KA220-VET - Cooperation partnerships in vocational education and training

Digital Transformation Hub of Rural Europe (DigiTrans Hub)

Smart Region Activity and Knowledge Menue

Prepared by: University of Vechta (UV)

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Erasmus Plus KA220-VET - Cooperation partnerships in vocational education and training

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Introduction

According to the original application, the data collected during the regional innovation workshops was to be analysed and transferred into an interactive graphic which illustrates smart key activities and key knowledge elements that have surfaced during the workshops.

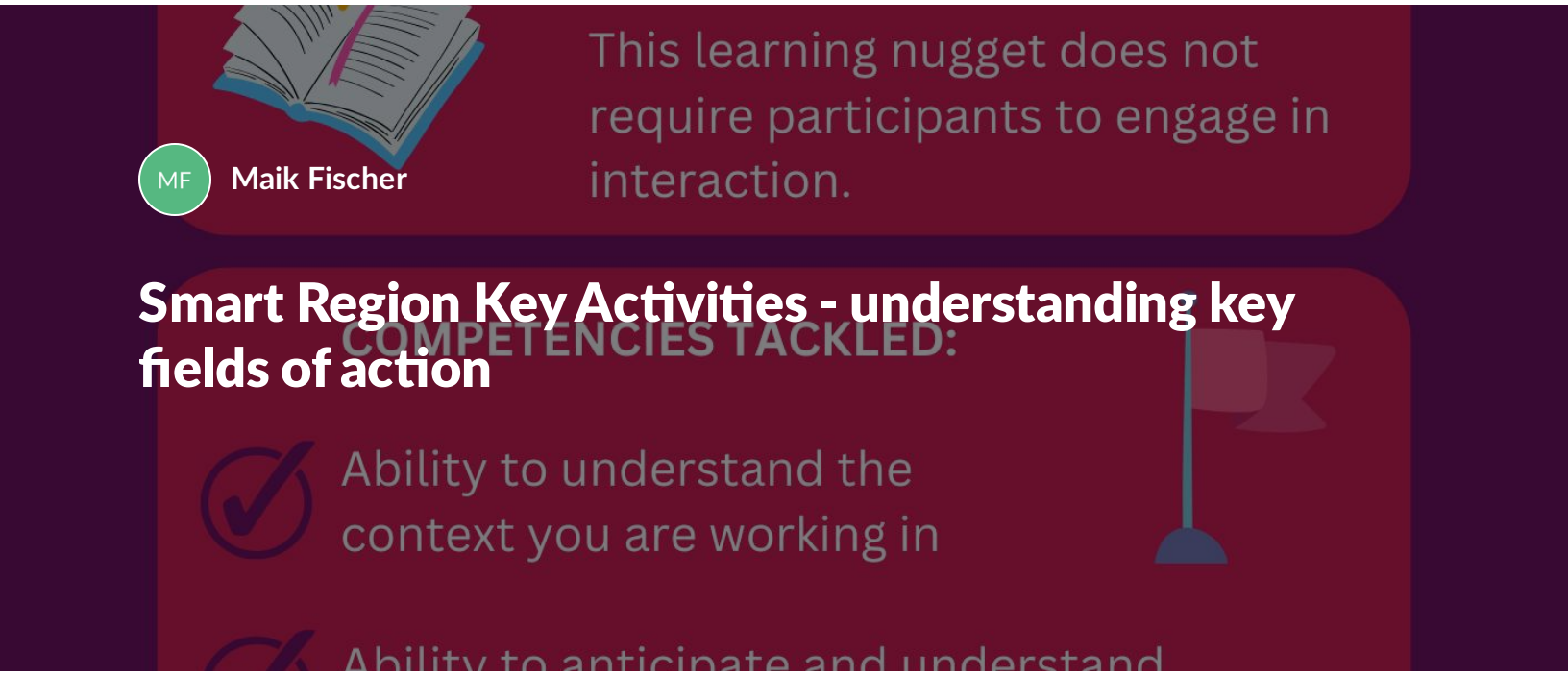
Since the working methodology of project result 3 underwent significant changes that were initiated and ultimately approved by the German national agency, this project result needed to be adapted to these changes.

As a result, the Smart Region Activity and Knowledge Menue now consists of three separate Rise courses that showcase key findings of the project's expert interviews, case studies and innovation workshops by means of interactive, comprehensive educational resources. The three Rise courses focus on the following topics:

1. Smart Region Key Vocabulary
2. Smart Region Key Activities
3. Smart Region Key Competencies

All three Rise Courses have been translated into all partner languages and integrated into the DigiTrans Hub Learning Corner: https://digitranshub.eu/module-1/

In addition, the pdf versions of the courses can be found attached to this document.



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Smart Region Key Activities - understanding key fields of action

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 that were identified in the DigiTrans Project.

The Rise course at hand can be used by workshop facilitators to create a common understanding of Smart Region key fields of action among participants.

Lesson 1 of 4

Smart City Wheel

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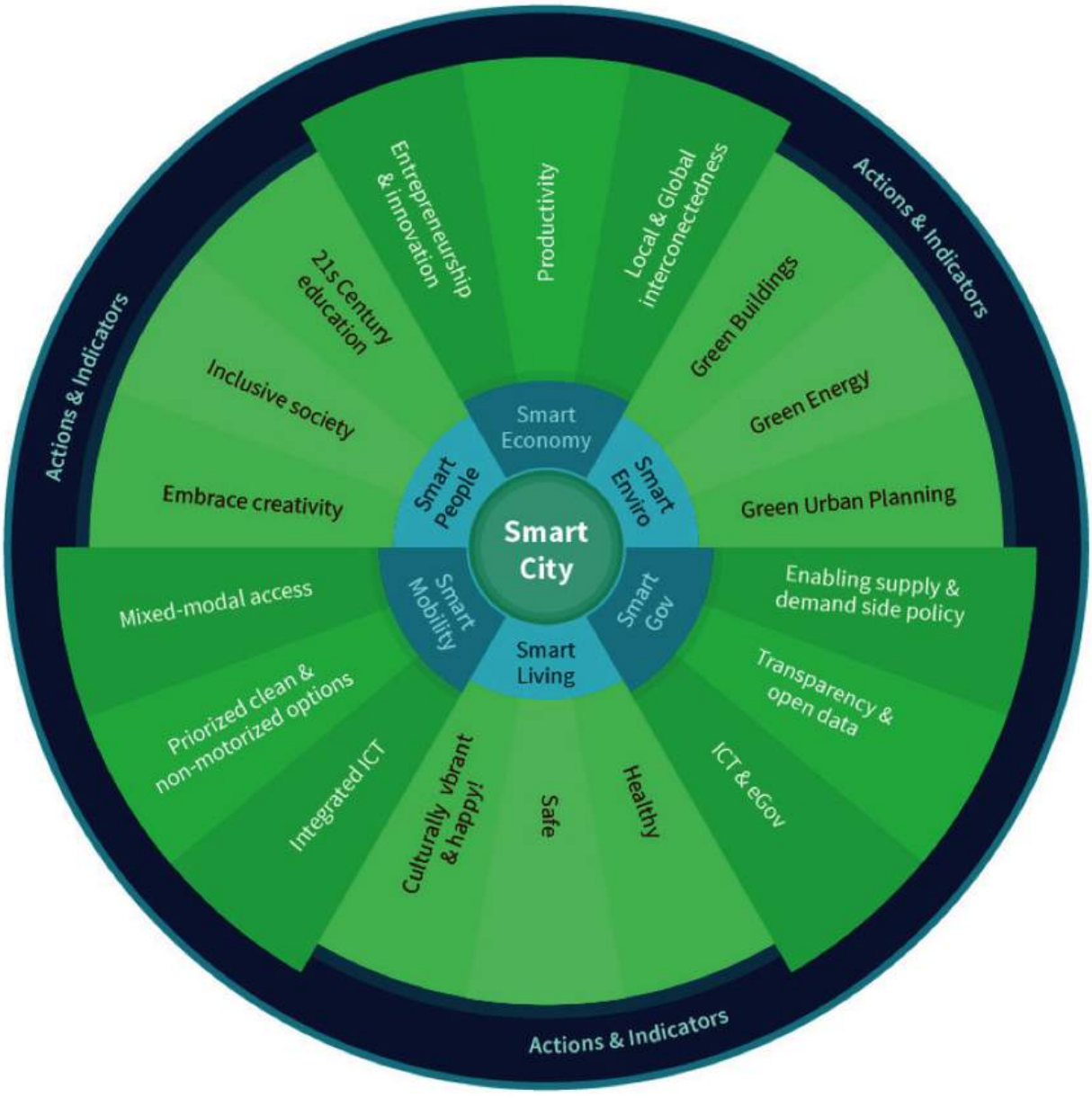

Boyd Cohen’s Smart City Wheel, source: Soe 2017

Although originally designed to illustrate the impact of digitization on urban challenges and planning strategies, many smart region strategies mirror Boyd Cohen's Smart City Wheel at least to some degree.

Boyd and many other experts emphasize six fields of action. At times, their titles vary. And yet, they always adress the following core areas:

1. Smart Living / Society

2. Smart Economy

3. Smart Mobility

4. Smart Health

5. Smart Government

6. Smart Environment

> Such ‘smart’ ecosystems are complex, often non-transparent and encompass not only technology and digitization, but diverse fields of action in which various stakeholder with diverging interests need to be addressed. Moreover, municipalities are unique in terms of their socio-economic resources. However, many of the challenges can be addressed by solutions and in other municipalities in a way that conserves resources.

Lesson 2 of 4

Fields of Action

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Smart Economy

An economy that is well networked locally and globally and in which innovation-friendly entrepreneurship ensures high productivity, growth, and employment. This also includes a future-oriented political and administrative business policy that facilitates start-up innovation as well as new modes of working (such as co-working).

CoWorkLand (Germany)

CoWorkLand is a self-organization of founders and operators of rural coworking spaces. It is organized as a cooperative. The first field of action is start-up support for founders who want to set up a coworking space in rural areas. That can be private individuals, that can be municipalities, but that can also be a university, of course. But also a foundation. On the other hand, it is the support in operation, that is, when you have already founded a coworking space.

- Type of organization: Cooperative
- Founding year: 2017
- Field of action: rural co-working
- Problem-solving instruments: digital platform/co-working spaces
- Learn more: https://coworkland.de/de

Smart Ruralité Alpes Provence Verdon (Belgium)

To support the challenges presented by digital transition in rural areas, in June 2018 the Regional Rural Network launched an experimental approach in the territory Communauté de Communes Alpes-Provence-Verdon. The program aims to help companies to gain visibility and foster cross-sectorial collaboration and transitions strategies

- Type of organization: Public / project
- Founding year: 2018
- Field of action: Networking/Digital Development/Funding/Circular Economy
- Problem-solving instruments: Digital Platform/Partner Search Tool
- Learn more: https://reseaurural.maregionsud.fr/chantiers/acces-aux-services-smart-ruralite/

Tourism Innovation Map (Austria)

The Tourism Innovation Map (TIM) is a project of the Innolab Next Level Tourism Austria (NETA) on behalf of the Federal Ministry of Agriculture, Regions and Tourism. Next Level Tourism Austria is operated by Austria's national tourism marketing agency and acts as a central innovation hub for the national tourism industry.

TIM is an interactive map divided into three sections. In the first section one can find an overview of current projects in Austrian tourism, structured by category and project progress. The other tabs offer more detailed insights into project descriptions and technologies used. Its ultimate goal is to create an innovation eco-system that encompasses the entire touristic sector.

- Type of organization: Public / project
- Number of staff: 1-5
- Founding year: 2020
- Field of action: Tourism/Digital Tourism
- Problem-solving instruments: Digital Map/Interactive Map
- Learn more: https://www.austriatourism.com/blog/2019/neta/tourism-innovation-map-austria/

Smart Living

A region is "smart" in terms of quality of living if safety is high and the healthcare system is well developed, networked and accessible regardless of one's location. The cultural offerings should also be appropriate and sufficient recreational areas should be available for all citizens, which also strengthens social cohesion. Smart Home technologies also contribute to the quality of life for residents, for example in the areas of healthcare and security.

South DENMARK eHealth ECOsystem (Denmark)

The creation of the South DENMARK eHealth ECO system was initiated by the Health Innovation Centre of Southern Denmark, as part of the region of Southern Denmark. The project promotes collaboration and coordination of combined efforts within digital health, active healthy ageing and private-public collaboration.

- Type of organization: Public network
- Founding year: 2017
- Field of action: Health/Digital Health
- Problem-solving instruments: Networking/Innovation Services/Meeting Facilitation
- Learn more: https://syddansksundhedsinnovation.dk/en/projects/south-denmark-ehealth-ecosystem-echalliance#:~:text=The%20South%20DENMARK%20eHealth%20ECOsystem%2C%20part%20of%20the,digital%20health%2C%20active%20healthy%20ageing%20and%20private-public%20collaboration

Smart Country Side (Germany)

The project is led by a joint venture of the province of Lippeand the province of Höxter and is funded jointly by theEuropean Union (EFRE program) and the state ofNorth Rhine-Westphalia. Through the Smart Countryside Lippe/Höxter project, 16 villages are developing need-focused digital applications and 26 villages are gaining digital education. Smart Countryside is exploring new ways of bringing people together, supporting new ways of thinking and delivering social innovation by using digital tools.

- Type of organization: Public / project
- Founding year: 2015
- Field of action: digital social innovation
- Problem-solving instruments: Start-up support/Training center/Digital Transformation SME
- Learn more: https://www.kreis-lippe.de/kreis-lippe/verwaltung-und-service/themen-und-projekte/bildung/zukunftsprojekte-innovationszentrum/smart-country-side.php

Superfast Cornwall (Wales / United Kingdom)

Superfast Cornwall, a £132 million project funded by the EU, BT Group,Building Digital UK (BDUK) and Cornwall Council and managed by Cornwall Development Company, launched a fibre-based superfast broadband rollout across Cornwall. In addition, the project emphasized training in digital skills which were seen as a support, particularly for the elderly rural population.

- Type of organization: Public / project
- Founding year: 2011
- Field of action: Broadband Internet / digital skills for elderly
- Problem-solving instruments: Infrastructure implementation, training programmes
- Learn more: https://www.superfastcornwall.org/

Smart Government

The level of ‘smartness’ of a local administration is often determined by indicators of transparency, citizen participation, open access to services and the associated infrastructure. These factors are based on new digital technologies, but must also ensure the inclusion of all citizens no matter their age or income (digital divide).

TiLab (France)

Ti Lab bet on collective intelligence and give users a central place to improve public services: an experimental approach led by the regional public laboratory, jointly carried out by the Region and the State combines other public and private actors, such as Pôle emploi, CAF or the Askoria training institute.

- Type of organization: Public / project
- Founding year: 2017
- Field of action: Digital Innovation/Public Services
- Problem-solving instruments: Training/Labs/Public Platform
- Learn more: https://www.modernisation.gouv.fr/laboratoires/ti-lab

Digitale Dörfer (Germany)

In the project "Digital Villages", the Fraunhofer Institute for Experimental Software Engineering IESE shows how digitalization is opening up new opportunities for rural regions. The project started in the summer of 2015 with the goal of investigating the challenges of today's life in rural regions in relation to digitization.
The developed LösBar app brings citizens and administration closer together to solve their concerns together as a team. The citizens can get in touch with their administration via a 'tell us' channel to make suggestions or to report deficiencies.

- Type of organization: Research institute
- Founding year: 2015
- Field of action: Digital services / smart administration
- Problem-solving instruments: Application

- Learn more: https://www.digitale-doerfer.de/unsere-loesungen/loesbar/?portfolioCats=68%2C70%2C69%2C97

Smart Mobility

This field of action is concerned with the realization of an efficient, intermodally integrated and seamless mobility offer for the population as well as for visitors from outside the municipality. Low-emission modes of transport and decarbonisation are promoted as well as traffic being optimized, and congestion reduced through intelligent control.

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The LieferBar app is a neighborhood delivery service. Here, citizens can see which packages are still waiting to be delivered and bring them to their neighbors right away. For the delivery of the parcels, the citizens receive a special currency (DigiTaler).

- Type of organization: Research institute
- Founding year: 2015
- Field of action: Digital services / smart mobility
- Problem-solving instruments: Application
- Learn more: https://www.digitale-doerfer.de/unsere-loesungen/lieferbar/?portfolioCats=68%2C70%2C69%2C97

Smart Environment

Environmental friendliness, climate protection and sustainability are the bottom of this field of action. This includes appropriate standards in building, good management of resources - especially in the areas of waste, energy, water, and housing. The local energy turnaround and the reduction of emissions are among the greatest challenges.

Agribio (Italy)

In Sardinia, Consulmedia, a systems integrator has developed an Agriculture 4.0 project using data from Libelium sensors. The client, the Agribio social cooperative, owns more than 5 hectares of land for cultivation and 5 greenhouses with a total covered area of approximately 6,000 square meters. Consulmedias' system, named Biots, controls, measures and analyses the greenhouse gas emissions with the data provided by Libelium's network of high-end sensors forwater and soil.

- Type of organization: Private cooperative
- Founding year: 2020
- Field of action: Agritech
- Problem-solving instruments: Sensors/Water Management/Sensor Data

Energetisches Nachbarschaftsquartier Fliegerhorst Oldenburg (Germany)

The project Energetisches Nachbarschaftsquartier Fliegerhorst Oldenburg (energy neighborhood) is based in northwestern Germany and is implemented by a broad spectrum of regional stakeholders, including: universities, research institutes, municipalities, energy suppliers.

In the project, different tools for visualizing the availability of 'green' electricity in one's own neighborhood are being developed. One of the prototypes labelled 'Energieampel' (energy traffic light) uses simple traffic light colors to indicate whether or not the currently used electricity was produced locally and sustainably.

- Type of organization: Public / project
- Founding year: 2018
- Field of action: Living Lab / Smart Energy Supply
- Problem-solving instruments: Digital Platform / Technical Prototypes
- Learn more: https://www.enaq-fliegerhorst.de/

Smart People

A ‘smart’ region needs intelligent, enlightened residents who form a strong foundation for society. With education and awareness programs that are reflected in economic opportunities as well as social participation, "smart" communities promote good education and cohesion in society. Particularly against the backdrop of new technologies, digital inclusion and the prevention of digital exclusion of different population groups is of particular importance in order to ensure equal opportunities.

Vongrid (Greece)

Vongrid is a private sector company based in Patras, Greece. It offers a broad portfolio of digital education that is tailor-made for various target groups, ranging from preschoolers to senior citizens. In addition, Vongrid's mission is to serve the community through public talks and participation in local events.

- Type of organization: Private Sector Company
- Number of staff: 1-5
- Founding year: 2019

- Field of action: Digital content
- Problem-solving instruments: Digitalization public and private entities/Networking actions

TURNTABLE (Italy)

TURNTABLE is a platform, a one-stop-shop for ICT solutions for the elderly. The consortium is composed of the Sardinian IT-company Abinsula, the University of Cagliari and many other knowledge institutions. It aims at motivating older adults to adopt a healthy lifestyle and engage in lifelong-learning.

- Type of organization: Project (public and private sector partners)
- Number of staff: 21-30
- Founding year: 2020
- Field of action: Silver Economy/Social Development/Active Ageing/ICT for elderly
- Problem-solving instruments: Digital Platform/Mobile Usability
- Learn more: https://abinsula.com/turntable/

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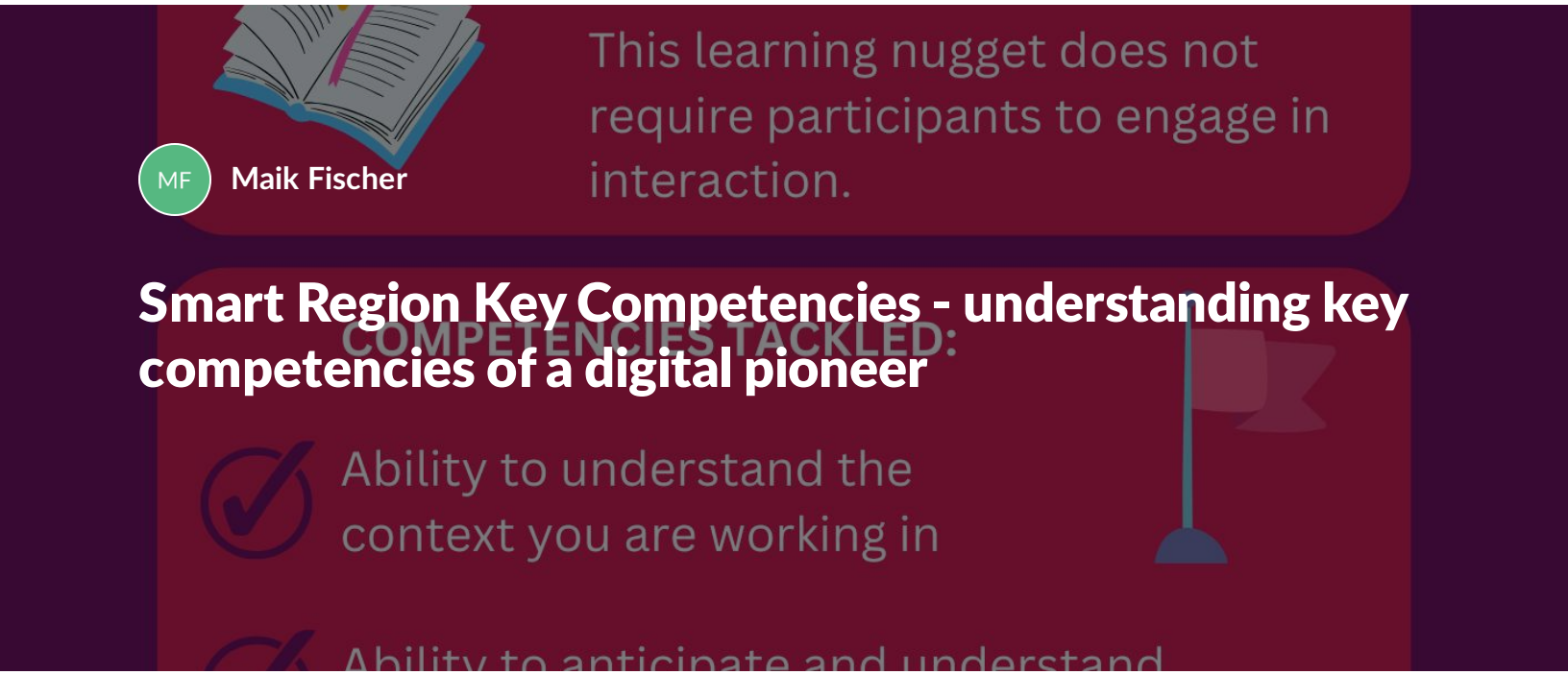

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Smart Region Key Competencies - understanding key competencies of a digital pioneer

This learning nugget presents workshop participants with key competencies that define a digital pioneer. The Rise course at hand will present findings generated by the DigiTrans project in a condensed manner.

Lesson 1 of 3

Competence Profile

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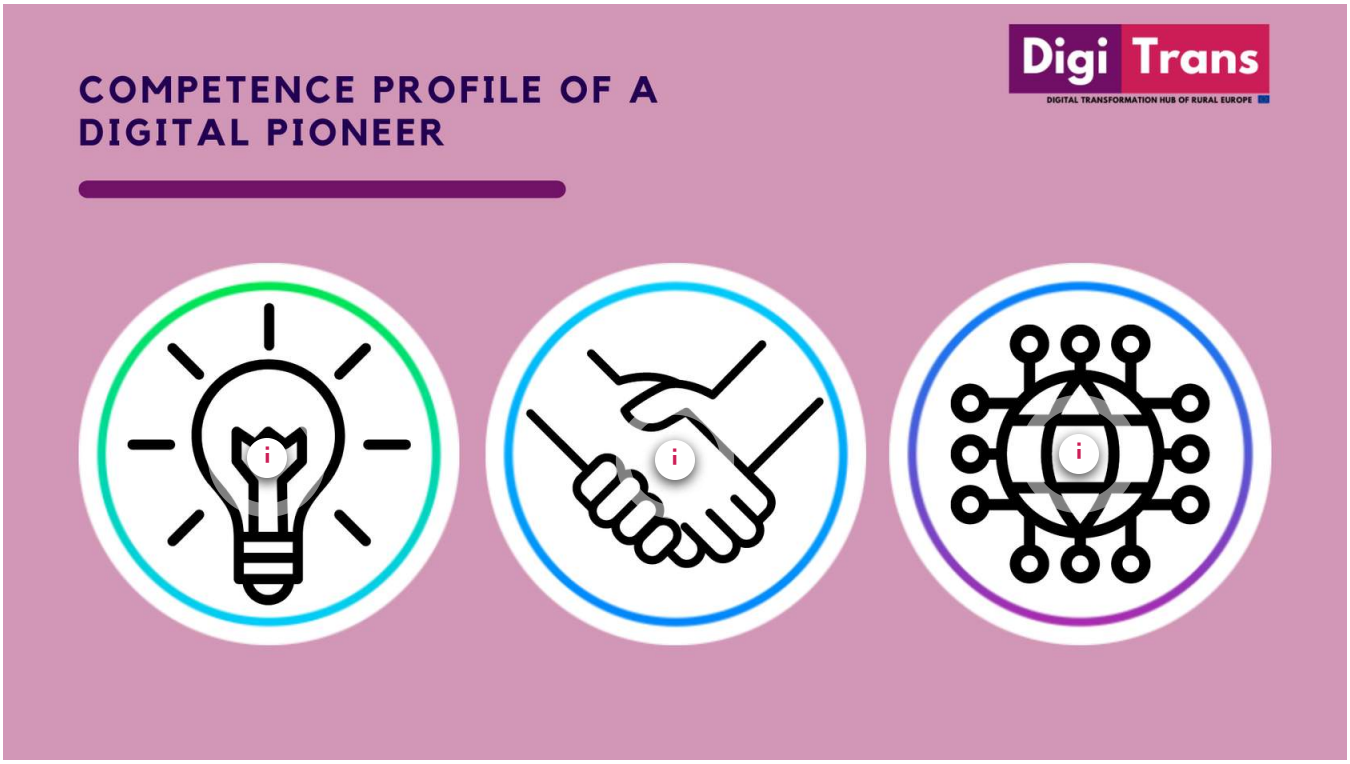
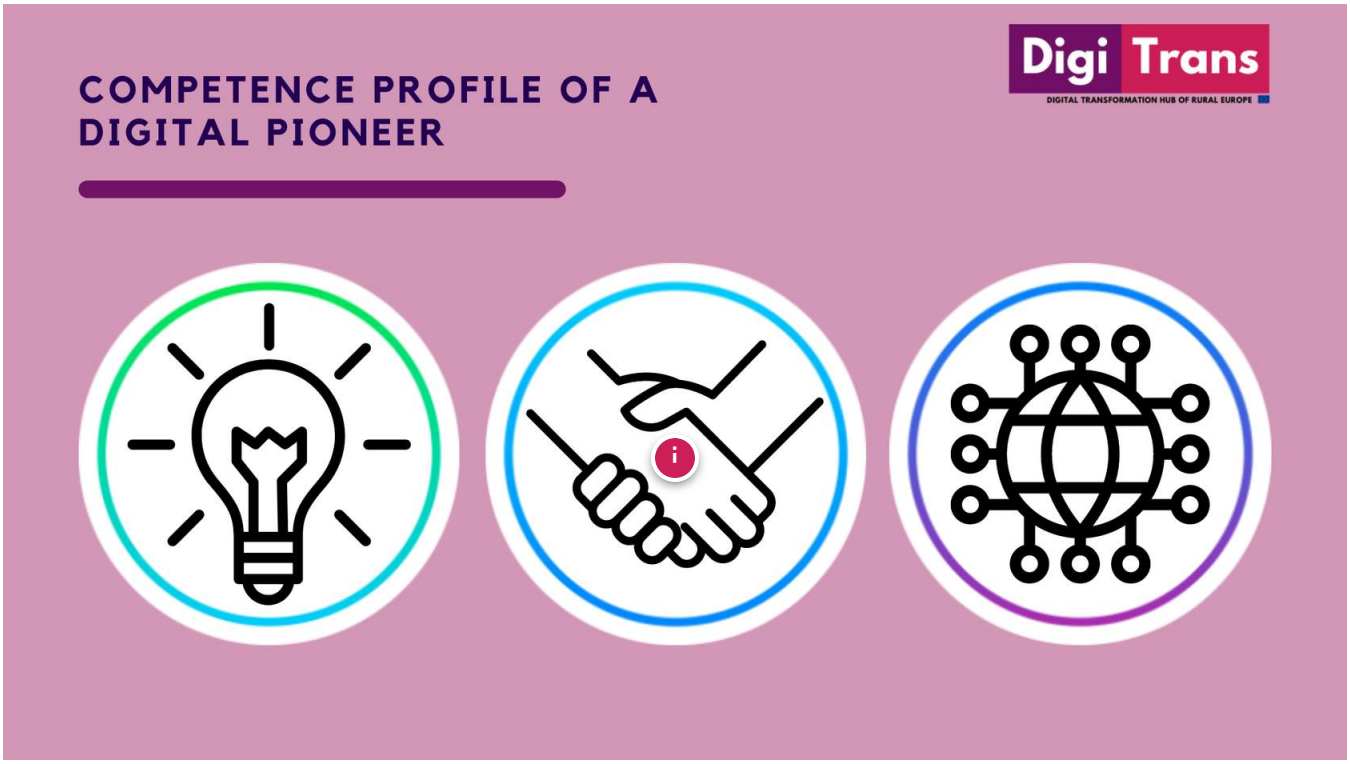
Digital pioneers might be best described as actors whose skills enable them to adopt innovations faster than their environment and accelerate their diffusion.

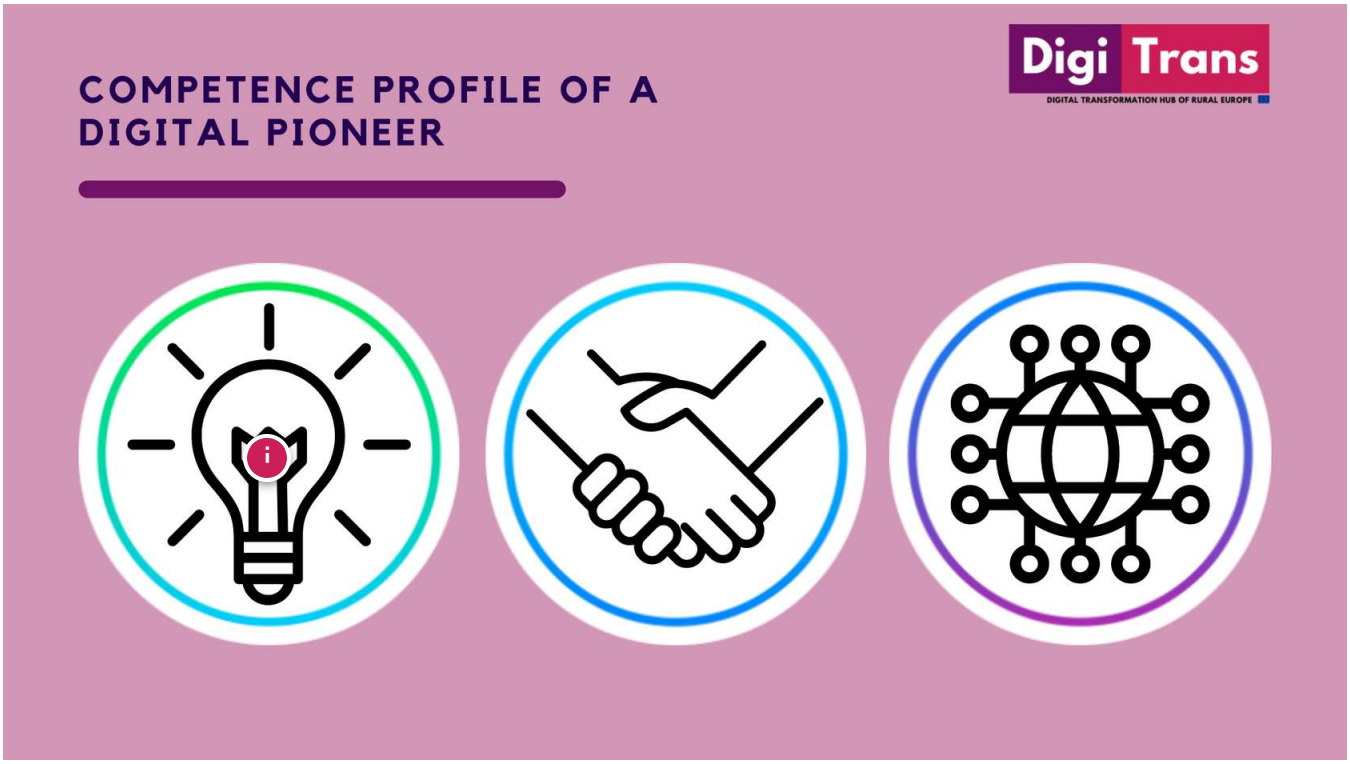
Contrary to popular, digital skills are not the most important characteristic of a digital pioneer. Social and transformative competencies are equally important.





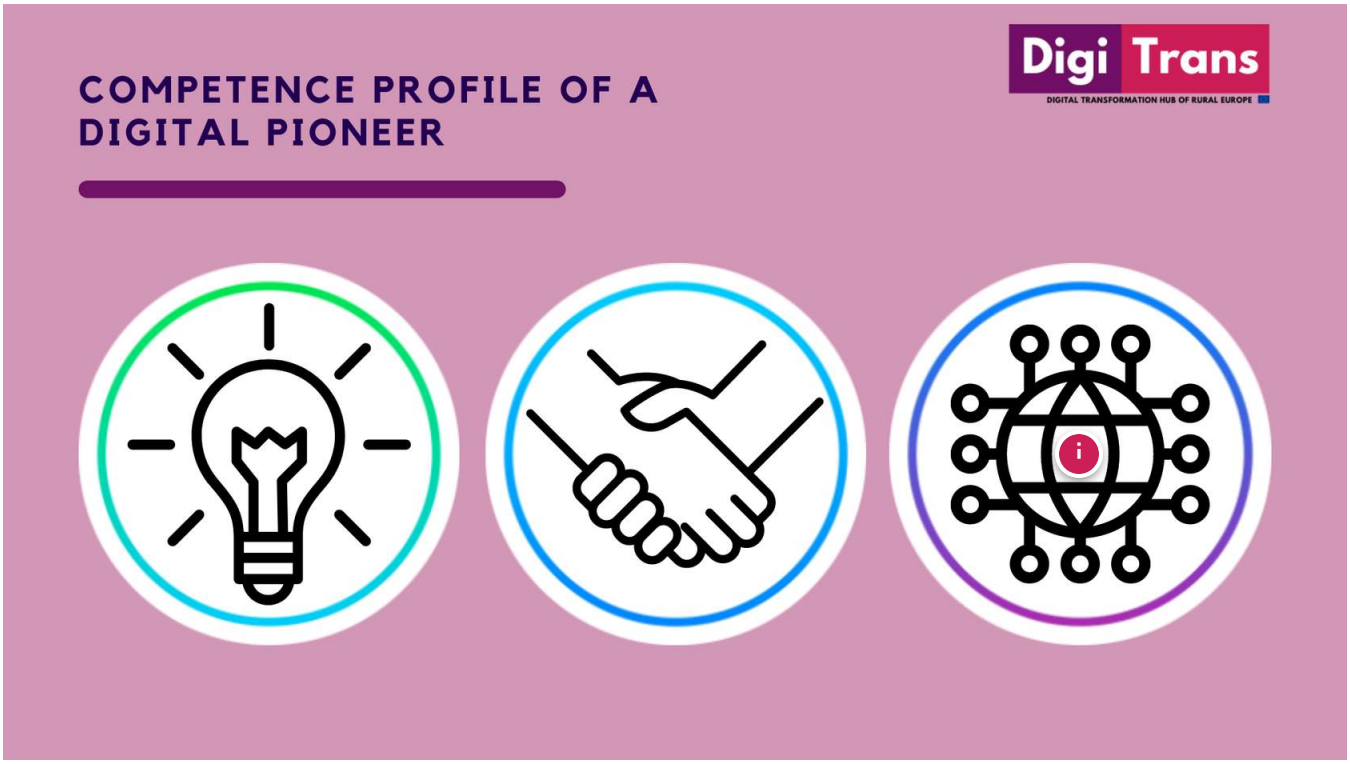
Social Competencies

types of knowledge, skills, attitudes and values needed to successfully interact with others



Transformative competencies

types of knowledge, skills, attitudes and values needed to transform society and shape the future for better lives



Digital Competencies

types of knowledge, skills, attitudes and values needed to navigate through the digital world

Lesson 2 of 3

Competencies in the Spotlight

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In 2022, the DigiTrans project team conducted a total of 20 expert interviews with digital pioneers from 9 European countries.

In the following, all three competence areas of a digital pioneer (transformative, social, digital) will be showcased based on interview statements.

Thus, the depicted abilities together reflect the professional reality of digital pioneers in various European regions.

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 strategic 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. [...]”

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. [...]"

Digital Competencies

Ability to communicate and collaborate with others via 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. [...]”

Lesson 3 of 3

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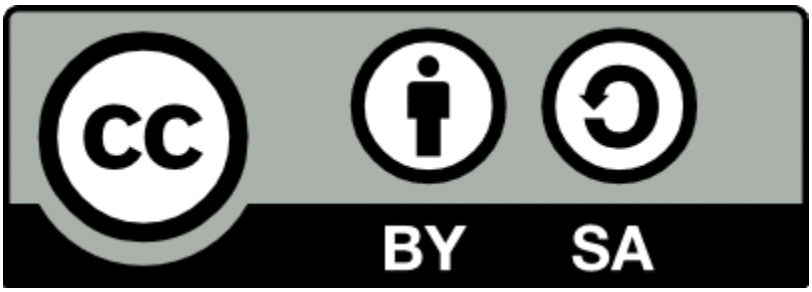

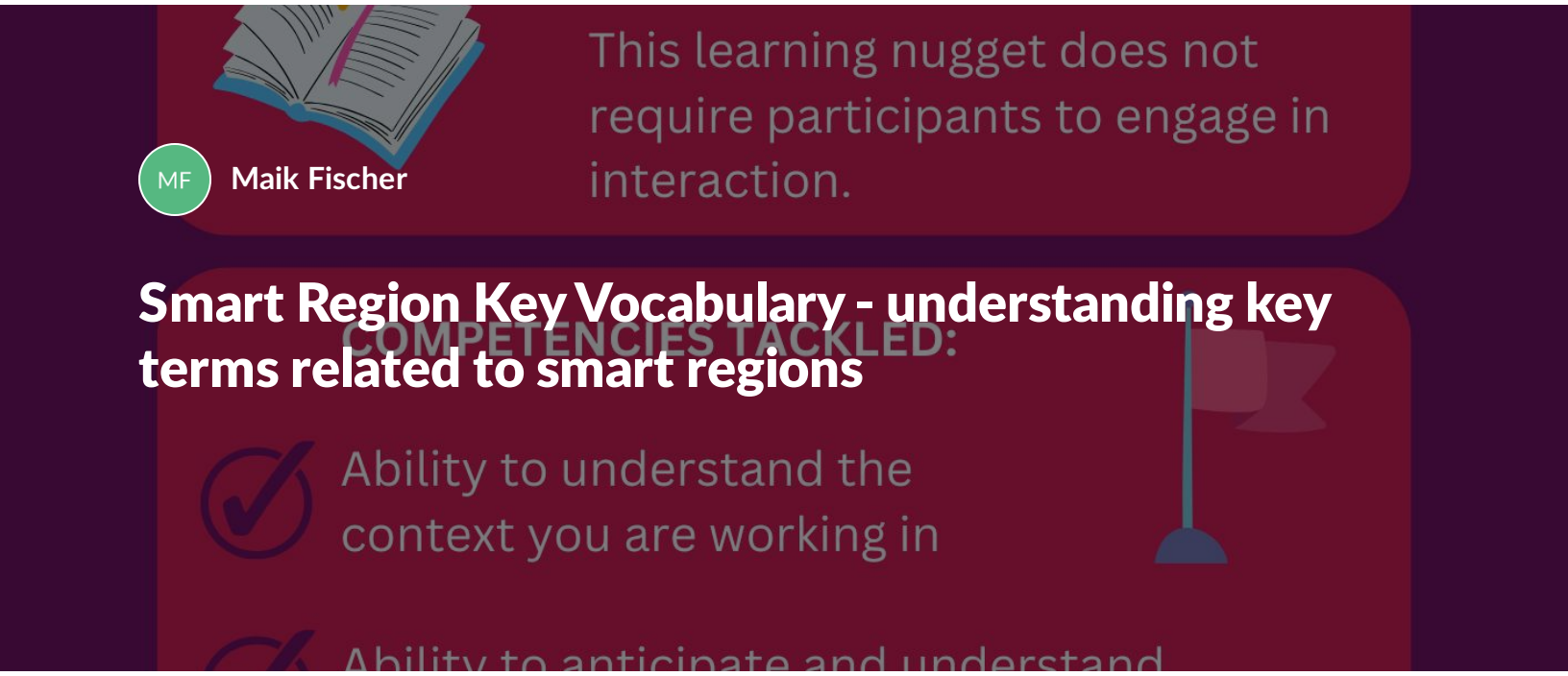

MF Maik Fischer

Smart Region Key Vocabulary - understanding key terms related to smart regions

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.

The Rise course at hand is recommended to be used in workshop settings with diverse participants that haven't previously engaged with Smart Region methodologies.

Lesson 1 of 4

Key Terms

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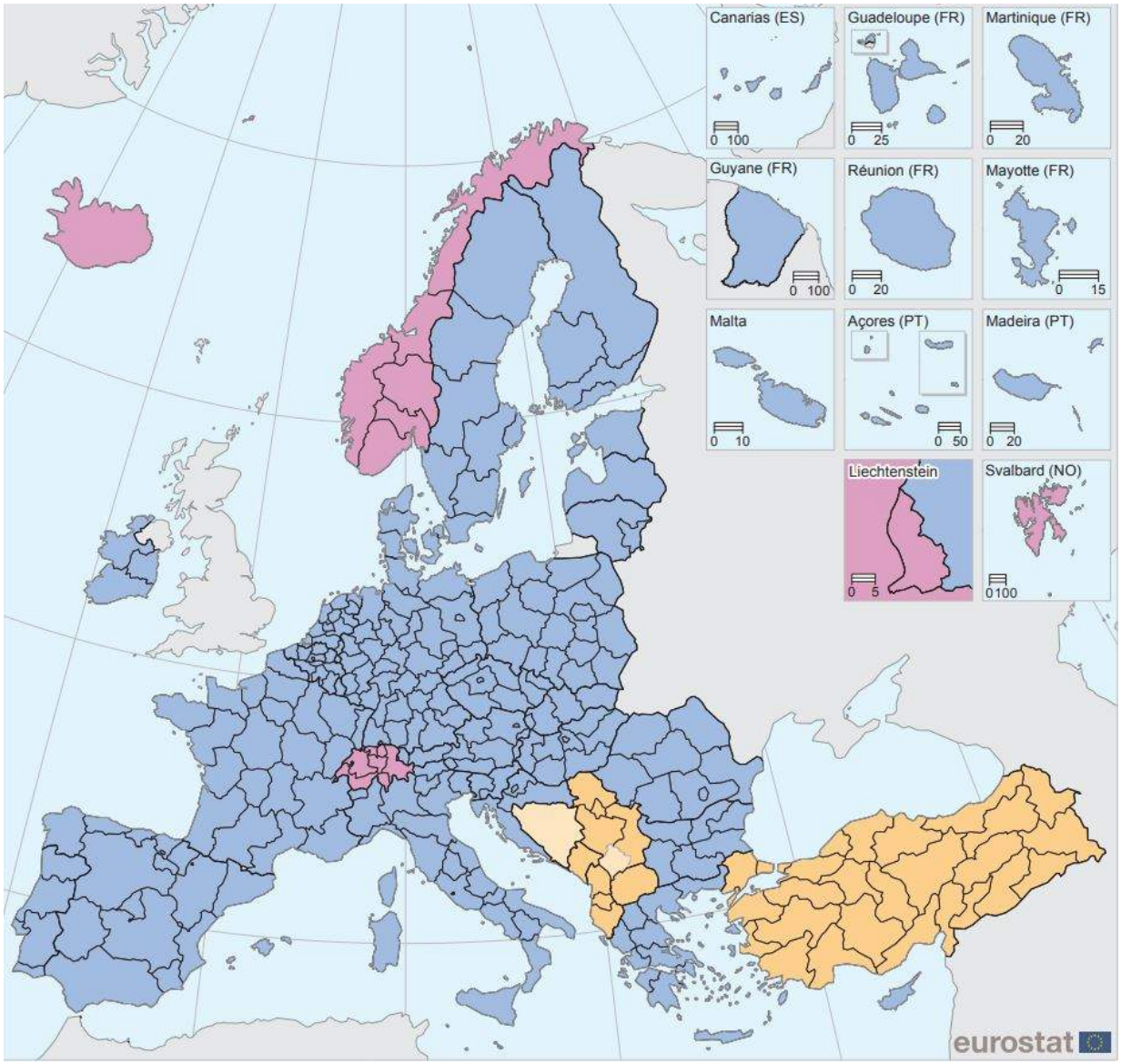
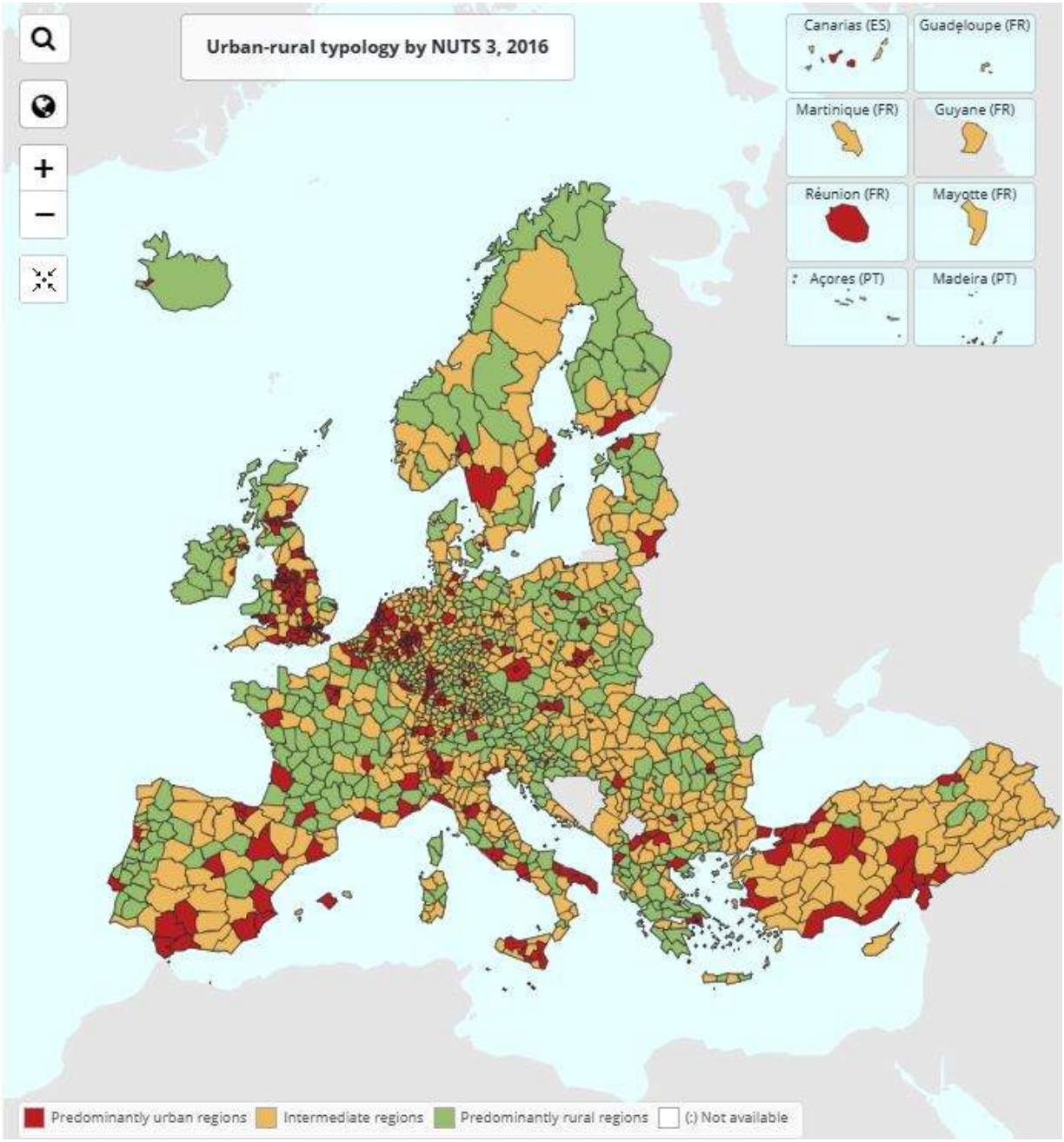


NUTS 2 regions in the Member States (blue) of the European Union (EU-) according to NUTS 2021, with corresponding statistical regions in EFTA countries (purple), candidate countries (yellow) and potential candidates (orange), source: Eurostat 2021

Regions

Shaped by their rich history, each European country has its own administrative division, ranging from a strong centralization to federalist models. In total, within the 27 Member States of the European Union, there are 242 regions according to the NUTS 2 statistical classification carried out by Eurostat, which serves as a reference framework for regional policies. The latter show significant differences in terms of size, population and, of course, economic, and social development.



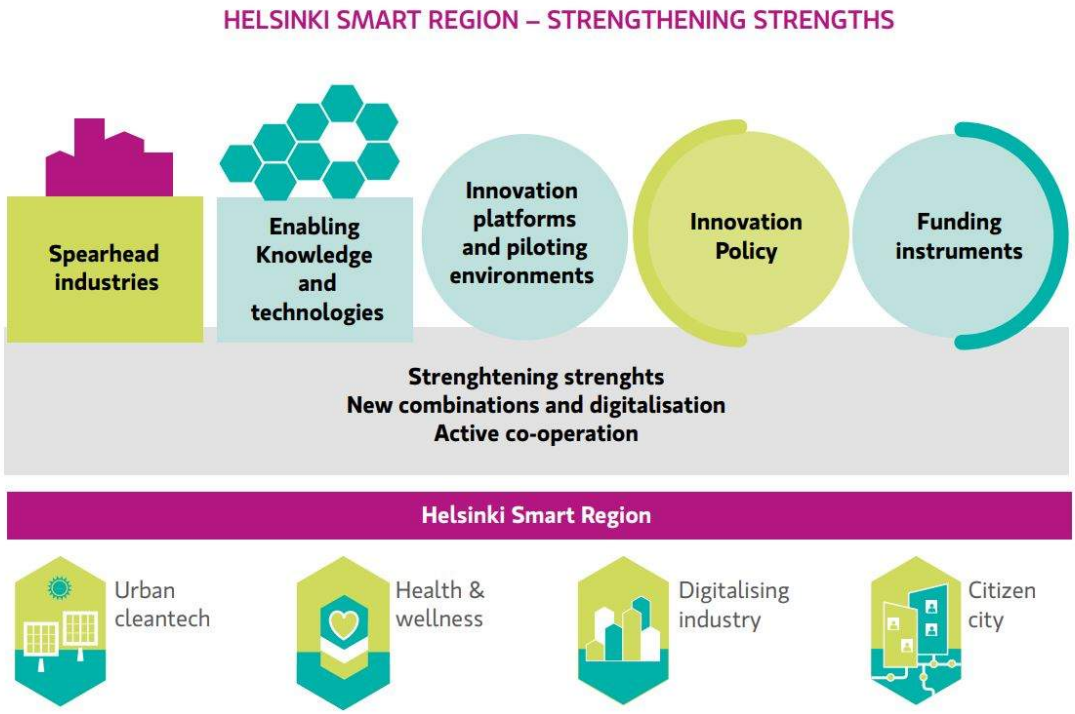
Urban-rural typology, by NUTS 3 regions, source: Eurostat 2021

Rural areas

Rural areas (often labelled as 'countryside') are most fundamentally defined by their low population density in comparison to cities. Moreover, agriculture, forestry, or resource extraction dominate the landscape and generally drive the economy. In recent years, globalization and digitization have led to the rise of new economic sectors, such as tourism and

energy production. On the other hand, however, rural areas have also experienced processes of decline, such as population ageing, brain-drain and a withdrawal of public services.

Nevertheless, rural areas are often part of larger territories in which they functionally blend with urban centres, as can be seen in metropolitan areas all over Europe. This is encompassed in the term of 'global countryside' (cf. Woods 2007, 2013)



Helsinki Smart Region strategy, source: https://www.researchgate.net/figure/The-concept-of-the-Helsinki-Region-smart-specialization-strategy-is-an-ongoing-systemic_fig1_326307590

Smart Region

The terms smart city and smart region are deeply interwoven and together stand for the vision of digitally networked cities and regions that pursue socially, ecologically, and economically sustainable goals via technological innovation. A smart region must be viewed as an interconnected socio-economic system with many stakeholders. Also, ‘resilience’ is often

pursued by means of novel strategies that aim to anticipate and adapt to oncoming complex challenges.

This implies a change in traditional regional strategic approaches which now seek to integrate complexity on a systemic level by means of new digital solutions that allow rural areas to monitor socio-economic developments and foster adequate resources and competences accordingly.

Digital Pioneers & Innovation Networks

Digital innovation refers to the process of applying digital technology as a mean to solving economic and/or societal problems. Hence, digital pioneers might be best described as individuals with particular resources and skills which allow them to adopt innovations before others (cf. Rogers 2003).

More importantly, they often have a role model function within their regional environment which allows them to promote the diffusion of digital innovation. This phenomenon is widely discussed as innovation networks. Since these networks include actors from various sectors, such as the public sector, civil society, scientific institutions and regional enterprises, they in turn facilitate the regional spillover of an innovation (cf. Karlsson & Warda 2014).

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MF Maik Fischer

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Additional Material

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Click on the button to the right to gain access to an interactive Eurostat map that allows you to visualize various statistical domains.

GO TO EUROSTAT

Lesson 4 of 4

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