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EdReNe

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eContentplus

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¹ OJ L 79, 24.3.2005, p. 1.

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2 EdReNe objectives

A gap exists between users, who ask “where are the learning resources” and the content providers, who ask “where are the users”. Repositories address this missing knowledge about opportunities and resources. They are key disseminators of information of available learning resources. In repositories users search or browse for relevant resources (text books, digital learning resources, websites etc.) among the vast supply on the market. Therefore, in many countries ministries of education/authorities or professional organizations have established national repositories of educational resources.

EdReNe stands for Educational Repositories Network.

The overall objective of the EdReNe thematic network is to provide the European education community with more and better repositories and to ensure wider use of existing ones. In order to reach this goal, EdReNe brings together web-based repositories of learning resources with content owners and other stakeholders within education in order to share, develop and document strategies, experiences, practices, solutions, advice, procedures etc. on the organisation, structuring and functionality of repositories.

Themes of discussion include

- Policies and strategies of repositories of learning resources
- Identifying successful policy actions
- The future of repositories in a rapidly evolving web environment
- Functionalities and features of a repository
- Encouraging teachers' knowledge sharing
- Optimizing number of titles and users
- Ensuring ease of use - usability, wizards, help and support
- Quality criteria and quality assurance
- Reviews and evaluations
- Building your own content from repository resources
- Involving commercial publishers and associated agreements

- Rights protection and management
- Ethics, screening and clearing
- Licensing schemes
- Strategies for providing copyright cleared material for education
- Providing guidelines for users/teachers/producers

- Standards and interoperability
- Connecting and cooperating with existing repositories
- Facilitating exchange between repositories and Learning Management Systems
- Development and harmonisation/mapping of metadata application profiles
- Pedagogical metadata and links to curriculum

For all issues, a common effort is to identify best practice examples – and examples not to follow.

In order to address these issues in a structured way they have been organised into four overall themes; repository strategies, engaging providers and users, standards and interoperability, and rights issues. During a three-year period, from May 2007 to May 2010, the network has arranged four strategic seminars and ten expert workshops, where members work closely together, discuss the themes and learn from one another and invited external experts.

The next seminar will take place in October 2010. You are invited.

The network links to/collaborates with other cross-national and/or local repositories/collections/catalogues, and publishers' associations.

The network develops practical guidelines and recommendations, but equally importantly, it has established a lasting collegial network of European repository nodes and stakeholders. The main output of the EdReNe network is a comprehensive website with recommendations, documentation, templates, roadmaps and documents describing issues, state-of-the-art and offering possible solutions to the problems described above. Existing repositories can cut some corners and new repositories may have a less costly and much less complicated path in life.

The work of the EdReNe thematic network can be followed at the website edrene.org.

3 Consortium

By May 1st 2010, the EdReNe thematic network comprises 44 members. By that date the funding from the European Commission stops and there is no difference between the 22 founding members and associate members. All members collaborate on equal terms.

The network members represent European ministries, national agencies, owners of educational repositories, universities, content providers, associations of authors and publishers, a number of fellow European networks and other interested stakeholders.

The EdReNe network invites new members to join the network. A candidate just writes a short statement about his expertise in the area and commitment to contributing to the objectives of EdReNe, and submits this statement to the coordinator. The Network Management Board will then eventually approve the application.

- Agenzia Nazionale per lo Sviluppo dell'Autonomia Scolastica (former INDIRE) (Italy)
- AIE – Associazione Italiana Editori (Italy)
- ALLIANZ S.p.A. (Italy)
- APS IT diensten (The Netherlands)
- AtiT (Belgium)
- Becta (UK)
- BFU – Brancheforeningen for undervisningsmidler (Denmark)
- CNDP – Centre National de Documentation Pédagogique (France)
- CTE – Centre de technologie de l'éducation (Luxembourg)
- CTIE - Centre suisse des technologies de l'information dans l'enseignement (Switzerland)
- DGIDC - Direcção-Geral de Inovação e de Desenvolvimento Curricular (Portugal)
- EDEN – European Distance and E-Learning Network (Europe)
- EENET – European Expert's Network for Education and Technology e.V. (Europe)

- Encyclopaedia Britannica Education (UK)
- EDUCATION HIGHWAY Innovationszentrum für Schule und Neue Technologie GmbH (Austria)
- ENIS –Europäisches Netzwerk Innovativer Schulen in Österreich (Austria)
- EUN – European Schoolnet AISBL (Europe)
- FWU – Institut für Film und Bild in Wissenschaft und Unterricht gemeinnützige GmbH (Germany)
- Giunti Labs S.r.l. (Italy)
- Intrallect (UK)
- IML – Umeå University Department of Interactive Media and Learning (Sweden)
- ITC – Centre of Information Technologies in Education (Lithuania)
- i.zone SGPS SA (Portugal)
- Kennisnet – Sticting Kennisnet Ict op School (The Netherlands)
- KlasCement (Belgium)
- Lektion.se (Sweden)
- LTScotland, Learning and Teaching Scotland (UK)
- Menon Network (Europe)
- NCTE – National Centre for Technology in Education (Ireland)
- Ontwikkelcentrum (The Netherlands)
- Open University/OLnet (UK)
- sDae – Sociedad Digital De Autores y Editores (Spain)
- Senter for IKT i utdanningen (Norway)
- ShareTEC (Europe)
- Skolverket – The Swedish National Agency for Education (Sweden)
- SMART Technologies (United Kingdom)
- SLO - the Netherland's Institute for Curriculum Development (The Netherlands)
- Teachable.net (UK)
- TLF – Tiger Leap Foundation (Estonia)
- TLU-CET - Talinn University (Estonia)
- UNI•C (Denmark)
- UNI-LJ-FMF, Univerza v Ljubljani, Fakulteta za matematiko in fiziko (Slovenia)
- UPF - Universitat Pompeu Fabra (Spain)
- VETAMIX (Finland)

See details about members and their presentations in [Section 9.2](#).

4 Project Results

EdReNe has summarised its discussions and sharing of good practice cases in the fields of educational repositories in a number of reports that are available from the EdReNe web site.

4.1 EdReNe reports

Building successful educational repositories

EdReNe's consolidated recommendations report sums up the key points that have emerged during discussions and presentations throughout the three year project period of the EdReNe network. The conclusions are presented as recommendations targeting most of the stakeholders of educational repositories. Recommendations are grouped according to the four major themes: Repository strategies, Engaging users, Rights Issues, and Standards and

interoperability.

<http://edrene.org/results/deliverables/EdReNeD2.7Recommendations.pdf>

A summary of the recommendations is given in [Annex I](#), together with parallel recommendations on the same issues, from EdReNe member Intrallect's annual conference 2010, in [Annex II](#).

Planning for success – repository strategies

Make sure you have a clear business case for your repository, engage early with all relevant stakeholders, have a strong focus on integration, open standards and build upon existing communities of practice. These are some of the recommendations for building and maintaining a successful educational repository.

Read more in EdReNe's synthesis report on the repository policies and strategies theme http://edrene.org/results/deliverables/EdReNeD3.4TSR_Repository_strategies.pdf

Bringing the buzzing teacher room online

Many educational repositories are in the process of adding community features with the intention to build a more active and engaged user community. Competent and engaged community management and implementing best-of-breed designs for repository functionality are key to success.

Read more in EdReNe's synthesis report on the theme on how to engage users and producers http://edrene.org/results/deliverables/EdReNeD5.4TSR_Engaging_users.pdf

Are current standardization bodies in sync with actual user needs?

It seems striking that many of the most successful repository initiatives – measured in terms of active users – have not heavily engaged with educational technology standards ... This leads to the question of whether current standardization bodies and organisations are in sync with actual user needs.

Read more in EdReNe's synthesis report on the theme standards and interoperability http://edrene.org/results/deliverables/EdReNeD4.3TSR_Standards_and_interoperability.pdf

Copyright legislation is not in tune with educators' expectations

The most general conclusions that can be drawn from the discussions so far are that current copyright legislation is not in tune with what would be expected and considered fair in relation to education, and that currently the strongest and most often heard response from the educational sector is to use open licensing while waiting for a reform of copyright law...

Read more in EdReNe's synthesis report on the rights issues theme http://edrene.org/results/deliverables/EdReNeD6.3TSR_Rights_Issues.pdf

State of the Art of Educational Repositories in Europe

Based on new input from all members, EdReNe has published a comprehensive State of the art report on educational repositories in Europe.

A continuously updated web-version of the current status of educational repositories in Europe is available at <http://edrene.org/results/currentState/index.html>

Templates for agreements between repositories and content owners

EdReNe has published a collection of agreement templates and guidelines for repository owners. The report includes examples of relevant terms of use and deposit licenses from a range of repositories and other online services, which EdReNe members have provided.

Furthermore, the report contains (references to) a number of guideline examples targeting various groups of repository stakeholders.

The report is available at http://edrene.org/results/deliverables/EdReNeD55Agreement_templates.pdf.

4.2 Strategic seminars and expert workshops

The analyses and recommendations published in the EdReNe reports reflect only a fraction of the experiences that members and invited external experts have shared during and in between the network's strategic seminars and expert workshops.

The best way to learn from experienced colleagues and invited external experts is of course to participate in these events. However, the public proceedings from the events summarise the bottlenecks and problems – and solutions - that have been presented and discussed.

The expert workshops have covered the themes:

- WS 3: Repositories and resources – repository strategies, general level
- WS 4: Standards and interoperability
- WS 5: Engagement of producers and users - features and functionality, operational level
- WS 6 : Rights issues

The presentations of EdReNe members are referenced in [Section 9](#).

The following sections of Section 4 summarise some of the good practice cases presented and lessons learned that are not covered by EdReNe's synthesis reports, or in the reports of current status and presentation of EdReNe members.

4.3 The four strategic seminars



At the first strategic seminar members got to know one another as everybody presented their background, and introduced their work on educational repositories together with the relevant national strategies. Then they identified and prioritised concrete topics for further discussion and work at the series of expert workshop. This strategy has been followed at the next seminars, where members have discussed the outcomes and experiences of the network so far together with new developments, and prioritised themes for next year's expert workshops.

All along new members have joined and presented their work, and external experts have been invited to inform about relevant international and national initiatives. Furthermore, each of the four seminars had a special focus: building a strong network; learning from Korea's considerable investment in the area; national broadcasters and cultural heritage repositories; and eventually extracting recommendations and ensuring sustainability.

Some headlines from invited external experts

Dr. Dae-Joon Hwang, Ex-President of KERIS, Republic of Korea, presented Korean ICT initiatives in education and EDUNET, which is the core of Korea's Knowledge Bank, the ICT strategy and master plans followed in Korea since 1996. EDUNET has 1 million educational resources and 5.6 million registered users.

Manuela Lara, Santillana Educación, Spain introduced Agrega – a new Spanish Educational Repository under development - 2000 different educational objects are being produced according to standards.

The LOGOS project – a European Commission supported project with the aim to build a ubiquitous e-learning environment, was presented by Eva Suba, EDEN, on behalf of Zsolt Markus, Antenna Hungária Ltd., Hungary. An innovative platform feature is the fact that it will provide a personalized learning experience.

Educational repositories in perspective

Three very different initiatives with relevance to the field of educational repositories: a comparative study by OECD on digital learning resources as systemic innovation, Europeana providing access to millions of digitized items from museums, libraries, archives etc. and finally, a teacher driven streaming video service for learning.

Repository strategies of national broadcasters

Representatives of broadcasters from five countries (Finland, The Netherlands, Sweden, France and Denmark) presented their products and strategies.

Spanish initiatives

Julià Minguillón, Universitat Oberta de Catalunya, Barcelona, gave a talk on Learning Object Repositories with a learner centred perspective

Ernest Abadal, Department of Library and Information Science, University of Barcelona, presented facts and figures about repositories in Spain

Ignasi Labastida i Juan, Office for Knowledge Dissemination, Universitat de Barcelona, and Creative Commons Spain and Catalonia, informed about Creative Commons' announcement of a reorganisation of CC's open education project with the objective to focus CC's activities in the support of Open Education Resources (OER) - developing and explaining the legal and technical infrastructure required to make "open" work.

Read more about the strategic seminars at <http://edrene.org/seminars/index.html>

4.3.1 Expert workshop series WS 3 - Repository strategies

Lisa Petrides, OER Commons, spoke about OER Commons projects and gave further insight and examples on the origin and use of Open Educational Resources.

Lilla Voss, former expert adviser to the Danish Ministry of Education on ICT in education, gave an overview of strategic national initiatives in relation to educational repositories, and shared her visions for the schools and repository tools of the future.

Quality assurance and Repositories in a Google world

- Which quality control strategies ensure high quality content
- Present and future role of Google in education and (national) repositories in a world with Google's many features and dominance.

Strategies, content and tools of publishers and universities

There is a clear trend towards the use of commercially available repository platforms. And nearly all repositories also contain the digital learning resources. A number of universities follow the same approach. However, in most cases the repositories need to be tailored/modified /improved further to be integrated into the universities' other systems, e.g. the repository part and the VLE part are integrated into one system for the staff and students. All higher education institutions manage their academic work in some sort of digital repository. Some stress the importance – for them and for colleagues – that the content (e.g. tools and courses) is open to the academic society.

Resource Discovery System

Becta presented their vision and first concrete steps of implementation on a new Resource Discovery System that is to pool a number of previous projects and components, and provide coordinated answers to many questions which previously have been dealt with in a more fragmented approach.

Content packaging

A closer link between standards developers from universities and standardisation bodies, and publishers' everyday needs must be given more attention. Becta has commissioned a project to work with content suppliers and VLE providers to define a specification for content packaging. They want to ensure that content developers use a consistent technical specification so that the content they produce can work in all VLEs. This issue was also discussed further in the group sessions.

See more about the workshop series WS 3 at <http://edrene.org/workshops/repositories/index.html>.

4.3.2 Expert workshop series WS 4 – Standards and interoperability

National LOM profiles

Many European countries have established a national IEEE LOM application profile. The use is not always widespread and defining vocabularies and mapping to curriculum is work in progress in most countries. The current version of LOM does not solve all needs and several examples of application profiles mapping different specifications are emerging.

Automatic creation of metadata

Simplifying the process of metadata creation by automatic tools has high priority. The tools for (semi-) automatic creation can however still be improved. The content of a number of “simple” elements are already automatically generated in many instances – the biggest potential to be realized in the near future probably evolving around title, keywords and description elements.

Open systems – VLE environments

The task of unlocking the content currently stored in VLE/LMS mandates better standard support by these systems – or alternatively that educators will move completely towards open systems instead. Sharing and remixing between different platforms is still not an easily achieved goal for the average teacher.

Current educational standards are not standardised

It seems evident that irrespective of the user perspective taken current educational standards often do not meet primary user needs. The reasons for this are very diverse depending on whether you want to find, use, produce or reuse digital content, but it underlines the importance of designing for humans first, machines second and reuse building blocks from widely adopted standards instead of developing new. The sheer number of existing standards and differences in their implementation by different providers of tools and content currently seems to have almost made it necessary in some cases to focus on the interoperability between the standards and specifications themselves instead of focusing on the original problem.

Nevertheless there was also (still) consensus on a growing need for ensuring interoperability. One of the important keys to this will undoubtedly be efficient authentication and authorization systems. Various national approaches were presented and discussed during the workshop. An interesting outcome of this discussion was that the success of such initiatives is often much more dependent on political decisions (such as mandatory use of specific solutions etc.) than the actual technical implementation.

Read more at <http://edrene.org/workshops/standards/index.html>.

4.3.3 Workshop series WS 5 – Engagement of producers and users

Professor Michael Wagner, Danube University Krems, spoke about (Media)-Education in the 21st Century. The education system is currently facing three fundamental challenges: Media Convergence, Participatory Culture and Collective Intelligence.

Jeffrey Earp, Istituti di Ricerca del Consiglio Nazionale delle Ricerche, introduced the Share.TEC 3-year project devoted to fostering a stronger digital culture in the Teacher

Education (TE) field and to supporting the development of a Europe-wide perspective among those working in and with the TE community.

Design patterns

Documenting best practise of ensuring ease of use was initiated by a catalogue of 31 design patterns common to educational repositories, based on a number of concrete examples of common repository functionality.

Current state of health of educational repositories

Discussion of the most profound ailments from examining specific repository examples, and the suggested cures.

User experiences from Austrian educational repositories

A number of expert teachers gave concrete examples of success stories in Austria: from an introduction to subject oriented portals for teachers in Austria and experiences from using them in the subjects Geography, English, and Latin; to other challenges for schools like supporting migrants at Austrian schools, individualisation of learning and practical demonstration of successful online tools.

Middle layers between repositories and users

In the Netherlands, EduRep has introduced a syndication component, which is a middle layer from where the users select a particular repository among the various repositories connected to EduRep and a Social metadata Broker enabling users to give feedback to the usefulness of a given resource.

Common file format for interactive whiteboards

Becta, UK, informed that a common file format for interactive whiteboards has now been defined, and that Becta expects to be able to proactively support the adoption of the common file format with a couple of early implementing vendors in 2010.

Read more at <http://edrene.org/workshops/engagement/index.html>.

4.3.4 Expert workshop series WS 6 – Rights issues

This workshop theme called for important contributions from a number of external experts.

Matthias Klang, legal lead Creative Commons, Sweden, led an Ask the expert session to clarify questions from members and point to best practise examples.

Maja Bogataj Jančič, IPI -Intellectual Property Institute, Slovenia, presented the history of copyright law, and discussing the new challenges posed by digital technology. The new possibilities – or threats, depending on your view – posed by the internet and distribution of digital content were discussed in the context of reactions already seen by copyright organizations, authors/content creators, users and high-tech industries.

Maja Lubarda, Creative Commons Slovenia, gave an introduction to the origins, status and future of Creative Commons and introduced the aspects of the various types of Open Content licenses.

Albert de Vos, TSS project manager, presented a concrete case of digital learning resource sharing across institutional (and national) borders, and did an online demonstration of searching for, creating and publishing content within the Take Shape Share repository

Marshall Mateer, Education Consultant, discussed some of the paradoxes that accompany the increased use of ICT both in schools and outside schools. Whereas ICT to a great extent can facilitate the wishes of educators to have flexible, open and contextualised materials, as well as offer great potential for personalised learning, this is often at stakes with doing all of this legally.

Naomi Korn, NKCC, informed about the JISC funded Web2Rights project, which has developed a set of online tools and accompanying flowcharts to raise awareness about – and simplify the procedures necessary to tackle – copyright issues related to producing and using digital learning resources.

Prodromos Tsiavos, London School of Economics, first examined the typical flow of rights and value in a content creation process. Then he introduced the basics of open content, and different models illustrating the flow of content, permissions and value by real-world examples.

Guidance of teachers

What guidance should be provided to teachers when using or depositing digital content from/in repositories? Focuses is on establishing knowledge on current practise and how, when and where information should be presented in order to be most effective.

Most initiatives concerning rights issues and digital educational content concentrate on educating pupils and teachers to understand and comply with current copyright law. However, there is an equally important task in having legislation and/or licensing models that will actually meet user needs and expectations. The legal side doesn't move very fast while user behaviour and expectations towards being able to reuse and remix content have indeed seen dramatic changes during recent years

While licensing issues are almost inevitably sorted out in concrete projects it is still rare to see coherent strategies across the entire educational sector (or public sector in general). It is also clear that there is a clear link between current approaches to content licensing and the need for the publishing industry to develop new business models for online content.

Read more at <http://edrene.org/workshops/rights/index.html>

4.4 Summing up on seminars and workshops

The examples and outcomes from of a seminar or workshop have served as the basis for discussing priorities. At the seminars the members have also looked back summing up the results of the previous year, and looked ahead identifying and prioritising the issues to focus on in the subsequent years.

Many of the issues and obstacles have remained the same as originally identified at the first strategic seminar. From the first year of work it had become even more evident that contextual factors to a very high degree determine the best strategy for any given educational repository. In tune with this, members expressed a wish to stay with a format of informal group sessions for exchanging and sharing ideas, as many of the benefits of the network

originate from building trusted relationships and receiving feedback on initial ideas from other network members facing similar problems.

A request was also to have group session where attendees could have a choice of the specific issue they wished to cover in more detail in order to have the highest level of impact to their own most current issues.

The complex pattern of different types and dependencies of individual repositories identified also meant that members requested different presentations on quite specific topics in order to have as many perspectives and experiences as possible for a particular problem – albeit this of course at the same time limits the possibilities for covering all of the many relevant topics identified.

Besides addressing the prioritised issues, seminars have focused on special themes like cultural heritage repositories as Europeana and their impact in the education society. Also very diverse resource providers like big national broadcasters on one hand and individual innovative teachers and schools on the other have been invited to present their repositories.

At events priority has also been on learning from local experiences with repositories, e.g. in Slovenia, Estonia, Austria and in Catalonia.

During the three years the network has doubled itself by attracting 22 new associate members, who all actively contribute to the work and discussions. The belief that members will substantially benefit from a continued sharing of expertise has led to a model for sustainability when the EC funding finishes, involving distributed responsibility of organising future semi-annual seminars.

5 Target Users and their Needs

EdReNe brings together web-based repositories of learning resources with content owners and other stakeholders within education in order to share, develop and document strategies, experiences, practices, solutions, advice, procedures etc. on the organisation, structuring and functionality of repositories of learning resources.

EdReNe invites all stakeholders interested in sharing experiences and opinions on repositories of learning resources to join the network as members. Members participate in the work and events organised by the network, and have access to the Members zone of the EdReNe website.

The project develops practical guidelines and recommendations, but most importantly, it has established a lasting collegial network of European repository nodes and stakeholders. Furthermore, it has connected with other networks like e.g. Europeana, and the networks that have now become EdReNe members themselves.

The main output of the EdReNe project is a comprehensive website with recommendations, documentation, templates, roadmaps and documents describing issues, state-of-the-art and offering possible solutions to the problems described above. Existing repositories can cut some corners and new repositories may have a less costly and much less complicated path in life.

6 Underlying Content

The data and metadata of the EdReNe network is provided by its members, who are all central European actors in the area. They own or develop national or thematic educational repositories, or they represent providers of learning resources. The primary idea of the network is thus to ensure wider use of existing and contribution of new content to these key collections of learning resources. Quality assurance procedures vary considerably among repositories, and there is not one best recommendation.

External experts, recognized by EdReNe members to have a high degree of detailed expertise on the various workshop themes, have also been invited to contribute to the work.

7 Summary of Activities

7.1 EdReNe events of the first three years

Name	Location	Date
Strategic seminars prioritising (new) themes and discussing achievements so far		
Strategic seminar I	Naples, Italy	11 – 13 June 2007
Strategic seminar II	Lisbon, Portugal	9 – 11 June 2008
Strategic seminar III	Stockholm, Sweden	3 – 4 June 2009
Strategic seminar IV	Barcelona, Spain	24 – 26 March 2010
Expert workshops on policies and strategies		
Expert workshop WS 3.1	Brussels, Belgium	11 – 13 June 2007
Expert workshop WS 3.2	Tallinn, Estonia	16 - 17 September 2008
Expert workshop WS 3.3	Sestri Levante, Italy	17 – 18 September 2009
Expert workshops on rights issues		
Expert workshop WS 4.1	London, UK	8 – 9 January 2008
Expert workshop WS 4.2	Oegstgeest, The Netherlands	25 – 27 February 2009
Expert workshops on engaging users and producers		
Expert workshop WS 5.1	Aarhus, Denmark	2 – 3 October 2007
Expert workshop WS 5.2	Husseren-les-Chateaux, France	20 - 22 October 2008
Expert workshop WS 5.3	Linz, Austria	18 - 20 November 2009
Expert workshops on standards and interoperability		
Expert workshop WS 6.1	Ljubljana, Slovenia	4 – 5 March 2008
Expert workshop WS 6.2	Warwick, UK	23 – 25 March 2009

7.2 Scheduled events

Name	Location	Date
Seminar V	Copenhagen, Denmark	6 – 7 October 2010
Seminar VI	UK	Spring 2011

8 Impact & Sustainability

EdReNe has a high impact on national strategies on European educational repositories and the daily operation of them, because the network now comprises 19 ‘owners’ of national repositories, a European Learning Resources Exchange platform and a number of major thematic repositories. Also private companies are represented. During the project 221 representatives from 44 members have participated in the seminars and workshops. In the network they learn from one another and from collaborating with producers’ associations and other members from research institutions. In this way advice and solutions are passed to colleagues that may implement them in their national environment. Repeatedly, members report that input from this collaboration has led to new strategies and features, and concrete experiences from the national implementations feed back to the network.

After three years EdReNe includes six European Networks and members from 20 European countries. Sustainability is assured as key members have all confirmed their interest and commitment to a continued network, and new candidates from other countries continually apply for membership (June 2010 red.se – Ministerio de Industria, Turismo y Comercio, Spain, has been registered as a new member). The next seminar of the network is scheduled for October 2010, in Copenhagen.

The network is also seeking expertise from other countries that have important experiences in operating major repositories of (open) digital educational content e.g. the USA and Republic of Korea. Furthermore, EdReNe may evolve to play a central role in working together with repositories from the cultural and scientific areas on attracting many users from the education society to their resources.

The list of European repositories of learning resources, published by EdReNe at edrene.org, provides an overview of the current situation in Europe. This status will be updated every year and continue to provide the basis for the themes that the members address. The easy to read recommendations report gives practical introductory guidelines to stakeholders of educational repositories, and the four thematic synthesis reports expand on the experiences that form the basis of these pieces of advice.

9 Further Information

9.1 Edrene.org

All information is available from the network's website edrene.org.



The screenshot shows the EdReNe website homepage. The header includes the DRENE logo and navigation links: News, Contact, Sitemap, About, Technical. There is also a 'SHARE' button and social media icons. A sidebar on the left lists 'EdReNe Front page' with sub-links: About, Results, Strategic seminars, Expert workshops, Join EdReNe, and Members Zone. The main content area features a large image of birds flying in a blue sky. Below this, there are several article teasers with titles and brief descriptions, each followed by a link to read more. The articles include: 'Building successful educational repositories', 'Bringing the buzzing teacher room online', 'Planning for success – repository strategies', 'Are current standardization bodies in sync with actual user needs?', and 'Copyright legislation is not in tune with educators' expectations'. At the bottom, there is a section titled 'Proceedings from recent EdReNe events' listing several seminars and workshops from 2009 and 2010.

At the EdReNe site you may find e.g.



A ppt- presentation of EdReNe,
edrene.org/results/deliverables/EdReNe.ppt



An EdReNe leaflet,
edrene.org/EDRENEbrochure_april_2010.pdf

EdReNe's 3rd workshops addressed repository strategies and engaging users and producers

In September 2009 EdReNe members met near Giurifi's premises in Sestri Levante to discuss the new development in repository strategies. In November the Edu4All and the city of Linz hosted the third workshop on how to engage users and producers in the running of repositories of learning resources.

3rd EdReNe expert workshop on repository strategies
 took place in Sestri Levante, Italy, on the 17th - 18th September 2009

In the opening session Lilla Voss, former expert adviser to the Danish Ministry of Education on ICT in education, gave an overview of strategic national initiatives in relation to educational repositories, and shared her visions for the schools and repository tools of the future.

Archive

- > 3rd Strategic seminar
- > VRS 6.2 - Rights issues II
- > VRS 4.2 - Standards and interoperability II
- > VRS 5.2 - Engagement of producers and users II
- > VRS 3.2 - Repository strategies
- > The 2nd EdReNe strategic seminar
- > VRS 6.1 - Rights issues
- > VRS 4.1 - Standards and interoperability
- > VRS 3.1 - Repository

News and Newsletters are available at
edrene.org/info/newsletter/index.html

10 EdReNe Thematic Network members

– with links to homepages and presentations of members and repositories issues



[Agenzia Nazionale per lo Sviluppo dell'Autonomia Scolastica \(former INDIRE\) \(Italy\)](http://www.indire.it/)
<http://www.indire.it/>



[AIE – Associazione Italiana Editori \(Italy\)](http://www.aie.it/)
<http://www.aie.it/>
<http://edrene.org/presentations/Italy-AIE.ppt>
<http://files.itslearning.com/data/826/open/CO15/663.ppt>

Enhancing the LOM application profiles using the DOI
<https://files.itslearning.com/data/826/open/CO4/190.ppt>



[ALLIANZ S.p.A. \(Italy\); http://allianz.it/](http://allianz.it/)



[APS IT diensten \(The Netherlands\)](http://www.aps.nl/)
<http://www.aps.nl/>
http://edrene.org/presentations/apsit_Sharing_learning_materials.ppt



[@it \(Belgium\); http://www.atit.be/](http://www.atit.be/)
<http://files.itslearning.com/data/826/open/CO15/771.ppt>



[Becta \(UK\)](http://www.becta.org.uk/)
<http://www.becta.org.uk/>
<http://edrene.org/presentations/UK-Becta.ppt>
<http://files.itslearning.com/data/826/open/CO15/665.ppt>
<http://files.itslearning.com/data/826/open/CO15/773.ppt>

National Digital Resource Bank

<http://files.itslearning.com/data/826/open/CO3/442.ppt>
<http://www.ndrb.org.uk/>

An ecosystem for the discovery, delivery and sharing of digital learning resources

<https://files.itslearning.com/data/826/open/CO3/708.ppt>
<https://files.itslearning.com/data/826/open/CO3/709.ppt>

Defining an interoperability standard for educational content for Interactive Whiteboards?

<https://files.itslearning.com/data/826/open/CO4/234.ppt>

<http://industry.becta.org.uk/display.cfm?resID=38729>

Common File Format (CFF) for Interactive whiteboards

<http://sourceforge.net/projects/iwbcff/>

<http://iwbcff.sourceforge.net/>

Vocabulary Management Services

<http://industry.becta.org.uk/display.cfm?resID=20732>

<http://www.vocman.com/>

Drivers and blockers to teachers accessing, repurposing and sharing digital resources

<http://files.itslearning.com/data/826/open/CO15/348.ppt>



BFU – Brancheforeningen for undervisningsmidler (Denmark)

<http://www.bfu.dk/>

<http://edrene.org/presentations/Denmark-BFU.pdf>

Producers and their motives for interest in Resource Databases

<https://files.itslearning.com/data/826/open/CO19/743.ppt>

IPR in theatrical context

<https://files.itslearning.com/data/826/open/CO19/746.doc>



CNDP – Centre National de Documentation Pédagogique (France)

<http://www.sceren.fr/>

<http://edrene.org/presentations/France-CNDP.ppt>

Online content metadata generation

http://edrene.org/workshops/engagement/ws5-1presentations/CNDPautomatic-metadata_290907.ppt

EducaSources

<https://files.itslearning.com/data/826/open/CO19/508.ppt>



CTE – Centre de technologie de l'éducation (Luxembourg)

<http://www.cte.lu/>

<http://www.myschool.lu/>

<http://files.itslearning.com/data/826/open/CO15/538.ppt>



CTIE - Centre suisse des technologies de l'information dans l'enseignement (Switzerland)

<http://www.educa.coop/dyn/9.asp?url=81268%2Ehtm>

<http://edrene.org/presentations/ctie-2007-12-04.pdf>

Be where the users are: Teachers and schools in the Swiss Digital School Library

<https://files.itslearning.com/data/826/open/CO19/737.pptx>



DGIDC - Direcção-Geral de Inovação e de Desenvolvimento Curricular (Portugal);

<http://www.dgicd.min-edu.pt/>

Repository of the Portuguese Ministry of Education

<https://files.itslearning.com/data/826/open/CO19/535.ppt>

<http://files.itslearning.com/data/826/open/CO15/782.pptx>



EDEN – European Distance and E-Learning Network (Europe)

<http://www.eden-online.org/>



EENET – European Expert's Network for Education and Technology e.V. (Europe);

<http://edrene.org/presentations/network-EENet.ppt>



Encyclopaedia Britannica Education (UK);

<http://www.britannica.co.uk/Education>

<https://files.itslearning.com/data/826/open/CO3/540.ppt>

Contribute to Britannica with online tools – a trend for online encyclopaedias?

<http://britannica.com/>

Allowing content mixing and adapting business models

<https://files.itslearning.com/data/826/open/CO14/649.pptx>



EDUCATION HIGHWAY Innovationszentrum für Schule und Neue Technologie GmbH (Austria)

<http://ist.eduhi.at/>

<http://edrene.org/presentations/Austria-eduhi.ppt>

<http://www.schule.at> and www.eduhi.at

<https://files.itslearning.com/data/826/open/CO19/510.ppt>

Subject oriented portals for teachers in Austria - A success story since 1996

<https://files.itslearning.com/data/826/open/CO19/731.ppt>

Geography: Content linked to the curriculum

<https://files.itslearning.com/data/826/open/CO19/730.pdf>

English: Results of a survey of teachers using the English portal

<https://files.itslearning.com/data/826/open/CO19/732.ppt>

Latin: Community building as success factor

<https://files.itslearning.com/data/826/open/CO19/733.ppt>

Migration - IT as support tool for migrants at Austrian schools

<http://www.memorylifter.com/>

http://virtuelleschule.bmukk.gv.at/fileadmin/folder/Folder_Basisinformationen/toolbox_EN.pdf

Individualisation of learning - IT as tool for “e-individualisation”

<https://files.itslearning.com/data/826/open/CO19/734.ppt>

Practical demonstration of successful online tools: eduGenerator, Quiz-Tool

<http://www.eduhi.at/material/edugenerator/>

<http://quiz.schule.at/>



ENIS – Europäisches Netzwerk Innovativer Schulen in Österreich (Austria);

<http://www.enis.at/>



EUN – European Schoolnet AISBL (Europe)

<http://www.eun.org/>

<http://edrene.org/presentations/network-EUN.ppt>

The Calibrate project

<https://files.itslearning.com/data/826/open/CO3/123.ppt>

LRE – Learning Resource Exchange service

<https://files.itslearning.com/data/826/open/CO3/125.ppt>

The IMS Learning Object Discovery and Exchange group

<https://files.itslearning.com/data/826/open/CO4/186.ppt>

<http://www.imsglobal.org/lode.html>

ASPECT - Adopting Standards and Specifications for Educational Content

<https://files.itslearning.com/data/826/open/CO4/607.ppt>

<http://files.itslearning.com/data/826/open/CO15/778.pdf>

<http://aspect.eun.org/>

Analysis of browse and search strategies of teachers

& Teachers’ Multilingual Tagging behaviour

http://edrene.org/workshops/engagement/ws5-1presentations/Vuorikari_show_tell_1_2.pdf

Inspire - aiming at promoting the use of digital learning resources in MST education

<http://files.itslearning.com/data/826/open/CO15/776.pdf>

Scientix - community for science education in Europe

<http://files.itslearning.com/data/826/open/CO15/779.pdf>



[eXact learning solutions \(Italy\)](http://www.exact-learning.com/) (former Giunti Labs)

<http://www.exact-learning.com/>

<http://edrene.org/presentations/Italy-GiuntiLabs.ppt>

<https://files.itslearning.com/data/826/open/CO3/702.pptx>

Repositories and the learning experience - Using a Repository for Learning & Support

<https://files.itslearning.com/data/826/open/CO3/697.ppt>

Delft University of Technology: Opening up our content

<https://files.itslearning.com/data/826/open/CO3/696.ppt>



[FWU – Institut für Film und Bild in Wissenschaft und Unterricht gemeinnützige GmbH](http://www.fwu.de/)
(Germany)

<http://www.fwu.de/>

<http://edrene.org/presentations/Germany-FWU/index.html>

Connecting Different German Metadata Communities

http://melt.fwu.de/080108_EdReNe.html



[Intrallet \(UK\)](http://www.intrallet.com/)

<http://www.intrallet.com/>

<http://edrene.org/presentations/intrallet+intraLibrary.ppt>

<http://files.itslearning.com/data/826/open/CO15/774.ppt>

National Repository Strategies: Some Higher and Further Education Examples

<http://files.itslearning.com/data/826/open/CO3/436.ppt>

The origins of UK LOM Core - how and why it came about

<https://files.itslearning.com/data/826/open/CO4/187.ppt%22>

<http://www.icbl.hw.ac.uk/lmap/>

Rights Management and Educational Repositories

<https://files.itslearning.com/data/826/open/CO14/265.ppt>

http://videlectures.net/edrene08_duncan_rme/



[IML – Umeå University Department of Interactive Media and Learning \(Sweden\):](http://www.iml.umu.se/index_eng.html)

http://www.iml.umu.se/index_eng.html

<http://edrene.org/presentations/Sweden-IML.ppt>

Encouraging teachers to do learning object with copyrights?

<https://files.itslearning.com/data/826/open/CO14/623.pptx>

<https://files.itslearning.com/data/826/open/CO14/647.pdf>

ITC ITC – Centre of Information Technologies in Education (Lithuania)

<http://www.itc.smm.lt/>

<http://edrene.org/presentations/Lithuania-ITC.ppt>

Learning repositories quality evaluation and improvement tools

<https://files.itslearning.com/data/826/open/CO3/705.ppt>

Model and method for evaluation of eQNet travel well quality learning resources

<http://files.itslearning.com/data/826/open/CO15/786.ppt>

Metadata application profile: Lithuanian approach

<https://files.itslearning.com/data/826/open/CO4/189.ppt>

<http://lom.emokykla.lt/nauja>



I.Zone SGPS SA (Portugal)

<http://www.izone.pt/>

<http://edrene.org/presentations/Portugal-EduWeb.ppt>

The Magellan Initiative

<http://www.iniciativa-magalhaes.com/>

Junior Virtual Assembly - a new Portuguese project

<http://files.itslearning.com/data/826/open/CO15/783.pptx>

Kennisnet

Kennisnet – Sticting Kennisnet Ict op School (The Netherlands):

<http://www.kennisnetictopschool.nl/>

<http://edrene.org/presentations/TheNetherlands-Kennisnet.ppt>

<http://files.itslearning.com/data/826/open/CO15/666.ppt>

New additions to the content value chain?

<https://files.itslearning.com/data/826/open/CO3/710.ppt>

Experiences with the use of ICT and digital content in upper secondary education

<http://studiewijzerplus.nl/>

Benefits of standards and interoperability – from a VLE provider perspective

<https://files.itslearning.com/data/826/open/CO4/605.pptx>

<http://www.teletop.nl/>

Connection services for the Content (Value) Chain

<https://files.itslearning.com/data/826/open/CO4/604.pptx>

<http://edurep.kennisnet.nl/>

Edurep as the Middleman in the Dutch educational content chain

<https://files.itslearning.com/data/826/open/CO3/104.ppt>

Edurep developments: social metadata and syndication
<https://files.itslearning.com/data/826/open/CO19/738.ppt>
<http://wikiwijs.nl/sector/>

A Dutch LOM application profile - and the road to vocabularies
<https://files.itslearning.com/data/826/open/CO4/188.ppt>
<http://www.edustandaard.nl/>

The TSS (Take Shape Share) initiative
<https://files.itslearning.com/data/826/open/CO4/606.ppt>
<http://www.tsseurope.eu/>

A VLE to produce and share learning objects
<http://www.deonderwijsvernieuwingscooperatie.nl/>

Kennisnet Entrée: federated authentication
<https://files.itslearning.com/data/826/open/CO4/602.ppt>
<http://entree.kennisnet.nl/>

Next big thing: support flexible curriculum building
<https://files.itslearning.com/data/826/open/CO19/506.pptx>

Teachers developing digital content across institutional boundaries: why and how
<https://files.itslearning.com/data/826/open/CO19/517.pptx>



[KlasCement \(Belgium\)](http://www.klascement.net/)
<http://www.klascement.net/>
<http://www.klascement.net/universal>
KlasCement - Educational portal of Flanders
<http://files.itslearning.com/data/826/open/CO15/346.ppt>
<http://files.itslearning.com/data/826/open/CO15/769.pptx>



[Lektion.se \(Sweden\)](http://www.lektion.se/)
<http://www.lektion.se/>
A study of user behaviour on lektion.se – how teachers share knowledge through lektion.se
http://www.nada.kth.se/utbildning/grukth/exjobb/rapportlistor/2008/rapporter08/olausson_ann-louise_08050.pdf



[LTScotland, Learning and Teaching Scotland \(UK\)](http://www.glowscotland.org.uk/index.asp)
Glow -the Scottish Schools Digital Network
<http://www.glowscotland.org.uk/index.asp>
<https://files.itslearning.com/data/826/open/CO15/349.pdf>

Licensing practice: Allowing teachers to scan and use text book material in their own learning resources
<https://files.itslearning.com/data/826/open/CO14/621.pptx>



Menon Network (Europe)

<http://www.menon.org/>

<http://edrene.org/presentations/network-MENON.ppt>



NCTE – National Centre for Technology in Education (Ireland);

<http://www.ncte.ie/>

<http://edrene.org/presentations/NCTE%20general-%20EdReNe%20Dec%202007.ppt>

Scoilnet

<https://files.itslearning.com/data/826/open/CO19/509.pptx>



Ontwikkelcentrum (The Netherlands)

www.ontwikkelcentrum.nl

<https://files.itslearning.com/data/826/open/CO15/352.ppt>



Open University/OLnet (UK)

<http://olnet.org/>

<http://files.itslearning.com/data/826/open/CO15/770.ppt>



sDae – Sociedad Digital De Autores y Editores (Spain)

<http://www.sdae.net/>

<http://edrene.org/presentations/Spain-sDae.ppt>

Digital Rights Management in the educational sector

<https://files.itslearning.com/data/826/open/CO14/263.ppt>

http://videlectures.net/edrene08_sire_drm/



Senter for IKT i utdanningen (Norway)

<http://iktsenteret.no/>

<http://edrene.org/presentations/Norway-Utdanning-no.ppt>

<http://edrene.org/presentations/Utdanning.%20no%20Edrene-presentation-brussels-07-12-05.ppt>

<http://files.itslearning.com/data/826/open/CO15/784.pptx>

Norway's service oriented strategy

<https://files.itslearning.com/data/826/open/CO3/119.ppt>

Linking policies and business models

<https://files.itslearning.com/data/826/open/CO3/126.ppt>

Feide - an identity management system

<https://files.itslearning.com/data/826/open/CO4/601.pptx>

<http://feide.no/content.ap?thisId=1307>

Drupal.org as a framework for publishing and tagging of learning resources

<http://edrene.org/workshops/engagement/ws5-1presentations/drupalutdanningno.pdf>



ShareTEC (Europe)

<http://www.share-tec.eu/>

<https://files.itslearning.com/data/826/open/CO19/741.ppt>

Sharing digital resources in the Teacher Education Community

<http://files.itslearning.com/data/826/open/CO15/775.ppt>

Skolverket Skolverket – The Swedish National Agency for Education

<https://files.itslearning.com/data/826/open/CO19/741.ppt>

<http://files.itslearning.com/data/826/open/CO15/780.ppt>

The Spider - a brokerage service for learning resources in Sweden

<http://files.itslearning.com/data/826/open/CO15/345.ppt>

<http://files.itslearning.com/data/826/open/CO15/422.pdf>

Dela! - an online teacher community

http://slides.diigo.com/list/niklas_karlsson/presentation-of-dela?mode=full&sid=32195



SMART Technologies (United Kingdom)

<http://smarttech.com/>

<http://exchange.smarttech.com/>

Notebook Express

<http://express.smarttech.com/>

<http://exchange.smarttech.com/>



SLO - the Netherland's Institute for Curriculum Development (The Netherlands);

<http://www.slo.nl/international/>

<http://edrene.org/presentations/SLO-introduction.ppt>

<http://files.itslearning.com/data/826/open/CO15/785.ppt>

Digital learning resources: What are teachers looking for?

<http://files.itslearning.com/data/826/open/CO15/347.ppt>



[Teachable.net \(UK\)](http://www.teachable.net/)

<http://www.teachable.net/>

<https://files.itslearning.com/data/826/open/CO4/599.ppt>



[TLF – Tiger Leap Foundation \(Estonia\)](http://www.tiigrihype.ee/?setlang=eng)

<http://www.tiigrihype.ee/?setlang=eng>

<http://edrene.org/presentations/Estonia-TLF-part1.ppt>

<http://edrene.org/presentations/Estonia-TLF-part2.ppt>

Identifying the decisive benefits that trigger repository use by teachers

<http://voicethread.com/#q.b190642.i0.k0>

Repositories – What’s there for teachers?

<http://www.slideshare.net/meerisild/learning-repositories-presentation/>

Painful experiences in author rights violation

<http://www.slideshare.net/chryssy/teachers-and-copy-right-issues-presentation/>

Do teachers need repositories?

<http://www.slideshare.net/pilletkuusik/repositooriumid-presentation>

Estonian educational portal

<https://files.itslearning.com/data/826/open/CO3/706.ppt>



[TLU-CET - Tallinn University \(Estonia\)](http://www.htk.tlu.ee/newhtk)

<http://www.htk.tlu.ee/newhtk>

http://edrene.org/presentations/TLU_Laanpere.pdf

<http://edrene.org/presentations/TLU2.ppt>

LeMill & Waramu - two Repository Development Projects

<http://files.itslearning.com/data/826/open/CO15/353.ppt>

Open educational resource community LeMill - Copyright Issues

<https://files.itslearning.com/data/826/open/CO14/267.pdf>

UNI•C [UNI•C \(Denmark\)](http://www.uni-c.dk/)

<http://www.uni-c.dk/>

<http://edrene.org/presentations/Denmark-uni-c.ppt>

The Danish national educational repository

<http://materialeplatform.emu.dk/english/index.html>

Materialeplatformen and Fagenes Infoguide

<https://files.itslearning.com/data/826/open/CO19/512.ppt>

Supporting homework with free digital learning resources

<http://traeneren.emu.dk/>

UNI-Login – a national educational single sign on solution
<https://files.itslearning.com/data/826/open/CO4/600.ppt>

Introduction to design patterns
http://edrene.org/workshops/engagement/ws5-1presentations/Design%20Patterns_nonotes.ppt



<http://www.fmf.uni-lj.si/>
<http://edrene.org/presentations/Slovenia-UNI-LJ-FMF.ppt>
<http://files.itslearning.com/data/826/open/CO15/664.pptx>

The need for repository editors and possible solutions
<http://edrene.org/workshops/engagement/ws5-1presentations/The%20need%20for%20repository%20editors%20and%20possible%20solutions%20-%20presentation.ppt>



<http://www.upf.edu/en/index.shtml>
<https://files.itslearning.com/data/826/open/CO15/676.pdf>

JClic, Building a repository on the success of an authoring tool
<https://files.itslearning.com/data/826/open/CO19/546.pdf>
<http://clic.xtec.cat/en/jclic/>

The Merlí project: An open-standards metadata catalogue for online educational resources
<https://files.itslearning.com/data/826/open/CO4/222.pdf>



<http://vetamix.yle.fi/>
<https://files.itslearning.com/data/826/open/CO19/511.ppt>

11 Proceedings of EdReNe strategic seminars and expert workshops

1st strategic seminar; <http://edrene.org/seminars/Naples/EdReNe-MinutesJune11-13-2007.pdf>

2nd strategic seminar; <http://edrene.org/results/deliverables/EdReNeD2.2StrategicSeminar.pdf>

3rd strategic seminar; <http://edrene.org/results/deliverables/EdReNeD2.3StrategicSeminar.pdf>

4th strategic seminar; <http://edrene.org/results/deliverables/EdReNeD2.4StrategicSeminar.pdf>

Expert workshop 3.1;

<http://edrene.org/results/deliverables/EdReNe%20D3.1%20ExpertWorkshop%203-1.pdf>

Expert workshop 3.2;

<http://edrene.org/results/deliverables/EdReNeD32ExpertWorkshop32.pdf>

Expert workshop 3.3;

http://edrene.org/results/deliverables/EdReNeD33ExpertWorkshop_final.pdf

Expert workshop 4.1;

<http://edrene.org/results/deliverables/EdReNe%20D4.1%20ExpertWorkshop%204-1.pdf>

Expert workshop 4.2;

<http://edrene.org/results/deliverables/EdReNeD42ExpertWorkshop42.pdf>

Expert workshop 5.1;

<http://edrene.org/results/deliverables/EdReNe%20D5.1%20ExpertWorkshop%205-1.pdf>

Expert workshop 5.2;

<http://edrene.org/results/deliverables/EdReNeD52ExpertWorkshop52.pdf>

Expert workshop 5.3;

<http://edrene.org/results/deliverables/EdReNeD5.3ExpertWorkshop.pdf>

Expert workshop 6.1, with references to Streaming video presentations;

<http://edrene.org/results/deliverables/EdReNe%20D6.1%20ExpertWorkshop%206-1.pdf>

Expert workshop 6.2;

http://edrene.org/results/deliverables/EdReNeD6.2ExpertWorkshop_final.pdf

12 Attachments

Attached to this final report

An updated ppt-presentation of EdReNe

EdReNe leaflet

13 Annex I

EdReNe's consolidated recommendations report groups recommendations according to the four major themes: Repository strategies, Engaging users, Rights Issues, and Standards and interoperability. <http://edrene.org/results/deliverables/EdReNeD2.7Recommendations.pdf>

Repository strategies

The majority of educational repositories share the overall goal to enable educators and students to have *seamless access* to *high quality* learning resources and to *support sharing, repurposing and remixing* of these. This has been a long standing vision and many experiences have been collected during the last ten to fifteen years. On the strategic level of setting up the infrastructure to support this goal, the recommendations are:

- Leverage the support of existing communities of practice by supporting their needs
- Take advantage of generally used, open standards to allow for the broadest range of partnerships, future adaptability and innovation
- Engage with all stakeholders early in the planning process and base development on user needs
- Support open licensing to increase impact of funding and maximize possibilities for reuse and repurposing
- Acknowledge that integration with a range of tools and services will greatly benefit uptake and use of digital learning resources
- Carefully build a sustainable business case based on the broad existing evidence base

Engaging users

In order to be a success any educational repository needs to attract a high number of returning users. Many successful major web sites support this goal by building active and engaged user communities and the same trend is now seen for educational repositories that were often initiated long before the advent of the social web. These efforts have been the focus of many of the discussions within this theme, and have led to the following recommendations:

- Analyze user behaviour to support development
- It should be easy for users to invite friends
- Make it easy to participate – for all members
- Keep it simple
- A strong community cannot be built quickly – plan for long term sustainability
- A dedicated and skilled community manager is essential
- Build trust and defend your brand
- Describe why you want an online community – to yourself and all involved stakeholders
- Reward user activity
- Keep moderation to a minimum
- Make the community the centre of your web site – never hide it
- Encourage and facilitate real life meetings between users

Rights issues

Within this theme there is a trend to have more discrepancy between the views of commercial providers and those of public agencies, but (a reasonable degree of) consensus has also been reached on a number of concrete recommendations. These recommendations target different groups of stakeholders, which are mentioned in parenthesis following each suggestion:

- Establish coherent licensing strategies for (publicly funded) learning resources (policy makers)
- Clearly express usage rights to users when depositing or accessing resources (repository owners)
- Set up institutional policies and strategies concerning IPR (institution management)
- Support equal access to market to maximize innovation (publishers and content providers)
- Encourage institutions to engage in sharing and production of open content (institution management)
- Interesting new business models should be showcased (publishers and content providers)
- Provide guidance and training on use of Creative Commons licenses (repository owners)
- Provide recommendations and guidance on how to remix “incompatible” content (teachers and students)
- Encourage use of CC-BY licenses when publishing own work (teachers and students)
- Advocate reform and development of copyright law (policy makers)

Standards and interoperability

The reflections and discussions during EdReNe workshops clearly support the need for interoperability on many levels. The recommendations drawn from these discussions are not intended to recommend a specific standard but rather point directions at a higher level, as consensus was built between a number of different stakeholders. Common to all of them is however the need to use standards to support user needs.

The recommendations have been assigned the following priorities:

- Present clear and easy-to-understand information on usage rights
- Support the development of ‘sharing as a culture’ by providing user friendly mechanisms for depositing and repurposing
- Make it easier to find quality content
- Open up information silos by a strong focus on web services, APIs and other ways of allowing seamless integration across services.
- When content standards are encouraged, this should be done with central guidance
- Minimize the number of repositories necessary to access for any given user

14 Annex II

Repository recommendations in prioritized order from Intrallect's annual conference 2010, *Repositories: Back to the future*.

(http://www.intrallect.com/index.php/intrallect/news_events/events).

Policies and strategies

- Take advantage of generally used, open standards to allow for the broadest range of partnerships, future adaptability and innovation
- Acknowledge that integration with a range of tools and services will greatly benefit uptake and use of digital learning resources
- Engage with all stakeholders early in the planning process and base development on user needs
- Support open licensing to increase impact of funding and maximize possibilities for reuse and repurposing
- Leverage the support of existing communities of practice by supporting their needs
- Carefully build a sustainable business case based on the broad existing evidence base

Engaging users and producers

- Keep it simple
- Make it easy to participate – for all members: incl. both new users and power users
- A strong community cannot be built quickly – plan for long term sustainability
- Analyze user behaviour to support development
- A dedicated and skilled community manager is essential
- Make the community the centre of your web site - never hide it
- Keep moderation to a minimum
- Describe why you want an online community – to yourself and all involved stakeholders
- It should be easy for users to invite friends
- Encourage and facilitate real life meetings between users
- Reward user activity
- Build trust and defend your brand

Standards and interoperability

- Open up information silos by a strong focus on web services, APIs and other ways of allowing seamless integration across services
- Support the development of 'sharing as a culture' by providing user friendly mechanisms for depositing and repurposing
- When content standards are encouraged, this should be done with central guidance
- Make it easier to find quality content
- Present clear and easy-to-understand information on usage rights
- Minimize the number of repositories necessary to access

Rights issues

- Teachers and students should encourage use of CC-BY licenses when publishing own work
- Institution management should encourage institutions to engage in sharing and production of open content
- Policy makers should advocate reform and development of copyright law
- Institution management should set up institutional policies and strategies concerning IPR
- Policy makers should establish coherent licensing strategies for (publicly funded) learning resources
- Repository owners should clearly express usage rights to users when depositing or accessing resources
- Publishers and content providers should showcase interesting new business models
- Repository owners should provide guidance and training on use of Creative Commons licenses
- Teachers and students should provide recommendations and guidance on how to remix “incompatible” content
- Publishers and content providers should support equal access to market to maximize innovation