

# A network of Global Open Libraries, GOL

Draft report, version 0-96 – for open consultation – comments by 11 October 2017.

This report was presented and discussed at the 2<sup>nd</sup> OER World Congress 19 September at the satellite event:

## GLOBAL COLLABORATION BETWEEN QUALITY OER REPOSITORIES

A gamechanger for the use of OER and Open educational practices linked to innovation and Quality?



Published 2017 by  
International Council for Open and Distance Education  
Drammensveien 211 | Oslo 0281 | Norway

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Commissioned by  
UNIT (France, Higher Education) and ICDE (global NGO)

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## Executive Summary

This report presents the results from a feasibility study on networking quality-controlled OER repositories for building a network of Global Open Libraries, GOL. The feasibility study addressed the problem of the gap between widespread OER production and the efficiency and efficacy of their reuse to support learning and widen access to higher education. Noting the relative scarcity of repositories of high-quality OERs, the feasibility study determined that networking these for strengthened external and internal impact should have priority. It recommends that a GOL initiative add software services to surface OERs that match user demands for quality, content and context. The aim of the GOL initiative should be to encourage initiatives in this space, such as the PANOR European-originated initiative, to accelerate regional and global collaboration.

This feasibility report examined the current landscape of repository organization and asked whether other governmental or commercial actors couldn't solve the identified problem of OER reuse. It concluded that a third-party, nongovernmental organization could best serve as a trusted partner to the existing initiatives. It could more easily acquire the support of university, governmental, nongovernmental and commercial parties. From this, it recommended an organizational structure with a small, permanent leadership of the principal international and regional NGOs, with a membership consisting of the project partners – repositories, OER advocacy organizations, and others.

The new Sustainable Development Goals, in particular SDG 4 Education 2030, has brought a new importance, impetus, and urgency for immediate actions and increased impact from OER: “Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.”. Significant strengthened uptake and the use of OER is an important enabler for achieving the SDG 4.

A network of repositories could be formally established in 2018 and operational by 2019.

# GOL –background, rationale, scope and methodology

## Introduction

### Background and definitions

Open Educational Resources (OER) have been part of the educational landscape since 2001 with the announcement of MIT's OpenCourseWare project, and longer if the Learning Objects movement is viewed as a precursor to OER. The learning objects idea was influenced by the open source software movement, whereby small pieces of content could be reused elsewhere, for example a multimedia animation explaining sine waves. OER developed on this idea of using copyright licenses that explicitly permitted reuse. There are several definitions of OER, with a good deal of overlap between these. E.g. the William and Flora Hewlett Foundation, which funded the MIT project, another is the 5R activities by David Wiley, (Retain, Reuse, Revise, Remix and Redistribute). UNESCO defines OER as:

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*Open Educational Resources (OERs) are any type of educational materials that are in the public domain or introduced with an open license. The nature of these open materials means that anyone can legally and freely copy, use, adapt and re-share them. OERs range from textbooks to curricula, syllabi, lecture notes, assignments, tests, projects, audio, video and animation.*

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An **OER** is openly licenced, most commonly using a Creative Commons licence, which gives users rights to use the learning resource according to the specifications of the license. We define an OER repository as a collection of OERs, *with search services to find OER in the collection*, and reference or help services to support constituents' use of the collection and search services.

While OER repositories have been successful in developing for example open textbooks and having an impact on student performance, they do not represent mainstream practice for educators yet. The main reasons for this are:

- Lack of awareness of OER
- Ease in finding OER
- Confusion on quality of OER
- Availability of suitable OER
- Time taken to locate and adapt OER
- Presence of policies rewarding and promoting OER

While the focus should be on uptake, use, reuse and innovation facilitated by OER, the hinders for moving OER mainstream are largely awareness and availability issues. In other words, the main challenge with OER: Too much and unclear consumption, lack of awareness and ease of finding the relevant resources.

For instance, a survey<sup>1</sup> of educators found that, while they were willing to use openly licensed online resources in their teaching, Google, YouTube and Khan Academy were the only recognised sites for search. The many repositories containing potentially suitable OER were largely unknown and unused. It is this step in OER adoption that this initiative seeks to address. A recent study<sup>2</sup> on the extent to which existing OER repositories promote the discovery, use, and reuse of resources found that most were institutional (76.4%), the majority were European, and the majority adopted Creative Commons licenses. There was a range of technology platforms, metadata standards, granularity and format. The authors conclude that ‘more drivers that promote the reuse of OERs, mainly through open licenses and social networks, than features facilitating the retrieval and use of OERs according to educational needs, such as learning goals.’ This diversity which is both a benefit in that it means OER repositories can address different needs, and a drawback in that it impedes discoverability. The proposal of GOL is to effectively provide a network that promotes this diversity while improving overall awareness. The main target group for GOL would be the end users. This includes that GOL aim for providing training and other services for users, to enhance the reuse of OERs and make institutions more conscious about having a strategy about OERs

The ICDE and the French UNT,<sup>3</sup> in a joint workshop in May 2016, agreed to the following goal:

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*“To have global access to and use of quality-assured, freely licenced OERs for curricula / grades in upper secondary and higher education available across countries, across languages and across cultures.”*

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The two organizations proposed a feasibility study for a Global Open Library. The starting point for a possible global initiative could be the unique French collection(s) of OERs for higher education<sup>4</sup>. By making these available and connecting to collaborative initiatives, one could aim for facilitating an interactive, growing and self-sustaining virtual library of quality resources.

Late autumn 2016 the feasibility study was initiated, led by ICDE and UNIT (on behalf of the French UNT’s) and a reference group was established. See Attachment 1.

The purpose of the feasibility study was to:

- Consider if the GOL concept and an associated project were feasible.
- Consider whether and how to test the concept in a pilot project.
- Deliver a report outlining a possible pilot project.

The feasibility study had a variety of components, from mapping the current landscape of OER and repository initiatives, extracting lessons from similar initiatives, and propose a possible way forward. The study was to consider all of the complexities, including cultural

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<sup>1</sup> <https://oerresearchhub.files.wordpress.com/2014/11/oerrh-evidence-report-2014.pdf>

<sup>2</sup> <http://www.irrodl.org/index.php/irrodl/article/view/3063/4300>

<sup>3</sup> <http://univ-numerique.fr/>

<sup>4</sup> <http://www.sup-numerique.gouv.fr/pid33288/moteur-des-ressources-pedagogiques.html>

and linguistic issues, how learners, teachers and educational institutions interact in their use of OERs.

In the preparation for the 2<sup>nd</sup> OER World Congress, at the European Regional Consultation on OER on February 23-24, Malta, one of the working groups considered “Ensuring inclusive and equitable access to quality content.” It recommended better collaboration and networking among the existing European quality OER resources and repositories and sharing knowledge and practice on

- models of OER ecosystems,
- OER platforms that promote quality content, visibility and accessibility,
- how to include parents and the public OER ecosystem, and
- to consider better infrastructures to support the collaboration and networking

In Spring 2017, a more focused scope was agreed to test the feasibility of the following idea:

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*“Based on existing quality<sup>5</sup> OER repositories, educational needs, teachers and learners demands, a possible initiative intends to spark the uptake of OER and Open education in Higher Education and Upper Secondary Education, and provide the basis for a future networked global cooperation between quality OER repositories. The main outcome of a possible initiative will be a dynamic global network of OER repositories, well connected to key stakeholders and the user community.”*

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In late June 2017 a team of three was established to finalise the feasibility report according to this more limited scope:

Larry Cooperman, University of California, Irvine

Martin Weller, Open University UK

Gard Titlestad, ICDE, co-ordinator

Based on early findings in the feasibility study, UNIT (France, Higher Education), ICDE (global NGO) and NDLA (Norway, Upper Secondary Education) together with partners in Germany and the UK, initiated a preparatory initiative for a possible ERASMUS+ project, which with Europe as a starting point, could establish a possible global initiative. This preparatory, limited initiative was named PArtnership for Networking Open education resources, OER, Repositories: PANOR. Attachment 2.

### Rationale and scope

Supporters of OER have held out the promise of a variety of public benefits, including cost savings, quality improvements, opportunities for innovation, and multiplier effects in terms of public investment.

Despite great progress in the field of OER, we observe that regional and global collaboration between repositories and similar initiatives remain weak and suffer from difficulties in

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<sup>5</sup> Examples of quality repositories are peer reviewed resources, reviewed by teachers, or adopted in curricula..

accessing, discovering and reusing quality content. GOL seeks to remedy this problem through building a collaborative network of OER repositories. From this collaboration, a GOL would seek better OER visibility, access, quality, usability, sharing, content, effectiveness, support for innovation and even development of new business models.

## Methodology

The methodology for building this feasibility report is:

- Initial observation of needs for moving OER mainstream, made by the French Virtual Thematic Universities, UNT, and ICDE – supplemented by observations made by the Norwegian Digital Learning Arena, NDLA.
- A one day workshop by UNT and ICDE in Paris to suggest the feasibility study.
- Desk research and initial contacts to some recognised repositories: Universités Numériques Thématiques, UNT, France, NDLA, Norway, MERLOT, USA, BC Campus, Canada, Commonwealth of Learning, CoL, Canada, Surfnet, Netherlands, African Virtual University, AVU, Kenya, National Institute of Open Schooling, India and UNIR, Spain.
- The observations and experience by the three authors from three leading Open Education organisations to co-write the report.
- A global reference group with key stakeholders to give comments and direction to the report.
- Consult the draft feasibility report openly at a satellite event at the 2<sup>nd</sup> OER World Congress 19 September 2017, followed by a web consultation, before drafting the final report.

## Issues and Motivations – the new Sustainable Development Goals

From their inception, OER, OpenCourseWare, and free cultural licenses was to improve and expand access to higher education. Projects sprang up to fill the gaps in the initial efforts. Repositories developed in various countries as well as within institutions and NGOs. They aggregated resources and facilitated the occasionally difficult task of discovering appropriate resources for specific audiences. They also brought into focus the issue of quality: Finding resources of high-enough quality for rapid deployment at minimal cost.

Repositories have begun to address quality through a variety of mechanisms. They added peer review as a means of enforcing quality. User reviews figure prominently in the TEMOA repository, creating a ranking for usefulness in the classroom. Likewise, California's Cool4Ed project combined peer reviews for content quality with an adoption review – a use case - by other faculty. Other projects, such as OpenLearn have an inbuilt quality assurance method in the production process. The initial partners for the PANOR initiative as well have concepts for ensuring repository quality.

In some cases, the repositories have begun to reach national scale. In Colombia, the Ministry of Education designed a central repository for OERs, in response to the 2012 UNESCO World OER Congress. France has one of the largest open digital repositories in its Universités Numériques Thématiques (UNT). In other cases, public policy may call for materials created with public funds to be available to the public with an open license, but lack a corresponding mechanism for unified discovery and reuse.

After 15 years and the creation of hundreds of thousands of open educational resources, there are still several imbalances:

Public policy without a corresponding aggregation of resources (or vice versa);

- A significant aggregation of resources, but without quality metrics;
- Mismatches of language, intended audience, granularity of resources and other variables; or
- Resource sustainability – the aging of the resources themselves or the financial wherewithal for periodic maintenance.

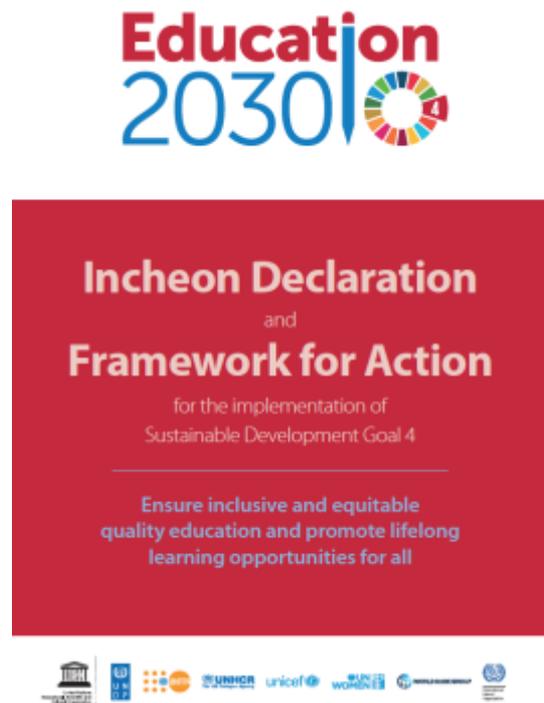
As a result, the GOL initiative could address these issues by providing global access to libraries of open educational resources in an integrated way, enabling learners and educators to retrieve high-quality, appropriate, audience-specific resources without having to be expert in search engines or content areas. The notion of GOL is to enhance the usefulness of existing repositories through adding a software architecture that aggregates repository contents, promoting visibility of each repository, surfacing relevant quality OERs and ensuring maximum end user usefulness and minimizing the effort of resource discovery.

Overall, by creating a networked repository structure, the initiative could lower the cost of reuse of OERs, improve cost savings for institutions, and serve as a motor for enhanced innovation and success in education.

## The new SDGs

The Sustainable Development Goals, SDGs, were adopted by the prime ministers and heads of states September 2015, including SDG 4 Education 2030: “Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all,” followed by the adoption of the Framework for Action, FFA, for SDG 4. This has brought a new importance, impetus, and urgency for increased impact from OER.

Figure 1. The new Goal for Education, SDG 4, and the FFA



The FFA states the importance of OER (point 14) and, with regards to tertiary education, target 3, point 43,:

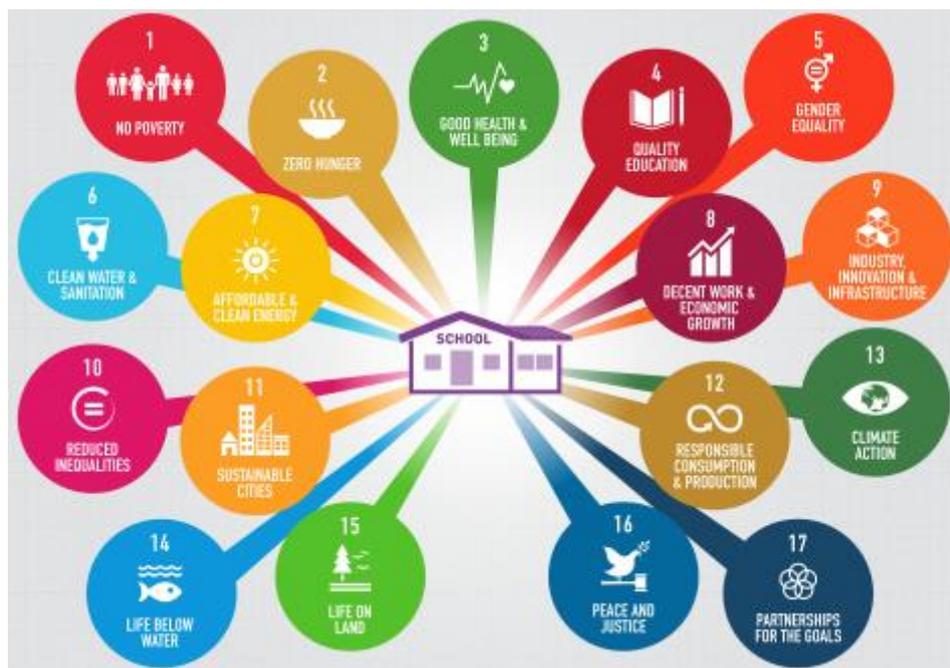
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*“A well-established, properly-regulated tertiary education system supported by technology, Open Educational Resources (OERs) and distance education modalities can increase access, equity, quality and relevance, and narrow the gap between what is taught at tertiary education institutions and what economies and societies demand. The provision of tertiary education should be progressively free, in line with existing international agreements.”*

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One should not underestimate the potential for OER contributing to **all** agreed SDGs. OER could radically contribute to all – in particular Health (3), Economic Work (8), Industry (9), Consumption (12), Climate action (13), just to mention the most obvious.

Figure 2. Education's impact on the SDGs.



## Previous and similar initiatives

### Principles

The Global OER Library is based on a number of key principles and assumptions which can be summarized as:

- OER have the potential to positively impact a number of areas in education, from the perspectives of learners, educators, institutions and national bodies.
- These impacts occur when the use of OER is localized and targeted to a specific need.
- Lack of awareness and access to appropriate OER is a major barrier in mainstreaming OER
- There exists a substantial pool of OER which is insufficiently utilized
- To be effectively deployed, OER adoption requires a community of people acting as advocates, adopters and knowledge sharers.

### Previous relevant initiatives and recommendations

Some initiatives examined deliver important experience and advice for a possible GOL. Here we have picked some illustrative examples for this report.

### GLOBE

The Global Learning Object Brokered Exchange (GLOBE), was begun in 2004 to facilitate the search and discovery of quality online learning objects. Adopted by Merlot, Ariadne and others, the initiative worked on metadata standards for federated search across multiple repositories and collections of online educational resources. In 2010, GLOBE version 2.0 became a harvested metadata collection in order to improve speed and performance. In 2016, the effort was decommissioned.

## World E-Academy (WEA)

The World E-Academy (WEA) was a global initiative, including several UN agencies, international organizations and independent institutions, which stalled in 2015 because of lack of funding. WEA aimed at a global open platform and services for e-learning, contributing towards educational knowledge development and inclusive and equity access to quality learning opportunities in all relevant educational areas, with special attention for developing countries.

## Cross-border Content

This European Joint Research Centre, JRC, Science and Policy report (2015)<sup>6</sup> investigated Sharing Curricula across Borders and its Opportunities for Open Education Resources.

The aim of the study was to make an inventory of the existing cases in formal education (school sector, vocational education and higher education) where a curriculum or syllabus is shared across borders (e.g. state, national, linguistic and cultural). Based on the analysis of the desk research and a case study, further considerations were given to the potential cross border sharing of curricula/syllabi could have for Open Educational Resources, either existing or prospective.

The report

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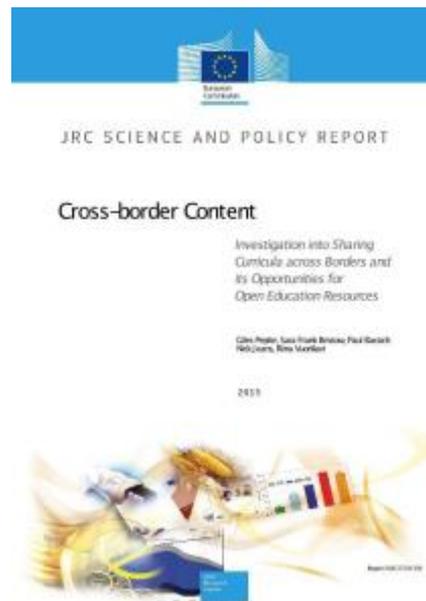
“calls for visionary multi-stakeholder initiatives in the area of cross-border curricula and education that could offer viable collaboration on Open Educational Resources. This could benefit not only single Member States, but also create an outlook that, in the longer term, might form a pillar of the development of a European connected digital single market, for example for boosting digital skills and learning.”

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<sup>6</sup> <https://ec.europa.eu/jrc/en/publication/eur-scientific-and-technical-research-reports/cross-border-content-investigation-sharing-curricula-across-borders-and-its-opportunities>

Figure 3. the Cross-border Content report



## LangOER

The EU funded project LangOER issued a policy brief (2015) which recommended governments to

“Take the leadership in facilitating the development of open frameworks and standards to ease the ability of OER repositories and systems to work together (provide and accept educational content, compatible applications and contextualised services).”

In its final “Policy Recommendations Enhancement of Cultural and Linguistic Diversity through OER” it submits several recommendations relevant for an initiative for GOL.

## 2nd World OER Congress Ljubljana OER Action Plan

The 2nd World OER Congress (18-20 September) will conclude with the Ljubljana OER Action Plan. In the draft as of 14 September 2017, under Recommendations for Mainstreaming OER in support of SDG 4, the following action is recommended:

### 1. Building the capacity of users to access, re-use and share OER

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*“f) Support the creation and maintenance of effective peer networks of educational providers that share OER based on areas such as subject matter, language, institutions, regions, level of education etc. at local, regional and global levels;”*

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## Initiatives on utilizing OER repositories

A number of meta-search tools have been developed which scan existing repositories. These include Ariadne Harvester, which operated on the precursor to OER, Learning Objects and is

now discontinued. [Solvonauts](#) is a practical search tool accessing 984 openly licensed repositories. Similarly, Creative Commons offers a [search tool](#) for openly licensed resources.

The [OER Commons](#) is an online OER library developed by ISKME in California. It aggregates resources from OER providers and curated contributions from individual educators. These materials are reviewed for quality, alignment to standards such as the Common Core and application of Creative Commons licenses.

### [The Learning Resource Exchange \(LRE\)](#)

From European Schoolnet (EUN) is a service that enables schools to find educational content from many different countries and providers. It was developed in order to provide Ministries of Education with access to a network of learning content repositories and associated tools that allow them to more easily exchange high quality learning resources that ‘travel well’ and can be used by teachers in different countries.

### [Amazon Inspire](#)

Amazon have recently entered the OER space with a site for sharing K-12 resources. It will allow teachers to upload and share their own resources. It provides resources from third party providers also. The licenses vary, and thus the extent to which it can be deemed an OER repository, remains to be seen.

### [Educational Repositories Network \(EdReNe\)](#)

The objective of this French Thematic Network is to bring together web-based repositories of learning resources with content owners and other stakeholders within education. It strives to share, develop and document strategies, experiences, practices, solutions, advice, procedures etc. on the organisation, structuring and functionality of repositories.

The overall goal is to improve the provision of and access to learning resources. The network will link to/collaborate with other cross-national and/or local repositories/ collections/ catalogues, and publishers’ associations.

### [EduOER](#)

EduOER is a European project hosted by GEANT, which acts as a portal, using metadata from OER repositories with the aim at facilitating access to European digital multimedia content including repositories, infrastructures and services.

### [OER World Map](#)

The OER World Map is a project funded by the Hewlett Foundation, which aims to provide a global representation of organizations, projects, services, people, and events relevant to OER.

These projects all provide inspiration and possible collaboration interfaces for a possible future GOL.

### [The Global Book Alliance](#)

The GBA is an international effort involving multiple stakeholders working to transform book development, procurement and distribution to ensure that no child is without books. The GBA mission is to guarantee that children everywhere have the books and learning materials they need to learn to read and read to learn. A sub project to GBA is the Global Digital Library.

## The Global Digital Library

The Global Digital Library intends to expand access to mother tongue (MT) content by providing openly licensed, downloadable materials that allow sharing, electronic use and large scale printing, as well as linking to other sources for those materials.

The initial focus will be on learning resources that can support children’s literacy learning. Other learning resources will be included at a later stage.

## Will Repositories Collaborate?

### Repositories already have begun to reach an important scale

OER repositories – institutional, governmental, and non-governmental – already reach tens of millions of users annually. These repositories vary dramatically by their contents, from textbooks to open online courses to documents. In addition, they vary by language, culture and intended audience. If we were to count the number of repositories themselves, they would surely range in the hundreds. So, is there a problem in this landscape of significant usage served by a wide variety of dispersed repositories? What problem would propel collaboration among such varying repository projects?

The answer may lie in three areas:

- **Discoverability.** Users, whether educators or learners, will not be aware of the variety of OER repositories available to them. Therefore, the discoverability of the repositories themselves is an important transmission belt to making underlying OERs discoverable.
- **Quality and trust.** Repositories vary in how they handle the issue of quality, ranging from curation to peer review. Closely tied to the issue of surface quality is the creation of trust between the user and the repository, which leads the user “stickiness.” In the same way, Wikipedia retains its users through creating a high level of trust that the entries are of high quality.
- **Quantity and niches.** General OER repositories attempt to please widely diverse users. A collaboration project may be the vehicle to allow for increased specialization of repositories, resulting in even higher levels of curation and review.

The GOL initiative aims to assist repositories by providing a single useful interface to make resources and the repositories that hold them more visible. What visibility provides to each repository, whether institutional, governmental or nongovernmental, is the enhancement of its services, its reach, and its reputation.

Several relevant quality repositories have been contacted to understand the interest and possible commitment for a global collaboration – and the interest is there. However, more specific and broad contacts have to be taken before concluding state of play.

The initial group of European repositories represented by PANOR and its partners, – represents a first possible initiative for successful collaboration.

As GOL grows, each repository will face both incentives to participate and disincentives if they fail to participate. If GOL is associated with high-quality OER repositories, those that participate will strive to differentiate their collections to ensure maximum usefulness and avoid duplication. These specializations will then permit them to offer value-added services to the free offering of educational resources. Finally, if GOL becomes the trusted interface to

high-quality OERs, non-participating institutions will risk losing their relevance as users return to the largest collection of vetted OER materials.

Figure 4. Model of GOL

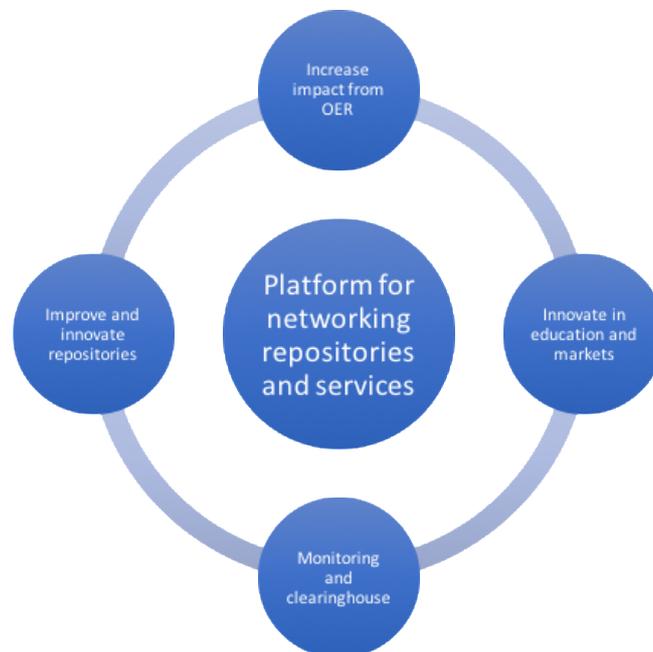


Figure 4 shows a functional model we could suggest for GOL. In the core, a platform for networking and knowledge sharing, and agreed actions and operations. Key functions could be 1) to support “internal” improvements among network members – e.g. repository structures, quality functions, metadata and other harmonisation, new type of repository functions and relations: to innovate and improve repositories, 2) to establish monitoring and clearinghouse functions among and by repositories, 3) facilitate innovation in education (ref. in particular reuse and remix) and in markets (ref. industry and edtech companies), and ultimately to 4) increase impact from OER, by stimulating increased uptake, use and reuse of OER.

## Organisational approaches

There are different approaches and ways of organising initiatives.

1. A council approach, taking ad hoc initiatives when needed
2. An initiative hosted by one or more stakeholders.
3. An independent, structured, democratic global organisation – a consortium, alliance or federated organisation.

Based on experience, whatever solution is selected, we think it is necessary that the initiative has a mandated, relative small (5 – 9 members) board/steering committee, that can take decisions to be implemented, to keep the intention and vision for the initiative alive. The board should provide permanence, regional diversity and institutional stability. The board would need a staff or secretariat services provided, depending on chosen model and level of ambition.

The chosen approach would deliver premises for financial model and business plan.

## Pros and cons:

1. **Council Approach.** Flexible. Should be able to adapt easily to changing needs in the OER market; identify external and internal needs and challenges. Challenges will be transparency, building trust and fundraising. Its weakness could be long-term projects and actions.
2. **Hosted by stakeholder.** This could be used alongside options #1 or #3 or a hybrid. Its advantage is greater flexibility. It would be easier to sustain than than the council approach (#1). Its challenges will be balancing independence and democracy. Its weakness is that the initiative could be dependent on the hosts, with less control by other OER/repository stakeholders.
3. **Consortium/Alliance/Federation.** Its strength would be independence, stakeholder control and sustainability. Possible challenges of this organisational structure could be to maintain entrepreneurial spirit among repositories and stakeholders. Its potential weakness would be costs and overhead.

Based on the principles from Education 2030, ownership by repositories and the need for operations, approach #3 seems most favourable. However, #2 could be a less ambitious solution – or a fall back option, if #3 seems unrealistic.

A possible organisational chart for the consortium/alliance/federation structure is below.

Figure 5. A possible organisation for Global Open Libraries - GOL.



Figure 5 shows how one could organise GOL. The partner meeting would be the core, decision-making part of GOL, including all members (repositories, stakeholders etc.). The specific democratic rules of the game, stakeholders etc. should be agreed among the members. The Steering Committee is envisioned as a relatively small, five-to-nine member body. The Secretariat and task forces enable the direct operations of the organisation. The initiative could be divided into one ongoing part, the GOL Platform, and one project part, supporting new activities, like PANOR or other innovative projects – as well as enhancing the collaboration and networking of regional stakeholders.

## Sustainability of GOL

The issue of sustainability is always relative: sustainability for what purpose? We see the initiative as instrumental for moving OER mainstream. From that perspective, we envision the need for sustainability from a five-to-ten-year timeframe.

Three criteria are critical for sustainability:

1. The benefits for owners and stakeholders are clear and possible to reap.
2. The commitment from owners and stakeholders are strong and long-term.
3. A realistic funding scheme is established.

In the following section, we discuss the issues of business plans and funding for sustainability. Therefore, we turn to the issue of sustainability as it applies to building a strong organizational basis for the overall initiative. Achieving commitment is not a quick fix, but a process- and result-oriented movement toward common goals. First, let's examine a few steps we can take:

- Identify and consult key repositories and stakeholders related to the described aims (Education 2030)
- Create ownership and responsibilities among the interested parties
- Show evidence that lessons are learned from previous and ongoing initiatives
- Create an interim committee among stakeholders for establishing the business plan, organisation and funding scheme.
- Allow enough time (penetration time) for the above steps.
- Secure secretariat resources necessary for the first 2–3 years before launching the organisation.

The PANOR initiative could deliver much of this, if it gets its funding. If not, agreement and investment in a joint project among key stakeholders, e.g. ICDE and OEC (and others), could deliver similar results.

## Business plan and funding

A draft business plan, including a risk mitigation plan and a funding scheme need to be in place before launching an initiative. The business plan must be developed by an interim committee and should aim for an operational plan for 2 – 3 years.

A funding scheme could have the following components:

- Membership fees, basic fee to have access to basic services. The size of the basic fee could be decided when commitment and general interest is better known.
- Basic funding/fee from governments – core customers. Ideally speaking, funding should come, in some way, from governments – basic funding, to facilitate educational resources as a public good. Alternatively, there could also be some kind of “sustaining membership fee” from publicly funded members.
  - Revenue from services
  - Libraries
  - Public entities
  - Companies
  - Commercial actors

- Users
  - Revenue for joint projects – “pay as you go.”
  - Grants. The GOL initiative should apply for grant-funded projects.
  - Develop a mechanism for sponsorships from donors, companies, etc.

Seen from the perspective of Education as a public good and that governments are accountable for Education 2030, a balanced mix could be governmental funding, membership fee and some income from membership services.

For the first phases the mix could be membership fee (30%), governmental/public support (50%) and services (20%). This mix can be changed by time with services delivering a bigger part of the budget. For expansion and higher ambitions, revenue from joint projects, grants and sponsorships should be implemented.

## The way forward

The way forward in establishing the initiative for GOL should be stepwise and divided into phases. The role of regions (federated approach), initiating projects like PANOR, and initiatives from significant repositories are important to include in such an approach – building momentum. We can also design user pilots, in which end user needs can enable us to test the usefulness of federated repositories to facilitate the uptake of OER. One such example is the need for a train-the-trainers approach to teacher education, ref. the Teachers Task Force (UNESCO).

Another example, recommended by the JRC study “Cross-border Content”, was collaboration on STEM.

Another key source for considering the next steps is the 2nd World OER Congress (Ljubljana OER Action Plan). The final plan should be considered to suggest which aspects could be carefully carried ahead within an initiative for GOL.

Having considered possible pilots, this study will not recommend any specific pilot project, but rather recommends considering pilot/s based on

- Available quality OER among partners
- Pull factors (e.g. teachers education)
- Stakeholders interest and support

Building regional momentum and designing user pilots go hand in hand as mutually reinforcing activities.

## Suggested Timeline:

### 2017 Phase 1 Feasibility and idea

- Testing the idea of GOL desk studies, field research and consultations.
- Consulting findings and commitments – the reference group and a few stakeholders
- Feasibility study delivered
- Contact and survey selected repositories
- PANOR developed as a project proposal

## 2018 Phase 2 Establishing GOL

- Application for PANOR submitted
- Interim steering committee established
- Organisational model
- Business plan
- Funding scheme
- Founding meeting?
- Secretariat established?
- Potential startup of PANOR

## 2019 Phase 3 Operations starts

- Pilot project/s defined
- Platform for GOL established

## 2020 Phase 4 Sustain operations

## 202X Evaluate, reevaluate

Based on the interest, support and commitments for GOL, the initiative could be founded as an organisation before mid-2018. An open summit for repositories and core stakeholders could be planned for 2019.

## Actions for further analysis

There is a number of issues that was not possible to cover in a limited feasibility study, that should be followed up either in a next step or by others, some of these issues related to repositories are summarized below:

1. Analyses of the demand for OER. Do educational institutions, NGOs, government organizations, and industries employing skilled workers want OER and are they demanding OER as a strategy for their success? Just because SDG's have been declared doesn't mean that individual organizations and institutions are demanding OER.
2. Analyses of the capabilities of educational institutions and organizations to adopt and manage the use of OER. Management of content within educational and training programs may not be ready and/or capable of adopting OER from different content providers.
3. Analyses of the capabilities of learners in different regions for adopt digital learning services.
4. Analyses of the capabilities and priorities of leadership in different regions to create and implement policies that support OER use as well as support for the allocation of resources to enable OER adoption.
5. Analyse state of play and issues related to coordination of repository initiatives within (large) countries and regions.
6. Analyse the situation and options for quality enhancements of and by repositories.

## Recommendations

The following recommendations are made as a result of this document (justification for these follows in a subsequent section):

### Conclusion and main recommendation:

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*Networking repositories of high-quality OERs for strengthened external and internal impact should have priority. A GOL initiative should add software services to surface OERs that match user demands for quality, content and context. The aim of the GOL initiative should be to encourage initiatives in this space, such as the PANOR European-originated initiative, to accelerate regional and global collaboration. A network of repositories could be formally established in 2018 and operational by 2019.*

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*Recommendation 1: Licensed, quality-controlled, open content should be in the control of the owners (or those representing the owners). A collaborative initiative should maintain that control and defend the principle of education as a public good.*

*Recommendation 2: GOL will connect human resources, experts and leaders for repositories and key stakeholders. Focus for networking should be to increase the impact of OER, significant increase the uptake among institutions, teachers and students / the end users.*

*Recommendation 3: Regional or national collaborative initiatives will be supported in GOL by creating a framework for regional initiatives. Community building should be a part of that framework.*

*Recommendation 4: GOL will be organised around an independent, structured, democratic global organisation. A business plan and an organisation model which is flexible, lean and optimised for its purpose to be developed.*

*Recommendation 5: Sustainability is a key priority of the model, which depends of the commitment the core owners and stakeholders are willing to give the initiative.*

*Recommendation 6: The basic funding scheme could be a mix of membership fee (30%), governmental/public support (50%) and services (20%). This mix can be changed by time with services delivering a bigger part of the budget. For expansion and higher ambitions, revenue from joint projects, grants and sponsorships should be implemented.*

### Reasoning for recommendations

In this study we have tested the feasibility of the following idea:

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*“Based on existing quality OER repositories, educational needs, teachers and learners demands, a possible initiative intends to **spark the uptake of OER and Open education in Higher Education and Upper Secondary Education**, and provide the basis for a future **networked global cooperation between quality OER repositories**. The main outcome of a*

*possible initiative will be a **dynamic global network of OER repositories**, well connected to key stakeholders and the user community.”*

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The simple answer from the feasibility study is **yes**. It is feasible to facilitate a global network between quality OER repositories to spark the uptake of OER and increase the impact from OER.

The rationale for a collaborative network of repositories is, first and foremost, the urgency for existing, quality-labelled OER repositories to have a greater impact. Through sharing of knowledge and practices, they could collaborate on:

- Visibility and access to resources that are relevant for the users and are of the expected level of quality
- Usability of the resources for teachers and students
- Facilitating sharing across repositories, borders and regions, and find solutions for contextual, linguistic and cultural adaptations
- Improving effectiveness of the repositories themselves
- Monitoring uptake and use of resources
- Business models for repositories
- Innovation, linkages and interaction with EdTech companies

Can the benefits from global cooperation exceed the costs (eg. overhead)? Closer collaboration between repositories have a number of possible benefits:

Beyond sharing experiences, knowledge, and practices, possible collaborations can come from sharing of usability methodologies, repository design and technologies, and toolboxes for users and producers, just to name a few. Other collaborations could include support for languages and cultures and semantics and standardisation. Global cooperation could support next generation OER for VR, AI, and AR. Business collaborations could support new markets for OER and services, innovation around repository services, internal and external quality management. Finally, global research collaborations could study usage, efficacy, efficiency and a host of other issues.

Perhaps the best argument for a global initiative is that the OER market is global. Costs and risks of going global would not be any higher than a corresponding regional initiative. Conversely, regional funders may find advantages in a funded activity has global benefits. Stakeholders from all regions of the world have indicated interest as well, supported by global NGOs and IGOs (ICDE, OEC, CoL and UNESCO).

The conclusion, the main recommendation, and the other recommendations given needs to be consulted so all targeted repositories and key stakeholders have an opportunity to give its say. Furthermore, commitments from repositories is key factor for success. Contacts to survey the interest and possible commitments for collaborations with key repositories should be a direct follow up of this report.

The 6 other recommendations 1 – 6 are discussed below.

**1. Is a collaborative initiative needed?** Or could one leave it to the marketplace?

Why should repositories link up at all? Could not commercial actors, as for example Amazon.com's initiative for amazoninspire.com<sup>7</sup> meet the needs – making other “weaker” initiatives redundant?

The GOL initiative bases itself on a commitment to the SDG 4, Education 2030 and education-as-a-public-good. This means that long-term principles, such as equity, inclusiveness, affordability, accessibility and quality, are of core importance. This leads to a recommendation that licensed open content should be under the control of the repositories that either directly own or represent the owners of the open content.

A collaborative initiative needs to build trust based on the before-mentioned principles. We do not think that the market place at this time can deliver that trust. Neither would a centralised “iTunes”-like commercial initiative be capable of successfully overcoming barriers for mainstreaming OER in education. Most of these barriers are connected to human processes and can only be solved in a human collaborative environment.

A community-based initiative (of repositories and core stakeholders) seems the best fit for building a successful initiative. Given the state of the “OER market”, such an initiative could correct for the failure of the market itself to provide solutions.

While the marketplace has an important role in the lifecycle of open content and in maximising the effect of the investments in openly licensed content, the control of the content as such should remain by the owners based on the principles from Education 2030.

## **2. Couldn't a public portal or technology do the job?**

If smart technologies or centralised portals could achieve our aims, then the investment in network building and knowledge sharing might not be required.

The current observed barriers to adoption of OER is closely connected to human processes. A global collaborative initiative of repositories supporting the goals for the OER movement will be very dependent on deep knowledge of the resources provided and capacity for intelligent curation to overcome those barriers. We anticipate needing supporting and novel technology solutions to enable improved repository services, but that is different from relying on technology alone. Similar, existing portals might provide great opportunities for making OER successfully available, a multi-channel approach for making OER available is foreseen to be a part of any strategy selected.

## **3. Regional initiatives?**

Already we see (several) regional initiatives for collaboration for OER, and some regionally oriented portals, e.g. EduOER, a European project hosted by GEANT.

The PANOR<sup>8</sup> is an example of a regional initiative responding to the opening up of education. It is part of the movement toward modernization of Europe's higher education systems, one

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<sup>7</sup> <https://www.amazoninspire.com/>

<sup>8</sup> PANOR position itself as a key initiative to respond to the opening up of education in Europe and modernization of Europe's higher education systems through contributing in creating a coordinated OER area for education in Europe, with strong links to key global partners in all regions of the world. Given the partnership get funding, a project will be initiated in 2018.

aspect of which is the coordination of OER initiatives for education in Europe with strong links to key global partners. Assuming that the partnership gets funding, the PANOR project will start in 2018. The partners aim for a global partnership, a Global Open Library. Similar initiatives could be taken to fuel regional impact – in other regions of the world – in some big countries.

Both in local and regional context communities are important for the successful uptake of OER repositories. Communities can be developed on an institutional, local/national or regional level.

Communities can build trust and confidence in the OER and are important to raise acceptance.

Regional collaboration among repositories, e.g. in Africa, could help accelerate educational opportunities, support local culture and provide better access to supportive mechanisms and funding.

#### **4. Approach and organisation.**

Given that an initiative is needed and wanted, one can imagine a few different approaches and way of organising initiatives.

- A council approach, taking ad hoc initiatives when needed.
- An initiative hosted by one or more stakeholders.
- An independent, structured, democratic global organisation – a consortium, alliance or federated organisation.

Based on the principles from Education 2030, ownership by repositories and the need for operations, approach #3 seems most favourable. However, #2 could be a less ambitious solution – or a fall-back option if the consortium approach does not seem realistic.

#### **5. Sustainability.**

The issue of sustainability is always a relative issue: Sustainable for which purpose?

In this case we see the initiative as possibly instrumental for moving OER mainstream. When that happens, one can evaluate and reevaluate the initiative. Three criteria are seen as success critical for sustainability:

1. The benefits for owners and stakeholders are clear and possible to reap.
2. The commitment from owners and stakeholders are strong and long-term.
3. A realistic funding scheme is established.

#### **6. Business plan and funding.**

A draft business plan, including a risk plan, and a funding scheme need to be in place before launching an initiative.

A funding scheme could have the following components:

- Membership fees.
- Basic funding/fee from governments – core customers.
- Revenue from services.
- Revenue for joint projects – “pay as you go”
- Grants, plans for applying for projects should be established.
- Sponsorships from donors, companies, etc. A scheme should be developed.

Glossary of terms used in this report (to be inserted in next version)

## Attachment 1 Steering group and reference group the feasibility study for GOL

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## PANOR

### The PARTnership for Networking Open education resources, OER, Repositories: PANOR

*PANOR position itself as a key initiative to respond to the opening up of education in Europe and modernization of Europe's higher education systems through contributing in creating a coordinated OER area for education in Europe, with strong links to key global partners in all regions of the world.*

*Given the partnership get funding, a project will be initiated in 2018.*

*The partners aim for having established a global partnership, a network: Global Open Libraries.*

**OER State of play:** The number and strength in existing and new initiatives for OER have grown significantly the last few years. Still the uptake of OER in the most advanced countries (e.g. the US) is low (estimated 15 – 25 % among faculties – teachers). Among laggards, in countries with lesser used languages like most countries in Europe, (e.g. Norwegian, Greek), the uptake is very low in higher education. The connection to the market place and EdTech providers is weak, but interesting cases and opportunities are emerging.

There are many initiatives for OER repositories and similar in all regions of the world, the quality and usability vary a lot and they are not well connected. The knowledge sharing and transfer between repositories is assumed to be weak. Significant, effective initiatives for utilising and sharing OER across borders, across languages and culture are not observed. The policy drive for OER has been strengthened, in particular through UNESCO and Commonwealth of Learning - COL, but still there is a huge need for actions to have easy access and use of quality OER.

**The vision:** is through a collaborative effort inspired by, and within the framework of the Sustainable Development Goal 4 Education 2030: “Ensure inclusive and equitable quality education and promote life-long learning opportunities for all”, and current relevant EU policies, establish a collaborative network to share knowledge, to design, test, establish, scale up and sustain a global open library for higher and upper secondary education.

**The rationale:** By PANOR networking existing quality repositories to:

- better connect to user communities, institutions, companies and the market place,
- innovate in repositories, stimulate innovation in education and at the market place
- build trust for OER in teachers' and learners' communities, as well as for institutional leaders
- facilitate sharing of OER across borders, languages and cultures
- increase the effect of the knowledge triangle, the investments in education innovation and research.

Well networked repositories are assumed to constitute a key resource for institutional innovation and making educational institutions more relevant. It will be a source for developing Courses, for MOOCs, Short courses and other content for learning and education. Utilising and collaborating with repositories is an opportunity for visibility, for cooperation and internationalisation.

For companies – well networked repositories should be an important source for quality assured content adapted to new technologies and solutions. Opportunities for new value

added services for students, for institutions for the communities and working life. It will be a source for new business opportunities, ref. the WEF publication “New Vision for Education” *Figure 1 Need for technologies based on OER (WEF 2015)*

## The initiative PANOR

**PANOR:** Through a long term partnership, the overall aim is to contribute to creating a coordinated OER area for education in Europe, with strong links to key global partners in all regions of the world. A sustained network in Europe can contribute to a global collaborative network of repositories.

Based on existing quality OER repositories, educational needs, teachers and learners demands, the project intends to spark the uptake of OER and Open education in Europe and provide the basis for a future networked global cooperation between quality OER repositories. The main outcome of the project will be a dynamic network of OER repositories, well connected to key stakeholders and the user community.

The partnership will address the following **specific objectives:**

- Consider and suggest models and solutions for networked OER repositories – a sustainable quality platform for the future
- Survey and consider ecological and business models for quality OER repositories
- Examine, test and suggest sustainable, easy accessible and user-friendly quality OER repositories
- Consider and suggest solutions for sharing across borders, languages and better cultural adaptation
- Clearinghouse and provide European and Global oversight and new knowledge on OER repositories
- Explore and promote innovation in OER, by OER in education and EdTech companies utilising OER
- Technology awareness
- Explore and facilitate knowledge exchange on next generation OER (ref. VR, AR, AI)
- Framework for Quality of knowledge sharing through OER
- A framework to strengthen local user communities in a global networked OER infrastructure
- Quality assurance for the project
- Provide information, communication, exploitation and innovation
- Good governance and management of the project.

The initiative will tap into the experiences from previous and similar initiatives, existing networks for quality OER, the knowledge of the ICDE OER chairs and international networks connected to the project.

## The core group of partners

The **core group of partners** are:

- International Council for Open and Distance Education (ICDE) – NGO, Norway
- Norwegian Digital Learning Arena (NDLA) – Public agency, Norway
- l'Université Numérique Ingénierie et Technologie (UNIT) – University, France

- Open University (OU) – University, England
- University of Cooperative Education Baden Wuerttemberg (DHBW) – University, Germany

The partnership is in a process of inviting in two companies as core members.

**ICDE:**

ICDE is the leading global membership organization for online, open and flexible education.

ICDE has the last years participated in the following EU projects:

- EPiCA (H2020), Coordinator, (2017 – 2020), Strategic partnership for the co-design of an innovative and scalable eportfolio ecosystem to improve the quality and visibility of skills
- IDEAL, Coordinator, (2014 – 2015/16), Impact of Distance Education on Adult Learning.
- LangOER, Partner, (2014-2016), OER for Less used Languages. Responsible for policy development.
- OPAL, Partner, (2009 – 2011). Open Educational Quality Initiative.

**UNIT:**

UNIT is one of 8 French Thematic Digital Universities (TDU), and is coordinating these universities participation in PANOR. The French Repository built by the TDU holds more than 35000 quality assured, licensed open educational resources. UNIT was selected by the French National Research Agency for the project SONATE (2015) to increase inclusion of disadvantaged persons in tertiary education through e-learning and remote tutoring.

**NDLA:**

NDLA is an agency operating on behalf of the county councils in Norway. Its aim is to develop and publish high quality, internet-based open educational resources (OER). NDLA was awarded the [European Public Service Award](#) in 2011 the Boldic Award in 2014 and the global OEC award in 2017. It holds more than 100.000 licensed resources targeting upper secondary level.

**OU:**

Institute of Educational Technology at OU, is an expert on the design, content and delivery of supported open and distance learning through the innovative use of technology. OU is one of the leading Open Universities in the World.

**DHBW**

DHBW is a public institution and the largest and preeminent German university for dual studies in Baden-Wuerttemberg, the innovation capital of Germany. DHBW combines academic studies and on-the-job training with **over 10,000 partner companies** in Germany. It is the only HEI offering entirely **dual studies**. DHBW regards **companies and social institutions as equal partners**. All partners work together to develop and improve the 'dual concept' and to **achieve mutual goals**. Its digital strategy as well as a number of digital learning materials and programs have been awarded with a national price of excellence. DHBW is a knowledge hub for Open Education in Germany.

The project partner Professor Dr. phil. habil. Ulf-Daniel Ehlers, Vicepresident Quality and Academic Affairs for DHBW, has led several OER initiatives, created numerous EU funded projects and is an internationally known innovator in the OER field.

All these partners have a history of collaboration on OER and open education for several years.

## **The wider partnership**

PANOR aims for establishing a wider partnership throughout the globe, with partners in all regions of the world. Candidate partners in most regions have been contacted for tentative feedback, and this work is ongoing. A networking event is organised during the 2<sup>nd</sup> OER World Congress on 19 September 2017, in Ljubljana, Slovenia.

### Attachment 3 Draft form for contacting and surveying repositories

(To be added later).