



# A Manifesto for Rewarding and Recognising Team Infrastructure Roles

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The Scientific Reform Movement has highlighted the need for large research teams with diverse skills. This has necessitated the growth of professional team infrastructure roles (TIRs) who support research through specialised skills, but do not have primary responsibility for conceiving or leading research projects. TIRs such as Lab Technicians, Project Managers, Data Stewards, Community Managers, and Research Software Engineers all play an important role in ensuring the success of a research project, but are commonly neglected under current reward and recognition procedures, which focus on the individual academic researcher instead of the teams involved. Without meaningful identification and recognition of TIR contributions, we risk reinforcing the conceptual and practical division between academic researchers and TIRs. This situation is inequitable and detrimental to the research enterprise: the limited potential for career advancement for TIRs may cause them to leave for other occupations, ultimately leading to a loss of institutional skill, expertise, and memory. This contribution explores the evolution of specialist TIRs and the status of these positions in various settings. We provide three case study descriptions of TIR activities, so that readers may become more familiar with the breadth and depth of their work. We then propose system level changes designed to embed meaningful recognition of all contributions. Acknowledging the contributions of all research roles will help retain skill and expertise, and lead to collaborative research ecosystems that are well-positioned to address complex research challenges.

**Keywords** *Team Infrastructure Roles, Rewards and Recognition, Research Evaluation, Team Science, Career*

The social and technological developments of recent decades have reinforced the notion of science as a team-based enterprise. As we tackle increasingly complex scientific questions (Coles et al., 2022), we leverage the strengths of diverse research teams, recognising that we cannot solve the significant challenges of our time through isolated endeavours. This increased diversity in practice is part and parcel of the Scientific Reform Movement, which seeks to promote the uptake of practices that improve the transparency of the research process (Penders, 2022), as well as to provide recognition for these practises (Coles et al., 2023). Reform of academic publication and authorship practices are one route to ad-

dress such issues, but we see authorship (or contributorship, see Rennie et al. (1997)) as a symptom of entrenched inequity, rather than the source of it. The Scientific Reform movement should go beyond reformation of publishing and aim instead to address fundamental roots of academic inequity, such as the perceptions of what it means to be a researcher and participate in research. In this piece we will explore a broad range of factors which may lead to inequity in the academic workforce and suggest changes to research systems to improve equitable practices.

## I The emergence of TIRs

To illustrate the increasingly diverse and team-

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