

## Building the iSchools online community

A proposal for developing a digital platform to support the iSchools collaboration network.

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### Background

The iSchools organization (ischools.org) currently has 77 member institutions, or iSchools, from around the world. While each individual iSchool has its own focus and strengths, together the iSchools consortium intends to be the global resource for education and research at the nexus of information, people and technology. The iSchools consortium is also a community with the world's largest body of students, academics and scholars in the field of information that ought to be able to seamlessly interact, share knowledge and collaborate for acting together. For achieving its full potential, the iSchools community should be developed and nurtured continuously. Nowadays, most communities are online communities in the sense that a great part of the interpersonal/inter-organizational interaction is mediated by synchronous and asynchronous means of communication. In fact, most of today's communities wouldn't be viable if they weren't online. The iSchools organization is no exception, meaning that it is of utmost importance to escalate and strengthen the iSchools community through the support of a digital platform.

At the present, the iSchools organization is not close to a full online community. The current support to the iSchools online community (iSchoolsOC) is limited to (i) one way information sharing through the iSchools website, and (ii) asynchronous communication using the ideans email list. This is by no means sufficient to develop and nurture the community. The results of the recent iSchools Survey of Deans and Heads of Schools (held in May 2017) pointed that community building is a strongly shared priority. It is thus clear that the iSchools organization needs to put in place a digital platform (iSchoolsDP) supporting information/knowledge sharing, collaboration and collective action.

### Vision

The iSchoolsOC is potentially produced by the social interaction between the faculty, researchers and students of every individual iSchool, at several organizational roles and levels. It can be supported in different ways by diverse configurations of features and architectural arrangements leading to distinct socio-technical configurations. The chosen base platform should be plastic enough to be adapted and extended to fulfill the needs of the iSchoolsOC, meaning that architectural and functional modularity are a critical design requirement.

We envisage then a digital platform based in a modular architecture supporting three fundamental purposes: information sharing, collaboration and collective action. In the technological plan, there is a range of open-source platforms that can be adopted as the basis for the iSchoolsDP development. The online community and the digital platform are the two faces of the same coin, so a socio-technical plan should be developed rather than just a platform development. Therefore, we'll adopt an agile-pilot based approach to the development of the iSchoolsOC/DP.

### Objectives

This project will develop a prototype of a digital platform to support the iSchools online community and will setup a pilot for demonstrating its use. The digital platform is intended to support the needs of the iSchools community in terms of knowledge sharing, social interaction and visibility by providing tools for information sharing, collaboration and collective action.

### Scope

The project will deliver a functional prototype with enough functionalities to enable setting up a pilot involving a number of iSchools to demonstrate the potential of the approach. This is not a platform ready to enter in the production phase, however it is expected that at the end of the first phase (by the iConference 2018) the functionalities implemented (basic features) and the gathered feedback will enable the planning the production phase. This feedback will be used to improve and finalize the prototype. As the prototype is a functional and evolutionary prototype, it is expected that to transform it in a production platform hosted by a professional service will not take longer than three months (according to the calendar of this project this would be in the end of October 2018, assuming that the decision to enter the production phase would be taken in July 2018).

### Basic features

The basic features to be demonstrated in the pilot are the following:

#### *Information sharing*

<i>iSchoolsDP basic features</i>	<i>iSchoolsDP pilot demonstration</i>
Content management	Basic content types, basic metadata, content structure and organization, content search, filtering of results; content exploration; selective diffusion; Current content of the iSchools website available in the iSchoolsDP;
Activity/news/events streams	Global and personalised streams;

### Collaboration

<i>iSchoolsDP basic features</i>	<i>iSchoolsDP pilot demonstration</i>
Groups	Closed groups implemented for PhD students and early career faculty;
Social network features	Profiles, follow, notifications, related content, comments;
Integration with social networks	Integration with twitter

### Collective action

<i>iSchoolsDP basic features</i>	<i>iSchoolsDP pilot demonstration</i>
Collaborative spaces,	A collaborative space implemented for PhD knowledge sharing activities;
Foruns, polls,	A general forum implemented; a simple poll implemented;
Events management,	Enrollment, coordination

### Platform

<i>iSchoolsDP basic features,</i>	<i>iSchoolsDP pilot demonstration</i>
User accounts and profiles,	At least 30 active users and profiles
Administration,	Management of users, groups, roles, content, comments

These basic features and pilot demonstrations can be changed or expanded depending on the evolution of the project.

### Beneficiaries and impact

The beneficiaries of this project are (i) the iSchools community: individually, the faculty and students and, institutionally, the iSchools organization as a whole and each iSchool member and (ii) the general public, particularly in information related sectors. The iSchools online community will foster collaboration and networking between faculty, students, researchers, making potentially continuous the interaction between the iSchools between face-to-face meetings. This will result in the strengthening of togetherness and mutual bonds. The main outcome will be a substantial increase in knowledge sharing in the teaching, research and industry relationships areas. The general public, particularly in information related sectors, will find in the iSchoolsDP a rich and diversified body of knowledge made public by the iSchools community. This will also impact the iSchools organisation for the increased visibility of its activities and outcomes.

### Relationship with other projects

This project will have a close interaction with the Northumbria University project “Promoting teaching and research in information through a searchable interface of iSchools’ teaching and research activities”. In particular, it is a requirement that the digital platform will have access to the database in order to extract information useful for dissemination or collective action.

### A note about the governance of the future iSchoolOC/DP

As mentioned before, the project will deliver a prototype and pilot of the iSchoolsOC/DP in a first phase, and a governance model in a second phase assuming that the iSchoolsDP will be officially deployed. It is then premature to advance the governance model in detail in this proposal as we need to have the prototype and pilot tested in order to go into the governance details. Nevertheless, it is important to foresee that the platform, when in production, must be run in a professional service provider and this will represent a yearly cost (about 250-400€/year). Technical support will also be needed, which can be provided by e.g., contracted yearly hours from the IT services of one or more iSchools. Also needed, and an important success factor, is a community/information manager to deal with the continuous needs of creating and maintaining the collaboration dynamics and nurturing the iSchoolsOC, as well as giving support to data and information management. Scenarios will be described in the governance model.

### Work plan

We aim at demonstrating at the iConference 2018 a pilot of the iSchoolsOC/DP featuring realistic information/knowledge sharing, collaboration and the support of some collective action. In our initial vision, this pilot would involve at least two iSchools of each geographic area. We’ll also try to have a rough prototype at the euro-iSchools next meeting in October in Porto.

	Tasks
1 <sup>st</sup> phase [August 2017-April 2018]	t1. Vision, goals and high-level requirements
	t2. Platform selection and setup (baseline)
	t3. Base requirements specification
	t4. Iterations on the development and evaluation of the prototype
	t5. Pilot planning, implementation, management and evaluation
2 <sup>nd</sup> phase [May 2018-July 2018]	t6. Prototype improvement and finalization
	t7. Development of a governance model

#### Milestones

M1 — 30SEP17 — Vision for the iSchoolsOC established

M2 — 30NOV17 — Prototype proof-of-concept

M3 — 16MAR18 — Pilot ready for demonstration

#### Deliverables

d1 - Report: Vision, goals and high-level requirements - end of September 2017

d2 - Software: Prototype proof-of-concept - first week of October 2017

d3 - Software: Prototype and pilot - third week of March 2018 (iConference 2018)

d4 - Software: Final prototype - end of July 2018

d5 - Report: Final report including the governance model - end of July 2018

### Project management

The project will be managed locally by the University of Porto (INESCTEC) and steered by a group composed of 4 members: 2 representatives of the euro-iSchools, 1 representative of the Americas iSchools and 1 representative of the Asian-Pacific iSchools.

The project will be developed at the labs of the Center for Enterprise Systems Engineering of INESCTEC. INESCTEC is an independent R&D institute who has the University of Porto as an associate. It is located at the campus of the Faculty of Engineering (see annex for further details).

### Budget

1<sup>st</sup> phase: 20,000€

2<sup>nd</sup> phase: 6,600€

This price covers one full-time research assistant allocated to the project plus the overhead costs. Project management and scientific/technical coordination will be subsidized by the University of Porto/INESCTEC.

Any travel expenses are not included in the price and will be funded by the iSchools. One travel is planned: the participation in the iConference 2018 in Sheffield of one person (research assistant). The travel costs will include the flights Porto-Sheffield-Porto, accommodation in Sheffield and per diem subsistence.

### Technological options

Drupal is consistently portrayed in developers and IT professionals web sites<sup>1</sup> as one of the 3 main open source platforms (together with Wordpress and Joomla) for

<sup>1</sup> Examples:

<https://support.rackspace.com/how-to/cms-comparison-drupal-joomla-and-wordpress/>

<https://www.1and1.com/digitalguide/hosting/cms/cms-comparison-a-review-of-the-five-best-platforms/>

<https://websitesetup.org/cms-comparison-wordpress-vs-joomla-drupal/>

developing web sites or portals, from simple blog sites to complex online stores. These sites describe Drupal as best for complex, advanced, and versatile sites; for sites that require complex data organization; for community platform sites with multiple users. It is evaluated as very flexible, with modular layout, having a slim basic installation and has a focus on social publishing and community projects. These sites also point as a drawback of Drupal being technically more difficult to manage than the other.

Specifically, the Drupal distribution that we find more adequate to undertake this project is Drupal Open Social<sup>2</sup>:

“Open Social is a distribution for building social communities and intranets. The distribution is positioned as the successor of Drupal Commons, taking full advantage of the new possibilities of Drupal 8. Open Social is made by the same core team that created the award winning, Drupal based social community: 'Greenpeace Greenwire'.”

Furthermore, Drupal has been widely adopted by universities worldwide<sup>3</sup>. An example of Drupal adoption and its rationale as content management platform is the University of Edinburgh<sup>4</sup>.

Finally, there is an extensive know-how at INESCTEC on developing Drupal-based collaborative platforms.

**Risk management**

The main risks of this project are the following:

<b>Risk</b>	<b>Contingency measure</b>
<p><i>Problems due to technical complexity</i></p> <p>The Drupal platform is more complex than other similar platforms. It can happen that the development team encounter difficulties that delay considerably the planned deliveries.</p>	<p>Drupal online community is extensive and supportive in problem solving. On the other side, INESCTEC and UPorto have several centers and labs with experienced developers in Drupal.</p> <p>Also, decisions on the development path will be cautious in a way not to enter in unknown or undocumented areas.</p>
<p><i>Lack of iSchools stakeholders involvement</i></p> <p>The success of the prototype will be directly dependent on the involvement of stakeholders from multiple iSchools. A weak</p>	<p>The steering group is composed by a group of iDeans highly committed and enthusiasts of this project. They will be able to mobilize</p>

<sup>2</sup> <https://www.drupal.org/project/social>

<sup>3</sup> <https://www.drupal.org/industries/education>

<sup>4</sup> <http://www.ed.ac.uk/website-programme/edweb/project/why-drupal>

<p>participation of the future users in the design of the platform will compromise the quality of the specification and the prototype and can diminish the overall acceptance of the platform.</p>	<p>the adequate iSchool faculty and other staff that will contribute effectively to the prototype design and pilot implementation.</p>
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**Research opportunity**

Although this is not a research project, it will provide an opportunity for research. Data can be collected, from stakeholders and designers, regarding topics such as the knowledge community design process or the collaboration drivers. Action-research can be an effective research approach.