



Work Item Title: **Register CRediT (Contributor Roles Taxonomy) as NISO standard**

Proposal for Consideration by the NISO Voting Membership

Approval Ballot Period: November 18 - December 18, 2019

The following proposed work item is submitted by:

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Background and Problem Statement:

It has been several years since the launch of the first incarnation of the contributor role taxonomy ([CRediT](#)) for use by scholarly publishers of science (launched 2014). And CRediT is increasingly recognised by actors from across the research community (e.g. publishers, Journal editors, funders, research evaluators) as a simple and effective way to help drive a shift to greater visibility and recognition for the myriad contributions to scholarly research output (see for example: [DORA Assessment](#); [UK Academy of Medical Sciences](#); [Journal Editors' recommendation in PNAS](#))

Today an increasing number of publishers have implemented CRediT across a number of their journals; thus far, while the implementations have been mainly across life and physical sciences journals, the applicability of CRediT goes beyond these disciplines. The number of journals using CRediT to capture structured author contribution is set to increase substantially over 2019 due to Elsevier's plans to roll out more widely - and a number of other big publishers have indicated their intention to follow.

CRediT has almost taken flight on its own, with very little designated support – created initially through a collaboration between journal editors (ICMJE), Harvard University provost office (Institution, Amy Brand) and Wellcome (Funder, Liz Allen) - see [report of Harvard-Wellcome workshop](#) - and it is now an important time to ensure that all current and further implementations can draw upon the taxonomy to best effect. CRediT currently does not have any formal registered standard assignment and we believe that attaining the ANSI/NISO standard will support further implementation and uptake.

Once the Taxonomy was developed and road tested (2014-2015), CASRAI became the custodian to CRediT but was not resourced to provide specific resources to support implementations; therefore beyond the website, 'word of mouth' became the main route by which researchers and publishers found out about CRediT. There has been a snowballing effect and today we see increasing uptake - and the need to ensure that the taxonomy is managed in a way that supports implementations and use.

While there was an informal CRediT 'programme committee' set up via CASRAI, this committee met only sporadically during 2015/16 and has now been disbanded, mainly due to lack of designated resources to manage meetings/agendas. The Programme Committee/CRediT project co-Chairs (Liz Allen, F1000 and Alison McGonagle-O'Connell, formerly Aries Systems and Coko Foundation) currently work alongside a CASRAI Board Member (Simon Kerridge, University of Kent) to provide basic resource for CRediT and act as the contact points for enquiries - mainly about implementations. This however is not sustainable as interest grows, nor is it desirable as without formal documentation of CRediT's status and credibility as a formal standard.

As noted, many publishers already capture contributor information, and examples exist for expressing this information in structured ways as some of the current implementers are already tagging CRediT contributions coded in JATS XML v1.2. Crossref - who currently provide the indexing around most scholarly published outputs - are also currently planning to include CRediT roles into the latest version of its scholarly output meta-data schema (NB: Liz Allen is currently a member of the Crossref Board of Directors). **It is therefore the ideal time for CRediT to attain the ANSI/NISO standard - and for NISO to be part of CRediT management and governance going forward** (helping to manage and evolve the standard as required over time).

Statement of Work:

The CRediT Chairs (Liz, Alison, Simon) are now seeking additional financial resources to help support an awareness and implementation drive, specifically among scholarly publishers in the first instance. And, as with any taxonomy being used as a standard, it is important for it to have value as part of metadata that it is used consistently.

We are keen for CRediT to be lodged as a formal standard with NISO and encourage usage of '[CRediT 1.0](#)'. And there are four priorities for CRediT going forward:

- (i) **Lodging as ANSI/NISO standard** - this will support uptake and provide assurance to Crossref who are planning to include CRediT in their latest metadata schema. And provide a marker of 'QA' to scholarly publishers who are looking to implement CRediT.
- (ii) **Awareness & outreach drive** - to support further uptake among publishers and use of the data more broadly.
- (iii) **Re-establish a CRediT users community/programme committee** - we would like to do this under the auspices of NISO or linked to if possible (as a NISO Standing Committee).
- (iv) **Manage the taxonomy for the future** - to provide a route for feedback and road testing further iterations as required over time. While CRediT was initially developed and tested as a taxonomy for life and physical sciences, many of the current implementers are using it to capture contribution in other disciplinary areas. We are aware that over time the current 14-role taxonomy may need to evolve as science and the types of contributions change.

Furthermore, to facilitate and optimize adoption by researchers, new tools are emerging that allow research teams to record the CRediT contributions collaboratively and upstream in the research cycle, as a research project is ongoing or the results drafted. Early and frequent discussions about authorship are the most effective way to avoid author disputes, and CRediT, while not dictating which contribution determines authorship, is now advocated as a useful framework to facilitate these discussions.

Specific Deliverables and Objectives:

To support the four priorities to be achieved, the co-Chairs request specific support from NISO:

Consider the case for CRediT to be approved as an ANSI/NISO standard:

1. Support the reinstating of the programme committee/NISO Standing Committee group - working with the CRediT co-Chairs.
2. Provide support for an information/helpdesk type services and a system to support further implementations and collate feedback.
3. Support the designated website space for CRediT - either within or linked to NISO website spaces.
4. Develop and support a programme of outreach and awareness for CRediT among the target researcher, publisher and institution stakeholders.
5. Other: explore the feasibility of CRediT extensions for non-traditional outputs
6. Liaise with publishers, indexing services and metadata aggregators (e.g. Crossref and ORCID) to ensure implementation of CRediT support production of the required metadata.

Process:

Having CRediT accepted as an ANSI/NISO standard would therefore be a significant development, support assurance that the taxonomy is credible and usable, and will help to ensure further adoption and all the concomitant benefits.

NISO can help with this, in addition to organisations that have already integrated CRediT in their processes.

Partners and Participation:

Lyrisis/CASRAI, the CRediT co-Chairs, NISO, Crossref and the re-established programme committee (to include a mix of scholarly publishers, researchers, funders and other key stakeholders) are the primary actors who will need to work together to support the standard's adoption.

We need to closely partner with the publishers who have adopted CRediT already and implemented according to current best practices - to maximise the use and availability of contributor roles as part of their open meta-data schema. .

We can also include infrastructure/service provider partners with customers who are using their CRediT integrations, or other lifecycle tools that need to implement CRediT, to enhance the utility of collecting this information and reporting/sharing it, for example, in the article XML.

Timeline:

We would hope for the approval of CRediT as an NISO project by the end of 2019, with ANSI/NISO standard approval following by mid-2020.

Crossref are also in the process of revising their metadata schema which will include CRediT during 2019/2020. Crossref adoption would support further implementations.

We would envisage building up a website space during 2019/2020 (possibly on the NISO website) and reinstating the Programme committee/interest group as a NISO Standing Committee starting early 2020.

The CRediT co-Chairs have in principle approval from 2 major research funders for funds to support a 'community manager' type post (c0.6 fte) to act as the main contact point and outreach lead for CRediT. There is therefore likely to be someone in post from early 2020 - who will act as the administrative contact (we plan to locate/host this post to work alongside the existing project chairs but be working closely with Crossref).

Within two years we anticipate:

- An increase in publisher implementation of CRediT across journals and publishing outlets
- Routine inclusion of contributor roles in the metadata of outputs - and inclusion in the open meta-data schema set by Crossref.
- Widespread awareness and ability to consider contributor roles to a wide range of scholarly outputs to support career development and researcher assessment.
- Ability to support peer reviewer identification and other practical benefits.

An initial focus of the proposed Community Manager role would be to work with the project Chairs and Programme Committee to develop some realistic success criteria in terms of target numbers based on the current baseline. This will in turn inform the return on investment in terms of dispute savings, and improved data granularity and consistency.

Further out, it is anticipated that the CRediT taxonomy will be so fully embedded into scholarly communication metadata schemas (e.g. captured across publishers and directed and supported by Crossref) that the role of managing and updating CRediT may in future become business as usual for a metadata provider such as Crossref.

Over the longer term we anticipate that CRediT can evolve to support changes and innovation in research and scholarly communication to better reflect the myriad of contributions, support more holistic research and researcher evaluation, and improve discoverability, use and re-use of research and those contributing.

Funding:

We have in principle commitment to support CRediT awareness and implementation from 2 major international research funders. Subject to the success of the initial project, **further funding needs would be assessed at the end of the two year period.**