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Support services for Centres of Vocational Excellence

Scoping report

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Executive Summary

In 2018 the European Commission launched a flagship initiative for Vocational Education and Training (VET), a policy area in which the European Union (EU) has intervened since the Treaty of Rome. Labelled Centres of Vocational Excellence (CoVEs), the objective is to support pioneers of high quality, innovative and demand led VET through partnerships of employers, education providers and other stakeholders. The impact of such centres, especially at the local and regional level, will be enhanced if their activities are in line with innovation and economic development strategies. Within the EU such strategies are increasingly following the smart specialisation approach, which focuses public investment on selected innovation priorities.

There are many existing partnerships in Europe that can be described as CoVEs, both informal and those classified as such by national or regional governments. EU funding from the Erasmus programme will support European wide platforms of CoVEs to develop common activities and facilitate transnational learning. A first round of pilot CoVEs were launched in 2019 and seven more were selected in July 2020, to be funded by the Erasmus+ programme. The next generation of Erasmus starting in 2021 has a draft budget allocation of €200 million. Furthermore, the European Structural and Investment Funds could be mobilised to support CoVEs (both those financed by Erasmus and others), including the European Regional Development Fund which for the first time will finance investments in human capital.

Transnational learning and "levelling up" between countries would be maximised if the individual CoVEs could rely on European level support services. Such policy support is common for EU policies that engage with institutions and citizens, and appears to be particularly crucial for the CoVE initiative which targets relatively less developed and connected stakeholders. This scoping report aims to provide an overview of what services could be provided. It is based on the results of a join DG Employment – JRC workshop on VET and Smart Specialisation, as well as follow up interviews with stakeholders. In addition, similar support policy support facilities were analysed, especially the experience of the JRC in managing the S3 Platform, which provides advice to national and regional authorities on Smart Specialisation Strategies.

Following a discussion of the policy context, including a competence-based approach to strengthening VET and the demand led nature of Smart Specialisation, specific proposals for services are analysed and their potential resource intensity is estimated. They are structured around three groups of activities, indicated by DG Employment as potential support 'hubs', namely (i) Knowledge-sharing, (ii) Networking and Collaboration, and (iii) Information and Support. These activities are also mapped according to other typologies, namely the level of customisation and their target users (individuals, institutions or the skills/innovation system as a whole). This helps to appropriately design the future support services. It is also proposed that the services be guided by certain principles, namely that they should be relevant, coherent, effective and efficient, innovative and digital, as well as (crucially) empowering.

The following services are proposed and analysed:

— Innovation handbook

— Business sector case studies (and/or surveys)

— Territorial reviews of industrial transition

— Compendium of good practice (CoVE stories)

— Working Group on the Development of Vocational Excellence Competences

— Working group on a CoVE fellowship model

— Online knowledge, networking and communication hub

— CoVE mapping and European partnership tool

— Peer learning workshops

— Self-assessment tools

— Management of a European network of national CoVE support services

— Scoping industry needs and gathering intelligence

— Dissemination of VET Excellence via an online platform

— Integration into European innovation communities

— Quality Assurance

Coherence between services becomes evident when mapping the services across the different typologies, which shows that they do not fit exclusively into separate hubs. Some, such as the proposed working groups on a competence framework of fellowship scheme would be knowledge heavy to begin with but later their results could be operationalised through networking and targeted support. The different services are not intended to be launched at the same time, not least due to resource constraints, and some may be deemed less relevant as the initiative develops. However, the report provides a 'menu' of services that could be provided depending on the demand from the CoVEs and the policy objectives of the EU.

1 Introduction

Centres of Vocational Excellence (CoVEs) are vanguard institutions/partnerships[1] that not only excel in the provision of Vocational Education and Training (VET) but also go beyond what is usually expected of VET providers (European Commission 2019). They are institutions in the broad sense of the word because they bring together a number of different organisations from business, government and civil society in addition to traditional providers of education and training. Such partnerships develop strategic and operational plans to meet the specific skill needs of a sector or a territory, linked increasingly to innovation and the green and digital transitions. Therefore, they are an important part of skills and innovation ecosystems, which describe the capabilities, relationships and interactions between individuals and institutions.

There is a trend towards vocational excellence, across Europe and indeed internationally.[2] Roughly speaking there are two types (European Commission 2019): On the one hand, there are nationally designated CoVEs, such as the *Campus des Métiers* in France or the *Istituti Tecnici Superiori* in Italy, while on the other there are individual VET providers or local/regional partnerships that display the characteristics of vocational excellence. Since 2018, the European Commission has initiated support to set-up European Platforms of CoVEs funded by the Erasmus programme.[3] In 2019, five pilot platforms were established and in 2020 seven more will be selected from a total of 48 applications, demonstrating the demand and interest in the initiative.

The CoVE platforms will provide a European dimension to vocational excellence, developing joint activities, while contributing to the 'upward convergence' of the individual partners. The Commission plans to roll out the initiative on a larger scale in the forthcoming multi-annual financial framework, proposing a budget allocation of at least €200million under the Erasmus programme 2021-2027 (exact figure still to be confirmed). While the platforms allow for learning and mutual support among partners, dedicated support services at European level would significantly strengthen the initiative and the development of vocational excellence overall. This scoping report discusses the content, activities and feasibility of such a CoVE support service. It considers both the experiences of support to other EU policies, in particular Smart Specialisation, and the distinctive nature, current and future needs of the CoVEs.

After this introduction, the report provides a brief overview of trends in VET and EU policy, as well as those related to industrial policy, innovation and regional development, to which CoVEs could contribute. This is followed by a discussion of the typologies, principles and approaches to the support services, drawing on lessons from the JRC-managed S3 Platform as well as the work of other national, European and international organisations in the area of vocational excellence. The fourth part introduces each of the potential services, analysing their contribution, possible difficulties, and level of resource required. The conclusion is that the support services should focus on building competences and capabilities in vocational excellence, since this is the basis not only for high quality VET but also for cooperation, partnership, governance and participation in regional innovation systems.

[1] The term institution is used broadly and does not have the same meaning as an organisation.

[2] E.g. New Zealand launched a similar imitative last year: https://www.tec.govt.nz/rove/coves

[3] The Commission first announced the CoVE initiative in the Communication on Building a Stronger Europe: the role of youth, education and culture policies (European Commission 2018). However an initiative to promote Vocational Excellence has been called for since 2004.

2 Context for CoVEs and the support services

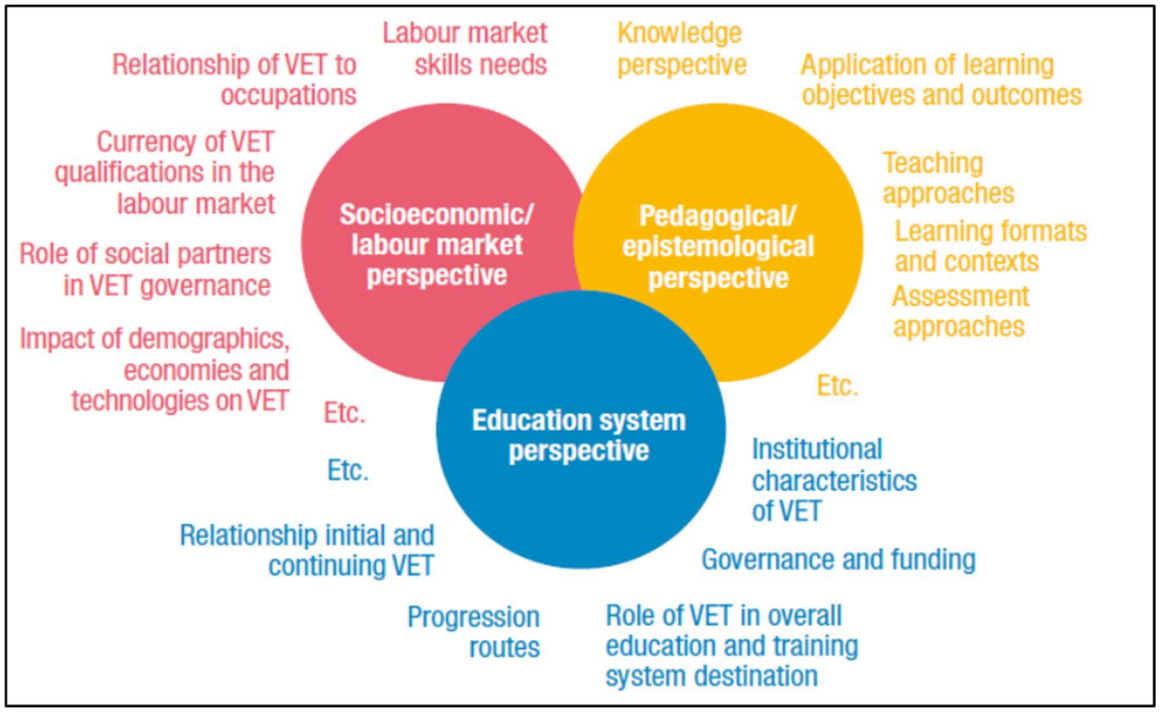
2.1 Education

2.1.1 VET today and in the future

The European Centre for the Development of Vocational Training (CEDEFOP) describes VET as 'education and training which aims to equip people with the knowledge, know-how, skills and/or competences required for particular occupations or more broadly on the labour market' (CEDEFOP, 2020, p. 24). It takes place at different levels of education, usually provided in specialized training institutions, and focuses on giving students tools and integration in the workplace, through apprenticeships, formal and non-formal learning, delivered by highly qualified teaching staff and practitioners.

Recent years have seen a considerable change in the concept of VET and its practice. The focus is now on preparing workers and young people to meet the challenges of industry through the development of key competences (CEDOFOP, 2020). Digitalization, new technologies, and sustainability are areas that VET now has to address (Johal & Urban, 2020; Markowitsch & Hefler, 2019) while also integrating these perspectives in their own learning methods. It has also become more difficult to differentiate vocational from academic education (CEDOFOP, 2020), where VET is becoming more relevant at all levels and forms of education. With a new emphasis on learning outcomes, it is not the type but the quality and outcomes of education that matters (Hazelkorn and Edwards 2019).

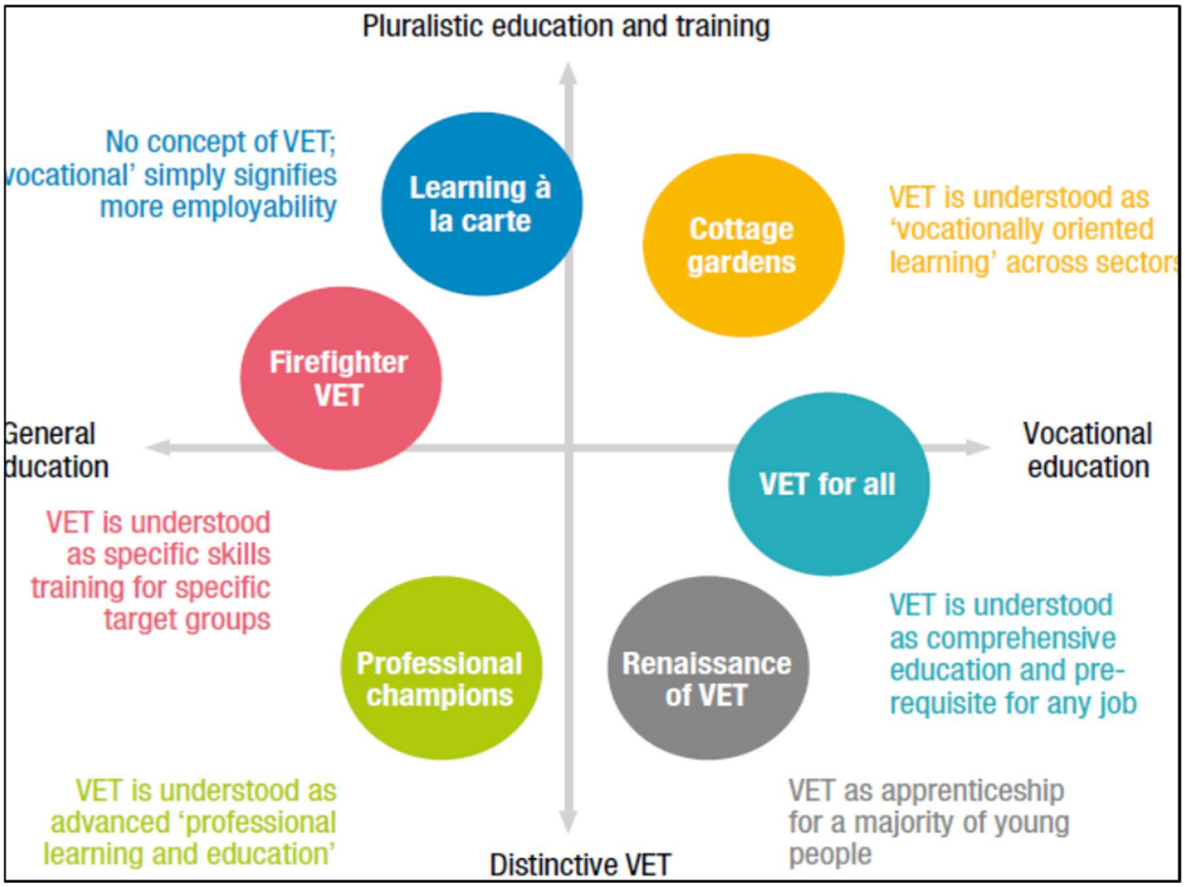
Figure 1: Conceptual Framework to Characterize VET



Source: CEDOFOP 2020

VET is perceived differently throughout Europe, as illustrated by CEDEFOP (2020) in Figure 1: an epistemological or pedagogical ("learning by doing" and workplace-based settings); an education system (VET providers; the nature and scale of VET – level of education; status of learners); and a socioeconomic or labour market perspective (costs and benefits for employers and workers).

Figure 2: Six future scenarios for VET



Source: CEDEFOP (2020)

As illustrated in Figure 2 **Error! Reference source not found.**, CEDOFOP (2020) also proposes six future scenarios of VET development:

— Learning à la carte is the most pluralistic vision in which the distinction between VET and general education becomes obsolete. In this scenario, learning focuses on industry-specific needs, entrepreneurial education and lifelong learning.

— Cottage gardens in which highly varied and well-organised education provision coexist and in which the vocational dimension plays an important role. There is a strategic focus on partnerships and methodologies.

— Firefighter VET, the primary purpose of which is to tackle deficiencies of the education and labour market system; VET is a minority track concerned with supporting unemployed adults and early school leavers to (re-)enter the labour market.

— Professional champions describes a system of apprenticeships, loosely coupled with mainstream general and higher education. There is an emphasis on designing pathways by linking different levels of VET.

— VET for all is a comprehensive system where VET caters for all types of career paths and students, making it highly inclusive.

— Renaissance of VET with modernised apprenticeships within the upper secondary level and the emergence of strong and distinctive higher VET. The VET education system responds to industry challenges with regard to applied research and innovation, while developing competences of critical thinking, entrepreneurship and "hands on" innovation.

The economic context, policy decisions and external drivers (e.g. technological change, demography/migration, societal trends) all shape these scenarios. The future of VET is dependent on how institutions or countries put it into practice, ensuring it is relevant to the particular economic, social, and environmental context (CEDOFOP, 2020). The development of a wide set of organisational practices (e.g. planning, financing, human resource management, administrative structure, and internal monitoring and communication) is critical, while fostering external relationships is fundamental to a much-needed sense of community and enhanced status.

2.1.2 Innovation in Education from an Institutional Perspective

There is a wealth of literature and policy documents about innovation within education and training institutions. It can be the result of different drivers and be analysed within six key areas identified by the OECD (Vincent-Lancrin et al. 2019):

- **Human resources**: regarding the skills for and openness to innovation of actors (teachers and faculty) within the education sector.
- **Learning organisations**: innovation and improvement are strongly linked to how work is organised and whether education establishments and professionals are able to both absorb and generate improved knowledge and practice.
- **Technology**: the application of technologies to the education sector (e.g. digital technologies) is a critical for innovation and improvement.
- **Regulation and system organisation**: innovation and improvement only succeeds when regulations do not prevent curriculum, assessment or entrepreneurial incentives and funds to take place in schools.
- **Educational research**: the investment in and use of research and evaluation to develop an educational innovation ecosystem.
- **Educational development**: innovative tools, organisations, and processes are needed to improve and change the practices in the education sector.

The demands for competences are continuously evolving. Investing in lifelong learning is crucial, through more learning on the job to maximise future employability. The advantages of continuous learning bring people in different phases of their life and professional cycles back into education and promote more engagement with employers. These partnerships, or new forms of them, between the education system and public and private actors lead to curricula improvement, experimenting with new intersections between disciplines, with a positive impact on employability (EPSC, 2017).

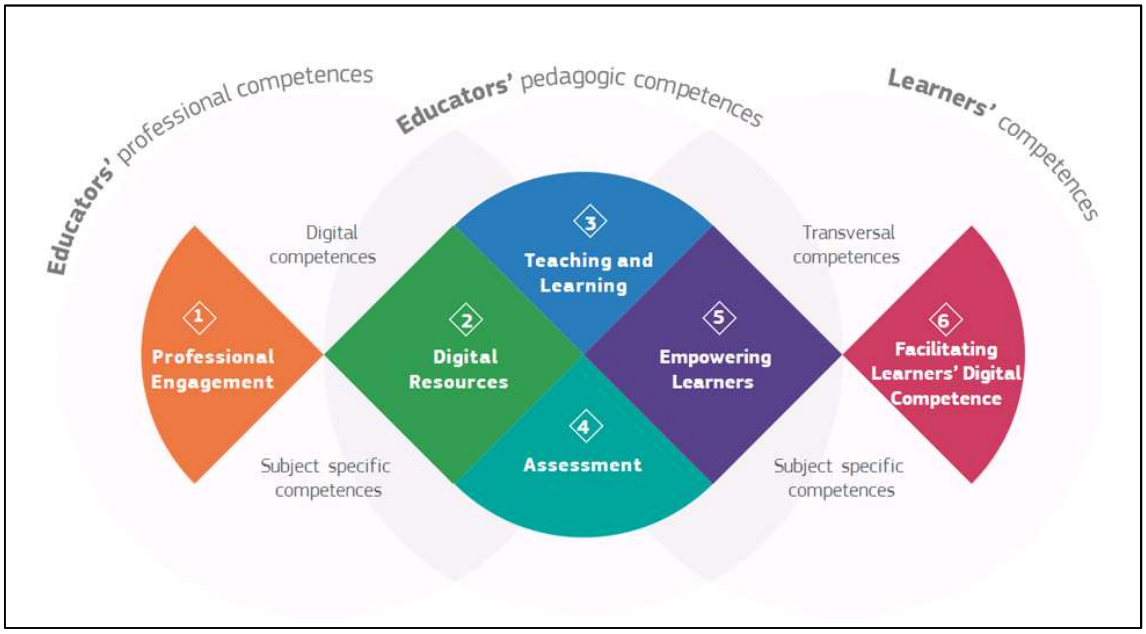
2.1.3 Innovation in Education from a Competence Perspective

Starting in 2010, the Joint Research Centre developed the Digital Competence Framework (DigComp) aimed at identifying the key components of Digital Competence in terms of the knowledge, skills and attitudes needed to be digitally competent. DigComp is now integrated into the Europass Framework and has evolved to include Digitally Competent Education Organisations (DigCompOrg) as well as Digital Competence Framework for Educators (DigCompEdu).

In the education sector, digital competences affect all aspects of the educational value chain (e.g., curricular reform, assessment). They involve teachers, students, and schools and are already having an impact on learning and teaching practices. The JRC developed a working document on “Developing digital competence for employability: engaging and supporting stakeholders with the use of DigComp” (Centeno, 2019) which could be used in the work with the CoVEs at the institutional level in conjunction with DigCompOrg.

The need for digital, sustainability and critical thinking knowledge and skills is clearly understood, but also entrepreneurial competences need to be further promoted, in a lifelong learning approach. This is crucial to achieve the goal of educating students who will be able to be proactive, responsible, and autonomous innovators.

Figure 3: DigCompEdu Framework



Source: JRC (2017)

Entrepreneurial learning has different perspectives: experiential (learning is a process by which concepts arise from the experience and continuous reflection of the entrepreneur), cognitive (learning is the mental process of acquisition, storage and use of entrepreneurial knowledge in the long run which is in turn affected by emotional, motivational, attitude and personality factors); and networking (entrepreneurial knowledge is acquired through the networks of relationships - clients, suppliers, banks, high education institutions, professionals, relatives, friends and mentors) (Paiva et al., 2019).

Entrepreneurs learn through direct experience, practices, successes and failures, as well as relationships with others (Rae, D., & Wang, C. L., 2015; Rae & Carswell, 2000). In this sense, entrepreneurial education needs to be promoted within the VET system to further encourage the "thinking hands" approach needed by industry. VET Excellence must endorse the promotion of entrepreneurial competences (EntreComp, 2016) as a part of its focus on quality assurance such as it is in the EIT Masters and PhD Label (EIT Label Handbook, 2018).

2.1.4 The EIT QALE Model

The European Institute of Innovation and Technology (EIT) is based on the knowledge triangle, bringing together leading business, education and research organisations to form cross-border partnerships. This approach followed by the EIT, especially in the education sector, has several parallels to the CoVEs initiative. The EIT Quality Assurance and Learning Enhancement Model (QALE) and the EIT Label are part of a quality assurance process that academic partners have to go through in order to receive funding from the Knowledge and Innovation Communities (KICs). External experts review proposals to ensure they follow the EIT Label guidelines. The EIT-specific quality criteria and EIT overarching learning outcomes apply to all EIT labelled degree programmes and include:

- Robust entrepreneurship education;
- Highly integrated, innovative learning-by-doing curricula;
- International and cross-organisational mobility, the European Dimension and openness to the world; and
- Access policy and joint outreach strategy.

EIT labelled programmes aim to ensure that students demonstrate skills and competences in the areas of creativity, innovation, entrepreneurship, research, and leadership.

2.1.5 Micro-credentials / Modular Approach

Many education and training Institutions now offer courses in modular version and credentialing in the form of digital badges, nano-degrees, and micro-credentialing for use in the acknowledgement of online coursework (Lemoine & Richardson, 2015), to provide a method of accrediting content knowledge rather than course credit for specific knowledge.

According to the International Standard Classification of Education (ISCED), "A micro-credential is a certification of assessed learning that is additional, alternate, complementary to or a component part of a formal qualification", (UNESCO Institute of Statistics, 2011 cited by Oliver, 2019). But there is still much discussion over how these types of credits should be attributed, defended by some as fully-open credentials and by others as credentials issued by trusted institutions, since they believe credibility is the way to win the confidence of learners, employers and providers. Micro-credentials should build trust, add value in areas of importance, and achieve sustainability (Oliver, 2019).

A key aspect of VET excellence in the future will be integrating the abilities to work with micro-credentials and incorporate these within the educational offering, integrating them with other initiatives such as the redevelopment of the Europass Framework.

Box 1: The Kaplan CoDegree

- A new model from the US academic services company, Kaplan, is the CreDegree. The aim is to address the needs of a quickly moving market with undergraduate degrees having recognised credentials as the differentiating factor. By combining degrees (e.g. cybersecurity or graphic design) with specific certifications (e.g. Security+ Certification or Adobe Dreamweaver, Illustrator, InDesign Certification) it provides industry-recognized credentials that: 1) Increase the value of a degree (both perceived and tangible); 2) Positions the graduate more effectively in the job market and 3) Effectively fend off the work readiness critique of higher education. The secondary aim is to attract more corporate partnerships for internships and recruitment, which responds to the major concern of students and parents that a degree should lead to gainful employment.

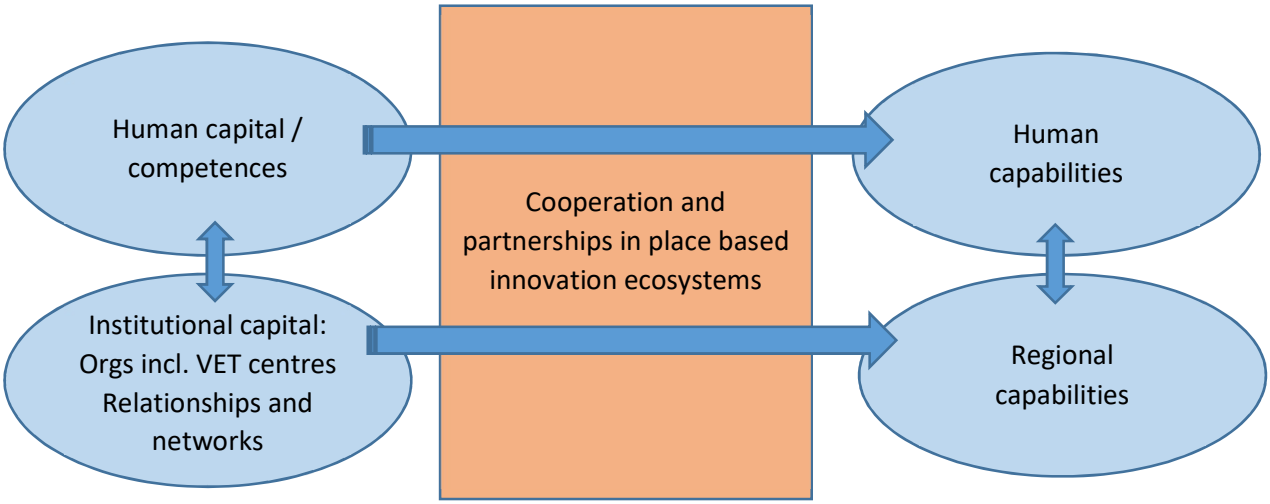
2.2 Innovation and regional development

2.2.1 A capabilities approach to vocational excellence and regional development

Increasing the quality of VET, notably stronger emphasis on entrepreneurial and digital skills, in addition to technical skills, is one way of boosting innovation and economic development. However, the impact can be even greater if education and training take into account the skills needs of local employers as well as the innovation priorities of the country and region. Cooperation and partnership turn competences/human capital into capabilities, and is thus a central part of the vocational excellence approach. On the one hand such capabilities relate to individuals because they allow people to use their competences, gain employment or start a business, and ultimately lead a life they value (Sen 1997). On the other hand, it can be argued that such capabilities exist on a community or local/regional level (Edwards 2012). Institutional capital including organisations and 'social capital' (relationships and networks) is converted into regional capabilities through cooperation and partnerships (See Figure).

Education and training also has other positive impacts on making places more attractive to live, albeit subjective indicators of quality of life (younger population, culture and creativity, social and community). Finally, it must be remembered that high quality learning is intrinsically valuable in itself, regardless of its potential to drive innovation and economic/social development in places.

Figure 4: A capabilities approach to vocational excellence



Source: own elaboration

2.2.2 Territorial education and skills eco-systems

A further characteristic of CoVEs is the link between other levels of education and institutions, as well as the horizontal nature of VET that means it can feature in many different types of institutions. In fact, what is important for CoVEs is not the type of institution that delivers education and training but its quality (Hazelkorn and Edwards 2019). At the same time, territorial systems of education involve cooperation between institutions whether at the same level (e.g. between universities or technical schools) or between them. This is not always easy to achieve, due to institutional frictions and national regulations. However, several case studies of higher education in regions has shown that this is possible (Navarro et al 2017; Benneworth and Arregui, forthcoming). The new JRC project on Education and Skills for Regional Innovation Transitions (ESRIT) aims to combine perspectives from different levels of education. This type of institutional coordination as well as cooperation with local employers has been described as a (regional) skills ecosystem (Dalziel 2014; Finegold 1999).

2.2.3 Regional innovation systems

The concept of regional innovation systems has been put forward by academics (see Moulaert 2003 for an overview) to describe the institutions and more importantly the relationships between them that most likely lead to innovation. Traditionally universities have been analysed as crucial components of these systems, since compared to other types of education and training institutions they are more likely to be involved in research and innovation projects. The role of CoVEs in such systems deserves much more attention, because 1) they are also involved in R&I projects, especially in applied research which can have a greater impact locally, and 2) high level vocational skills are crucial for the type of Doing-Using-Interacting mode of innovation (Jensen et al., 2007) that can have a much greater impact than the Science and Technology mode of innovation which is usually associated with research intensive universities.

2.2.4 Smart Specialisation

Smart Specialisation has underpinned regional innovation policy in the EU: Since 2014 all ERDF spending on research and innovation has been dependent on a Smart Specialisation Strategy (S3 or RIS3), sometimes at national, but usually at a regional level. These strategies prioritise public investment in a limited number of innovation priorities in order to create critical mass for regional transformation. Crucially, these priorities should be the result of an 'Entrepreneurial Process of Discovery'. Through discussion, experimentation and monitoring, entrepreneurs and other innovation actors discover which knowledge-based activities are most likely to be successful in their region.

In its Communication on Strengthening Innovation in Europe's Regions, the Commission (2017) took stock of S3 implementation. One of the most interesting observations was that VET should take a much larger role in building the skills for innovation at regional level. In the accompanying staff document (European Commission 2017b), three reasons were given: 1) VET contributes to absorption of knowledge; 2) VET provides the skills for

innovation in work practices that allow companies, especially SMEs, to remain competitive within global value chains; and 3) innovation cannot be limited to high tech industries, which also takes pace in low and mid tech firms and which accounts for the majority of employment. In conclusion the SWD stresses that *"Investment in training is also an investment in innovation, since many technological changes result from incremental innovations made by skilled workers and engineers on the factory floor"* (European Commission 2017b, p38). It also notes however that the potential to drive innovation has not been taken into account in most education and training systems.

The CoVE initiative can act as a demonstrator to show that VET can play a crucial role in innovation and smart specialisation. This will also help regional authorities understand their contribution better and invest funds from their own ESIF operational programmes in CoVEs. In particular, this can be included in the proposed new specific objective on Skills for Smart Specialisation, Entrepreneurship and Industrial Transition under the policy objective for Smart Growth. Synergies between Erasmus and the ESIF is a way to ensure sustainability of the CoVEs and scale the initiative up within the Member States.

2.2.5 Regional industrial transitions

While successful industrial transitions may rely on a host of different policy areas, targeted provision of education and training is one of the most important to address. It has been largely neglected by S3, showing the limitation of traditional R&I policies (Edwards et al 2017; Hazelkorn and Edwards 2019). The most successful and innovative firms invest in different types of human competences (through recruitment or in house training), but they are geographically concentrated in more economically developed regions. Public investment has a role to increase the collective availability of human competences in those places that need them most.

Investment in human competences can allow firms to better absorb new technologies and adapt to new business models. However, 'soft' competences are needed in addition to technical skills for the specific transition path that to be followed. Furthermore, vocational education, training and adult learning can address demographic challenges in regions going through industrial transition, since the population is likely to be older and requires upskilling or reskilling through innovative pedagogical techniques. Other factors affecting participation in education and training include gender and social exclusion. More generally, upskilling and reskilling increase social esteem and civic awareness, acting as a mitigating factor against the negative consequences of unemployment and globalisation.

3 Rationale, typologies, and principles of CoVE support services

There is a clear demand and rationale for CoVE support services at EU level. This is shown by the meetings and workshops already held between the Commission and the selected pilot CoVEs. Arguments for such services include:

— Vocational excellence is a relatively new concept that is not fully understood or present in all Member States.

— The selected CoVE platforms will not have the same level of experience in European cooperation and the support services can give special attention to those who need most assistance.

— Some CoVE platforms have fewer partners from a small number of countries, limiting their exposure to different perspectives (geographical, levels of innovation etc). Involvement in activities of the support services will increase the European added value of the initiative.

— Like the European Universities, the aim of the CoVE initiative is to move beyond simple project-based funding by creating sustainable networks. This will be challenging, especially given the nature and capacity of some of the VET partners.

— Support services would complement the role of DG Employment and the EACEA in raising the profile of the CoVE platforms as well as vocational excellence overall. This would also help to make the initiative more inclusive, aiding the emergence of new platforms with partners less experienced in applying for EU support.

Many other policy areas rely on support services, on various scales and for different needs, as shown in a collection of examples in Table 1, with more detail in the Annex. Some are managed by EU institutions including the policy directorate generals, the Joint Research Centre and thematic agencies, while others are managed by external contractors. Such services vary from simple provision of information to intensive engagement with stakeholders.

Future support services to CoVEs can be analysed according to the different typologies. It is important to remember however, that services will straddle the different types, reinforcing the need for coherent delivery, drawing on sources of expertise and competence under a single coordinator. Three typologies can be used to describe the type of support services.

1. **Activities:** DG Employment has foreseen that services to CoVEs could take three forms: Knowledge-sharing, Networking and Collaboration, and Information and Support.
2. **Level of customisation:** Some non-customised services such as handbooks or tools would be applicable to all CoVEs and institutions interested in Vocational Excellence, others would be customised towards types of CoVEs (themes or levels of development), while highly customised services could target individual CoVEs.
3. **Target of support:** Services can target the people involved with CoVEs whether student, staff or partners, the CoVEs as institutions in the way they are managed and collaborate, and the regional innovation eco-systems in which they operate.

Table 1: Examples of relevant EU support services

Support service (link)	Established by	Managed by	Objective / activities	Cost
European Rural Development Network (ERDN)	DG Agriculture and Rural Development (DG AGRI) in 2008	External Contractors	Provides support to Community Led Local Development Action Groups in rural and coastal areas.	EUR 39 815 300 over seven years (Two contracts: EUR 28 000 000 + EUR 11 815 300 EUR
Urban Data Platform Plus	DG Regional and Urban Policy (DG REGIO)	Joint Research Centre	Provides access to information on the status and trends of cities and regions and EU support for urban and territorial development strategies.	Not available
Research and Innovation Observatory – Horizon 2020 Policy Support Facility	DG Research and Innovation (DG RTD) in 2014	DG RTD and Joint Research Centre	Delivers analysis, insights, statistical data and best practices on designing, implementing and evaluating research and innovation policy at EU and national levels	Not available
European Observatory for Clusters and Industrial Change	DG for Internal Market, Industry, Entrepreneurship and SMEs (DG GROW) in 2017	External Contractors	Helps Europe's regions and countries in designing better and more evidence-based cluster policies and initiatives.	EUR 6 000 000 over four years
S3 Platform	DG REGIO in 2011 (and subsequently DGs CONNECT, EAC, ENER, GROW, MARE, NEAR)	Joint Research Centre	Provides advice to EU countries and regions for the design and implementation of their Smart Specialisation Strategy (S3) and facilitates mutual learning between them	Not available

Table 2: Typologies of support services – Activities mapped

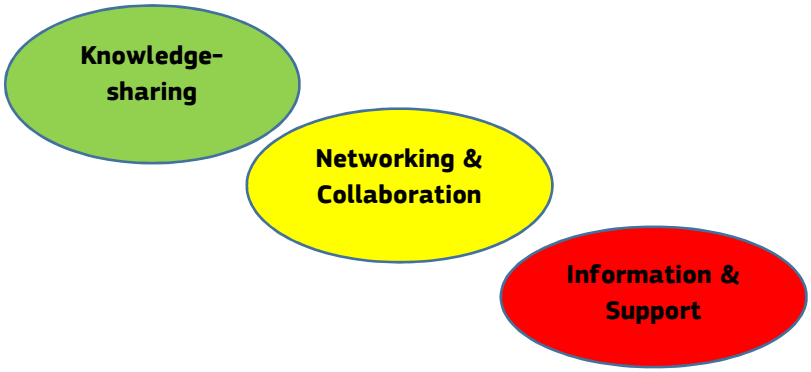
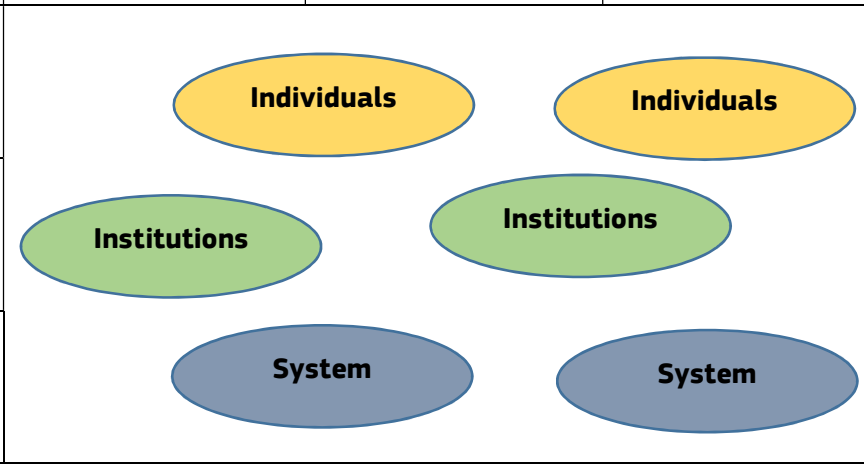
	Individuals	Institutions	System
Non-customised			
Customised			
Highly customised			

Table 2 above shows the different types of activities, mapped on a matrix of the other two typologies of services. This allows us to see how activities cut across individuals, institutions and systems, while some are much more customized to individual CoVEs or territories than others. When mapped in this way on Table 4 in the next section we can see that most of the activities target the CoVEs as institutions and the systems (there is in fact a blurring of these two targets, given the nature of the CoVEs as partnerships). However, there are some important activities targeting individuals within CoVEs, notably the development of competences, a fellowship scheme and a marketing/information portal (this is different from a website for the support services themselves). In Table 3 below it is the targets that are mapped on a matrix of the other two typologies. When the activities are mapped in this way, in Table 5, it shows how many of them cover all three types of knowledge, capacity building and technical assistance services, underlining the importance of integrated delivery.

Table 3: Typologies of support services – targets mapped

	Knowledge-sharing	Networking & collaboration	Information & support
Non-customised			
Customised			
Highly customised			

In advance of setting up support services and when monitoring their delivery, it is important to establish a set of principles which should be followed. These could include:

- **Relevant:** The services offered need to be relevant to the CoVEs and the approach of vocational excellence itself. Feedback from representatives of the CoVEs as well as advice from external experts could help to ensure relevance.
- **Coherent:** The different services as described in the above typologies may be provided by more than one organisation and with the assistance of external experts. However, it is essential that the services are delivered seamlessly in a coherent manner that is clear for the VET community, in particular the CoVEs themselves, as well as policy makers.
- **Effective and efficient:** The objectives of the support services need to be clearly and realistically defined, in order to ensure that they are effective, to decide on the best mode of delivery and to enable monitoring of progress. Organisations and people who can deliver them most efficiently should provide the different support services.
- **Innovative and digital:** In order to practice what they preach, the support services should be delivered in an innovative and user-friendly manner. In this context, the public and private sectors may offer different but complementary approaches. Furthermore, the current COVID pandemic shows us that activities such as seminars, workshops and trainings can be carried out remotely, thanks to new technologies and open minds. A combination of remote and proximate delivery should be integrated into the design of the services.
- **Empowering:** The support should not lead to a relationship of dependence between the CoVEs and the EU services. Whenever possible CoVEs should be encouraged to take initiatives forward in a bottom up manner. This also applies to activities of the CoVE support services themselves, when participatory methods should be used extensively.

4 Overview of possible CoVE support services

This section outlines the different possible CoVE support services, structured around the three groups of activities of Knowledge Sharing, Networking and Collaboration and Information and Support. In Table 4 the groups are shown in different colours and as introduced in the previous section, are mapped according to their level of customisation and target user. Table 5 maps the services according to their target user, with different colours indicating whether they target individuals, institutions or services, as explained in Table 3. When they cover more than one target user they are shaded in several colours.

4.1 Knowledge sharing

4.1.1 Innovation handbook

Industry needs the kind of replicable or 'Doing-Using-Interacting' (DUI) mode of innovation that VET graduates can help bring about. This mode "relies on informal processes of learning and experience-based know-how", compared to the Science, Technology and Innovation (STI) mode, which "is based on the production and use of codified scientific and technical knowledge" (Jensen et al 2017). There are many different approaches to innovation, depending on the context and/or the form, and can incorporate different actors and organizations (Otero, 2019). This calls for a broader process of transformation in VET institutions as drivers of innovation in their regional ecosystems. Here the innovation is a "solution to different types of social, economic and environmental problems, with a specific focus on labour market issues" (Otero, 2019, p. 13). This has a strong impact on the VET education system since innovation and technologies shape the skills demanded by industry, and contribute to national/regional innovation systems.

A good practice from higher education is the Demola[4] innovation challenges platform, originating in Finland but now operating in 18 countries. It acts as an intermediary between industry and academia (students and teachers) to answer industry questions, challenges, and requests. Companies set the challenge and work with students in inter-disciplinary teams to find solutions. Demola and other similar initiatives are in line with the challenge-based approach to innovation policy that will be a central feature of the Horizon Europe programme.

The Basque VET innovation system[5] is divided into three pillars according to the type of research and degree of partnership with industry: Centre projects (projects partnership involving more than one school and company to provide specific innovation services to the community); Areas of specialisation (innovation projects with the participation of teachers and companies that aim to generate knowledge considered important by the Smart Specialisation Strategy); and Strategic Settings (development of innovative services to SMEs and Micro-SMEs in specific knowledge and VET areas).

Helping to build innovation systems would be one objective of the Innovation Handbook. It could draw on existing resources and methods such as those developed by the Transition Hub of the EIT Climate-KIC, in particular the visual toolbox. This would allow actors in the VET system, teachers, students and stakeholders to give feedback to regional and EU-level policymakers on how to strengthen the role of VET in regional innovation systems.

4 https://www.demola.net/

5 https://ec.europa.eu/social/BlobServlet?docId=18470&langId=en

Table 4: Mapping of CoVE Support Services

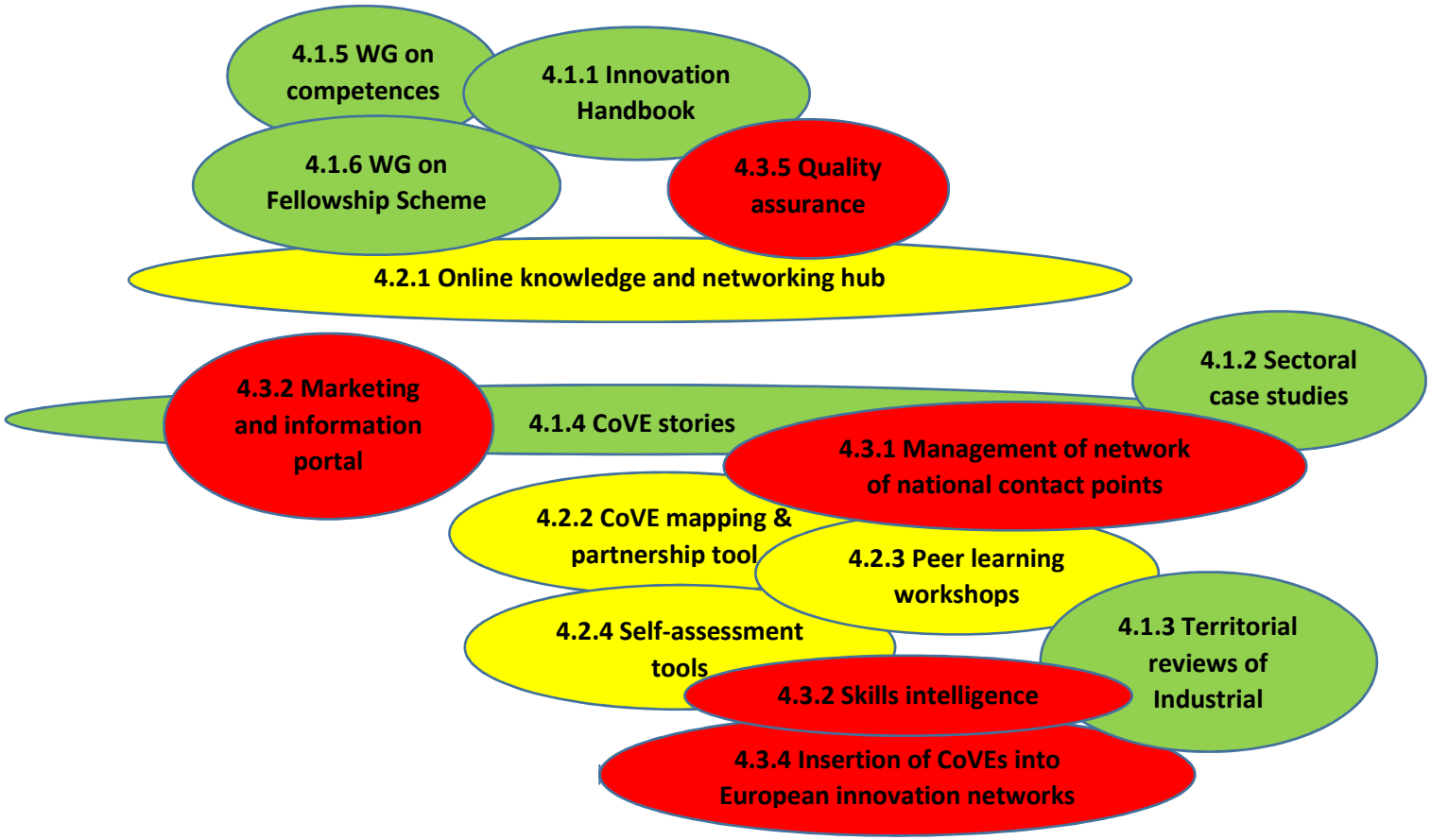
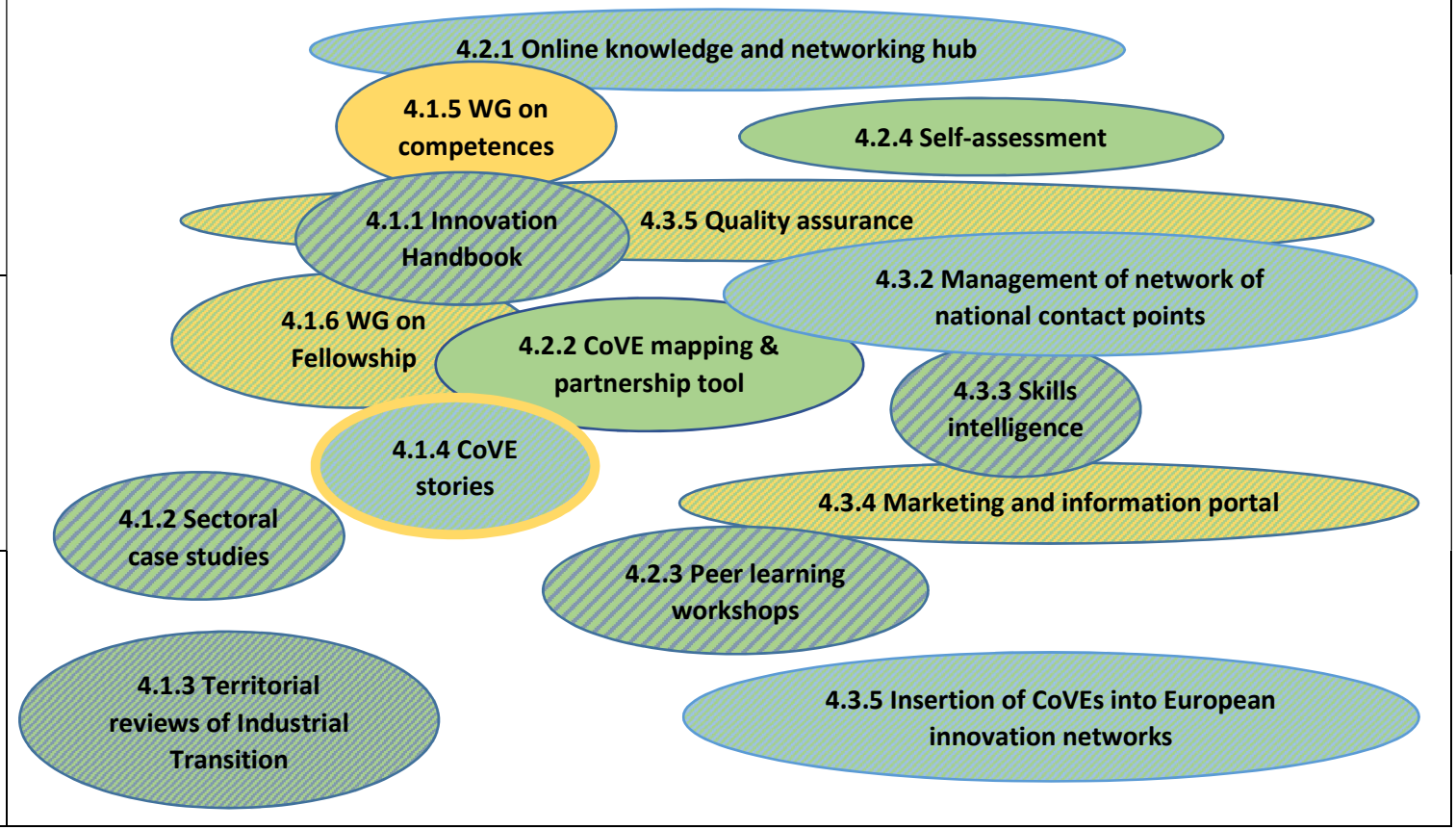
	Individuals	Institutions	System
Non-customised			
Customised			
Highly customised			

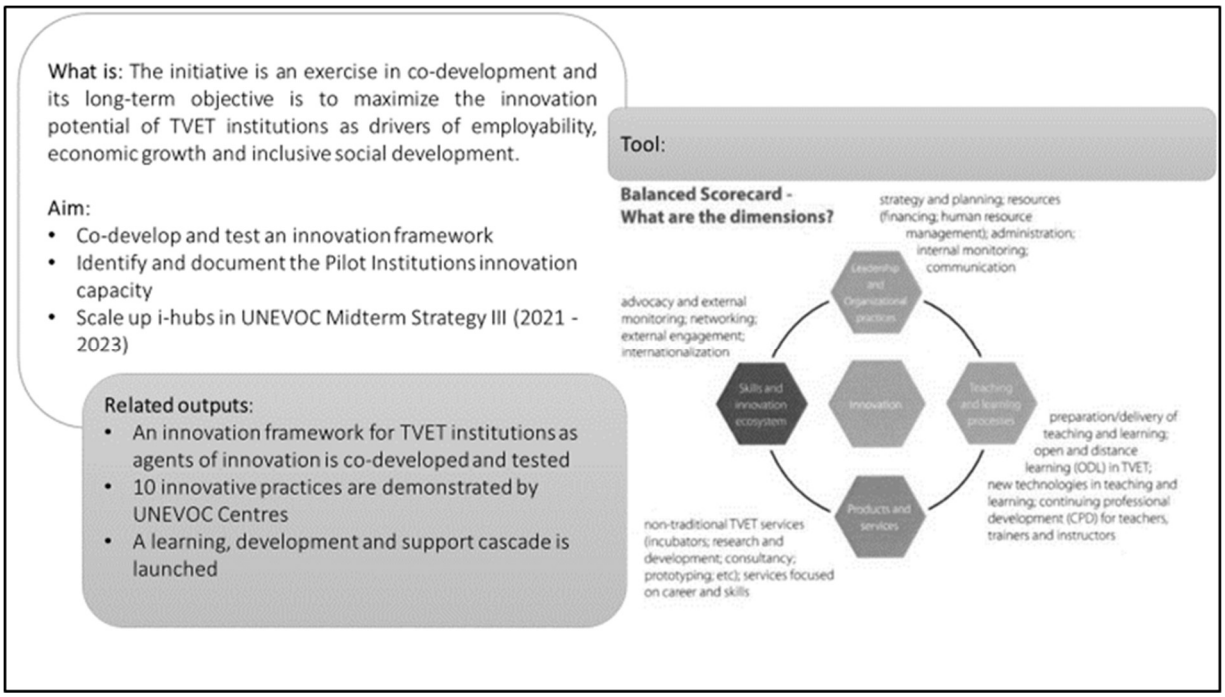
Table 5: Alternative Mapping of Support Services

	Knowledge-sharing	Networking & collaboration	Information & support
Non-customised			
Customised			
Highly customised			

EU and international organisations focusing on VET have also developed tools and resources to guide institutions in developing innovation strategies:

- As part of the i-hubs project, UNEVOC-UNESCO has developed a 'balanced scorecard' that is used by the project partners to help them self-assess their innovation performance, as illustrated in Figure 5. The scorecard is based on indicators covering four dimensions of innovation: Leadership and Organizational Practices; Teaching and Learning Processes; Products and Services and Skills and Innovation Ecosystem

Figure 5: i-hubs – UNESCO-UNEVOC



- The European Training Foundation is due to launch the 'ETF Network for Excellence' (ENE) in 2020, bringing together CoVEs from within the EU and its partner countries, for which the ETF is mainly responsible. One of the tools that the ETF will help ENE members use is a self-assessment exercise which includes a questionnaire composed of seven sections: Education-business collaboration and cooperation; Pedagogy and professional development; Autonomy, institutional improvement and resources; Lifelong learning in VET; Smart specialisation – mobilising innovation, ecosystems and SMEs; Industry 4.0 and digitalisation; and Going green – supporting sustainable goals.

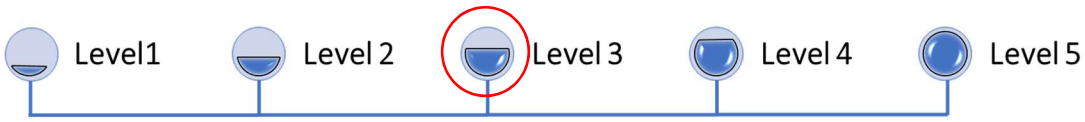
- CEDEFOP will soon launch a major study on entrepreneurship competence in VET, which could support a section of the handbook on entrepreneurship.

The CoVE Innovation Handbook would draw from this existing knowledge and good practice, while new ideas and examples would be co-discovered with CoVEs and experts on innovation processes. It could be published both as a single document and a 'living document' (i.e. online version in which comments could be made by users and along with new material would for the basis for regular updates).

Capacity building could be provided to trainers and facilitators at VET providers, companies, national and regional authorities, and other VET stakeholders to mobilise the collaborative process aimed at sharing and developing knowledge.

Technical assistance and system mapping could be used to provide collective intelligence and credibility concerning and solutions from the VET community, emphasising the role of collective agency. Potentially a series of events could be launched where feedback from across Europe can be given and help provided to organisations and authorities committed to Vocational Excellence. In this way, this instrument could help develop the VET answer to the challenges it presently faces and which must be dealt with in the future.

Resources: Existing material will help what could be a central task for the support services. Professional facilitation of handbook implementation could increase resources.



4.1.2 Business sector case studies (and/or surveys)

Action research aims to create knowledge (the research) with stakeholders while helping to build capacity (the action).

Box 3: Defining characteristics of action research

Practical. It is aimed at dealing with real-world problems and issues, typically at work and in organizational settings.

Change. Both as a way of dealing with practical problems and as a means of discovering more about phenomena, change is regarded as an integral part of research.

Cyclical process. Research involves a feedback loop in which initial findings generate possibilities for change which are then implemented and evaluated as a prelude to further investigation.

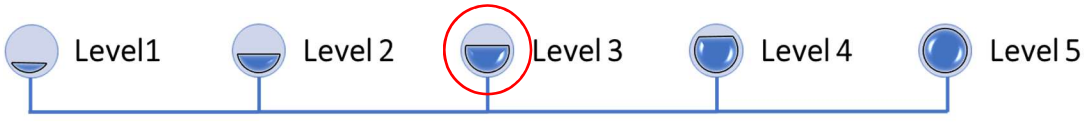
Participation. Practitioners are the crucial people in the research process. Their participation is active, not passive.

Source: Denscombe, M (2010) The Good Research Guide for small scale research projects, OUP

The business sector case studies could be linked to CoVE platform themes, intended to:

- Understand and find ways to raise demand for skills within firms
- Encourage firms to invest in skills
- Identify synergies between formal vocational training and on-the-job training
- Understand the relationship between skills development and broad-based innovation activities within firms (including not just R&D, but also non-R&D engineering, design, information technology, marketing, management)

Resources: Depends on the number of case studies but action research is resource intensive



4.1.3 Territorial reviews of industrial transition

Such reviews are intended to understand the architecture of the production and consumption system, the direction of structural change (in terms of sectors, value chains, skills, occupations, tasks) and the scope for developing targeted policy interventions in vocational skills and strengthening synergies with other policy domains (research and innovation, industrial policy, infrastructure, urban planning, social welfare provisions, regulation etc.) These reviews can follow a suitably adapted POINT methodology (Projecting Opportunities for INdustrial Transition as shown in Box 4), tested in four pilot reviews of industrial transition (Greece, Andalusia, Bulgaria and Romania). The reviews would focus on provision of skills through vocational excellence, while making links to other policy areas.

Box 4: POINT methodology for territorial reviews of industrial transition

The reviews focus on an industrial theme of growing global importance suggested by the relevant territorial authorities (for instance, but not confined to: climate change/renewable energy; electrification of transport; circular economy; digitalisation; artificial intelligence). The purpose of the reviews is to collect evidence and examine the scope for developing adequate territorial responses that harness cross-portfolio complementarities (e.g. between ministries and between levels of governance) and cross-stakeholder coordination (e.g. between businesses and broad constituencies of consumers/users). In each territory under review and for an industrial theme suggested by the authorities the review findings are documented in a report that serves to:

(a) Map the affected orientation, resource mobilisation, production and consumption systems in the territory;

(b) Document existing planning arrangements and directions of deliberate change (e.g. as described in thematic policy and business strategies, or evident in momentum-gathering social concerns and movements, consumer trends, common territorial values etc.) of various stakeholders in the affected systems that could later form the basis for a broadly-supported transition vision;

(c) Make concrete suggestions for the advancement of the transition and for managing its downsides. Given the nature and magnitude of the transition challenge, adequate territorial responses will include not just research and innovation policies that are already part of S3, but also industrial and employment policies more generally, including provisions for education and skills, for complementary large public infrastructures (e.g. in energy, transport, waste), urban planning, fiscal policy and social security reform, among others. The recommendations of the review therefore place a particular emphasis on fostering alignment and coordination within government.

Source: Pontikakis et al (2020)

Resources: The JRC has recently developed a methodology for such reviews, which would be focused on vocational excellence and skills

4.1.4 Compendium of good practice (CoVE stories)

The aim of the Compendium is to make easily available information and materials/ documentation on: (i) currently used VET good practices (pedagogies, formats, evaluation) and (ii) practices that will be designed and developed in the training and co-creation programme.

The long-term objective is that the Compendium will be used increasingly by existing CoVE communities in Europe and worldwide spreading the concept. In order to trigger a process whereby the Compendium is fed by its users, throughout the programme period the support services will feed a pool of 30-40 good practices in VET excellence (pedagogies, formats and evaluation). These will be practices reported by CoVE partners, participants of JRC workshops, teachers and practices identified by research. Links to existing databases, such as OPPE in France, already exist and will be expanded throughout Europe and globally. The Compendium would be accessible on the 'open' area of the support services website and could be a dissemination mechanism that is complementary to existing dissemination platform (e.g. Erasmus+, others?) that would be specifically for VET Excellence.

Resources:

4.1.5 Working Group on the Development of Vocational Excellence Competences

As referred to in part two, competence frameworks are becoming an important element of thinking and policy approaches to human capital. The support services could manage a working group and series of workshops for developing a competence framework for CoVEs. This would allow the consolidation of the concepts of VET excellence, based on active stakeholder engagement and expert input. This would also help contribute to the promotion of CoVEs. The working group would discuss how to integrate the DigComp, EntreComp, LifeComp and future ClimateComp into the concept of competence in vocational excellence and provide guidance on building such competences within CoVEs.

The support services would provide research-based insights and knowledge about the area in addition to managing the working group. It would directly relate to the ET2020 Working Group on VET but focus on the common factors and address the key challenges facing the CoVEs specifically. A main goal would also be to improve quality assurance in CoVEs. It is anticipated that the working group could find agreement on the required definitions and quality assurance procedures in approximately two years. This Working Group would feed into, and validate, the idea of a CoVEs Fellowship Model that could possibly be implemented in the EU funding period starting 2028.

Resources: Convening a working group and managing expert contracts, and workshops with CoVEs. Should not be too resource intensive.

4.1.6 Working group on a CoVE fellowship model

Both the European Institute for Innovation and Technology (EIT) Label for Masters and PhD and the European Vocational Training Association (EVTA) VET Quality Label for Centres of Excellence are institutionally focused. Currently, the EIT Label is based on a programme-centric approach for Masters and PhD industry-university consortiums. The stated aim of the EIT quality assurance and learning enhancement (QALE) system is to "move from 'teacher-driven' to 'student-centred' teaching and learning" (Label Handbook, 2018). The desire is also to change institutions from imparting knowledge to focusing on developing competences. The QALE process promotes programme excellence and the incorporation of overarching learning objectives that relate to the entrepreneurship and innovation mandate of the EIT.

A major problem facing vocational excellence is that students, employers and the general public do not understand what it means to be a CoVE graduate. The brand of VET Excellence needs to be focused on: 1) the learner; 2) work with the secondary-level VET providers and universities of applied science on ensuring quality; 3) enable everyone to communicate better to the market about VET excellence. One solution to this problem would be to work towards the development of a fellowship model that would be simple yet powerful, one that communicates to the market and connects the VET Centres of Excellence while fostering pan-European knowledge sharing.

In adopting a fellowship model, VET Excellence would not be without precedent in the EU. Innovative work at the institutional and individual level is part of the work plan for the Marie Skłodowska-Curie actions, which follows a student/researcher-centric approach. The objective of the Innovative Training Networks (ITN) is to "train a new generation of creative, entrepreneurial and innovative early-stage researchers, able to face current and future challenges and to convert knowledge and ideas into products and services for economic and social benefit." (H2020 MSCA Workplan). In a similar way, the EIT has started work on revising the EIT Label of Excellence at the Masters and PhD level, and a fellowship model is currently under discussion, premised on creating more entrepreneurship and innovation at this level. Similar to the ITN, and quite possibly the EIT KICs, VET Excellence could advance a type of network in their thematic area, thus increasing the exchanges between those VET institutions, companies and regions that are currently covered by the CoVEs with other organizations involved in the same area that are ready to apply some of the CoVE consortiums good practices.

Box 2: The Stanford Biodesign Fellowship

There are many Fellowship Programmes/Schemes, and many have recently focused on developing innovation and entrepreneurialism. Stanford University in the United States was a pioneer in developing Fellowship Programmes. For example, Stanford Biodesign Fellowship is a year-long, full-time programme designed for individuals from anywhere in the world and provides the most in-depth training experience in health technology innovation through multidisciplinary experiences that involve hands-on health technology projects with the help of Biodesign faculty and industry experts. Bio-design Faculty Fellows are selected via a competitive application and interview process.

Similar to the Stanford model in Box 2, CoVE fellows could potentially focus on challenges identified by the CoVEs with regional and national government and educational stakeholders, and most importantly, industry partners. CoVE fellows could work individually, or in teams, to solve concrete challenges through collaborating with universities of applied sciences, industry and research partners. This would provide the type of replicable innovations that underpin the Knowledge Triangle Integration and might provide fellows with exciting innovation and entrepreneurship opportunities within or outside their organizations, universities of applied science or industries.

Resources: Convening a working group and managing expert contracts, and workshops with CoVEs. Should not be too resource intensive.

4.2 Networking and Collaboration

4.2.1 Online knowledge, networking and communication hub

All the support services should be centralised in one knowledge, networking and communication hub. This will allow for learning among CoVEs, help to maintain the community of practice, and promote the initiative among the VET community, policy makers and other stakeholders. This website needs to have the freedom to operate outside of the Europa server, although benefit from links on the most relevant of its pages.

Resources: Websites are increasingly easy to design and maintain but content is key. Techniques to effectively harvest content from the CoVE community should be explored.

4.2.2 CoVE mapping and European partnership tool

The objective is to identify other VET centres (as well as organisations interested in Vocational Excellence, e.g. regional development agencies, companies, employment services, chambers etc.) that could join existing platforms, create new ones or simply find partners for ad hoc cooperation and events. Eventually it could help promote mobility of staff and students between countries.

Resources:

4.2.3 Peer learning workshops

The CoVE initiative will create networks across Europe, which will provide the conditions for an unprecedented level of learning among a community of practice. This can be nurtured through peer learning workshops, both among the partners within the CoVE platforms and between the platforms themselves. The EU level support

services could take on two roles: One is to be a facilitator for peer learning events within CoVEs and another is to organise peer learning workshops between the CoVEs, which is similar to the peer review workshops organised during the design and implementation of Smart Specialisation Strategies, as shown in Figure 6.

Figure 6: S3 Platform Peer Review workshops 2012-2019

S3 Design (2012-2014)

- 17 peer review workshops, allowing 53 regions and 15 Member States to be peer reviewed
- Key methods: Advance preperation, participatory leadership, expert comments, feedback reports

S3 Implementation (2015-2019)

- 'Peer eXchange @ Learning (PXL)' workshops on specific themes related to S3 implementation
- Fewer regions but with a greater level of detail

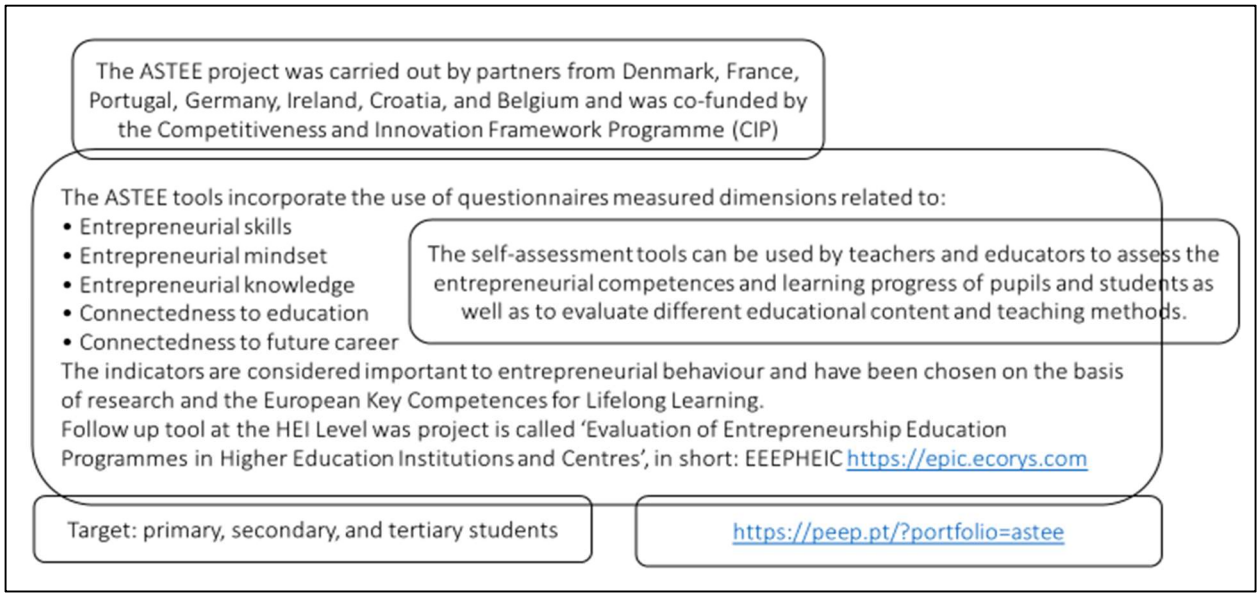
Resources: Depends on how many peer reviews and facilitation role but existing methodologies can be used and adapted.

4.2.4 Self-assessment tools

CoVEs would benefit from a dedicated self-assessment tool to monitor how their institutions are developing. The tool would help CoVEs analyse their progress in areas such as network and collaboration between stakeholders, new education pedagogies and methodologies, entrepreneurial education, critical thinking and internationalization. It could be structured around the three main clusters of CoVE activities (teaching and learning, cooperation and partnerships, governance and funding) or around EU level objectives related to the digital and green transitions. The tool could be web and app based to allow for flexible use.

In terms of assessing individual entrepreneurial competences, there are several measurement tools to assess entrepreneurial skills, knowledge, attitudes and mindsets among students. As shown in Figure 7, the Assessment Tools for Entrepreneurship Education (ASTEE) was developed as a European reference for evaluating the impact of entrepreneurship education that is broadly applicable to a diversity of CVs, teaching methods and educational institutions, to measure the influence educational programmes have on participant entrepreneurial self-efficacy, attitudes, and mindset as well as to their future intention to work in innovation-oriented professions.

Figure 7: ASTEE: Assessment Tools for Entrepreneurship Education



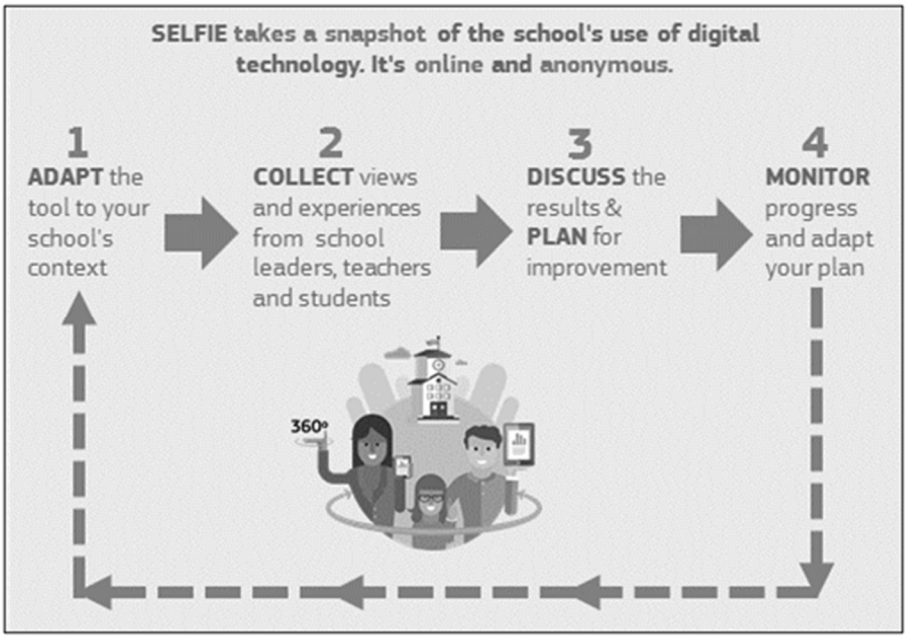
A CoVE self-assessment tool could build on existing practices, such as HEInnovate (see Figure 8), which has been developed and disseminated over recent years by DG EAC, in cooperation with the OECD. The aim is not to classify or rank institutions (which is the role of UMultirank) but to provide a participatory tool for HEIs to review achievements and identify areas for improvement. It is possible to involve a wide range of stakeholders (leadership, academic and administrative staff, students, key partner organisations etc.), and to repeat the exercise over time. Building on existing practices would be the most efficient way of developing a CoVE self-assessment tool. Moreover, experience of HEInnovate shows that the greatest challenge is the use and not the design of the tool; this is the area where most resources would be needed. This said, the CoVE initiative has the advantage of a small group of institutions in which the tool can be piloted, and in the future, it may become a compulsory part of the application process or kick off stage for new Erasmus funded CoVEs.

Figure 8: HEInnovate dimensions of self-assessment

Eight distinct dimensions of entrepreneurial and innovative HEIs are used to structure HEInnovate, as shown in Figure 8. The CoVE self-assessment could draw on existing work on competence frameworks in particular areas,

such as Entrcomp, DigiComp and to be developed over the next funding period, ClimateComp. The recently developed SELFIE tool (Figure 9) could be used by CoVEs to know where they stand in digital education and act in a bottom-up approach with the involvement of learners and in-company trainers. Another model that can be integrated into an overall CoVE self-assessment toolkit comes from the SOLITY project (funded by Erasmus+ KA3). This project analyses the impact of VET on society as part of quality assurance mechanisms (see more on QA above). Based on a model fist developed in France, the European Association for Vocational Training (ETVA) has transformed it into a more general self-assessment tool.**Figure 8:** HEInnovate dimensions of self-assessment. Finally, the European Training Foundation (ETF) is developing a self-assessment tool as part of its work on vocational excellence in the EU's neighbourhood, as described in 4.1.1. The support services could work with the ETF as well as UNESCO's i-hubs project (also described in 4.1.1) to optimise the self-assessment exercises.

Figure 9: SELFIE snapshot



Resources: There is already a lot of material and tools for different aspects of vocational excellence. The main resource would be bringing it together and testing / disseminating.

4.3 Technical Assistance

4.3.1 Management of a European network of national CoVE support services

In order to promote the CoVE initiative and make it more inclusive, ideally there should be contact points in each Member State. They would have the role of helping new CoVEs to form, give advice on European funding, and publicise activities of the EU level hub.

Resources: In order to be efficient, existing networks should be mobilised.

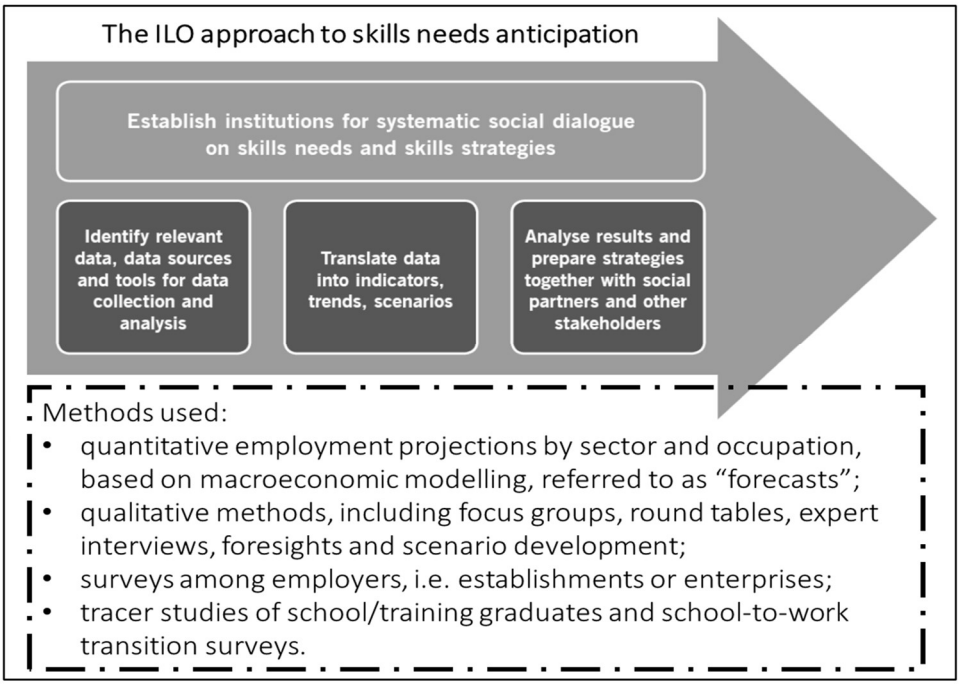
4.3.2 Scoping industry needs and gathering intelligence

VET education system has difficulty in matching the skills employers demand (ETF, 2016). There seems to be a gap between the education courses offered and the industry need that must solved so VET can be recognised

as the technical competence and abilities provider that businesses in the different sectors need and want. Closer cooperation is therefore necessary to create a better flow of information and curriculum co-creation to help to bring the skills in demand and the education provided closer together.

Skills mismatch leads to economic and social consequences for individuals, business and governments and a persistent gap on of skills demand and supply is responsible for structural unemployment. The International Labour Office (ILO) has developed a methodology, shown in Figure 10, to identify and anticipate future skills needs, to prevent this mismatch and support a strong training and skills development system.

Figure 10: The ILO and skills needs



There has been a development of several types of tools to identify industry's skills needs, based on different measures to identify these mismatches, some more quantitative and others more qualitative. What is key is the development of a network of organizations that are able to work with the information created, giving feedback on the outcomes, results interpretations and participating in policy approaches discussion. This bottom-up approach is very important so regions may have a more important role in education and labour market decision-making (ETF, 2016).

A scoping tool for skills identification would help CoVEs develop adequate programmes and curricula to prepare future employees in emerging areas of industrial growth and regional specialisation. A tool capable of diagnosing the skills demand of each sector or region, considering trends in technology and innovation, would help to develop curricula more quickly and would attract learners for training in these areas.

Resources: Similar to the self-assessment tool, collaboration could be sought with the ILO

4.3.3 Dissemination of VET Excellence via an online platform

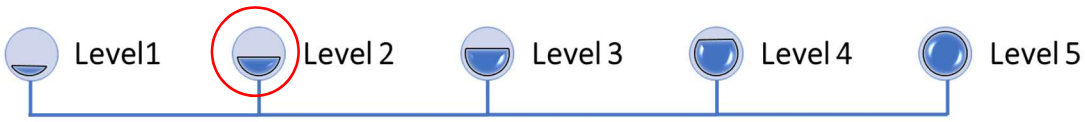
There is a lack of recognition and credibility of VET as a pathway towards successful careers. An online platform could promote the concept of vocational excellence, acting a joint marketing tool for all CoVEs. It would allow potential students and firms to link up with CoVEs nearby or further afield. The online platform would contribute to improve communication and build reputation, creating a common identity and sense of community of VET Excellence.

Resources: In order to be effective the marketing website would have to be designed and disseminated using professional contractors.

4.3.4 Integration into European innovation communities

The CoVE initiative can become more sustainable if consortia use the opportunity of participating in a European programme to join wider networks of innovation. The support services can help facilitate this by making bridges between the initiative and institutions such as the EIT-KICs and thematic smart specialisation platforms.

Resources:



4.3.5 Quality Assurance

The draft Commission proposal for a Council Recommendation on VET suggests that a single integrated EU level service could be provided to cater for the various dimensions of VET systems, including quality assurance as well as CoVEs (in addition to apprenticeships and graduate tracking). Benchmarking and convergence of quality assurance for VET takes place under the umbrella of EQAVET, which itself has a secretariat and undertakes activities such as peer reviews. At the same time, one of the tasks for CoVEs is "establishing strong quality assurance mechanisms aligned with European tools and instruments, which may also include working towards the certification of education and training providers based on standards developed by relevant national and/or international standards organisations - e.g. ISO 21001 or EFQM." [6]

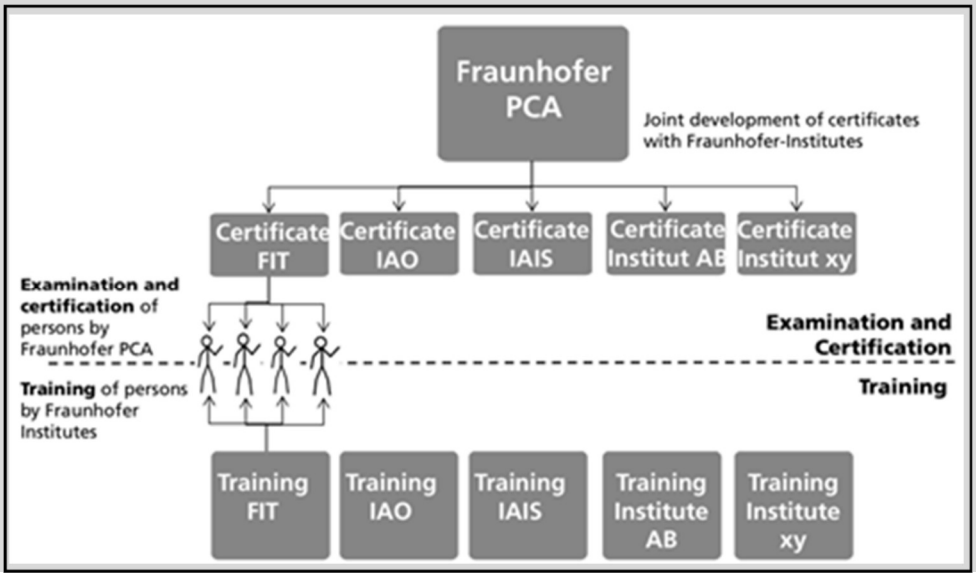
The role of quality assurance in CoVEs goes beyond EQAVET, providing a more advanced and at the same time bespoke method of quality assurance to cover all the characteristics of vocational excellence. The European Association for Vocational Training (ETVA) is working on a quality label for CoVEs based partly on the experience from two Erasmus+ projects: European Trainers' Training for Excellence (KA2) and SOLITY (KA3) as referred to in 4.2.4. The support services could continue to build on this knowledge and experience to develop a specific quality label for vocational excellence, which would be tested and adopted by the CoVE platforms. These forms of quality assurance could address both individual competences of learners as well as institutions. The overall framework for a CoVE label could be based around different dimensions, such as:

- Discipline focused (strategic thematic area – national accreditation-assessed)
- Market focused (put ideas into action through EntreComp, DigComp & LifeComp)
- Institution focused (duplicating replicable VET innovation at the institutional)
- Societal focused (providing problem-based solutions to societal issues)

[6] Within the institutional approach to excellence, other international standards could be adopted like ISO 17024 that requires strict separation between teaching and examination, or quality management corresponding to ISO 9001.

Box 5: The Fraunhofer model of quality assurance

Germany's Fraunhofer Institute provides a benchmark in testing competences, working across their professional educational programmes and institutions. It has deve**1**loped a model of quality assurance for professional certifications following guidance from the German Accreditation, Certification and Quality Assurance Institute (ACQUIN). The Federal Institute for Vocational Education and Training (BIBB) in Germany might also assist in testing this type of model.



Source: Fraunhofer Institute, Personnel Certification Authority, 2019

One possible support service is to create quality assurance and oversight to lead monitoring of the quality assurance process in CoVEs. The resources needed for this type of exercise would depend of the number of programmes under review. The support services could explore strategic objectives for CoVEs such as developing a common structure to provide digital certificates that would be built on blockchain technology and integrate into the EuroPass framework and experimentations. This would demonstrate that the CoVEs are providing educational degree QA and certificates are on the cutting edge of verifiability, transparency and excellence. Other support services related to implementation and quality assurance of the CoVEs would include:

- Facilitating the process of CoVEs to gain ISO 21001, 17024 and 9001 certification;
- Monitoring consortia and providing ad hoc opinions and support;
- Providing ongoing QA for CoVEs that are part of these two first intakes in 2 to 4 years (e.g. how do they stay CoVEs after the funding runs out?);
- Providing cross-CoVE initiatives where relevant to promote excellence in specific themes;
- Assisting the CoVEs in developing new certified VET programmes adhering to excellence criteria.

Resources: Very much depends on what the role of the support services would be in quality assurance (developing a label would be possible but awarding and monitoring would be very resource intensive)

5 Conclusions

There is a wealth of information and relevant, policies, programmes and activities related to the worlds of VET, regional development and innovation that was impossible to review all of them in this report. However, the background section as well as the description of potential services shows the great potential of bringing together two areas of policy and practice that have so far operated independently. While education and training increasingly focuses on competences as a way of preparing citizens for the green and digital transitions, institutions and cooperation at regional level is crucial to convert these competences into value for the economy and society.

As the concept of vocational excellence spreads across Europe and beyond, it is the right time for the Commission to support this growing community of practice. This will contribute to the success of the Erasmus funded CoVEs but also bring together all relevant activities in a single place.

The need to coordinate and support stakeholders in key EU policy areas is not new. It is important to learn from similar networks, hubs and platforms to set up a coherent, effective, efficient, relevant, innovative and empowering CoVE support service. The best solution would be a combination of institutions working together under the lead of the Commission, in order to control and maintain the support services over time.

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List of interviewees

Isabelle Le Mouillour	Federal Institute for VET
Noelia Cantero	EARLALL
Rikardo Lamadrid -	Government of the Basque Country
Anastasia Feleti	ETF
Carmen Arias	European Footwear Confederation
Adrijana Hodak	School Centre Nova Gorica
Pieter Hoekstra	CIV Water
Oliver Heckemann	Industrie- und Handelskammer Schwaben
Aude Körfer	Maison de la Bretagne Europe
Joep Bresser	Netherlands house for Education and Research
Richard Tuffs	Friends of Smart Specialisation
Pieter Moerman	Katapult
Jens Bjornavold	CEDEFOP

Annex 1. Examples of EU level support services

The European Rural Development Network

Established in 2008 by DG Agriculture and Rural Development (DG AGRI) and implemented by external contractors, the European Network for Rural Development (ENRD) is composed of two units: A Contact Point and an Evaluation Helpdesk

The ENRD Contact Point: Emerged from the Leader+ initiative that until 2007 supported rural based Local Action Groups (LAGs) funded by the European Agricultural and Rural Development Fund (EARDF). In 2007, the European Commission mainstreamed the Leader into other policies: urban LAGs supported by the ERDF and fisheries LAGs supported by the EMFF (see FARNET for specific support services) and labelled the approach Community Led Local Development (CLLD). The ENRD contact point continues to focus primarily on rural LAGs but expanded its level of support by including National Rural Networks (similar to contact points for LAGs in each Member State), EARDF Managing Authorities and the wider rural development community. The activities of the Contact Point include three main areas, similar to the typology presented in this report.

- Knowledge development, including analytical summaries with facts and figures about rural development and the EARDF, identification of good practices, and thematic work.
- Networking and exchange, including thematic seminars, meetings of the national rural networks, capacity-building workshops and a database of LAGs.
- Communication, including management of a website (available in five official languages and providing a 'one stop shop' for information on rural development), a monthly newsletter, a magazine, brochures presenting case studies of EAFRD projects, and a 'EU Rural Review' to develop knowledge.

The European Evaluation Helpdesk for Rural Development is a technical unit supporting DG AGRI, Member States and other evaluation stakeholders in meeting the objectives of a Common Monitoring and Evaluation System. Its activities include collecting evaluation examples, running surveys, organising capacity-building events to improve evaluation, summarising national evaluations and training national experts.

Urban Data Platform Plus

The Urban Data Platform Plus is a joint initiative of the JRC and DG Regional and Urban Policy (DG REGIO), providing access to information on the status and trends of cities and regions and EU support for urban and territorial development strategies. It includes three main elements:

- Territorial trends has data on Population dynamics, the Economy, Labour Market, Education, Research and Innovation, Social Issues, Transport and Accessibility, Environment and Climate, Governance, and Security and Safety.
- Thematic analyses build on the data to produce policy relevant reports.
- Territorial and Urban Strategies Dashboard (STRAT-Board) is a mapping tool showing the geographical location of three types of strategies supported by the European Structural and Investment Funds, namely Sustainable Urban Development, Integrated Territorial Investments and Community Led Local Development (see above support to CLLD in rural areas). So far, it has mapped more than a thousand strategies within 28 countries.

RIO Observatory / H2020 PSF

The Research and Innovation Observatory – Horizon 2020 Policy Support Facility, managed jointly by the JRC and DG Research and Innovation delivers analysis, insights, statistical data and best practices on designing, implementing and evaluating research and innovation policy at EU and national levels. Its activities include:

- Country Analysis on R&I policies and performance for all 28 EU Member States and selected countries associated to Horizon 2020.
- Key statistics and a library of relevant reports
- Mutual learning exercises, peer reviews and targeted support to specific countries

Cluster Observatory

The European Observatory for Clusters and Industrial Change, established by the Commission's DG for Internal Market, Industry, Entrepreneurship and SMEs (DG GROW), aims to help Europe's regions and countries in designing better and more evidence-based cluster policies and initiatives. The services provided include:

- Information hub for clusters on the latest news, events and open funding calls
- Mapping of cluster organisations
- Matchmaking events to build cooperation among clusters
- Database on cluster networks
- Information on the European Strategic Cluster Partnerships
- Partner search facility
- Collection of EU funded cluster-related projects supporting international cooperation

Smart Specialisation Platform

The Smart Specialisation or S3 Platform, established by DG REGIO in 2011 and managed by the JRC, provides advice to EU countries and regions for the design and implementation of their Smart Specialisation Strategy (S3) and facilitates mutual learning between them. Its activities include:

- Managing and mapping membership of the S3 Platform
- Thematic platforms for regions with common S3 priorities
- Guidance on how to develop and implement an S3
- Targeted support to less developed countries and on specific themes such as working with Higher Education Institutions and Digital Innovation Hubs
- International Cooperation outside the EU
- Peer reviews
- Events and workshops
- Knowledge Repository
- Chairing of a Steering Team gathering representatives of several Commission services
- Convening a Mirror Group composed of experts and stakeholders.

It should be noted that while DG REGIO first set up the S3 Platform, it now contains activities funded by a range of policy DGs.

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