KA220-VET - Cooperation partnerships in vocational education and training

Digital Transformation Hub of Rural Europe (DigiTrans Hub)

Smart Region Innovation Workshop Curriculum

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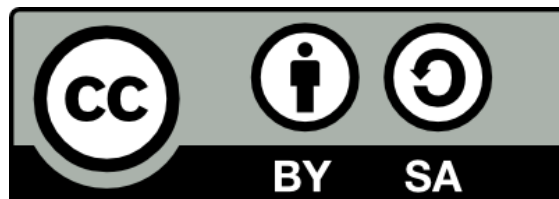
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1. Introduction

The "smart region" approach represents a paradigm shift in how rural areas envision their progress. By incorporating cutting-edge digital technologies such as the Internet of Things (IoT), Artificial Intelligence (AI), data analytics, and advanced connectivity, these regions can overcome longstanding obstacles and unlock new opportunities. This transformative journey hinges upon the synergy between technology, sustainability, and community-driven initiatives.

The key to unlocking this hidden reservoir of growth lies in the hands of passionate and driven project leaders, who possess the vision and determination to shape the future of their communities. However, these aspiring entrepreneurs and change-makers often lack the resources and support needed to bring their ideas to fruition. Enter the concept of empowerment – a dynamic process that aims to equip these visionary leaders with the knowledge, skills, and confidence to drive sustainable development in rural areas.

At the core of this transformative approach are inspiring and adaptable workshops, designed to ignite creativity, foster collaboration, and equip project leaders with the tools they need to thrive. Digitrans Hub and its workshops are foreseen as vibrant hubs of knowledge exchange, enabling participants to learn from experienced mentors, successful project leaders, digital pioneers and innovators. The flexible design of these sessions ensures that they can be tailored to address the unique challenges and opportunities present in the diversity of rural regions.

Indeed, PR2 aims at defining a European Curriculum on how to organize and implement Smart Region innovation workshops, with a reproducible methodological framework, to empower project leaders and rural regions stakeholders. The curriculum covers key competences and knowledge in areas of digital innovation which have been deduced from the outcomes of previous desk research and expert interviews (PR1). Since the curriculum's methodology will follow a collaborative Smart Region framework, it will actively seek to network different actors to collaborate on co-designing, co-developing and co-implementing digital innovation.

The curriculum is not intended to be primarily applied in a HEI-context, rather it will be designed as a guide for rural stakeholders who wish to apply a Smart Region strategy within their respective regional environment.

Hence, the document at hand provides valuable insights into common objectives, fields of action and, most importantly for the workshop framework, factors of success. The following list contains key findings derived from the previously outlined data analysis which need to be reflected by the workshop curriculum's methodology:

- An efficient Smart Region approach should take into account both a region's past (political, social and economical history) and future (anticipation of future challenges) in order to determine its strenghths, opportunities, weaknesses, threats (possibly with the help of designing thinking tools).

- Smart region strategies need to reflect the speficic needs of a region, but should at at the same time seek to acknowledge the complexity and interconnectedness of 'smart' ecoystems (smart economy, smart environment, smart government, smart living, smart mobility, smart people). Key fields of action may be tackled individually (easier for the first steps of experimentation) in the beginning, but should be incorporated in a strategy as broad as possible (to be coherent, consistent, resilient) at some point.

- A Smart Region should at all times involve a high number of stakeholders that represent the region's key fields of action. Based on the administrative, economical and social particularities of the region at hand, different foci may be applied with regard to the involvement of stakeholders (e.g. in a region that is characterized by a 'passive' public sector citizen initiatives and/or socially comitted private sector enterprises may instead be the driving force).

- Identify the right scale and scope of the 'smart' initiative and assess possible consequences thereof (the greater the scale, the greater the complexity of the involved systems and the smaller the scale, the smaller the possible impact)

- Digital tools are transversal and can support smart initiatives both by adressing current deficits as well as anticipating future challenges.. IT-solutions may help to improve the efficiency of both private and public sector organizations. However, ultimately, digitization must be implemented to connect to new business models and value propositions for citizens.

- To ensure a sustainable success, 'Smart' initiatives need to be based on real needs, take into account the existing uses, reflect a common vision or project, involve a wide range of local stakeholders and be backed by strong and transparent means of public support (e.g. funds, consulting, networks). This raises the issue on the bottom-up or top-down approach of such initiatives. Ultimately, the approach must incorporate elements of both in a way that suits the region's organizational particularities.

2. Key Competencies of a Digital Pioneer

The following chapter provides you with a comprehensive overview of all key competencies of a digital pioneer that were derived from analyzing 20 expert interviews with leading figures in proccesses of digital transformation within rural areas. We argue that digital skills need to be underpinned by social and transformative competencies to enable rural actors to fully (and successfully) embrace the role of digital pioneer.

PR1 has revealed that the competence framework to successfully implement digitalization in rural regions go well beyond digital competencies alone. Social and transformative skills needs have been stressed out during the interviews. This has important implications for the definition of a competence framework to successfully foster (digital) innovation in rural areas.

These competences can be difficult to teach and obtain. They mainly come with experience. Experience is a long process, that includes time, resources, and failure. Competences needed to successfully implement digitalization initiatives will also differ from regions, as we have found while defining a smart region profile. Regional ecosystem, culture, economy will have an impact on the success, but also on the competences needed. If we want an increasing amount of digitalization initiatives to emerge at regional level in Europe, we must find common patterns, hurdles, obstacles, although there is no one-fit-all model. Experience can be shared, throughout good practices, sensibilization, feedbacks, exchanges, and inspirational cases, stressing the need of a Digitrans Hub, an inspirational network of good practices sharing.
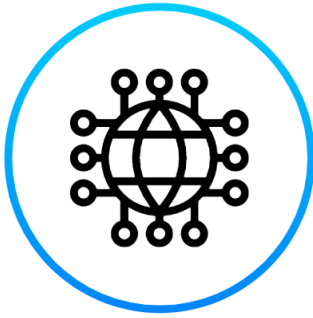
Social Competencies

✓ **Ability to empathise**

"[...] But it's funny that I didn't actually learn any of that. I'm a trained cook and waiter. But that gives me a lot of soft skills, like how to deal with people. And that's something very important for digital pioneers."

✓ **Ability to set-up feedback loops and learn from others**

"And the second thing is to have time allocated to discuss things with colleagues and to share experiences. [...] And it's also an incline to share your ideas and information with others so that you don't have to do the mistakes others did before you."

✓ **Ability to create a shared long-term vision**

"For me, these are also people who have guiding principles that are oriented toward the common good. [...] These are the things that I find important in addition to pure, digital skills. [...]"

✓ **Ability to cope with setbacks**

"You also have to be able to put up with something. In villages, you sometimes have to discuss things with older men who think they know it all better. But I can cope with that. [...]"

Transformative Competencies

✓ **Ability to understand the context you are working in**

"Yes, I can do 'village'! That sounds totally silly. [...] I'm not the one who comes from the big city and brings digitalization with me. I may come from the city, but I bring skills to help people. And I work at eye level. Co-creation, so to speak."

✓ **Ability to anticipate and understand (complex) problems**

"I know a lot about analysing the potential of future topics. I am a potential recognizer. I am also always linking things and different influences. [...]"

✓ **Ability to facilitate creative processes**

"From a resume perspective, I also think it's important to be able to do feedback sessions, facilitating workshops, business model canvas, design thinking. These are the important things in terms of hard skills. [...]"

✓ **Ability to build networks**

"I've learned to identify the people who really want to get things done and also those who are just talking hot air. [...] That is an important success factor, to have these doers on board and to build up a network with them. [...]"

Digital Competencies*

✓ **Ability to interact, communicate and collaborate with others through the use of digital technologies**

"So, writing e-mails and getting connected on social media plays a major role in our networking activities. So, the whole spectrum of digitalization comes into play."

✓ **Ability to use digital tools to improve processes, services and products**

"It's a key element. In Greece we are a little behind when it comes to digitalisation, but after the coronavirus we all switched to digital tools and there was a lot of self-education. In the next 3 years there will be greater development."

✓ **Ability to create, edit, improve and share meaningful digital content**

"Actually, I grew up in marketing - location marketing, specifically. [...] I was involved with relevant aspects such as digital marketing at an early stage and realized that this is a key to revitalizing rural areas. [...]"

*

"The depicted digital competencies are derived from the European Digital Competence Framework (DigComp), for further information visit: *https://joint-research-centre.ec.europa.eu/digcomp/digcomp-framework_en*

This is having an even greater impact on the definition of a Workshop Curriculum (PR2): it should be adapted to the regions, considering regional specificities.

To identify those specificities, the Smart Region Profile Definition helped identifying different types of regions. Based on this analysis, common factors, and leverages to play with to conduct successful digitalization initiatives have been highlighted. These leverages will be disseminated or activated within the multiplier events (PR3), to maximise the impact, thanks to design thinking tools:

- Determine strentghts, opportunities, weaknesses, threats of a regional ecosystem
- Determine a common vision or project based on real specific regional needs and existing uses
- Acknowledge interconnectedness and complementarity of the existing "smart ecosystems"
- Ackowledge of subsidiarity principles and determine a relevant scales of action
- Involve the greater number of relevant and representative stakeholders possible
- Digital tools should be implemented with regard with the benefits it brings to regional economic and social development, and should definitely include a strong human component and support.

Hence, Smart Region innovation workshops should incorporate activities that are based upon materials and techniques that purposefully fooster such competencies among participants.

3. Smart Region Innovation Workshop Curriculum

The following chapter contains the Smart Region Innovation Workshop Curriculum, which is in itself a logical conclusion of our previous findings by fostering the competences of a digital pioneer within a systemic Smart Region framework. The curriculum offers educational resources in a reproducable and modular manner that reflects the vastly varying needs of European rural regions. At all times, the curriculum seeks to combine individual and systemic assets:

Individual level

- ✓ Foster knowledge elements and competences that will enable participants to step into the role of digital pioneers
- ✓ Networking of stakeholders to establish mutual learning, feedback loops, etc.
- ✓ Raising individual awareness of the complexity and interconnectedness of regional challenges

Systemic level

- ✓ Creation of a Smart Region strategy that reflects the speficic needs of a region, and at the same time acknowledges the complexity and interconnectedness of 'smart' ecoystems
- ✓ Involvement of a high number of stakeholders that represent the region's key fields of action (based on the administrative, economical and social particularities of the region at hand, different foci may be applied with regard to the involvement of stakeholders)
- ✓ Identification of the right scale and scope of the 'smart' initiative and assess possible consequences thereof
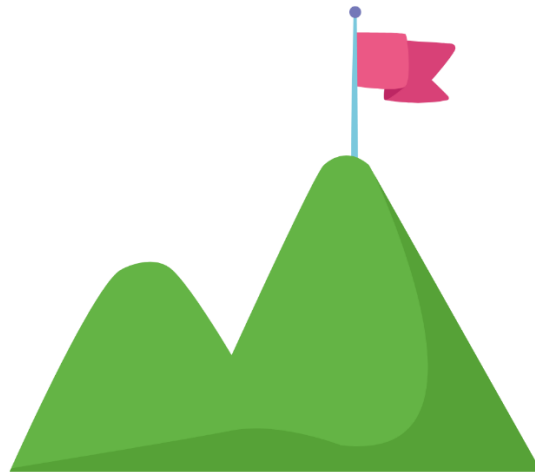
Module 'Exploring the Regional Challenge'

- Identification of regional challenges, key stakeholders, fields of action

- Understanding complexity and interconnecedness

- Fostering a common understanding of problems and possible solutions

SMART REGION KEY VOCABULARY
which elements comprise a rural smart region?

This learning nugget presents workshop participants with key terms that evolve around the concept of a rural Smart Region, including: rural areas, digital pioneers and innovation networks.

A Rise course will convey easy-to-grasp information to the participants and thus makes it reproducible in various workshop settings.

LEARNING NUGGET

This learning nugget does not require participants to engage in interaction.

COMPETENCIES TACKLED:

✓ Ability to understand the context you are working in

✓ Ability to anticipate and understand (complex) problems

SMART REGION KEY ACTIVITIES
which fields of action define an innovative region?

This learning nugget presents workshop participants with key fields of action that appear most prominently in existing European Smart Regions. Additionally, each field of action will be underpinned by best practices.

A Rise course will provide the necessary information for workshop facilitators to convey all essential information.

LEARNING NUGGET

This learning nugget does not require participants to engage in interaction.

COMPETENCIES TACKLED:

Ability to understand the context you are working in

Ability to anticipate and understand (complex) problems

SMART REGION KEY COMPETENCIES
understanding key competencies of a digital pioneer

This learning nugget presents workshop participants with key competencies that define a digital pioneer.

A Rise course will present findings generated by the DigiTrans project in a condensed manner.

LEARNING NUGGET

This learning nugget does not require participants to engage in interaction.

COMPETENCIES TACKLED:

✓ Ability to understand the context you are working in

✓ Ability to anticipate and understand (complex) problems

COMPLEXITY
learn the difference between complicated and complex problems

By studying this learning nugget, workshop participants will discover that the regional challenges that they seek to address are constituted of highly interwoven and multi-layered factors that require holistic strategies.

A Rise course will provide the necessary information for workshop facilitators to convey the nature of complex problems to the participants on their own.

LEARNING NUGGET

This learning nugget does not require participants to engage in interaction.

COMPETENCIES TACKLED:

✓ Ability to understand the context you are working in

✓ Ability to anticipate and understand (complex) problems

SYSTEMS THINKING
which elements comprise a rural smart region?

By studying this learning nugget workshop participants will gain awareness of systems theory by which complex problems can be better understood and addressed.

A Rise course will portray basis features of systems thinking thinking and provide participants with tips on how to put them into practice.

LEARNING NUGGET

This learning nugget does not require participants to engage in interaction.

COMPETENCIES TACKLED:

✓ Ability to understand the context you are working in

✓ Ability to anticipate and understand (complex) problems

DIGITAL CITIZENSHIP
empowering alternative forms of active participation

Over the past decade, the vision of smart regions filled with technological innovation and digitally engaged citizens has been pursued around the globe. But what exactly defines digital citizenship?

This learning nugget allows participants to engage in with multiple areas of digital citizenship by means of an interactive tool called Genially.

LEARNING NUGGET

This learning nugget does not require participants to engage in interaction.

COMPETENCIES TACKLED:

✓ Ability to empathise

✓ Ability to create a shared long-term vision

✓ Ability to understand the context you are working in

✓ Ability to interact, communicate and collaborate through the use of digital technologies

STAKEHOLDER MAPPING
a tool to visualize and categorize relevant stakeholders

Participants will obtain a visual overview of all stakeholders that are relevant for dealing with regional challenges.

A Rise course will provide the necessary information for workshop facilitators to reproduce the stakeholder mapping technique in their own specific work setting

COLLABORATIVE TOOL

We recommend using this nugget to support interactive group activities

COMPETENCIES TACKLED:

✓ Ability to facilitate creative processes

✓ Ability to build networks

✓ Ability to interact, communicate and collaborate through the use of digital technologies

RICH PICTURE
a method to visualize complex regional eco-systems

By implementing this collaborative tool, workshop participants will learn to draw rich pictures of complex challenges, enabling you to visualize multi-layered interdependencies. This technique will not only make complex issues tangible, but also helps to gain a common understanding.

A Rise course will provide the necessary information for workshop facilitators to convey the technique's methodology to the participants on their own.

COLLABORATIVE TOOL

We recommend using this nugget to support interactive group activities

COMPETENCIES TACKLED:

✓ Ability to understand the context you are working in

✓ Ability to anticipate and understand (complex) problems

✓ Ability to facilitate creative processes

SWOT ANALYSIS
identifying a region's strengths, weaknesses, opportunities and threats

A SWOT analysis aims at identifying the strengths, weaknesses, opportunities, and threats of a region, or a particular project. It is a strategic tool to identify the actions to be taken to develop a project while strengthening its resilience.

Workshop participants are provided with a comprehensive methodology to implement a SWOT analysis themselves.

COLLABORATIVE TOOL

We recommend using this nugget to support interactive group activities

COMPETENCIES TACKLED:

✓ Ability to create a shared long-term vision

✓ Ability to understand the context you are working in

✓ Ability to anticipate and understand (complex) problems

PESTEL ANALYSIS
a tool to understand contexts, anticipate problems and optimize decision-making

The PESTEL analysis is an easy-to-use tool for all business leaders and project managers that can be useful in many contexts. It helps to achieve a better understanding of one's own environment, to anticipate problems, and to optimize decision-making accordingly.

Workshop participants are provided with a comprehensive methodology to implement a PESTEL analysis themselves.

COLLABORATIVE TOOL

We recommend using this nugget to support interactive group activities

COMPETENCIES TACKLED:

✓ Ability to create a shared long-term vision

✓ Ability to understand the context you are working in

✓ Ability to anticipate and understand (complex) problems

Module 'Ideation of Solutions'

- Generate ideas for (possible) solutions in a collaborative manner
- Participants learn to establish meaningful feedback loops and embrace failure as part of the process

DESIGN THINKING
transferring ideas into tangible solutions by means of feedback loops

By implementing this collaborative tool, workshop participants will learn how to transfer ideas into tangible prototypes by means of design thinking.

A Rise course will provide the necessary theorectical information for workshop participants to understand the design thinkng process and its underlying methdodology.

We recommend using learning nugget as a build-up to the interactive ADDIE design board.

LEARNING NUGGET

This learning nugget does not require participants to engage in interaction.

COMPETENCIES TACKLED:

✓ Ability to empathise

✓ Ability to set-up feedback loops and learn from others

✓ Ability to facilitate creative processes

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ADDIE DESIGN THINKING METHODOLOGY developing and testing ideas on a collaborative whiteboard

The ADDIE design model consists of 5 stages, which are Analyse, Design, Develop, Implement and Evaluate. It helps with brainstorming processes for innovative solutions.

Digital pioneers can individually or in a group setting use this methodology to design and develop their ideas.

COLLABORATIVE TOOL

We recommend using this nugget to support interactive group activities

COMPETENCIES TACKLED:

✓ Ability to set-up feedback and learn from others

✓ Ability to cope with setbacks

✓ Ability to interact, communicate and collaborate through the use of digital technologies

**BUSINESS MODEL CANVAS –
a template used for developing and improving
new ideas**

By implementing this collaborative tool, workshop participants will learn how to refine and validate ideas in a well-organized manner and thus reduce the risk of short-term failure.

A Rise course grants access to an online whiteboard (Miro) which will allow participants to work on a BMC in a collaborative manner within a digital environment.

COLLABORATIVE TOOL

We recommend using this nugget to support interactive group activities

COMPETENCIES TACKLED:

✓ Ability to facilitate creative processes

✓ Ability to anticipate and understand (complex) problems

✓ Ability to interact, communicate and collaborate through the use of digital technologies

BRAINSTORMING
creativity-based tools to support brainstorming processes

Brainstorming may come across as an 'old hat' at first. And yet, it has immense potential to explore solutions in dynamic settings.

This tool provides access to the SEED platform, a hub of creativity-based activities that can be implemented depending on the workshop setting.

The SEED platform offers comprehensive explanations on how to implement each presented activity.

COLLABORATIVE TOOL

We recommend using this nugget to support interactive group activities

COMPETENCIES TACKLED:

✓ Ability to empathise

✓ Ability to facilitate creative processes

✓ Ability to interact, communicate and collaborate through the use of digital technologies

LIVING LAB TOOLS FOR CO-CREATION
discover various tools to support ideation and experimentation

Workshop particpants are presented with Living Lab methodologies that enable them to unleash creativity, discover valuable insights, and generate innovative solutions.

Various tools are derived from the European UNaLAB database. Workshop facilitators are presented with comprehensive templates and working instructions.

COLLABORATIVE TOOL

We recommend using this nugget to support interactive group activities

COMPETENCIES TACKLED:

✓ Ability to empathise

✓ Ability to create a shared long-term vision

✓ Ability to facilitate creative processes

✓ Ability to build networks

Module 'Defining a Common Strategy'

- Participants define a shared strategy, inlucuding: goal, tasks, stakeholders, resources, responsibilities, timeframes, etc.
- Participants learn to think and act as a team that pursues a shared 'smart' vision of the future

CONTRACTS OF RECIPROCITY
convergence of objectives and project reciprocity

This exercise allows workshop participants to express their expectations towards a cooperation. By doing so, 'contracts of reciprocity' are set-up which foster sincere cooperation. Also, it ensures that a cooperation is comprised of stakeholders that have the capacity and wil to act.

Based on the UTILO toolbook, a compresensive methodology is provided that allows this exercise to be reproduced in various workshop settings.

COLLABORATIVE TOOL

We recommend using this nugget to support interactive group activities

COMPETENCIES TACKLED:

✓ Ability to empathise

✓ Ability to facilitate creative processes

✓ Ability to build networks

MAPPING OF VALUES
a tool to prepare a collaboration based on shared principles

This actvity is to be used at the very beginning of a collaboration to ensure that you share the same beliefs and wish for the same outcomes.

Based on the UTILO toolbook, a compresensive methodology is provided that allows this exercise to be reproduced in various workshop settings.

COLLABORATIVE TOOL

We recommend using this nugget to support interactive group activities

COMPETENCIES TACKLED:

- Ability to empathise

- Ability to facilitate creative processes

- Ability to build networks

DRAGON DREAMING
a framework for the realization of collaborative and sustainable projects

By implementing this collaborative tool, workshop participants will gain greater insight into collective intelligence and sense-making. Dragon Dreaming does not focus on the result, but on the networking and personal growth of participants.

A Rise course will provide the necessary information for workshop facilitators to reproduce the Dragon Dreaming technique in their own specific work setting. The group size can be varied, but should not exceed 30 participants.

COLLABORATIVE TOOL

We recommend using this nugget to support interactive group activities

COMPETENCIES TACKLED:

✓ Ability to set-up feedback loops and learn from others

✓ Ability to create a shared long-term vision

✓ Ability to facilitate creative processes