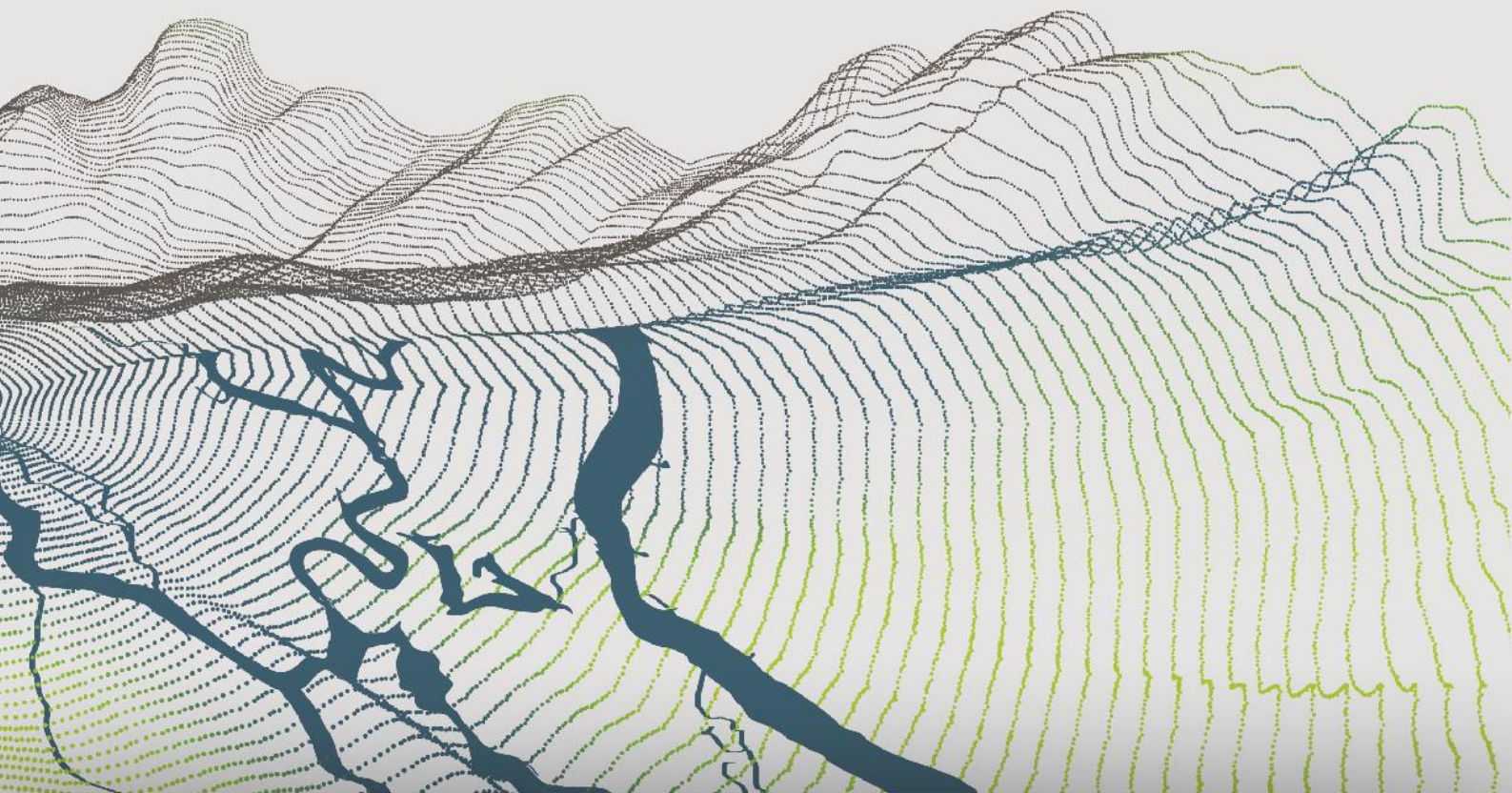




QWMM CAPACITY DEVELOPMENT SMALL GRANTS

Information and Instructions for Proposals



QWMN CAPACITY DEVELOPMENT SMALL GRANTS PROGRAM PARTNER EXPRESSION OF INTEREST

SUMMARY OF KEY DATES

KEY ACTIVITIES	KEY DATES
Call for proposals opens	15 June 2020
Call for proposals closes	17 July 2020
Evaluation period	17-23 July 2020
Successful partners/projects notified	24 July 2020
Projects commence	1 August 2020
Projects complete	23 December 2020
Evaluation of outputs and outcomes	By end January 2021

SUMMARY

The Queensland Water Modelling Network (QWMN) is seeking proposals for capacity building and allied engagement projects that catalyse and accelerate the implementation of actions to address skill, knowledge and broader workforce development challenges across the QLD water modelling and use sector. Key features:

- Up to \$50,000 worth of small grants available for projects in sizes ranging from \$5000 to \$10,000 per grant
- Applications can be made by a single organisation or by organisations collaborating
- Grants must be for capacity building projects that implement actions to address priority skill, knowledge and broader workforce development challenges identified by the QWMN (see below under Background for more information)
- Grant projects must begin by 1 August and be complete by 30 November 2020

BACKGROUND

In July 2019 the QWMN released a Skills and Knowledge Audit Report (accessible via [here](#) and termed the Audit Report for short). This Report provided a characterisation of workforce structure (in terms of job roles) then assessed recruitment and capability gaps and issues, both current and emerging, across the whole of the Queensland water modelling and use sector. The Report was a global first in terms of being a structured assessment of workforce and capability needs across a water modelling and use sector. It identified in specific job role terms what water modelling and use means professionally as well as showing variation across government, consulting and research/higher education employers in terms of recruitment and the development and maintenance of suitable skills and knowledge sets within their workforces.

To turn the gaps and issues in recruitment and capability identified by the Skills and Knowledge Audit Report into actions a second follow up piece of work was commissioned by the QWMN. This involved convening a Cross Sector Skills and Knowledge Audit Working Group to assess and prioritise the most significant challenges raised by the Skills and Knowledge Audit Report, identify how those challenges might be addressed through specific

actions before outlining the potential role of different employer types in doing so. The recommendations of that Working Group were captured in a Skills and Knowledge Audit Response Report (accessible via [here](#) and termed the Response Report for short). This Report identified skill and knowledge challenges but also a set of broader workforce development challenges.

WHAT IS BEING SOUGHT

We are seeking proposals to deliver small projects that help address the skill, knowledge and broader workforce development challenges identified within the Response Report. More information on these challenges can be found in the Appendix to this document and across Tables 2 and 5 of the Response Report. In summary, the priority skill, knowledge and broader workforce development challenges and some example ways of addressing them are shown in the table below.

Challenges	Example approach for addressing challenge
Developing cross-disciplinary systems and approaches	Learning from other sectors through running cross-sector workshops; Creating internship positions on complex, boundary spanning projects
Improve communication of models, modelling and model outputs	Design a program of capacity building in story telling as a key communication mechanism; Train modellers to be able to design communication strategies that focus on differing needs of different users
Provide more and better data for models and modelling	Improving awareness of where different data sources are and how they can be used through a set of events and supporting resources; Creating an open, data sharing culture through a CoP process
Improving workforce recruitment and retention	Create a work-based learning program for students to learn about water modelling practice; Advocating for a career in water modelling through career events, mentoring or video assets
Improving modelling standards and QA	Develop documentation that makes the assumptions embedded in standard models transparent and clear; Build capacity in assessing and responding to uncertainty using model

In addition to the Priority challenges above, the Response Report also identified the following challenge:

- Developing and improving modelling skills e.g. better embedding modelling in University curricula, improving continuing professional development for modelling related roles and staff, and better understanding what skills to develop over the next 2-3 years to make an impact on sector capacity
- Workforce planning and management e.g. the need to improve succession planning, improving the reward and development of talent to prevent turnover

ELIGIBILITY CRITERIA

The eligibility criteria are simple. To be eligible a proposal must:

1. Propose a project whose intended outputs and outcomes will benefit the water modelling and use sector in Queensland
2. Propose a project that implements actions that address or contribute towards addressing the challenges identified by the QWMN Response Report (report accessible via [here](#)).
3. Be complete – all fields in the application form must be completed.

INSTRUCTIONS FOR SUBMITTING A PROPOSAL

Proposals for a QWMN Capacity Development Small Grant should be submitted via this form: [SUBMIT PROPOSAL](#) by midday 17 July 2020. Parties will be notified by 24 July 2020 via email about the outcome.

The proposal form will require that you include:

1. Contact details for the lead applicant and any secondary applicants
2. A description of the proposed project in terms of:
 - I. Target audience and intended outcomes
 - II. How these outcomes address the skill, knowledge and broader workforce development challenges identified by QWMN
 - III. What the project will do and how it will achieve the intended outcomes
 - IV. How the achievement of the outcomes could be measured/assessed
 - V. The project budget including a specification of leveraged or in-kind funding that will be provided
3. A statement of the capabilities and experience of the applicant organisation(s) that are relevant to delivering the project

EVALUATION OF PROPOSALS

Proposals will be evaluated by a panel chaired by Dr Brian McIntosh (International WaterCentre) which will include diverse representatives from across the QLD water modelling and use sector. Proposals will be evaluated based on the following criteria:

- Addressing priority skill, knowledge and broader workforce development challenges – the extent to which the priority skill, knowledge and broader workforce development challenges described in the Response Report are addressed
- Benefit to water modelling and use sector – how significant the benefits of the project will be to capacity development across the sector
- Likelihood of success – how likely the project is to achieve the intended outcomes given the approach to be used, the resources and the capability of the applicant(s)
- Value for money – in relation to the costs and any leveraged or in-kind funding brought, what is the value of the project outcomes?

ABOUT THE QUEENSLAND WATER MODELLING NETWORK

The Queensland Water Modelling Network (QWMN) seeks to develop a network and build capacity to undertake modelling of surface water and groundwater resources and their quality to help inform management of the State's water resources, including water supply management, flood risk management, and catchment restoration. The QWMN provides the tools, information and collaborative platforms to support best-practice use of water models, and the uptake of their results by policy makers and natural resource managers.

The QWMN:

- Addresses the critical strategic gaps and weaknesses in water models at all scales, from individual farm paddocks, through to catchments and regions
- Improves the integration of all Queensland hydrology, groundwater and water quality models—and the consistency of modelling practices across the State including Great Barrier Reef models
- Integrates environmental monitoring activities with water modelling, particularly in priority catchments and basins
- Identifies innovation, research and development opportunities to improve the efficiency and effectiveness of water modelling in Queensland
- Develops a community of practice in model development that will better inform environmental resource management decision-making in Queensland.

More information can be found [here](#).

FOR MORE INFORMATION ON THE SMALL GRANTS PROGRAM

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APPENDIX 1 – SKILL, KNOWLEDGE AND BROADER WORKFORCE DEVELOPMENT CHALLENGES

The following table shows the challenges – taken from the Response Report.

Challenge	Explaining the critical issues
1. Developing and improving modelling skills	Embedding modelling education in our Universities: <ul style="list-style-type: none"> • What kind of modelling curricula should we develop? • How long will it take and what would be involved in doing so?
	Continuous improvement: <ul style="list-style-type: none"> • Of skills of modellers in work • Building capacity and capability in organisations (ongoing)
	What skills should we focus on developing over the next 2-3 years so we: <ul style="list-style-type: none"> • Create an impact on modelling skills and capabilities? • Establish a platform for future response to changing skills needs?
2. Developing cross-disciplinary and systems approaches	Developing multi-disciplinary knowledge and skills in water modellers: <ul style="list-style-type: none"> • These skills come with age and experience right now, so how can we develop them at a younger age in the workforce? • Sharing knowledge across disciplines • Creating the desire to collaborate and to learn from others
	Enabling cross-sector learning: <ul style="list-style-type: none"> • Developing more complete knowledge of the whole of the modelling supply chain by developing knowledge and skills in different areas from model provider (technical) to decision maker (policy) • Joint sector capacity building needs • Creating the desire to collaborate and to learn from others
3. Communication of models, modelling and model outputs	How should the sector deal with modelling skeptics?
	Communication skills development: <ul style="list-style-type: none"> • Communicating with the public • Communicating with policy makers – translation skills • How to communicate modelling outputs simply and succinctly?
	Visualisation of complex systems
4. Workforce recruitment and retention	Fundamental skills/knowledge behind water modelling need to be stronger: <ul style="list-style-type: none"> • Graduate coding skills • Graduate physical process knowledge
	Difficult to recruit people with both right skills and interest in working in both water management and modelling
	Making modelling more attractive as a career choice: <ul style="list-style-type: none"> • Is modelling ‘sexy’? • Getting students interested in water sector work generally is a challenge <ul style="list-style-type: none"> ○ General level of community water literacy might be inhibiting the sense that water modelling and water work more broadly are critically important • Having clear ways for graduates to get a foothold in and progress through a career in the water modelling sector • Having mechanisms to support early career water modelling professionals
5. Workforce planning and management	Succession planning
	Rewarding, developing and retaining talent? <ul style="list-style-type: none"> • Most employers only offer exposure to a limited set of water modelling areas, which in turn forces talent to move on to gain experience in a broader set of water modelling tools, approaches and applications • Market forces don’t reward deep specialisation in any particular model so talent leaves to find other opportunities
	Poaching of modelling talent between employers
	Data science skills need to be developed: <ul style="list-style-type: none"> • We are information rich but data poor

Challenge	Explaining the critical issues
6. More and better data for models and modelling	<ul style="list-style-type: none"> We need to be better able to run real-time simulation and visualisation with and of that big data
	Need to develop improved data management capabilities: This will enable us to take advantage of the opportunity of increased access to data (gauges, terrain, gridded data)
	Improved model integration, interoperability and scalability: Requires better data management
7. Modelling standards and QA	We need a clearer set of modelling standards and literacy of those standards as they apply across the whole modelling cycle
	Professional opinion about how to model a particular process or set of issues sometimes fragments and clashes with existing specifications and standards – how should we handle this?