Public:Start

Public Entrepreneurship as a Response to Complex Challenges

Public:Start Taining Programme

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Public Entrepreneurship as a Response to Complex Challenges

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1. Setting the Scene

The development of social, economic and environmental models requires a continuous improvement in the different ways of thinking and acting in our environment. Innovation as a response to these models is key to meet new challenges and design scenarios that respond to this reality.

The public sector is no exception to this need to innovate and respond to these new challenges. New realities that must be managed from new approaches beyond a bureaucratic model based on the control of intervention that seeks to meet a series of closed and assumed objectives.

This training program's methodology is derived from a series of interviews with public sector experts and employees. In total, 30 interviews were conducted in various European countries (Germany, Spain, Italy, Ireland, Netherlands). The interviews aimed at the identification of regional manifestations of complex challenges as well as a needs analysis with regards to different entrepreneurial and transformative competencies.

Our research design draws from various sources that analysed and designed competence sets for the transformation of businesses and society, including:

- Bacigalupo, Kampylis, Punie, Van den Brande (2016): EntreComp - The Entrepreneurship Competence Framework
- Van Berkel, Manickam (2021): Wicked World - Complex Challenges and Systems Innovation.
- EMBRACE (2022): Corporate Social Entrepreneurship: practices, tools, and knowledge for action.

From the interviews we held with different public sector stakeholders, we summarized the competences and the need for system change in the following picture:
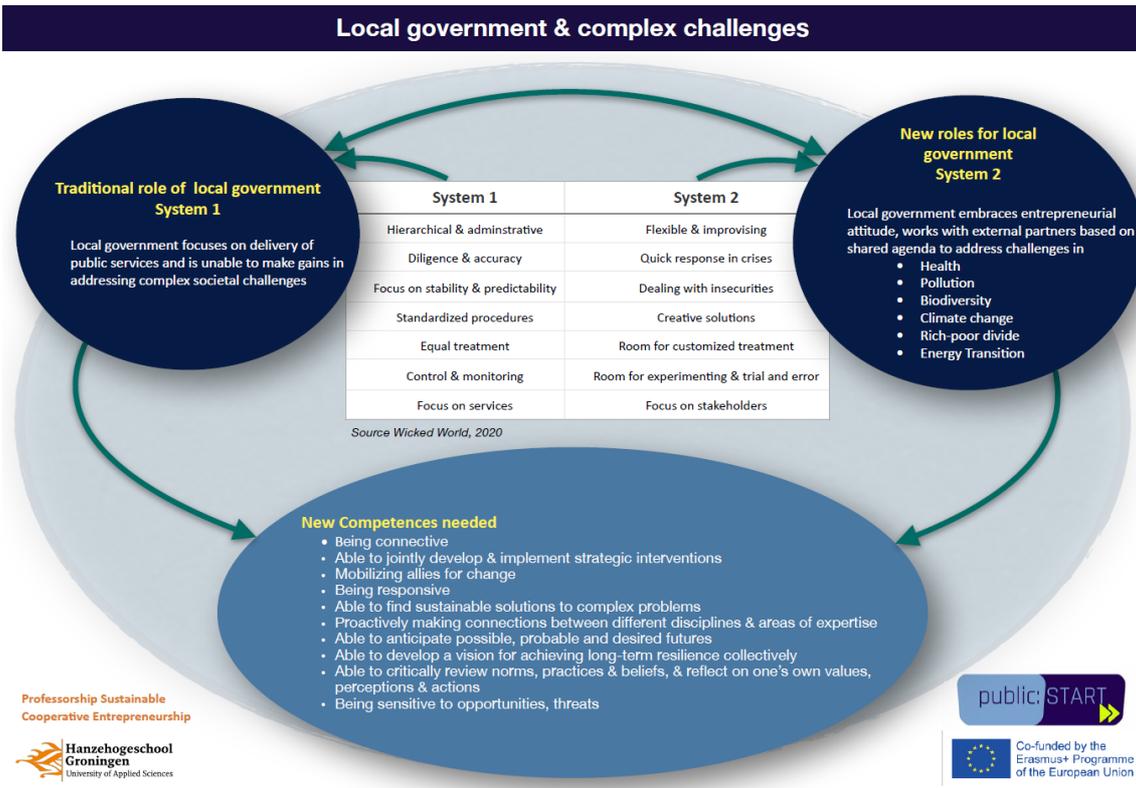
Figure 1: Local Government and Complex Challenges, source: Hanzehogeschool Groningen, public:START 20223

The visualization shown above implies not only a new model of relations between the administration and citizens, but also a new approach to delivering public action.

For this, the training of public sector employees is key. And this is where the public:START project contributes through the development of a training itinerary that reinforces the key competencies to move forward in this process.

Based on the theory of Complex challenges (wicked problems) (cf. Can Berkel & Manickam 2021), we have designed a training programme that responds to the current and future needs of the public sector and contributes to change and drives innovation within the public sector. Our programme that incorporates aspects of entrepreneurial thinking and acting is for public sector employees who want to upskill.

1.1. Target group

This learning pathway is addressed to the **employees of the public sector**.

> *The public sector consists of governments and all publicly controlled or publicly funded agencies, enterprises, and other entities that deliver public programs, goods, or services. The public sector comprises the general government sector plus all public corporations including the central bank. (cf. Institute of Internal Auditors 2011).*

We focused our learning pathway specially on those employees who are planning and managing programmes that require a new approach to deal with them. Important learner role in this learning pathway will have the local public sector employees. Because they are the responsible to create and manage interventions and project close to the citizens and they have to deal with complexity and challenges that require the collaboration of the citizens and local stakeholder to be effective and answer to the real needs.

1.2 public:START for educational institutions

public:START was not only designed for individual learners, but also for the use in the educational sector. This training programme outlines how teachers and trainers can make use of the public:START materials. Vocational education providers and other educators can use the learning components to accompany a course that upskills public sector employees in order to equip them with competences they need for solving complex societal challenges. Due to the provision of digital materials, public:START is suitable for online or blended-learning environments and promotes self-directed learning. There are different approaches that can be taken by teachers, educators and trainers to integrate public:START in their work:

1. **Competence-based teaching:**

Teachers pick public:START contents according to the competences they want to teach. Public:START learning units make this approach easy and fast.

2. **Challenge-based teaching:**

Providing learners with challenges or real complex problems to be solved, the teacher can start with the complexity map and either focus on specific phases or be a coach in a self-directed learning process. This training programme guides the trainer, which public:START materials belong to which phase.

2. Public start training needs

The results obtained during our research confirm the need to introduce new management approaches within the public sector to meet current challenges. The need for quick and effective responses of the administration towards new management models is to strengthen the entrepreneurial competences of public sector employees. This is what we mean by public entrepreneurship.

The public sector is facing a new scenario for service delivery to contribute to more sustainable and resilient societies. Public administration still has the unfinished business of reaching out better to citizens and the community and responding to the problems it faces: lack of trust from citizens, overcoming the dichotomy of management marked by the (sometimes) confrontation between the political and the technical levels, as well as the lack of resources of the public sector to face its biggest challenges. Not to mention the challenges that arise from increasingly diverse societies and new areas of intervention that require new service models from the public sector.

The barriers faced by the public sector are both internal and external. On the one hand, the administration is faced with new management models that require constant communication between the various administrations, communication that is often complex due to the bureaucratic model on which it is based. On the other hand, the lack of resources and tools (capacity for a correct evaluation of public intervention together with the ability to see beyond the short term and design future scenarios) mean that the administration is unable to respond effectively to these challenges. Together with this, there is a need to train employees in order to achieve management models that are more in line with current needs.

On the other hand, the community distrusts an administration that lacks transparency and with which it finds it difficult to communicate and collaborate, and which it feels does not offer opportunities to find out what it needs from it and to define common models of action.

Innovation in the sector is necessary. And an important step in promoting innovative processes that help the public sector to manage new challenges effectively is to equip its employees with the entrepreneurial skills that make the sector flexible, responsive and permeable to change. To do that, the following skills will be crucial:

- Being connective: proactively seeking connections and facilitating collaborations with new stakeholders and networks, new themes, new societal challenges, interdisciplinary networks, etc.
- Being able to develop and implement strategic interventions collectively, within and outside the organization, upholding mutual trust, transparency and integrity.
- Mobilising allies for change.
- Being responsive: enacting innovative solutions for a changing environment and developing core capabilities to adapt to new circumstances.
- Being able to find sustainable solutions to complex problems
- Proactively seeking and connecting across disciplines and areas of expertise to revisit, recombine and transform knowledge and practice to develop transdisciplinary solutions for complex problems
- Being able to anticipate possible, probable and desirable futures and consequences of chosen actions in consideration of the accompanying risks and expected changes, both personally and collectively.
- Being able to develop a vision based on possible futures, including a strategy for achieving long-term resilience.
- Being able to critically question norms, practices and opinions, reflecting on one's own values, perceptions and actions; and taking a position in the sustainability discourse.
- Being sensitive: enacting a good 'radar' system that provides timely alerts on deviations, current and future developments and threats to internal and external matters.

This set of needs led us to define and design a training programme that has the dual role of responding to the needs detected and contributing to innovation in the public sector.

3. Methodological background of the training programme

Considering the nature of the training and the target audience, we have based our training programme on three major methodological concepts:

- Needs-based and self-directed learning (when to learn)
- Microlearning (what to learn)

3.1 Needs-based and self-directed learning (when to learn)

The public:START project is based on the need to innovate the management and performance of the public sector by reinforcing the competencies of employees to face complex challenges. For this reason, the following process will be used as a reference for the design of the training itinerary:
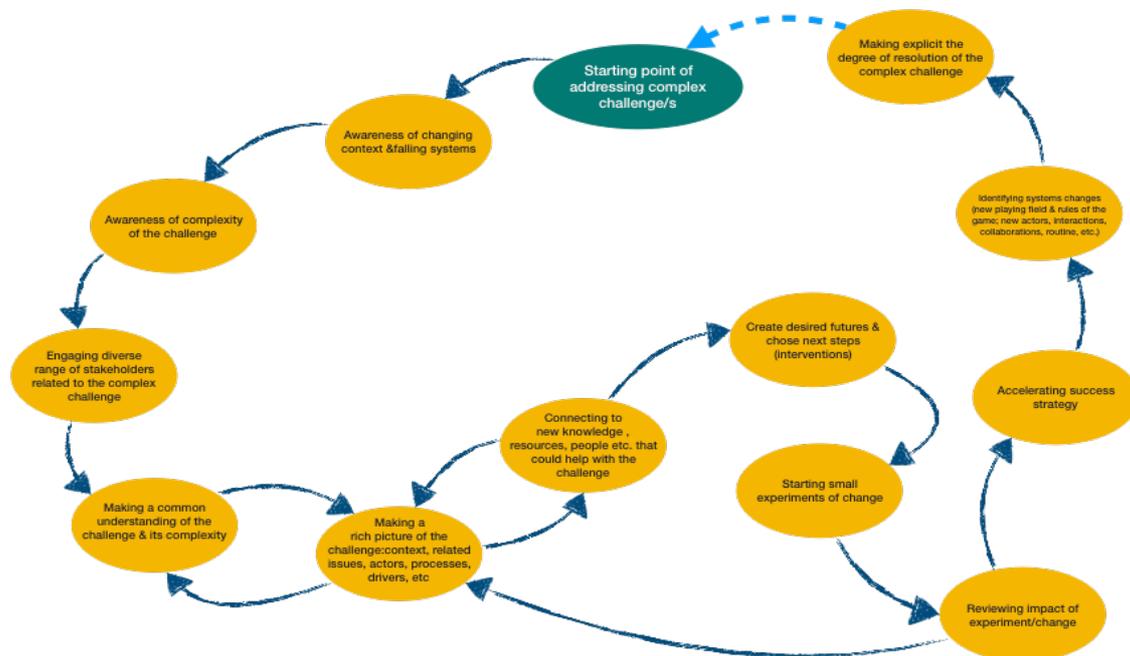
Figure 2: Complexity Map, source: public:START 2023

Using this map, a complexity journey, the learner can jump in at any phase, depending on their phase in solving a problem within their work environment. The learning is non-linear and phases can also be re-iterated or left out for the learner. The learner will be able to navigate through the map and acquire the information he/she needs at any given moment. Either to help them to develop an activity of their position, to face new situations or just to further develop their skills.

Linking these phases to certain competencies will facilitate the leaning and teaching process resolution.

This methodological approach is based on a very practical approach and it's closely related to the "on-job learning" method. Learning by the tasks that people have to deal with every day is practical and appropriate to contribute to a flexible and effective skill acquisition.

3.3. Microlearning (what to learn)

Microlearning is an approach to training characterised by brief learning modules comprising bite-sized learning activities delivered over mobile devices and designed for quick consumption. They are built in bits, between three and ten minutes long — short enough to keep a learner's attention focused from beginning to end. And they are served up just in time at the point of contact — exactly when and where they are needed.

Microlearning content examples include text, images, video, audio, games, and quizzes.

In an era of remote working, short attention spans and busy schedules, training programs like microlearning is an ideal model to train new hires as well as established employees for the following reasons (cf. Cedefop 2023, Kankaras 2021, Rintala et al. 2019, Russo 2022, 2017):

1. More Affordable: These contents are short and powerful in nature and therefore often quick to make.

2. Easily Updated: By splitting up large topics into microlearning contents, only the part that is no longer up to date can be revised to add one learning objective. It is much easier to adjust one video than to change a compressed training program, especially after a few months of deployment. Additionally, online training and mobile learning help learners go back to previous topics to enrich their learning process, refresh their memory and improve learner retention.

3. Fast Impact: Due to the short contents, a limited amount of information and often a practical approach to microlearning, employees tend to understand a topic faster. Additionally, the fact that learning can be interrupted after a module has been completed lowers the threshold to start with a new topic. As a result, learners typically learn new content faster.

4. Increased Freedom: As microlearning modules are manageable chunks of information, available in the cloud and even viewable in offline mode on mobile, learners can learn casually at their convenience. Microlearning also allows the online training anytime, anywhere. Mobile learning or online learning is now more important than ever, especially with over six billion mobile users worldwide.

5. Highly Engaging: Microlearning offers the most engaging training delivery method. The experience for learners is similar to checking their favorite social media app, compared to the "serious study" feel of regular classroom training. This is something that all businesses and e-learning program service providers strive to achieve. The fatigue felt by adult learners going through longer courses or an entire range of media forms in one sitting.

6. Microlearning Improves Knowledge Retention: Studies have proven that knowledge retention is much higher when a subject is studied repeatedly and can be easily revisited. This is in line with the principles of microlearning, since the modules are small, self-contained and easy to return to.

4. public:START learning pathway

A training programme is a set of actions, structured or not, that respond to learning needs, set learning objectives and goals and develop the activities to achieve them. These programs are adapted to one or several groups of students in order to optimise their process and effectiveness.

In the following lines we are going to see in detail the different elements of the public:START training program, starting with its design and ending with the concrete learning components that will be integrated in it.

4.1. public:START learning pathway design

On the basis of the methodological approaches on which this learning program is based (on-job learning, process based learning and micro learning - explained in detail in the previous section) we have designed the program according to the structure of the following table:

Competence	Phase of the complexity map
Being connective	- Connecting to new resources, knowledge, people etc. that could help with the challenge
Being able to develop and implement strategic interventions collectively	- Create desired futures & choose next steps (interventions)
Mobilising allies for change	- Engaging a diverse range of stakeholders related to the complex challenge - Connecting to new resources, knowledge, people etc. that could help with the challenge

	- Accelerating success strategy
Being responsive	- Starting small experiments of change
Being able to find sustainable solutions to complex problems	- Connecting to new resources, knowledge, people etc. that could help with the challenge - Create desired futures & choose next steps (interventions)
Proactively seeking and connecting across disciplines	- Connecting to new resources, knowledge, people etc. that could help with the challenge
Being able to anticipate possible, probable & desirable futures and consequences of chosen actions	- -Create desired futures & choose next steps (interventions)
Being able to develop a vision based on possible futures	- Making a common understanding of the challenge and its complexity - Making a rich picture of the challenge: context, related issues, actors, processes, drivers, etc. - Identifying systems changes (new playing field & rules of the game, new actors, interactions, collaboration, routines, etc.)
Being able to critically question norms, practices and opinions	- Awareness of the complexity of the challenge - Engaging a diverse range of stakeholders related to the complex challenge - Making a common understanding of the challenge and its complexity - Making a rich picture of the challenge: context, related issues, actors, processes, drivers, etc.

	- Identifying systems changes (new playing field & rules of the game, new actors, interactions, collaboration, routines, etc.)
Being sensitive	- Awareness of changing context & failing systems - Awareness of the complexity of the challenge

The rational of public:START learning programme responds to the complexity map and the different steps identified to deal with the complex challenges. The learning needs identified at the beginning of the project helped us identified the competences that they require to work in this innovative environment.

Each competence detected have been associated to phases of the complexity map, covering most of the phases identified. However, this training pathway is a flexible pathway that allow

1. Accessing to different learning content depends on the special needs – interest of the learner (on-job learning approach);
2. Adapting the learning navigation to the specific situation of the learner. It's not a linear process and learner can take the most appropriated content and come back for more information if additional knowledge is required (process based approach),
3. Including (in the future) new knowledge to update the existing one, aggregating new competences and related knowledge as appropriated to deal with new challenges.

4.3. Type of contents

Following the idea that this learning pathway must be both practical and useful to support the management of complex challenges and centered on the learner, we find two types of contents:

Learning Components

Small bite-sized learning provides theoretical concepts, tools and knowledge that the learner will apply in a practical way in their daily work.

The contents that we will find are:

1. **Focused on the idea/concept**: they explain a knowledge that they can apply when solving complex challenges. They can be infographics, small animations, videos, games and similar. These small pills explain concepts that can be easily applied.

2. **Easy to understand and accessible**: considering that learners come from different backgrounds and cultures, the public:START learning pathway will provide these contents for a universal group of users. It's not necessarily previous knowledge, so the micro-learning will be accessible for any learner.

3. **Covering public:START competences:** micro-learning will deal with the competences that form the learning pathway. So, they will contain all the knowledge associated with the competencies that structure the learning pathway.

Practical Examples

An important aspect of the public:START learning pathway training process is the case studies that have been included to reinforce learning. Case studies are actions and programmes already implemented in local communities that explain how a specific and complex challenge has been addressed.

The learner will learn from present and experience, applying similar solutions or adapting those already implemented to a new challenge. For that, case studies will contain the following information:

Learner will find real cases implemented in local administration by different bodies to act in a specific step of the complexity map and hence illustrate its usage and also inspires learners to transfer it to their own practical case. In order to achieve this, practical examples incorporate the following characteristics:

1. They focus on undertaken actions, rather than lengthy theoretical descriptions.
2. They are meant to be reproducible, meaning that they offer practical, recipe-like information.

3. Their presentation closely mirrors the complexity map's phases.
4. They are presented as a journey, meaning that they can be followed chronologically

4.4. public:START learning units

This section will explain the different competencies included in the learning pathway identifying the following elements. The learning units are based on competences in order to facilitate the usage for educational purposes:

Competencies	• Identification of the required competencies
Definition	• Detailed definition of the competencies
Related phases	• The complexity map's related phases
Learning objectives	• Learning objectives associated to each competence
Associated knowledge	• Describes the knowledge that learners need to acquire to develop the respective competenceies
Learning outcomes	• Describes the abilities of learners after acquiring the competencies

Learning unit: Being connective	
Definition:	Proactively seeking connections and facilitating collaborations with new stakeholders and networks, new themes, new societal challenges, interdisciplinary networks, etc.
Related phases:	Connecting to new resources, knowledge, people etc. that could help with the challenge

Learning objectives:	⇒ Awareness about existing stakeholders, recourses and knowledge related to a complex challenge ⇒ Ability to systematically take inventory of existing resources ⇒ Ability to connect to new stakeholders, resources and knowledge that might be relevant for solving a complex challenge
Associated knowledge:	o Understanding of internal and external networking o Understanding of Regional Innovation Ecosystems
Learning outcome:	The learner is able to establish new connections to stakeholders, knowledge, resources, etc. that are relevant to solving a complex challenge.
Learning components:	- Community Resources Inventory - Regional Innovation Ecosystems - Networking
Practical examples:	- Eemsdelta, Netherlands - Westerkwartier, Netherlands - Center for Administrative Studies of Marca Trevigiana, Italy - Rural District of Northern Sardinia, Italy

Learning unit: Being able to carry out strategic interventions	
Definition:	Being able to develop and implement strategic interventions collectively, within and outside the organization, upholding mutual trust, transparency and integrity.
Related phases:	-Create desired futures & choose next steps (interventions)
Learning objectives:	⇒ Awareness about future scenarios and their respective consequences

	⇒ Understanding of how to define and create interventions to move to a desirable future
Associated knowledge:	o Definition of change management and interventions o Knowledge about techniques to manage change and bring about desired futures
Learning outcome:	The learner is able to implement interventions according to the principles of change management by means of different techniques.
Learning components:	- Managing change - Dragon Dreaming Technique
Practical examples:	- Eemsdelta, Netherlands - Center for Administrative Studies of Marca Trevigiana, Italy - Rural District of Northern Sardinia, Italy

Learning unit: Being able to mobilise allies for change

Definition:	Being able to identify, mobilise and coordinate stakeholders based on a shared vision for change.
Related phases:	- Engaging a diverse range of stakeholders related to the complex challenge - Connecting to new resources, knowledge, people etc. that could help with the challenge - Accelerating success strategy
Learning objectives:	⇒ Know how to identify stakeholders related to the complex challenge ⇒ Understand how to involve different stakeholders throughout the process. ⇒ Know how to maintain relations between drivers of change

Associated knowledge:	o Understanding of the concepts of: Regional Innovation Ecosystems, Leverage Points o Basic how-to-knowledge in the areas of stakeholder mapping & engagement, project management
Learning outcome:	The learner could proactively seek connections and facilitating collaborations with new stakeholders and networks, new themes, new societal challenges, interdisciplinary networks, etc
Learning components:	- Community Resources Inventory - Regional Innovation Ecosystems - Networking - Stakeholder Mapping - Stakeholder Engagement - How to manage projects - Leverage Points - Social Innovation
Practical examples:	- Eemsdelta, Netherlands - Westerkwartier, Netherlands - City of Oldenburg, Germany - Center for Administrative Studies of Marca Trevigiana, Italy - Rural District of Northern Sardinia, Italy

Learning unit: Being responsive	
Definition:	Enacting innovative solutions for a changing environment and developing core capabilities to adapt to new circumstances.
Related phases:	- Starting small experiments of change
Learning objectives:	⇒ Understand the environment to define innovative solutions ⇒ Be aware of the changing environment to accelerate the success strategy

	⇒ Know the process and techniques to make explicit the degree of resolution of the complex challenges
Knowledge associated:	o Awareness of leverage points that are relevant for enacting change in the local context
Learning outcomes:	The learner can enact innovative solutions for a changing environment.
Learning components:	- Google Design Sprint - Starting Small in the Local Context - Triggering Social Intrapreneurship
Practical examples:	- Eemsdelta, Netherlands - Westerkwartier, Netherlands - Center for Administrative Studies of Marca Trevigiana, Italy - Rural District of Northern Sardinia, Italy

Learning unit: Being able to find sustainable solutions to complex problems	
Definition:	Be able to evaluate and integrate different problem-solving frameworks to develop viable, inclusive and equitable solutions for complex problems that promote sustainable development.
Related phases:	- Connecting to new resources, knowledge, people etc. that could help with the challenge - Create desired futures & choose next steps (interventions)
Learning objectives:	⇒ Be aware of the assessment needs of any intervention

	⇒ Be aware of the changing environment to accelerate the success strategy ⇒ Understand the meaning of the evaluation and assessment and it role in the complex challenge process
Knowledge associated:	o Basic how-to-knowledge related to techniques aimed at assessing change and its impact o Knowledge related to the concept of sustainable development and its impact on the management of complex challenges.
Learning outcomes:	The learner can enact innovative solutions for a changing environment.
Learning components:	- Community Resources Inventory - Regional Innovation Ecosystems - Networking - Managing change - Dragon Dreaming Technique
Practical examples:	- Eemsdelta, Netherlands - Westerkwartier, Netherlands - Center for Administrative Studies of Marca Trevigiana, Italy - Rural District of Northern Sardinia, Italy

Learning unit: Proactively seeking and connecting across disciplines

Definition:	Proactively seeking and connecting across disciplines and areas of expertise to revisit, recombine and transform knowledge and practice to develop transdisciplinary solutions for complex problems.
Related phases:	- Connecting to new resources, knowledge, people etc. that could help with the challenge
Learning objectives:	⇒ Ability to work inter- and transdisciplinary ⇒ Developing transdisciplinary solutions for complex problems

Knowledge associated:	o Understanding of internal and external networking o Understanding of Regional Innovation Ecosystems
Learning outcomes:	The learner is able to establish new connections to stakeholders across disciplines.
Learning components:	- Community Resources Inventory - Regional Innovation Ecosystems - Networking
Practical examples:	- Eemsdelta, Netherlands - Westerkwartier, Netherlands - Center for Administrative Studies of Marca Trevigiana, Italy - Rural District of Northern Sardinia, Italy

Learning unit: Being able to anticipate possible, probable & desirable futures and consequences of chosen actions	
Definition:	Being able to anticipate possible, probable and desirable futures and consequences of chosen actions in consideration of the accompanying risks and expected changes, both personally and collectively.
Related phases:	- Create desired futures & choose next steps (interventions)
Learning objectives:	⇒ Ability to predict positive and negative consequences of (yet to be) chosen actions ⇒ Ability to assess risks on an individual, organizational and systemic level
Knowledge associated:	o Basic knowledge of risk assessment and change manegement o Basic how-to knowledge related to creative techniques aimed at collective sense-making

Learning outcomes:	The learner is able to anticipate possible, probable & desirable futures and consequences of chosen actions on an individual, organizational and systemic level.
Learning components:	- Managing change - Dragon Dreaming Technique
Practical examples:	- Eemsdelta, Netherlands - Center for Administrative Studies of Marca Trevigiana, Italy - Rural District of Northern Sardinia, Italy

Learning unit: Being able to develop a vision based on possible futures	
Definition:	Being able to develop a vision based on possible futures, including a strategy for achieving long-term resilience.
Phases related:	- Making a common understanding of the challenge and its complexity - Making a rich picture of the challenge: context, related issues, actors, processes, drivers, etc. - Identifying systems changes (new playing field & rules of the game, new actors, interactions, collaboration, routines, etc.)
Learning objectives:	$\Rightarrow$ Ability to develop a strategic vision that is shared by diverse stakeholders
Knowledge associated:	o Basic how-to knowledge related to collaborative techniques that aim at analysing complex problems and identifying approaches for action
Learning outcomes:	The learner is able to develop a shared vision based on collaborative communication and ideation techniques.
Learning components:	- Concept Mapping - Business Model Canvas

	- Collective Intelligence & Sensemaking - Effective Communication Techniques - Rich Picture Method - Systems Thinking
Practical examples:	- Eemsdelta, Netherlands - Westerkwartier, Netherlands - City of Oldenburg, Germany - Center for Administrative Studies of Marca Trevigiana, Italy - Rural District of Northern Sardinia, Italy

Learning unit: Being able to critically question norms, practices and opinions

Definition:	Being able to critically question norms, practices and opinions, reflecting on one's own values, perceptions and actions; and taking a position in the sustainability discourse.
Phases related:	- Awareness of the complexity of the challenge - Engaging a diverse range of stakeholders related to the complex challenge - Making a common understanding of the challenge and its complexity - Making a rich picture of the challenge: context, related issues, actors, processes, drivers, etc. - Identifying systems changes (new playing field & rules of the game, new actors, interactions, collaboration, routines, etc.)
Learning objectives:	⇒ Ability to assess a system's strengths and weaknesses and deduce leverage points

	$\Rightarrow$ Ability to map all elements of a systems as well as their interaction
Knowledge associated:	o Basic theoretical knowledge of critical and systems thinking o Basic how-to knowledge of creative techniques aimed at analysing weak points within systems
Learning outcomes:	The learner is able to critically reflect on the current shortcomings of systems and deduce leverage points.
Learning components:	- Critical Skills Methods - Changing Paradigms - Stakeholder Mapping - Stakeholder Engagement - Concept Mapping - Business Model Canvas - Collective Intelligence & Sensemaking - Effective Communication Techniques - Rich Picture Method - Systems Thinking
Practical examples:	- Eemsdelta, Netherlands - Westerkwartier, Netherlands - City of Oldenburg, Germany - Center for Administrative Studies of Marca Trevigiana, Italy - Rural District of Northern Sardinia, Italy

Learning unit: Being sensitive	
Definition:	Enacting a good "radar" system that provides timely alerts on deviations, current and future developments and threats to internal and external matters.
Phases related:	- Awareness of changing content & failing systems

	- Awareness of complexity
Learning objectives:	⇒ Understand the concept of complexity. ⇒ Know the differences between complex and complicated problems. ⇒ Be aware about the complex challenges and how to deal with them.
Knowledge associated:	o Definition of complex problem o Different characteristics of the complex problems o Complexity vs. complicated
Learning outcomes:	The learner could clearly identify the complex problems/challenges and started the process
Learning components:	- Critical Skills Methods - Changing Paradigms - Difference between Complicated and Complex Challenges - Engagement Methodologies and Group Dynamics
Practical examples:	- Eemsdelta, Netherlands - Westerkwartier, Netherlands - City of Oldenburg, Germany - Center for Administrative Studies of Marca Trevigiana, Italy - Rural District of Northern Sardinia, Italy

4.5 public:START contents by phases

To provide an overview of the different public:START contents, i.e. learning components and practical examples, sorted by each phase of the complexity map, teachers can pick the relevant material from the perspective of the complexity map. In the following, all learning components (marked in grey) as well as practical examples are listed for each phase of the complexity map. In addition, links to each individual educational resource are given:

1. Awareness of changing context	
Name	**Link**
Changing Paradigms	
Critical Skills Methods	English: https://rise.articulate.com/share/0a7PLFvsDR0VDL50Q8GD9YRxxXjtma-p Italian: https://rise.articulate.com/share/Ucd5mZaERyljgTgQpie7s_3kzGLxCKoj Spanish: https://rise.articulate.com/author/unfPjzr3AXMhg2BRSy3uvKOZNP80L5E1#/author/course German: https://rise.articulate.com/share/eu_kL3YVBUuVC9gpLKBQLDWO8hSR8YFn Dutch: https://rise.articulate.com/share/K6oO746b2fxO6RzlUF_HQEcAEaX6XXL8
City of Oldenburg, Germany	
Municipality Westerkwartier, Netherlands	
Eemsdelta, Netherlands	
Centro Studi Administrativi della Marca Trevigiana, Italy	
Distretto delle Ruralità del	

Nord Sardegna, Italy	
2. Awareness of complexity	
Complex vs. Complicated	English: https://rise.articulate.com/share/GQ4wJfDNV8U0g1myH80GgZl2BvM5_klV Italian: https://rise.articulate.com/share/Ioxn9OQXQhuFcng3bBEda9ZldCCY4KzU Spanish: https://rise.articulate.com/share/vJ-v5OEU_-dx0RQWZlYbN7DCzwTbEnB_ German: https://rise.articulate.com/share/xqOUGRAggz-WRoKkpu3ZKVN6ifmoKCry Dutch: https://rise.articulate.com/share/CxkSWUvpHGiCSiO-x4K4wCJrjf3gaexQ
Engagement methodologies	
Eemsdelta, Netherlands	
Centro Studi Administrativi della Marca Trevigiana, Italy	
Distretto delle Ruralità del Nord Sardegna, Italy	
3. Engaging a diverse range of stakeholders	
Stakeholder Engagement	English: https://rise.articulate.com/share/7isvKr-AO6aDiMI57kfgDncqfoUx5T-i Italian: https://rise.articulate.com/share/mAI05MRpgq9yr5f0o9D7Yvv8mr5nQLfF Spanish: https://rise.articulate.com/share/qyTTdXhQGVXscbFuw_9VnH3nS2WmLGVj German: https://rise.articulate.com/share/dsrtVc19rn2KopwyqKwLLgiwf6yCTUZZ Dutch: https://rise.articulate.com/share/xowrZlLFJJ57oIFtW7sQQfSIlgha-oQ7

Stakeholder mapping	English: https://rise.articulate.com/share/sCuBLNWcaELFlshBshHdb55a4o2ZF_Gz Italian: https://rise.articulate.com/share/QWHa8AcKy9o1OW5ImFj87uyymdCd4ZSe Spanish: https://rise.articulate.com/share/Dv5BhgYqTiarPfuobKgwi0VFm_RrjqfL German: https://rise.articulate.com/share/UTCkyYt89bThocVYIcEcIhRRiaD_VOyf Dutch: https://rise.articulate.com/share/WCzcyWTCjCg5Svxq4d8DgSQ4FSBtvLu_
City of Oldenburg, Germany	
Municipality Westerkwartier, Netherlands	
Eemsdelta, Netherlands	
Centro Studi Administrativi della Marca Trevigiana, Italy	
Distretto delle Ruralità del Nord Sardegna, Italy	
4. Making a common understanding of the challenge	
Collective Intelligence and Sensemaking	
Effective communication techniques	English: https://360.articulate.com/review/content/bccca07a-972a-41c1-9134-56af8644b5e0/review Italian: https://rise.articulate.com/share/UkHR66w5O7smrPUMNtzk_R2zUhSydYUX Spanish: https://rise.articulate.com/share/XQXGtS6Iq6uK17CllyJ9CQRNuWMWdiav German: https://rise.articulate.com/share/wgY194kRVYJMxT6mmH5gBrhdPP2GIeeW

	Dutch:
	https://rise.articulate.com/share/vqxEN3gJtqA0Fi9rpB1PiZW_GJHVBr2g
Conceptual maps	
Critical thinking	
Business Model Canvas	English:
	https://rise.articulate.com/share/rDIuA2iAEBpxbVJusoRwB9_6Md3AfEPK
	Italian:
	https://rise.articulate.com/share/iUCPRGa1KNMGENCZgZfQg2oDgX2aLoyI
	Spanish:
	https://rise.articulate.com/share/HjtDsw-JKyzaE-9m9NfXWkdxzD5SVLc9
	German:
	https://rise.articulate.com/share/Ps79jth3RP9tC7r4jVtBloK0HK8Rfnuy
	Dutch:
	https://rise.articulate.com/share/1Ob2M_EB06LvjRCSfInV7WTE4ikubRVp
City of Oldenburg, Germany	
Municipality Westerkwartier, Netherlands	
Eemsdelta, Netherlands	
Centro Studi Administrativi della Marca Trevigiana, Italy	
Distretto delle Ruralità del Nord Sardegna, Italy	
5. Making a rich picture of the challenge	
Rich Picture Method	English:
	https://rise.articulate.com/share/Ept4k9K1ICZqMx4-B9UBTnFfcOKLFEbz
	Italian:
	https://rise.articulate.com/share/b64vQzzvBkmXAa4DYMdg-kXmpQ49x9gv
	Spanish:
	https://rise.articulate.com/share/jsy5WIB_6U3NtD9aquC-HQbbKppsf4jA

	German:
	https://rise.articulate.com/share/FXOYLaEyWJ103OJsXc5Jn4LAqdl8OUup
	Dutch:
	https://rise.articulate.com/share/7cCjWWV6DSsTiE-B9SQfUOL73M8ymnkL
City of Oldenburg, Germany	
Eemsdelta, Netherlands	
Distretto delle Ruralità del Nord Sardegna, Italy	
6. Connecting to new knowledge	
Regional Innovation Ecosystems	
Disruptive innovation management	
Community resources inventory	English:
	https://rise.articulate.com/share/CNJIjP9a45Ire66cXzfHcx0G_x5siYCp
	Italian:
	https://rise.articulate.com/share/G65LseZvF0yT1dMKjHWRgvPEzO_RFr6Z
	Spanish:
	https://rise.articulate.com/share/4BRHK0CU-hyZZeq9NhAJnu2l3Nbpmpci
	German:
	https://rise.articulate.com/share/nbt8Otoo0r4ziN090J4P8-qvS1ZDHYlU
	Dutch:
	https://rise.articulate.com/share/WCAhgEGzIi5Sehvgchti3RgudIFa9JTy
Networking	
Municipality Westerkwartier, Netherlands	
Eemsdelta, Netherlands	
Centro Studi Administrativi della Marca	

Trevigiana, Italy	
Distretto delle Ruralità del Nord Sardegna, Italy	
7. Create desired futures	
Managing Change	English: https://rise.articulate.com/share/H9w-CmZeoPZPIV9lZ25NMxiENeYIzyMQ Italian: https://rise.articulate.com/share/C8UE3_-fZv0LSdObyeQqGwW2JuZgvIY2 Spanish: https://rise.articulate.com/share/5y8jx7xWBsR_u7ZI_wlU_lZ-nnjRZZrI German: https://rise.articulate.com/share/EaX6L-N9dQ1rrMS73IKuoiIsOeqcHrjm Dutch: https://rise.articulate.com/share/gQ3yOJIog6XdJwdVJKaTMzPqOoWu63u2
Dragon Dreaming Technique	English: https://rise.articulate.com/share/efeo5nGof18VoASd-IwTUibwWJxvXh8d Italian: https://rise.articulate.com/share/Pg1pjdn8_LIEvJXUDa24oilZgc1JZiwq Spanish: https://rise.articulate.com/share/zwt2vTs4mjmcXTVG9Tc5eL9RCC3CsYek German: https://rise.articulate.com/share/BNr5YBGob9mbAzMNn2i4dl23dTuS0hOA Dutch: https://rise.articulate.com/share/ZIBrWObQjeF_PRwLQB8W_KpFp3SP9TPa
Municipality Westerkwartier, Netherlands	
Eemsdelta, Netherlands	
Centro Studi Administrativi della Marca Trevigiana, Italy	
Distretto delle Ruralità del	

Nord Sardegna, Italy	
8. Starting small experiments	
Start Small in the Local Context	
How to trigger Social Intrapreneurship in the public sector	English: https://360.articulate.com/review/content/bccca07a-972a-41c1-9134-56af8644b5e0/review Italian: https://rise.articulate.com/share/QY3imv3l6Ns5w1HcTIrufWZqGkgq2z9r Spanish: https://rise.articulate.com/share/KBV3rmgcRrduftwsPrC9Zs4qC4RVtKA0 German: https://rise.articulate.com/share/gs4MZX8ZvdiuL29HZ3J-ozyfoif5KycP Dutch: https://rise.articulate.com/share/wWIC7NQaDB7GsHiA1rSTMaSBI64rdCSb
Municipality Westerkwartier, Netherlands	
Eemsdelta, Netherlands	
Distretto delle Ruralità del Nord Sardegna, Italy	
9. Reviewing impacts	
Impact Assessment	
Municipality Westerkwartier, Netherlands	
10. Accelerating success strategy	
How to Manage Projects	English: https://rise.articulate.com/share/JcfeaZgZc8q3LA1OHSJ9phHfO6Hli5Bd Italian: https://rise.articulate.com/share/lIB4GBNXRJPm1OC4dw7CuTMnkELndmBI Spanish: https://rise.articulate.com/share/Hmz-23PUtyWqPbpP2GMELYDu9HMd6I6X German: https://rise.articulate.com/share/RcZkkGieOzfGKF01pkInikXTAWvIJY9g

	Dutch: https://rise.articulate.com/share/QFP60rPxU8sOxIXZvOP3dhUcbZkXFgSH
Social Innovation	English: https://rise.articulate.com/share/EqrfuyiFEyiBpnSaPhBifF3EiIFtq1OL Italian: https://rise.articulate.com/share/zgIg2tij5c_kYeuOuUB6m92cpoww1abe Spanish: https://rise.articulate.com/share/7yOHNEDGFAXrkOdKBIBQsP4VgNs8UKHF German: https://rise.articulate.com/share/i_TMXAhizd9-YDzyUfRLpUL0EvPu4u76 Dutch: https://rise.articulate.com/share/bf_BGIRcuEahnT4w8TFEbLOEI-KC8YBR
Municipality Westerkwartier, Netherlands	
Centro Studi Administrativi della Marca	
11. Identifying system changes	
Systems Thinking	English: https://rise.articulate.com/share/cmLYDAw3Y1lw_3EIAd9_3zdlqxWX4h8K Italian: https://rise.articulate.com/share/RP93TK1385_1UK9ZO2cRsGim50ku7C2o Spanish: https://rise.articulate.com/share/SLM9iOaQ97wP1-HMNC922vozvvMTlCC_ German: https://rise.articulate.com/share/Xda97NC8lgqv2t1MUu6ZS0HH3mC5ZN2x Dutch: https://rise.articulate.com/share/5vmyHxm8rrMGAQGB1Nwu1ekXU6pXvegR
Municipality Westerkwartier, Netherlands	
Centro Studi Administrativi della Marca	
12. Making explicit the degree of resolution	
Environmental monitoring	English: https://rise.articulate.com/share/8znPQM3dl6lsuYxskYWkl8tjIWwoBxnt Italian: https://rise.articulate.com/share/8E2ajNSO2XRPE1lFXVMUGoIf41SYZqFA

	Spanish: https://rise.articulate.com/share/cumS1wOkisEvKG-SeRrgS78b1u49Yqod German: https://rise.articulate.com/share/_FGdENa9ub6MrXKp9XLmBpbNV1zNAj6p Dutch: https://rise.articulate.com/share/2X8p7_AeVFQH2ThvD4PVAcsci6nnUJrE
Municipality Westerkwartier, Netherlands	
Centro Studi Administrativi della Marca	

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