



# **Eufolio Process Specification**

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Extended summary of the final draft (2013)  
for briefings and possible interested 3rd parties  
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## **Executive summary**

The EUfolio Process Specification (Deliverable 10) was presented to the partners in October 2013 to give an overall picture and plan for the process of ePortfolio implementation within EUfolio. A concise version devoted to the EUfolio process specification was finalized in late 2013.

This extended summary shows the process of EUfolio partner's implementation for those who want to follow EUfolio's model.

The process specification provides definitions and a needs analysis, helps to understand the ePortfolio process (together with EUfolio's Functional Specification) and outlines learning objectives, concepts for contents and didactical concepts and methods.

The EUfolio consortium has recommended a teacher-centered implementation of ePortfolios to the pilot schools. Well prepared teachers have developed projects and/or teaching methods involving ePortfolios in the curriculum. This, however, means that teachers have to have the full support on policy, institutional, and technical level as well as ongoing CPD support. Teacher-centered also means that teachers thus learn to understand the learner-centered approach of teaching with ePortfolios.

For preparing implementation, we recommend a briefing with EUfolio's questionnaire (see Annex) or with JISC's implementing ePortfolios checklist (JISC 2008/2013) – see chapter 5.1 and 5.2.

For evaluation purposes, working with the AeP Maturity matrix was recommended (cf. Chapter 6)

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## ***Preface: Aims of the process specification***

The structure of this process specification basically orientates at an adaptation of the process model of ISO/IEC 19796-1 for Learning, Education, and Training, which „provides a harmonized approach to manage, assure, or assess quality“ (Pawlowski 2007: 7).

The adaptation bases on JISC's „Six steps to e-portfolio-based learning“. These steps may serve as a quick introduction into the process (JISC 2008: 36-37).

1. **Define:** The purpose and objectives of the ePortfolio initiative have to be defined and established. The issues it aims to address as well as the support needs and the nature of learner environments have to be made clear.

Main question:

“Which tools, systems or approaches should we adopt.”

2. **Understand:** The potential for ePortfolios for personalized and self-determined learning has an impact on pedagogic and institutional practices.

Main questions:

2.1 What kind of learning outcomes are required from the implementation?

2.2 What implication does this have on staff (teachers/practitioners, administrative and technical staff)?

3. **Prepare:** The work with ePortfolios is intertwined with issues round ownership of data, identity and access management. Furthermore investment in staff training and support is necessary, as well as assessemtn of risks and benefits, Accessibility, copyright and other potential legal issues.

Main question: Who will prepare the ground?

4. **Engage:** The implementation of ePortfolios involves practitioners, personal tutors, administrative, technical and support staff.

Main question: What are the most effective strategies for engaging and sustaining the commitment of teachers and learners?

5. **Implement:** ePortfolio use is only effective if lead and accompanied by curriculum managers and teams of teachers and other practitioners (like trainers, tutors, mentors). Take into consideration good practices of successful implementations.

Questions: Which factors – such as timing or good practices – influence the

outcomes?

6. **Review:** The viewpoints of both learners and teachers have to be explored. Guidance materials for this purpose are developed in WP 6 of EUfolio.

## 1. Definition and Needs Analysis

### 1.1 Definition

Salzburg research state in a study on ePortfolios that „it is impossible to speak about one ePortfolio approach“only. They use the following definition:

ePortfolio is a digital collection of “skillfully made works” (lat. artefacts) of one person who thus wants to document and illustrate the product (learning outcomes) and the process (learning path/growth) of the development of her/his expertise in a certain time span and for certain purposes. The respective person picked the selection of the artefacts autonomously and arranged them in accordance with the learning target. As an owner, she/he has the complete control who can review at what time which amount of information from the Portfolio.

(Hornung-Prähauser e.a. 2007, translated)

There are a range of definitions of ePortfolios which are summarized in EUfolio’s Policy and Practice review. It is important to agree on one definition in the context of the ePortfolio process as there has to be a common basis of understanding of ePortfolios.

For the EUfolio project, the following definition was chosen:

ePortfolios are (student-owned) dynamic digital workspaces whereby students can capture their learning, their ideas, access their collections of work, reflect on their learning, share it, set goals, seek feedback and showcase their learning and achievements.

Remarks on the definition and clarifications on terms and stakeholder’s roles:

A digital workspace is a digital environment for learning. It implies active learning (i.e. active engagement of the learners). The term workspace also incorporates the notion that one might engage with the portfolio in many ways, for example collaboratively. A digital workspace, too, has roots in software development and symbolizes a temporary storage area. This is, however, not the meaning of workspace we are applying in the definition and in ePortfolio use, even though the ePortfolio also may serve as a temporary (and permanent) storage area.

The ePortfolio is owned by the student – s/he has control over

- file management,

- what to share with whom,
- which views to hand in to the teacher

etc. ...

Of course, the teacher's role in working with ePortfolios is still important – if not more important than ever. The teacher – for example – supports the students in order to

- set and monitor learning goals
- plan their strategies how to achieve goals
- develop success criteria
- collect evidence of their learning and
- reflect on and evaluate their learning

etc.

### **Reflection and sharing of learning:**

Even though ePortfolios are completely controlled by the learners, they are not intimate diaries. They can be accessed by wide audience as required, such as teachers, fellow students and parents. Using ePortfolios can give teachers a new insight into the process of learning. When teachers integrate ePortfolios into teaching and learning it creates an opportunity to use a wide range of educational approaches.

## ***1.2 Definition of objectives***

As there are curriculum reform processes underway or planned, the ePortfolio can be used as a tool to support these reforms. ePortfolios can back competence or skills oriented teaching and they can be used as an instrument for assessment.

To date, ePortfolio use in most European countries – if there is such a use – is rather in the hand of teachers for Continuous Professional Development (CPD). The emerging reforms in teaching make it desirable to introduce student's ePortfolios as well.

It has to be emphasized as well that a successful implementation needs policy support.

## ***1.3 Needs analysis***

The demand for ePortfolios in the classroom is mainly emerging from the need for a change in school curricula and a more learner-centered way of teaching. In order to implement ePortfolios in European classrooms, the needs of supporting measures seem to be diverse. It starts with the demand of supporting the policy making; needs

expressed (as answers to a questionnaire for EUfolio) are furthermore case studies of ePortfolio use, sharing experience with partners, a platform for teachers and teacher trainers and the need for a clear functional specification (which is provided as EUfolio Functional Specification).

#### **1.4 Framework analysis / Context analysis**

Most of the surveys carried out so far focus on ePortfolio practice in higher education. Here is an example taken from the report on the Australian ePortfolio Project (AeP 2008)

The key factors leading to sector-wide engagement with ePortfolios in these jurisdictions are reviewed, with reference also made to policy-driven ePortfolio activity in Canada and New Zealand. In a global education market, questions of technical standards and interoperability are also critical, in order to meet the need to support learner mobility within and between learning and training institutions and the workplace. (AeP 2008, p.31)

In 2010, “Europe’s 2020 strategy for smart, sustainable and inclusive growth” was launched by the European Commission (Europe 2020). In the framework of this strategy paper, Member States were asked, for example,

- To improve educational outcomes, addressing each segment (pre-school, primary, secondary, vocational and tertiary) within an integrated approach, encompassing key competences and aiming at reducing early school leaving
- To enhance the openness and relevance of education systems by building national qualification frameworks and better gearing learning outcomes towards labour market needs. (Europe 2020, 13)

One of the targets of the initiative “A Digital Agenda for Europe”, which was announced in the abovementioned strategy paper, was to “promote internet access and take-up by all European citizens, especially through actions in support of digital literacy and accessibility” (Europe 2020, 14).

In Europe, main policy efforts were undertaken in the framework of competence based education (cf. EACEA 2012). Implementation of ePortfolios (mainly in Higher Education) is accompanied by an “implementation guidance” in the UK (JISC 2008ff). In the Netherlands, SURF, “the collaborative organisation for higher education institutions and research institutes aimed at breakthrough innovation in ICT” offers thorough background information in its report “Stimulating Lifelong Learning: The ePortfolio in Dutch Higher Education“ (2007).

Key competences, as defined in the European Framework for Key Competences for Lifelong Learning, or 21st century skills (both often used synonymously) include ICT

skills. Furthermore, ICT can be and is used as a tool for teaching, learning, and assessment.

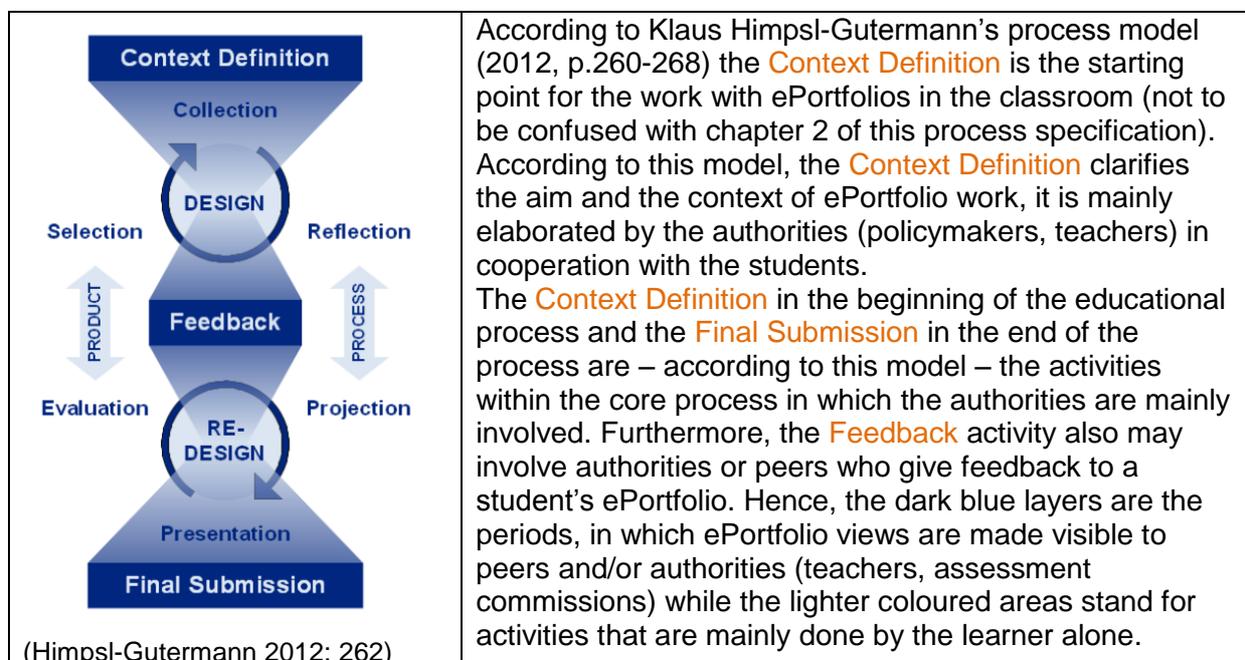
ePortfolios are mentioned in the Eurydice report (EACEA 2011) as an assessment tool only. This is lamentable, as ePortfolios should be also used as a reflection and development tool, and even the showcase portfolio may contain elements that are more important for the student's identity than for her/his assessment.

In Europe there is no clear national policy for the use of ePortfolios in schools. However, there are several policy approaches, for example from the Netherlands, from England (cf the JISC documents) and from Scotland (cf SQA 2012).

## 2. Conception and design of the ePortfolio process – Understand

JISC (2008) reminds: “e-Portfolio based learning offers a real potential for autonomous and personalised learning“. JISC wants project groups to ask: „What kind of learning outcomes do we require from the e-portfolio initiative and what implication will this have for our practitioners, administrative and technical staff?

We start with a model of the ePortfolio process:

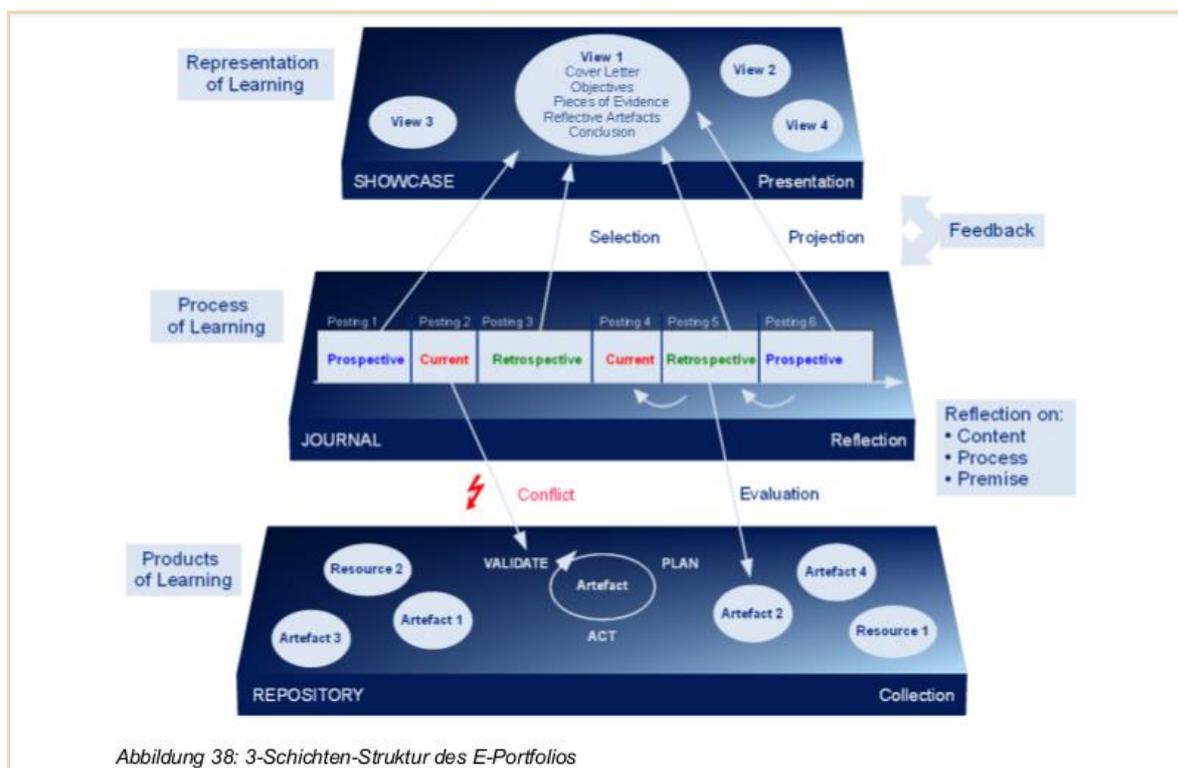


In the following model, Klaus Himpsl-Gutermann shows the basic structure of the ePortfolio in three layers. The structure is learner-centered and initiates with single learning acts of the individual learner. The latter performs a learning act, which can

be – with the basic layer of the model – simplified to the stages „plan – act – validate“ and usually results in an artefact. (Himpsl-Gutermann 2012, 269). A range of learning acts results in a collection of artefacts. These are collected in a repository. They are **Products of Learning**. (Please observe the correspondence of this layer with the step „collection“ in the process model of Himpsl-Gutermann).

The layer **Process of Learning** depicts the planning, judgement and steering of the own learning process and the self-evaluation of the artefacts. This layer corresponds to a blog (journal) in which the learning process is reflected. Reflections can reflect the current situation („reflecting-in-action“, 270), they can be prospective if expectations are uttered or plans are made, and many of them are retrospective („reflecting-on-action“).

The top layer of the model is named **Representation of Learning**. It serves as a showcase of learning, even though not all groups/peers of the targeted audience get the same view of the same showcase, there are rather different views for different target groups. Besides artefacts and reflective artefacts which form the pieces of evidence of learning, a self evaluation should be added to the portfolio view. This self evaluation can be done in the form of a journal entry that can be retrospective and prospective in the same time, as it also should contain the reflection about a possible continuation of the work done.



(Himpsl-Gutermann 2012: 239)

## **2.1 Learning objectives**

Determining the learning objectives is crucial for every educational process. The process of learning with ePortfolios emerges from the need for a curriculum reform, because the objectives of learning are changing from an information centered teaching and learning model to a skills-centered approach, we can summarize that key competences and 21st century skills will be the main objectives for learning.

The learning objectives have to be determined by the teacher in accordance with the learning outcomes expected for a certain subject or grade. However, learning outcomes and the way to achieve them can be also negotiated between student and teacher. In this case the student would – with the help of the teacher determine learning aims and paths. Results of this negotiation could also determine which learning outcomes can be achieved with the help of using an ePortfolio and which outcomes might just be collected in the ePortfolio at the end to hand them in for assessment.

## **3. Preparing the ground for the implementation**

### **3.1 Roles and activities**

For both, teachers and students, the roles will be similar in the beginning as both have to get acquainted with the ePortfolio first. So we can expect similar processes, but with a time gap. When students are novices, teachers will be already trained and have a certain expertise in both the concept of ePortfolio and the handling of the software.

The ePortfolio process for users (both teachers and students) can be structured into four phases. All phases have internal and external components, and in all phases there is a risk of dropping out. It can be expected that the risk of dropping out is higher during the circle of teacher training and teachers elaborating their ePortfolios. In school, the risk of drop-out/withdrawal is lower as students are constantly supervised (cf Himpsl-Gutermann 2012a: 130).

With skills-based teaching and implementation of learner centered tools such as ePortfolios, teachers are additionally facing a change of their role in the knowledge loop. They don't mainly transfer information any more, they got acquainted to the role

of a tutor during the last years, but now they additionally face that 21st century classrooms need coaches as well (cf Baumgartner 2004).

### **3.2 Basing ePortfolio implementation on teacher trainings**

Case studies show that many teachers, when introduced to the ePortfolio idea and software, quickly developed didactical concepts for working with it. Some of them even implemented it without support. Therefore, a “teacher-centered” implementation, focusing on teacher training and supporting them in implementing ePortfolios in the classroom could result in a rather high rate of implementation of ePortfolios in EU classrooms. Therefore, the implementation can be seen as a process in 3 steps.

#### **1. train the trainers**

Teacher trainers are trained first. They have to understand the complexity of the ePortfolio process, immerse themselves in it (by creating their own portfolios and participating in a community of practice as provided via [eufolio.mahara.eu](http://eufolio.mahara.eu)), develop or reserch case studies and then to accompany teachers through the ePortfolio journey. Ideally, teacher trainers (as well as teachers) should set up their own ePortfolio.

#### **2. teacher training**

This training should be convincing enough to make teachers not only ready to use ePortfolios in the classroom but also to make them eager of keeping an ePortfolio as well and of adopting the new style of coaching their students to elaborate skills and knowledge.

#### **3. use of ePortfolios in the classroom**

Basing on these trainings, teachers will have enough skills and knowledge to develop their own pedagogical approach and to implement ePortfolios in the classroom.

Throughout all the phases of implementation, **didactical and IT support** should be given to the teachers, by supervisors, follow-up-trainings or via the abovementioned **community of practice**. It is important that the community of practice is moderated by a coach or supervisor who keeps discussions alive and answers questions with as little delay as possible.

Valuable information on concepts for ePortfolio support can be found in AeP's publication: "ePortfolio concepts for information technology and teaching and learning support staff" (2009).

#### **4. Development/production – Engage**

The process implies the development of an ePortfolio within a platform (eg. <http://mahara.eufolio.eu> or Microsoft's platform) and of appropriate ways for the stakeholders involved to access them. Most of the ways to engage the stakeholders are already explained in the conceptual part (chapter 3), therefore this chapter is kept rather short.

##### **4.1 Content realization**

The content is ideally produced by the user. In EUfolio's ePortfolio implementation there will be first model content for the teacher's CPD, thereafter we expect teacher trainers and teachers to develop content for their teaching portfolios. Building on that, students will make their own portfolios, basing on learning outcomes defined by their teacher.

##### **4.2 Design realization**

Curriculum and teaching design should base on the experiences of work with ePortfolios. The design of this sub-process is therefore dependent on both the curriculum set for a certain school type and age group and the possibilities of using an ePortfolio for reaching certain learning targets.

With respect to the design of the ePortfolio platforms the following can be stated:

The Mahara ePortfolio solution is adaptable (to a certain extent) as far as the design is concerned.

The Microsoft ePortfolio solution bases on the MS office suite and therefore also allows a broad range of design features.

##### **4.3 Media realization**

The implementation of ePortfolios in EU classrooms in the framework of EUfolio bases on two media solutions: an Open Source platform (Mahara) and the Microsoft Student ePortfolio Solution. The desired functionalities are described in EUfolio's functional specification.

In order to use the media appropriately, both, students and teachers need to be

equipped with devices (like notebooks) and Internet access in order to access the ePortfolio platforms. Ideally, this accessibility should be provided both in the classroom and at home.

#### **4.4 Technical realization**

Schools and classrooms need to be equipped with appropriate technical infrastructure (good broadband or WLAN internet connection, notebooks, ...) and 1st level support.

### **5. Implementation**

Implementation requires preparation, which was done for EUfolio with questionnaires (see Annex). The EUfolio questionnaires were basing on checklists developed for eLearning and ePortfolio implementation. For further use we recommend to use either the EUfolio questionnaire (“general issues” and “institutional issues” or JISC’s „Implementing e-portfolios checklist“ (2008/2012).

### **6. Review to evidence and evaluate the outcomes**

The ePortfolioMaturity Model of the AeP (2008) seems to be a good tool for evaluation as it covers institutional, staff and student’s issues. If the matrix is used before and after implementation, the progress can be monitored.

### **7. Guidance Materials for participants**

Guidance for EUfolio pilot partners is given in the full version of the EUfolio Process Specification (Del. 10) and through the CPD resources elaborated for EUfolio by the CPI. An example: Avraamidou/Economou (2013). EUfolio – EU classroom ePortfolios. Trainers’ booklet (Deliverable 16).

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## Annex: Questionnaire to be completed by the EUfolio partners participating in the pilot (drafted by Danube University Krems, Austria)

The questionnaire was sent out + replies to it collected in June/July 2013

### EUfolio Process & Technical Specification

Work Package 04 | Pilot Design

#### [ Part 1 ] Key issues to think about before the piloting

Please find below a list of questions that will help you think about your national ePortfolio project(s) in more detail. A number of issues will surely need to be discussed when planning the implementation of your pilots.

Please note: There is no need in answering all questions to every detail. Simply let us know to which of these issues/questions you already have a clear vision or objective. The more information we collect from you, the more likely we will be to develop a process model for ePortfolio use that covers the specific requirements of your pilot projects.

Of course there will also be other issues and questions that will come up. We will be able to discuss them together with all open issues either in the online meeting and/or on an individual basis in follow-up meetings.

#### General Issues

	<input type="checkbox"/>	<i>Please make your notes here ..</i>
<ul style="list-style-type: none"> <li>• What are you doing with ePortfolio(s) at the moment (at national or school level)?</li> </ul>	<input type="checkbox"/>	
<ul style="list-style-type: none"> <li>• What would you like to be doing in the future (at national or school level)? Why?</li> </ul>	<input type="checkbox"/>	
<ul style="list-style-type: none"> <li>• What support would you need in order to progress your level of engagement?</li> </ul>	<input type="checkbox"/>	
<ul style="list-style-type: none"> <li>• How should ePortfolios link to national policies or competence definitions?</li> </ul>	<input type="checkbox"/>	
<ul style="list-style-type: none"> <li>• Do you intend to integrate ePortfolio use in national assessment policies?</li> </ul>	<input type="checkbox"/>	
<ul style="list-style-type: none"> <li>• Is there a recommended ePortfolio model / initiative in your country?</li> </ul>	<input type="checkbox"/>	

#### Institutional Issues

	<input type="checkbox"/>	<i>Please make your notes here ..</i>
<ul style="list-style-type: none"> <li>• What is the purpose of the ePortfolio in your pilot(s)?</li> </ul>	<input type="checkbox"/>	
<ul style="list-style-type: none"> <li>• In what ways should your learners reflect in an ePortfolio?</li> </ul>	<input type="checkbox"/>	
<ul style="list-style-type: none"> <li>• To what extent are ePortfolios already used by the pilot institutions?</li> </ul>	<input type="checkbox"/>	
<ul style="list-style-type: none"> <li>• On which level should the implementation take</li> </ul>	<input type="checkbox"/>	

place (class/institutional/beyond)?		
<ul style="list-style-type: none"> <li>• Are there any differences in the way ePortfolios should be adopted in various disciplines/schools?</li> </ul>	<input type="checkbox"/>	
<ul style="list-style-type: none"> <li>• What aspects &amp; types of the ePortfolio should be assessed and at which levels? -&gt; see <i>eP taxonomy</i> (Baumgartner, Peter (2011). Educational Scenarios with E-portfolios - a Taxonomy of Application Patterns. WWW: <a href="http://peter.baumgartner.name/wp-content/uploads/2012/12/SCO2001-eportfolio-taxonomy.pdf">http://peter.baumgartner.name/wp-content/uploads/2012/12/SCO2001-eportfolio-taxonomy.pdf</a>)</li> </ul>	<input type="checkbox"/>	
<ul style="list-style-type: none"> <li>• How likely is it that learners and/or teachers will accept and use the ePortfolio system?</li> </ul>	<input type="checkbox"/>	
<ul style="list-style-type: none"> <li>• Should ePortfolios be sustained over time (e.g. after graduation), and how can this be done?</li> </ul>	<input type="checkbox"/>	
<ul style="list-style-type: none"> <li>• Are ICT skills &amp; experiences of teachers &amp; learners sufficient for this pilot?</li> </ul>	<input type="checkbox"/>	
<ul style="list-style-type: none"> <li>• Who will show learners how to use the ePortfolio system?</li> </ul>	<input type="checkbox"/>	
<ul style="list-style-type: none"> <li>• Who will need to be involved in the implementation?</li> </ul>	<input type="checkbox"/>	

**Technical Issues**

	<input type="checkbox"/>	<i>Please make your notes here ..</i>
<ul style="list-style-type: none"> <li>• What kinds of technological infrastructure and collaboration will be needed in the pilots?</li> </ul>	<input type="checkbox"/>	
<ul style="list-style-type: none"> <li>• What technologies will be available in the classroom to implement the ePortfolio?</li> </ul>	<input type="checkbox"/>	
<ul style="list-style-type: none"> <li>• Will there be an infrastructure in place to properly train teachers and learners?</li> </ul>	<input type="checkbox"/>	
<ul style="list-style-type: none"> <li>• What pedagogical features (functions) do you expect from the ePortfolio system?</li> </ul>	<input type="checkbox"/>	
<ul style="list-style-type: none"> <li>• How will intellectual property used in an ePortfolio be protected?</li> </ul>	<input type="checkbox"/>	
<ul style="list-style-type: none"> <li>• Who will be the "owner" of the artefacts in the ePortfolio?</li> </ul>	<input type="checkbox"/>	
<ul style="list-style-type: none"> <li>• Are there already ePortfolio systems in use? Which?</li> </ul>	<input type="checkbox"/>	