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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 Service	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.
Software Platform / INTERLINK Platform	A platform is a group of technologies that are used as a base upon which other applications, processes or technologies are developed.
	In other words, a platform is the basic hardware (computer) and software (operating system) on which software applications can be run. This environment constitutes the basic foundation upon which any application or software is supported and/or developed.
	Within the context of the INTERLINK project, we define a as a set of data storage, backend services and APIs which serve as a basis for the business logic and frontend applications to develop, integrate and function. It also includes software deployment and operational infrastructure.
Software Backend	Is part of software services and/or applications running on server side within the client-server paradigm. It mostly dedicates to data storage, business logic, process workflow and utility functions
Software Frontend	Is part of the software services and/or applications running on the client side within the client-server paradigm. It mostly focuses on graphical user interface (GUI), workflow navigations and supporting business logic
Software API	API means Application Programming Interface, a type of software interface, offering a service to other pieces of software.





ACRONYMS

ABBREVIATED	EXTENDED
API	Application Programming Interface
CI/CD	Continuous Integration / Continuous Deployment
CE	INTERLINK Collaborative Environment
CEF	Connecting Europe Facility
CSV	Comma-separated values
DEMO	Staging Environment
eTOPIA	City of Zaragoza's Centre for Art and Technology
EU	Europe / European
GDPR	General Data Protection Regulation
KPI	Key Performance Indicator
РА	Public Administration
SaaS	Software as a Service
SOC	Service Offering Canvas
VARAM	Latvian Ministry of Regional Development
WP	Work Package
ZGZ	City of Zaragoza



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Executive summary

This deliverable represents the final release of INTERLINK platform, including the community web portal ready for transfer and exploitation beyond the end of the project.

Modifications done to the platform and infrastructure compared to the second release of the platform (described in deliverable D4.3) are detailed in **Chapter 2**.

Updates to the implemented INTERLINK Community Web Portal are reported in a separate **Chapter 3** as it corresponds to Task T4.4 of the WP4 of the Project. Main updates are described under section 3.3 where the INTERLINK Collaborative Environment is illustrated.





1 Introduction

1.1 Introduction

INTERLINK is designed as a collaborative software system, which consists of numerous software components.

This deliverable describes the final release of the integration including the community web portal ready for transfer and exploitation beyond the end of the project. The document builds upon D4.3 and D4.4, first and second release of INTERLINK platform respectively, and includes the last modifications done to the platform for its final release within the project duration.

1.2 Related documents and contents

During the project, many conceptual and architectural deliverables have been created, which build the basis for the INTERLINK platform. The following enumeration lists the most relevant of them. Each of them describes aspects, which apply to a single component or idea in much greater detail. We will refer to those documents where necessary, notably:

- D4.1 (FBK, R, M6) List and description of the socio-technical requirements. The initial list and description of the socio-technical requirements defined in T4.1.
- D3.1 (FBK, R, M10) Identification and specifications of INTERLINKERs. Specifications of common building blocks for INTERLINK inclusive public services and their specification.
- D4.2 (TREE, OTHER, M12) Reference architecture model and specification. The reference architecture model and specifications as defined in T4.1.
- D5.1 (DEUSTO, R, M12) Use-case plans and guidelines v1. Result of T5.2, this document contains the specification of the use-case plan, including purpose and background, objectives and evaluation criteria, strategy, prerequisites, assumptions, risks, personnel and responsibilities, organisation, site description, methodology, schedule and test result collection. It also describes the associated trial evaluation plan and KPIs. Two releases are planned, one for each phase.
- D5.2 (VARAM, R, M12) Community building and preliminary use-cases activities. Result of T5.3, this document contains the plan for building a community for the users and stakeholders in all the use-case sites, including details about the communication channels and contents.
- D2.1 (RU, R, M16) Preliminary governance model. This report will include a literature review and a preliminary governance model identifying relevant variables and conditions. The model will also take into account the comparative analysis of successful and unsuccessful cases of co-production.
- D2.3 (RU, R, M16) Governance performance indicators. This document will be a list of operationalized, non-technical performance indicators, to be used in T5.2 to develop KPI for the evaluation of the platform.





- D3.2 (FBK, OTHER, M16) Initial repository of INTERLINKERs and partnership tools. This deliverable will provide an initial repository of common core INTERLINK enablers (INTERLINKERs) to foster Government as Platform model, and of public-private partnership governing tools such as partnership models, templates, and guidelines. The initial repository will cover a subset of the enablers targeted at the first use-case validation.
- D4.3 (TREE, OTHER, M18) First release of INTERLINK platform and community portal. Description of the first release of INTERLINK platform, including the community portal, guidelines for instantiation and specific instantiations in the three use-cases ready for the first validation phase.
- D5.3 (DEUSTO, R, M21) Use-case deployment and operation report v1. Details on the result of T5.4 and contains INTERLINK platform evaluation results obtained after each of the two phases of use-cases. It will report on the effort and strategy use for the deployment and the running of use-case operations.
- D5.4 (DEUSTO, R, 24) Use-case plans and guidelines v2. Result of T5.2, this document contains the specification of the use-case plan, including purpose and background, objectives and evaluation criteria, strategy, prerequisites, assumptions, risks, personnel and responsibilities, organization, site description, methodology, schedule and test result collection. It also describes the associated trial evaluation plan and KPIs. Two releases are planned, one for each phase.
- D4.4 (TREE, DEUSTO, FBK, M28) Second release of INTERLINK platform and community portal.
- D3.3 (FBK, OTHER, M32) Final repository of Interlinkers and partnership tools. This deliverable provided an update to compile the final repository to that initially described in D3.2.
- D5.5 (DEUSTO, R, 33) Use-case deployment and operation report v2. This document is the result of T5.4 and contained the INTERLINK platform evaluation results obtained after each of the two phases of use-cases. It reported on the effort and strategy use for the deployment and the running of use-case operations.





2 INTERLINK Platform and Infrastructure

The aspects detailed in deliverable D4.3 and D4.4 in relation to the structuring and use of GitHub, as well as the various CI/CD components, have not undergone any changes. Similarly, the components that were detailed in subsections 2.1.1 "Software Repository", 2.3 "Task and Incident Management", and 2.4 "The Servers Deployed", along with 2.2.1 "Software Development and Deployment Procedures" remain unaltered, while some modifications have been done to the details of section 2.2 "Infrastructure Platform Components which are detailed below.

Infrastructure Platform Components

Deliverable D4.4 contemplated the use of Matomo which was ultimately discarded due to its failure to meet technical requirements. After a more detailed examination of Matomo, it was determined that it would not be included in the final architecture, because although it had the potential for providing advantages, there were a number of obstacles preventing the stabilisation of the solution. Furthermore, the process of incorporating new features into Matomo was not as smooth as expected, in consequence its effectiveness for INTERLINK project had to be reconsidered. An important factor in reaching this decision was that the key performance indicators (KPIs) needed could already be obtained without relying on the data provided by Matomo. Hence, in our endeavour to uphold a less complex and more streamlined structure, the choice to relinquish the use of Matomo was made. This decision was reached in line with the objective of enhancing and simplifying operations, guaranteeing that every element of the architecture provides substantial functional worth.

On the other hand, new functionalities were added:

- New alert dashboards have been added for the control and notification of incidents on the platform (Figure 1),
- New monitoring dashboards to oversee the status of the platform (Figure 2),
- The email server designed to notify users of events occurring within the platform was also optimised (Figure 3).

The **Mailu** project (<u>https://mailu.io/2.0/</u>) was selected as the **email server** solution for its comprehensive benefits. Being an open-source and self-hosted platform, Mailu offers transparency, full control, and customization options, differentiating it from third-party providers. It encompasses a broad range of features such as webmail, antispam, antivirus, and auto-configuration, making it versatile for various email needs. Mailu allows easy setup through docker. Mailu is particularly focused on privacy and security, providing regular updates and security protocols. Additionally, its open-source nature allows for customisation to meet specific user requirements. This cost-effective solution is especially beneficial for small businesses or individuals and is supported by an active community that contributes to continuous improvements and user support.



For these reasons, the decision was made to use Mailu as the email server software.

Container Group All ~ Interval 5m ~	Server All ~				
Uptime	Containers	Disk space	Memory	Swap	Load
21 week	34	6.8%	47%	ОВ	6%
Network Traffic	CPU Usage 🗢	Used Disk Space 🔍	Available Memory		
4 KIB John Munichen Andread Sundaling		128 GIB	12 GIB	600 kB/s	
0.8			8 GIB		
			4 G/B	200 kB/s which with which all the March description of	
-4 KIB - Walance (Weather A cold half of the					05 -River Andra March and the south of the loss
CPU Usage per Container			Memory Usage per Container		
20%					
15%		mef-augmenterservice mef-auth			mef-augmenterservice mef-auth
10%		- mef-catalogue			- mef-catalogue
5%			1 GIB		
54	· ·	- mef-coproduction		anteres and a star and	- mef-coproduction
0% 11/08 00:00 11/09 00:00 11/10 00:00	11/11 00:00 11/12 00:00 11/13 00:00 11	/14 00:00 mef-coproductionworker	0 B 11/08 00:00 11/09 00:00 11/10 00:00	11/11 00:00 11/12 00:00 11/13 00:00 11/	- mef-coproductionworker 14 00:00 - mef-crontab
Usage memory			Memory Swap per Container		
Field					 interlink-gamification-engine
mef-dremio					 interlink-gamification-mongo mef-augmenterservice
mef-grafana-elasticsearch					- met-augmenter service
mef-elasticsearch8		1.11 GB			- mef-catalogue
mef-elasticsearch6					mef-coproduction mef-coproductionworker
mef-prometheus		792.67 MB	0 B 11/08 00:00 11/09 00:00 11/10 00:00	11/11 00:00 11/12 00:00 11/13 00:00 11/	

Figure 1. System Monitoring Dashboard



Figure 2. Service Monitoring Dashboard



Mailu Mailu	=												A
diego.bernabe@interlink-pro	Antispam RSPAND status page												
II CUENTA	RSPAMD All SEF	IVERS V					Status	Throu	ighput Conf	liguratio	n Symbols	Scan/Learn Test selectors History	2 Refresh 00:06 - 0
Actualizar contraseña	3.41k	2.39k	1 greyfist		D2k header	0 rewrite subject	2 rej		3 Learned				3.2 Imth 29d
Cuentas recogidas	Servers										Statistics		
Tokens de autenticación	Server name	Host		Status	Scan time	Uptime	Version	Configura	ation ID				
Configuración del cliente	All SERVERS			~		1mth 29d	3.2					Rspamd filter	stats
MINISTRACIÓN	O local	mail.inter	link-project.eu	~	0.008/0.228/0	658 1mth 29d	3.2	p59uysgc				greylist	
Anuncio	🔩 Bayesian stati	stics											
Administradores	Server name		Symbol		Тур	e Le	arns	Us	ers			add header	
Dominios recepcionados	local		BAYES_SPAM		redis	3		1	1			30%	
layed)			BAYES_HAM		redis	5		2	1				
Antispam	# Fuzzy hashes												
Dominios de correo	Server name		Storage			Hash	29						70%
A	local		local						0				no action
Correo web 🕑			rspamd.o	om					3863508132				
Correo web 🗹													
Ayuda 🕑													

Figure 3. Email server designed to notify users of events occurring within the platform.





3 Community Web Portal

The developments and updates in relation to the community web portal from a platform perspective were described in detail in section 5 of deliverable D4.4. As explained there, the INTERLINK collaborative environment offers the following core functionalities:

- Co-producer organisation, team, and process management.
- Guide for co-production process, a "how to" guide, based on a given co-production process schema, to take these partnerships towards a successful deployment of new co-delivered public services.
- Recommendation of INTERLINKERs most suitable to the problem profiles represented by the chosen co-production task.
- Selection, instantiation, and registry of usage (registering the result of using the enabler, e.g., instantiation of a Business Plan template) of a given INTERLINKER. The instantiation of an INTERLINKER, no matter if it is a software or knowledge one, usually gives place to a new resource which contributes to the completion of a co-production process task.
- INTERLINKER catalogue where imported INTERLINKERs and co-produced ones are published.
- Catalogue of Success Stories, which represents a public instantiable template of a co-production process, contains all the resources and information needed to reproduce it into an entirely new process as a starting point.
- Open Processes catalogue enables making processes public so other users in the platform can opt-in and contribute to their development.
- Modification of the co-production tree by process admins, so that a chosen co-production schema can be adapted to the specifics of the collaborative process being managed by the Collaborative Environment.
- Add teams to a whole process, apart from having the capability to add different permissions to branches of the co-production schema.
- Ease the creation of teams, allowing contact details imported from a CSV file and export emails of a given team. This has been done to streamline and speed up team configuration or the creation of complementary communication channels among team members.
- Notification functionality (in-app & by email) to allow updates in each co-production process to be seen by different team members. Now, users can see WHO has done WHAT, and WHEN within a co-production process. Besides, now the environment sends emails every time that a user is added to a team and every time that a team is assigned to a process.
- Enable users to claim contributions for tasks and be awarded points based on their relative contribution, as determined by a Gamification Engine. This new feature significantly enhances the tracking and valuation of individual contributions within co-production processes. Additionally, we have introduced a functionality that allows administrators to submit either single contributions or multiple contributions made by a team.
- Cloning of processes to promote internal replication and reuse of previously created co-production processes.





• Publication of success stories from cloned and pruned successful co-production trees, promoting third-party replication. Hence, those approaching the Collaborative Environment may review previous success stories and ground them in setting up their own collaborative processes.

With respect to v2, the following additional functionalities have also been added to the Collaborative Environment in the final version:

- 1) A shared leaderboard that shows the points obtained by every user in the coproduction process and a personal leaderboard that displays the points obtained by your user in each process task.
- Creation of an open process list in which administrators of processes can publish collaboration requests to make them available for other users to opt in and collaborate.
- 3) Users can import and export a whole co-production process as a zip file. This function also serves as a method for process backup.
- 4) A roadmap guide has been created for new users, designed to teach them how to set up and understand the subsequent steps required to fully utilise the collaborative environment.
- 5) Assignment functionality allows process administrators to assign tasks related to a resource to specific users. The assignments are shown in an assignment list and as notifications.

Compared to deliverable D4.4 where version 2 of the platform was described, sections 3.1 INTERLINKERs and Enablers of the Co-production process and 3.2 Catalogue of INTERLINKERs, have not undergone additional modifications. However, most of the progress towards the final release of the platform is detailed in Section 3.3 INTERLINK Collaborative Environment, as described below.

3.1 INTERLINKERs as Enablers of the Co-production Process

INTERLINKERs, as already specified in D3.2, are common building blocks, provided as software tools or in the form of knowledge offered digitally, that offer interoperable, re-usable, EU-compliant, standardised functionality for public service co-production management. These enablers are designed to support the co-production of effective, participatory, and sustainable public services. They can be applied to the following purposes:

- To guide co-production: Co-production enablers that guide and support teams in the collaborative execution of the co-production initiatives.
- To build capacity: Partnership tools and knowledge resources, which tackle the legal, social, and business aspects to make co-delivered public services viable and feasible in time.





• To aid service development: Technical enablers for co-delivered services, aligned with other existing EU-wide initiatives to foster interoperable and sustainable public services.

Some examples of *software INTERLINKERs for co-production* are: a) Tools for ideas crowdsourcing and collaborative decision making; b) Tools for surveys; c) Tools for team management; d) Document sharing & File management tool. On the other hand, some exemplary knowledge *INTERLINKERs for co-production* are: a) Guidelines and canvas to perform stakeholders analysis; b) Templates for stakeholders' engagement plan; c) Templates for surveys for problem refinement; d) Guidelines and materials for workshops for service design or e) Templates for Business Plans. Some exemplary *knowledge INTERLINKERs to build capacity* are: a) Guidelines on GDPR for Data Protection; b) Information sheets and consent forms; c) Guidelines on the acquisition and reuse of software for public administrations. Some exemplary *software INTERLINKERs supporting service building* are: a) Registration and authentication component; b) Collaborative Editor for public service descriptions; c) Loyalty, incentives, and rewards component.

In order to support the continuous growth of a catalogue of INTERLINKERs to empower the co-production process, a *Specification Model for INTERLINKERs* has been defined.

The INTERLINKER specification model aims at classifying INTERLINKERs across different dimensions to guide and support the co-production process activities, comply with standards, and foster reuse. Each INTERLINKER must supply a set of metadata in the form of several categories. Regarding *usage*: a) problems it addresses; or b) Service offering type in EU CEF SOC model. Regarding *licensing*: Software and Data licences. Regarding *context*: a) Administrative: local, national, EU; b) Regulatory: standards, regulations it complies to; c) Organisational: PA, Business, Individuals as beneficiaries and d) Domain: application domains, cross-cutting concerns. Regarding *software*: a) Provisioning: SaaS, OSS; b) Interoperability; c) Security: protocols and d) Integration within the platform.

Following a design pattern similar as the one defined in Research Object Crates (RO-CRATE)¹, INTERLINK has defined an extensible declarative model, based on JSON Schemas, to easily define new either knowledge or software INTERLINKERs. The way to add new INTERLINKERs is to create a new directory per INTERLINKER that contains:

- A "metadata.json" file in the root of the directory.
- Optionally, a "snapshots" directory to store the images corresponding to the INTERLINKER.

¹ «Research Object Crate (RO-Crate)», Research Object Crate (RO-Crate). <u>https://www.researchobject.org/ro-crate/</u>





Knowledge INTERLINKERs usually contain several representations of the template, e.g. document (docx), spreadsheet (xlsx), presentation (pptx) and so on, from which it will be instantiated so that users may view what capability they offer before instantiating them. Besides, they often include an *instructions.md* file which explains its usage.

INTERLINKERs include, on one hand, common metadata to all enablers (e.g., problem profiles targeted, difficulty, licence, name, description, logo, etc.) to allow for their exploration and searching, and, on the other hand, they also include aspects to enable its integration with the collaborative environment. Particularly, this annotation is particularly important whenever they are of co-production type, e.g., through the "capabilities" dictionary which includes elements such "instantiate", "clone", "view", "edit", "delete" or "download" among others. Figure 4 illustrates the corresponding API methods to be provided by every software INTERLINKER to be neatly integrated with the collaborative environment. On the other hand, Figure 5 shows the GitHub repository (<u>https://github.com/interlink-project</u>) where all INTERLINKERs that populate the Collaborative Environment, and more concretely its Catalogue, are published, following the mentioned Specification Model.

Googledrive interlinker API	
Servers /googledrive v	
main	^
GET / Main	\sim
GET /healthcheck Healthcheck	\sim
Integrable	^
POST /assets Create Asset	~
GET /assets/instantiate Instantiate Asset	\sim
GET /assets/{id} Asset Data	~
CELETE /assets/{id} Delete Asset	~
GET /assets/{id}/download Download Asset	\sim
GET /assets/{id}/view AssetViewer	\sim
POST /assets/{id}/clone Cione Asset	\sim
Custom endpoints	^
POST /api/v1/assets/empty Create Empty Asset	~ .

Figure 4. INTERLINK API to be integrable in the collaborative environment.



Search or jump to 🕧 Pu	ill requests Issues Marketplace Explore			¢ +• ⊜
interlink-project / Interlinkers-data				• ¥ Fork 2 ☆ Star 0 •
⇔ Code ⊙ Issues 11 Pull requests ⊙ Actio	nns 🖽 Projects 🖽 Wiki 🔘 Security 🗠 Insights 🏶 S	ettings		
	12 master + interlinkers-data / Interlinkers /		Go to file Add file *	
	julenbadiola and github-actions[bot] Auto changes		dBec 528 4 days ago 🕚 History	
	externalknowledge	generator	4 days ago	
	externalsoftware	Auto changes	4 days ago	
	images	Iterlinkers and schemas separation	3 months ago	
	knowledge	generator	4 days ago	
	software	Auto changes	4 days ago	
	README.md	Problemprofiles	last month	
	D base.py	generator	4 days ago	
	E README.md		0	
	Interlinkers data			
	Current version status:			
	C Testing passing			
	In here we will indicate the steps to follow to the INTERLINKER catalogue	o create a BUNDLE for a KNOWLEDGE or SOFTWARE INTERLINKER that can I	be imported directly by	
	The schemas implemented are based on wh	at have been discussed here:		
	https://docs.google.com/spreadsheets/d/1t	J2BfX4EOdbBqEbrJWg8a3MENw13vYiPZM_S4wWWgWQ/edit		
	For users			

Figure 5. INTERLINKERs Catalogue data in GitHub repository.

3.2 Catalogue of INTERLINKERs

The INTERLINKER catalogue provides a one-stop-shop for know-how enabling co-production. It has been populated with knowledge and software INTERLINKERs leveraging resources generated in previous EU projects, social innovation initiatives, like: and service design best practices WeLive, Silearning.eu, servicedesigntools.org, DesignersItalia, IDEO or Engage2020. Some resources have been adapted to the specific needs of co-production; others are being created from scratch based on project research results. Figure 6 shows the INTERLINK catalogue where items can be filtered according to strings associated to their metadata, to their nature (software or knowledge), who created them and their ranking.





Figure 6. INTERLINKER catalogue.

3.3 INTERLINK Collaborative Environment

The INTERLINK collaborative environment has been designed to support the co-production methodology of INTERLINK (see Figure 7) and facilitate its adoption and application in the co-production of novel public services. As previously mentioned, it offers the following core functionalities: a) co-producer organization, team and process management; b) guide for co-production process; c) recommendation of INTERLINKERs most suitable to the problem profiles represented by the chosen co-production task; d) selection, instantiation, and registry of use (displaying result of using the enabler, e.g. instantiation of a Business Plan) and e) INTERLINKER catalogue already showcased in Figure 6.



Figure 7. Generic co-production model in INTERLINK.

Notice that apart from methods required to integrate a co-production INTERLINKER with the collaborative environment, see Table 1, custom endpoints are defined by each INTERLINKER, e.g. for GoogleDrive the endpoint shown as /api/v1/assets/empty (see Figure 4).

Table 1. Co-production INTERLINKER API

URI Method Description		Description
/	GET	redirects to swagger / redoc DOCS
/assets	POST [OPTIONAL] Posts data for asset creation return JSON of asset	
/assets/instantiate	GET	GUI for asset creation



URI Method		Description	
/assets/{ASSET_ID} GET		JSON data of asset	
/assets/{ASSET_ID} DELETE		Deletes asset and returns No content	
/assets/{ASSET_ID}/download	GET	Download a representation of asset	
/assets/{ASSET_ID}/view	ID}/view GET GUI for the interaction with the asset		
/assets/{ASSET_ID}/clone	POST	[OPTIONAL] Clones the asset and returns JSON data	

An assortment of co-production INTERLINKERs has been created to provide useful functionality to the collaborative environment, e.g.: a) interlinker-googledrive to deal with office like documents; b) interlinker-survey to design and host answers for surveys; c) interlinker-ceditor to collaboratively edit documents or d) description augmenter to annotate web pages.

As already mentioned, JSON Schemas have been defined to declaratively define Software and Knowledge INTERLINKERs. Likewise, co-production models can be defined which are tuned to the specifics of a co-production process, e.g. a Hackathon organisation and celebration. Indeed, although the collaborative environment is pre-loaded by default with the generic INTERLINK co-production tree, applicable in any co-production process, purpose-specific co-production trees can be defined as shown in Figure 11 and Figure 12. Notice that Figure 8 and Figure 9 show the INTERLINKERs recommendation capability of the collaborative environment, where the same task in two different co-production trees has been selected, recommending the same INTERLINKERs plus additional specific ones for the second co-production tree. Figure 10. shows how the generic build sub-phase is replaced in the custom Etiopia-Kids co-production tree by a run sub-phase, with very different composing objectives and tasks.

	SRACE ORGANIZATIONS CATALOGUE STORIES 🕹 🗘 Search
familie	ENGAGE DESIGN DEPLOY SUSTAIN +
share amilies Share @ Work	Court Finance Information about the task RESOURCES (2) PERMISSIONS (3) CONTRIBUTIONS (0)
English	Contention lentify stakeholders
_	Name Updated INTERLINKER History Actions
Front Page	Copy of Stakeholders. Mapping-Canves. pptx a year ago Stakeholders Mapping Canves
Overview	Tips to create an effective network of stakeholders for coll a year ago 🔥 Google Drive Activities
Resources	Rows per page: 5 → 1-2 of 2 < >
Guide	Task Create a contact list of potential network Instantiate task resource (result) through recommended INTERUNKERs (enablers)
Workplan	© participants Outpart Instantiale task resource (result) through generic INTERLINKERs (enablers)
Team	Contemporation of the state of
Settings	CAR Task Create awareness and communication
	O Isso developments and communication
	O Taxe Communicate benefit for stakeholders





Figure 8. Comparison of INTERLINK ENGAGE in 2 co-production processes (top - family share; bottom - ZGZ etopiaKids)

INTERLINK WORKSPACE ORGANIZATION				×	0 ¢		• 0
fomilie	Q. Search						
Share		mum rating: ☆☆☆☆☆			BUTIONS (0)		
English	Nature: Internal software 🔘 Nature: Internal knowled	dge 🔕 Nature: External software 😒 Nature: Ex	tternal knowledge 🛞 Problem profile: UND_PROBLEM_2 🔇		History	Actions	
Cverview	5 INTERLINKERs found		= =		Activities	:	
ng Guide	by INTERLINK Collaborative Environment Last update: 9 months ago	Template for preparing a user journey.			Activities	:	
≁ Workplan					iers)	_	
Team	Nature Internal knowledge	Rating 会会会会会	Keywords (services)				
A straig	Stakeholder types guidelines by INTERLINK Collaborative Environment Last update: 9 months ago	Guidelines to understand which are the different toward the project	t types of stakeholder, their motivations, skills, expectations				
	Nature Internal knowledge	Rating ☆☆☆☆☆	Keywords (services) (stakeholder mappping)				
	Stakeholders Mapping Canvas by INTERLINK Collaborative Environment Last update: 9 months ago	This resource supports the identification and set	ection of the stakeholders to engage in a co-production team.				
	Nature	Rating	Keywords				

Figure 9. INTERLINKER recommendation in the Family Share co-production process.





Figure 10. Different task views' tabs in two processes (from Etopia-Kids creation process model) vs. Families Share co-production processes.

	Selection of the co-production schema		
Q Search			
Name	Description	Creation date	Actions
#1 Hackathon creation process 会会会合(0)	The NTRENE known of the dambition of parameters are produced moreovers in this case production moreovers assigned to gaid down parameters lawer and esolations of a statistication deviced on address some sociated dailargent in cooperation between public advirtuations. Category and other KNL statistications, anyonoming and engoing the right statistication deviced for advirtuation of the statistication of the statistication of the statistication of the statistication and the statistication of the statistication of the statistication of the statistication and RNL - lowers the statistication of the RNL and RNL and RNL and RNL and RNL and RNL and RNL - lowers the statistication of RNL and RNL and RNL and RNL and RNL and RNL and RNL - lowers the statistication of RNL and RNL and RNL and RNL and RNL and RNL and lawers and reacting and RNL and RNL and RNL and RNL and RNL and RNL and hashadown and its lawork and RNL and	9 months ago	• Preview
#2 Default schema ☆☆☆☆☆(0)	The INTERING region has defend a generic or specification preserve which can accommodate any corporation environment. It is compared of how non-physicane to the followed how proceedings of the comparison of th	9 months ago	• Preview
#3 Co-production schema to support co-refinement of public service descriptions হার হার হার হি হে হি (৫)	Specific to production process specially cattered for co-refinement of public service denciptions where citaters, civil servers managing public service infrastructure and col servers working at a public department cooperate. It is understood and registering procession of the service service process the service proper test description augmentation space to be used by those rehounds service description c(RIR - where the description augmentation space to be used by those rehounds service description (C RIR - where the description augmentation space to be used by those rehounds service description (C RIR - where the description augmentation space to be used by those rehounds service description (C RIR - where the description RIR RIR/RIR/RIR and REFINE - where the validated with the support of the Decription Augmenter NTRE/RIR/RIR and REFINE - where the validated contributions are assessment and applied in reflements to service descriptions.	9 months ago	O Preview
#4 Co-refinement schema to support co-refection and collaborative re-design of an existing solution (app, tool or service) 会立な会会(0)	Specific co-production process specially cattered for co-refinement of previously cristed solution (ppp, tool or service). It cannits of two phases co-reflection and re-denging. Hence, an initial phase too reflection() is executed when their an initial interpole waships of what is washible new mode densible fautures as replaced. Such as a selection (hum, a pacing) phase (re-density) is barries to a seconsmodels to in mod highly need fautures. After an Initial core to the second phase (re-density) is barries to a seconsmodels to in mod highly need fautures. After an Initial core thematic cares of the segn tool or any rest of ensement to any rest.	5 months ago	• Preview



INTERLINK *	A Tris is a previow. Glob on Use Schema to Instantiate it Coaback Use schema	0
	BNGAGE DESIGN BUILD SUSTAIN	
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Guide	Task Visually map the network of stakeholders Task Create a contact list of potential network participants SINTERLINKERs found Image Statement St	
▲ Team ✿ Settings		
	Image of citizens in the co-production process Stakeholder types guidelines by INTRUNK Collaborate troitment tox Define legal and ethical framework tox Turcinent	
	Nature Rating Konnech □ come Define data management plan the the the come of the stabeled encomposition and unlection of the stabeled data to encome approximate the stabeled data to encome	

Figure 11. Selection of co-production process from 4 available models/schemas.

INTERLINK WORKSPACE ORGAN	NIZATIONS CATALOGUE STORIES		0 \$	🔍 Search 🌻 🌘
		ENGAGE DESIGN BUILD SUSTAIN	+	
TEST	Engage	INFORMATION ABOUT THE TASK	RESOURCES (0) PERMISSIONS (0) CONTRIBUTIONS (0)	
Ch progress English	Collection Identify stakeholders Fask Understand the different Create new tree item		INKER History	Actions
E Overview	Task Map stakeholders, analys Type expectations			Activity
alla Leaderboard	Task Visually map the network Parent item		the second	
🛹 Workplan	Task Create a contact list of px Prerequisite item participants Name		sult) through generic INTERLINKERs (enablers) 🗸	
Settings	Coljective Engage stakeholders Description			
	Task Prepare an engagement Task Create awareness and co			
	Task Create awareness and co Task Communicate benefit for	Create >		
	► Tesk Engage citizens in the co-production process			
	Objective Define legal and ethical framework			
	Task Define a non-disclosure agreement (NDA)			
	Task Define a partnership agreement			

Figure 12. Customisation of existing co-production process by clicking on "+" in the phase menu (top menu).

3.3.1. INTERLINK Collaborative Environment Views

The Collaborative Environment initially offered three distinct views: Guide, Workplan, and Overview. However, following an analysis of system access and usability, the platform expanded to include or split into additional sections: Front Page, Overview, Resources, Guide, Leaderboard, Workplan, Team, and Settings.

The Front Page View

The Front Page View, as shown in Figure 13, serves as a comprehensive summary within the Collaborative Environment, offering an at-a-glance overview of the co-production process. This view includes essential details such as the creation date and the current state of the process. It is divided into several key subsections:





- Description of the process: This section offers a detailed narrative of the co-production process, outlining its structure, methodologies, and the sequence of activities involved. It helps users understand the overall workflow and the key components that constitute the process.
- 2. Aim of the process: Here, the objectives and goals of the co-production process are clearly defined. It elucidates what the process intends to achieve, outlining both the short-term and long-term outcomes expected from the collaborative efforts.
- 3. **Challenges of the process:** This subsection identifies and elaborates on the potential obstacles and hurdles that might arise during the process. It provides insights into the complexities and difficulties, offering a realistic view of the challenges participants might encounter.
- 4. **Origin of the process' Idea:** This part delves into the genesis of the co-production process. It explores the initial concept or problem that led to the development of the process, offering a historical perspective and the rationale behind its inception.

Together, these subsections offer a holistic and informative overview of the co-production process, allowing users to quickly grasp its essence, objectives, challenges, and origins, enhancing the collaborative endeavour.

	kspace organizations catalogue stories 🛛 0 0 🗢 🔍 Search 🜻	D
familie share	Front Page	
Families Share @ Work Finished English (* Incentives	Families Share @ Work Share Created: August 23, 2022 Finded	
🕞 Front Page ९. Overview	Description of the process 🖹 Families Share @ Work offers a bottom-up solution to work/life balance by supporting families with childcare, parenting advice and after-school activities. It has been co-produced within the EU funded project Families Share and already tested in 3 European Cities, Field: Work-life balance Co-production process: Bottom-up social innovation Owner: Families Share Contact: Contact@families-	
Resources 백물 Guide	share.eu Countries: Families Share has been tested in Italy (Bologna, Venice, Trento), Greece (Thessaloniki),	
 Haderboard ✓ Workplan ▲ Team 	Families Share represents an innovative solution for work-life balance, and can constitute a valuable integration to the existing local public childcare offers, during holiday periods in particular but even beyond. Co-playing weeks or activities can be either set up as new services or integrate existing ones. In addition, it lays the basis for establishing good neighbourhood relationships from which to start for a wide range of other possible initiatives based on mutual help and solidarity. Last but not least, if under-utilized or unused public spaces are made available for the activities, families Share can serve regeneration of urban composes too	
🌣 Settings	Challenges of the process 🔻	
	The deployment of collaborative childcare strongly depend on a number of factors, such as: (Existing) welfare policies Organizational culture Existence and type of Work-Life balance policies Level of employee participation that is promoted Structure of work	

Figure 13. Front Page View.

Overview View: Tracking and Guiding Co-production Activities.

The Overview View is a pivotal tool within the Collaborative Environment, meticulously designed to track activities across the entire co-production process. It





not only monitors progress but also guides users through the initial stages, offering a well-defined roadmap. This roadmap includes several crucial steps:

- Set Co-production Data and Administrator: In this initial step, users define the co-production process by specifying various attributes, such as the project's objectives, challenges, and organizational structure. Additionally, this step allows for the designation of administrators, who hold the authority to update process information, adjust permissions, and onboard new administrators.
- Complete the Co-production Information: Acknowledging that each co-production process is distinct, this phase aids users in selecting the most fitting model. By choosing keywords that resonate with their specific process, users can tailor the platform to suit their unique needs.
- Select the Co-production Schema: Schemas act as blueprints, offering guidance on the process's phases, objectives, and tasks. Users can choose a schema that aligns best with their project goals, with the flexibility to revise their choice later via the settings section.
- Organizations and Teams: This step encourages users to establish their own organization and form teams within it. Public organizations are visible to all users on the platform, fostering an open collaborative environment. Each organization includes the option for team creation, facilitating structured collaboration.
- Your Interlinkers/Resources: Linking to the Guide View, this step enables users to associate resources with specific process elements. The Resources section displays these additions, providing details about each resource and its origin.
- Grant Permissions to Teams: Users can empower teams by assigning them permissions to contribute to various aspects of the co-production process. These permissions can be comprehensive or specific to certain elements, such as objectives and tasks.

Give Rewards to Collaborators: To incentivize collaboration, the platform includes a reward system. Users can define task difficulties and, upon completion, assess each collaborator's contribution to distribute rewards accordingly. This feature necessitates integration with an external voucher portal for reward redemption.





Figure 14. Overview View: Progress section.

Figures 14 and 15 show both sections of the Overview View, the first one presents the roadmap and the second shows the different activities performed in chronological order where you can navigate directly to specific sections in the co-production process, or the resources related to those activities.

	KSPACE ORGANIZATIONS CATALOGUE STORIES	e e 🗢 🔍 Search 🔎
	Coproduction process overview	
Organization of	PROGRESS	RESS ACTIVITIES (43)
Iteration 2	6 months ago	ago En resource was created. D.L.D.L.G.D.Attaza created the resource W Copy of Stakeholder-Engagement-Plan-for- INTERNIK-rotigetadocs to coproduction process 'Organization of INTERLINK's Pilots' Iteration 2' in task 'Overall planning of pilots and evaluation strategy'.
	A new contribution was performed over a resource. CLeonardi contributed with the action: 'Add comment' to the resource is <u>improvement</u> suggestions in the topic 'Showcase infrastructure upgrade for iteration 2'. (more)	ient
Front Page	7 months ago	An resource was created. DLD.I.G.D.Artaza created the resource 'Loyalty Engine presentation' to coproduction process 'Oronaziation of INTERLINKS Pilots' Iteration 2' in task: Loyalty INTERLINKER for ZGZ.
Resources	An resource was created.	
ta Guide	D.L.D.I.G.D.Artaza created the resource "Evaluating co-production behaviour analysis" to coproduction process <u>Organization of INTERUNK's Pilots' Iteration 2</u> : in task <u>Co-production</u> behaviour analysis in front-end.	tion
 Leaderboard Workplan 	7 months ago	—
Team		 DLUDIGUATTATA created the resource commication strategies to coproduction process 'Organization of INTERLINK's Pilos' Iteration 2' in task '<u>Gamification strategies and other</u> incentivization mechanisms'.
Settings	An resource was created. D.L.D.I.G.D.Artaza created the resource 'Activity tracking and acknowledgment presentation' to coproduction process ' <u>Organization of INTERLINK's Pilots' Iteration 2</u> ' in task ' <u>Activity tracking</u> and acknowledgement.	s' to

Figure 15. Overview View: Activities section.

Resources View: Comprehensive Overview of Process Resources and User Assignments

The Resources View in the Collaborative Environment is a centralised platform that showcases all the resources created throughout a co-production process, along with





the assignments allocated to specific users. This view is not just a repository of information; it actively displays relevant details about the activities conducted on each resource, enhancing user engagement and operational efficiency. Moreover, it provides direct access to these resources by seamlessly redirecting users to the Guide View for more in-depth interaction. An illustration of the Resources View is provided in Figure 16.

INTERLINK •	VORKSPACE ORG	SANIZATIONS CATALOGUE	STORIES		ଡ	०	Search
L			R	RESOURCES ASSIGNMENT	5		
Hackaton 2023	Q, S	earch					
In progress English		Name		Updated	INTERLINKER	History	Actions
Front Page	PDF	Copy of How-to-take-advantage	e-of-gamification-in-the-Collaborative-Environment.pdf	an hour ago	How to take advantage of gamification in the C	Activities	:
Overview	8	Copy of Template-for-user-journ	ney.xlsx	an hour ago	Template for user journey	Activities	:
Resources	PDF	Copy of How-to-take-advantage	e-of-gamification-in-the-Collaborative-Environment.pdf	an hour ago	How to take advantage of gamification in the C	Activities	:
Guide	0	Copy of Stakeholders-Mapping-	Canvas.pptx	an hour ago	Stakeholders Mapping Canvas	Activities	:
Leaderboard					Rows per pa	ge: 5 🛩 1	_4 of 4 < >
Workplan							
Team							
Settings							

Figure 16. Resource View: Resource section.

A notable feature of this view is its functionality in tracking and managing assignments. As depicted in Figure 17, the Resources View illustrates all the assignment activities designated to a particular user. This subsection is particularly useful as it displays the current state of each assignment, enabling users to update the status of their tasks. For instance, upon the completion of an assignment, users have the ability to change its state to 'Archived', signifying that the task has been successfully accomplished.

Additionally, the Resources View is designed to facilitate better project management and resource allocation. It allows users to not only monitor their own assignments but also gain insights into the overall resource utilisation within the process. This holistic view is instrumental in identifying bottlenecks, optimising resource distribution, and ensuring that each aspect of the co-production process is adequately resourced and on track.



	WORKSPACE ORGANIZATIC	ONS CATALOGUE	STORIES		0 🍳 🗢 🔍 Search 🔑 🌘
<u>ia</u> . 11				RESOURCES ASSIGNMENTS	
Hackaton 2023	User Assig	nments			Show All Assignments
In progress English	These are the mo	st recent assignments	you can work on.		
English	Date	State	Title	Instructions	Task Resource Archive
Front Page	an hour ago	In Progress	Please fill the questionary	Instruction to fill it please	400
Q Overview	•	Claims (1)			^
Resources	-				
Guide			th 2023, 11:07:33 am ation in the survey		
Leaderboard		Complete th			
✓ Workplan					Delete
Team					
Settings					

Figure 17. Resource View: Assignments section.

The Guide View

The **guide view** shown in Figure 18 depicts a co-production team can be guided in the co-production process, by being able to navigate through the co-production process phases, and for each phase, select a co-production objective, realise the tasks associated with that objective and get recommended relevant INTERLINKERs which may support accomplishing the objective of the currently selected task. Observe in the figure the selection of the task "Overall planning of pilots and evaluation" with the corresponding suggestion of generic INTERLINKERs, which may be instantiated to give place to resources with which to make progress on the given task, e.g., "Create a Google Drive document", "Create a discussion thread in Loomio" and so on.







Figure 18. Guide view (top) and resource creation drop-down menu (bottom).

A significant enhancement within the Guide View is the refined process of sharing or assigning activities to users (Figure 19). To improve user experience, we have simplified the information displayed on the screen, particularly in the context of filtering options. This simplification is evident when selecting activities for a single user versus multiple teams. The streamlined interface is designed for intuitive navigation and ease of use. When selecting a single user, the system presents a tailored set of options that are relevant to individual assignments. This personalised approach ensures that the user receives only pertinent tasks, reducing clutter and enhancing focus (Figure 20). In contrast, when assigning activities to multiple teams, the system adopts a more comprehensive approach. It allows for the selection of tasks on a broader scale, suitable for collaborative efforts involving several team members. This feature is especially useful in managing large-scale projects or tasks that require collective input and collaboration (Figure 21).



	RKSPACE ORGANIZATIONS CATALOGUE STORIES		0 0 ¢ Q Search 4 0
K		ENGAGE DESIGN RUN DXPLDIT +	
Hackaton 2023	Engage	INFORMATION ABOUT THE TASK RESOURCES (4) PERMISSIONS (1) CONTRU	BUTIONS (1)
In progress English	E Objective Identify stakeholders	Q Search	
	Task Understand the difference	are or assign options	INTERLINKER History Actions
Front Page	16 0	ou may copy the link below and share it with your colleagues. 5 hours ago	Stakeholders Mapping Canvas Activities
Overview Resources	Task Map stakeholders, analys	ss://demo.interlink-projecteu/dashboard/coproductionprocesses/6f.	How to take advantage of gar Activities
¶⊈ Guide	6 9	ou may send and email.	How to take advantage of gar Activities
III Leaderboard	Task Visually map the network	Single user 🔔 Teams 🚢	Rows per page: 5 + 1-4 of 4 < >
✓ Workplan	Task Create a contact list of po participants	assances use resource (read) through recommer	ided INTERLINKERs (enablers)
Settings	Gotjectore Engage stakeholders	Instantiate task resource (result) through generic I	NTERLINKERs (enablers) 🗸
	Objective Engage stakeholders		
	rask) Prepare an engagement plan		

Figure 19. Selecting share or assign.

INTERLINK W	ORKSPACE ORGANIZATIONS CATALOGUE STO		🛛 😨 🌩 🔍 Search 🖊 🖣 📵
		Share or assign options	
<u>60</u>		2 You may send and email.	
Hackaton 2023	E O Engage	Enter the user email:	IONS (1) CONTRIBUTIONS (1)
In progress		Type here to add users	
English Uncentives	Cobjective Identify stakeholders	- Content included in the email:	
	Task Understand the different	You may add more information and instruction about the activity to perform:	Updated INTERLINKER History Actions
Front Page	stakeholders		5 hours ago Stakeholders Mapping Canvas Activities
Q Overview	60	Subject	e-C 5 hours ago How to take advantage of gar Activities
Resources	Task Map stakeholders, analys expectations	Instructions	5 hours ago Template for user journey Activities
∎t≣ Guide	40		e-C 5 hours ago How to take advantage of gar Activities
III Leaderboard	Task Visually map the network		Rows per page: 5 🛩 1-4 of 4 < >
📈 Workplan	Task Create a contact list of po	- Options to share:	
🚢 Team	participants	You can choose one of the follow ways to share the link:	t) through recommended INTERLINKERs (enablers)
Settings	50	Send a link to access assignment and claim registration page.	ult) through generic INTERLINKERs (enablers) 🗸
	Objective Engage stakeholders	Send a link with the direct access to the resource.	
	- 1	Send a link to the claim submission form.	
	ی التقاد Prepare an engagement ; انها	Send email 🛛 😭	

Figure 20. The form to assign a single user.



		Share or assign options					
Hackaton 2023	E O Chase Engage	 2 You may send and email. - Select the Teams: If a user is included in multiple teams, the user only will receive one email. 	IONS	(1) CONTRIB	utions (1)		
English Incentives Front Page	Task Understand the diffe	 Public servants of the University of Deusto Daniel Andres Silva Palacios Ruben Sanchez Corcuera Diego Loopes de laiñs Gonzalez de Artaza 	I	Updated 5 hours ago	INTERLINKER	History	Actions
Overview	ts⊉ Task Map stakeholders, analy ► expectations	- Content included in the email:	e-C	5 hours ago 5 hours ago	How to take advantage of gar Template for user journey		
Guide Leaderboard	SØ Task Visually map the networ SØ	Subject	e-C	5 hours ago	How to take advantage of gar Rows per page: 5 +		:
Workplan Team Settings	Task Create a contact list of p ▶ participants			_	led INTERLINKERs (enablers) TERLINKERs (enablers) ~	_	
Jeungs	Chjective Engage stakeholders	- Options to share:	-				

Figure 21. The form to assign one or multiple teams.

Figure 22 shows the **Workplan view**, which allows stakeholders to establish and review the durations of the tasks accomplished within a co-production process. Also, notice that navigation between the "Workplan" and "Guide" views is possible by clicking on the corresponding task name in the Workplan view (see Figure 22) or clicking on the "Time planification" link within a given task view in the "Guide" view (see Figure 23).

	WORKSPACE	ORGANIZATIONS	CATALOGUE STOR	NES				00	🗢 🔍 Search	🔹 🎝 🖸
				CO-REVIE	W OF SOLUTION	CO-REFLECT ABOUT C	o-delivery +			
		DAY		v	VEEK		MONTH		YEAR	
Organization of INTERLINK's Pilots'				March				April		
Iteration 2	5	04 March	11	18	25	01 April	08	15	22	29
In progress				Co-review o	f solution					
English Incentives		Ģ	Co-analyse fe	atures of solution	(iteration 2)					
* incentives					\longrightarrow	Showcase infra	structure upgrade for i	teration 2		
Front Page		\subseteq	Gather feedb	ack from partners about r	newly shown features					
Q Overview						\longrightarrow	Co-analys	e approach for pi	ilots' iteration 2	
Resources						\subseteq	Overall plann	ing of pilots and evaluati	ion strategy	
∎t ≣ Guide						\hookrightarrow	Re-analysing	quality of co-production	: how to assess co-delivery	
Leaderboard						\hookrightarrow	Description of	f MEF pilot		
≁ Workplan						\hookrightarrow	Description of	f VARAM pilot		
🚓 Team						\rightarrow	Description of	f ZGZ pilot		
Settings						\hookrightarrow	Reflect on ho	w pilots meet project go	als (CO-DELIVERY multi-stake	holders)

Figure 22. Workplan view.







Figure 23. Guide view to note the "Time Planification" tag on the centre of the screen.

Leaderboard View: Gamified Engagement in Co-production Processes

The Leaderboard View in the Collaborative Environment is designed to enhance user engagement through a gamification framework. This view provides insightful information about a user's participation in a co-production process, showcasing their achievements and contributions from a game-like perspective. Depending on the configuration settings, it can display the performance and standings of multiple users within a game-like environment. A significant aspect of this view is the 'My Profile' section (Figure 24). This subsection serves as a comprehensive summary of each user's contributions, detailing the points they have accumulated throughout the co-production process. It allows users to not only view their own standings and achievements but also compare their progress with others. This competitive yet constructive environment fosters a sense of motivation and accomplishment among users. Additionally, the Leaderboard View offers detailed insights into the various activities of the co-production process (Figure 25). It provides information on the potential points a user can earn by completing specific assignments associated with each activity. This feature helps set clear goals and expectations for users, encouraging them to engage more actively and efficiently with the tasks at hand. Moreover, this view is instrumental in fostering a dynamic and interactive environment. By visualising progress and achievements in a game-like format, it adds an element of fun and competition to the co-production process. Users can track their progress, strive for higher rankings, and gain a sense of accomplishment as they complete tasks and climb up the leaderboard. In essence, the Leaderboard View not only serves as a tool for monitoring participation and performance but also plays a crucial role in motivating users through gamified elements. It enhances the overall user experience in the co-production process, making it more engaging and rewarding.





Figure 24. Leaderboard View: My profile section.

INTERLINK WORKSPACE O	RGANIZATIONS CATALOGUE STORIES		🎯 🂠 🔍 Search
		LEADERBOARD MY PROFILE	
Co delivery	Leaderboard Here you can see the overall standings. The amount of points is be finished task, decided by the admins. At the end of the project the rewards the estima it own the platform and a responsibility of the ac-	admin will decide who can be tribute into the project. The	
Front Page Overview			
Resources			
të Guide		D	0
Leaderboard	Diego López-de-Ipiña	Daniel Andres Silva Palacios	Julen Badiola Martínez
🗠 Workplan	40 points 🛃	80 points 🛃	40 points 🗾
1. Team			
C Settings	Collaborator name	Activity	Points
	4 Roberto Carballedo Morillo	Activities	0
	5 Ruben Sanchez Corcuera	Activities	0
			1-2 of 2 < >
s//demo.interlink-project.eu/dashboard/coproductionprocess	s/tb7/d464-0-0-4651-8011-8cottiSabc00d/8eaderboard		



Catalogue Views: Navigating Knowledge and INTERLINKERs

As previously illustrated in Figure 6, the Catalogue View enables users to effectively navigate through an extensive set of knowledge and software INTERLINKERs. This view is particularly user-friendly, offering several search criteria to streamline the browsing experience. Users can filter their search based on: a) the type of INTERLINKER; b) the problem profile addressed by the INTERLINKER; c) keywords in the title or description of the INTERLINKERs.





A notable enhancement to this view is the integration of the 'Open Process Catalogue' as a new subsection. This addition enriches the Catalogue View by providing users with an additional layer of interactivity and accessibility. The Open Process Catalogue broadens the scope of available resources, allowing users to explore and engage with processes that are currently open for participation. This expansion not only increases the diversity of resources accessible to users but also facilitates greater collaboration and knowledge sharing within the platform.

Enhancing Collaboration through the Open Process Catalogue

The platform's capabilities have been significantly expanded with the introduction of an 'Open Process Catalogue'. This innovative feature is tailored to facilitate user engagement in co-production activities by showcasing processes that are actively recruiting participants. It is a gateway for eager users to contribute to various co-production endeavours. Within this catalogue, each listed item provides a wealth of information about the respective co-production process. Users can delve into detailed descriptions, gaining an understanding of the general scope and objectives of each process. A key highlight of each listing is the emphasis on why the process is essential, coupled with a clear outline of the specific skills and expertise required for participation. This level of detail ensures that users can easily identify processes that align with their skills and interests. Another interactive aspect of the Open Process Catalogue is the user feedback system. Participants who have previously engaged in a process can leave ratings and reviews, offering valuable insights and firsthand experiences. This feature allows potential new participants to gauge the effectiveness and appeal of a process based on the experiences of their peers. The open processes catalogue is depicted in Figure 26.

KSPACE ORGA		STORIES				0 0 1	Search	P 🛛
	INTERLINKERS				PROCESOS			
	N PROCESSES CATA there is a list of public pro		you think that you can collabor	ate.				
Q Topic	Search Minimum rating: 7	***						
No pro	ocess found				[= :::		
-	SOCIO-BEE CS Campaign by Last update: 4 days ago	SOCIO-BEE CS Campaign						
	Topics	Rating ☆☆☆☆☆	Туре					
oant duct	North Brabant co- production of citizen observatory by Last update: 4 months ago	North Brabant co-productio	on of citizen abservatory					







Additionally, the Open Process catalogue streamlines the process of joining co-production activities (Figure 27). With the 'Request to Join' function, users can express their interest in participating in a specific process. This action triggers a notification to the administrators of the process, effectively communicating the user's willingness to contribute. It simplifies the recruitment process, making it more efficient for both potential participants and process administrators.

	KSPACE ORGANIZATIONS CATALOGUE STORIES	@ @ 🌣 Q Search 🖉 🖸
	Public Coproduction Overview	
Testing co-delivery 音音音音音	GENERAL INFORMATION REVIEWS	
Topics	Testing co-delivery Created: March 14, 2023 (ht progress)	Admin:
Join this co- production process	Why do we need your collaboration Explain why you would like to join this co-production process and how you could support it as co-producer. Type your answer here I am eager to be part of the co-production process because I have studied data scince and am capable of performing any activity in this field. Additionally, I need to test the system for its future implementation in our public administration.	
	This is a co-production process to emu Cancel Submit	
	Aim of the process	

Figure 27. Open Processes Catalogue.

Overall, the Open Process Catalogue not only serves as a repository of available co-production activities but also enhances the user experience by fostering a community-driven approach. It encourages active participation, facilitates skill-based matching, and promotes transparency through user-generated feedback, thereby enriching the collaborative ecosystem of the platform.

Success Stories Catalogue

When a co-production process reaches its end and has achieved all the proposed objectives, it becomes an example of how to achieve success for other users. Therefore, we have created a catalogue to store and visualise the projects that have been catalogued as success-stories as shown in Figure 28. For each success case, the following metadata is published: objectives, lessons learnt, materials generated or licensed, apart from the co-production process in which it is based. Notice that the view of success story provides a "Clone process" button to be able to create a brand-new co-production process from the associated process to such a success story (Figure 29).



Constant Image: Constant	INTERLINK WORKSPACE	ORGANIZATIONS CATALOGUE STORIES			② ✿ Q Search	• 6
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Plice: cognitive terms of the second se		Topics	Rating	Туре		
Control of the second and the s		childcare families share	***	BZC CE		
		by Fondazione Brune Kessler Universidad de la igleia de Deusto Entidad Reli Tes Technology (TRUTK) Radibood Universi Ministerio Dell'Economia E Delle Finance Ayuntamiento de Zatagoza	combining the enthusiasm and flexi down e-government frameworks. O operational platform, an open softw	bility of grassroot initiatives with the legitimscy and accountability granted by top- ne important goal of the process is to deliver the INTERLINK framework and are system leveraging on mobile communications that will facilitate the co-		
Topics Rating Type		Topics	Rating	Туре		
(childrare) (families) (share) ★★★☆☆ (szc) (cl)		childcare families share	****			

Figure 28. Success Stories Catalogue.



Figure 29. Success stories' view.

Likewise, in the Settings view of coproduction processes, amendments have been performed to allow a given co-production process to clone it or to publish a success story from it. Figure 30 shows the new appearance of this screen, allowing the cloning of processes and the publication of success stories from it.



INTERLINK WORKSPACE ORGANIZATIO	ns catalogue stories	🛛 🌣 🔍 Search 🌒 🌍
	O The clearing of the co-production tree is irreversible. All resources created in it will disappear. However, the co-production process will not be deleted.	L Clear coproduction process tree
the Collaborative Environment English	Delete coproduction process	
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tta Guide IIIa Leaderboard ≁ Workplan	Clone coproduction process	
🗱 Team	A The clonation of the coproduction process will create a new coproduction process with the same structure and resources.	Clone coproduction process
	Publish coproduction process	
	A The publication of the coproduction process will make the some information you choose visible in the catalogue of stories.	Publish coproduction process
	Reward system	
	① If you disable the Reward system every data will be deleted, so if you want to enable again this option, you will not able to restore the old data.	

Figure 30. Settings view.

Other Improvements in the Collaborative Environment Platform

Responding to feedback from pilot users, a redesign of the welcome page was essential to enhance user-friendliness, particularly for new users (Figure 31). On the main page, we have introduced easily accessible links to tutorials and videos. Additionally, users can conveniently navigate to their list of co-production processes.

INTERLINK WORKSPACE ORGANIZATIONS CATALOGUE STORIES	🛛 😋 🗢 🔍 Search 🖉 🚺
Welcome, Daniel Andres Biome to the INTERLINK platform, a collaborative environment where PAs, officers, and other actors can collaborate to develop their projects, which we will call considered to develop their projects, which we will call considered to develop their projects, which we will call considered to develop their projects, which we will call considered to develop their projects, which we will call considered to develop their projects, which we will call considered to develop their projects, which we will call considered to develop their projects, which we will call considered to develop their projects, which we will call considered to develop their projects, which we will call considered to develop their projects, which we will call considered to develop their projects, which we will call considered to develop their projects, which we will call considered to develop their projects, which we will call considered to develop their projects, which we will call construction to develop their projects, which we will call construction to develop their projects, which we will call construction to develop their provide t	

Figure 31. Welcome Page.

These features are provided through a web and mobile-accessible responsive portal for all stakeholders involved in the INTERLINK community (PA, citizens, and private actors). Such a portal is freely accessible at https://demo.interlink-project.eu/.





Enhancements to the Settings of the Process

In the latest update to the settings view (Figure 32), a minor yet impactful change has been implemented: the division of settings options into multiple tabs, enhancing the organization and accessibility within the main view. These new subsections are: Info, Admins, Actions, and Extra.

- Info Section: This section is a comprehensive repository of all the essential details of the co-production process, including its name, description, tags, and other relevant information. It serves as the central point for understanding the core aspects of the process.
- Admins Subsection: Here, users are empowered with the capability to manage administrative roles within the co-production process. It allows for the addition and removal of administration users, enabling efficient control over who has access to critical process management functions.
- Actions Subsection: This part of the settings view is particularly dynamic, encompassing all the possible actions applicable to a co-production process. Users can access various functions here, such as clearing the tree, deleting the process, cloning, publishing, and downloading it. Additionally, this subsection provides an option to include the process in the Open Process Catalogue, further extending its visibility and accessibility.
- Extra Subsection: (Suggested addition) This subsection could potentially include advanced settings and additional features that enhance the customization and functionality of the co-production process. It could offer options for integrating with other tools, setting up notifications, or other specialized actions that provide users with a more tailored experience.

These enhancements to the settings view not only streamline the management of the co-production process but also ensure that users can navigate and modify settings with greater ease and precision. By categorizing settings into these distinct subsections, the platform significantly improves user experience, making process customization and management more intuitive and efficient.



Enhanced Mobile Responsive Interface

The previous version of the mobile interface posed significant usability challenges for users, particularly due to overflow issues when displaying information. This problem was effectively addressed by refining the screen navigation process. A key enhancement in this update is the improved navigation mechanism within the guide view. Prior to this, users found the co-production tree cumbersome to manipulate. To



resolve this, a flexible feature was introduced, allowing users to compress or expand the tree according to their needs. This enhancement greatly improves user interaction, making the interface more intuitive and efficient. The effectiveness of these improvements is clearly demonstrated in the accompanying Figure 33, which showcases the interface's new layout and functionality.



Figure 33. Expanded Tree version for mobile.

Additional Enhancements with Intuitive Access Icons

A notable enhancement in the mobile interface is the integration of strategically placed access icons within the bottom menu bar. This update introduces two new icons, enhancing the user experience by providing direct and effortless navigation to crucial sections. The icons, and therefore the buttons work as follows (from left to right):

- Workspace: Access to the initial dashboard
- Processes: Access to the list of available processes
- Catalogue: Access to the catalogue of Interlinkers and public processes
- Stories: Access to the success stories' view





These icons are not only visually appealing but also functionally significant, simplifying the user's journey through the application and ensuring a more engaging and user-friendly interface.



