Project no. 619347

**EAGLE – EnhAnced Government LEarning**

Objective ICT-2013.8.2 Technology-enhanced learning;
c) Holistic learning solutions for managing, reaching and engaging learners in the public administrations

Small-scale Collaborative Project (STREP)

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**Deliverable No. D2.1**

**Engagement Plan with requirements engineering methodology**

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# 1 Introduction

The main goal of this document is to present the EAGLE's methodology for collecting requirements and engagement activities as a starting point for the project. The methodology proposed combines awareness and engagement activities to inform stakeholders about the project's goals and its opportunities, using a **mixed method** approach.

The project EAGLE aims at introducing e-learning and in particular Open Educational Resources (OER) in public administration institutions. The user involvement is a key to successful adoption and implementation of OER. As stated in the project's Description of Work (DoW), Requirements Elicitation (RE) will rely on agile and participatory methods. At all stages of the RE phase, an inclusive design strategy and methodology will be used to guarantee any instruments, guidelines or software systems produced in the project to be user accessible.

Requirements engineering is crucial for the project participants to clearly understand the context, needs, barriers and requirements of stakeholders within public administration: Firstly, stakeholders need to be informed about the context and goals of the project; secondly, stakeholders need to develop a clear vision about their needs and requirements in the scope of the project. This might require a lot of effort for stakeholders, and might result in low participation or poor quality of answers. Therefore, our aim is to involve stakeholders by informing them on project's key ideas and possible opportunities for themselves at the very beginning in order to create awareness and achieve better engagement of stakeholders for later phases of the project. Presenting our mixed method approach to stakeholder engagement and requirements elicitation is the target of this document. The main outcomes will be a clear understanding of the context of the participating organization, an analysis of possible barriers, as well as initial awareness about (e-)learning and open education in the context of EAGLE.

In the following, we briefly describe the project and related requirements as specified in the description of work. This includes the relation of the deliverable and its outcomes to other WPs. Furthermore, we define our methodology combining requirements and stakeholder engagement. We conclude with the detailed schedule of our activities.

# 2   Context

## 2.1   Project context

**EAGLE in a Nutshell**

Public administrations (PA) need to cope with various challenges: new regulations, managing workforce and the need for adopting their ICT. Technology-enhanced learning (TEL) represents thus a sensible option notably for rural local governments (RLG) that need to keep up with such changing environments, but do have limited access to training courses.

Interviews in a pre-study with RLG in 5 European countries (namely Luxembourg, Montenegro, Germany, Austria and Ireland) have shown that

1. often the biggest obstacle is to include learning in the work process,
2. training plans are missing and
3. motivation to spend working time on learning is often low for different reasons.

Despite regular use of computer and mobile devices, there are deficiencies in communication and collaboration skills of people working in public administrations that also need to be improved in an enhanced government learning environment.

EAGLE will significantly advance the state-of-the-art in public administration learning and introduce the technology through our validation and associated partners in real-life rural local government environments. More particularly, this project will:

- Stimulate the take-up of learning technologies in local government;
- Reinforce the evidence-based assessment of learning technologies' effectiveness;
- Encourage the innovative use of learning technologies;
- Allow employees in public administrations to acquire skills more timely and effectively;
- Increase awareness on the benefits of the adoption of learning technologies.

**Project and Work Package Objectives**

The expectation of WP2 is to identify main requirements for each WP (see figure below).
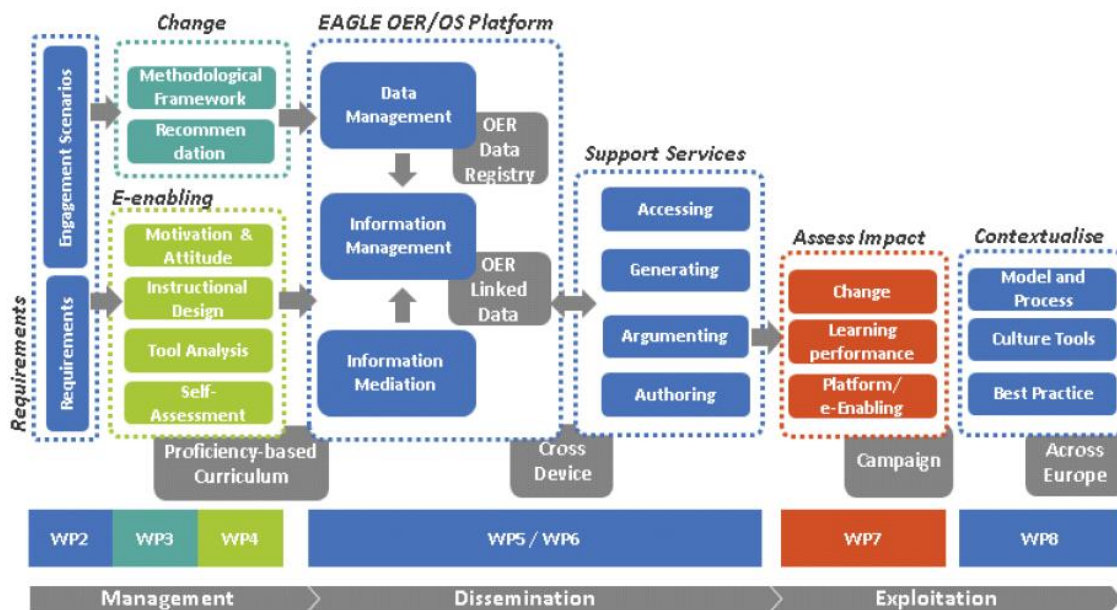
**Figure 1: EAGLE Work Packages**

Based on the project structure, the requirements shall be achieved for the main objectives of the project and each WP. As stated in the DoW, the objectives of WPs are as follows:

- Develop a change management model for local government & provide guidance for implementation of a learning-enhanced work process using the introduction of the Open Learning platform as a test case (WP3).

- Develop a proficiency-based curriculum for e-enabling and learning with OER and OER-based tools, including rapid development tools (WP4).

- Create an Open Learning platform that will be connected to existing learning platforms (i.e. Ariadne (c.f. www.ariadne-eu.org) and OpenScout (c.f. http://learn.openscout.net/)) and local government information systems, harnessing the powers of open data and OER (WP5).

- Enhance the Open Learning platform with public administration specific user services like argumentation technology and general learner support through automatic question item generation from OER and easy access to OER tools. These will build in existing methods and tools such as the process map and the argumentation technology tool Carneades, developed as open source by Fraunhofer (WP6) and customized if appropriate.

- Analyze cultural differences and commonalities to support exchange of knowledge and to foster a cross-European OER local government learning community (WP7).


As a consequence, the RE phase needs to take the following WP-related issues into account:

- **E-Enabling**: What are the main challenges and requirements which are pre-requisites for enabling local governments / public administration to incorporate (e-)learning solutions? This includes motivational, didactical as well as contextual aspects.

- **Change**: What are the main challenges and requirements that allow for change processes and the adoption of change management?

- **EAGLE Platform**: What are the main challenges and requirements for introducing a technical platform for e-learning in public administration?
- **Support Services**: What are the main challenges and requirements regarding user support services? What services need to be realized and what is their priority?
- **Assessment**: What are the main challenges and requirements that include assessments in learning processes?
- **Contextualization**: What are the main challenges and requirements to support stakeholders in the adaptation and contextualization of OER?

In this way, we have identified the main constraints and expectation from the RE phase. The initial engagement plan will be poposed in this document and will include a procedure to identify and harmonize needs of each WP.

### WP2 Objectives

The main objectives of WP2 are:

- Define a **RE methodology** seamlessly connecting to the User eXperience (UX) validation methodology;
- **Identify requirements** in the participating partner regions **with participatory methods;**
- **Identify requirements** relevant for **accessibility, change management, OER instructional design and Open Learning platform design.**

Within the DoW, the main idea of the WP has been outlined. The RE will cover project's barriers and challenges. The main barriers will be analyzed regarding 1) cultural and societal, 2) organizational and individual, and 3) technical barriers to learning.

In the following, we will provide:

- Requirement planning document;
- Workshop, interview and survey guideline;
- Data analysis guideline;
- Reporting templates.

## 2.2  Findings and requirements from the pre-study

In the preparation of the project, a pre-study in the field of learning for public administration was conducted. This study was based on interviews performed in Luxembourg, Montenegro, Germany, Austria and Ireland in 2012/13. The survey tried to identify the current state of Technology Enhanced Learning (TEL) in local governments. The main outcomes of the survey identified the following challenges and barriers from the perspective of public administration managers (e.g. mayor, line manager)?

- No timely learning;
- No established learning processes;
- No availability of learning content;
- Changes but no change management;
- Lack of digital literacy skills.

The results influence design of the EAGLE project (as stated in the DoW) and can be seen as starting points to RE phase statements (see Table below for more details)

**Table 1: EAGLE's identified barriers, requirements, priorities and related WPs**

| Barrier / Challenge | Requirement statement | Priority | Related WP |
|---|---|---|---|
| No timely learning | The project should enable learning opportunities in public administration | High | WP3, WP6 |
| No established learning processes | The project should support planning, and the adoption of learning and training processes. | High | WP3, WP5, WP6 |
| No availability of learning content | The project should provide high quality learning content to enable better learning opportunities | High | WP4, WP6, WP7 |
| Changes but no change management | The project should enable change management processes. | High | WP3 |
| Lack of digital literacy skills | The project should provide learning opportunities to improve ICT and information literacy. | High | WP4 |

The above table summarizes several general requirements related to the EAGLE projects. The real challenges and barriers in EAGLE need to reflect project's expected outcomes in more details.

# 3   Foundation: Barriers of E-Learning and Open Education

In the following, we introduce the current status of barriers to learning in public administration. As barriers, we understand any obstacle preventing the achievement of a certain goal: in our case, it is to implement successful e-learning in public administration.

We start with a brief review on learning processes and technologies in public administration. In the next step, we briefly outline the foundation of our approach based on previous studies on barriers and success factors on TEL, and in particular, Open Education/OER (Pirkkalainen & Pawlowski, 2013).

**Barriers to E-Learning in Public Administration**

The term eLearning embrace a broad spectrum of studies and implementation of using technology to support learning processes in a variety of modalities and educational contexts. Specifically in Public Administration (PA), eLearning has been mainly reported to be used in academic context for enhancing PA education mostly by linking pre-service students or academic networks with in-service practitioners (Naidoo, 2012; Neubauer, Hug, Hamon, & Stewart, 2011; Schweik, Mergel, Sandfort, & Zhao, 2011). Although there are evidences of eLearning uses at the PA workplace, they are essentially implemented as redesign of existing training programs in different modalities (open or blended learning) or to extend the offer and availability of training courses (Casagranda, Colazzo, Molinari, & Tomasini, 2010; Interrreg IIIA Greece-Cyprus, 2008; Martins & Martins, 2013; Silvestru, Bere, & Nemes, 2013). As stated in the DoW, there are no reported uses of open education for self-regulated learning in PA and it is not yet considered as a mainstream development.

There are many argumentation and hypothesis why it is like this, however systematic research and high quality studies are needed to know the real reasons and overcome them. What we know is that the acceptance and adoption of TEL in this context is rather low (in contrast to e-government solutions). Thus, barriers need to be addressed on a general level.

For analyzing the barriers in public administration it is reasonable to distinguish several types of barriers concerning barriers for:

1. Using Self-regulated learning in general
2. Using OER
3. Offering OER content

Barriers for self-regulated learning in general are to expect, as mentioned above that the e-learning is not broadly used in public administrations. Only with this barriers realized and at least lowered it make sense to look at OER barriers.

The barriers against the use of OER content by learners and the barrier for creating and offering OER content should be considered separately as the stakeholders in question are different for both topics.

The mental reservations towards the use e-learning/self-regulated learning in general are multifaceted. Here we give some hypothesis for widespread reasons based on studies and personal experience, which will be addressed and refined during the analysis:

1. Diffuse fearful anticipations against unknown matters
2. No expectation by the management to the staff to use this medium
3. No incentives (motivation) to use the medium
4. No strategic concept for deployment and encouragement to use the medium
5. Offers are not corresponding to the needs of daily routine or newly arising needs

6. Inadequate offers (content, didactics, usability included platform usability)
7. Existing offers are unknown and not sufficiently promoted
8. No motivation to take responsibility of his/her own learning process

The reasons for barriers 2 and 3 can be considered in detail only in the course of the evaluation of the general concerns.

We can thus state that there is a minor uptake of e-learning and a variety of barriers which might even be stronger than in other domains. These barriers and corresponding requirements need to be refined and addressed carefully.

## Open Educational Resources

Open Educational Resources (OER) has received increasing attention from educators, policy makers and researchers. However, the uptake of OER has not yet reached the expected level. Several barriers still keep people away from (re-) using OER. In particular, workplace of public administration is one of the context in which there is almost no uptake of TEL and OER.

As a starting point, we define *Open Educational Resources (OER) as any digital object which can be freely accessed, (re-)used, adapted and distributed for educational purposes with a certified open license (e.g. Creative Commons, GNU Public License)*.

OER cover a wide range of resources, e.g. different types of learning materials such as learning objects, online (internet-based) courses, slide sets, simulations, educational e-books or educational games. Also other educational materials are part of OER in a broad sense, e.g. learning scenarios, syllabi or experiences and practices. However, the uptake is still low.

Several recent studies have looked into OER to identify the main barriers to uptake and slow acceptance in most educators' communities. Atkins et al. (2007) approached major challenges for OER from a broad perspective. These touched upon sustainability, access to resources, IPR (Intellectual Property Rights) to quality and infrastructural issues. Hylén (2006) approached the general challenges as well. Similar research is conducted by Agarwal et al. (2007), Humbert et al. (2008), Chen (2010). Clements and Pawlowski (2012) have identified the following barriers (shown in Figure 2).
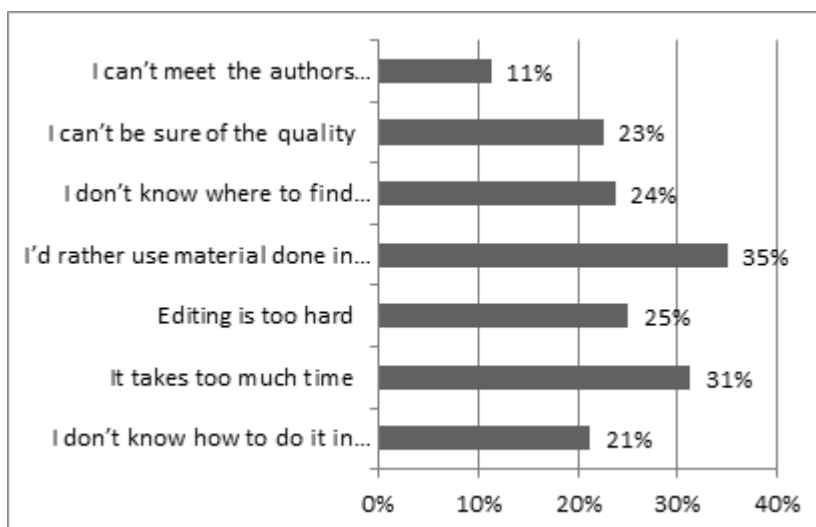


**Figure 2: Open Education Barriers (Clements and Pawlowski, 2012)**

Another recent study carried out by Pirkkalainen, Jokinen & Pawlowski (2014) shows further barriers in a school context, amongst them several personal and motivational aspects:

- Lack of motivation to share resources or information around those resources;
- Lack of time for production and localization of OER;
- Need for rewards and acknowledgement;
- Lack of contextual information for the resources – how can it be used or modified;
- Open content do not fit the scope of the course / curriculum;
- Lack of trust towards unknown authors or systems where resources retrieved from;
- "Not invented here" notion - hesitation to receiving knowledge that someone has created;
- Hard to assess the quality and relevance.

Therefore, it is necessary to clearly understand the barriers and interventions which have a high probability of success.

As a conclusion, in EAGLE we will identify barriers using the following categories for extracting barriers:

1. cultural and societal,
2. organizational and individual,
3. technological barriers.

These will be refined using the above-mentioned aspects, such as motivational, didactical, process/change, as well as assessment aspects. It needs to be emphasized that there are no studies on Open Education barriers in public administration. Thus, the barrier approach needs to be contextualized and adapted for specific target user group in EAGLE.

# 4 Methodology
## 4.1 Overall methodology

The goals for the methodology are related to the key outcomes of the project, as well as the WPs. Furthermore, the methodology needs to include both engagement as well as RE aspects. The methodology builds on the fact that the amount and quality of studies in e-learning in public administration, beside of redesigning or producing online training courses, is rather small. Very few studies have considered e-learning adoption for implementing innovative ways of learning in public administration. Therefore, the nature of the project and related methodology is explorative.

Accordingly to this we will use a qualitative approach that combines traditional and contextual RE techniques. Traditional techniques will cover focus groups and semi-structured interviews, which will be conducted in workshops. The contextual RE technique will cover technology probes (digital or paper-based notes made by participants to bring along to workshops), which will prepare and enhance workshop discussions. In that way, we aim to better explore the field, and initiate the participatory stakeholder's commitment.

Additionally, we distinguish between different aspects of the RE analysis.

1. **Literature review**: To base our methodology on a solid base, we have performed an initial literature review to determine the state of the art regarding barriers towards TEL in public administration (see chapter 3).
2. **Workshops**
   a. **Focus Groups (face to face and online)**: We perform both online and face to face workshops to do the RE and engagement activities with our stakeholders. The workshops are equivalent to the focus group approach. The workshops are organized firstly as face to face workshops, then online workshops resolving specific issues, for example, accessibility. In that way, we can deepen the barriers and requirements step by step (see section 4.2).
   b. **In depth interviews**: We will also explore the main barriers through interviews by focusing on the key barriers and related interventions (see section 4.3).
   c. **Technology Probes**: This step shall be performed depending on the technology awareness of the participants and the time frame – we expect that this step could be done also at a later stage when the portal development can be supported. For this step, we prepare a focus-group-kit for participants that provide probes and questions for stakeholders. The provision of probes can be done (resource-/and privacy-permitting) in the workshop; we will provide a sample for each group (either during or after the workshop).
3. **Data analysis**: Based on the workshop's documentation and interviews, we will further analyze the data in order to clarify the project's context and barriers.
4. **Enabler statements**: We will transform the results into statements with concrete actions for each WP. These statements will be shared with the interviewed stakeholders to check for their truthfulness.
5. **Requirements follow up**: The enabler statements will be forwarded to the relevant WP for implementation. As part of the validation WP, we will follow up on the requirements to see how they will be fulfilled and implemented.

These five steps are now elaborated in detail, additionally covering the foundation of our mixed approach.

## 4.2   Barriers: Workshop format

The main idea of the workshop is to create initial engagement and understanding between the project consortium and selected stakeholders. To derive concrete requirements and create appropriate interventions, it is necessary to understand the context (i.e., the role of (e-)learning in the organization) and its possible barriers. We propose the following:

- To run an initial interactive workshop (M3), in which a minimum of 10 up to a maximum of 20 stakeholders should participate. This will create visibility of the project within the public administration organization, and provide the initial input.
- Stakeholders should include decision makers within an organization, key users, HR responsible persons.
- It can be useful to run separate workshops for decision makers and key users to allow and enable open discussions. The local partners should decide on this.

Each workshop should include the following steps:

1. **Awareness building**: In the initial step, e-learning and open education awareness in public administration should be built. Depending on the audience, an introduction to TEL and OER should be given. Discussing good practices, as well as organizational and individual benefits could be the way to do this.
2. **Understanding the context**: It is necessary to understand the general situation of a public administration authority/organization. Thus we need to capture the main contextual factors, e.g. policies, guidelines, incentives…
3. **Requirements/barrier analysis**: We will analyze the key barriers using the above-discussed structure. The main categories of the context (or specific situations) should be taken up (for example: when a related project is mentioned, barriers within this project could be discussed). Here *Technology Probes* can be integrated as well.
4. **Intervention prioritization**: For each barrier, solutions (interventions) should be discussed; these should be related to the main interventions proposed by EAGLE.
5. **Scenario/action planning**: As a final step (Task 2.3), scenarios and actions should be discussed.

The following workshop template can be adapted to each workshop organizers. The timeline suggests minimum and maximum timing. A presentation template will be provided in the Annex 3 of this document.

**Overall workshop template**

1. Welcome and introduction
   - o Each workshop participant should give a brief introduction of its institution, and describe the specific expectations of the workshop (~20 minutes)
   - o Start with a thorough stakeholder analysis:
     - ▪ Describe the main groups of stakeholders (~ 5 minutes);
     - ▪ Describe their interests in the project (~ 5 minutes);
     - ▪ How are they affected: e.g. the aims, services and facilities that the project and portal will offer (~ 5 minutes):

- How the project will interact with stakeholders (~ 5 minutes).
  - o Introduce participating stakeholders to e-learning and Open Education (~10 minutes).
2. Present good practices
  - o Present good practices/scenarios of e-learning in public administrations. Each workshop should be designed around a success story, which could be the story of an innovative HR developer or supervisor. This can also be a hypothetical initial scenario, discussing opportunities of the EAGLE solutions. (~ 20-30 minutes)
3. Start the discussion with stakeholders in order to create a convincing scenario for relevant stakeholders communities:
  - o Discuss about the current role of learning and the context aspects in the organization. Here, at least the starting question (italics in the table below) should be asked. The group can split in smaller groups according to the barriers of interest (e.g. policy, processes, technology). Further planning of the discussion should be determined by the workshop organizer (e.g. using a learning café in which participants move from topic to topic in the given time line (~ 30-60 minutes)
  - o Discuss the learning barriers in order to elicit the most important needs, limitations and challenges for making use of resources in public administration practice. Also here, at least the starting question (italics in the table below) should be asked (~ 30 minutes)
  - o Discuss why they should participate in the project and use the EAGLE platform (~ 30 minutes)
  - o Discuss what will be the benefits for the participating stakeholders (~ 20 minutes)
  - o Develop a convincing scenario with participating stakeholders (~ 40 minutes)
  - o Discuss the relevance and priorities of issues to resolve in the project (~ 10 min) (see template barrier framework; table 3.1.)
  - o Discuss the main requirements (~ 30 minutes)
4. Debrief and outline the follow-up procedure. (i.e. online workshops, resource/ time-permitting for participants hand out or collecting technology-probe-kits).
5. Deepen barrier knowledge through interviews (following the workshop) with at least three key stakeholders (after the workshop (~ 1-1.5 hour per interview; see 4.3).
6. Decide about organizing another event at the end of WP2 (following the workshop in collaboration with the key stakeholders) to showcase success stories/examples ((~ 10 min)

Following the suggested workshop template, we further discuss in more details the description of the learning contexts, barriers, scenarios, and priorities.

### 4.2.1 Context Analysis

During the workshop, the moderators need to document the key aspects of the context in which the project will work in the PA organisations: What is the situation of learning in the organization; which factors influence the learning opportunities? Thereby technology probes can be a starting point for participants to reflect on the questions. The questions should be adapted to the participant group and the discussion (similar to a semi-structured interview following the initial questions in Table 2) should start from general knowledge to more specific information, addressing the following issues (see Table 2).

**Table 2: Learning Context documentation**

| Context Category | Description / Summary of Workshops |
|---|---|
| (Summary of questions; an initial question should be asked for open discussion in the workshop – further questions should be used for the interviews after the workshop) | (The main outcomes of workshops should be documented here) |
| **Meaning of (e-)Learning**<br><br>*What is the role of "learning" in your organization?*<br><br>What has been or need to be "learned" in your organization?<br><br>How do you understand the concept of e-learning?<br><br>What could be next steps around e-learning foreseen for your organization? | *Exemplar response*<br>*Learning is currently no topic in our organization. Staff members have 3 days per year dedicated to learning, but do rarely use that opportunity.* |
| **Policy**<br><br>*What are key policies on learning in your organization?*<br><br>Are any conditions in place that make learning mandatory or obligatory?<br><br>Are there policies and regulations in relation to accessibility?<br><br>Is there a specific learning budget and how is it allocated? | *Exemplar response*<br>*There is a general regulation that employees have the right for training.*<br><br>*There are no concrete policies.* |
| **Projects**<br><br>*What are key projects related to technology use in (e-)learning?*<br><br>Where do/would you acquire technology and e-literacy skills? | *Exemplar response*<br>*There is a project on intranet for all employees*<br>*There is a social network page (forum) where some requests are answered and events are posted.* |
| **Processes**<br><br>*What are the processes to implement changes in institutions?*<br><br>What are favourable learning/ training methods?<br><br>What is your learning style? Are you learning individually, with colleagues, or mainly when specific questions arise? | *Exemplar response*<br>*We have no process definitions.*<br><br>*Changes are initiated by the management, and a memo is distributed how to handle the requests in the new way.* |

| | |
|---|---|
| **Roles**<br><br>*Which role do you and your colleagues have in the learning processes?*<br><br>Who would you ask or encourage to develop a training /e-learning project (course)?<br><br>Who would you have to ask before enrolling in an e-learning course? | *Exemplar response*<br><br>*Employee: Proposing a training*<br>*Manager: Agreeing, allocating resources*<br>*Training contractor: Providing the course*<br>*HR: Updating the staff data* |
| **Knowledge**<br><br>*What are the main skills needed to realize online learning? (e.g. specific subjects, general software skills, …)*<br><br>Are there prior technology skills you have to proof when working in public administrations? | *Exemplar response*<br><br>*Leadership skills, specific regulations, Communication*<br>*IT Skills* |
| **Curricula**<br><br>*What are current curricula/ schemes for career development / learning in the institution?*<br><br>What are favourable learning / training methods?<br><br>Did you have open questions or newly emerging topics in your work, during the last year, which required an extensive research (taking at least an hour)?<br><br>For which public service that you delivered during the last year, did you have questions that required extensive research (taking at least an hour)?<br><br>For which topic in the context of your work did you have a need for information in the last year, which required an extensive research (taking at least an hour)? For example:<br><br>1. Interpretation of regulations<br>2. Information on tasks and responsibilities<br>3. Tasks of cross-relevance, such as project management methods, procurement, controlling, statistics, etc.<br><br>Which resources describing administrative products and processes are available in your country? | *Exemplar response*<br><br>*Currently the training contractors' list of courses can be booked.*<br><br>*No further curricula are given. The main competences are listed in the job descriptions.* |
| **Culture and Collaboration**<br>**Are you comfortable to share knowledge or discuss questions that arise during your work?**<br><br>Do you like / have experience collaborating with other institutions (cross regional or cross | *Exemplar response*<br><br>*We collaborate with other rural governments in our state.* |

| Technologies | Exemplar response |
|---|---|
| *Please describe which technologies and programs you use in your workplace*<br>• Internet based tools and services?<br>• Intranet based tools and services?<br>• Shared databases?<br>• Knowledge & organization management tools?<br>• Decision-support tools?<br>• Expert systems to answer questions?<br>Which technologies and processes are essential to integrate in an e-learning course?<br>Are there tools for accessible use of ICT / learning and training offers? | *Intranet is available*<br><br>*Forums and wikis are provided but not used*<br><br>*Communication staff answers facebook requests on a specific computer (due to security reasons).*<br><br>*MS Office is installed on all computers*<br><br>*Only 50% have private computers*<br><br>*Different devices are provided for accessible usage such as screen readers and braille input devices.* |

Note: The exemplar responses in the above table (column 2; written *in italics*) should be used only if the participants do not understand the question on the context.

Note 2: Please start with the initial question (column 1; in italics); further questions can be asked to guide the groups, otherwise those questions should be asked during the interviews.

### 4.2.2 Barriers and Interventions

In this phase, learning barriers and interventions required should be discussed and elaborated (see Table 3). This will answer the following questions:

1. What are the key problems, which keep people away from learning?
2. What are possible solutions to these problems? (the moderators should ask for the solutions)
3. What trends and solutions ("interventions") do you anticipate emerging to overcome the barrier? (time permitting)

**Table 3: Barrier documentation**

| Barriers | Description / Summary | Interventions |
|---|---|---|
| *(The barriers should be discussed. The examples can be given in case that participant needs an additional clarification.)* | (Summary of the workshop outcomes) | (Summary of opportunities to overcome learning barriers) |
| **Policy barriers**<br>*Are there policies for supporting learning and training processes?* | *No policies are available in regard to learning.* | *There should be good practices of policies to* |

| | | |
|---|---|---|
| Which barriers can you see on the policy level (e.g. no policies for employee training)? | | *support the development process.* |
| **Organizational and individual barriers** *Which barriers can be identified at the **organizational level** (e.g. resistance to change, lack of learning culture, high costs of learning…):* **Process-related barriers** (lack of learning / change processes…): Are processes for career development and learning in place? Are they well organized and clear? **Role-related barriers** (lack of responsible persons): Are there clear structures who initiates trainings? **Resource-related barriers**: Are there adequate resources for training (time, course fees, …) *Which barriers can be identified at the **individual level** (e.g., lack of time, lack of appreciation, lack of motivation …)* **Resource-related barriers**: Do individuals have time for learning? **Motivation-related barriers**: Do individuals have motivation to learn? **Knowledge-related barriers**: Do individuals have knowledge to use ICT for learning? | *We do not have processes to allow systematic learning.* *We do not have time and resources.* *We do not have advantages when going to training.* *General willingness towards learning.* *My boss does not let me attend trainings.* | *A change and an envisioned learning process should be developed together.* *Resources for the key topics will be selected and provided through the EAGLE portal.* |
| **Technological barriers** *What are technological barriers (complex/ lack of systems for learning, lack of integration of mobile devices, lack of accessible solutions …):* **Overall barriers**: Are technologies useful and available? Are you allowed to use mobile phones in your workplace? What is the last technology or software that has been implemented? Can everyone access internet or computer? | *I don't know how to use internet tools.* *I cannot use MS office; my secretary does it.* *We have the regulation to provide accessible web sites, an agency does this for us.* *We do not have money to create accessible resources* | *The solution must be integrated in the intranet solution and accessible through a secure connection or local server.* *A guideline and training is necessary to create more accessible offers.* |

| | | |
|---|---|---|
| Are there guidelines and how are the offers provided?<br><br>**System-related barriers**:<br><br>Are there systems for learning and training? Authoring systems? Tools for communication? Tools for knowledge-sharing? Internet-based tools?<br><br>**Accessibility barriers**:<br><br>What is the role of accessibility in the organization? Are there technologies/ guidelines for accessible workplaces, how are the offers provided? | | |
| **Pedagogy barriers**<br><br>*Which barriers exist towards open education?*<br>*Which barriers can occur regarding e-learning?*<br><br>Are there models how learning should be performed? | *We have no pedagogical strategy and learning model; the training company does this for us.* | |

Note: The exemplar responses in the table above (column 2/3; written *in italics*) should be used only if the participants do not understand the question on learning context.

Note 2: Please start with the initial question (column 1; in italics); further questions can be asked to guide the groups, otherwise those questions should be asked during the interviews.

### 4.2.3  Scenarios

A scenario can be thought of as a high level or conceptual scenario, or perhaps just a verbal description of a problem, its series of activities, events, persons and outcomes in a certain context. In our case, an ideal learning situation should describe:

- The design of the learning processes and technology support in organization;
- The description of learning context, activities, responsibilities.;
- The requirements to realize such a scenario in organization.

The first ideas for the development of scenarios usually come when discussing the context and barriers. For example, "stakeholder X mentioned that staff needs to know about XYZ". Scenarios could be additionally motivated by the following questions:

- How could e-learning/OER be successfully used in stakeholder's organization (in order to reach a specific goal such as "improving ICT literacy", "improving leadership skills", "decrease training cost", "increase motivation to develop a personal career").
- What are the most promising scenarios for
    - o …fulfilling the main constraints (context)?
    - o …creating tangible results and benefits for your organization?
    - o …utilizing existing resources from EAGLE?

Each scenario should be described including the following categories:

- **Description of scenario**: *Introduce issues of private internet use in the workplace. The main idea is make participants aware and sensitive for internet usage at work. In many cases, no guidance is provided; sometimes organizations are left alone.*

- **Context/ situation**: *A local government provides internet services through a portal. In addition, internet is freely usable for searching at each workplace. However, some employees have concerns about colleagues just chatting. Also, some (unsuccessful) attacks have been found.*

- **Requirements**: *Employees need to use internet in a responsible way and only for work contexts. All users can use the service request system which has been implemented in the organization for customer requests. Most staff have experiences in private internet use but are not familiar with privacy and security issues.*

- **Goals / Learning Outcomes**: *To create sensitivity on privacy and security concerns. To create awareness on the consequences of private internet usage. To improve performance of answering internet requests.*

- **Resources**: *Course hours: 8; used OER: OER (link) on privacy, OER (link) on security; both OER are in English and need to be adapted to the concrete organizational context and language; facilitator is needed for 30h of online and face to face support)*

- **Roles**: *One facilitator per course supporting group work and discussions*

- **EAGLE tools**: *EAGLE learning platform supporting searching, navigation, visualization and presentation of OER results*

- **Learning Activities**: *Initial meeting (F2F). OER used for preparation. F2F discussion. Group assignment; final assessment.*

**Example Scenario**

The following example could be used as a starting point for awareness but also for scenario development and further refinement.

An offer used since 2006 is a Blended Learning course titled "Advanced Qualification in managerial-economics for managers in judicial authorities" offered by the Ministry of Justice Baden-Württemberg (Federal State of Germany). The total workload is 200 h,; the e-learning part is about 100 h. There have been more than 150 participants since 2006 up to now. The content was generated by the University of Applied Sciences Ludwigsburg.

## 4.2.4  Prioritization task

Before closing the workshop, it is useful to discuss a prioritization task. The notes on learning barriers and requirements elicited in the workshop will be put on the screen (a template can be seen in table 3.1) and participants will be asked to rank three themes/barriers shown on the screen (3 points to the most important, 1 to the least important).

The final count per issue serves to determine priority points to trace up from the perspective of participants after they gained an idea of potential benefits and barriers that EAGLE may confront.

## 4.3 Barriers: Interviews

The post-workshop interviews with three selected stakeholders should deepen the knowledge on learning barriers and identify more detailed requirements. As discussed above, a minimum of three interviews should be done per participating country, including key users (a public servant as a key user, decision makers (e.g. management /policy level) and HR responsible staff. The interview should discuss the above-mentioned issues in detail and discuss the questions presented in table 3 (first column, in italics). When important aspects emerge, the interviewers should ask for more details.. The following categories should be discussed:

- **Start of the interview**: Explain the idea of the interview and reflect results of the workshop (*if the interviewee was present in the workshop*).
- **Move to context**: Ask for relevant experiences and context factors (some interviewees might only answer selected categories, e.g. policy factors).
- **Discuss barriers**: Go through the main barriers identified in the workshop. Ask if there are additional important barriers or why the priority list has evolved, because facilitators and participants may have different ideas on the issue. Try to identify 1-2 barriers per category and ask for ways to overcome those barriers ("intervention"). With advanced users, it might already be possible to identify the possibilities how forthcoming EAGLE components and services (e.g. change process, repository, content, assessment) could be adopted.
- **Scenario**: Ask for an ideal solution (e.g., "if you were free to develop an Open Education / E-learning, how would you organize this?"; ask for the different aspects (e.g. learning activities, resources, etc).
- **Close the interview**: Ask for final remarks or aspects the interviewee has not yet addressed and would like to express.

The same reporting template as the workshop template should be used. The facilitator has to mark which parts represent the workshop documentation and which represent the interview documentation (e.g. different colour). It might be also useful to discuss previously defined barriers, prioritize those and develop interventions (see Table 4):

Table 4. Barriers in focus: Template list for the prioritization task

| |
|---|
| 1. Lack of time to search or use resources from a repository |
| 2. Lack of time to learn and use tools/services in the repository |
| 3. Lack of training how to use the repository |
| 4. Lack of reward for the efforts made (e.g. not getting paid extra to use resources from the repository) |
| 5. Lack of support from management level on how to use or apply open content |
| 6. Lack of technical support within my organization how to use or apply tools and services for open content |
| 7. Lack of Policy and guidelines (within your organization) for using resources in your work |
| 8. Lack of Policy and guidelines (within your organization) for social tools (open services and tools such as social networking, wikis, collaborative features for editing materials etc.) |
| 9. No training on how to use resources from a repository for my work |
| 10. No training on how to use tools and services around the resources for my purposes |

| | |
|---|---|
| 11. | Incompatibility of resources with existing work styles (e.g. the pedagogical approaches used in the repository are not what I want to use in my classroom) |
| 12. | Incompatibility of repository tools and services with existing work practices (e.g. don't support the learning environment available(Moodle etc)) |
| 13. | Lack of Learning object repositories good practices in my own country |
| 14. | The IT infrastructure in my organization is not sufficient (the network is not fast enough etc.) |
| 15. | Resources in the repository are not available in own language |
| 16. | Language problems when collaborating online (misunderstandings when not sharing same mother tongue etc.) (collaboration can mean for example producing educational resources together) |
| 17. | Differences in national culture or ethnic background (values and beliefs etc.) affects negatively online collaboration with globally distributed peers |
| 18. | Impact of cultural and geographical distance on trust between collaborators working together over distance |
| 19. | Resources I found are too dependent on a specific culture (viewpoints, perceptions, terminology etc.) for my own use |
| 20. | Lack of educational resource sharing culture within my organization |
| 21. | Resources I found do not give enough information on the context where it is / was created and used |
| 22. | It is too problematic to be dependent (or to build) on resources developed by others (in general) |
| 23. | Lack of motivation to share information (in form of sharing own contents or contributing to discussions around open contents) |
| 24. | I am not sure what I can use or modify the resource to my own needs, I am not sure about the licensing details. I don't want to share resources that someone else own rights to etc. (IPR issues in general (intellectual property rights)) |

Each interview should be recorded and provided to the WP2 lead one week after the interview. In cases where the interviews cannot be recorded (non-authorization of the interviewer, technical problems, etc.) this should be documented taking notes and a summary that should be done immediately after the interview to avoid missing information. In these cases, the notes and documentation will be provided to the WP2.

## 4.4 Online conference workshops and the accessibility forum

In general web-conferencing and hence online workshops, by virtue of the associated real-time collaboration demands, pose challenges for accessibility. The requirement of live streaming of content can cause issues for those with visual, auditory and/or of motor functions impairments. Such issues need to be considered as part of the preparation of online workshops. It should be noted that it can be difficult to translate dynamic multi-media-based content into text and/or provide alternatives to rich content.

The online workshops must provide solutions to some of the main accessibility issues associated with web-conferencing. Any platform chosen must represent an appropriate solution in that it needs to provide shortcuts for many key meeting features, including attendee management, navigation through interface features such as menus, windows and content-sharing. Keyboard shortcuts facilitate collaboration and interaction by both hosts and

attendees with visual, auditory, and mobility disabilities during real-time meetings. Support must also be provided for screen readers etc. through the chosen software solution.

Therefore, a suitable platform for holding online workshops should be incorporated as part of the data elicitation process. Participants should be notified of the associated accessibility features in advance of the workshops and provided with a detailed outline of accessibility features and their use along with directions to set-up prior to the workshop.

## 4.5  Planning

The following partners in EAGLE are responsible for the workshops organization:

- Luxembourg: TUDOR
- Germany: DHBW/ Fraunhofer
- Montenegro: UNIM
- Ireland: DCU

For the online workshops, TUDOR will coordinate the general workshop, while DCU will organize the online workshop with the focus on user accessibility.

**The following tables will be filled as soon as the dates and concrete participants are confirmed.**

### 4.5.1  Face-to-Face and Online Workshop

Face-to-face workshop

| Country | Number of Communes | Levels addressed | Organization | Date of intervention |
|---|---|---|---|---|
| **Luxembourg** | 7 | | Commune of XXX Commune of yyy | |
| **Ireland** | | | | |
| **Montenegro** | | | | |
| **Germany** | | | | |

Online workshops

| Country | Number of Communes | Levels addressed | Organization | |
|---|---|---|---|---|
| **Luxembourg** | | ??? | Communes of XXX | |
| **Ireland** | | | | |
| **Montenegro** | | | | |
| **Germany** | | | | |

### 4.5.2 Interviews

| Country | Number of Communes | Levels addressed | Organization | Persons interviewed |
|---|---|---|---|---|
| **Luxembourg** | x | ??? | Communes of XXX | |
| **Ireland** | | | | |
| **Montenegro** | | | | |
| **Germany** | | | | |

### 4.5.3 Feedback on Enable Statements/Scenarios

| Country | Number of Communes | Levels addressed | Organization | Person in charge |
|---|---|---|---|---|
| **Luxembourg** | x | ??? | Communes of XXX | |
| **Ireland** | | | | |
| **Montenegro** | | | | |
| **Germany** | | | | |

## 4.6 Reporting

**Before the workshop:**

Each coordinator should report the date and target organization in a central list and report to the WP2 coordinator:

| Country | Number of workshops | Dates | Organization | Reporting time |
|---|---|---|---|---|
| **Luxembourg** | 1 online<br>1 face to face | *10.04.2014* | | One week after the actual workshop date |
| **Ireland** | 1 online<br>1 face to face | *10.04.2014* | | One week after the actual workshop date |
| **Montenegro** | 1 online<br>1 face to face | *10.04.2014* | | One week after the actual workshop date |
| **Germany** | 1 online | *10.04.2014* | | One week after the actual |

| | 1 face to face | | | workshop date |
|---|---|---|---|---|

**Documenting the workshop**

For each workshop, the above documentation should be provided. Additionally, the documentation should contain the data analysis information listed in 4.6.

The reports should be provided one week after each workshop to WP2. The reports should also be provided in their own language and discussed with the workshop participants as a reward for their participation. In addition, the results of workshops (especially, user stories and requirements identified as the results of conducting workshops with participating stakeholders) should be communicated to WP5 participants.

## 4.7  Data Analysis

The data captured in the workshops will be provided and summarized in English. For each workshop, a short summary should be written, describing the following information:

- Information about the participating stakeholders: Name, institution, role, experiences with e-learning, learning trends, expectations from the EAGLE project;
- Context description: Summarize the main factors from the context discussions;
- Barriers and interventions: Summarize for each category the most important barriers and possible interventions that need to be provided;
- Scenario: Describe the main driving scenarios selected from the workshops;
- Interview: Summarize the three interviews in the templates (their context, barriers and scenarios).

WP2 will also create the recommendations, which will be then forwarded to the relevant participants / work packages. The validation package will later follow up on the recommendations.

## 4.8  Enabler Statements

As an interpretation of the context, requirements and barriers, WP2 participants will transform the main requirements into concrete requirements statements. These statements will be discussed with each WP to discuss the consequences to the overall project development. The following format should be used for each barrier/ requirement (as presented in Table 1).

| Barrier / Challenge | Requirement statement | Priority | Related WP |
|---|---|---|---|
| No timely learning | The project should enable learning opportunities including prerequisites in public administration | High | WPx |

The requirements statements will be discussed and agreed upon the whole consortium as part of the deliverable D2.2 review process.

# 5 Summary and conclusion

This document has outlined the EAGLE's mixed methodology for the preparation of the project's awareness and requirements' workshops. It fully presents EAGLE's mixed method approach to stakeholder engagement and requirements elicitation. The main outcomes is expected to be a clear understanding of the learning context of the participating organization, an analysis of possible learning barriers, as well as initial awareness on (e-)learning and open education in public administration.

It should be noted that this report called **Engagement Plan with requirements engineering methodology** will be refined after the initial workshops. We will share our experiences with participating stakeholders, but also with WP2, WP4 and WP5 project participants, to better align the feedback of workshops with the project's targets. It is also important to note that the results of the workshops will be followed by the validation WP (WP8, Task 8.1), as a guarantee that all D2.1 relevant findings will be met.

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# 7 Annex 1: Barrier Framework (Pirkkalainen & Pawlowski, 2013)

| Barrier Dimension | Barrier Category | Barrier Subcategory | Barrier examples |
|---|---|---|---|
| Context | Organizational | Financial | Inadequate resources (personnel, lack of time for using and evaluating open content/ Social Software, sustaining technologies)… |
| | | Management /Coordination / Control / Support | Lack of leadership, Lack of training, lack of policy and guidelines for OER, how to reward contribution, benefits of adoption not easy to measure, Coordination breakdown… |
| | | Technology fit | Incompatibility with existing work practices, Lack of evidence of similar cases of usage… |
| | Geographical / Temporal | | Geographic distance (no physical collocation), temporal distance … |
| | Contractual | | Different contractual settings (regulations) – creates contractual distance |
| Social | Relational | Knowledge sharing | Lack of mutual trust, "Knowledge is the power" – loss of power through sharing, Unwillingness to receive (Preferring own ideas, doubt validity of received knowledge etc.)… |
| | | Communication / collaboration / language | Loss of communication richness (geographical/temporal), Misunderstandings, Lack of informal communication, multi-lingual setting… |
| | Skills | | Poor verbal/written communication and interpersonal skills, poor ICT skills… |
| | Cognitive / personal background / Preferences | | Diversity setting (different backgrounds) – creates cognitive distance (source of misunderstanding), motivators that motivate individual differ, differences in experience levels… |
| Technical | Availability | | Shortage of appropriate infrastructure supporting sharing practices, lack of broadband, content not available in own language… |
| | Interoperability | | Multi-platform setting, Lack of interoperability of tools and systems… |

| | | | |
|---|---|---|---|
| | **Functionality** | | Lack of control the users have in what is displayed and how it is displayed, too open (anyone able to see or even modify the information)… |
| | **Usability /system quality** | | Difficult to use interface, slow response, bugs, information bandwidth… |
| | **Conceptual / contextual** | | Lack of common description (e.g. concepts, references, taxonomy), technology likely to change, role of technology… |
| | **Digital divide** | | Social Software will not be adopted equally, Unbalanced technological usage and expertise… |
| | **Privacy / security** | | Reliability and security of information exchange, Risk of viruses, hacking, stalking… |
| | **Misuse** | | Faking identity, Plagiarism, staff members writing negatively about the firm… |
| **Quality** | **Information** | | Lack of quality, Lack of trust for information (assessing quality hard), risk of relying on a few people to contribute to the content… |
| **Legal** | **Ownership** | | Unclear IPR (not sure of details, lack of awareness), Fear breaking the law when sharing something, violation of copyrights… |
| **Culture** | **Organizational** | | Differences in curriculums, content not fitting to the context of students, Hierarchical Organisation structure inhibits or slows down most sharing Practices, Lack of collaboration incentive… |
| | **National** | | Differences in national culture or ethnic background; and values and beliefs, There is no common understanding in our culture what open content is… |

# 8   Annex 2: Documentation tables

**Context Analysis**

| Context Category<br>(Summary of questions; an initial question should be asked for open discussion in the workshop – further questions should be used for the interviews after the workshop) | Description / Summary of Workshops<br>(The main outcomes of workshops should be documented here) |
|---|---|
| **Meaning of (e-)Learning**<br>What is the role of "learning" in your organization?<br>What has been or need to be "learned" in your organization?<br>How do you understand the concept of e-learning?<br>What could be next steps around e-learning foreseen for your organization? | |
| **Policy**<br>What are key policies on learning in your organization?<br>Are any conditions in place that make learning mandatory or obligatory?<br>Are there policies and regulations in relation to accessibility?<br>Is there a specific learning budget and how is it allocated? | |
| **Projects**<br>What are key projects related to technology use in (e-)learning?<br>Where do/would you acquire technology and e-literacy skills? | |
| **Processes**<br>What are favourable learning/ training methods?<br>What is your learning style? Are you learning individually, with colleagues, or mainly when specific questions arise?<br>What are the processes to implement changes in institutions? | |

| | |
|---|---|
| **Roles**<br><br>Which role do you and your colleagues have in the learning processes?<br><br>Who would you ask or encourage to develop a training /e-learning project (course)?<br><br>Who would you have to ask before enrolling in an e-learning course? | |
| **Knowledge**<br><br>What are the main skills needed to realize online learning? (e.g. specific subjects, general software skills, …)<br><br>Are there prior technology skills you have to proof when working in public administrations? | |
| **Curricula**<br><br>What are current curricula/ schemes for career development / learning in the institution?<br><br>What are favourable learning / training methods?<br><br>Did you have open questions or newly emerging topics in your work, during the last year, which required an extensive research (taking at least an hour)?<br><br>For which topic in the context of your work did you have a need for information in the last year, which required an extensive research (taking at least an hour)? For example:<br><br>1. Interpretation of regulations<br>2. Information on tasks and responsibilities<br>3. Tasks of cross-relevance, such as project management methods, procurement, controlling, statistics, etc.<br><br>Which resources describing administrative products and processes are available in your country? | |
| **Culture and Collaboration**<br><br>Are you comfortable to share knowledge or discuss questions that arise during your work?<br><br>Do you like / have experience collaborating with other institutions (cross regional or cross border communes or else)? | |
| **Technologies** | |

| | |
|---|---|
| Please describe which technologies and programs you use in your workplace<br><br>• Internet based tools and services?<br>• Intranet based tools and services?<br>• Shared databases?<br>• Knowledge & organization management tools?<br>• Decision-support tools?<br>• Expert systems to answer questions?<br><br>Which technologies and processes are essential to integrate in an e-learning course?<br><br>Are there tools for accessible use of ICT / learning and training offers? | |

**Barrier Analysis**

| Barriers<br>*(The barriers should be discussed. The examples can be given in case that participant needs an additional clarification.)* | Description / Summary<br>(Summary of the workshop outcomes) | Interventions<br>(Summary of opportunities to overcome learning barriers) |
|---|---|---|
| **Policy barriers**<br>Which barriers can you see on the policy level (e.g. no policies for employee training)?<br>Are there policies for supporting learning and training processes? | | |
| **Organizational and individual barriers**<br>Which barriers can be identified at the **organizational level** (e.g. resistance to change, lack of learning culture, high costs of learning…):<br>**Process-related barriers** (lack of learning / change processes…):<br>Are processes for career development and learning in place? Are they well organized and clear?<br>**Role-related barriers** (lack of responsible persons):<br>Are there clear structures who initiates trainings?<br>**Resource-related barriers**:<br>Are there adequate resources for training | | |

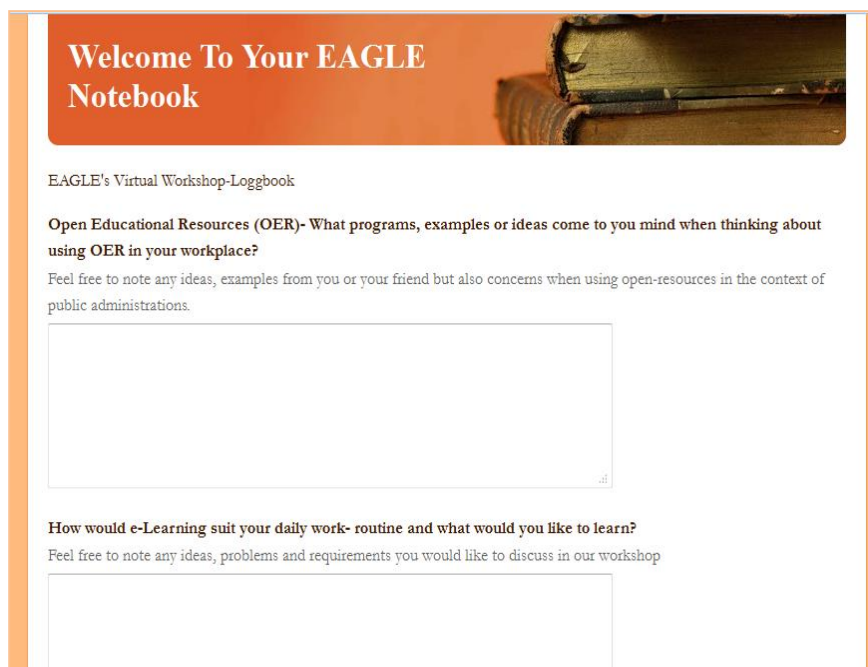| | | |
|---|---|---|
| (time, course fees, …)<br><br>Which barriers can be identified at the **individual level** (e.g., lack of time, lack of appreciation, lack of motivation …)<br>**Resource-related barriers**:<br>Do individuals have time for learning?<br>**Motivation-related barriers**:<br>Do individuals have motivation to learn?<br>**Knowledge-related barriers**:<br>Do individuals have knowledge to use ICT for learning? | | |
| **Technological barriers**<br>What are technological barriers (complex/ lack of systems for learning, lack of integration of mobile devices, lack of accessible solutions …):<br>**Overall barriers**:<br>Are technologies useful and available?<br>Are you allowed to use mobile phones in your workplace?<br>What is the last technology or software that has been implemented?<br>Can everyone access internet or computer?<br>Are there guidelines and how are the offers provided?<br>**System-related barriers**:<br>Are there systems for learning and training? Authoring systems? Tools for communication? Tools for knowledge-sharing? Internet-based tools?<br>**Accessibility barriers**:<br>What is the role of accessibility in the organization? Are there technologies/ guidelines for accessible workplaces, how are the offers provided? | | |
| **Pedagogy barriers**<br>Which barriers exist towards open education?<br>Which barriers can occur regarding e-learning?<br>Are there models how learning should be performed? | | |

# 9 Annex 3: Technology Probe Template

**Technology Probes**

Technology probes are participatory instruments that "...combine the goal of collecting information about the use and the users of the technology in a real-world setting, (...) the goal of field-testing technology, and the design goal of inspiring users and designers to think of new kinds of technology to support their needs and desires" (Hutchinson et al., 2003: 2).

Generally probes can be digital or paper-based post-it's, snapshots, emails, sms or usage-diaries which serve as additional sources for workshops and can facilitate eliciting the "working context [while] improv[ing] collaboration [in the] requirements elicitation" (Dörner et al., 2008:45). One example prepared for the EAGLE project can be found following link: [Your Virtual Notebook](#).

Your EAGLE Notebook is a mix of probing our requirement-elicitation questions and the



participant's use of technology for answering and noting down issues that come across in their working routine. This example is not a general notebook, but would still work out fine as answers may be amended or simply send anew from participants.

In the elicitation phase in EAGLE, technology probes refer to the "contextual requirement instrument" and introduce a (self-)ethnographic component: workshop participants would be asked to reflect and document their current technology usage on their own. Depending on the timing of introduction of probes, participants can also be asked as prospective users of EAGLE whether and how they work around difficulties that may arise during the technology integration of EAGLE in their workplace (Dörner et al., 2008; Hutchinson et al., 2003).

For EAGLE in particular the integration of technology probes may be beneficial because they could work as an awareness raising technique and related to this, as a possible change enabler for later work-packages (f.e. in Pirkkalainen et al. 2012). It would enable coordinators to 'interview' participants while being 'in their workplace' and thus encourage reflecting what works, why not, and what will have to be considered when developing EAGLE.

However, the timing of providing technology probes is difficult: As participants are unknown in the beginning, they may have no trust to prepare a diary-log for workshops, or post virtual notes online, whose recording may be intransparent for them. Constantly noting down ideas,

requires commitment to the co-design and joint-development of EAGLE which may not be established by now. At the same time, these points are project goals of EAGLEs design process. Hence, having the instrument at hand can serve as an indicator, how participants and coordinators are getting along. In view of these points the following procedure is suggested: Depending on the workshop-coordinator's contact to participants

- coordinators send out technology probes along with workshop-information packages (a template is provided next page) prior to the workshop and see whether participants already use it. Otherwise they can encourage the use in the workshop
- coordinators introduce the designed technology probe in workshops as a means to follow up and maintain an ongoing interaction

As outlined, technology probes can work both as a preparation or follow up of workshops to establish a tie for an ongoing interaction (in the best case). Thus it can also be worth considering introducing technology probes in a later development phase of EAGLE. The probes, in this case, could be tailored as to resemble the early EAGLE-platform-solution and thus notes of participants about the probes use would deliver insight on particular technical requirements neglected beforehand.

Using the Virtual Notebook as in the example, the notes and answers of participants are automatically summarized in an excel sheet, ready to download for coordinators. For each country/ workshop-group a Notebook would be prepared separately in order to facilitate allocating responses between the countries/workshops. The notes are recorded in google docs (so is the notebook) but the recording does not include names, locations or else. Hence, saved notes are anonymized and one can see the time when participants answered only.

**Template**

Dear Workshop-Participant, thank you for your interest and time to participate in the Workshop on the EAGLE project. We are looking forward to meeting you on *XX.XX at XX:XX pm/am in placeXX*. To inform you about the project EAGLE in advance, we decided to send you an information package covering a project overview and giving a link to your virtual notebook that we prepared for you to use for noting any questions, concerns or discussion points prior and after the workshops that you would like to address to.

*EAGLE& the Workshop*

EAGLE is a project that aims at developing an open-educational-resource platform that shall equip employees in local government administration in rural communities. Together with the platform, a holistic training solution that supports learning of ICT skills and literacy, as well as professional management of change situations can be developed.

In the workshop we would like to get to know your perspective and context of workplace as well as to elicit the requirements and barriers that we will need to take into consideration for making the most of the EAGLE-platform for you.

*EAGLE & Your Virtual Notebook*

To facilitate our start into a fruitful discussion we prepared a virtual notebook for you and would like you to think about three initial questions posed on the blog.

- Which programs, examples or ideas come to your mind when thinking about using Open Educational resources (OER) in your workplace?
- How would e-Learning suit your daily work-routine and what would you like to learn?
- What software programs do you use in your office?
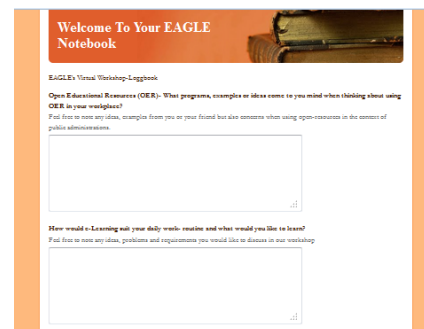


However, the blog shall not serve *us* to ask questions. Your Notebook shall work as a diary and log-book for you, where any concerns or questions as well as ideas can briefly and quickly be noted which you would like to be answered or shared.

Over the time you can either send in new notes or amend those you already sent in. We as the project and workshop coordinators can see the notes but certainly the saved notes are anonymized, treated confidential and will be used within Eagles project frame only.

*How to start using Your Virtual Notebook?*

Open the link: Your Virtual Notebook - the link will direct you to Your Eagle Notebook. Read the questions and answer one, two, or all questions as you like. You answer by

- typing in your notes in one, two or more answer frames
- after answering as much as you would like or have time to, simply scroll down the page where you can see the "submit" button
- press the submit button what will save your note anonymously in our record
- after submitting you will see a link "to amend" your current notes or simply answer anew the next time
- Please open the link to Your Virtual Notebook whenever you feel to pin down thoughts and ideas that come to your mind about EAGLE

If you have any questions concerning the Workshops or Your Virtual Notebook feel free to contact us. We are looking forward to meet you in the workshop.

Person/contact, Date/Location

# 10 Annex 4: Model Presentation

EAGLE: Workshop for Local Governments

NAME
Institution

Date

1

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Add concrete timing / agenda

## Workshop outline

- E-Learning and Open Education

- What is Eagle?
  - Objectives, Goals & Plans

- Workshop & Steps
  - Discussing E-Learning and OER in your context
  - Discussing barriers and solutions
  - Developing promising scenarios

2

**What is EAGLE all about: Objectives**

- Develop a **change management model for local government** & provide guidance for implementation of a learning-enhanced work process using the introduction of the Open Learning platform
- Develop a proficiency-based **curriculum for e-enabling** and learning with open educational resources (OER) and OER tools, including rapid development tools
- Create an **open learning platform** connected to existing learning platforms (Ariadne and OpenScout) and local government information systems, harnessing the powers of **open data** as well as OER
- **Enhance** the open learning platform with **public administration specific user services** like **argumentation technology** and general learner support through **automatic question item generation from OER** and easy access to OER tools. These will build in existing tools such as the process map tool and the argumentation technology tool Carneades, both developed as open source by Fraunhofer
- Analyse cultural differences and commonalities to **support exchange of knowledge** and to **foster a cross-European OER local government learning community**

3



**What is EAGLE all about: In simple words…**

- Providing solutions for **simple, timely, accessible learning processes**
- Providing a **platform for affordable, recent solutions** for learning
- Providing support to **improve learning processes and career development**
- Supporting **change and daily work**
- Providing **opportunities to collaborate across institutions**

➢ Improving performance and competences in public administration
➢ How to make the most of the project for you and your institutions? What are your needs and requirements to "let eagle fly"

4

2

## Today's plan

- Discussion on requirements and benefits

- How to use e-learning and open education in my institution?
- How does it fit in our context?
- What are possible barriers?
- How can EAGLE support my organization?
- What are the next steps and common activities?

5

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Not for participants, delete!

## Requirements Elicitation: (Very Rough) Steps

- **Stakeholders**
  - Decision makers
  - IT department: technical leaders
  - Selected users
  - HR responsible
- **Introduce participating stakeholders to OER – ask beforehand about their ideas**

- **Introduce participating stakeholders to the aims, services and facilities** that the project and portal will be designed to offer them

- **Present good practices/ scenarios** of OER on various curriculum areas. Each workshop was designed/developed around a success story, which could be the story of an innovative HR developer or supervisor.

- **Initiate discussion** with the participants in order to elicit the most important needs, limitations and barriers for making use of resources in public administration practice. The discussion also aimed at highlighting the potential of OER, of sharing and re-using resources, examine the pedagogies used in the scenarios presented and associate these issues with the project.

- **Collect their views through a survey**: At the end of the workshop, participants are asked to fill in the workshop questionnaire which was intended to record their views discussed previously, with reference to the practices/scenarios presented and the EAGLE approach that was introduced to them during the session.

- **Deepen barrier knowledge** through interviews

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## Imagine…

- you need to develop your staff's or your own competences to keep up with latest developments?
- you needed to set up a new training course?
- your budget for trainings was cut and you have only 2 days to prepare a new training
- there are new EU regulations which are relevant for all employees
- you want to improve working with colleagues
- you thought about country-boarder projects with admins?
- you want to develop the highest quality resources for your staff!
- you want to develop your personal skills

**Is E-Learning a solution for you???**

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## E-Learning – what is it all about?

- **Main questions**
  - How to improve facilitate organizations and people to by improving their knowledge and skills?
  - How to learn when new requirements (e.g. regulations, customer citizen requirements, technologies) emerge?
  - How to make an organization better?
- **Main answers**
  - by supporting teaching and learning by information and communication technologies (ICT)
  - by including blended learning: combining face to face (seminars) and e-learning
  - Special formats: collaborative learning, self-learning, workplace-based learning, and many many more…like OER on the next slide

8

4

**HRW**

**EAGLE**

## E-Learning – some samples

- **Add local (!) samples here…**

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**HRW**

**EAGLE**

## Open Education – what is it all about?

- **Open Educational Resources**
  - ….are a special format of e-Learning material
  - …any digital object which can be freely accessed, (re-)used, adapted and distributed for educational purposes with a certified open license (e.g. Creative Commons, GNU Public License) – *examples are*
    - Online (internet-based) Courses
    - Simulations and animations
    - Educational E-Books
    - Learning activities
- **In plain words…**
  - Learning materials which can be used for free and also modified
  - Many resources are available all over the world in many languages
  - Can improve learning and teaching and thus an organization's performance

## Some examples…

http://ocw.mit.edu/index.htm
http://openlearn.open.ac.uk/
http://www.ariadne-eu.org/
http://www.learningcommons.org/educators/library/gem.php
http://www.merlot.org/merlot/index.htm
http://www.jisc-collections.ac.uk/
http://wiki.creativecommons.org/Creative_Commons_and_Open_Educational_Resources
http://opentraining.unesco-ci.org/
http://portal.mace-project.eu/
http://www.openscout.net
http://lreforschools.eun.org/
http://globe-info.org
http://lorn.flexiblelearning.net.au/

➢ **There are many more for specific contents and skills!**

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## E-Learning in Public Administration - Samples

- **Compat EGOV Project**
  - Defining necessary competences for E-Government
  - Self- assessment of E-Government competences
  - Training offers for E-Government

- **Finnish Tax Administration**
  - The Finnish Tax Academy is in charge of the learning activities within the Finnish Tax Administration.
  - quickly changing regulatory environment (and thus permanent need for updates and maintenance)
  - expertise in taxation issues really is within the Tax Administration operational staff (and thus restricted potential to utilize external expertise).
  - Peer Production: Supervised, supported course development within the institution (including peer reviews, publishing etc)
  - 20 Courses annually

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## E-Learning in Public Administration - Samples

- **BITS: IT Security for Public Administration**
  - Awareness of security for public administration organizations and individuals
  - Available openly: can be used and re-used
  - Available for free: one institution created the development in Northrhine Westphalia, Germany - available for all
  - http://www.bits-training.de/bits/index.html
- **Community examples**
  - Partnerships in projects (e.g. between local governments)
  - Communities in social networks
  - ...and many more…

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## E-Learning in Public Administration – Sample from Germany

- Blended Learning course titeled "Advanced Qualification in managerial-economics for managers in judicial authorities"
- Provider: Ministry of Justice Baden-Württemberg (Federal State of Germany)
- Time volume: 200 h,;
- e-learning part: ca. 100 h.
- More than 150 participants since 2006 till now
- The content was generated by the University of Applied Sciences for Public Administration Ludwigsburg.

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## Steps of the Workshop in the next phase

(1) Describe your context: What about aspects influence the uptake of e-learning?

- For example: What role has "learning" in your workplace? How is learning organized in terms of processes, technologies, policies)? What are projects and initiatives related to learning and technology use?

(2) Discuss potential barriers: What difficulties emerge?

- For example: What are policy, organizational / individual or technological barriers?

(3) Develop a scenario: How to resolve the difficulties so learning can be realized ideally in your institution?

- For example: How can Open Education tools support you? What would motivate to learn and use OER a development? What tools would be the most helpful? How can we support you?

(4) Reflection

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## Context and Barriers

- (1) Learning about the context, aspects influencing the uptake of learning?
    - What role has "learning" in, what (is needed to be) "learned" in your workplace?
    - How is learning organized in terms of
        - processes: are you learning individually, with colleagues, due to initiatives
        - technologies: do you use technologies to learn and/or clarify issues
        - policies: are rules in place defining conditions like whether learning is mandatory or obligatory
    - What are the main aspects influencing (successful) learning and personal development?

Instruction to participants:

➢ Get together with 3-5 people around you and briefly discuss & note answers; you can also integrate your "technology probes that have been sent to you?"
reason: (secure involvement, prevent marginalization of voices, shared meaning)

Instructor

➢ use the following (empty) tables (uniform)

## Context (1)

| Context<br><br>(These questions should be refined depending on the target group and the follow of the discussion) | Description / Summary<br><br>(here, the main outcomes should be documented) |
|---|---|
| General:<br><br>what does "learning" mean to you? Remember a situation have you feel have learned online for your workplace?<br><br>What role has "learning" in, what (is needed to be) "learned" in your workplace? | *Learning is currently no topic in the organization. Staff members have 3 days per year but do rarely use it.* |
| Policy:<br><br>What are key policies on learning in your institution?<br><br>Are there policies and regulations in relation to accessibility? | *There is a general regulation that employees have the right for training. But there are no concrete policies.* |
| Projects:<br><br>What are key projects related to technology use and (e-)learning? | *There is a project on intranet for all employees. There is a social network page where some requests are answered and events are posted.* |

## Context (2)

| Processes:<br><br>What are key processes to enable learning and career development? What are the processes to implement changes in institutions? | We have no process definitions. Changes are initiated by the management, a memo is distributed how to handle the requests in the new way. |
|---|---|
| Roles:<br><br>What are the main roles in the learning processes? (e.g. HR, manager, administrator, user, …) How are the main intermediaries / multiplicators? | *Employee: Proposing a training*<br><br>*Manager: Agreeing, allocating resources*<br><br>*Training contractor: Providing the course*<br><br>*HR: Updating the staff data* |
| Public administration knowledge, skills, and competences: What are the main skills needed (e.g. specific subjects, general soft skills, …).<br><br>What are main competences for the focus areas (if relevant): change management, digital literacy | *Leadership skills*<br><br>*Specific regulations*<br><br>*Communication*<br><br>*IT Skills* |
| Curricula:<br><br>What are current curricula / schemes for career development / learning in the institution? What are favorable learning / training methods? | *Currently the training contractors' list of courses can be booked. No further curricula are given, the main competences are listed in the job descriptions.* |

**Context (3)**

| | |
|---|---|
| **Culture and Collaboration:** What is the organizational culture in relation to learning? Are you collaborating with other institutions (other communes, cross region, cross border)? | *We collaborate with other rural governments in our state.* |
| **Technologies** Please explain the main technologies (e.g. intranet, knowledge management, standard software, internet usage and policies) Technical tools, such as software or devices for on-site control; which technologies and devices are used in private settings? | *Intranet is available* *Forums and wikis are provided but not used* *Communication staff answers facebook requests on a specific computer (due to security reasons).* *MS Office is on all computers* *Only 50% have private computers.* |

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**Context and Barriers**

- (2) What are the potential difficulties / key barriers you would see?
    - What would prevent you to integrate e-learning in your daily work?
    - What would prevent you to collaborate with colleagues/ your institution?
    - What policies, rules/rights need to be established to support you?
    - What requirements would an collaboration crossing EU bring along?
    - What technologies you would like to work with?
      (Organizational and individual: e.g. management support, lack of time
      Policy and Cultural, e.g. lack of policies to allow learning
      Technological, e.g. lack of knowledge, complex tools
      Note: Use the following (empty) tables

- Instruction to participants: Get together with 3-5 people around you and briefly discuss & take notes; you can also integrate your "technology probes that have been sent to you?"
  reason: (secure involvement, prevent marginalization of voices, shared meaning)
- Instructor: use the following (empty) tables (uniform)

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## Barriers (1)

| Barrier | Description / Summary (document the outcomes here) | Interventions (discuss ways to overcome the barriers: relate to EAGLE solutions) |
|---|---|---|
| Policy: Are there barriers related to policies (e.g. no policies for employee training) | *No policies are available in regard to learning.* | *As a start, there should be good practices of policies to support the development process.* |
| Organizational and individual: Which barriers can be identified on the organizational level (e.g. resistance to change, lack of learning culture, high cost, …) Which barriers can be identified on the individual level (e.g., lack of time, lack of appreciation, lack of motivation, …) | *We do not have processes to allow systematic learning.* *We do not have time and resources.* *We do not have advantages when going to training.* *General willingness towards learning* *My boss does not let me attend trainings.* | *A change and model learning process should be developed together.* *Resources for the key topics will be selected and provided through the EAGLE portal.* |

## Barriers (2)

| | | |
|---|---|---|
| Technological: What are technological barriers (complex / lack of systems for learning, lack of integration of mobile devices, lack of accessible solutions, …) Accessibility: What is the role of accessibility. Are there guidelines and how are the offers provided? | *I don't know how to use internet tools.* *I cannot use MS office, my secretary does this.* *We have the regulation to provide accessible web sites, an agency does this for us.* *We do not have money to create accessible resources* | *The solution must be integrated in the intranet solution and accessible through a secure connection or local server.* *A guideline and training is necessary to create more accessible offers.* |
| Pegagogy: Which barriers exist towards open education, which barriers can occur regarding e-learning? | *We have no pedagogical strategy and model, the training company does this for us.* | |

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## Developing a Scenarios

- How could e-learning / OER be successfully used in your organization (in order to reach a specific goal such as "improving ICT literacy", "improving leadership skills", "decrease training cost", "increase motivation to develop a personal career".).
- What is a promising scenario…?
    - …fulfilling the main constraints (context)?
    - …creating tangible results and benefits for your organization?
    - …utilizing existing resources from EAGLE?
- *Note: Use a google doc with the description format below or use the following items for documentation*

- Description of scenarios
    - Context / situation
    - Requirements
    - Goals
    - Resources

    - Learning Outcomes
    - Roles
    - EAGLE tools
    - Learning Activities

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## 3 Scenarios

**Delete samples in italics after introduction**

- **Description of scenario**: *Introducing issues of private internet use in the workplace. This topic has become very important in different organization. In many cases, no guidance is provided, sometimes organizations are left alone. The main idea is to create sensitivity regarding internet use.*
- **Context / situation**: *A local government provides internet services through a portal – as in many cases also internet searches are necessary, internet is freely usable at each workplace. However, some employees have concerns about colleagues just chatting. Also, some (unsuccessful) attacks have been found.*
- **Requirements**: *Employees need to use internet responsibly and only for work contexts. All users can use the service request system and have experiences in private internet use but are not familiar with privacy and security issues.*
- **Goals / Learning Outcomes**: *To create sensitivity on privacy and security concerns. To create awareness on the consequences of private internet usage. To improve performance of answering internet requests.*
- **Resources**: *Course hours: 8; used OER: OER on privacy, OER on security in English – need to be adapted to the concrete organization; facilitator for 30h)*
- **Roles**: *One faciliatator per course supporting group work and discussions*
- **EAGLE tools**: *tbd*
- **Learning Activities**: *Initial meeting (f2f). OER used for preparation. F2F discussion. Group assignment; final assessment.*

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## Reflection and Action Plan / Prioritization Tasks

- How can these scenarios help other people in your institution?

- Do you think the main barriers can be overcome and how?

- What kind of support is needed (e.g. portal, tools, technologies, collaboration, …)

- How to transform the ideas into actions?
  - Policy
  - Organizational
  - Technology /infrastructure
  - Individual
  - ….
- *Note: Use a google doc with the action plan table or the tables*

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Not for participants, delete!

## Requirements: Move from barriers to requirements

- Combine findings of initial workshops
- Provide statements for requirements and needs
- Discuss with selected participants…
- Provide priorization
- Define (WP) responsibilities

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Not for participants, delete!

## Requirements: Next steps

- Provide initial methodology
- Improve methodology (e.g. barriers specific to public admin)
- Test methodology
- Create requirement templates
    - Initial presentation of EAGLE
    - Practices of OER
    - Barrier discussion template
    - Scenario building template
- Create engagement scenarios
- Run workshops ☺

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## Contact

**Your contact data**

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