



IO2 Roadmap

IO2A1 Identification of Technologies



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European Association of Institutions in Higher Education	EURASHE	BE
Celje School of Economics, Higher Vocational College	EŠ Celje	SI
Knowledge Innovation Centre (Malta) Ltd	KIC	MT
Sdružení profesního terciárního vzdělávání	CASPHE	CZ
VERN University of Applied Sciences	VERN	HR

This project has been funded with support from the European Commission. This publication reflects the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

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Co-funded by the
Erasmus+ Programme
of the European Union



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1 Aim and Methodology

Apprenticeships are particularly good indicators of the level of transition and integration between the world of education and the world of work. The investment of Higher Education Institutions (HEIs) put into offering and/or managing and/or monitoring apprenticeships for their students is therefore particularly relevant in this context. This highlights the importance of the collaboration between Professional Higher Education Institutions (PHEIs) and employers. ApprenticeTrack undertakes this matter under the angle of digital competences by creating an online prototype tool ('Technology Roadmap for Apprenticeship Management') to improve the quality and quantity of communication between all stakeholders, namely PHEIs, employers and apprentices, and to address issues in this context more quickly and transparently. Such a tool will be used before, during and after the apprenticeship and for all EQF levels when basic information is inserted. It will therefore act as a concrete tool for the improvement of institutional and system-level governance, transparency and feedback mechanisms. It is meant to create an environment where the students' progress, achievements and business communication will be measured and monitored. Unlike projects ApprenticeTrack takes a leaf out of and/or builds on, this project, in particular its second intellectual output, moves from a systemic, policy and institutional level to the very grassroot level of students, PHEIs and employers.

Thus, in order to address the necessary improvements of work-based learning quality and create the adequate prototype fitting such needs in a very concrete manner, partners first need to map uses made of such existing technologies. This state-of-the-art analysis will help partners to assess their adequacy with quality criteria defined in IO1, identify characteristics to be potentially added in the meta-data standards (IO2A2) and factors that could prevent the technological roadmap to be mainstreamed (IO2A4). The prototype is meant to reflect on and adapt to this analysis, according to the feedbacks received which will be mostly used to complete O2A2 - Proposition of an appropriate meta-data standard for apprenticeship management.

This mapping was carried out through a 10-question survey which was put online through SurveyMonkey and open to participation from June to August 2019.

2 Survey

2.1 Methodology used

The survey was drafted by Skupnost VSŠ and KIC and approved by partners after a few changes in the formulation of questions. Because of its vast network to disseminate it to, EURASHE was in charge of creating the questionnaire on SurveyMonkey, put it online and promote it through its network. SurveyMonkey was the privileged tool as EURASHE already has a license to use it and is easily accessible on all systems.

The survey addressed all stakeholders involved in apprenticeships, whether they work with a management system for apprenticeships or not, as this could also be an indicator regarding the need of such a tool that ApprenticeTrack intends to create and mainstream.

The questions focused on the meta-data components, use and type of systems used by the respondents. The components presented and to be ticked off if employed by respondents were based on Intellectual Output 1 and the identification of quality criteria which was performed and reviewed by experts (*cf Peer-Review of Indicators & Measurement Criteria*). Their use and type will be indexes regarding the future application of the technology roadmap by stakeholders.

The survey was disseminated on all partners' own channels. It was also addressed to targeted persons in potentially interested organisations per email, as well as to other consortiums working on work-based learning projects that EURASHE is part of.

The survey was eventually closed on 31st August 2019

2.2 Results

The survey gathered 32 responses from 17 different countries

2.2.1 Stakeholders identification

ANSWER CHOICES		RESPONSES
Higher Education Institution		78.13% 25
Employer (world of work)		3.13% 1
Student		3.13% 1
National Authority		0.00% 0
European Commission		0.00% 0
HE institutions' umbrella organisation		0.00% 0
Employers' umbrella organisation		3.13% 1
Students' umbrella organisation		0.00% 0
Other (please specify)	Responses	12.50% 4
TOTAL		32

Out of a few exceptions, a large part of respondents came from Higher Education Institutions with 25 representatives responding to the questionnaire out of 32 participants. One employer organisation took part in the survey as well as one employers' umbrella organisation. The weak number of respondents stemming from the world-of-work can potentially be explained by EURASHE's network for its activities target mainly HEIs.

« Other » stakeholders included: « Skills coach », « Professional body (national) », « Ministry of Education and Research », « Civil Society non-profit organisation », highlighting that apprenticeships' stakeholders are wider than the ones targeted by ApprenticeTrack and that the outputs can be applied in other frameworks dealing with apprenticeships, one typical example being national employment centres

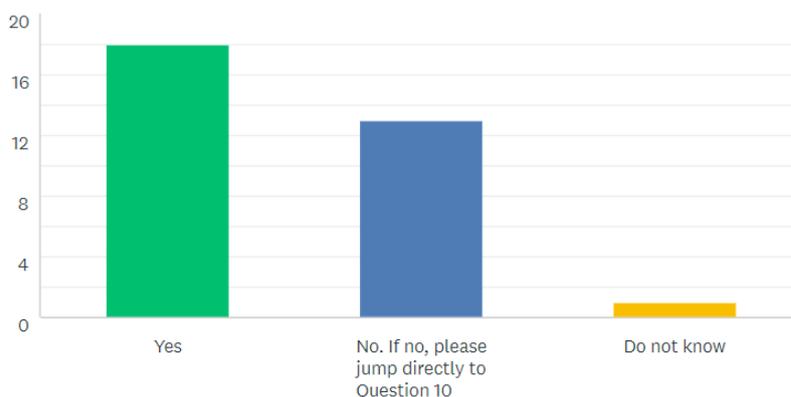
2.2.2 Country

Australia	Austria	Belgium	Estonia	France	Germany
1	2	1	1	5	2
Greece	Hungary	Iceland	Lithuania	Netherlands	Norway
1	5	1	2	2	1
Poland	Slovenia	Switzerland	Turkey	UK	
1	1	1	1	4	

17 countries were represented among the respondents. No specific trend was observed among groups of countries

2.2.3 Does your institution/organisation use any digital apprenticeship management system?

Answered: 32 Skipped: 0



ANSWER CHOICES	RESPONSES	
▼ Yes	56.25%	18
▼ No. If no, please jump directly to Question 10	40.63%	13
▼ Do not know	3.13%	1
TOTAL		32

The small majority of responses were positive to the question of the existence and use of an apprenticeship management system in responding organisations. This means that more than half of the responding organisations do work with one, including HEIs, the Ministry of Education and Research (from Estonia) and the Austrian responding Civil society non-for-profit organisation. The same analysis applies to HEIs: out of 25 HEIs, 11 do not have an apprenticeship management system and 13 do meaning that almost half of responding HEIs are not equipped with an online tool to manage and monitor apprenticeships.

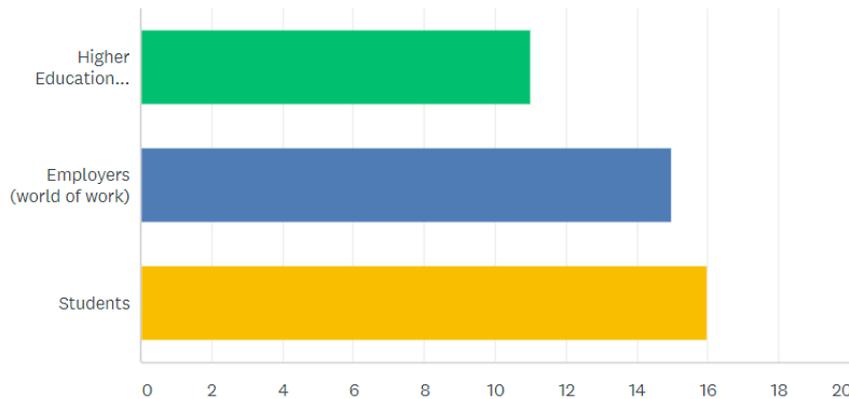
In the “Other” category, both employer-related respondents (Employers’ umbrella organisation and Employer) indicated that they had such a system, as well as the sole student-related respondent, the National professional body and the Skills coach. Only one participant didn’t know whether their organisation used an apprenticeship management system.

This then calls for another statement: many respondents indicated not having an apprenticeship management system in their organisation: this could underline the interest sparked by the survey and the will of getting more information to implement such tools. This highlights once more the equipment issue, hence the collaboration gap that ApprenticeTrack

can fill in between education and work in the context of promoting quality apprenticeships in Europe.

2.2.4 Which apprenticeship stakeholders have direct and active access to the digital apprenticeship management system?

Answered: 20 Skipped: 12



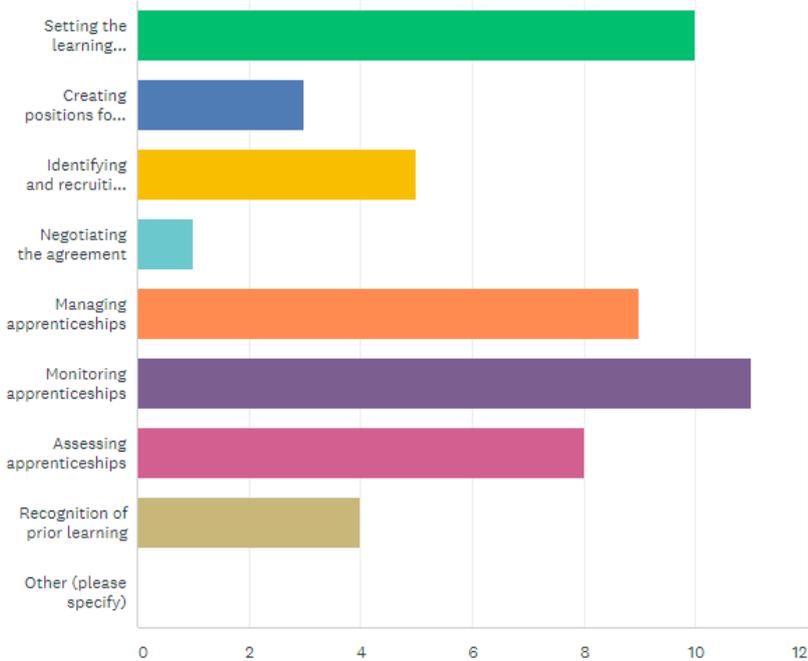
ANSWER CHOICES	RESPONSES
Higher Education Institutions	55.00% 11
Employers (world of work)	75.00% 15
Students	80.00% 16
Total Respondents: 20	

All HEIs that have an apprenticeship management system (13) are accessible to students. What is more surprising is that only half of them (7) have accessible systems to all stakeholders, namely the HEI, the employer and the concerned student/apprentice. Surprisingly enough, 2 HEIs responded that their apprenticeship management systems were directly and actively accessible to students and employers only, 2 others are accessible to the HEI and students, and finally 2 others are solely accessible to students.

Again, the quality criteria indicating that all apprenticeship stakeholders should be involved in the apprenticeship proceedings is not fully met, hence the importance of stressing this point out to the target audiences by partners in ApprenticeTrack, especially through the Technological Roadmap. Indeed, such systems leaving out one or two apprenticeship stakeholders may lead to lack of transparency and slow down, if not deteriorate the outcomes of the apprenticeships.

2.2.5 Which apprenticeship management processes does he digital apprenticeship management system comprise?

Answered: 18 Skipped: 14



ANSWER CHOICES	RESPONSES
Setting the learning objectives of the overall programme	55.56% 10
Creating positions for apprentices	16.67% 3
Identifying and recruiting placements	27.78% 5
Negotiating the agreement	5.56% 1
Managing apprenticeships	50.00% 9
Monitoring apprenticeships	61.11% 11
Assessing apprenticeships	44.44% 8
Recognition of prior learning	22.22% 4
Other (please specify)	Responses 0.00% 0
Total Respondents: 18	

The multiple answers proposed in this question were identified in IO1 after having been further checked by experts. These quality criteria to be involved in an ‘ideal’ apprenticeship management system were the following:

- Setting the learning objectives of the overall programme
- Creating positions for apprentices
- Identifying and recruiting placements
- Negotiating the agreement
- Managing apprenticeships
- Monitoring apprenticeships

- Assessing apprenticeships
- Recognition of prior learning
- Other (please specify)

It appears clear that the most used processes are “Setting the learning objectives of the overall programme”, “Managing apprenticeships” and “Monitoring apprenticeships” with respectively 10, 9 and 11 respondents that ticked them off.

Only the 2 Lithuanian HEIs use only one feature, i.e. “Identifying and recruiting placement” as well as the Swiss HEI which solely uses the “Setting the learning objectives of the overall programme”. All other HEIs management systems use at least 2 features.

The 4 French responding HEIs ticked between 3 and 5 features off. “Assessing apprenticeships” was unanimous and 3 out of the 4 HEIs use the “Setting the learning objectives of the overall programme”, “Managing apprenticeships” and “Monitoring apprenticeships” characteristics of their system.

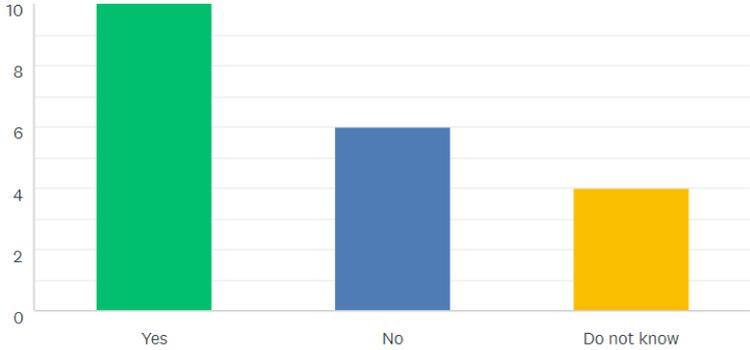
Similarly all UK respondents agreed on “Monitoring apprenticeships” and “Assessing apprenticeships” although their type differ: 2 are HEIs, one is the Skills coach and the last is the National professional body. The UK respondents seem to be the most proactive actors in this sector: 2 of them ticked 3 features off (adding “Negotiating the agreement” and “Recognition of prior learning” to the 2 aforementioned components), one ticked 4 off (+ “Setting the objectives of the overall programme” and “Managing apprenticeships”), and one ticked 6 off (+ “Setting the objectives of the overall programme”, “Managing apprenticeships” and “Recognition of prior learning”)

“Negotiating the agreement” is the lowest priority among participants since this process is usually rather left between the apprentice and the employer, as is “Creating positions for apprentices”. These underline the core role of HEIs already known in the apprenticeship context of HEIs: skills pinpointing and development, and following/supporting apprentices through the administration process of the apprenticeship. HEIs do not seem entitled to be more involved into apprenticeships.

No participant indicated to use other components in their system and no proposition was left out. This underlines the thorough work performed by project partners in IO1, showing that overall all proposed components are considered useful and appropriate by respondents.

2.2.6 Is the digital apprenticeship management system an integrated part of a larger management system or is it an independent systemic solution

Answered: 20 Skipped: 12

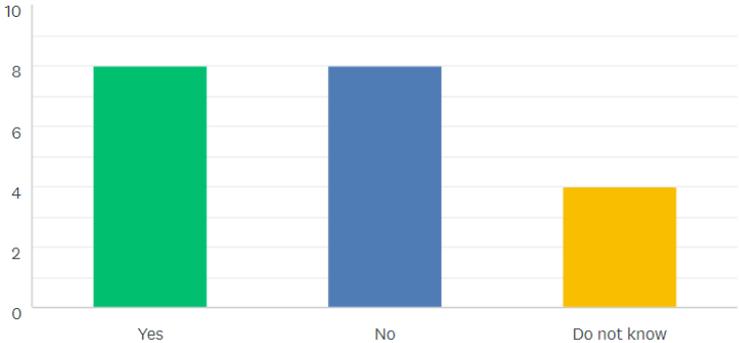


ANSWER CHOICES	RESPONSES
Yes	50.00% 10
No	30.00% 6
Do not know	20.00% 4
TOTAL	20

Only after the closing of the survey did partners notice the inadequacy of the question with the answered proposed, making it therefore difficult to interpret the results.

2.2.7 Is the digital apprenticeship management system widely (not limited to your institution/organisation only) used?

Answered: 20 Skipped: 12



ANSWER CHOICES	RESPONSES	
▼ Yes	40.00%	8
▼ No	40.00%	8
▼ Do not know	20.00%	4
TOTAL		20

Although no specific trend is highlighted in this question, a few participants complemented their answers with a comment:

A German student organization typed in: “No: fear of over-standardization not enabling adaptation”.

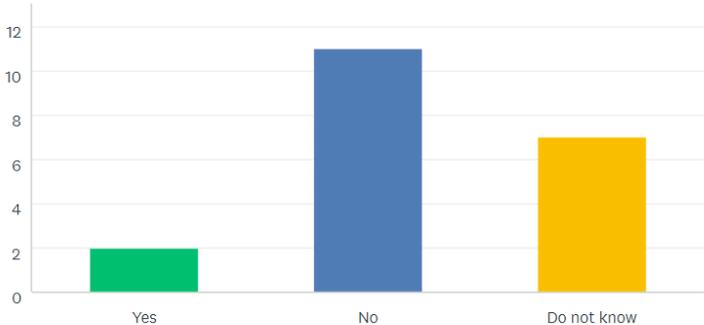
A French HEI replied: “No: A part of the management system is not limited to our institution, another one is specific”

Another French HEI commented: “No: Restricted to university staff and students”

The first comment could potentially explain the evenly distributed answers and why so many HEIs do not have such an apprenticeship management system. Indeed, such a broad tool could deepen the fear of not being able to personalize the case of each apprenticeship and therefore deteriorate the quality of the monitoring. Besides, none of the participants who answered “Yes” complemented their feedback with a comment, making it hard for partners to know what type these systems are exactly. However, such issues should be addressed in the third output on how to use the tool.

2.2.8 Is the digital apprenticeship management system's metadata standard publicly available?

Answered: 20 Skipped: 12



ANSWER CHOICES	RESPONSES	
Yes	10.00%	2
No	55.00%	11
Do not know	35.00%	7
TOTAL		20

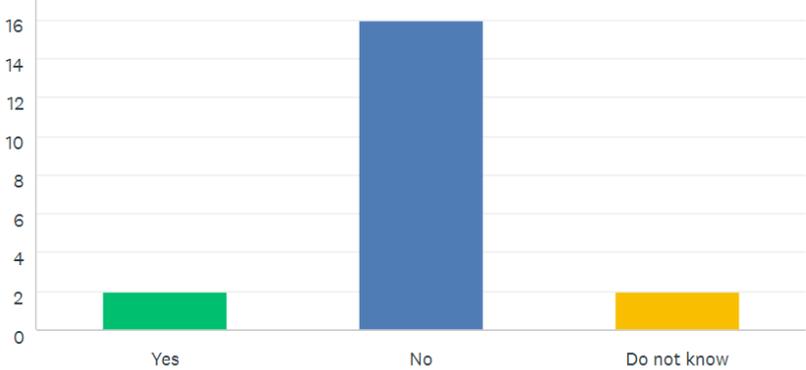
Comments (0)

Only a Lithuanian and a British (Scottish) HEI's systems are publicly available. We can also see that many representatives of their organisations (HEIs, the Skills Coach and the National Professional Body) do not know if the meta-data standards of their system is public; it is difficult to interpret what it is due to as it could simply be due to the fact that the respondents were not the responsible persons for their organisation's systems. However this could be interesting from a digital competences point of view, highlighting that users of such systems are not necessarily aware of their full functioning which could be something to stress out in the third output of ApprenticeTrack, the Course on Apprenticeship-Management.

Therefore if participants' apprenticeship management systems are widely used, it does not mean that their metadata standards are necessarily publicly available. And given the high amount of « No » and « Don't know » answers, it is difficult for partners to access examples of such meta-data standards. Yet it is an indicator for the consortium about the further step of upscaling the management system created and to decide whether it should be publicly accessible to stakeholders or not, as keeping it 'private' could also be a factor of trust for users.

2.2.9 Is the digital apprenticeship management system free and available to other users?

Answered: 20 Skipped: 12



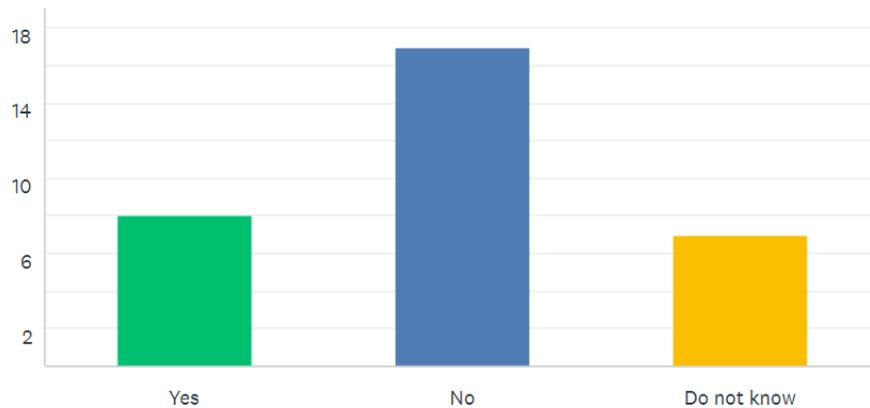
ANSWER CHOICES	RESPONSES
Yes	10.00% 2
No	80.00% 16
Do not know	10.00% 2
TOTAL	20

The only 2 participants that responded yes are 2 HEIs from The Netherlands and Switzerland which both give access to their system to employers, students and their own staff. However, it is odd that the 5 other participants who indicated to give access to all apprenticeships stakeholders did not reply yes to this question. This could be a misunderstanding of the definition of the term 'users': it may not have been comprehended as 'apprenticeships stakeholders' yet as 'external' users which could distort the overall results

Nevertheless, given the feedback from the previous questions, these replies come relatively as expected. Again, it could be interesting for partners to understand why so in the process of developing and/or upscaling the management system further after the EU project ends.

2.2.10 Are you aware of any other digital apprenticeship management system?

Answered: 32 Skipped: 0



ANSWER CHOICES	RESPONSES
Yes	25.00% 8
No	53.13% 17
Do not know	21.88% 7
TOTAL	32

Although most respondents were not aware of other management tools, a few provided examples:

- [JobReady](#), an Australian education and employer software provider. It is accessible to students and employers. It is accessible for students both for their studying curricula and apprenticeship/work placement
- [HOSCO](#), specializing in the international hospitality sector for employers and schools
- [Expertise Center for Technical Theatre](#): this centre has 3 different types of platforms dedicated to the recognition of prior learning ([TeBaVat](#)), the mapping of national qualifications and certificates ([TalQ](#)) and an evaluation tool ([Cue One Go](#)). The Expertise Center Technical Theatre is a research cell as part of the RITCS School of arts of the Erasmus University College Brussels.

Those are 3 different examples for the project partners as none include the same features. The platforms created by the Expertise Center for Technical Theatre is the only one which is fully dedicated to a certain HEI; JobReady and HOSCO are 'standardized' management software solutions for employers and/or students and/or HEIs, but it reflects the fear of one of the participants expressing his/her doubts regarding the standardization of such management systems to appropriately adapt to each HEI's needs.

3 Conclusion

All this feedback will be used to complete the setting of meta-data standards. Indeed, such a process needs to record all the information required to be held about apprenticeships. The information provided by the respondents will help the project partners to decide on the appropriate meta-data standards to add to the prototype in order to manage a large number of placement at the same time.

This survey was a mandatory step to the creation of the Technological Roadmap: although the project is not inventing such a tool, it is enhancing it for an easier and wider use in all European countries; it can therefore not start from scratch and needs to reflect the reality of the current uses of similar tools across Europe.

The feedbacks demonstrated that a large number of HEIs did not cover all quality criteria in the management of apprenticeships from their beginning to their end nor all stakeholders, as had defined the consortium and was confirmed by many experts in IO1. This shows that despite their use of a roadmap to manage apprenticeships, extra work is needed to convince them of the importance to include all quality criteria in order to best ease the collaboration between HEIs and employers, hence smoothing the transition to the world of work of the apprentice. Despite the very few respondents coming from employers organisations, the results showed that some were already familiar with such systems, making it easier to introduce the Technological Roadmap, its functioning and advantages, especially in IO3-Courses on Apprenticeship-Management.

A field approach being the best way to assess the needs of the target groups, the results will be used by the consortium not only to adapt its prototype tool through meta-data standards, but also to adapt the project's message to the target audiences (HEIs, employers and students) with supporting evidence that the collaboration between the world of education and the world of work needs to and can be improved.

Annex 1 – Survey



Identification of Technologies Used for Managing Apprenticeships

Introduction:

The aim of this short survey within the ApprenticeTrack (SAT) project is to map and research the existing digital systems for managing apprenticeships in order to assess the adequacy of current technological solutions for managing apprenticeships and identify any factors which are preventing them from being mainstreamed.

Question 1

Stakeholders identification.

Select one of the proposed answers.

- Higher Education Institution
- Employer (World of Work)
- Student
- National Authority
- European Commission
- HE Institutions' umbrella organization
- Employers' umbrella organization
- Students' umbrella organization
- Other (Please specify) _____

Question 2

Country (your answer is related to):

Question 3

Does your institution/organisation use any digital apprenticeship management system?

Select one of the proposed answers.

- Yes.
- No. (if not jump to question XY)
- Do not know.

Question 4

Which apprenticeship stakeholders have direct and active access to the digital apprenticeship management system?

Select all relevant answers.

- Higher Education Institution
- Employer (World of Work)
- Student

Question 5

Which apprenticeship management processes does the digital apprenticeship management system comprise?

Select all relevant answers.

- Setting the learning objectives of the overall programme
- Creating positions for apprentices
- Identifying and recruiting placements
- Negotiating the agreement
- Managing the apprenticeship
- Monitoring apprenticeships
- Assessment of apprenticeships
- Recognition of prior learning
- Other (Please specify) _____



Identification of Technologies Used for Managing Apprenticeships

Question 6

Is the digital apprenticeship management system an integrated part of a larger management system or is it an independent systemic solution?

Select one of the proposed answers.

- Yes.
- No.
- Do not know.

Question 7

Is the digital apprenticeship management system widely (not limited to only your institution/organisation) used?

Select one of the proposed answers.

- Yes.
- No. Why not? (Please specify) _____
- Do not know.

Question 8

Is the digital apprenticeship management system's metadata standard publicly available?

Select one of the proposed answers.

- Yes. Provide source. _____
- No.
- Do not know.

Question 9

Is the digital apprenticeship management system free and available to other users?

Select one of the proposed answers.

- Yes.
- No.
- Do not know.

Question 10

Are you aware of any other digital apprenticeship|management system?

Select one of the proposed answers.

- Yes. Provide source. _____
- No.
- Do not know.

Thank you for your contribution. For more information follow <https://apprenticetrack.eu/>.

About the Apprenticeship Track Project and this publication

Apprenticeships allow students to build up skills and knowledge, while providing companies with a reliable way to evaluate potential future hires and the benefit from fresh perspectives offered by academia. Despite their advantages, apprenticeships are challenging to manage, as the needs of students and of specific enterprises are difficult to match, particularly when organizations need to deal with massive amounts of students and, consequently, data. Structured communication channels between enterprises and students, robust management systems and clear evaluation protocols are necessary to manage such a complex system, are therefore needed to enable the launch of valuable, steady and sustainable Apprenticeship Programmes.

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Co-funded by the
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