# LRMI Governance Requirements, Options and Recommendations

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# 1. Requirements

We need to find a suitable home for the current LRMI specification that will ensure that implementers have confidence in its stability and longevity. This should not preclude updating the specification or extending its scope in line with community requirements. We also need an open and transparent process for specification updates, bug fixes, version control, deprecation, etc.

We believe that LRMI would benefit from being brought under the aegis of an open governance body. This would provide stakeholders and implementers with a stable version of the specification and the confidence to adopt it. Adoption by a recognised body would ensure that transparent governance and maintenance procedures exist, which again should help to increase adopters and implementers’ confidence in the specification. Our aim is that the governance body would ratify the current specification quickly and without significant alteration.

The output of the governance process should be a stable version of the LRMI specification that is freely available, provides developers with the right to implement, and carries an appropriate Creative Commons licence (CC BY 4.0 or CC BY 3.0). As part of the governance process we would also propose to investigate and clarify any potential IPR or patent issues.

We also believe that LRMI requires an open community engagement mechanism which would enable feedback to be submitted and requirements to be gathered from the education community in order to enable the specification to grow and adapt as required e.g. advocating the adoption and use of the useRightsUrl data field in both LRMI and schema.org. LRMI needs an active and open community group to provide use cases and input functional requirements for amendments, additional features etc, for future version of the specification. In addition, a technical working group is required to oversee maintenance and any potential extension of the specification, under the aegis of a governance body. The role of the LRMI Advisory Group should also be reviewed. We need to ensure that the interests and requirements of all stakeholders are represented, e.g. search engines, all publishers regardless of business model, and the user community including governmental agencies, schools, and education professional associations representing K-12, further and higher education.

# 2. Options

## 2.1 ISO

<http://www.iso.org/iso/home.html>

**Pros:** Route to formal international standardisation. Adoption of ISO standards can be mandated in some jurisdictions. ISO standards are recognised internationally. Not affiliated with any one sector or domain.

**Cons:** Development and ratification of ISO standards can be a lengthy process. Procedures for updating international standards are also time consuming. There is no guarantee that LRMI would be approved in its current form. Representation is primarily through national standards bodies. Specifications are not free at the point of use.

**Comments:** We do not believe it is necessary or beneficial to seek to formalise LRMI as an ISO standard at this point in time. However we do propose to explore the relationship between LRMI and ISO MLR.

##  2.2 NISO

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

Many of the pros and cons that apply to ISO also apply to NISO.

## 2.3 W3C

<http://www.w3.org/>

**Pros:** Recognised internationally. Not affiliated with any one sector or domain. Hosts a number of different group types, e.g. Community Group, Business Group. Community Groups are open fora, with no fee to participate. Both Community and Business groups are not limited by time, and have “no chartered end date.” A [Schema.org Community Group](http://www.w3.org/community/schemabibex/) already exists, which aims to extend schema.org with properties relevant to bibliographic resource description. W3C Recommendations are free at the point of use.

**Cons:** W3C has traditionally focused on technical web standards. May require some effort to get necessary pedagogic input for LRMI. W3C Recommendations may not carry the weight of ISO standards in some quarters.

**Comments:** Given the one Schema.org Community Group already exists, there may be a good argument for establishing an LRMI Community Group, however this requires further discussion between Cetis, AEP and Creative Commons with input from the TWG. Cetis and AEP are less familiar with W3C procedures so further investigation is required.

## 2.4 Schema.org

<http://schema.org/>

**Pros:** LRMI has benefited enormously from its association with Schema.org. Schema.org has the backing of the search engines. Schema.org is free at the point of use.

**Cons:** Schema.org is not an open specifications governance organisation. Governance procedures are opaque and decision making processes are unclear. Schema.org is a closed membership organisation. It is unclear how the Schema.org sponsors may plan to manage the specification in the future.

**Comments:** LRMI’s relationship to the schema.org organisation and specification is fundamental to its successful uptake and future development. It will be important for LRMI to continue harmonising with Schema.org going forward, but it may be beneficial to seek an alternative home to maintain a stable current version of the LRMI specification.

## 2.5 IMS Global Learning Consortium

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

**Pros:** Strong track record in the development of learning technology interoperability standards. Recognised in the education domain. Specifications are free at the point of use. Cetis are familiar with the IMS standardisation process.

**Cons:** Closed membership organisation. Less recognised in the publishing domain? Perception that the organisation is focused primarily on the HE sector? Have not developed any metadata standards for a number of years.

**Comments:** Although IMS are unlikely to be considered as a suitable option for governance of the LRMI specification it would be potentially beneficial to work closely with IMS and to explore LRMI’s relationship to existing IMS content specifications including QTI and Common Cartridge.

**2.6 ISTE (International Society for Technology in Education)**

<http://www.iste.org>

**Pros:** Recognised in the publishing and K-12 domains. Good track record of working collaboratively with other associations and communities. Strong understanding of the teaching and learning domain. AEP already have a good relationship with ISTE.

**Cons:** Closed membership organisation. Less widely recognised internationally. May be perceived as too domain specific or too US centric ISTE do not currently develop or maintain technical standards.

**Comments:**  Some of the issues that apply to IMS may also apply to ISTE. Further investigation and discussion of ISTE may be required.

**2.7 Constitute a new governance body**

**Pros:** The LRMI community would have control over the current specification and potential future developments.

**Cons:** Establishing and approving governance procedures from scratch would be costly and time consuming. Significant risks associated with establishing a new governance body. Concerns about longevity, sustainability and lack of process. May be perceived as being partial towards one group of stakeholders or another.

**Comments:**  We are unconvinced that Cetis, AEP or Creative Commons have the resources to establish an entirely new governance body to ratify and maintain LRMI and are unlikely to pursue this as a way forward.

# 3. Cognate Initiatives

It may be useful to look at other metadata initiatives that have contributed to schema.org and how they function. Two significant ones are [Good Relations](http://www.heppnetz.de/projects/goodrelations/), which contributed the e-commerce parts of schema, and [wikidoc](http://www.wikidoc.org/index.php/Main_Page) which contributed the medical parts.

The approach adopted by the WHATWG (web hypertext application technology working group) for HTML5 may also provide a relevant case study if submission to W3C is deemed to be an appropriate option.

# 4. Thoughts and Recommendations

## 4.1 Relationship to schema.org

Whatever option is adopted we will need to carefully consider the relationship between the governance of LRMI and schema.org. If a body other than Schema.org maintains LRMI, what are the dangers of the two verisons of the specification diverging? How do we mitigate this risk?

## 4.2 Maintenance process

If the specification is going to develop, we need to ensure that it does not become bloated, and that, as far as possible, it remains backwards compatible with earlier versions and with schema.org. There must to be a clear process for identifying and prioritising new features and deprecating old ones. There should be a mechanism to allow the wider community to input new additions and features, the TWG should prioritise features for adoption and seek to achieve consensus, with the governance body approving changes and maintaining version control of the specification.

## 4.3 Technical Working Group

Reconstitute the LRMI TWG to prioritise and act on community requirements, comment on possible changes from other sources, e.g. amendments and additions to schema.og, and potentially develop the specification.

## 4.4 Application Profiles Guidelines

Profiling LRMI and associated vocabularies is likely to be the best way to meet specific community requirements. Consequently it may be useful to produce an informative Best Practice and Implementation Guide for the specification. This would take the form of documentation contribted to schema.org explaining how to use schema.org to mark-up learning resources, similar to this documentation for [medical/health](http://schema.org/docs/meddocs.html) types.

## 4.5 A Dual Solution?

One solution that may be worth exploring is involving two organisations in the specification maintenance and governance process. For example, a technical standards organisation with the relevant technical expertise, such as W3C, could oversee governance of the current stable version of the specification, while community engagement could come under the aegis of a domain specific education organisation, such as ISTE. This would be something of an experimental solution, however ongoing discussions between Cetis and AEP suggest that this approach could potentially be beneficial for aiding the adoption, uptake and implementation of LRMI.