

**A Proposed NISO Work Item:
Development of Standards for Alternative Metrics**

**Proposal for Consideration by the NISO Voting Membership
Approval Ballot Period: November 7-December 8, 2014**

**The following proposed work item is submitted by:
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**Proposal Last Modified: November 5, 2014
Approved by the NISO [Business Information Topic Committee](#), October 14, 2014**

GOAL:

Creation of ANSI/NISO standards covering definitions, calculation methodologies, improvement of data quality, and use of persistent identifiers in alternative metrics.

INTRODUCTION AND STATEMENT OF PROBLEM:

Assessment of scholarship is a critical component of the research process, impacting most elements of the process from which projects get funded to who gains promotion and tenure, and which publications gain prominence in fields of inquiry. As a metric, citation reference counts have historically been an exceptionally strong and rich source of accessible data upon which to draw conclusions about the quality of scholarship and will remain an important component of research assessment.

However, traditional metrics which have been primarily based on print processes are failing to keep pace with expanded scope of forms and usage that are becoming available with scholarly communication that is increasingly purely electronic. Online reader behavior, network interactions with content, social media references, and online content management, all important indicators of scholars' interaction with research outputs, are not reflected in these measures. In addition, newer forms of network and researcher behavior analysis can provide a means to assess non-traditional scholarly outputs. The growing movement around alternative metrics, sometimes called "altmetrics," is trying to address these concerns, among others.

Altmetrics are increasingly being used and discussed as an expansion of the tools available for measuring the scholarly impact of research in the knowledge environment. However, hindering the adoption of altmetrics are limitations and gaps which can be addressed through the development of consensus standards and best practices. In order for altmetrics to move out of its current "pilot" or "proof-of-concept" phase, we need to develop commonly used definitions and guidelines for appropriate collection and reporting of data, so that organizations who wish to utilize these metrics can adequately understand them and ensure their consistent application and meaning across the community.

To provide support for this work, the NISO Alternative Assessment Metrics Project was begun in July 2013 with funding from the Alfred P. Sloan Foundation¹. This project has been divided into two phases. Phase I, which is now complete, worked to gather a large array of input from

¹ http://www.niso.org/topics/tl/altmetrics_initiative/

relevant stakeholder groups as to what areas of alternative metrics would benefit most from standards-related developments. This input was distilled into a white paper published in June 2014², which was then presented to the NISO community to prioritize the action items it put forward as possible NISO work items. Phase II of the Project, to begin in late 2014, will advance the particular action items listed below through the creation of several NISO working groups to develop standards covering these areas. Presuming the approval of the NISO Voting Membership, the final output of this initiative will be one or more published standards or recommended practices in the following areas of work:

1. Development of specific definitions for alternative assessment metrics. This working group will come up with specific definitions for the terms commonly used in alternative assessment metrics, enabling different stakeholders to talk about the same thing. This work will also lay the groundwork for the other working groups.
2. Definitions for appropriate metrics and calculation methodologies for specific output types. Research outputs that are currently underrepresented in research evaluation will be the focus of this working group. This includes research data, software, and performances, but also research outputs commonly found in the social sciences. The working group will come up with recommendations for appropriate metrics for these research outputs and will develop guidelines for their use.
3. Development of strategies to improve data quality through source data providers. Data quality is essential before any alternative assessment metrics can be used for research evaluation. This working group will look at issues of data quality and will recommend strategies to overcome these issues, or to clarify the limitations of particular assessment metrics.
4. Promotion and facilitation of use of persistent identifiers in scholarly communications. Persistent identifiers are needed to clearly identify research outputs for which collection of metrics is desired, but also to describe their relationships to other research outputs, to contributors, institutions and funders. This working group will work closely with other initiatives in the space of identifiers.
5. Descriptions of how the main use cases apply to and are valuable to the different stakeholder groups. Alternative assessment metrics can be used for a variety of use cases from research evaluation to discovery. This working group will try to identify the main use cases, the stakeholder groups to which they are most relevant, and will also develop a statement about the role of alternative assessment metrics in research evaluation.

PROCESS:

The areas described above will be addressed by several working groups to be coordinated by a steering group which will consist of the chairs of the working groups, NISO Executive Director Todd Carpenter and Associate Director of Programs Nettie Lagace, and project consultant Martin Fenner. This steering group will determine project timing and manage dependencies and overall sharing of information. Martin Fenner will also participate as co-chair on all the working groups, and Nettie Lagace will provide NISO support as for all NISO working groups. It is expected that the working groups, which will consist of 10-15 members each, will meet semi-monthly and work with each other in tandem, in parallel, or serially on particular details.

The Altmetrics Steering Committee³, which was assembled at the beginning of the initiative, will

² http://www.niso.org/topics/tl/altmetrics_initiative/#Phase1Whitepaper

³ http://www.niso.org/topics/tl/altmetrics_initiative/sc_roster/

continue to meet bimonthly to provide input and guidance.

A stakeholders' interest group will be created. Members of this group will serve as a source of feedback for drafts created by the working groups. As is the case for NISO work, draft documents will also be made available for public comment/trial use before finalization and publication. NISO will schedule public webinars for further discussion and training purposes.

AUDIENCE/STAKEHOLDERS:

The audience that will benefit from the successful development of standards for alternative assessment metrics includes, but is not limited to, libraries, scholarly publishers, research funders (governmental and non-governmental), scholars, university departments of academic affairs, providers of alternative metrics data, and system providers of various sorts who incorporate different elements of alternative metrics in their services. NISO will seek to attract participation in the Working Groups from as many of these sectors as possible. Additionally, as applicable, the Working Groups will seek input from existing organizations such as ORCID, the ISNI community, and the International DOI Foundation in order to ensure that this experience is considered in the recommendations.

WORK TIMELINE

Approval of Proposal	December 2014
Appointment of Working Group chairs and First Meeting of Steering Committee	January 2015
Approval of Initial Work Plan and Appointment of Working Groups	February 2015
Completion of Initial Draft Standard(s)	November 2015
NISO Report to Sloan Foundation	November 2015
Public Comment Period	December 2015
Completion of Final Draft(s)	March 2016