EXTERNAL EVALUATION OF THE COMPLEAP PROJECT

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For factual check to CSC

CONFIDENTIAL

FINNISH EDUCATION EVALUATION CENTRE (FINEEC)

Sisällys

1. Introduction

1.1. Background of the external evaluation

Finnish Education Evaluation Centre (FINEEC) has proceed the external evaluation that covers the CompLeap project carried out in 2018—2019. FINEEC is an independent agency responsible for the evaluation of education. It operates as a separate unit within the Finnish National Agency for Education. FINEEC activities are described in more detail at https://karvi.fi/en/ This evaluation belongs to the paid fee services offered by FINEEC. All the paid fee services are tailored in close cooperation with the customer.

The key operating principles of FINEEC are the independence of evaluation and enhancement-led evaluation. Enhancement-led evaluation emphasises participation, as well as trust between the party implementing the evaluation and evaluation participant. These principles are applied to this evaluation.

The EU financed CompLeap project has been implemented by the Finnish-Dutch consortium led by CSC – IT center for Science in Finland. The language of the project has been English that was also applied to the external evaluation.

The consortium partners involved in the CompLeap project have been the following ones:

Project consortium partners:

- CSC – It Center for Science (a coordinating partner), Finland
- Finnish National Agency for Education (Edufi), Finland
- Jyväskylä Education Consortium Gradia (JEC), Finland
- Dienst Uitvoering Onderwijs (DUO), Netherlands
- University of Oulu, Finland

Associate partners involved in the piloting stage:

- Salpaus Further Education – Regional Consortium, Finland
- The Oulu Region Joint Authority for Education (OSAO), Finland
- Rovaniemi Municipal Federation for Education (Redu), Finland
- Die EU-Geschäftsstelle der Bezirksregierung Köln, Germany

More information on The CompLeap project can be found on their external web pages at https://www.compleap.eu/.

The consortium partners hold the following core tasks as well as expertise used in the CompLeap project:

CSC is a Finnish center of expertise in information technology owned by the Finnish state and higher education institutions. CSC has an important role as an instrument for steering and developing the Ministry of Education and Culture's education, science and cultural policy. CSC is owned by the Finnish state (70% shareholding) and higher education institutions (30% shareholding). CSC have been the coordinator of the CompLeap project consortium. CSC has been in charge of the management of the project

and ensured that the project plan is successfully implemented. This included the management of the Consortium, the financial and administrative management and the project management tasks of the project, too.

The Finnish National Agency for Education is the national development agency responsible for early childhood education and care, pre-primary, basic, general and vocational upper secondary education as well as for adult education and training. It is steered by the Ministry of Education and Culture. Agency maintains the Learners' Online Services portal. The Learner´s Online Services portal is to support studying and career planning via one online service that has been built between 2011 and 2015. Its services are intended for applicants, students, educational institutions and other education providers, companies and other business organizations as well as public administration and civic society.

Jyväskylä Educational Consortium Gradia (JEC) is a multi-cultural learning society owned by Central Finnish municipalities. It provides general and vocational upper secondary education and training for altogether 8 000 young and 13 000 adult students year. JEC has vast experience in offering integration training and later, training and education opportunities for immigrants for acquiring the skills required in the labour market including strong emphasis on guidance and other supporting actions, especially in transition periods.

Dienst Uitvoering Onderwijs (DUO) is an executive department for the Dutch Ministry of Education, Culture and Science in Netherlands. DUO implements complex legislation and regulations and has a lot of experience with large scale information systems. The sub-department DUO/International services is active in many national and international networks and projects. As a part of its activities, DUO runs the National Europass Centre.

The University of Oulu is a science university in Finland. There are 13 000 students as well as 2900 employees at the university. The university consists of eight faculties and many specialized research units. The content knowledge and experience of learning analytics of the key staff and the supporting multidisciplinary group are strong. The multidisciplinary AVAIN-research group is investigating register data and digital traces of learning processes to study e.g., learning environments, learning pathways, student selection, subject selection in secondary education its influences on student continuing educational paths, and learning analytics use for governance.

1.2. Organization of the external evaluation

CSC and FINEEC made a mutual contract on the external evaluation on 27th August 2019. In the contract the following issues were agreed on: schedule of the evaluation, evaluation materials, key work phases, key responsibilities of the parties involved, evaluation framework, evaluation areas as well as evaluation questions linked with the each of the areas defined.

CSC contact person for the evaluation was Project manager Antti Laitinen. FINEEC staff members involved in the implementation of the evaluation were Senior Advisor Kati Isoaho as a project manager and Project manager/digitalization of the FINEEC operations Heli Koskenniemi as a consulting expert. The assistant Anu Lehikko from FINEEC joined the evaluation in two of the workshops as well as during the report writing. The progress of the evaluation was followed jointly by CSC, other project consortium partners and FINEEC. In addition, FINEEC experts presented the current status of the evaluation for the CompLeap steering committee during the process (27th Sep 2019). In the end of the process, the Project Management Committee

and FINEEC carried out a workshop (28th Nov 2019) where the evaluation results were discussed and elaborated cooperatively.

The initial findings and conclusions were presented in the Final Seminar of the CompLeap project (14th Oct 2019) before the completion of the evaluation report. The initial findings and conclusions presented in the Final Seminar focused in the policy-driven aspects of the external evaluation (evaluation areas 3,4 and 5), considering the seminar audience that consisted mainly of the project stakeholders. The Steering Committee as well as Project Management Committee reflected shortly the initial findings and conclusions for the FINEEC evaluators after the seminar. As stated in the evaluation contract between CSC and FINEEC, FINEEC provided a comprehensive set of mid-results (31 findings) as a slide set for CSC by 31st October 2019. This package covered all the five evaluation areas agreed on. They were used as a basis for this report.

CSC and FINEEC created together a reflection panel for the evaluation. The panel consisted of key stakeholder representatives of the CompLeap that attended the Final Seminar of the project on 14th October 2019. The panel joined the evaluation process by reflecting and testing the initial findings and conclusions elaborated by FINEEC experts. The reflection took place as an electronic Webropol survey. Due to the short timeslot reserved for the panel work, the questionnaire was very concise. The answers submitted by the date were seven altogether. FINEEC exploited the notions and findings made by the panel in reporting. The panel did not take a part in the elaboration of the final conclusions or recommendations included in the evaluation report.

The CSC along with the other consortium partners had a possibility to proceed a factual check on the report draft before it´s completion by FINEEC.

1.3. Aims, organization and management of the CompLeap project

The establishment of the CompLeap project is a part of the government level continuous learning policies in Finland. The continuous learning has been widely discussed both in Finland, Netherlands as well as in the EU area in the course of the past decade.

In the implementing countries of the CompLeap project there are currently going on the following reforms on continuous learning, presented in the picture 1 below:

Finland	**Parliamentary reform on continuous learning (21.8.2019-31.12.2020)**
	https://minedu.fi/jatkuva-oppiminen-hanketiedot-ja-asiakirjat (in Finnish and English)
	The parliamentary reform of continuous learning will respond to people's lifelong need for upskilling and reskilling. The project will prepare a proposal for a reform of continuous learning. This comprehensive reform will apply to each point of the educational pathway at which the educational system interfaces with the provision and funding of education, social security, relocation

	security, unemployment security, independent and labour market training, and recognition of prior learning. One of the specific reform aims is to create a coherent system for the continuous counselling and guidance services.
Netherlands	**SURF (Association of Dutch educational and research organisations) programme to support flexibility in higher education** https://www.surf.nl/files/2019-04/Flyer%20versnellingsplan%20-%20zone%20Flexibilisering.pdf (in Dutch) The programme is based on the idea that lifelong development becomes the new normal and higher education institutions must be generous to this question. The programme will respond to the need for the more flexible learning routes, also between the initial and post-initial education. In addition, the programme supports the learning routes where students can get control over their own learning. Furthermore, the programme aims to strengthen the student-centered approach, where students ´needs determine the way to a diploma or a certificate.

Picture 1: Current reforms on continuous learning in the countries that conducted the CompLeap project.

The entire EU-funding allocated to the CompLeap project was appr. 1,3 million euros. The reimbursement rate of the costs was 70%. The total number of eligible costs was appr. 1,8 million euros.

The CompLeap has been aiming to build a learner-centred ecosystem of digital services and products around skills and competences to better match competence supply and labour market needs, serving individual citizens, employers, decision-makers and, ultimately, the society at large. More specifically, the project has been aiming to empower the citizen to take ownership of their competence development by offering them an opportunity to plan their own learner pathway based on enhanced self-awareness, improved recognition practices and responsive education offer. Furthermore, the competence formation has been based on national competence requirements reflecting the needs of the labor market. The key target groups of the CompLeap project – as described in the evaluation contract between CSC and FINEEC – have been the immigrants as well as the youth not in education, employment or training (NEET). The aimed ecosystem is described in the picture 2.
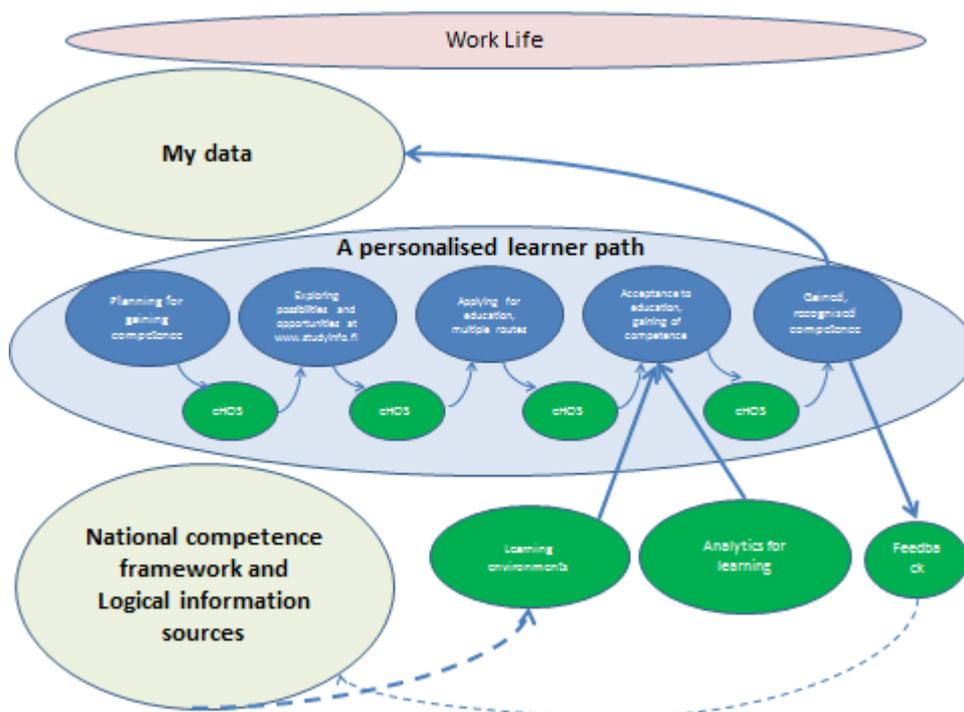
Picture 2: The description of the aimed ecosystem (source: Description of the Action, updated version 23.4.2019)

The project objectives have been as follows:

1. To study and develop an integrated and holistic learner-centred digitalised ecosystem framework that will look beyond existing, often siloed, structures

2. To tailor the functionality of this framework so that it is suitable across Europe

3. To technologically build prototypes of this ecosystem

4. To deploy the developed ecosystem through networks

The goals set for the project have served as a basis for the external evaluation carried out by FINEEC, too.

The more specific description of the project presents these four objectives as follows [1]:

Under **the first** objective, the project will develop the conceptual framework to support the creation, evolution and implementation of a so called structured, digitalised learner pathway integrating personal competence development plan, education offer, labor market needs and competence intelligence together. The digital learner pathway aims to provide comprehensive yet tailored support to all learners while particularly addressing the needs of citizens at risk of exclusion. To support **the second** objective, the system will be developed in cooperation with international partners / networks. The technological solution will be

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[1] Grant Application ECOKT2016, Annex 1 (updated version 23.4.2019) Description of the Action.

open source, modular and easily adaptable to different geographic locations and circumstances. The interested parties may choose to implement the ecosystem as a whole or only parts of it depending on their needs and already existing infrastructure. **The third** objective aims to build prototypes of the modules of the ecosystem to test the technical feasibility and architectural principles. The **fourth objective** will aim to support the deployment of the ecosystem through various professional networks and impact evaluation study.

The project management and results have been documented on the public the wiki pages at https://wiki.eduuni.fi/display/csccompleap/CompLeap+Home

The consortium partners had agreed on the division of the responsibilities, based on the work packages (WP) defined for the project.

The work packages along with the resources defined by person months have been the following ones, as presented in the picture 3:

| No.(i) | Work Package | Lead | | Lead Participant | Total person months | Start | End |
	Title	Participant No. (ii)		Short name	per WP (iii)	Month (iv)	Month (v)
1	Project management	CSC – It Center for Science (No. 1)		CSC	23,5	M1	M24
2	Requirements and architecture design	Finnish National Agency for Education (No. 2)		EDUFI	44	M2	M22
3	Prototype development	Finnish National Agency for Education (No. 2)		EDUFI	37,75	M6	M21
4	Deployment and evaluation	Jyväskylä Educational Consortium (No. 4)		JEC	27,75	M17	M22
5	Dissemination, communication and exploitation	DUO (No. 5)		DUO	23,5	M1	M24

Picture 3: CompLeap project work packages (source: Description of the Action, updated version 23.4.2019)

1.4. Goals of the external evaluation

In the project plan it is stated that the results of the evaluation should draw lessons that will inform the key stakeholders of this evaluation and may draw future recommendations for policy-makers. Furthermore, the project plan also states that the evaluation should assess the preliminary indications of potential impact and sustainability of results including the contribution to the development and formation of competences.

The CompLeap project plan includes an impact evaluation study to be submitted for the European Commission. The aim of the evaluation carried out by FINEEC is to produce information that supports CSC project reporting for the financing party as well as the further development of the CompLeap activities. In addition, the external evaluation carried out by FINEEC produces information on the CompLeap´s capacity to be integrated to the digital learning services nationally and internationally.

The external evaluation is a part of the larger entity that CSC along with the project consortium partners provides for the European Commission as an impact evaluation study covering all the CompLeap activities. The focus, evaluation areas and evaluation questions of the FINEEC´s part are described in detail later in this implementation plan.

1.5. Evaluation framework

A division into a) investments, b) outcomes, c) impacts and d) effects created a general framework for the external evaluation carried out by FINEEC. the concepts of short-term/long-term impacts as well as intended/unintended impacts were also applied when they were found relevant. The framework is described in picture 5 below.

FINEEC INSERTS HERE A PICTURE ILLUSTRATING THE DIFFERENCE BETWEEN OUTCOMES, IMPACTS AND EFFECTS TO THE FINAL VERSION OF THE REPORT.

Inclusion of the consortium partners and stakeholders, implementation of the learner-centered approach and search for the good practices were applied to the evaluation as matrix topics.

In the original plan the learner-centeredness as a topic was included to the several evaluation areas. However, in order to keep the message clear for the report readers, in this report the all the findings related to the learner-centered approach are presented in chapter 3.1.

The evaluation areas as well as evaluation questions are described in the picture 6 below.[2]

evaluation area	evaluation questions
1. *Organization and management of the CompLeap project*	How and to what extent the CompLeap project organization has supported the achievement of the objectives set for the project?
	How and to what extent the CompLeap project management has supported the achievement of the objectives set for the project?

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[2] The questions listed in the table 3 follow mainly the structure presented in the Implementation plan for the evaluation of the CompLeap project, annex 1 to the Evaluation contract between CSC and FINEEC. However, couple of adjustment have been adapted to this, due to the evaluators´ upgraded understanding of the projects key activities.

		What kind good of practices are possible to identify within the project organization and management?
2.	*Monitoring and evaluation of the CompLeap project*	How and to what extent the chosen monitoring practices have supported the achievement of the objectives set for the project? How and to what extent the chosen evaluation practices have supported the achievement of the objectives set for the project? What kind of good practices are possible to identify within the project monitoring and evaluation?
3.	*CompLeap framework architecture and services development*	What has been the CompLeap´s capacity to achieve the objectives set for the framework architecture and services development, assessed against the planned resources (financial, policy, etc.)? What kind of outcomes CompLeap frameworks architecture and services development has produced? What kind of impacts CompLeap frameworks architecture and services development has produced? What kind of effects CompLeap framework architecture and services development has produced? How the learner-centered approach is implemented in the Compleap project? What is the potential impact and sustainability of the CompLeap project as a whole?
4.	*CompLeap prototype services capacity to be integrated to the digital learner services (nationally and internationally, incl. Europass).*	How and to what extent the CompLeap services could be integrated to the digital learner services nationally and internationally, reflected against the goals set for the project? What is the potential impact and sustainability of the CompLeap project as a whole?
5.	*Communication and stakeholder relations*	How and to what extent the chosen communication practices have supported the achievement of the objectives set for the project? How and to what extent the chosen stakeholder practices have supported the achievement of the objectives set for the project? What kind of outcomes CompLeap communication and stakeholder relations have produced?

	What kind of impacts CompLeap communication and stakeholder relations have produced?
	What kind of effects CompLeap communication and stakeholder relations have produced?
	What kind of good practices are possible to identify within the communication of the CompLeap project?
	What kind of good practices are possible to identify within the stakeholder relations of the CompLeap project?

Picture 6: The evaluation areas and evaluation questions used in the external evaluation of the CompLeap project.

1.6. Materials used in the external evaluation

The external evaluation was partially based on the materials produced by the CompLeap consortium partners.

The project materials are documented on the public wiki pages at
https://wiki.eduuni.fi/display/csccompleap/Key+documents

Due to the relatively short implementation time of the external evaluation (three months in practice), the use of the materials submitted to the wiki pages has been selective and focused to the set of the key documents and descriptions as follows:

- Description of the Action (updated version 23.4.2019)
- Original project budget and its updated version in 2019
- Modified Project Plan 2019
- Mid-term review conducted by the European Commission in 2018
- Project Road map
- Desk research and its updated version (Deliverable 15)
- Basic information on the Steering Committee meetings
- Documentation on the stakeholder workshops held outside of Finland with the international partners
- Sustainability Plan of the project submitted for European Commission (Deliverable 23).
- Europass Case Study

In addition, the FINEEC was provided the analyzed results of the user survey conducted by the Finnish National Agency for the Education among the pilot users of the CompLeap prototype (September 2019, 32 answers altogether).

The Sustainability Plan prepared for the project (Deliverable 23) was presented to the FINEEC evaluators after its completion by 30th October 2019. It has also served as an evaluation material at the late stage of the external evaluation.

In addition, the FINEEC collected evaluation material followingly:

- Self-evaluation reports completed by each of the CompLeap consortium partners. FINEEC designed the evaluation concept and collected the electronic reports via Webropol online survey tool. All the partners submitted the report (five altogether). The self-evaluation questionnaire, see appendix 1.

- Focus group interviews of the key actors: representatives of the Finnish Ministry of Education and Culture, Project Management Committee, Finnish National Agency for Education staff involved in the prototype development and project management, a selection of the Finnish stakeholders available. The stakeholder interviewees belonged to the following organizations: The partners and associate partners involved in the piloting in Finland and Germany, Rectors` Conference of Finnish Universities of Applied Sciences Arene, Akava - Confederation of Unions of Professional and Managerial Staff in Finland, Service Sectors Employers Palta, Finnish Scouts, Finnish Guidance Counsellors- SOPO, The Association of Finnish eLearning Centre.

- Workshops with the Steering Committee (27.9.2019) and with the partners and associate partners involved in piloting (15.10.2019), altogether 10 representatives from the following Finnish VET providers: Jyväskylä Education Consortium Gradia (JEC), The Oulu Region Joint Authority for Education (OSAO) and Rovaniemi Municipal Federation for Education (Redu).

- FINEEC evaluators Kati Isoaho and Heli Koskenniemi attended to the Final Seminar of the CompLeap project on 14th October 2019 in Helsinki. The seminar presentations as well as discussions have also informed the findings, conclusions and recommendations presented in this report.

- The electronic reflection round among the key stakeholders on the initial findings and conclusions carried out by FINEEC. The initial findings and conclusions were presented in the Final Seminar of the project in 14th October 2019 in Helsinki. Altogether seven answers were submitted by 21st October 2019. The electronic Webropol questionnaire, see appendix 2.

Due to the large number of stakeholders involved in the project network, the choice of the interviewees was based on the following principles:

- Key project actors (Steering Committee, Project Management Committee, staff members involved in the prototype development at Finnish National Agency for Education) were easily available and their interviews were essential when considering the goals set for the external evaluation.
- Representatives of Finnish Ministry of Education and Culture were interviewed as the original initiative for the CompLeap Grant Application was made by the ministry.
- The workshop with the project actors involved in the piloting stage was based on the initiative made by JEC – one of the consortium partners – who was eager to provide the Finnish associate partners a possibility to reflect the project experiences.
- Other stakeholders were interviewed based on their availability and willingness to contribute to the evaluation. In addition, the time left for the external evaluation also brought some limitations to the number of interviews carried out.

- Finally, as the external stakeholder interviews provided in many cases rather similar views to the project, its key outcomes and a future potential, it was not seen relevant to reach all the possible parties listed as project stakeholders.

1.7. The report contents

As agreed with CSC, the evaluation results are presented in two parts in this report. The first part covers the topics aimed for the future development of the similar EU financed projects in the field of education, continuous learning and digital learner services. Furthermore, the second part covers the policy-related topics, aimed for the wider audience such as policy-makers, state authorities and various stakeholders. The conclusions, good practices and recommendation covering the entire external evaluation are presented in chapter 4.

IT IS POSSIBLE TO DIVIDE THE CONTENTS OF THE CHAPTER 4 INTO TWO PARTS TOO, IF WISHED BY THE CSC. HOWEVER, FOR THE INTENDED READER THE ONE SUMMARIZING CHAPTER MIGHT BE EASIER?

2. Evaluation results: evaluation areas 1 and 2

Evaluation areas 1 and 2 cover the topics related to the project´s internal issues. This part of the report aims to inform the key project actors, state authorities as well as funding party on the lessons learned in the course of the project. Furthermore, it provides a set of recommendations for the similar future projects in Finland, Netherlands and the rest of EU.

2.1. Organisation and Management of the CompLeap project

This chapter illustrates the strengths and weaknesses of the CompLeap project´s organization and management starting from the grant application stage. In addition, it presents good practices identified from the evaluation material.

The evaluation questions guiding this chapter have been the following ones:

- How and to what extent the CompLeap project organization has supported the achievement of the objectives set for the project?
- How and to what extent the CompLeap project management has supported the achievement of the objectives set for the project?
- What kind good of practices are possible to identify within the project organization and management?

Key Findings

- **Application stage of the project funding was challenging for the key actors in charge of preparing the Grant Application for the European Commission.** The actual time left for the preparation was relatively short. In addition, the funding decision was delayed which lead to challenges in the beginning of the project. These two factors have had an impact on the project actors' de facto possibilities to implement the project goals in an effective manner.

- **The composition of the project partners is multifaceted expertise which have supported the achievement of the project goals.**

- **Due to the several reasons, the project organization is partially perceived as a complex one by some project actors. In addition, the actual ownership of the project has remained unclear in some cases.**

- **The changes in the project key staff had challenged the daily management and effective implementation of the project in the starting phase. However, the situation has improved in the course of the project and the Project Management Committee has demonstrated their good ability to work together.**

- **Good practices**
1.) Weekly meetings as a part of the project management.
2.) Webinars for the project key actors: such as ones arranged for the users of the prototype within the project.
3.) Majority of the project documentation as public wiki pages.

2.1.1. Application stage of the CompLeap project

Interviews show that the application stage of the project funding has been challenging for the key actors in operative charge of the application. The original initiative for building such a project was made by the Finnish Ministry of Education and Culture. Furthermore, CSC along with the Finnish Agency for Education was in charge to prepare the grant application. Finnish National Agency for Education was in charge to look for the VET education providers to pilot the service prototypes. In addition, as the final decision on the funding by European Commission was submitted later than supposed, some of the partners were not fully prepared to start the project at the given stage of the work year.

These two factors have had an impact on the project actors' de facto possibilities to implement the project goals in an effective manner in the beginning of the project. In future, the policy-level actors such as ministries should pay extra attention to the timing of similar initiatives and avoid setting overly tight schedules for the policy-implementing operative partners whenever possible.

2.1.2. The composition of the project partners

Based on the evaluation material as whole it is clear that the choice of the project consortium partners has been conducted using two principles. First, the aim has been to find the partners that complement each other substantially in a productive manner. Second, due to the limited time window in the grant application phase, former project partnerships have played an important role. Both choices seem relevant for the FINEEC evaluators, considering the conditions described above.

Self-evaluation reports along with the project documentation show that the chosen project partners have complemented each other in a good manner (different specialization areas and tasks). This is visible e.g. in the work packages and division of responsibilities within the project. Each of the partners have had a responsible project manager/coordinator in charge of the certain work packages defined in the project documentation.

Self-evaluation reports as well as some of the interviews show that the project organization is partially seen as a complex one. In addition, the actual ownership of the project is in some cases seen unclear.

As analyzed in detail, these findings relate to the following features:

- Number of actors involved is relatively high.
- The different sizes, profiles as well as responsibilities of the project consortium partners: CSC have led the project in general (WP 1), but Finnish Agency for Education has had the biggest actual workload along with the equal resources. In addition, Finnish National Agency for Education has been in charge of the work packages 2 and 3 that cover the actual framework architecture and a prototype development (key outcomes of the project). Furthermore, the JEC has been in charge of piloting and deployment of the prototypes in the field of VET in Finland.
- Several levels of operations (state authorities and equal actors, local VET providers in Finland, international networks in Netherlands, Germany and Estonia, various stakeholder meetings and networks in Finland).
- To some extent complex communication chains and responsibilities: CSC along with Finnish National Agency for Education has been in charge of national as well as international stakeholder relations, DUO as an only partner outside of Finland has taken actions on the project communication and dissemination (WP 5) such as web pages and marketing material, JEC has kept contacts with the piloting partners in the field (WP 4), University of Oulu has maintained the research staff pool for the research and learning analytics purposes.

The high numbers of actors (both organizations as well as individual actors) derives partially from the original choice of the project consortium partners. The associate partners involved in the pilot stage of the project have increased the number of the actors involved. Furthermore, the chosen strategy in the stakeholder management has been to include as many stakeholders as possible to join and follow the project within a low threshold. Considering the goals set for the project, these have been relevant choices, although it has also led to some unintended results, such as to some extent unrealistic expectations among some project actors and stakeholders (see also chapter 3.3 on communication and stakeholder relations).

In the light of the interviews the project organization has been most challenging for the field actors involved in the pilot stage. As pilot stage actors have joined project in a concrete manner during the second year of its implementation, more emphasis on their introduction to the project in general might have been beneficial. For example, they would have benefitted of more concise communication about the original project goals and current state of the project at the time of joining. As the number of individual actors have gradually increased, it has led to some extent sporadic communication practices, e.g. not all of the actors the joined the project late have received all the relevant invitations directly from the project key actors. However, this is also natural, as none of the extensive projects cannot reach all its actors in a perfect manner. In future projects it would be recommendable to define clearly, who is in charge of keeping record of all the key actors and communicating then during the project.

The key actors in charge of the operative implementation of the project have changed to some extent in the course of the project. In addition, majority of the staff have worked with percentage workload for the project. The consortium partners having a biggest workload along with equal resources have had a full-time project managers, that has been beneficial for the achievement of the project goals. The picture 7 presents the state of the staff by the consortium partners during the project implementation. The table shows that the total number of staff members involved in the project implementation has been relatively high. In addition, based on the information provided by the project consortium members, X (Gradia, DUO) of the local project managers/work package leaders changed in the course of the project.

FINEEC SHALL COMPLEMENT THE TABLE BEFORE FINAL SUBMISSION OF THE REPORT.

CONSORTIUM PARTNER	NUMBER OF STAFF MEMBERS THAT WORKED IN THE PROJECT	NUMBER OF PERMANENT STAFF MEMBERS	NUMBER OF NON-PERMANENT STAFF MEMBERS	NUMBER OF FULL-TIME STAFF MEMBERS	NUMBER OF STAFF MEMBERS WORKING % WORKLOAD FOR THE PROJECT
CSC	6	5	1	1	5
Finnish National Agency for Education					
Jyväskylä Joint Authority for Education Gradia	10	2	8	1	9
DUO	5	3	2	0	5
University of Oulu					
TOTAL					

Picture 7: Staff involved in the CompLeap project by the consortium partners. The numbers presented in the table include all the staff members in the course of the project, also the ones who did not work in the project anymore during the external evaluation.

Based on the evaluation material, these features have sometimes created a challenge for the effective implementation of the project activities. From the project coordination point of view the changing project managers among the partners have been a challenge for the daily implementation of the project in the

beginning of it. However, the FINEEC evaluators understand that this is something that the current actors of the project did not have influence on. The interview with the Project Management Committee indicates that situation enhanced in the course of the project The Sustainability Plan (Deliverable 23) states that changes in the project staff has also benefitted the project, as there have been a wide range of expertise available for the project purposes. FINEEC evaluators agree on this.

The interviews show that the people in charge of the original Grant Application have mainly not been involved in the actual project implementation. It is possible, that this has partially led to the slow start of the project as well as relatively slow start of the prototype development. In future, it would be recommendable to consider, how the link between the planning phase and implementation phase is ensured, also in the terms of staffing the projects.

These features were a challenge for the effective implementation of the project. However, at least partially the reason behind is the general way to build and implement the EU financed projects. In addition, the evaluation material shows that the staff members in charge of coordination have been capable to manage the project even in the changing conditions. The challenges in the beginning of the project were identified in the Mid-term review by European Commission, too.

2.1.3 The allocation of the funds within the CompLeap project

As stated in chapter 1, the entire EU-funding allocated to the CompLeap project was appr. 1,3 million euros. The reimbursement rate of the costs was 70%. The total number of eligible costs was appr. 1,8 million euros. The picture 8 presents the original budget allocation of the project at the starting phase in 2018. A great deal of funds and workload (app. 42%) was originally allocated to Finnish National Agency for Education for the design and development of the framework architecture and prototypes. Some reallocations were adapted based on the recommendations made in the Mid-term review by European Commission. The need for the reallocation was mainly due to the underuse of the staff resources during the first year of the project, as well as identified needs to invest more on the learning analytics work as a part of the project in the University of Oulu. The picture 9 presents the amended budget in 2019. Furthermore, the picture 10 shows the allocation of the person months by work packages and between the project consortium partners after the reallocation (as of 23th April 2019).

Appplicant	Applicant Short name	Personnel	Subcontracting	Travel & Subsistence	Other costs	Indirect costs	Total eligible costs	Reimbursement rate	Requested EU Funding
1	CSC	214 200	7 000	50 000	25 000	20 734	316 934	70 %	221 854
2	EDUFI	457 483	381 255	43 000	30 000	63 821	975 559	70 %	682 891
3	UOulu	117 750	0	13 000	10 000	9 852	150 602	70 %	105 421
4	JEC	106 500	0	45 000	100 000	17 605	269 105	70 %	188 374
5	DUO	70 000	10 000	15 000	10 000	7 350	112 350	70 %	78 645
Totals		965 933	398 255	166 000	175 000	119 362	1 824 550		1 277 185

Picture 8: the original budget of the CompLeap project.

Appplicant	Applicant Short name	Personnel	Subcontracting	Travel & Subsistence	Other costs	Indirect costs	Total eligible costs	Reimbursement rate	Requested EU Funding
1	CSC	214 200	7 000	50 000	25 000	20 734	316 934	70 %	221 854
2	EDUFI	518 737	350 000	45 000	30 000	66 062	1 009 799	70 %	706 859
3	UOulu	87 750	0	11 000	10 000	7 613	116 363	70 %	81 454
4	JEC	106 500	0	45 000	100 000	17 605	269 105	70 %	188 374
5	DUO	70 000	10 000	15 000	10 000	7 350	112 350	70 %	78 645
Totals		997 187	367 000	166 000	175 000	119 363	1 824 550		1 277 185

Picture 9: the amended budget of the CompLeap project in 2019.

	WP 1	WP 2	WP 3	WP 4	WP 5	Total person months per participant
CSC	14	9	3	3	7	36
EDUFI	5,5	16	26,5	12	7	67
UOulu	2	14	6	5	1,5	28,5
JEC	1	3	2	6	3	15
DUO	1	2	0,25	1,75	5	10
Total person/months	23,5	44	37,75	27,75	23,5	156,5

Picture 10: Allocation of the person months in the CompLeap project (source: Description of the Action, updated version of 23th April 2019).

The FINEEC evaluators see that the proceeded reallocations show a good ability adjust the project during its implementation. The CompLeap case makes visible a couple of features regarding the EU funded projects in general. First, the original design of the project budget really matters and has a remarkable impact on the achievement of the project goals. As noted in chapter x in this report, the allocation of the funds has not fully supported the project actors´ inclusive participation the to design and development of the key outcomes, the framework design and development of the prototypes. Second, as the adjustment to the budget were proceeded after the Mid-term review by the European Commission, the importance of the review for the project has been notable. The evident Mid-term review impact indicates the effective work of the European Commission on this case, that has been an asset for the project.

2.1.4. Documentation of the CompLeap project

As noted earlier in this report, the project has been documented on the public wiki pages. The high publicity of the pages is a clear strength of the project. Furthermore, the amount of material submitted for the pages is remarkable, that indicates the careful and detailed documentation of the project. As a principle the general openness in publicly funded project activities is an asset, that can have potential positive impacts on the project outcomes´ sustainability and future use. The CompLeap has implemented openness in a wider sense than just in terms of public documentation, e.g. as an inclusive way of working with the stakeholders (extensive networks, webinars and demo sessions with the stakeholders and project actors etc.).

However, the large amount of the documentation submitted to the wiki pages is also a challenge. The usability and accessibility of the web-based information sources is currently much highlighted. Although the external web pages provide information on the project activities and results in a concise form, the accessibility of the public wiki pages should also be approached in future projects. LISÄÄ LINKKI KOODISTOON

2.1.5. *Day-to-day management of the CompLeap project*

The work of the Project Management Committee (PMC) seems essential for the implementation of the project. The Mid-term review submitted by the European Commission in 02/2019 indicates that the start of the project has not been easy for the operational actors and there has been a lot of efforts to do during the second year of the project to keep it on the track. In the interview of the PMC it was evident that they have been able to discuss also the challenging topics and maintain the project together, even in the changing conditions.

All the consortium partners were able to name strengths in the project management. For example, the following features were pointed out in the self-evaluation reports: responsible and agile project management by CSC, CSCs previous experience on the EU financed projects, use of the electronic tools (such as Zoom work and meeting space) in the day-to-day management, CSC`s services in the financial matters of the project.

The self-evaluation reports also show, that there are some issues where the project consortium partners do not fully agree. The following issues were identified by from the self-evaluation reports and interviews. First, the agility has been one of the targets set for the project implementation. Some of the partners see, that the project management has not fully followed agile way of working and there have been needs for the more flexible and quicker decision-making, that would have advanced the achievement of the project goals. On the other hand, some of the partners see, that they have not been always listened to enough, and in some cases, even been micromanaged. Second, some of the partners would have liked to have more internal communication about the choices made in the course of the prototype development. It is important to note, that a mutual trust and respect always play a role in the projects such as CompLeap, aside of the structural choices and official management practices.

2.2. Monitoring and Evaluation of the CompLeap project

This chapter illustrates the strengths and weaknesses of the CompLeap project´s monitoring and evaluation, starting from the beginning of the implementation period. In addition, it presents a couple of good practices identified from the evaluation material.

The evaluation questions guiding this chapter have been the following ones:

- How and to what extent the chosen monitoring practices have supported the achievement of the objectives set for the project?
- How and to what extent the chosen evaluation practices have supported the achievement of the objectives set for the project?
- What kind of good practices are possible to identify within the project monitoring and evaluation?

Key findings

- **The project actors (Project Management committee and Steering Committee) recognize the key practices of the monitoring and evaluation in a similar way. This is an asset, that has advanced the achievement of the goals set for the project.**

- **Mid-term review by European Commission is seen beneficial among the key project staff and Steering Committee members. Its recommendations have been seriously considered as well as implemented in the project management and other work package operations.**

- **Mid-term review along with the implemented requests has evidently supported the achievement of the goals set for the project.**

- **The project partners´ opinions on the sufficiency and regularity of the monitoring of the project vary to some extent. However, the project actors have been capable to enhance the monitoring practices in the course of the project.**

- **Good practices:**
1) Mid-term review as a European Commission practice has visibly been beneficial to the CompLeap project. It has helped to enhance the various management practices as well as brought some new elements to the actual project implementation.
2) Work package specific local evaluation meetings at Finnish National Agency for Educations have served the effective implementation of the project.
3) Systematic feedback collection from the webinar participants.

2.2.1. Key practices of the monitoring and evaluation

The self-evaluation reports show that the project consortium partners recognize the key practices of the monitoring and evaluation mainly in a similar way. The following practices were identified from the self-evaluation reports:

- Project management committee (PMC) meetings
- Steering committee (SC) meetings
- Weekly meetings of the work package (WP) leaders
- Financial monitoring with the assistance of CSC as a leading organization
- Mid-term review by European Commission (EC)
- Documentation of the wiki pages such as Deliverables and a Road map
- Systematic way to collect feedback from the webinar participants

Based on the self-evaluation reports, the project partners opinions on the sufficiency and regularity of the monitoring of the project vary to some extent. Some of the partners are rather satisfied with it while some others see in a more critical light. One of the critical views pointed out in the self-evaluation reports relate to the number of monitoring and evaluation practices. It is possible, that there have been even too many ways to monitor the project, considering the duration of the project.

However, the self-evaluation reports also show that the project actors have been capable to enhance the monitoring practices in the course of the project. For example, it was noted that the financial monitoring of the project enhanced remarkably during the implementation period. In addition, an introduction of the project Road map has helped to focus the project and keep its main actors better aware of the state of the project.

2.2.2. Mid-term review by the European Commission

The European Commission carried out a Mid-term review on the CompLeap project. The review report was used as an evaluation material by the FINEEC evaluators. Interviews as well as self-evaluation reports show that it is seen as beneficial among the key project staff and Steering Committee members. Its recommendations have been seriously considered as well as implemented in the project management and other work package operations. The Modified Project Plan (July 2019) presents the state of the project as well as the actions taken based on the Mid-tern review recommendations.

The following actions were taken based on the recommendations of the Mid-term review:

- Reallocation of the funds between the work packages
- Europass case study
- Update of the desk research
- Recreation of the project road map (Deliverable

3.   Results: Evaluation areas 3, 4 and 5

Evaluation areas 3, 4 and 5 cover the policy-related topics of the evaluation. The content of this part of the report aims to inform the key stakeholders as well as policy makers on the lessons learned in the course of the project. Furthermore, it provides a set of views on the future potential of the CompLeap key outcomes presented by the various actors in the evaluation interviews, self-evaluation reports as well as in project´s own documentation (such as the Sustainability Plan, Deliverable 23).

3.1. CompLeap framework architecture and services development

This chapter presents the key outcomes as well as potential future impacts and effects of the CompLeap framework architecture and prototype development. Furthermore, it illustrates the strengths and

weaknesses of the development operations and process. In addition, it presents a couple of good practices identified from the evaluation material.

The evaluation questions guiding this chapter have been the following ones:

- What has been the CompLeap´s capacity to achieve the objectives set for the services development, assessed against the planned resources (financial, policy, etc.)?
- What kind of outcomes CompLeap services development has produced?
- What kind of impacts CompLeap services development has produced?
- What kind of effects CompLeap services development has produced?
- What is the potential impact and sustainability of the CompLeap project as a whole?

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Key findings

- **The representatives of the project consortium partners share the understanding of the key goals set for project. This is an asset, that has supported the achievement of the project outcomes.**

- **The key goals of the project - the design of the framework architecture and the development of the service prototypes – were both completed in the course of the project. In terms of the maturity the framework architecture can be seen as a mature outcome and the prototypes as a raw outcome.**

- **The actual impact of the CompLeap project outcomes among the original target groups, immigrants and NEETs, is still low. the original goal setting – to develop digital learner services prototypes – does not fully comply with needs of the specified target groups, whose ability to use digital services independently is often limited, along with the limited language skills. However, there is evident potential regarding the needs of these customer groups too, if the project key outcomes are more clearly linked with the professional counselling and guidance expertise in Finland, Netherlands and across the EU countries.**

- **The project implementation implies a successful adaptation of the learner-centeredness.**

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3.1.1. Understanding of the project goals among the various actors

Self-evaluation reports show that the project consortium partner representatives share the understanding of the key targets of the project implementation. This is an asset, that has advanced the achievement of the project goals in the changing conditions. The weaknessess pointed out in the interviews relate to the very general target setting of the original Grant Application. This lead to the situation were the project consortium partners had to refocus the project in the beginning of the implementation period.

As explained in the chapter 2.1, the large amount of project actors has partially lead to the sporadic understanding of the project goals at the pilot stage of the project (see also ==chapter x== on the pilot stage of the project). In the self-evaluation reports managing the expectations is seen as one of the project challenges. Based on the evaluation material this covers both part of the project actors as well as some of the stakeholders. The bigger the number of the actors becomes, the more challenging it is to communicate in a equal and substantially coherent manner on the project goals.

3.1.2. The key outcomes of the CompLeap project

As stated in the chapter 1, three first goals set for the entire project were the following ones:

1. To study and develop an integrated and holistic learner-centered digitalized ecosystem framework that will look beyond existing, often siloed, structures

2. To tailor the functionality of this framework so that it is suitable across Europe

3. To technologically build prototypes[3] of this ecosystem

A concrete investment to the work packages 2 and 3 led by Finnish National Agency for Education has been remarkable. As shown in the chapter 2.1, a great deal of the project workload (appr. 42 % of the person months) along with the equal funds have been allocated to the work packages 2 and 3. They dealt with the framework architecture and a prototype development. As the framework architecture and the prototypes create a core of the intended project outcomes, that has been the choice aiming to support the effective implementation of the project. However, as described in the ==chapter x==, some reallocation has been necessary after the Mid-term review, due to challenges in the project start. One of the recommendations given in the Mid-term review by the European Commission was to resubmit more concrete plans on the prototype development.

In the light of the evaluation material both the framework architecture and the prototypes were completed during the project. However, the evaluation material also shows that the maturity of the completion differs between them. Accordingly, they are both concrete short-term outcomes as well as carry potential long-term impacts and effects.

To clarify a difference in the maturity of the key outcomes, the FINEEC evaluators have made a division to the mature outcomes and the raw outcomes as presented in the table below:

Mature outcomes	Raw outcomes
The key outcome recognisez by the various actors as well as stakeholders: the framework architecture, designed to be tailored accross the EU countries.	The prototypes (incl. algorithm) have been designed as well as piloted as part of the project. However, the actual time left for the development work and piloting has been relatively short.

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[3] The FINEEC evaluators recognize that the development process of the prototypes within the CompLeap project includes several steps as well as a couple versions of the prototypes (beta, html). However, as the FINEEC evaluators do not directly review the functionality or technical details of these versions, the different versions of the prototypes are not indicated in this report. For the clarity´s sake, all the prototype versions are referred as "prototypes".

The raw nature of the prototypes derives from the following issues, identified from the evaluation material:

- The relatively slow start of the project, basically not depending on the current operative project actors.
- The need to recreate the detailed project goals in the beginning of the project that were quite a general in nature in the original grant application.
- Challenges in the beginning of the project, when looking for the suitable staff to implement the work packages 2 and 3 actions at Finnish National Agency for Education, as well as changes in the staff being closely related to the existing Finnish services such as KOSKI.
- The relatively short time left for the actual piloting of the CompLeap prototype among the intended user groups (individual users, counselling staff at Finnish VET education providers). This has lead to the situation where the number of test users have not yet been very high. Accordingly, the user survey results included in the evaluation material inform primarily as examples, not as a representative sample of the intended target groups.
- The choice was to build the prototype around the data and information on the vocational education and training in Finland. Considering the original choice of the piloting parties among the Finnish VET providers, this is relevant limitation and has supported the effective piloting of the prototype within a very limited timeframe in 2019. However, due to these limitations the current protype offers relatively limited view to the opportunities built into the framework architecture and algorithm developed in the project.

The Sustainability Plan (Deliverable 23) illustrates the current state of the prototype and in addition, presents the required future connections to the other levels of education in Finland. The FINEEC evaluators agree on the need to complement the algorithm/prototype with the wider selection of the educational opportunities.

The interviews show that the framework architecture and a protype along with their design process has been both inclusive and a learning process for the many actors involved. That include the project consortium partners, Finnish ministry representatives as well as the most active stakeholders in Finland, Netherlands and Germany.

It was pointed out in the stakeholder interviews, that some of the stakeholders have similar processes going on in the field of competence development, e.g. Finnish Scouts work currently for the better opportunities to recognize the nonf-formal learning and experience gained in NGO activities. These features have increased the public interest to the government-led development projects such as CompLeap, that could provide a platform to recognize many kind of learning in future.

3.1.3. CompLeap key outcomes make visible the potential of the national educational data resources

One of the greatest results of the CompLeap project is the way it makes visible the potential built into the national education data resources. The digital, competence-based learner services illustrated in the protype are a kind of an advanced product, where the national education data resources play primary production role. CompLeap development work makes visible that competence-based and learner-centered digital

services aimed for the individual citizens as well as counselling staff are possible. Furthermore, this applies to the countries that have centralized data resources or equal ways to collect and validate data on the citizens learning paths. In the light of the project key outcomes, Finland serves as an example of the country that has a valid data resources for this kind of services. This is a clear asset for the sustainability of the project results. The wider reforms, both technical, thinking-related and practical, require illustration of the opportunities available.

This also means current barriers for the future potential of the key results, as the state of the education data resources varies a lot across the EU countries. The evaluation material shows that the project actors have recognized these challenges in a respectable manner in the course of the project and documented them accordingly for the future porposes. In addition, the current national regulation does not fully support the creation of the services designed and illustrated in the CompLeap project. This is visible in the Finnish case described in the Sustainability Plan. The evaluation material shows that these barriers are well recognized among the key project actors, that is a clear asset for the sustainability and potential impact of the CompLeap key outcomes. Furthermore, FINEEC evaluators see that this creates a good basis to seek for the solutions in the future.

Based on the interviews there are to some extent varying interpretations among the project actors whether the developed framework architecture takes enough into account the other countries outside of Finland.

In the light of the interviews and other evaluation material there are a couple of possible reasons for these varying views, as follows:

First, other actors than actual developers of the framework architecture and prototypes may not always recognize the difference between them and their intended outcomes as a part of the CompLeap project. Second, as stated in the original project goals, the framework architecture was supposed to the be tailored in a way that is usable across the Europe. Based on the interviews, this goal has been reached. In addition, the framework architecture has been presented and discussed in the workshops in Netherland, Germany, Estonia and Croatia (an online workshop). However, in the light of the evaluation material it has not led to the concrete local solutions that would advance the framework architecture developed. The project has not had associate partners for piloting in Netherlands. Thus, the outcome of the workshops has primarily been creation of the consciousness on the CompLeap key outcomes among the countries across Europe.

Third, the different stages of joining the project have had an impact on the understanding of the project goals and activities. The interviews show that the later joined parties have had to some extent different expectations as well as experiences on the completion of the key outcomes. The end users in the field of Finnish VET providers are not fully satisfied with the project outcomes, as they expected to have a more advanced service to pilot and use with the real customers belonging to the target groups such as NEETs and immigrants. On the other hand, it is positive that the end users involved in the piloting are committed to use such services, when they reach the fuller potential among the real-life customers seeking the educational opportunities.

Fourth, interviews show that the international dimension of the project has not fully reached the field actors involved in piloting in Finland. The associate partners are primarily Finnish, added with one partner from Germany. The piloting of the framework architecture in Netherland has not been possible in the course of

the project. The reasons for this relate to the factors handled in detail in ==chapter 2.2.==, in the parts regarding the allocations of the funds as well as challenges found in the original division of workload into the work packages. All these features together have led to the situation, where the field actors involved in the pilots have not had operational connections with the Dutch project partner DUO. In the light of the reasons presented above this is understandable, but at same time a factor, that may have weakened the achievement of the goals set for the project.

3.1.4. Approach towards the specified target groups the project

Interviews show that one of the challenges have been the target group thinking as a part of the project. The target groups identified from the project documentation are the following ones: immigrants, youth not in education, employment or training (NEET) and employment as well as working-life professionals seeking for the new career. However, it seems that these groups have not been prioritisez in a real sense in the course of the project. Interviews show that the key project actors are aware of the needs of these groups, but the actual implementation of the project does not fully support them. In addition, due to the core tasks of the project consortium partners such as Finnish National Agency for Education, they need to consider the wider citizens view, too, in any activity carried out.

Lacking the approach towards the original target groups was noted in the Mid-term review by the European Commission, too. It was identified from the interviews, that the original goal setting – to develop digital learner services prototypes – does not fully comply with needs of the specified target groups, whose ability to use digital services independently is often limited, along with the limited language skills. This notion is actually one of the notable outcomes of the CompLeap project and informs remarkably the possible future development projects among the above-mentioned customer groups in the field on counselling and guidance services.

3.1.5. The adaptation of the learner-centered approach

Evaluation material show that the key project actors understand the concept of the learner-centeredness and have been able to adjust it to the project implementation. This is evident in the light of the self-evaluation reports, material submitted to the wiki pages as well as practical solutions made in the implementation of the work packages (WP).

For example, the following ways to implement the project imply the successful adaptation of the learner-centeredness:

- The service design expertise has been exploited in the course of the project.
- Part of the project has been a design of the user scenarios as well as user profiles that were used in the prototype development.
- The prototype has been designed around the potential learners and users of the competence-based digital learner services.
- The learners view has been studied in the desk research.

- The piloting with the test profiles has been conducted among the real students or equal groups of potential users.
- The project has conducted a user surveys (Deliverable x) as well as counselling staff research (Deliverable x) simultaneously with the piloting stage to find out their views on the usability of the CompLeap prototype. The usability view has also been included in the development process of the prototypes (Deliverable x).

3.1.6. Piloting stage of the project

The interviews show that the choice of the piloting organizations (Finnish VET providers) has been carried out within the quick timeframe when preparing the original Grant Application for the European Commission and later on, starting to implement the work package 4. From the FINEEC point of view, it has been natural to rely on the parties that are both well-known active developers and in general active in the project world. On the project external web pages there has also been an open call for the associate partners.Based on the interviews the chosen pilot partners as well as associate partners have been committed to the active implementation of the project with a great enthusiasm. Interviews and a workshop illustrated the innovative and committed ways to pilot the prototype service. For example, one of the VET education providers has incorporated the piloting to the actual study modules (ICT field) offered for the VET students.

The critical incidents identified from the evaluation material regarding the pilot stage are the following ones:

First, the piloting has been carried out by Finnish VET institutions in Central Finland (JEC in Jyväskylä), in Lapland (Redu in Rovaniemi) as well as Oulu area in North Ostrobotnia (OSAO) and Päijät-Häme area (Salpaus in Lahti). Considering the key target groups of the project (such as immigrants), it would have been beneficial to carry out piloting in the capital area cities in Finland, too. The more than half of the persons with the foreign background in Finland lives in Uusimaa region in Southern Finland. The picture x presents the numbers of persons with a foreign background living in the different regions of the country (statistics of 2017).

region	number of persons with the foreign background
Uusimaa	213290
Varsinais-Suomi	33506
Pirkanmaa	24259
Osthrobotnia	12681
North Osthrobotnia	11512
Kymenlaakso	10588
Päijät-Häme	10446
Central Finland	9221
South Karelia	7977
Satakunta	7451
Pohjois-Savo	7234
Kanta-Häme	7058

North Karelia	6156
Lapland	5331
Etelä-Savo	4737
Åland	4316
South Ostrobothnia	4193
Kainuu	2109
Central Ostrobothnia	2058

<mark>Picture x</mark>: **Number of persons with the foreign background living in the different regions in Finland. Statistics present the situation in 2017**. Source: Statistics Finland.

Second, the expectations of the counselling and teaching staff involved in the piloting have been to some extent different compared to the original goals set for the project. In the light of the evaluation material one key challenge in the internal project communication has been to introduce the difference between a service prototype and a fully developed service. The goal set in the project documentation has been to develop prototypes and to pilot them. In the CompLeap case, the service prototype illustrates the potential use of the developed algorithm, is a kind of a visualization of its possibilities. The prototype does not offer full opportunities for the real counselling work. It was pointed out in the interviews by the counselling and teaching staff that the prototype was not suitable to be tested with all the customers in need of counselling and guidance for the choices in VET field and further. The counselling staff also saw, that especially the most challenging customers require pedagogically and ethically well-designed and considered services, as their situation is often fragile in the field of education, training and employment.

The ethical points of the counselling services were considered also in terms of opportunities and threats brought by the artificial intelligence. The algorithms based on the artificial intelligence may provide opportunities such as illustrated in CompLeap prototype services. However, there is also an increased risk of standardizing the individual choices or manipulating the individual choices by prioritized offers from the educational institutions. It was also noted in the interviews, that state-level initiatives for competence-based digital learner services are seen beneficial and reliable, compared to the market-driven services in the same field. The risks of the market-driven services could be their directs links to the selected education providers, whose offer would be prioritized in the electronic counselling process.

Third, it seems that the counselling view requires more attention in future, when further elaborating the key outcomes of the CompLeap project. It was noted in the some of the self-evaluation reports as well as in some interviews, that there was not enough substantial consideration in the course of the protype development. As shown earlier in this report, the actual time left for the prototype development was relatively short, that obviously have had an impact to the possibilities to consider different aspects in a deep sense. However, the recognized needs for the substantial further development among the project actors and stakeholders create potential for it in future.

There are several existing codes, standards and guidelines on professional counselling, that could be advanced in the further elaboration of the CompLeap key outcomes. For instance, The European Lifelong Guidance Policy Network[4] has produced *the Guidelines for Policies and System Development for Lifelong*

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[4] http://www.elgpn.eu/

Guidance[5] document, that provides a wide range on data, information and recommendations on the lifelong guidance for the different target groups. Considering the original target groups of the CompLeap project – immigrants and NEETs – the document includes the set of views regarding the fragile target groups.

The CompLeap project has conducted the electronic pilot user survey among the pilot users (National Agency for Education) and research on piloting counselling staff (University of Oulu). This is an asset and shows active commitment to the learner-centered approach in the implementation of the project. However, as the number of survey answers submitted by September 2019 was not very high, they should be seen as examples, not as a representative sample of the project target groups. The background information of the survey data indicates that vast majority of the test users that replied to the survey were existing students of the piloting education providers.

3.1.7. Potential future users of the project key outcomes

Interviews show that one of the potential user groups of the digital competence-based learner services are the counselling staff of the education providers and higher education institutions. In addition, the interviews show that there are varying opinions among the project actors and stakeholders on the successful implementation of the counselling view. The counselling staff has been one of the defined stakeholder groups, along with their own professional organization SOPO in Finland. On the other hand, especially the piloting partners see that the counselling needs and philosophy are not visible enough in the developed prototype. Thus, there is not fully shared opinion on this matter among the project actors, that might have had impact on the effective project implementation. It is recommended that counselling approach is further studied in future to guarantee the adequate use of the competence-based digital learner services among the professional counselling staff in Finland, Netherlands as well as other EU countries.

The case of the individual users seems more challenging in the light of the evaluation material. In the interviews the CompLeap prototype is seen as a tool that requires individual users to have:

1) advanced language skills
2) at least some IT skills

In the light of the user survey results the reach of the some key target groups (such as immigrants and NEETs) set for the project has not succeeded remarkably in piloting the prototype. Thus, there is not yet reliable information available in their user experience on the service prototype. It is known that these user groups have evident limitations in both language skills and IT skills. However, as the target set for the project was to develop a prototype of the digital service, it is merely a policy-driven future question whether such a services are aimed for the individual users or for the councelling staff working with these customers groups. This question appears e.g. in the field of learner services and educational opportunities. It was pointed out in the interviews with the German stakeholders, that immigrants as a user group might require a wider language selection to be able to benefit of the digital learner services. The national languages along with

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[5] http://www.elgpn.eu/publications/elgpn-tools-no-6-guidelines-for-policies-and-systems-development-for-lifelong-guidance

English do not fully comply with their current needs. The Sustainability Plan states that in the future the aimed languages supported by the Studyinfo -services portal in Finland are Finnish, Swedish as well as English.

3.2. CompLeap key outcomes and their capacity to be integrated to the national and international education and counselling systems

This chapter presents the views to the integration capacity built into the project key outcomes along with their future potential and sustainability.

The evaluation questions guiding this chapter have been the following ones:

- How and to what extent the CompLeap services could be integrated to the digital learner services nationally and internationally, reflected against the goals set for the project?
- What is the potential impact and sustainability of the CompLeap project as a whole?

Key Findings

- **The completion of the international dimension of the CompLeap project is still relatively low, in terms of concrete outcomes linked to the framework architecture and a developed services prototype.** Experiences on the national use and integration capacity of the architecture are limited to Finland. However, the Finnish case highlights well the opportunities built into the framework architecture and competence-based digital learner services.

- **The deployment workshops held in Netherlands, Germany, Estonia and Croatia are seeds, that carry potential to the further impacts and effects, if the key project outcomes are advanced adequately in these countries to make local solutions of them.**

- **The project actors show a good capacity to collect and analyze data and information on the possibilities to integrate the CompLeap key outcomes to the existing services nationally and internationally. This is evident in the Europass Case Study and the Sustainability Plan (Deliverable 23).**

- **The national data resources on education should be seen as a primary product, that make advanced digital learner services possible. Countries across EU should address the establishment of the national data resources as one of the future priorities in the field of education infrastructure development.** They are a precondition to the possible shared framework architectures along with the competence-based digital learner services for the transnational audience.

- **National decision-making plays a key role in the digital learner services that advance the national data resources on education jointly. The EU should create incentives for the voluntary cross-country cooperation in this field.**

- **THIS SHALL BE COMPLEMENTEDN BY THE COUPLE OF POINTS BY 18TH OCT 2019**
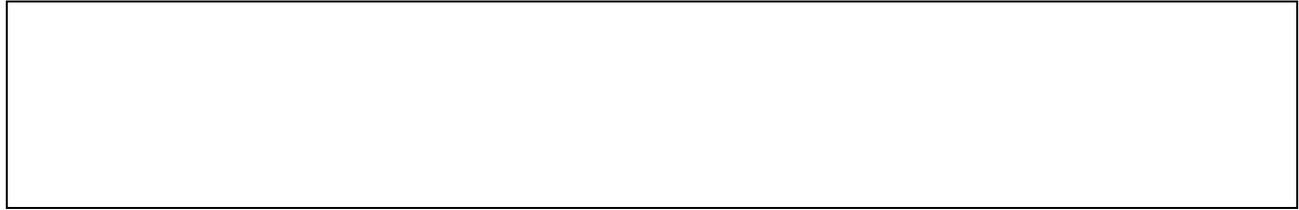
3.2.1 Completion of the international dimension

Evaluation material as a whole show that completion of the concrete international dimension is still relatively low in the light of the project key outcomes. As there have been only one partner outside of Finland in the project consortium, the concrete investment to the international dimension in terms of funds and a workload has not been very high. The Dutch partner DUO has been in charge of commucation and dissemination practises, as well as contributed to the Europass case study that was conducted as a part of the project.

As stated in the ==chapter x==, the original division into the work packages and workloads is noted to be challenging in the self-evaluation reports. Thus, this is at least partially the reason behind the lack of concrete outcomes outside of Finland regarding the framework architecture tailoring and piloting the prototype. It was also noted in the interviews of the key project actors that more study on the Dutch state of affairs would have been beneficial in the beginning of the project and might have advanced the achievement of the goals set for the project. It was also noted, that there were not resources allocated for this kind of activity in the project budget.

The concete outcomes of the international dimension, identified from the evaluation material, are the following ones:

- The Dutch partner DUO has attended the work of the Steering Group and the Project Management Committee, and therefore contributed to the decision-making and implementation at the project level. The Steering Committee interview indicates a good cooperation between the project partner representatives.
- Deployment workshops have been carried out in Netherlands, Germany, Estonia and Croatia (an online workshop).
- The desk research (==Deliverable x==) conducted as a part of the project include views to the existing relevant services in Finland, Netherland, Germany and EU as a whole. However, the evaluation material did not offer the clear view to the use the desk research in the implementation of the project. As a summary and analysis it could serve the other actors too, after the end of the project.
- The project has conducted the Europass case study, following the recommendation of the Mid-term review. The study describes the state of affairs of both CompLeap and Europass, as well as illustrates the possible connections between them.

However, the concrete outcomes presented above can be seen as seeds, that carry potential for the wider impacts and effects, if advanced in the adequate manner in Netherlands and other EU countries. The project impact in the countries outside of Finland is still sporadic compared to the Finland, where the large number of stakeholders have been involved in the project at different stages. Furthermore, the concrete developmet

of the prototypes is based on the Finnish education data resources and education system. It was evident in the interviews, that different national education systems create one of the challenges to the services illustrated in the CompLeap prototype, especially for their possible transnational use.

As a lesson for the future projects it is evident that ensuring the actual international dimension in the EU funded projects requires clear financial investments to the attendance to the project key activities. The evident threshold in the CompLeap case has been the original division of the work packages as well as allocation of the funding. In addition, in the projects where the associate partners are needed for the piloting purposes, their availability in the target countries should be ensured in advance.

3.2.2. Role of the national decision-making as well as national data resources

The Sustainability Plan produced as a part of the project handles the role of the national decision-making in the development of the competence-based digital learner services. It is noted, that EU does not have a mandate that would make the use of the same framework architecture mandatory for all the EU countries. In addition, in the field of the education the EU level steering and regulation is relatively low and much is left for the national decision-makers. Thus, so far decisions on the possible competence-based learner-services as well as framework architecture around them are made nationally. In the current light it seems unrealistic to assume that the level of EU steering and regulation on the education would notably increase.

The evaluation material also shows that state of the national data resources on education varies a lot across the EU countries. This is one of the key lessons made visible by the CompLeap project and could benefit the other projects or equal development processes in the field, too. Furthermore, the national data resources should be seen as primary products, that make possible the advanced products such as CompLeap service prototype. The incentives are needed for the voluntary cross-country cooperation in this field.

The data protection issues create a crucial framework for the possible transnational use of the national data resources on the education and competences. Based on the interviews as well as written project materials, the project key actors are well aware of these features and their impact on the project operations as well as future use of the project outcomes.

3.2.4. Challenges of the several parallel processes

The interviews as well as the Sustainability Plan indicate that there are several parallel processes going on in the field of digital learner services and digital services for the job seekers. in Finnish case the most often named example is Työmarkkinatori services portal established by the Finnish Ministry of Economic Affairs and Employment in Finland. The separate services in the fields of education and labour market were commonly seen problematic in the stakeholder interviews.

NOTE: ANALYSIS ON THE EUROPASS CASE SHALL BE ADDED BY MONDAY THE 18TH OCTOBER AS WELL AS ANALYSIS ON THE VIEWS PRESENTED IN THE SUSTAINABILITY PLAN.

3.3. Communication and stakeholder relations

This chapter illustrates the strengths and weaknesses of the CompLeap project´s communication and stakeholder relations, starting from the beginning of the implementation period. In addition, it presents a couple of good practices identified from the evaluation material.

The evaluation questions guiding this chapter have been the following ones:

- How and to what extent the chosen communication practices have supported the achievement of the objectives set for the project?
- How and to what extent the chosen stakeholder practices have supported the achievement of the objectives set for the project?
- What kind of outcomes CompLeap communication and stakeholder relations have produced?
- What kind of impacts CompLeap communication and stakeholder relations have produced?
- What kind of effects CompLeap communication and stakeholder relations have produced?
- What kind of good practices are possible to identify within the communication of the CompLeap project?
- What kind of good practices are possible to identify within the stakeholder relations of the CompLeap project?

Key Findings

- **Stakeholders have been widely included in the design and implementation of the CompLeap project. In general, stakeholders are satisfied with their possibilities to join the project**. **The stakeholder issues have been approached in an ambitious manner in the CompLeap project.**

- **There are several concrete outcomes of the communication and stakeholder work in the project, such as stakeholder events, webinars, external web pages and marketing videos (animations).**

- **The management of the expectations among the key project actors as well as stakeholders is essential for the project such as CompLeap. This should be carefully addressed in the similar future projects to avoid the gaps between the goals, expectations as well as key outcomes of the projects.**

- **Good practises:**
- Demo sessions
- stakeholder webinars
- marketing videos and printed marketing material
- external CompLeap web pages

3.3.1. *Stakeholder relations at the project level*

Evaluation material as a whole shows that the stakeholder relations has been one of the priorities in the project implementation. The project has had a Communication and dissemination plan (Deliverable 34) that defines the stakeholder groups approached. The FINEEC evaluators consider the list as very extensive. It shows ambitious approach to the stakeholder issues.

In the light of the evaluation material the full list of the stakeholders concretely reached to the project network is extensive and includes state authorities, policy-makers, labour market NGOs, education providers, higher education institutions, other NGOs such as Finnish Scouts, counselling staff association SOPO as well as existing networks in the field of education, counselling and digital services in Finland and EU area.

Interviews show that the stakeholders have been widely included in the design and implementation of the CompLeap project. In general, stakeholders seem to be satisfied with their possibilities to join the project. Interviews also show that some of the stakeholders in Finland have followed the project since the application stage. This is a clear asset, also for the possible future use of the key project outcomes.

The concrete outcomes of the communication and stakeholder relations identified from the evaluation material are the following ones:

- Creation of the project identity such as easily recognizable visual outlook and inclusive external communication practices (such as webinars).
- Two project-level seminars arranged for the wider audience (see table below).
- The creation of the extensive and committed stakeholder network for the project, by actively attending to the other existing networks as well as communicating about the project goals and activities going on.
- A set of the webinars and demo sessions arranged for the active project actors and followers in the course of the design and development of the key project outcomes (framework architecture, prototypes).
- A set of the workshops (in Finland and Germany) arranged for the partners and associate partners involved in the piloting, including a kick-of meeting for the piloting parties.
- External web pages of the CompLeap project along with the key information on the project background, actors, activities, events and results.
- Project documentation on the public wiki pages.
- Printed marketing material.
- Audiovisual marketing and communication material (animations).

As shown, the project has emphasized the external communication in many ways. The set of communication practices is extensive, that can be seen as one of the factors advancing the achievement of the project goals. The outlook of the project is professional and stakeholder-oriented. The project has evidently emphasized the stakeholder events, such as webinars and demo sessions, as an on-going and integral practice in the project implementation.

The CompLeap project has arranged the following two seminars in the course of the project for the wider stakeholder audience:

event	number of participants
Mid-term review seminar, 4th Dec 2018, in Helsinki	73 incl. speakers and online participants
Final Seminar, 14th Oct 2019, in Helsinki	97 incl. the speakers and online participants

The numbers of participants are considered high by the FINEEC evaluators and they indicate a wide interest among the stakeholders, especially the Finnish ones. This can be seen as one the features creating the future potential for the project key outcomes. However, as the most active external stakeholder remain mainly in Finland, is this impact to some extent limited when considering the goals set for the project.

The project wiki pages present the wide selection of the events where the CompLeap actors has attended to deploy and market the project and its key results in the EU area. The number of the events attended is in line with the project timeline and resources available for the project coordination, management, communication as well as stakeholder relations.

3.3.2. *Management of the expectations among the project actors and stakeholders*

It was pointed out in the self-evaluation reports, that the management of the expectation set for the project have been a challenge for the effective project implementation. As explained in chapter x in this report, the actual number of the project actors have been relatively high. In addition, as explained in chapter x, the chosen strategy has been to include a wide selection of stakeholders to the project network. Although these features carry many positive aims and effects, it has also led to some unintended results in form of the very high expectations set for the two years project.

Interviews show that end user representatives who has attended to the pilot stage are not fully satisfied with the prototype and its piloting potential. Naturally, this gap between the project targets, outcomes and expectations does not support the effective implementation of the project. On the other hand, the varying expectation are also understandable, when the number of actors is high.

Furthermore, the key substance (framework architecture design, design of the algoritm, design of the service prototypes that advance the national data resources on education) of the CompLeap development work is relatively challenging topic to introduce in a simple package. In future, the projects such as CompLeap should emphasize the clear and on-going internal communication on the key goals set for the project, as well as clarifying the key concepts belonging to the project.

4. CONCLUSIONS AND RECOMMENDATIONS

This chapter summarizes the key conclusions that cover the all the evaluation areas approached in the external evaluation carried out by FINEEC. The good practices presented in the chapters 2 and 3 are also

gathered to this chapter. Furthermore, it provides a set of recommendations to be considered by the policy-makers, other state-level actors, stakeholders as well as parties seeking and implementing the EU financed projects in Finland, Netherlands and other EU countries.

4.1. CONCLUSIONS

- **The concrete key goals set for the Compleap project were both completed in the course of the project. First, the framework architecture was designed in cooperation with the various Finnish, Dutch and German stakeholders. It is designed in a way that makes possible to tailor it across the Europe, as supposed. Second, the prototypes of the service (incl. algorithm) were designed and developed to illustrate the potential built into the designed architecture and use of the national education data resources.**

- **The CompLeap project has made visible the capacity built into the national education data resources. They serve as primary products that make possible the solutions visualized in the CompLeap prototype. One of the greatest impacts of the entire project is active boost of the competence-based learner services among the several stakeholder groups. This have also created the future potential for the key outcomes of the CompLeap. However, as the most diverse and active stakeholder selection remains in Finland, in this impact to some extent still limited to Finland. In Netherlands, Germany and other EU countries the impact is more sporadic, covering the active project actors and their background organisations.**

- **The overall impact of the project is strongest in Finland, where the wide selection of stakeholders have joined the project activities or followed the project progress. Equally, the service prototype developed in the project is based on the Finnish data resources and education system.**

- **The national decision-making plays a key role in the further adaptation of the CompLeap key outcomes. In addition, the EU level decision-making may play some role, in cases such as Europass system. However, in the field of education the level of EU regulation and guidance is relatively low and much is left for the national decision-makers. The data protection issues create a crucial framework for the possible transnational use of the project key outcomes.**

- **The professional counselling staff plays a key role in the future embedding the project key outcomes at the level of the education providers and higher education institutions. Their role is essential when considering the counselling and guidance needs of the CompLeap key target groups, immigrants and NEETs.**

- **The ethical view of the counselling services and practices should be considered, when further elaborating the framework architecture and service prototype (incl. algorithm) developed in the CompLeap project.**

- **The challenges in the following steps of the project preparation and implementation has decreased its capacity to fully reach the goals set for it: to tightly scheduled preparation of the Grant Application; delayed funding decision by the European Commission; need to refocus the project**

in the beginning of the implementation period, due to the relatively general level target setting in the original Grant Application; challenges to find suitable experts for the project purposes in the course of the first implementation year.

4.2.   GOOD PRACTISES

- Weekly meetings as a part of the project management have been praised by all the project partners.
- Webinars for the project key actors: such as ones arranged for the users of the prototype within the project.
- Majority of the project documentation as public wiki pages.
- Demo sessions for the project actors and active followers of the project.
- marketing videos and printed marketing material.
- external CompLeap web pages.

4.3.   RECOMMENDATIONS

- **The ownership of the key outcomes, such as framework architecture, services prototypes (incl. algorithm) as well as stakeholder networks built around the CompLeap project should be considered carefully and soon among the ministry-level actors, CSC, Finnish National Board of the Education, DUO as well as the end users in the field of education.** The evaluation shows that the CompLeap project has succeed in creating the widespread interest in the competence-based digital learner services among the stakeholders in Finland, Germany, Estonia and EU as a whole. To maintain this future-looking approach, it is necessary to design and implement rather soon the required actions for integrating the usable parts of the outcomes to the existing Finnish services, such as Studyinfo in Finland. This need is adequately analyzed in the Sustainability Plan prepared by the project actors, too.

- **The connection with the labour market needs and digital services requires more studying, as there are parallel processes going on in this field (such as Työmarkkinatori services portal developed by the Ministry of Economic Affairs and Employment of Finland).** The evaluation shows that stakeholders in Finland as well as other in EU countries recognize many parallel processes to the key outcomes of the CompLeap project. One of the key interfaces identified is a labour market and related services supporting the competence development.

- **The countries involved in the CompLeap project should integrate the key outcomes of the CompLeap project to the existing or upcoming policy-level national reforms in the field of continuous learning.** The evaluation shows that the key outcomes are both promising examples of the potential built into the digital learner services advancing the national data resources on education and competences. In Finland, the Government has launched The Parliamentary Reform of Continuous Learning (21.8.2019-31.12.2020) led by the Ministry of Education and Culture. The key outcomes of the CompLeap project should be considered as a part of this reform.

- **As one of the greatest impacts of the CompLeap project is high-level consciousness on the opportunities provided by the national education data resources and their use in the digital, competence-based learner services, maintaining this boost should be an issue to approach for the state-level actors in Finland, Netherlands, Germany and Estonia.** Evaluation shows that CompLeap has succeed in creating growing interest and wide consciousness on its key outcomes and the potential built into them. The impact is most visibly on Finland, where the key stakeholders are well aware of the work process and outcomes of the CompLeap project. Outside of Finland the impact is still more sporadic, limited to the key actors of the project. However, also in the other countries involved this offers a great opportunity for the national future initiatives and practical solutions.

- **The counselling staff at the VET institutions, higher education institutions and in the field of the services provided for the job-seekers are a potential high-profile user group of the competence-based digital services illustrated in CompLeap prototypes. Counselling approach to the competence-based digital learner services should be explored more in future.** Evaluation shows that although the counselling staff has been one of the key stakeholder groups, the concrete counselling approach is not yet very advanced in the framework architecture or prototypes. In addition, many actors interviewed noted that some key user groups – such as immigrants and youth outside of education and employment – would benefit most the competence-based digital services when guided by the counselling staff.

- **The counselling and guidance of the immigrant-backgrounded customers, similarly with the NEETs, cannot rely on the digital learner services alone. These customer groups can benefit the services illustrates in the CompLeap prototype as a part of the guidance provided by the professional counselling staff. As the individual use of the digital services requires at least some IT skills and, in many cases, advanced language skills, the potential of the individual use is limited in case of the above mentioned customer groups.** The evaluation shows that counselling staff see potential in the services such as CompLeap protype or equal services relying on the algorithm developed. As the full potential of this kind of counselling tools is not visible yet, one of the future paths to explore could be the strengthening the counselling approach and testing its use among the most challenging customer groups in Finland, Netherlands, Germany and other EU countries.

- **CompLeap prototype, its advanced version or other equal electronic services advancing the same algorithm should be tested within the larger group of users.** Evaluation shows that actual time left for the piloting was relatively short. Furthermore, evaluation also shows that due to the challenges with the schedule as well as finding the representatives of the original target groups, the piloting has primarily happened among the existing students of the Finnish VET providers. To reach the wider group of potential users it is recommended to test the above-mentioned services in the Finnish capital area. Open source nature of the developed algorithm supports its deployment within a low threshold.

- **It is recommended that CSC along with the ministries responsible for the education both in Finland and Netherlands create a procedure for the follow-up of the CompLeap long-term impacts and effects.** As stated in the project documentation, the long-term impacts and effects of the project

cannot be measured nor fully identified right after the end of the project. However, as shown in this external evaluation, project actors as well as many stakeholders recognize much potential in the project key outcomes. The follow-up procedure could include e.g. following steps and actions: 1) concise set of follow up indicators (such as users of the developed algorithm across EU countries), 2) review of the digital competence-based learner services (at least) in Finland and Netherlands reflected against the key outcomes and lessons learned of the CompLeap 3) Analysis on the state of the ==legislative/regulative== sphere having an impact to the digital learner services that advance the national and international education data resources.

- **There is a need to further explore the ethical issues related to the digital services illustrated in the CompLeap prototype.** Counselling and study guidance are a sensitive process, that combines professional expertise of the counselling staff as well as the information and knowledge available on the educational opportunities to the competences, aims and personal skills of the individuals. Technically, the artificial intelligence can provide selected views for the suitable next steps to the individuals looking for the education and training. However, the potential challenge is its dependence on the statistical probabilities. National and transnational education systems along with the counselling built into them should not lead to the standardized learning paths that do not leave space for the individual choice and diversity.

- **In future, the state-level actors such as ministries should pay extra attention to the timing of policy-driven project initiatives and avoid, whenever possible, too tight schedules left for the operative parties that implement the policy lines.** The evaluation shows that the preparation time for the original Grant Application has been relatively short. This have had am impact to the project actors´ de facto possibilities to implement the project goals in an effective manner in the beginning of the project.

- **Similarly with the state-level actors, also the European Commission should pay more attention to the customer-oriented and timely application processes of the project funding.** The evaluation shows that delayed funding decisions or other procedural misconduct may have a negative impact on the start of the project implementation and the project actors´ de facto possibilities to implement project goals as supposed.

- **The realistic goal-setting as well as management of the expectations seem essential for the extensive, policy-driven and international projects such as CompLeap.** The future fund seekers as well as project actors should pay attention to these factors. The evaluation shows clearly the challenges caused by the very high goal-setting, extensive stakeholder network as well as divergence of the goals among the key project actors.

- **The organisations interested in projects such as CompLeap in future should make sure in advance, that they are able to fulfill the required key staff needs in an adequate manner from the very beginning of the project.** Evaluation shows that some of the challenges in the start of the CompLeap project were caused by the lack of the adequate staff resources at Finnish National Agency for Education.

- **The operative actors of the similar projects in future should emphasize the internal communication of the key goals set for the project in the course of the project.** Evaluation shows that one of the main challenges in the cooperation between the CompLeap project partners has been the up to date,

on-going and clear communication about the goals set for the project, especially in the case of the piloting parties, who joined the project at the later stage.