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Learning Registry Sample RFP Requirements

This document offers some sample language that could be used in an RFP or in supporting documents for organizations wishing to participate in the Learning Registry and who are looking for vendor support to do so.

The language and requirements should be adapted to the organization's particular needs and policies; what is provided here is a starting point.

This is a summary version of requirements for using the Learning Registry. A longer version i included below.

Sample Scope of Work & Tasks

The [[organization]] is seeking proposals to address one or more of the following areas of work: (1) establish and operate a Node connected to the Learning Registry on behalf of the [[organization]]; (2) prepare and publish alignment and other data into the Node for distribution across the Learning Registry Network and (3) extract, from the Learning Registry, relevant alignment and other data for use in existing state data systems and teaching/learning environments. Offerers may respond with a proposal for all or some of these areas of work, and should clearly indicate in the first sentence of the proposal to which area(s) the proposal responds.

In the following, "[[organization]] data systems" refers to systems such as resource repositories, content management systems, teacher portals, and learning authoring and delivery systems

1. Operate a Node. Present a task breakdown and cost to establish and operate a Learning Registry node, including a description of the proposed hardware and software to be used for the node. Address plans for contined operation and maintenenace, such as data backup procedures, software updates, and security and uptime monitoring.

2. Publish Data. Present a task breakdown and cost to publish data from the [[organization]]'s data systems to the Learning Registry on a recurring basis. Metadata, such as how learning resources align to content standards, shall be expressed in a [[organization]]-approved standard format such as LRMI, Dublin Core (or variants of) or Learning Registry formats. Content standards alignment data shall be expressed in a machine-accesible format such as ASN. Other data, such as how a learning resource is used, shall be expressed in a [[organization]]-approved

standard format such as LRMI or Learning Registry formats.

3. Extract and Use Data. Present a task breakdown and cost to extract learning resource data out of the Learning Registry for import into an [[organization's]] data storage system. Alignment between content standards and learning resources should be imported, along with data about the identities of organizations who submitted such alignment data. Extraction should use appropriate mechanisms for including/excluding data, such as whitelists of organizations.

Include a task to provide data feeds from the [[organization's]] data storage system to other state data systems, especially resource repositories and teacher portals. Use of these data feeds should be shown to support the discovery of learning resources and re-publishing of feedback about learning resource use from districts, schools and teachers through their normal tools and environments. Where possible, describe how web versions of these tools and environments could display resource summary and detail pages that contain metadata tags (such as LRMI) to permit Schema.org-compliant web crawlers to consume this metadata to improve search.

This is a more detailed description of requirements that could be used as a Appendix.

Detailed RFP Language

General Statement of Needs

The [[organization]] intends to establish a presence within the Learning Registry Public Network (LRPN) for the purpose of sharing information about learning resources, including information about alignment of learning resources to content standards (alignment data). The [[organization]] intends to share its alignment data with other states and organizations through the Learning Registry Public Network and to access alignment data provided by other entities through the LRPN. The [[organization]] also intends to share other descriptive information about learning resources (metadata) and anonymous and aggregate data about the usage of learning resources (social metadata/paradata).

Additionally, the [[organization]] intends to make alignment data, metadata and paradata available to districts, schools and teachers for the purpose of discovery of appropriate learning resources and to gather from these entities information about learning resource usage, including social data (likes, ratings, comments). To enable this discovery and feedback, the [[organization]] intends to expose the data in the node to districts, schools and teachers through the normal tools and processes that they currently use for finding and using learning resources.

In summary, the [[organization]] intends:

1. to deploy and operate a Node that is connected to the Learning Registry Public Network;
2. to integrate the Node into its teaching and learning infrastructure for the purpose of data exchange between the node and other components of the [[organization]]'s teaching and learning infrastructure;
3. to prepare and publish the [[organization]]'s existing or to-be-developed curricular alignment data to the Node and to develop an automated process for periodic updating; and
4. to establish data feeds and interfaces to/from the Node to permit districts, schools and teachers to discover and use learning resources and to provide feedback and usage data.

Sample Scope of Work

The [[organization]] is seeking proposals to address one or more of the following areas of work:

(1) establish and operate a Node connected to the LRPN on behalf of the [[organization]]; (2) prepare and publish alignment and other data into the Node for distribution across the LRPN and (3) extract, from LRPN, relevant alignment and other data for use in existing state data systems and teaching/learning environments. Offerers may respond with a proposal for all or some of these areas of work, and should clearly indicate in the first sentence of the proposal to which area(s) the proposal responds.

In the following, "[[organization]] data systems" refers to systems such as resource repositories, content management systems, teacher portals, and learning authoring and delivery systems

RFP Response

In their proposal, the offerer shall describe the following depending upon the area to which the proposal responds:

Technical Approach to Operating a Node

Technical/architectural approach to deploying the Node. Describe the approach to establishing and operating a Learning Registry node, including a description of the proposed hardware and software stack. For example, the proposed approach may be to deploy a single node instance connected to the Learning Registry Public Network, multiple node instances, or both public and private (test/sandbox) node instances. Additionally, the approach may be to deploy nodes on dedicated (new or existing) private hardware/software ([[organization]]/Offerer) or alternatively in the cloud (e.g., using Amazon Web Services).

The Learning Registry software to be used. Describe how the functionality of the Learning Registry is to be achieved. For example, the approach may be to use the existing open source implementation of the Learning Registry services, or alternatively to use other 3rd party software providing Learning Registry services. In the case of using 3rd party software, the offerer shall describe their approach to validate that the software conforms to the relevant Learning Registry and other technical and interoperability specifications and test suites and the process to obtain [[organization]] approval for deployment.

Operational plans and policies for the Node and other related software. These operational plans include, but are not limited to, data backup and restore procedures, system patches, software updates and revisions, including keeping the [[organization]]'s Node up to date with new releases of both the Learning Registry software and specifications, security, data breach/break-in, access controls, logging, auditing, performance and up-time monitoring,

Technical Approach to Publishing

Publishing to the Learning Registry Public Network. Describe how the [[organization]]'s data, including existing or to-be-developed standards alignment data, will be extracted from the

[[organization]]'s data systems, formatted appropriately for the Learning Registry, and published on a recurring basis. Data about how learning resources align to content standards shall be expressed in a [[organization]]-approved standard format such as LRMI, Dublin Core (or variants of) or Learning Registry formats. Content standards alignment data shall be expressed in a machine-accesible format such as ASN. Publishing of alignment data shall include the ability to specify "white listed" identities (such as from other authorized states) as represented in [[organization]] data systems. Describe how interfaces to publish other data, such as metadata about learning resources or non-alignment paradata, will be created and implemented. Describe how an automated schedule for recurring publishing will be established.

Note, the offerer may propose to publish the alignment data to a public node or nodes in the Learning Registry Public Network simultaneously with, or in advance of, the deployment of the [[organization]]'s node. In this way, this task is not entirely dependent upon the task for establishing and operating a Node.

Note that developing the alignment data itself is not part of the scope of this work, but working with [[organization]] stakeholders who have created such alignments is required.

Technical Approach to Data Extraction and Usage

Integrating LR data into the [[organization]]'s teaching and learning infrastructure. Describe the process for extracting data out of the Learning Registry for import into an [[organization's]] data storage system of learning resource data. In particular, specific data available from the Learning Registry covering alignment between content standards and learning resources should be imported. This import service should account for the identities of submitting organizations to the Learning Registry, such that the [[organization]] can specify a white list and/or a black list of identities to accept or reject during imports. Imported data should retain the identity of the submitting organizations within the internal data storage system.

Additionally, this task will include providing data feeds from the [[organization's]] data storage system to other state data systems, especially resource repositories and teacher portals. This also includes supporting discovery of learning resources and extraction of feedback about learning resource use from districts, schools and teachers through their normal tools and environments. Where possible, describe how web versions of these tools and environments could display resource summary and detail pages that contain LRMI metadata tags to permit Google and other Schema.org compliant web crawlers to consume this metadata.

Other Proposal Requirements

If applicable, proposals should also include the following elements:

Terms and license conditions for all software, documents and data to be developed. All

interfaces, APIs and data model specifications shall be available under the Apache 2 open source license, or an alternative open source license approved by the [[organization]]. All documents and data shall be available under the CC0 license or an alternative open content license approved by the [[organization]].

Description of Other Support. Help desk and training support for users for the duration of the contract, including the list of materials and documents to be developed. Include a description of offeror's approach to forming a community of interest among [[organization]] users and offerer's participation in the larger Learning Registry community.

Transition Plan. A change management and end-of-contract transition plan to support the sustainment and ongoing operations of the Node throughout and after the contract period.

Workplan and Costing. A complete workplan with proposed milestones for all tasks and activities and project costs by tasks, including options and alternatives.

Offerers must abide by all applicable [[organization]] and Federal regulatory and reporting requirements.

Offerer's Qualifications

Offerer should describe any participation in the ongoing development of the Learning Registry, and should demonstrate their knowledge of the Learning Registry implementation, APIs, and effective use. Offerer experience as a participant in community and open source projects should also be described. The successful offerer will have experience with distributed, peer-to-peer content management systems like the Learning Registry and will demonstrate familiarity with the [[organization]]'s content repositories, digital libraries, teacher portals, learning managment system, and the like. Offerer must be familiar with standards for expressing metadata, paradata, and content standards alignment data.

Glossary

Alignment Data: A statement relating a learning resource to a content standard. The statement is encoded in some metadata or paradata representation, and the content standard is identified by a well-defined identification scheme, e.g., an ID from ASN.

Learning Resource: A digital resource used in education and teaching. A learning resource is identified by a resource locator that can be used to access (a copy of) the resource.

Learning Registry Public Network: A collection of connected Learning Registry Nodes that share metadata and paradata and that allow open access to the metadata and paradata. The Public Network operates under a set of open access and connection policies.

Metadata: Descriptive, authoritative descriptive or cataloging data that describes a learning resource. Metadata is encoded in a well-defined standard's representation, e.g., Dublin Core, IEEE Learning Object Metadata.

Node: A deployment of the Learning Registry software. A node includes a data store for metadata and paradata, network connections to other nodes for sharing of metadata and paradata between nodes and a set of services used to access data from and publish data to the node. The node and its services operate under a set of policies set by its owner.

Paradata: Usage/activity data (e.g., resource x used in situation y), social networking data (e.g., likes, ratings) or assertions about a learning resource. Paradata is encoded in a well-defined representation, e.g, the Learning Registry Paradata Specification