

Italian Reproducibility Network (ITRN) Action Plan for the Coalition for Advancing Research Assessment (CoARA)

The Italian Reproducibility Network (ITRN) is a dynamic and proactive organisation dedicated to promoting quality and equity in research. Aligned with CoARA's principles, ITRN has integrated these philosophies into its activities to foster trustworthiness and integrity in science. ITRN's mission includes training, promoting, and disseminating practices that enhance scientific reliability by encouraging collaboration, the adoption of replicable research methodologies, open sharing of results, transparent validation methods, and the integrity of research, with a focus on inclusiveness (see reference 1 for the "statuto").

In 2023, ITRN developed a comprehensive two-year strategic plan involving its entire community. The full plan, available on Zenodo (2), outlines the following key objectives:

1. Promoting reform of research evaluation;
2. Strengthening national institutional relationships;
3. Consolidating and developing joint actions with international institutions;
4. Expanding nodes and connections within the ITRN, by stimulating initiatives at a local level;
5. Outlining a targeted educational programme to promote relevant aspects of open research;
6. Rewarding open science practices;

Among these objectives, Activities 1 and 6 are particularly tuned to the "Agreement on Reforming Research Assessment" by CoARA.

Activity 1: Promoting Reform of Research Evaluation

ITRN actively promotes evaluation reform through symposia, roundtables at conferences, and interactions with institutions and colleagues. Additionally, ITRN participates in a specific Working Group "Responsible metrics and indicators" and in the Italian National Chapter, contributing to shaping evaluation practices that emphasise transparency and quality.

Below the strategic plan excerpt

Activity 1: Promoting reform of research evaluation

Synthetic objective: The goal is to promote a reform of research evaluation practices by defining and setting a common direction for change. This will involve rethinking how research, researchers, and research performing organisations are evaluated in order to better align with contemporary needs and priorities. Ultimately, the objective of promoting research evaluation reform is to foster a more equitable and effective research ecosystem that better serves the needs of research and society at large.

Target: The primary targets of this effort are policy-makers, universities and research organisations, and scientific societies at the national level.

Actions / Planned activity

Opening an internal discussion about the status quo of the assessment and set up ideas on the matter.

Engaging in dialogue and consultation with targeted subjects to build a shared understanding of the challenges and opportunities associated with research evaluation.

Participate in discussion groups (e.g., CoARA), to define and set a common direction for changes in the practice of evaluation of research, of researchers and of research performing organisations.

Redefining the criteria for evaluating research outputs, rethinking the role of metrics and indicators, and exploring alternative methods for assessing research impact and productivity in line with CoARA core commitments.

Encouraging the use of alternative metrics and indicators that better capture the full range of contributions made by researchers (and research organisations)

Advocating for changes in funding and reward policy that support the adoption of new evaluation practices (e.g., promote open science badges; work collaboratively with grant agencies).

Result: build broad-based support for reform to develop and implement effective strategies for a change in the evaluation system.

Reference period: annual actions from summer 2023 toward 2024 in synchrony with the relevant the CoARA and ANVUR scheduling.

Quantifiers: Producing a document that evaluates the current evaluation system and proposes (at least in the form of ideas) new evaluation criteria. Sitting in at least one of the CoARA working groups with an active role (e.g. by promoting ITRN lines of work), or having a role in the CoARA National Chapter.

Activity 6: Rewarding open science practices

In relation to evaluation criteria, ITRN has established the "ITRN Award," recognizing contributions produced within the past five years that are reproducible or replicable and adhere to open science principles. The evaluation criteria for this award are transparent and well-defined in the call for submissions (see 3 for the call).

The first ITRN Award received a large number of submissions, exceeding expectations. The judging committee awarded three cash prizes and three Honourable mentions, each reflecting significant contributions to research quality and reproducibility (see 4 for more details).

Based on this experience, ITRN has refined the award criteria to better align with the Italian research context and to further enhance the quality of research ([see 5 for further consideration on this aspect](#)).

In addition to the ITRN Award, ITRN collaborated with the Italian Society of Psychophysiology and Cognitive Neuroscience (SIPF) to create the "Premio SIPF – ITRN" for young scientists. This award recognizes researchers under 35 who demonstrate adherence to Open Science principles in their publications, promoting integrity, ethicality, transparency, methodological rigour, and data reproducibility. The criteria for this award are clear and published on SIPF's website. After the first year, the criteria were revised to enhance clarity and focus on quality.

Below the strategic plan excerpt

Activity 6: Rewarding open science practices

Synthetic objective: As a collector of relevant Italian open-science related activities, an annual end of year prize, will be awarded to a researcher (or institution) who has promoted, through various research or training actions, open science in Italy. In addition, one (or more) awards will be possibly planned to support research activities of young researchers (e.g. travel grants; partial APC support).

Target: Researchers (at any level but in particular young ones) and institution currently part of the network

Actions / Planned activity:

Define a call/calls: ITRN Award, honorary membership, travel grants, support for APC. Publicising the call before approaching the deadline with an email (mentioning past successful stories) sent to the whole local community;

Result: Reward open science practices should increase the adoption of the same practices.

Reference period: Define criteria before the annual ITRN meeting and award the prize during the same meeting

Quantifiers: Awarding the 2024 Prize for activities in the year 2023.

These efforts by ITRN underscore its commitment to advancing research assessment ensuring that scientific evaluation is transparent, adequate and sustainable to the broader community.

References

- 1) Italian Reproducibility Network. Statuto (2023). Zenodo. <https://doi.org/10.5281/zenodo.8136474>
- 2) Italian Reproducibility Network. Biannual Strategic Plan 2023 - 2024 (2023). Zenodo. <https://doi.org/10.5281/zenodo.8136446>
- 3) Italian Reproducibility Network call: Reproducibility Award 2023 (2023). Zenodo. <https://doi.org/10.5281/zenodo.10277050>
- 4) News by ITRN: Prima Edizione Reproducibility Awards (2024). Zenodo <https://zenodo.org/records/11549317>
- 5) Article by ITRN: Premiare la riproducibilità: l'esperienza di ITRN Reproducibility Award 2023 (2024). Zenodo <https://zenodo.org/doi/10.5281/zenodo.12180101>