Platforms EOI: The Digital Observatory Platform ("Observatory")

Project title

The Digital Observatory Platform ("Observatory")

Field of Research code(s)

- 05 ENVIRONMENTAL SCIENCES
- 08 INFORMATION AND COMPUTING SCIENCES
- 09 ENGINEERING
- 10 TECHNOLOGY
- 11 MEDICAL AND HEALTH SCIENCES
- 13 EDUCATION
- 15 COMMERCE, MANAGEMENT, TOURISM AND SERVICES
- 16 STUDIES IN HUMAN SOCIETY
- 18 LAW AND LEGAL STUDIES
- 20 LANGUAGE, COMMUNICATION AND CULTURE

EOI Lead Name

Sach Jayasinghe

EOI lead Research Group

Research Infrastructure, Institute for Future Environments

EOI lead Organisation

Queensland University of Technology

EOI lead Email

Collaborator details

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<th>Organisation</th>
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Project description

The Observatory’s mission is to enable the understanding of the dynamic digital landscape by providing researchers access to a reliable and scalable data infrastructure and relevant analytic services. With most social media platforms operating increasingly as closed domains, researchers wanting to study various social
Phenomena occurring on these platforms are facing difficulty in accessing, collecting, and analysing relevant and quality data. The Observatory addresses these data-related difficulties and thus supports and enables diverse and innovative research activities across various academic disciplines. The ARDC investment will enable the Observatory to: (1) implement the 2014-2016 ARC LIEF funded TrISMA prototype into a production-grade software platform thereby increasing robustness, reliability, and scalability; (2) maintain and expand unique and nationally significant dataset(s) collected; (3) create user-friendly interfaces for researchers; and (4) expand engagement with Australian universities and industries. The Observatory is aligned with NCRIS focus areas: Digital Platforms and HASS and the mentioned national research priorities.

### Existing technology

**Adopt**

The platform will adopt the Observatory's existing cloud-based services to host the data collections and services. We will also adopt existing databank ethics protocols as well as information security standards, technologies, and processes to facilitate secure and auditable data sharing. We will be guided by FAIR Data principles in promoting optimum use of research data in our databank. We will continue to support community engagement by contributing to training resources on social media analytics and big data processing.

**Adapt**

The Observatory will adapt models and legal frameworks that Prof Bruns and team are developing for the National Australian Twitter Collection project via the recent ARDC Transformative Data Collections call. Specifically, we will adapt the national accreditation and access scheme, user-base updating process and the standardised and consolidated TrISMA data archives. We will adapt existing open-source software libraries to facilitate sustainable platform development. We will provide advice and guidance on data governance, data management, data security and policies based on best practice.

**Build**

The Observatory will redesign and implement the TrISMA prototype into a production-grade software platform using professional software development best practice. This platform comprises data collectors, controllers, databases and processes holistically designed for robustness, reliability, and scalability. The platform will maintain current data collections and accommodate future sources of dynamic digital data based on research demands. We will build relevant data and analytical pipelines to facilitate the data flow from the platform to the researchers and enable efficient analyses.

### Anticipated requirements

**Annual funding**

$100,000 - $199,000

**Proposed length**

3 years

### Other information

**Other information you wish to provide**

This EOI extends the "National Australian Twitter Collection" ARDC Discovery Application led by Prof Bruns (QUT), alongside collaborators: Curtin, Deakin, Monash, RMIT, Swinburne, U of Adelaid, U of Canberra, U of Melbourne, U of Queensland, and U of Tasmania.

The Digital Observatory platform welcomes collaboration with other ARDC platforms EOIs to ensure that the developed technology, processes, and datasets can be shared between and across multiple disciplinary groups. We have already committed to supporting the Australian Language Data Commons, and the Humanities Digital Research Platform.

### Terms

**I agree to the terms**

Yes