Open Virtual Mobility

07.A3. Sustainability plan

O7.A3. 1. Definition of the sustainability strategy

- Final draft -

Outcome # Activity # Name of Output	
Document submission and review information	
Declared due date of deliverable	November 2018
Reviewed due date of deliverable	December 2018
Actual submission date	January 2019
Organisation name of lead contractor	Beuth University
Revision	Final draft
Author and reviewer information	
Name of the author	Gemma Tur and Santos Urbina
Affiliation of the author	University of the Balearic Islands
Name of the reviewer	George Ubachs
Affiliation of the reviewer	EADTU

The creation of these resources has been (partially) funded by the ERASMUS+ grant program of the European Union under grant no. **2017-1-DE01-KA203-003494**. *Neither the European Commission nor the project's national funding agency DAAD are responsible for the content or liable for any losses or damage resulting of the use of these resources.*

Imprint

Imprint: This publication is O7 of the Open Virtual Mobility Erasmus+ strategic partnership founded by the European Commission 2017 - 2020 under **2017-1-DE01-KA203-003494,** URL: https://www.openvirtualmobility.eu/

This paper is the final document of milestone 07.A3.1 produced as part of Outcome 07 "Quality Assurance, Dissemination and Sustainability" whose aims is the design of the sustainability plan by means of a group discussion and short questionnaire in the partnership and other agreements with external partners.

PDF download

A full-text PDF of this report is available as a free download from:
https://www.openvirtualmobility.eu

Social media

Find us on Twitter: @openVM_erasmus
Give us your feedback on social media with the following hashtag: #openvirtualmobility

Suggested citation

Tur, G., Urbina, S. & Ubachs, G. (2019, January 14th). *Open Virtual Mobility. Output 07.A3: Sustainability plan. Final draft.* Retrieved from https://www.openvirtualmobility.eu

Corresponding author

Gemma Tur
gemma.tur@uib.es
University of the Balearic Islands
Calvari, 1, 07800 Ibiza
Balearic Islands, Spain

INDEX

A. Executive summary

After a short introduction about the Open Virtual Mobility Erasmus+ project (OpenVM from now on), the first half of the document mainly presents a very short review of some related concepts such as sustainable development and the different models for sustainability. After that, the Business model is argued as the basis for the OpenVM sustainability plan. The second half of the document presents partners' suggestions for key partners, key activities and key resources, the first three elements of the chosen model. Afterwards, the OpenVM suggests a courageous plan which includes the social pillar of sustainable development as an initial stage for its strategy and develops these first three elements regarding their internal or external scope. Finally, the network of related projects, such as key external partner organisations and institutions, which can enrich the possibilities for sustainability after project lifetime, is introduced.

B. What are the objectives covered in this paper?

The main objective of this first milestone in Output 7 of the OpenVM project is to design the sustainability plan and present its first steps such as the key partners, key activities and key resources.

C. Who is this paper for?

This paper is for anyone involved in E+ projects, MOOCs and in general, online learning in HE institutions and open education. Although sustainability might initially be understood as a competence of designers, leaders, policy makers or stakeholders, but the distributed responsibility that it involves makes it interesting for a wide range of participants at diverse levels. Therefore, this paper may be of interest to a wide variety of target agents:

A. Higher Education Educators
B. Primary, Secondary and Tertiary student teachers
C. Higher Education Students (BA and MA)
D. International Offices, Teacher training units/centres
E. HE leaders
F. Career Service Units
G. Researchers and Research Units
H. Internship providers
I. Open Education Communities
J. Policy makers
K. e-learning designers
L. and, other practitioners involved in Open Education, online learning and HE.

D.What topics are addressed in this paper?

There are some topics addressed in this document related to the diverse fields about which the OpenVM is about:

A. Sustainability as sustainable development
B. Sustainability models
C. Sustainability Business Model
D. Open Virtual Mobility sustainability

E. Contributors

Gemma Tur holds a PhD in Educational Technology from the the University of the Balearic Islands (UIB), Spain. She works as a Lecturer in the Department of Applied Pedagogy and Educational Psychology at the UIB and collaborates in research in the Educational Technology Group of the same university (GITED- GTE). She is the coordinator of several programs in the Ibiza off-campus centre such as Early Childhood, Primary and Secondary Teacher Education courses and the Open Senior University. She has participated in many international conferences such as the PLE Conference, EDEN, EDUTEC, EDMEDIA and EDULEARN. Her research interests include eportfolios and Personal Learning Environments, social media for learning and reflexive aims, and in general, technology enhanced learning in Teacher Education.

Santos Urbina holds a PhD in Education Sciences from the University of the Balearic Islands (UIB), Spain. He works as a Professor in the Department of Applied Pedagogy and Educational Psychology at the UIB and he is a member of the Educational Technology Research Group of the same university. During the last 10 years he has been the director of the Virtual Campus of the UIB. His preferred fields of research are focused on the design, production and use of didactic media, virtual campuses, technology-enhanced learning environments and the curricular integration of ICT.

George Ubachs is the Managing Director of EADTU, the European Association of Distance Teaching Universities. He is responsible for the development and support of the EADTU network, policies and execution of its goals in online, open and flexible higher education. He is the coordinator of international academic cooperation networks on networked curricula, virtual mobility, QA in online education and on business models for lifelong learning. George Ubachs is the coordinator of the E-xcellence movement on quality assurance in online, open and flexible education and leading the ICDE-UNESCO focal point for QA in online education in Europe. He further coordinates the EMPOWERing universities network of a 100 experts representing 12 specific fields of expertise related

to online, open and flexible education. As coordinator of these two dedicated networks he works closely with the EUA, ENQA, ESU, ICDE and Unesco.

F. Acknowledgements

The plan has been designed based on a short questionnaire and helpful discussion by partners attending the Rome meeting in May 2018, whose insights and help have been of immense importance in the project's first steps. Special thanks to Ilona Buchem, whose contribution has been most helpful in the design of the whole sustainability plan. And also, the authors would like to thank all colleagues from other projects and institutions for their help and commitment in the design of the network, in particular to Sara Guth for her efforts and help in extending the network as much as possible.

1. Aims and Scope

The aim of this milestone in Output 07 is the design of a sustainability plan for the openVM E+ project. The sustainability plan is envisioned as being courageous and not only considers project outcomes to be sustainable in time but also includes the approach of social sustainability. In this sense, the document is aimed at planning all the elements that can support project sustainability after project life time, such as, for example, the continuation of project research, the re-usage of the learning hub or the OER from Output 6 or other project outputs, adding the value of the social pillar of sustainability. To this end the different priorities and needs for continuation and uptake after project lifetime are determined including key activities, key partners and key resources required.

2. Background and rationale (State of the Art)

2.1. Introduction

The sustainability strategy is based on a double perspective: the sustainable development approach and the the Business plan model, which has been successful in previous E+ projects by the project coordinator such as in the Open Badge Network (OBN). The OpenVM is committed to the social pillar of its mission and the sustainability literature review reflects this aspect. Also, regarding the Business model, an analysis of diverse models for sustainability is summarised from a previous OBN project, and a Business model with a combination of some of the affordances of each model was decided. Based on this work, a similar model was introduced to the OpenVM partnership and it was agreed to continue the work by adapting it to the needs of the current project.

2.2 The OpenVM E+ project

The OpenVM project challenges both the conceptual framework for Virtual Mobility and the current landscape for teaming up in educational experiences in HE across Europe. The concept of Virtual Mobility has been defined as “a set of ICT supported activities, organized at institutional level, that realize or facilitate international, collaborative experiences in a context of teaching and/or learning” (Ubachs & Henderikx, 2018). While early experiences may have been institutionally supported with formal learning agreements, the current project challenges what is known so far by opening up Virtual Mobility. In this regard, the new emergent concept of Open Virtual Mobility is understood as extending the potential of open digital environments for VM and at the same time, extending the contexts from more to less formalised agreements among HE institutions, teachers and students. The OpenVM project is aimed at achieving the six main objectives represented in figure 1:

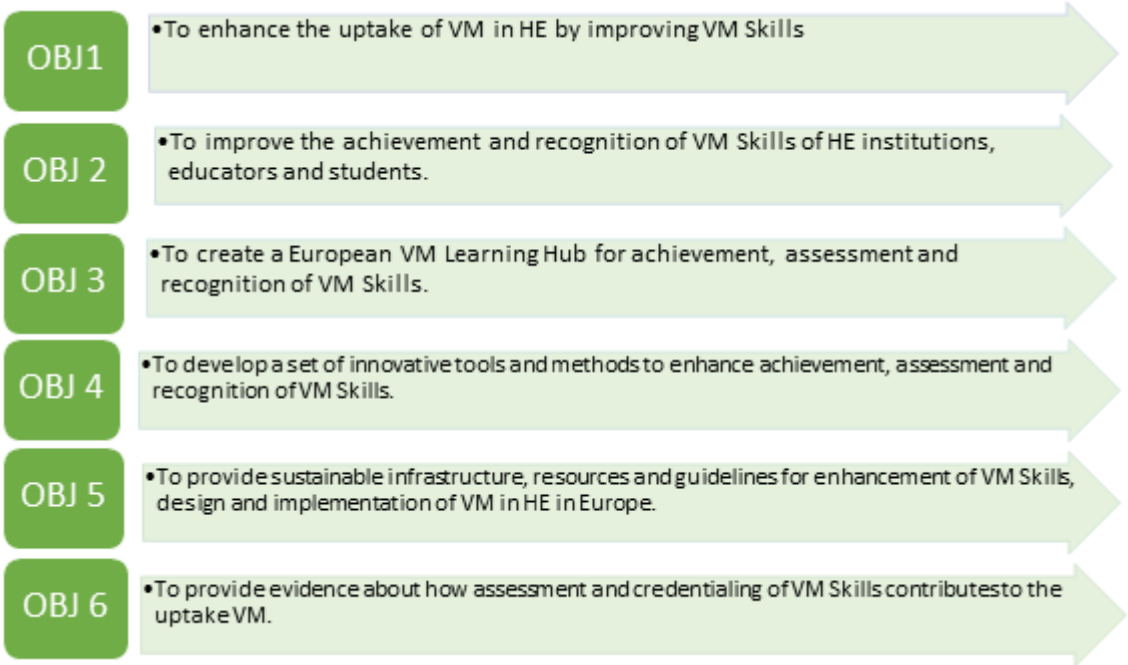


Figure 1. OpenVM objectives

Its development has been planned in seven outcomes, which are closely interrelated as the following figure shows:

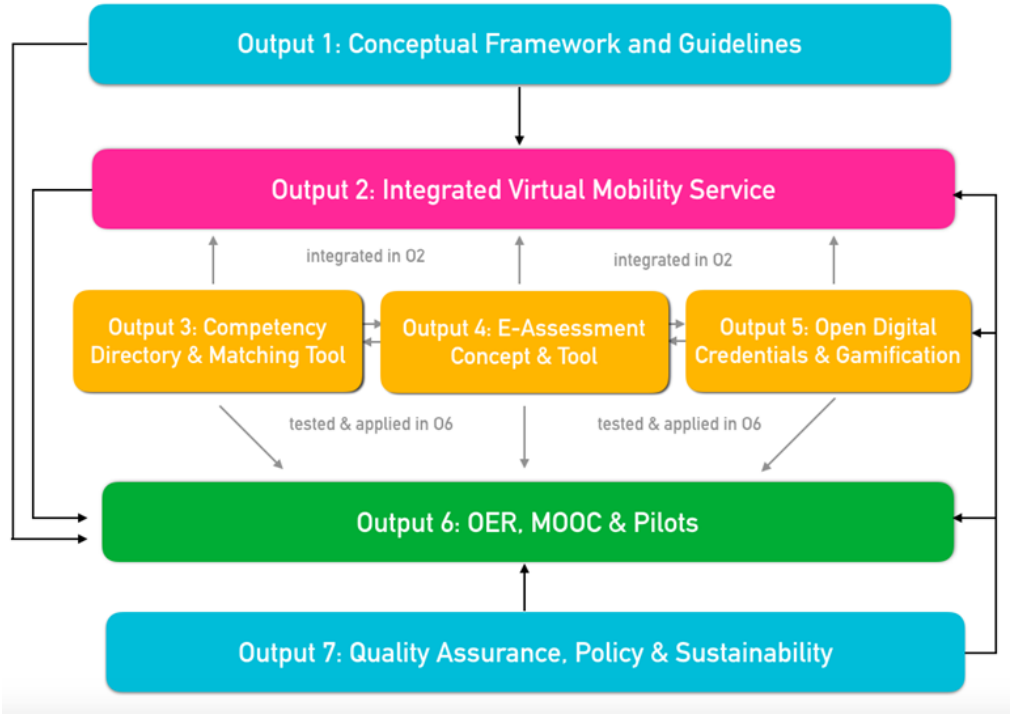


Figure 2. OpenVM Outputs

2.3 Vision for the future

The OpenVM is envisioned to:

- redefine what is known about Virtual Mobility, its characteristics and potential in open digital environments
- describe the skills developed in Virtual Mobility
- create a Learning Hub to unite all Virtual Mobility initiatives in European Higher Education institutions
- promote and recognise the development of VM skills by the development of a system a Open Badges
- create and promote Open Educational Resources on VM
- create and promote a MOOC on VM divided into eight mini-MOOCS for the development of the skills described in the theoretical and underpinning conceptual research

2.4. Sustainability as sustainable development

Sustainability has been incorporated at all levels from macro and global to micro and project stages (Agarwal & Kalmár, 2015). The most extended vision of sustainability is the one stated by Elkington (1997) who coined it as as the "triple bottom line" or "Triple-P (People, Planet, Profit)" concept and described it as "the balance or harmony between economic sustainability, social sustainability and environmental sustainability". Likewise, at the same time, there is an important approach to sustainability, which is used in the same terms as "sustainable development", relating it to project management. Silvius and Schipper (2014) identified a set of 14 dimensions of sustainability, which in further work they describe as a summarised set of nine clusters of sustainability dimensions:

It is about...	Description
… balancing or harmonizing social, environmental and economical interests	A project should answer to the three pillars of sustainable development: social, environment and economic
....both short-term and long-term orientation	A project should focus not only on short-term aims but also on long-term consequences, extending the attention to full lifespan
… local and global orientation	The organisation is influenced by international stakeholders and its effects can have potential impact at both local and global levels
… values and ethics	It is a normative concept with value and ethic implications
… transparency and accountability	The organisation is open about policies, decisions and actions. Along with transparency, accountability has to be assumed.

… stakeholder participation	The potential interest of stakeholders is critical for sustainability, and "proactive stakeholder engagement" is advised. It is important to establish a dialogue and to as work together in order to "define the problems, design possible solutions, collaborate to implement them,and monitor and evaluate the outcome" (p. 339)
… about risk reduction	In the environment system, it is better to prevent and avoid risk than to reduce bad consequences
… eliminating waste	It has been said that the waste elimination equals food
… consuming income, not capital	Sustainable projects should not lead to exhaustion

Table 1. Sustainable development (based on Silvius & Schipper, 2014)

Beyond the traditional criteria of project success, which has been reduced to time, budget and specification (the "iron triangle"), sustainability has emerged as another criteria whereby we can measure project success (Silvius & Schipper, 2014). Thus sustainability has been related to success since it informs about success after project delivery and project success "over time".

2.5 Sustainability models

The Open Badge Network (2015-2017) explored four sustainability models in a SWOT analysis. Thus, the Sponsorship, Membership or Merger, Marketplace and Advocacy models were assessed in terms of strengths, weaknesses, opportunities and threats. The following tables summarise those results (Lewis, van den Broek, & Mihalyi, 2016, pp. 17-24) which can be adapted to the OpenVM with little modification:

	Strengths
Sponsorship	• Simple solution which maintains non-profit ethos and requires no "legal status" • Many resources that could be given are time-based or low cost to the organisation or individual • Contributions could come from many sources which makes it less risky • Enables an open approach to developing partnerships with other providers

	which will add further value
Membership or Merger	● Proven funding model that could provide regular and consistent resources ● Simple to operate and could be based on a series of online & offline events and discussion groups ● Creates a sense of community and commitment within membership base ● Opportunity to plug into existing networks & platforms in order to reduce the resources needed to set up and maintain the network
Marketplace	● Helps to expand the OBN network through joint promotional activity with partners ● Potentially provides a source of regular income to the network
Advocacy	● This would provide enough resources to keep key stakeholders proactively engaged in order to expand and develop the european eco- system

Table 2. Strengths for the four sustainability models (Lewis, van den Broek, & Mihalyi, 2016, pp. 17-24)

	Weaknesses
Sponsorship	● Ongoing resources would be needed in order to obtain sponsorship ● Difficult to plan and grow the network without secured resources ● Significant momentum and value would need to be established by the end of the project in order to attract sponsors
Membership or Merger	● It would need to continually develop and ensure that it was delivering value to its members ● It would no longer be seen as a non-profit network which might make it difficult for certain organisations to play a role within the Steering Committee ● There would need to be a formal structure and governance in place to manage

	membership money and data ● A commercial model might make it difficult to develop partnerships with other open badge networks and service providers, fragmenting the community rather than connecting it ● Requires a large fee paying user base to generate the sustainability revenue
Marketplace	● It might no longer be viewed as a trusted independent network which could mean some organisations choose not to be members ● A level of quality assurance and governance will need to be in place to select and manage the commercial partners and revenue generated
Advocacy	●Not many funders provide extension funding for existing activities ● Would need to identify partners able to commit to delivering a further grant funded project. ● Would still need to consider a sustainability plan for when the next funded program of work finished

Table 3. Weaknesses for the four sustainability models (Lewis, van den Broek, & Mihalyi, 2016, pp. 17-24)

	Opportunities
Sponsorship	● We create a network effect where many people contribute small amounts of time, money or materials to enable the network to flourish in a decentralised way
Membership or Merger	● The network could quickly raise funding allowing it to grow and develop further ● Options to expand the model in the future to include different levels of membership, within different territories
Marketplace	● Opportunity to drive revenue through commercial partnerships and develop

	OBN-owned products ● Create a 'one-stop shop' for open badge projects in Europe
Advocacy	● Partners may not see the value in promoting their services via OBN if the membership isn't sufficiently large or active.

Table 4. Opportunities for the sustainability model (Lewis, van den Broek, & Mihalyi, 2016, pp. 17-24)

	Threats
Sponsorship	● There are not sufficient resources to maintain the network and activity decreases
Membership or Merger	● We lose members to other similar networks that provide more value or access free.
Marketplace	● Merging with other networks could provide a way to quickly accelerate the growth of the network and the uptake of Open Badges across Europe ● Connecting more formally with the global Open Badge community would provide the opportunity to influence the development of the OB standard and raise the profile of the needs of the European network.
Advocacy	● The purpose and objective of the network may need to change in order to align with new funding requirements

Table 5. Threats for the four sustainability models (Lewis, van den Broek, & Mihalyi, 2016, pp. 17-24)

Following the recommendations from the OBN (Lewis, van den Broek, & Mihalyi, 2016) the sustainability plan for the OpenVM assumes a mixed approach inspired in the potential explored in the SWOT analysis. Mainly, the advocacy model could be the one which might be more adjusted to the needs of the OpenVM but there are also two main axes to inspire the whole plan: taking advantage of existing infrastructure to extend the network (based on both the Advocacy and the Membership models) and encouraging single partners to volunteer to extend and offer their support after the project life time (based on the Sponsorship model).

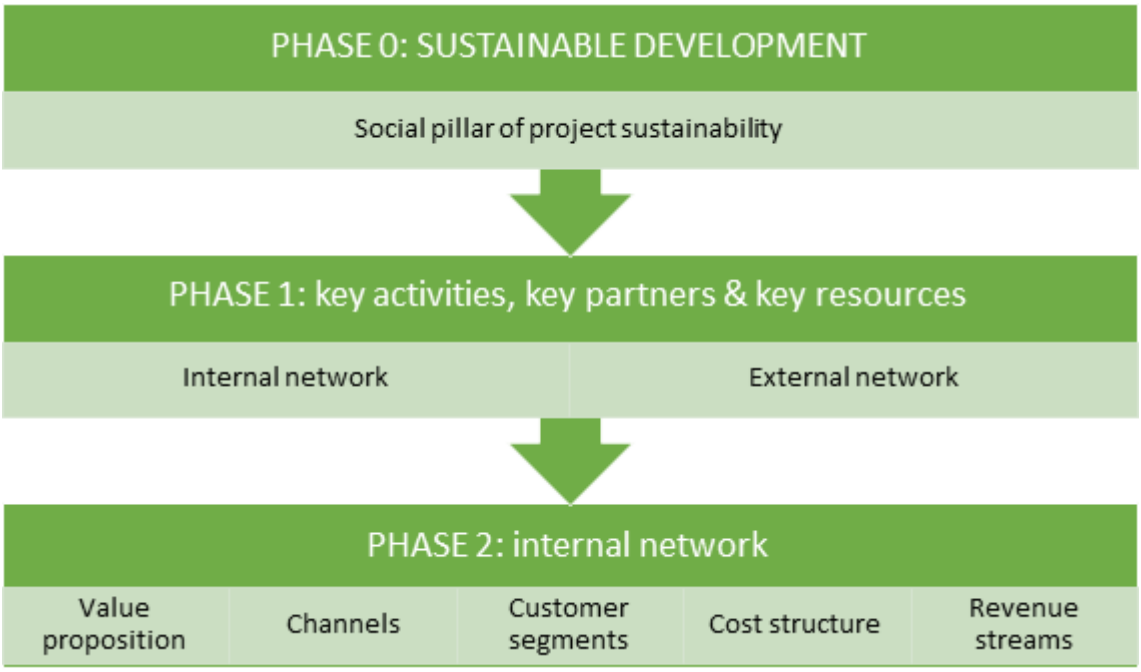
2.5. Sustainability Business model

Starting from the previous analysis, the Business model was finally suggested to the partnership and it was agreed to plan the sustainability of the OpeVM project based on its structure. Based on the model presented in the canvas[1], the elements of the business model canvas are the following:

1. Key activities
2. Key partners
3. Key resources
4. Value Proposition
5. Channels
6. Customer segments
7. Cost Structure
8. Revenue streams

3. Methodology and instrument

To begin the development of the sustainability plan, a 0 phase has been added, which refers to the social aspects of OpenVM sustainability strategy. For the following phases, the eight elements have been included in a two-step process, in which the second phase is for the definition of the three first key elements of the Business model and the final phase is for the rest of them, represented in figure 3.



[1] https://canvanizer.com/downloads/business_model_canvas_poster.pdf

Figure 3. Phases for the OpenVM sustainability plan

In order to determine the priorities including partners, activities and resources, a qualitative approach was used and a short instrument with three questions for the first elements of the Business model was presented. Project partners were asked about potential elements for the openVM sustainability through a short questionnaire and discussion. In a dynamic activity in the Roma partner meeting, in May 2018, partners were asked to answer the two following questions, regarding the whole project and their own Output:

- Is there a task in the output work plan focusing on sustainability?
- What are your ideas for sustainability in your Output?

Also, based on the sponsorship model, a third question was added:

- What can you do for the sustainability of the project?

Based on the Business sustainability model, partners had to answer these questions in relation to three elements: key partners, key activities and key resources. The activity was designed to be carried out in partner group, and in teams they had to write their ideas on colour-based clues:

- Key partners (blue paper)
- Key activities (pink paper)
- Key resources (yellow paper)

4. Results

4.1. Questionnaire and discussion

The result of the brainstorming activity is presented in the following table:

	BLUE- KEY PARTNERS	PINK - KEY ACTIVITIES	YELLOW- KEY RESOURCES
BEUTH	EADTU, EDEN, CINECA Timisoara Uni for hosting the platform (could be taken over by EDEN/EADTU) Advisory Board- establish in 2018: 3 meetings (2018-2019-2020) with Project Management Team	Technical infrastructure (server, MOOC,Bestr) Technical support (people) Contact person	Advisory board with 3 key partners (meet 1x year)- EADTU, EDEN, ESCO

	CEO of EADTU, EDEN, ESCO (decision makers)		
ROMA3	Availability for follow up projects on virtual mobility Reuse open resources created in the project in our curricular courses	Promote VM within the university governance. Example: promote the VM experience as internal traineeship	Support VM development actively in my research work
OUNL	Collaboration in different initiatives	Dissemination Create good practice through our own VM activities	Our goodwill to continue research in this area Teach with the OpenVM outputs Teaching material create will be maintained and developed
UPT	VM Content Erasmus+ partner distributions on learning/ internships mobilities → Other national universities CC and OER communities. Banat ITT Club; Startup Hub (regional associations and actions the ICT?	ACTIVITIES Upgrade of new versions of Moodle, Mahara, Bestr, … Upgrade of in-house developments Maintenance of existing VM - LH Modeling (financial and technical) for future new institutions, partners, , for VM, OERs. → How We will keep all information, resources functional	Maintenance and upgrade of new versions of Moodle, Mahara, Bestr, etc. RESOURCES Moodle - New plugins, nwe extensions, new versions. Mahara - (the same) CINECA - Bestr open badges updates UPT supported hardware (storage for new data, new VM, new contact, OERs)
UNIT/AUNEGE		Sustainability must also be kept in mind for the design and implementation of the hub. Example 1: non-automated assessments require power that must be funded after the end of the project Example 2. As a learner, I have a portfolio at my university. I need to get back from the HUB the	

		competences stored in the Mahara eportfolio into my global portfolio.	
KU LEUVEN		Dissemination of project results Further research on topic Synergies with other virtual mobility/ exchange projects. E.g. LERU network is currently initiating virtual mobility with LERU partners	Use projects results further: • in future projects • In our training/ support materials for teachers
EADTU	The partners could/ should help in sustainability Spread the word - students/ teachers	See what possibilities are for continuing the project (new project)	Will the learning hub be sustainable after the project? Who will make sure it is sustainable? What is needed for the hub to be sustainable? Who should play what role in making sure the hub and MOOC are sustainable (technical, licences, etc.)

Table 6. Data collection of partners' answers

Additional post-it were delivered among participants to write down about their own resources and tools that could be used for the sustainability plan. The results of this question are presented in the following table:

	YELLOW POST-ITS
BEUTH	Re-use 03- competency directory could be used by other projects 03- grouping can be used in Moodle 05- Badges re-use, issue somewhere else
ROMA3	Support VM development actively in my research work Single trainer role
OUNL	Maintenance of resources, output production… we'll share good practices and new knowledge experiences with OUNL Confirmation research + practical use of competence framework
UPT	Maintenance and upgrade of new versions of Moodle, Mahara, Bestr etc

EADTU	We use the Roma technique often, if I am correct, it is used for sustainability and to create impact, I should check.

Table 7. Data collection on partners' answers

4.2. The double approach to sustainability

The OpenVM designs its sustainability strategy not only as another neutral element of project management but also from the perspective of the sustainable development concept in its social pillar, for the implications it has for access to quality mobility opportunities for HE agents.

4.2.1.The sustainable development approach

Based on the literature review of the first section, it can be argued that the sustainability approach has been designed from an extended vision, in which the partnership is committed to the social pillar of an innovation-based project as is the OpenVM Erasmus+ project. Therefore, from the dimensions observed, the OpenVM project the following six:

Sustainability in the OpenVM E+ project is about...	Description
....both short-term and long-term orientation	The OpenVM strategy is committed to delivering project outcomes that can be useful over project lifetime.
… local and global orientation	The inherent international characteristic of the partnership and the intrinsic characteristics of MOOCs and the Learning HUB make them in particular committed to local and global impact
… values and ethics	The OpenEDU underpinning framework guarantees the democratic values and ethics for the OpenVM project (Tur, Urbina & Ubachs, 2018a)
… transparency and accountability	Publication of all product outcomes as well as all working documents and the accountability towards supra institutions

… stakeholder participation	The OpenVM has always been committed to integrating stakeholders from the theoretical framework research to the design of the technological and pedagogical elements and the validation of the Quality Assurance Framework (QAF).
… consuming income, not capital	The learning design has to be aware of its implications for student effort and overwhelming feelings, about which the SRL model may be helfpful (Tur, Urbina & Ubachs, 2018a)

Table 8. Sustainable development for the OpenVM

4.2.2 General overview of the sustainability plan

Derived from the literature review and data collection from partners, some main guiding indicators can be deduced for the sustainability of the project. Conceptually, partners refer in general to: close interrelationship on what is known and what is currently being done, future work for educational implementation and research, maintaining infrastructure and monitoring, and, quality and success. The following figure summarises these main aspects:

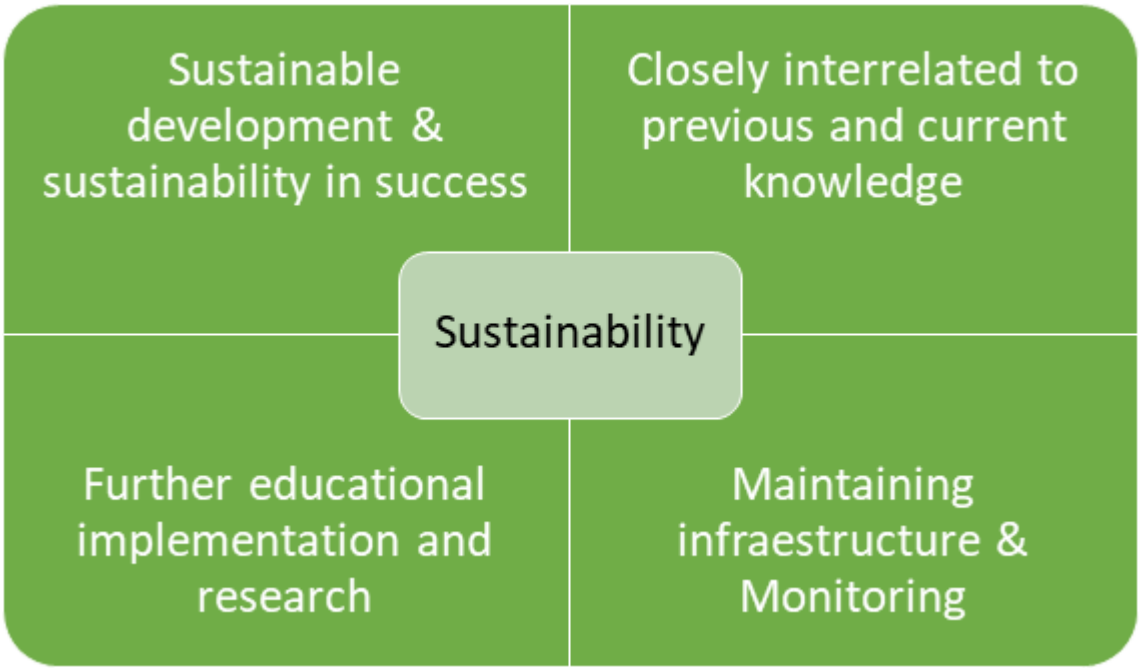


Figure 4. Main guidelines for the OpenVM sustainability plan

In more detail, and based on results, in the following sections some concrete guidelines per partner and their role towards each single output and the whole project are presented. The first detailed draft of the sustainability plan includes key activities, key partners and key resources for the internal network of the partnership and the external one created beyond these inner institutions.

4.2.2 The Business model

After the general overview of the sustainability plan and the results of data collection on the specific business model, in the following sections a more detailed plan for key activities, partners and resources are presented for both the internal network of partners and the external ones that has been woving.

4.2.2.1.Internal network: key activities

Key activities are suggested for each partner in relation to the outputs in which they are leaders or reviewers and also regarding the project.

	As Output leader	As Output reviewer	Regarding the project
OU	Further research on the 8 sets of skills		Dissemination Advisory board
UPT	Maintenance and upgrade of new versions Moodle, Mahara, Bestr, etc & Learning Hub Moodle - New plugins, new extensions, new versions.		Dissemination Further implementation Advisory board
BEUTH	Re-use 03- competency directory could be used by other projects 03- grouping can be used in Moodle 05- Badges reuse, issue somewhere else	Technical support (people) Contact person	Advisory board with 3 key partners (meet 1x year)- EADTU, EDEN, ESCO
AUNEGE	Further research Automated assessment for MOOC and mini-MOOC to guarantee usage		Dissemination Further implementation
ROMA3	Re-use open resources created in the project in curricular courses OER monitoring		Dissemination Further implementation Advisory board
UIB	Further research and quality monitoring	OER re-usage OER monitoring	Dissemination Advisory board
KU LEUVEN		Further research	Dissemination of project results Further research Advisory board

EADTU		Further research	Dissemination Continue research Advisory board
CINECA		Re-usage of Open Badges	Dissemination Continue research and implementation Advisory board

Table 9. Internal network: key activities

4.2.2.2 Internal network: key partners

As for the internal network, all partners are key partners for specific Output sustainability, in particular for those of which they are the leaders. Also, partners who are reviewers of an output, become fundamental actors who can support its sustainability. Therefore, regarding the agreement on Output teams made by leaders and reviewers (Tur, Urbina & Ubachs, 2018) the key partners are the following:

	O1	O2	O3	O4	O5	O6	O7
OU	X						
UPT		X	X				
BEUTH		X	X		X		
AUNEGE				X			
ROMA3						X	
UIB						X	X
KU LEUVEN	X						
EADTU	X						X
CINECA		X			X		

Table 10. Internal network: key partners

4.2.2.3 Internal network: key resources

As with key activities, key resources for which can be responsible partners regarding outputs and the whole project are presented in the following table:

	As Output leader	As Output reviewer	Regarding the project
OU	Research instruments		
UPT	New versions of Moodle, Mahara, Bestr, etc. RESOURCES Moodle - New plugins, nwe extensions, new versions.		
BEUTH	Competency directory Matching tool		
AUNEGE	Assessment platform		
ROMA3	OER structure		
UIB			Personal resources
KU LEUVEN			Personal resources
EADTU			Personal resources
CINECA	Open Badge infrastructure		Personal and infrastructure resources

Table 11. Internal network: key resources

4.2.2.4. Output sustainability

Once having analysed the three first elements in relation to partnership, the following table summarises these elements in relation to each Output.

	KEY ACTIVITIES	KEY PARTNERS	KEY RESOURCES
O1	Research	OU Leuven EADTU	Research instruments
O2	Maintenance	UPT Beuth CINECA	Learning Hub Moodle platform
O3	Maintenance	Beuth UPT	Technical infraestructure

O4	Automated design	UPT Aunege	Technical platform
O5	Maintenance Re-use	Beuth CINECA UPT	Bestr platform
O6	MOOC monitoring OER monitoring	RomaTre UIB	
O7	Monitoring feedback from Learning Hub & MOOC	UIB EADTU	DBR model Quality instruments European networks
OpenVM	Follow-up	All	Advisory Board

Table 12. Analysis per Output

4.2.3.1. External network: key partners

Among key partners for sustainability there are coetaneous projects on Virtual Mobility. Contact has been done with project leaders, and agreements to joint work has been done.

The current running projects from which the OpenVM project has joint efforts for meaningful collaboration that can promote future sustainability are:

Program	Program	Website
Evaluate	EVALUATE	http://www.evaluateproject.eu
UNIcollaboration	UNICollaboration	https://www.unicollaboration.org
Virtual exchange coalition	Erasmus+ Virtual Exchange INTERCULTURAL LEARNING EXPERIENCES	http://virtualexchangecoalition.org

Navigate		https://www.navigateproject.eu
MicroHE		https://microcredentials.eu
eLene4work		http://elene4work.eu
eLene4life		http://elene4life.eu
Erasmus Virtual (youth section)		online meeting- willing to collaborate no answer yet to add logo in our website https://europa.eu/youth/erasmusvirtual_en
Fied (French National network on distance education) memeber of EADTU		https://www.fied.fr/fr/index.html

Table 13. External network: key partners

4.2.3.2 External network: key activities & key resources

In this case, as the external network is clue to know how to develop activities and use resources, first, key partners are presented and later, both activities and resources are explored jointly.

	Key activities	key resources
Evaluate Virtual Exchange Navigate MicroHE Elene4work Elene4life FIED	Theoretical interrelationship Reusage Common research Participation in the Advisory board	Set of skills Learning Hub MOOC and mini-MOOCs OER Competency directory Matching tool Open Badge infrastructure eAssessement QAF

Table 14. External network: key activities and key resources

4.2.2.4 Instrument for first contact

		OpenVM proposal
1	**What can OpenVM offer?**	- Theoretical background for the development of 8 skills for Teacher Education programs and those involved in VM - OER for 8 skills involved in Virtual Mobility learning activities - 8 mini MOOCs for these skills - A complete MOOC on VM - Validated instruments for QAF
2	**What can OpenVM ask for?**	Reuse: - Learning Hub/Mini Moocs/ Mooc in your project - Promote blending Mini Moocs/Mooc Promote further educational implementation: - invite educators/students to participate in the MOOC on Virtual Mobility - invite your educators/students to co-design and/or adapt OER on Virtual Mobility to own context (e.g. in terms of content, language),

		- design an own online course on Virtual Mobility for your educators/students in the Learning Hub?
3	**Research synergies**	- Definitions and conceptual landscape - Skills development - Learning design: badges, assessment, learning path (our MOOC and mini-moocs) - Joint research
4	**Advisory board**	- Possible participation in the Advisory board

Table 15. Instrument for first contact with external network

5. Conclusions

The OpenVM with its sustainability plan challenges project management including the social pillar of sustainable development. A project with such a social implication could not forget this perspective for the sustainability strategy as well. Moreover, the link of sustainability with project success has introduced new criteria to review when re-addressing the work carried out in O7.A1.2, in particular in the work for the assessment of the quality of the project (Tur, Urbina & Ubach, 2018b).

Furthermore, the sustainability of the OpenVM Erasmus+ is based on its intrinsic characteristics. The future of the work carried out in the partnership is envisioned to be alive after its official end because of the following three main characteristics:

- Relevant. The OpenVM E+ project is relevant to current research and implementation of Virtual Mobility. It has been developed on what is known so far and has made a special effort to connect with current similar initiative. The Learning Hub is envisioned to unite all this current work and can be useful for all those interested in Virtual Mobility implementation or further research.
- Accurate. The work developed is extremely rigorous: output 1 has developed the theoretical framework based on strict research methodologies and the set of clusters of skills is a useful background for educational and research implementation. All the learning resources in Outputs from 2 to 6 have been designed regarding this set of skills. The Open Badges become a structure for the assessment of these skills and are perfectly integrated into the MOOC design. The selection of OER has been done based on a previously validate rubric for OER quality assessment.
- Grounded and interrelated. The competency directory relates the set of skills with current recognised set of skills such as ESCO, which are important for current European labour force. The underpinning structure of key associations from Higher Education context makes it feasible and visible for a wide range of stakeholders in Europe.

More agreements about the engagement of partners, their responsibility and the need of their resources and agency are needed in the partnership. Also, the next step will be the planning of all other elements of the sustainability plan such as the customer relationship and segments, channels, cost structure and revenue streams; and, finally, working further with the network of key participants for their help in terms of dissemination and future sustainability.

6. References

Agarwal,S.R. & Kalmár, T.(2016). *Sustainability in Project Management: Eight principles in practice*. Master thesis. Retrieved from http://umu.diva-portal.org/smash/get/diva2:899231/FULLTEXT01.pdf

Elkington, J. (1997). *Cannibals with Forks: the Triple Bottom Line of 21st Century Business*. Capstone Publishing Ltc. Oxford.

Lewis, L.; van den Broek, E., & Mihalyi, K. (2016). O1A5 Green Paper (Open Badge Network project, Erasmus+). Retrieved from http://www.openbadgenetwork.com/outputs/obn- framework-and-leadership/

Mihalyi, K. (2017, July 31). Open Badge Network. 01.A6. Business plan. Retrieved from http://www.openbadgenetwork.com/wp-content/uploads/2017/10/O1A6OBN_BusinessPlan_FINAL-1.pdf

Rogers, E. (1995). Diffusion of innovations. New York: Free Press

Silvius, A. G., & Schipper, R. (2015). A conceptual model for exploring the relationship between sustainability and project success. *Procedia Computer Science, 64,* 334-342. doi: 10.1016/j.procs.2015.08.497

The Business Model Canvas. Retrieved from https://canvanizer.com/downloads/business_model_canvas_poster.pdf

Tur, G., Urbina, S. & Ubachs, G. (2018a, September 30). *Open Virtual Mobility. Output 07.A1.1: Quality Assurance Framework. Final draft.* Retrieved from https://www.openvirtualmobility.eu

Tur, G., Urbina, S., & Ubachs, G. (2018b, September 30). *Open Virtual Mobility. Output 07.A1.2: Design of Quality Assurance Process. Final draft.* Retrieved from https://www.openvirtualmobility.eu

Ubachs, G. & Hederikx, P. (2018). EADTU Mobility Matrix, (pp. 26). Maastricht, NL: EADTU. Retrieved from https://tinyurl.com/EADTU-mobility-matrix

Von Hippel, E. (1986). Lead users: a source of novel product concepts. *Management science, 32*(7), 791-805. doi: 10.1287/mnsc.32.7.791