

The Australian BioCommons Community Engagement Strategy: Engaging Researchers at a National Scale to Understand Challenges and Deliver Solutions

Tiffanie M. Nelson¹, Andrew Lonie¹, Johan Gustafsson^{1,2}, Jeff Christiansen¹
¹ Australian BioCommons; ² Bioplatforms Australia

Australian BioCommons engagements to understand bioinformatic and infrastructure challenges to research

The Australian BioCommons develops digital capacity, training and bioinformatics infrastructure to support Australia's life scientists. So how can we identify the greatest needs of many thousands of geographically dispersed researchers, and also deliver useful infrastructure? Strong user engagement is paramount to understand community needs and direct the deployment and resourcing of appropriate infrastructure to ensure maximum impact. We have developed a five step process of engagement that maximises community interaction, from initiation to deployment.



Identify

meaningful communities of manageable scope around focus areas with known infrastructure challenges. Communities of practice are established around a focus point within the limitations of project goals, e.g. current challenges faced by Australian life scientists researching and interested in de novo Genome Assembly.

Research

the community topic area to understand broad needs and challenges to engage members. Knowledge of the community focus is determined through literature review and discussion with field experts.

Communicate

with the broad community, inclusive of everyone from any expertise level or any institution, to identify issues, roadblocks and solutions/suggestions through electronic surveys, shared discussion boards and virtual meetings.

Document

the challenges and, in discussion with infrastructure specialists, detail conceptual solutions with endorsement from community practitioners. The knowledge recorded is formalised into a Roadmap with proposed solutions.

Deploy

and implement solutions with testing and feedback from the community. Knowledge learned through the engagement process informs deployment and implementation strategies.



Meeting with members of the community facilitates relationships and provides an opportunity for:

- 1/ the community to interact and question the goals of the project; and,
- 2/ the engagement team to clarify details of current knowledge, and ensure information representing community needs is accurate.



For geographically dispersed communities with a large number of potential members (i.e. >50), virtual and electronic methods for knowledge transfer is efficient.

Key lessons learned:

- **Clarify project goals.** When engaging it is important to have clear messages about the goals and scope of the project, so as to not unintentionally overpromise.
- **Use a diversity of voices.** During the course of researching a community topic or focus point, get to know the expert practitioners and engage with them to discuss the broad challenges and invite them to give their perspective during meetings and activities.
- **Know your members.** Be clear and upfront about who can participate and at which stage; a community member with an 'interest' but no practical skills in running a methodology may provide valuable information on community needs but will not be the best resource for advising on roadblocks or solutions.
- **Be transparent.** Make it easy to join communities; communicate how to be involved and provide accessible documents and records for new members to find.
- **Document with detail and context.** Deployment and implementation teams need quality information to design appropriate solutions; the documentation of this information in various forms, e.g. Roadmap, spreadsheet of 'user stories' including questions and comments, detailed minutes and video recordings for reference, facilitates the efficient development of solutions.

Through this engagement process, the Australian BioCommons has identified and then coordinated work to deploy essential infrastructure that was previously lacking to support critical communities (e.g. those undertaking genome annotation). Successful outcomes of deployment at this early stage are measured by positive responses from the community (e.g. turning up in large numbers, actively joining the discussion), and active use by early adopters.

The method is now being applied to engage a diverse range of communities. To view the full Australian BioCommons Community Engagement Framework, please visit tinyurl.com/EngageAusBioCommons, and for information about communities, please visit biocommons.org.au/get-involved.