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Abstract:
This document describes a series of practical actions to secure long-term impact for LACE project outputs and to conserve community momentum beyond the project end. It was drafted prior to the 2nd year GA that took place at BETT 2016, London, UK, and revised according to discussion.
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1 Introduction

In this deliverable, we provide a first version of an exit and sustainability plan that covers key issues central to the exploitation of the LACE results. This includes tools, knowledge and key events developed for building up the European LACE community.

We first define relevant concepts for sustainability and exploitation (section 1.1). Then we provide an overview of best practices and guidelines in elaboration of such kind of plans and show how we followed the recommendations into the LACE exit strategy (section 1.2).

Section 2 is the core of the deliverable. It contains the identification of the main project results, outcomes and their related exit and sustainability strategy. Those results are: the evaluation framework for learning analytics (section 2.1), the Evidence Hub (section 2.2), LACE review articles (section 2.3), the LACE voice e.g., Blogs, Twitter, Newsletter, LinkedIn group (section 2.4), the LACE community e.g., Associate Partners, Key community events, List of important contacts (section 2.5), visions of the LA future (section 2.6), data interoperability studies (section 2.7), and ethics & privacy studies (section 2.8). For each element we provide a description, with reference to the extended information in related deliverable(s), together with sustainability and exploitation plans.

Section 3 drafts early ideas about the establishment of Special Interest Groups for the LACE community to maintain and build upon the project outcomes. Section 4 summarises our plans.

1.1 Sustainability and Exploitation

A major difficulty the promoters and coordinators of projects at European level are facing relates to the design and implementation of an effective exploitation strategy, able to adequately promote projects and their outcomes and assure their sustainability (Diva, 2011).

**Sustainability** is the capacity of the project to continue its existence and functioning beyond its end. The project results are used and exploited continuously. Sustainability of results implies use and exploitation of results in the long term. A project can be considered as sustainable if its outcomes or parts of these continue after the end of the funded project duration. The sustainability of project outcomes may be difficult to anticipate and to describe in early stages of the project.

Sustainability may not concern all the aspects of a project. In each project some results may be maintained, while others may not be required to be maintained. A project can therefore be considered as sustainable if core results are pursued and outcomes are maintained or developed after the end of the EU funding. Typical sustainability actions include the maintenance and update of information and software or the provisioning of services and their persistent and self-sustainable maintenance.

**Exploitation** is associated with the use of the project’s results at different levels, during and after the implementation of the project. It is related with the necessary action that will bring visibility to the project in order to involve the different stakeholder groups and transfer the results/outcomes into their professional scope.

Exploitation is mostly related to the idea of winning key actors to use the outcomes and services of a project. Exploitation is closely associated with the sustainability of the project after its conclusion, since exploitation activities should ensure that the results of the project are used by its target groups.
and possibly are transferred to other contexts (e.g. other countries, other pedagogical areas, other sectors).

1.2 Best Practices for Sustainability and Exploitation

It is important to keep project outcomes visible and available after the period of project funding especially for a community support action like LACE. This can be achieved through websites or future events so that target audiences can access them, learn from them, adapt them to their own needs and even build on them and take them to the next level.

For successful sustainability and exploitation, it is important to bear in mind the importance of creating outcomes that can survive after the end of the project. For this, all partners of the consortium but also the built-up community with high level of expertise need to be involved and agree to continue to work with the stakeholder groups (decision makers, associations, institutions of the sectors, etc.) so that outcomes can be applied to institutional policies. In LACE, consortium partners have a long-time interest in learning analytics and are all committed to the sustainability of the project outcomes and the present exit strategy. Furthermore, it is fundamental to involve the LACE community and the associated network in the sustainability actions.

The LACE consortium partners are research centres from a heterogeneous group such as HEI, K12 and workplace. In addition to this, the LACE community events themselves have in total attracted more than 2500 people up to the end of December 2015 with approximately 45% coming from the HEI sector, 35% from schools and 20% from the workplace.

A promising way for exploitation will be letting the stakeholders use the results of the project as an instrument for further developments so that they can start and involve new beneficiaries. Since its very beginning LACE got in touch with relevant stakeholders, surveying their interests and information needs to be translated into project actions. Examples of those are the SoLAR Flare workshops\(^1\)\(^2\), the Ethics and Privacy Workshop series (#EP4LA)\(^3\), as well as the sector specific activities such as the ‘Learning at the Workplace’ (LAW)\(^4\) or the ‘Learning Analytics at Schools’ (LASO) series of workshops and review documents addressing specific needs for learning analytics insights, policies, privacy, and interoperability.

The project website and the evidence hub have to be updated and partners will visit sector events and social media networks even after the end of the project. As it is very important to continue to be a “community”, even though the funding period is over, the project partners tend to be continuously involved with the project’s results and outcomes due to their affection towards the project itself. All this maintaining of the project brand for information/outcomes can easily be recognised and linked to the project. In LACE it is planned to maintain the project website via a specific LACE Special Interest Group (see Section 3). In LACE, all partners are committed to maintain the project’s outcomes and results, as described in Section 2.

\(^1\) http://www.laceproject.eu/blog/lace-solar-flare-event-in-uk-9-october-2015/
\(^2\) http://www.laceproject.eu/blog/learning-analytics-solar-flare-event-uk-24-october-2014/
\(^3\) http://www.laceproject.eu/ethics-privacy-learning-analytics/
\(^4\) http://www.laceproject.eu/learning-analytics-review/law-manifesto/
2 Identification of Project Outcomes and Initial Sustainability Plan

In this section, we provide an overview of the main tangible outcomes of the project and initial considerations about their sustainability.

2.1 Evaluation Framework for Learning Analytics

The Evaluation Framework for Learning Analytics (EFLA) is one of the outcomes of the LACE project and will be further developed and improved throughout and after the duration of the project, especially by evaluating LA tools with the EFLA survey.

2.1.1 Description

The first version of the framework as described in D3.1 consists of five criteria with four indicators each. The results of a first evaluation study (Scheffel et al., 2015), however, indicate that several issues needed to be adjusted. Based on these results as well as a revisitation of the original GCM data, the framework is currently being improved and a second version of the framework is being developed. The EFLA is now split in two parts: one for learners and one for teachers as different stakeholders have different points of view on learning analytics issues and thus need to be addressed differently. The framework now consists of four sections for the two stakeholder groups: data aspects, awareness, reflection and impact. Each section is then validated with three aspects that are adapted to the stakeholder’s point of view. Figure 1 shows the four sections and their indicators. More information can also be found on the LACE website: http://www.laceproject.eu/evaluation-framework-for-la/

![Figure 1: Version 2 of the Evaluation Framework for Learning Analytics](image)

<table>
<thead>
<tr>
<th>Learners</th>
<th>Teachers</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Data Aspects</strong></td>
<td></td>
</tr>
<tr>
<td>I know what data is being collected</td>
<td>I know what data is being collected</td>
</tr>
<tr>
<td>I have access to my data</td>
<td>I have access to my students’ data</td>
</tr>
<tr>
<td>I understand the presented results</td>
<td>I understand the presented results</td>
</tr>
<tr>
<td><strong>Awareness</strong></td>
<td></td>
</tr>
<tr>
<td>I am aware of my current learning status</td>
<td>I am aware of my learners’ current learning status</td>
</tr>
<tr>
<td>I comprehend my current learning status</td>
<td>I comprehend my learners’ current learning status</td>
</tr>
<tr>
<td>I can project my future learning status</td>
<td>I can project my learners’ future learning status</td>
</tr>
<tr>
<td><strong>Reflection</strong></td>
<td></td>
</tr>
<tr>
<td>I reflect on my learning activities</td>
<td>I reflect on my teaching activities</td>
</tr>
<tr>
<td>I reflect on alternative learning activities</td>
<td>I reflect on alternative teaching activities</td>
</tr>
<tr>
<td>I know when to change my behaviour</td>
<td>I know when to change my behaviour</td>
</tr>
<tr>
<td><strong>Impact</strong></td>
<td></td>
</tr>
<tr>
<td>I can detect whether I am falling behind</td>
<td>I can detect whether my students are falling behind</td>
</tr>
<tr>
<td>I am study more efficiently</td>
<td>My students learn more efficiently</td>
</tr>
<tr>
<td>I am study more effectively</td>
<td>My students learn more effectively</td>
</tr>
</tbody>
</table>

2.1.2 Sustainability and Exploitation

Through the increased use of LA tools there is a high need for quality evaluation criteria and procedures. As described in D3.1 - ‘Framework of Quality Indicators’ there is a growing need in evaluating the effects of LA applications at the side of the practitioners. Until now most of the LA tools either apply an unguided evaluation procedure or create own approaches to evaluate the added value of LA applications. Within LACE we offer the first evaluation framework for LA tools geared towards the stakeholders that are personally involved, i.e. learners and teachers. The evaluation criteria have been created by an expert study as defined in D3.1 and the related publication in the high impact journal ET&S (Scheffel et al., 2014). The EF allows third parties to take
advantage of our ready to use framework and survey or take advantage of the most suitable evaluation criteria to their own outcome evaluation.

There is a high demand for operationalised and transparent evaluation criteria as an increasing amount of LA tools are being implemented. We therefore aim to sustain and exploit the EFLA through two main activities:

**Publishing development steps in scientific journals and conferences**
We aim to publish articles and papers about the various phases of the development of the EFLA in scientific journals and conferences like in the ET&S version (Scheffel et al., 2014). In that way, we can disseminate the development process and the application of the EFLA and enable its reuse and exploitation by third parties. In addition, we will disseminate the EFLA over the LACE blog and social media channels. Such activities will provide and share our experience and lessons learnt.

**Exploitation of EFLA survey**
We aim to provided the latest version of EFLA and the used survey on the LACE website\(^5\). The EFLA survey will be published as a public template within Google spread sheets. In that way the evaluation procedure, its criteria, the applied indicators, and further processing of the evaluation can be made available as a comprehensive toolset to third parties. Those external parties will be reached over the Associate Partner network of the LACE project, Special Interest Groups like the EATEL SIG dataTEL, the Dutch SURF SIG LA, and the newly to start up SIG LA Europe under SoLAR or EATEL.

### 2.2 Evidence Hub
The LACE Evidence Hub brings together evidences about the effects of learning analytics from across the world, and has the capacity to inform policy making for learning analytics.

#### 2.2.1 Description
The LACE Evidence Hub is a place for recording, organising and searching evidence relating to the theory, research and practice of learning analytics and associated educational data mining. It seeks to bring together evidence from across the globe to support or contest the effectiveness of learning analytics in the schools / compulsory education, higher education and workplace sectors. Guiding questions and tools will be available to help users frame, categorise and interpret the evidence. The Evidence Hub is available at [http://evidence.laceproject.eu](http://evidence.laceproject.eu). It is hosted by the Open University as a separate Wordpress instance. More detail about the Evidence Hub is set out in D2.8 Evidence Hub Review v2.

#### 2.2.2 Sustainability and Exploitation
As part of the LACE project, the Hub’s funding will come to an end in June 2016. Left unattended, the site would gradually deteriorate, missing the necessary updates to its host, theme and plug-ins. The Hub will therefore form part of a proposal by the LACE project to sustain the outcomes of LACE in a Special Interest Group at EATEL or SoLAR (see Section 3). The alignment of the Evidence Hub with the LAK16 submission system positions the Evidence Hub as part of the process of developing, reviewing, presenting and disseminating evidence within the LAK community. LACE is eager to

demonstrate that the connection of the LAK16 conference management tool and the Evidence Hub can have great benefits for the learning analytics community as a whole. Further details about the LAK16 conference management tool and the Evidence Hub can be found also in D2.8 Evidence Hub Review v2.

The LACE project has built close connections with many related learning analytics projects such as WatchMe, PELLARS, Lea’s Box, SafePat, SHEILA, and LAEP. Especially for the SHEILA and LEAP project that focus on European Educational Policy (LAEP) having the Evidence Hub will be of high value. LAEP and SHEILA are investigating the state of the art of learning analytics in Europe and beyond to provide recommendations for European education policy, including putting together an inventory of evidence. Both projects are drawing on the Evidence Hub to inform their inventory and assessment of the current state of the art.

2.3 Learning Analytics Review

The Learning Analytics Review is the name given to the collection of reports that address pressing topics of learning analytics. It aims to lower the threshold for early adopters of learning analytics, and to support them in joining the LACE community.

2.3.1 Description

The Learning Analytics Review series address adopters working in the schools, workplace and higher education with an interest in the impact of learning analytics in the short to medium term. The reports are peer-reviewed and the commissioning and editorial processes ensure that the papers are of high quality. The reports address practitioners, managers and policy makers, and are therefore focused on reporting current state of the art and best practices, within the context of more scientific results. They are intended to answer practical questions of early adopters of learning analytics to lower the threshold to apply learning analytics and join the LACE community. The articles are produced by the LACE project and published by the University of Bolton, Bolton, UK under a Creative Commons Attribution v4.0 licence under the ISSN number 2057-7494. Learning Analytics Review articles are available from [http://www.laceproject.eu/learning-analytics-review/](http://www.laceproject.eu/learning-analytics-review/).

2.3.2 Sustainability and Exploitation

There are currently six Learning Analytics Review papers published, plus three case studies, and this number will increase substantially before the end of the project. These papers will remain available following the end of the funded period as part of the maintenance of the project Website. As these papers are published under a Creative Commons licence there are no issues of intellectual property or financial benefit to be addressed. They do, however, contribute to the overall reputation of the LACE brand, and in turn contribute to the reputation for authoritative resources that has been gained by the project. There is therefore a benefit to be gained by including the LACE Learning Analytics Review as part of a proposal by the LACE project to sustain its outcomes in a special interest group (SIG) at EATEL or SoLAR (see Section 3). Access to the Learning Analytics Review papers will provide a motivation for participation in the new SIG, and a context for the continued publication of the type of papers that have come to characterise the Learning Analytics Review. If
appropriate responsibility has been assigned, the hosting of the existing and future papers can be handed over to the SIG (in which the present editorial team is likely to participate).

2.4 LACE Voice

Under this section we combine all outcomes related to the LACE Voice, a unified social media identity for the learning analytics community in Europe. This involves media types such as the LACE Website, YouTube channel, blogs, specific sector activities, the newsletter, the social media accounts such as Twitter and LinkedIn labelled with the LACE logo.

2.4.1 Description

The social and web media content has been used during the runtime of the project for several reasons:

- To support the development and growth of a community with interests in learning analytics
- To facilitate discussion and exchange of ideas
- To facilitate the sharing of resources, ideas, discussions, etc.
- To make use of established and mature existing tools which are felt to be sustainable
- To facilitate discussions around resources hosted on mature social sharing services.

For the sustainability plan we are considering those tools and infrastructure as crucial for fostering the LACE community. In the following sections we shortly introduce those contents and discuss its sustainability options.

The LACE Website

The LACE website is available at www.laceproject.eu. Among all LACE contents it especially hosts the following areas: general information about the LACE project, the Learning Analytics Review, Associate Partners, LACE FAQs.

The LACE Blog

The LACE blog provides a key communication channel for the LACE project, with regular posts being published by LACE project team members as well as by guests. Until time of writing 128 blog posts and over 10 guest blog posts are available on the homepage of the LACE Website. For more details please check the 2nd year project report. The main LACE blog is available at www.laceproject.eu/blog.

Twitter

Twitter is being used as a lightweight and mature tool that is widely used to support discussions, exchange ideas and promote access to digital resources. The LACE twitter account is available at https://twitter.com/laceproject and has 591 followers at the time of writing. Since tweets are unavailable via the Twitter API after a short period (about 10 days), LACE used the twitter tools TAGS, Twubs, and Storify to capture relevant twitter conversations. TAGS\(^6\) is a sophisticated Twitter archiving and analytics tool. It can be used to archive Twitter hashtags. TAGS is therefore used to archive selected significant Twitter hashtags including #laceproject. Twubs is a simpler Twitter account for tracking Twitter activity.

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\(^6\) [https://mashe.hawksey.info/2012/12/backup-twitter-status-updates-v11/](https://mashe.hawksey.info/2012/12/backup-twitter-status-updates-v11/)
archiving tool. Twubs is used to set up archives of small events of relevance to the LACE project. In contrast to TAGS and Twubs, Storify is used to manually curate tweets from significant events of relevance to the LACE project. Links to Topsy archives are embedded near the bottom of web pages for key deliverables and recent blog posts.

LinkedIn group

A LinkedIn group has been established by the LACE project to support discussions and sharing of resources. Use of LinkedIn is felt to be particularly important for communities and users who do not make use of Twitter. We were able to extend the LACE community with over 343 contacts that signed up over the LACE group. It is available at https://www.linkedin.com/groups/Learning-Analytics-Community-Exchange-LACE-8133802.

Slideshare

Slideshare is used to host significant presentations used by LACE team members. Presentations contain a “laceproject” tag to enable relevant presentations to be easily found at http://www.slideshare.net/search/slideshow?searchfrom=header&q=laceproject. Use of Slideshare enables presentations to be easily embedded in other Websites, blogs, etc. Currently 58 presentations are available.

YouTube channel

A YouTube channel is used to host archives of recordings of LACE videos from various stakeholder events of the European learning analytics community. In December 2015 LACE has created 36 videos from workshops, interviews, and keynotes. The channel is available at https://www.youtube.com/user/LaceprojectEu.

Newsletter

The LACE Newsletter is published quarterly. It aims to provide a summary of recent LACE activities. The first LACE newsletter was published in June 2014. This issue introduced the project and its aims, and encouraged readers to get involved by visiting the Website, joining the community, registering to receive updates, tracking activity on Lanyrd and attending LACE workshops and events. Since than the newsletter has become more content driven and provides links to project outcomes.

2.4.2 Sustainability and Exploitation

The online media will surely remain after the project life cycle on the Web. With hosting the website at the University of Bolton IT infrastructure, the hosting costs are reduced to a minimum level. In that way the online contents remain available for many years. In case, LACE will be continued in an SIG, the SIG will be able to use the Website and all its social media channels for their activities. The LACE newsletter in the present form will no longer be published after the project ends. Terminating the publication will be communicated to the subscribed with recommendations of how to stay informed on the subject (relevant new initiatives, subscription recommendations etc.). If LACE

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7 For example see the archive of the SoLAR Flare event at http://twubs.com/LACEflare
8 For example see the curated summary of tweets for the opening session of the SoLAR Flare event at https://storify.com/briankelly/solar-flare-2014-summary-morning
10 https://www.linkedin.com/groups?home=&gid=8133802&trk=anet_ug_hm
becomes a SIG at SoLAR or EATEL our partner EDEN committed himself to continue to provide regular visibility of LACE in related news in its monthly newsletter and on its social media channels.

### 2.5 LACE Community

Among having many followers on Twitter (591) and LinkedIn (343), LACE has established a network of dedicated associated partners in Europe. By late October 2015, 66 people from 27 countries had joined LACE as Associate Partner and at least two-thirds of these had actively engaged with the project in one or more ways. Most Associate Partners are based in Europe, but the project also has a worldwide reach. LACE Associate Partners are key actors in the community, potentially individuals or organisations, and we reserve the term for a clearly-defined, but non-committing, relationship with reciprocal benefits. The community is driven by online means but also largely by well branded learning analytics events such as:

- **Academic events:** LASI Netherlands, SoLAR Flare, LAK conference
- **Workplace events:** Excel London, Learntec, OnlineEduca, eLearningGuild
- **School events:** EMINENT, Onderwijsdagen, BETT.

#### 2.5.1 Description

Up to now in Europe the topic of learning analytics is relatively new on the events calendar and being dealt with, largely, as a side topic on the agendas of some of the more established events. The growth of the LAK and EDM series of conferences is certainly an important development as they have become the most important events in the community. The organisation of LAK16 in Europe, Edinburgh, will help consolidate its position as being the most important event of its kind on the European calendar. LACE partners are likely to continue to contribute to the LAK and EDM conferences for years to come.

While EDM, LAK, LASI-NL, and SoLAR Flare are largely targeted to the academic research community there seems to be a gap in respect to other sectors like schools and workplace. This raises the question whether to support dedicated workshops on learning analytics at existing events aimed at those sectors like EMINENT and Onderwijsdagen for schools, or the learning technologies events dedicated to corporate and industry training (e.g., UK: London Technologies at Excel London, Germany: Learntec & OnlineEduca, US: eLearning Guild) or whether it is worth considering setting up dedicated events specifically and purely on the topic of learning analytics.

The workplace sector wants to continue the spirit established at the LACE event organised with the support of the European Parliament in Brussels during April 2015. A ‘Learning at the Workplace’ (LAW) community was established gathering academic, industry and public governance actors interested in the topics. The community members contributed to the publishing of a LAW Manifest providing policy guidelines and directions for promoting use of LA at the workplace. The community then joined into a series of interactions using the Twitter and Linkedin promotion of the Manifest, resulting in a more technical Review publication addressing the interoperability needs and integration issues for the establishment of a proper LAW ecosystem. The intent is to keep such community active by gathering to main learning technologies events specifically dedicated to industry and corporate training.
2.5.2 Sustainability and Exploitation
Among EDM and LAK, the LACE SoLAR Flare and the LASI Netherlands events hosted by the OUUK and OUNL as part of the project succeeded in drawing together not just academic researchers, but practitioners and commercial and not-for-profit organisations in the analytics sector. The HEI sector is keen to continue to host similar events in the future, and will actively seek funding sources to support this. Upcoming opportunities are the 2nd Ethics & Privacy workshop, the first Failure Workshop, and a panel on the future of learning analytics at at LAK16.

The LACE schools sector team is launching a new event in collaboration with European Schoolnet in June 2016 to test the level of interest in a dedicated event on learning analytics for schools that may well be worth continuing should the level of support and interest warrant it.

The LACE workplace sector will be promoted and expanded during the LACE speech on LAW to be held at the Learntec 2016 event in Karlsruhe and the LACE LAW corner planned for the next smart manufacturing event held by sedApta Group & Partners during May 2016 (Genoa, Italy). Such first internal and external events to promote the LACE LAW community will continue beyond project end in June 2016 in order to keep the community alive and expanding.

2.6 Visions of the Future Studies
The “Visions of the Future” report is aiming to become a wayshowing document based on the Evidence Hub and a Policy Delphi process to draw out differences of perception and visions from a high number of experts in learning analytics.

2.6.1 Description
The aim of the Visions of the Future Policy Delphi is the systematic solicitation and collation of informed judgments on visions of learning analytics in 2025 http://www.laceproject.eu/future-of-learning-analytics/. Its objectives are: to explore or expose underlying assumptions or information leading to differing judgments on learning analytics, and to correlate informed judgments on the topic of learning analytics. The first phase of the Policy Delphi drew on the expertise of LACE consortium members to develop visions of learning analytics in 2025 in the form of short scenarios. Following a matrix analysis, these visions were selected to provide good coverage for (a) relevance to stakeholders, and (b) the underlying themes of technology, privacy and ethics, and pedagogy.

Table 1: Overview of the eight visions selected for the LACE Policy Delphi11

<table>
<thead>
<tr>
<th>No.</th>
<th>Vision title</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Learners are monitored by their learning environments</td>
</tr>
<tr>
<td>2</td>
<td>Learners’ personal data are tracked</td>
</tr>
<tr>
<td>3</td>
<td>Analytics are rarely used</td>
</tr>
<tr>
<td>4</td>
<td>Learners control their own data</td>
</tr>
<tr>
<td>5</td>
<td>Open systems are widely adopted</td>
</tr>
<tr>
<td>6</td>
<td>Learning analytics are essential tools</td>
</tr>
<tr>
<td>7</td>
<td>Analytics help learners make the right choices</td>
</tr>
<tr>
<td>8</td>
<td>Analytics have largely replaced teachers</td>
</tr>
</tbody>
</table>

11 http://www.slideshare.net/Drachsler/the-future-of-learning-analytics
The visions were incorporated into a SurveyMonkey survey, which was completed by invited experts and the LACE Associate Partners. The experts were drawn from the three focus domains of application of LACE (schools, higher education, workplace) and the three principal contributing discourses of learning analytics (technology, privacy and ethics, pedagogy). The respondents provided their views on whether the visions were ‘desirable’ and ‘feasible’, and on the actions which should be taken in response to them. 134 responses were obtained, and analysis has been carried out. Consultation on the insights with stakeholders has already commenced in several workshops, and will be continued to the end of the project.

2.6.2 Sustainability and Exploitation

The Visions of the Future study is a Policy Delphi, and as such sustainability and exploitation is a matter of ensuring that the results reach those policy makers and strategists who can make a difference to the future of learning analytics. In the final phase of the project this will be done by publishing a LACE Review paper, organising workshops, and holding a panel at LAK16. A high-impact journal paper will be produced once the full consultation with stakeholders has been completed. The study will be brought to a close with the end of the project, but the example of its success will feed into the proposed Special Interest Group (see Section 3), which will provide an ideal context for studies that build on the methods and successful outcomes of the Visions of the Future study.

Already now we are in contact with other projects like LEAP and SHEILA that are interested in working further with the 8 Visions of the Future of Learning Analytics and the empirical data that has been collected so far. These are strong exploitation actions, as both projects will run longer than the remaining project lifetime of LACE.

2.7 Interoperability Studies

LACE has delivered a number of studies of current actors and activities within data interoperability standardisation with relevance to LA; inventories of specifications and standards that implementers should take into consideration; studies of new requirements raised by data sharing and the different work processes in a learning analytics cycle. These studies have been informed by the LACE community’s exchange with national, European and international stakeholders.

2.7.1 Description

Deliverable D7.4, section 7, discusses the criteria for taking decisions on interoperability systems, among them the involvement of a broad range of actors spanning from individual institutions and companies, to organisations, national agencies, governments and the European Commission. The EC through LACE has temporarily filled a need for cross-institutional and European discourse, supporting initiatives like the Jisc Open Learning Analytics Architecture in the UK, scoping of national standardisation projects in Norway, development and implementation of LA pilots at the University of Amsterdam in the Netherlands, etc. However, there is a need for continuous support and leadership, and in this field there is lack of European leadership. As D7.4 observes, “the CEN instruments for consensus building and harmonisation in this area are inactive”, there is a lack of appropriate funding, and the individual market players are in fact left to make sense of the latest trends, often conceived within a US business context.
2.7.2 Sustainability and Exploitation
In reality, the LACE interoperability studies come with an expiry date; the development of the ‘interoperability scene’ is a dynamic, and the only way to sustain the results of our work is to make sure that there are communities that are able to maintain the exchange. At the moment the Apereo Foundation has emerged as the strongest candidate for a developers’ community that could undertake the task to keep the discourse running. LACE already talks with the LA chapter of the Apereo Foundation to sustain and further develop some of the work that LACE has done in this field.

2.8 Ethics & Privacy Studies
Ethics and Privacy related to learning analytics are issues that have been forwarded and highlighted to an extent that was not expected when the LACE project was designed. Ethics and Privacy issues are addressed in several deliverables (e.g., D7.1, D7.2, D7.3 and D7.4), in dedicated workshops, and in the LACE Review series.

2.8.1 Description
The issues of Ethics and Privacy (E&P) can only be addressed if the concerns are turned into requirements for design of technical or organisational solutions and enforced through well-established codes of practice. Thus the exploitation of the LACE E&P studies should be judged by the extent to which E&P requirements are embedded in technical and organisational design proposals. It is still ‘early days’ when it comes to how the LA community addresses E&P, and how recent changes in European Privacy Protection will influence the implementation of learning analytics in schools, universities and the workplace. Therefore, LACE developed the DELICATE checklist to support the community to deal with E&P issues (Drachsler & Greller, 2016).

2.8.2 Sustainability and Exploitation
LACE has been instrumental in establishing dedicated E&P workshops at international conferences (i.e., the Asian-Pacific ICCE conference, and the international LAK conference, Apereo Conference, and SURF events). This work will be sustained through the LACE partner institutions’ contributions. Furthermore, E&P requirements will be prominent in future interoperability work, see section above.
3 Bodies for Long-time Sustainability of Project Results

During the project runtime, the LACE consortium carried out a number of activities with the aim of involving stakeholders of learning analytics who favour the persistence and exploitation of the project results. The following sections summarise concrete plans towards ensuring the long-term sustainability of the main concrete outcomes in related Special Interest Groups of academic associations. We aim to establish a SIG named: ‘Learning Analytics Community of Europe’ which will enable us to keep the LACE acronym and logo after the end of the project funding.

3.1 EATEL and SIG dataTEL

EATEL, the European Association of Technology Enhanced Learning, is a network of European research laboratories, groups, companies and people with the objective to promote knowledge, education and continuing education in the area of technology-enhanced learning, to support science and research in this area as well as to foster co-operation among researchers, non-commercial providers and users of TEL. EATEL aims to disseminate high-quality resources about technology-enhanced learning topics to as many interested communities as possible and to facilitate the continuous and rapid transfer of research results into deployment for the general public. EATEL strives towards the development, conversion and adoption of standards for TEL. It is the key independent TEL organisation, combining most stakeholders in the field. The main EATEL activities can be summarised as:

- Support for the provisioning of material and tools for education and continuing education in the area of TEL.
- Administration and hosting of an electronic community portal and information exchange system.
- Organisation and support of various scientific and educational events, mainly EC-TEL conference, and JTEL summer school.
- Establishment of collaborative partnerships in research and industry to advance the current state of TEL.

Any natural or legal person from any country of the world can become a member, if this person supports the objectives of the association and acknowledges the statutes of the association. By joining the association, a member agrees to promote and support the association and the objectives of the association in an appropriate way – including public forums. An association fee is requested. The executive bodies of the association are:

- The Members Assembly, the highest organ of the association. Its tasks comprise: recommendations regarding the association’s activities; election of the Managing Committee members, auditors and members of the Scientific Advisory Board, whose terms of office have ended; approval of the financial plan for the upcoming fiscal year, which has to be proposed by the Managing Committee; decisions about proposals; organisation structure decisions (e.g. changing the statutes, the financial amendment or any other amendment, dissolution of the association).
- The Managing Committee, composed by:
  - The president
  - The vice-president
  - The treasurer
The secretary

EATEL is a well-established organisation, with a statute and executives bodies. They are active in the TEL field and organise and support several activities and events. The LACE consortium partners think they could be great sponsors and partners for the sustainability of LACE activities like organising core events, maintaining the Evidence Hub, and supporting the community.

EATEL has various Special Interest Groups, among which the EC-TEL Advisory Board. Three LACE partners are already members of EATEL (OUNL, OUUK, CETIS). As consortium partner OUNL chairs the SIG dataTEL, this would be a natural and easy way to accomplish continuation of the LACE support activities. The board of EATEL supports the proposal and will be able to provide some funding for the continuation. Further, given the stated goals of the SIG dataTEL to stimulate the use of learning analytics and TEL, it seems logical to maintain the dataset catalogue as part of the SIG’s activities.

3.2 SoLAR & SIG LA Europe

Another option for sustainability and exploitation is establishing a SIG Europe at the Society for Learning Analytics Research (SoLAR). SoLAR is an inter-disciplinary network of leading international researchers who are exploring the role and impact of analytics on teaching, learning, training and development. SoLAR organises the International Conference on Learning Analytics & Knowledge (LAK)\(^{12}\) and the Learning Analytics Summer Institute (LASI)\(^{13}\), launching multiple initiatives to support collaborative and open research around learning analytics, promoting the publication and dissemination of learning analytics research, and advising and consulting with state, provincial, and national governments.

It is a similar organisation like EATEL but specialised on learning analytics. Furthermore, SoLAR is mainly driven by US, Canadian and Australian organisations, which would make a SIG Europe an interesting exploitation chapter for the society. The mission of SoLAR has the following priorities to advance the field of learning analytics globally:

- Foster the highest standards of academic research into learning analytics
- Promote the development of open educational resources in learning analytics
- Raise awareness of learning analytics amongst policy and decision-makers in educational institutions and governments
- Create opportunities for the diverse stakeholders in learning analytics to communicate, collaborate and debate, e.g. academic researchers, product developers, educators, students, institutional administrators, government policy analysts

Especially, missions 1, 3 and 4 are supportive arguments for the establishment of a SIG Europe at SoLAR. In the current stage we have requested the application form from the society’s SIG Coordinator and are preparing an application of the SIG prior to the LAK16 conference. The reason for this is to use the LAK16 conference for the founding of the SIG and advertise it to many international participants that are interested in learning analytics.

\(^{12}\) [https://solaresearch.org/conferences/lak](https://solaresearch.org/conferences/lak)

\(^{13}\) [https://solaresearch.org/conferences/lasi](https://solaresearch.org/conferences/lasi)
4 Conclusions and Outlook

With the present deliverable we describe our approach towards sustainability and exploitation for the LACE project. We believe that our efforts are resulting in promising outcomes that will persist even after the project’s end.

The identified tangible outcomes described in sections 2.1 to 2.8 can strongly support a SIG LA Europe either at EATEL or SoLAR. All LACE media resources, the established networks and associated partners, as well as the written reports are an ideal ground to be taken up by a SIG that will have substantially less budget than LACE had to establish those networks. On the other hand, the SIG can continue from a well-established entity – the LACE Voice – and continue with little efforts to disseminate learning analytics topics and events.

We believe that two years after the start of LACE, we have established a well-known project that became a central information hub on learning analytics in Europe and beyond.

The Evaluation Framework for Learning Analytics is expected to survive as reference, guideline and basis for the evaluation of learning analytics tools in the close and long term future in scientific journals and conferences as well as via dissemination of experience and lessons learnt through blogs and social media channels. It will be applied by the LACE partners and associate partners in upcoming studies.

The Evidence Hub is a unique outcome that requires some budget to be maintained. But it is also a resource that attracts needs of many follow-up projects such as LEAP and SHEILA.

The Learning Analytics Review articles, the vision of the future and interoperability studies, the video and the blog posts will survive in best practices and guidelines and will be taken up by future projects and organisations that plan to apply LA to their organisation.

As described in section 3, we are evaluating the feasibility of establishing a LACE SIG Europe that could offer body and means for the LACE community and results to persist and lead to new insights. We need to explore if that SIG should only be established at either EATEL or SoLAR or whether a combined approach is of interest for the professional academic organisations that have already been cooperating more closely in the past.

This plan will be further discussed at the Annual Meeting at BETT 2016, 22.01.2016. Once a final strategic agreement has been formed within LACE, we are planning to submit a SIG proposal to SoLAR by mid March 2016. In the meantime we will also elaborate the possible cooperation with the existing SIG dataTEL at EATEL. We aim to have a solution for the home of the LA SIG Europe by mid of April and promote it at the LAK16 conference in Edinburgh and various additional events organised by the LACE sectors.
References


### About

**Version History**

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### About this document

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### About LACE

The LACE project brings together existing key European players in the fields of learning analytics & educational data mining who are committed to building communities of practice and sharing emerging best practice in order to make progress towards four objectives.

- **Objective 1 – Promote knowledge creation and exchange**
- **Objective 2 – Increase the evidence base**
- **Objective 3 – Contribute to the definition of future directions**
- **Objective 4 – Build consensus on interoperability and data sharing**

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