

# EXPLORING VOCATIONAL EXCELLENCE:

A WORKING PAPER ON THE SELF-  
ASSESSMENT CARRIED OUT BY  
MEMBERS OF THE ETF NETWORK FOR  
EXCELLENCE (ENE)

# ACKNOWLEDGEMENTS

This report has been produced by ETF on behalf of the ENE Network. The report is only possible because of the careful self-assessments that were carried out by the staff of 72 CoVEs during the first wave of self-assessment. The survey tool was designed by ETF in consultation with ENE members and with advice from Bart Horemans (Enabel), Philip Lassig (GIZ) and Joao Santos (DGEMP). The survey was implemented by Doriana Monteleone and this report was authored by Julian Stanley and Doriana Monteleone. The report was reviewed by Evelyn Viertel.

The contents of this working paper are the sole responsibility of the ETF and do not necessarily reflect the views of the EU institutions.

@ European Training Foundation, 2021 Reproduction is authorised provided the source is acknowledged.

# CONTENTS

1	Introduction	5
2	What is the ENE?	5
3	The ENE Self-Assessment Tool – Purposes	7
4	What is Vocational Excellence?	7
5	Design and Development	8
6	Findings	10
6.1	Description of the observed population	10
6.2	Relevance of dimensions	11
6.3	Overall level of development	12
6.4	Excellence by dimension	13
6.5	Relevance of leadership dimension - Clusters and cooperation	16
6.6	Results by Dimension	18
7	Conclusions	34
7.1	General conclusions	34
7.2	Conclusions relating to particular dimensions	35
7.3	Informing the ENE's work	36
7.4	Relevance for policy makers and stakeholders	36
	ACRONYMS	38
	ANNEX 1: ENE – Self-Assessment – Full Questionnaire	39
	ANNEX 2: Number of CoVEs working to improve their excellence	54

## List of figures

Figure 1: Year of establishment	10
Figure 2: Relevance of dimensions	11
Figure 3: Overall level of development by dimension	13
Figure 4: Consistency of levels of development between dimensions	14
Figure 5: Correlation of levels of development between dimensions	15
Figure 6: Inconsistent levels of development between dimensions	15
Figure 7: Average Leadership Scores by dimension - for CoVEs in formal clusters and others	16

Figure 8: Percentages reporting achievement and scores for indicators in dimension A 'Education and Business Collaboration and Cooperation'	18
Figure 9: Percentages reporting achievement and scores for indicators in dimension B 'Pedagogy and Professional Development'	20
Figure 10: Percentages reporting achievement and scores for indicators in dimension C 'Autonomy, Institutional Improvement and Resources'	22
Figure 11: Percentages reporting achievement and scores in dimension D 'Lifelong Learning in	25
Figure 12: Percentages reporting achievement and scores for dimension D 'Lifelong Learning in VET': Selected Indicators	26
Figure 13: Percentages achieving indicators and scores in dimension E 'Skills for Smart specialisation – mobilising innovation, ecosystems and SMEs'	28
Figure 14: Percentages achieving indicators and scores in dimension F 'Industry 4.0 and Industrialisation'	30
Figure 15: Percentages achieving indicators and scores in dimension G 'Going Green – supporting sustainable goals'	32
Figure 16: Number of CoVEs working to improve their excellence in relation to dimension A 'Education-business collaboration'	54
Figure 17: Numbers of CoVEs working to improve their excellence in relation to dimension B 'Pedagogy and Professional Development'	55
Figure 18: Numbers of CoVEs working to improve their excellence in relation to dimension C 'Autonomy, Institutional Improvement and Resources'	56
Figure 19: Numbers of CoVEs working to improve their excellence in relation to dimension D 'Lifelong Learning in VET'	57
Figure 20: Number of CoVEs working to improve their excellence in relation to dimension E 'Skills for Smart specialisation – mobilising innovation, ecosystems and SMEs'	58
Figure 21: Number of CoVEs working to improve their excellence in relation to dimension F 'Digitalisation and Industry 4.0'	59
Figure 22: Number of CoVEs working to improve their excellence in relation to dimension G 'Going Green: supporting sustainable goals'	60

## List of tables

Table 1: First wave questionnaires by country (%)	10
Table 2: Development and Leadership/Collaboration Score for each dimension	12

## 1 Introduction

This report describes the self-assessment process that has been carried out by 72 members of the ETF's Network for Excellence (ENE) and analyses the results. Centres of Vocational Excellence (CoVEs) that participated in the self-assessment have already received individual feedback; this report provides an analysis at the level of the Network as a whole. It shows which dimensions of excellence were judged to be relevant and which dimensions were assessed to be most fully achieved. The self-assessment exercise invited CoVEs to examine their performance in relation to seven dimensions:

- A. Education-business collaboration and cooperation
- B. Pedagogy and professional development
- C. Autonomy, institutional improvement and resources
- D. Lifelong learning in VET
- E. Skills for Smart specialisation – mobilising innovation, ecosystems and SMEs
- F. Industry 4.0 and digitalisation
- G. Going green – supporting sustainable goals

It asked CoVEs to review not only their own performance but also the extent to which they are providing leadership and coordination in relation to other centres and partners.

The report offers an analysis of the planned developmental priorities of ENE Members and the results should be of interest to educational leaders who are currently deciding their own priorities.

This report provides an evidence-based understanding of what vocational excellence means to the CoVEs in the ETF Network for Excellence. Although they self-assess themselves as performing relatively well, their self-rating varies by dimension and their development priorities vary accordingly. This finding suggests that, if the potential of CoVEs to become drivers of improvement in vocational education is to be optimised, then policy and support for CoVEs should be carefully tailored to match their developmental stage and their priorities.

During the course of this year, many more CoVEs have chosen to self-assess their vocational excellence using the ENE self-assessment tool. It is planned to publish a complete analysis in 2022.

## 2 What is the ENE?

The ETF's Network for Excellence (ENE) is an international network of Centres of Vocational Excellence (CoVEs). The ENE was established in early 2020 and has grown rapidly so that it now includes more than 200 vocational schools and centres from more than 29 countries<sup>1</sup>. The ENE was created in 2019 to support the development of CoVEs in ETF's Partner Countries. The ENE is also inspired by the CoVE Platforms that have been encouraged and funded by the Commission's DG Employment and which form a key element of the European Union's Skills Strategy<sup>2</sup>. Like the EU's CoVE Platforms, the ENE aims to support improvements in vocational education by bringing together excellent providers to share best practices, to collaborate and to innovate. The ENE has the specific

---

<sup>1</sup> Updated in July 2021, including ETF's Partner Countries, EU Member States and African countries.

<sup>2</sup> <https://ec.europa.eu/social/BlobServlet?docId=22832&langId=en>

mission to extend the benefits of networking to CoVEs based in the ETF's 29 Partner Countries – and to help CoVEs within the EU to network with these CoVEs. It is a characteristic of CoVEs that they have an enhanced range of activities and objectives over and beyond the provision of initial vocational training: for example, research, continuing vocational training, local economic development, greening of skills and technology transfer. The ENE aims to support its members to develop excellence in those functions that they chose to prioritise as well as in training provision. The ETF places a particular emphasis upon the potential of CoVEs to lead improvement, enhance relevance and to raise attractiveness of the entire VET systems. In many countries, policy makers intend that CoVEs will be engines for systemic improvement but their capacity to perform this role depends upon their character as organisations, the capabilities of their leaders and staff, their relationships with their ecosystems and their capacity to collaborate with other vocational schools and centres.

The ENE has a particular focus on CoVEs operating in the EU's neighbouring countries, but it also includes CoVEs in Member States and in Africa. It aims to build partnerships and to share practices between groups of CoVEs – wherever they are located in the world.

The ENE's wide international scope has given it a particular focus on the **development** of vocational excellence<sup>3</sup>. Inevitably, ENE members belong to VET systems which are themselves at different stages of development. Often the creation of CoVEs is part of a strategy of system development – so that CoVEs are expected to model or drive development nationally or regionally. The ENE therefore places a particular emphasis on the role of CoVEs as potential *transmitters* of excellence in addition to their own excellent performance as training organisations.

---

<sup>3</sup> [Centres of Vocational Excellence: An Engine for Vocational Education and Training Development, ETF, 2020](#)

### 3 The ENE Self-Assessment Tool – Purposes

The ENE Self-Assessment Tool (ENESAT) has been developed to enable members of the network to develop a better understanding of different dimensions and levels of excellence and to understand their own current level of development. It also generates a database that helps ENE to identify the developmental priorities of its members and it is helping the ETF to focus its interventions on those priorities. It is intended that the Self-Assessment Tool will help schools and centres to reflect upon their own state of development and to plan their next steps. In addition, the ETF can use the Self-Assessment tool 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. The tool can be viewed at: <https://survey.alchemer.com/s3/6024312/ENESurvey-Link>.

### 4 What is Vocational Excellence?

There are many concepts of vocational excellence; these concepts reflect different models of vocational education and different approaches to the improvement of vocational education. Different countries and development organisations place greater or lesser weight on one or more possible characteristics of Centres of Vocational Education: for example, their role in system change; their symbiosis with an economic sector or with their regional ecosystems; their capacity to innovate or their exceptional regulatory status<sup>4</sup>. The ET 2020 Working Group's European mapping exercise revealed a rich variety of CoVEs, each with a mission to pursue excellence, but with different priorities and objectives and different mixes of functions and activities<sup>5</sup>.

The approach taken by the ENE is intended to reflect the needs and interests of its members. We distinguish three distinct perspectives or pathways for the development of excellence:

1. The range of functions or services that a CoVE performs – to put it simply - a CoVE may pursue excellence by offering more functions or services. For example, a CoVE may offer not only initial training but, in addition, continuing training for adults, including employees, and second-chance training for unemployed young people. These different functions are referred to in this report as different *dimensions*.
2. The quality or effectiveness of the functions or services. Everything else being equal, a CoVE can pursue excellence by seeking to perform its functions better and so obtain better results for learners and other beneficiaries.
3. The collective or average level of excellence achieved by a group of CoVEs, for example, between all of ENE Members, or between all of the vocational schools and centres in a particular sector or particular country.

In the analysis that follows, we will analyse the self-assessment data to explore each of these pathways. Our intention is to provide evidence that will permit generalised and particular assessments in relation to each pathway. In addition, when the opportunity presents itself, we will explore correlations or connections between these three pathways, for example whether there are trade-offs or complementarities between them. Taken together this approach should serve CoVEs that would like to explore a) how they might grow in excellence within a single pathway and b) how they might grow in excellence across two or more pathways.

<sup>4</sup> Various approaches are examined in the ETF publication: [Centres of Vocational Excellence: An engine for vocational education and training development, ETF, 2020](#)

<sup>5</sup> Mapping Centres of Vocational Excellence, ET 2020 Working Group on Vocational Education and Training, EU, 2019

## 5 Design and Development

The ENE framework was developed by ETF experts, taking into consideration existing development frameworks and methodologies. The framework was reviewed after consultation with external experts and with some of the CoVEs that form the ENE network.

The draft questionnaire was piloted in June 2020, with 8 CoVEs across 5 Member States and 2 ETF Partner countries, with a view to assessing its clarity, relevance, usefulness and the burden of completion for respondents. Feedback has confirmed that the questions were clear and relevant and that the self-assessment exercise would be useful for participants, because it increased organisational self-understanding and suggested areas for improvement.

Pilot CoVEs reported that 2 to 8 managers and teachers helped complete the questionnaire in each CoVE. The time needed was highly variable: some schools did it in a couple of hours, others reported that it took days.

Some respondents said that they would like to be able to compare their scores to averages of comparable institutions or that they would like to learn about practices and developments from CoVEs in other countries. It was also proposed that the self-assessment data could inform the development of national VET systems.

In the light of feedback from the pilot, a number of questions and answer options were reformulated, and the following options were created:

- translations of the questionnaire into French and Russian;
- functionality to save and continue later, to facilitate consultation;
- a scoring system that calculates totals and sub-totals for each dimension;

An optional feedback report that contains a record of the responses and a report on the level of development: Foundational, Developing or Mature.

The current version of the **ENE Self-assessment questionnaire**, available on-line in English, French and Russian, is based on **7 dimensions** of vocational excellence:

- A.** Education-business collaboration and cooperation
- B.** Pedagogy and professional development
- C.** Autonomy, institutional improvement and resources
- D.** Lifelong learning in VET
- E.** Skills for Smart specialisation – mobilising innovation, ecosystems and SMEs
- F.** Industry 4.0 and digitalisation
- G.** Going green – supporting sustainable goals

These dimensions were developed in the light of what was understood about the priorities and needs of CoVEs in 2019. However, the indicators themselves and the grouping of the indicators into dimensions, remain provisional and may be modified as the needs of ENE members are better understood. An additional dimension of Social Inclusion and Equity is already under development and other dimensions may be added as needed in the future.



Each dimension is based on a list of indicators, simple and unambiguous statements providing an indication of the different services or processes that may be carried out in the school or centre, and which provides evidence of development in a particular dimension.

Within each dimension, the indicators are grouped into **three levels of development** according to the level of challenge or difficulty posed by the indicators.



An additional section within each dimension addresses **Leadership and Coordination** and in particular the transmission and sharing of excellence. The section is made up of a group of indicators, addressing the way in which the school or centre works with other educational organisations, businesses and public-sector organisations and provides a measure of the extent to which the school or centre has taken on a leadership or coordination role.

For each indicator, the **evaluation scale** is the following:

- a. Yes (i.e. we do it already)
- b. To some degree (i.e. we do it only partially)
- c. No (i.e. we don't do it)
- d. Not relevant
- e. Don't know

The first three options allow an analysis of the level of implementation of each indicator.

If the respondent selects 'No', they are then invited to choose between three further options, to clarify their potential plan:

c1 We will do it within two years

c2 We will do it in more than two years

c3 We are not planning to do it

The current version of the questionnaire is available in annex 1.

## 6 Findings

### 6.1 Description of the observed population

The first wave of the Self-assessment Survey was launched in October 2020 and was sent to 82 CoVEs in 12 ETF partner countries. All of these CoVEs are registered members of the ENE Network.

**Table 1: First-wave questionnaires by country (%)**

Country	N.	%	Country	N.	%
Ukraine	27	42%	Armenia	2	3%
Turkey	11	17%	Israel	2	3%
Serbia	6	9%	Moldova	2	3%
Kazakhstan	5	8%	Albania	1	2%
Georgia	4	6%	Azerbaijan	1	2%
Belarus	3	5%	<b>TOTAL</b>	<b>64</b>	<b>100%</b>

64 CoVEs completed the questionnaire between October and December 2020 (response rate: 78%). Many of the responding CoVEs were from Ukraine (42%), followed by CoVEs from Turkey (17%).

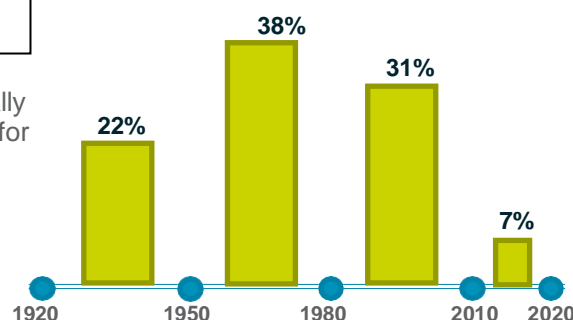
Among the participating institutions, 22% were established between 1920 and 1950, 38% were established between 1950 and 1980, 31% were established between 1980 and 2010, and only 7% were established after 2010.

Source: ENE Self-assessment database

The Central Ukrainian Mykola Fedorovsky Higher Vocational School was founded in 1867.

Among all ENE Members, 12% have been formally recognised as Centres of Vocational Excellence for more than 10 years, 29% for between 6 and 10 years and 25% for 5 years or less. 35% of ENE members expect to be formally recognised as CoVEs in the near future.

**Figure 1: Year of establishment**



Source: ENE Registry

Only 17% of participating CoVEs are financed entirely through public resources. A further 22% receives support from donors, but 40% report that they receive both public and private funding (Source: ENE Registry).

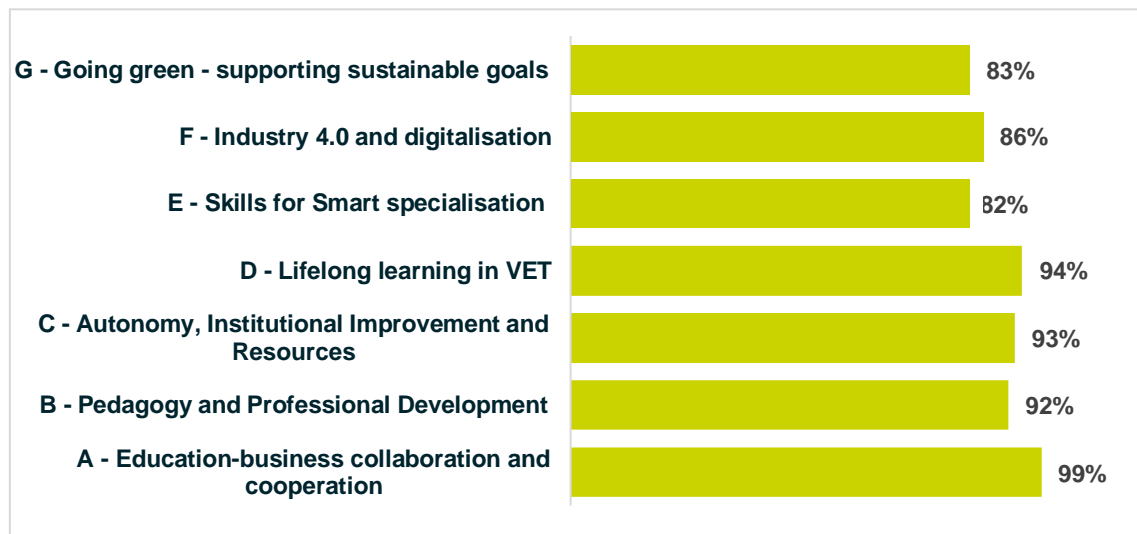
## 6.2 Relevance of dimensions

The following analysis has been conducted on the 64 responses received during the first wave, together with the eight responses collected during the testing phase (total number of analysed responses: 72).

All of the seven dimensions were considered to be relevant by 80% or more of respondents (figure 2).

Education-business collaboration (dimension A) was considered the most relevant, as almost all CoVEs decided to self-assess in this dimension.

**Figure 2: Relevance of dimensions**



Source: ENE Self-assessment database; N. 72

However, some 20% of CoVEs chose not to self-assess in relation to dimensions E 'Skills for Smart Specialisation' and G 'Skills for Sustainability' – either because they did not feel ready to self-assess or because they believed these dimensions were not relevant.

### 6.3 Overall level of development

On completing the self-assessment, each CoVE automatically receives a '**score**' for each dimension, structured as follow:

**Total score** = Development score + Leadership score

The **Development score** measures the overall level of development in relation to all of the indicators that together describe a particular dimension (ranked by category: Foundational, Developing and Mature). By contrast, the **Leadership score** measures additional development, but only in respect to leadership and coordination within that dimension.

Overall, ENE CoVEs scored highest in relation to dimension B 'Pedagogy and Professional development', while the lowest scores were reported in dimension G 'Going green – supporting sustainable goals'.

The dimensions that ENE members were least likely to select for completion (dimensions G, E and F) were also those in which the average scores were relatively low (See Table 2). Therefore, it seems that non-completion may have masked, to some degree, lower levels of development.

**Table 2: Development and Leadership/Collaboration Score for each dimension**

	N. of received questionnaires	% of total popul. (N. 72)	Average Total Score		Average Development Score		Average Leadership Score	
A. Education- business collaboration and cooperation	71	99%	74%	(10.3/14)	77%	(8.5/11)	57%	(1.7/3)
B. Pedagogy and Professional Development	66	92%	83%	(15.7/19)	86%	(12.9/15)	70%	(2.8/4)
C. Autonomy, Institutional Improvement and Resources	67	93%	67%	(12.0/18)	73%	(10.2/14)	45%	(1.8/4)
D. Lifelong learning inVET	68	94%	63%	(11.4/18)	65%	(9.7/15)	57%	(1.7/3)
E. Skills for Smart specialisation	59	82%	66%	(9.9/15)	67%	(8.0/12)	63%	(1.9/3)
F. Industry 4.0 and digitalisation	62	86%	68%	(14.3/21)	72%	(11.5/16)	56%	(2.8/5)
G. Going green - supporting sustainable goals	59	83%	51%	(7.7/15)	53%	(5.8/11)	50%	(2.0/4)

Source: ENE Self-assessment database

ENE's Self-assessment Framework includes indicators that address the leadership/collaboration role that each CoVE may play in each dimension. CoVEs are most likely to assume a leadership/collaboration role in dimension B 'Pedagogy and professional development', where 70% have built (or are in the process of building) lasting institutional partnerships to develop pedagogy and teacher training over the medium term.

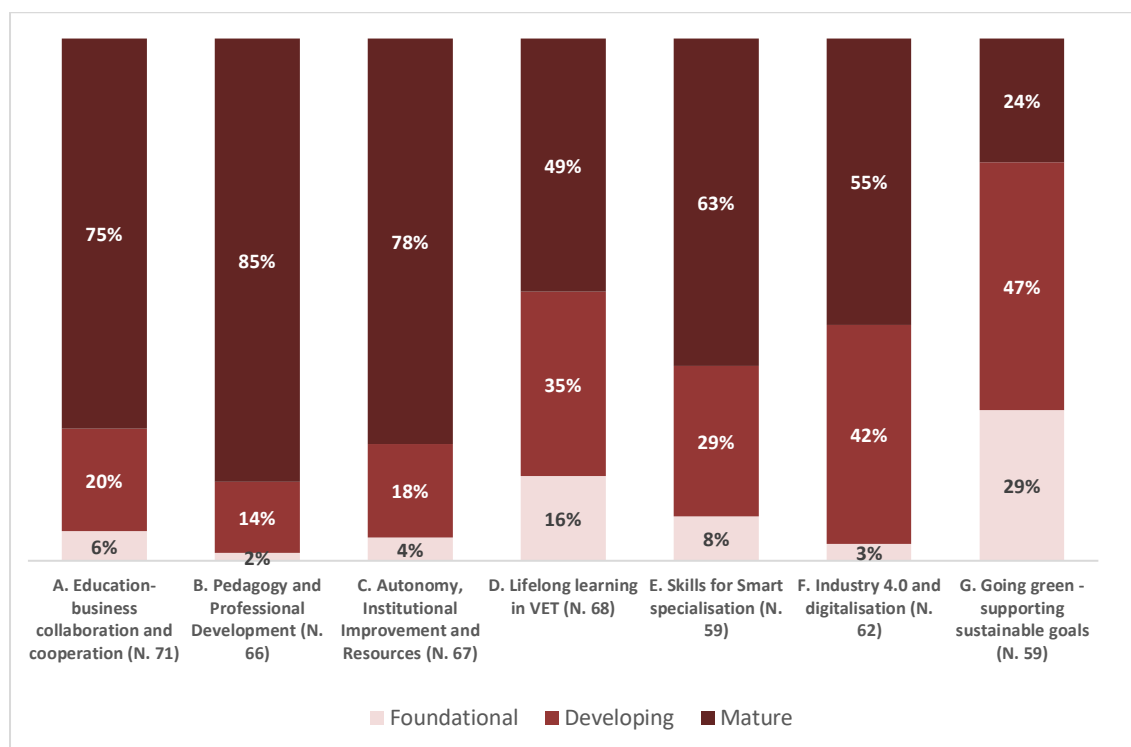
The analysis does not reveal a significant correlation between development scores and leadership scores, so it appears that both advanced and less advanced CoVEs are acting as leaders and coordinators.

## 6.4 Excellence by dimension

The self-assessment tool generates a 'level of development' score for each CoVE. The scores are ranked into three levels of development: 'Foundational', 'Developing' and 'Mature'.

More than 75% of ENE Members assessed themselves as 'mature' in dimensions A, B and C. By contrast 15% of more of CoVEs assessed themselves as 'foundational' in relation to dimensions G and D.

**Figure 3: Overall level of development by dimension**



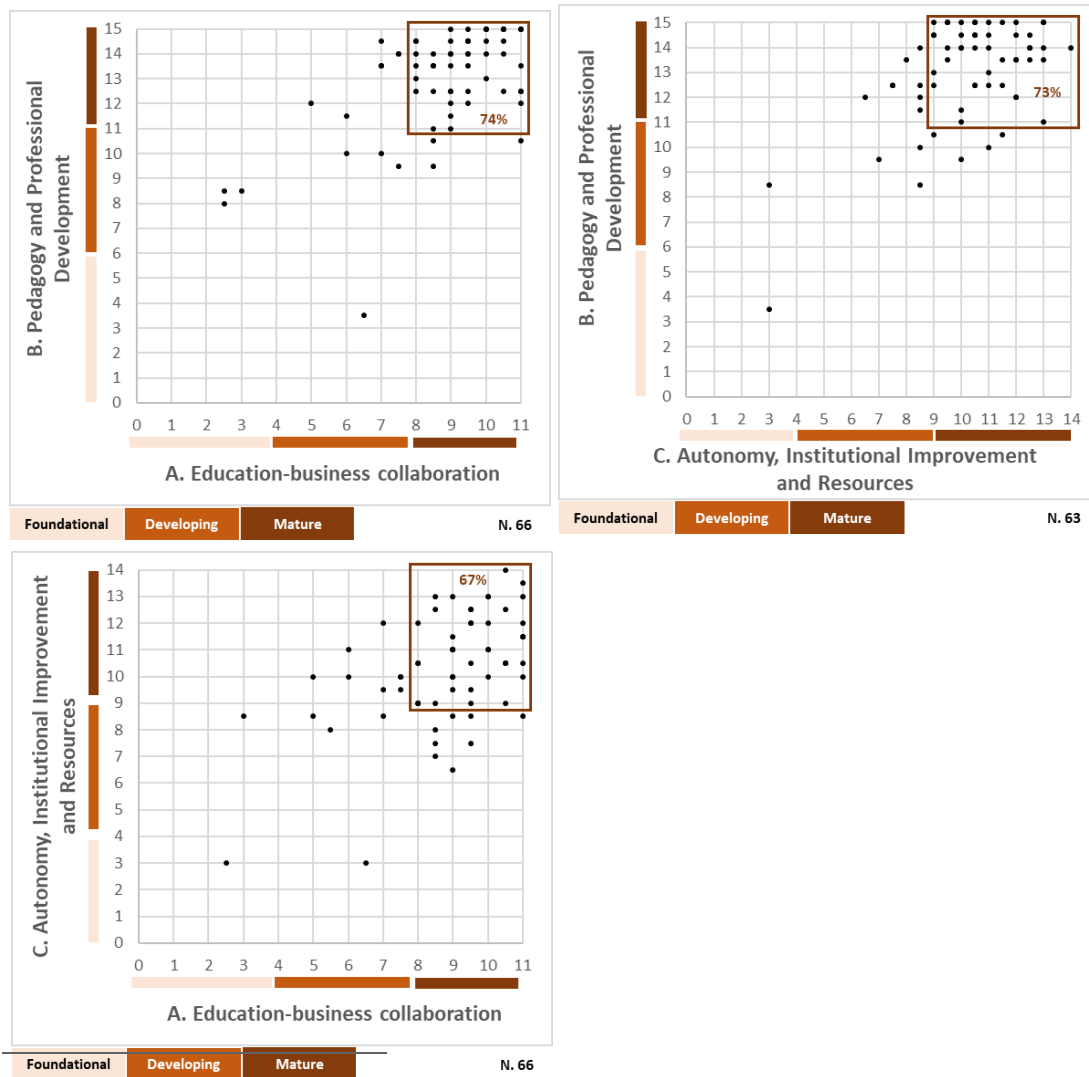
Source: ENE Self-assessment database

However, it does not follow that the CoVEs assessed themselves to be at the same level of development across all or even most dimensions. There is a strong correlation in excellence for only some dimensions, whereas most dimensions show no correlation.

The analysis of how CoVEs self-assessed across dimensions shows that development levels are more consistent between some dimensions than between others. For example, 74% self-assessed as 'mature' in both dimension A 'Education-business collaboration' and dimension B 'Pedagogy and Professional development', and only 5% were 'developing' in both dimensions, with an overall 'degree of consistency' between the two dimensions of 79%<sup>6</sup>. There is a high level of consistency (79%) between dimension C 'Autonomy, Institutional improvement and Resources' and dimension B 'Pedagogy and Professional development', as 73% of CoVEs self-assessed as 'mature' in both dimensions (Figure 4).

<sup>6</sup> The degree of consistency is measured as the sum of the percentage of those that were 'mature' in both dimensions and that were 'developing' in both dimensions.

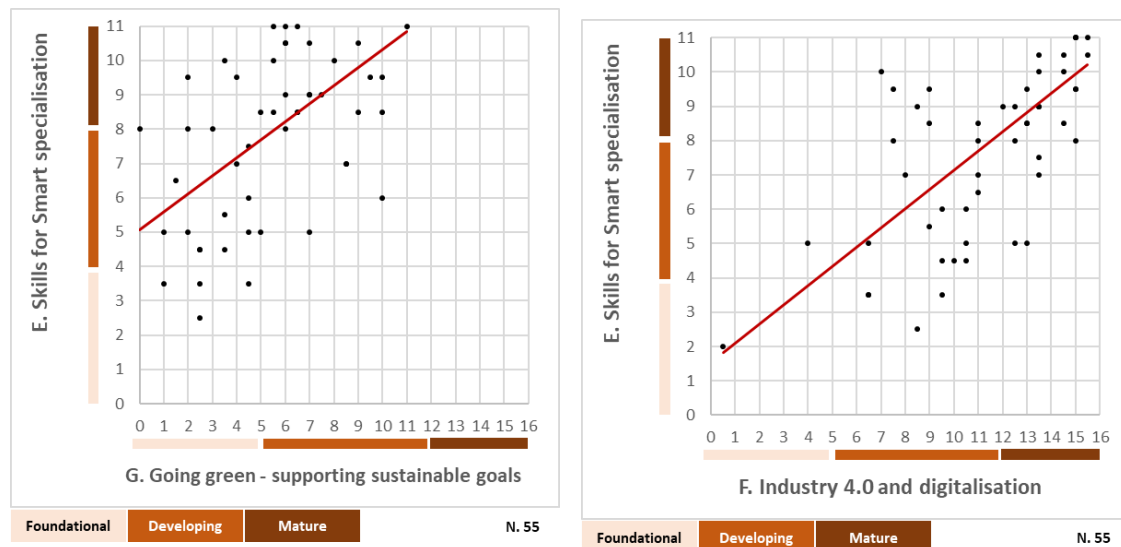
**Figure 4: Consistency of levels of development between dimensions**



Source: *ENE Self-assessment database*

Similarly, 67% of CoVEs self-assessed as mature for both dimension C ‘Autonomy, institutional improvement and resources’ and dimension A ‘Education-business collaboration’. The correlations suggest that these three dimensions are connected in some way. A possible explanation is that CoVEs that have already developed higher levels of autonomy, institutional improvement and resources will have made use of this capacity to improve pedagogy, develop their workforce and enhance their collaboration with businesses. It is also possible that collaboration with businesses may in turn have helped to develop resources and foster institutional improvement and pedagogy.

**Figure 5: Correlation of levels of development between dimensions**

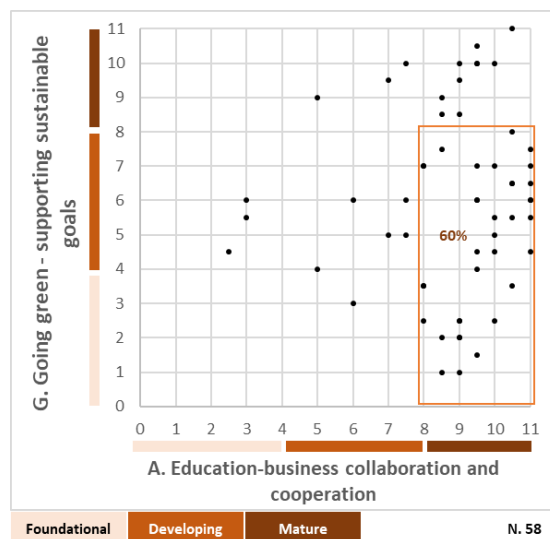


Source: ENE Self-assessment database

The analysis indicates some degree of correlation between dimension E 'Skills for Smart specialisation' and dimension F 'Industry 4.0', and (with a greater degree of variability) between dimension E and dimension G 'Going green' (Figure 5).

On the other hand, other pairs of dimensions show little correlation and low consistency between levels. For example, 74% of CoVEs self-assessed a different level in dimension A 'Education-business collaboration' and dimension G 'Going green', with 60% assessing as 'mature' in dimension A and 'foundational' or 'developing' in dimension G.

**Figure 6: Inconsistent levels of development between dimensions**



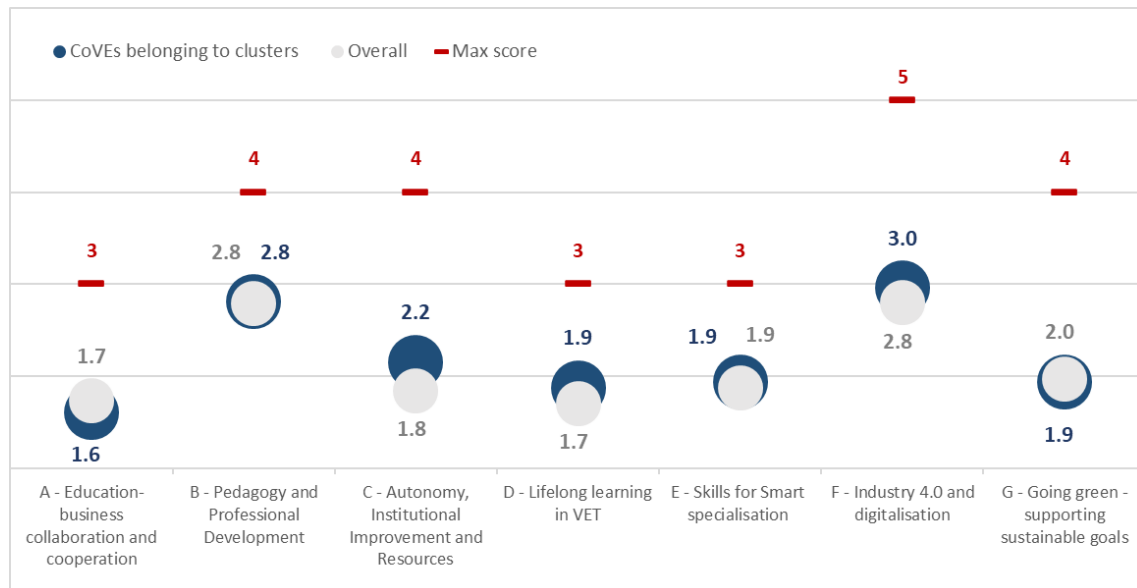
Source: ENE Self-assessment database

## 6.5 Relevance of leadership dimension - Clusters and cooperation

According to the survey, only 27 of 72 CoVEs (38%) form part of a formal cluster with other learning institutions, although others may share and collaborate with other CoVEs occasionally or informally.

Out of these 27 CoVEs, 46% reported that they have a formal relationship with 1 or 2 schools, 35% are part of a cluster of 3 to 5 schools, and 19% belong to a cluster of 7 to 10 schools.

**Figure 7: Average Leadership Scores by dimension - for CoVEs in formal clusters and others**



Source: ENE Self-assessment database; N. 27

The comparison between the average leadership/co-ordination scores shows that participation in a cluster of institutions is not correlated with capacity for leadership and coordination. CoVEs in clusters self-assessing in the dimensions of Autonomy, Lifelong learning and Digitalisation show a higher-than-average leadership/co-ordination score, but there is no difference for dimension B 'Pedagogy' or dimension E 'Skills for Smart specialisation'. In the case of dimension A 'Education-business collaboration' and dimension G 'Supporting sustainable goals', the leadership/co-ordination score of CoVEs in clusters is lower than average.

Respondents were invited to describe the clusters that they participate in. Based on the ETF's analysis<sup>7</sup>, different degrees of collaboration can be established, as shown in the examples below:

<sup>7</sup> [Centres of Vocational Excellence: An engine for vocational education and training development, ETF, 2020](#)



### **Box 1: Types and examples of relationship**

#### *Full integration*

Our vocational school is an educational unit operating under Nevşehir Hacı Bektaş Veli University. Nevşehir Hacı Bektaş Veli University was founded in 2007 and is a fast-growing young university. The number of students is increasing at a similarly fast rate and new units and departments are being opened. In 2007, our university started educational activities with 4 faculties, 1 college, 4 vocational schools, 2 institutes and 1 research centre. The educational activities of Nevşehir Hacı Bektaş Veli University at different levels are as follows; (a) associate degree, (b) undergraduate, (c) graduate (d) lifelong learning and (e) distance education services (*Nevşehir Vocational College, Turkey*).

#### *Regular sharing of information and some sharing of services*

Miguel Altuna school is part of Ikaslan, which is an association of all the public VET centres in the Basque Country. There are 3 Ikaslan groups, one per province. We are part of Ikaslan Gipuzkoa, which includes 27 schools. Miguel Altuna also collaborates actively with TKNKA which is a public regional VET Centre that provides expertise, resources, coordination and networking across the Basque Region (*CIFP Miguel Altuna III, Spain*).

#### *Sharing of experiences, joint activities, sharing of resources*

Cooperation in the training of teachers, exchange of experiences about labour markets and training services for employers, joint use of infrastructure facilities.

#### *Long-term sharing of information and practices across multiple networks*

The school centre is an active member of several consortia or associations. Being connected with other entities enables us better research and development opportunities and allows us to implement innovations in VET. Above all, being active in many networks means sharing highly valuable information, knowledge, experiences, skills, ideas, projects and connections (*Šolski center Nova Gorica, Slovenia*).

#### *Long-term sharing of information and practices*

Partner in the Association of Agricultural Educational Institutions.

## 6.6 Results by Dimension

### A - Education-business collaboration and cooperation

ENE members were most likely to consider this dimension as relevant (average total score: 74%) and their score for leadership and coordination was also relatively high in this dimension (57%) (see Table 2).

Some 80% of ENE members report that all of their students have access to work placements, that employers participate in the assessment of learners, that they have long-term agreements with at least 2 enterprises and that at least 30% of graduates enter employment or further study in the sector (Figure 8). On the other hand, only two thirds of ENE members report that they are cooperating with other schools and employers on school governance, staff development, funding and adult education.

**Figure 8: Percentages reporting achievement and scores for indicators in dimension A 'Education and Business Collaboration and Cooperation'**



Source: ENE Self-assessment database

Note: The chart shows the percentage of respondents who self-assess that they have achieved each indicator. The average point score is expressed as a decimal where maximum score would be 1. N. 71.

ENE members had a relatively high and consistent level of excellence up to the 'Developing' level. At the first two levels, 'Foundational' and 'Developing', the average score for all respondents was greater than 0.7 (70%) across all indicators (with the exception of 'employers' involvement in school governance'). This composite indicator of development is shown by the red vertical line in Figure 8 above.

However, only a minority of CoVEs collaborate with other schools or employer associations in a sustained way to support industry-education cooperation (Leadership and Co-ordination).

ENE members were invited to indicate which areas of development they were working upon currently, or intended to address within two years or more. Some 30% of ENE members are working on engaging employers in governance, in teacher development, in finance, in curriculum development and in programme development. More than 45% of CoVEs aim to improve relationships with industry through collaboration with other schools or with business associations – that is through multi-lateral partnerships and cooperation.<sup>8</sup>

### **Good practice relating to dimension A 'Education-Business Collaboration and Cooperation'**

Many ENE members provided examples of good practice for this dimension. This often took the form of all-round cooperation addressing multiple activities, including long-term partnerships extending over many years, as illustrated in the examples below:

#### **Box 2: Examples of good practice relating to dimension A 'Education-Business Collaboration and Cooperation'**

*In cooperation with a local enterprise, we have developed a new profile in Serbia based on the needs of this enterprise. Our students were employed by this enterprise immediately after obtaining a degree. (Vazduhoplovna akademija, Aviation Academy, Serbia).*

*In cooperation with two enterprises, FH 'Kray-DV' and 'Dibrova', we were able to develop a garden laboratory with 2500 fruit trees and more than 10 000 units of berry crops (Hlybotskyi Vocational Lyceum, Ukraine).*

*The company 'Kryukov Carriage Works' carries out formal assessment of the students of the school for profile 7219 'Welder' (Higher Vocational School №7 Kremenchuk Poltava region, Ukraine).*

*High-Tech companies let their employees act as mentors and consultants to support student ventures (Amal Hadera Entrepreneurship center, Israel).*

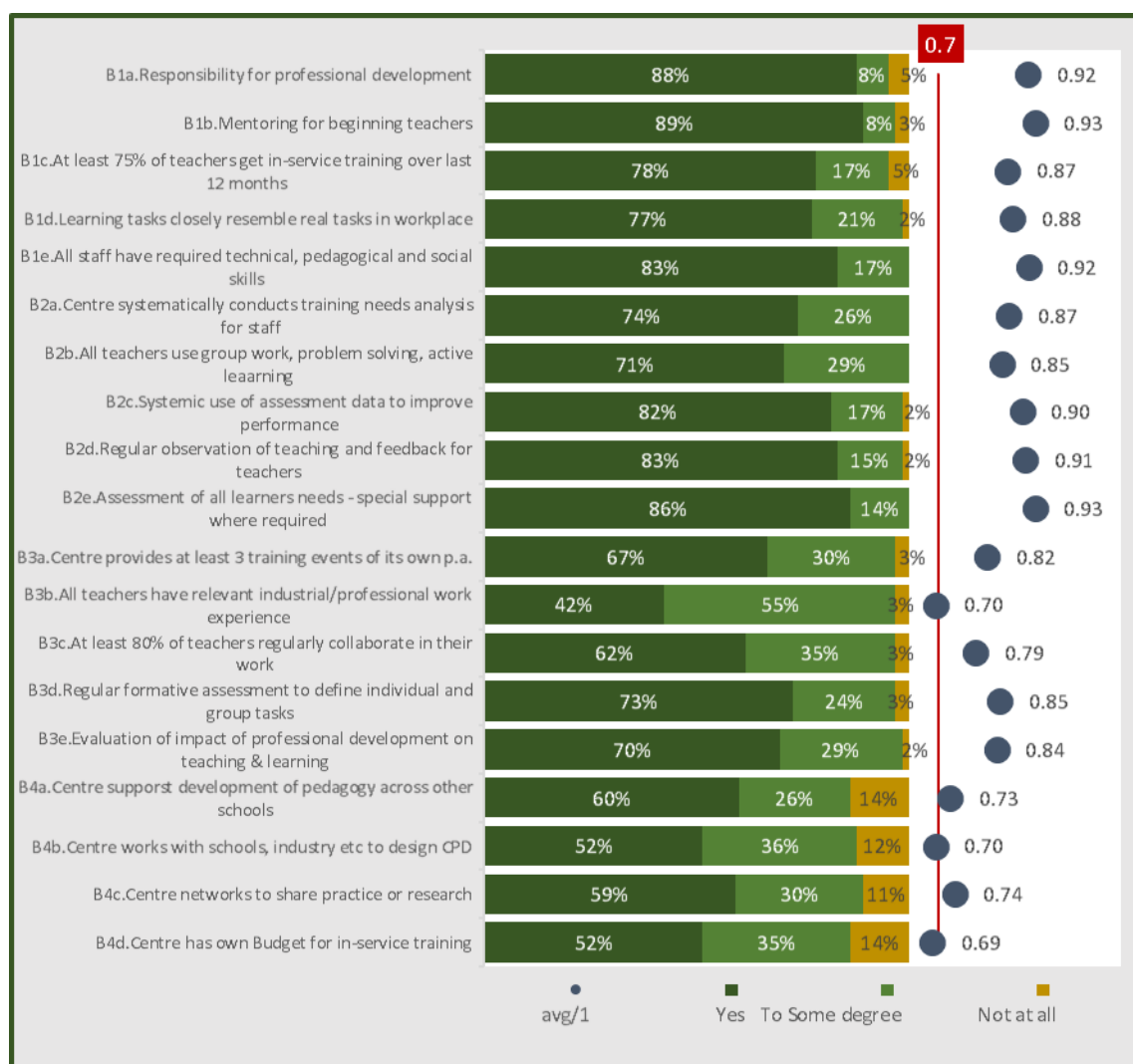
## **B - Pedagogy and Professional Development**

This component contains indicators that belong to two distinct dimensions: pedagogy and professional development. The scope of these dimensions is illustrated by the indicators in Figure 9 below.

---

<sup>8</sup> Annex 2 contains charts that illustrate in detail the priorities of CoVEs.

**Figure 9: Percentages reporting achievement and scores for indicators in dimension B ‘Pedagogy and Professional Development’**



Source: ENE Self-assessment database; N. 66.

More than two thirds of ENE members reported that they fully met most indicators, rising to 75% or above regarding the availability of systems for professional development: monitoring, analysis of needs, coordination of professional development, observation of teachers and provision of training. ENE members were *less* likely to self-assess as excellent in relation to active learning, collaboration between teachers and provision of their own training events. Only 52% have a dedicated budget for staff development. ENE members performed least well in terms of staff having relevant professional/industrial work experience: only 42% claimed to have fully achieved this. Only about half of ENE members reported that they collaborated with industry, other schools or across networks to provide professional development.

ENE Members performed least well when it comes to their staff having relevant professional/industrial work experience – only 42% claimed to have fully achieved this.

The reported development priorities reflect this self-assessment. More than half of ENE members are working to extend the professional/industrial experience of their staff. More than one third are working to increase collaboration between their staff, extend collaboration with industry or with other schools or through networks.

## Examples of good practice relating to dimension B ‘Pedagogy and Professional Development’

ENE members were invited to share some examples of good practice with respect to pedagogy and professional development, as shown below.

### **Box 3: Examples of good practice relating to dimension B ‘Pedagogy and Professional Development’**

*We organise intensive learning challenges to develop solutions (Hackatons): students create concepts for sustainable initiatives and professional mentors provide help (Amal Shimon Peres Entrepreneurship Center, Tel Aviv, Israel).*

*The teachers regularly gather to exchange experiences and to collaborate, in order to achieve better results in teaching (LEPL College Iberia, Georgia).*

*From September 2015, teachers have been implementing new approaches to the personal development of students and the development of students' life skills. Together, they have created a database of methods for life skills in an information society and improved the professional skills of teachers in the use of active methods of teaching (Chortkiv Higher Vocational School, Ukraine).*

*The teachers of the school conduct master classes, educational seminars and open lessons for teachers of other educational institutions in the region (Higher vocational school №41 of Tulchyn, Ukraine).*

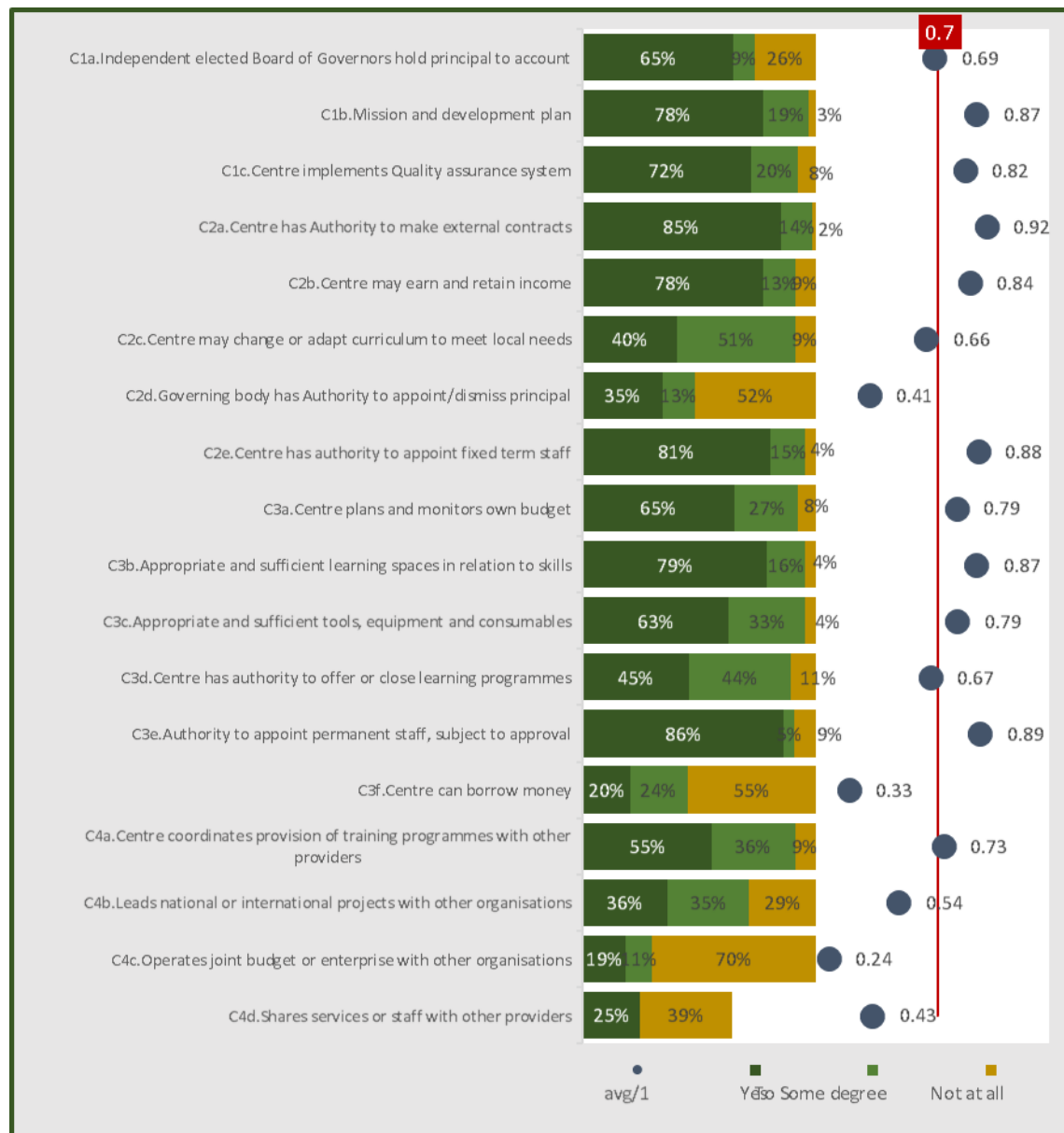
*We use Information and Communication technology (ICT) to provide access to content, professional development and professional learning communities (Baku State Industry and Innovation, Azerbaijan).*

*As a result of systematic work on the formation and professional development of the teaching staff we can report as follows: 20 people completed an internship with SAIT Polytechnic instructors, including 10 people on internship in Canada; 38 people passed the courses of teaching skills according to the international standards ‘Instructional Skills Workshop’ ISW; 5 people have a FDW trainer certificate for conducting ISW courses; 5 people have an international certificate in the methodology for creating control and measuring materials; 8 people took courses in SPT programmes (workshop equipment); 8 people completed an internship in English (Train the trainer); 11 people were trained according to the OPITO standard, of which 3 people were certified by the OPITO Competence Assessor and OPITO Internal Verifier; 38 people have international certificates ‘Ready to teach’ in the methodology of teaching academic disciplines in English; 20 people have a master's degree, 3 teachers have a PhD degree and 4 teachers are continuing their studies through masters' degrees and one doctorate (TOO ‘Высший колледж АПЕС ПетроТехник’, Kazakhstan).*

## C - Autonomy, Institutional Improvement and Resources

The score for this dimension was average in relation to the other dimensions (67%), and was relatively weak for ‘Leadership and Coordination’ (45%). This may reflect a trade-off between the pursuit of autonomy and that of collaboration with other centres. On average, ENE members achieved the excellence threshold of 0.7 in the ‘Foundational’ and ‘Mature’ level, but not in the ‘Developing’ level.

**Figure 10: Percentages reporting achievement and scores for indicators in dimension C ‘Autonomy, Institutional Improvement and Resources’**



Source: ENE Self-assessment database; N. 67.

Some 80% or more of ENE members have the authority to appoint their permanent and fixed-term staff, but only 35% have the authority to appoint the principal. 79% report that they have appropriate and sufficient learning spaces whilst 63% have appropriate and sufficient tools and consumables. 78% can earn and retain income, but only 20% take out loans. Just 40% are free to adapt and change their curriculum to meet local needs. Collaboration in relation to funding, provision of learning and services is limited: only 25% share staff or services, 55% coordinate the provision of training programmes with other centres, and 19% operate joint budgets with other centres.

Some 55% of ENE members are working to develop and adapt their curriculum to meet local needs. The same percentage is looking to increase their activity as leaders of national or international

projects. 44% have the authority to offer or close learning programmes. More than 37% are working to improve their equipment and tools, their sharing of services and their coordination of training provision with other centres.

### **Examples of good practice relating to dimension C 'Autonomy, Institutional Improvement and Resources'**

The examples are mostly provided by CoVEs that are well resourced and which attract additional funding and have been able to enter into projects. Those CoVEs that serve a highly internationalised sector – such as aviation or the oil industry – are more likely to be committed to benchmarking against international standards for resourcing, quality assurance and qualifications.

#### **Box 4: Examples of good practice relating to dimension C 'Autonomy, Institutional Improvement and Resources'**

*Together with a number of other schools (ranging from primary to secondary and VET), we have established cooperative provision for our IT services (Da Vinci College, Netherlands).*

*50% of the money earned by students in industrial practice goes to the account of the educational institution (Snovsk Higher Vocational School of Forestry, Ukraine).*

*The right to dispose of earned funds - over the past 5 years, over EUR 250 000 have been used to modernise the educational process (Hlybotskyi Vocational Lyceum, Ukraine).*

*Implementation of Additive Manufacturing Program with a university, an NGO and an additive manufacturing factory (Bursa Coşkunöz Education Foundation, Turkey).*

*A good material base has been created for the organisation and to support the educational process in the college. The workshop contains a locksmith's workshop, a welding workshop, an industrial control workshop, a chemical engineering workshop, a fluid mechanics workshop, a thermodynamics workshop, a measuring workshop, a workshop for electricity and electric motors, a workshop for thermal electronics, a workshop for process control, a workshop for drilling, a workshop for well study, a petrochemical process workshop and an analytical laboratory. Educational and industrial practices of students are held in workshops and classrooms for industrial training, where there is the necessary educational and industrial base (TOO "Высший колледж APEC PetroTechnic", Kazakhstan).*



**Box 4: Examples of Good Practice – Dimension C: Autonomy, Institutional Improvement and Resources (continued)**

*The Aviation Academy is recognized and certified as an educational institution that meets all standards of European and national aviation authorities (Vazduhoplovna akademija, Aviation Academy, Serbia)*

*The school monitors the needs of the national job market and adjusts the nationally defined curriculum accordingly. Just this year, the school made a proposal to introduce a new educational profile, which was approved by the government (The Secondary School of Technical Education Valjevo, Serbia).*

*The school or centre has the authority to enter independently into contracts with other organisations such as businesses, training providers and donors (Baku State Industry and Innovation, Azerbaijan).*

## **D - Lifelong learning in VET**

This dimension was judged relevant by 94% of respondents. The total average score was 63%. The excellence threshold of 0.7 was reached at the 'Foundational' and 'Developing' levels.

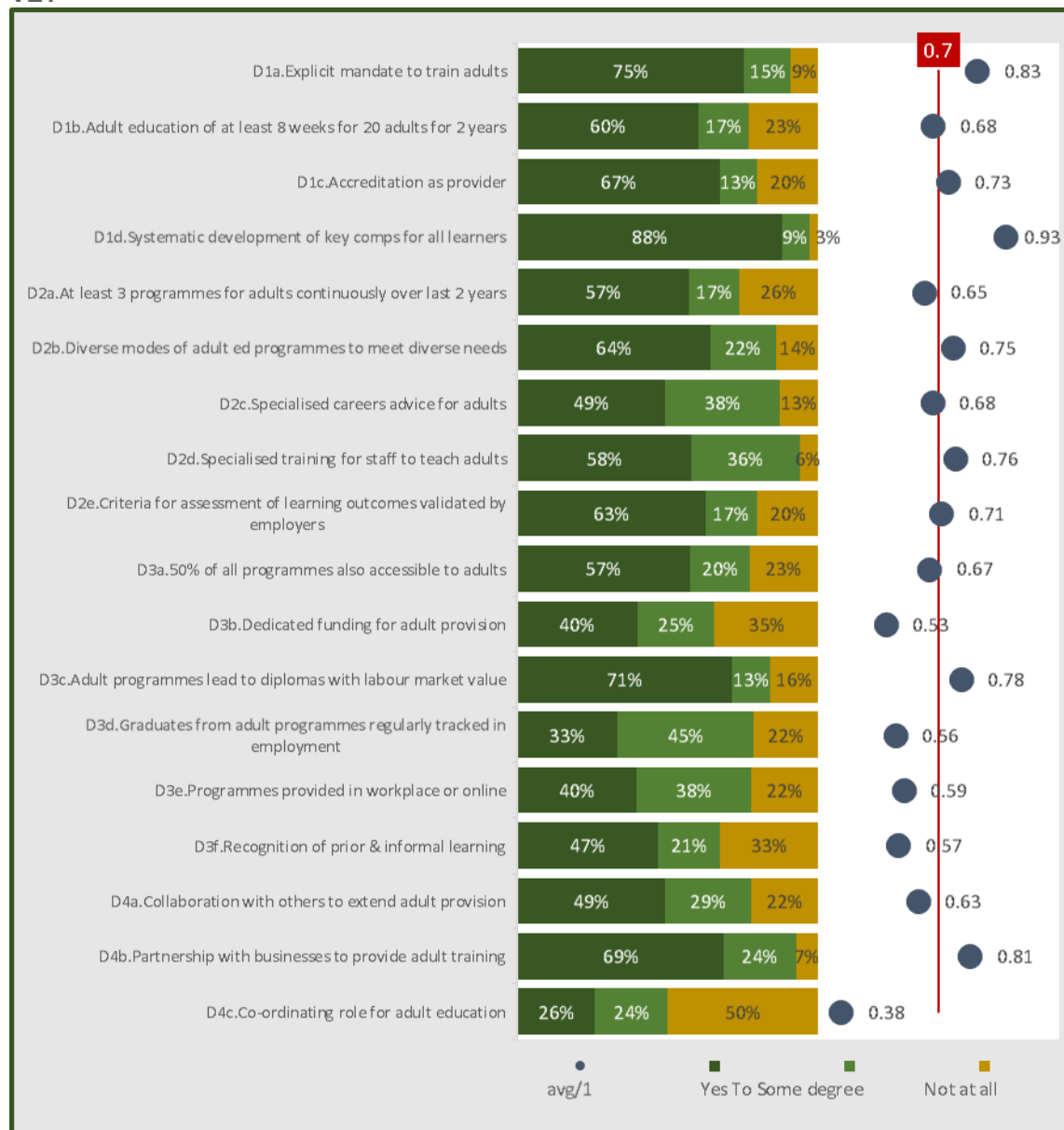
75% of CoVEs already have an explicit mandate to provide adult training and 67% were accredited as adult training providers. However, only 60% confirmed that they had provided at least 8 weeks of training for 20 adults over the last two years.

58% provided specialised training for staff to teach adults and 50% reported that all of their programmes were also accessible for adults. Only 40% had dedicated funding for adult provision.

49% provide specialised careers advice for adults and 33% monitor the progress of their adult graduates into employment. 69% work in partnership with employers to provide adult education.



**Figure 11: Percentages reporting achievement and scores in dimension D ‘Lifelong Learning in VET’**

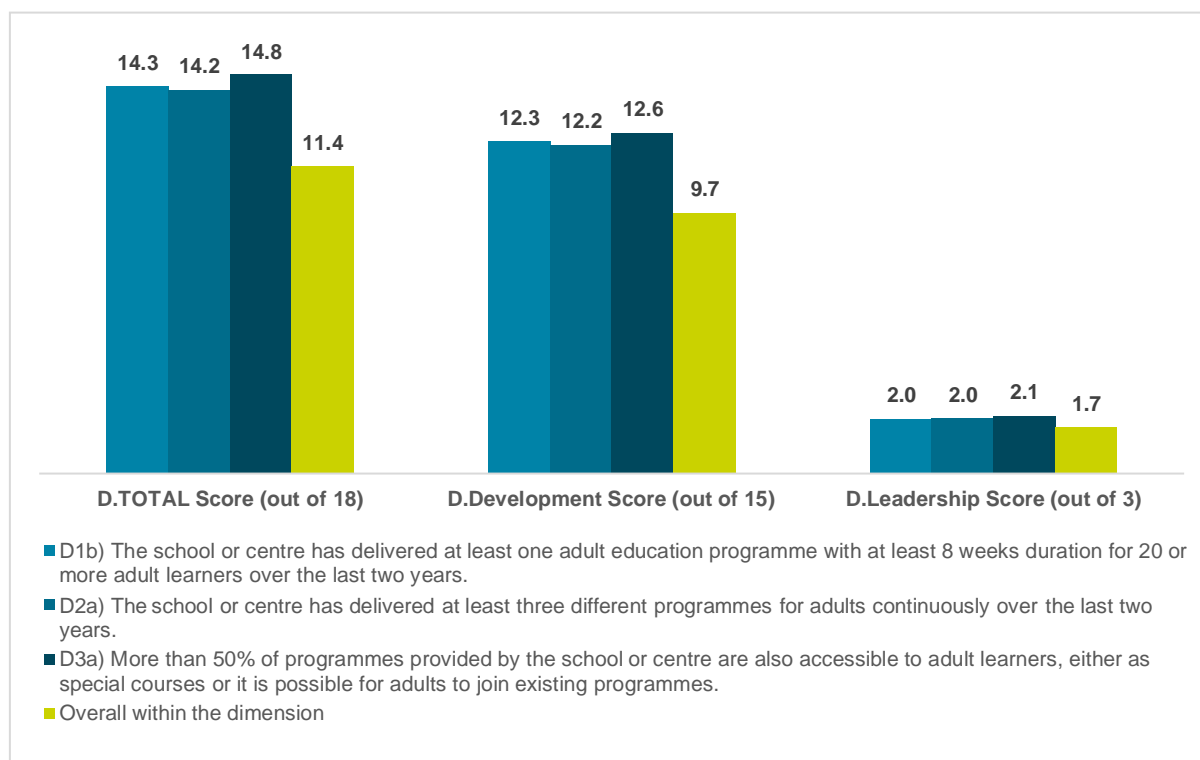


Source: ENE Self-assessment database: N. 68.

More than 50% of CoVEs are working to develop (either currently or within the next two years) the following activities: tracking adult graduates into employment and provision of programmes in the workplace or online. More than 38% are improving, or intend to improve, specialised careers advice for adults and specialised training for trainers of adults.

Figure 12 below indicates that those CoVEs which have a significant and sustained adult education offer are more likely have a higher overall score with respect to entire dimension. In other words, a more extensive offer for adults is associated with a higher quality offer. This is only an association and is no indication of causality, but it does suggest that those CoVEs with a more extensive offer may well have good practices that they can share with CoVEs that are looking to improve or develop their adult provision.

**Figure 12: Percentages reporting achievement and scores for dimension D ‘Lifelong Learning in VET’: Selected Indicators**



Source: ENE Self-assessment database

49% of CoVEs already collaborate with other organisations to provide adult education, and an additional 29% have started such collaboration (15% plan to do so in the coming years). More than 40% of CoVEs were looking to develop this collaboration and 26% reported that they already act as a coordinator for adult provision within a cluster (a further 24% do this to some degree). Some 13% aim to do so within the next two years, while 18% aim to do so in more than two years.

## Examples of good practice relating to dimension D 'Lifelong Learning in VET'

### **Box 5: Examples of Good Practice relating to Dimension D: Lifelong Learning in VET**

*Every year, about 300 people (workers of the regional forestry enterprises) undergo retraining and advanced training for the professions of lumberjack, forestry machine operator, and tractor driver-machine operator (Snovsk Higher Vocational School of Forestry, Ukraine).*

*We train adult workers working for the 'Minsk Crystal Group' and 'Belagroterminal' in accordance with the requirements for knowledge and skills required by these enterprises (Molodechno State Polytechnic College, Belarus).*

*Career guidance activities are systematically carried out in conjunction with the city and district employment centres (State Educational Institution Podilsky Center of Vocational Education, Ukraine).*

*A training programme in hotel front-office procedures is available for adults with varied abilities; it is conducted online and it is implemented by our business partner - Batumi Hilton Hotel. After completion of the programme, graduates have the possibility to be employed in the Batumi Hilton (LEPL College 'Akhali Talga', Georgia).*

*The college has a training centre that trains adults, both independently and in partnership with the city employment centre. On average, 500 people study there each year (IT Competence Center, Kazakhstan).*

Many of the examples of good practice describe programmes for the retraining of the unemployed. A few specialist CoVEs work closely with corresponding industries to provide continuing training to employees.

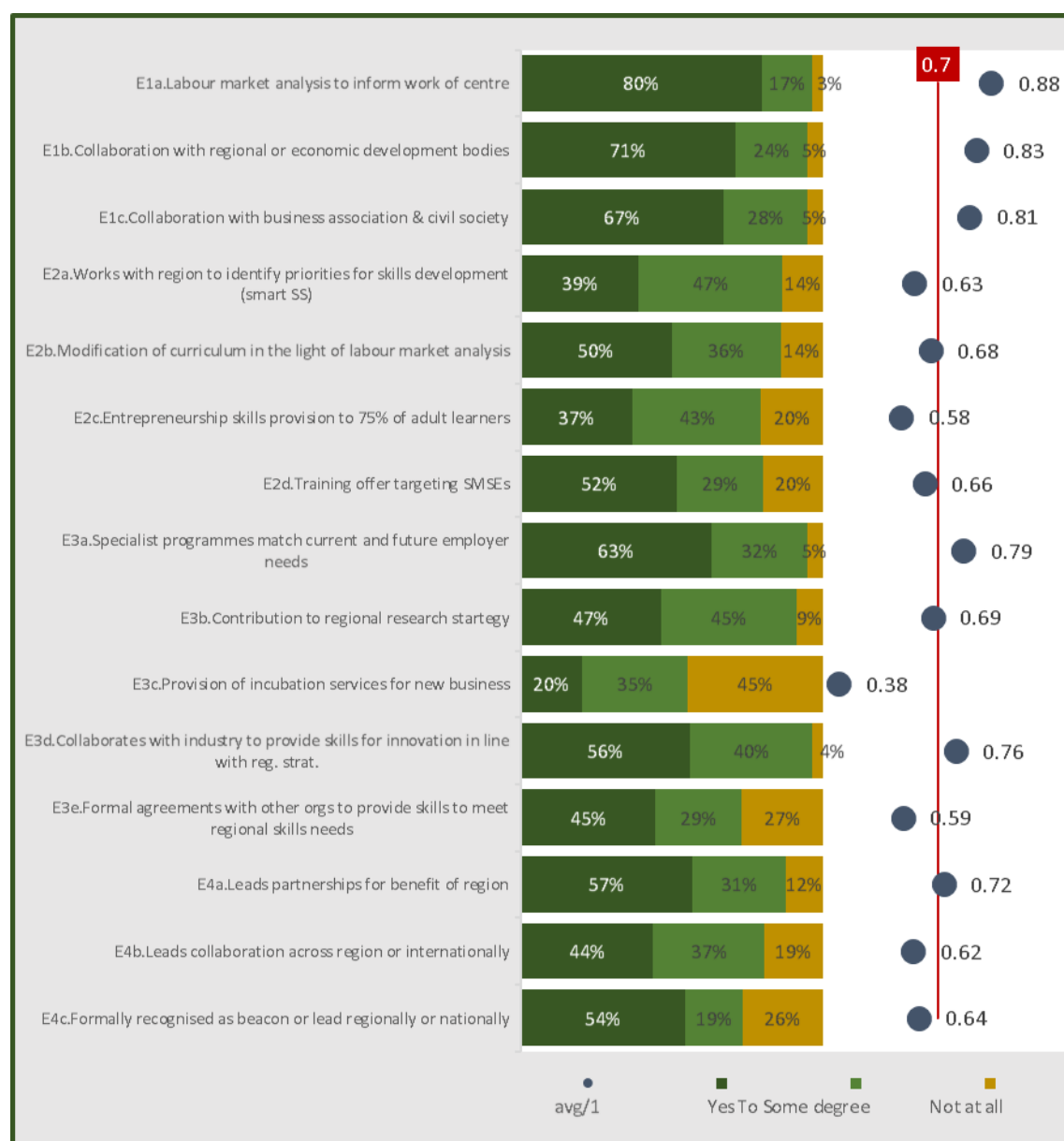
## **E – Skills for Smart specialisation - Mobilising Innovation, ecosystems and SMEs**

Some 82% of ENE members chose to assess their performance in relation to this set of indicators, making this dimension the least likely to be judged relevant. The average score of the respondents was 66%, but the Leadership score was relatively high (63%). The Excellence threshold (mean score of 0.7) was achieved only for the Indicators in the 'Developing' level (Figure 13).

More than two thirds of ENE members are collaborating with economic development bodies and with business associations or civil society. However, only 39% work with their region to develop priorities for skills development. 80% draw on labour market analysis, but only 50% say that they modify the curriculum to match this analysis. 63% report that they provide specialist programmes to match current and future employer needs. 37% provide entrepreneurship skills to at least 75% of their learners and 52% say they have a training offer for employees in SMEs. Only 20% provide business incubation services.

80% of ENE Members access labour market analysis, but only 50% say that they modify their curriculum to match this analysis.

**Figure 13: Percentages achieving indicators and scores in dimension E ‘Skills for Smart specialisation – mobilising innovation, ecosystems and SMEs’**



Source: ENE Self-assessment database; N. 59.

57% of CoVEs are either currently seeking to deepen their collaboration with their region to identify priorities for skills development or plan to do so in the future, and 50% want to increase their contribution to their region’s research strategy. 50% are looking to develop as leaders of collaboration – regionally and nationally. 39% are working or plan to develop their training offer for SMEs and 52% are working or plan to extend their provision of entrepreneurship skills to their adult learners.

## **Examples of good practice relating to dimension E ‘Skills for Smart specialisation – mobilising innovation, ecosystems and SMEs’**

### **Box 6: Examples of good practice relating to dimension E ‘Skills for Smart specialisation – mobilising innovation, ecosystems and SMEs’**

*We hold an annual innovation competition for our 9-11 grade students every year, assign mentors from the industry and link the winners to incubation centres and universities interested in their projects (Technology and Humanities College, Turkey).*

*The strategy of Miguel Altuna follows the V Basque plan for VET, which is based on the course of action of the RIS3. We collaborate with the regional development agency (DGA) and with industrial associations (Adegi, Confebask, Aswfi, Sife). We collaborate with many R&D agents and universities to transfer knowledge to SMEs and micro SMEs (CIFP Miguel Altuna III, Spain).*

*Our Talentjourney project aims to bring together various stakeholders and experts at the local, regional, national and international level to share their expertise in the field of the Internet of Things inside our Platform for vocational excellence. The Platform is being designed as a live and virtual hub for connecting and sharing knowledge, skills, experiences, ideas, innovative projects among different professionals, such as company experts, tutors, researchers, learners, etc. (Šolski center Nova Gorica, Slovenia).*

*A union of industrialists and entrepreneurs has been established in the city to systematically monitor the regional labour market and to provide information on the need for qualified workers (State Educational Institution ‘Podilsky Centre of Vocational Education’, Ukraine).*

*In order to organise partnerships between oil and gas companies, the scientific community and start-ups, as well as to involve Kazakhstani companies in the digitalisation of the oil and gas industry, Atyrau HUB, an international accelerator and centre of innovation for the oil and gas industry, was created (TOO ‘Высший колледж APEC PetroTechnic’, Kazakhstan).*

*Professional standards and educational standards have been developed jointly with sectoral ministries and enterprises to create a new national occupational profile addressing the introduction of automation into production (College of Modern Technologies in Mechanical Engineering and Car Service, Belarus).*

*The KNAUF innovation centre was established at the college five years ago. It provides training for our students and teachers and for participants from other schools. KNAUF organises competitions at regional and international levels as well. Adults are involved in these competitions throughout Georgia (LEPL College ‘Akhali Talga’, Georgia).*

*There is an R&D centre at the university called the Technopark. In this centre, companies work on the development of new technologies (Nevşehir Vocational College, Turkey).*

## F: Industry 4.0 and digitalisation

This dimension was judged as being of relatively low relevance. The total average score was 68% and the Leadership and Coordination score stood at 56%. The Excellence threshold (mean score of 0.7) was achieved collectively only for the indicators at the 'Foundational' level.

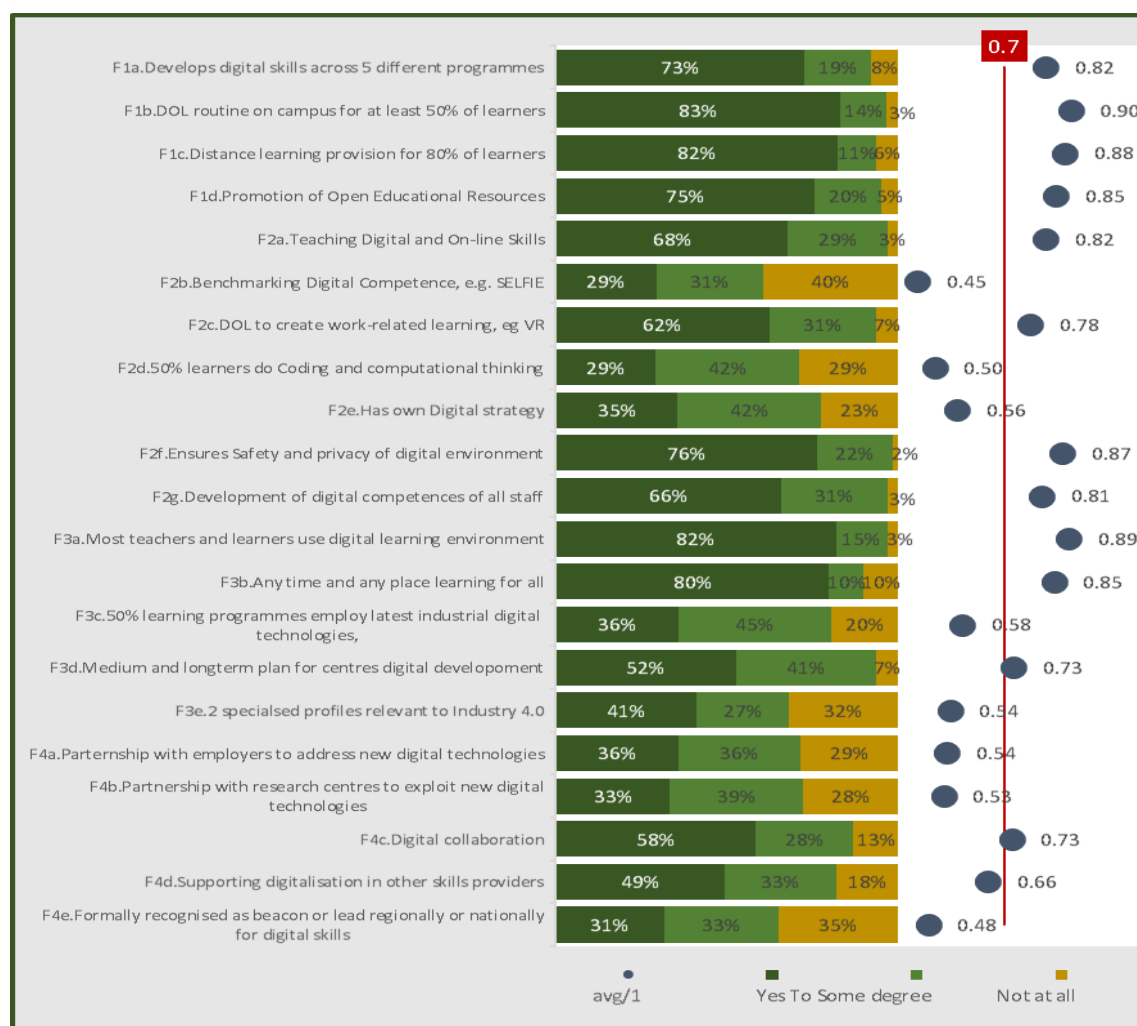
Digital and On-line Learning (DOL) is routine on and off campus in more than 80% of CoVEs. Digital skills are taught widely in more than 70% of CoVEs.

In more than 80% of CoVEs, most teachers and learners are using digital learning environments, which enables learning 'at any time, from any place'.

However, only 41% of CoVEs have established specialised profiles relevant to Industry 4.0, and only 36% report that 50% of learning programmes employ the latest industrial digital technologies. Collaboration with other providers, industry and research centres for digitalisation was reported by less than half of CoVEs.

The most popular domains of current development in this dimension are benchmarking digital competence (63% of CoVEs are either working or intend to work on this theme) and developing a digital strategy (61%).

**Figure 14: Percentages achieving indicators and scores in dimension F 'Industry 4.0 and Industrialisation'**



Source: ENE Self-assessment database; N. 62.

The most popular domains of current development are benchmarking digital competence (63% of CoVEs are either working or intend to work on this theme), developing a digital strategy (61%) and establishing partnerships with employers (55%) and with research centres to address digital technologies (58%).

### ***Examples of good practice relating to dimension F ‘Digitalisation and Industry 4.0’***

#### ***Box 7: Examples of good practice relating to dimension F ‘Digitalisation and Industry 4.0’***

*One of our teachers, Titarenko A.P., won the All-Ukrainian competition for the best electronic educational resource ‘Planet IT’ (Kramatorsk Higher Vocational School, Ukraine).*

*We have operated CAD CAM Simulation programs during the pandemic as part of our Additive Manufacturing Training and Experience Centre (Bursa Coşkunöz Education Foundation, Turkey).*

*We have just started digitalisation in our school. The first stage consists in preparing lectures as powerpoint presentations and interactive e-books. We expect in the next 2 years that the whole school will be covered by digital teaching/learning. We are currently using Moodle as the teaching platform and all students and teachers are involved in it (Vazduhoplovna akademija (Aviation Academy), Serbia).*

*The educational institution successfully uses the G-Suite information system. We place open digital materials developed by our teachers on the Digital Matter platform and we use the data management system SIME.md (PI Centre of Excellence in Economy and Finance, Moldova).*

*We aim to equip every classroom with a projector to improve the learning experience for all our students. We also have two educational profiles that cater to industry 4.0 (Mechatronic studies and CNC machine operators, both of which offer instruction in coding in relevant languages) (The Secondary School of Technical Education Valjevo, Serbia).*

*Our TIMA project involves working with 5 partners for three years on digitalisation and the use of robotics in the production of sustainable and accurate single-piece production in the maritime industry (Da Vinci College, Netherlands).*

*Robotics, Additive Manufacturing and VR/AR (Curt Nicolin Gymnasiet, Sweden).*



## G - Going green - supporting sustainable goals

83% of ENE members found this dimension relevant. The average total score for the sustainability dimension was just 51% - the lowest of all 7 dimensions. The ENE excellence threshold was not reached even at 'Foundational' level. There were only two indicators where more than 50% of CoVEs reported full achievement. These are both Foundational indicators: 1) awareness raising with respect to green issues and 2) inclusion of green skills in relevant programmes.

**Figure 15: Percentages achieving indicators and scores in dimension G 'Going Green – supporting sustainable goals'**



Source: ENE Self-assessment database; N. 60.

Most ENE members are currently at 'developing' level. 65% say they are already or will be working on managing their own carbon footprint. 55% are already improving or plan to improve teaching and learning about climate change, while 60% are already addressing or plan to introduce skills for green



technologies. Most ENE members are also looking to develop their collaboration with other providers and industry to address green issues.

### ***Examples of practice and development work relating to dimension G ‘Going Green’***

The following examples illustrate the variety of initiatives underway in different CoVEs. It is notable that initiatives addressing Green issues are particularly frequent in Ukraine.

#### **Box 8: Examples of practice and development work relating to dimension G ‘Going Green’**

*ŠCNG has launched a new initiative which is called UIL - Učno izdelovalni laboratorij (innovative business incubator) with a special focus on efficiency of energy use for users and businesses and additive manufacturing. The users are students (university, higher VET, VET), companies, SMEs, teachers (VET teachers, teachers for entrepreneurship), company experts, researchers, other creative enthusiasts from the local environment. So far 15 companies/SMEs entered the UIL network to support the implementation of innovative and work-related projects by mentoring, giving ideas, donating materials and sharing space for specific projects (Šolski center Nova Gorica, Slovenia).*

*Our teams take part in the national green competition and develop products in collaboration with green tech companies (Amal Shimon Peres Entrepreneurship Center, Tel Aviv, Israel).*

*The school takes an active part in the development of environmental greening programmes. Coniferous and deciduous trees and ornamental shrubs are planted in large quantities. To improve the environmental situation, projects have been developed to create recreational zones around the school and in the city: ‘Kalinovy Park on the Water’, ‘Cedar Forest’ (Snovsk Higher Vocational School of Forestry, Ukraine).*

*The school plans to switch to autonomous heat supply and electricity supply. The project was developed and presented to the Regional Development Centre. We are waiting for a decision (Higher Vocational School №7, Kalush, Ukraine).*

*We plan to offer a new profile: ‘Fitter of building insulation systems’ (Higher Vocational School №2, Kherson, Ukraine).*

*The educational institution has a green club ‘CEEV Volunteer’ and various events are regularly held to contribute to the sustainable development of the institution (PI Centre of Excellence in Economy and Finance, Moldova).*

*We have set up a new laboratory dedicated to ‘Renewable Energy Sources’ (Communal state-owned enterprise ‘Electrotechnical College’, East Kazakhstan region).*

*The school or centre is working with industry and sector associations to provide training programmes for employees focusing on sustainability (Baku State Industry and Innovation, Azerbaijan).*

## 7 Conclusions

### 7.1 General conclusions

The analysis suggests that excellence is composed of different elements which are relatively independent from one another. It therefore makes sense for CoVEs to make strategic decisions about which dimensions or which areas of excellence they want to focus upon – rather than aiming to pursue excellence in all dimensions.

Most ENE members are relatively well advanced in dimensions A ‘Education-Business Cooperation’ and B ‘Pedagogy and Professional Development’. In these dimensions, the ENE should seek to facilitate opportunities for less developed CoVEs to learn from their peers. However, in these same dimensions, ‘Leadership and Coordination’ is relatively undeveloped: ENE should assist its members to take on a leadership role in relation to other CoVEs and organisations, outside of the ENE.

ENE members are least well advanced in relation to dimensions G ‘Going Green’ and D ‘Lifelong Learning in VET’. In these dimensions, it will be more difficult for them to advance by learning from one another. Improvements in these dimensions may be supported by partnerships or projects where there is a more intense and sustained input to help advance know-how and build capacity.

The remaining dimensions, C ‘Autonomy, Institutional Improvement and Resources’, F ‘Industry 4.0 and digitalisation’ and E ‘Skills for Smart Specialisation – mobilisation innovation, ecosystems and SMEs’, represent areas of development of greater diversity – many CoVEs are well advanced but many are not. It follows that there are considerable opportunities for those CoVEs that wish to improve through collaboration to find other CoVEs from whom they can learn and with whom they can collaborate. The role of the ENE should be to facilitate such partnerships and sharing.

Some indicators correspond to activities that seem particularly challenging, for example the provision of incubation services for businesses, tracking of adult learners in employment, benchmarking digital competences. However, most ENE members aspire to offer these services. It may be that such services imply substantial changes in the regulatory framework or financing, or that there is a methodological gap.

The ENE should seek to assist its members in leading national and international projects – this is a priority area of development for many of its members.

The ENE offers a reservoir of know-how and good practices – there is no indicator that is not achieved by at least 15 CoVEs (20% of respondents). Good practices were reported for every single indicator. The ENE should develop ways of bringing together its members so that they can learn from one another and support other CoVEs outside the ENE network.

The ENE Network should explore how it can facilitate networking between its members so that they find peers that they can assist and learn from, and with whom they can collaborate.

Some of the good practices offered by ENE Members suggest additional indicators that the ENE could develop and share across the network.

## 7.2 Conclusions relating to particular dimensions

**Dimension A ‘Education and Business Collaboration’** was judged relevant by most ENE members and their average total score was high (74%) and their score for leadership and collaboration was relatively high at 57%. The ENE should provide support for popular areas of development: engaging employers in governance, in teacher development, in finance, in curriculum development, in programme development and should also address multi-lateral collaboration with enterprises, through business and school associations.

ENE members scored highly across **dimension B ‘Pedagogy and Professional Development’**, with an average total score of 83%. The Leadership and Coordination score was 70%. All CoVEs exceeded the excellence threshold of 0.7 for all levels, with Foundation, Developing, Mature and Leadership demonstrating a high level of consistency. Major areas for development are the industrial/professional experience of staff and the degree of collaboration with other schools and industry and through networks.

ENE members met the ENE excellence threshold of 0.7 in **dimension C ‘Autonomy’** for the ‘Foundational’ and ‘Mature’ (but not ‘Developing’) levels, demonstrating an uneven performance in relation to the indicators in this dimension. Priority areas for development include: developing the curriculum to meet local needs; increasing leadership in relation to international projects; extending authority to open or close training programmes; upgrading equipment and tools; coordination of provision and sharing services with other centres.

**Dimension D ‘Lifelong Learning in VET’** has an average performance and the excellence threshold of 0.7 was reached on average by ENE members for the ‘Foundational’ and ‘Developing’ levels. CoVEs with greater adult provision tend to have higher scores for the quality of their adult and lifelong learning provision. Tracking adult graduates into employment; provision of programmes in the workplace or online; specialised careers advice for adults; and specialised training for trainers of adults are the most common priority areas for development.

From the limited number of good practice examples submitted, together with the relatively low relevance of this dimension, it can be concluded that many CoVEs in partner countries have not yet achieved excellent practice across **dimension E ‘Smart Specialisation’**. Performance in this dimension is average in relation to that in other dimensions. However, the excellence threshold (mean score of 0.7) was achieved only at ‘**Foundation**’ level, indicating a relatively uneven profile for this dimension. Co-ordination and leadership in this dimension is relatively weak, compared to other dimensions; however, a large proportion of ENE members are looking to increase participation in regional planning and research strategies. However, to move forward in **Smart Specialisation**, most ENE members will require more than access to good practices, as they are also constrained by limited funding opportunities and underdeveloped ecosystems.

ENE members exhibit high levels of general **digitalisation** of the teaching process, which was considerably encouraged by the switch to distance learning during the Covid crisis. Less than half of ENE members are addressing **Industry 4.0**, i.e. they have set up partnerships with relevant actors or are offering dedicated profiles. The excellence threshold (mean score of 0.7) was achieved collectively only for the indicators at the ‘**Foundation**’ level, demonstrating a lack of consistent achievement across this dimension. There are relatively few good practice examples of Industry 4.0 technologies outside of the EU Member States. The ENE should support the exchange of good practices, particularly in relation to benchmarking digital competence, developing a digital strategy and establishing partnerships with employers and with research centres to address digital technologies.

Despite the urgency of **Going Green – supporting sustainable goals** in international policy discourse, dimension G is the weakest domain of performance for ENE members. Overall, ENE

members do not yet meet the excellence threshold for the ‘Foundation’ level – although some individual CoVEs achieve highly in this dimension. In addition, almost 20% of ENE members chose not to self-assess in relation to this dimension.

### 7.3 Informing the ENE’s work

The findings from the self-assessment have informed the support and development work of the ETF with respect to the ENE Network. The analysis has provided an indication of the developmental priorities of CoVEs and of the short- and medium-term aspirations of each ENE member. This has allowed ETF to provide targeted invitations to CoVEs to participate in particular workshops or to explore particular partnerships.

#### **Box 9: Responding to the needs of ENE members**

*According to the ENE Self-assessment, the ‘Going Green’ activities within CoVEs scored the lowest among the 7 dimensions, but are also the activities in which the highest share of CoVEs are looking to progress, i.e. they are already or will be working on improving their green actions. CoVEs are at different stages of greening and green responses are offered in different modes, sectors and partnerships.*

*The ENE ‘Going Green’ partnership, starting in Autumn 2021, will help ENE members to share their experiences, working practices and projects and learn from each other, to progress their green responses to excellence. The partnership will build upon the self-assessment framework as a developmental framework, providing support and facilitating exchanges that help CoVEs to set their own greening targets and to implement actions to achieve them.*

### 7.4 Relevance for policy makers and stakeholders

It is too early to draw **firm** conclusions in relation to policy making that aims to support the development of CoVEs and vocational excellence. It is however important that policy makers take account of the current state of development of CoVEs in their countries and the current developmental aspirations of these CoVEs. Ultimately, the development of vocational excellence depends on respect, understanding and cooperation between policy makers and teachers and managers across the VET system.

Provisionally, these findings suggest that policy makers and stakeholders would do well to provide resources, support and regulations that enable CoVEs to focus on the development of excellence in relation to particular dimensions or groups of dimensions.

CoVEs should be supported and encouraged to self-evaluate in order to understand their own state of development and to agree and implement their own priorities for the development of excellence.

CoVEs will need to negotiate with their stakeholders, typically including local and national governments, local and sectoral employers, social partners and funding bodies, in order to set achievable and relevant objectives.

This study suggests that the development of excellence is linked across some dimensions. For example, institutional autonomy, institutional improvement and resources (dimension C) is correlated with both pedagogy and professional development (dimension B) and education-business collaboration (dimension A). There also appears to be a correlation between excellence in 'Industry 4.0' and 'Skills for Smart Specialisation'.

The findings from this research are only indicative, but they suggest that policy makers and practitioners should enter into dialogue at local and regional level to agree strategic plans for excellence. That is how the priorities, in terms of dimensions, skills and investments, should be grouped and implemented.

Policy makers should take note of the fact that co-ordination and leadership between CoVEs – in almost every dimension – remains relatively weak. Even where a CoVE is relatively advanced, it does not follow that it is providing leadership for other CoVEs in the same country or sector or collaborating extensively with them. Therefore, there is a risk that the policy of developing CoVEs will lead to a polarisation of quality in vocational education and training, rather than systemic improvement.

The ENE intends to address this issue by encouraging international networking: the survey reveals that most CoVEs aspire to extend their international networks. However, policy makers may wish to examine whether, in designing their VET systems, they wish to create regulatory frameworks, structures or incentives that support collaboration between CoVEs and also between CoVEs and other vocational training providers.

## ACRONYMS

CAD/CAM	Computer Aided Design/Computer Aided Manufacturing
CNC	Computerized numerical control
CoVE	Centre of vocational excellence
CPD	Continuing professional development
DGEMP	Directorate General Employment, EU Commission
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit (German development agency)
ENE	ETF Network for Excellence
ENESAT	ENE Self-Assessment Tool
ETF	European Training Foundation
EU	European Union
ICT	Information and Communication technology
SME	Small and medium enterprises
VR/AR	Virtual reality/Augmented Reality
VET	Vocational education and training

## ANNEX 1: ENE – Self-Assessment – Full Questionnaire

ENE Framework for Excellence

### Introduction

*This questionnaire has been designed for vocational schools and centres of vocational excellence that are members or associates of ETF's [Network for Excellence](#) (ENE). It has been developed to permit members and associates to self-assess their own level of development against a shared set of indicators.*

*Completing this self-assessment will assist schools and centres to understand their own strengths and weaknesses and to plan their own improvement strategies. Members of the Network will be invited to repeat the self-assessment in the future, in order to review their own progress.*

*Data from the survey will be analysed in order to understand the development needs of its members and to plan support across the network. However, the self-assessment of each centre or school belongs to that institution: it will not be disclosed or published – unless the school or centre chooses to do this.*

*After you have completed the self-assessment you will be able to download feedback for your school or centre.*

---

### Structure of the questionnaire

Schools and centres are invited to self-assess in relation to 7 dimensions of vocational excellence which, according to previous research, are particularly relevant to schools and centres in the ENE. Currently the dimensions are:

- A.** Education-business collaboration and cooperation
- B.** Pedagogy and professional development
- C.** Autonomy, institutional improvement and resources
- D.** Lifelong learning in VET
- E.** Skills for smart specialisation – mobilising innovation, ecosystems and SMEs
- F.** Industry 4.0 and digitalisation
- G.** Going green – supporting sustainable goals

In the future, it is planned that indicators for other dimensions and sub-dimensions will be developed and made available.

Within each dimension, the indicators are organised into **three development levels**:

- Foundational
- Developing
- Mature.

Since ENE is concerned not only with the development of excellence but also with its transmission, each dimension includes a section on Leadership and Coordination.

For each indicator the **evaluation scale** is the following:

- 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)
- Not relevant
  
- Don't know.

If the answer is "No", then the school will be invited to describe its **plans for the future**, choosing between three options:

- We will do it within two years
- We will do it in longer than two years
- We are not planning to do it

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'.

---

## How to fill in the questionnaire

ETF advises that the self-assessment will be most useful to a school or centre if a small team of teachers and managers from each school or centre familiarise themselves with the questionnaire in advance – since it may be necessary to consult with others or collect information before responding. The team should include 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.

Following this link you will find the **full version of the questionnaire**, which you may like to download in order to prepare your organisation's response.

- The questionnaire may be completed in **English, Russian or French**. Please select your preferred language from the language bar on the top.
  
- To **save** the questionnaire and **continue** at a later date, click on '**Save & Continue**' on the toolbar at the top of the survey page. You can enter an **email address** to receive a link to return your survey later (all your survey progress will be saved).

To raise questions about the purpose and use of the self-assessment for vocational excellence please contact [Julian.stanley@etf.europa.eu](mailto:Julian.stanley@etf.europa.eu)

---

## Dimensions' choice

You are encouraged to self-assess in relation to all 7 dimensions, since ETF advises that they are all relevant for a centre of vocational excellence.

However, if you judge that one or more element is irrelevant or inappropriate you can **deselect** it



below.

The questionnaire will then display only the selected dimensions.

The **full version of the questionnaire** can be previewed [here](#).

**Please deselect any dimension(s) that you judge irrelevant or inappropriate:**

☐ 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

---

### Background Information

Please provide some background information on your school or centre.

If the school or centre is part of a cluster or partnership, please complete this questionnaire on behalf of your own organisation rather than on behalf of the whole cluster.

Name of the school or centre responding: \_\_\_\_\_

Name of the person responding: \_\_\_\_\_

Email of the person responding: \_\_\_\_\_

Is your school or centre part of a formal cluster or association with other vocational schools or another centre?      ( ) Yes      ( ) No      ( ) Don't Know

*If 'Yes', please name the other schools or centres that form part of your cluster or organisation:*

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

5. \_\_\_\_\_

6. \_\_\_\_\_

7. \_\_\_\_\_

8. \_\_\_\_\_

9. \_\_\_\_\_

10. \_\_\_\_\_

*Please describe what relationship exists between your school or centre and the others in the cluster:*

---

---

N.B.

For each indicator the **evaluation scale** is the following:

☐ Yes            ☐ To some Degree    ☐ No            ☐ Not relevant            ☐ Don't Know

If the answer is "No", then the school will be invited to describe its **plans for the future**, choosing between three options:

☐ *We will do it within two years*

☐ *We will do it in longer than two years*

☐ *We are not planning to do it*

---

#### A - Education-business collaboration and cooperation

The following statements provide an indication of the different services or processes that may be going on in the school or centre where you work, and which provide evidence of development in education-business collaboration and cooperation.

The indicators are grouped according to level of development: Foundational, Developing and Mature.

The fourth group of indicators addresses the extent to which the school or centre has taken on a leadership or coordinating role in relation to other schools or centres.

For every indicator, select the option that best describes the situation in your school or centre. Questions marked with an asterisk are compulsory.

#### **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.

#### **A2) Developing**

**A2a)** A senior person (for example Deputy Principal) in the school or centre leads and coordinates school-industry cooperation.

**A2b)** The school or centre has signed long-term memoranda of understanding with at least two enterprises which bring about annual cooperation (for example, to provide work placements for learners or visits).

**A2c)** The school or centre cooperates with enterprises in order to organise work placements for all learners which are equivalent to at least 10% of curriculum time.

**A2d)** At least one teacher benefits from at least 5 days training or work placement (or work) in an enterprise every year.

### **A3) Mature**

**A3a)** School or centre systematically develops and updates a catalogue of training programmes designed to meet the needs of identified employers for both initial and continuing vocational training.

**A3b)** Enterprises regularly contribute to assessment processes for students, for example, participate in assessment juries.

**A3c)** Tracer studies demonstrate that at least 30% of graduates enter employment or self-employment or further study in sector related to their programme.

**A3d)** Enterprises contribute to infrastructure, equipment or other costs in the school or centre (value of contribution at least € 5000 over last two years).

### **A4) Lead or Coordinating**

The indicators in this section address the way in which the school or centre works with other schools or training centres.

**A4a)** The school or centre forms lasting institutional partnership with specialist national or regional employer associations or sector organisations to develop skills over medium term, for example, developing joint curricula or implementing joint skills surveys.

**A4b)** The school or centre cooperates with other schools to co-ordinate placements or other work-based learning for adult learners.

**A4c)** The school or centre cooperates with other schools to co-ordinate placements for teachers in industry or to organise training for teachers in the workplace.

**Give one example of good practice in Cooperation with Enterprise at your school or centre:**

---

---

## B - Pedagogy and Professional Development

The following statements provide an indication of the different services or processes that may be going on in the school or centre where you work, and which provide evidence of development of development of pedagogy and professional development.

The indicators are grouped according to level of development: Foundational, Developing and Mature.

The fourth group of indicators addresses the extent to which the school or centre has taken on a leadership or coordinating role in relation to other schools or centres.

For every indicator, select the option that best describes the situation in your school or centre. Questions marked with an asterisk are compulsory.

### B1) Foundational

**B1a)** The school or centre has a person (pedagogue or pedagogical coordinator or lead teacher) in charge of professional development.

**B1b)** The school or centre provides mentoring and induction for all Beginning Teachers.

**B1c)** At least 75% of the teachers in the school or centre attended at least one in-service training event (for example, a seminar or workshop) in the last 12 months.

**B1d)** Teachers of theory and of skills regularly set learning tasks that closely resemble real, up-to-date tasks in the world of work.

**B1e)** All staff have appropriate knowledge, skills and competences (technical, pedagogical and personal) which qualify them to teach, collaborate and support the welfare of learners.

### B2) Developing

**B2a)** The school or centre systematically conducts training needs identification for all of its staff, for example, through interviews or surveys.

**B2b)** All teachers at the school or centre regularly practise a range of pedagogies that are appropriate to vocational subjects and to different learners (for example, active approaches like group work, problem solving, critical thinking, role play).

**B2c)** The school or centre makes systematic use of assessment data to evaluate and improve its own performance.

**B2d)** Senior managers and pedagogues regularly observe teaching and provide feedback to all staff.

**B2e)** School or centre regularly assesses needs of all learners and provides special support to meet individual needs (with respect to both learning and wellbeing) where appropriate.

### B3) Mature

**B3a)** The school or centre plans its own in-service training events at least three times each year to achieve its training plan (in addition to participating in external training events).

**B3b)** All teachers and trainers have relevant industrial or professional work experience which they have either obtained outside of teaching or through placements and training in relevant enterprises.

**B3c)** At least 80% of teachers and instructors regularly collaborate to prepare and support their teaching, for example, through mentoring, team teaching or joint lesson preparation.

**B3d)** Regular assessment of learning is used systematically to decide what learning tasks should be set for individual learners and for groups of learners.

**B3e)** The school or centre evaluates the impact of professional development on the quality of teaching and learning, and the information is used to plan future professional development.

#### **B4) Lead or Coordinating**

The indicators in this section address the way in which the school or centre works with other schools or training centres.

**B4a)** The school or centre supports the development of pedagogy across a group of other schools or learning centres, for example, through the offer of in-service training or by sharing instructional materials.

**B4b)** The school or centre works in partnership with industry, universities or donors to design and organise in-service training for teachers and trainers.

**B4c)** The school or centre participates in national or international networks to share good practices or research in teaching and learning.

**B4d)** The school or centre has a budget to develop and provide in-service training (or is able to charge for in-service training).

**Give one example of good practice in pedagogy and professional development at your school or centre:**

---

---

#### **C - Autonomy, Institutional Improvement and Resources**

The following statements provide an indication of the different services or processes that may be going on in the school or centre where you work, and which provide evidence of development of autonomy, capacity for improvement and of what resources are available.

The indicators are grouped according to level of development: Foundational, Developing and Mature.

The fourth group of indicators addresses the extent to which the school or centre has taken on a leadership or coordinating role in relation to other schools or centres.

For every indicator, select the option that best describes the situation in your school or centre. Questions marked with an asterisk are compulsory.

## **C1) Foundational**

**C1a)** The school or centre has an independent Board of Governors with some elected members that exercises authority and holds the principal to account.

**C1b)** The school or centre, in consultation with its stakeholders, has defined its own mission and institutional development plan.

**C1c)** The school or centre has an institutional quality assurance system which it implements.

## **C2) Developing**

**C2a)** The school or centre has the authority to enter independently into contracts with other organisations such as businesses, training providers and donors e.g. to buy or sell services or equipment.

**C2b)** The school or centre is able to earn and retain income (for example, by selling training services).

**C2c)** The school or centre is able to make changes to nationally defined curriculum frameworks or profiles in order to adapt curriculum to local needs.

**C2d)** The Governing Body has the authority to appoint and dismiss principal.

**C2e)** The school or centre has the authority to appoint its own fixed term staff (for example, part-time teachers, maintenance staff).

## **C3) Mature**

**C3a)** The school or centre plans and monitors its own budget, deciding independently how to use the resources.

**C3b)** The school or centre has appropriate and sufficient laboratories, classrooms and workshops which permit it develop the competences required by employers.

**C3c)** The school or centre has appropriate and sufficient tools, equipment, infrastructure and consumables which permit it develop the competences required by employers.

**C3d)** The school or centre has the authority to decide which learning programmes will be offered in the future and to close down current programmes if not required.

**C3e)** The school or centre has the authority to appoint full-time, permanent teaching staff, subject to approval.

**C3f)** The school or centre has the authority to take out loans, for example, to fund investment.

## **C4) Lead or Coordinating**

The indicators in this section address the way in which the school or centre works with other schools or training centres.

**C4a)** The school or centre coordinates the planning and provision of training programmes, together with other skills providers.

**C4b)** The school or centre leads and sometimes initiates national or international projects involving more than one other organisation.

**C4c)** The school or centre operates a joint budget or joint owns assets or enterprises with other schools or organisations, for example, a training company.

**C4d)** The school or centre shares services or staff with other schools (for example, accounting services, technical maintenance services, etc.).

**Give one example of good practice in Autonomy and Institutional Improvement at your school or centre:**

---

---

## D - Lifelong learning in VET

The following statements provide an indication of the different services or processes that may be going on in the school or centre where you work, and which provide evidence of development of development of Lifelong Learning in VET.

The indicators are grouped according to level of development: Foundational, Developing and Mature.

The fourth group of indicators addresses the extent to which the school or centre has taken on a leadership or coordinating role in relation to other schools or centres.

For every indicator, select the option that best describes the situation in your school or centre. Questions marked with an asterisk are compulsory.

### D1) Foundational

**D1a)** The school or centre has an explicit mission to provide education or training programmes to adults.

**D1b)** The school or centre has delivered at least one adult education programme with at least 8 weeks duration for 20 or more adult learners over the last two years.

**D1c)** The school or centre is formally accredited as provider of adult education.

**D1d)** The school or centre systematically supports the development of key competences (including soft skills as well as basic skills) for all learners.

### D2) Developing

**D2a)** The school or centre has delivered at least three different programmes for adults continuously over the last two years.

**D2b)** Different kinds of learning-programme are offered to different kinds of adult learners, in order to meet their needs (for example, part-time courses for employees, elementary courses for adults without basic skills, etc.).

**D2c)** The school or centre offers specialised advice on training and careers to adult learners.

**D2d)** Teachers and trainers have received training or specialised support that has helped them to develop skills to support adult learning and career counselling.

**D2e)** Learning outcomes (or competences) from adults' skills programmes are assessed using criteria that have been validated by employers (or their representatives).

### **D3) Mature**

**D3a)** More than 50% of programmes provided by the school or centre are also accessible to adult learners, either as special courses or it is possible for adults to join existing programmes.

**D3b)** There is dedicated funding which makes it possible for adult learners to study.

**D3c)** Learning from adults' skills programmes is accredited, i.e. the programmes lead to diplomas which have value on the labour market.

**D3d)** Graduates from adult programmes are regularly tracked (e.g. by tracer studies) in order to monitor destinations and/or future learning needs.

**D3e)** The school or centre provides adult education programmes outside (either partially or fully) of a school environment (for example, in the workplace, online, etc.).

**D3f)** The school or centre recognises informal learning of adults so that they can benefit from prior learning outside of the school or centre.

### **D4) Lead or Coordinating**

The indicators in this section address the way in which the school or centre works with other schools or training centres.

**D4a)** The school or centre collaborates with or supports other adult education providers, for example, so that together schools can offer a wider range of programmes.

**D4b)** The school or centre has well-established partnerships with businesses or employment agencies, for example, to provide training.

**D4c)** The school or centre has a co-ordinating role with respect to adult education (for example, it coordinates adult education in several organisations or campuses or neighbourhood centres).

**Give one example of good practice in Adult Education at your school or centre:**

---

---

**E - Smart specialisation - Mobilising Innovation, ecosystems and SMEs**

The following statements provide an indication of the different services or processes that may be going on in the school or centre where you work and which provide evidence of how your school or centre is working in collaboration with local and regional organisations to plan and implement regional economic development and innovation, following the principles of [\*Smart Specialisation\*](#).



The indicators are grouped according to level of development: Foundational, Developing and Mature.

The fourth group of indicators addresses the extent to which the school or centre has taken on a leadership or coordinating role in relation to other schools or centres.

For every indicator, select the option that best describes the situation in your school or centre. Questions marked with an asterisk are compulsory.

### **E1) Foundational**

**E1a)** The school or centre gathers and analyses labour market knowledge (for example, information on employers' needs) to inform its work.

**E1b)** The school or centre collaborates with local or regional bodies responsible for local/regional development (for example, with the Regional Development Agency).

**E1c)** The school or centre collaborates with the local or regional business associations and civil society (for example, Chambers, employers' associations, NGOs, etc.).

### **E2) Developing**

**E2a)** The school or centre is involved in activities that help the region to identify priorities for the economic development ("skills for smart specialisation").

**E2b)** The school or centre has developed or modified its curriculum or the range of programmes that it offers in response to labour market analysis in the last three years.

**E2c)** The school or centre provides enterprise/entrepreneurship skills to 75% of its adult learners.

**E2d)** The school or centre provides training or other services targeting Small and Medium Enterprises (SMEs).

### **E3) Mature**

**E3a)** The specialist programmes offered by the school or centre match well with the current and future employment needs of local and regional enterprises.

**E3b)** The school or centre contributes to regional research strategy, for example, by helping to transfer and apply new knowledge and technologies.

**E3c)** The school or centre provides incubation services, i.e. support for new business start-ups, such as accommodation, mentoring or loans.

**E3d)** The school or centre collaborates with industry to create new training programmes which address innovation (for example, take up of new technologies), in line with the regional strategy.

**E3e)** The school or centre has entered into formal agreements with private and public sector organisations to jointly address local or regional economic needs, for example the ones expressed in the regional strategy.

### **E4) Lead or Coordinating**

The indicators in this section address the way in which the school or centre leads or coordinates other organisations and skills providers to support regional economic development and innovation according to the principles of smart specialisation.

**E4a)** The school or centre leads or coordinates building partnerships, for example, by hosting meetings or mobilising alumni, for the benefit of the region.

**E4b)** The school or centre leads or coordinates collaboration with other schools, centres or research organisations locally, across regions or internationally, for example, to develop project or training programmes e.g. on emerging technologies.

**E4c)** The school or centre is formally recognised to have a lead role in the development of identified specialised skills or technologies at regional or national level.

**Give one example of good practice in Skills for smart specialisation – Mobilising Innovation, ecosystems and SMEs at your school or centre:**

---

## F - Industry 4.0 and digitalisation

The following statements provide an indication of the different services or processes that may be going on in the school or centre where you work, and which provide evidence of development of capacity to address Industry 4.0 and digitalisation.

The indicators are grouped according to level of development: Foundational, Developing and Mature.

The fourth group of indicators addresses the extent to which the school or centre has taken on a leadership or coordinating role in relation to other schools or centres.

For every indicator, select the option that best describes the situation in your school or centre. Questions marked with an asterisk are compulsory.

### F1) Foundational

**F1a)** The school or centre develops the digital skills and competences of learners in at least five different learning programmes.

**F1b)** Digital and on-line instruction is regularly used on campus as a mode of teaching and learning by at least 50% of learners.

**F1c)** The school or centre is able to use digital tools to provide distance learning to 80% of its students.

**F1d)** The school or centre promotes and uses Open Educational Resources.

### F2) Developing

**F2a)** An explicitly defined set of Digital and On-line Skills are taught to all learners as part of their key competences.

**F2b)** The Digital Competence (DC) of staff and learners is benchmarked, e.g. using the **EU's SELFIE tool** or another framework.

**F2c)** The school or centre uses digital and on-line learning to provide work-related learning situations (for example, video simulations, business games, videos of workplace, VR).

**F2d)** At least 50% of learners learn coding and computational thinking.

**F2e)** The school or centre has a digital strategy (for example incorporated into institutional development plan).

**F2f)** The school or centre ensures safety, privacy and a responsible behaviour in digital environments.

**F2g)** The school or centre develops digital competences of all staff, in line with institutional development plan or workforce development plan.

### **F3) Mature**

**F3a)** Most teachers and learners use digital learning environments or systems for learning and assessment (for example, Moodle, Microsoft 365, etc.).

**F3b)** Digital learning technologies are used to provide anytime/anyplace learning for all learners.

**F3c)** At least 50% of learning programmes develop the competence of learners to make use of up-to-date industrial digital technologies, e.g. CAD, CAM, 3D printing.

**F3d)** The school or centre has medium- and long-term plans to ensure that the development of its own digital infrastructure is in line with pedagogy and curriculum and industrial practice and the plans are implemented.

**F3e)** The school or centre provides at least two specialised profiles (qualifications) that explicitly address digital competences relevant to Industry 4.0. (for example, robotics, AI, website designer, data scientist).

### **F4) Lead or Coordinating**

The indicators in this section address the way in which the school or centre works with other schools or training centres.

**F4a)** The school or centre works in partnership with employers to address new digital technological development (for example, through investment, sharing of technology and know-how and continuing training for advanced digital competences).

**F4b)** The school or centre works with research partners to address new challenges and exploit new digital technologies.

**F4c)** The school or centre networks and collaborates digitally with other skills providers, for example, through e-twinning, videoconferencing or platforms.

**F4d)** The school or centre supports or encourages the development of digitalisation in other skills providers, for example, by providing professional development, development of assessment.

**F4e)** The school or centre is formally recognised to have a national or regional mission to lead development in the provision of digital skills and/or the use of educational technologies.

**Give one example of good practice in Industry 4.0 and digitalisation at your school or centre:**

---

---

## G - Going green - supporting sustainable goals

The following statements provide an indication of the different services or processes that may be going on in the school or centre where you work, and which provide evidence of development of skills for a green and sustainable economy.

The indicators are grouped according to level of development: Foundational, Developing and Mature.

The fourth group of indicators addresses the extent to which the school or centre has taken on a leadership or coordinating role in relation to other schools or centres.

For every indicator, select the option that best describes the situation in your school or centre. Questions marked with an asterisk are compulsory.

### G1) Foundational

**G1a)** Some awareness raising activities have already taken place in the school or centre (for example, campaigns to reduce and/or carefully manage waste).

**G1b)** Where appropriate the learning programmes provided include competences that are relevant to making the economy sustainable ('green skills'), for example, knowledge about energy conservation, skills in waste reduction.

**G1c)** The school or centre supports learning addressing the science of climate change and exploring critically economic, political and technological responses to environmental change.

### G2) Developing

**G2a)** The school or centre addresses explicitly sustainability issues in its institutional strategy (for example, with respect to energy, curriculum, consumables).

**G2b)** The school or centre provides at least one training programme that explicitly addresses a current or emerging green occupation (for example, environmental management, photo-voltaic installer, recycling worker).

**G2c)** The school or centre systematically develops skills in green technologies, for example, solar or wind power, insulation, electric batteries.

**G2d)** The school or centre audits and controls its own environmental footprint.

### G3) Mature

**G3a)** The school or centre is providing adult training programmes that provide green skills, give access to green technologies and open up green occupations.

**G3b)** The school or centre is helping to develop new programmes, curricula or technologies associated with green skills, occupations and technologies.

**G3c)** The school or centre has successfully implemented a strategy for green transformation and is on course to achieve a reduction in its own carbon foot print in line with national and international targets by 2030.

**G3d)** The school or centre empowers learners and staff to innovate and collaborate to bring about a sustainable economy.

#### **G4) Lead or Coordinating**

The indicators in this section address the way in which the school or centre works with other schools or training centres.

**G4a)** The school or centre is collaborating with industry or research institutes to develop or provide learning programmes which address sustainability, for example, through projects or platforms.

**G4b)** The school or centre is collaborating with other skills providers to support or provide learning programmes which address sustainability, e.g. through clusters or in-service training.

**G4c)** The school or centre is working with industry or sector associations to provide training programmes for employees focusing on sustainability.

**G4d)** The school or centre is collaborating with other stakeholders, (for example, local government, NGOs, parents, adult learners, employers) on actions to bring measurable progress in achieving collective sustainability goals.

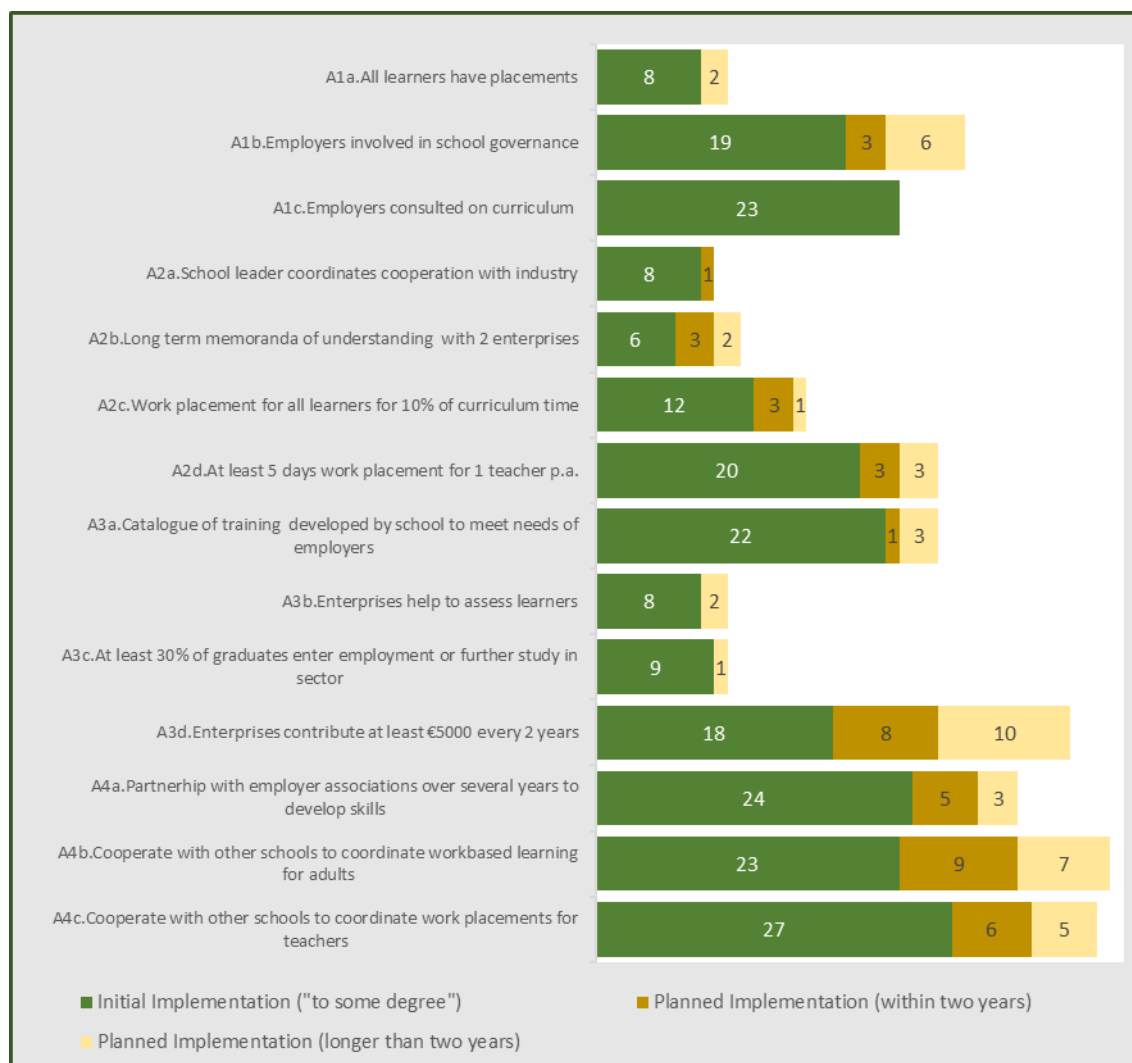
**Give one example of good practice in development of Going green – supporting sustainable goals at your school or centre:**

---

## ANNEX 2: Number of CoVEs working to improve their excellence

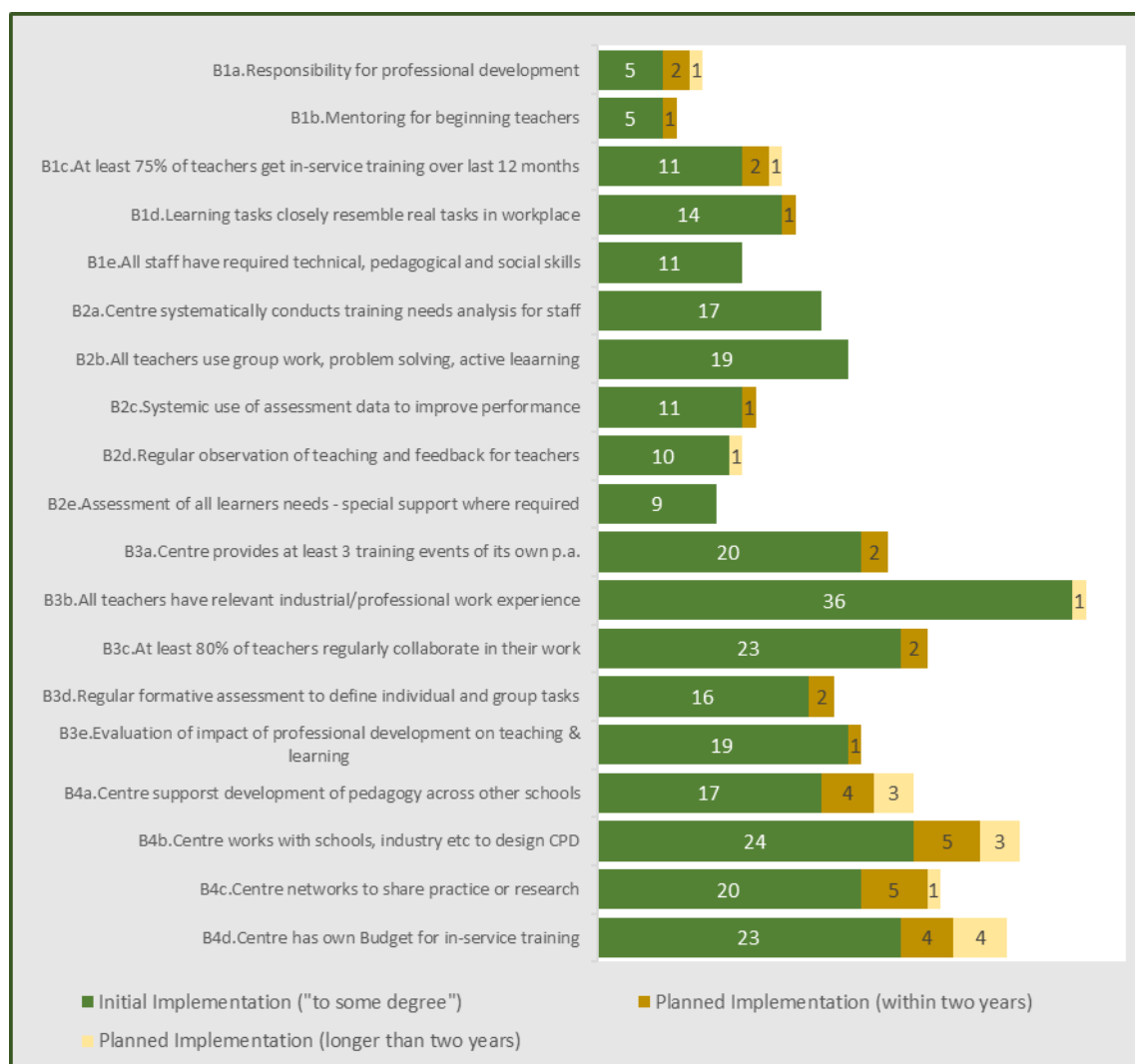
The following figures show how many CoVEs are progressing in each indicator, or plan to do so within two years or more (source: ENE Self-assessment database).

**Figure 16: Number of CoVEs working to improve their excellence in relation to dimension 'Education- collaboration'**



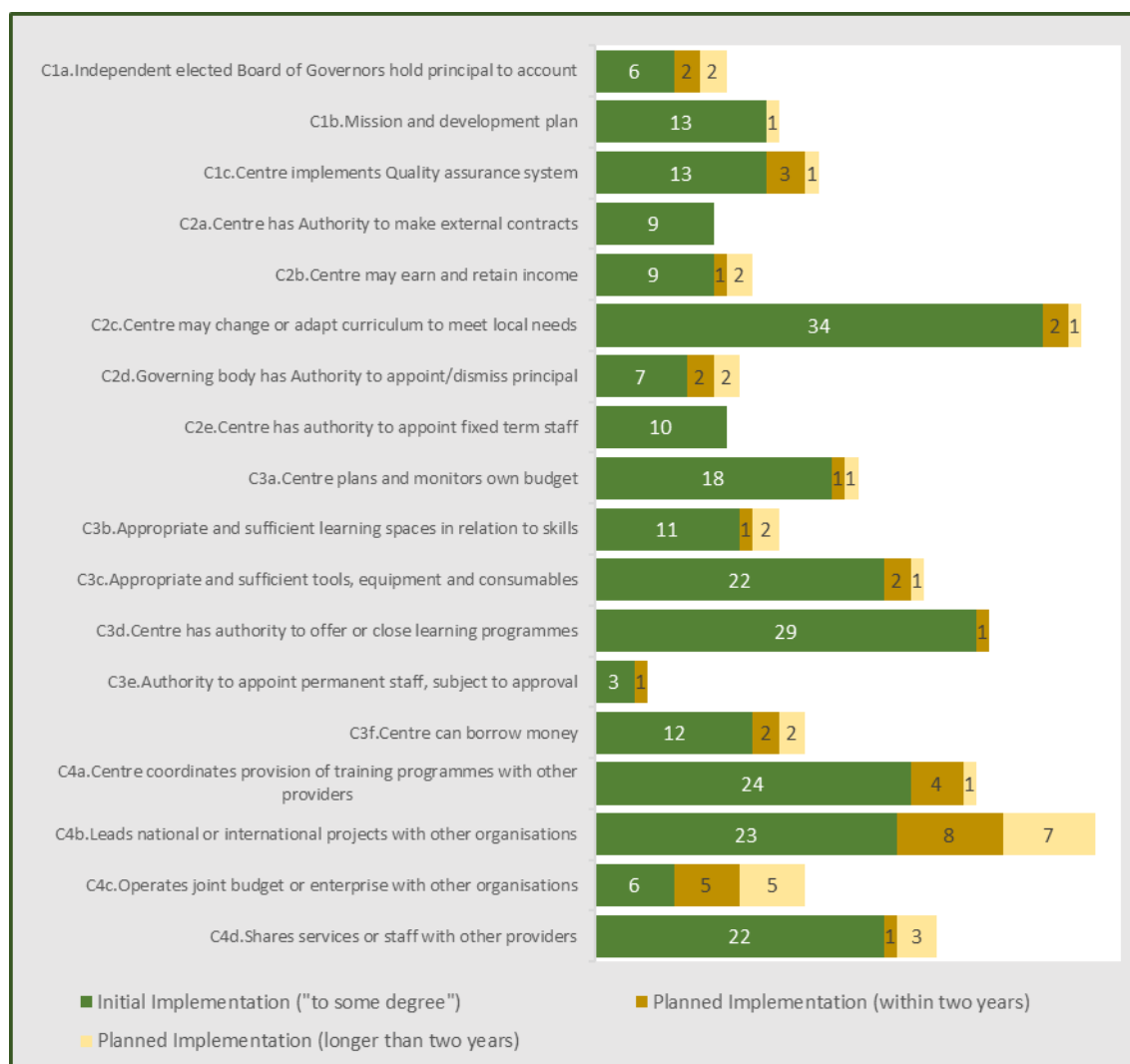
Source: ENE Self-assessment database

**Figure 17: Numbers of CoVEs working to improve their excellence in relation to dimension B ‘Pedagogy and Professional Development’**



Source: ENE Self-assessment database

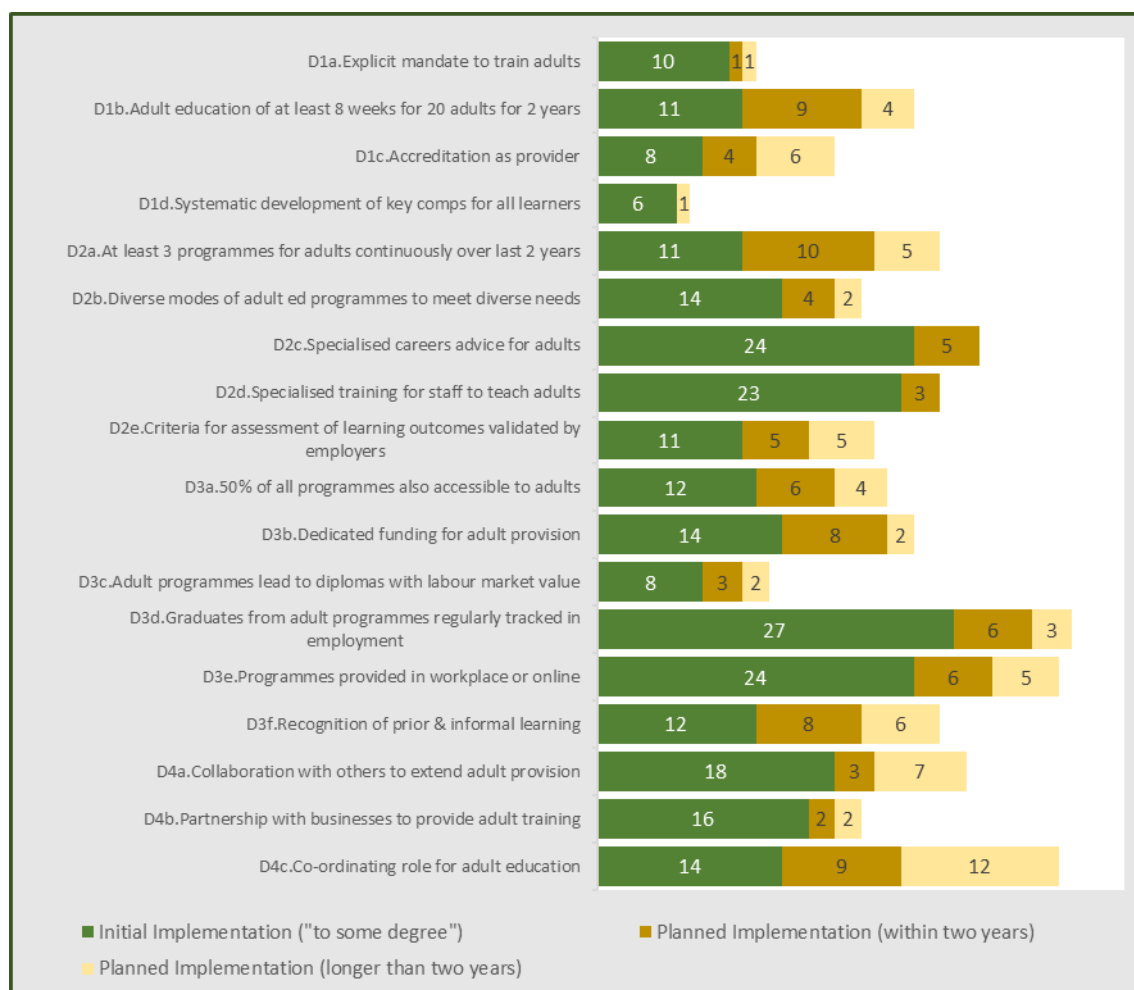
**Figure 18: Numbers of CoVEs working to improve their excellence in relation to dimension C ‘Autonomy, Institutional Improvement and Resources’**



Source: ENE Self-assessment database

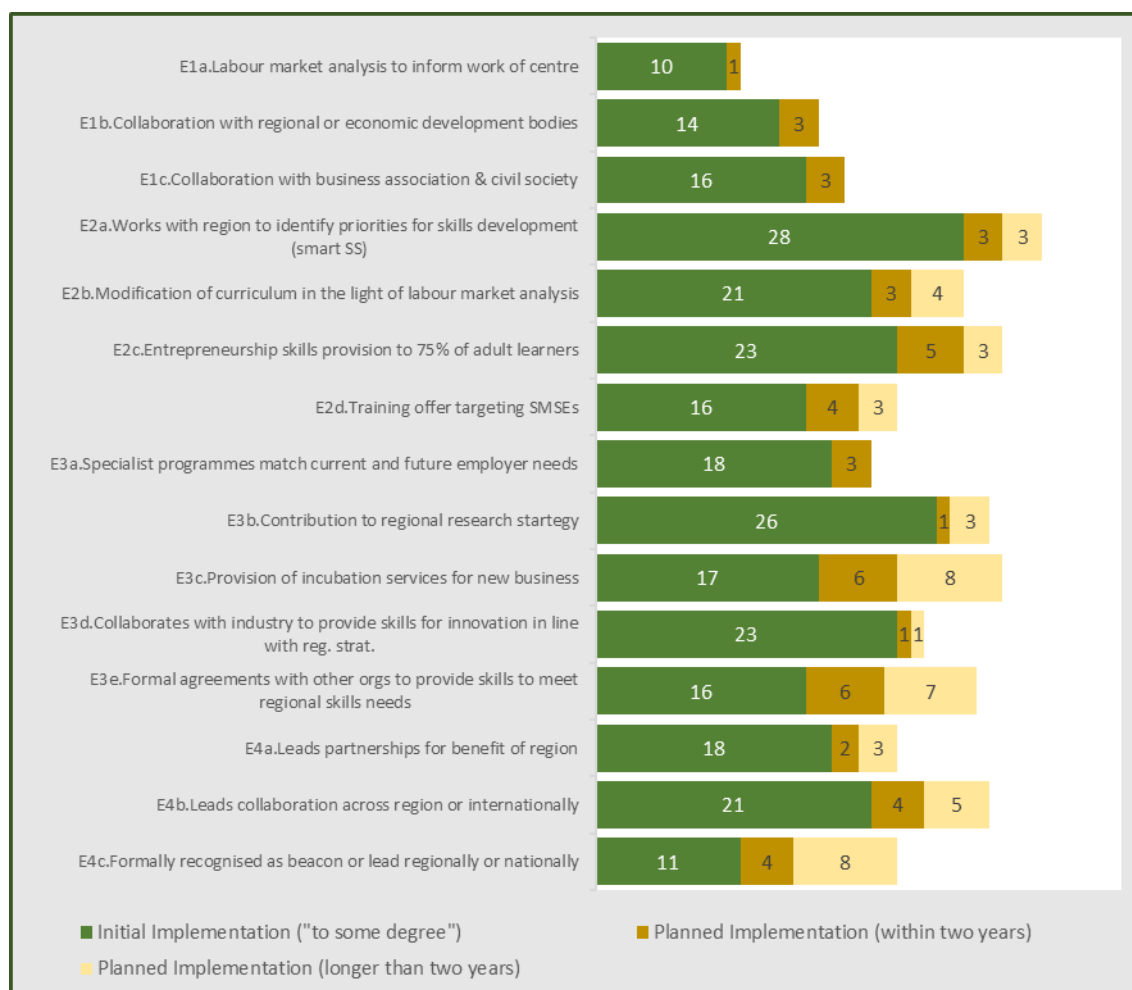


**Figure 19: Numbers of CoVEs working to improve their excellence in relation to dimension D 'Lifelong Learning in VET'**



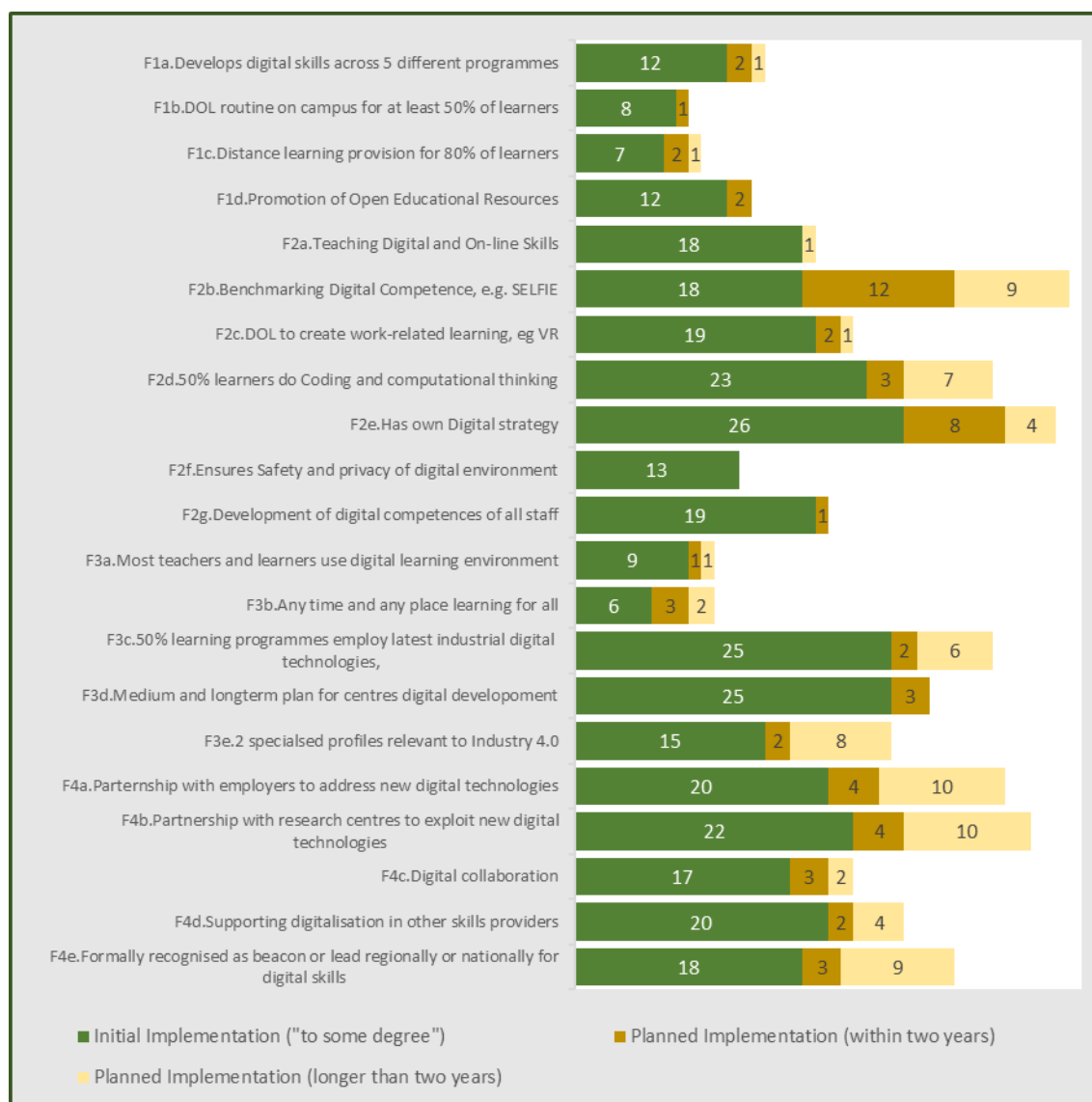
Source: ENE Self-assessment database

**Figure 20: Number of CoVEs working to improve their excellence in relation to dimension E ‘Skills for Smart specialisation – mobilising innovation, ecosystems and SMEs’**



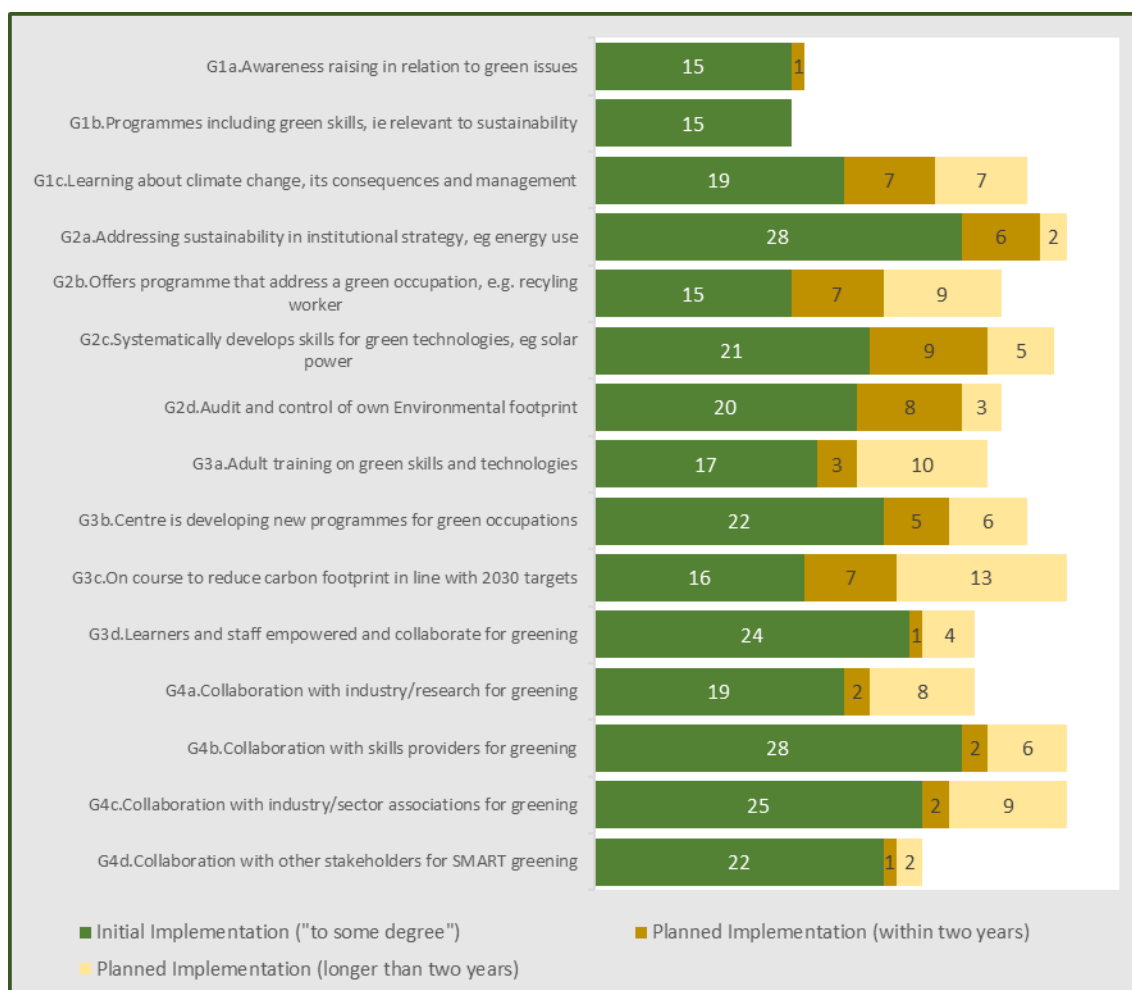
Source: ENE Self-assessment database

**Figure 21: Number of CoVEs working to improve their excellence in relation to dimension F 'Digitalisation and Industry 4.0'**



Source: ENE Self-assessment database

**Figure 22: Number of CoVEs working to improve their excellence in relation to dimension G ‘Going Green: supporting sustainable goals’**



Source: ENE Self-assessment database