Deliverable 2.2.3
Final webinar report

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Editor:	Maribel Acosta, KIT
Deliverable nature:	Report (R)
Dissemination level: (Confidentiality)	Public (PU)
Contractual delivery date:	April 30, 2014
Actual delivery date:	April 30, 2014
Version:	1.0
Total number of pages:	26
Keywords:	Webinar delivery, training material, module, curriculum.

Executive summary

Developments on the Web during the past few years have not only been characterised by the increasing volumes of published and available data but also by the growing adoption and importance of the Linked Data technologies, which are establishing themselves in the context of publishing, interlinking and exploring datasets. Until now the main adopters have been research organisations, governmental institutions and a limited number of companies. However, with the increasing number of interested parties, committing to use Linked Data core principles, and through the plenitude of applications build on top of the already available data, it seems that the time is right for the wider industrial adoption of Linked Data. To this end EUCLID aims to support this development by addressing the need for trained data practitioners who are able to apply a Linked Data approach as part of their data business solutions.

In particular, one of the main objectives of the project is support different teaching scenarios including face to face and on site training, but also distance learning and self training. Therefore, EUCLID provides an extensive training curriculum, covering the main technologies, tools, use cases and skills that need to be acquired in order to complete both basic, as well as more complex, tasks related to dealing with Linked Data. In addition, one of the main features of EUCLID's curriculum is that it not only covers the six core topics related to learning how to use and employ Linked Data, through the six developed modules. It also provides a set of diverse materials supporting a variety of learning scenarios.

In this deliverable we describe the delivery of the materials in the form of webinars – an activity aimed to engage the community with the learning materials and solicit feedback on the contents and direction. At this point, all six of the EUCLID modules have been presented in webinars broadcast live using the Open University's Stadium platform and are made available for streaming and download on the Vimeo and Slideshare platforms, with slides on the Slideshare platform. As webinar attendance has grown, we have monitored the geographic distribution and have seen signs of how this is affected by the 'real life community engagement' task. In this deliverable we report on our experience and observations in delivering webinars on Linked Data topics.

Initially, EUCLID's plan for materials development and training delivery foresaw that each module has only one webinar. However, we found out that the overall quality of the produced recordings can be increased by introducing a rehearsal webinar, presented to an internal audience. This has helped significantly with sizing and refining the sections in each module. In addition, we advocated the recoding on mini webinars, which present more in-depth details about a particular topic, covered in one of the main modules.

Document Information

IST Project Number	FP7 - 296229	**Acronym**	EUCLID
Full Title	Educational curriculum for the usage of Linked Data		
Project URL	http://www.euclid-project.eu/		
Document URL			
EU Project Officer	Martina Eydner		

Deliverable	**Number**	2.2.3	**Title**	Final webinar report
Work Package	**Number**	2	**Title**	Community Building and Outreach

Date of Delivery	**Contractual**	M24	**Actual**	
Status	version 1.0		draft □	
Nature	prototype □ report X dissemination □			
Dissemination level	public X consortium □			

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Abstract (for dissemination)	In this deliverable we describe the delivery of the materials in the form of webinars. At this point, all six of the EUCLID modules have been presented in webinars, broadcast live and later made available for streaming and download on the Vimeo and Slideshare platforms, with slides on the Slideshare platform. As webinar attendance has grown, we have monitored the geographic distribution and have seen signs of how this is affected by the 'real life community engagement' task. In this deliverable we report on our experience and observations in delivering webinars on Linked Data topics.
Keywords	Webinar delivery, training material, module, curriculum

Version Log			
Issue Date	**Rev. No.**	**Author**	**Change**
27.03.2014	0.1	Maribel Acosta (KIT)	Initial deliverable draft
01.04.2014	0.2	Maribel Acosta (KIT)	Input in Section 2
07.04.2014	0.3	Maribel Acosta (KIT)	Input in Sections 3 and 4
24.04.2014	0.4	Maribel Acosta (KIT)	Incorporated feedback from quality assessor
30.04.2014	1.0	Maribel Acosta (KIT)	Final version

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Abbreviations

DL – Description Logic

FOAF – Friend of a Friend

fluidOps – fluid Operations AG

HTTP – Hypertext Transfer Protocol

KIT – Karlsruhe Institute of Technology

KMi – Knowledge Media Institute

LD - Linked Data

OA – Ontotext AD

ONTO – Ontotext

OU – Open University

OWL – Ontology Web Language

OWL-S – OWL for Services/ OWL-based Web Service Ontology (formerly DAML-S)

RDF/S – Resource Description Framework / Schema

SPARQL – SPARQL Protocol and RDF Query Language

URI – Uniform Resource Identifier

URL – Uniform Resource Locator

WP – Work Package

XML - Extensible Markup Language

1 Introduction

Current developments on the Web are marked by the growing adoption and importance of the Linked Data technologies. In this context, EUCLID aims to support this development by addressing the need for trained data practitioners who are able to apply a Linked Data approach as part of their data business solutions. In particular, one of the main objectives of the project is support different teaching scenarios including face to face and on site training, but also distance learning and self training. Therefore, EUCLID provides an extensive training curriculum, covering the main technologies, tools, use cases and skills that need to be acquired in order to complete both basic, as well as more complex, tasks related to dealing with Linked Data. In addition, one of the main features of EUCLID's curriculum is that it not only covers the six core topics related to learning how to use and employ Linked Data, through the six developed modules. It also provides a set of diverse materials supporting a variety of learning scenarios.

Some of the developed materials foresee a more interactive delivery, while others, such as the eBook and slides, are suitable for self learning. In this deliverable we describe the delivery of the materials in the form of webinars – an activity aimed to engage the community with the learning material and solicit feedback on its contents and direction. The EUCLID webinars are live broadcasts of presentations, given by experts in the field, who use the module slides and examples in order to explain a particular topic. The webinars were held and recorded at the Open University in Milton Keynes, which has the facilities to create multi-perspective high quality videos of live presentations. Furthermore, the webinars were used as a way to gather feedback by directly taking questions from the audience or collecting questions via Twitter, thus using the online presentations not only as broadcasting but also as feedback channels.

Figure 1a: Still from Module 4 Webinar

Figure 1a: Still from Module 5 Webinar

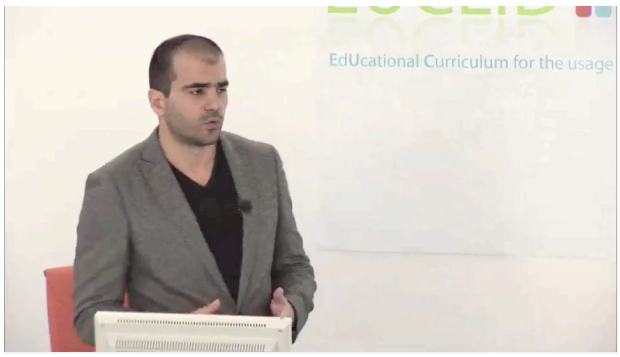


Figure 1c: Still from Module 6 Webinar

Figure 1: Stills from EUCLID webinars

The webinar recordings are available on Vimeo and SlideShare, and are use as past of the eBooks and the online courses. Together with the slides and the written chapters, they support both distance and self learning.

The content of this deliverable is structured as follows. Section 2 details all EUCLID webinars. Section 3 discusses the platforms that were used to improve our availability during future webinars. Section 4 discusses lessons learned and draws conclusions for webinar delivery. Section 4 concludes this deliverable.

2 Delivered Webinars

All the planned six EUCLID modules have been successfully delivered as webinars. In the following sections first we present a summary of the first three EUCLID webinars, which were covered in more details in EUCLID Deliverable D2.2.2. Afterwards, we present the information and statistics about the webinars for EUCLID Modules 4, 5 and 6. In these sections we present the geo-plots of the live audience that participated in each webinar and discuss their delivery and uptake.

2.1 Summary of the First Three EUCLID Webinars

In this Section we present a brief summary of the webinars for EUCLID Modules 1, 2 and 3. During the development of each webinar, we faced different challenges that allowed us to adapt the production of the materials as well as webinars to optimize the quality of the final results. In the following we expose the most important lessons and uptakes from the first webinars. Additional detailed information regarding these webinars is available in the EUCLID Deliverable D2.2.2 "Interim Webinar Report".

The Module 1 Webinar "Linked Data: Introduction and Application Scenarios" took place on 1st October 2012 and was presented by Dr. Barry Norton (OA). Previously to the live broadcasting, the webinar was rehearsed in the KMi Podium. As explained in the EUCLID Deliverable D2.2.2, this first rehearsal session was very useful, since this allowed to adjust the creation process of EUCLID materials by including the feedback raised during the rehearsal from the presenter as well as from the internal viewers in the next iteration of the slides.

The second webinar "Querying Linked Data" was broadcast on 4th March 2013 and presented by Dr. Barry Norton (OA). Similar to the previous webinar, a rehearsal session was scheduled around one more in advance to collect additional comments about the slides. One of the most important lessons from this webinar is the fact that the Open University portal restricted to 100 simultaneous connections. As the number of viewers of the EUCLID Webinar Series started to grow, we started to analyse alternative platforms to broadcast the upcoming webinars. Another important point is that for this webinar we could collect the information of the live audience and generate a geo-plot, which confirmed the reaction to diverse engagement strategies at that time.

The last webinar reported in EUCLID Deliverable D2.2.2 is Module 3 Webinar "Production of Linked Data". This webinar was presented once again by Dr. Barry Norton (OA) on 22nd April 2013. The rehearsal for this webinar took place one month in advance, enough time to implement all the revisions in the final version of the slides. During the live webinar, the number of viewers exceeded the capacity of the Open University system (100 connections), therefore the need to provide live webinars via other scalable platforms became crucial for the success of the upcoming live webinars.

After every webinar, the recordings of these three webinars were uploaded to the KMi Stadium site[1] as well as to the EUCLID channels in SlideShare[2] and Vimeo[3] (for more details see Section 3), which are well-known media-sharing platforms. Other type of complementary materials for the webinars and EUCLID modules in general, i.e. slides and screencasts (or screen captures), are also available in these channels. In addition, the webinar videos were split into smaller units named *clips* – which cover certain sub-topics of the module – and embedded as part of the learning material in appropriate sections of the chapters published in the EUCLID eBooks.

[1] http://stadium.open.ac.uk/podium
[2] http://www.slideshare.net/EUCLIDproject
[3] https://vimeo.com/euclidproject

2.2 Module 4 Webinar: Interaction with Linked Data

The EUCLID Module 4 webinar presented current techniques and popular tools to support user interaction in the Linked Data context. In particular, this webinar covered the following:

- Visualization of Linked Data datasets: challenges when plotting Linked (Open) Data; a comprehensive classification of visualization techniques; and current solutions for providing accessible view of semi-structured data with Linked Data tools and other Web-based technologies
- Linked Data search: exploitation of semantic models for data search; different types of search over semi-structured data (e.g., faceted search and semantic data search)
- Linked Data analysis: application of statistical analysis and machine learning over Linked Data.

During the webinar, a number of practical examples were presented including Linked Data-based tools like Sig.ma[4], Sindice[5], LOD Live[6], and LOD Visualization[7], as well as Web-based solutions like Google Webmaster Tool[8], Google Knowledge Graph[9] and DuckDuckGo[10]. This webinar also included a demo to analyse and process data form the music domain published following the Linked Data principles.

The fourth webinar was rehearsed – as performed in previous webinars – to an internal audience on May 15th 2013. The public live presentation was broadcast on 10th June 2013 by utilizing the OU Stadium platform. This webinar was delivered in two consecutive parts: Dr. Michael Meier (fluidOps), who delivered the first part of the webinar related to visualization of Linked Data. Michael Meier illustrated the plotting features of Information Workbench[11], a Linked Data platform developed by fluidOps, with a demo for producing graphical representations of linked data from the musical domain. Dr. Barry Norton (OA), who brought his expertise on solution architectures driven by Linked Data, presented the second part of the webinar regarding Linked Data search and analysis.

During the webinar, the live audience reached the number of 579 viewers. The geo-plot of the live audience is depicted in Figure 2, where one can appreciate high participation from diverse European countries and the United States. In particular, we can corroborate the reaction to the dissemination strategies at SemTechBiz and the San Francisco SemWeb Meet-ups by looking at the participation in the East Cost United States. Also, this webinar reached new viewers from China, Russia and Peru. This webinar reached the highest number of attendees with respect to the other webinars in the EUCLID series. This reaction corresponds to the deployment of dissemination and advertisement activities of the project in different events: SemTechBiz and the San Francisco SemWeb Meet-ups (mentioned earlier), the "Online learning and Linked Data" tutorial together with the LinkedUp[12] project, and the "The new R2RML and Direct Mapping Standards, from Semantics to practice" at the Extended Semantic Web Conference[13] (ESWC) 2013.

[4] http://sig.ma/
[5] http://sindice.com/
[6] http://en.lodlive.it/
[7] http://lodvisualization.appspot.com/
[8] https://www.google.com/webmasters/tools/
[9] http://www.google.com/insidesearch/features/search/knowledge.html
[10] https://duckduckgo.com/
[11] http://www.fluidops.com/information-workbench/
[12] http://linkedup-project.eu/
[13] http://2013.eswc-conferences.org/

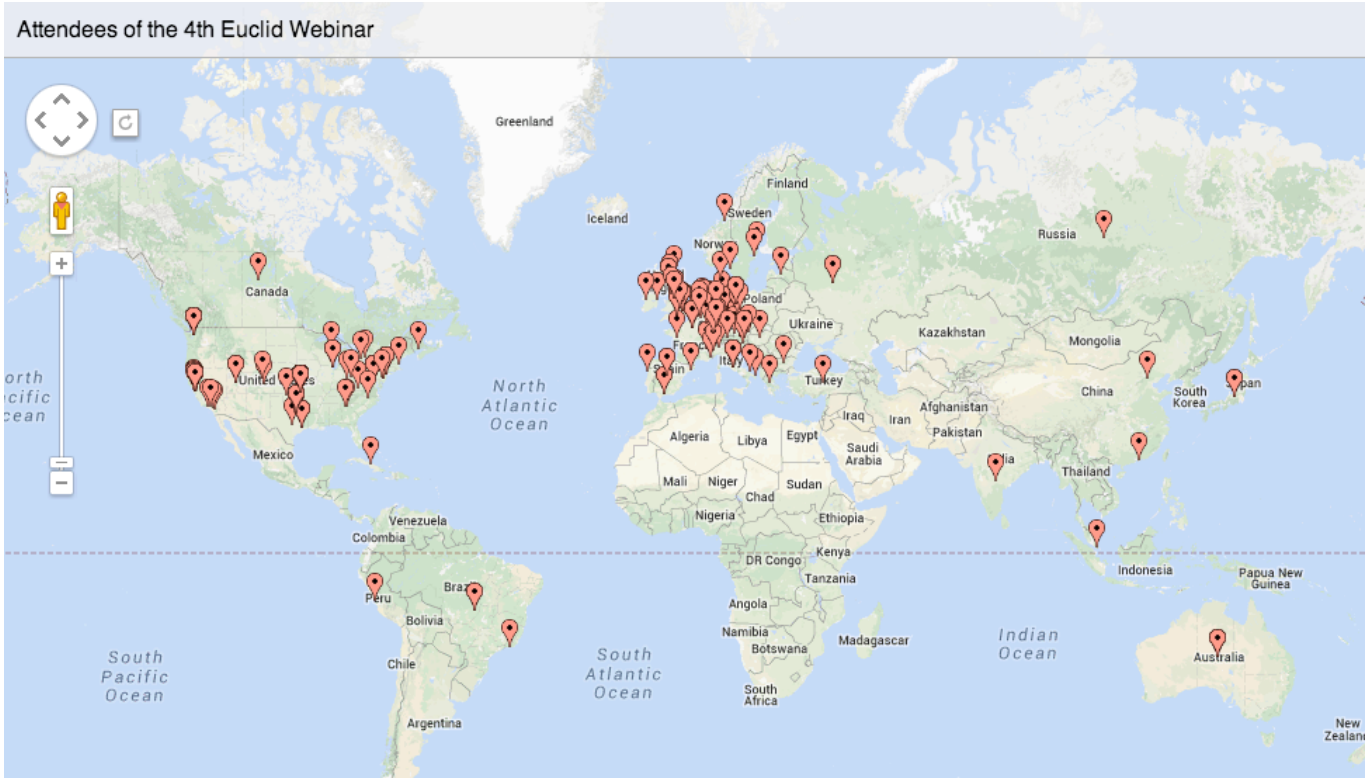


Figure 2: Geo plot of live audience for 4th EUCLID webinar

The recordings of this webinar are available in three different platforms, including the OU Stadium, SlideShare and Vimeo, under the following links:

- OU Stadium: http://stadium.open.ac.uk/2210
- SlideShare (Part 1 of 2): http://www.slideshare.net/EUCLIDproject/interaction-with-linked-data-part-i
- SlideShare (Part 1 of 2): http://www.slideshare.net/EUCLIDproject/interaction-with-linked-data-part-ii
- Vimeo (Part 1 of 2): https://vimeo.com/68160645
- Vimeo (Part 2 of 2): https://vimeo.com/68260328

According to the statistics from SlideShare and Vimeo, the two parts of the fourth webinar has reached to date over 360 views in SlideShare and 160 plays in Vimeo.

2.3 Module 5 Webinar: Building Linked Data Applications

The topic covered in EUCLID Module 5 webinar corresponds to the development of Linked-Data-based applications. During this webinar, the presenter explained a set of technologies and approaches, which allows for exploiting the properties of Linked Data to build rich applications. Starting with examples of various successful Linked Open Data applications in the real world, the webinar continued with the introduction of frameworks to build such applications. A key aspect of the webinar was to make the audience aware of different choices of such platforms to build their applications, as well as to give an overview of their most important features and capabilities. The material also included examples for the usage of Web APIs to combine and exchange other types of data besides Linked Data.

The fifth webinar was not rehearsed in the KMi Podium, since the presenter had to travel from an external country. Instead, the presenter was involved in the production of the webinar material and worked together with the KIT team on developing the slides to be presented during the live webinar. The presenter carefully revised the slides and

provided insightful feedback as well as further materials – including real life examples of building Linked Data application in practice – which were included in the final version of the slides. Therefore, even if the rehearsal could not take place for this webinar, the presenter actively participated in the quality iteration of the slides in order to guarantee high quality learning materials.

The public live webinar was broadcast on 10th June 2013 via the OU Stadium and the LiveStream platforms (see Section 3). This webinar was delivered in two parts. The presenter of this webinar was Christoph Pinkel (fluidOps), who brought his experience on the topic and provided a detailed exposition of Information Workbench, a platform produced by fluidOps specifically designed to support the development cycle of Linked Data applications.

Right after the finalisation of the webinar, a live question answering session took place via the LiveStream chat. During this session Christoph Pinkel as well as Dr. Barry Norton answered enquiries from the audience.

The live audience of this webinar fluctuated from 30 viewers in the first part, to 40 participant in the second part. During the presentation of this webinar, several attendees reported technical difficulties while joining the webinar..This could be the reason of the low audience rate achieved in this webinar with respect to the previous one. The geo-plot of the live audience is depicted in Figure 3. As in previous webinars, one can appreciate high participation from diverse European countries. In addition, this webinar reached new viewers from Turkey, Egypt, Portugal and Mexico. It is notably that the attendees from the United States dropped considerably.

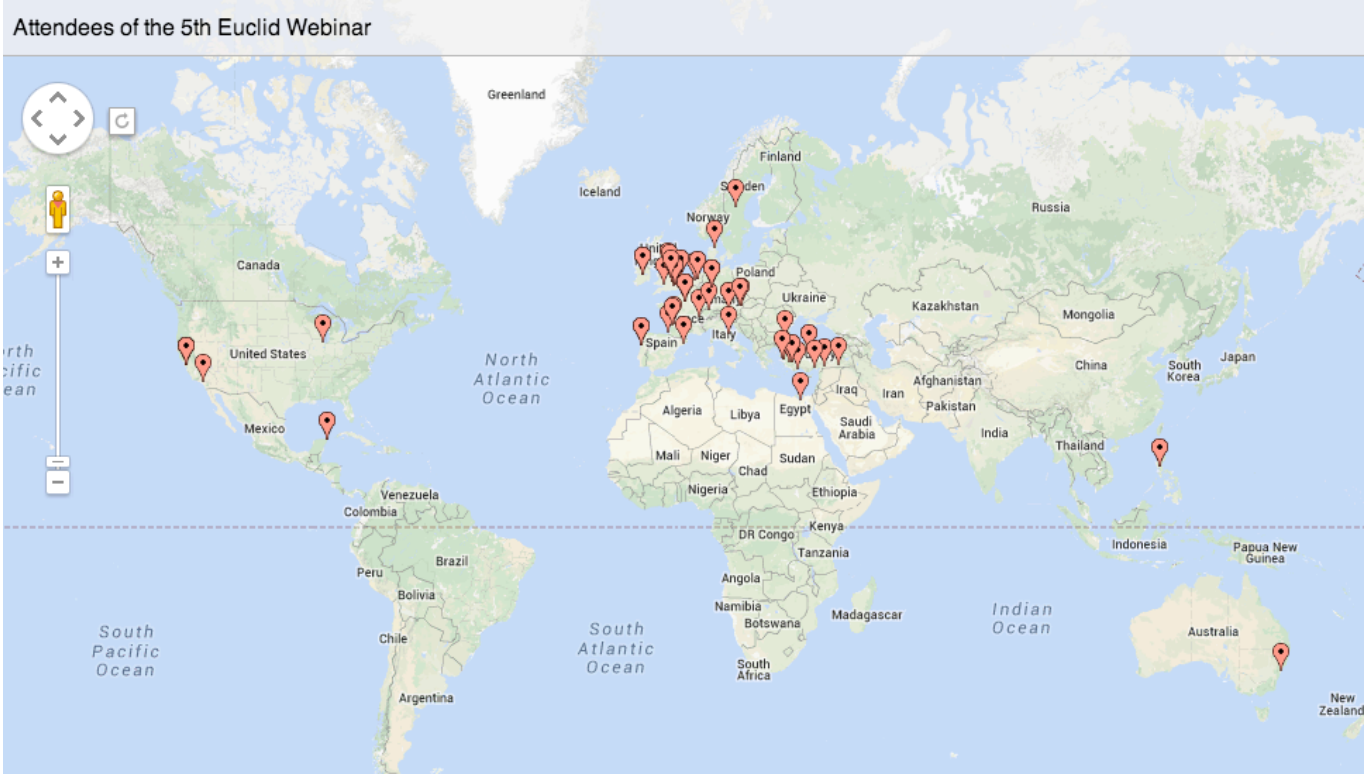


Figure 3: Geo plot of live audience for 5th EUCLID webinar

Similar to Module 4 webinar, the recordings of this fifth webinar are available in the following platforms, under the links specified below:

- OU Stadium: http://stadium.open.ac.uk/2263
- Slideshare (Part 1 of 2): http://www.slideshare.net/EUCLIDproject/building-linked-data-applications-video-part-i
- Slideshare (Part 1 of 2): http://www.slideshare.net/EUCLIDproject/building-linked-data-applications-video-part-ii
- Vimeo (Part 1 of 2): https://vimeo.com/79106373
- Vimeo (Part 2 of 2): https://vimeo.com/79128486

According to the statistics from Slideshare and Vimeo, the two parts of the fifth webinar has reached to date over 200 views in Slideshare and 100 plays in Vimeo.

2.4 Module 6 Webinar: Scaling Up Linked Data

The EUCLID Module 6 webinar presented various emerging technologies for managing Linked Data in a Big Data context. This webinar presented the basic concepts related to Big Data and discussed the challenges when processing this type of data as well as the impact on the Enterprise Data Management landscape. During the webinar, a set of widely used tools to handle data with big volume, velocity or variety was explained with illustrative examples. In particular, the webinar provided an overview of most prominent approaches for:

- storing and querying RDF and Linked Data in NoSQL datastores,
- scalable RDF inference one large distributed Hadoop clusters,
- scalable RDF inference on massively parallel GPU systems,
- real-time processing and querying of RDF streams.

Similarly to the previous module webinar, since the presenter had to travel from an external country, the sixth webinar was not rehearsed in the KMi Podium. The presenter received the webinar materials from the KIT team in advance, and the presenter adapted and included additional information in certain sections. The involvement of the presenter during the production of the slides successfully substituted the live rehearsal.

The public live webinar was broadcast on 19th December 2013 via the OU Stadium and the LiveStream platforms. As in previous webinars, this webinar was delivered in two parts. The presenter of this webinar was Marin Dimitrov (OA), who brought his experience on the topic and had delivered several presentations regarding Big Data, Smart Data and Semantic Technologies.

For this webinar, a registration step was required for viewers via the OU portal. The purpose of the registration was to collect additional information (besides the IP address, which allows to infer the geo-location) about the EUCLID live audience. The registration form enquired the name of the participant, contact email, affiliation and role within this institution. There were 53 requests to attend the webinar. The live audience of this webinar was composed of 46 participants in total.

The geo-plot of the live audience is depicted in Figure 4. As in previous webinars, one can appreciate high participation from diverse European countries. It is important to note that the attendees from the United States increased with respect to the participation experienced in Module 5 Webinar.

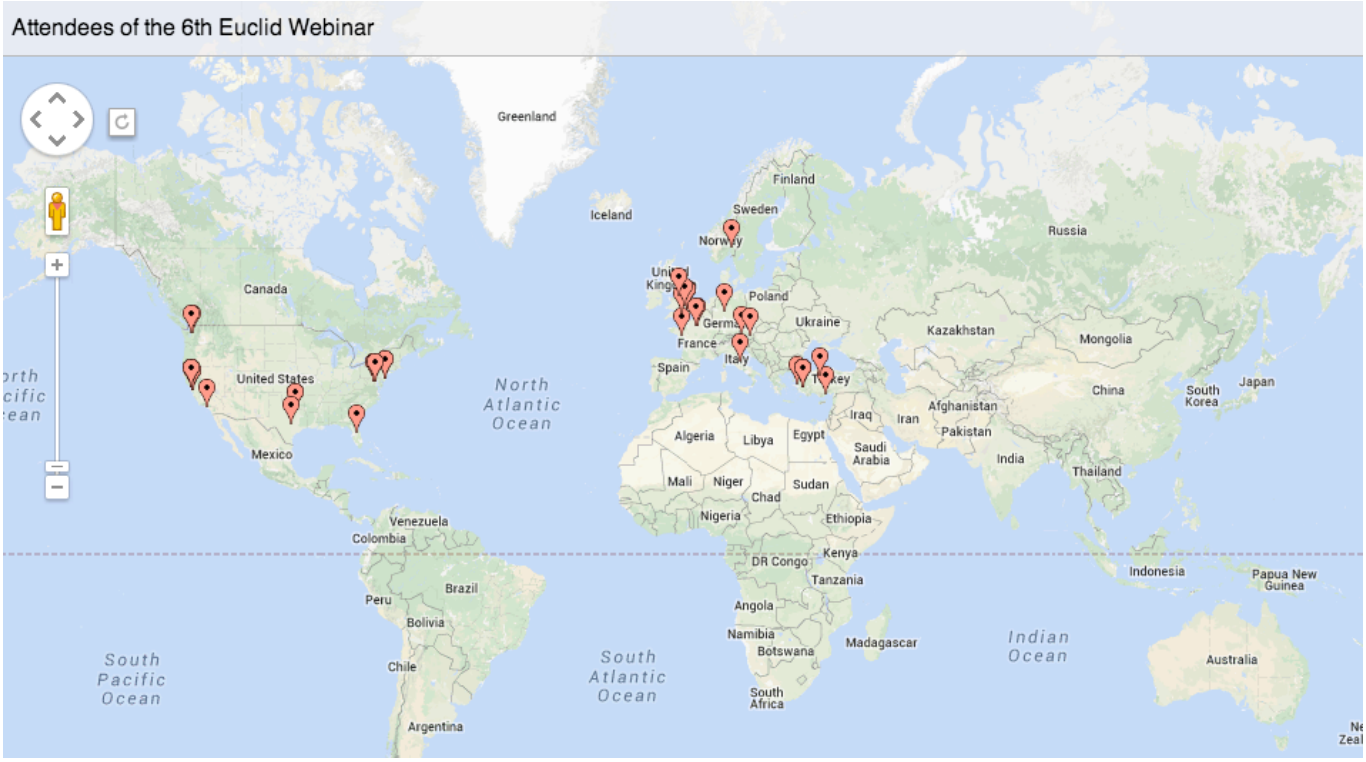


Figure 4: Geo plot of live audience for 6th EUCLID webinar

Similar to previous webinars, the recordings of this sixth webinar are available in the OU Stadium portal, Slideshare and Vimeo, under the links specified below:

- OU Stadium: http://stadium.open.ac.uk/2299
- Slideshare (Part 1 of 2): http://www.slideshare.net/EUCLIDproject/scaling-up-linked-data-video-part-i
- Slideshare (Part 1 of 2): http://www.slideshare.net/EUCLIDproject/scaling-up-linked-data-video-part-ii
- Vimeo (Part 1 of 2): https://vimeo.com/84126769
- Vimeo (Part 2 of 2): https://vimeo.com/84126770

According to the statistics from Slideshare and Vimeo, the two parts of the sixth webinar has reached to date over 145 views in Slideshare and 55 plays in Vimeo.

2.5 Summary of the EUCLID Webinar Series

During the development of the project, we delivered a total of six webinars acompanying each of the modules. The initial purpose of the webinars was to serve as complementary material for each chapter covering different topics about Linked Data. With the high attendance not only live but considering the reproduction of the recordings (see Section 3.3.1 and Section 3.4.1), the webinars became one of the more succesful events within the project, which also serve as an effective mechanism to promote other materials of the project.

During the development of the webinars, different experts from the EUCLID consortium participated not only in the delivery of the webinar but also on the production and quality assessment of the webinar content. The presentation of each webinar was carried out by differenet specialists in the area of Linked Data, who brought their experience in particular topics to enrich the webinar series. In preparaition for the webinars, the slidesets underwent

two revisions. First, the initial version of the slides was reviewed by the presenter and by an additional expert in the field. The improved version was used for the rehearsal webinar, which was introduced as an additional step in oder to ensure the high-quality of the presentations. Reherasal webinars were given for modules 1-4. For the final two modules, we did not do reherasals first because the gained expereience eabled us to shorten the produciotn process and second because the invited exprets were from outside of the UK and could not commit to two appointsments. The presenters were chosen based on their expertise and based on the fact that all of them give talks to the particular topics as part of their usual professional activities. The official webinar was broadcast live and recorded. The recodings were then edited an published online, in freely accesible channels (Vimeo and SlideShare). They were also used as part of the eBook and the onlince courses.

Table 1 presents reports on the particularities of each EUCLID (live) webinar.

Table 1: Live features of the EUCLID Webinar Series

Webinar	*Title*	*Broadcasting Date*	*Live Broadcasting Platform*	*Presenter(s)*	*Live Audience*
1	"Linked Data: Introduction and Application Scenarios"	01st October 2012	OU Stadium	Barry Norton (OA)	35
2	"Querying Linked Data"	04th March 2013	OU Stadium	Barry Norton (OA)	91
3	"Providing Linked Data"	22nd April 2013	OU Stadium	Barry Norton (OA)	114
4	"Interaction with Linked Data"	10th June 2013	OU Stadium and LiveStream	Barry Norton (OA) and Michael Meier (fluidOps)	579
5	"Building Linked Data Applications"	14th October 2013	OU Stadium and LiveStream	Christoph Pinkel (fluidOps)	40
6	"Scaling up Linked Data"	19th December 2013	OU Stadium and LiveStream	Marin Dimitrov (OA)	46

3 Platforms

In order to publish the EUCLID webinars, we used a set of platforms with two different objectives: broadcasting and hosting. The broadcasting platforms are designed to stream live videos. In EUCLID, we made use of the OU Stadium portal and the LiveStream platform to deliver the live webinar presentations. The OU Stadium also provides access to the recording of the webinars after their finalisation. In addition, the Web-based platforms SlideShare and Vimeo were used as online publishing channels, where we uploaded all the webinar content and other materials related to the EUCLID modules. Table 2 summarizes the platforms used in the EUCLID Webinar Series and their corresponding purposes.

Table 2: Classification of platforms used in the EUCLID Webinar Series

Platform	(Live) Broadcasting Platform	Hosting Platform
OU Stadium	Yes	Yes
LiveStream	Yes	No
SlideShare	No	Yes
Vimeo	No	Yes

In the following sections we review the platforms to deliver the EUCLID webinar content mentioned in Table 2. We also provide some details regarding their particular configurations for the project. In particular, SlideShare and Vimeo provide an analytic feature that allows monitoring the performance of the videos and other content in terms of views, plays, etc. Therefore, we present the collected statistics regarding the accomplishment of the webinar recordings on these platforms.

3.1 OU Stadium

As introduced in the deliverable D2.2.2, the OU Stadium is a portal for streaming video form the Berrill Lecture Theatre and the KMi Podium – this last one is where the EUCLID webinars took place.

The first webinars 1, 2 and 3, were broadcast using the OU Stadium services. After the transmission, the recordings of the webinars are stored in the platform, and can be reproduced by using the QuickTime player.

Nevertheless, during the development of the first EUCLID – as mentioned earlier (see Section 2.1) – we noticed two main constraints on the OU Stadium that may affect the presentation of the webinars. The first one corresponds to the limitation on the connections over the OU servers, which restricts the number of viewers. The second refers to the requirement of installing proprietary software to watch the webinars on this site. For these reasons, we decided to work with the alternative platform LiveStream explained in the following section in order to overcome these two limitations.

After switching to LiveStream, the recordings of the remaining webinars 4, 5 and 6 were still made available in the OU Stadium platform by embedding the corresponding video from Vimeo, as depicted in *Figure 5*.

Figure 5: EUCLID webinar viewed in KMi Podium (OU Stadium) platform

3.2 LiveStream

LiveStream is a video streaming platform. It is specially designed for broadcasting real-time events. LiveStream is based on Web technologies and support live social media interaction via different social networks like Facebook[14], Twitter[15] and a built-in chat channel.

The platform LiveStream replaced the QuickTime-based streaming solution supported by the OU Stadium, thus eliminating the requirement of installing proprietary software to watch the EUCLID webinars. Another benefit of using this platform is that the communication was performed directly to the LiveStream servers, which overcame the limitation of the OS servers to attend up to 100 concurrent connections.

The KMi channel in LiveStream (see Figure 6) was used to broadcast the EUCLID webinars 4, 5 and 6. As mentioned in Section 2.3, during webinar 5 the live chat feature was used to interact with the audience right after the finalisation of the webinar.

[14] https://www.facebook.com/
[15] https://twitter.com/

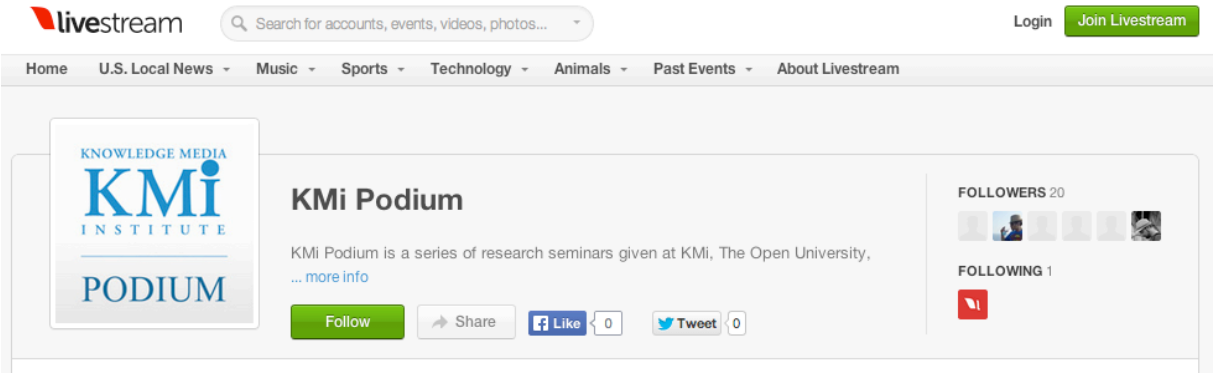


Figure 6: KMi channel in LiveStream site

During the filming of the webinars, the LiveStream video was embedded in the OU portal page. Therefore, the viewers could watch the webinar from the OU Stadium (which was the regular mechanism to broadcast the previous webinars), or directly from the LiveStream site.

3.3 SlideShare

SlideShare is a platform which main purpose is the sharing of slides on the Web. This site is widely used in the industry as well as in the Linked Data community. In addition, a PRO account in SlideShare allows for uploading and sharing videos. Therefore, the EUCLID project acquired a PRO subscription to disseminate the recordings of the webinars. All the videos from the webinars have been made available in SlideShare. In total, we have published 12 videos on the SlideShare EUCLID channel, as can be observed in Figure 7.

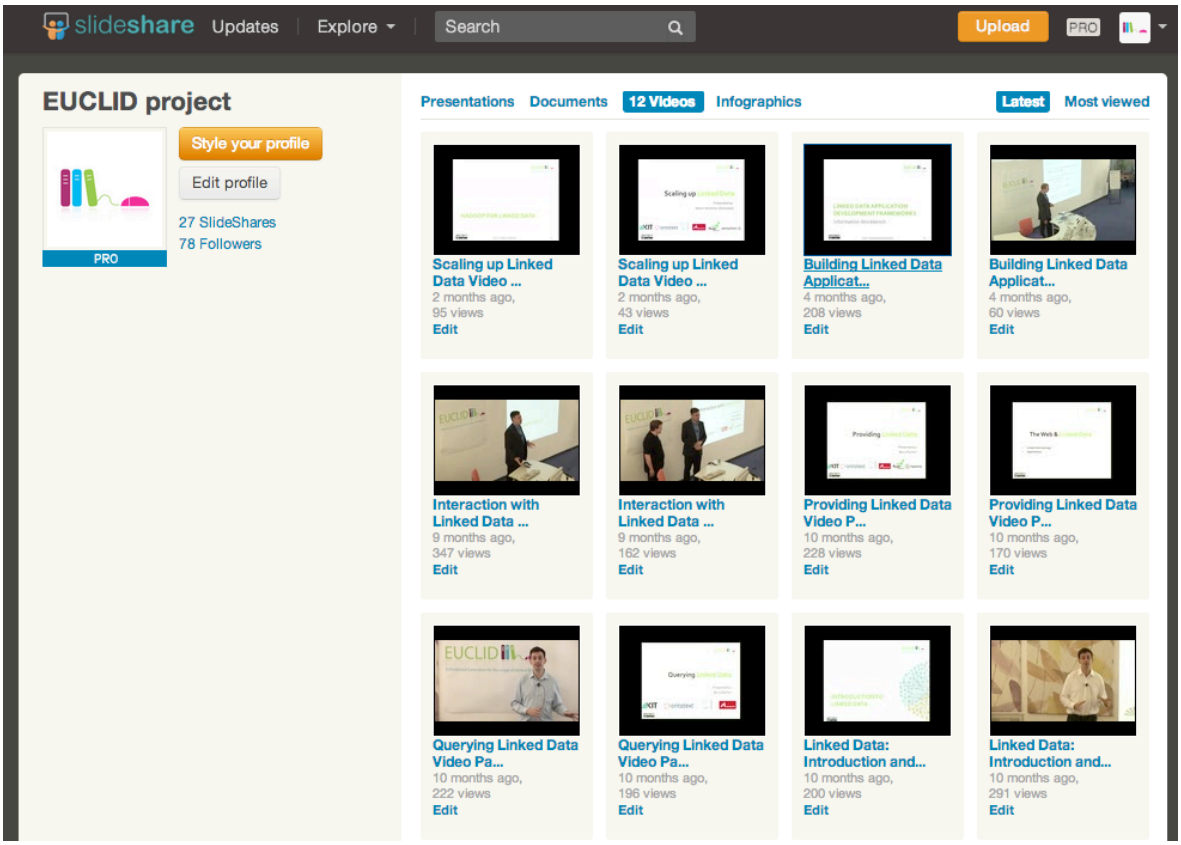


Figure 7: EUCLID SlideShare site – uploaded videos

3.3.1 SlideShare Statistics of the Webinars

Another benefit of holding a SlideShare PRO account is that it allows retrieving the analytics of the uploaded content. In this section we report on the numbers of views of the webinars on the EUCLID SlideShare channel – the analytics for other type of content is detailed in D2.1.5 "Final online community engagement report".

The EUCLID webinars on SlideShare received a total of 1,256 views to the moment of writing this report. Figure 8 depicts the number of views per webinar. The webinar with the highest number of viewers on this channel is Module 4. A possible explanation to this behaviour corresponds to the fact that the webinars were uploaded to this platform on May 2013, and Module 4 was the first webinar broadcast after this date. Viewers might have then watched the previous webinars in other platforms, as can be confirmed in the statistics from Vimeo (see Section 3.4).

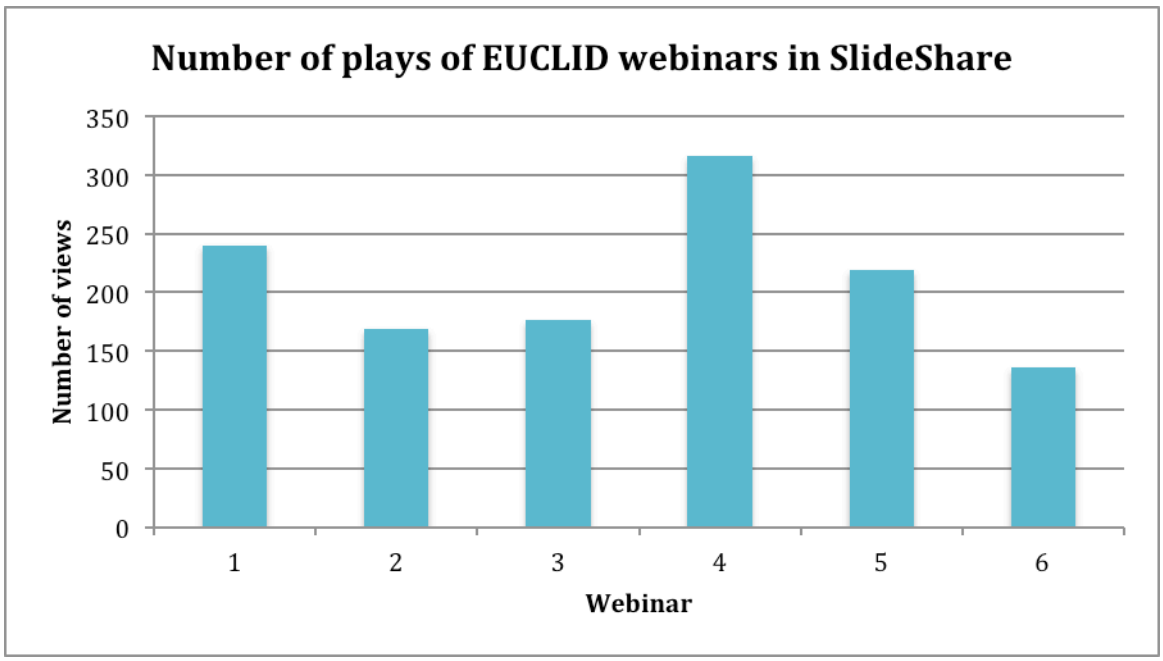


Figure 8: Number of views of EUCLID webinars in SlideShare (since May 2013)

3.4 Vimeo

The EUCLID project holds a Vimeo PLUS account that allows hosting and playing lengthy High Definition (HD) videos. In this platform the project publishes all the videos and recordings produced during the development of the EUCLID materials. We have published to date a total of 50 videos in this platform as depicted in Figure 9. This includes the webinar clips as well as screencasts. The screencasts usually complement the content presented in the webinars and book chapters, covering the usage of specific Linked Data tools and technologies.

Figure 9: EUCLID Vimeo site

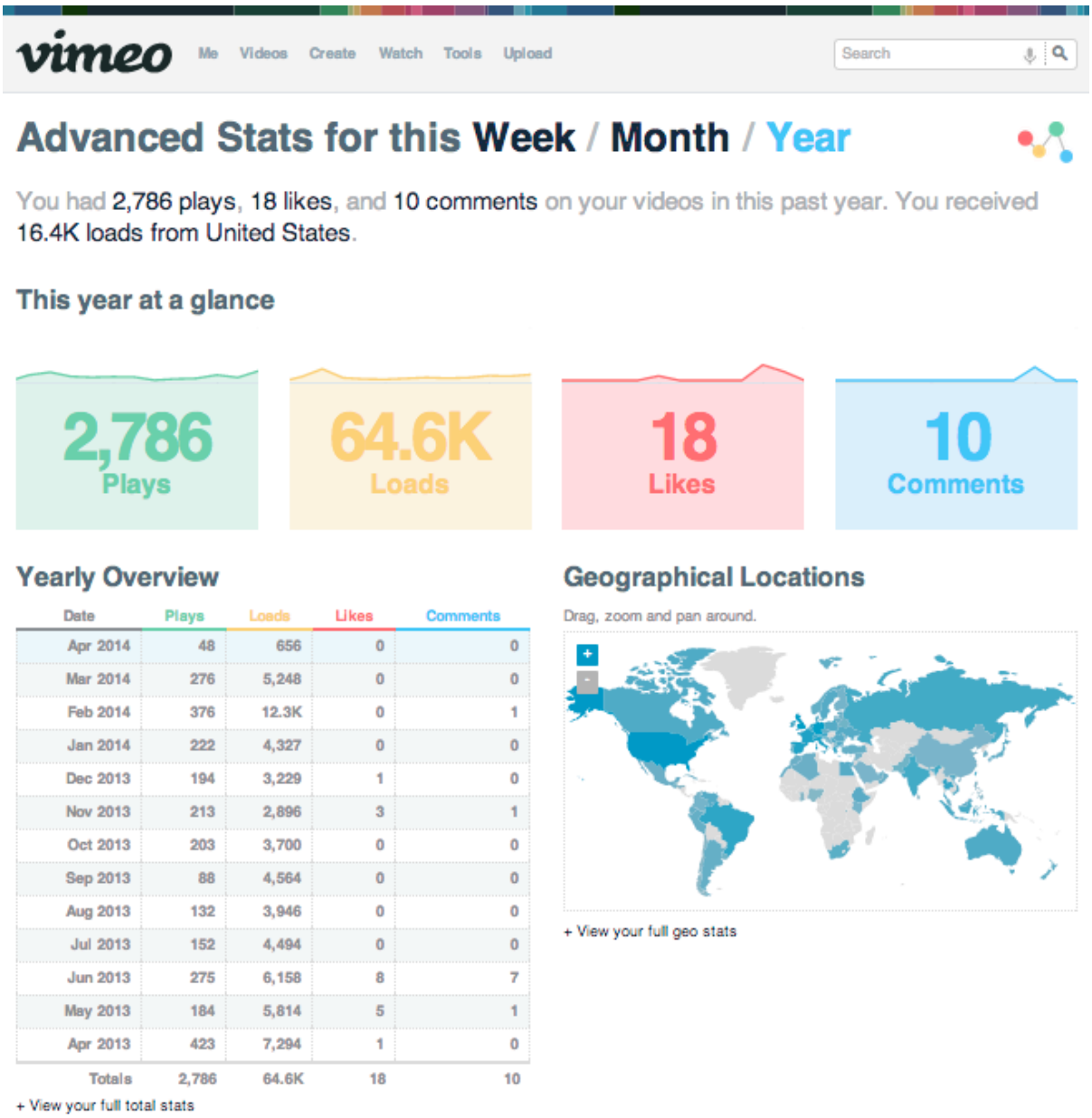
The EUCLID channel in Vimeo has been very productive. In the following sections we present a summary of the statistics provided by the Vimeo site about the performance of the uploaded videos.

3.4.1 Vimeo: General statistics

One of the features of the Vimeo PLUS account is the generation of stats that allow one to evaluate the performance/popularity of the videos published via this platform. The Vimeo statistics report on four different metrics – plays, loads, likes and comments – yet we are going to focus on the following:

- Plays: Corresponds to the number of times the "Play" button was pressed on Vimeo as well on other web pages that embed the EUCLID videos published in Vimeo (e.g., the EUCLID web site).
- Loads: Reports on the number of times a video is loaded on any page. This metric provides insights on the hits received on the EUCLID materials via the different web pages that embed EUCLID videos published in Vimeo.

As depicted in Figure 10, the EUCLID channel in Vimeo has reached a total of 2,768 plays and more than 60,000 loads since April 2013.



Date	Plays	Loads	Likes	Comments
Apr 2014	48	656	0	0
Mar 2014	276	5,248	0	0
Feb 2014	376	12.3K	0	1
Jan 2014	222	4,327	0	0
Dec 2013	194	3,229	1	0
Nov 2013	213	2,896	3	1
Oct 2013	203	3,700	0	0
Sep 2013	88	4,564	0	0
Aug 2013	132	3,946	0	0
Jul 2013	152	4,494	0	0
Jun 2013	275	6,158	8	7
May 2013	184	5,814	5	1
Apr 2013	423	7,294	1	0
Totals	2,786	64.6K	18	10

Figure 10: Vimeo general statistics

Considering only the videos of the whole webinars – this excludes webinar clips (short scenes from webinars covering a specific subtopic) and screencasts – the total number of plays in Vimeo to the moment of writing this report is 1,583. As one can observe in Figure 11, the videos for the earlier webinars had reached a higher number of reproductions, since they have been uploaded for a longer period of time. We expect the number of plays to keep growing for all the webinars.

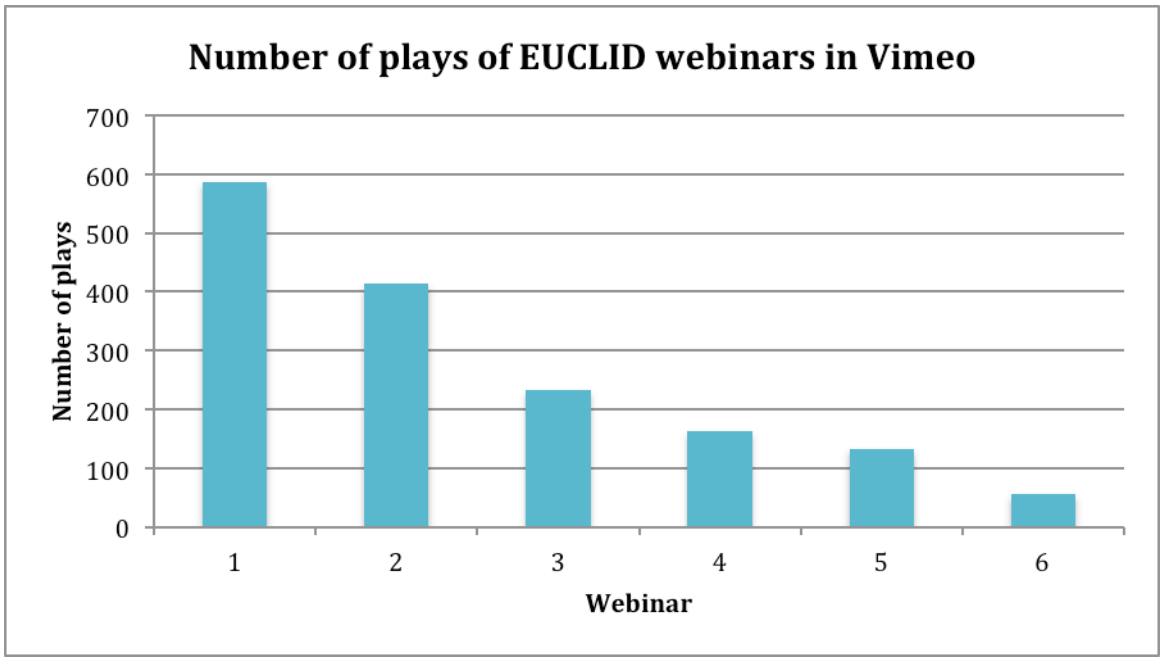


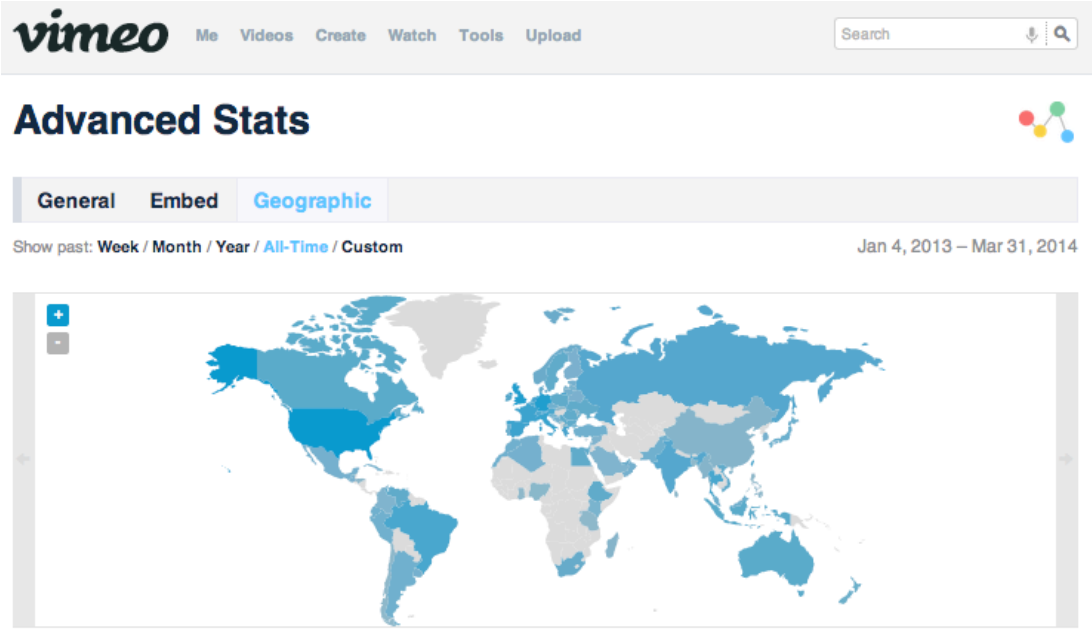
Figure 11: Number of total plays of EUCLID webinars in Vimeo (since April 2013)

3.4.2 Vimeo: Geo statistics

Another feature of Vimeo statistics is the visualization of the viewers according to their locations. The geo statistics presented in this section correspond to all the EUCLID videos available in Vimeo, since it is not possible to select only a subset for analysis. Figure 12 displays the worldwide distribution of viewers of the EUCLID Vimeo channel. As reported in the EUCLID Deliverable 2.2.2, European countries have a high participation, in particular those ones with a long tradition in the Linked Data Community, i.e, the United Kingdom, Germany, Italy, France and Spain. This plot also confirms that the webinars have attracted a considerable amount of viewers from the United States and other countries from America.

The demographics of the viewers of the EUCLID Vimeo channel is in general consistent with the geo plots of the live audience observed for all the EUCLID webinars. In both cases we distinguished a high predominance of the previously mentioned European countries – United Kingdom, Germany, Italy, France and Spain (in that specific order). In the geo statistics from Vimeo we can appreciate a valuable amount of video plays from the United States, which is also consistent with the American audience depicted in the geo plot for Webinar 4 in Figure 2.

When comparing the live audience vs. the Vimeo viewers (c.f. Figure 12), we can observe a considerable participation from South American countries like Brazil and Venezuela, which differs notably from the regular webinar audience (only Webinar 4 had two attendees from Brazil). Since all webinars were broadcast in this region during early hours in the morning, we assume that South American viewers resorted to the recorded version.



	Country	Total Loads	Total Plays
1	United Kingdom	9,855	450
2	United States	17,290	489
3	Germany	9,477	395
4	Italy	4,064	118
5	France	3,002	144
6	Spain	2,595	93
7	Belgium	1,356	54
8	Austria	1,453	77
9	Netherlands	1,753	93
10	Singapore	997	52
11	Brazil	1,630	58
12	Venezuela	376	36
13	Russia	762	31
14	Ireland	663	32
15	Greece	1,749	54
16	Sweden	430	17
17	Switzerland	1,211	63
18	Indonesia	551	5
19	Canada	453	62
20	Australia	495	50
21	India	871	49
22	Denmark	218	14
23	Vietnam	307	18
24	Bulgaria	284	50
25	China	542	0

Figure 12: Geo statistics of viewers in Vimeo

4 Lessons Learned

During the production of the EUCLID Webinar series a set of challenges were raised that allowed us to improve the quality of the final results. In the following we summarize the lessons learned from those challenges while producing and delivering the webinars.

1. Advertising

One of the most important actions to make the webinars successful is the advertising of the webinars. Different online community engagement and dissemination strategies were developed not only to collect feedback from experts but also to present the EUCLID materials (slides, webinars, eBook, etc). The online channels for engagement like the EUCLID website, Twitter, LinkedIn, public mailing lists, and others, were used to constantly promote and announce the upcoming webinars (for example, see Figure 13). More information regarding these channels is available in the EUCLID Deliverable D2.1.5 "Final online community engagement report".

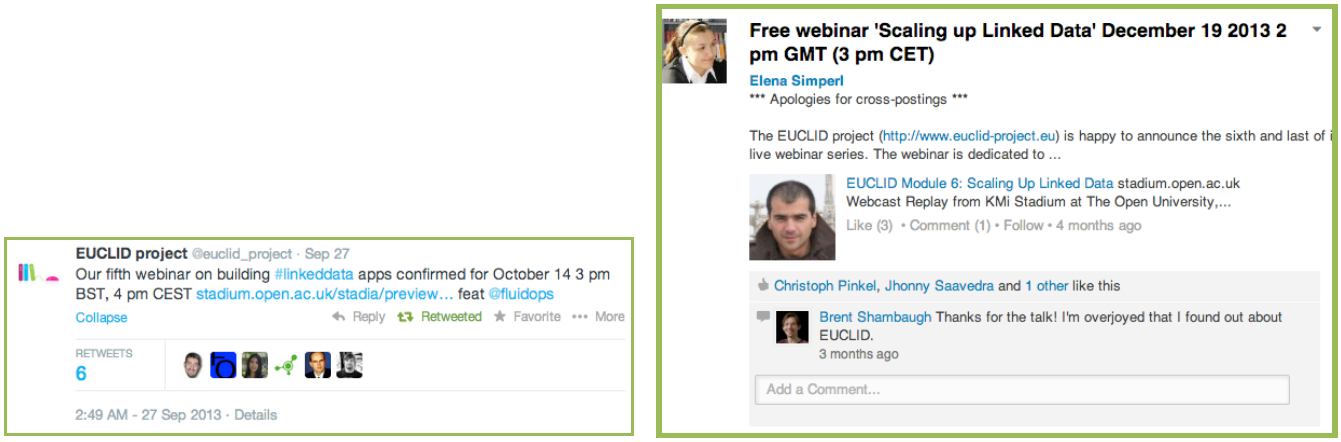


Figure 13: Advertisement of EUCLID webinars

2. Preparation of rehearsals

The first four webinars out of the six EUCLID webinars were rehearsed. The rehearsals were scheduled around one month prior to the official or public webinar. The actual presenters participated *in situ* during the practice session, i.e., in the KMi Podium, where EUCLID webinars were filmed. This approach allowed for testing and improving the quality of the webinars as well as the production and delivery of the material in two different manners: improving the quality of the slides and testing the technical infrastructure.

One of the most important of the lessons learned during the development of the Webinar series is that the rehearsals became an implicit quality iteration for the slides. As shown in the EUCLID Deliverable 1.2.2 "First year study report", the presenter was not involved in the creation of the webinar materials, but the KIT team carried out the production of the slides. During the rehearsals, the webinar presenter as well as the invited audience detected possible refinements on the materials. These refinements usually referred to restructuring the content, in order to deliver each subtopic in a more didactic fashion. Furthermore, the rehearsals allowed us to identify whether additional content or supplementary examples were needed in order to deliver a more comprehensive presentation. At least one member of the team provided written feedback from the comments raised during the rehearsal session. As a consequence, the rehearsals were an additional quality assessment mechanism for improving the overall quality of the final version of the slides.

Although for the last two webinars a rehearsal in the KMi Podium could not be scheduled, since the presenters were travelling from the different countries, we slightly modified the production of the webinar material by incorporating the presenters in the creation process of the slides. The presenters of these webinars worked together with the KIT team preparing the slides of each module and actively contributed with examples to illustrate the

different topics. In this manner, even if an *in situ* rehearsal was not performed, the quality iteration over the webinar material was still carried on.

Another important aspect of the rehearsals, especially for the first webinars, is the testing of the technical infrastructure to deliver the live webinars. Although the KMi Podium has a long trajectory on delivering high-quality on-line webcasts, it was crucial for the success of the EUCLID webinars to perform tests especially for the (visual) quality of the slides when displayed in video. We also wanted to test the feasibility of using this platform for our intended audience. Therefore, for the first rehearsals the internal audience was composed of invited people from the Linked Data community from different countries, e.g. Germany, France, the United States, Venezuela, etc. Initially the KMi Podium platform conveyed all our requirements. Nevertheless, the limitation to 100 connections per webinar in this platform forced us to investigate into alternatives to stream the live webinars due to the increasing audience of the EUCLID webinars. More details about this are presented in the following.

3. Displaying the broadcasts on diverse platforms

As previously mentioned, the KMi Podium system is limited to 100 connections per webinar. This became a scalability issue for the EUCLID webinars since the number of viewers was constantly increasing. In addition, as documented in the EUCLID Deliverable D2.2.2 "Interim Webinar Report", during the broadcasting of the Module 1 webinar, some people from the audience experienced technical problems for installing and executing the required software (Apple QuickTime) required by the KMi Podium portal to watch the webinars. These two factors led to investigate alternative platforms to stream the live webinars.

For Modules 4, 5 and 6 the KMi channel on the LiveStream platform was configured to stream the EUCLID webinars. The LiveStream video was embedded as well in the KMi Podium portal, so the users were able to watch the webinar directly from the LiveStream page and from the KMi portal without requiring any additional software. This decision allowed to have redundancy in the transmission and also overcame the limitation on the number of viewers initially imposed by the KMi system.

4. Uploading the webinar recordings to diverse platforms

After each live webinar, the corresponding recordings were made available online. This allowed the users – especially those ones who could not attend the live streaming – to watch the EUCLID webinars at any time.

The KMi Podium platform already stored the recordings for Module 1, 2 and 3 webinars. However, as previously discussed, one of the limitation of this platform is that it requires the installation of proprietary software. In addition, we decided to upload the recordings to other Web-based platforms. Although some platforms are most suitable for certain types of content (for example, Slideshare is ideal for publishing slides), some users may have accounts in particular platforms, therefore we again opted for redundancy and published the recordings in two widely popular platforms: SlideShare and Vimeo. This allowed the project to reach to a broader audience.

5 Conclusions

With the growing importance and use of Linked Data principles and technologies, there is also an increased demand for trained data practitioners who are able to develop Linked Data-based solutions. The EUCLID project addresses precisely this need by providing an extensive training curriculum that communicates the fundamental background knowledge but also introduces some advanced and expert-level topics. The curriculum is accompanied by as set of diverse materials, enabling both onsite as well as distance training.

In this context, this deliverable presents all EUCLID webinars, which have been given as part of the resources created for each module. We have described the preparation process and the step taken for conducting each of the webinars. Furthermore, we have discussed the uptake in terms of live participants, and their geographic spread, as well as the post-webinar take-up of the slides and recorded video stream. We have discussed how the EUCLID community engagement plan has been adjusted to take the results into account. We have also shared some of our observations and experience, which are relevant for anyone working in the field of online course productions that involves live presentations and recorded videos.

All webinars will continue to be available online, beyond the end of the project, since we discovered that alongside with the slides, they are one of the main resources used for both preparing on site trainings and self-training.