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THE EU AGENCY SUPPORTING COUNTRIES TO DEVELOP THROUGH LEARNING

MAPPING OF SELF-ASSESSMENT TOOLS RELEVANT TO VOCATIONAL EXCELLENCE

This final report was prepared for the ETF by 3s research laboratory.

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1. INTRODUCTION

This draft final report has been prepared in response to Order Form ETF.96224, for a mapping of international and well-established self-assessment tools relevant for Centres of Vocational Excellence (CoVEs). The report identifies and discusses options for a new self-assessment tool (SAT) relevant to vocational excellence in the light of the analysis of existing tools and provides recommendations. It is structured in the following sections:

- Chapter 1: the remaining part of this introductory chapter introduces the objective of this assignment and its background.
- Chapter 2 refers to the research methodology and issues to take into consideration for the development of any new SAT.
- Chapter 3 discusses the results of the analysis of the existing tools and frameworks and the respective implications for a CoVE tool.
- Chapter 4 presents pointers towards a SAT for CoVEs.

1.1. Objective of the assignment

In accordance with the list of services requested in the request for offer, the objective of this work is to

- provide a mapping of the main tools that already exist (or are currently in development) that serve the self-assessment of vocational schools or training centres or centres of vocational excellence;
- provide an analysis of current frameworks and processes for self-assessment in order to identify what options exist for an additional and improved framework and for the processes through which it would be administered and used;
- provide an account of what use is made of the self-assessment tools and evaluate the benefits (and costs) of this use for actors and stakeholders;
- make recommendations towards a model for a new framework and corresponding process.

1.2. Background

The ETF is the EU Agency that supports countries outside the EU in improving their human capital development, in the context of EU external relations policies. The ETF has a long-standing interest in Centres of Vocational Excellence (CoVEs), having conducted several studies on their development and launching in 2020, a Network for Excellence (ENE) to support CoVEs.

The European Commission (Directorate-General for Employment, Social Affairs and Inclusion, DG EMPL) has contracted the ETF to create a self-assessment tool for CoVEs that will support the development of vocational excellence at institutional, cluster, system and international level. It aims to support VET institutions in their effort to assess their current performance in relation to a ‘maturity model’ or ‘developmental framework’, and to provide examples and references to best practices and activities. The tool will be primarily addressed to (groups of) VET institutions.

This report aims to inform ETF’s ongoing work on this self-assessment tool, by providing a mapping of identified self-assessment tools relevant for the context of vocational excellence.

2. RESEARCH METHODOLOGY AND ISSUES TO TAKE INTO CONSIDERATION

This chapter first introduces the research methodology and presents a list of the self-assessment tools analysed before discussing key issues – linked to specific features of CoVEs – that need to be considered for the SAT that will be developed.

2.1. Research methodology

In a first step, a template (research grid) was developed with dimensions and features to be used in the analysis of existing self-assessment tools and frameworks (analytical framework). The template was to be completed based on desk research and interviews. In total, nine interviews with 15 key informants were conducted.

Initially (see inception report), five tools identified for a more in-depth investigation. This group comprises three tools that are directly related to recognised CoVEs, and two tools applied in other contexts (VET schools in general and HE), to provide a good balance. For a second group of tools, a more 'light touch' approach was applied, in the form of a quick review in terms of relevant aspects which could provide inspiration for a CoVE SAT. However, in some of the latter cases, more detailed information was also collected whereas for some of the tools selected for in-depth investigation the approach had to be adapted (for example, for France, it has not been possible so far to conduct an interview).

The research was carried out between end of January and early March 2022.

Table 1: List of self-assessment tools analysed

Name	Research methods	Comments
Tools selected for more in-depth investigation		
Tools in use in recognised CoVEs		
Basque Country: EFQM-HOBBIDE - Basque QA system for VET centres based on ISO standards and EFQM excellence standards	Desk research & interview	
CoVE certification scheme in the Castilla y León region of Spain	Desk research & interview	
Campus de métiers & qualifications (CMQ), 'Excellence' label (France)	Desk research & interview	Only desk research was possible
Tools used in non-CoVE contexts		
SELFIE (Self-reflection on Effective Learning by Fostering the use of Innovative Educational technologies)	Desk research & interview	
HEInnovate	Desk research & interview	2 interviews were conducted
Tools selected for 'light touch' investigation/'quick review'		
Katapult - peer review model for CoVEs (Netherlands)	Interview only	
UNESCO: Innovation Framework – Guided Self-Assessment	Desk research only	Interview was

		conducted by ETF
ISO 21001:2018 - Educational organizations — Management systems for educational organizations — Requirements with guidance for use	Desk research & interview	This was initially interview only but we also did some desk research
EVTA: SOLITY self-assessment tool (& VET Quality Label for Centres of Excellence)	Desk research & interview	This was initially interview only but we also did some desk research.
British Council VET Toolbox: Self-Assessment Toolkit for Training Institutions	Desk research & interview	
ETF: ENE Self-Assessment Tool (ENESAT)	Desk research only	
NARIC/ECCTIS – Handbook	Desk research only	No information received
Global CoVEs initiative: Self-Assessment Tool mechanism	Desk research only	No information received
System of self-evaluation of VET schools in Croatia	Desk research only	
Suggested additional investigation (interviews subject to availability of key informants)		
Cedefop	Interview only	No information on contact person received

2.2. Issues to take into consideration

There are a number of features of CoVEs that will need to be borne in mind for any SAT that is developed. These involve: the diversity and complexity of both CoVE objectives and activities and their form and function; the key roles played by wider stakeholders and partnerships; and where CoVEs sit in existing hierarchies and related improvements processes.

2.2.1. The diversity and complexity of CoVE objectives and activities

CoVEs are a still-evolving concept, and whilst there is a growing amount of literature on them, it is possible that they may come to be defined by what they do in practice in the coming years as much as according to the characteristics attributed to them through, e.g. Erasmus + funding or the EC mapping exercise[1]. This may have a bearing on the likely content of the SAT since the definition of a CoVE – or indeed of vocational excellence – is not (yet) fixed.

Nonetheless, it seems to be quite widely accepted that, as the EC mapping exercise (based on evidence of existing CoVEs) argued, to be counted as CoVEs, VET providers have to 'go beyond normal provision' and embrace quite a broad range of objectives and activities (shown in the box below which draws on both the mapping exercise and the CoVE activities defined in Erasmus + guidance). This is a wide and complex landscape that raises questions for any SAT about how it might handle **the scale and complexity of the CoVE agenda.**

[1] https://ec.europa.eu/social/main.jsp?catId=738&langId=en&pubId=8250&furtherPubs=yes

CoVE activities that go 'beyond normal provision'

- Two-way **reciprocal exchanges** with stakeholders, based on partnerships
- **Integration** of activities
- **Feedback loops** between research, and teaching and learning
- Continual learning, adjustment, and **innovation** in provision
- Systematic approaches to **internationalisation**
- **Sustainable funding models** involving strong and reliable stakeholder contributions
- Being a **proactive player**
- Systematically engaging with **local and regional agendas** for sustainability, and social and economic development

Source: Elaborated from European Commission (2019) Mapping of Centres of Vocational Excellence; and Erasmus + programme guidance (https://erasmus-plus.ec.europa.eu/programme-guide/part-b/key-action-2/centres-vocational-excellence)

It also needs to be noted that CoVE activities take mainstream VET into new areas such as innovation, knowledge creation and increasing the permeability between IVET and CVET. **These are complex topics that could be challenging to operationalise in a SAT**, e.g. by converting them into answerable questions or statements).

2.2.2. The large variation in CoVE form and function

CoVEs show enormous variation in how they are constituted. The table below shows the main types of CoVE structure but in practice even within these groups there is great variation depending, e.g. on country context and the roles and responsibilities of different stakeholders. For example, an individual provider might aspire to being a CoVE in only one area of activities, e.g. for a particular commercial sector.

Types of CoVE context relevant to development of a self-assessment tool

CoVEs that are part of national/regional arrangements for vocational excellence and which may be 'additions' to the main VET system, bringing partners together to form 'new' VET providers, e.g.:

- In the **Netherlands, the Katapult network** is a community of 160 'action-oriented partnerships'.
- In **France, there are 95 *Campus des métiers et des qualifications*** covering 'dynamic and job-creating' sectors.
- In **Sweden, the Region of Västra Götaland** where the regional authority oversees and coordinates a set of wide-ranging and inter-linked activities.

Individual VET providers, functioning as CoVEs for a region, sub-region, or sector, e.g.:

- In **Estonia**, the **Tartu Vocational Educational Centre** is a municipal school with strong links to local businesses and sector bodies providing links to SMEs.
- In **Slovenia**, the **Šolski center Nova Gorica** offers a wide choice of educational programmes and training in various fields.

CoVE-type activities that are integrated into the VET system, e.g.:

- Countries with dual systems, e.g. Austria and Germany.
- Countries where CoVE-type activities are included in quality requirements, e.g. Finland.

Source: European Commission (2019) Mapping of Centres of Vocational Excellence

CoVEs also differ vastly in the range of stakeholders involved and the way they are involved. The partnerships in the Dutch Katapult network exist parallel to mainstream VET provision – and have been set up that way deliberately in order to encourage innovation. In contrast, in the Swedish Västra Götaland region, there is a complex set of structures covering a wide range of both public and private sector stakeholders, overseen by the regional authority. **This variable context is challenging for the design of a SAT if universal appeal is required**.

2.2.3. The partnership dimension

A particular aspect of stakeholder engagement that will provide key context for a CoVE SAT will be partnerships, which are almost a defining feature of CoVEs (see box). Involving stakeholders beyond VET providers in any SAT that is developed seems to be a sine qua non, which raises questions for **how stakeholders might be engaged in the process**. A SAT may also have to take into account stakeholders' varying contexts of rules and regulations around quality and excellence.

Types of CoVE partnership that may affect SAT development

Partnerships are set up separately, as an addition to the main VET system.

- This is common in CoVE networks, e.g. In Italy, the Higher Technical Institutes (Istituti tecnici superiori – ITS) are mixed public-private foundations comprising local authorities, schools, training institutions, relevant enterprises, universities, and research bodies.

Single providers act as lead organisations with a variety of partnerships to deal with specific sectors or issues.

- Most common where there are not established national or regional CoVE systems.
- Single providers act as 'hubs' or 'umbrellas' for a package of activities, which may cover a variety of sectors.
- Time-limited projects/funds are often a feature.
- Regional authorities may lead activities, e.g. Tknika in the Basque Country in Spain, and the Västra Götaland region in Sweden.

Source: European Commission (2019) Mapping of Centres of Vocational Excellence

2.2.4. Top-down, bottom-up or somewhere in between?

CoVEs show significant variation in their relationship to existing government hierarchies. Relevant aspects here include not just whether CoVEs are individual providers or clusters (as the ToR notes) but also whether they have been developed 'organically' in localities by individual providers or by regional authorities (as in the case of the Västra Götaland Region of Sweden), have been set up as part of regional or national networks (as in the case of Katapult in the Netherlands, or the CMQs in

France), and now whether they are part of CoVEs funded under Erasmus+. This matters for two main reasons: (i) the **'owners' of the processes within which a SAT might be embedded will vary** (different combinations of individual providers, partnerships/networks, local/regional/national authorities); (ii) therefore the contextual 'rules and regulations' will vary enormously.

To highlight what this means in practice, SATs might, at one end of a spectrum, be part of voluntary 'bottom-up' processes based around mutual learning and development, peer review etc., whilst, at the other end of the spectrum, they might be used for monitoring purposes or built into mandatory QA processes set by national authorities (more 'top-down). This gives a **very different setting and character to how a SAT might be used** although in practice both aspects might be desired, e.g. a CoVE might want to use a SAT to combine the two points of the spectrum - i.e. a bottom-up SAT that nevertheless provides information for monitoring and contributes to quality assurance.

An important related question will be **what role might be played by the maturity/development model for CoVEs set out in the EC mapping study.** Does this provide a useful set of benchmarks that would be widely accepted by CoVEs as providing a useful foundation for a SAT? Or would it be considered as undermining the potential usefulness of a tool by discouraging engagement where CoVEs have developed organically from the bottom upwards and eschew outside monitoring or oversight because of their specific nature and culture? What would be the relationship of the maturity model to national networks of CoVEs? And, given the diversity of CoVEs across Europe, would it be possible to design a set of benchmarks (perhaps a 'core' set) that would be universally useful – or would they have to be at such a high level of generalisation that they would lose their usefulness?

2.2.5. Relationship to existing 'improvement' processes

CoVEs vary in their relationship to 'mainstream' provision. Where there are individual CoVEs, the individual providers involved may set up separate structures for excellence activities, e.g. around a particular sector. In some national networks, as noted, CoVE sit alongside mainstream provision. This means CoVEs may be subject to different 'improvement regimes'. In some countries/regions the CoVE initiative is seen as a policy tool to improve the relevance and attractiveness of the VET system as a whole.

It is unclear how European CoVEs might be using QA systems currently but individual CoVEs might wish to extend existing QA procedures to cover CoVE-type activities, whilst for new CoVE partnerships such QA procedures may need to be created de novo. Certainly, VET providers are already subject to a variety of QA procedures, which continue to evolve, and a key question is how a SAT designed for CoVEs might relate to such existing QA procedures, not overlapping (too much) with them, and being able to demonstrate its value as a tool to potential users. EQAVET has shown that most QA concepts and tools in the education and training context (including the EQAVET Framework) do not yet include descriptors and indicators for the types of activities that distinguish CoVEs from standard VET providers and 'could potentially be introduced as new standards of excellence in VET' . Hence, **there is scope for a SAT that might help fill the gap between current QA standards and tools and the distinguishing features of CoVEs. The question is how the two might relate to one another, if at all.**

3. OPTIONS FOR A SELF-ASSESSMENT TOOL FOR CoVEs: INSIGHTS FROM THE RESEARCH

This chapter identifies possible options for a new self-assessment tool for CoVEs, and assesses them in the light of the evidence collected about existing and emerging tools, their use, their strengths and weaknesses in different contexts and the related needs of VET institutions.

The analysis presented in this chapter follows the structure of the research grid and comprises the following sub-sections:

- Objectives, purposes and ownership;
- Dimensions and indicators;
- Framework and process;
- Operational aspects;
- Usage and sustainability.

3.1. Objectives, purposes and ownership

3.1.1. Objectives, purposes and uses

All the tools in one way or another stem from a policy objective of **improvement** (e.g. more and better digitalisation with SELFIE, or innovation in HEInnovate) and are built on the premise that the **organisations that need to make improvements should be involved themselves** in the process of identifying their strengths and weaknesses and developing priorities and solutions.

The tools tend to position themselves as being **designed to help and support users** – and typically have involved users and experts from the field in their development and piloting, as described further below. All tools thus combine these bottom-up and top-down elements, though in different ways. Interestingly, the ENESAT tool combines these bottom-up and top-down elements by being designed for self-assessment but also to enable better support to be provided by the ETF, which is not the case with, e.g. SELFIE or HEInnovate (although both make 'how to' resources available to users.)

At the same time, the way and degree to which the tools are instruments of policy varies. HEInnovate and SELFIE have quite a general relationship to the goal of improving innovation and digitalisation respectively (use is voluntary). In contrast, the tool used in the CoVE certification scheme in the Castilla y León region of Spain is much more instrumental in the sense of being conceived as a way of driving up standards in VET across the board in the region by issuing certificates linked to the categorisation of VET providers against three levels (initial, advanced and high); and by giving 'preference [to certificated CoVEs] in improvement activities and other procedures'.

All tools have the purpose of enabling their users, broadly, **to determine 'where we are now' and provide a picture of 'where we want to get to**'. In general, the instruments studied are more diagnostic tools and the latter function is aimed at less or only implicitly. How they do this, though, is prone to much variation, as will be described in more detail in subsequent sections. At this point, it is worth pointing out that whilst some tools are at pains to point out that they are 'not benchmarking tools', all of them provide some form of reference point for users: without them it would be difficult to work out the first of the questions above, 'where we are now', still less the second, 'where we want to get to'. The crucial point of differentiation is in the extent to which tool users **reveal their current positions in the public domain**. In this sense the SELFIE tool and the CoVE certification scheme in the Castilla y León region of Spain sit at opposite ends of a continuum. SELFIE inputs are anonymous and outputs are available only to the registered user (a school). Under the CoVE certification scheme,

self-assessment is subject to external evaluation and a certificate reveals a school's 'level' of vocational excellence, though framed within a 'non-elitist' approach in which all schools are seen as being able to be vocationally excellent in some respect. HEInnovate sits somewhere between these two ends of the continuum since it enables the sharing of information through country reviews. Similarly, the SOLITY tool encourages benchmarking and mutual learning.

Another point of variation flowing from this is that the tools vary in the extent to which **comparison between institutions** is an objective. In the tool used as part of the CoVE certification scheme in the Castilla y León region of Spain, one of the expressed goals is 'to facilitate self-evaluation and self-management, as well as collaboration with other centres of VET excellence in Spain and in Europe'. In SELFIE, such comparisons are left to individual VET centres to determine, although the possibility is being explored of developing a platform that might lead to schools linking up in areas of mutual interest[2]. In HEInnovate, the idea of 'compare and contrast' is built in and country reviews are undertaken that apply all the dimensions of the HEInnovate framework to a country's HE system and HEIs to support policy makers and HEI leaders in this transformation process. The ENESAT tool can be used by the ETF to help ENE members to find peers with whom they can exchange and share practice and to find development partners with whom they can collaborate.

One aspect the tools have in common is that they all offer a **systematic approach** to whichever topic is their particular focus, whether that be digitalisation in SELFIE or innovation in HEInnovate. They are also positioned as providing a **starting point for further investigation** of topics, for dialogue amongst stakeholders and for the formulation of action plans. The purpose of tools is thus to provide an **outline picture** – in the case of SELFIE a 'snapshot' – but one which is comprehensive in its coverage of relevant topics. In the case of HEInnovate the context means that, since institutions tend to be rather slow to change, the tool tends to lead to a basic or outline action plan that is loose rather than prescriptive or rigid, and where rather 'small' activities or steps are identified. In the case of some tools, further evidence alongside SAT results needs to be compiled and submitted, e.g. for tools related to QA or which lead to certification (as in the case of the CoVE certification scheme in the Castilla y León region of Spain where the volume of supporting evidence regarded can be seen as quite burdensome).

It should also be noted that whilst the tools support users to identify their needs and priorities, they **do not prescribe the course of action to be taken**. Instead, this is left to the institutions concerned, though with varying degrees of support through, e.g. case study resources, mutual learning and peer reviews.

3.1.2. Ownership and governance

Given that the SATs examined have been designed for their users and thus seek to strike a balance between being top-down and bottom-up, it is not surprising that this is reflected in the characteristics of ownership, if we take a broad view. 'De jure' ownership of tools tends to be in the hands of the policy-making bodies or other institutions that initiated their development, e.g. the EC is the formal owner of SELFIE, and JRC is in charge of maintaining and developing the tool and the two share the governance. However, a form of **de facto 'co-ownership'** between owners, developers/managers and users seems to come into being around many tools.

As noted, tools tend to be developed by bringing in experts and/or users and such **bottom-up involvement** typically continues as tools undergo piloting and refinement and this can provide a basis for co-ownership. E.g. ENE-SAT was designed by ETF in consultation with ENE members and with advice from Enabel, GIZ and the EC; draft tools were critically reviewed by ETF and external experts, and tested and reviewed by CoVEs in EU Member States and in ETF's partner countries.

[2] SELFIE calculates the average for each indicator/statement for all respondent types, but also shows the average for each respondent type.

Furthermore, communities of practice typically develop around tools to support users in action planning and implementing solutions and they also play a role in fostering a sense of co-ownership. In the case of SELFIE, such evolution may lead to concrete results in terms of governance:

> *'The owner of the tool is the European Commission but it is designed to be used by schools. The tool is improved mostly based on users' needs/requests and also from educational authorities' requests, if they are appropriate and relevant. However, we are exploring a model where users will be responsible for content refinement and development and if this goes ahead we will be looking into a governance of the tool which includes the users.'* (Interviewee)

Another aspect of ownership concerns the question of **who owns the process and results of using a tool**. This varies across the tools. A foundation stone of SELFIE is that the tool is used anonymously and schools, in effect, take ownership of the use of the tool in their context, e.g. they decide which companies to add in the WBL version; the results of using the tool (the reports produced) are also owned by the school concerned. In HEInnovate, individual institutions own their results but sharing of results is more an integral part of the tool and national authorities may also take ownership of results through country reviews. In the case of the CoVE certification scheme in the Castilla y León region, the fact that the tool is part of a certification process means that ownership is necessarily in the hands of the responsible authorities in order to ensure consistent application of standards.

3.1.3. Thematic and geographic scope

The tools examined vary in thematic and geographic scope according to their objectives.

Geographically, the tool used in the CoVE certification scheme in the Castilla y León region of Spain is naturally available only in the autonomous region of Castilla y León and in the Spanish language only. International tools like SELFIE and HEInnovate have been successful enough globally for their geographic range to be extended beyond Europe and for them to be translated into many languages. E.g. SELFIE is now in 40 languages and has been used in 86 countries; HEInnovate is available in all 24 EU languages, and the OECD has promoted the use of the tool in Latin America and Asia; ENESAT is available in ETF's 29 Partner Countries, EU Member States and Africa and in English, French and Russian. SOLITY is now available in four languages (EN, FR, IT, DE) but is currently being translated into all remaining EU languages. Geographic reach depends on: the overall policy with respect to whether it is in effect a 'free' resource that can be used by anyone; where and how it is promoted (e.g. whether to international audiences or restricted to the 'home market'); and 'user satisfaction' and perceptions of a tool's usefulness and ease of use (evidently where a tool is transparently simple to use, as in the case of SELFIE, it is easy for potential users to see whether it might be useful to them.)

Thematically the tools vary a lot in terms of their breadth. Tools that deal with a wide range of topics include those specifically meant for CoVEs (e.g. ENE-SAT and C&L which deal with vocational excellence), along with QA tools like the VET toolbox and ISO 21001. In contrast, SELFIE and HEInnovate are focused on particular topics, digitalisation for the former and entrepreneurialism and innovation for the latter. Elements of SELFIE and HEInnovate may therefore be relevant to CoVEs as well, as discussed below.

Evidently there is **overlap between the themes of the tools** and there is potential for a more narrowly focused tool to be used to support another, e.g. SELFIE is used in QA procedures to cover digital topics in parts of Spain (see section 3.3.3 on links between tools). It is also informative to note that the very clear object of SELFIE (embedding digital tools) is regarded as a strength of the tool and helps to increase its popularity.

3.1.4. Target group and users

The target groups for tools are generally **broadly defined**. C&L certification is open to all VET centres, SELFIE is available for any primary, secondary and vocational school, and HEInnovate is open to any HEI. However, the actual appeal – and therefore take-up – of tools is likely to vary: QA-related tools

and SELFIE have near universal appeal, since the object of the tools are of interest to everyone, and SELFIE has had a high rate of take-up in some countries, e.g. Portugal where the national authorities are now interested in using SELFIE for policy monitoring, whilst HEInnovate covers a topic that all HE institutions are likely to be interested in at a corporate level to varying degrees.

The prime users of tools are intended on the whole to be **institutions**. E.g. the main target audience for HEInnovate are those HEI staff concerned with strategic planning and decision-making, although HEInnovate can be used by faculties as well as universities as a whole (its group function allows stakeholders in HEIs to come together and compare their assessments internally, compare against previous assessments as well as see how perceptions change over time). In the case of the C&L tool, the SAT is completed by the institution (certificate applications are submitted by directors or heads of VET centres), and for SELFIE to be used a school coordinator must register the school before the tool can be accessed.

Below the institution level there can be **other users** and SELFIE defines constituencies within schools whose views are to be gathered and provided with tailored indicator statements (for school leaders, teachers, students - and in-company trainers in the case of SELFIE for WBL). The clarity of the different user groups in SELFIE is regarded as a strength of the tool.

In relation to the question of whether tools can be used by users across the spectrum from 'beginners' to advanced, **'universality' seems to be the approach adopted by tools**, enabling all potential users to engage with them and find them helpful. This is explicitly the case with the C&L tool, where certification is available for all VET centres so as not to deploy an 'elitist' conception of CoVEs or develop a restricted group of CoVEs which only some VET schools could be party to. Interestingly, such a philosophy also seems to implicitly underpin peer review approaches, e.g. used by Katapult: i.e. anyone at any stage can stand to benefit from peer review.

Where tools are essentially free and open access, as with SELFIE and HEInnovate, the **users of tools tend to expand over time** – along with the ways in which the tools are used. This is actively encouraged: Erasmus-funded projects such as the European University Alliances and the Alliances for Innovation are invited to use HEInnovate where relevant to accompany their projects; and several projects are examining ways to develop SELFIE. But, in addition, institutions beyond the target group recognise the potential for tools to be used in new ways, witness the interest of Spanish and Portuguese authorities in how to use SELFIE for monitoring progress at national level (see section 3.5 on usage and sustainability).

3.1.5. Stage of development

All tools take several years to develop initially and **on-going evolution** once they have been launched seems to be integral to the process. Typically, initial research is followed by consultations with experts and testing and piloting with users. E.g. the need for a guidance tool like HEInnovate was first floated in 2011 by the University-Business Forum (organised by the European Commission) and development started with a one-year research phase involving an expert group of five people and a consultation phase leading to the tool's launch in 2013. The next five years were then dedicated to piloting, collecting feedback and reviewing, which, inter alia, led to the initial six dimensions being expanded to eight but a reduction in the overall number of questions.

Development processes often depend on **emerging user needs** as communities of users/practitioners develop, e.g. the JRC is considering how to respond to requests for a digital platform for users of SELFIE and introducing a modular structure to enable user-generated content to be made available. Another way in which EU tools continue to develop is through Erasmus+ projects. There are E+ projects working on SELFIE, which might generate relevant content, and there are several others linked to HEInnovate, e.g.:

- BeyondScale (www.beyondscale.eu) utilises the HEInnovate self-assessment-platform to drive entrepreneurial and innovative change across a range of education and engagement activities in higher education institutions.

- THEI2.0 (http://www.thei2.eu/) will develop an increased and improved version of the HEInnovate self-assessment tool (with new features) – it develops profiles and tests them – this should help formulating an action plan.
- UASiMAP (Mapping Regional Engagement Activities of European Universities of Applied Sciences - https://www.uasimap.eu/) is aiming to develop a self-reflection tool to evaluate the level of regional engagement of UAS.
- RE-ACT (Self-reflection Tools for Smart Universities Acting Regionally - http://ris3heinnovate.eu/) ill develop, test and scale-up a new tool based on HEInnovate - HEInnovate for RIS3 -, aiming at promoting HEIs to rethink and reposition their strategies, structures and actions towards regional development, fostering collaboration among the quadruple helix.

On-going research seem essential to fine-tune tools and to deal with emerging issues. E.g. over a third of the JRC's budget for SELFIE (around 1million euros per year) goes towards R&D, and one issue that has emerged concerns how trends in scores over time might be interpreted. There is an argument that SELFIE may stimulate greater awareness of digitalisation, which leads to more critical views, which might lead to a fall in scores. But scores seem to have risen – and this may not mean real improvements are taking place. So JRC is conducting a follow-up survey with c. 200 schools that have used the tool twice to probe this issue.

Inputs from expert groups can also play a key role. Eighty-six experts from 39 national standardization bodies were involved in developing the ISO 21001 standard, with the added participation of stakeholder organizations from various educational sectors. HEInnovate's expert group, which delivers workshops for HEIs to improve their innovation performance and train the trainers events to disseminate the approach more widely at national level, was identified as a key success factor during interview. Experts drive the approach, are very committed and very motivated; they are frontrunners, as they have used the tool in their own HEIs and can promote it very well; they are also a geographically diverse group and hence provide a range of very useful views.

As the tools evolve**, resources such as guidance documents and good practice case studies** are developed and collated on digital platforms to support users in both using the tools and then subsequently undertaking dialogue processes to identify priorities and executing action plans. Some tools have ambitious plans: there are intentions to set up a centre of coordination and innovation for CoVEs in C&L (inspired by TKNIKA in the Basque Country) to promote the introduction of a culture of excellence in all VET centres.

3.1.6. Implications for a CoVE tool

Tools are designed for their users and hence balance top-down policy goals and bottom-up needs. Of the European-level tools, both SELFIE and HEInnovate are aimed at achieving a general goal of improvement but in areas that can be well-defined and whose users can also be well delineated. **CoVEs, with their multiple objectives, multiple forms and multiple stakeholders sit in contrast to this situation, which provides a key frame of reference for determining SAT options.**

Although the wider aim of the tools studied is often the further development of education and training providers in specific areas, their immediate **function** is often to provide a diagnosis of the current state of affairs. Designing tools that can be used concretely for **further development** seems to be more difficult than designing diagnostic tools, but it would be worth considering both functions for the CoVE SAT. It is also important to bear in mind that the capacity of a tool to communicate good practice (such as standards, practices or diversity) is crucial if it is to guide development.

The tools examined are much more than just a SAT alone. They provide an initial starting point for examining where improvements need to be made and are embedded in a broader framework to support their effective use and above all to lead to change, e.g. through learning from good practices and exchanges of experiences. Tool users are involved in both the design and subsequent evolution of tools and the development of communities of practice seems to be an important success factor, even to the point of 'co-ownership.' Any SAT for CoVEs will also need to take these issues into

account and the planned development of support services at European level would provide an opportunity to make sure this happens. At the same time, tools deal systematically with the topics they cover. As we shall see below, the number of indicators/statements in SELFIE and HEInnovate to deal with comparatively narrowly defined topics is large and a challenge for CoVEs will be **how to enable a systematic treatment of the topics they cover effectively and efficiently.**

An important question is who the users of a CoVE SAT might be. The tools examined show that target groups tend to be broadly defined but at the same time they have clarity – everyone knows who or what they are (schools, HEIs etc). They are also intended to be applicable to all users whether at 'beginner' stage or more advanced. In countries/regions with CoVE networks, clarity of the target group is also likely to be the case (e.g. the Dutch Katapult network comprises state-supported public-private partnerships (PPPs) which sit alongside the mainstream VET system and a peer review process has been adopted that is available to all, irrespective of whether they are new or more established PPPs). But elsewhere – where individual VET providers might 'self-identify' as a CoVE (though maybe not for all its activities – e.g. it may have a CoVE for a particular sector) it is less clear who might use the tool. If the aim is to be available to all potential users, a CoVE SAT would need to be built with flexibility in mind.

As the previous analysis has shown, there is also a 'user' issue below this 'institutional' level – the stakeholders who actually complete the tool. This is covered further below but here we should note that **a choice will need to be made as to how to treat the wide range of different stakeholders involved in CoVEs**.

The tools vary in how far they are designed for users to make public comparisons or to 'benchmark' themselves. The term 'benchmark' (and even 'assessment') seems to be quite contentious where there is a strong emphasis on tools being owned by their users as it can be taken to imply assessment by an external authority. It is interesting here to contrast the world of higher education and the world of school education: the HE community (in which global league tables are commonplace) seems not to have a problem with the type of comparisons and country reviews that are eschewed in SELFIE (where schools may feel threatened by public comparison and deterred from using the tool at all). **An issue a CoVE SAT will need to resolve will be how far the results of any SAT tool should be private to the institution concerned and how far they might be used publicly for monitoring**. This relates to who the tool is ultimately for, what the objectives of the tool are and the balance of interests between stakeholders, e.g. the EC, individual CoVEs, national and regional authorities (especially where there are national CoVEs systems). To address this problem, solutions could be explored, such as making only some selected information publicly available or creating case studies with specific information (while carefully considering what information one might make available that would be useful without undermining the privacy benefits that support high take-up where a tool is voluntarily to be used). Or average values from selected indicators could be calculated, which then serve as a comparison/benchmark for individual CoVEs. Evidently, if the SAT is linked to some sort of labelling, the nature of the tool and how it is regarded by users is quite different.

The thematic and geographic overlap between tools might be something which a CoVE SAT could utilise. At the very least a CoVE SAT needs to take into account existing tools and its position amongst them, e.g. SELFIE could potentially act as a component of a CoVE SAT on the digitalisation topic, learning from some Spanish regions where SELFIE is incorporated into QA processes.

In general, the benefits of the SAT (the advantages for CoVEs, such as recommendations on actions to be taken for further development) should be proportionate to the effort (the resources needed by CoVEs) to carry out the self-assessment. Consideration could be given to developing **different versions or modules** – for example, a 'quick' version that only requires filling in a questionnaire in a short time (e.g. 20 minutes), another version or module that requires more time for data collection, and yet another version or module that would enable stakeholders to come to a joint decision on the statements/questions to be addressed.

An important aspect of the tools is that they do not try to do everything from the start. Indeed, their developmental phase can be quite long, as in the case of HEInnovate and is more like a continuous

evolution, as in the case of SELFIE, since it is impossible to know from the start which parts of the tool might be successful, where changes may be made, and how uses of the tool might develop in practice. Provision for user-generated content, including through Erasmus +, seems important for user buy-in and the popularity of tools. It seems likely that **the far greater complexity involved in CoVEs, in light of their multiple objectives and their structural and thematic variation, points strongly towards making sure that such elements are integrated into any SAT**. It also suggests that a long development/evolution phase may be necessary.

3.2. Dimensions and indicators

3.2.1. Dimensions and indicators used

Some of the tools and framework analysed use dimensions and indicators that are **directly linked to vocational excellence** (ENESAT, EFQM-HOBBIDE from the Basque Country, the 'Excellence' label from France, the CoVE certification scheme in the Castilla y León region of Spain, the CoVE Peer Review model from Katapult) while **others refer to specific aspects that could be related to vocational excellence** (such as innovation and entrepreneurship: HEInnovate[3]; UNESCO-UNEVOC Innovation Framework, digitalisation: SELFIE; social utility of VET: SOLITY) or to quality assurance at VET provider level (ISO 21001:2018, Self-Assessment Toolkit for Training Institutions[4], System of self-evaluation of VET schools in Croatia).

The dimensions and indicators used are generally **in line with the purposes and needs** that the frameworks and tools seek to address: They are supposed to determine the status quo, initiate self-reflection and dialogue and support improvements in certain aspects.

With regard to **user-friendliness** (and thus also the actual use) of the new SAT to be developed, the **number of indicators used** or the dimensions into which they are grouped is relevant. The table below shows that the instruments and frameworks studied differ to a large extent on this aspect: the number of indicators used ranges from 22 to 213.

Table 2: Dimensions and number of indicators - examples

Name	Dimensions	Indicators
CoVE certification scheme in the Castilla y León region of Spain	3 categories/groups: – teaching and learning – cooperation and partnership – governance and funding	22 activities/ criteria
Campus de métiers & qualifications (CMQ, 'Excellence' label (France)	11 criteria: 1. Socio-economic analysis & analysis of challenges identified - National-level economic analysis. - The sector or industry is identified as carrying national strategic importance. - The contribution of research is required given specific challenges related to that sector. 2. An identified scope of actors, regions, structures and qualifications - The commitment of higher education institutions also includes the identification of resources that can realistically be mobilised in terms of research (laboratories, contract projects), technological services that may be directly linked to the campus. 3. Clear and ambitious strategic objectives	Information not available

[3] In particular statements linked to the following dimension seem to be relevant for CoVEs as well: 'Knowledge Exchange and Collaboration'.

[4] Only the Section A: Leadership and Management refers to excellence as it includes the following indicator: Evaluate the extent to which the senior management: demonstrate a commitment to excellence and quality improvement at all levels of provision.

	4. Specific regional governance 5. Operational management of the campus 6. Financial and human resources ensuring the operationality and ambition of the project 7. A strong and unifying identity 8. Spaces for innovation and development for learners - The campus is embodied in one or more physical education and training spaces [as opposed to CMQ which may also be run as local networks without a specific location]. - The campus develops collaborative projects with economic partners, in particular companies, as well as with training and research institutions. it is characterised by shared resources: digital resources for training, data sharing, fablabs, business incubators, shared resource centres, technological platforms, etc. - The campus develops new sporting and cultural venues that are attractive to the learners. - The campus develops an accommodation offer that is adapted to meeting the requirements arising from national and international mobility in the field 9. Innovative VET offer 10. International development and visibility - The campus concludes cross-border, European or international partnerships whose purposes go beyond the mobility of beneficiaries and their teachers: sharing of technical platforms, joint training courses, joint diplomas, creating training platforms, etc.; - The campus contributes to promoting vocational pathways at international level. It is able to respond to requests from other countries regarding the training of technicians and educators from foreign countries 11. Effective quality approach - In addition to self-evaluation, the campus undergoes a process of external evaluation	
SELFIE (Self-reflection on Effective Learning by Fostering the use of Innovative Educational technologies)	8 dimensions: – Area A: Leadership – up to 6 questions (depending on the respondent group) – Area B: Infrastructure and equipment– up to 12 questions – Area C: Collaboration and networking – up to 6 questions – Area D: Continuing Professional Development - up to 5 questions – Area E: Pedagogy: Supports and Resources – up to 5 questions – Area F: Pedagogy: Implementation in the classroom – up to 11 questions – Area G: Assessment Practices – up to 11 questions – Area H: Student Digital Competence – up to 19 questions	up to 75
HEInnovate	8 areas or dimensions: – 1. Leadership and Governance – 2. Organisational Capacity: Funding, People and Incentives – 3. Entrepreneurial Teaching and Learning – 4. Preparing and Supporting Entrepreneurs – 5. Digital Transformation and Capability – 6. Knowledge Exchange and Collaboration – 7. The Internationalised Institution – 8. Measuring Impact	42
ENESAT	7 dimensions: – A. Education-business collaboration and cooperation – B. Pedagogy and professional development – C. Autonomy, institutional improvement and resources – D. Lifelong learning in VET – E. Smart specialisation – mobilising innovation, ecosystems and SMEs – F. Industry 4.0 and digitalisation – G. Going green – supporting sustainable goals	120
Katapult - peer review model for CoVEs (Netherlands)	4 dimensions: – Activities & Offer – Market – Business – People, partners, organisation	16 criteria

SOLITY	5 'axes': – Activities in support of return to employment – Activities in support of human development – Actions against exclusion and social inequalities – Territorial and regional development – Internal Practices	39
UNESCO-UNEVOC Innovation Framework – Guided Self Assessment	Balanced Scorecard: 4 dimensions – Leadership and Organizational Practices – Teaching and learning Processes – Products and Services – Skills and Innovation Ecosystem Ecosystem map: 2 dimensions – Commitment to skills development – Innovation potential.	BS: 41 (14 need to be selected) ESM:12
System of self-evaluation of VET schools in Croatia	6 priority areas: – Planning and programming of work – Teaching and learning support – Students' achievements and learning outcomes – Material conditions and human resources –professional development and development of employees – Human relations in the VET institution – cooperation with other stakeholders – promotion of the institution – Managing (institution and quality)	213
Self Assessment Toolkit for training institutions (part of VET Toolbox project)	4 dimensions: – Section A: Leadership and Management – Section B: Quality of Learning, Teaching and Assessment – Section C: Personal Development, Behaviour, Care and Guidance - including Safeguarding – Section D: Outcomes for Learners 3 performance descriptors: – Retention: The percentage of enrolments who complete their programme of study. – Achievement: The percentage of completers who gain a full qualification if that is what they set out to achieve in their programme of study. – Progression: The proportion of successful completers who progress to employment, further or higher education, or training	84[5]
ISO 21001:2018 - Educational organizations — Management systems for educational organizations — Requirements with guidance for use	7 areas: – Context of the Organization – Leadership – Planning – Support: Resources, Competence, Awareness, Communication, Documented information. – Operation – Performance Evaluation – Improvement	

[5] It is not clear to what extent each individual indicator needs to be addressed.

Maturity model

Some of the SAT analysed are **based on a 'maturity model'**, which is either used for indicating the overall profile of the VET provider (e.g. the CoVE certification scheme in the Castilla y León region of Spain) or the level in relation to individual dimensions.

The CoVE certification scheme in the Castilla y León region of Spain distinguishes three levels of vocational excellence: 'initial', 'advanced', and 'higher'. The first (initial) level corresponds to the requirements set out in the 2019 Erasmus+ call for CoVEs, while the higher levels go beyond.

- Initial level: awarded to VET centres that fulfil the criteria for three activities from Group 1, three activities from Group 2, and two activities from Group 3.
- Advanced level: awarded to VET centres that fulfil the criteria for five activities from Group 1, four activities from Group 2, and two activities from Group 3.
- Higher level: awarded to VET centres that fulfil the criteria for seven activities from Group 1, six activities from Group 2, and three activities from Group 3.

The following tools use maturity models for indicating the level in relation to individual dimensions:

- Within each dimension of the ENESAT, the indicators are grouped into three levels of development according to the level of challenge or difficulty posed by the indicators: Foundational, Developing, Mature.
- With the UNESCO-UNEVOC Innovation Framework the maturity levels of an institution and the ecosystem are analysed based on evidence corresponding to the indicators proposed in each of the balanced scorecard and ecosystem map dimensions. On the balanced scorecard, maturity level refers to the level of innovation performance reached by an institution using the maturity framework. In the ecosystem map, maturity level refers to the level of innovation performance assessed for each of the identified stakeholders (in particular) and the ecosystem (in general) in terms of commitment to skills development and innovation leverage potential. The maturity level for each dimension is based on the collective perception of the stakeholders that are consulted and the evidence that is presented.

The HEInnovate tool does not use a maturity model but levels of complexity and maturity are **developed in the ongoing Erasmus+ project** 'THEI2.0' (the 7 Profiles are: 1. The Entrepreneurial Aspirant, 2. The Builder, 3. The Educator, 4. The Internal Performer, 5. The Regional Performer, 6. The International Performer, 7. The Guru).

Formulation of statements and response options

The **indicators** used in the tools examined are usually formulated as **statements to which consent may be given**. The way in which the assessment is carried out in relation to the response options offered also differs between the tools analysed, including a dichotomous form (yes/no), the use of 5-point scales (and in addition not applicable) to indicate the agreement with a statement, other versions with 4-5 response options, indication of percentage, qualitative descriptions. The table below presents some examples.

Table 3: Formulation - examples

Name	Examples	Response options:
CoVE certification scheme in the Castilla y León region of Spain	Criterion 4 - Employ innovative learner-centred teaching and learning methodologies, including project-based and competence-based learning, as well as digital technologies to support the teaching process and learning (e.g. simulators, virtual reality).	Yes/no
SELFIE (Self-reflection on Effective Learning by Fostering the use of Innovative Educational technologies)	Area B: Collaboration and Networking B2 Discussion on the use of technology – School leader: In our school, we discuss the advantages and disadvantages of teaching and learning with digital technologies – Teachers: In our school, we discuss the advantages and disadvantages of teaching and learning with digital technologies – Students: In our school, we talk with teachers about the advantages and disadvantages of using technology for learning	5-point scales and not applicable (N/A)
HEInnovate	3. Entrepreneurial Teaching and Learning – The HEI provides diverse formal learning opportunities to develop entrepreneurial mindsets and skills. – The HEI provides diverse informal learning opportunities and experiences to stimulate the development of entrepreneurial mindsets and skills. – The HEI validates entrepreneurial learning outcomes which drives the design and execution of the entrepreneurial curriculum.	5-point scales and not applicable (N/A)
ENESAT	A - Education-business collaboration and cooperation A1) Foundational A1a) The school or centre cooperates with enterprises so that all learners can carry out learning in the workplace (placements or internships) to meet formal requirements specified in relevant qualification or curriculum frameworks. A1b) Representatives from employers are formally involved in school governance, for example, they are included in the Governing Body. A1c) Employers are regularly consulted by the school or centre in relation to curriculum.	– Yes (i.e. we do it already) – To some degree (i.e. we do it only partially) – No (i.e. we don't do it): - We will do it within two years - We will do it in more than two years - We are not planning to do it – Not relevant – Don't know
SOLITY	Axis 1: Indicators of activities in favour of return to employment 1.1 Employment rate in the medium term - % Number of graduates who found a job/total number of graduates from a centre	Mostly input of quantitative information; % calculated by the tool
UNESCO-UNEVOC Innovation Framework – Guided Self Assessment	Balanced Scorecard: 1 Strategy and management 1.1 Innovation reflected in the TVET institution's vision/mission/strategy – Descriptor: Innovation is embedded in the vision/mission statements of the institution. Strategic plan includes innovation and is set as one of the strategic plan's priorities. 1.2 The existence of an innovation action plan in the TVET institution – Descriptor: Institution has an action plan focused on boosting innovation performance on the level of institution, with innovation-related objectives and actions, within defined timeframe and with defined resources. 1.3 Financial resources for innovation are allocated in	Maturity level: 0-4 – 0 – ABSENCE - No awareness of the importance of the issue. – 1 – BEGINNING - Some awareness of the issue's importance, but no concrete evidence of achievement. – 2 – SOME PROGRESS - Some awareness of the issue's importance, but only evidence of sporadic/pilot achievements in one dimension.

	the institution's budget – Descriptor: Financial resources are generated through innovation-related activities such as the provision of non-traditional services.	– 3 – SATISFACTORY PROGRESS – Advanced awareness of the issue's importance, with evidence of established achievements improving over time. – 4 – EMBEDDED CHANGE - Full awareness of the issue's importance, with evidence of systematic achievement and improvement over time leading to external recognition of the institution's performance.
Self Assessment Toolkit for training institutions (part of VET Toolbox project)	Section A: Leadership and Management Evaluate the extent to which the senior management: - demonstrate a commitment to excellence and quality improvement at all levels of provision - set, share and review realistic objectives and targets that meet local and regional education and training needs -….	– Outstanding: the team has demonstrated a high level of capacity for sustained improvement in the interest of learners – Good: the team demonstrates the capacity to identify and bring about sustained improvement in the interest of learner however…… – Requires Improvement: the team needs to address important areas…….. – Inadequate: the team needs to urgently address…….. In addition, qualitative statements need to be provided and statistics (%) for performance descriptors
ISO 21001:2018 - Educational organizations — Management systems for educational organizations — Requirements with guidance for use	5. Leadership: 5.1.2 Focus on learners and other beneficiaries Top management shall be directly responsible for ensuring that: a) the needs and expectations of learners and other beneficiaries are determined, understood and consistently met, as evidenced by monitoring their satisfaction and educational progress; b) …	No response options given

Subjectivity

In **most cases** of the SAT analysed, the indicators and questions rely on **subjective views/opinions** rather than objective measures (e.g. SELFIE, HEInnovate, ENESAT, ENESAT, UNESCO-UNEVOC Innovation Framework – GSA, Self Assessment for training institutions - part of VET Toolbox project).

The statements vary in the degree to which responses are subjective or objective but rely mostly on opinion. For example, in the SELFIE tool, a more objective indicator would be: A1 – Digital Strategy: 'In our school, we have a digital strategy' (this indicator is formulated descriptively and the answer is straightforward: either there is a digital strategy or there is not); a more subjective one is: F1 – Tailoring to students' needs: 'Our teachers use digital technologies to tailor their teaching to students' individual needs' (with regard to this indicator, the answer is not so easy to give with reference to facts, it is more a matter of judgements).

The SOLITY model follows another approach, as the tool mostly asks for quantitative information (numbers) rather than subjective assessment. For each reply/indicator, the level of trustworthiness of the input data must be indicated, i.e. the respondent chooses between 'low', 'average', 'high' or 'estimate'.

In some cases, also in other tools an attempt is made to somewhat reduce the disadvantages of subjective assessments:

- For supporting the selected answers in the ENESAT questionnaire, examples need to be provided (as evidence for judgements).
- UNESCO-UNEVOC Innovation Framework – GSA: In the 'Balanced scorecard data collection form', evidence of efficiency, effectiveness and outcome needs to be documented;
- In the Self Assessment for training institutions (part of VET Toolbox project) the subjective views are substantiated with evidence, if possible; statistical data are used related to retention/achievement/success (progression).

Evidence is also asked for in the self-assessment questionnaire that is part of the CoVE certification scheme in the Castilla y León region of Spain (although in this case, most of the criteria refer to objective measures anyway): For example, in relation to 'Criterion 4 - Employ innovative learner-centred teaching and learning methodologies, including project-based and competence-based learning, as well as digital technologies to support the teaching process and learning (e.g. simulators, virtual reality)', possible evidence can be provided as follows:

- The centre has a virtual classroom that is used by 100% of the teaching staff and at least 50% of VET learners.
- The methodology and resources are based on the development of projects and challenges that jointly relate to two or more modules.
- The centre uses methodologies that include teaching resources related to disruptive technology (Industry 4.0, simulations or other innovative technologies).

However, it is recognised that judgements will differ – due to both access to evidence and perspective – and the **gathering of subjective views is not usually contested**; rather, the **benefits of this approach are highlighted and emphasized** as being fit for purpose: it encourages self-reflection and dialogue among stakeholders with differing views and perceptions. However, some argue that the self-assessment approach can be even more useful when embedded in a broader guidance framework (this was emphasised for HEInnovate, which is embedded in a broader framework composed of 3 components: HEInnovate as a tool for self-reflection and -assessment, as a community of practice, and as a tool has been adopted to facilitate country reviews and a European policy learning network).

3.2.2. Use of scores, labels and benchmarks

With regard to **benchmarking**, the results of the analysis indicated **both interest and reluctance** on the part of providers.

Some instruments allow the comparison of self-assessment results at different points in time. For example, the Self Assessment Toolkit for training institutions (part of VET Toolbox project) includes internal benchmarking to ensure year on year quality improvement both in terms of programme retention/achievement/success (progression) and in terms of institution-wide enhancement. However, it is also questioned whether benchmarking against oneself would work or would be sufficient:

- If the self-assessment is mainly based on subjective views, the question arises what is actually being compared in an internal benchmarking: different subjective views regarding the same dimensions/indicators (e.g. because either the views have changed or the persons carrying out the self-assessment have changed) or actual changes and developments.
- If the purpose of a SAT is to initiate reflection, dialogue between stakeholders and improvement in a particular area, the internal benchmarking aspect is probably less important anyway, especially if there is no incentive attached to it. Repeated self-assessment might be of more interest to providers if they need to demonstrate progress and formally confirm it to someone (e.g. to obtain a certificate or label). In this case, an additional element of external review could be included.

Rather rarely do the tools also offer the possibility to compare one's own results with those of other providers. An exception is the SOLITY model that uses both, scoring and benchmarks: After completing the self-assessment, the interactive SOLITY tool provides a social utility score, assesses the VET provider's performance on the five axes and respective indicators. For these, users will also get their score ('your response'), the highest European score reached from the best performing VET provider ('best in class'), and the average European score ('average'). The tool also allows for benchmarking performance against other users (e.g. by country, region, organisation, training year, specific VET centre).[6]

In order for a SAT to be used for comparison and benchmarking, the dimensions and indicators must be relevant and fit the VET contexts of the target countries. Experience with the SOLITY model shows that the heterogeneity of VET systems in Europe has been a major challenge in this regard, and translation problems have sometimes played a role. They also found those indicators that require collection of data that most VET providers collect anyway (e.g. as part of their QA procedures) work best. With other indicators, there are significant differences across systems, and they might not work for a given system as it is simply not possible to collect the required information.

For other tools it is sometimes emphasised that they have not been developed as benchmarking or ranking tools (e.g. SELFIE, HEInnovate), however, providers could voluntarily share their reports and scores if they wished. Nevertheless, comparisons between providers would be problematic because of the subjectivity of the results. For example, in the HEInnovate tool, which uses a 5-point scale, there are no fixed rules for what constitutes a 1 or a 5. It is up to the individual user to decide how well they think their HEI performs in relation to each statement. For this reason, the results, when aggregated, can only be used for discussion and dialogue and not for benchmarking or ranking an institution. However, this would be less of a problem if sharply defined qualitative statements were used that required simple yes/no responses (based on easily ascertainable facts) – such as 'The provider has business representatives on the government board'.

3.2.3. Implications for a CoVE tool

It should be kept in mind that the use of long questionnaires or a high **number of dimensions and indicators** can always be a problem, as a lot of time and resources are needed for the assessment, in particular if several (internal and external) stakeholders should be involved in the assessment. It should also be remembered that self-assessment with an instrument designed to contribute to self-reflection with the aim of improvement in a particular area is not an end in itself: it is only the starting point for further activities and its use should therefore not be too resource-intensive.

There are several ways to address this issue:

- Keeping the list of indicators manageable so that the time required to complete the self-assessment remains acceptable;
- Providing the possibility to select the most important dimensions and/or indicators (and omit others) (see also discussion on 'flexibility' further below);
- Dividing the SAT (or questionnaire) into modules and defining dimensions and/or indicators that can be addressed by different types of respondents with the appropriate knowledge and experience (and therefore not all respondents have to comment on all indicators). Moreover, in case different stakeholders participate in the self-assessment, the number of questions to be answered could differ (this is the case, for example, for the SELFIE tool, where students answer more questions in Areas F, G and H than others).

The analyses reveal that **maturity levels** seem to be useful for showing the VET providers (and also CoVEs) directions for progression. They also seem useful in cases where a label is given. However, there are also risks that they might feel penalised when not reaching the highest level and in particular

[6] With the updated version of the tool, the benchmarking element will be improved, and made easier.

when this information is published. It might also make the SAT less flexible if all dimensions and indicators have to be addressed in the self-assessment to determine the respective maturity level of a CoVE.

Furthermore, defining the levels and what they are based on is a challenge: for example, one could ask whether it is sufficient to base the classification on the number of activities in certain areas (as in the CoVE certification system in the Spanish region of Castilla y León), or whether it makes more sense to define different levels of performance for each statement or dimension that can actually be distinguished and achieved in reality and selected in the self-assessment process. The first approach mentioned could serve as a 'breadth exercise' and show a range of activities carried out, while the other approach is more interesting internally as it can be particularly relevant for development and future action. However, having definitions for each level (i.e. detailed criteria) does not seem to be a realistic solution – it would be too much work to define the criteria and also too burdensome for the users (who would have to check all the criteria and compare them with their own situation). Consideration could be given to whether it is possible to consistently indicate levels based on objective information.

For the **formulation of statements and response options** in the SAT, the following should be considered:

- The SAT must contain simple and unambiguous statements. Both in the statements and in the response options (i.e., provided options from which to choose the one that best describes the situation in the specific CoVE), any possible negative connotation should be reflected and eliminated (e.g. different cultural contexts should be taken into account when developing an international SAT - in the Vietnamese context, for example, an assessment indicator that led to statements such as ‘needs improvement’ was not considered useful as it was understood as ‘really bad’).
- In order to make the tool user-friendly for different types of stakeholders that are involved in CoVEs, it could be considered to adjust the wording to the respondent group (e.g. as in the case of SELFIE).
- In general, when formulating statements in a SAT that is useful and make sense for different types of CoVEs in different countries and VET contexts, a balance needs to be struck between being specific on the one hand and general enough to be applied by different providers on the other.

The **subjectivity** of assessment in a SAT can be seen as both a strength (or even a necessity) and a weakness. There are ways to counter the disadvantages of subjective scores, for example, by using different types of statements/questions:

- questions ~~on highly specific qualitative statements~~ that require factual answers (e.g. yes/no) or that are sharply defined to avoid ambiguity (e.g. asking for a percentage instead of having answer options like few, many, very many);
- questions requiring data or statistics;
- questions requiring normative judgements (formulated in an evaluative manner).

It might also be useful to require – at least for some indicators – explanations or evidence (such as statistical data as hard evidence or good practice examples as illustrative evidence) as it increases transparency of the judgements. For a SAT for CoVEs that incorporates the perspectives of different stakeholders, it is important to provide access to evidence as well as different perspectives to underpin the assessments, and it might be useful to collect these before the assessment to construct a common 'organisational understanding'.

Gathering evidence may be of particular importance if the SAT for CoVEs is to be used for comparison and **benchmarking** purposes. In addition, this would require clear guidelines for interpreting the response options, (e.g., if a 5-point scale is used, guidance should be provided on what constitutes a score of 1, 2, 3 etc. in each case).

3.3. Framework and process

3.3.1. Self-assessment processes

Some of the **self-assessment tools** examined are designed to collect the **perspective of different stakeholders** (e.g. SELFIE, HEInnovate, ENESAT). Usually, in the case of online tools, a responsible person is nominated as coordinator and starts with the registration process. Depending on the design of the tool, the steps that follow can differ:

- The coordinator can select the participants who will conduct the self-assessment (e.g. SELFIE: school leaders, teachers, students). They will then receive a link with the questions and statements to answer on an anonymous basis.
- The coordinator must first decide whether to set up a personal account or a group account (e.g., HEInnovate). In the latter case, the coordinator can invite a non-limited number of internal as well as external stakeholders (e.g. colleagues, external partners, students, etc.) to complete the self-assessment as part of the group.
- Other tools, such as the ENESAT questionnaire or the SOLITY tool, in turn, are completed once for each VET provider, but it is recommended that it be done on the basis of consultation with others (in the case of ENESAT: including the school or centre Director or a senior manager, the identified ENE contact point and other teachers or managers who have, between them, a strong understanding of all of the dimensions addressed): After the individuals have reviewed the questionnaire, the team may then meet to discuss and complete the questionnaire together or, once they have agreed their collective responses, they may delegate a member of the team to respond on their behalf.

Also the Guided Self-Assessment approach (UNESCO-UNECOC) involves the perspectives of different stakeholders (students and teachers that represent a broad range of units, fields, departments or areas of the TVET institution). It is designed as a structured exercise and as a participatory process in which a TVET institution can consult internal stakeholders to assess its level of preparedness for innovation. But in this case, the self-assessment process is spread over four days, with several meetings. External stakeholders (representatives from bodies with an interest in skills and innovation) may also be mobilized for participation in the introductory meeting, which is an opportunity for the TVET institution to raise awareness and advocate its innovation-related activities.

For initiatives that link the self-assessment to the award of a certification or a label, an element of **external assessment** is added – for example:

- CoVE certification scheme in the Castilla y León region of Spain: Applications may be submitted by directors/heads of publicly funded VET centres in the Castilla y León province. The region of Castilla y León launches one call for applications per year. Applications can be submitted electronically through the official web portal of the Castilla y León region, or alternatively by e-mail. VET centres need to complete the self-assessment questionnaire (online pdf document) and complete the evidence dossier (online Word document). Each provincial directorate (i.e. of the nine provinces in the region of Castilla y León) assigns a panel of at least two experts (usually one inspector and one other expert) to assess the application and undertake an on-site visit to the VET centre. Feedback to the VET centres is provided in the form of a report by the expert panel in charge, which also includes information on the level of certification awarded. Feedback may also be provided during the on-site visits by the technical experts.
- Campus de métiers & qualifications (CMQ), 'Excellence' label (France): Applications for 'excellence campuses' need to be submitted and a group of experts representing both the labelling ministries, the economic partners and the regions, assesses the applications for labelling with regard to the labelling criteria.

An element of **peer review** is usually not directly integrated in the tools examined but in some cases the frameworks are used for conducting peer reviews:

- Katapult - peer review model for CoVEs (Netherlands): Katapult supports with tools and guidance the public-private partnerships (PPPs) and CoVEs being set up in the Netherlands as part of government policy to bring VET and commercial sectors closer together. They have developed a peer review model for these CoVEs, based on four dimensions and 16 criteria and a maturity model comprising five phases from 'start' to 'sustain' and finally 'further development'. For each criterion, there is guidance for peer reviewers in terms of what the criterion 'could look like' at each of the 5 levels (a matrix of criteria and levels) but this is strictly to support dialogue. Peer reviewers are trained in the dimensions and phases by Katapult staff and may include sector experts. The voluntary reviews take 1 or 2 days: Day 1 is used for interviews (teachers, students, companies and the PPP project managers); Day 2 is for feedback and discussion.
- HEInnovate – peer review at country level: Since 2017, the SAT has been complemented by HEInnovate country reviews, that apply all the dimensions of the HEInnovate framework to a country's HE system and higher education institutions (HEI) to support policy makers and HEI leaders in this transformation process (usually, some dimensions are selected). As part of country reviews, case studies are conducted and HEIs are invited to use the self-assessment tool. The results are used for initiating discussions at site visits.

For conducting self-assessments with a focus on **quality assurance**, in many cases **report templates** are provided that have to be completed (e.g. Self-Assessment Toolkit for Training Institutions - as part of the VET Toolbox). The system of self-evaluation of VET schools in Croatia, for example, requires that the VET institution compiles a report on the conducted self-assessment. In the process of self-assessment, schools use the e-Quality online tool for self-assessment and the Self-assessment Manual with guidelines for self-assessment.

3.3.2. Flexibility

The tools examined that have **self-assessment and -reflection as key purpose** usually allow for **tailoring** the tool, either by selecting relevant dimensions/indicators ('static' flexibility) or by providing the possibility to add own indicators to cover specific areas/topics ('dynamic' flexibility) – for example:

- SELFIE: Schools can add up to 10 statements/questions created by themselves and there are lists of optional questions (around 27 in the WBL tool).
- ENESAT: Schools and centres may choose to self-assess only for those dimensions which they find relevant, selecting the dimensions for which they opt in in the page 'Dimensions' choice'.
- HEInnovate: Users can select relevant dimension and choose how to organise and use the results.
- UNESCO-UNEVOC Innovation Framework – Guided Self Assessment: the number of indicators selected for each dimension can vary to allow for more information to be collected on one dimension. The overall number of indicators can also be adjusted to fit the time frame available for the exercise.
- Self Assessment for training institutions (part of VET Toolbox project): the tool can be adapted to the needs of the VET provider.
- In the new version of SOLITY, which is currently undergoing testing, there will be a 'wild card', i.e. VET providers will have the option to not respond to certain questions (e.g. if they are not applicable to their context).

3.3.3. Links to other tools

Some of the self-assessment tools and frameworks analysed are **directly linked to quality assurance** procedures. But some of the other tools are also already **used as part of quality assurance processes**. This is the case, for example, for SELFIE which gives a badge to a school once they have used it; this can then be used at Member State level for various purposes. There are country examples that demonstrate that SELFIE is indeed embedded in quality assurance processes

(e.g. Castilla y León has a quality programme and use SELFIE as the means for judging digital capacity, with schools being categorised against five levels as part of the QA process; Andalusia uses the questions from SELFIE in its QA procedures).

Specific tools can also be used for certain dimensions or indicators of a broader tool, as the reference to SELFIE shows that is made in one of the questions in the ENESAT: 'F2b) The Digital Competence (DC) of staff and learners is benchmarked, e.g. using the EU's SELFIE tool or another framework.'

Another way of linking tools, in this case a rather 'loose' linkage, is to **present them side by side on platforms** – for example:

- EPIC – an instrument that helps measure entrepreneurial education's impact on students – is connected to the HEInnovate platform since late 2019.
- In the future, SOLITY will be moved to a joint platform with the 'Go International' tool (a SAT related to internationalisation – under development). This work is currently being undertaken as part of the VENHANS project.

3.3.4. Analysis, reporting and feedback

Digital self-assessment tools can be designed with **various functionalities** for analysis and reporting as well as for the provision of feedback:[7]

- Provision of extract of the analysis (data summary) as well as a detailed report;
- Provision of score for each dimension and overall score;
- Graphical presentation of data (e.g. bar charts, radar or spider diagram) that can be downloaded, e.g. as pdf or .jpeg files, Microsoft Excel (.xls) files;
- Comparison functions: self-assessment result averages per statement compared to averages of all other respondents (HEInnovate); individual results compared to the group average (HEInnovate); comparison of results over time, amongst local centres, per country (SOLITY).
- Tailor-made recommendations, such as suggested case studies, videos and guidance notes (HEInnovate);

3.3.5. Implications for a CoVE tool

Since CoVEs involve a **variety of different stakeholders**, the SAT also needs to ensure that their various perspectives can be included in the self-assessment. It has the advantage that on the one hand all perspectives can be taken together to get a comprehensive picture and also the responses of the different stakeholder groups can be compared. However, it might be a challenge to motivate all relevant stakeholders to participate in the self-assessment. Discussion with others before and after the assessment seems to be a useful approach to increase motivation to participate and to create a shared view on the current situation and development goals and options.

Peer reviews could be a useful **addition to the SAT**, as an optional add-on. For example, peer review could be integrated as additional feature; in this case, it would be necessary to decide whether all or only selected dimensions/indicators should be used for the peer review, at what level/depth the peer review should be conducted, and how the results should be expressed, e.g., as overall statements or as feedback on each indicator. Peer reviews could also be organised once a CoVE has

[7] A tool that could be interesting to explore (but was only identified after fieldwork had been finalised) is the Self-assessment tool on inclusion in and around schools, hosted by the School Education Gateway (https://www.schooleducationgateway.eu/en/pub/resources/toolkitsforschools/self-assessment.htm) (not specifically for VET). Based on their responses, schools will get a personalised report with the areas where they already seem to be working well to prevent early school leaving and promote inclusion, and others in which there is more room for development.

conducted the collective self-assessment process. The focus could be on selected dimensions and the process could include site visits (e.g. for discussions with stakeholders). The dimensions and indicators of the SAT could be used as the framework for the peer review.

While it seems to be useful and important to design a SAT with some element of **flexibility** because this can increase motivation to participate (e.g. by addressing local needs and potentially saving resources), there are **trade-offs** to consider:

- The way the dimensions and indicators are conceived may require them to be considered holistically and in their relationships to each other. Omitting individual dimensions and indicators would undermine a holistic approach.
- Should the SAT (also) be used for benchmarking and comparison purposes, this could be hampered by the possibility of selecting dimensions/indicators and not including all of them in the self-assessment (flexibility versus standardisation).
- Tailored feedback and recommendations as support for improvements would not be possible in the case of individually added dimensions and indicators (flexibility verses tailored feedback).

Consideration should also be given to the extent to which **existing tools and frameworks could be integrated** into a SAT for CoVEs to assess (or deepen the assessment of) certain aspects. Or at least these could be offered as optional elements on the platform.

Reporting and feedback functionalities should reflect the goals of the SAT for CoVEs (e.g., self-reflection only or comparison and benchmarking as well) and provide the ability to obtain analysis in a variety of ways and receive feedback and recommendations depending on results and development needs (to help identifying direction of travel, follow-up and next steps).

3.4. Operational aspects

3.4.1. Technology/application(s) used

Among the tools analysed, HEInnovate, SOLITY and SELFIE can be considered as interactive self-assessment tools that are based on a web application.[8]

- SELFIE is a JavaEE tool based on the Spring framework, HTML5, CSS, Jquery, Java i18n and I10n. Under Oracle database and tomcat application server. It is also integrated and uses several Commission libraries and services such as: EU-Login, Europa Component Library. It is accessible on any device.
- SOLITY: No details on the backend development are available, as this work was carried out by an external subcontractor. The web application used is Laravel. After completing the registration process and getting a personal access link, any user can complete the on-line form.
- The HEInnovate tool is based on a huge database – it is tailor-made for this SAT. In order to gain better statistical data on users, they have recently put behind a database of HEIs – users can select their institution from this database or can send a request for their HEI to be added to this database (they run a helpdesk). There are no specific access requirements.

3.4.2. Interactivity

Both SELFIE, HEInnovate and SOLITY have a user interface that is optimised for mobile phone users. Graphical charts are part-and-parcel of all three tools. With SELFIE, data is input directly to the questions by individuals who receive a link with direct access to the questions, accessible from any device. Some tools, like SOLITY, provide the possibility to complete the online form at different times, saving all data in the meantime, until the user logs in again to complete the assessment.

While SELFIE and SOLITY direct users straight to the self-assessment questions, with HEInnovate users start the self-assessment from the user dashboard by clicking the button 'Start new self-assessment'. The user dashboard is central to all the features of HEInnovate. From the dashboard users can (a) start a new self-assessment; (b) manage their self-assessments – access to all self-assessments previously completed or started; and (c) access all group-related functions, including creating a new group and managing existing group(s). In addition, the User dashboard includes a section called 'Next steps', where one can find useful information and materials to support your use of the tool.

3.4.3. Accompanying resources and support

HEInnovate, SELFIE and SOLITY are all accompanied by user guidance and support, often through several different channels. Usually, built-in guidance (help text) on each indicator is available[9].

- SOLITY currently provides an extensive FAQ section on its website (and also built into the SAT platform) that addresses various questions related to the self-assessment process (https://www.solityproject.eu/instructions). In addition, there is built-in guidance in the SAT form: next to each indicator, there is an 'i' symbol that offers further information on that indicator if clicked upon. Furthermore, SOLITY offers a functional mailbox and national as well as European contact points as a kind of helpdesk.

[8] The Croatian platform for the self-assessment of VET providers probably also would fall into this group but we were not able to retrieve sufficient information to report on this. e-Quality (http://e-kvaliteta.asoo.hr/pages/public/login.xhtml?v=#{now}) is an application to support vocational schools in the implementation of the self-assessment process and the preparation of self-assessment reports.

[9] This also includes guidance on how to interpret 'Strongly disagree' is given as 'I/we/they do not do this' or 'In my experience, this is not true at all' (from the SELFIE all questions document). For indicators that use the 5-point scale, a descriptor is provided as to what a rating of 5 means (this will soon be published).

In the future, the tool will be accompanied by a support service, managed by EVTA (and together with the newly developed Go International tool), developed as part of the VENHANS project.

- SELFIE provides resources for school leaders, teachers and students, including guidance on using SELFIE, communications material and reports. They can be accessed online or downloaded.

  This includes links to a short course in developing an action plan developed by the Spanish Ministry for Education and VET's Instituto Nacional de Tecnologías Educativas y de Formación del Profesorado (INTEF) with the JRC[10]; and a Digital action plan guide, designed by the Spanish Ministry of Education and vocational education and training (VET) to help schools in their digital transformation process by designing their digital action plans (in Spanish).

- HEInnovate offers both online and offline support. For each of the eight dimensions, Guidance Notes are available online on www.heinnovate.eu.
  A comprehensive training 1-day workshop for one or more HEIs on how the tool can be used in a HEI is offered. It is understood that the self-assessment tool works best if it is used as part of a process for HEIs who are exploring their entrepreneurial and innovative potential rather than in isolation. Workshops are an important part of the process as they provide an opportunity for those involved to discuss and prioritise actions for the future. This is complemented by extensive training and support materials, including practical case studies, are available to support workshops and further development within the HEIs.

  In addition, digital resources are provided, including videos and interviews which describe how HEIs implement HEInnovate and the changes it has brought.

In the case of SELFIE, JRC is looking at creating a modular structure that could be populated by third party content (developed by, e.g. research centres, universities) and which could help it to respond to needs, e.g. to cover topics such as digital wellness and greening, without undertaking all the work itself. For this to be successful, QA criteria will be adopted which content creators will need to satisfy to upload content.

3.4.4. Data collection

HEInnovate and SELFIE allow for multiple inputs from individuals; with HEInnovate, even external stakeholders can be included, whilst SELFIE for WBL includes in-company trainers. The SOLITY model is technically based on single input per subject, however the distinction between 'VET provider' and 'organisation' (upon registration) allows for some sort of multiple input model (see below). For all three tools, personal information is to be treated according to the applicable European Data Protection legislation.

- With SOLITY, the registration portal differentiates between 'VET provider' (i.e. individual VET centre using the SOLITY self-assessment tool) and 'organisation' (i.e. head or umbrella organisation under which the VET provider or VET centre operates). This allows groups of VET providers to complete the SAT at organisation level, or to complete it for one or more individual entities. SOLITY has access to all data but it will not be used besides for the creation of the report. Users may share their social utility report with others.

- SELFIE: Data is input directly to the questions by individuals who have been given the link by their school. Results are only available to the registered user and are anonymous. They are never in the public domain. JRC has access to all data, individual and global level.

- The HEInnovate self-assessment can be completed either by individuals or by groups (e.g colleagues, external partners, students, etc.), internal as well as external (i.e. it is a possible to invite a broader group of stakeholders including external partners for example to gain insight into their views).

[10] https://enlinea.intef.es/courses/course-v1:INTEF+DigCompOrgEN+2020/about

The results derived from the use of HEInnovate belong to the HEIs. The results are only available to the registered user or in the case of a group, to the group administrator. The registered profile gives access to all self-assessments completed by the user, which can be used for their own internal comparative purposes.

When starting a self-assessment, users can choose to complete the self-assessment anonymously. The results are never in the public domain. In principle, it is possible for HEIs to share the reports with their results.

The HEInnovate Team i.e. the site administrators have access to the results, in case technical assistance is needed.

3.4.5. Cost and funding

The interactive tools analysed all rely on public funding. SOLITY, for instance, was developed within a (now completed) European project developed under the EACEA-41-2016 call: Support for Policy Reform - ERASMUS+ KeyAction 3 - Sub-Action: Forward Looking Cooperation Projects. The ongoing work on the joint platform with the 'Go International' SAT is carried within the VENHANS project, a currently ongoing Erasmus+ KA3 project. Detailed information is however only available in the case of SELFIE and HEInnovate.

Funding of SELFIE

Publicly funded. The development on 2018 when the tool was launched was about 250,000 Euro. It was developed in-house.

JRC receives specific funding for SELFIE and has in place a dedicated team for the management and the operation of the tool. The operation includes: Research and Development work. Technical Operation. Content and Data management. Ecosystem Development (including user support and international presence of SELFIE). Project Management and Policy Support.

JRC is now in the process of outsourcing elements of SELFIE operation from JRC and it seems that in the new model they have JRC keeping the Research and Development strand along with data management and participation in the tool monitoring. The rest of the operation is planned to be outsourced.

Annual budget is around 1 million Euro. Technical work accounts for 14%, research 35%, ecosystem development (the community) 23%.

Funding of HEInnovate

The tool was developed based on public funding (European Commission, OECD). The OECD contribution was originally in-kind; for the last two years, they have financed 20% of the initiative.

In the Erasmus+ Programme (2021-2027) funding is foreseen to continue and expand HEInnovate.

The development during the last 10 years was carried out with many events, and meetings – overall, the costs were around EUR 4-5 million (incl. travel costs and costs for events – e.g. the expert group met twice a year, physical meetings were organised, also big conferences).

The annual budget amounts to 300,000-350;000.

The tool is free of charge and open to anyone to use. It cannot be used for commercial purposes.

Among the non-interactive tools, only the ISO certification is entirely privately funded through payments for standards. All other tools are publicly funded. The C&L certification is funded by the region of Castilla y León. The VET Toolbox activities are co-funded by the European Commission and by the German Government. The GSA tool (UNESCO-UNEVOC) is supported by the Beijing

Caofeidian International Vocational Education City (BCEC), with contributions from the German Federal Ministry of Education and Research (BMBF) and the Federal Ministry for Economic Cooperation and Development (BMZ).

3.4.6. Quality assurance & updating/review of the tool

For SELFIE and HEInnovate, there is constant feedback on the tool, which has led to a number of revisions across time. SOLITY is currently being revised and updated; the new version of the tool will be launched in summer 2022. The tools rely both on user feedback and expert feedback.

- SELFIE: Constant feedback is received from various pilots and exercises done in collaboration with countries, but also through a functional mailbox, requests from educational authorities and an annual usability study.

  There is significant content management. It is now available in 40 languages and there is constant feedback on terminology, meaning individual words might be changed. JRC also commissioned a psychometric report, which led some questions to be repositioned within the tool.

  There is a set of feedback questions at the end of the tool covering these topics:

  Overall score: If you were to review SELFIE, what score would you give it out of 10?
  Recommending SELFIE: How likely is it that you'd recommend SELFIE to a colleague?
  Suggestions for improvement; How can we improve SELFIE further? Share your ideas and suggestions with us.
  Relevance for WBL: Out of 10, how relevant were the questions for your WBL context?
  Usefulness: What would SELFIE need to make it more useful for your school/company?

- HEInnovate has been regularly revised since 2012, based on the outcomes of a pilot, a number on interviews, and the feedback from the HEInnovate expert group. The annual expert group meetings are used to decide on any updates. User feedback is also important – e.g. the train-the-trainer workshops (two per year) and other workshops are used for discussing the content and collecting feedback. Further suggestions for revision may come from the OECD country reviews.

  Revisions so far were mainly related to the HEInnovate statements, which were fundamentally changed in 2015, based on users' feedback. In 2019, an additional HEInnovate dimension, including statements on the digital transformation of HEIs, was added.

There are Erasmus+ projects working on SELFIE and HEInnovate, which might generate relevant content. In the case of HEInnovate, these are followed closely - but it depends on the quality of the results whether they will be taken on board.

3.5. Usage

3.5.1. Re-assessment

The interactive tools analysed (HEInnovate, SOLITY and SELFIE) all support re-assessment, though it is not a requirement. Both HEInnovate and SOLITY recommend annual re-assessment in order to allow them to monitor their progress over time.

The certification awarded by C&L as well as the French CMQ label is awarded for a limited period of time, after which re-application or renewal are required. The excellence certification in Castilla y León is awarded for a duration of three years; whereas the CMQ label is awarded for a duration between one and five years.

The ISO 21001:2018 standard does not require re-assessment.

3.5.2. Data on usage and reported benefits

The table below provides an overview on the usage and reported benefits of the tools.

Table 4: Data on tool usage and reported benefits

Name	Data on usage	Reported benefits
Usage of interactive tools		
SELFIE	Over 2.4 million users (teachers, students etc.) in over 19,000 schools in 86 countries since its launch in 2018. (figures in January 2021 were 750,000 users in 7,000 schools in 56 countries) Other stakeholders beyond schools are increasingly interested in the tool. National initiatives in Spain and Portugal.	– Schools acquiring a systematic understanding of their position on digitalisation and areas they can prioritise for improvement (but no data on effect at school level available).
HEInnovate	Total number of (see: https://www.heinnovate.eu/en): - Self-assessments: 27,400 - Higher Education Institutions:1,400 - Registered users:27,700 - Groups on the site:2,200	– Initiating a transformation process, or to give feedback on the institution's transformational journey to becoming an entrepreneurial HEI – Bringing stakeholders together, and acting as a framework to develop the strategy – Getting closer to funding opportunities OECD have used HEInnovate also outside EC – Latin America: there is a sincere interest in the tool, to systematize their development approach. OECD have used HEInnovate also outside EC – Latin America: there is a sincere interest in the tool, to systematize their development approach.
SOLITY	– Number of organisations registered: 35 – Number of VET centres registered: 62 Data on the number of assessments carried out is not available.	– Helps VET providers become more aware of their own procedures. – Helps visualise that the role of VET providers often goes beyond providing education and training, and also includes empowerment.
Usage of non-interactive tools and certifications		
ENESAT	The first wave of the Self-assessment Survey was launched in October 2020 and was sent to 82 CoVEs in 12 ETF partner countries. Self-assessments were carried out by the staff of 72 CoVEs during the first wave of self-assessment. Since then, the initiative has grown rapidly: it now includes more than 200 vocational schools and centres from more than 30 countries.. A second cycle of self-assessment will take place in 2022. It is planned to publish a complete analysis in 2022.	Interim reports have informed development of ENE, e.g. partnership on green skills.

Self Assessment Toolkit for training institutions (part of VET Toolbox project)	The toolkit was developed with input from local stakeholders and piloted in 4 colleges (and later used by others as well) – the pilot was in one curriculum area (automotive) and the application of the toolkit was rolled out afterwards. Since the toolkit is available on the website, it can be used by anyone – its use is not being monitored. In Vietnam, it was used by 18 colleges, probably more now.	The toolkit and the self-assessment provide inspiration for changes. After going through the self-assessment, development processes in different areas are initiated (incl. investing in new machinery, for streamlining their processes - some had too many processes, improving QA of assessment). It is used as a guiding tool. The toolkit is used as starting point – but providers usually adapt it to improve their system. Benchmarking is very big issue in the Vietnamese context. Toolbox project tries to influence systemic change - and this was also achieved in Vietnam with this project: policy documents were developed, regulations, QA cycles – there was quite important buy-in at policy level.
ISO 21001:2018	Europe probably has the least adoption of this standard (mostly because many have their own quality standards) It is more widespread in South America, China, also in Mittel East, Japan.	The potential benefits to an organization of implementing an EOMS based on this International Standard are: – Better alignment of objectives and activities with policy – Enhanced social responsibility by providing inclusive and equitable quality education for all – More personalized learning and effective response to all learners, in particular those with special education needs and distance learners – Consistent processes and evaluation tools to demonstrate and increase effectiveness and efficiency – Increased credibility of the educational organization – Ability to demonstrate commitment to effective quality management practices – Development of a culture for organizational improvement – Harmonization of regional, national, open and proprietary standards within an international framework – Widened participation of interested parties – Stimulation of excellence and innovation
CoVE certification scheme in the Castilla y León region of Spain	Since 2020, after two rounds of applications, in total, 47 VET centres have been awarded the certification so far (out of approximately 200 VET centres in the region), of which are: – 20 higher level certifications – 22 advanced level certifications 5 initial level certifications	
Campus de métiers & qualifications (CMQ, 'Excellence' label (France)	To date, more than 100 campuses have been certified, in 12 different sectors. 40 of these campuses have been certified in the Excellence category.	

4. POINTERS TOWARDS A SELF-ASSESSMENT TOOL FOR CENTRES OF VOCATIONAL EXCELLENCE

This section presents a list of key issues to be considered for the development of the SAT for CoVEs:

Development phase

- Balancing top-down policy goals and bottom-up needs, taking into account the specific characteristics of CoVEs with their multiple objectives, multiple forms and multiple stakeholders which provides a key frame of reference for determining SAT options;
- Defining the purpose (who is the tool for, how will the results be used) and functions (e.g. reflection only or also initiating dialogue and drawing-up an action plan) and also what is not the purpose of the SAT (to consider that it could be an iterative process when it comes to defining the design characteristics of the tool); a particular question is whether/to what extent/how the tool could be used for self-assessment and for comparison (either over time or with other CoVEs) and benchmarking and how far the results of any SAT should be private to the institution concerned and how far they might be used publicly for monitoring (private or public benchmarking);
- Identifying potential users / user groups (stakeholders to be involved in the self-assessment) and their needs; due to the characteristics of CoVEs, the involvement of multiple stakeholders in the self-assessment seems to be a fundamental and necessary principle (to consider that a choice will need to be made as to how to treat the wide range of different stakeholders involved in CoVEs);
- Involving potential users in the design process ('bottom up' development) to ensure 'co-ownership' (e.g. CoVE community of practice), but at the same time, development should also be based on expert knowledge, scientific studies, etc.;
- Embedding the SAT in a broader framework (going beyond self-assessment) with some elements envisioned from the start (such as the tool itself and potentially some support structures), and with opportunities for adding elements that can evolve organically over time. Following such a 'modular' approach to the development of the SAT could help to reduce complexity and ensure stakeholder buy-in; this could mean, for example, starting with a block of statements/questions that are easier for CoVEs to answer and that relate to areas where the SAT results are of immediate use to CoVEs; in a next step, more complex questions/statements could be integrated as well as other features, e.g. comparison with other CoVEs, automated generation of recommendations for further development and improvement;
- Piloting and testing are crucial as well as considering opportunities for revision and further development (e.g. within EU-funded projects).

Design features

- Identifying a manageable number of indicators/statements relevant for CoVEs to enable a systematic treatment of the topics they cover effectively and efficiently; at the same time, the statements must be comprehensive enough to capture the key elements of professional excellence in the specific context of CoVEs; testing and collecting feedback from users is crucial for developing useful indicators;
- Deciding whether and to what extent the SAT for CoVEs should have a modular structure (allowing for flexibility – keeping the trade-offs in mind) or whether it is necessary to keep a holistic approach; a holistic approach may work better where a monitoring function for the tool is envisaged; perhaps an option could be to take a core + options approach, so the core can be used for monitoring;

- Considering the use of a maturity model (if one should be utilised at all, possibly in combination with a label) that is based on clearly defined different levels of performance for each statement or dimension that can actually be distinguished and achieved in reality and selected in the self-assessment process (supported with guidance on how to interpret the different levels); as this is a rather tedious task, it could be considered whether it is possible to indicate the maturity level in a uniform way based on objective information (e.g. easily obtainable data);
- Using simple and unambiguous statements, avoiding any negative connotations; consider adjusting the wording to the different respondent groups; ensure that the statements are useful and make sense for different types of CoVEs, which are at different stages of their development, in different countries and VET contexts (balance between being specificity and generality); translation in several languages is also useful but raises challenges of its own (including cultural differences in the connotations of terms);
- Considering countering the disadvantages of subjective assessment, for example, by providing advice on how to interpret low and high scores or by requiring explanations or evidence of answer option selected (such as statistical data or good practice examples) for increasing transparency of judgements; possibly include different types of statements/questions that are relevant for different purposes (e.g. questions that require factual answers, questions requiring quantitative information, questions based on normative judgements);
- Identifying any existing self-assessment tools that could be taken into account and potentially act as a component of a SAT for CoVEs;
- Identifying the process for the self-assessment by indicating the roles and responsibilities of the stakeholders involved and how they can contribute to the self-assessment (e.g. individual or group assessments, invitation of external stakeholders);
- Designing analysis, reporting and feedback functionalities that reflect the goals of the SAT for CoVEs (e.g., self-reflection only or comparison and benchmarking as well) and ensure the provision of tangible outputs;
- Considering the inclusion of features to provide tailor-made recommendations and support material for further improvement of CoVEs;
- Deciding on any additional features the tool should have or that could be added at a later stage (such as an element of peer review); this includes features integrated into the tool as well as elements of the broader framework (such as provision of training and support materials, organisation of related events);

Operational aspects

- Attractive and intuitive user interface: ease of access, user-friendliness and clarity are key requirements. Focus on data presentation – charts, benchmarks, etc.
- Link to existing platforms/guidance; shared platform for exchange.
- Downloadable/shareable output of the assessment (e.g. report).
- Built-in feature to monitor usage of the tool.

Additional aspects

- Promotion and communication activities are important to explain the benefits of using the SAT for CoVEs and to outline purposes and objectives (CoVEs need to have a reason to complete the SAT, the benefits for them need to be clear);
- Commitment and follow-up needs to be ensured, including the engagement and support of the management of a VET provider and the CoVE from the outset; this is also important for ensuring the readiness to respond to the development needs emerging from using the tool and follow-up

with more robust discussions and activities; a systematic action plan is useful in suggesting next steps and ensuring regular monitoring and follow-up.

ACRONYMS

C&L	Castilla y León
CMQ	Campus de métiers & qualifications
CoVE	Centre of vocational excellence
DG EMPL	Directorate-General Employment, Social Affairs & Inclusion (EC)
EC	European Commission
EFQM	European Foundation for Quality Management
ENE	ETF Network for Excellence
ENESAT	ETF Network for Excellence Self-Assessment Tool
EQAVET	European Quality Assurance in Vocational Education and Training
E.T.F.	European Training Foundation.
EVTA	European Vocational Training Association
EU	European Union
HE	Higher education
HEI	Higher education institution
ISO	International Organization for Standardization
ITS	Istituti tecnici superiori (Higher Technial Institutes, Italy)
JRC	Joint Research Centre (European Commission)
OECD	Organisation for Economoc Co-operation and Development
PPP	Private-public partnership
QA	Quality assurance
R&D	Research & development
SAT	Self-assessment tool
SELFIE	Self-reflection on Effective Learning by Fostering the use of Innovative Educational technologies
TVET	Technical and vocational education and training
UNESCO-UNEVOC	International Centre for Technical and Vocational Education and Training (a UNESCO Institute)
WBL	Work-based learning

ANNEX 1: LIST OF INTERVIEWEES

See separate document – Annex 1.

ANNEX 2: COMPLETED SAT FACTSHEETS

See separate document – Annex 2.