



Expressions of interest: Data 4 Development Fellowship Program

Request for expressions of interest from applicants to participate in the Data 4 Development (D4D) Fellowship Program for Indonesian Civil Servants

A. Background and objectives

The D4D Fellowship program will empower high performing data specialists from partner government agencies in Indonesia to use best practice technology to support economic growth and sustainable development.

Fellows will:

- Spend three months at CSIRO's Data61 drawing on advice from research and engineering experts to address a difficult, high-value development and data-related problem
- Engage with the broader Australian research community through facilitated networking opportunities, building long-term institutional links between Australian and Indonesian organisations
- Be guided by host agency mentors to build data skills within their originating agency

The D4D Fellowship Program will:

- Provide data specialists from Indonesia with access to high-end professional development opportunities in Australia, advancing their knowledge and skills
- Provide technical skills training targeted at helping the fellows to solve complex, high-value development and data-related problems
- Build data skills within the fellows' originating agencies through their participation in the program and ongoing engagement with established networks
- Develop long-term institutional links between Australian and Indonesian organisations
- Contribute to economic development, poverty alleviation, security, and stability across Indonesia

B. Background to the D4D Fellowships program

The D4D Fellowship program is modelled on the successful Australian Public Service (APS) Data Fellowships Program, a partnership between the Australian Digital Transformation Agency (DTA) and CSIRO. The APS Data Fellowships was a competitive program for high performing APS data specialists. APS officers spent three months at CSIRO's Data61, drawing on advice from research and engineering experts to address an agency data-related problem. Under the APS Data Fellowships program, Data61 and its partners hosted 30 APS data specialists from 20 Australian agencies over a 3-year period.

Data Fellows were supported to work in a self-directed manner with guidance from host agency mentors. Fellows were encouraged to make connections with relevant experts in the broader CSIRO community and

Data61 actively supported network building by arranging presentations and one-on-one meetings.

Each fellow came to the program with a different approach, skillset, project aim and personal development goal. Data61 managed the program in a way that optimised the experience for each individual, supporting them to get the most value out of the program.

D4D Fellowships will follow a similar model, where each fellow brings a difficult, high-value development and data-related problem to the program and is hosted by CSIRO's Data61 while they work on their proposed solutions over a three-month period.

Opportunities will be provided for **two selected fellows** to share their project goals with relevant experts, through presentations, one-on-one meetings, and networking events. Fellows will be introduced to researchers and engineers, including staff from CSIRO and affiliate universities. Fellows will have opportunity to seek advice and guidance from experts but are ultimately in charge of the direction of their project in consultation with their originating agency supervisors.

C. Targeted Government of Indonesia ministries and agencies

With respect to the first fellowship intake, agreed Government of Indonesia ministries/agencies are being targeted. These are strategic partners of the Cyber Cooperation agreement or are key agencies in Indonesia. The agreed targeted agencies are:

- BPS-Statistics Indonesia (BPS)
- National Cyber and Crypto Agency (BSSN)

D. Expected Qualifications

There are several prerequisites for application to the program. Candidates must:

- a. Be a civil servant from a targeted Government of Indonesia ministry or agency
- b. Have significant cyber and/or data analytics (preferably AI/ML) capability
- c. Have a clearly defined problem and a viable proposal for how to address the issue
- d. Have full support from their ministry/agency, both during the fellowship and for implementation of outcomes upon their return
- e. Be in the appropriate position to implement the project upon return from Australia
- f. Be eligible to travel and stay in Australia for three months
- g. Be able to participate within the fellowship timetable, including post-fellowship activity
- h. Be fluent in English*

*) The applicant's English language competency is part of the selection process; however, there will be no official language test. The assessment of language competency is based on a phone interview and any additional evidence provided by the applicant (for examples: proof of studies or living in an English-speaking country or working in an English-speaking environment; completion of studies in English, or language course or language tests)

E. What you'll get out of the program

Participating in the D4D Fellowship Program will provide you with:

- Opportunities to be mentored by experts in your field
- Networking opportunities with Australian researchers and engineers, seeking and sharing advice and guidance
- The control to oversee the direction of your project in consultation with your agency supervisors
- Access to, and participation in, the Australia Global Alumni Network
- Additional opportunities to benefit your career, increase your capability and confidence to tackle challenges with data, and to lead organisational change

F. Assessment criteria

- Scope and quality of the applicant's data-related problem or opportunity
- Feasibility of finding a solution to the applicant's problem or opportunity within the 3-month placement
- Skills and experience needed to solve the problem within the 3-month placement
- How easy it would be to apply the solution on a larger scale
- How the placement could improve the applicant's data capabilities and professional development
- Applicant's ability to share the skills and capabilities they learn with their home agency
- Benefit to other Indonesian government agencies

G. Examples of past fellowship projects

In 2023, two fellows have successfully completed their fellowship programs in Australia. Both represent different agencies and project focus as follows:

1. A fellow from the BPS-Statistics Indonesia (BPS) explored techniques to enhance the accuracy of satellite imagery to improve paddy fields monitoring in Indonesia;
2. A fellow from the Cyber and Crypto Agency (BSSN) optimised the use of cybersecurity threat information sharing to equip organizations with improved defensive capabilities.

Additionally, there is a number of impressive outputs and outcomes from participants in the APS program to date, including:

- A Fellow from the Department of Finance built expenditure models for evidence-based policy design using a variety of health-related datasets.
- A Fellow from Treasury used machine-learning techniques to forecast real GDP growth in Australia and to compare the accuracy of this modelling approach to methods that are currently used.
- A Fellow from the Department of Health developed a microsimulation model for hospitalisation risk in chronic disease patients.
- A Fellow from the Department of the Environment and Energy developed an empirical model using machine learning algorithms with the aim to predict the changes of terrestrial soil carbon. This model is intended for use as a validation tool for the official estimates of greenhouse gas emissions from changes in soil carbon in Australia's crop and grass lands.
- A Fellow from the Department of Social Services examined the effectiveness of the Commonwealth Financial Well-being and Capability Activity towards improving wellbeing outcomes for financially disadvantaged Australians, using robust analysis of administrative data.

H. Indicative timeline for expressions of interest and selection process

The indicative timeline for the application and selection process and fellowship component of the program is as follows:

Date	Action
18 Mar – 24 Apr 2024	Stage 1 - Calls for expression of interest Applicants to submit their CV and up to two-page proposal of their research project by 24 April 2024.
25 Apr – 3 May 2024	Expression of interest reviewed; applicants to be notified of success
6 – 19 May 2024	Stage 2 - Shortlisted applicants to develop detailed proposals
20 May – 7 Jun 2024	Detailed proposals reviewed Applicant interviews Shortlisted applicants and their supervisors will be invited for online interviews by the joint selection panel.
10 Jun 2024	Stage 3 – Two selected fellows notified
11 – 28 Jun 2024	Stage 4 – Pre-departure preparations <ul style="list-style-type: none">• Fellows to conduct pre-fellowship activities that can be delivered remotely.• Fellows to prepare their 3-month module plans (see section I for sample) and identify relevant stakeholders to connect in Australia• Data preparation• Travel arrangement and visa application.
Jul – Sep 2024	Fellowship conducted in Australia <ul style="list-style-type: none">• Fellows regularly check-in with supervisors and teams at their originating agencies, providing a short progress report at a minimum of every four weeks.• Fellows secure agreement with supervisors on a post-fellowship plan of action.
Oct – Dec 2024	Final reporting and activities conducted in-country <ul style="list-style-type: none">• Fellows present to their agency and relevant stakeholders on the outcome of the fellowship.• Implementation of post-fellowship plan.

I. Indicative modules of the program

Week 1: On-boarding, Induction, and Online Training

- Introduction to the program, objectives, and expectations
- Orientation to the host research organization and facilities

Week 2-3: Understanding the problem and investigation of the dataset from the fellow.

- Defining the fellow's real-world data challenge
- Identifying key stakeholders and their requirements
- Familiarization with the structure and content of the dataset

Week 4-5: Data visualization and exploration

- Creating meaningful visualizations to gain insights

Week 6: Fellow presents the problem/dataset to a broader audience of Data61

Week 7-8: Exploring digital solutions for data management and sharing in Data61:

- National map
- Magda
- Data sharing platforms

Week 9-10: Data management and responsible data governance

- Ethical considerations in data analysis and usage
- Complying with data regulations and policies

Week 11-12: Project Refinement, Final Presentations and Feedback

J. Submission of expressions of interest

As the first stage of the selection process, aspiring applicants from targeted Government of Indonesia agencies are requested to submit their expression of interest through the link [HERE](#). The expression of interest should comprise of following items:

- A. An outline of the problem and proposal of the solution to the problem
- B. CV (no more than 3 pages)
- C. Proof of English proficiency (optional)

The expression of interest shall be submitted in English no later than **24 April 2024**. We will send you an email confirming we have received your expression of interest in two working days.

All inquiries related to the selection process and other relevant issues can be addressed to D4DFellowships@csiro.au.

K. Selection procedures

The two fellows will be identified through a competitive process. As indicated in the timeframe, the selection process is divided into two steps.

Step one involves submission and assessment of expression of interest. In this step, aspiring applicants submit their expression of interest comprising three main parts: i) description of relevant qualifications; ii) an outline of the problem and proposal of the solution to the problem; and iii) a current CV.

Step two involves submission of the detailed project proposal and interview. Only shortlisted applicants will be requested to submit detailed project proposals. Upon reviews of the proposals, the applicants and their managers will be invited to the panel interview. During the interview, the applicant will be asked to present and answer questions about their project proposal.

L. Assessment of expressions of interest

Your application must also be fully supported by your originating ministry/agency. To prove this, your institution will shortlist the applications based on the agency's priority issues, and other relevant criteria after the period of the expression of interest submission has been closed. For more information regarding this process and the criteria, please send your inquiries to:

BPS (*select one*)

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Announcement will be sent to shortlisted applicants along with a request to submit the detailed project proposal and an invitation to the interview session.

The shortlisted expression of interest will then be assessed by a joint selection panel. The joint selection panel will comprise representatives from DFAT and CSIRO. The panel will pay specific attention to project proposals that are related data-related problem in their originating institutions.