INTERLINK

WP7 Dissemination, exploitation and sustainability strategy

D7.5 - Innovation strategy plan

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Glossary

ENTRY	DEFINITION
INTERLINKERS	Common building blocks, provided as software tools or in the form of knowledge offered digitally, that represent interoperable, re-usable, EU-compliant, standardized functionality for the co-production of public services
Public Services	Services that are publicly available and are provided by the government or on behalf of the government's residence in the interest of its citizens. In INTERLINK we focus not only on the software services (i.e., the services delivered digitally) but also the services that rely on digital technologies.
Co-business	It emerges when a team of independent stakeholders work together towards a common goal to solve important real-world needs which eventually brings benefits to everybody involved and beyond.
Intellectual Property Rights	Rights given to persons over the creations of their minds. They usually give the creator an exclusive right over the use of his/her creation for a certain period of time.

ACRONYMS

ABBREVIATED	EXTENDED
CEF	Connecting Europe Facility
GDPR	General Data Protection Regulation
IPRs	Intellectual Property Rights
MEF	Ministry of Economy and Finance - Italy
NGO	Non-Government Organization
OECD	Organisation for Economic Co-operation and Development
PA	Public Administration
VARAM	Ministry of Environmental Protection and Regional Development - Latvia
VPC	Value Proposition Canvas
ZGZ	Zaragoza, capital city of the Zaragoza province - Spain

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Executive summary

D7.5 - Innovation strategy and business model development is the second key objective of the WP7 Dissemination, exploitation and sustainability strategy. It aims to capitalise the innovation achieved, and to **plan and develop actions for future sustainability and further exploitation in order to facilitate the adoption of INTERLINK results by a wide range of national and local public administrations**.

Relevant stakeholders identified in T8.4 will be actively involved in the Objective T7.3 Innovation strategy and business model development (M7-M36) in order to draft the innovation plan based on users' feedback, and to foster the adoption of the INTERLINK approach in the challenging relationship between citizens and public administrations where its base in the social responsibility weight.

This deliverable includes an overview of what kind of innovation (Chapter 1 - Introduction) we are exploring and what technical and social innovations we need to face in the emerging economy (1.1). In Chapter 2 we set the context of our innovation (the problem that public services/e-services has to be solved) under the light of the Governance Model, delivered as a first output in WP2 (and described in D2.1.). In Chapter 3 we start to define the main target groups/customers of the Interlink platform, including their needs, expectations and potential benefits. In Chapter 4 we identify the **unique value proposition** as the process and the canvas to find our single, clear, compelling message that will state why our services will be different and worth buying. Then, in Chapter 5, we list some possible **concrete solutions or practical cases**, to showcase some ideas of application in a real context, in addition to the 3 pilots' use cases. In Chapter 6 the preliminary ideas for the **core business model** is presented together with a brief overview of the co-business models, but more detailed descriptions of proposed co-business models will be provided in the forthcoming deliverable D2.4. Chapter 7 launches the marketability approach and the market analysis with an introduction on IPRs exploitation whilst a complete exploitation plan will be developed in T7.4, coherent with the first statements and results carried out in the innovation strategy.

We agreed that the present Innovation Strategy has strict connections with other tasks: from the activity of definition of governance models in WP2 - and in particular, the results of the design and analysis of co-business models and co-exploitation processes and the case study analysis - to the legal and GPR compliance needs (WP6).

For sure, the **INTERLINK Innovation Strategy will be adaptive and will evolve during the project and for this reason, we decided to consider this deliverable as a "living document"** that will accompany the project's life, helping the team to take track of ideas, proposals, experiences and to arrive, at the end of the project, at the final outcome exploitation strategy. In this first release of the deliverable in M12, we are able to provide our first ideas for the innovation strategy and a first requirements list to define how to continue the task's activities, but we have foreseen updating it during the project.

During the whole project, this document will provide details on the strategy for efficient exploitation and commercialization of project results and will report on market updates, business requirements, and IPRs analysis and will include the initial version of the joint exploitation plan.

At the current stage of the project, it was not possible to investigate all the topics initially planned for the Innovation Plan. **In order to guarantee a complete, satisfactory, and useful**

analysis, also for the following tasks, the Consortium decided to submit a new updated version of this deliverable at month 18, even if not initially foreseen in the agreement.

1 Introduction

The innovation strategy is a fundamental part of the exploitation and sustainability model for the INTERLINK solutions. From the very beginning of the project, the consortium has started to discuss how to bring to the market the project's innovations, also in order to guarantee the maximum diffusion and impact.

This discussion has defined **a common idea of the desirable future state for the INTERLINK services sustainability and exploitation, which is the main issue of this document**.

The INTERLINK project has the ambitious goal to create not only new technological "products" but a **new way of creating and delivering public services through the collaboration of PAs, enterprises, and citizens; in doing** so, **the innovation strategy will need to consider several aspects** to:

- Identify and engage the stakeholders (public administrations, companies, citizens) in various territorial areas;
- Activate a continuous channel with the identified stakeholders for the requirements gathering, needs assessment, and acceptance of the ongoing and final project's results;
- Define one or more business models to spread and exploit the impact of the INTERLINK results on the territory, ensuring economical and governance sustainability to the actions over time and allowing a strong innovation in the PA-users relationship and in the management of public services.

An Innovation plan involves the idea generation and the opportunity recognition, needed to take advantage of market opportunities to introduce a new business, product, or service.

An effective innovation strategy can:

- **Clarify priorities and goals**. An innovation strategy outlines the goals of the organization's innovation activities and helps focus efforts on reaching those goals.
- **Foster alignment.** With a plan in place, diverse groups within an organization will all be working toward common goals rather than pursuing their own individual priorities.
- **Keep a business from resting on its laurels**. Even businesses that start out as innovators must continue to innovate in a strategic way, as copycats and innovative competitors are likely to take market share over time.
- **Help a business achieve long-term success**. Without ongoing innovation, a project is unlikely to gain a competitive advantage or keep customers engaged over the long term.

In project activities, we are involved in experimenting with a well identified idea: our conceptual framework is the need to define a new way of creating and delivering public services through the collaboration of PAs, enterprises, and citizens.

This is a path of innovation not only in results but also in methodologies and tools.

So, the Innovation Strategy has the scope to **define the "story" of the project's innovation proposal** and to **identify the offering and the commercial strategies** for the solutions that will emerge from the project. This document has the ambition to answer the question "***How do we bring the Innovation from INTERLINK to users, meeting their needs and solving their problems?"***

The final objective is to define a **desirable future state for the INTERLINK services sustainability and exploitation.**

In this context, first of all, it is necessary to define and systematize **what** the INTERLINK consortium can offer to support the adoption of this innovation path (**the value proposition**) and **who** are the typology of possible interested subjects in the various territorial areas (**the stakeholders' engagement strategy**).

So, the innovation strategy will identify:

- **The interesting stakeholders**, starting from the catalogue of available INTERLINKERs
- **The project value proposition**, that includes the strategies for involving the end-users, in a logic of co-designing
- **A possible Business Model**
- **Some practical cases of application**, starting from the experiments carried out in the project pilots

The Innovation plan is inspired by Design Thinking pillars, that look at value and change from the perspective of people. Or, even better, from the perspective of what is meaningful to people. In a nutshell, it combines three factors:

- **Technologies**, how things are made and their performance improved;
- **People**, how these things are valuable for customers;
- **Business**, how organizations can profit from offering them.

Starting from this approach, we can use the **Value proposition Canvas**[1] to describe the main issues of our Innovation Strategy.

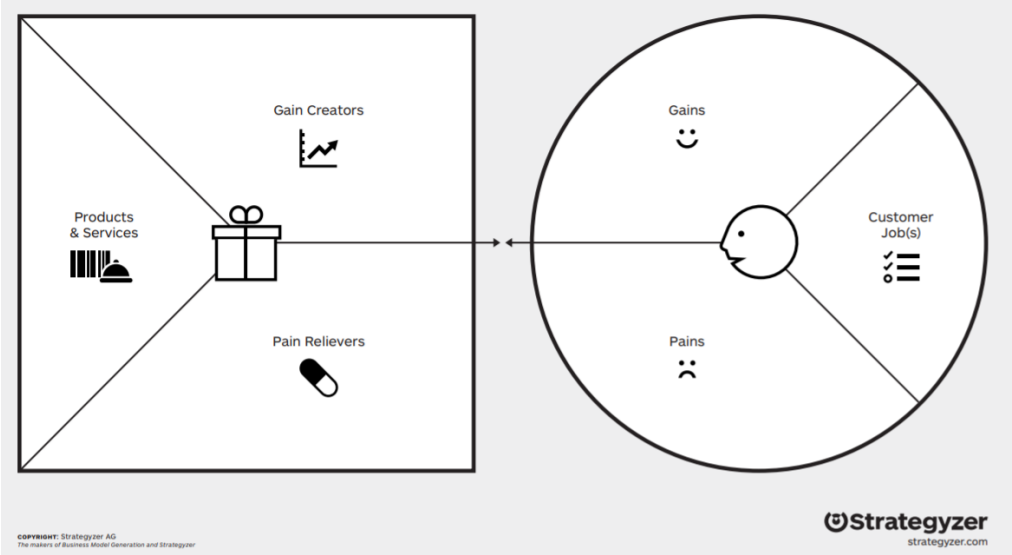

Figure 1 - Value Proposition Canvas approach

[1] https://www.strategyzer.com/canvas/value-proposition-canvas

The **best strategic plans are always flexible, because it takes time to assess the effectiveness of the innovation strategy**, also by crowdsourcing among users. So, our strategy will be adaptive and conceived to evolve over time, according to reference domain dynamic changes. As users' needs and PA's needs could change, it's important to adapt the INTERLINK innovation strategy to better-fit reality. For this reason, **this document will be continuously updated during the project, continuing to collect users' feedback and inputs, to adjust our strategy to meet current needs**.

1.1 Technical and social innovation of the emerging economy

In the Oxford Dictionary, the term "Innovation" is described as the process of *"making changes in something established, especially by introducing new methods, ideas, or products"*. So, we can refer to an innovation as a product, service, process or experience with a viable business model that is perceived as new and is adopted by customers.

In order to define the best strategy for innovation and exploitation of a new product, service, process or experience, it is important to clarify **what kind of innovation we are exploring**. So, in this section of the document, we will try to describe "**the Innovation universe**" from different perspectives, such as technical and social points of view. Both are related to the emerging economy (platform economy, social economy, shared economy, etc.), its actors (prosumers, stakeholders), its co-productive, co-exploitation, co-marketing tools, and methodologies.

The OECD[2] and the LEED Programme (Local Economic and Employment Development), drafted social innovation can concern conceptual, process or product change, organisational change and changes in financing, and can deal with new relationships with stakeholders and territories. **Social innovation** seeks new answers to social problems by:

- Identifying and delivering new services that improve the quality of life of individuals and communities.
- Identifying and implementing new labour market integration processes, new competencies, new jobs, and new forms of participation, as diverse elements that each contribute to improving the position of individuals in the workforce.

Social innovations can therefore be seen as dealing with the welfare of individuals and communities, both as consumers and producers. The elements of this welfare are linked with their quality of life and activity. Wherever social innovations appear, they always bring about new references or processes. Social innovation deals with improving the welfare of individuals and community through employment, consumption or participation, its expressed purpose being therefore to provide solutions for individual and community problems.

Social innovation seeks new responses to social problems by identifying and directing new services that improve the quality of life of individuals and communities, all this identifying and implementing new processes of market integration of work, new skills, new jobs and new forms of participation, different elements that together help to improve the position of individuals.

[2] https://www.oecd.org/sti/oecd-science-technology-and-innovation-outlook-25186167.htm

NESTA[3] defines *social innovations explicitly aimed at the public and social good*. This is innovation inspired by the desire to meet real needs which may be overlooked by the logic of the private market and public services. Social innovations may take place inside or outside public issues. They may be developed by the public, private or tertiary bodies, or by users and community: finally, innovation cannot be defined as social if it does not take on societal challenges.

The term social innovation has different meanings. **It can describe a socialized innovation that creates new technical knowledge or social innovation, which is an approach pragmatic to social problems, and applies managerial techniques to solve problems in the present, without paying much attention to ideological horizons or political correctness.**

Social innovation also involves the use of new technologies and especially new organizational forms, where the bottom-up organizations coexist with network sociality, and where the social relations become instruments to be mobilized in business. We are witnessing that differences in working life, political and private life are going to disappear.

Starting from social innovation and thanks to technological innovation, communities all around the world are testing new strategies to tackle ancient and present challenges. Different contexts, actors, paradigms converge on a new type of economy that combines some past elements with fresh innovations. We define it as a social economy because it has distant characteristics from those based on the production and consumption of goods. Its pillars include:

- The strong use of branched networks to support and manage relationships, helped by every possible form of communication;
- The blurred boundaries between production and consumption;
- The emphasis given to complexity, circular collaboration, care, and maintenance rather than to a linear, single-use pattern of behavior;
- A strong role of vision, mission, values, and objectives.

Indeed, social economy distinctive features can be represented by:

- **Technology**: the creation of global information infrastructure, and the increasing importance of physical and digital social networks[4]
- A field closely linked to **culture and values**, that is the growing emphasis on the human dimension, the putting individuals on the first spot, framing environmental, social, and economic systems and structures.

The social economy has largely formed around distributed systems rather than centralized structures. It deals not through simplifications and standardizations imposed by the centre, but distributing complexity to the margins, finally to consumers. The role of the consumer has shifted from being passive to turning into an active subject, also a creator of his own rights, solutions, and satisfaction.

Starting from here, we can describe our context, our consumers, and our positioning as a tech platform, a capacity builder, and a connector between citizens and public bodies.

[3] Social Innovation: How Societies Find the Power to Change, Geoff Mulgan, 2019

[4] The Rise of the Network Society: the Information Age and the network society, Manuel Castells, 2009

2 The context of our Innovation

The term "**Public Services**" can be found in several disciplines and has various interpretations. For the INTERLINK project, we need to reduce the conceptual fuzziness around the term "public services", by capturing the core notion that underlies the concept. According to Guarino, there is still no standard way of describing and documenting public services (2017). Basic definitions on what constitutes a public service differ and there is no standard interpretation of what types of public services exist. There are some complications in pinning down its meaning:

- **Public services affect the public interest**. However, as Bozeman (1987) famously noted, 'all organizations are public': all activities can be said to have an element that touches upon the public interest (for instance, as private industry produces pollution).
- One of the definitions that is frequently used states that public services are **publicly funded activities that arise from public policy**. These activities are accountable to and governed by political processes (Guarino, 2017). However, the past decades have seen a growing use of market mechanisms. While public funding is important, it is often complemented by other funding streams. Public authorities can initiate or support the development of services which are then taken up by businesses (the Internet being a famous example).
- According to traditional conceptions, **public services are state-provided**. But (1) this was never true in many countries, which have a traditionally large role for private non-profits (2) everywhere there has been an increasing involvement of private actors (businesses, civil society) in the provision of public services.

In other words, the role of public authorities has shifted towards one of systemic responsibility: even where they do not fund or provide a service directly, they may commit to ensuring or supporting that such a service is provided. Guarino offers a refined definition of (public) services, which we will here follow, which emphasizes the commitment of public authorities in making services available:

''*A public service is an aggregation of all activities that realize a public authority's commitment to make available to individuals, businesses, or other public authorities some capabilities intended to answer their needs, giving them some possibilities to control whether, how and when such capabilities are manifested*'' (2017).

The public services considered within the INTERLINK project are e-services. Kvasnicova et al. define e-services as ''*activities provided by provider to a recipient; these services are non-material; they are provided by means of information and communication devices and the result of their consumption can be a benefit, service or acquisition of property*''. A distinction can be made between (1) wholly digital services and (2) human services that are digitally supported, but which also rely heavily on 'social technologies'. An important challenge for the project is to clarify to what extent a service depends weakly or deeply on particular software to be provided effectively.

Sheth & Sharma (2007) further distinguish different types of e-services by the degree to which a service can be digitized (1) and the ability for co-creation (2), involving citizens in aspects of the (co-)design and (co-)delivery of the service.

The services upon which INTERLINK focuses therefore have the following characteristics:

- They are **public services**, in the sense that **public authorities have committed to realizing them**.
- They have an element of **co-creation/-production**, meaning that private organizations and citizens are engaged and collaborate with the public government in their design and/or their delivery.
- The services are realised through the **use of digital technologies**, either as a fully digital service or as a human service supported digitally.

Public-sector services are characterized by some very specific issues that frequently could be an obstacle to innovation: in these contexts, **ICT-enabled co-creation could be a driver for changes and could contribute to overcoming the challenges posed by scarce resources and heterogeneity of citizens' needs** (*See deliverable D4.1. for an articulated discussion on barriers to co-production*).

Co-creation here will refer to a process in which services are jointly designed and/or delivered by public authorities and other stakeholders (not necessarily citizens). The term "**co-production" is in practice often used interchangeably with co-creation, but is generally seen as referring to the design and delivery stages of a service** (Brandsen & Honingh, 2020).

The organization of services has moved from a **traditional model, which could be defined as "Fordist",** because of its approach of providing services in a standardised and top-down approach, to a **model of collaboration between different actors in the design and production of services.**

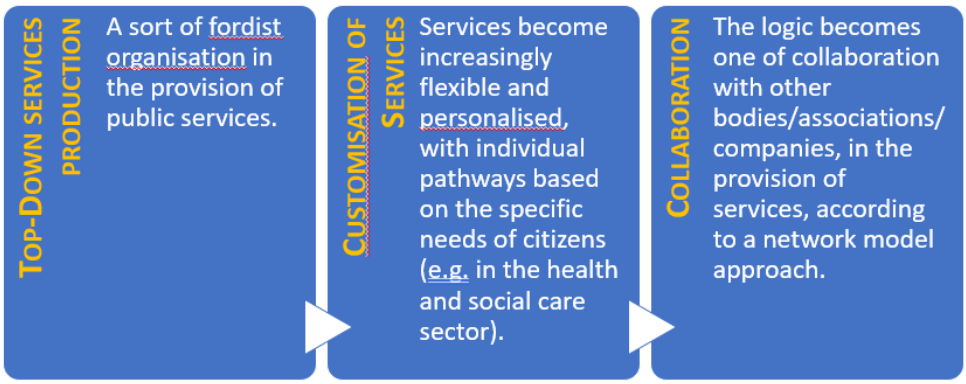

Figure 2 - Evolution in the organisation of services

The European Union has already taken this direction and in EU's eGovernment Action Plan 2016-2020[5] states: **"*Digital public services reduce administrative burdens on businesses and***

[5] https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:52016DC0179&from=EN

citizens by making their interactions with public administrations faster and efficient, more convenient and transparent, and less costly." In the EU vision, as declared in the 2017 Tallinn Ministerial Declaration on eGovernment[6], the modern public services must be digital, cross-border, and interoperable by default, inclusive and accessible, open and transparent, trustworthy, and secure, and require users to supply information only once.

After the Tallinn Declaration, citizens and businesses are increasingly expecting better, more personalized public service delivery, burden reduction, transparency, participation, and citizen engagement in the creation of public services. Co-creation and co-production are practices in the delivery of public services in which **citizens are involved in the creation of public policies and services**.

These processes emphasize people as active agents, not passive beneficiaries and, for this, they tend to lead towards better, more preventative outcomes in the long-term.

Riding the trend of the new approach, as we are living in a world where technological opportunities are cascading on society at an unprecedented speed, this innovation plan is also inspired by Design Thinking methodology. The challenge of the digital transformation is not the "digital", but the "transformation". Design Thinking is key in our world transformed by technologies, because:

- It is needed for value creation, to turn this wealth of technologies and information into real value for customers;
- It is needed for organizational transformation, to engage people in a widespread process of change.

Design Thinking creates products by starting from what is meaningful for customers. It creates organizational transformation by starting from what is meaningful for people in your organization: by engaging them in creating innovation instead of simply adopting it, in collaborating, in nurturing their creative confidence, in bringing their work closer to the purpose of their life. The assumption here is that if people find value in something, then business will follow naturally.

Digital tools and digitalization are a central part of this solution. They can support the modernization of Public Administrations, guaranteeing more efficient and user-centric administrative processes, improving the quality of services through flexible and personalized interactions, and increasing public sector efficiency.

In this context, **INTERLINK ambition is to define a new governance model for public-civic partnerships**, and the Consortium is working on existing approaches and best practices, in order to develop them with a set of digital building blocks, called "INTERLINKERs", that will implement the defined governance model and standardize the basic functionalities needed to enable private actors to cooperate in the delivery of a service (organization, communication, scheduling, monitoring, etc.).

The first draft of the Governance Model delivered as a first output in WP2 (and that will be described in detail in D2.1.) proposes a new collaborative governance model, based on a partnership between private actors (citizens and companies) and public administration.

[6] https://digital-strategy.ec.europa.eu/en/news/ministerial-declaration-egovernment-tallinn-declaration

There are different ways to categorise such processes. In this project, since the aim is to carry a service from inception to long-term delivery, we will use a categorization based on phases. This roughly fits both concepts of business development and of a policy cycle, but there are different understandings of what occurs in each phase. According to this conceptualisation, there are two main phases in the process: (1) one during which the service is (re-) designed and (2) one during which it is delivered: design and delivery, respectively.

The Governance Model focuses on the different **phases** of the co-production process, identifying two main phases of the process:

- **Co-design phase**: co-design concerns activities that incorporate "the experience of users and their communities" into the creation, planning, or arrangements of public services" (Bovaird and Loeffler, 2012). In this phase the co-production team is created and starts working together to define the service to be co-produced.
- **Co-delivery phase**: co-delivery is a joint effort by public authorities and stakeholders to provide and improve public services (Alford, 2014; Nabatchi et.al., 2017), where the service is implemented and delivered in a sustainable manner.

In conclusion, co-production is a relationship between a paid employee of an organization and (groups of) individual citizens that requires a direct and active contribution from these citizens to the work of the organization (Brandsen & Honingh, 2015).

In this context, we can **analyse the government-citizen relationship** in the co-production process, according to these parameters:

- **Provider versus Beneficiary** - what is the division of labor and who is leveraging whom? Government-to-citizen (G2C) or citizens-to-government (C2G)
- **Citizen Power and Responsibility** - how much control do citizens have vis-à-vis the government? The government's role is progressively decreasing in favor of the people (citizens)

3 Engagement of stakeholders and customers

The INTERLINK project is characterised by a **strong involvement of stakeholders at all stages of the project.**

As far as the innovation plan is concerned, it is essential to always have in mind **both the stakeholders' needs**, emerging from the three use cases that will be tested in the project, **and the possible customers of INTERLINK solutions**.

- A stakeholder is an **individual, group, or organization who is affected by the outcome of a product or service and possibly involved in doing the work**. Anyone associated with the project either directly or indirectly can consider themselves a stakeholder, but **will not necessarily become a customer of INTERLINK products in the future**.
- A customer, on the other hand, is **an individual who receives or purchases a product or service**. Such feedback (or voice of the customer) is then frequently used to improve organizational processes and set requirements.

The project's innovation plan is therefore mandatory to **identify and describe the main target groups/customers including their needs, expectations and potential benefits**. For each customer, it's also possible to define the appropriate exploitation strategy (commercial or non-commercial).

From a general point of view, at this stage of the project, we identify **three main types of co-managed services that can be offered to the market**

- Collaboration with the volunteering system, associations, etc.
- Co-management of public services in collaboration with the private sector (Health sector, Family share, ...)
- Community initiatives (e.g. time bank)

In this deliverable, we will start from the description of the use cases and the stakeholders involved, in order **to collect useful elements for the identification of the final customers.**

3.1 Stakeholders

Deepening the role of stakeholders means also taking into account the idea that social networks can **play a role in the creation of individual and collective social capital**, according to the **Community building approach**.
In the Wikipedia definition, Community building is "*a field of practices directed toward the creation or enhancement of community among individuals within a regional area (such as a neighborhood) or with a common need or interest.*"[7]

[7] https://en.wikipedia.org/wiki/Community_building

According to Blackwell & Colmenar, 2000; Ponzo, 2014; Razavi, 2007; Fisher & Tronto, 1990; Brennan, 2012, the basic principles of community building are: **strengthening communities in a holistic way; building local capacities and relationships between communities, institutions, resources; promoting community participation in the development and implementation of policies; addressing the problems of ethnic minorities to create fair conditions for all; breaking down the isolation of marginal, needy communities; adapting programmes to local conditions; build accountability mechanisms to maintain improvements and assess community progress**.
In the Community building paradigm, stakeholders ask for a radical change of **public services,** that are facing a threat of rising demand, struggling to cope with a rapidly changing population (aging, different needs, heterogeneity, …), combined with reducing resources. In addition, people expect to exercise more control over their day-to-day lives – and can do so using technology.
"*Stakeholders, people, and communities have the best insight into their own situation, and public services need to work with and recognise this if they are to be fit for purpose and sustainable into the future*." [8]

According to the Community Building approach, **co-creating innovative public services for citizens and businesses could have a direct and positive impact on the quality of citizens' lives,** because "*community stakeholders are committed to working together in the process of community development*" [9].

The logic of community building aims to experiment with forms of active participation of actors of different kinds (public bodies, private individuals, citizens, etc.), aimed at innovating public policies and encouraging collective processes, through active forms of participation of local communities (Ponzo, 2014).

Currently public services are held back by two paradigms which became dominant when the challenges and opportunities for these services were very different to those that exist today:

- The **State paradigm**, which came about in the 1940s, instils hierarchy, creates professionally dominated siloes and treats people as largely passive service users.
- The **Market paradigm**, which came into being from the 1980s onwards, injects a focus on efficiency and cost, reducing interactions to transactions and viewing the individual as a customer.

The actual community Paradigm sets out that **more power and resources should be given to communities rather than be held by central government or public services**: the society needs a fundamental shift in how public services work – to share power with people rather than hoard it.

According to the Quadruple Helix approach for innovation, we must take into consideration four main groups of possible stakeholders: *public authorities, citizens, businesses and private non-profit organisations* and r*esearch organisations.*

[8] "THE COMMUNITY PARADIGM - Why public services need radical change and how it can be achieved", Adam Lent and Jessica Studdert, New Local March, 2021
[9] Blackwell and Colmenar, 2000; Walter, 2004 https://www.newlocal.org.uk/publications/the-community-paradigm/

The domain of public services has to consider a **strong heterogeneity of actors involved and also the INTERLINKERs will be used by different users with different skills (ICT, Service design, communications, etc.), backgrounds, competences in relation to eGovernance and, finally, with different motivations to participate in a co-production process**.

INTERLINK should be used by different users: National PAs (e.g. MEF and VARAM) as well as by citizens (e.g. ZGZ). This entails that the Interface should be flexible enough to be used by users that have previous experience in the co-production of services as well as by novice users with low familiarity with ICT and eGovernment concepts.
A preliminary analysis of the co-production of public services conducted in WP2 has identified the following sub-groups that could participate in the co-production process, analyzing for each of the target groups motivations that can drive their engagement in co-production (Misikangas et al. 2021). It is worth noting that in INTERLINK these sub-groups might be end-users of the platform, playing an active role in creating and managing co-production teams and projects though the INTERLINK digital platform or participating in the team activities.

Public authorities

- National and local PAS, Public servants
- Politicians whose constituents/voters include end-users of the service.

Motivations to participate: deliver more acceptable and adopted stakeholder-driven public services; solving a common problem/need or improving an existing solution, helping a specific group of people in everyday life, helping civic servants to fulfill their daily duties, allowing citizens to participate in governance related tasks, improving communication between public servants and citizens, improving acceptance and adoption of new services.

Citizens

- Potential end-users who would benefit from the co-produced service directly as an end-user and/or want to help in creating a service which they believe to be useful. They contribute experiential knowledge which is valuable in (re-)designing a service. These can be individual or organised in groups (associations).
- Expert citizens who enjoy participating in co-creation projects and have the relevant skills to take on a more specialist role (knowledge activists).

Motivations to participate: contribute to the improvement of a service addressed to them, based and customized on their needs and priorities; use the co-produced service personally or for family members; receive benefits when others use it, e.g. simplified duties for public servants or for service deliverers; get rewards for their participation (e.g. bonuses, social coin); learn by doing; advertise personal skills (e.g. to find a job), social acceptance/reputation.

Private businesses and non-profit organisations

- SME who are looking for new business opportunities and ways to utilize their skills and technology.
- Freelancers who are looking for new customers and ways to demonstrate the benefits of their services.
- Large companies who are looking for new customer relationships (with involved PA or companies), investment opportunities or ways to improve their brand or corporate image.

- Private non-profit organisations (e.g. foundations, charities) who are willing to support the service.

Motivations to participate: short- or long-term revenue to business, funding, new business partnerships, intellectual properties that could be licensed, revenue sharing opportunities, improved corporate image, proof-of-concept for a new technology or service, opportunity to learn or practice skills needed in other business

Research organisations

- Universities and other research organisations who support the service as part of their research mission.

Motivations to participate: new research projects, academic publications, enlarge own network, funding for research and innovation projects.

It is important to pay attention to the role of these different groups of stakeholders within the INTERLINK project. To achieve the project objectives, it is necessary to understand the individual actors potentially affected and envisioned by the system and project results, identify their needs and motivations to participate and, finally, recognize synergies among them. For each co-production phase, we can identify the role and the level of involvement of the stakeholders, as synthesized in the table below.

Approach	**Phase**	**Subphase**	**What occurs during each phase**
Co-production	Co-design	Engagement	This is an open process during which users and/or other stakeholders interact to define the nature of the problems and the direction of the solution.
		Design	This is a closed process in which the solution is developed within a smaller team, which may or may not include stakeholders, from a basic concept towards tools and modules (instantiation).

Co-production	Co-delivery	Implementation	The service is first piloted, evaluated and if necessary re-designed. Users may have a role in producing the service.
		Sustainability	The service is continued as a routine process and is periodically evaluated.

Table 1 - Role and the level of involvement of the stakeholders in different phases

Within the two main phases, different types of subphases must be identified, because they are very different in nature. Within design, there can be both (a) an open, participatory part that involves many actors and (b) one focused on the development of concrete service design and tools within smaller teams. Delivery can consist of an active piloting/testing phase and a routine phase in which the originals are less or no longer involved.

4 Value Proposition

The Value proposition approach helps us to define the most important components of our offering, how we can relieve pain and create gains for our customers.

What is the single, clear, compelling message that states why our product/service is different and worth buying?

Searching for the uniqueness, we could start with the Positioning Statement, with the phrase that defines the position that the INTERLINK project occupies in the market of the eServices. It is useful to understand what is the value that the project brings to customers and stakeholders.

- How is INTERLINK unique or first in its market?
- What is the advantage that it brings to the customer?
- What does it offer other than its competitors?

Usually the position statement sounds like: [NAME] is the first / the only [CATEGORY] which through [UNIQUE ELEMENT] helps [CUSTOMER] to [BENEFIT]. Unlike the competitors that [WHAT THEY DO] we [WHAT WE DO].

The project introduces the concept of **INTERLINKERs**, i.e., **digital building blocks that standardize the basic functionalities needed to empower the involved actors to cooperate in the production and delivery of a public service**. In other words, these are the reusable elements that are employed for the implementation and delivery of a new public service. This notion **follows the definition of the CEF building blocks as reusable basic capabilities that can be employed in any European project to facilitate the delivery of digital public services across borders**.
The different working groups have defined and categorized all the interlinker on the basis of the co-creation and co-delivery phases:

- Front end: user attraction, user guidance
- Engagement: stakeholder engagement, team management, legal and ethical enabler;
- Co-design: information and data sharing, common work plan, ideation, decision making, problem explanation, service specification, evaluation of co-design;
- Service implementation/co-delivery: partnership enablers, pilots specific enablers (Zaragoza, Varam, Mef), evaluation of service;
- Service re-use: information on service, evaluation of reuse process, fostering adoption.

Now we have different INTERLINKERs types: technological (platform, middleware, tools), management (service design and co-creation journey), knowledge: legal agreements, privacy, ethical aspects, knowledge (communication, dissemination, etc.).
More precisely, we define the INTERLINKERs as follows:
INTERLINKERs are common building blocks, provided as software tools or in the form of knowledge offered digitally, that offer interoperable, re-usable, EU-compliant, standardized functionality for the public service co-production management.

Some innovations are based on technology development, while others are based on innovative business processes. Both types are valuable and important and are considered in the INTERLINK project.

For these, the real value that the project brings to customers and stakeholders is not represented only by the INTERLINKERS, but by the ability **to offer experienced support in managing a co-production process**.

There may be different co-production paths according to different government models and types of services. The INTERLINK platform should provide guidance to different types of co-production arrangements that might benefit from different resources and types of support. For instance, co-producing an ICT-based service requires different tools, expertise and a different organization of the collaborative work than to co-produce a more traditional service (e.g. set-up a new educational program). A step-by-step guided co-production flow management process should be integrated in the INTERLINK platform to support actors in coping with the different challenges of a co-production process and use the most appropriate resources and INTERLINKERs (defined in T3.1) at the different stages of the process. Support should also be provided to select the most appropriate INTERLINKERs according to specific phases and needs.

The technological component is only a part of the Project offering and the "tool-kit" that INTERLINK can offer is composed by:

- Methodologies for engaging citizens and Public Structures
- Methodologies for re-designing and co-designing services
- A catalogue of INTERLINKERs

It is around these objects that our business model must be defined.

In order to **recognise, capture and characterise project outputs, and transform them into marketable objects**, it will be important the consortium will establish defined procedures as, for example, notification of partners of any publication or disclosure.

We will also be dealing with establishing proper arrangements to ensure that legitimate interests of project partners will not be compromised (e.g. filing a patent, or the need to keep results confidential).

5 Practical Cases

This is the central part of this deliverable and it will be continuously updated, because it represents a sort of **practical cases' catalogue**. It is fundamental, to go to the market, **to have a rich list of practical cases of application of INTERLINKERs** (not only from the pilot experiences).
This catalogue of practical cases will be continuously updated and we will try to identify:

- Cases that describe the use of INTERLINKERs from a PA
- Cases that describe the use of INTERLINKERs from private actors
- Cases that describe the use of INTERLINKERs in a sustainable economic model (no need for public funding)

Title	
Nation	
Initiative Type	*(example: institutional, voluntary, participatory, co-production, …)*
Promotor	*(example: local authorities, PAs, no-profit organizations, …)*
Involved actors	*(example: citizen associations, local Authorities, No Profit organization, profit Companies, universities, voluntary association, …)*
Brief description	*(Describe objectives, timing, tools, results…)*
Strengths	
Weaknesses	
Indications for replicability of the initiative	
Website/contacts	

Table 2 - Format for use case's description

The use case's catalog will be continuously updated and in particular, we will continue to collaborate with WP2 that in the next months will be in charge of identifying some cases in Europe. The idea is to plan a total of fifty interviews, and a desk research to ensure that the project collects a good spread of cases, not just the most famous and celebrated ones. This work will be translated into a model that meets all the necessary requirements: the social conditions that are known to be necessary for co-production to work and the legal restrictions that must be met and a sustainable business model.

In collaboration with WP2, the use cases will be classified by typology, according to these parameters:

- Provider versus Beneficiary: what is the division of labor - who is leveraging whom?
- Citizen Power and Responsibility: how much control do citizens have vis-à-vis the government?
- Stage of Service Delivery Cycle: at which phase of the service is the activity occurring?

This approach would be useful to build a **co-production process map** that answers to some questions related to governance issues and to the governance model, like "who initiated the service?", "*which stakeholders should be involved/are involved? What does the government-citizen relationship look like?*", "*is there a shared understanding regarding the problem?*", "*is there a consensus regarding possible solutions?*", "*how to evaluate co-production solutions?*".

In the collection of practical cases, useful for the description of the INTERLINK value proposition, we can start from the **use cases' experiences** (described in 5.1, 5.2, 5.3 paragraphs).

Then, in the 5.4 paragraph we describe **some other existing use cases that are applicable to the INTERLINK approach**, that are experienced in different contexts and which, in some cases, **involved some project partners**.

5.1 Italy - Ministry of Economy and Finance (MEF)

MEF is interested in strengthening its legitimacy by adopting a collaborative approach on service design and delivery, by directly involving external stakeholders in its business planning.

Title	Participatory Strategic Planning Module (PSPM)
Nation	Italy
Initiative Type	Interlink project pilot. Co-production initiative.
Promotor	PA - Italian Ministry of Economy and Finance (MEF)
Involved actors	*PAs*
Brief description	The co-production team will co-design a Participatory Strategic Planning Module (PSPM). After development by specialized IT personnel, the module will support Public Administrations in collaboratively defining Strategic Plans and share best practices in terms of strategic planning. The PSPM will be open to other public administrations and associations of citizens during both the planning and implementation phase of a Strategic Plan. As a second functionality, the PSPM serves as a repository of

	good practices where MEF uploads strategic planning methodologies and approaches, to be freely downloaded by other public administrations and citizens' associations. After the end of the Project, the MEF will be adapting and re-using the consultation tool in-house for different transversal services provided by the MEF.
Strengths	*Pilot in progress: the main strengths and weaknesses of this pilot will be analyzed at the end of the activity, to evaluate major evidence and results.*
Weaknesses	*Pilot in progress: the main strengths and weaknesses of this pilot will be analyzed at the end of the activity, to evaluate major evidence and results.*
Indications for replicability of the initiative	*Pilot in progress: the main strengths and weaknesses of this pilot will be analyzed at the end of the activity, to evaluate major evidence and results.*
Website/contacts	https://noipa.mef.gov.it/cl/interlink

Table 3 - MEF use case's description

5.2 Spain - Municipality of Zaragoza

Zaragoza will adopt the INTERLINK governance framework to widen Open Innovation within the city. The framework and set of enablers made available within INTERLINK will provide holistic support for sustainable Open Innovation in the co-creation and co-delivery of services

Title	eTOPIA
Nation	Spain
Initiative Type	Co-creation and co-delivery of services for the City.
Promotor	*Local Authority - Municipality of Zaragoza*
Involved actors	*Citizen associations, universities, voluntary associations, schools, ...*
Brief description	Zaragoza and its center for Art and Technology (eTOPIA_), aims at promoting collaborative city-making facilities and programs and at improving the process of Open Innovation in the city. eTOPIA_ needs communication and co-creation tools so that the different stakeholders involved in the co-creation of new public services and initiatives (SMEs, startups, entrepreneurs, social collectives, citizens) can collaborate in

	particular in the co-development, co-maintenance and co-exploitation phases of the resulting new services. Different types of co-produced services are envisaged for the Zaragoza Use Case, as resulting from the collaborative co-creation of activities exploiting eTOPIA_ facilities
Strengths	*Pilot in progress: the main strengths and weaknesses of this pilot will be analyzed at the end of the activity, to evaluate major evidence and results.*
Weaknesses	*Pilot in progress: the main strengths and weaknesses of this pilot will be analyzed at the end of the activity, to evaluate major evidence and results.*
Indications for replicability of the initiative	*Pilot in progress: the main strengths and weaknesses of this pilot will be analyzed at the end of the activity, to evaluate major evidence and results.*
Website/contacts	https://www.zaragoza.es/ciudad/etopia/

Table 4 - Zaragoza use case's description

5.3 Latvia - Ministry of Environmental Protection and Regional Development (VARAM)

The goal of the Latvian Ministry of Environmental Protection and Regional Development Customer Service Centers' use case is to test the sharing of service delivery with third parties to improve public services.

Title	State and Municipal Unified Customer Service Centers (CSCs)
Nation	Latvia
Initiative Type	Participatory initiative to define new richer service descriptions and new content will be created to better describe services
Promotor	PA - Ministry of Environmental Protection and Regional Development (VARAM)
Involved actors	Citizen associations, local Authorities, profit Companies, universities, ...
Brief description	VARAM, the Ministry of Environmental Protection and Regional Development of the Republic of Latvia, has the goal to improve the service descriptions available on the Latvian State Portal (https://latvija.lv/EN), which is a portal that provides easy access to services delivered by state and local government institutions. The ambition is to make these

	descriptions more useful and accessible, since most of the citizens still rely on physical consultation of services through CSC (Unified State and Municipal Customer Service Centres). Through INTERLINK, the co-production team will improve service descriptions available on the Latvian portal. The improvement of these service descriptions are meant to facilitate citizens' access to public services available from the Latvian State Portal.
Strengths	*Pilot in progress: the main strengths and weaknesses of this pilot will be analyzed at the end of the activity, to evaluate major evidence and results.*
Weaknesses	*Pilot in progress: the main strengths and weaknesses of this pilot will be analyzed at the end of the activity, to evaluate major evidence and results.*
Indications for replicability of the initiative	*Pilot in progress: the main strengths and weaknesses of this pilot will be analyzed at the end of the activity, to evaluate major evidence and results.*
Website/contacts	

Table 5 - VARAM use case's description

5.4 Other use cases

During the INTERLINK project, the evidence that will emerge from the pilot projects will serve to complete the definition of the Innovation Strategy and to arrive at a coherent sustainability and marketability Strategy.

In addition to pilot observation, we have collected **other concrete experiences of collaboration in public services**, in order to enrich the catalogue of use cases and to have a complete framework of the possibilities to spread the results that will emerge in the Project.

Use Case 1

The governance model followed by Reggio Emilia Municipality is based on three pillars, that are strictly connected with INTERLINK goals and mission:

- ***Participatory governance***, to promote stakeholder involvement and to ensure that everyone contributes with their own ideas, skills and solutions;
- ***Transparency***, to make decisions transparent and open to the participation of citizens, organizations and businesses (e.g. openness and publication of data and procedures);
- ***Sustainability*** to rationalize processes and plan initiatives that will be integrated into normal operational flows and organizational structures, so as to ensure continuity and allow for a medium-long term horizon.

The Reggio Emilia Municipality implements its participative governance model within the "*Smart City proto*col", a formal framework to boost strategic initiatives for digital and social innovation. Launched in 2017, the protocol has already involved 36 local organizations to design and implement joint initiatives which, through collaborations and sharing of working methods, solutions and skills, allow subscribers to promote innovation and development of the territory and thus improve the quality of life and services.

Title	**Reggio Emilia Digital Agenda**
Nation	Italy
Initiative Type	Participatory
Promotor	Municipality of Reggio Emilia
Involved actors	Public agencies, local public services, in-house companies, citizen and professional associations, University and Research centers, ...
Brief description	In the context of **Digital Agenda governance**, the municipality's main objectives were: ● Co-design of the digital agenda of the Municipality of Reggio Emilia ● Stakeholders engagement in order to create a participatory governance model for the City ● Co-design of on-line services (e.g. single integrated access to local services) After a discussion with other public agencies (e.g. IREN, Agenzia mobilità, ...), the municipality decided to implement a unique access point for local services "Fascicolo del Cittadino", integrating different local public services (not only municipal services). **The design phase was organized with a participatory approach**, with the organization of some appointments for the collection of requirements. The result was the identification of a **clear as-is description of existing online services.** After the initial phase, other stakeholders were involved and all the organisations interested in participating signed a **memorandum of understanding**. Subsequently, the municipality activated a moment of **restitution of the collected information**, with the publication of the materials on a web site, accessible to participants and reference figures. **The operational phase was less linked to the participation process.**
Strengths	**Simultaneously, bottom - up & top-down approach** > The

	process started with the experience of ***some pioneering projects*** that had been developed within the city. At the same time, the political side exerted a strong push, with the **establishment of a political table and a councillor dedicated to digital**.
Weaknesses	The collaborative tool used in the co-design phase works well as an archive but does not have functions to really support collaboration. The municipality failed to stimulate at the best participation and there was **little interaction in the operational phase. The evaluation and monitoring process needs to be improved.** Citizens have not yet been involved.
Indications for replicability of the initiative	More attention should be paid to improve citizen involvement and communication activities.
Website/contacts	https://www.comune.re.it/innovazionedigitale

Table 6 - Reggio Emilia use case's description

Use Case 2

Open IN.CE.T. is an example of public-private partnership, involving the local public administration and eight private organisations with complementary competences and networks, both local and international.

In our idea, setting a platform to co-design public services with PAs and citizens **means to create a community of people, interests & values, bodies that share vision and mission**. This use case is interesting and useful for our project because the community of Open IN.CE.T. adopts methodologies, tools and IT solutions to deliver services.

Title	Open IN.CE.T. – Open Innovation Center Torino
Nation	Italy
Initiative Type	Institutional
Promotor	Local authorities: the City of Turin
Involved actors	Local Public Administration, Private organisations.
Brief description	The city of Turin has developed Torino Social Innovation (TSI) in order to address local territorial challenges. TSI is a multi-stakeholders platform involving an ensemble of 34 public and private organisations with a set of different competencies, strategies and tools that support and sustain bottom up processes to rapidly generate, prototype, test, adopt

	and scale new solutions to societal challenges. Open Incet is a key element of the TSI platform, created with the purpose of increasing the effectiveness and the resilience of the local innovation ecosystem by complementing the existing innovation offer, attracting investments and establishing connections with other innovation local ecosystems at the transnational level. The Center's main mission is to accelerate the local innovation ecosystem of the City of Turin by systematically applying an open innovation approach. Among others, Open IN.CET cultivates The Public Lab. The Public Lab is a way to strengthen public systems to design and deliver more effective public services to bridge the gap between how policies are designed and how they are implemented. It offers a neutral physical and digital place where civil servants, along with the other local stakeholders (including citizens) can tackle together the long-term challenges.
Strengths	Open innovation implies the engagement of the quadruple helix stakeholders (public, business, academia and third sector/citizens) in the generation of innovative solutions for complex societal challenges. The Center focuses on idea generation, enterprise creation and growth, internationalisation and networks development. The range of activities includes IT platform, service design, learning journeys, living labs, bar camps, acceleration, scouting and matching. The focus is primarily on problem solving using a range of methods according to the nature of the problem, but Public Lab is also a suitable place to take experiments and also improve the assessment of public policy initiatives.
Weaknesses	There are several test beds of Open Innovation Lab but few are related to the public sector. The IT tools are frozen.
Indications for replicability of the initiative	As the debate and the experimentation moves forward, some have started to associate the term platform to cities, again mainly referring to the possibility to go beyond the notion of a smart city by bringing to citizens the benefits of an open platform that interconnects and exchange flows of open data that inform and engage the community in the attempt to turn a territory into an asset whose value is shared by everybody living in it.
Website/contacts	http://openincet.it/en/

Table 7 - Open INCET use case's description

Use Case 3

La 27e Région (FR) conducts action-research programs to test new innovation methods for designing public policy involving all public stakeholders.

Title	La 27e Région
Nation	France
Initiative Type	TSO
Promotor	La 27e Région came into being as the result of a spontaneous initiative on the part of an elected regional official, a dissident consultant and a philosopher of the digital world, all eager to re-examine how public policies are designed and implemented, particularly at regional government level. Their initiative resulted in an alliance with the Association of French Regions (ARF) in 2008, which subsequently grew to encompass other levels of public authorities, including at the national level.
Involved actors	Since its inception, the goal of La 27e Région is to play the role of "public transformation lab". To this end, it mobilizes the capabilities of multi-disciplinary teams composed of designers, idea generators, and social scientists from many fields (ethnography, sociology, participant observation) and engages in ground-level actions (do-it-yourself projects, adult education actions, etc.). Both these approaches prioritize the concrete experience of users, civil servants, and citizens to serve as the starting point for re-examining public policy.
Brief description	The work of La 27e Région is two-fold. It conducts action-research programs, such as Territoires en résidence and la Transfo to prototype new methods for designing and implementing public policies/services by engaging in experiments in the field. La 27e Région is also a resource center set up to build and pool knowledge and know-how, and to encourage peer-to-peer interchanges in the public sector.
Strengths	La 27e Région calls "public policy design" that consists of applying the principles of design – or "user-oriented design" – in the making of public policy/services. This is both a mindset and a series of methods to re-examine the problems of society, to better understand situations from the perspective of the intended beneficiaries, to involve them in tests and simulations, and to develop prototypes of solutions that can later be deployed with a better chance of success.

	The design of public policy is a multidisciplinary and collective practice. Designers act as one element of a broader set of professionals versed in the issue of uses: field sociologists, participatory architects and planners, social network professionals, video artists, ethnologists, participatory journalists, philosophers and a number of activists who invent their business practices along the way, by mixing lessons learned from political science, adult education, collective actions.
Weaknesses	Partners are local and regional authorities, public administrations, and private stakeholders who provide funding to both benefit from and actively contribute to the common good. Activities are not continuous due to the funding.
Indications for replicability of the initiative	Based on practices implemented in the field, new possibilities arise as a result of creative dialogue with users and by sharing views by means of representation and materialization techniques. These possibilities are then put quickly to the test, the goal being to organize policy-making practices or public services differently and thereby give new meaning to public action. For example, in 2014 la 27e Région and the Secretariat-General for Government Modernization (SGMAP) launched an exploratory approach to setting up neighborhood public services. The residency explored the challenges involved in accessing public services in rural areas from the standpoint of both the isolation of certain fragile groups of citizens, and the difficulty for the public services themselves to remain present in these areas via local public offices, auxiliary services, partly manned services, and digital terminals. https://www.la27eregion.fr/en/cas-pratiques/ladministration-publique-au-coin-de-ma-rue-en/
Website/contacts	https://www.la27eregion.fr/en/

Table 8 - la 27e Region use case's description

Use Case 4

The project had the goal to offer a bottom-up solution to work/life balance by supporting families with childcare, parenting advice and after-school activities. It was developed in 6 Pilot Cities in 4 countries and involves parents of children aged 3–11 that live in the same neighbourhoods in the 6 Pilot cities (Bologna, Gyor, Kortrijk, Thessaloniki, Trento, Venice).

It was built under 3 pillars:

- Community
- Participation

- Digital Innovation

Title	**Families Share @ Work** Co-creation of childcare services within companies by exploiting the time-shift model experimented in the Families Share approach
Nation	Italy
Initiative Type	Co-production Field: Work-life balance
Promotor	Businesses, with the sponsorship of Local Authorities
Involved actors	Representatives of Local Authorities ● The local PA interested in promoting the adoption of "Family Audit" certification by companies. HR managers of companies ● HR staff that are interested in implementing innovative forms of company welfare. Their role is to i) define the normative framework for collaborative childcare (e.g. employees participation during working hours; insurance issues, etc); ii) find safe and adequate spaces to carry out activities, iii) involve an external partner/ professional educator; vi) co-design the initiative with employees and professional educator, v) communicate the initiative and engage employees, vi) evaluate the initiative (impact). Employees with children ● Employees who are interested in receiving more support to deal with Work-Life balance issues, especially after the COVID outbreak. Their role is to i) co-design childcare activities, ii) participate in collaborative childcare: their role can be for instance to propose a creative lab for children or to support the educator. External educators ● Professional educators who will support the company and employees in defining the initiatives and will be responsible during childcare activities.
Brief description	**Families Share** (EU funded H2020) is a collective childcare method with a shift schedule system involving the co-production of childcare services among different actors: companies, HR managers, employees. Born as a form of participative and family-friendly welfare it promotes collaboration among colleagues to deal with work-life balance issues. Several companies and institutions already experienced this approach that can be integrated as a new practice of the company

	Corporate Social Responsibility (CSR) initiatives and Work-Life balance policies. The **Family Agency of the Autonomous Province of Trento** aims at promoting innovative forms of collaborative childcare among companies and organizations that are certified "Family Audit". They are interested in fostering the Families Share collaborative approach that has been successfully experimented in some companies in Italy and Belgium. **FBK** has already adopted the Families Share method for childcare co-delivery within their company. **Other companies** in the Trento area, certified Family Audit, are currently interested in implementing collaborative childcare to i) improve employees wellbeing and their active engagement within companies initiatives, ii) retain employees, and reduce absenteeism. They are interested in replicating and adapting the experience of Families Share, within their context.
Strengths	The co-production approach to child care services envisaged by Families Share allows employees to play an active role in the definition of welfare services that best fit their needs and to support their motivation to directly contribute to the co-delivery of the services.
Weaknesses	Companies who would like to implement the same participative forms of child care might have not got previous in-house knowledge and know how to manage the co-production process. **A digital platform like INTERLINK would greatly improve and support the co-design and co-delivery stages**. The INTERLINK collaborative environment and the catalogue of (knowledge and software) INTERLINKERs would provide the required: ● Support for managing the legal framework and insurance issues, ● Tips and guidelines on how to structure a co-production process in the context of companies (with tips on how to manage criticalities, conflicts, heterogeneous needs and preferences, etc), ● Support to make all the actors involved aware on the type of process (e.g. make co-production process "visible" for all actors involved), ● Tools for managing team tasks and action lists, ● Support to make relevant actors aware about the initiative (communication tools/guidelines),

	● Support for organizing shifts among colleagues, ● Support to quickly collect feedback and preferences by participants, ● Support for creating evaluation surveys.
Indications for replicability of the initiative	The Families Share approach has already been tested and validated in several pilot case studies, in different European countries where different models have been explored. In the Italian Cities of Venice and Bologna and in the Ducth City of Kortrijk, Families Share has been exploited to integrate the existing local public childcare offers (during holiday periods for instance) thanks to neighbourhood relationships based on mutual help and solidarity. Different legal and ethical regulations, as well as local financial support, might apply locally when the initiative is replicated in specific contexts. **Families Share could be published in the INTERLINK catalogue of replicable public services, together with all the knowledge and software resources required to guide its reuse**.
Website/contacts	Families Share toolkit: https://www.families-share-toolkit.eu/companies/ Families Share app: https://www.families-share-toolkit.eu/developers-app/

Table 9 - Families Share use case's description

Use Case 5

The traditional walking bus experience supports social interactions among parents and kids while they safely make their way to school. PedibusSmart supports this objective by using transparent technology to automatically handle the routine task of the daily attendance register, freeing the volunteers for personal interactions with the kids.

Title	**PedibusSmart** Co-delivery of smart mobility services for school children
Nation	Italy
Initiative Type	Co-production / collaborative Field: Sustainable Mobility
Promotor	Fondazione Bruno Kessler Local authorities: Municipality of Trento (City of Trento) - Youth Policies Office
Involved actors	Local authorities ● Interested in encouraging sustainable mobility and

	children's autonomy. They could provide insurance, perform a security check of the journey/path traversed by children, provide material (e.g. jackets for volunteers, indication along the path). Primary Schools ● Primary schools interested in sustainable mobility, children's independent mobility, and in positive behavior change toward sustainability. Schools can manage the initiative (also in partnership with local authorities) and sustain the initiative by managing the communication and engagement campaign. Citizens volunteers ● Volunteers (mostly parents) offer their time to accompany children from one fixed point of the city to the school. Research Center (FBK - Fondazione Bruno Kessler) ● Interested in the application of research results related to gamification to support behaviour change and green transition. ● provides a smartphone app, proximity tags and an online dashboard that simplify the daily walking bus routine, helping volunteer "drivers" and making the trip to school safe and fun for everyone.
Brief description	PedibusSmart provides a collaborative solution for sustainable mobility that involves a partnership between local authorities, schools, teachers and families. A walking school bus involves adult volunteers, often parents or grandparents, escorting a group of children to school. Similar to a traditional school bus, it follows a timetable along a planned, safe route with a number of stops. *PedibusSmart* uses transparent technology developed by Fondazione Bruno Kessler to automatically handle the routine task of the daily attendance register, freeing the volunteers for personal interactions with the kids. Each child participating in the walking bus receives a BLE (Bluetooth Low Energy) smart tag to drop into their backpack. The proximity of this device to the driver's own smartphone triggers the registration of the child as on-board the walking bus, automatically compiling the daily presence register.
Strengths	The PedibusSmart initiative has been co-designed within a network of stakeholders to make sure the needs and requirements of all the actors involved are taken into account, in an inclusive manner. This sustainable mobility public service is co-delivered with the active contribution of families and volunteer citizens who offer their time to keep the walking bus running.

Weaknesses	The porting of the PedibusSmart solution to a different context requires an articulated co-production process that involves carefully planning insurance, legal, and ethical aspects. Awareness campaigns as well as pre and post evaluations are important to ensure successful participation and a measurement of the impacts. The porting process would highly benefit from: clear step-by-step guidelines on how to engage the necessary stakeholders; templates and examples on the type of documents to produce and sign; templates for communication campaigns; best practices and materials for evaluation surveys. **A co-production platform like INTERLINK, with its collaborative environment and its catalogue of replicable public services and reusable INTERLINKERs could significantly facilitate and support the adoption of the PedibusSmart solution by other Public Administrations.**
Indications for replicability of the initiative	The PedibusSmart initiative has been piloted in Trento (a medium-sized Municipality in Northern Italy) and then replicated in several schools in different Italian Municipalities (Trento, Lecco, Ferrara) and in Ticino. **PedibusSmart could be published in the INTERLINK catalogue of replicable public services, together with all the knowledge and software resources required to guide its reuse.**
Website/contacts	How to set up a SmartPedibus initiative: https://pedibussmart.fbk.eu/en/ The initiative on the Trento Municipality Website: https://trentogiovani.it/Archivio-iniziative/Piedibus-2019

Table 10 - Pedibus Smart use case's description

Use Case 6

Play&Go suggests a comprehensive approach based on an innovative gamification platform that enables the entire community to get involved and promote greater awareness of the city's mobility goals and policies and active and collective participation for more sustainable mobility.

Title	**Play & Go** Urban mobility game promoting citizens' travel behaviour change
Nation	Italy

Initiative Type	C2G
Promotor	Fondazione Bruno Kessler Local authorities: Municipality of Rovereto, Municipality of Trento Field: Sustainable Mobility
Involved actors	Local authorities ● Interested in encouraging sustainable mobility and in improving awareness of the city's mobility goals and policies. Companies and local businesses ● Interested in encouraging sustainable mobility of their employees. ● Providers of real incentives and rewards for citizens. Citizens volunteers ● Volunteers that engage with the Play & Go system to receive inter-modal mobility information, decide responsibly which transportation solution to use, and get rewarded for their eco-friendly choices. Research Center (FBK - Fondazione Bruno Kessler) ● Interested in the application of research results related to gamification to support behaviour change and green transition. ● Provides the Play & Go gamified digital platform.
Brief description	Play&Go has been developed under the EU FP7 STREETLIFE (2013-2016) project, of which Fondazione Bruno Kessler was a scientific coordinator, to support administrations in delivering long-term sustainable mobility campaigns with the aim of making the use of sustainable means of transportation enjoyable and rewarding (via instant feedback to users and virtual and real rewards) and the effects achieved as well as the impact on the mobility system measurable. Play&Go is an innovative gamification initiative that enables the entire community to get involved and promote greater awareness of the city's mobility goals and policies and active and collective participation for more sustainable mobility. Play&Go covers all phases of this process: from defining customized mobility campaigns, to implementing and validating them. Play&Go is a platform that consists of four tools: (1) Gamification Framework. Support of definition, execution, and management of game campaigns. (2) Viaggia Play&Go. A personalized and gamified mobile application for sustainable info-mobility that: (i) provides citizens with updated, integrated and inter-

	modal mobility information; ii) suggests and rewards mobility behaviors in line with sustainability goals. (3) Analysis dashboard. It provides administrations with a comprehensive and up-to-date analysis of the mobility system and the impact of gaming campaigns. It allows them to analyze the impact in terms of participation, change of behavior, and effects on the mobility system. (4) Incentive system. The sustainability of gaming campaigns is ensured by the active involvement of the local business fabric. Companies and businesses are directly involved in these initiatives, not just as promoters of the initiative among their employees and customers, but also as real incentive providers (e.g. discounts, coupons, gifts).
Strengths	Innovative and often costly mobility policies and solutions introduced by cities are liable to fail, if not combined with initiatives aimed at increasing the awareness of citizens, and promoting their behavioural change through direct action. Play & Go leverages the incentives and rewards system supported by gamification to engage citizens and promote their active participation. The synergistic action of a network of stakeholders (public, private, research bodies) that collaborates to the definition of the game elements grants legitimacy and efficacy to the solution.
Weaknesses	Deciding which incentives (virtual and real) should be included in the game, the content and timing of the challenges, the means of transportation to promote, the companies and public offices to involve in the awareness campaigns depends on the specificity of each city context (type of public transportation available, population distribution, traffic issues, needs of commuters, interested companies….). The porting of the solution to a different location requires the involvement of a network of stakeholders that performs an initial co-design process to tailor the solution to optimize the expected result. **A co-production platform like INTERLINK, with its collaborative environment and knowledge INTERLINKERs supporting stakeholders engagement, ecosystem mapping, and problem analysis would greatly facilitate this phase.**
Indications for replicability of the initiative	Play&Go was created under the EU FP7 STREETLIFE (2013-2016) project, of which FBK was a scientific coordinator. The solution has been replicated in other contexts and adopted by other cities: ● City of Rovereto (TN) in the framework of the Viaggia

	Rovereto Play&Go sustainable mobility campaign (April 18 – June 19, 2016) ● City of Trento for the Viaggia Trento Play & Go (September 10 – December 2, 2016) ● City of Ferrara (2020-2022): Play & Go is being used in several initiatives related to smart mobility (Landscape Metropolis, AIR BREAK Urban Innovative Actions (UIA), Bike2Work) **Play&Go could be published in the INTERLINK catalogue of replicable public services, together with all the knowledge and software resources required to guide its reuse.**
Website/contacts	https://www.fbk.eu/en/result/play-go-community-gets-involved-sustainable-mobility/

Table 11 - Play&Go use case's description

Further use cases may be included in future versions of the document.

6 Proposition & Business Model

It is extremely important to ensure sustainability of the INTERLINK platform and co-produced services. One of the key factors towards sustainability is to secure financing required to operate the platform and services. Another key element is to ensure the growth of the co-production ecosystem emerging around the INTERLINK platform, which is best achieved through a continuously increasing number of active co-production projects and completed success stories. Both of these key objectives are supported by developing solid **business models** that bring sufficient funding and motivate teams to start new co-production projects and work on them.

The INTERLINK concept requires two kinds of business models, as depicted in Figure 3, which shows the key elements of the concept and their relationships. The lower dashed box presents the scope for the **core business model** which should define how INTERLINK Platform creators and operators could do business based on the developed INTERLINK platform and INTERLINKERS. The upper dashed box shows the scope for the **co-business model** which should open business opportunities for co-production teams based on the services they have co-produced. The scopes have clearly different products, beneficiaries and customers, so handling them as separate business cases is well justified.

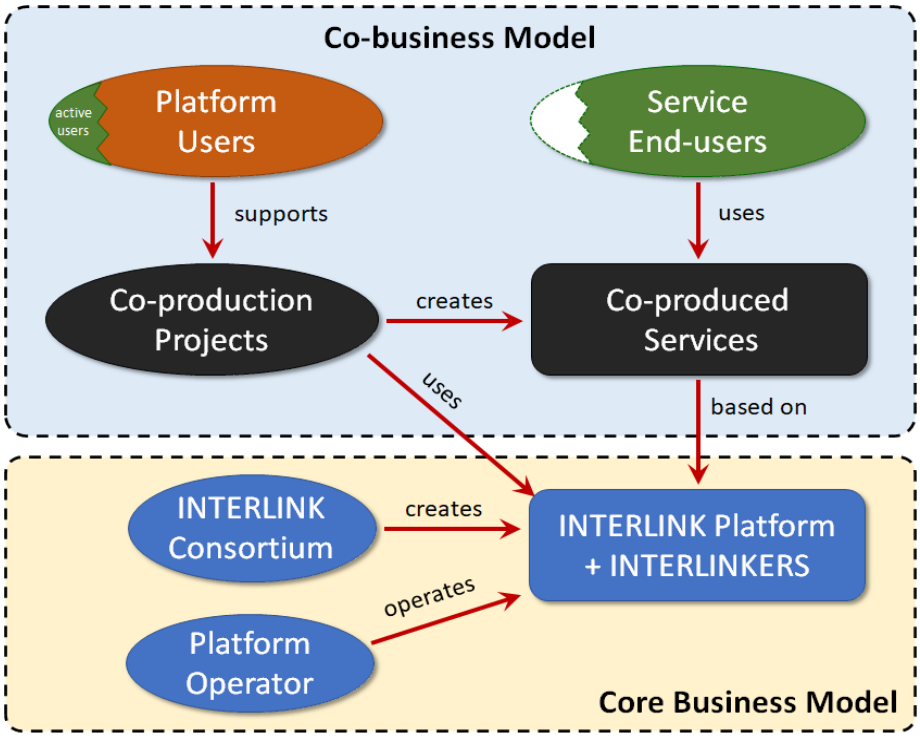

Figure 3 - Business model scopes

In this deliverable, the preliminary ideas for the core business model will be presented. A brief overview of the co-business models will also be given, but more detailed descriptions of proposed co-business models will be provided in the forthcoming deliverable D2.4.

6.1 Core Business Model

In our idea, we can imagine a sort of "**building block business model**", flexible, modular and with a maturity-based evolution, depending on:

- The **context**
- The **maturity level of the platform**

In particular, for maturity, we consider not only technical maturity, but also the presence of a remarkable ecosystem of co-producers and end-users.

In the beginning, before any company would be ready to pay for advertising their products or services in the platform/marketplace, selling licenses to PA's (or receiving co-financing from other sources) seems like the most realistic business model (license model or as a service). In an intermediate step, we could also imagine the involvement of private entities that will co-finance the platform.

Finally, when the level of maturity will be maximum, **the platform could become a real marketplace of products and services**. In this idea, the INTERLINK platform could be a marketing channel for companies/professionals who wish to advertise their products or services as INTERLINKERs. In other words, charge a fee for registering commercial INTERLINKERS or promoting/highlighting it on the platform.

This leads to a two-phase expected revenue model like shown in the chart below.

First, monthly revenue grows slowly whenever a new license is sold to some PA (fixed monthly/early fee per PA, the blue area of the chart). Most likely, the sales process for each new license will take several months as PA's tend to be rather slow in making such purchase decisions. Later on, when platform instances have reached enough users and content, the marketplace business model begins to bring additional revenue, which can be expected to grow faster (orange area of the chart). We have intentionally hidden the actual scale of the chart as real euro-based revenues are totally impossible to estimate at this point.

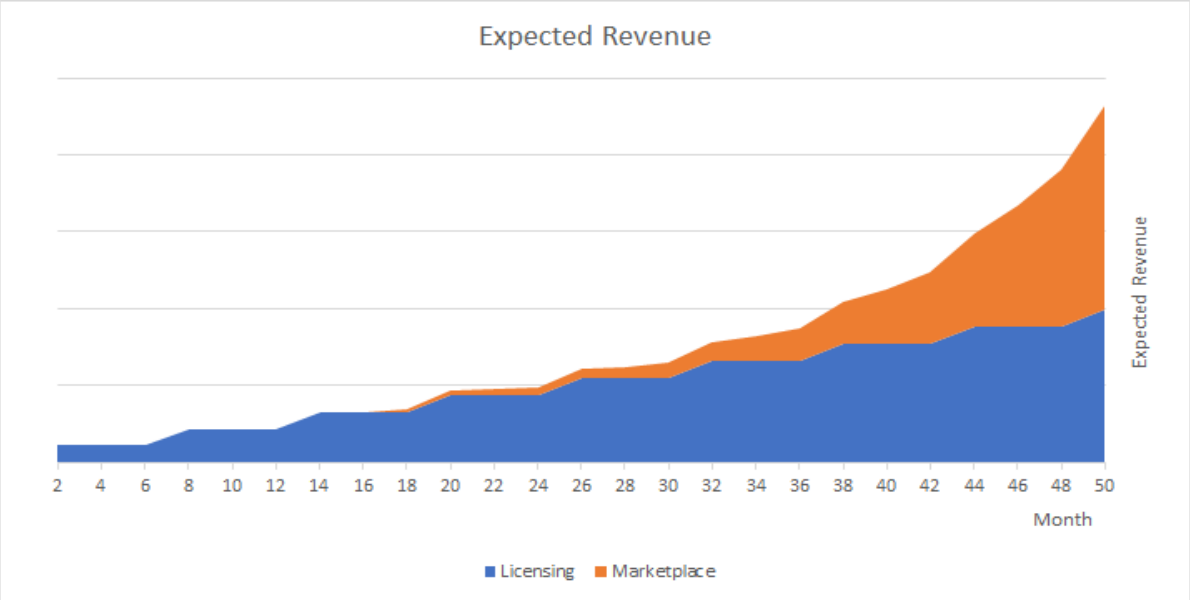

Figure 4 - Evolution of Interlink Business Model and Revenue scheme

So, the maturity phase represents the maximum potential of innovation (in terms of governance & business model), but could be more difficult to reach and it needs a beginning phase of public financing, useful to make the platform gain popularity, users and new interlinkers: key elements to reach success.

In conclusion, at this stage of the project, we could describe **the evolution of our business model as in a timeline that accompanies the maturity level and the success of the platform**.

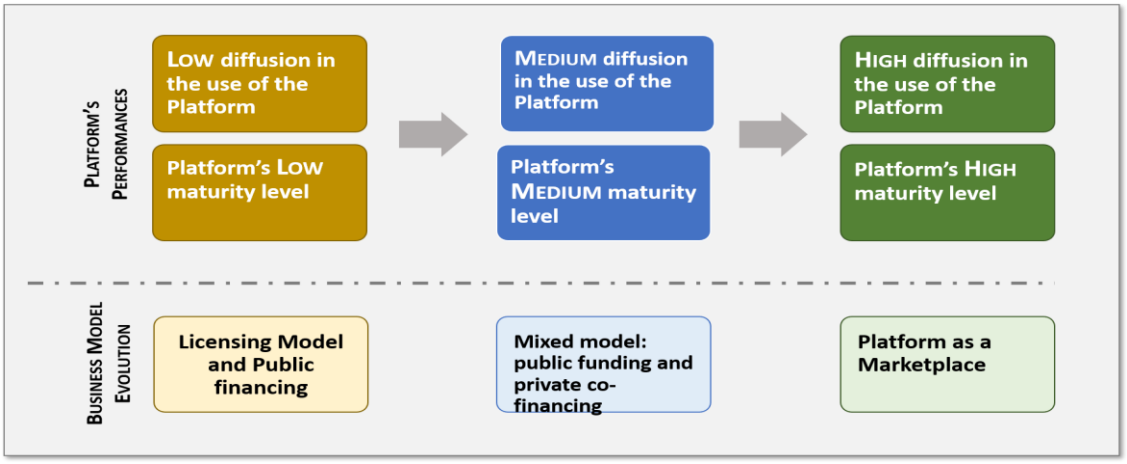

Figure 5 - Evolution of Interlink Business Model Maturity

6.2 Co-Business Model

There is no commonly accepted definition of *"co-business"* in the literature, so let's define the term here by ourselves:

"Co-business emerges when a team of independent stakeholders work together towards a common goal to solve important real-world needs which eventually brings benefits to everybody involved and beyond."

The Interlink Project

This definition makes a clear distinction between business and co-business. In "normal" business, the main objective is to make money by producing or buying and selling products (see e.g. wikipedia). However, in co-business, the primary goal is to solve important real-world needs together in the hope that it shall bring common benefits. Moreover, the desired benefit is not necessarily monetary profit and each stakeholder may have different expectations for it. Figure 6 below illustrates what typical expected benefits of different stakeholders could be.

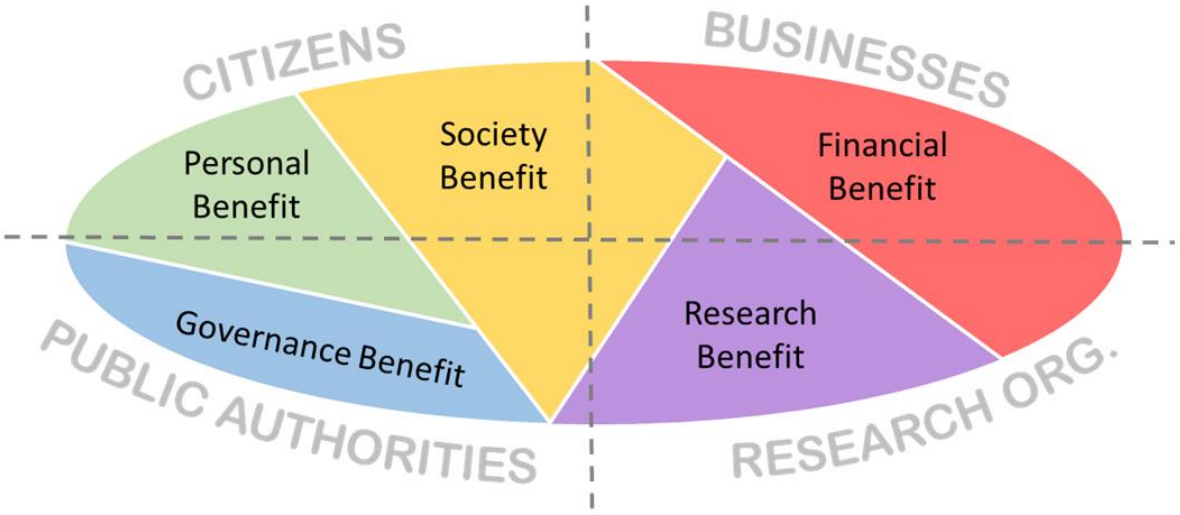

Figure 6 - Expected benefits from co-production

Another key difference is that business models are usually made from the perspective of a single business entity, describing how it could make profit by selling products or services. In co-business, there is no single legal entity who could own a product, sign a contract with a customer and begin sales - just a team of independent stakeholders. The co-production team does not have a bank account, credit card or any other means to actually perform payments nor receive money.

During the early phases of co-production projects, activities such as exploring, innovating and designing could be carried out without expenses by utilizing free tools provided by the INTERLINK platform or available on the web. However, when the project eventually reaches

a phase where some resources or services need to be purchased to continue the work or publish project outcomes, the inability to handle money will become a serious issue.

The INTERLINK project aims to tackle these issues by enabling **virtual crowdfunding** of co-production projects inside the platform which is based on the concept of *co-production coins*. The **INTERLINK Co-production Coin** is a virtual currency which is valid only within the INTERLINK platform and has no monetary value outside. Platform users and co-production projects can earn coins by doing certain useful actions in the co-production ecosystem. Each registered user and project has a *co-production wallet* to safely store their coins and do transactions with them.

Co-production projects can be virtually crowdfunded simply by transferring co-production coins into their co-production wallets. Projects can utilize their coins by purchasing services or resources they need in co-production which are provided though the INTERLINK platform. In addition, coins are used to keep track of project contributions, prioritize tasks and determine owners of project results, as will be explained in the forthcoming deliverable D2.4.

Although the principles of co-production coins are fairly simple and similar to real world businesses, applying them in the co-production ecosystem shall have remarkable consequences. **Coins will turn co-production into a game wherein only the active, smart and brave players will succeed!** The key benefits of coins include:

- Coins received by users after doing some actions in the platform are immediate incentives that motivate them to continue being active.
- Interesting projects receive more crowdfunding, which improves their chances to succeed, which will make them even more interesting.
- Ownership of the project and related intellectual properties is known precisely all the time.
- Project decisions can be reached by voting based on ownership percentages.
- In case the project is a success and generates profit to share, they should be shared according to the ownership percentages specified by owned shares.

7 Marketability approach and Market analysis

An Exploitation plan will be developed in T7.4, and it will be coherent with the first statements and results carried out in this Innovation strategy.

In particular, as far as the topic of IPR is concerned, the project activities have already produced some reflections, which are anticipated in this first release of the deliverable (chapter 7.1) and will be deepened in the coming months.

7.1 Intellectual Property Rights (IPR) analysis

According to the World Trade Organization (WTO), Intellectual property rights[10] are the rights given to persons over the creations of their minds. They usually give the creator an exclusive right over the use of his/her creation for a certain period of time. Intellectual property rights are customarily divided into two main areas:

- **Copyright and rights related to copyright**

  The rights of authors of literary and artistic works (such as books and other writings, musical compositions, paintings, sculpture, computer programs and films) are protected by copyright, for a minimum period of 50 years after the death of the author.

  Also protected through copyright and related (sometimes referred to as "neighbouring") rights are the rights of performers (e.g. actors, singers and musicians), producers of phonograms (sound recordings) and broadcasting organizations. The main social purpose of protection of copyright and related rights is to encourage and reward creative work.

- **Industrial property**

  Industrial property can usefully be divided into two main areas:

  1. One area can be characterized as the protection of distinctive signs, in particular trademarks (which distinguish the goods or services of one undertaking from those of other undertakings) and geographical indications (which identify a good as originating in a place where a given characteristic of the good is essentially attributable to its geographical origin). The protection of such distinctive signs aims to stimulate and ensure fair competition and to protect consumers, by enabling them to make informed choices between various goods and services. The protection may last indefinitely, provided the sign in question continues to be distinctive.
  2. Other types of industrial property are protected primarily to stimulate innovation, design and the creation of technology. In this category fall inventions (protected by patents), industrial designs and trade secrets. The social purpose is to provide protection for the results of investment in the development of new technology, thus giving the incentive and means to finance research and development activities. A functioning intellectual property regime should also facilitate the transfer of technology in the form of foreign direct investment, joint

[10] https://www.wto.org/english/tratop_e/trips_e/intel1_e.htm

ventures and licensing. The protection is usually given for a finite term (typically 20 years in the case of patents).

While the basic social objectives of intellectual property protection are as outlined above, it should also be noted that the exclusive rights given are generally subject to a number of limitations and exceptions, aimed at fine-tuning the balance that has to be found between the legitimate interests of right holders and of users.

Intellectual Property (IP) can be protected by different registered IP rights or titles, such as trademarks or patents, as well as by other unregistered rights. Such titles are usually thought to confer negative rights, which means, the right to exclude others from using or commercialising, for example, an invention protected under a patent.

In recent decades **Intellectual Property Rights (IPRs) have become increasingly important for organizations**. "*They are no longer perceived merely as tools that reward creativity and inventiveness, deter imitation and secure the reputation of a company's products and services. Beyond their traditional function, IPRs provide companies with new opportunities to reap the benefits of their original works and adequately monetise their intellectual property*."[11]

Innovation is a crucial moment in the life of an organization, which can gain a competitive advantage over its competitors through innovations: in the **Knowledge Society, ideas and creativity are often the most important source of value for firms and organizations**, replacing the more traditional factors of production such as land, labour and capital. A range of options from formal to informal tools of protection of the intellectual assets is available.

So, we can define PRs as flexible instruments that could provide a complex set of **strategic options**: an organization can, for example, decide to open up IPRs for use by others through licensing programmes or through R&D joint ventures, thus creating valuable economic activity. Additionally, instead of focusing on one IPR at a time, companies increasingly look at their intellectual assets collectively and take the combination and interaction of various IPRs into account in their decisions. In fact the use of IPRs as a bundle displays significant potential for firms to strengthen their competitive position in the market, and research has shown that IPRs can be used in a complementary way in order to generate additional streams of revenue and to improve a firm's financial performance (EUIPO, 2020).

There are established rules for exploitation and dissemination of Horizon 2020 results projects in the following documents:

- Rules for participation - (Regulation EU No. 1290/2013 of the European Parliament and Council - 11th December 2013 laying down the rules for participation and dissemination in "Horizon 2020 - the Framework Programme for Research and Innovation (2014-2020)"
- General Legal Framework applicable for the Horizon 2020 grants (Regulation EU No. 1291/2013 of the European Parliament and Council - 11th December 2013 establishing Horizon 2020 - the Framework Programme for Research and Innovation (2014-2020)
- Model Grant Agreement (MGA - Section 3[12]) and Annotated MGA, "Section 3 Rights and obligations related to background and results".

[11] Intellectual property rights and firm performance in the European Union Firm-level analysis report, February 2021, EUIPO

[12] https://ec.europa.eu/research/participants/data/ref/h2020/grants_manual/amga/h2020-amga_en.pdf

Following these rules and the Commission Recommendation[13] (10th April 2008 on the management of intellectual property in knowledge transfer activities and Code of Practice for universities and other public research organizations), in the Interlink project, monitoring of the partners' potential contribution to new IP generation, a **detailed IP protection plan internal to the consortium** will be elaborated in 2022 and included in the Consortium Agreement.

In the Interlink project, the Consortium partners are going to **generate new knowledge that will be instrumental in shaping the expected project outcomes, several of which may qualify for Intellectual Property (IP) protection**. Disseminating results means following open-access rules and obligations, safeguarding at the same time the rights of the partners to protect their IP: to maximize the Plan for the use and dissemination of Outcomes (POMT: Project Outcomes Management Tool), a strategy aimed at the proper management of the generated knowledge will be developed in 2022. It will list all the intellectual property rights that are applied for and foreground that might be exploited. Companies and PAs will indicate their exploitation objectives regarding public services development and deployment, while the research organizations will elaborate how to utilize the results within their Research & Development initiatives and educational initiatives within for example courses, tutorials.

As the development of IPR enforcement strategies and undertaking the relevant IP enforcement actions require a high level of legal expertise, and the IPR theme is cross to the whole project, **the discussion on this topic will have to involve all partners**, starting with the innovations that will be introduced in the governance model.

Therefore, this issue will be addressed in particular in the next versions of the innovation plan and in the final exploitation plan.

In particular, the main issues that will be addressed are:

- **Licences on software:**
  - **Compatibility and incompatibility between the licences** of the tools used
  - Choices about **licensing the results of the project**. We can already assume that there will be a difference between the basic tools' licences and the licence for the products developed by the project, like wizard, collaborative environment, platform, pilots.
- **Knowledge INTERLINKers**: the Consortia must take a decision also in relation to non-software INTERLINKers. In general, we intend to proceed with **open science releases, creative commons, also to contribute to the CEF system** (open licences e.g. EUPL). However, the analysis must take into account the possibility of using this content for value-added services to be sold on the market.

The Consortia converges on the effort to better convert knowledge and IPRs into socio-economic benefits. Therefore, it needed to disseminate and to more effectively exploit publicly-funded research results with a view to translating them into new products and services. Means to realise this include in particular academia-industry collaborations – collaborative or contract

[13] https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32008H0416&from=EN#d1e32-21-1

research conducted or funded jointly with the private sector – licensing and the creation of spin-offs.

7.2 Next step

In addition to the results already achieved, the project work, in the coming months, will focus on:

- **Raising awareness among all partners concerning good research practice and the importance of IPR management** (incl. confidentiality, ownership, access rights, responsibilities).
- **Assessing, balancing, and moderating the possibly varying exploitation interests of project partners** (e.g. through exploitation or innovation questionnaires) and coming up with a **common strategy that responds to the general objective of the project**.
- **Systematically planning, preparing, and implementing appropriate activities to identify, assess and prioritise key exploitable results**. We could plan, for example, follow-up research and market analysis to identify and assess competing technologies, market competitors, emerging trends, etc.
- **Identifying market opportunities** arriving to describe how the project results will be accessed and used.

During the whole project, **this document will be updated and will provide details on the strategy for efficient exploitation and commercialization of project results. In next release, it will focus on market updates, business requirements, and IPR analysis.**


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