 LUTECH-TAN-7	D4.2	INNOVA-INTAN-{5,6}	D7.3
		REGOLA-TAN-2 REGOLA-INTAN-2	D7.4
		REGOLA-TAN-3 REGOLA-INTAN-3	D7.5

At the same time, in the exploitation task we identified four main packages which could drive our next exploitation strategy: Consultancy, Open Source, ICT (Proprietary) and Pilot Showcase. They are described in D8.1.

The correspondence between Deliverables and such exploitable assets is reported in the following table.

Table 4 – Deliverables vs Exploitable Assets

Exploitable Assets	Deliverable	Exploitable Assets	Deliverable
METH ASSET #1 (MA.1)	D2.1	C2-SENS ASSET #3 (C2-SENS.3)	D5.1
METH ASSET #2 (MA.2)	D2.2	C2-SENS ASSET #3 (C2-SENS.3)	D5.2
METH ASSET #1 (MA.1)	D2.3	METH ASSET #2 (MA.2)	D5.3
OSS ASSET #1 (OSS.1)	D3.1	PILOT ASSET #1 (PILOT.1)	D5.4
OSS ASSET #1 (OSS.1)	D3.2	METH ASSET #2 (MA.2)	D6.1
OSS ASSET #1 (OSS.1)	D3.3	METH ASSET #2 (MA.2)	D6.2
OSS ASSET #1 (OSS.1)	D3.4	METH ASSET #2 (MA.2)	D6.3
OSS ASSET #1 (OSS.1)	D3.5	PILOT ASSET #1 (PILOT.1)	D7.1
OSS ASSET #2 (OSS.2)	D4.1	PILOT ASSET #2 (PILOT.2)	D7.2
OSS ASSET #2 (OSS.2)	D4.2	PILOT ASSET #2 (PILOT.2)	D7.3
C2-SENS ASSET #2 (C2-SENS.1)	D3.2	PILOT ASSET #1 (PILOT.1)	D7.4
C2-SENS ASSET #2 (C2-SENS.1)	D3.3	PILOT ASSET #1 (PILOT.1)	D7.5
C2-SENS ASSET #2 (C2-SENS.1)	D3.4		
C2-SENS ASSET #2 (C2-SENS.1)	D3.5		
C2-SENS ASSET #1 (C2-SENS.2)	D4.1		
C2-SENS ASSET #1 (C2-SENS.2)	D4.2		

5 C2-SENSE LICENSING VISION

Though exploitation routes will be clearly identified in D8.2, the Consortium has already considered the grant of license an effective tool to exploit IP generated in C2-SENSE and is therefore planning to make use of IP licensing for commercializing the generated foreground, in particular in the form of “licensing-out” technology.

This initial commercialization choice, that will be combined with others, derives from a set of reasons. In fact, the Partners consider licensing as a cost-effective route, that allows them to retain the IP in the given result and to derive an economic benefit from it, as well as to gain access to new markets, which otherwise may be inaccessible or accessible with difficulties, in a more effective manner and with greater ease than on their own. Moreover, the grant of licenses may imply some degree of control over innovations and also over the direction and evolution of technologies where interoperability is important, like in C2-SENSE. Finally, most of them successfully experimented it for e

Nevertheless it's of paramount importance to select the most suitable licensing model/s, in order encourage early adoption of C2-SENSE results and their rapid integration into commercial products. Therefore the Consortium intends to agree on a common approach to licensing, that also envisions the potential implications of the current obligations imposed by the main type of open source/proprietary software licenses, for instance as regards the background. Nonetheless, despite the elaboration of the common C2-SENSE policy framework in relation to licensing, that may be considered as a recommended default option, each of the Partners, in its role of IP owner or co-owner, preserves its own position an freedom on the IPR instruments to adopt.

Partners will have to deepen the applicability of different license types with special regard to the intended C2-SENSE assets. Considering that most of the results will be software, this process have to deal with source code, test code, documentation, etc.

One well-known categorization of OS licenses, relevant for C2-SENSE also after the project lifetime and referring to all licenses approved as official Open Source licenses by the Open Source Initiative, is as follows:

- **copyleft software licenses:** they contain a copyleft provision that ensures that all copies and further development may not be distributed or sold as a proprietary software and contain the same distribution terms. This kind of licenses includes:
 - o **strong copyleft licenses:** e.g. GNU General Public License (GPL), AGPL Version 3. They do not allow any derived work to become proprietary because require that all derivative work is published under the same license;
 - o **weak copyleft licenses:** e.g. Mozilla Public License (MPL), GNU Lesser General Public License (LGPL) and Eclipse Public License (EPL). They allow a combination of the original software with extensions under different terms of a license. Software under this kind of license may be used within proprietary software.
- **Non-copyleft software licenses,** like BSD-esque licenses and Apache License. In this case the Open Source software may be integrated into proprietary software or extended, and sold or distributed as proprietary software. Therefore, non-copyleft software may become proprietary software and it is

also possible to add additional restrictions to it. This kind of licenses is permissive and is without copyleft effect: such licenses grant all rights and privileges of an OS license to the user, without restrictions or further conditions as to which license has to be used subsequently in case of modifications. The modified versions of the software may be distributed as proprietary software.

The following table lists the most widespread OS licenses:

Table 5 – OS licenses

License	License Type
GNU General Public License (GPL) 2.0	Strong Copyleft
GNU General Public License (GPL) 3.0	Strong Copyleft
GNU Lesser Public License (LGPL) 2.1	Weak Copyleft
Mozilla Public License (MPL) 1.1	Weak Copyleft
Eclipse Public License (EPL)	Weak Copyleft
GNU Lesser Public License (LGPL) 3.0	Weak Copyleft
Artistic License (Perl)	Permissive
BSD License 2.0	Permissive
Apache License 2.0	Permissive
MIT License	Permissive

According to the Black Duck Knowledge Base⁷, including data about over 200,000 projects, the most popular OS software license currently is MIT License (25%), followed by GNU General Public License (GPL) 2.0 (22%) and then by Apache License (16%).

For C2-SENSE it is important to consider compatibility between licenses applied for the individual parts, because also commercial routes are relevant in C2-SENSE exploitation streams and some background is proprietary.

Compatibilities issues will therefore carefully be taken into consideration by the Partners in the choice of the type of license, given that the infrastructure under development in C2-SENSE is based on background that not always is open source software. For instance, the Protocol Interoperability development is based on Sensor Protocol Adapter – Anysen (not open source), the Conformance Testing Mechanisms development relies upon TestBATN (not open source), as well as the Information Interoperability is built by using Semantic MDR (not open source). In the next release of this document, to be released at the end of the project, Partners are expected to select for each of the results the respective license. In case of use of a piece

⁷ <http://www.blackducksoftware.com/oss/licenses>

of software (e.g. background) under a strong copyleft license background, considering the viral “character of this kind of licenses, the whole result must again be licensed under the same type (e.g. GPL). This kind of license is incompatible with most other open source licenses. Furthermore, two different copyleft licenses are usually not compatible. That means that it is not allowed to merge source code from two different licenses. Permissive Non-Copyleft Licenses, given their high degree of freedom of choice in developing open free or proprietary software, are expected to be rather attractive for commercial vendors of C2-SENSE compliant solutions. In case individual elements may be partially decoupled, this will make easier the choice of individual compatible licenses, while in other cases the link among software elements has implications on the choice of licenses and, therefore, there is the need to consider license compatibility among these elements. Generally speaking, though the compatibility needs to be checked by the Partners in the specific case, the more permissive licensed software may be converted to the more permissive licensed software to stronger protective licenses, but not the other way round. In such a case the stronger license usually needs to be applied.

In the C2-SENSE project, several factors, mainly related to the need of license compatibility, argue for the usage of a multi-license model:

- project consortium composition, consisting of both academic software developers and of businesses, that both pursue different intentions regarding the exploitation of the foreground;
- development of several classes of software components during the project lifetime, each of them requiring an appropriate license compatible with the other classes;

Project Partners may profitably adopt a business models making use of the multi-licensing paradigm, thereby combining two (or even more) licenses. Multi-licensing allows them to properly address license incompatibility, being an option to allow code that are under differently licensed free software licenses to be combined, or to provide users the preference to pick a license.

The well-known multi-license Mozilla Tri-License (MPL/GPL/LGPL) is a prominent example of triple license combination consisting of Mozilla Public License (MPL), GNU General Public License (GPL) and GNU Lesser General Public License (LGPL) for the source code. Such combination seems to be attractive for C2-SENSE results, though there are other possible multi-license combinations⁸. The Mozilla Tri-License is a good tool for creating improved compatibility with other licenses by giving a choice. Partners have to consider the distinction between four different categories of software elements (as well as a list of elements for each of these categories) to be licensed, that was made by the official Mozilla Foundation License Policy (<http://www.mozilla.org/MPL/license-policy.html>).

⁸ Another popular license combination is Perl Multi-License (Artistic License/GPL).

6 THE WAY FORWARD: IPR ROADMAP AND FUTURE PLANS

The next steps and future plans related to IPR issues to be executed till the end of the project are as described in the table below. This table includes, for each of the activity, a brief description, the timeline and the Partners involved, besides some notes.

Table 6 – IPR – The way forward

<i>Name of the Activity</i>	<i>Description/Objectives</i>	<i>Timeline</i>	<i>Partners involved</i>	<i>Other</i>
Patent Search	Double function: <ul style="list-style-type: none"> - taking care not to infringe existing third parties' rights - market analysis and competitive positioning tool 	Every 2 months	IP owner/s, IPR Manager, Project Executive Board and the involved Technology R&D team	<ul style="list-style-type: none"> - The patent search's results are able to prevent or limit the exploitation of C2-SENSE results by identifying potentially relevant patents and published patent applications that may cover one or the other pieces of the expected project results - We intend to use especially Espacenet (http://worldwide.espacenet.com/) - In case of need we'll also conduct additional searches for IP rights and freedom to operate searches (FTO). -
Laboratory Workbooks	Proceeding at the on-going identification, tracing, tracking, and registration of knowledge resulting from C2-SENSE as it is produced	Activity to be realized in conjunction with the on-going development of project results (new entries every time an advancement is realized)	Technology R&D team	<ul style="list-style-type: none"> - Need of balance between time spent keeping the lab book and time spent actually getting the project activities done - Google spreadsheet with an exploitable result-based structure or organised at WP level. It will also be possible to refer to virtual and F2F meeting minutes – including both general and WPs meetings, as well as other technical meetings, if opportune.
IPR Sheet and Consolidated IPR Sheet	Data collector regarding all the contributions, suggestions, directives that, related to the main vision and strategy of the Partner, the IPR focal points consider worth candidating as an IPR object. Collection into the Consolidated IPR Sheet by the IPR Manager	Every 3 months till the end of the project	IPR Focal Points (for IS) and IPR Manager (for IPR Report)	This activity is strongly interrelated with both the IPR tracking system, since it takes into consideration its content, and with the IPR Repository updates, since such updates will move from the IPR Sheets and IPR Report, and, finally, with the overall IPR flowchart and related processes.

<i>Name of the Activity</i>	<i>Description/Objectives</i>	<i>Timeline</i>	<i>Partners involved</i>	<i>Other</i>
IPR Flowchart and IPR-related processes	Processes related to IPR that, moving from the IPR Sheets and IPR Report, and on the basis of the Laboratory Workbooks, move towards the allocation of IP shares among co-owners, as well as towards the final decision on the proposal of registration of patent in relation to an IP asset/ every atomic item	Every 3 months till the end of the project and, in any additional case if needed.	IPR Manager, Project Executive Board, Technology R&D team, WP2 Leader	No doubt should be raised as to which parts of the results are actually proprietary to a given Partner and what parts are accessible under (ideally already negotiated and secured) co- ownership or licensing agreements with other Partners or third parties. This has to be clarified, if necessary, during the process.
Patent registration or other IP application and registration routes	Selection and implementation of the right protection route for every atomic item the Partner/s concerned (owner or co-owners): e.g., for patent, choice between national protection, European Protection, International patent application under the Patent Cooperation Treaty)	After the end of IPR Flowchart with the final decision on the proposal of registration	IP owner/s or WP2 Leader	N/A
Joint Ownership Agreement	Discussion on the key content of the agreement, elaboration of the template with options for the most relevant clauses, strengthening and facilitating signature in case of joint ownership. Partners will establish Joint Ownership Agreements and other IPR agreements that will be reported in the next release of this deliverable (D8.6)	The model will be finalized at month 26 and then the IPR Manager, together with the IPR Focal Points, will promote its adoption in C2-SENSE Consortium	IPR Manager, IPR Focal Points, joint owners of IP assets	The model agreement include different choices for the most significant clauses, to accelerate a common understanding and fine-tuning of IP arrangements related to co-owned results. Such option-based structure for main clauses is directed to facilitate and speed up its adoption in case of joint ownership.
T8.3 Virtual Meeting	Conference call to discuss the main issues related to IPR management in C2-SENSE	Every 3 months till the end of the project, in particular every time the IPR Report will be prepared	IPR Manager, IPR Focal Points, Executive Board, Technology R&D teams, Partners involved in T8.3	N/A
T8.1-T8.3 synergy	Telco, email exchange, bilateral meeting and other tools functional to maintain an active communication flow and to foster the creation of synergies between T8.1 and T8.3.	Continuous activity till the end of the project	Lutech, all Partners	These communication flow and synergy will be facilitated by the fact that the task leader is the same for both: Lutech
Licensing choice	IPR Manager will facilitate Partners' selection of their respective license, eventually by circulating a survey summarizing the main differences between the major	Till the end of the project	Lutech, all Partners	N/A

<i>Name of the Activity</i>	<i>Description/Objectives</i>	<i>Timeline</i>	<i>Partners involved</i>	<i>Other</i>
	license types. The Partners will select the license for their foreground.			

7 INDIVIDUAL CONTRIBUTIONS TO IPR

Here following the individual contributions and proposals for IPR Management.

7.1.1 SAGEM: Foreground

Due to internal authorization procedures, for the time being SAGEM is still investigating internally which are the guidelines to follow for IPR management.

7.1.2 LUTECH - Background

As declared into WP2 – D2.1 – *State of the art*, Lutech brings to the C2-SENSE Consortium the following pre-existing expertise:

- Wso2 ESB (*Enterprise Service Bus*)
- Kafka
- L-TMS
- wHospital
- Activiti

7.1.2.1 LUT-TAN-1: Wso2 ESB (Enterprise Service Bus)

- **Feeder**
 - o These IPR assets have been shared with the Consortium by **LUTECH (Raul Arisi)**, who is part of the IPR Team with the role of IPR Owner for Lutech.
- **Know-how:**
 - o **Name:**
 - **Wso2 ESB (Enterprise Service Bus)**
 - o **UNIQUE ID:**
 - **LUT-TAN-1 (Source Code)**
 - o **Description:**
 - WSO2 Enterprise Service Bus is a lightweight, high performance, and comprehensive ESB. 100% open source, the WSO2 ESB effectively addresses integration standards and supports all integration patterns, enabling interoperability among various heterogeneous systems and business applications.
 - <http://wso2.com/products/enterprise-service-bus/>
 - o **Year of creation:**
 - **2013**
- **Origin**
 - o Since these IPR assets were pre-existing the lifetime of the project, these assets are classified as **Background**.
- **Type:**
 - o **Tangible:**
 - LUT-TAN-1 (Source Code): it's a tangible asset, since it's an open source software (**Source Code**).
- **Source of know-how:**
 - o This IPR asset belongs to the Open Source Community.
- **Owner of know-how:**
 - o Since the know-how has been developed by the Open Source Community, the ownership of the related knowledge remains to the Open Source Community.
- **Scope of usage:**
 - o **INTERNAL:** For Internal usage, **all the Partners** in the Consortium have **free full access** to all the parts of the IPR asset.
 - o **EXTERNAL:** For External usage, **all the Partners** in the Consortium have **free full access** to all the parts of the IPR asset.

- **Users of know-how (Access Rights):**
 - o See above “*Scope of usage*”

- **Protection – Proposal:**
 - o N/A: Since this IPR asset belongs to the Open Source Community, there’s no proposal to the Consortium.

- **Protection - Final Decision:**
 - o Since this IPR asset belongs to the Open Source Community, there’s just a communication to the Consortium that the IPR asset is **fully accessible**.

- **Time**
 - o **During Project LifeTime: all the Partners** in the Consortium have **free full access** to LUT-TAN-1 (Source Code).
 - o **12-months After Project LifeTime: all the Partners** in the Consortium have **free full access** to LUT-TAN-1 (Source Code).
 - o **Ever After Project LifeTime: all the Partners** in the Consortium have **free full access** to LUT-TAN-1 (Source Code).

7.1.2.2 LUT-TAN-4: Kafka

- **Feeder**
 - These IPR assets have been shared with the Consortium by **LUTECH (Raul Arisi)**, who is part of the IPR Team with the role of IPR Owner for Lutech.

- **Know-how:**
 - **Name:**
 - **Kafka**
 - **UNIQUE ID:**
 - **LUT-TAN-4 (Source Code)**
 - **Description:**

Apache Kafka is publish-subscribe messaging rethought as a distributed commit log.

 - **Fast**
 - A single Kafka broker can handle hundreds of megabytes of reads and writes per second from thousands of clients.
 - **Scalable**
 - Kafka is designed to allow a single cluster to serve as the central data backbone for a large organization. It can be elastically and transparently expanded without downtime. Data streams are partitioned and spread over a cluster of machines to allow data streams larger than the capability of any single machine and to allow clusters of coordinated consumers
 - **Durable**
 - Messages are persisted on disk and replicated within the cluster to prevent data loss. Each broker can handle terabytes of messages without performance impact.
 - **Distributed by Design**
 - Kafka has a modern cluster-centric design that offers strong durability and fault-tolerance guarantees
 - <http://kafka.apache.org/>
 - **Year of creation:**
 - **2011**

- **Origin**
 - Since these IPR assets were pre-existing the lifetime of the project, these assets are classified as **Background**.

- **Type:**
 - **Tangible:**
 - LUT-TAN-4 (Source Code): it's a tangible asset, since it's an open source software (**Source Code**).

- **Source of know-how:**
 - This IPR asset belongs to the Open Source Community.

- **Owner of know-how:**
 - Since the know-how has been developed by the Open Source Community, the ownership of the related knowledge remains to the Open Source Community.

- **Scope of usage:**
 - **INTERNAL:** For Internal usage, **all the Partners** in the Consortium have **free full access** to all the parts of the IPR asset.

- **EXTERNAL:** For External usage, **all the Partners** in the Consortium have **free full access** to all the parts of the IPR asset.
- **Users of know-how (Access Rights):**
 - See above “*Scope of usage*”
- **Protection – Proposal:**
 - N/A: Since this IPR asset belongs to the Open Source Community, there’s no proposal to the Consortium.
- **Protection - Final Decision:**
 - Since this IPR asset belongs to the Open Source Community, there’s just a communication to the Consortium that the IPR asset is **fully accessible**.
- **Time**
 - **During Project LifeTime:** **all the Partners** in the Consortium have **free full access** to LUT-TAN-4 (Source Code).
 - **12-months After Project LifeTime:** **all the Partners** in the Consortium have **free full access** to LUT-TAN-4 (Source Code).
 - **Ever After Project LifeTime:** **all the Partners** in the Consortium have **free full access** to LUT-TAN-4 (Source Code).

7.1.2.3 LUT-TAN-6: L-TMS

- **Feeder**
 - These IPR assets have been shared with the Consortium by **LUTECH (Raul Arisi)**, who is part of the IPR Team with the role of IPR Owner for Lutech.
- **Know-how:**
 - **Name:**
 - **L-TMS (Lutech – Threat Management System)**
 - **UNIQUE ID:**
 - **LUT-TAN-6 (Source Code)**
 - **Description:**
 - Lutech Threat Management System (TMS) is a proprietary platform: an innovative module of Breach Detection, Intelligence & Response, currently operating on many customers, that is the result of the R&D of the Lutech’s Security Competence Center.
 - **Year of creation:**
 - **2010**
- **Origin**
 - Since these IPR assets were pre-existing the lifetime of the project, these assets are classified as **Background**.
- **Type:**
 - **Tangible:**
 - LUT-TAN-6 (Source Code): it’s a tangible asset, since Lutech have developed software (**Source Code**).
- **Source of know-how:**
 - The only Partner that has contributed to the development of this IPR asset is: **LUTECH**.
- **Owner of know-how:**
 - Since the know-how is developed by the source Partner, the ownership of the related knowledge remains to the source Partner.
- **Scope of usage:**
 - **INTERNAL:** For Internal usage, only the source Partners in the Consortium have **free full access** to all the parts of the IPR asset.
 - **EXTERNAL:** For External usage, only the source Partner has **free full access** to all the parts of the IPR asset.
- **Users of know-how (Access Rights):**
 - See above “*Scope of usage*”
- **Protection – Proposal:**
 - N/A: Since this IPR asset is pre-existing the lifetime of the Project, there’s no proposal to the Consortium.
- **Protection - Final Decision:**
 - N/A: Since this IPR asset is pre-existing the lifetime of the Project, there’s just a communication to the Consortium.
- **Time**

- **During Project LifeTime:** only the source Partners in the Consortium have **free full access** to LUT-TAN-6 (**Source Code**).
- **12-months After Project LifeTime:** only the source Partners have **free full access** to LUT-TAN-6 (**Source Code**). All the other Partners have to act according the finally decided protection (see above).
- **Ever After Project LifeTime:** only the source Partners have **free full access** to LUT-TAN-6 (**Source Code**). All the other Partners have to act according the finally decided protection (see above).

7.1.2.4 LUT-TAN-7: wHospital

- **Feeder**
 - o These IPR assets have been shared with the Consortium by **LUTECH (Raul Arisi)**, who is part of the IPR Team with the role of IPR Owner for Lutech.

- **Know-how:**
 - o **Name:**
 - **wHospital**
 - o **UNIQUE ID:**
 - **LUT-TAN-7 (Source Code)**
 - o **Description:**
 - Lutech wHospital is a proprietary platform: a healthcare web application framework to build Electronic Health Records (EHR) that allows doctors and nurses to handle their mainstream activities via web-based EHR.
 - <http://www.lutech.it/practices/whospital/?lang=en>
 - o **Year of creation:**
 - **2009**

- **Origin**
 - o Since these IPR assets were pre-existing the lifetime of the project, these assets are classified as **Background**.

- **Type:**
 - o **Tangible:**
 - LUT-TAN-7 (Source Code): it's a tangible asset, since Lutech have developed software (**Source Code**).

- **Source of know-how:**
 - o The only Partner that has contributed to the development of this IPR asset is: **LUTECH**.

- **Owner of know-how:**
 - o Since the know-how is developed by the source Partner, the ownership of the related knowledge remains to the source Partner.

- **Scope of usage:**
 - o **INTERNAL:** For Internal usage, only the source Partners in the Consortium have **free full access** to all the parts of the IPR asset.
 - o **EXTERNAL:** For External usage, only the source Partner has **free full access** to all the parts of the IPR asset.

- **Users of know-how (Access Rights):**
 - o See above "*Scope of usage*"

- **Protection – Proposal:**
 - o N/A: Since this IPR asset is pre-existing the lifetime of the Project, there's no proposal to the Consortium.

- **Protection - Final Decision:**
 - o N/A: Since this IPR asset is pre-existing the lifetime of the Project, there's just a communication to the Consortium.

- **Time**

- **During Project LifeTime:** only the source Partners in the Consortium have **free full access** to LUT-TAN-7 (**Source Code**).
- **12-months After Project LifeTime:** only the source Partners have **free full access** to LUT-TAN-7 (**Source Code**). All the other Partners have to act according the finally decided protection (see above).
- **Ever After Project LifeTime:** only the source Partners have **free full access** to LUT-TAN-7 (**Source Code**). All the other Partners have to act according the finally decided protection (see above).

7.1.2.5 LUT-TAN-8: Activiti

- **Feeder**
 - o These IPR assets have been shared with the Consortium by **LUTECH (Raul Arisi)**, who is part of the IPR Team with the role of IPR Owner for Lutech.
- **Know-how:**
 - o **Name:**
 - **Activiti BPM Platform**
 - o **UNIQUE ID:**
 - **LUT-TAN-8 (Source Code)**
 - o **Description:**
 - Activiti is a light-weight workflow and Business Process Management (BPM) Platform targeted at business people, developers and system admins. Its core is a super-fast and rock-solid BPMN 2 process engine for Java. It's open-source and distributed under the Apache license. Activiti runs in any Java application, on a server, on a cluster or in the cloud. It integrates perfectly with Spring, it is extremely lightweight and based on simple concepts.
 - o **Year of creation:**
 - **2009**
- **Origin**
 - o Since these IPR assets were pre-existing the lifetime of the project, these assets are classified as **Background**.
- **Type:**
 - o **Tangible:**
 - **LUT-TAN-8 (Source Code):** it's a tangible asset, since it's an open source software (**Source Code**).
- **Source of know-how:**
 - o This IPR asset belongs to the Open Source Community Apache License.
- **Owner of know-how:**
 - o Since the know-how has been developed by the Open Source Community, the ownership of the related knowledge remains to the Open Source Community.
- **Scope of usage:**
 - o **INTERNAL:** For Internal usage, **all the Partners** in the Consortium have **free full access** to all the parts of the IPR asset.
 - o **EXTERNAL:** For External usage, **all the Partners** in the Consortium have **free full access** to all the parts of the IPR asset.
- **Users of know-how (Access Rights):**
 - o See above "*Scope of usage*"
- **Protection – Proposal:**
 - o N/A: Since this IPR asset belongs to the Open Source Community, there's no proposal to the Consortium.
- **Protection - Final Decision:**
 - o Since this IPR asset belongs to the Open Source Community, there's just a communication to the Consortium that the IPR asset is **fully accessible**.

- **Time**
 - **During Project LifeTime: all the Partners** in the Consortium have **free full access** to LUT-TAN-8 (Source Code).
 - **12-months After Project LifeTime: all the Partners** in the Consortium have **free full access** to LUT-TAN-8 (Source Code).
 - **Ever After Project LifeTime: all the Partners** in the Consortium have **free full access** to LUT-TAN-8 (Source Code).

7.1.3 LUTECH - Foreground

Since Lutech is a major contributor to the following tasks:

- WP3
 - o T3.2 - Protocol Interoperability
 - o T3.3 - Data/Object Model Interoperability
- WP4
 - o T4.1 - Aligned Procedures and Operations
 - o T4.2 - Harmonized Strategy Doctrines and High Level Objectives
- WP5 - T5.2 - Integration of Software Components

Lutech is proposing to rule the related IPR Foreground assets.

7.1.3.1 WP3 - T3.2 - Protocol Interoperability: LUT-TAN-2, LUT-INTAN-5, LUT-INTAN-6

- **Feeder**
 - o These IPR assets have been proposed to the Consortium by **LUTECH (Raul Arisi)**, who is part of the IPR Team with the role of IPR Owner for Lutech.
- **Know-how:**
 - o **Name:**
 - **WP3 - T3.2 - Protocol Interoperability**
 - o **UNIQUE ID:**
 - **LUT-TAN-2 (Source Code)**
 - **LUT-INTAN-5 (Experience - Soft-IP)**
 - **LUT-INTAN-6 (Methodology)**
 - o **Description:**
 - Achieving the protocol interoperability of emergency applications/systems and sensors using heterogeneous protocols can be reached by C2-SENSE using Web service protocols for this layer by exposing the proprietary services of emergency applications and organizations as “Web services”.
 - o **Year of creation:**
 - **2016 (Month 24 – Mar 2016)**
- **Origin**
 - o Since these IPR assets will be developed during the lifetime of the project, these assets are classified as **Foreground**.
- **Type:**
 - o **Tangible:**
 - LUT-TAN-2 (Source Code): it’s a tangible asset, since Lutech will develop Data Integrators using Background components, that implies to develop **Source Code**.
 - o **Intangible:**
 - LUT-INTAN-5 (Experience - Soft-IP), LUT-INTAN-6 (Methodology): while developing the tangible part of this asset, Lutech will create also Intangible assets, like **Experience - Soft-IP** and a **Methodology** to approach Protocol Interoperability.
- **Source of know-how:**
 - o The Partners that will contribute to the development of the Protocol Adapters are: **SAGEM, LUTECH, AIT**.

- **Owner of know-how:**
 - o Since the know-how is developed by the source Partners, all the Partners in the Consortium have agreed on the fact that the ownership of the related knowledge remains to the source Partners.

- **Scope of usage:**
 - o **INTERNAL:** For Internal usage, **all the Partners** in the Consortium have **free full access** to all the parts of the IPR asset (both tangible and intangible parts).
 - o **EXTERNAL:** For External usage, only the source Partners have **free full access** to all the parts of the IPR asset (both tangible and intangible parts).

- **Users of know-how (Access Rights):**
 - o See above “*Scope of usage*”

- **Protection – Proposal:**
 - o **Tangible:**
 - LUT-TAN-2 (Source Code): the proposal is to protect (**Register**) the tangible part of the IPR asset.
 - o **Intangible:**
 - LUT-INTAN-5 (Experience - Soft-IP): the proposal is **not to protect** part of the intangible part of the IPR asset
 - LUT-INTAN-6 (Methodology): the proposal is to protect (**Register**) part of the intangible part of the IPR asset,

- **Protection - Final Decision:**
 - o **Tangible:**
 - LUT-TAN-2 (Source Code): all the Partners of the Consortium have not agreed on the proposal yet.
 - o **Intangible:**
 - LUT-INTAN-5 (Experience - Soft-IP): all the Partners of the Consortium have not agreed on the proposal.
 - LUT-INTAN-6 (Methodology): all the Partners of the Consortium have not agreed on the proposal yet.

- **Time**
 - o **During Project LifeTime:** **all the Partners** in the Consortium have **free full access** to LUT-TAN-2 (Source Code), LUT-INTAN-5 (Experience - Soft-IP), LUT-INTAN-6 (Methodology).
 - o **12-months After Project LifeTime:** only the source Partners have **free full access** to LUT-TAN-2 (Source Code), LUT-INTAN-5 (Experience - Soft-IP), LUT-INTAN-6 (Methodology). All the other Partners have to act according the finally decided protection (see above).
 - o **Ever After Project LifeTime:** only the source Partners have **free full access** to LUT-TAN-2 (Source Code), LUT-INTAN-5 (Experience - Soft-IP), LUT-INTAN-6 (Methodology). All the other Partners have to act according the finally decided protection (see above).

7.1.3.2 WP3 - T3.3 - Data/Object Model Interoperability: LUT-TAN-5, LUT-INTAN-9, LUT-INTAN-10

- **Feeder**
 - o These IPR assets have been proposed to the Consortium by **LUTECH (Raul Arisi)**, who is part of the IPR Team with the role of IPR Owner for Lutech.

- **Know-how:**
 - o **Name:**
 - **WP3 - T3.3 - Data/Object Model Interoperability**
 - o **UNIQUE ID:**
 - **LUT-TAN-5 (Source Code)**
 - **LUT-INTAN-9 (Experience - Soft-IP)**
 - **LUT-INTAN-10 (Methodology)**
 - o **Description:**
 - The functionality of applications will be wrapped and exposed as Operational Web services whose interfaces will conform to the related standards. In other words, in this task the interfaces (and profiles) of the Operational Web Services identified in Task 3.2 will be developed. An important component that C2-SENSE will support at this layer will be the “Web Service Creator” tool, which will be developed by SAGEM. A Web Service Creator exposes the functionality of legacy systems as Web services based on the identified profile and by creating all the necessary code. Web Service Creator will use **Data Integrators** to convert the data from the legacy emergency systems/applications and sensors to the corresponding standard and they will be developed by LUTECH (It should be noted that the access of the data will be achieved through Protocol Adapters developed in Task 3.2). In this respect, this task covers the development of necessary Web service based Data/Object Model Interoperability Profiles, the implementation of Web Service Creator Tool and Data Integrators.
 - **Year of creation : 2016 (Month 24 – Mar 2016)**

- **Origin**
 - o Since these IPR assets will be developed during the lifetime of the project, these assets are classified as **Foreground**.

- **Type:**
 - o **Tangible:**
 - LUT-TAN-5 (Source Code): it’s a tangible asset, since Lutech will develop Data Integrators using Background components, that implies to develop **Source Code**.
 - o **Intangible:**
 - LUT-INTAN-9 (Experience - Soft-IP), LUT-INTAN-10 (Methodology): while developing the tangible part of this asset, Lutech will create also Intangible assets, like **Experience - Soft-IP** and a **Methodology** to approach Protocol Interoperability.

- **Source of know-how:**
 - o The Partners that will contribute to the development of the Protocol Adapters are: **SAGEM, LUTECH**.

- **Owner of know-how:**
 - o Since the know-how is developed by the source Partners, all the Partners in the Consortium have agreed on the fact that the ownership of the related knowledge remains to the source Partners.

- **Scope of usage:**
 - **INTERNAL:** For Internal usage, **all the Partners** in the Consortium have **free full access** to all the parts of the IPR asset (both tangible and intangible parts).
 - **EXTERNAL:** For External usage, only the source Partners have **free full access** to all the parts of the IPR asset (both tangible and intangible parts).

- **Users of know-how (Access Rights):**
 - See above “*Scope of usage*”

- **Protection – Proposal:**
 - **Tangible:**
 - LUT-TAN-5 (Source Code): the proposal is to protect (**Register**) the tangible part of the IPR asset.
 - **Intangible:**
 - LUT-INTAN-9 (Experience - Soft-IP): the proposal is **not to protect** part of the intangible part of the IPR asset
 - LUT-INTAN-10 (Methodology): the proposal is to protect (**Register**) part of the intangible part of the IPR asset,

- **Protection - Final Decision:**
 - **Tangible:**
 - LUT-TAN-5 (Source Code): all the Partners of the Consortium have not agreed on the proposal yet.
 - **Intangible:**
 - LUT-INTAN-9 (Experience - Soft-IP): all the Partners of the Consortium have not agreed on the proposal.
 - LUT-INTAN-10 (Methodology): all the Partners of the Consortium have not agreed on the proposal yet.

- **Time**
 - **During Project LifeTime:** **all the Partners** in the Consortium have **free full access** to LUT-TAN-5 (Source Code), LUT-INTAN-9 (Experience - Soft-IP), LUT-INTAN-10 (Methodology).
 - **12-months After Project LifeTime:** only the source Partners have **free full access** to LUT-TAN-5 (Source Code), LUT-INTAN-9 (Experience - Soft-IP), LUT-INTAN-10 (Methodology). All the other Partners have to act according the finally decided protection (see above).
 - **Ever After Project LifeTime:** only the source Partners have **free full access** to LUT-TAN-5 (Source Code), LUT-INTAN-9 (Experience - Soft-IP), LUT-INTAN-10 (Methodology). All the other Partners have to act according the finally decided protection (see above).

7.1.3.3 WP4 – T4.1 – Aligned Procedures and Operations: LUT-TAN-9, LUT-TAN-10, LUT-INTAN-11, LUT-INTAN-12

- **Feeder**
 - o These IPR assets have been proposed to the Consortium by **LUTECH (Raul Arisi)**, who is part of the IPR Team with the role of IPR Owner for Lutech.

- **Know-how:**
 - o **Name:**
 - **WP4 – T4.1 - Aligned Procedures and Operations**
 - o **UNIQUE ID:**
 - **LUT-TAN-9 (Source Code)**
 - **LUT-TAN-10 (Source Code)**
 - **LUT-INTAN-11 (Experience - Soft-IP)**
 - o **Description:**
 - Aligned Procedures and Operations layer addresses whether the emergency Partners are familiar with each other's processes and can align their operations. The profiles defined up to this layer are generic in that they are not specific to a country or organization. In this task, the generic C2-SENSE profiles will be customized to specific organizations and specific incidents at the "Aligned Procedures and Operations" level by considering the existing procedures and operations of the organizations involved. This harmonization will be supported through service level agreements (SLA) which are formal contracts between service consumers and providers negotiated prior to service provisioning. C2-SENSE Project will extend SLAs so that they can be used in emergency situations to align the procedures and operations of different Partners. The SLAs will be supported by Operational Level Agreements (OLA). The purpose of the OLA is to help ensure that the underpinning activities that are performed by a number of support team components are clearly aligned to provide the intended SLA.
 - o **Year of creation : 2016 (Month 24 – Mar 2016)**

- **Origin**
 - o Since these IPR assets will be developed during the lifetime of the project, these assets are classified as **Foreground**.

- **Type:**
 - o **Tangible:**
 - LUT-TAN-9 (Source Code): it's a tangible asset, since Lutech will develop Profile Execution Engine using Background components, that implies to develop **Source Code**.
 - LUT-TAN-10 (Source Code): it's a tangible asset, since Lutech will develop SLA Negotiation Tool using Background components, that implies to develop **Source Code**.
 - o **Intangible:**
 - LUT-INTAN-11 (Experience - Soft-IP), LUT-INTAN-12 (Methodology): while developing the tangible part of this asset, Lutech will create also Intangible assets, like **Experience - Soft-IP** and a **Methodology** to approach Aligned Procedures and Operations.

- **Source of know-how:**
 - o The Partner that will contribute to the development of the Profile Execution Engine is: **LUTECH**.

- The Partner that will contribute to the development of the SLA Negotiation Tool is: **LUTECH.**
- **Owner of know-how:**
 - Since the know-how is developed by the source Partners, all the Partners in the Consortium have agreed on the fact that the ownership of the related knowledge remains to the source Partners.
- **Scope of usage:**
 - **INTERNAL:** For Internal usage, **all the Partners** in the Consortium have **free full access** to all the parts of the IPR asset (both tangible and intangible parts).
 - **EXTERNAL:** For External usage, only the source Partners have **free full access** to all the parts of the IPR asset (both tangible and intangible parts).
- **Users of know-how (Access Rights):**
 - See above “*Scope of usage*”
- **Protection – Proposal:**
 - **Tangible:**
 - LUT-TAN-9 (Source Code): the proposal is to protect (**Register**) the tangible part of the IPR asset.
 - LUT-TAN-10 (Source Code): the proposal is to protect (**Register**) the tangible part of the IPR asset.
 - **Intangible:**
 - LUT-INTAN-11 (Experience - Soft-IP): the proposal is **not to protect** part of the intangible part of the IPR asset
 - LUT-INTAN-12 (Methodology): the proposal is to protect (**Register**) part of the intangible part of the IPR asset,
- **Protection - Final Decision:**
 - **Tangible:**
 - LUT-TAN-9 (Source Code): all the Partners of the Consortium have not agreed on the proposal yet.
 - LUT-TAN-10 (Source Code): all the Partners of the Consortium have not agreed on the proposal yet.
 - **Intangible:**
 - LUT-INTAN-11 (Experience - Soft-IP): all the Partners of the Consortium have not agreed on the proposal.
 - LUT-INTAN-12 (Methodology): all the Partners of the Consortium have not agreed on the proposal yet.
- **Time**
 - **During Project LifeTime:** **all the Partners** in the Consortium have **free full access** to LUT-TAN-7, LUT-TAN-8 (Source Code), LUT-INTAN-11 (Experience - Soft-IP), LUT-INTAN-12 (Methodology).
 - **12-months After Project LifeTime:** only the source Partners have **free full access** to LUT-TAN-7, LUT-TAN-8 (Source Code), LUT-INTAN-11 (Experience - Soft-IP), LUT-INTAN-12 (Methodology). All the other Partners have to act according the finally decided protection (see above).
 - **Ever After Project LifeTime:** only the source Partners have **free full access** to LUT-TAN-7, LUT-TAN-8 (Source Code), LUT-INTAN-11 (Experience - Soft-IP), LUT-INTAN-12 (Methodology). All the other Partners have to act according the finally decided protection (see above).

7.1.3.4 WP4 – T4.2 – Harmonized Strategy Doctrines and High Level Objectives: LUT-INTAN-13

- **Feeder**
 - o These IPR assets have been proposed to the Consortium by **LUTECH (Raul Arisi)**, who is part of the IPR Team with the role of IPR Owner for Lutech.
- **Know-how:**
 - o **Name:**
 - **WP4 – T4.2 - Harmonized Strategy Doctrines and High Level Objectives**
 - o **UNIQUE ID:**
 - **LUT-INTAN-13 (Experience - Soft-IP)**
 - o **Description:**
 - “Harmonised Strategy/Doctrines” layer involves aligning the cultural and social backgrounds of the emergency Partners and “High Level Objectives” level involve sharing the same high level objectives. In developing these layers complementarity with the *'Framework Programme on Security and Safeguarding Liberties' (SSL)*, which focuses on actions related to policy and operational work will be ensured.
 - o **Year of creation : 2016 (Month 24 – Mar 2016)**
- **Origin**
 - o Since these IPR assets will be developed during the lifetime of the project, these assets are classified as **Foreground**.
- **Type:**
 - o **Intangible:**
 - LUT-INTAN-13 (Experience - Soft-IP) while developing the tangible part of this asset, Lutech will create also Intangible assets, like **Experience - Soft-IP** to approach Harmonized Strategy Doctrines and High Level Objectives.
- **Source of know-how:**
 - o The Partners that will contribute to the development of the Harmonized Strategy Doctrines and High Level Objectives are: **LUTECH**.
- **Owner of know-how:**
 - o Since the know-how is developed by the source Partners, all the Partners in the Consortium have agreed on the fact that the ownership of the related knowledge remains to the source Partners.
- **Scope of usage:**
 - o **INTERNAL:** For Internal usage, **all the Partners** in the Consortium have **free full access** to all the parts of the IPR asset (both tangible and intangible parts).
 - o **EXTERNAL:** For External usage, only the source Partners have **free full access** to all the parts of the IPR asset (both tangible and intangible parts).
- **Users of know-how (Access Rights):**
 - o See above “*Scope of usage*”
- **Protection – Proposal:**
 - o **Intangible:**
 - LUT-INTAN-13 (Experience - Soft-IP): the proposal is **not to protect** part of the intangible part of the IPR asset
- **Protection - Final Decision:**
 - o **Intangible:**

- LUT-INTAN-13 (Experience - Soft-IP): all the Partners of the Consortium have not agreed on the proposal.

- **Time**

- **During Project LifeTime:** all the Partners in the Consortium have **free full access** to LUT-INTAN-13 (Experience - Soft-IP).
- **12-months After Project LifeTime:** only the source Partners have **free full access** to LUT-INTAN-13 (Experience - Soft-IP). All the other Partners have to act according the finally decided protection (see above).
- **Ever After Project LifeTime:** only the source Partners have **free full access** to LUT-INTAN-13 (Experience - Soft-IP). All the other Partners have to act according the finally decided protection (see above).

7.1.3.5 WP5 - T5.2 - Integration of Software Components: LUT-TAN-3, LUT-INTAN-7, LUT-INTAN-8

- **Feeder**
 - These IPR assets have been proposed to the Consortium by **LUTECH (Raul Arisi)**, who is part of the IPR Team with the role of IPR Owner for Lutech.
- **Know-how:**
 - **Name:**
 - **WP5 - T5.2 - Integration of Software Components**
 - **UNIQUE ID:**
 - **LUT-TAN-3 (Source Code)**
 - **LUT-INTAN-7 (Experience - Soft-IP)**
 - **LUT-INTAN-8 (Methodology)**
 - **Description:**
 - The implemented C2-SENSE components will be integrated into C2-SENSE Framework. In the integration task, the interfaces defined in the Conceptual Design of the C2-SENSE System in WP2 will be utilized.
 - **Year of creation:**
 - **2016 (Month 30 – Sept 2016)**
- **Origin**
 - Since these IPR assets will be developed during the lifetime of the project, these assets are classified as **Foreground**.
- **Type:**
 - **Tangible:**
 - LUT-TAN-3 (Source Code): it's a tangible asset, since Lutech will integrate components, that implies to develop **Source Code**.
 - **Intangible:**
 - LUT-INTAN-7 (Experience - Soft-IP), LUT-INTAN-8 (Methodology): while developing the tangible part of this asset, Lutech will create also Intangible assets, like **Experience - Soft-IP** and a **Methodology** to approach Protocol Interoperability.
- **Source of know-how:**
 - The Partners that will contribute to the integration of the components are: **SAGEM, LUTECH, AIT, SRDC, PIAP**.
- **Owner of know-how:**
 - Since the know-how is developed by the source Partners, all the Partners in the Consortium have agreed on the fact that the ownership of the related knowledge remains to the source Partners.
- **Scope of usage:**
 - **INTERNAL:** For Internal usage, **all the Partners** in the Consortium have **free full access** to all the parts of the IPR asset (both tangible and intangible parts).
 - **EXTERNAL:** For External usage, only the source Partners have **free full access** to all the parts of the IPR asset (both tangible and intangible parts).
- **Users of know-how (Access Rights):**
 - See above “*Scope of usage*”
- **Protection – Proposal:**

- **Tangible:**
 - LUT-TAN-3 (Source Code): the proposal is to protect (**Register**) the tangible part of the IPR asset.
 - **Intangible:**
 - LUT-INTAN-7 (Experience - Soft-IP): the proposal is **not to protect** part of the intangible part of the IPR asset.
 - LUT-INTAN-8 (Methodology): the proposal is to protect (**Register**) part of the intangible part of the IPR asset.
- **Protection - Final Decision:**
- **Tangible:**
 - LUT-TAN-3 (Source Code): all the Partners of the Consortium have not agreed on the proposal yet.
 - **Intangible:**
 - LUT-INTAN-7 (Experience - Soft-IP): all the Partners of the Consortium have not agreed on the proposal.
 - LUT-INTAN-8 (Methodology): all the Partners of the Consortium have not agreed on the proposal yet.
- **Time**
- **During Project LifeTime:** **all the Partners** in the Consortium have **free full access** to LUT-TAN-3 (Source Code), LUT-INTAN-7 (Experience - Soft-IP), LUT-INTAN-8 (Methodology).
 - **12-months After Project LifeTime:** only the source Partners have **free full access** to LUT-TAN-3 (Source Code), LUT-INTAN-7 (Experience - Soft-IP), LUT-INTAN-8 (Methodology). All the other Partners have to act according the finally decided protection (see above).
 - **Ever After Project LifeTime:** only the source Partners have **free full access** to LUT-TAN-3 (Source Code), LUT-INTAN-7 (Experience - Soft-IP), LUT-INTAN-8 (Methodology). All the other Partners have to act according the finally decided protection (see above).

7.1.4 AIT - Background Knowledge (INCLUDED)

AIT brings to the C2-SENSE Consortium previous expertise developed in the following areas:

- *Development, Implementation and operation of Environmental Measurement Networks*
- *Safety and Security*

7.1.4.1 AIT-INTAN-1 and INTAN-2- Designing, building and operating Environmental Measurement Networks

- **Feeder**
 - o These IPR assets have been shared with the Consortium by **AIT (Gerald Schimak)**, who is part of the IPR Team with the role of IPR Owner for AIT.
- **Know-how:**
 - o **Name:**
 - **Designing, building and operating Environmental Measurement Networks**
 -
 - o **UNIQUE ID:**
 - **AIT-INTAN-1 (Experience - Soft-IP)**
 - **AIT-INTAN-2 (Methodology)**
 - o **Description:**
 - AIT has 20 years of experience with designing, building and operating
 - Environmental measurement networks, including both the technical knowledge needed to build and maintain the complete sensor network with accompanying software.
 - **Experience**
 - Methods, concepts and modelling of Environmental Measurement and Monitoring networks on national but also international scale, especially related integration of sensors and external monitoring networks.
 - **SOLUTIONS**
 - Set up of regional, national and international environmental monitoring systems (for example systems are operational in Austria, Switzerland, Indonesia).
 - Air/Water/Soil Monitoring Systems
 - Emission Inventories
 - Maintenance of systems
 - Data Protection
 - Application Security
 - o **Year of creation:**
 - **1990- ongoing business**
- **Origin**
 - o Since these IPR assets were pre-existing the lifetime of the project, these assets are classified as **Background Knowledge (INCLUDED)**.
- **Type:**
 - o **Intangible:**
 - AIT-INTAN-1 (Experience - Soft-IP): AIT has developed the experience and skills in the area of designing, building and operating Environmental Measurement Networks during its regular business operations.
 - AIT-INTAN-2 (Methodology): AIT has developed the experience and skills in the area of **designing, building and operating Environmental Measurement Networks** during its regular business operations.

- **Source of know-how:**
 - o The only Partner that has contributed to the development of this IPR asset is: **AIT**.
- **Owner of know-how:**
 - o Since the know-how is developed by the source Partner, the ownership of the related knowledge remains to the source Partner.
- **Scope of usage:**
 - o **INTERNAL:** For Internal usage, **all the Partners** in the Consortium have **free full access** to all the parts of the IPR asset.
 - o **EXTERNAL:** For External usage, only after request to AIT.
- **Users of know-how (Access Rights):**
 - o See above “*Scope of usage*”
- **Protection – Proposal:**
 - o N/A: Since this IPR asset is pre-existing the lifetime of the Project, there’s no proposal to the Consortium.
- **Protection - Final Decision:**
 - o Since this IPR asset is pre-existing the lifetime of the Project, there’s just a communication to the Consortium that the IPR asset is **fully accessible**.
- **Time**
 - o **During Project LifeTime:** **all the Partners** in the Consortium have **free full access** to AIT-INTAN-1 (Experience - Soft-IP) and AIT-INTAN-2 (Methodology).
 - o **12-months After Project LifeTime:** only the sources Partners have **free full access** to AIT-INTAN-1 (Experience - Soft-IP) and AIT-INTAN-2 (Methodology).
 - o All the other Partners have to act according the finally decided protection (see above).
 - o **Ever After Project LifeTime:** all Partners only after request to AIT maybe granted **access** to AIT-INTAN-1 (Experience - Soft-IP) and AIT-INTAN-2 (Methodology).

7.1.4.2 AIT-INTAN-3 and INTAN-4- Safety and Security

- **Feeder**
 - These IPR assets have been shared with the Consortium by **AIT (Gerald Schimak)**, who is part of the IPR Team with the role of IPR Owner for AIT.

- **Know-how:**
 - **Name:**
 - **Safety and Security**
 -
 - **UNIQUE ID:**
 - **AIT-INTAN-3 (Experience - Soft-IP)**
 - **AIT-INTAN-4 (Methodology)**
 - **Description:**
 - Since about 10 years AIT has of experience in Safety and Security Application Design, Architecture and Development related to environmental crises and disaster management.
 - Modelling crises management for improved actions and preparedness.
 - .
 - **Experience**
 - Architectural Design, Methods, concepts and modelling of crises and disaster management applications.
 - Integration of training facilities
 - Integration of volunteer management
 - **SOLUTIONS**
 - Crises and Disaster Management Applications
 - Integration of Communication Platforms related to communication with volunteers.
 - Crowd Sourcing, Crowd Tasking
 - Data and Privacy Protection
 - **Year of creation:**
 - **2006- ongoing business**

- **Origin**
 - Since these IPR assets where pre-existing the lifetime of the project, these assets are classified as **Background Knowledge (INCLUDED)**.

- **Type:**
 - **Intangible:**
 - AIT-INTAN-3 (Experience - Soft-IP): AIT has developed the experience and skills in the area of Safety and Security during its regular business operations.
 - AIT-INTAN-4 (Methodology): AIT has developed the experience and skills in the area of Safety and Security during its regular business operations.

- **Source of know-how:**
 - The only Partner that has contributed to the development of this IPR asset is: **AIT**.

- **Owner of know-how:**
 - Since the know-how is developed by the source Partner, the ownership of the related knowledge remains to the source Partner.

- **Scope of usage:**

- **INTERNAL:** For Internal usage, **all the Partners** in the Consortium have **free full access** to all the parts of the IPR asset.
 - **EXTERNAL:** For External usage, only after request to AIT.
- **Users of know-how (Access Rights):**
 - See above “*Scope of usage*”
 - **Protection – Proposal:**
 - N/A: Since this IPR asset is pre-existing the lifetime of the Project, there’s no proposal to the Consortium.
 - **Protection - Final Decision:**
 - Since this IPR asset is pre-existing the lifetime of the Project, there’s just a communication to the Consortium that the IPR asset is **fully accessible**.
 - **Time**
 - **During Project LifeTime:** **all the Partners** in the Consortium have **free full access** to AIT-INTAN-3 (Experience - Soft-IP) and AIT-INTAN-4 (Methodology).
 - **12-months After Project LifeTime:** only the sources Partners have **free full access** to AIT-INTAN-3 (Experience - Soft-IP) and AIT-INTAN-4 (Methodology).
 - All the other Partners have to act according the finally decided protection (see above).
 - **Ever After Project LifeTime:** all Partners only after request to AIT maybe granted **access** to AIT-INTAN-3 (Experience - Soft-IP) and AIT-INTAN-4 (Methodology).

7.1.5 AIT - Background

As a necessity for protocol interoperability tasks AIT brings to the C2-SENSE Consortium the following pre-existing tool and expertise:

- *Sensor Protocol Adapter - AnySen*

7.1.5.1 WP3 - T3.2 - Protocol Interoperability: Sensor Protocol Adapter - AnySen: AIT-TAN-4, AIT-INTAN-8

- **Feeder**
 - o These IPR assets have been proposed to the Consortium by **AIT (Gerald Schimak)**, who is part of the IPR Team with the role of IPR Owner for AIT.
 - o Since these IPR assets were pre-existing the lifetime of the project, these assets are classified as **Background Knowledge (INCLUDED)**.
- **Know-how:**
 - o **Name:**
 - **WP3 - T3.2 - Protocol Interoperability**
 - o **UNIQUE ID:**
 - **AIT-TAN-4 (Tools, Source Code, Prototype)**
 - **AIT-INTAN-8 (Experience - Soft-IP)**
 - o **Description:**

AnySen is a driver which supports various protocols in order to connect sensor devices to an environmental monitoring system (e.g. air, water, soil monitoring).
 - o **Year of creation:**
 - **2007**
- **Origin**
 - o Since these IPR assets were pre-existing the lifetime of the project, these assets are classified as **Background**.
- **Type:**
 - o **Tangible:**
 - AIT-TAN-4 (Tool, Source Code): it's a tangible asset, since AIT provides a component suitable to be used as adapter for (on-the-fly) sensor to be connected to a bus system (like the ESB) in order to provide measurement data for a C2-System or decision support system.
 - o **Intangible:**
 - AIT-INTAN-8 (Experience - Soft-IP): while adapting the tangible part of this asset to C2-SENSE, AIT will create also Intangible assets, like **Experience - Soft-IP** to provide suitable technology to C2-Sense.
- **Source of know-how:**
 - o For the source of know-how related to adaptation and development (source code) is **AIT**.
- **Owner of know-how:**
 - o AIT (in both cases AIT-TAN-4 and AIT-INTAN-8);
- **Scope of usage:**

- **INTERNAL:** For Internal usage, **all the Partners** in the Consortium have **free full access** to all the parts of the IPR asset (both tangible and intangible parts).
 - **EXTERNAL:** For External usage, only the source Partners have **free full access** to all the parts of the IPR asset (both tangible and intangible parts).
- **Users of know-how (Access Rights):**
 - See above “*Scope of usage*”
 - **Protection – Proposal:**
 - **Tangible:**
 - AIT-TAN-4 (Tools, Source Code, Prototype): the proposal is to protect (**Register**) the tangible part of the IPR asset.
 - **Intangible:**
 - AIT-INTAN-8 (Experience - Soft-IP, Methodology): the proposal is to protect (**Register**) the tangible part of the IPR asset.
 - **Protection - Final Decision:**
 - **Tangible:**
 - AIT-TAN-4 (Tools, Source Code, Prototype): Since this IPR asset is pre-existing the lifetime of the Project, an agreement with AIT has to be established. During the project the IPR asset is **fully accessible**
 - **Intangible:**
 - AIT-INTAN-8 (Experience - Soft-IP): Since this IPR asset is pre-existing the lifetime of the Project, an agreement with AIT has to be established. During the project the IPR asset is fully accessible
 - **Time**
 - **During Project LifeTime:** **all the Partners** in the Consortium have **free full access** to AIT-TAN-4 (Tools, Source Code, Prototype), AIT-INTAN-8 (Experience - Soft-IP).
 - **12-months After Project LifeTime:** only with a bilateral agreement
 - **Ever After Project LifeTime:** only with a bilateral agreement

7.1.6 AIT - Foreground

7.1.6.1 WP1 – T1.1 – Administrative Management C2-SENSE Project Web Site: Development of the Project Web Site: AIT-TAN-1, AIT-INTAN-5

- **Feeder**
 - These IPR assets have been proposed to the Consortium by **AIT (Gerald Schimak)**, who is part of the IPR Team with the role of IPR Owner for AIT.
- **Know-how:**
 - **Name:**
 - **WP1 - T1.1 - Administrative Management**
 - **UNIQUE ID:**
 - **AIT-TAN-1 (Source Code)**
 - **AIT-INTAN-5 (Experience - Soft-IP; Methodology)**
 - **Description:**
 - Implementation of the C2-SENSE project Web-Site. A) Providing a generic overview of all project relevant details important for the public representation of the project. B) Providing an internal communication platform (login protected) for file sharing within the C2-SENSE Partners.
 - **Year of creation:**
 - **2014**
 - **Date of creation:** 1.5.2014
 - **Web-Page:** <http://c2-sense.eu/>
- **Origin**
 - Since these IPR assets will be developed during the lifetime of the project, these assets are classified as **Foreground**.
- **Type:**
 - **Tangible:**
 - AIT-TAN-1 (Source Code): it's a tangible asset, since AIT will integrate platform components for the reason to provide an internal communication platform as well as a requirements database. That implies to develop **Source Code**.
 - **Intangible:**
 - AIT-INTAN-5 (Experience - Soft-IP; Methodology): while developing the tangible part of this asset, AIT will create also Intangible assets, like **Experience - Soft-IP** and a **Methodology** to provide a project suitable web-page (design, look and feel, layout) and key elements for the communication platform (i.e. a file share respectively a file depot).
- **Source of know-how:**
 - For the source of know-how related to the development (source code) is **AIT**.
- **Owner of know-how:**
 - AIT for the source code part (AIT-TAN-1);
 - Content wise (i.e. content of the web-site related to public information) are all C2-SENSE project Partners. All the Partners in the Consortium have agreed on the fact that the ownership of the related content knowledge remains to the respective content providing Partner.
- **Scope of usage:**
 - **INTERNAL:** For Internal usage, **all the Partners** in the Consortium have **free full access** to all the parts of the IPR asset (both tangible and intangible parts).

- **EXTERNAL:** For External usage, only the source Partners have **free full access** to all the parts of the IPR asset (both tangible and intangible parts).
- **Users of know-how (Access Rights):**
 - See above “*Scope of usage*”
- **Protection – Proposal:**
 - **Tangible:**
 - AIT-TAN-1 (Source Code): the proposal is to protect (**Copyright**) the tangible part of the IPR asset.
 - **Intangible:**
 - AIT-INTAN-5 (Experience - Soft-IP): the proposal is to protect (**Copyright**) the Intangible part of the IPR asset. Same proposal for (Methodology).
- **Protection - Final Decision:**
 - **Tangible:**
 - AIT-TAN-1 (Source Code): all the Partners of the Consortium have not agreed on the proposal yet.
 - **Intangible:**
 - AIT-INTAN-5 (Experience - Soft-IP; Methodology): all the Partners of the Consortium have not agreed on the proposal.
- **Time**
 - **During Project LifeTime:** all the Partners in the Consortium have **free full access** to AIT-TAN-1 (Source Code), AIT-INTAN-5 (Experience - Soft-IP and Methodology).
 - **12-months After Project LifeTime:** only the source Partners have **free full access** to AIT-TAN-1 (Source Code), AIT-INTAN-5 (Experience - Soft-IP and Methodology). All the other Partners have to act according the finally decided protection (see above).
 - **Ever After Project LifeTime:** Only the sources Partners have **free full access** to AIT-TAN-1 (Source Code), AIT-INTAN-5 (Experience - Soft-IP and Methodology). All the other Partners have to act according the finally decided protection (see above).

7.1.6.2 WP2 - T2.3 - Gathering User and Technical Requirements: C2-SENSE Requirements (web-based) Database: AIT-TAN-2, AIT-INTAN-6

- **Feeder**
 - o These IPR assets have been proposed to the Consortium by **AIT (Gerald Schimak)**, who is part of the IPR Team with the role of IPR Owner for AIT.

- **Know-how:**
 - o **Name:**
 - **WP2 - T2.3 - Gathering User and Technical Requirements**
 - o **UNIQUE ID:**
 - **AIT-TAN-2 (Other)**
 - **AIT-INTAN-6 (Experience - Soft-IP; Methodology)**
 - o **Description:**
 - Implementation of the C2-SENSE web-based requirements database to allow the storage and review of the C2-SENSE defined requirements as well as for continuous requirements update during the course of the project.
 - o **Year of creation:**
 - **2014**
 - o **Date of creation:** 1.8.2014
 - o **Web-Page:** <https://service.ait.ac.at/c2-sense/user-requirements>

- **Origin**
 - o Since these IPR assets will be developed during the lifetime of the project, these assets are classified as **Foreground**.

- **Type:**
 - o **Tangible:**
 - AIT-TAN-2 (Other): it's a tangible asset, since AIT provides a web-based database component suitable for as requirement storage. That implies to develop proper tables and structures.
 - o **Intangible:**
 - AIT-INTAN-6 (Experience - Soft-IP; Methodology): while developing the tangible part of this asset, AIT will create also Intangible assets, like **Experience - Soft-IP** and a **Methodology** to provide suitable web-application for storing C2-SENSE related user and technical requirements.

- **Source of know-how:**
 - o For the source of know-how related to the development (source code) is **AIT**.

- **Owner of know-how:**
 - o AIT for the database part (AIT-TAN-2);
 - o Content wise (i.e. the specified user and technical requirements) are stemming from individual C2-SENSE project Partners. All the Partners in the Consortium have agreed on the fact that the ownership of the related content knowledge about the requirements remains to the all Partners.

- **Scope of usage:**
 - o **INTERNAL:** For Internal usage, **all the Partners** in the Consortium have **free full access** to all the parts of the IPR asset (both tangible and intangible parts).
 - o **EXTERNAL:** For External usage, only the source Partners have **free full access** to all the parts of the IPR asset (both tangible and intangible parts).

- **Users of know-how (Access Rights):**
 - o See above “*Scope of usage*”

- **Protection – Proposal:**
 - o **Tangible:**
 - AIT-TAN-2 (Other): the proposal is to protect (**Register**) the tangible part of the IPR asset.
 - o **Intangible:**
 - AIT-INTAN-6 (Experience - Soft-IP, Methodology): the proposal is to protect (**Register**) the tangible part of the IPR asset.

- **Protection - Final Decision:**
 - o **Tangible:**
 - AIT-TAN-2 (Other): all the Partners of the Consortium have not agreed on the proposal yet
 - o **Intangible:**
 - AIT-INTAN-6 (Experience - Soft-IP; Methodology): all the Partners of the Consortium have not agreed on the proposal yet

- **Time**
 - o **During Project LifeTime: all the Partners** in the Consortium have **free full access** to AIT-TAN-2 (Other), AIT-INTAN-6 (Experience - Soft-IP and Methodology).
 - o **12-months After Project LifeTime:** only the source Partners have **free full access** to AIT-TAN-2 (Other), AIT-INTAN-6 (Experience - Soft-IP and Methodology). All the other Partners have to act according the finally decided protection (see above).
 - o **Ever After Project LifeTime:** Only the sources Partners have **free full access** to AIT-TAN-2 (Other). All the other Partners have to act according the finally decided protection (see above).

7.1.6.3 WP2 - T2.3 - Gathering User and Technical Requirements: User and technical requirements document: AIT-TAN-3, AIT-INTAN-7

- **Feeder**
 - o These IPR assets have been proposed to the Consortium by **AIT (Gerald Schimak)**, who is part of the IPR Team with the role of IPR Owner for AIT.
- **Know-how:**
 - o **Name:**
 - **WP2 - T2.3 - Gathering User and Technical Requirements**
 - o **UNIQUE ID:**
 - **AIT-TAN-3 (Deliverable)**
 - **AIT-INTAN-7 (Experience - Soft-IP; Methodology)**
 - o **Description:**
 - Deliverable User and Technical Requirements is a comprehensive document containing requirements and Use-Cases. Requirements creation has been a joint effort of all project Partners and is based on the Consortiums Expertise, EC projects dealing with similar topics like C2-Sense, Interview of Experts in the domain and a survey to be sent to end-users.
 - o **Year of creation:**
 - **2014**
 - o **Date of creation:** 30.11.2014
 - o **Web-Page:** <https://service.ait.ac.at/c2-sense/user-requirements>
- **Origin**
 - o Since these IPR assets will be developed during the lifetime of the project, these assets are classified as **Foreground**.
- **Type:**
 - o **Tangible:**
 - AIT-TAN-3 (Deliverable): it's a tangible asset of the Consortium as whole. It implies development of the deliverable structure and the content (requirements and use-cases) of deliverable.
 - o **Intangible:**
 - AIT-INTAN-7 (Experience - Soft-IP; Methodology): while developing the tangible part of this asset, all Partners will create also Intangible assets, like **Experience - Soft-IP** and a **Methodology** to provide relevant input to the Deliverable.
- **Source of know-how:**
 - o For the source of know-how related to the development (Deliverable) is **AIT**.
- **Owner of know-how:**
 - o AIT for the editing of the Deliverable (AIT-TAN-3);
 - o Content has been provided by all C2-SENSE project Partners. All the Partners in the Consortium have agreed on the fact that the ownership of the related content knowledge about the requirements remains to all Partners.
- **Scope of usage:**
 - o **INTERNAL:** For Internal usage, **all the Partners** in the Consortium have **free full access** to all the parts of the IPR asset (both tangible and intangible parts).
 - o **EXTERNAL:** For External usage, all the Partners have **free full access** to all the parts of the IPR asset (both tangible and intangible parts).

- **Users of know-how (Access Rights):**
 - o See above “*Scope of usage*”

- **Protection – Proposal:**
 - o **Tangible:**
 - AIT-TAN-3 (Deliverable): the proposal is to protect (**Copyright**) the tangible part of the IPR asset.
 - o **Intangible:**
 - AIT-INTAN-7 (Experience - Soft-IP, Methodology): the proposal is to protect (**Copyright**) the tangible part of the IPR asset.

- **Protection - Final Decision:**
 - o **Tangible:**
 - AIT-TAN-3 (Deliverable): all the Partners of the Consortium have not agreed on the proposal yet
 - o **Intangible:**
 - AIT-INTAN-7 (Experience - Soft-IP; Methodology): all the Partners of the Consortium have not agreed on the proposal yet

- **Time**
 - o **During Project LifeTime: all the Partners** in the Consortium have **free full access** to AIT-TAN-3 (Deliverable), AIT-INTAN-7 (Experience - Soft-IP and Methodology).
 - o **12-months After Project LifeTime:** only the source Partners have **free full access** to AIT-TAN-3 (Deliverable), AIT-INTAN-7 (Experience - Soft-IP and Methodology). All the other Partners have to act according the finally decided protection (see above).
 - o **Ever After Project LifeTime:** Only the sources Partners have **free full access** to AIT-TAN-3 (Deliverable). All the other Partners have to act according the finally decided protection (see above).

7.1.6.4 WP3 - T3.5 - Knowledge Interoperability: Sensor Management Tool: AIT-TAN-5, AIT-INTAN-9

- **Feeder**
 - o These IPR assets have been proposed to the Consortium by **AIT (Gerald Schimak)**, who is part of the IPR Team with the role of IPR Owner for AIT.

- **Know-how:**
 - o **Name:**
 - **WP3 - T3.5 - Knowledge Interoperability**
 - o **UNIQUE ID:**
 - **AIT-TAN-5 (Tools, Source Code, Prototypes)**
 - **AIT-INTAN-9 (Experience - Soft-IP)**
 - o **Description:**
 - Development and Implementation of the Sensor Management Tool for the Management of ad-hoc (on-the-fly) sensor C2-SENSE wants to place in the field in case of an emergency (e.g. flooding).
 - Typically such sensors are not sensors available in already existing monitoring networks (of the region). They might be just put in the field during an emergency.

 - o **Year of creation:**
 - **2015**

- **Origin**
 - o Since these IPR assets will be developed during the lifetime of the project, these assets are classified as **Foreground**.

- **Type:**
 - o **Tangible:**
 - AIT-TAN-5 (Tools, Source Code, Prototype): it's a tangible asset, since AIT will enhance the existing AIT Implementation and to provide a new prototype for C2-Sense. That implies to develop **Source Code** adapt the Sensor Management **Tool** and provide a **prototype**.
 - o **Intangible:**
 - AIT-INTAN-9 (Experience - Soft-IP): while developing the tangible part of this asset, AIT will create also Intangible assets, like **Experience - Soft-IP** to provide a prototype tailored to the end-user needs (e.g. in the respective Pilot Scenario(s)).

- **Source of know-how:**
 - o For the source of know-how related to the development (tool, source code, prototype) is **AIT**.

- **Owner of know-how:**
 - o AIT for the tool, source code and prototype (AIT-TAN-5);

- **Scope of usage:**
 - o **INTERNAL:** For Internal usage, **all the Partners** in the Consortium have **free full access** to all the parts of the IPR asset (both tangible and intangible parts).
 - o **EXTERNAL:** For External usage, only the source Partners have **free full access** to all the parts of the IPR asset (both tangible and intangible parts).

- **Users of know-how (Access Rights):**

- See above “*Scope of usage*”
- **Protection – Proposal:**
 - **Tangible:**
 - AIT-TAN-5 (Tool, Source Code, Prototype): the proposal is to protect (**Copyright**) the tangible part of the IPR asset.
 - **Intangible:**
 - AIT-INTAN-9 (Experience - Soft-IP): the proposal is to protect (**Copyright**) the Intangible part of the IPR asset. Same proposal for (Methodology).
- **Protection - Final Decision:**
 - **Tangible:**
 - AIT-TAN-5 (Source Code): all the Partners of the Consortium have not agreed on the proposal yet.
 - **Intangible:**
 - AIT-INTAN-9 (Experience - Soft-IP; Methodology): all the Partners of the Consortium have not agreed on the proposal.
- **Time**
 - **During Project LifeTime:** **all the Partners** in the Consortium have **free full access** to AIT-TAN-5 (Tool, Source Code, Prototype), AIT-INTAN-9 (Experience - Soft-IP).
 - **12-months After Project LifeTime:** only the source Partners have **free full access** to AIT-TAN-5 (Tool, Source Code, Prototype), AIT-INTAN-9 (Experience - Soft-IP). All the other Partners have to act according the finally decided protection (see above).
 - **Ever After Project LifeTime:** AIT intends to provide an open source license. Final Decision not yet done. Needs more AIT and Partner internal discussion.

7.1.6.5 WP3 - T3.5 - Knowledge Interoperability: Emergency Maps Tool: AIT-TAN-6, AIT-INTAN-10

- **Feeder**
 - These IPR assets have been proposed to the Consortium by **AIT (Gerald Schimak)**, who is part of the IPR Team with the role of IPR Owner for AIT.

- **Know-how:**
 - **Name:**
 - **WP3 - T3.5 - Knowledge Interoperability**
 - **UNIQUE ID:**
 - **AIT-TAN-6 (Tools, Source Code, Prototypes)**
 - **AIT-INTAN-10 (Experience - Soft-IP)**
 - **Description:**
 - Development and Implementation of decision support element of the collaboration environment of C2-Sense, which is the Emergency Maps Tool (EMT). EMT allows at the client side for the responsible emergency manager a proper decision making as EMT visualizes all the involved resources and actors (i.e. object of interests) during an emergency situation on a map.

 - **Year of creation:**
 - **2016**

- **Origin**
 - Since these IPR assets will be developed during the lifetime of the project, these assets are classified as **Foreground**.

- **Type:**
 - **Tangible:**
 - AIT-TAN-6 (Tools, Source Code, Prototype): it's a tangible asset, since AIT to provide a decision making tool as prototype for C2-Sense. That implies to develop **Source Code** for the **Tool** and release it as **prototype** for the C2-SENSE project and its consortium Partners.
 - **Intangible:**
 - AIT-INTAN-10 (Experience - Soft-IP): while developing the tangible part of this asset, AIT will create also Intangible assets, like **Experience - Soft-IP** to provide a prototype tailored to the user's needs (e.g. emergency managers, decision makers related to the pilot scenario(s)).

- **Source of know-how:**
 - For the source of know-how related to the development (tool, source code, prototype) is **AIT**.

- **Owner of know-how:**
 - AIT for the tool, source code and prototype (AIT-TAN-6);

- **Scope of usage:**
 - **INTERNAL:** For Internal usage, **all the Partners** in the Consortium have **free full access** to all the parts of the IPR asset (both tangible and intangible parts).
 - **EXTERNAL:** For External usage, only the source Partners have **free full access** to all the parts of the IPR asset (both tangible and intangible parts).

- **Users of know-how (Access Rights):**
 - o See above “*Scope of usage*”

- **Protection – Proposal:**
 - o **Tangible:**
 - AIT-TAN-6 (Tool, Source Code, Prototype): the proposal is to protect (**Copyright**) the tangible part of the IPR asset.
 - o **Intangible:**
 - AIT-INTAN-10 (Experience - Soft-IP): the proposal is to protect (**Copyright**) the Intangible part of the IPR asset. Same proposal for (Methodology).

- **Protection - Final Decision:**
 - o **Tangible:**
 - AIT-TAN-6 (Tool, Source Code, Prototype): all the Partners of the Consortium have not agreed on the proposal yet.
 - o **Intangible:**
 - AIT-INTAN-10 (Experience - Soft-IP): all the Partners of the Consortium have not agreed on the proposal.

- **Time**
 - o **During Project LifeTime:** all the Partners in the Consortium have **free full access** to AIT-TAN-6 (Tool, Source Code, Prototype), AIT-INTAN-10 (Experience - Soft-IP).
 - o **12-months After Project LifeTime:** only the source Partners have **free full access** to AIT-TAN-6 (Tool, Source Code, Prototype), AIT-INTAN-10 (Experience - Soft-IP). All the other Partners have to act according the finally decided protection (see above).
 - o **Ever After Project LifeTime:** AIT intends to provide an open source license. Final Decision not yet done. Needs more AIT and Partner internal discussion.

7.1.6.6 WP3 - T3.5 - Knowledge Interoperability: OOI Repository: AIT-TAN-7, AIT-INTAN-11

- **Feeder**
 - These IPR assets have been proposed to the Consortium by **AIT (Gerald Schimak)**, who is part of the IPR Team with the role of IPR Owner for AIT.

- **Know-how:**
 - **Name:**
 - **WP3 - T3.5 - Knowledge Interoperability**
 - **UNIQUE ID:**
 - **AIT-TAN-7 (Tools, Source Code, Prototypes)**
 - **AIT-INTAN-11 (Experience - Soft-IP)**
 - **Description:**
 - Development and Implementation of a repository for the objects of interest to the management of a crisis or emergency situation. It is the basis information source for the Emergency Maps Tool. All resources that should be presented on the Emergency Maps Tool have to be put into this data store, for example measurement values to be monitored, (alarm) messages to be exchanged between organizations, sensor, etc.
 - The OOI is connected to the EMT and is part of the Collaboration Environment of C2-SENSE
 - **Year of creation:**
 - **2016**

- **Origin**
 - Since these IPR assets will be developed during the lifetime of the project, these assets are classified as **Foreground**.

- **Type:**
 - **Tangible:**
 - AIT-TAN-7 (Tools, Source Code, Prototype): it's a tangible asset, since AIT to provide a decision making tool as prototype for C2-Sense. That implies to develop **Source Code** for the **Tool** and release it as **prototype** for the C2-SENSE project and its consortium Partners.
 - **Intangible:**
 - AIT-INTAN-11 (Experience - Soft-IP): while developing the tangible part of this asset, AIT will create also Intangible assets, like **Experience - Soft-IP** to provide a prototype tailored to the user's needs (e.g. emergency managers, decision makers related to the pilot scenario(s)).

- **Source of know-how:**
 - For the source of know-how related to the development (tool, source code, prototype) is **AIT**.

- **Owner of know-how:**
 - AIT for the tool, source code and prototype (AIT-TAN-7);

- **Scope of usage:**
 - **INTERNAL:** For Internal usage, **all the Partners** in the Consortium have **free full access** to all the parts of the IPR asset (both tangible and intangible parts).
 - **EXTERNAL:** For External usage, only the source Partners have **free full access** to all the parts of the IPR asset (both tangible and intangible parts).

- **Users of know-how (Access Rights):**
 - o See above “*Scope of usage*”

- **Protection – Proposal:**
 - o **Tangible:**
 - AIT-TAN-7 (Tool, Source Code, Prototype): the proposal is to protect (**Copyright**) the tangible part of the IPR asset.
 - o **Intangible:**
 - AIT-INTAN-11 (Experience - Soft-IP): the proposal is to protect (**Copyright**) the Intangible part of the IPR asset. Same proposal for (Methodology).

- **Protection - Final Decision:**
 - o **Tangible:**
 - AIT-TAN-7 (Tool, Source Code, Prototype): all the Partners of the Consortium have not agreed on the proposal yet.
 - o **Intangible:**
 - AIT-INTAN-11 (Experience - Soft-IP): all the Partners of the Consortium have not agreed on the proposal.

- **Time**
 - o **During Project LifeTime:** all the Partners in the Consortium have **free full access** to AIT-TAN-7 (Tool, Source Code, Prototype), AIT-INTAN-11 (Experience - Soft-IP).
 - o **12-months After Project LifeTime:** only the source Partners have **free full access** to AIT-TAN-7 (Tool, Source Code, Prototype), AIT-INTAN-11 (Experience - Soft-IP). All the other Partners have to act according the finally decided protection (see above).
 - o **Ever After Project LifeTime:** AIT intends to provide an open source license. Final Decision not yet done. Needs more AIT and Partner internal discussion.

7.1.6.7 WP3 - T3.5 - Knowledge Interoperability: Limit Checker: AIT-TAN-8, AIT-INTAN-12

- **Feeder**
 - o These IPR assets have been proposed to the Consortium by **AIT (Gerald Schimak)**, who is part of the IPR Team with the role of IPR Owner for AIT.

- **Know-how:**
 - o **Name:**
 - **WP3 - T3.5 - Knowledge Interoperability**
 - o **UNIQUE ID:**
 - **AIT-TAN-8 (Tools, Source Code, Prototypes)**
 - **AIT-INTAN-12 (Experience - Soft-IP)**
 - o **Description:**
 - Development and Implementation of an application that monitors incoming measurement values stored at the OOI, and compares against defined limits (i.e. water level thresholds). If limits are violated an alarm will be generated. The limit checker is connected to the OOI and has to be seen in the context of EMT and the collaboration environment set of tools for C2-SENSE.

 - o **Year of creation:**
 - **2016**

- **Origin**
 - o Since these IPR assets will be developed during the lifetime of the project, these assets are classified as **Foreground**.

- **Type:**
 - o **Tangible:**
 - AIT-TAN-8 (Tools, Source Code, Prototype): it's a tangible asset, since AIT to provide a decision making tool as prototype for C2-Sense. That implies to develop **Source Code** for the **Tool** and release it as **prototype** for the C2-SENSE project and its consortium Partners.
 - o **Intangible:**
 - AIT-INTAN-12 (Experience - Soft-IP): while developing the tangible part of this asset, AIT will create also Intangible assets, like **Experience - Soft-IP** to provide a prototype tailored to the user's needs (e.g. emergency managers, decision makers related to the pilot scenario(s)).

- **Source of know-how:**
 - o For the source of know-how related to the development (tool, source code, prototype) is **AIT**.

- **Owner of know-how:**
 - o AIT for the tool, source code and prototype (AIT-TAN-8);

- **Scope of usage:**
 - o **INTERNAL:** For Internal usage, **all the Partners** in the Consortium have **free full access** to all the parts of the IPR asset (both tangible and intangible parts).
 - o **EXTERNAL:** For External usage, only the source Partners have **free full access** to all the parts of the IPR asset (both tangible and intangible parts).

- **Users of know-how (Access Rights):**

- See above “*Scope of usage*”
- **Protection – Proposal:**
 - **Tangible:**
 - AIT-TAN-8 (Tool, Source Code, Prototype): the proposal is to protect (**Copyright**) the tangible part of the IPR asset.
 - **Intangible:**
 - AIT-INTAN-12 (Experience - Soft-IP): the proposal is to protect (**Copyright**) the Intangible part of the IPR asset. Same proposal for (Methodology).
- **Protection - Final Decision:**
 - **Tangible:**
 - AIT-TAN-8 (Tool, Source Code, Prototype): all the Partners of the Consortium have not agreed on the proposal yet.
 - **Intangible:**
 - AIT-INTAN-12 (Experience - Soft-IP): all the Partners of the Consortium have not agreed on the proposal.
- **Time**
 - **During Project Lifetime: all the Partners** in the Consortium have **free full access** to AIT-TAN-8 (Tool, Source Code, Prototype), AIT-INTAN-12 (Experience - Soft-IP).
 - **12-months After Project Lifetime:** only the source Partners have **free full access** to AIT-TAN-8 (Tool, Source Code, Prototype), AIT-INTAN-12 (Experience - Soft-IP). All the other Partners have to act according the finally decided protection (see above).
 - **Ever After Project Lifetime:** AIT intends to provide an open source license. Final Decision not yet done. Needs more AIT and Partner internal discussion.

7.1.6.8 WP3 - T3.5 - Knowledge Interoperability: Collaboration Environment: AIT-TAN-9, AIT-INTAN-13

- **Feeder**
 - o These IPR assets have been proposed to the Consortium by **AIT (Gerald Schimak)**, who is part of the IPR Team with the role of IPR Owner for AIT.

- **Know-how:**
 - o **Name:**
 - **WP3 - T3.5 - Knowledge Interoperability**
 - o **UNIQUE ID:**
 - **AIT-TAN-9 (Deliverable)**
 - **AIT-INTAN-13 (Experience - Soft-IP; Methodology)**
 - o **Description:**
 - This deliverable describes the collaboration environment, basically a software suite to be used for the collaboration in emergency management. Related Tools to be described are Emergency Maps Tool, Sensor Management Tool, Messaging/Communication Platform, Registry of Emergency Web Services, Profile Monitoring Tool, Profile Definition Tool, Security and Privacy Tool, Profile Repository.
Content production of the Deliverable has been a joint effort of AIT, LUTECH, SRDC and PIAP.
 - o **Year of creation:**
 - **2016**
 - o **Date of creation:** 30.06.2016
 - o **Web-Page:** <https://service.ait.ac.at/c2-sense/downloads>

- **Origin**
 - o Since these IPR assets will be developed during the lifetime of the project, these assets are classified as **Foreground**.

- **Type:**
 - o **Tangible:**
 - AIT-TAN-9 (Deliverable): it's a tangible asset of the Consortium as whole. It implies development of the deliverable structure and the content (requirements and use-cases) of deliverable.
 - o **Intangible:**
 - AIT-INTAN-13 (Experience - Soft-IP; Methodology): while developing the tangible part of this asset, all Partners will create also Intangible assets, like **Experience - Soft-IP** and a **Methodology** to provide relevant input to the Deliverable.

- **Source of know-how:**
 - o For the source of know-how related to the development (Deliverable) is **AIT, LUTECH, SRDC, PIAP**

- **Owner of know-how:**
 - o AIT for the editing of the Deliverable (AIT-TAN-3);
 - o Content provider has been **AIT, LUTECH, SRDC, PIAP**

- **Scope of usage:**
 - o **INTERNAL:** For Internal usage, **all the Partners** in the Consortium have **free full access** to all the parts of the IPR asset (both tangible and intangible parts).

- **EXTERNAL:** For External usage, all the Partners have **free full access** to all the parts of the IPR asset (both tangible and intangible parts).
- **Users of know-how (Access Rights):**
 - See above “*Scope of usage*”
- **Protection – Proposal:**
 - **Tangible:**
 - AIT-TAN-9 (Deliverable): the proposal is to protect (**Copyright**) the tangible part of the IPR asset.
 - **Intangible:**
 - AIT-INTAN-13 (Experience - Soft-IP, Methodology): the proposal is to protect (**Copyright**) the tangible part of the IPR asset.
- **Protection - Final Decision:**
 - **Tangible:**
 - AIT-TAN-9 (Deliverable): all the Partners of the Consortium have not agreed on the proposal yet
 - **Intangible:**
 - AIT-INTAN-13 (Experience - Soft-IP; Methodology): all the Partners of the Consortium have not agreed on the proposal yet
- **Time**
 - **During Project Lifetime:** all the Partners in the Consortium have **free full access** to AIT-TAN-9 (Deliverable), AIT-INTAN-13 (Experience - Soft-IP and Methodology).
 - **12-months After Project Lifetime:** only the source Partners have **free full access** to AIT-TAN-9 (Deliverable), AIT-INTAN-13 (Experience - Soft-IP and Methodology). All the other Partners have to act according the finally decided protection (see above).
 - **Ever After Project Lifetime:** Only the sources Partners have **free full access** to AIT-TAN-9 (Deliverable). All the other Partners have to act according the finally decided protection (see above).

7.1.1 SRDC - Background

7.1.1.1 Semantic MDR: SRDC-TAN-1, SRDC-INTAN-5

- **Feeder**
 - o These IPR assets have been proposed to the Consortium by **SRDC (Mert Gencturk)**, who is part of the IPR Team with the role of IPR Owner for SRDC.
 - o Since these IPR assets were pre-existing the lifetime of the project, these assets are classified as **Background Knowledge (INCLUDED)**.

 - **Know-how:**
 - o **Name:**
 - **Semantic MDR**
 - o **UNIQUE ID:**
 - **SRDC-TAN-1 (Tools, Source Code)**
 - **SRDC-INTAN-5 (Experience - Soft-IP)**
 - o **Description:**

Semantic MDR is a web-based metadata management and data modelling tool to create and maintain common data models collaboratively either based on imported standard content models or from scratch. It will be extended further for C2-SENSE purposes in the project.
 - o **Year of creation:**
 - **2012**

 - **Origin**
 - o Since these IPR assets were pre-existing the lifetime of the project, these assets are classified as **Background**.

 - **Type:**
 - o **Tangible:**
 - SRDC-TAN-1 (Tool, Source Code): it's a tangible asset, since SRDC provides it as a tool to be used in C2-SENSE project.
 - o **Intangible:**
 - SRDC-INTAN-5 (Experience - Soft-IP): while adapting the tangible part of this asset to C2-SENSE, SRDC will create also Intangible assets, like **Experience - Soft-IP** to provide suitable technology to C2-SENSE.

 - **Source of know-how:**
 - o For the source of know-how related to adaptation and development (source code) is **SRDC**.

 - **Owner of know-how:**
 - o SRDC;

 - **Scope of usage:**
 - o **INTERNAL:** For Internal usage, **all the Partners** in the Consortium have **free full access** to all the parts of the IPR asset (both tangible and intangible parts).
 - o **EXTERNAL:** For External usage, only the source Partners have **free full access** to all the parts of the IPR asset (both tangible and intangible parts).

 - **Users of know-how (Access Rights):**
-

- See above “*Scope of usage*”
- **Protection – Proposal:**
 - **Tangible:**
 - SRDC-TAN-1 (Tools, Source Code): the proposal is to protect (**Trademark**) the tangible part of the IPR asset.
- **Protection - Final Decision:**
 - **Tangible:**
 - SRDC-TAN-1 (Tools, Source Code): Since this IPR asset is pre-existing the lifetime of the Project, an agreement with SRDC has to be established. During the project the IPR asset is **fully accessible**
- **Time**
 - **During Project Lifetime: all the Partners** in the Consortium have **free full access** to SRDC-TAN-1 (Tools, Source Code, Prototype), SRDC-INTAN-5 (Experience - Soft-IP).
 - **12-months After Project Lifetime:** only with a bilateral agreement
 - **Ever After Project Lifetime:** only with a bilateral agreement

7.1.1.2 TestBATN: SRDC-TAN-2, SRDC-INTAN-1

- **Feeder**
 - o These IPR assets have been proposed to the Consortium by **SRDC (Mert Gencturk)**, who is part of the IPR Team with the role of IPR Owner for SRDC.
 - o Since these IPR assets were pre-existing the lifetime of the project, these assets are classified as **Background Knowledge (EXCLUDED)**.

- **Know-how:**
 - o **Name:**
 - **TestBATN**
 - o **UNIQUE ID:**
 - **SRDC-TAN-2 (Tools, Source Code)**
 - **SRDC-INTAN-1 (Experience - Soft-IP)**
 - o **Description:**

TestBATN is an automated conformance and interoperability testing tool for vendors to test their products for compliance to any interoperability standard.
 - o **Year of creation:**
 - **2007**

- **Origin**
 - o Since these IPR assets were pre-existing the lifetime of the project, these assets are classified as **Background**.

- **Type:**
 - o **Tangible:**
 - SRDC-TAN-2 (Tool, Source Code): it's a tangible asset, since SRDC provides it as a tool to be used in C2-SENSE project.
 - o **Intangible:**
 - SRDC-INTAN-1 (Experience - Soft-IP): while adapting the tangible part of this asset to C2-SENSE, SRDC will create also Intangible assets, like **Experience - Soft-IP** to provide suitable technology to C2-SENSE.

- **Source of know-how:**
 - o For the source of know-how related to adaptation and development (source code) is **SRDC**.

- **Owner of know-how:**
 - o SRDC;

- **Scope of usage:**
 - o **INTERNAL:** For Internal usage, **all the Partners** in the Consortium have **free full access** to all the parts of the IPR asset (both tangible and intangible parts).
 - o **EXTERNAL:** For External usage, only SRDC have **free full access** to all the parts of the IPR asset (both tangible and intangible parts).

- **Users of know-how (Access Rights):**
 - o See above "*Scope of usage*"

- **Protection – Proposal:**
 - o **Tangible:**

- SRDC-TAN-2 (Tools, Source Code): the proposal is to protect (**Trademark**) the tangible part of the IPR asset.
- **Protection - Final Decision:**
 - **Tangible:**
 - SRDC-TAN-2 (Tools, Source Code): Since this IPR asset is pre-existing the lifetime of the Project, an agreement with SRDC has to be established. During the project the IPR asset is **fully accessible**
- **Time**
 - **During Project Lifetime: all the Partners** in the Consortium have **free full access** to SRDC-TAN-2 (Tools, Source Code), SRDC-INTAN-1 (Experience - Soft-IP).
 - **12-months After Project Lifetime:** only with a bilateral agreement
 - **Ever After Project Lifetime:** only with a bilateral agreement

7.1.2 SRDC - Foreground

7.1.2.1 WP2 - T2.4 - Conceptual Design of C2-SENSE Architecture: Conceptual Design Document: SRDC-TAN-3, SRDC-INTAN-6

- **Feeder**
 - o These IPR assets have been proposed to the Consortium by **SRDC (Mert Gencturk)**, who is part of the IPR Team with the role of IPR Owner for SRDC.

- **Know-how:**
 - o **Name:**
 - **WP2 - T2.4 - Conceptual Design of C2-SENSE Architecture**
 - o **UNIQUE ID:**
 - **SRDC-TAN-3 (Deliverable)**
 - **SRDC-INTAN-6 (Experience - Soft-IP; Methodology)**
 - o **Description:**
 - C2-SENSE Conceptual Design document describes how the software system will be structured to satisfy the requirements identified in the User and Technical Requirements deliverable. All technical Partners have contributed to it by applying Analysis & Design workflow step of Rational Unified Process (RUP) methodology.
 - o **Year of creation:**
 - **2014**
 - o **Date of creation:** 31.12.2014
 - o **Web-Page:** <https://service.ait.ac.at/c2-sense/filedepot>

- **Origin**
 - o Since these IPR assets will be developed during the lifetime of the project, these assets are classified as **Foreground**.

- **Type:**
 - o **Tangible:**
 - SRDC-TAN-3 (Deliverable): it's a tangible asset of the Consortium as whole. It implies development of the deliverable structure and the content (design of individual components and overall C2-SENSE architecture) of deliverable.
 - o **Intangible:**
 - SRDC-INTAN-6 (Experience - Soft-IP; Methodology): while developing the tangible part of this asset, all Partners will create also Intangible assets, like **Experience - Soft-IP** and a **Methodology** to provide relevant input to the Deliverable.

- **Source of know-how:**
 - o For the source of know-how related to the development (Deliverable) is **SRDC**.

- **Owner of know-how:**
 - o SRDC for the editing of the Deliverable (SRDC-TAN-3);
 - o Content has been provided by all technical Partners of C2-SENSE. All the Partners in the Consortium have agreed on the fact that the ownership of the related content knowledge about the requirements remains to all technical Partners.

- **Scope of usage:**
 - o **INTERNAL:** For Internal usage, **all the Partners** in the Consortium have **free full access** to all the parts of the IPR asset (both tangible and intangible parts).
 - o **EXTERNAL:** For External usage, all the technical Partners have **free full access** to all the parts of the IPR asset (both tangible and intangible parts).

- **Users of know-how (Access Rights):**
 - o See above “*Scope of usage*”

- **Protection – Proposal:**
 - o **Tangible:**
 - SRDC-TAN-3 (Deliverable): the proposal is to protect (**Copyright**) the tangible part of the IPR asset.
 - o **Intangible:**
 - SRDC-INTAN-6 (Experience - Soft-IP, Methodology): the proposal is to protect (**Copyright**) the tangible part of the IPR asset.

- **Protection - Final Decision:**
 - o **Tangible:**
 - SRDC-TAN-3 (Deliverable): all the Partners of the Consortium have not agreed on the proposal yet.
 - o **Intangible:**
 - SRDC-INTAN-6 (Experience - Soft-IP; Methodology): all the Partners of the Consortium have not agreed on the proposal yet.

- **Time**
 - o **During Project Lifetime: all the Partners** in the Consortium have **free full access** to SRDC-TAN-3 (Deliverable), SRDC-INTAN-6 (Experience - Soft-IP and Methodology).
 - o **12-months After Project Lifetime:** only the source Partners have **free full access** to SRDC-TAN-3 (Deliverable), SRDC-INTAN-6 (Experience - Soft-IP and Methodology). All the other Partners have to act according the finally decided protection (see above).
 - o **Ever After Project Lifetime:** Only the sources Partners have **free full access** to SRDC-TAN-3 (Deliverable). All the other Partners have to act according the finally decided protection (see above).

7.1.2.2 WP3 - T3.4 – Information Interoperability: Emergency Ontology Creator Tool: SRDC-TAN-4, SRDC-INTAN-7

- **Feeder**
 - o These IPR assets have been proposed to the Consortium by **SRDC (Mert Gencturk)**, who is part of the IPR Team with the role of IPR Owner for SRDC.
- **Know-how:**
 - o **Name:**
 - **WP3 - T3.4 – Information Interoperability**
 - o **UNIQUE ID:**
 - **SRDC-TAN-4 (Tools, Source Code, Prototypes)**
 - **SRDC-INTAN-7 (Experience - Soft-IP)**
 - o **Description:**
 - Emergency Ontology Creator Tool is a web-based tool enabling users not only to import any number of content models as Common Data Elements (CDEs) and generate ontology from them, but also to export a new or modified content model from an ontology. Emergency Ontology Creator Tool will be used for semantic interoperability as part of Semantic Interoperability Suite of C2-SENSE system.
 - o **Year of creation:**
 - **2016**
- **Origin**
 - o Since these IPR assets will be developed during the lifetime of the project, these assets are classified as **Foreground**.
- **Type:**
 - o **Tangible:**
 - SRDC-TAN-4 (Tools, Source Code, Prototype): it's a tangible asset, since SRDC will provide it as an online tool. That implies to develop **Source Code** for the **Tool** and release it as **prototype** for the C2-SENSE project and its consortium Partners.
 - o **Intangible:**
 - SRDC-INTAN-7 (Experience - Soft-IP): while developing the tangible part of this asset, SRDC will create also Intangible assets, like **Experience - Soft-IP** to provide a prototype tailored to the user's needs (e.g. modifying common content models by excluding unused optional fields).
- **Source of know-how:**
 - o For the source of know-how related to the development (tool, source code, prototype) is **SRDC**.
- **Owner of know-how:**
 - o SRDC for the tool, source code and prototype (SRDC-TAN-4);
- **Scope of usage:**
 - o **INTERNAL:** For Internal usage, **all the Partners** in the Consortium have **free full access** to all the parts of the IPR asset (both tangible and intangible parts).
 - o **EXTERNAL:** For External usage, only the source Partners have **free full access** to all the parts of the IPR asset (both tangible and intangible parts).

- **Users of know-how (Access Rights):**
 - o See above “*Scope of usage*”

- **Protection – Proposal:**
 - o **Tangible:**
 - SRDC-TAN-4 (Tool, Source Code, Prototype): the proposal is to protect (**Copyright**) the tangible part of the IPR asset.
 - o **Intangible:**
 - SRDC-INTAN-7 (Experience - Soft-IP): the proposal is to protect (**Copyright**) the Intangible part of the IPR asset.

- **Protection - Final Decision:**
 - o **Tangible:**
 - SRDC-TAN-4 (Tool, Source Code, Prototype): all the Partners of the Consortium have not agreed on the proposal yet, but further discussions will be made during the lifecycle of the project.
 - o **Intangible:**
 - SRDC-INTAN-7 (Experience - Soft-IP): all the Partners of the Consortium have not agreed on the proposal yet, but further discussions will be made during the lifecycle of the project.

- **Time**
 - o **During Project Lifetime: all the Partners** in the Consortium have **free full access** to SRDC-TAN-4 (Tool, Source Code, Prototype), SRDC-INTAN-7 (Experience - Soft-IP).
 - o **12-months After Project Lifetime:** only the source Partners have **free full access** to SRDC-TAN-4 (Tool, Source Code, Prototype), SRDC-INTAN-7 (Experience - Soft-IP). All the other Partners have to act according the finally decided protection (see above).
 - o **Ever After Project Lifetime:** SRDC intends to provide two editions: 1. Open source edition, 2. Enterprise edition. Open source edition will be free with limited features. Enterprise edition will be a commercial product with all features enabled.

7.1.2.3 WP3 - T3.4 – Information Interoperability: Mapping Generator Tool: SRDC-TAN-5, SRDC-INTAN-8

- **Feeder**
 - o These IPR assets have been proposed to the Consortium by **SRDC (Mert Gencturk)**, who is part of the IPR Team with the role of IPR Owner for SRDC.

- **Know-how:**
 - o **Name:**
 - **WP3 - T3.4 – Information Interoperability**
 - o **UNIQUE ID:**
 - **SRDC-TAN-5 (Tools, Source Code, Prototypes)**
 - **SRDC-INTAN-8 (Experience - Soft-IP)**
 - o **Description:**
 - Mapping Generator Tool is a web-based tool enabling users to define mappings between proprietary content models and C2-SENSE harmonized ontology so that an organization who do not conform to the standard specified in Interoperability Profile can exchange data with any other organization.

 - o **Year of creation:**
 - **2016**

- **Origin**
 - o Since these IPR assets will be developed during the lifetime of the project, these assets are classified as **Foreground**.

- **Type:**
 - o **Tangible:**
 - SRDC-TAN-5 (Tools, Source Code, Prototype): it's a tangible asset, since SRDC will provide it as an online tool. That implies to develop **Source Code** for the **Tool** and release it as **prototype** for the C2-SENSE project and its consortium Partners.
 - o **Intangible:**
 - SRDC-INTAN-8 (Experience - Soft-IP): while developing the tangible part of this asset, SRDC will create also Intangible assets, like **Experience - Soft-IP** to provide a prototype tailored to the user's needs (e.g. proprietary data formats used by end-users).

- **Source of know-how:**
 - o For the source of know-how related to the development (tool, source code, prototype) is **SRDC**.

- **Owner of know-how:**
 - o SRDC for the tool, source code and prototype (SRDC-TAN-5);

- **Scope of usage:**
 - o **INTERNAL:** For Internal usage, **all the Partners** in the Consortium have **free full access** to all the parts of the IPR asset (both tangible and intangible parts).
 - o **EXTERNAL:** For External usage, only the source Partners have **free full access** to all the parts of the IPR asset (both tangible and intangible parts).

- **Users of know-how (Access Rights):**

- See above “*Scope of usage*”
- **Protection – Proposal:**
 - **Tangible:**
 - SRDC-TAN-5 (Tool, Source Code, Prototype): the proposal is to protect (**Copyright**) the tangible part of the IPR asset.
 - **Intangible:**
 - SRDC-INTAN-8 (Experience - Soft-IP): the proposal is to protect (**Copyright**) the Intangible part of the IPR asset.
- **Protection - Final Decision:**
 - **Tangible:**
 - SRDC-TAN-5 (Tool, Source Code, Prototype): all the Partners of the Consortium have not agreed on the proposal yet, but further discussions will be made during the lifecycle of the project.
 - **Intangible:**
 - SRDC-INTAN-8 (Experience - Soft-IP): all the Partners of the Consortium have not agreed on the proposal yet, but further discussions will be made during the lifecycle of the project.
- **Time**
 - **During Project Lifetime: all the Partners** in the Consortium have **free full access** to SRDC-TAN-5 (Tool, Source Code, Prototype), SRDC-INTAN-8 (Experience - Soft-IP).
 - **12-months After Project Lifetime:** only the source Partners have **free full access** to SRDC-TAN-5 (Tool, Source Code, Prototype), SRDC-INTAN-8 (Experience - Soft-IP). All the other Partners have to act according the finally decided protection (see above).
 - **Ever After Project Lifetime:** SRDC intends to provide two editions: 1. Open source edition, 2. Enterprise edition. Open source edition will be free with limited features. Enterprise edition will be a commercial product with all features enabled.

7.1.2.4 WP3 - T3.5 – Knowledge Interoperability: Profile Definition and Specialization Tool: SRDC-TAN-6, SRDC-INTAN-9

- **Feeder**
 - o These IPR assets have been proposed to the Consortium by **SRDC (Mert Gencturk)**, who is part of the IPR Team with the role of IPR Owner for SRDC.

- **Know-how:**
 - o **Name:**
 - **WP3 - T3.5 – Knowledge Interoperability**
 - o **UNIQUE ID:**
 - **SRDC-TAN-6 (Tools, Source Code, Prototypes)**
 - **SRDC-INTAN-9 (Experience - Soft-IP)**
 - o **Description:**
 - Profile Definition and Specialization Tool is one of the key components of the C2-SENSE Framework. It is an online tool enabling domain experts to define Emergency Interoperability Profiles through a GUI as well as to specialize them for specific incidents. After definition and specialization processes, the tool automatically generates necessary human readable and machine processable documents.

 - o **Year of creation:**
 - **2016**

- **Origin**
 - o Since these IPR assets will be developed during the lifetime of the project, these assets are classified as **Foreground**.

- **Type:**
 - o **Tangible:**
 - SRDC-TAN-6 (Tools, Source Code, Prototype): it's a tangible asset, since SRDC will provide it as an online tool. That implies to develop **Source Code** for the **Tool** and release it as **prototype** for the C2-SENSE project and its consortium Partners.
 - o **Intangible:**
 - SRDC-INTAN-9 (Experience - Soft-IP): while developing the tangible part of this asset, SRDC will create also Intangible assets, like **Experience - Soft-IP** since this kind of a tool has never implemented before.

- **Source of know-how:**
 - o For the source of know-how related to the development (tool, source code, prototype) is **SRDC**.

- **Owner of know-how:**
 - o SRDC for the tool, source code and prototype (SRDC-TAN-6);

- **Scope of usage:**
 - o **INTERNAL:** For Internal usage, **all the Partners** in the Consortium have **free full access** to all the parts of the IPR asset (both tangible and intangible parts).
 - o **EXTERNAL:** For External usage, only the source Partners have **free full access** to all the parts of the IPR asset (both tangible and intangible parts).

- **Users of know-how (Access Rights):**
 - o See above “*Scope of usage*”

- **Protection – Proposal:**
 - o **Tangible:**
 - SRDC-TAN-6 (Tool, Source Code, Prototype): the proposal is to protect (**Copyright**) the tangible part of the IPR asset.
 - o **Intangible:**
 - SRDC-INTAN-9 (Experience - Soft-IP): the proposal is to protect (**Copyright**) the Intangible part of the IPR asset.

- **Protection - Final Decision:**
 - o **Tangible:**
 - SRDC-TAN-6 (Tool, Source Code, Prototype): all the Partners of the Consortium have not agreed on the proposal yet, but further discussions will be made during the lifecycle of the project.
 - o **Intangible:**
 - SRDC-INTAN-9 (Experience - Soft-IP): all the Partners of the Consortium have not agreed on the proposal yet, but further discussions will be made during the lifecycle of the project.

- **Time**
 - o **During Project Lifetime: all the Partners** in the Consortium have **free full access** to SRDC-TAN-6 (Tool, Source Code, Prototype), SRDC-INTAN-9 (Experience - Soft-IP).
 - o **12-months After Project Lifetime:** only the source Partners have **free full access** to SRDC-TAN-6 (Tool, Source Code, Prototype), SRDC-INTAN-9 (Experience - Soft-IP). All the other Partners have to act according the finally decided protection (see above).
 - o **Ever After Project Lifetime:** SRDC intends to provide two editions: 1. Open source edition, 2. Enterprise edition. Open source edition will be free with limited features. Enterprise edition will be a commercial product with all features enabled.

7.1.2.5 WP3 - T3.5 – Knowledge Interoperability: Profile Monitoring Tool: SRDC-TAN-7

- **Feeder**
 - o These IPR assets have been proposed to the Consortium by **SRDC (Mert Gencturk)**, who is part of the IPR Team with the role of IPR Owner for SRDC.

- **Know-how:**
 - o **Name:**
 - **WP3 - T3.5 – Knowledge Interoperability**
 - o **UNIQUE ID:**
 - **SRDC-TAN-7 (Tools, Source Code, Prototypes)**
 - o **Description:**
 - Profile Monitoring Tool monitors the execution of specialized profiles and informs user about the current situation of execution. It displays successfully executed steps, bottlenecks, errors etc.

 - o **Year of creation:**
 - **2016**

- **Origin**
 - o Since these IPR assets will be developed during the lifetime of the project, these assets are classified as **Foreground**.

- **Type:**
 - o **Tangible:**
 - SRDC-TAN-7 (Tools, Source Code, Prototype): it's a tangible asset, since SRDC will provide it as an online tool. That implies to develop **Source Code** for the **Tool** and release it as **prototype** for the C2-SENSE project and its consortium Partners.

- **Source of know-how:**
 - o For the source of know-how related to the development (tool, source code, prototype) is **SRDC**.

- **Owner of know-how:**
 - o SRDC for the tool, source code and prototype (SRDC-TAN-7);

- **Scope of usage:**
 - o **INTERNAL:** For Internal usage, **all the Partners** in the Consortium have **free full access** to all the parts of the IPR asset (both tangible and intangible parts).
 - o **EXTERNAL:** For External usage, only the source Partners have **free full access** to all the parts of the IPR asset (both tangible and intangible parts).

- **Users of know-how (Access Rights):**
 - o See above “*Scope of usage*”

- **Protection – Proposal:**
 - o **Tangible:**
 - SRDC-TAN-7 (Tool, Source Code, Prototype): the proposal is to protect (**Copyright**) the tangible part of the IPR asset.

- **Protection - Final Decision:**

- **Tangible:**
 - SRDC-TAN-7 (Tool, Source Code, Prototype): all the Partners of the Consortium have not agreed on the proposal yet, but further discussions will be made during the lifecycle of the project.

- **Time**

- **During Project Lifetime: all the Partners** in the Consortium have **free full access** to SRDC-TAN-7 (Tool, Source Code, Prototype)
- **12-months After Project Lifetime:** only the source Partners have **free full access** to SRDC-TAN-7 (Tool, Source Code, Prototype). All the other Partners have to act according the finally decided protection (see above).
- **Ever After Project Lifetime:** This tool can only be used if there exists a Profile Execution Engine. Therefore, SRDC and LUTECH, who is in charge of the development of Profile Execution Engine, will discuss about this matter. SRDC intends to provide these tools as two editions: 1. Open source edition, 2. Enterprise edition. Open source edition will be free with limited features. Enterprise edition will be a commercial product with all features enabled.

7.1.2.6 WP3 - T3.5 – Knowledge Interoperability: Security and Privacy Tool: SRDC-TAN-8, SRDC-INTAN-10

- **Feeder**
 - o These IPR assets have been proposed to the Consortium by **SRDC (Mert Gencturk)**, who is part of the IPR Team with the role of IPR Owner for SRDC.

- **Know-how:**
 - o **Name:**
 - **WP3 - T3.5 – Knowledge Interoperability**
 - o **UNIQUE ID:**
 - **SRDC-TAN-8 (Tools, Source Code, Prototypes)**
 - **SRDC-INTAN-10 (Experience - Soft-IP)**
 - o **Description:**
 - Security and Privacy Tool will control the integrity, confidentiality, authorization and authentication in C2-SENSE Collaboration Environment.

 - o **Year of creation:**
 - **2016**

- **Origin**
 - o Since these IPR assets will be developed during the lifetime of the project, these assets are classified as **Foreground**.

- **Type:**
 - o **Tangible:**
 - SRDC-TAN-8 (Tools, Source Code, Prototype): it's a tangible asset, since SRDC will provide it as a mechanism running in background. Other tools in C2-SENSE should have necessary GUI components if they need to be secured with Security and Privacy Tool (e.g. authentication). That implies to develop **Source Code** for the **Tool** and release it as **prototype** for the C2-SENSE project and its consortium Partners.
 - o **Intangible:**
 - SRDC-INTAN-10 (Experience - Soft-IP): while developing the tangible part of this asset, SRDC will create also Intangible assets, like **Experience - Soft-IP** to provide a prototype tailored to the user's needs.

- **Source of know-how:**
 - o For the source of know-how related to the development (tool, source code, prototype) is **SRDC**.

- **Owner of know-how:**
 - o SRDC for the tool, source code and prototype (SRDC-TAN-8);

- **Scope of usage:**
 - o **INTERNAL:** For Internal usage, **all the Partners** in the Consortium have **free full access** to all the parts of the IPR asset (both tangible and intangible parts).
 - o **EXTERNAL:** For External usage, only the source Partners have **free full access** to all the parts of the IPR asset (both tangible and intangible parts).

- **Users of know-how (Access Rights):**

- See above “*Scope of usage*”
- **Protection – Proposal:**
 - **Tangible:**
 - SRDC-TAN-8 (Tool, Source Code, Prototype): the proposal is to protect (**Copyright**) the tangible part of the IPR asset.
 - **Intangible:**
 - SRDC-INTAN-10 (Experience - Soft-IP): the proposal is to protect (**Copyright**) the Intangible part of the IPR asset.
- **Protection - Final Decision:**
 - **Tangible:**
 - SRDC-TAN-8 (Tool, Source Code, Prototype): all the Partners of the Consortium have not agreed on the proposal yet, but further discussions will be made during the lifecycle of the project.
 - **Intangible:**
 - SRDC-INTAN-10 (Experience - Soft-IP): all the Partners of the Consortium have not agreed on the proposal yet, but further discussions will be made during the lifecycle of the project.
- **Time**
 - **During Project Lifetime: all the Partners** in the Consortium have **free full access** to SRDC-TAN-8 (Tool, Source Code, Prototype), SRDC-INTAN-10 (Experience - Soft-IP).
 - **12-months After Project Lifetime:** only the source Partners have **free full access** to SRDC-TAN-8 (Tool, Source Code, Prototype), SRDC-INTAN-10 (Experience - Soft-IP). All the other Partners have to act according the finally decided protection (see above).
 - **Ever After Project Lifetime:** only the source Partners have **free full access** to SRDC-TAN-8 (Tool, Source Code, Prototype), SRDC-INTAN-10 (Experience - Soft-IP). All the other Partners have to act according the finally decided protection (see above).

7.1.2.7 WP5 – T5.1 – Integration of Layer Specific Profiles: Emergency Interoperability Profiles: SRDC-TAN-9, SRDC-INTAN-11

- **Feeder**
 - o These IPR assets have been proposed to the Consortium by **SRDC (Mert Gencturk)**, who is part of the IPR Team with the role of IPR Owner for SRDC.

- **Know-how:**
 - o **Name:**
 - **WP5 – T5.1 – Integration of Layer Specific Profiles**
 - o **UNIQUE ID:**
 - **SRDC-TAN-9 (Deliverable)**
 - **SRDC-INTAN-11 (Experience - Soft-IP, Methodology)**
 - o **Description:**
 - The main purpose of C2-SENSE project is to develop Emergency Interoperability Profiles. The profiles will first be defined as layer specific and then they will be consolidated to a single profile, which will be called as Emergency Interoperability Profile.

 - o **Year of creation:**
 - **2016**

- **Origin**
 - o Since these IPR assets will be developed during the lifetime of the project, these assets are classified as **Foreground**.

- **Type:**
 - o **Tangible:**
 - SRDC-TAN-9 (Deliverable): it's a tangible asset, since C2-SENSE consortium will provide Emergency Interoperability Profiles both as Word document and in XML format. That implies to develop **Deliverable** for the C2-SENSE project and its consortium Partners.
 - o **Intangible:**
 - SRDC-INTAN-11 (Experience - Soft-IP, Methodology): while developing the tangible part of this asset, C2-SENSE consortium will create also Intangible assets, like **Experience - Soft-IP** and **Methodology** to provide the profiles according to the user's and community's needs.

- **Source of know-how:**
 - o For the source of know-how related to the development (deliverable) is **all C2-SENSE consortium**.

- **Owner of know-how:**
 - o C2-SENSE consortium as a whole for the deliverable (SRDC-TAN-9);

- **Scope of usage:**
 - o **INTERNAL:** For Internal usage, **all the Partners** in the Consortium have **free full access** to all the parts of the IPR asset (both tangible and intangible parts).
 - o **EXTERNAL:** For External usage, **all the Partners** in the Consortium have **free full access** to all the parts of the IPR asset (both tangible and intangible parts).

- **Users of know-how (Access Rights):**
 - o See above “*Scope of usage*”

- **Protection – Proposal:**
 - o **Tangible:**
 - SRDC-TAN-9 (Deliverable): the proposal is not to protect the tangible part of the IPR asset.
 - o **Intangible:**
 - SRDC-INTAN-11 (Experience - Soft-IP, Methodology): the proposal is not to protect the Intangible part of the IPR asset.

- **Protection - Final Decision:**
 - o **Tangible:**
 - SRDC-TAN-9 (Deliverable): all the Partners of the Consortium have not agreed on the proposal yet.
 - o **Intangible:**
 - SRDC-INTAN-11 Methodology): all the Partners of the Consortium have not agreed on the proposal yet.

- **Time**
 - o **During Project Lifetime: all the Partners** in the Consortium have **free full access** to SRDC-TAN-9 (Deliverable), SRDC-INTAN-11 (Experience - Soft-IP, Methodology).
 - o **12-months After Project Lifetime: all the Partners** in the Consortium have **free full access** to SRDC-TAN-9 (Deliverable), SRDC-INTAN-11 (Experience - Soft-IP, Methodology).
 - o **Ever After Project Lifetime:** The Emergency Interoperability Profiles will be released as open source.

7.1.2.8 WP6 – T6.1, T6.2 – Conformance and Interoperability Testing Mechanisms: SRDC-TAN-10, SRDC-TAN-11, SRDC-INTAN-12, SRDC-INTAN-13

- **Feeder**
 - o These IPR assets have been proposed to the Consortium by **SRDC (Mert Gencturk)**, who is part of the IPR Team with the role of IPR Owner for SRDC.

- **Know-how:**
 - o **Name:**
 - **WP6 - T6.1, T6.2 – Conformance and Interoperability Testing Mechanisms**
 - o **UNIQUE ID:**
 - **SRDC-TAN-10, SRDC-TAN-11 (Tools, Source Code, Prototypes)**
 - **SRDC-INTAN-12, SRDC-INTAN-13 (Experience - Soft-IP, Methodology)**
 - o **Description:**
 - Conformance of systems against developed Emergency Interoperability Profiles will be tested by making syntactic validation, semantic verification and checking messaging interface. SRDC's TestBATN tool will be used to test interoperability of different systems according to a scenario (which means specialized profile in C2-SENSE environment).

 - o **Year of creation:**
 - **2017**

- **Origin**
 - o Since these IPR assets will be developed during the lifetime of the project, these assets are classified as **Foreground**.

- **Type:**
 - o **Tangible:**
 - SRDC-TAN-10, SRDC-TAN-11 (Tools, Source Code, Prototype): it's a tangible asset, since SRDC will provide it as a tool. That implies to develop **Source Code** for the **Tool** and release it as **prototype** for the C2-SENSE project and its consortium Partners.
 - o **Intangible:**
 - SRDC-INTAN-12, SRDC-INTAN-13 (Experience - Soft-IP, Methodology): while developing the tangible part of this asset, SRDC will create also Intangible assets, like **Experience - Soft-IP** and **Methodology** by applying existing testing approach, which has already been used in eHealth domain, to a new domain (emergency).

- **Source of know-how:**
 - o For the source of know-how related to the development (tool, source code, prototype) is **SRDC**.

- **Owner of know-how:**
 - o SRDC for the tool, source code and prototype (SRDC-TAN-10, SRDC-TAN-11);

- **Scope of usage:**
 - o **INTERNAL:** For Internal usage, **all the Partners** in the Consortium have **free full access** to all the parts of the IPR asset (both tangible and intangible parts).
 - o **EXTERNAL:** For External usage, only SRDC will have **free full access** to all the parts of the IPR asset (both tangible and intangible parts).

- **Users of know-how (Access Rights):**
 - o See above “*Scope of usage*”

- **Protection – Proposal:**
 - o **Tangible:**
 - SRDC-TAN-10, SRDC-TAN-11 (Tool, Source Code, Prototype): the proposal is to protect (**Copyright**) the tangible part of the IPR asset.
 - o **Intangible:**
 - SRDC-INTAN-12, SRDC-INTAN-13 (Experience - Soft-IP, Methodology): the proposal is to protect (**Copyright**) the Intangible part of the IPR asset.

- **Protection - Final Decision:**
 - o **Tangible:**
 - SRDC-TAN-10, SRDC-TAN-11 (Tool, Source Code, Prototype): all the Partners of the Consortium have not agreed on the proposal yet, but further discussions will be made during the lifecycle of the project.
 - o **Intangible:**
 - SRDC-INTAN-12, SRDC-INTAN-13 (Experience - Soft-IP): all the Partners of the Consortium have not agreed on the proposal yet, but further discussions will be made during the lifecycle of the project.

- **Time**
 - o **During Project Lifetime:** all the Partners in the Consortium have **free full access** to SRDC-TAN-10, SRDC-TAN-11 (Tool, Source Code, Prototype), SRDC-INTAN-12, SRDC-INTAN-13 (Experience - Soft-IP, Methodology).
 - o **12-months After Project Lifetime:** only SRDC have **free full access** to SRDC-TAN-10, SRDC-TAN-11 (Tool, Source Code, Prototype), SRDC-INTAN-12, SRDC-INTAN-13 (Experience - Soft-IP, Methodology). All the other Partners have to act according the finally decided protection (see above).
 - o **Ever After Project Lifetime:** SRDC has already been providing its testing mechanism as commercial product.

7.1.3 REGIONE - Foreground

Since Regione is a major contributor to the following tasks:

- WP7 - T7.1 - Requirement of C2-SENSE Pilot Application

Regione is proposing to rule the related IPR Foreground assets.

7.1.3.1 WP7 - T7.1 - Requirement of C2-SENSE Pilot Application: REGIONE-INTAN-1, REGIONE-INTAN-2

- **Feeder**
 - o These IPR assets have been proposed to the Consortium by **REGIONE**, who is part of the IPR team
- **Know-how:**
 - o **Name:**
 - **WP7 - T7.1 - Requirement of C2-SENSE Pilot Application**
 - o **UNIQUE ID:**
 - **REGIONE-INTAN-1 (Experience - Soft-IP)**
 - **REGIONE-INTAN-2 (Methodology)**
 - **REGIONE-TAN-1 (Database)**
 - o **Description:**
 - The specifications and requirements of the pilot application and scenario will be defined. The conformity of the requirements of the pilot application with the conceptual design of C2-SENSE project will be ensured by this task.
 - All the knowledge acquired during the pilot application about interoperability in emergency management, that is the core of the C2-sense project, will be available for other operators of Civil Protection for future reuse (knowledge transfer).
 - All data coming from Puglia sensors network should be used under notification by email to “Centro Funzionale Decentrato” (centrofunzionale.puglia@regione.puglia.it), with the indication of the institution, the aim, the location in which data should be used, only after having authorization. At the end of the project, these data will be not available anymore and any use will be not authorized.
 - o **Year of creation:**
 - **2014**
- **Origin**
 - o Since these IPR assets will be developed during the lifetime of the project, these assets are classified as **Foreground**.
- **Type:**
 - o **Intangible:**
 - **REGIONE-INTAN-1** and **REGIONE-INTAN-2** (Experience - Soft-IP; Methodology): REGIONE will create Intangible assets, like **Experience - Soft-IP** and a **Methodology** to provide support to Civil Protection for any similar activities (i.e. emergency drill-downs,...).
 - o **Tangible:**
 - **REGIONE-TAN-1** (Database): this database will be used inside the “EMERGENCY MAP TOOL”
- **Source of know-how:**
 - o The Partners that have contributed to the development of this IPR asset are: **REGIONE, INNOVA.**

- **Owner of know-how:**
 - o Since the know-how is developed by the source Partners, the ownership of the related knowledge remains to the source Partners.

- **Scope of usage:**
 - o **Intangible:**
 - **INTERNAL:** For Internal usage, **all the Partners** in the Consortium have **free full access** to all the parts of the IPR asset (intangible parts).
 - **EXTERNAL:** For External usage only the source Partners have **free full access** to all the parts of the IPR asset (intangible parts).
 - o **Tangible:**
 - **INTERNAL:** For Internal usage, **only AIT Partners** in the Consortium have **free full access** to all the parts of the IPR asset (tangible parts).
 - **EXTERNAL:** For External usage all Partners can use database under notification by email to “Centro Funzionale Decentrato” (centrofunzionale.puglia@regione.puglia.it), with the indication of the institution, the aim, the location in which data should be used, only after having authorization.

- **Users of know-how (Access Rights):**
 - o See above “*Scope of usage*”

- **Protection – Proposal:**
 - o **Intangible:**
 - **REGIONE-INTAN-1** (Experience - Soft-IP) and **REGIONE-INTAN-2** (Methodology): the proposal is: no protection of the IPR asset.
 - o **Tangible:**
 - **REGIONE-TAN-1** (Database) Due to Legal constraints, the Database must be protected. So, there’s no actual proposal to the Consortium.

- **Protection - Final Decision:**
 - o **Intangible:**
 - **REGIONE-INTAN-1** (Experience - Soft-IP) and **REGIONE-INTAN-2** (Methodology): the final decision is: no protection of the IPR asset.
 - o **Tangible:**
 - **REGIONE-TAN-1** (Database) Due to Legal constraints, the Database must be protected. So, there’s no actual proposal to the Consortium.

- **Time**
 - o **Intangible:**
 - **During Project Lifetime:** **all the Partners** in the Consortium have **free full access** to **REGIONE-INTAN-1** (Experience - Soft-IP) and **REGIONE-INTAN-2** (Methodology).
 - **12-months After Project Lifetime:** only the InnovaPuglia and Regione Puglia have **free full access** to **REGIONE-INTAN-1** (Experience - Soft-IP) and **REGIONE-INTAN-2** (Methodology).
 - **Ever After Project Lifetime:** only the InnovaPuglia and Regione Puglia have **free full access** to **REGIONE-INTAN-1** (Experience - Soft-IP) and **REGIONE-INTAN-2** (Methodology).
 - o **Tangible:**
 - **During Project Lifetime:** For **Internal** usage, **only AIT Partners** in the Consortium has **free full access** to **REGIONE-TAN-1** (Database) and for **External** usage all Partners can use **REGIONE-TAN-1** (Database) under notification by email to “Centro Funzionale Decentrato” (centrofunzionale.puglia@regione.puglia.it),

with the indication of the institution, the aim, the location in which data should be used, only after having authorization.

- **Ever After Project Lifetime:** At the end of the project, REGIONE-TAN-1 (Database) will be not available anymore and any use will be not authorized.



7.1.4 INNOVAPUGLIA - Foreground

Since InnovaPuglia is a major contributor to the following tasks:

- WP7 – T7.2 – *Design of C2-SENSE Pilot Application*
- WP7 – T7.3 – *Deployment of C2-SENSE Pilot Application – Flood Scenario*

InnovaPuglia is proposing to rule the related IPR Foreground assets.

7.1.4.1 WP7 – T7.2 – Design of C2-SENSE Pilot Application: INNOVA-INTAN-3, INNOVA-INTAN-4

- **Feeder**
 - o These IPR assets have been proposed to the Consortium by **INNOVAPUGLIA**, who is part of the IPR team
- **Know-how:**
 - o **Name:**
 - **WP7 – T7.2 – Design of C2-SENSE Pilot Application**
 - o **UNIQUE ID:**
 - **INNOVA-INTAN-3 (Experience - Soft-IP)**
 - **INNOVA-INTAN-4 (Methodology)**
 - o **Description:**
 - Design of C2-SENSE Pilot Application and definition of its inclusion within the C2-SENSE project. Description of involvement of local stakeholders for emergency of situation management. And definition of Pilot Scenario that will be tested during experimentation phases.
 - o **Year of creation:**
 - **2015**
 - o **Date of creation:** 31.7.2015
 - o **Deliverable:** Design of the implementation of the Pilot Application Scenario – Flood Scenario
- **Origin**
 - o Since these IPR assets will be developed during the lifetime of the project, these assets are classified as **Foreground**.
- **Type:**
 - o **Intangible:**
 - INNOVA-INTAN-3 and INNOVA-INTAN-4 (Experience - Soft-IP; Methodology): INNOVAPUGLIA will create Intangible assets, like **Experience - Soft-IP** and a **Methodology** to provide a first opportunity for integration between stakeholders' systems involved into emergency situations.
- **Source of know-how:**
 - o For the source of know-how related to the development is **INNOVAPUGLIA** with contributions of other project Partners.
- **Owner of know-how:**
 - o INNOVAPUGLIA has played a co-ordinating work and information gathering from all the Partners that remain owners of their knowledge.
- **Scope of usage:**
 - o **INTERNAL:** For Internal usage, **all the Partners** in the Consortium have **free full access** to all the parts of the IPR asset (intangible parts).

- **EXTERNAL:** For External usage **all the Partners** have **free full access** to all the parts of the IPR asset (intangible parts).
- **Users of know-how (Access Rights):**
Access right are according the “*Scope of usage*” and in compliance with the instruction in paragraph “Time”
- **Protection – Proposal:**
 - **Intangible:**
 - INNOVAPUGLIA-INTAN-3 (Experience - Soft-IP) and INNOVAPUGLIA-INTAN-4 (Methodology): the proposal is: no protection for the Intangible part of the IPR asset.
- **Protection - Final Decision:**
 - **Intangible:**
 - INNOVAPUGLIA-INTAN-3 (Experience - Soft-IP) and INNOVAPUGLIA-INTAN-4 (Methodology): the final decision has not been taken yet.
- **Time**
 - **During Project Lifetime:** **all the Partners** in the Consortium have **free full access** to INNOVAPUGLIA-INTAN-3 (Experience - Soft-IP) and INNOVAPUGLIA-INTAN-4 (Methodology).
 - **12-months After Project Lifetime:** only the InnovaPuglia and Regione Puglia have **free full access** to INNOVAPUGLIA-INTAN-3 (Experience - Soft-IP) and INNOVAPUGLIA-INTAN-4 (Methodology).
 - **Ever After Project Lifetime:** only the InnovaPuglia and Regione Puglia have **free full access** to INNOVAPUGLIA-INTAN-3 (Experience - Soft-IP) and INNOVAPUGLIA-INTAN-4 (Methodology).

7.1.4.2 WP7 – T7.3 – Deployment of pilot application, test phase definition, evaluation criteria definition: INNOVA-INTAN-5, INNOVA-INTAN-6

- **Feeder**
 - o These IPR assets have been proposed to the Consortium by **INNOVAPUGLIA**, who is part of the IPR team.

- **Know-how:**
 - o **Name:**
 - **WP7 – T7.3 – Deployment of C2-SENSE Pilot Application**
 - o **UNIQUE ID:**
 - **INNOVA-INTAN-5 (Experience - Soft-IP)**
 - **INNOVA-INTAN-6 (Methodology)**
 - o **Description:**
 - Deployment of C2-SENSE Pilot Application and definition of module adapters to interface stakeholders' systems involved in Pilot Scenario. Description of final architecture of Pilot Application and description of deployment phases. Definition and description of test phase.
 - o **Year of creation:**
 - **2015**
 - o **Date of creation:** 31.9.2015
 - o **Deliverable:** Deployment of the implementation of the Pilot Application Scenario – Flood Scenario

- **Origin**
 - o Since these IPR assets will be developed during the lifetime of the project, these assets are classified as **Foreground**.

- **Type:**
 - o **Intangible:**
 - INNOVA-INTAN-5 and INNOVA-INTAN-6 (Experience - Soft-IP; Methodology): INNOVAPUGLIA will create Intangible assets, like **Experience - Soft-IP** and a **Methodology** to provide a detailed description of interaction between system of involved stakeholders, specifying the technologies that their systems use and applicative modules that interface with C2-SENSE system.

- **Source of know-how:**
 - o For the source of know-how related to the development is **INNOVAPUGLIA** with contributions of other project Partners.

- **Owner of know-how:**
 - o INNOVAPUGLIA has played a co-ordinating work and information gathering from all the Partners that remain owners of their knowledge.

- **Scope of usage:**
 - o **INTERNAL:** For Internal usage, **all the Partners** in the Consortium have **free full access** to all the parts of the IPR asset (intangible parts).
 - o **EXTERNAL:** For External usage, **all the Partners** have **free full access** to all the parts of the IPR asset (intangible parts).

- **Users of know-how (Access Rights):**

Access right are according the “*Scope of usage*” and in compliance with the instruction in paragraph “Time”

- **Protection – Proposal:**
 - o **Intangible:**
 - INNOVAPUGLIA-INTAN-5 (Experience - Soft-IP) and INNOVAPUGLIA-INTAN-6 (Methodology): the proposal is: no protection for the Intangible part of the IPR asset.
- **Protection - Final Decision:**
 - o **Intangible:**
 - INNOVAPUGLIA-INTAN-5 (Experience - Soft-IP) and INNOVAPUGLIA-INTAN-6 (Methodology): the final decision has not been taken yet.
- **Time**
 - o **During Project Lifetime: all the Partners** in the Consortium have **free full access** to INNOVAPUGLIA-INTAN-5 (Experience - Soft-IP) and INNOVAPUGLIA-INTAN-6 (Methodology).
 - o **12-months After Project Lifetime:** only the InnovaPuglia and Regione Puglia have **free full access** to INNOVAPUGLIA-INTAN-5 (Experience - Soft-IP) and INNOVAPUGLIA-INTAN-6 (Methodology).
 - o **Ever After Project Lifetime:** only the InnovaPuglia and Regione Puglia have **free full access** to INNOVAPUGLIA-INTAN-5 (Experience - Soft-IP) and INNOVAPUGLIA-INTAN-6 (Methodology).

7.1.5 PIAP - Foreground

7.1.5.1 WP3 - T3.1 – Physical Interoperability: PIAP-TAN-1, PIAP-TAN-2, PIAP-TAN-3, PIAP-TAN-4, PIAP-INTAN-1

- **Feeder**
 - o These IPR assets have been proposed to the Consortium by **PIAP (Roman Szewczyk)**, who is part of the IPR Team with the role of IPR Owner for AIT.

- **Know-how:**
 - o **Name:**
 - **WP3 - T3.1 - Physical Interoperability**
 - o **UNIQUE ID:**
 - **PIAP-TAN-1 (Tools)**
 - **PIAP-TAN-2 (Source Code)**
 - **PIAP-TAN-3 (Prototypes)**
 - **PIAP-TAN-4 (Deliverable)**
 - **PIAP-INTAN (Methodology)**
 - o **Description:**
 - This deliverable describes the collaboration environment, basically a software suite to be used for the collaboration in emergency management. Related Tools to be described are Emergency Maps Tool, Sensor Management Tool, Messaging/Communication Platform, Registry of Emergency Web Services, Profile Monitoring Tool, Profile Definition Tool, Security and Privacy Tool, Profile Repository.
 - The “Physical Interoperability” layer manages the physical connections between the networked applications and devices. In this task generic physical interoperability profiles will be developed implementing the most popular interfaces and protocols. Additionally, C2-SENSE will develop an IP based gateway (by PIAP and REGOLA) to enable the exchange of data using prominent wired and wireless communication mediums generating dependent adapters on the basis of physical profiles.
 - o **Year of creation:**
 - **2016**

- **Origin**
 - o Since these IPR assets will be developed during the lifetime of the project, these assets are classified as **Foreground**.

- **Type:**
 - o **Tangible:**
 - PIAP-TAN-1 (Tools), PIAP-TAN-2 (Source Code), PIAP-TAN-3 (Prototypes), PIAP-TAN-4 (Deliverable): they are tangible assets, since they imply development of source code (i.e. collaboration environment, tools,...)
 - o **Intangible:**
 - PIAP-INTAN-1 (Methodology): while developing the tangible part of this asset, all Partners will create also Intangible assets, like **Methodology**.

- **Source of know-how:**
 - o The Partners that will contribute to these assets are: **INNOVA, PIAP, REGOLA REGIONE PUGLIA**.

- **Owner of know-how:**

- Since the know-how is developed by the source Partners, all the Partners in the Consortium have agreed on the fact that the ownership of the related knowledge remains to the source Partners.
- **Scope of usage:**
 - **INTERNAL:** For Internal usage, **all the Partners** in the Consortium have **free full access** to all the parts of the IPR asset (both tangible and intangible parts).
 - **EXTERNAL:** For External usage, only the source Partners have **free full access** to all the parts of the IPR asset (both tangible and intangible parts).
- **Users of know-how (Access Rights):**
 - See above “*Scope of usage*”
- **Protection – Proposal:**
 - **Tangible:**
 - PIAP-TAN-1 (Tools), PIAP-TAN-2 (Source Code), PIAP-TAN-3 (Prototypes), PIAP-TAN-4 (Deliverable): the proposal is not to protect the tangible part of the IPR asset.
 - **Intangible:**
 - PIAP-INTAN-1 (Methodology): the proposal is not to protect the tangible part of the IPR asset.
- **Protection - Final Decision:**
 - **Tangible:**
 - PIAP-TAN-1 (Tools), PIAP-TAN-2 (Source Code), PIAP-TAN-3 (Prototypes), PIAP-TAN-4 (Deliverable): all the Partners of the Consortium have not agreed on the proposal yet.
 - **Intangible:**
 - PIAP-INTAN-1 (Methodology): all the Partners of the Consortium have not agreed on the proposal yet.
- **Time**
 - **During Project Lifetime:** **all the Partners** in the Consortium have **free full access** to PIAP-TAN-1 (Tools), PIAP-TAN-2 (Source Code), PIAP-TAN-3 (Prototypes), PIAP-TAN-4 (Deliverable), PIAP-INTAN-1 (Methodology).
 - **12-months After Project Lifetime:** only the **source Partners** have **free full access** to PIAP-TAN-1 (Tools), PIAP-TAN-2 (Source Code), PIAP-TAN-3 (Prototypes), PIAP-TAN-4 (Deliverable), PIAP-INTAN-1 (Methodology). All the other Partners have to act according the finally decided protection (see above).
 - **Ever After Project Lifetime:** Only the **sources Partners** have **free full access** to PIAP-TAN-1 (Tools), PIAP-TAN-2 (Source Code), PIAP-TAN-3 (Prototypes), PIAP-TAN-4 (Deliverable), PIAP-INTAN-1 (Methodology). All the other Partners have to act according the finally decided protection (see above).

7.1.6 REGOLA - Background

Regola as a producer of system and IT services for the emergency management bring into the consortium tool and technology that can enable an effective pilot application.

7.1.6.1 REGOLA-TAN-1 Product and services for emergency management

- Feeder

- These IPR assets have been proposed to the Consortium by **REGOLA (Biagio Lanziani)**, who is part of the IPR Team with the role of IPR Owner for REGOLA.
- Since these IPR assets were pre-existing the lifetime of the project and mentioned into the state of the art, these assets are classified as **Background**.

- Know-how:

○ Names:

- **ActOnLine**
- **FlagMii**
- **Nowtice**
- **NUE112**

○ UNIQUE ID:

- **REGOLA-TAN-1**

○ Description:

Regola is a producer of C2 system and a provider for services suitable for organizations involved into the emergency management.

The tool proposed to be used into the project can be really helpful in building the pilot application:

- in case the organization of the pilot hasn't the possibility to connect their real system or
- in case the organization of the pilot has no system to connect

The proposed tools are:

- **ActOnline:** It's a C2 system designed for civil protection
- **FlagMii:** It's a solution that helps citizen to make a rescue call to 112 and at the same time is able to send the position of the caller. The solution make more precise and time efficient the rescuer's response
- **NowTice:** It's an Emergency Warning Population system and can be useful to spread warn message to the population or to relevant stakeholder using several communication channel: sms, email, voice
- **NUE112:** it's a dispatcher for the call centre of the unique number 112. The SW help operator to localize the caller and then to forward the emergency request to the correct agency (fire, medical, police, civil protection).

○ Year of creation:

- **ActOnLine: 2005**
- **Flagmii: 2011**
- **NowTice:2011**
- **NUE112: 2014**

- Origin

- Since these IPR assets were pre-existing the lifetime of the project, these assets are classified as **Background**.

- **Type:**
 - o **Tangible:**
 - REGOLA-TAN-1: it's a tangible asset, since they are tool that can be used into the pilot application
- **Source of know-how:**
 - o For the source of know-how related to adaptation and development (source code) is **REGOLA**.
- **Owner of know-how:**
 - o REGOLA;
- **Scope of usage:**
 - o **INTERNAL:** For Internal usage the Regola tool (actonline, flagmii, NUE112, nowtice) is allowed only under the control of Regola. The tools are available for connection test purpose eventually necessary to build up the pilot application.
 - o **EXTERNAL:** The external usage is prohibited without an agreement with REGOLA
- **Users of know-how (Access Rights):**
 - o See above "*Scope of usage*"
- **Protection – Proposal:**
 - o **Tangible:**
 - REGOLA-TAN-1 Since this IPR asset is pre-existing the lifetime of the Project, there's no proposal to the Consortium. Trademark and copyright already exist on the listed product of REGOLA-TAN-1
- **Protection - Final Decision:**
 - o **Tangible:**
 - REGOLA-TAN-1 (Tools, services, Source Code): Since this IPR asset is pre-existing the lifetime of the Project, an agreement with REGOLA has to be established if a Partner which to use them after the project conclusion. During the project the IPR asset can be used by a consortium Partner only for test connection purpose and only under the control of Regola.
- **Time**
 - o **During Project Lifetime: all the Partners** can connect to REGOLA-TAN-1 tool but only for test connection purpose (technical communication between systems) and under the control on REGOLA.
 - o **12-months After Project Lifetime:** only with a bilateral agreement.
 - o **Ever After Project Lifetime:** only with a bilateral agreement.

7.1.7 REGOLA – Foreground

Regola is a contributor to the following tasks:

- WP3 – T3.1 – IP based gateway
- WP4 – T4.2 – Harmonized Strategy Doctrines and High Level Objectives
- WP5 – T5.3 – Functional Tests and End-User Validation of C2-SENSE Components
- WP7 – T7.4 – Validation of the pilot application

Regola is proposing to rule the related IPR Foreground assets.

7.1.7.1 WP3 – T3.1 –REGOLA-TAN-1

- **Feeder**
 - o These IPR assets have been proposed to the Consortium by **REGOLA (Biagio Lanziani)**, who is part of the IPR Team with the role of IPR Owner for REGOLA.
- **Know-how:**
 - o **Name:**
 - **WP3 - T3.1 - Physical Interoperability**
 - o **UNIQUE ID:**
 - **REGOLA-TAN-1 (Deliverable)**
 - o **Description:**
 - This deliverable is a part of the IP based gateway designed and developed together with PIAP and Innovapuglia.
 - o **Year of creation:**
 - **2016**
- **Origin**
 - o Since these IPR assets will be developed during the lifetime of the project, these assets are classified as **Foreground**.
- **Type:**
 - o **Tangible:**
 - REGOLA-TAN-1 (Deliverable): is a tangible assets, since they imply development of source code (i.e. collaboration environment, tools,...)
- **Source of know-how:**
 - o The Partners that will contribute to these assets are: **INNOVA, PIAP, REGOLA**.
- **Owner of know-how:**
 - o Since the know-how is developed by the source Partners, all the Partners in the Consortium have agreed on the fact that the ownership of the related knowledge remains to the source Partners.
- **Scope of usage:**
 - o **INTERNAL:** For Internal usage, **all the Partners** in the Consortium have **free full access** to all the parts of the IPR asset.
 - o **EXTERNAL:** For External usage, only the source Partners have **free full access** to all the parts of the IPR asset.
- **Users of know-how (Access Rights):**
 - o See above “*Scope of usage*”

- **Protection – Proposal:**
 - o **Tangible:**
 - REGOLA-TAN-1 (Deliverable): the proposal is not to protect the tangible part of the IPR asset.

- **Protection - Final Decision:**
 - o **Tangible:**
 - REGOLA-TAN-1: all the Partners of the Consortium have not agreed on the proposal yet.

- **Time**
 - o **During Project Lifetime:** all the Partners in the Consortium have **free full access** to REGOLA-TAN-1.
 - o **12-months After Project Lifetime:** only the **source Partners** have **free full access** to REGOLA-TAN-1.
 - o **Ever After Project Lifetime:** Only the **sources Partners** have **free full access** to REGOLA-TAN-1.

7.1.7.2 WP4 – T4.2 – REGOLA-TAN-4, REGOLA-INTAN-4

- **Feeder**
 - o These IPR assets have been proposed to the Consortium by **REGOLA (Biagio Lanziani)**, who is part of the IPR Team with the role of IPR Owner for REGOLA.

- **Know-how:**
 - o **Name:**
 - **WP4 – T 4.2 Harmonized Strategy Doctrines and High Level Objectives**
 - o **UNIQUE ID:**
 - **REGOLA-TAN-4 (Deliverable)**
 - **REGOLA-INTAN-4 (Methodology)**
 - o **Description:**
 - This deliverable describes the integration profile related to the high level objectives and strategy among organization
 - o **Year of creation:**
 - **2016**

- **Origin**
 - o Since these IPR assets will be developed during the lifetime of the project, these assets are classified as **Foreground**.

- **Type:**
 - o **Tangible:**
 - REGOLA-TAN-4 (Deliverable): they are tangible assets, since they imply development of document that describe the relative level of the interoperability stack.
 - o **Intangible:**
 - REGOLA-INTAN-4 (Methodology): while developing the tangible part of this asset, all Partners will create also Intangible assets, like **Methodology**.

- **Source of know-how:**
 - o The Partners that will contribute to these assets are: **INNOVA, PIAP, LUTECH, SAGEM, AIT**.

- **Owner of know-how:**
 - o Since the know-how is developed by the source Partners, all the Partners in the Consortium have agreed on the fact that the ownership of the related knowledge remains to the source Partners.

- **Scope of usage:**
 - o **INTERNAL:** For Internal usage, **all the Partners** in the Consortium have **free full access** to all the parts of the IPR asset (both tangible and intangible parts).
 - o **EXTERNAL:** For External usage, only the source Partners have **free full access** to all the parts of the IPR asset (both tangible and intangible parts).

- **Users of know-how (Access Rights):**
 - o See above “*Scope of usage*”

- **Protection – Proposal:**
 - o **Tangible:**
 - REGOLA-TAN-4 (Deliverable): the proposal is not to protect the tangible part of the IPR asset.
 - o **Intangible:**

- REGOLA-INTAN-4 (Methodology): the proposal is not to protect the tangible part of the IPR asset.
- **Protection - Final Decision:**
 - **Tangible:**
 - REGOLA-TAN-4 (Deliverable): all the Partners of the Consortium have not agreed on the proposal yet.
 - **Intangible:**
 - REGOLA-INTAN-1 (Methodology): all the Partners of the Consortium have not agreed on the proposal yet.
- **Time**
 - **During Project Lifetime:** all the Partners in the Consortium have **free full access** to REGOLA-TAN-4 (Deliverable), REGOLA-INTAN-4 (Methodology).
 - **12-months After Project Lifetime:** only the **source Partners** have **free full access** to REGOLA-TAN-4 (Deliverable), REGOLA-INTAN-4 (Methodology).
 - **Ever After Project Lifetime:** Only the **sources Partners** have **free full access** to REGOLA-TAN-4 (Deliverable), REGOLA-INTAN-4 (Methodology).

7.1.7.3 WP5 – T5.3 – REGOLA-TAN-5, REGOLA-INTAN-5

- **Feeder**
 - o These IPR assets have been proposed to the Consortium by **REGOLA (Biagio Lanziani)**, who is part of the IPR Team with the role of IPR Owner for REGOLA.

- **Know-how:**
 - o **Name:**
 - **WP5 – T 5.3 Harmonized Strategy Doctrines and High Level Objectives**
 - o **UNIQUE ID:**
 - **REGOLA-TAN-5 (Deliverable)**
 - **REGOLA-INTAN-5 (Methodology)**
 - o **Description:**
 - This deliverable describes the integration profile related to the high level objectives and strategy among organization
 - o **Year of creation:**
 - **2016**

- **Origin**
 - o Since these IPR assets will be developed during the lifetime of the project, these assets are classified as **Foreground**.

- **Type:**
 - o **Tangible:**
 - REGOLA-TAN-5 (Deliverable): they are tangible assets, since they imply development of document that describe the relative level of the interoperability stack.
 - o **Intangible:**
 - REGOLA-INTAN-5 (Methodology): while developing the tangible part of this asset, all Partners will create also Intangible assets, like **Methodology**.

- **Source of know-how:**
 - o The Partners that will contribute to these assets are: **INNOVA, LUTECH, SAGEM**.

- **Owner of know-how:**
 - o Since the know-how is developed by the source Partners, all the Partners in the Consortium have agreed on the fact that the ownership of the related knowledge remains to the source Partners.

- **Scope of usage:**
 - o **INTERNAL:** For Internal usage, **all the Partners** in the Consortium have **free full access** to all the parts of the IPR asset (both tangible and intangible parts).
 - o **EXTERNAL:** For External usage, only the source Partners have **free full access** to all the parts of the IPR asset (both tangible and intangible parts).

- **Users of know-how (Access Rights):**
 - o See above “*Scope of usage*”

- **Protection – Proposal:**
 - o **Tangible:**
 - REGOLA-TAN-5 (Deliverable): the proposal is not to protect the tangible part of the IPR asset.
 - o **Intangible:**

- REGOLA-INTAN-5 (Methodology): the proposal is not to protect the tangible part of the IPR asset.
- **Protection - Final Decision:**
 - **Tangible:**
 - REGOLA-TAN-5 (Deliverable): all the Partners of the Consortium have not agreed on the proposal yet.
 - **Intangible:**
 - REGOLA-INTAN-5 (Methodology): all the Partners of the Consortium have not agreed on the proposal yet.
- **Time**
 - **During Project Lifetime: all the Partners** in the Consortium have **free full access** to REGOLA-TAN-5 (Deliverable), REGOLA-INTAN-5 (Methodology).
 - **12-months After Project Lifetime: all the Partners** in the Consortium have **free full access** to REGOLA-TAN-5 (Deliverable), REGOLA-INTAN-5 (Methodology).
 - **Ever After Project Lifetime: all the Partners** in the Consortium have **free full access** to REGOLA-TAN-5 (Deliverable), REGOLA-INTAN-5 (Methodology).

7.1.7.4 WP7 – T7.4 – REGOLA-TAN-7, REGOLA-INTAN-7

- **Feeder**
 - o These IPR assets have been proposed to the Consortium by **REGOLA (Biagio Lanziani)**, who is part of the IPR Team with the role of IPR Owner for REGOLA.

- **Know-how:**
 - o **Name:**
 - **WP7 – T 7.4 Validation of pilot application**
 - o **UNIQUE ID:**
 - **REGOLA-TAN-7 (Deliverable)**
 - **REGOLA-INTAN-7 (Methodology)**
 - o **Description:**
 - This deliverable describes the integration profile related to the high level objectives and strategy among organization
 - o **Year of creation:**
 - **2016**

- **Origin**
 - o Since these IPR assets will be developed during the lifetime of the project, these assets are classified as **Foreground**.

- **Type:**
 - o **Tangible:**
 - REGOLA-TAN-7 (Deliverable): they are tangible assets, since they imply development of document that describe the relative level of the interoperability stack.
 - o **Intangible:**
 - REGOLA-INTAN-7 (Methodology): while developing the tangible part of this asset, all Partners will create also Intangible assets, like **Methodology**.

- **Source of know-how:**
 - o The Partners that will contribute to these assets are: **INNOVA, LUTECH, SAGEM, SRDC, RegionePuglia**

- **Owner of know-how:**
 - o Since the know-how is developed by the source Partners, all the Partners in the Consortium have agreed on the fact that the ownership of the related knowledge remains to the source Partners.

- **Scope of usage:**
 - o **INTERNAL:** For Internal usage, **all the Partners** in the Consortium have **free full access** to all the parts of the IPR asset (both tangible and intangible parts).
 - o **EXTERNAL:** For External usage, only the source Partners have **free full access** to all the parts of the IPR asset (both tangible and intangible parts).

- **Users of know-how (Access Rights):**
 - o See above “*Scope of usage*”

- **Protection – Proposal:**
 - o **Tangible:**
 - REGOLA-TAN-7 (Deliverable): the proposal is not to protect the tangible part of the IPR asset.
 - o **Intangible:**

- REGOLA-INTAN-7 (Methodology): the proposal is not to protect the tangible part of the IPR asset.
- **Protection - Final Decision:**
 - **Tangible:**
 - REGOLA-TAN-7 (Deliverable): all the Partners of the Consortium have not agreed on the proposal yet.
 - **Intangible:**
 - REGOLA-INTAN-7 (Methodology): all the Partners of the Consortium have not agreed on the proposal yet.
- **Time**
 - **During Project Lifetime: all the Partners** in the Consortium have **free full access** to REGOLA-TAN-7 (Deliverable), REGOLA-INTAN-5 (Methodology).
 - **12-months After Project Lifetime: all the Partners** in the Consortium have **free full access** to REGOLA-TAN-7 (Deliverable), REGOLA-INTAN-5 (Methodology).
 - **Ever After Project Lifetime: all the Partners** in the Consortium have **free full access** to REGOLA-TAN-7 (Deliverable), REGOLA-INTAN-7 (Methodology).

8 CONCLUSIONS

In this deliverable we described the main activities concerning IPR Management performed by C2-SENSE Consortium till M18. At the same time we focused on the underlying C2-SENSE IPR Management System, that establishes the overall project IPR policy, also for post-project phase: its vision, methodological approach, rules, principles, decision and roadmap for further work are outlined.

The chosen methodological approach, based on a market-driven and business-oriented paradigm, is flexible, integrated and structured. It gives rise to an efficient hybrid IP and innovation management strategy, pursuing a resource-effective handling of intellectual assets.

In the next months additional efforts will therefore be directed towards the implementation of this approach both in the development phase and in post project phase, as well as towards taking concrete decisions in line with exploitation streams. First

This is expected to strengthen C2-SENSE market exploitation routes as initially described in D8.1 “First Exploitation and Dissemination Plan a)” (M18) and then refined in D8.2 “Second Exploitation and Dissemination Plan b)” (M36), in view of identifying and valorizing the business and market opportunities arising from C2-SENSE value proposition, as well as of securing to project’s consortium a competitive advantage, able to allow its results more industry-oriented

Such a path, combined with the organization of knowledge and innovation management during project implementation, will strengthen the achievement of C2-SENSE expected impact of C2-SENSE, as well as of long-lasting sustainability of its results.

APPENDIX 1 IPR SHEET (IPRSHEET)

Please refer to the attached *Annex I* xls file.

APPENDIX 2 C2-SENSE BACKGROUND KNOWLEDGE

This annex includes the initial list of usable and not-reusable background, as reported in the CA, in order to let this deliverable be the unique reference point for IPR issue. This will facilitate further advancements and next steps to be put in place by the Partners in relation to IPRs (e.g. future patent search, registration of patents, declaration of copyrights, schedule of foreground, etc.).

A. Background included

SAGEM DEFENSE SECURITE (SAGEM)

Interface to planning and organization engine « ORTAC » for integration and testing needs.

SRDC YAZILIM ARASTIRMA VE GELISTIRME VE DANISMANLIK TICARET LIMITED Sirketi (SRDC)

- a. Interoperability among Command and Control Systems
- b. Semantic Interoperability
- c. Emergency Management Standards
- d. Ontologies

Regola S.r.l.

- a. Emergency Management Standards and Agencies' Profiles
- b. Expertise and Technological skills adopted to design and address Emergency Management systems
- c. Access to Emergency Agencies which Regola is working / cooperating with (limited to their willingness and to the project needs).

B. Background excluded

SAGEM DEFENSE SECURITE (SAGEM)

Source code of and generally « ORTAC » optimization module.

SRDC YAZILIM ARASTIRMA VE GELISTIRME VE DANISMANLIK TICARET LIMITED Sirketi (SRDC)

All and any kind of SRDC Background except the one described in Attachment 1 that has been produced at and/or owned by SRDC. Furthermore, the SRDC's already available testing framework, called TestBATN™, is excluded. However, in the C2-SENSE project, TestBATN™ System will be used in the certification and testing tasks.

Regola S.r.l.

All and any kind of Regola Background except the one described in Attachment 1 that has been produced at and/or owned by Regola.

Regola will be open to the possibility to connect the project results to its Command & Control Centers' Infrastructure (COREBOX™) as well as to its EMS CAD -Computer Aided Dispatch- (SAVEONLINE™), with the purpose of validating pilot applications.

However both COREBOX™ and SAVEONLINE™ are excluded.

Furthermore, if it will be considered helpful or interesting for the project purposes (such as extending the range of deployment activities), Regola will be open to make a connection between the project results and its emergency management tools or modules listed below:

- ORIENTAETM, decision-making support GIS developed for Cartography, Mobility and Logistics;
- NOWTICETM, Rapid Warning System based on dissemination mechanism to deliver public alerts as well as standardized messages among emergency personnel;
- FLAGMIITM, a Mobile App for public at large (Basic version) or emergency personnel (PRO version) to be geolocated, to communicate (deaf), to get informed, to get tracked,..;
- SAVEONBOARD™, a Mobile solution onboard emergency vehicles supporting responders' awareness and field-activities;

ORIENTAETM, NOWTICETM, FLAGMIITM, SAVEONBOARD™ are excluded as well.

AIT Austrian Institute of Technology GmbH

AIT excludes all Background that has been created by its researchers other than those members of the Business Unit DSS directly involved in carrying out the Project.

AIT also excludes all Background which due to third-parties' rights it is unable to grant Access-rights to.

AIT excludes any background which is held by AIT but owned by a Third Party.

AIT specifically excludes any unpublished work that has been carried out which is not already in the public domain.

APPENDIX 3 IPR REPOSITORY TEMPLATE

This annex contains the format for C2-SENSE IPR Repository and arises from the lists of included and excluded Background (Annex I), thus creating a living IPR database during the execution of the project, to be updated with Intellectual Property developed in parallel of the project by each of the participants (Sideground), as well as with knowledge generated in the project (Foreground).

Please refer to the attached *Annex II* xls file.

