



VRE4EIC

**A Europe-wide Interoperable Virtual Research Environment
to Empower Multidisciplinary Research Communities
and Accelerate Innovation and Collaboration**

Deliverable D6.2

Engagement and Training Evaluation Plan

Document version: 1.0

VRE4EIC DELIVERABLE

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Project	
Grant Agreement number	676247
Project acronym:	VRE4EIC
Project title:	A Europe-wide Interoperable Virtual Research Environment to Empower Multidisciplinary Research Communities and Accelerate Innovation and Collaboration
Funding Scheme:	Research & Innovation Action (RIA)
Date of latest version of DoW against which the assessment will be made:	14.01.2015
Document	
Period covered:	M1-M12
Deliverable number:	D6.2
Deliverable title	Engagement and training evaluation plan
Contractual Date of Delivery:	30/09/2016
Actual Date of Delivery:	21/09/2016
Editor (s):	Anneke Zuiderwijk (TU Delft)
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Reviewer (s):	Pierre Guisset (ERCIM), Anne Asserson (euroCRIS)
Participant(s):	Daniele Bailo (INGV), Zhiming Zhao (UvA)
Work package no.:	6
Work package title:	Communities engagement and training
Work package leader:	Anneke Zuiderwijk (TU Delft)
Distribution:	PU
Version/Revision:	1.0
Draft/Final:	Final
Total number of pages (including cover):	20

What is VRE4EIC?

VRE4EIC develops a reference architecture and software components for VREs (Virtual Research Environments). This e-VRE bridges across existing e-RIs (e-Research Infrastructures) such as EPOS and ENVRI+, both represented in the project, themselves supported by e-Is (e-Infrastructures) such as GEANT, EUDAT, PRACE, EGI, OpenAIRE. The e-VRE provides a comfortable homogeneous interface for users by virtualising access to the heterogeneous datasets, software services, resources of the e-RIs and also provides collaboration/communication facilities for users to improve research communication. Finally it provides access to research management /administrative facilities so that the end-user has a complete research environment.

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VRE4EIC has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 676247.

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1 Introduction

The VRE4EIC project aims at making it easier for researchers to reuse heterogeneous scientific datasets, software components, services (including workflows) from multiple disciplines utilizing distributed heterogeneous resources for computing and instrumentation/sensors. The project will deliver a VRE reference architecture, a reference implementation, and prototypes for e-Research Infrastructures (e-RIs) (EPOS and 20 others in the cluster of ENVRI^{PLUS}) removing barriers of existing e-RIs and providing a single point of homogeneous access to heterogeneous data and tools that support data reuse.

In order to continuously identify user requirements and to maximize its impact, VRE4EIC has set up a systematic methodology for evaluating the project results and for assessing their impact. This methodology has been described in D2.2 (WP2).

As the user experience and VRE usability are key to the VRE4EIC project (see the project objectives in section 2.1), this deliverable (D6.2) focuses specifically on a plan for evaluating the user engagement and training, in addition to the evaluation of and evaluation plan for the VRE4EIC architecture, prototype and use cases in WP2. The separation of the evaluation in WP2 and the evaluation in WP6 allows for evaluating whether certain evaluation outcomes (e.g. successful VRE use, but also problems with the VRE) are due to system design (evaluation in task 2.4) and/or due to training (evaluation in task 6.2).

This deliverable provides specific measurable goals for evaluating the engagement of researchers in the project and for the training materials and events. It starts by explaining the scope of the VRE4EIC engagement and training evaluation (chapter 2) and subsequently discusses the already developed engagement and training plans from deliverable 7.2 and 6.1 (chapter 3) and the already developed evaluation methodology from D2.2 (chapter 4). Thereafter, the engagement and training evaluation measures are described (chapter 5), followed by the engagement and training evaluation plan (chapter 6). Chapter 7 describes the next steps for the engagement and training evaluation, and chapter 8 summarizes the main conclusions from this deliverable.

2 Scope of VRE4EIC engagement and training evaluation

2.1 VRE4EIC project objectives

The objectives of the VRE4EIC project are:

1. Increase VRE **usability** in different interdisciplinary domains by closely involving user communities and real-world use cases in the VRE development.
2. Increase the **quality of VRE user experiences** by providing user centred, secure, privacy compliant, sustainable environments on searching data, composing workflows and tracking data publications.
3. Increase the **deployment** of the VRE on different clusters of research infrastructures by abstracting and reusing building blocks and workflows from existing VREs, infrastructures and projects.
4. Improve the **contextual awareness and interoperability** of the metadata across all layers of the resources in the VRE.
5. Promote the **exploitation and standardisation** of the VRE4EIC solution to different research domains and communities.

All of these objectives require the engagement and training of the VRE4EIC target groups. These objectives have to be considered in this engagement and training evaluation plan.

2.2 Engagement and training evaluation objectives

The objective of the engagement and training evaluation plan is described in Task 6.2:

To define specific measurable goals for evaluating the engagement of researchers in the project and for the training materials and events.

The engagement of researchers in the project and the training of researchers and other stakeholders should contribute to realizing the VRE4EIC project objectives as described in section 2.1. User engagement and training should enhance VRE usability, by helping end-users to obtain the capabilities needed for VRE usage. Feedback obtained from end-users gives insight in how the quality of VRE user experiences can be improved further. Engagement and training of e-RI and VRE developers should promote the deployment, exploitation and standardisation of the e-VRE solution, and should improve the contextual awareness and interoperability of metadata across all layers of the resources in the VRE.

In this deliverable measurable goals that can be used to attain the VRE4EIC project objectives are defined. Examples of such goals are the number of researchers involved in the engagement and training events, metrics for the quality and impact of the events, and metrics for the involvement of the targeted communities. Thus, the evaluation plan in this deliverable focuses only on the engagement and training and excludes other evaluation objectives, such as the evaluation of the VRE architecture, the three VRE prototypes and the 25 use cases developed in the project. This deliverable also excludes evaluation objectives related to system design. For the evaluation plan of aspects other than engagement and training, see deliverable 2.2.

2.3 Evaluation target groups

The viewpoints of the following target groups are central to the VRE4EIC engagement and training evaluation:

- Researchers as VRE users, including academic and governmental researchers, research managers, educators, students, innovators, entrepreneurs and the interested citizen;
- VRE developers, including commercial (large IT companies, SMEs, entrepreneurs) and non-commercial (universities, not-for-profit organisations, foundations, VRE related projects) developers;
- Scientific VRE researchers, including academics who conduct research on VREs, for instance on VRE components and VRE communities;
- VRE data publishers, i.e. publishers who wish their data to be available to VRE users, including research institutions and archives, universities, governmental organisations, various researchers and other data publishers.
- Other. At the same time, we envision other potential target groups, such as journalists, educators and students, although these groups are not the main focus of the project.

These target groups may overlap. For example, data publishers can also be VRE users. The target groups will be targeted especially in the domains of earth and environmental sciences related to other sciences (e.g. social sciences, humanities, life sciences, physics and other domains).

3 Engagement and training plan (D7.2 & D6.1)

Two already developed deliverables describe the engagement plan (D7.2) and the training plan (D6.1) used in the VRE4EIC project. In this chapter we summarize the key findings from D7.2 and D6.1 and we explain how the outcomes of these deliverables are used as input for the engagement and training evaluation plan.

3.1 Engagement activities (D7.2)

D6.1 refers to D7.2 for an overview of engagement activities. Although these activities are presented as dissemination activities in D7.2, they can be used as ways to engage with the VRE4EIC target groups. Table 1 below shows the dissemination/engagement activities included in D7.2 (see chapter 4 of D7.2).

Table 1: Types of engagement activities used in the VRE4EIC project (from D7.2).

Activity	Audience	Owner	Contributors	Key Performance Indicator (KPI)
Web site	General	ERCIM	All	Up and running
Newsletter	Specific	CNR	All	6 issues published
Social media	General	ERCIM	All	Active, 100+ followers
Press releases	General	ERCIM	All	6 issues published
Workshops	Specific	TUD	All	15 workshops organised
Academic dissemination	Specific	CWI	All	10 open access publications, 10 scientific papers

D7.2 defines six key activities that can be used for engagement: the website, newsletters, social media, press releases, workshops and academic dissemination (e.g. through conference and journal papers). These six key activities will be included in the engagement and training evaluation plan presented in this deliverable.

3.2 Training activities (D6.1)

Table 2 shows the type of training activities that are described in D6.1 (see chapter 4 of D6.1). The table shows that the VRE4EIC project has four focus areas for its training activities: VRE concepts, use of VRE by researchers, use of VRE across multiple e-research infrastructures and use of VRE4EIC components to build new VREs or to improve existing ones. The training focus on VRE concepts will remain during the entire project. Starting in month 18, the training activities will additionally be focused on the use of VRE by researchers, and from month 24 on the use of the e-VRE (i.e. the software result of the VRE4EIC project) by researchers across multiple e-RIs. Between month 30 and 36 the training activities also focus how the e-VRE components can be used to build your own VRE.

Table 2: Types of training activities used in the VRE4EIC project (from D6.1).

Project period	Training focus	By Whom	Modality
M12-M18 And then continuous	VRE concepts	Project team members	Face to Face Online education
M18-M24	Use of e-VRE by researchers	Project team members, then ambassadors (e.g. coordinators of VRE-related projects such as EPOS and ENVRIplus), then beta-users (e.g. TU Delft university students)	Face to Face Online Education MOOC
M24-M30	Use of e-VRE across multiple e-research infrastructures	Project team members Then ambassadors	Face to Face Online Education
M30-M36	Use of e-VRE components to build your own VRE	Project team members	Face to Face

As mentioned in D6.1, before widely giving trainings to end-users, some training will be given and used to prepare the “Training the trainers” activity: preparing materials, training curriculum, and assessments, and getting feedback from attendees. This will start as early as M6 (MOOC started in March 2016) and will be improved based on feedback from each training session until the end of the project.

Each of the specific training focus areas as described in D6.1 are included in the engagement and training evaluation plan that is presented in this deliverable.

4 Evaluation methodology (D2.2)

Deliverable 2.2 has already provided an evaluation methodology for the VRE4EIC project as a whole. It defines the evaluation objectives, measurements, targets and methods for the VRE4EIC project in general. In this chapter we summarize the key findings from D2.2 and we explain how the outcomes of D2.2 are used as input for the engagement and training evaluation plan.

D2.2 reviewed theories and concepts from existing project evaluations that are relevant in the context of the VRE4EIC evaluation methodology. Drawing from the described literature and interpreting it in the context of the VRE4EIC project, a key conclusion of the review was that specific evaluation criteria should be developed [1] and that both quantitative and qualitative approaches can be included [2]. Furthermore, it was found that both objective/rational engineering assumptions and 'soft' subjective/political social science assumptions can be included in Information System (IS) evaluation [3, 4]. IT evaluation can take place at different points in time or continuously [2], and it is important to evaluate at different development stages [5]. The characteristics, objectives, expected benefits and expected costs of the IS or the IT project determine the suitability of a particular evaluation strategy [2, 6]. Finally, specific individual characteristics and skills should be taken into account in measuring the intention to use a new technology, in measuring success and in measuring electronic service quality.

Building on the relevant theories and concepts from existing project evaluation, as described in D2.2, the evaluation methodology for the VRE4EIC project was developed (see chapter 4 of D2.2). The complete table of evaluation and impacts as defined in D2.2 is reproduced below. Whilst all goals require engagement for their impact to be achieved, those relating specifically to engagement and training will be shown in bold.

Table 3: VRE4EIC project evaluation objectives, measurements, targets and methods (from D2.2).

VRE4EIC project objectives	Measurements	Targets per project Year (Y) (cumulative)			Evaluation method
		Y1	Y2	Y3	
1. Usability	Number of users of the VRE4EIC building blocks ¹	-	25	100	Web analytics & log data
	Percentage of recurring users of the VRE4EIC building blocks ¹	-	5%	10%	
	Number of research collaboration groups on the e-VRE ¹	-	5	10	
	Number of domains involved in the e-VRE	-	5	10	
2. Use	Percentage of end-users involved in the evaluations finding it easy to use the e-VRE, EPOS VRE and ENVRI+-VRE (e.g. for sharing research data and information, searching research data and information, processing and using research data information, collaborating with other researchers, composing workflows and for tracking data publications) ¹	-	20%	40%	User questionnaires, participant observations, usability tests, group discussions
	Number of VRE prototypes developed ¹	-	1	3	Web

¹ Since the e-VRE building blocks and prototypes will be developed in the second and third year of the project, there are no targets for this measurement in year 1.

	Number of high quality software services offered to developers through the prototype(s) ¹	-	3	15	analytics & log data
	Number of datasets (with related publications) available to users through the prototypes¹	-	500	10,000	
	Number of researchers targeted as potential end-users	4,000	25,000	70,000	
2. User experience	Number of VRE4EIC-related training materials developed (e.g. MOOC videos)	5	10	15	Analytics
	Number of languages in which training materials are available to users	1	3	5	
	Number of users (with different skills) accessing the training materials	2,000	4,000	7,000	
	Percentage of developers convinced that the VRE4EIC building blocks enable researchers to work more effectively ¹	-	20%	75%	User questionnaires, participant observations, usability tests, group discussions, semi-structured interviews, log data
	Percentage of developers convinced that the VRE4EIC building blocks enable researchers to work more efficiently ¹	-	20%	75%	
	Percentage of developers convinced that the VRE4EIC building blocks support higher productivity of researchers ¹	-	20%	75%	
	Percentage of end-users satisfied with the VRE prototype (including the VRE services and the VRE learning environment) ¹	-	25%	50%	
	Percentage of end-users satisfied with security and privacy policies of the VRE prototype (describing conditions under which data can be shared and used) ¹	-	25%	50%	
3. VRE deployment	Number of building blocks and workflows from existing VREs, infrastructures and projects reused by VRE4EIC ¹	-	5	15	Analytics
	Number of use cases that the VRE building blocks support ¹	-	7	25	Participant observations, usability tests
	Strategies for handling security, privacy and trust issues developed	Yes	Yes	Yes	SWOT-analysis, analytics
4. Contextual awareness and interoperability	Number of metadata and architecture standards supported by the VRE4EIC architecture	1	3	5	SWOT-analysis, analytics
	Number of metadata mappings conducted	1	3	5	
5. Exploitation and standardi-	Exploitation plan for the VRE architecture and the canonical prototype developed	-	Yes	Yes	(Web) Analytics, SWOT-analysis
	Number of conference papers about the project	1	5	10	

zation	Number of (open access) journal papers about the project	-	3	10
	Total number of scientific publications by the project partners	2	10	25
	Number of commercial associate partners (SMEs) involved in the project	2	4	4
	Number of services disseminated by the competence centre (open source, for VRE developers)¹	-	5	15
	Number of countries where the VRE4EIC building blocks are available to users and developers ¹	-	15	28
	Number of languages that the e-VRE is available in ¹	-	2	5
	Number of standardisation group meetings (e.g. W3C, RDA)	2	5	12
	Number of VRE-related projects (and/or their communities) with which VRE4EIC project partners collaborate	2	20	53
	Number of press-releases	2	4	6
	Number of project newsletters	2	4	6
	Number of public websites developed	1	1	1
	Number of project stands developed	1	1	1
	Number of posters developed	-	1	2
	Number of flyers/brochures disseminated	300	600	1,000
	Number of social media used (e.g. Twitter accounts)	2	3	3
	Number of workshops organized	5	10	15
	Number of interviews for analysing user requirements	10	10	10
	Number of other interviews (excluding those for user requirements)	-	3	5
	Number of project presentations	5	12	20
	Number of survey responses of potential end-users	20	50	100
	Number of potential end-user training sessions	2	10	20
	Number of lab experiments	-	-	2
	Number of (university) lectures	1	5	10
Number of meetings with the commercial associate partners	1	2	3	

Some of the above-mentioned measurements are related to engagement and training, as shown in bold. Whereas these are useful measurements for the VRE4EIC project in general, the VRE4EIC project partners want to be able to make a distinction between whether certain project results are the consequence of system performance or of training and engagement activities. Therefore, some of these engagement and training measurements need to be more detailed. Additional and more specific measures are needed for the engagement and training evaluation. Chapter 5 provides these measures.

5 Engagement and training evaluation measures: objectives and impact

This section provides the specific measurable goals for evaluating the engagement of the target groups in the project and for the training materials and events. The measurable goals include both goals related to the VRE4EIC project objectives (e.g. concerning the usability of the e-VRE software) and the impact of the VRE4EIC project (e.g. concerning the number of researchers engaged). Key Performance Indicators (KPIs) for measuring these goals will be provided in section 6 of this deliverable. A few measurable goals overlap with the ones mentioned in Table 2 of D2.2.

5.1 Training the trainers

As mentioned in D6.1, there are different types of foci for the training activities. For each of these types, the trainers also need to be trained. The targets that have been created to measure the training of the trainers include the following.

- VRE4EIC project meetings serving as sessions where project partners share their insights in VRE concepts, and where all the partners agree on the relevant VRE concepts. For instance, in the first project meeting the terms VRE, e-VRE and e-RI were agreed upon.
- VRE4EIC project meetings serving as sessions where project partners share their insights in e-RI and VRE usage by researchers. The characterization of existing e-RIs provided input for this discussion.
- Training of the instructors of the MOOC (i.e. project partners that recorded online videos for the MOOC) by online e-learning experts of TU Delft regarding how to make engaging videos with an impact.
- Training sessions at VRE4EIC project meetings concerning the usage of VRE across multiple e-RIs by researchers in the EPOS and ENVRI+ projects.
- Training sessions concerning the CERIF metadata format by euroCRIS.
- Training sessions by the technical partners that are developing the e-VRE (CNR, FORTH, CWI) concerning how the e-VRE components can be used to build new VREs or to improve existing VREs.

5.2 Engaging and training researchers as VRE users

The metrics that have been created to measure the engagement and training of researchers as VRE users include the following.

- The number of researchers targeted as potential end-users
- The number of training materials developed for researchers as VRE users
 - o Flyer developed
 - o Project website developed
 - o The number of project newsletters developed
 - o Social media accounts maintained
 - o The number of press releases
 - o Online training videos developed
 - o The number of online courses developed
 - o Poster developed
 - o Slides for project presentations developed
- The number of training materials disseminated

- The number of flyers distributed
- The number of unique visitors of the VRE4EIC project website
- The number of people reached through project newsletters
- The number of followers on social media (e.g. Twitter followers)
- The number of people that have watched the online videos
- The number of poster presentations given
- The number of project presentations given
- The number of potential end-user training sessions
 - The number of workshops organized
 - The number of lab experiments organized

5.3 Engaging and training VRE developers

The metrics that have been created to measure the engagement and training of VRE developers include the following.

- Qualitative
 - Increase the deployment of the VRE on different clusters of research infrastructures
 - Improve the contextual awareness and interoperability of the metadata across all layers of the resources in the VRE.
 - Promote the exploitation of the VRE4EIC solution to different research domains and communities
 - Promote the standardisation of the VRE4EIC solution to different research domains and communities
- Quantitative
 - The number of VRE-related projects (and/or their communities) with which VRE4EIC project partners collaborate
 - The number of services disseminated by the competence centre (open source, for VRE developers)
 - The number of commercial associate partners (SMEs) involved in the project

5.4 Engaging and training scientific VRE researchers

The metrics that have been created to measure the engagement and training of scientific VRE researchers (i.e. academics doing research on VREs) include the following.

- The number of conference papers about the project
- The number of (open access) journal papers about the project
- The total number of scientific publications by the project partners
- The number of (university) lectures given

5.5 Engaging and training VRE data publishers

The metrics that have been created to measure the engagement and training of VRE data publishers include the following.

- The number of sources from which data is obtained (i.e. the number of e-RIs and other data sources)
- The number of research domains in which data is provided
- The number of datasets (with related publications) available to users through the prototypes.

6 Engagement and training evaluation plan: KPIs

The table below provides a list of concrete evaluation activities for the before-mentioned engagement and training activities, taking into account the engagement and training evaluation objectives (see section 2.2) and each of the evaluation target groups (see section 2.3). This table extends the measurements and targets/KPIs that have previously been presented in D2.2, D6.1 and D7.2.

Table 4: VRE4EIC engagement and training evaluation objectives, measurements and targets

VRE4EIC engagement and training evaluation objectives	Measurements	Targets/KPIs per project Year (Y) (cumulative)			Modality	Responsible partner
		Y1	Y2	Y3		
1. Training the trainers	Number of sessions in which VRE concepts are defined and agreed upon	3	3	3	Project meetings	All partners
	Number of sessions in which the State-of-the-Art concerning VRE usage by researchers is discussed	2	4	6	Project meetings	All partners but particularly TU Delft and ERCIM
	Provision of training for partners that contribute to the development of online education and videos	Yes	Yes	Yes	Project meetings and e-mail	TU Delft
	Number of sessions/events in which partners are informed concerning the usage of VREs across multiple e-RIs by researchers in the EPOS and ENVRI+ projects	5	10	15	Project meetings, document sharing, e-mail	INGV, UvA
	Number of metadata training sessions	3	4	4	Project meetings, online training	euroCRIS
	Number of sessions in which project team members are trained on how the e-VRE components can be used to build new VREs or to improve existing VREs	-	2	4	Project meetings	CNR, FORTH, CWI
2. Engaging and training researchers as VRE users	The number of researchers targeted as potential end-users	4,000	25,000	70,000	Press releases, newsletters, conferences, workshops, students, etc.	All partners
	The number of training materials developed for researchers as VRE users	5	10	15	Online and on paper	All partners but particularly

						ERCIM
	Flyer developed	Yes	Yes	Yes	Digital ready – to print	ERCIM
	Project website developed	Yes	Yes	Yes	Digital	ERCIM
	The number of project newsletters developed	2	4	6	Digital	ERCIM
	The number of social media accounts maintained	1	1	1	Digital	ERCIM
	The number of press releases	2	4	6	Digital	ERCIM
	The number of online training videos developed	10	15	20	Online courses	TU Delft
	Number of posters developed	-	1	2	Poster	All partners
	Slides for project presentations developed	Yes	Yes	Yes	Digital	All partners
	The number of flyers/brochures distributed	300	600	1,000	Paper	All partners
	The number of unique visitors of the VRE4EIC project website	35,000	45,000	55,000	Website	ERCIM
	The number of people reached through project newsletters	50	70	90	E-mail	ERCIM
	The number of followers on social media (e.g. Twitter followers)	50	70	90	Social media	ERCIM
	The number of people that have watched the online videos	200	400	600	Online courses and other means	TU Delft
	The number of poster presentations given	1	2	3	Poster	All partners
	The number of project presentations given	5	12	20	Conferences and other events	All partners
	The number of potential end-user training sessions	2	5	8	Online courses, workshops	All partners
	The number of workshops organized	5	10	15	Workshops	All partners
	The number of lab experiments	-	-	2	Lab experiments	TU Delft
	The number of online courses developed (e.g. a MOOC)	1	2	2	Online courses	TU Delft
3. Engaging and training VRE developers	Increase the deployment of the VRE on different clusters of research infrastructures	-	-	Yes	Digital	All partners
	Improve the contextual awareness and interoperability of the metadata across all layers of the resources in the VRE	-	-	Yes	Digital	euroCRIS
	Promote the exploitation of the VRE4EIC solution to different research domains and communities	-	-	Yes	Digital	UvA

	Promote the standardisation of the VRE4EIC solution to different research domains and communities	-	-	Yes	Digital	ERCIM
	Number of VRE-related projects (and/or their communities) with which VRE4EIC project partners collaborate	2	20	53	Digital	All partners
	Number of services disseminated by the competence centre (open source, for VRE developers) ¹	-	5	15	Digital	CNR
	Number of commercial associate partners (SMEs) involved in the project	2	4	4	Online and offline	All partners
4. Engaging and training scientific VRE researchers	Number of conference papers about the project	1	5	10	Papers	All partners
	Number of (open access) journal papers about the project	-	3	10	Papers	All partners
	Total number of scientific publications by the project partners	2	10	25	Papers	All partners
	Number of (university) lectures	1	5	10	Lectures	TU Delft, UvA & other partners
5. Engaging and training VRE data publishers	The number of sources from which data is obtained (i.e. the number of e-RIS and other data sources)	1	5	10	Digital	CNR
	The number of research domains in which data is provided	1	3	5	Digital	CNR
	The number of datasets (with related publications) available to users through the prototypes	-	500	10,000	Datasets	CNR

7 Next steps

Already since the start of the VRE4EIC project, various engagement and training events have been organized, to ensure that the measures and KPIs presented in Table 4 can be attained. The organization of engagement and training events will continue throughout the entire project. Task 6.3 will take the developed evaluation plan and will apply it to the specific events that are mentioned in WP2, WP6 and WP7 deliverables. Task 6.3 will:

- Organise various engagement and training events;
- Evaluate the strengths and weaknesses of the VRE4EIC project regarding the engagement and training plan;
- Obtain information on the impact of the performed engagement and training events, including the number of researchers reached;
- Obtain feedback on directions for improving the developed VRE learning environment and provide this feedback to WP3;
- Obtain feedback on directions for improving the developed VRE training materials and provide this feedback to task 6.1.
- Interact with task 7.2 and make joint effort for exploiting research results of the project.

The evaluation of engagement and training events will first be described in a deliverable in month 18 and will be updated in month 33.

8 Conclusions

This deliverable aimed to define specific measurable goals for evaluating the engagement of researchers in the project and for the training materials and events. The evaluation plan in this deliverable focuses only on the engagement and training and excludes the evaluation of the VRE architecture, the three VRE prototypes, the 25 use cases developed in the project and the evaluation of system design.

Within the VRE4EIC project, several deliverables have already been developed that provide input for the engagement and training evaluation plan. First, D7.2 provides an overview of activities that can be used as ways to engage with the VRE4EIC target groups. Second, provides an overview of activities that can be used to train the VRE4EIC target groups. Third, D2.2 provides an evaluation methodology for the VRE4EIC project as a whole. It defines the evaluation objectives, measurements, targets and methods for the VRE4EIC project in general. The outcomes of these existing deliverables were used to develop the engagement and training evaluation plan in this deliverable.

This deliverable describes specific measurable goals for evaluating the engagement of researchers in the project and for the training materials and events. The measurable goals include both goals related to the VRE4EIC project objectives (e.g. concerning the usability of the e-VRE) and the impact of the VRE4EIC project (e.g. concerning the number of researchers engaged). Measurable goals are described in five categories:

- Training the trainers (e.g. training sessions concerning the CERIF metadata format and training of MOOC video instructors)
- Engaging and training researchers as VRE users (e.g. the number of researchers targeted as potential end-users, the number of training materials disseminated, and the number of potential end-user training sessions)
- Engaging and training VRE developers (e.g. the number of services disseminated by the competence centre and the number of commercial associate partners (SMEs) involved in the project)
- Engaging and training scientific VRE researchers (e.g. the total number of scientific publications by the project partners)
- Engaging and training VRE data publishers (e.g. the number of sources from which data is obtained for the e-VRE).

Finally, this deliverable provides Key Performance Indicators (KPIs) for measuring the defined goals in each of the five categories. Table 4 summarizes the VRE4EIC engagement and training evaluation objectives, measurements and targets. This table extends the measurements and targets/KPIs that have previously been presented in D2.2, D6.1 and D7.2, so that more detailed information can be obtained concerning whether certain evaluation outcomes (e.g. successful VRE use, but also problems with the VRE) are due to system design (evaluation in task 2.4) and/or due to training and engagement (evaluation in task 6.2).

The targets described in this deliverable are ambitious, and failure to reach the targets in table 4 should not be seen as failures to the project since they are ambitious. However, to ensure as much as possible that the defined KPIs will be reached, the organization of engagement and training events will continue throughout the entire project. Task 6.3 will organise various engagement and training events and evaluate (both qualitatively and quantitatively) the strengths and weaknesses of the VRE4EIC project regarding the engagement and training plan. It will obtain information on the impact of the performed engagement and training events, feedback on directions for improving the developed VRE learning environment and feedback on directions for improving the developed VRE training materials. The evaluation of engagement and training events will first be described in a deliverable in month 18 and will be updated in month 33.

9 References

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