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EAGLE
EnhAnced Government Learning

www.fp7-eagle.eu

FP7-ICT-2013-11

Objective 8.2 Technology-enhanced learning;

Target outcome c): Holistic learning solutions for managing, reaching and engaging learners in the public administrations

Deliverable no. 6.8

Authoring tools- final version

WP 6 – OER Services
 Lead Participant: HRW

Approval Panel	Name / Partner short name	Department / / Function	Date
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Glossary

FP7	Seventh Framework Programme
EC	European Commission
EAGLE	EnhAnced Government Learning
EU	European Union
FAQ	Frequently Asked Questions
WP	Work Package

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Management Summary

D6.8 presents the final tool library for the EAGLE platform. Based on an expert discussion within the EAGLE Consortium, 45 core evaluation criteria have been defined. They address the learning scenarios: community building, group communication, and networking including the use of social media functions. Further prioritized evaluation criteria address the questions: which functions are necessary for sharing resources, for producing texts and graphics, which functions are needed for producing screencasts and taking notes. Also criteria address technical and cultural constraints. The appendix provides an overview of the tool evaluation; i.e. which tool scored at which category.

Building upon D6.4., tools which have been selected are:

- H5P (authoring tool)
- Freeplane (extended mind-mapping)
- Aspose (file conversion)
- Messenger SUC (messaging and communication)
- Screencast O Matic (screencasting)
- Calendar CE (calendar / planning)

While the tool ‘screencast O Matic’ is a recommended tool that needs to be downloaded and used offline, the consortium discussion concluded for the rest of tools mentioned above, that a direct integration of the tools is needed for the EAGLE users. Firstly, experience in other EU projects like OpenScout has shown that users do not switch between learning environments to create learning resources. Instead, they do not create a resource. Secondly, the requirements analysis in EAGLE has indicated that infrastructure including internet and broadband availability for availability of authoring tools is a critical barrier. If EAGLE users are not able and guided to use tools in the platform, the barrier may constrain the effective use of EAGLE.

Apart from the selection of tools D6.8. provides guidelines for the following tool uses in EAGLE: Community building with forums, group communication with blogs, group communication with the calendar, the aggregation of resources and doing presentations. D6.8. provides scenarios how to use the tools; list of quick-steps and furthermore created dedicated OER for EAGLE users. They are available to EAGLE users as videos, pictures, wiki and blog entries and will be updated once the technical integration of tools has been fully accomplished.

Last but not least, the full findings of the EAGLE tool evaluation are provided to users. More particularly, information, scenario of uses and where to find the tools are provided in a wiki entry “tool library”.

D7.2. will build upon this tool library and provide further guidelines for community building and contextualization activities in a next step. In this step, tutorials will also be translated and will be made available in all EAGLE languages. Currently OER are available in English and German.

1 Introduction

The following deliverable provides the final tool library for the EAGLE platform. Building upon the deliverable D6.4, recommended tools will be reassessed. The set of criteria for the final selection among recommended tools has been developed collaboratively with work-package four (WP4), five (WP5) and seven (WP7). In this regard, guidelines for several scenarios of use are provided in the deliverable.

The introduction will clarify on the objectives, which points to take up from the deliverable D6.4 as well as the structure of the deliverable D6.8.

1.1 Objectives of the deliverable

The objective of D6.8 is to derive at a meaningful, easy-to-use set of tools in form of a tool library. Tool library stands for a document which provides a list of tools, their assets, use and integration into scenarios. The tool library shall be provided also as part of the online EAGLE platform. On the one hand, this increases accessibility of the guidelines. On the other hand, the use of online guidelines increases familiarity and skills of users performing web-based activities at the workplace.

1.2 Input from other work-packages

The deliverable D6.4 synthesized work on tool analysis in the EAGLE project. WP4, for example, defined a set of pedagogical learning scenarios¹. EAGLE tools should facilitate related activities. Work-package seven elaborated a set of cultural factors which shape the use of tools on open e-Learning platforms. Correspondingly, whether tools are biased to one or the other end of cultural dimensions like accessibility or lack of accessibility of different languages was considered. Overall, the tools as well as the overall tool selection met criteria and (more detailed) requirements.

While the first elaboration was quite comprehensive, the list of criteria and requirements was too large. The long list of criteria was valuable to get familiar with comparable tools. For this deliverable, however, a core set of criteria needs to be defined that is more focused and agreed upon across work-packages. Corresponding implications were defined at the end of deliverable D6.4.

TABLE 1: RECAP OF TASKS DEFINED IN D6.4

Work Package	Task
WP4	Downscale criteria to a manageable set. Review the integration of criteria in this deliverable. Participate in the next analysis. Address the comments Formulate guidelines for learning scenarios ¹

¹ Scenario is not understood as a user scenario but a pedagogical view on the use of technologies for certain learning means.

WP5	Specify technical criteria.
WP6	Adapt criteria Extend guidelines. Re-evaluate recommended tools.
WP7	Collaborate in extending guidelines. Delimit what is in Deliverable 7.3. (D7.3.) regarding contextualization scenarios

1.3 Structure of the deliverable

In the spirit of D6.4., this deliverable follows a common tool analysis process (cf. Brown et al. 2007; Mikroyannidis 2010, 2012; Berking 2014; Shank 2013).

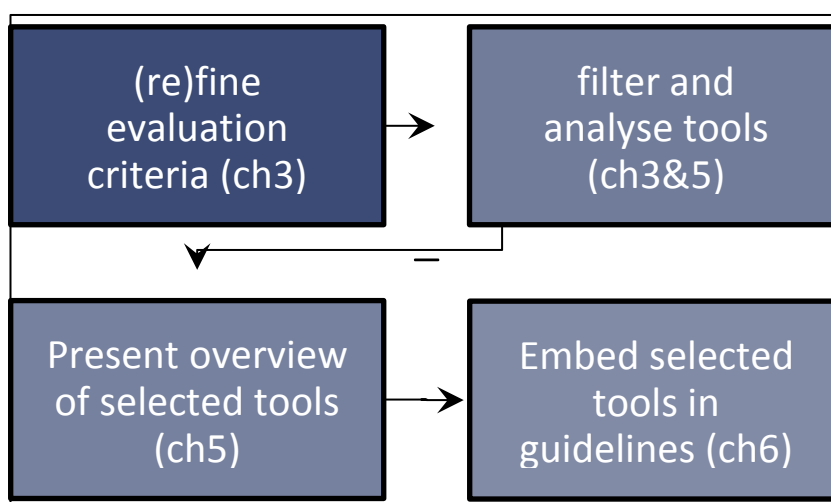



FIGURE 1: STRUCTURE OF THE DELIVERABLE

The following chapter 2 will briefly clarify the method of (re)analysing recommended tools of D6.4. In this respect tool categories and evaluation criteria will be tailored and translated into an analytical matrix. In the next chapter, recommended tools are filtered and analysed concerning selection criteria.² The selected tools will be presented in terms of features and success regarding selection criteria. Following this overview, results will be communicated by embedding them in guidelines.

Enjoy reading!

² While most details are covered in the core deliverable, several aspects will be addressed in the Appendix.

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2 Methods

In the following chapter, methods are outlined in order to refine the tool selection criteria, complete the review of recommended tools as well as develop guidelines. Hereby, an overview of particular criteria and selection mechanisms is provided.

2.1 Methods for analysis and criteria selection

Berking (2009) recommends using a set of highly differentiated requirements for an initial analysis of tools. The criteria need to be critical ones and they should be defined on a high (general) level in order to quickly filter the tools.

Generally, there are no predefined selection criteria for authoring, multi-lingual and specific purpose tools. In the initial deliverable (D6.4.) a catalogue of criteria was developed based on criteria provided by work-package four, seven and six. For the initial filtering, the catalogue of criteria was invaluable; yet, for the final selection of tools, the set has to be reduced to the core crucial selection criteria.

To tailor the range of evaluation criteria for the final tool selection, criteria from the catalogue were prioritized. An expert discussion was held with EAGLE consortium members involved in task 6.4. and work packages four, five, six and seven. The results will be presented in chapter three.

2.2 Tool categories

Tool categories in D6.4 covered authoring tools, specific purpose, multilingual and base tools. The tool categories will be kept for means of consistency among deliverables.

Authoring tools are "... any web-based or non-web-based application(s) that can be used by **authors** (alone or collaboratively) to create or modify **web content** for use by other people (other authors or **end users**)" (W3C 2013).

Specific purpose are any web-based or non-web-based applications that can be used by authors individually or collaboratively for specific purposes such as creating presentations, brainstorming and task organization (adapted from W3C 2013). This includes, but is not limited to re-authoring and localization strategies (cf. Rensing et al. 2005).

Multilingual tools allow stakeholders to utilize OER³ in innovative and collaborative scenarios. Creativity tools allow stakeholders to express and design their ideas in a cross-border group. As a starting point, we will provide multilingual brainstorming / mind-mapping tools to share, develop and refine ideas across language

Base tools support the process of authoring and contextualizing learning resources in different phases. On the one hand, the tools enable stakeholders to plan and coordinate the exchange with other European stakeholders about learning requirements and corresponding OER they intend to use.

³ The terms OER, open resources or open knowledge resources are used interchangeably.

These tools will allow users to specify their (future) needs and ideas (e.g. new forthcoming European regulations, management competences, emerging subjects) and enable to find collaborators in OER adaptation in simple ways.

In D6.4 the following tools were recommended on base of evaluation criteria:

TABLE 2: RECOMMENDED TOOLS

Tool category	Tool name
Authoring tools	ExeLearning, Liferay Tools (see ch.1)
Specific support tools	Slidewiki, Annotatelt, H5P, Reveal.js, Picmagick Digital drawing board, Docear, CAM, GIMP, Leptonica, XMind, Screencast O Matic
Base tools	Calendar CE, Kaleo, Chat Portlet, Messenger SUC, ToDo, Aspose, Mashare, Link Scanner
Multi-lingual tools	Mitzuli, Etherpad

After an initial review of possible tool candidates, the tools⁴ H5P, Screencast O Matic, reveal.js, wisemapping and freeplane were added. The choice relates to shared knowledge in the expert discussion (Consortium meeting), ongoing reviews of tools and initial work with the emerging EAGLE platform. For example, the tool CAM (for making screencast) provided no reliable service therefore alternative tools (Screencast O Matic) were explored. Another example related to exploring the technical integration of portlets (tools) into the EAGLE platform: we explored and found out that VideoChat WebRTC has several bugs which prohibit its use in the platform- WebRTC is thus deleted from the list.


The listed tools will be reviewed and serve for selection for the final tool library. At the current moment, the EAGLE platform already includes some basic tools, they will be evaluated in the deliverable D6.8. as well.

3 Evaluation Criteria

3.1 Choice of evaluation criteria

The list of evaluation criteria from D6.4. was assessed together with EAGLE Consortium members. The goal was to rank criteria in order to create a set of requirements the final tool selection in EAGLE shall meet. Hence, the list was projected on the screen and for every

⁴ www.h5p.org; <https://screencast-o-matic.com/home>; <http://revealjs.com/>; www.freeplane.org/wiki/index.php/Main_Page; <http://www.wisemapping.com/> .

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category of criteria (learning scenarios, culture, accessibility), the three most important requirements were defined. Importance was hereby defined as the value given the feasibility of technical integration, frequency of use, accessibility point of view and feedback based on first validation trials.

Based on the set of reduced evaluation criteria, the selection of tools for the EAGLE tool library depends on the following:

- A tool is selected if it meets more requirements than comparable tools (f.e., a screencast tool which allows to record the desktop and voice succeeds a screencast tool which allows to record the desktop only).
- The final tool selection shall succeed meeting all requirements defined in the Consortium meeting.

During the discussion of tool criteria, it was also decided that the set of selected tools shall be small given that these will be directly integrated into the EAGLE platform. Other tools with good performance will be described and provided on base of a link in the EAGLE platform.

- Few tools meeting the most requirements will be selected and directly integrated into EAGLE. Other tools will be provided by a link.

In the following, the selected evaluation criteria will be presented. Categories of requirements are outlined on the left hand of the table (Table 3). Those criteria ranked of highest (1st) to 3rd most important criterion are provided on the right hand of the table.

3.2 Learning scenarios

Learning scenarios for EAGLE determine requirements that enable users to follow learning scenarios and activities under the connectivism paradigm. Tools in EAGLE shall enable users to acquire knowledge and exchange experiences in the platform in various ways.

In WP4, the core learning scenarios (activities and processes from a pedagogical perspective) for EAGLE users were defined to be: community building, autonomous learning and OER authoring.

Community building defines activities to create a community of informal learning (D4.4., Chunggam, Sumalee, Murphy 2014). Users need to make connections to colleagues, experts and superiors. Tools should support them in networking, content sharing and communicating among other points. Following the discussion of experts in the Consortium meeting, the most important criteria (in terms of frequency, pedagogical and accessibility perspective, and feedback from first validation trials) are listed in the following table.

TABLE 3: LIST OF EVALUATION CRITERIA | COMMUNITY BUILDING

Category: Community building	List of evaluation criteria
Networking	Sending private messages to eagle users



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	Sending of emails to unknown eagle users Receiving email notifications in case of private messages
Group communication	Functional mailing lists Receiving email notification in case of group messages Private messages to group
Social media tools	Reciprocal connections (mutual acceptance) Unidirectional connections(follow) Indirect connections (#hashtag, @mentions)
Forum	Notification system Reply to posts Rating of contents
Annotation	Private annotation Tagging of annotations
Sharing	Share links Tagging Commenting

The following set of criteria represents the activity OER creation by public employees. Tools shall support EAGLE users to use, collect, share and adapt OER as time- and cost-effective as possible. Following the discussion in the Consortium, the following set of requirements was defined in the table below.

TABLE 4: LIST OF EVALUATION CRITERIA | OER CREATION

Category: OER creation	List of evaluation criteria
Text production	Tracking of changes, multi-user; AT LEAST VERSIONING allows embed graphics and links rich text editor, Can create and format tables Can copy and paste from other text editors
Graphics and animation	Editing options- basic ones- crop, turn, resize
Audio production	Capture audio from the device mobile or desktop -- playback and hearing is important but not for editing /recording online Can embed audio files Can add links to external audio files Can publish to open source audio formats: example: in open source formats; not mp3 only
Video production	Is able to see, hear, upload Can link to external or web video files Can export recorded video to open source format

Screencast editing	Unlimited time recording Screencast editing Audio integration
Presentation production	Template structure (beginning content end)
Aggregation	Gather different media; Make and save a file Share the work done

Last but not least, an important learning process that the EAGLE platform aims to support is autonomous learning. Autonomous learning defines activities to obtain knowledge and skills needed to fulfil an employee’s task. It aims to fulfil a personal employee’s learning needs and covers situations where the employee detects what s/he needs to perform a task, but also to cover a personal interest, or external information request, or internal curiosity. Based on the consortium discussion, the list of prioritized criteria is documented in the table below.

TABLE 5: LIST OF EVALUATION CRITERIA | AUTONOMOUS LEARNING

Category:	List of evaluation criteria
Autonomous learning	
Content collection	Adding notes
Blog	Online text blog Allows tagging

3.3 Technical criteria

To create a tool library for the EAGLE platform, some of the crucial considerations address the technical integration of tools. Technical criteria shall secure that the selected tools can be either directly integrated or provided as a link. By help of testing the applicability of criteria defined in D6.4., testing the integration of recommended tools as well as the discussion in the EAGLE Consortium, the following list of criteria (Table 6 below) has been defined:

TABLE 6: LIST OF EVALUATION CRITERIA | TECHNICAL CRITERIA

Category: Technical criteria	List of evaluation criteria
Multi-device operation	Be able to operate in mobile devices
Resizing of objects	Optimize the GUI for mobile devices Resize text to be readable

3.4 Accessibility criteria

In the deliverable D6.4 accessibility criteria have been defined with regard to common WCAG 2.0 guidelines (W3C 2003). The guidelines cover a wide range of accessibility recommendations and serve to accomplish a thorough accessibility check. By following the guidelines and criteria, the goal is to make content accessible to a wider range of people with disabilities, including blindness and low vision, deafness and hearing loss, learning disabilities, cognitive limitations, limited movement, speech disabilities, photosensitivity and combinations of these. Hence, the list of criteria as defined in D6.4 will stay and will not be prioritized.


Yet, after discussing the important role of accessibility in the EAGLE platform, it was noted that an accessibility check is only meaningful once tools are integrated and have the “look and feel” of the EAGLE platform. Related to this, it was decided that the accessibility team (DCU, C. Mulwa, D. Fitzpatrick) will evaluate potential tools on a general basis and check accessibility on base of the criteria after their integration online.

3.5 Culture criteria

Culture and context factors shape the (re-)use and exchange of open educational resources on the EAGLE platform. With hindsight to the culture contextualization model in work package seven, requirements in D6.4. were defined and covered the accommodation of diversity in international contexts as well as cultural inscriptions in tools and learning activities. Discussing the forthcoming tool evaluation and guidelines to be developed in WP7 (contextualization D7.1. and tasks T7.2 and T7.3.), it was thus decided to include the following evaluation criteria (Table 7 below) in this evaluation:

TABLE 7: LIST OF EVALUATION CRITERIA | CULTURE FACTORS

Category:	List of evaluation criteria
Culture factors	
Language	<p>The tools can be used in different languages.</p> <p>Any technical language should be clearly explained. Note that where possible, technical “jargon” should be avoided.</p>
Discussion culture	<p>The tools do not display errors in self-assessments openly.</p>

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3.6 Further needs, requirements and comments based on feedback of the first validation trials

The Open Source criteria in D6.4 aimed at securing that both outputs and software components of tools can be used and published in an accessible format. All tools were reviewed for this, which means the final selection does not require checking these criteria again.

Concerning the technical integration levels, discussions at the consortium meeting came to the conclusion to integrate few core recommended tools directly into the EAGLE portal while providing advice about further advanced tools by description and links. Related to this, discussions and online meetings were held between developers. This has served to clarify on the integration mode and time needed for forthcoming steps. Tools will be integrated as e.g. php-portlet. As indicated above, recommended tools are open source and provided on GIT⁵ or comparable platforms for free and unrestricted uses.

4 Scenarios and Guidelines

The deliverable provides practice guidelines how to use the selected tools. Guidelines define procedures which tell users how to interact and use the tool in a *general sense*. Taking into account the current expertise of EAGLE users, however, guidelines should be sensible to the actual work context of users. Users in EAGLE have only few or no experience with open e-Learning and contextualization tools in their everyday work. Providing guidelines for tool usage might be too straightforward and fail to erase unfamiliarity. An alternative to guidelines are scenarios⁶ which provide a narrative and guide users *imagining* the use of a tool. While scenarios may help imagining how to use tools, renouncing of guidelines may lack granularity how to use a particular tool step by step.

Based on these considerations, we have decided to merge best practices for writing scenarios (Goodman & Kuniavsky 2012; Rosson & Carroll 2002), and guidelines (Miles 1898; Tattersall 1991). To facilitate reading, however, we will use the name “guideline” only. The combination of scenarios and guidelines will lead to deliver a best practice guide for the EAGLE Tool Library in view of the needs and requirements of the users.

4.1 Synthesis of steps and objectives (scenarios and guidelines)

Scenarios sketch “a day in the life” (Goodman & Kuniavsky 2012) of typical EAGLE users, defined as EAGLE Personas (see 4.2). The scenarios are narratives showing future users how and when selected tools can be embedded in everyday work and life.

⁵ <https://git-scm.com/>

⁶ From this point onwards, scenarios refer to user scenarios from an engineering point of view (instead of the pedagogical perspective on processes and activities).

To create a scenario, a plot needs to be sketched. It describes how a Persona uses a tool. Personas are typical representatives of different user groups; they help to reflect how people with different goals, formal requirements and working contexts may interact with the tool. To illustrate the use of tools, screenshots and illustrations of guidance are provided.


The scenarios should be checked by selected reviewers in order to transfer them into concrete guidance (note that the steps are adapted from Miles 1989):

- Does the set of scenarios answer?
 - o What are the goals and functionalities to fulfill user goals?
 - o Are different groups of users considered?
 - o What happens if the settings, barriers, goals and outline changes? Is it clear how to respond to contingencies?
 - o Are technical skills of users (familiarity with limitations and abilities of a piece of software)
- Is the construction of the plot appropriate?
 - o Are activities logically structured, depending on frequency, necessity; or sequences?
 - o Clear and concise description without errors in spelling, syntax, and content; use active voice, write in second person, use familiar vocabulary, use few computer terms (if terms are used, they must be clearly defined); use symmetric pages, different print and typeface, provide significant whitespace to digest information
- Construction of guidelines
 - o Consider whether to include installation procedures
 - o Explain procedures in a logical flow and end with an example
 - o Divide the screen into regions
 - o Outline where error statement appear, where to enter information to the system and what form information need to be accepted.

By help of these best practices and criteria, the user's need for guidelines will be met. Not to anticipate the outcomes, it will be briefly described what the contents of guidelines in chapter six present overall: A section called:

- *Story* (the scenario) which illustrates the use of the tools in everyday life
- *OER* which are tutorials (such as screencasts or interactive videos) provided on the EAGLE platform.
- *Quick steps* which is a brief overview how to use or create an open knowledge resource by help of a certain tool. The set of quick steps will be provided on the EAGLE platform in the wiki.
- *Think positive* which addresses frequently asked questions (FAQs) and related answers.

To create these contents, personas need to be taken into account. The personas in EAGLE are briefly outlined in the following chapter.

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4.2 Personas in EAGLE

Personas are descriptions of typical user groups who are going to use the EAGLE platform. Personas are commonly used to reconsider who the users are. There is no single one user but several distinct users. Their requirements and goals differ from one another and respectively, the features and uses of the EAGLE platform differ as well (cf. Goodman & Kuniavsky 2012:481). Taking Personas into account will thus help to advance tool scenarios in this deliverable. The five personas in EAGLE are presented briefly in the following:

Louisa:

Louisa did her IT apprenticeship at the local municipality and is now at the beginning of her career. She likes to keep up-to-date with the most recent technology that might be helpful for any of her colleagues and for the different departments and their specific needs. When she started her permanent position, a group of local municipalities had decided to have a shared call-in IT help desk. She took over the new position of team lead within weeks after completion of her apprenticeship. Her key tasks are customer service at the IT call-in help desk and all the training needed by her team and other employees when introducing new technology.

John:


John has worked at the local municipality for 10 years and has reached the mid of his career. He is in charge of managing human resources as well as allocating municipal resources to a number of local associations, clubs, and initiatives. His key tasks are management of resources and inventory, scheduling and accounting. He has taken courses in health & safety, project management, public finances and Environment law. He has attended webinars on HR topics and is often contributing and using online HR forums.

Gabi:

Gabi has worked at the local municipality for the last 5 years and enjoys the freedom the part-time job provides for taking care of her family. She usually gets her orders from her team leader what to do that day and finishes work at lunch time. Her key tasks are maintenance of flower beds as well as shrubs on community property. She has taken a course in Health & Safety when she first started the job. She has no interest in any other continuing education.

Seamus:

Seamus works in the service centre dealing with citizen queries, which means he can apply his 10 year call centre experience. He is content with his job, as it allows him to work regular hours, with the occasional possibility of doing overtime to earn some extra money. His job entails talking to people, and answering their questions and passing the query on to someone more specialised, if he cannot help. He has to use the internal knowledge base to look things up for citizens calling in. This can sometimes take him longer than his colleagues, as he uses screen magnification software, because of his visual impairment and his occasional challenges mobility challenges. To avoid those delays, he has a well-organised set of bookmarks which he has gathered over time.

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Biljana:

Biljana is an expert for environment protection with 20 years of experience and excellent knowledge. She has a lot of work and deadlines that cannot be missed. Her office is in the capitol, but most her clients are small rural municipalities. Since she is proficient in English, she uses the internet and dedicated databases at work for researching information. She has taken courses in Environment law and Health & Safety recently to brush up her knowledge. Her key tasks are researching information, looking up special information and writing technical reports

So far, an approach to tool evaluation, selection and scenario development has been defined. In the following, we will analyse the tool candidates.

5 List of selected tools

5.1 Summary of tool analysis

For selecting tools for the final tool library in EAGLE, a list of core evaluation criteria has been defined in chapter three. For analysing the recommended tools from D6.4., an analytical matrix was developed which shows the criteria in a consolidated list.

For each tool it was then checked, whether the tool complies with the requirement (1) or not (0). Based on this elaboration, a sum of scores could be calculated for each tool. Moreover, it was possible to check whether the evolving tool library achieves to meet all selected criteria.

For means of space, the analytical matrix is provided in the appendix. The score of each tool recommended based on D6.4. is provided in the following:

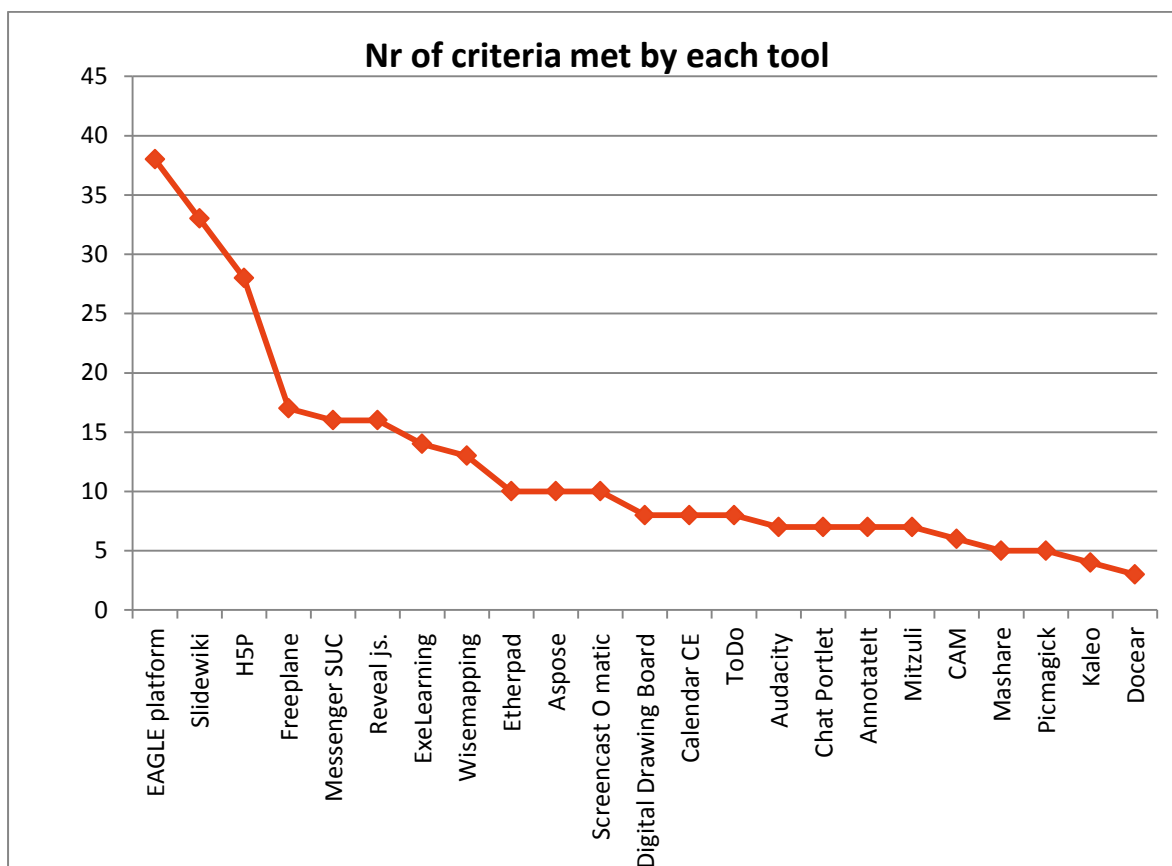



FIGURE 2 RANKING THE TOOLS ACCORDING TO EVALUATION CRITERIA

Based on this elaboration, we have discussed to select the following tools:

TABLE 8: SELECTED TOOLS

Kind of tool	Direct integration
Authoring tools	Liferay / Vaadin (EAGLE platform)
Specific support tools (incl. contextualization)	H5P, Freeplane, Screencast O matic
Base tools	Calendar CE, Messenger SUC Aspose,
Multi-lingual tools	H5P and EAGLE platform, Etherpad, Mitzuli

The first question to answer is: why was H5P chosen in favour for Slidewiki? Firstly, criteria met by Slidewiki are covered by the EAGLE platform already. Secondly, Slidewiki as a

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specialised tool is meeting the criteria for presentation only. H5P, in contrast, provides many more content templates apart from platforms. In addition, requirements that H5P tools do not meet in comparison to Slidewiki such as social media connections, can be overcome by a direct integration into the EAGLE platform. Last but not least, H5P allows integrating instances with own backends, hence, the technical integration can more easily be completed. Following these considerations, h5P was chosen.

The second question is: which tools are integrated and which ones are provided by link? Balancing the number of accomplished requirements and number of tools to integrate, it was decided after discussions with developers and work package leaders in EAGLE that H5P, Freeplane, Calendar and Messenger SUC and Aspose shall be directly integrated. Etherpad is a service which can be easily used online by following a link. Screencast-o-matic is a tool to be downloaded on the desktop. To stabilize the functioning of EAGLE on both desktop and mobile phones, the tool Mitzuli shall be recommended as an app download (for free).

Tools apart from these selected ones can be outlined to EAGLE users as well. It will be outlined in which scenarios they are needed and which competences users might have or evolve to have by using the tools.

In the following, the selected tools will be presented which means that their use and available functionalities will be summarized briefly. Subsequently, scenarios and guidelines will be provided for the use of these tools.

5.2 EAGLE platform (Liferay / Vaadin)


The current EAGLE platform is built upon the open source Liferay platform, supported by the java web application framework vaadin. The platform is not especially designed for e-learning uses, but hosts a set of favorable content templates which can be used to create self-standing as well as component based learning packages.

Tools which the EAGLE platform provides based on the Liferay/Vaadin configuration are: forums and groups, blogs, wikis, network/meet-ups.

Forums provide EAGLE users with the chance to exchange knowledge on a particular topic. The communication is asynchronous so people exchange one after the other. Groups in forums can be built by administrators in order to work within a dedicated team on particular questions. The content is visible to other EAGLE users while the chance to contribute depends on an accepted membership (simply to request via EAGLE).

Blogs provide EAGLE users with the chance to keep personal learning notes, outline personal opinions or use the format as a kind of OER for general learning means. Blogs allow giving others commenting and editing rights, to attach resources among others.

Wikis in EAGLE provides users an editor to develop front- and sub and orphan pages for particular topics, for means of knowledge accumulation and basic information about topics. The chance to configure editing rights for collaboration, and attach resources among others is provided.

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Network / meet-ups Apart from the Calendar CE presented below, the tool meet-ups allows administrators to schedule special events for a special group. Hence, apart from the title and means of the events, the email address and state of acceptance is to be defined.

The tools are integrated and run smoothly in the first prototype for evaluation. The tools to be integrated apart from the ones above subsequently will be presented in the following.

5.3 H5P

H5P is an authoring tool which enables ‘creating, sharing and reusing HTML5 content and applications’ (h5p.org). It is thus mainly used for authoring and contextualizing / adapting existing knowledge resources to the needs of the different organizations and users.

H5P allows authors to choose between various content types such as presentations, interactive videos, collages, documentation tools, flashcards, lframe embedder, summary and others. They help to structure authoring OER for different purposes including assessment tasks.

H5P can currently be integrated into drupal, wordpress and Joomla; integration into other frameworks is under development. The source file can be downloaded and embedded depending on the rights management of the author. However, the integration to Liferay will be part of the work in EAGLE.


The test space for h5p is appealing and provides an easy to understand interface. The structure is clear and simple. It provides well-structured guidance where processes are unclear. For example, every item, button and icon provides information what this item will lead to, how to fill in spaces and how to navigate if questions appear.

5.4 Freeplane

Freeplane is a brainstorming tool which allows single and collaborative editing of maps. It is a free and open source software application that can be installed on any system that runs Java.

Freeplane allows users to organize their ideas, knowledge, things to do and discuss in a neat, functionally rich mind map. Other than previously evaluated mind maps, Freeplane is interactive and allows users to track a status in the map by clicking on respective items. Freeplane can be used both by novice and advanced users given that the contents may be dragged and dropped as well as coded in html.

Freeplane can be integrated or depending on preference of users downloaded and used as a desktop version. Also add ons are available, such as RoAn-presentation. They allow making a presentation out of mind-mapped content.

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5.5 Calendar CE

Calendar CE is a planning tool for single and multiple users. It is a dedicated portlet for the Liferay Portal and contributes to manage learning and collaboration online.

Unlike network/meet-ups in Liferay presented above, calendar CE provides users a full-fledged planning tool. As described by Liferay the tool “allows users and organizations to create, track, share, and manage events.”⁷ Last but not least, it allows to invite people to events, to track responses and moreover to generally share calendars with others. Particularly for groups and community building, these features provide benefits.

Given that Calendar CE is a well-used and well-received portlet for Liferay platforms, the structures and components are well designed. The visual appearance of the portlet is fine, but it requires quite some space. Although it is responsive to mobile screens, the use as one customized column in the EAGLE portlet design does not suit other functionalities, embedded in one webpage. Due to this, it has been discussed to integrate the tool in a dedicated planning space, for example, together with the user profile. This will be validated and configured during the next validation phase.

5.6 Messenger SUC

Messenger SUC⁸ is a dedicated portlet for Liferay platforms. It allows users to communicate online. Similar to other communication tools, messenger SUC appears as a set of three icons in the lower, right handed side of the Liferay website. The icons represent contacts, configuration and personal status online. In comparison to Chat CE settings available for users are advanced; chat sound, buddy lists, relations among users can be configured. The own status can be switched between online, busy, unavailable and the tool can be turned off, which increases privacy.

The visual appearance of the portlet is fine. The structure and design components are well ordered and are already integrated in the EAGLE platform.


5.7 Aspose

Aspose⁹ is a tool which allows converting resources into different file formats. It is a dedicated plugin for Liferay Platforms. Aspose succeeds the built-in tool “jodconverter” which transforms OER into a HTML-compatible format. The tool has been tested in D6.4. already and will be fully integrated in the forthcoming platform.

⁷ <http://www.liferay.com/de/marketplace/-/mp/application/31070085>.

⁸ <http://www.liferay.com/de/marketplace/-/mp/application/27306952>.

⁹ <http://www.liferay.com/de/marketplace/-/mp/application/53739403>.

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6 Guidelines for using tools

The following guidelines help users to imagine and use tools at their workplace. They are related to personas and tools of the EAGLE portal. Hence, the guidelines are contextualized for the needs of public employees. While some videos on youtube are available, and some tool developers provide documentation of user guidelines, the ones provided below are often enriched with learning tasks (e.g. fill in the blanks, right/wrong answers). This will help users to use and engage with the EAGLE platform once implemented and reflect what they have learned with the guideline provided below.

6.1 Forum

The guideline is dedicated to users who aim to share knowledge and experience with similarly interested peers. The tool to be used is the forum integrated in EAGLE. The personas oriented upon are John and Luisa. The story helps inexperienced EAGLE users how to use forums, while the quick steps provide a list of steps (clicks) to follow for creating a user's first forum entry.

Aspects	Description
Story	<p>For public administrations in the European Union, a workshop was held how to organize software updates and implementation in front offices. Although all employees in the public sector are affected of changes, only two seats were left for the region Albertrange. Two representatives were selected to attend the workshops, namely John and Luisa.</p> <p>John and Luisa have attended different workshops on the use of Microsoft Office tools in public administrations. John has quite a lot experience with document management and attended related sessions. Luisa was more focused on the use and upgrading of excel and accounting files as well as related applications. As both get together and start talking about the workshop, both noticed that they have to share insights with their colleagues. John and Luisa dream of an integrated environment available for their administration and those in close distance. Just as John and Luisa have specialized in the use of tools, they know that some colleagues have become experts how to use and migrate documents to upgraded software. As their daily work is full with tasks, John and Luisa want to build a forum that manage themselves, or are directed by dedicated persons.</p> <p>Once they are back at the administration, Luisa and John get online and open the EAGLE platform. After logging in, they open the community site and create a forum. Luisa is creating a forum with a central goal (share best practices of software upgrades)</p>
OERs	<ol style="list-style-type: none"> 1. Forum entry in EAGLE (German) "Erster Forenbeitrag" 2. Tutorial recorded how to use forums (German), "erster Forenbeitrag" attached to the forum entry in EAGLE
Quick steps	<ol style="list-style-type: none"> 1. Log in and open the community site. 2. Click on forum.

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	<ol style="list-style-type: none"> 3. Check out the categories or whether your topic stands irrespective of them. 4. Click: "+ new topic" 5. Specify the topic and the content. 6. Decide whether to add an attachment. 7. Decide whether you want to follow the topic after you have posted it. 8. Click "submit" to save and publish the topic.
Think positive (potential difficulties and FAQ)	You cannot find the button "+ new topic"? → Check whether you are logged in. You have posted your entry with a typo? → No problem, open the post and move the cursor to the right of the webpage. Here you find the option "edit" or "delete".

6.2 Blog

The guideline is dedicated to users who aim to disseminate information for personal learning means (like repetition and reminders). The tool to be used is blogs implemented in EAGLE. The persona oriented upon is Biljana.

Aspects	Description
Story	<p>Biljana is an environmental specialist in a Montenegrin local public office. Given directives of the European Union to implement environmental laws, she has to attend a committee which serves to disseminate experiences of local administrations to central ministries. For reminding herself of take-aways, Biljana had used a paper-based notebook so far. But since she has difficulties of keeping all of her notes on track, she has used the EAGLE blog for personal learning and knowledge management means.</p> <p>Biljana does not want to challenge herself and simply puts her notes down in a bullet point list. As she has to inform her colleagues about the committee meetings, she simply configures the rights of the blog site and sometimes sends out a reminder to colleagues that the blog has been extended.</p> <p>This day, again, she logs in and opens the site MyOERs. She selects myblogs and clicks on the one dedicated with the title "implement environmental law". She adds another paragraph and outlines the date of the additional notes. She uses the editor to add more bullet points. While she had no internet connected during the meeting, she was able to take some notes on her laptop. Thus, Biljana opens the word document, copy and pastes the content and simply checks the formats.</p> <p>Although she is not confident in using laptops, she has learned how to take down notes on the laptop and then to simply copy-paste them to her blog. Biljana is satisfied because she feels that she has improved her ICT-competences a bit. Also, she has found a way to save time although having the additional task of attending the committee. After having added the notes, she saves the changes and signs off.</p>
OERs	<ol style="list-style-type: none"> 1. OER (video) available on https://h5p.org/node/5444 (English) 2. Blog entry in EAGLE: "Mein erster Blog" (German) 3. OER (Blog entry in EAGLE): "Blogeintrag"
Quick steps	<ol style="list-style-type: none"> 1. Log in and open the site community. 2. Select the option "blog". 3. Select "blog entry"

	<ol style="list-style-type: none"> 4. Specify a title. 5. Add content 6. Decide about rights and permissions. 7. Specify a brief abstract. 8. Categorize the blog by tags. 9. Add a related asset if needed. 10. The file is automatically saved. 11. Save it as a draft, select preview or publish the file. 12. You are redirected to the overview of blogs (step (2)). 13. Your blog is outlined in the beginning. 14. Check whether you are fine with the blog.
Think positive (potential difficulties and FAQs)	<p>I cannot select a blog entry.</p> <ul style="list-style-type: none"> ➔ Check whether you are logged in. <p>I am unsure about rights and permissions.</p> <ul style="list-style-type: none"> ➔ There is an OER about licensing and permissions in EAGLE. Use the search to find it and wait with the attribution. <p>How to enter tags?</p> <ul style="list-style-type: none"> ➔ Simply click into the writing space and press enter or “add”. To remove a tag, click remove or the “x” in the tag. <p>There is a typo!</p> <ul style="list-style-type: none"> ➔ That is no problem. Click on edit to improve your Blog entry. You may do this now or later.

6.3 Calendar

The guidelines are dedicated to users who aim at scheduling collaboration. The tool to be used is calendar. The persona oriented upon in this guideline is Gabi.

Aspects	Description
Story	<p>Gabi has gotten new branch shears and has to update her health- and safety education prior its use. More than that, Gabi will be away in the next weeks due to annual leave. Her new colleague will have to take care of cutting back trees at community property. Due to her job-profile, Gabi is rarely in an office; her main workplace is in gardens and parks, outside the administration buildings.</p> <p>Last year, Gabi was confronted with the question: how to share knowledge about the health-and safety instructions with colleagues when I am not working in the office? This year, Gabi has started using EAGLE which she can access over the phone. In the afternoon, she spends fifteen minutes to check whether branch-shear safety instructions are already provided in EAGLE. There are related open knowledge resources, but they are not specific enough for her updates. Gabi decides to adapt the resource and ask the author of the initial resource to work with her.</p> <p>Since she has no time for long explanations and for creating an OER, Gabi decides to send him an invitation and the safety instructions for the branch shears that she has recently bought. She would use the safety- instructions based on the manual that she has received with the product. Now, she wants to ask the original author whether he would agree to collaborate on the re-use of the learning resource.</p> <p>Gabi opens EAGLE and logs in. She opens her profile and the calendar. She</p>

	creates an event, specifies a deadline and her idea about collaboration in the notes (blank space for text, explanation of the event) and invites the author for collaboration. Furthermore Gabi adds assets to the invitation, namely the safety instructions for the branch shear. She saves the events and logs out. Gabi can proceed with her work; later today she can check the status of the invitation by opening the event.
Illustration	<ol style="list-style-type: none"> OER “Calendar in EAGLE” (English). OER “Kalender in EAGLE” (German)
Quick steps	<ol style="list-style-type: none"> Log in and open your profile. Scroll down to the calendar Magnify the calendar to your convenience (day, week, month, agenda) Click the button “add event”. Specify the title and details depending on need. Save the event. Check in the calendar (day, week, month, agenda) whether the event is properly saved.
Think positive (potential difficulties and FAQs)	<p>I cannot find the name of my colleague.</p> <p>➔ You can simply type in the first words of your colleague’s name. If you cannot find your colleague, check in EAGLE whether your colleague has an account. If not, you may invite him by mail.</p>

6.4 Mindmap

The guideline is dedicated to users who aim at creating mind maps and brainstorm alone or together with other peers. The tool to be used is Freeplane in EAGLE. The persona oriented upon is Seamus.

Aspects	Description
Story	<p>Seamus is a public employee who knows ‘who to contact’ for specialized queries in the call center. Given his long employment, Seamus’ knowledge is invaluable and gives him an expert status when people in the call center do not know how to respond to citizen requests.</p> <p>In recent times, several newcomers have entered the call center. Despite liking to give advice, there is a leap of requests. Seamus is about to become a coordinator for newcomers, but consequentially, the time left for his mandatory work is decreasing.</p> <p>Thus, Seamus has decided to develop a sort of map for frequent questions and directory which offices to contact in certain situations. Since his visual impairment does not allow him to draw properly with pen and pencil, he decides to prepare a mind-map in EAGLE. He could also do a presentation but a mind-map would allow newcomers in one view to scope whether their particular question is addressed or who they could contact.</p> <p>Seamus opens the EAGLE website and logs in. He selects MyOer and creates a new resource. He chooses Freeplane as the tool. He magnifies the screen layout to facilitate his view. He starts creating the first nodes. He adds icons to indicate a sequence of steps- how to read through the mind-map. During the creation, Seamus is reminded that newcomers often need some document templates to accomplish common citizen queries. Since the</p>

	<p>template may differ across administrations, it is created on base of a common regulation and does not specify any personal or privacy related data. Due to this, Seamus decides to attach the file to the OER. After some time, Seamus decides to stop the creation and saves the mindmap as a draft. His visual impairment converts the general laptop use to an exhausting task. Due to this he will finish the mind-map later.</p>
Illustration	<ol style="list-style-type: none"> OER (picture) Mindmaps – Short introduction Wiki documentation for freeplane: http://www.freeplane.org/wiki/index.php/Freeplane_Tutorial_Extension
Quick steps	<ol style="list-style-type: none"> Open MyEagle Select Create new OER Select create anew Specify a title, and metadata Select Mindmaps. Use the mindmap editor. Save the file.


6.5 Aggregation of files

The guideline is dedicated to users who want to convert a learning resource into a particular format. The tool to be used is Aspose. The persona oriented upon is Gabi.

Aspects	Description
Story	<p>Gabi has no great interest in spending a lot of time online during work time, except her way to work on the bus. She likes listening to news or records and her mobile phone is able to interpret .pdf.</p> <p>In EAGLE, she has found some interesting files about flower beds and resource management that Gabi would like to go through. Unfortunately, the documents are in word-format or structured as presentations. She can download an HTML-file and use an annotation tool she has in her phone, to convert the file to pdf format.</p> <p>At short hand, Gabi decides to convert the format to use it on her mobile phone. She waits until she is at the office and can use the internet. Gabi logs in and searches the OER “flower beds”. Gabi opens the OER and moves the curser to the icon “configuration”. She clicks and the system provides her with the option to download the file in a particular format. A few seconds later, Gabi has the OER in pdf format on her phone.</p>
Illustration	(to be integrated in EAGLE)
Quick steps	<ol style="list-style-type: none"> Search for OERs. Open the OER Click download. Specify the intended format. Save the file and take note of the directory.

6.6 Presentations

The guideline is dedicated to users who aim at developing a presentation for learning means. The tool to be used is presentations by H5P. The persona to orient upon is John.


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Aspects	Description
Story	<p>John has already attended webinars in the course of his career. After the first week of the EAGLE implementation, John notices that use of the platform is behind expectations. Yesterday, he had noticed that his employees complain that they are unsure how and when to use EAGLE from one day to the other. Thus, he decides to get his employees together in order to briefly illustrate potential uses.</p> <p>John thinks about different ways to show how he suggests using EAGLE in his administration. He opens EAGLE and screens the different tools. He could also use power point but in this case his employees might not comment or contribute to the presentation as easily as in EAGLE.</p> <p>Thus, he decides to use the presentation tool in EAGLE. He is logged in and opens the MyOER page. He selects create anew and chooses the tool H5p/presentation. He has some ideas about the first slides of the presentation, for example, specifying the learning goals and the role of his employees in creating and re-using this presentation. In the third slide, John aims at engaging his employees to reflect what John has told them about EAGLE before. Thus he decides to use the function “fill in the blanks” and creates an interactive task for his employees to be accomplished.</p> <p>In the next slide, John provides some lay guidelines how to use the tools, although he knows that the EAGLE platform already provides guidelines for tool usage. Together with these guidelines, John uses the function “guess the answer”. Here John poses questions and his employees have to answer, for example, where can I find further guidelines: (a) in the code of conduct of our administration, (b) in the EAGLE wiki. Last but not least, John adds a last slide with the task that every employee has to add one experience using the tool.</p>
Illustration	<ol style="list-style-type: none"> 1. Wiki entry in EAGLE “Presentations – how to?” 2. Tutorial H5P provided tutorial in English: https://h5p.org/tutorial-course-presentation
Quick steps	<ol style="list-style-type: none"> 1. Open MyEagle. 2. Select new OER 3. Specify the title and metadata. 4. Select the tool H5P / presentation. 5. Specify the content of the slides. 6. Save the file.

6.7 Assessments

The guideline is dedicated to users who aim at elaborating self-tests in EAGLE. The persona oriented upon is Luisa, the tool to be used is H5P.

Aspects	Description
Story	<p>Luisa has started her job only recently. She has to take care of the training of migration and implementation issues in her team. She has recently installed a forum for the exchange between people. To check whether her team has improved understanding, she wants to set up a voluntary assessment. She knows about the automatic question tool in EAGLE but she wants to mix different self-assessment questions.</p> <p>Earlier, Luisa would have made a presentation where one slide shows a</p>

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	question and the next one shows the result. She does not know which opportunities are available in EAGLE but opens the website and logs in. Luisa checks out the tool library and screens recommended tools for particular tasks. To her surprise, EAGLE provides assessment types based on image hotspots, accordions, words matching apart from others. She decides to use the word matching to provide a self-assessment tasks.
Illustration	<ol style="list-style-type: none"> 1. Tutorial by H5P https://h5p.org/tutorial-multichoice-question 2. Open MyEagle. 3. Select new OER 4. Specify the title and metadata. 5. Select the tool H5P / self-tests. 6. Specify the content / sentences to be tested. 7. Save the file.

7 Additional notes

Currently scenarios and guidelines for creating OER are available. Further scenarios and guidelines for contextualization are going to be provided in D7.2. D7.2 is coordinated with this deliverable and will follow a similar structure.

The final tool selection presents the set of tools agreed to be integrated in the EAGLE platform. While some of the tools are already integrated such as messenger SUC, others still have to be technically integrated for use. In this regard, further updates of quick steps and OER guidelines available on EAGLE will be provided. Since the DOW states that a final and complete tool library is to be updated in M30, the changes will be summarized and documented in the related task and deliverable.


8 Conclusion

Deliverable D6.8 (final tool selection) has presented the process and results of the final tool evaluation. Furthermore, several OER have been developed (using pictures, wiki- blog entries or guidelines by open source tool developers; links are provided in the chapter 6 for each tool) and prepared for EAGLE users.

The technical integration is agreed upon and is about to be completed. Based on that, guidelines provided in EAGLE will be updated.

8.1 Recommendations for validation

For validating the tool guidelines, future EAGLE users have to provide comments to the provided OERs that we have produced. Furthermore, EAGLE partners have to ask users whether they find the OER useful or not. For validation means, methods depicted in D8.1., such as thinking aloud and focus group methods, can be used to decide about the value of provided guidelines.

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8.2 Role distribution across work packages


The tool selection has implications for the following WP's.

WP	ToDo's
WP3	Take up references to the tool-guidance into the change management guidelines.
WP4	Check pedagogical diversity of the constructed OER. Check accessibility of the OER and tool selection. Collaborate in providing guidelines for learning scenarios (in engineering terms) such as doing presentations.
WP5	Confirm deadline of technical integration.
WP6	Accessibility team: evaluate accessibility of integrated tools
WP7	Extend tool library to the use of tools for community building and contextualization
WP8	Consider validation of tools during forthcoming interactions.

The roles and tasks will be discussed at the next WP leader and partner meeting in December 2015 (prior to submission of D6.8).

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Appendix

FIGURE 3: TOOL RANKING (TOTAL)

Category	Criteria / features	ExeLearning	Etherpad	Mitzuli	Slidewiki	AnnotateIt	Chat Portlet	Picmagick	Digital drawing board	Calendar Ce	ToDo	Aspose	Kaleo	Mashare	Link Scanner	reveal.js	Screencast O Matic	Audacity	Docear	Wisemapping	CAM	Freeplane	Messenger SUC	HSP	EAGLE platform tools	Tools able to meet the criterion	
2	Community building																										
3		Sending private messages to EAGLE	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2
4		Sending of emails to unknown EAGLE users	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2
5		Receiving Email notifications in case of	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2
6	Group communication	Functional mailing lists	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2
7		Receiving email notification in case of	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2
8		Private messages to group	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2
9	Social media tools	Reciprocal connections (mutual acceptance)	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
10		unidirectional connections(follow)	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
11		indirect connections (#Hashtag, @Mentions)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	Forum	Notification system	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2
13		Replay to posts	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	3
14		Rating of contents	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	2
15	Annotations	Private annotation	0	0	0	1	1	0	0	1	1	0	0	0	0	0	0	0	1	1	0	1	0	0	1	1	2
16		Tagging of annotations	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
17	Sharing	Share links	0	0	0	1	1	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	1	1	1	1	4
18		Tagging	0	0	0	1	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	1
19		Commenting	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	1	2
20	text production	tracking of changes, multi-user; AT LEAST can create and format tables	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	2
21		can copy and past from other text editors	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	3
22		Editing options- basic ones- crop, turn, resize	1	1	0	1	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0	1	1	1	1	1	4
23	graphics and animation		1	0	0	1	0	0	1	1	0	0	1	0	0	1	0	1	0	0	1	1	0	1	0	0	2



Contract Number
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Authoring Tools- final version

Deliverable Nature
D6.8

Dissemination level
PU

Version
final version

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA
20	text production	tracking of changes, multi-user; AT LEAST can create and format tables	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	2
21		can copy and past from other text editors	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	3
22	graphics and animation	Editing options- basic ones- crop, turn, resize	1	0	0	1	0	0	1	1	0	0	1	0	0	0	1	0	1	0	0	1	1	0	1	0	2
23	Audio production	capture audio from the device mobile or desktop	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	1	0	0	0	0	0
24		Can embed audio files	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	2
25		can add links to external audio files	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	1	0	1	1	3
26		Can publish to open source audio formats	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	1
27	video production	Is able see, hear, upload	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	1	1	2
28		can link to external or web video files	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	1	0	0	1	0	1	0	1	1	3
29		can export recorded video to open source format	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1	2
30	screencast editing	unlimited time recording	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1
31		screencast editing	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	1	0	1
32		audio integration	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	1	0	0	0	0	0
33	presentation production	can develop and save a presentation	0	0	0	1	0	0	0	0	0	0	0	1	0	0	1	0	0	0	1	0	1	0	1	1	3
34		template structure (beginning content end)	0	0	0	1	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	1	0	1
35	aggregation	gather different media;	1	0	0	1	0	0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	1	3
36		make and save a file	1	1	0	1	0	0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	1	3
37		share the work done	1	1	0	1	0	0	0	1	0	0	1	0	1	0	1	0	0	0	1	0	1	0	1	1	3
38	adding notes	adding notes	1	1	0	1	1	0	1	0	1	1	1	0	0	0	1	0	0	1	1	0	1	0	1	1	3
39	blog	online text blog	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2
40		allows tagging	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2
41	Technical	be able to operate in mobile devices (tested)	1	1	1	1	0	1	0	1	1	1	1	0	0	0	1	1	0	0	1	0	1	1	1	1	4
42		Optimizes the GUI for minihle devices	1	1	1	1	0	1	0	1	1	1	1	0	0	0	1	0	0	0	0	0	0	0	1	1	3
43		Resize text to be readable	1	1	1	1	0	1	0	0	1	1	0	0	1	1	0	0	0	0	0	0	0	0	1	1	3
44	Culture	The tools can be used in different languages	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0	1	0	0	1	1	1	1	4
45		Any technical language should be clearly	1	1	1	1	1	1	0	1	1	1	1	1	1	1	0	1	1	0	1	0	1	1	1	1	4
46		The tools do not display errors in assessments	0	0	1	1	-	0	1	-	0	1	0	0	0	0	0	0	0	0	1	0	1	1	1	1	4
47		SUMME	14	10	7	33	7	7	5	8	8	8	10	4	5	3	16	10	7	3	13	6	17	16	28	38	