



QUEENSLAND WATER MODELLING NETWORK INTERNATIONAL WATERCENTRE-LED CONSORTIUM - EXTERNAL ENGAGEMENT PROGRAM

The Queensland Water Modelling Network (QWMN) commenced in 2017 as an initiative of the Queensland Government to improve the state’s capacity to model its surface water and groundwater resources and improve the quality of models. Since then, the QWMN has initiated more than 12 collaborative projects, from cataloguing major water models used by the Queensland Government through to improving integration between agricultural and water catchment models.

In mid-2018, Griffith University, Queensland University of Technology, the University of Southern Queensland, the University of Queensland and AIMS, in a consortium led by the International WaterCentre, was engaged to work with the Queensland Government to complement, deepen and extend the work of the QWMN by building water modelling production and use capacity in Queensland, facilitating engagement across the full range of actors in the water modelling sector, and driving innovation in all aspects of water modelling across the State.

Specific intended outputs of the International WaterCentre-led consortium for the QWMN are detailed below.

For more information on the External Engagement Program, contact Dr. Brian S. McIntosh, QWMN External Engagement Program Manager, International WaterCentre at b.mcintosh@watercentre.org.

TYPES OF OUTPUT	DETAILS	DELIVERY SCHEDULE
EDUCATION, RESEARCH AND TRAINING	<p>WATER MODELLING SKILLS AND KNOWLEDGE AUDIT</p> <p>The Water Modelling Skills and Knowledge Audit will characterise both current and future water modelling workforce capability development needs, along with the full range of current formal education and training opportunities of relevance to those needs within Queensland.</p>	<ul style="list-style-type: none"> ▪ Interviews and workshop conducted November 2018 ▪ Report delivered December 2018
	<p>WATER MODELLING MENTORING PROGRAM</p> <p>In collaboration with QWMN members, a mentoring program will be established that provides undergraduate students with the opportunity to interact with water modelling professionals from government and industry with a view to developing their understanding of the use of water models in policy delivery as well as career opportunities available in the water modelling professions. The mentoring program will focus on skills-based mentoring, so students are better able to join the water modelling workforce in Queensland.</p>	<ul style="list-style-type: none"> ▪ Program designed in 2018, launched at the start of the 2019 academic year
	<p>QWMN INNOVATION PROGRAM</p> <p>The QWMN Innovation Program is based on the good practice lessons from successful Industrial Doctorate Centre (IDC) and Knowledge Transfer Partnership (KTP) models that have been running in the UK for the past two and four decades respectively. The program will see 5 Innovation Associates (IAs) recruited to conduct applied research on water modelling problems proposed by industry and government partners. The IA’s will be supervised jointly by Queensland researchers and government and industry scientists. The program will produce useful water models and modelling solutions for policy, planning and management issues in Queensland, develop the capabilities of the next generation of water modelling leaders, and act to attract the best potential candidates nationally and internationally to research, live and ultimately work in the Queensland water modelling and use sector. The IAs will also act as ambassadors for the QWMN and provide an important link between undergraduate students and the water modelling sector.</p>	<ul style="list-style-type: none"> ▪ Partner EOI late October 2018 ▪ Partner selection by 15 November 2018 ▪ Project development sandpit on 23 November 2018 ▪ Innovation Associate recruitment by 17 December 2018 ▪ Projects start February/March 2019



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TYPES OF OUTPUT	DETAILS	DELIVERY SCHEDULE
EDUCATION, RESEARCH AND TRAINING (CONT.)	<p>WATER MODELLING HACK CHALLENGE A 2-day Water Modelling Hack Challenge will provide a way for teams of junior-mid career water professional and postgraduate students to engage with sector stakeholders, to learn from real, practical problems and from the process of generating feasible innovative solutions. The challenge will be formulated and assessed by a panel of government, university and industry QWMN members. The challenge winners will be invited to present their solution at the QWMN Forum in 2019. The event provides a mechanism to recognise talent and incentivise entrepreneurial activity in water modelling in Queensland.</p>	<ul style="list-style-type: none"> ▪ Event to be designed in early 2019 and delivered mid - late 2019
	<p>PRIORITIES FOR FUTURE INVESTMENT REPORT A series of targeted interviews will be carried out with QWMN members and international experts to identify priority areas for future investment in education, research and training to support sustained sector-scale water modelling and use in Queensland. A scoping paper report will be provided that captures the outcomes of these interviews along with a prioritised and quantified list of future investment areas in terms of estimated returns on investment.</p>	<ul style="list-style-type: none"> ▪ Early 2020 delivery
ENGAGEMENT AND COMMUNICATION	<p>DEDICATED WEBSITE FOR THE QLD WATER MODELLING SECTOR A website (www.watermodelling.org) designed to facilitate communication, connection and collaboration between water modelling and use professionals, to help students understand and become engaged in water modelling as a career, to profile and promote good water modelling and use practice and innovation in Queensland, and to promote relevant events to build the capacity of the water modelling and use sector in Queensland.</p>	<ul style="list-style-type: none"> ▪ April 2019 launch
	<p>QWMN FORUM IN 2018 AND 2019 The QWMN Forum is an annual 1.5-day event designed to bring together water modelling and use professionals from industry, government and research to share good practice, learn from each other across application areas and organisational divides, and to connect and create opportunities for collaboration.</p>	<ul style="list-style-type: none"> ▪ 2018 Forum 21-22 November 2018 ▪ 2019 Forum TBC
	<p>WATER MODELLING COMMUNITY OF PRACTICE (COP) CoPs are a mechanism for enabling wider engagement across the modelling community, including with modellers, end-users and other actors in the sector. The QWMN CoP activities will seek to (i) enable participants to meet and collaborate to develop and champion agendas in water modelling; (ii) to generate practical and influential thought and advocacy outputs that reflect those agendas; (iii) to generate mutual understanding, trust and the desire to collaborate (the 'social infrastructure' which underpins improved capacity to innovate in water modelling), and; (iv) contribute to professional development and peer-to-peer learning and in doing so to help address some of the needs identified in the skills and knowledge audit.</p> <p>HDR students and young emerging professionals will be incorporated into CoP activities to ensure early exposure to sector-wide issues in water modelling and to contribute to workforce growth and capability development. QWMN CoP activities will be a hybrid mix of collaboration with other organisations and existing networks, plus dedicated QWMN events. This will enable leverage opportunities and help ensure maximum impact. Finally, over time, the CoP is intended to become an engagement process to benefit professionals involved in developing or using water models or their outputs across different catchment, rural, urban and coastal settings.</p>	<ul style="list-style-type: none"> ▪ CoP design in mid-late 2018 ▪ CoP events beginning in 2019