STM

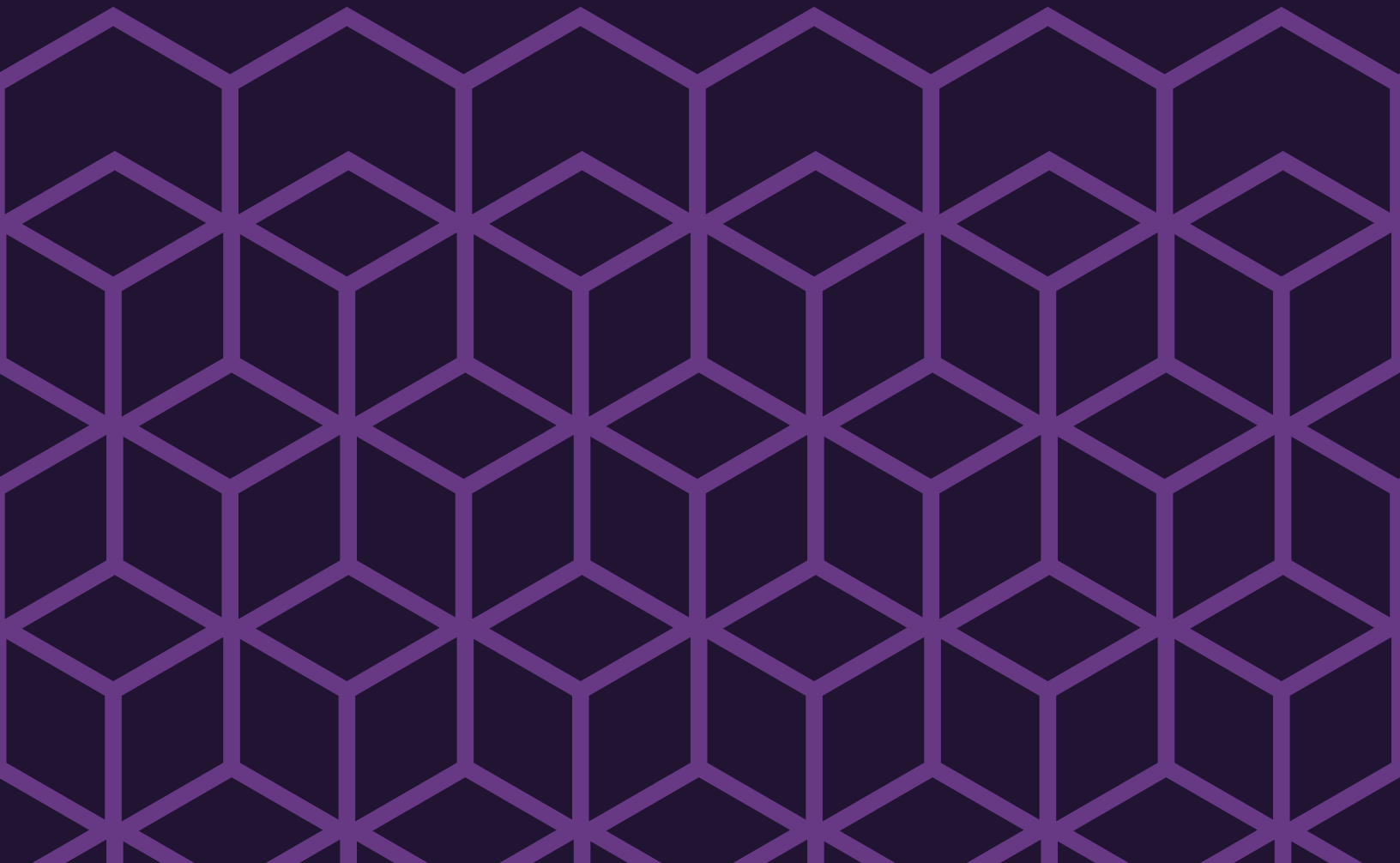# Our Position on Research Assessment

EXECUTIVE SUMMARY

All stakeholders in the knowledge ecosystem have a shared responsibility to enable a fair research assessment system that acknowledges the diversity of researchers, the complexity of impactful research outputs, and the value of researchers' differing contributions. In this context, publishers are committed to assisting and enabling research assessment, as a way of improving research culture to contribute towards societal benefits.

Publishers play a key role in the assessment of research through evaluation of articles reporting on research activities, including editorial review, peer review, and analysis of the use and citation of articles.

Publishers support and invest in the creation and development of diverse, transparent and fit-for-purpose indicators for a broad range of research inputs, activities and outcomes. This includes the endorsement of key initiatives and infrastructures for research assessment, such as CrossRef, ORCID, DORA, CRediT and numerous others.

Publishers recommend that all indicators should only be applied to support and inform expert, qualitative assessment. They should be applied correctly and consistently with the purpose they were created for and the context in which they need to be interpreted. Publishers agree that the Journal Impact Factor (JIF) should be applied at journal level and not used as a proxy to assess individual articles or researchers. The JIF should not be the sole measure used for assessment and should be considered in conjunction with a variety of indicators.

Publishers believe the most effective solutions modernising research assessment can be found in strong, close cooperation among all stakeholders; this includes joint development of improved indicators that offer a diverse suite of research metrics.

PART I:
INDUSTRY CONTEXT

About academic publishing and research assessment

ONE
STM and the publisher community are deeply committed to serving the research ecosystem. Publishers work together with other stakeholders to help make research and its communication more robust, efficient, and effective and to foster a research culture that delivers benefits to the wider society.

TWO
STM publishers are enablers of scholarly communication via journals, books, and conference proceedings, and through our investment in and coordination of the large-scale and sophisticated system of expert peer review that ensures that the most important research findings are shared and built upon. This also includes the development of standards, such as the peer review taxonomy aimed at making the peer review process for articles more transparent and trustworthy.

THREE
Several STM members are actively engaged in the design and delivery of metrics and indicators that are currently used in research assessment, and they champion their responsible and appropriate use in evaluative contexts to support and inform expert, qualitative assessment.

FOUR
Publishers will continue their ongoing engagement in designing, developing, and delivering new and improved metrics and indicators and are looking forward to cooperating further with other stakeholders.

FIVE
Many members have signed and/or endorsed some of the key public declarations on responsible research assessment, such as DORA and the Leiden Manifesto, and are committed to implementing systems that enable more robust research assessment, such as CRedIT and the peer review taxonomy. STM will continue its efforts to encourage more publishers to sign on or endorse and implement the recommendations of these declarations.

A DESIRABLE RESEARCH ASSESSMENT ENVIRONMENT

SIX

Publishers welcome the use of a diverse suite of research metrics and indicators at journal, publication, researcher, or institutional level. Publishers support the visibility and use of the most common indicators by integrating them in their products, platforms, and services.

SEVEN

At the level of individual researchers, a desirable system of research assessment must account for the diversity and granularity of contributions that researchers make, not only in the production of knowledge that emerges in publications but also in teaching, professional service (including but not limited to expert peer review), community engagement, and commercialisation.

EIGHT

In such a system, significant weight should be given to how researchers achieve their aims. Openness and sharing (including research data sharing and adherence to the FAIR principles), coaching and mentorship, interdisciplinary and team-based working, and the societal impact of their work must be considered.

NINE

Adherence to high standards in the conduct of research, including practices to ensure that research is reproducible and of sound scientific rigour, also should be acknowledged. STM and its member publishers are involved in a series of activities that support research integrity.

TEN

STM publishers believe that appropriate balance is needed in the use of qualitative and quantitative indicators. The latter must be used to support and complement; the former. as part of a diverse array of evidence used to present the story of each researcher in a holistic manner.

ELEVEN

STM is committed to supporting publishers in implementing new and more robust indicators in line with research assessment reforms and welcomes collaboration with policy makers, funders, and institutions to make these indicators more useful.

PART 3:
THE WAY FORWARD

TWELVE
For a meaningful transition towards a fairer research assessment system, time for cultural and behavioural change to take place will be required. Top-down mandates may not yield the desired results without wider community endorsement and support.

THIRTEEN
STM members – via STM as their global trade association – seek to engage in productive and constructive dialogue with all stakeholders on how we can create a meaningful and fit-for-purpose research assessment system for Europe and beyond.

ANNEX –
EXAMPLES OF INITIATIVES
AND PROJECTS

STM and its members are collaborating on a variety of projects that power the technical infrastructure and standards that enable research discoveries, research communications and research evaluation.
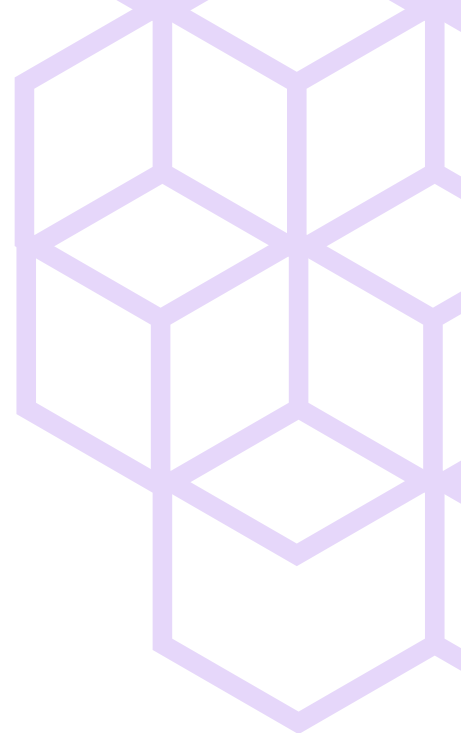
PART 1:
COMMERCIAL SOLUTIONS

Altmetric
Through a partnership with Altmetric the web-based, alternative metrics platform that provides authors with a single view of the online activity surrounding their scholarly content many publishers now display the Altmetric Attention Score on research articles published their portfolio of peer reviewed research journals.

Web of Science Author Impact Beamplots

Beamplots showcase the range of a researcher's publication and citation impact in a single visualisation. Unlike single-point metrics, a beamplot reveals the volume and citation impact of an individual's publication portfolio through time and provides context for comparison with a broad range of data. The information provided should be considered alongside contextual information such as working location, role, nature of collaborative projects, and type of research involved. Each paper's citation count is normalised (i.e., benchmarked against other similar publications) and measured as a percentile, which avoids some of the bias present in other researcher metrics.

PART 2:
COMMUNITY-LED SOLUTIONS

Taxonomy

CRediT taxonomy for author contributions

Contributor Roles Taxonomy (CRediT) is a high-level taxonomy, including 14 roles, that can be used to represent the roles typically played by contributors to scientific scholarly output. The roles describe each contributor's specific contribution to the scholarly output.

Transparency Openness Promotion
Many publishers have signed and are implementing the Guidelines for Transparency and Openess Promotion (TOP) in Journal Policies and Practices (the "TOP Guidelines" from

the Centre of Open Science. Many scholarly societies enable free public access to the supporting information that accompanies articles published in their journals.

San Francisco Declaration on Research Assessment
Many publishers have already signed the Declaration on Research Assessment (DORA) and now provide a comprehensive picture of the impact of scientific research published in their journals. In particular, recommendations 6 to 10 of DORA are directed to research publishers. DORA specifically calls for journal-based metrics, namely the Journal Impact Factor, to no longer be used as a 'surrogate measure of the quality of individual research articles, to assess an individual scientist's contribution, or in hiring promotion, or funding.'

Standards
STM supports the publisher community's work on industry standard initiatives; it helped develop standardised persistent identifiers and made them available to the research community, mainly through CrossRef.

CrossRef
CrossRef is a not-for-profit membership organisation where member publishers can deposit metadata and make them available to be searched, retrieved and reused by everyone, facilitating linking between research outputs.
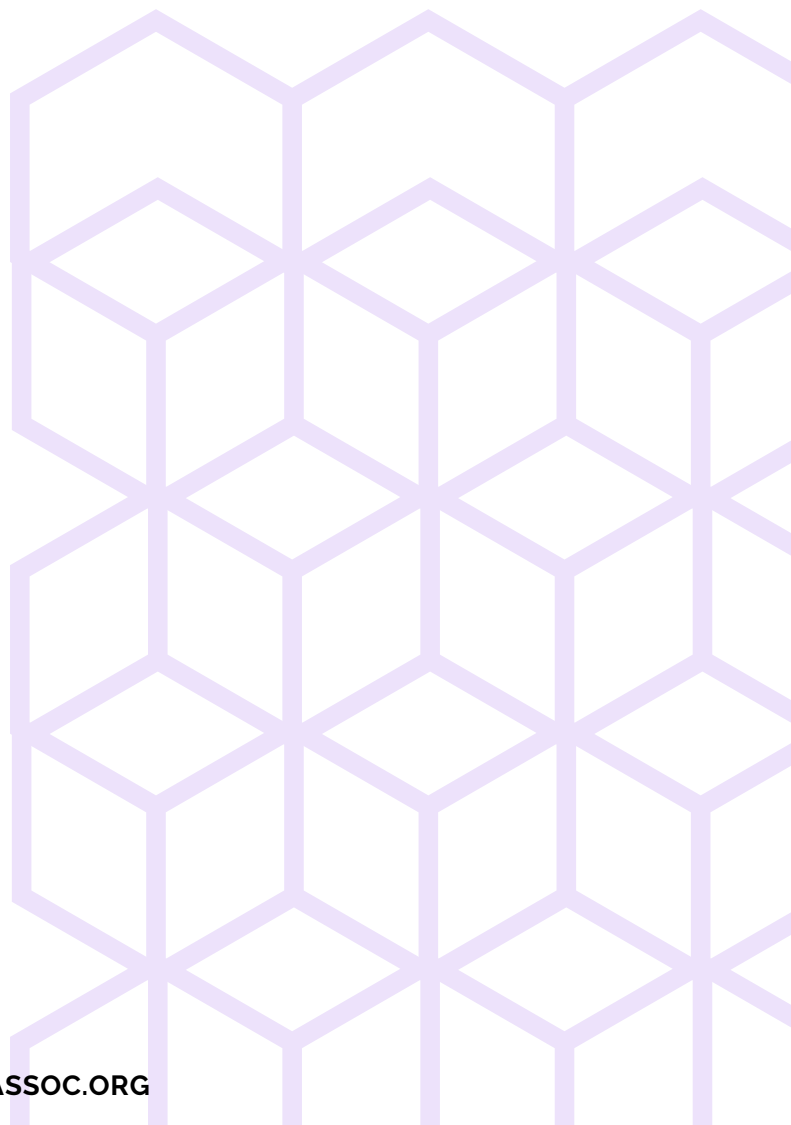
ORCID
ORCID is a nonprofit organisation that provides researchers with a persistent digital identifier (an ORCID iD) that they own and control and that distinguishes them uniquely within the researcher community. It is supported by a global community of member organisations, including publishers, research institutions, funders, professional associations, service providers, and other stakeholders in the research ecosystem.

Data
FAIRsFAIR (a European Horizon 2020 funded Project; 2018 - 2021)
Fostering Fair Data Practices in Europe - aims to supply practical solutions for the use of the FAIR (findability, accessibility, interoperability, and reusability) data principles throughout the research data life cycle. Emphasis is on fostering FAIR data culture and the uptake of good practices in making data FAIR.

FAIRsFAIR will play a key role in the development of global standards for FAIR certification of repositories and the data within them contributing to those policies and practices that will turn the EOSC programme into a functioning infrastructure. Moreover, STM has been accepted as an official EU Research Data Champion and member of the FAIRsFAIR project: we will be playing an active role: participating in European and international activities on FAIR data uptake and compliance, helping to demonstrate best FAIR policy and practice, and helping to support the co-development and implementation of standards for data management.

STM MEMBER-LED ACTIVITIES

Peer review taxonomy

STM recognises a need for identifying and standardising definitions and terminology in (open) peer review practices. A peer review taxonomy that is used across publishers will help make the peer review process for articles more transparent and trustworthy. STM's Peer Review Taxonomy is currently in the process of being formalised as an ANSI/NISO standard.

Toward a Compatible Taxonomy, Definitions, and Recognition Badging Scheme for Reproducibility in the Computational and Computing Sciences

With an increasing emphasis on reproducibility to support the research process, it is vital that consistent taxonomies are utilised to define and agree on standardised 'badging' that could be applied to the publication process. This joint NISO project aims to forge a new agreement to move towards a common vocabulary.

STM Research Data Programme

FAIR data is a crucial element in making research more robust, reproducible, and cost-efficient. The published article is an important hub for sharing, linking, and citing research data that is built upon (or refers to) the published content, making research data findable and accessible within the scholarly ecosystem. STM is running the Research Data Program with its members to stimulate the sharing, citing and linking of high-quality research data alongside publications.

Research on research

Some publishers are launching research projects to study the question of how to measure impact in research and to encourage the examination of research using a range of metrics and a variety of qualitative and quantitative methods. Questions explored centre on whether research is producing positive impacts on society, and therefore creating value from public funds contributed to research and development.