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APARSEN
Alliance for Permanent Access to the Records of Science Network

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D43.2 REPORT ON LAUNCH OF DIGITAL PRESERVATION TRAINING PORTAL FOR VCoE

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Abstract: This document reports on the customization, set-up and launch of the Online Training Portal (OTP). It describes the underlying specification rationale, dedicated to be of help to anyone interested in gaining initial skills or improving competence in Digital Preservation (DP). It describes the resulting online application and procedures for continuing maintenance organised by a Virtual Centre of Excellence. The addendum section reports about the progress in improving and extending the content of the portal as well as about the progress in planning its re-launch in a visible event.

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Project information

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CONTENT

1   OVERVIEW

This document represents Deliverable D43.2, 'Launch of Digital Preservation Training Portal for VCoE'. The deliverable is classified as 'Other' rather than 'Report' — it is the web application itself — but this report is submitted to explain the intent behind the repository (CMS) and learning management system (LMS), the way it has been implemented, and to give a brief overview of it.

Two alternative solutions have been developed supporting different levels of qualification and training services of the VCoE. The commercial option bases on the GLOBIT Educational Portal, a portfolio product of the company. Its features support certified online, interactive, self-directed learning for communities along various business models. The simple option bases on WordPress open source software and focuses on the online provision of training and qualification materials.

Whereas the commercial option implies costs for licensing the Educational Portal as software-as-a-service, the costs for the simple option in the first place are shared with operating the VCoE web site. The simple solution would not be set up to generate turnover. It allows the VCoE to enter into qualification and training activities by gathering, indexing and providing learning materials. Elaborated VCoE training and qualification services then necessitate the commercial version. The Educational Portal technology underlying the commercial option has a broader range of functionality for online training and qualification and is designed to support commercially oriented business models. However, this cannot be put in place as long as the VCoE does not have established business-to-business relationships to target communities and their associations.

Initial training material is available on the APARSEN Online Training Portal. Cooperations with networks and multiplier organisations, including cooperation in the field of qualification and training, are being negotiated.

1.1   PURPOSE AND SCOPE

The Online Training Portal (OTP) is dedicated to be of help to anyone interested in gaining initial skills or improving his competence in Digital Preservation (DP). Specifically, the portal is designed to support students and trainers with three main services:

- **Register of Digital Preservation curricula and courses in academia/Higher Education (HE) and Continuing Professional Education (CPE):** This service allows students and professionals to spot qualification and training opportunities meeting their competence profile and subject field, hence leveraging the required skills and competence profiles within and beyond the library and information science community.
- **Repository of training material in Digital Preservation:** This service supplies teachers and trainers with material suitable for creating courses on digital long-term preservation within and beyond the library and information science community. Furthermore, its material is expected to enable students and professionals to study single topics by self-directed learning on a basic level.
- **Online learning with courses in Digital Preservation:** Such service is dedicated to offering students and professionals to improve their knowledge in Digital Preservation by attending online courses.

The online services are designed and set-up by WP42 *Formal Qualifications* (Task 4240) and WP43 *Training Courses* (Task 4350) in close collaboration, integrated with the APA/APARSEN/prospective VCoE web site established by WP44 *External Communication and Awareness Rising* (Task 4430) and WP52 *Technical Coordination* (Task 5220).

For a comprehensive introduction to the OTP, please refer to [APARSEN D42.1, Chapter 5, Implications, page 35]).

1.2 CONCEPTION

The portal bundles three services supporting gaining initial skills or improving individual competence in Digital Preservation (DP). A comprehensive suite of shared information and communication services accompanies the register, the repository and the online learning in the Online Training Portal. The underlying system supports content access, content dissemination, content access control, community building and personalization.

Access to the diverse content is facilitated by taxonomy. The taxonomy structures the content comprised. Its categories reflect concepts researchers and practitioners in Digital Preservation are used to in their daily business. Independent schemes complement one another. The schemes either address the subject domain, technological issues or organizational issues. The schemes set-up stem from the APARSEN DoW, from the APARSEN reports D42.1 and D43.1, or have been developed in accordance with the APARSEN Common Vision WP11.

- Format
- Role in Digital Preservation
- APARSEN Topic
- Institution Type
- Language
- Training and Qualification Format
- Training and Qualification Certification
- Target Sector
- Target Audience
- Classification
- Training and Qualification Term

1.3 TARGET AUDIENCE

Deliverable D43.1 summarised the position as follows.

The targets for training materials were identified as:

- Senior management, who had the overall responsibility for (and knowledge of) funding and its limitations, the strategic planning, succession planning, and the position of the repository within the larger organization;
- Operational management, composed of people who were responsible for running the archive; they provided information about the main functions of the repository system and explained how the processes were documented and verifiable;
- Operational staff, responsible for archival tasks and for the effective functioning of the repository (the day-to-day operations), dealing, for example, with acquisition and ingest of material: they provided useful information about the processes, through step by step procedures.

As well as these three main groups, it must be noted that other professional contributions were considered of great importance:

- Domain experts (mainly in science repositories), whose contribution was important because they are in contact with the user communities and they have a deep knowledge of general issues and the stored data
- IT staff: they provided in-depth knowledge of IT systems used including storage and security.

As mentioned above two potential types of courses have been identified as desirable through the analyses undertaken. The first being a course that provides an overview of the complete digital preservation lifecycle and the second being courses that focus on one issue (or a small group of related issues). The topics identified above must be considered in relation to both of these types of course.

With regards to the first type of course, APARSEN is well placed to develop a course covering the complete digital preservation lifecycle at a more advanced level than those currently available and with more practically focused training and case studies by drawing on the collective experience of the partners within the Network of Excellence and, potentially, affiliated projects. Many of the partners within the Consortium can not only point to their own digital preservation systems as being innovative and examples of best practice but are also among the leaders in digital preservation within their respective countries and/or fields. Many of the work packages will also be able to directly provide content to such a course and work being carried out by work packages such as WP11 (Common Vision) and WP13 (Coordination of Common Standards) can ensure that training provision from APARSEN remains both relevant and at the forefront of developments.

When considering the second type of training, focused courses examining one particular topic (or a small number of related topics), it is essential to return to the list of topics identified above and compare these with the topics covered by the research and integration work packages within APARSEN. Such a comparison will clearly identify where APARSEN can fill gaps in current training provisions. This comparison is detailed in Table 1 below.

The analyses of this report [APARSEN D43.1], particularly those carried out in Sections 3.1.2 and 5.3, have also clearly identified the need for training tailored to particular job roles. For each topic listed in Table 10 potential audiences will also be identified according to the roles defined above.

TABLE 1: TRAINING TOPICS AND LINKS TO APARSEN RESEARCH AND INTEGRATION

Topic	APARSEN Topic Areas and WPs of Particular Interest	Potential Audiences (by role)
Preservation Planning and Services	Sustainability, Usability, WP21 (Preservation Services)	Operational Managers, Operational Staff
Discovery and Access (Package Description)	Access, Usability, WP13 (Coordination of Common Standards)	Operational Staff
Annotation and Data Quality	Trust, Usability, WP26 (Annotation, Reputation and Data Quality), WP13	Operational Managers, Operational Staff
Representation Information and Preservation Description Information	Sustainability, Usability, WP21 (Preservation Services)	Operational Managers, Operational Staff
Accessibility (incl. Interoperability and Usability)	Usability, WP25 (Interoperability and Intelligibility)	Operational Staff
Sustainability	Sustainability	Senior Managers
Legislation and Regulatory Frameworks	WP35 (Data Policies and Governance)	Senior Managers, Operational Managers
Digital Rights Management	Access, WP31 (Digital Rights and Access Management)	Operational Managers, Operational Staff
User Analysis (incl. understanding Designated Communities)	Usability, Access	Operational Managers, Operational Staff
Authenticity and Provenance	Trust, WP24 (Authenticity and Provenance)	Operational Managers, Operational Staff

Establishing Trust (incl. Peer Review and Audit)	Trust, WP33 (Peer Review and 3rd Party Certification of Repositories)	Senior Managers, Operational Managers, Operational Staff
Selection and Appraisal	WP36 (Business Cases)	Operational Staff
Change Management	Sustainability	Senior Managers
Succession Planning	Sustainability	Senior Managers, Operational Managers
Quality Assurance	Trust, WP24, WP26, WP33	Operational Managers, Operational Staff
Risk Mitigation	Sustainability	Senior Managers
Business Planning and Cost Analysis	Sustainability, WP32 (Cost/Benefit Data Collection and Modelling), WP36 (Business Cases)	Senior Managers, Operational Managers

An examination of Table 1 shows that APARSEN in well placed to fill many of the gaps in current training provision and should thus seek to develop training on a selection of topics from the list above. Ultimately the number of topics selected will reflect what is achievable within the resources available to WP43 and the availability of results at the time of training development. Also, although the topics have been separated here there are a number of complimentary issues, such as preservation planning and services and representation information and preservation descriptions information, which may be drawn together for a training course around a particular theme.

Thus the main aims of the APARSEN training efforts will be to develop two strands of training: one longer training course covering the complete digital preservation lifecycle at a more advanced level than the courses currently offered and with more focus on practical implementations and case studies; and a number of shorter courses focusing on some of the relevant topics identified in Table 9. It will, of course, be possible to share content between the two strands, making the development of courses as efficient and consistent as possible. This approach will satisfy the greatest number of identified requirements from the analyses described within this report.

It is evident from Table 10 that there is a reasonably even spread of coverage of the topics listed in relation to APARSEN's research streams. It would, therefore, seem an easy conclusion to draw that the most efficient use of APARSEN's resources will be to organise the majority of the shorter, more focused courses around the four research streams. Thus the project would provide training on a number of topics from the table above arranged around the themes of 'Trust', 'Sustainability', 'Usability' and 'Access'.

There are also a number of the topics in Table 10 which have been identified as a priority for the Senior Manager audience group. This is an audience that is notoriously difficult to engage due to pressures of time and responsibility, so training that is easily accessible is preferred. APARSEN has a commitment to the delivery of online training and the production of such training materials for those in Senior Management roles could be a key step in fulfilling this commitment.

1.4   CONTENT

Content types and content origins vary, depending on the services of the OTP.

Register of Digital Preservation curricula and courses in academia/Higher Education (HE) and Continuing Professional Education (CPE) on Digital Preservation: With launch of the online service, the register comprises the resources identified in the course of the WP42 survey (D42.1).

Repository of training material in Digital Preservation: APARSEN WP42 *Formal qualifications* in collaboration with WP41 *External workshops, symposia and events* will populate the repository with training material collected from third-parties. Moreover, the repository will host training material developed by WP43 *Training courses* belonging to the Advanced Practitioner Training Course (Task 4320), the Topic Specific Training Courses (Task 4330) and the Executive Briefings (Task 4340). With launch of the online service, the repository contains first presentation recordings of web-seminars organized by WP45.

Online learning with courses in Digital Preservation: Depending on their design, the programme will comprise or add to training courses or parts thereof developed by WP43 Training courses following the blended-learning approach, namely the Advanced Practitioner Training Course (Task 4320), the Topic Specific Training Courses (Task 4330) and the Executive Briefings (Task 4340). Besides that, an online course on "Digital Preservation Introduction" is currently being set-up.

The project set standards for the capturing, production and dissemination of learning and training material. As the APARSEN project organizes and runs a variety of virtual and real-world events as well as creates and publishes documents and media useful for qualification and training purposes, approaches for capturing and gathering, respectively, that ephemeral material for making it available to a broader audience through the APARSEN OTP, have been set-up. Standard procedures guide the submission and post-production of materials for dissemination through the OTP. The workflows are accompanied by general ingest requirements, metadata schema specifications and data format specifications.

1.5 IMPLEMENTATION

1.5.1 Simple option

The simpler option is based on the public website at http://www.alliancepermanentaccess.org/index.php/training/training-courses/courses-available/.
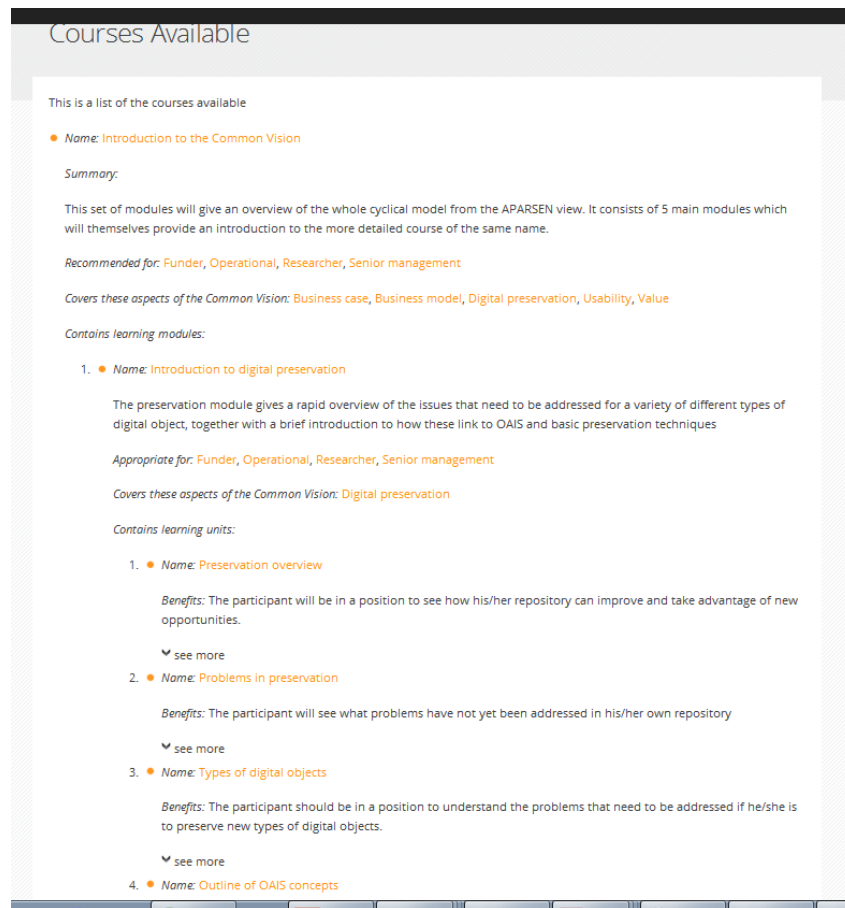
A screenshot is shown in Figure 1.

Figure 1 Screenshot of simple web-site add-on OLTP

The structure is:
- Courses each of which contains one or more modules
  - Modules each of which contains one or more units
    - Units – these contain the training material

Figure 2 Snapshot of a unit

Each of the courses, modules and units has associated

- Goals
- Benefits
- Features
- Estimated time
- Roles e.g. senior management, researcher etc – for whom this will be relevant
- Aspects of the Common Vision covered
- Origin, language, pre-requisites, associated qualification etc (to be added)

Each of the latter three bullets points link to all the related units etc as shown in Figure 3
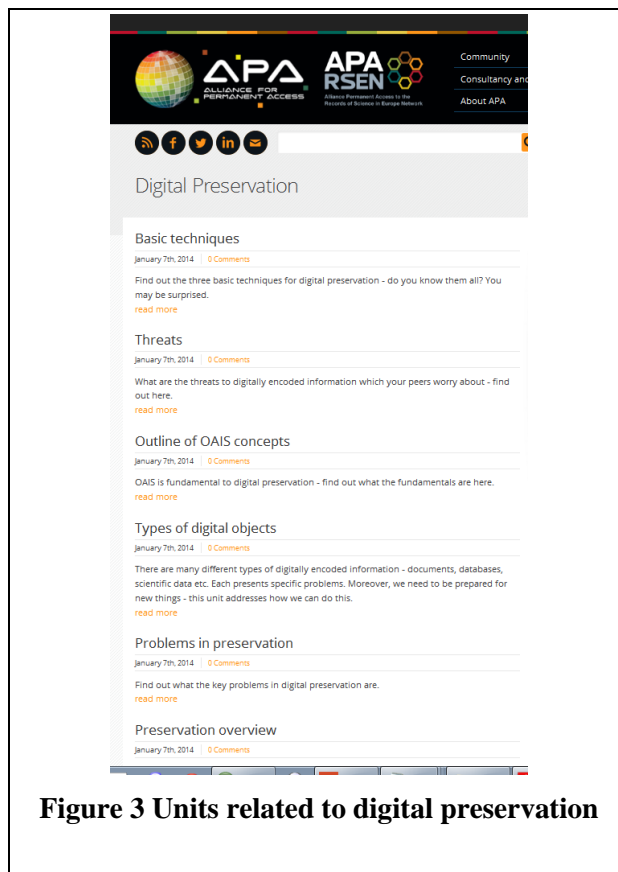
Figure 3 Units related to digital preservation

1.5.2   Commercial option

This option for the APARSEN Online Training Portal builds on GLOBIT Educational Portal technology which was customized to meet the requirements of the APARSEN network of excellence and the Virtual Centre of Excellence (VCoE).

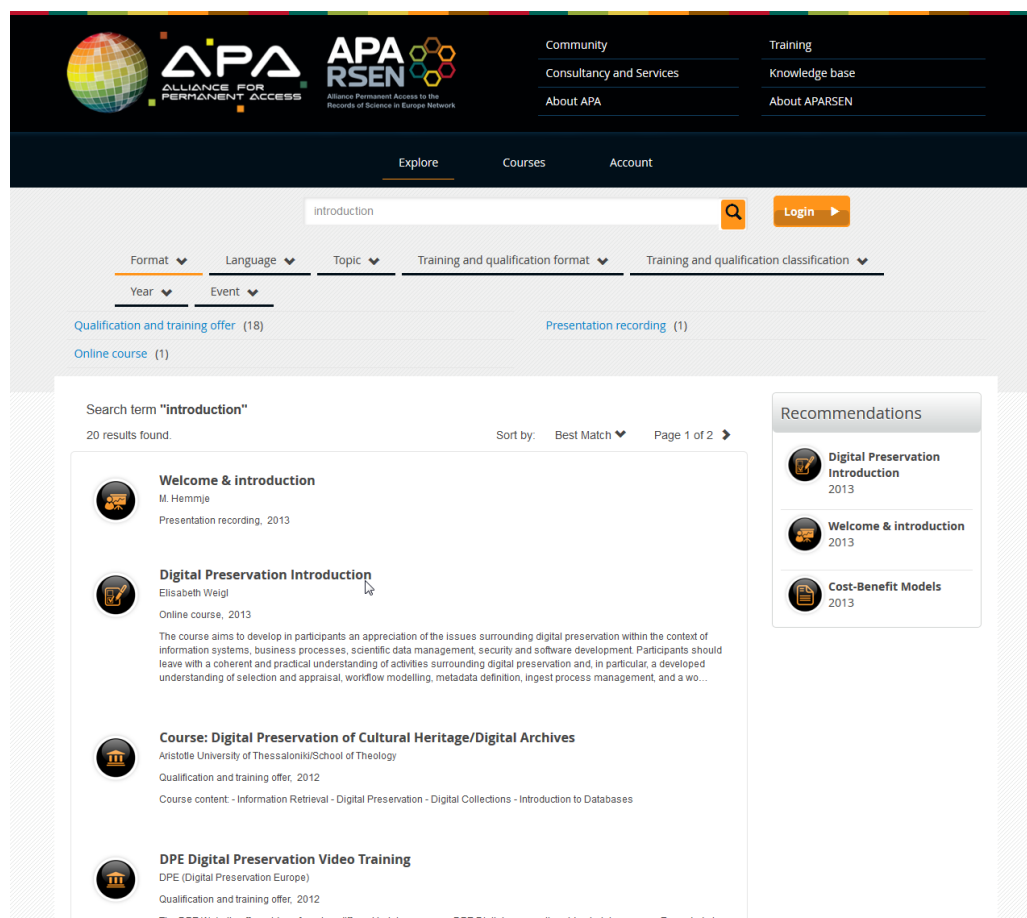The APARSEN Online Training Portal (OTP) (Figure 4) is located on the APARSEN public website at:

    http://learning.alliancepermanentaccess.org

Figure 4 APARSEN Online Training Portal (OTP) web application

The GLOBIT Educational Portal (EP) product underlying the commercial option of the APARSEN OTP offers a broad bandwith of features for providing qualification and training services:

- **Content management:** A unified repository of documents, video, audio, images, multimedia, courses, interactive learning material, and custom media provides a central hub for getting to training and qualification material of the organization.
- **Editorial content:** Adding to document library and media archive content, blog, case-of-the-month, event calendar and news allow for frequent updates.
- **Industry content:** Sponsored content is well-integrated into the repository content. In order not to compromise the portal's reputation, sponsored content is clearly marked and users can opt not to get displayed sponsored content.
- **Contributed content:** The portal can accommodate content contributed by collaborating organizations. Content display as well as content access control adopt to the content's origin.
- **Content dissemination:** Content is distributed to users as download or via streaming. Most content displayed directly on the web site, avoiding media breaks. The distribution via a content distribution network (CDN) enhances user experience when accessing high-quality and voluminous media.
- **Taxonomy:** Taxonomy structures the content comprised. Its custom categories reflect concepts researchers and practitioners in the subject field are used to in their daily business. Independent schemes complement one another.
- **Access:** Explore functions full-text search and filters support users in getting to content relevant to them.
- **Community:** Community building is supported by content rating, commenting, tagging, sharing and tell-a-friend functions.

- **Content access control:** Access to documents, media and courses is controlled through licences and user/role-based rules. Users can purchase licenses online. The provider can grant licenses through vouchers.
- **Personalization:** With individual recommendations, the portal adopts to the user. Students themselves may personalize the portal with setting fields of interest, personal collection, and notes.
- **Online courses:** Students train themselves in self-directed online courses. Non-linear course structures with conditional branching allow adopting the course progress to the student's state. Interactive learning activities foster learning. Custom course activity types can be developed. Teachers can author online courses.
- **Certification:** The system can issue certificates for successful course attendance.

The GLOBIT system has been designed in close collaboration with scientific associations, professional societies and federations. It meets requirements of the Virtual Centre of Excellence for running elaborated training and qualification activities. Especially, the contributed content feature enables the VCoE to host learning material provided by collaborating networks and multiplier organisations. The alternative mechanisms of content access control support the VCoE with alternative business models for training and qualification. The VCoE could decide to offer certified online training courses and use online registration fee payment. In blended learning scenarios, the VCoE can issue vouchers to registered students for accessing course documents and media online. Through the role-mechanism, the VCoE can give to members of a collaborating organisation free access to content contributed by their organisation.

The structure and design of online courses in the Educational Portal is highly flexible and also economically efficient because of the introduction of the Mini course authoring tool. Mini courses, a slim course format, has been designed in order to enable the creation of a broad coverage and to quickly spread results from research and practice. In mini courses existing media like presentation recordings are enhanced to become a training opportunity, through which students can gain recognized/ accredited competences. Mini courses are designed for lean and straightforward production. The Educational Portal supports the production of mini courses with tools.

Mini course standard structure:
- **Introduction**
- **Pre-test** – Assessment of the student's existing knowledge
- **Presentation** - The course subject content presented by presentation recordings, documents, animations and the like
- **Exam** – Validation of the student's learning progress
- **Forum** – Optional discussion with tutor and/or peer students
- **Evaluation** - Student feedback on the course
- **Reflection** - Opportunity for the student to reflect on its achievements during the course and how it influences its (professional) work]
- **Certificate** – Issuing a recognized certificate in case of accredited courses

2   SUSTAINABILITY OF THE ONLINE TRAINING PORTAL

The value of the Online Training Portal service depends on fundamentals content as well as up-to-date content. In this respect it is one of a number of resources being developed within APARSEN that will be continued by the Virtual Centre of Excellence — others include the database of standards and the listing of preservation services. The APARSEN consortium recognises the need for a plan to ensure the sustainability of these resources, and is working on this as part of its planning for the VCoE in general. For resources of this type, specific issues include:

- The online resource will be hosted either as local copies in the OTP or on servers of the content provider with the OTP linking to these resources
- The preservation communities are expected to provide updates of the content (content providers). Within cooperation agreements with these communities, the specific business models for this contribution will be agreed on. This includes provision of incentives where necessary.
- GLOBIT will be responsible for maintaining and enhancing the software.

Regarding these considerations, sustainable procedures for continuing maintenance of the services have been designed. The simple option will be maintained with the public web site. Similarly GLOBIT intends to continue hosting the Online Training Portal systems based on the GLOBIT Educational Portal, a portfolio product of the company. In essence, content production and service operations will follow both the central maintenance and the maintenance by organisation approaches for submission of contributions from outside the project and apply a review in order to assure data quality. Regular calls in public or direct communication are supposed to activate the community.

Submission and review procedure: New resources will be reviewed by appointed editors for review. Editors check the data for validity and may request changes. Furthermore, editors are free to correct and, where appropriate, enhance data provided before a new entry is accepted into the portal.

Central production procedure: Contributing partners within the VCoE will organize and/or execute the production of learning and training materials in collaboration with selected affiliated multiplier organisations and members.

Organisation activation procedure: The VCoE will directly address known organisations and companies active in Digital Preservation and offer to consume OTP services as an infrastructure for distributing materials as well as running online courses.

The operating and maintenance procedures outlined above represent the current deployment stage which are implemented in part and further completed, respectively. They are subject to adjustments and tailoring during the remainder runtime of the project. This is because of the interdependency with the VCoE business model development conducted in WP11 *Common Vision* and because of the early soft-launch of the service. The concerted deployment will determine relevant partners, target audiences and customers of the VCoE as well as its services offer. The design of the portal operating and maintenance procedures will be tailored towards resources available and adapted towards supporting the centre's business. In particular, experiences in running the services during the fourth project year after the soft-launch of the VCoE will lead to adjustments and tailoring of the offer for further, sustainable operations.

3   PROGRESS IN BUILDING THE TRAINING OFFER

Training services play an eminent role in the business model for the Virtual Centre of Excellence (VCoE). The APARSEN Online Training Portal (OTP) facilitates the provision of these services. On request of the project officer, this section as addendum to D43.2 reports on the progress in improving and extending the content of the portal as well as the plans for the re-launch of the APARSEN OTP. The progress is reported in terms of progress in methodology and processes for material production on the one hand (Section 3.1) and in terms of production numbers on the other hand (Section 3.2). Finally, plans for the OTP re-launch are sketched (Section 3.3).

3.1   PROGRESS ON METHODOLOGY AND PROCESSES

The APARSEN Online Training Portal (OTP) is a common effort of WP42 *Formal Qualifications* (Task 4240) and WP43 *Training Courses* (Task 4350). It manages their assets. This way, the contents of the OTP are driven by the setup of the training offer of the VCoE. Then again, the OTP has additional freedom to host arbitrary additional material of value for qualification of training in the field of Digital Preservation. Therefore, the remainder of this section explicitly describes the relationship of APARSEN OTP to WP42 (curricula) and to WP43 (qualification and training offer) without redundancy of contents in D43.2A (this addendum) and upcoming D42.2 or other full-fledged Deliverables.

The methodology on curricula definition as well as qualification and training production has been described in various Deliverables or, respectively, will be described in detail in the upcoming Deliverable D42.2 (M46). Hence, in the remainder of this document we just provide an overview with a focus on progress to former work in order to display our current state of planning and execution to ensure (continuous) content creation at ensured quality level. In this way the project will secure the existence of a critical mass of content until the end of September 2014 ready in time to support the launch of the VCoE in October 2014.

A series of decisions was taken, setting up and establishing procedures for the planning and production of courses and materials, contributing to the contents of the portal for the VCoE as service offer. The driver for module creation is the outline of the common vision as well as the outputs from the APARSEN research undertaken over the project. One-day courses are made up of a number of modules each have been designed and driven by experience from APARSEN. They will carry contents from the project. The courses together provide you with a full program of training material. The offer design will be validated during market research. The first set of courses is planned to be ready by the end of June 2014. A template for the specification of modules was set up containing, amongst others, the vision for the module, the learning objectives, the target audiences, benefits for the participants, key features, topics covered, and feedback mechanisms. The courses are described in terms of the Common Vision terminology. The course and module production plan covers the APARSEN Common Vision.

The content for the APARSEN Training Events (WP43) is closely aligned with the planned production of training modules for setting up the training services offer of the VCoE. These will be trial-tested at the Advanced Practitioner Course to be held in July this year. Feedback from the training events as well as from market research will be used for refining and enhancing the overall training offer. The APARSEN activities for the definition of curricula (WP42) and training offerings is currently exploited for involving communities and external organizations in the creation of materials for the APARSEN OTP.

Methods for involving communities and networks: For approaching as well as for involving communities and networks, WP42 first contacts service providers offering services to APARSEN target communities and exploits these as multipliers. Based on agreements, APARSEN and the service providers develop in common service offerings which then are presented by the well-established service providers to their clients and communities. In case of demand, the service provider and APARSEN enter into further in-detail negotiations with the clients about training services of the VCoE to the clients.

In the course of its dissemination activities WP42 organizes face-to-face trainings. Selected parts of these events are captured for later use within the VCoE qualification and training offering.

The Advanced Practitioner Course in this year will be a partnership with the TIMBUS and SCIDIP-ES projects.

Especially in the year 2013 summer school, other communities and networks have been involved through collaborative organization of training events. With the training offer being a key element for the sustainability of the VCoE and having this year APARSEN summer schools as test-trials for the training program designed, this approach is discontinued as most of the projects are coming to an end soon.

Identification of admissible resources: APARSEN has identified the following resources for the collation and production of qualification and training materials. Resources include communities, networks, events, event series and organizations, both internal and external.

- **APARSEN Training Materials Production (WP43)**
- **APARSEN Webinars (WP41, WP45)**
  APARSEN holds regular webinars on emerging topics/results in the project (cf. APARSEN D45.2). These webinars take place as virtual meetings and are open to the public. Their aim is to present selected results of APARSEN when a topic milestone is reached and to foster discussions with stakeholders outside of APARSEN. The webinars also feature guest speakers.
- **APARSEN Formal Qualifications (WP42)**
  For the identification of community qualification needs and the definition and validation of specific curricula and training offers, APARSEN runs workshop series and trainings events in collaboration with multiplier organizations representing various scientific communities. Presentation materials from workshops and face-to-face trainings with multiplier organizations and service providers to scientific communities are captured.
- **APARSEN Training Events (WP43)**
  APARSEN started hosting training events in 2013, with 2 two-day courses and a week-long Summer School, and a similar program of events will be presented in 2014. The APARSEN training events address the APARSEN topics Access, Trust, Sustainability and Accessibility as well as the Common Vision on Digital Preservation. They also provide a key opportunity to collaborate with other digital preservation projects and initiatives. APARSEN Deliverables covered by training courses to date include: D21.1, D22.1, D22.2, D23.1, D24.1, D24.2, D32.1, D32.2, D33.1B, D36.1 and D36.2. The training courses were aimed primarily at digital preservation practitioners working hands-on with digital records and data and 136 attendees and speakers participated across the 3 courses in 2013. Selected events are recorded live in audio.
- **APARSEN Online Course Production (WP43)**
  The online course builds on the Digital Preservation course held regularly at the Technical University of Vienna. It is a self-study course and gives a rough overview of Digital Preservation in general and an outlook on particular topics of the domain for the purpose of giving an overview on current research topics: Preservation Planning, Process Preservation, Data Citation, and Software Escrow. These address APARSEN topics Access and Sustainability and provide the APARSEN community with results of other DP projects. The course features a self-assessment test.
- **SCIDIP-ES**
  The project is producing training materials on its tools and services for Digital Preservation. These will be supplied to APA. As the tools and services developed by SCIDIP-ES will be handed over to APA as well, the VCOE will host both also after termination of the SCIDIP-ES project.

Mapping/ alignment with topic areas and community requirements/ curricula: The themes of all workshops organized by WP42 will be mapped onto APARSEN topics within Deliverable 42.3, due

end of September 2014. Already during preparation the APARSEN topics covered in the workshops were selected for and adopted to the target communities participating at the events as well as their needs. During subsequent events of the workshop series APARSEN validated together with these communities, to what extent these APARSEN topics could become building blocks in bespoke training curricula for these communities. Modules and training materials are described adhering to a common terminology and get indexed along the taxonomy of the Common Vision.

Definition of course contents: See annex 1 on list of modules.

Communities to be involved: Communities which have been or which are planned to contribute needs and specific requirements to the production of content and materials for the OTP:

- Earth sciences (represented by ESA)
- Atmospheric and geo-space research; large scale European research infrastructures (represented by EISCAT-3D)
- High-energy physics (represented by DP-HEP and ISIS)
- Space station data (represented by SSD)
- Data science (represented by CDS)
- Agricultural research (represented by agINFRA)
- Digital cultural heritage (represented by DCH-RP) – Collaboration in the field of cultural heritage institutions, memory institutions related to the social sciences and humanities
- Earth science (represented by EarthServer)
- Earth science; science data infrastructures (represented by SciDIP-ES)
- Earthquake and seismology research; e-science environments (represented by VERCE)
- Natural sciences
- The humanities and social sciences
- E-science service providers (represented by EGI)
- Scientific publishing; digital libraries; open access (represented by OPENAIRE) – Collaboration in the field of open access scientific publications and digital libraries support
- Science infrastructures (represented by EUDAT) – Collaboration in the field of scientific data management and archival
- Digital libraries and scientific digital information systems (represented by C-DAC with focus on Asia-Pacific region)

Partners and communities already contributing needs and specific requirements to the production of content and materials for the OTP:

- European Grid Initiative (EGI): Signed memorandum of understanding (MoU) on the collaboration in the design and validation of a common training offering for the professional education of EGI scientific communities as well as the capturing of face-to-face trainings for transformation into online training offerings
- European Data Infrastructure (EUDAT): Agreement on setting-up a memorandum of understanding (MoU) about establishing a collaboration related to the exchange of long-term digital preservation services
- Centre of Excellence for Digital Preservation (C-DAC): Agreement that C-DAC becomes APA member as formal basis for further collaboration; Joint work on establishing online training material for EGI communities, EUDAT communities as well as international communities represented by C-DAC
- Study group for data preservation and long term analysis in high energy physics (DP-HEP): A memorandum of understanding (MoU) on collaboration is being concluded

Production processes: APARSEN defined standard operational procedures for the planning, production and dissemination of training materials. Key to these procedures is the efficient use of

APARSEN resources and the involvement of external organizations and communities. Various APARSEN work packages are coordinated for the goal of contributing to the creation of qualification and training material for the OTP. Especially APARSEN activities in addressing and interacting with external stakeholders are guided to contribute to covering the APARSEN training program. Selected workshops, trainings and face-to-face meetings are captured. Presenters and contributors are asked to provide their contribution for educational use by the VCoE. Selected contributions get re-recorded. The project decided about standard capturing formats as well as indexing schemas and metadata sets. The edited recordings form the basis for training offers of the VCoE, also in the form of online courses and training material for blended learning.

3.2   PROGRESS ON CONTENTS

As of the end of May 2014, the production of content for the APARSEN OTP (compare Section 1.4) is under way, comprising numerous contents of different type from a variety of contributing partners and communities. The following materials were produced, are being produced or are planned, respectively. The list is organized by source/ origin of the materials.

- **APARSEN Training Materials Production (WP43)**
  At the moment, 44 module outlines covering the full Common Vision were set-up. Each module has a length of 35 minutes. 25 modules are under way to be produced by the end June 2014, ingest into the OTP will be done after validation in the summer training face-to-face events.

- **APARSEN Webinars (WP45, WP41)**
  The webinar program as scheduled throughout the duration of the APARSEN project comprises a total of 12 webinars, of which 9 have now been taking place. Each webinar has between 4 and 8 speakers with a general average of 5. Starting with webinar 4, the sessions were all recorded and made available on the APARSEN website. All slides etc. are made available and speakers can also add an audio file to their slides on the website. So far 12 speakers have done so. In 2014 until the completion of the project, 3 more webinars will follow with approximately 15 talks.

- **APARSEN Formal Qualifications (WP42)**
  Presenters will be requested to hand in their presentation materials and record the narration of their presentation for further use as training material. The presenters of the last workshop have been contacted.

- **APARSEN Training Events (WP43)**
  APARSEN organized three events in 2013 and the year 2014 will see another three APARSEN training events. So far, 28 presentations have been recorded. However, due to issues with the venue recording equipment, around 8 are expected to be of insufficient audio quality. The remainder 20 presentation recordings are in post-production. In 2014, another 20-25 presentations are due to be selected for recording. We will hopefully be developing exercises from these and up to 5 of these will be worked up for delivery online too.

- **APARSEN Online Course Production (WP43)**
  The course was tested by students. Currently, the course is being revised based on the students' feedback.

- **APARSEN Register of Digital Preservation Curricula and Courses on Digital Preservation (WP42)**
  The register comprises all 77 resources identified in the course of the WP42 survey (D42.1). No further entries have been contributed through the online feedback form so far.

- **SCIDIP-ES**
  Fully included in the 42 course modules produced by APARSEN Training Materials Production (WP43) (see above)

3.3   OUTLOOK TOWARDS RE-LAUNCH

The re-launch of the APARSEN Online Training Portal (OTP) will be part of the launch of the Virtual Centre of Excellence (VCoE). The (re-)launching event will take place in Bruxelles during the next APA conference taking place in October 2014. Well integrated in the overall VCoE launch, the OTP will contribute to or, respectively, benefit from, promotion of the VCoE. According to current planning, promotion will comprise newsletters, social media, personal recommendations, announcement posters at workshops and congresses. The planning of the OTP re-launch will be completed during summer 2014. Material building or contributing to the initial VCoE training offer will be made available on the OTP with the launch event.

BIBLIOGRAPHY

APARSEN D42.1: Report on existing initiatives and curricula regarding digital long term preservation.

ANNEX 1 – COURSE MODULES

Title	Vision for module	Benefits for participant
Additional representation information	Shows a small number of specific examples of how additional RepInfo can help make the use of data easier	Participants should see the way in which additional RepInfo can enable easier/wider usability of data.
Appraisal and the business case	Success criteria. Evaluation processes and organisational implications	Participants should gain an understanding of success criteria, evaluation processes and organisational implications.
Audit options and preparation	Describe the benefits which an audit could/should provide	Participants should gain an understanding of what an audit might involve.
Authenticity and preservation	Define principles and recommendations for supporting authenticity evidence and show examples of the importance of dealing with authenticity properly, and the some of the issues that cause problems.	Participants should gain a broader understanding of the OAIS definition of authenticity and the importance of technical and non-technical provenance
Authenticity management in long-term digital preservation – a conceptual framework	Authenticity is fundamental to digital preservation, but it needs to be managed carefully. This module defines the principles and recommendations for supporting authenticity evidence and show examples of the importance of dealing with authenticity	Participants should gain a broader understanding of the OAIS definition of authenticity and the importance of technical and non-technical provenance
Automated reasoning for digital preservation	TBC	TBC
Basic preservation techniques	Introduce participants to a variety of preservation techniques including adding RepInfo (including emulators), transformation, hand-over	Participants will gain a better understanding of a wide range of preservation techniques.
Business models – delivering the DP value proposition	Delivering DP value proposition	Participants will gain an understanding of key business model attributes, for example, users in terms of participant segments, competition, business processes, appraisal and resourcing.
Business models – what are they?	General discussion of types of business models	Participants should gain an idea of the possible business models
Characterising the users and participants base	Examples of various types of users (participant segments) and the way in which the business models must be adapted to them.	Participants should gain an understanding of the various types of users (participant segments) and the ways in which their business models must be adapted.
Common vision overview	Overview of integrated view. This module includes a quick overview of: Preservation and sub-processes, usability, value proposition, business case, business model	This module will provide the participant with a very rapid overview of the "Common Vision" - an integrated view of fundamental issues related to a business oriented approach to digital preservation.
Competition in the provision of the preserved assets	Factors and conditions under which users and participants choose digital assets providers	Participants should gain an understanding of the factors and conditions under which digital asset providers are chosen.

Creation of adequate representation information	This module describes the various types of representation information which may be of interest for a variety of digital objects and various preservation aims. The module should cover simple RepInfo for simple rendering, emulation, and description. For each of these areas there should be a number of examples of digital objects, preservation aims and potential tools.	Participants should gain a better understanding of what representation information may be and why it is important.
Data vs docs	TBC	TBC
Designated communities (identifying)	Choosing and specifying the designated community for a collection of digital objects is a critical part of preservation. This module should critically discuss a number of examples and the implication of those various options.	Participants will gain an understanding of the vital role the designated community plays in preservation
Digital preservation overview – introduction to Common Vision	This set of modules will give an overview of the whole cyclical model from the APARSEN view.	Participants should be made aware of issues that may affect their repositories or may enable their repository to justify their current preservation activities, or enable them to move into new areas in competition with other repositories.
Discoverability	Show some examples of the different ways in which data is found from Google to GIS based selection to more complex selection of scientific data.	Participants should gain a view of a variety of ways in which people - and machines - can discover digitally encoded information.
Dynamics of the formulated business case and model	Embedding decision making, implementation monitoring and adjustments within the institutional business processes	Participants should be able to embed decision making, implementation, and monitor within their institutional business processes.
Embedding within a particular business model	Choices to be made for securing resources. The role of targeted users and institutional context in securing sustainability conditions	TBD
Examples of business cases	Examples of business cases. How to build DP business cases. Usage	TBD
Governance (and licensing)	TBC	TBC
Handover of digital holdings	Show some scenarios of hand over of holdings, pointing out the problems that have arisen e.g. some semantics locked into proprietary systems.	Participants should understand the possible difficulties which might arise in a hand-over.
Increasing value	Examples of ways in which value has been increased, e.g. by combining with other data from other disciplines.	Module should provide examples of ways in which value has been increased, e.g. by combining with other data from other disciplines.
Ingest	Since ingest varies greatly between organisations this module will introduce the participant to a number of real-world examples and also to the outline of the PAIS standard. The ingest of the information needed to construct AIPs e.g. provenance and representation information, should be covered and the participant should be exposed to a	Participants will gain an understanding of the care which must be taken if a repository is to bring in new digital objects and preserve them properly.

	number of examples from various disciplines.	
Options for trade-offs between costs, risks and capabilities	Discussion of examples of trade-offs such as cost of adding specialised RepInfo vs increase in potential value. It will probably be difficult to quantify these but at least likelihood of increase/decrease in the amounts should be possible.	TBD
Options to counter threats to DP	Introduction to the threats	Participants should gain a view of how the techniques can counter different threats
Other communities	Shows a small number of examples of how users outside the normal user base can take advantage of unfamiliar data. In particular note the different software suites that are used.	Participants should gain an understanding of the way in which the concepts associated with the definition of designated community can help to define other communities.
Outline of OAIS concepts	A brief overview of the functional and information models and their relationship. Also the responsibilities of repositories will be discussed.	Participants gain much better understanding of OAIS, a very important standard
Persistent identifiers and citability	Association of persistent identifiers (PI) for people and digital objects on ingest	TBC
Preservation overview	The participant will be in a position to see how his/her repository can improve and take advantage of new opportunities.	TBC
Preservation plans (and policies)	More detailed examples with critical examination of the choise of options of tools and strategies for particular cases. A specific attention will be dedicated to the role of plans	Participants will gain a better understanding that there are trade-offs to be made in preservation
Preservation policies	Analysis of preservation policy will provide the basis for assessment and for supporting the definition of a specific policy framework	Participants will gain a better understanding the role of policies on preservation
Preservation techniques	This module will give the participants a more detailed view of the preservation activities involved. It consists of several sub-modules	Participants will gain an understanding of the full range of preservation techniques.
Problems in preservation	Benefits: The participant will see what problems have not yet been addressed in his/her own repository	Participants will see what problems have not yet been addressed in his/her own repository
Resourcing	Budgets versus income flows. Pros and cons	Participants should gain an understanding of budgets versus income flows.
Rights management	Discussion of digital rights and implications for digital preservation: ingest, preservation and access.	Participants will see the ways in which the correct application of rights information will allow wider usability of their digital assets.
Storage options	The challenges of storage, including scalability, reliability, commercial and in-house options and an overview of costs should be covered.	Participants will gain an understanding of the options available and some key choices
Threats to digital holdings	This module provides a brief overview of the threats which PARSE.Insight has identified. The participant will be able to compare the issues he/she is concerned about.	Participants will be better prepared in terms of the threats to his/her digital holdings
Transform to another	The challenges that must be addressed here	Participants should gain an

format	range from the the circumstances under which transformation may be a sensible option to the choice of what to transform into to the practical issues of performing the trans-formation. An important topic to touch on is that of authenticity which should be briefly described.	understanding of the advantages and disadvantages of transformations, and the difference between reversible and irreversible transformations
Types of digital objects	Shows a number of different types of digital objects, covering many of the types from D14.1. Should also show some of hexa-decimal dumps and compare some of the document formats including docx and ods etc.	Participants should be in a position to understand the problems that need to be addressed if he/she is to preserve new types of digital objects.
Usability – 'using and re-using data'	Shows some additional examples of using data from various domains, to introduce the following modules	Participants should gain a better understanding of the range of possible ways in which documents and data may be used.
Using digital objects	This module will give the participant an overview of the varieties of ways in which digital objects are/can be used.	Participants has a better understanding that there is a range of techniques
Value of digital objects	This module provides participants with examples of ways in which value can be attributed to various types of data - EXCERPT	Participants will see how others value their holdings and have a better appreciation of their own repository's value.
Value proposition	This module provides examples of what the real (or potential) value has been assigned to digitally encoded information to justify its preservation. This will include cultural value, commercial value, scientific value and replacement value.	Module should show how value propositions can be constructed and the links to business cases and business models