Director's Report

Management Committee Meeting

24 June 2020

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1. Summary

The Centre and the Core Team is pleased that many of the planned initiatives and events have come to fruition. Our Data Science in the News webinar series has been very successful and well-received both within QUT and externally, and has lifted the profile of the Centre to the wider community. Our Data Science Under the Hood seminar series has also enriched the academic community the sharing of data science methodologies.

With the widening of the Centre leadership to include co-leaders in our Research Programs and applied Domains areas, we are creating a community of researchers and students in each of these programs/areas from across QUT. With the anticipated addition of postdoctoral research fellows, this will add to our research capacity.

In the area of industry engagement, the Centre is building relationships with partners and a pipeline of potential engagement and projects.

2. Centre Profile

Leadership

The Centre has 5 Research Programs, each being led by one of the Centre's Core Team. Since the last Management Committee, the Centre has been organising its Centre Participants to identify their research participation with the Centre's Research Programs.

We have also explored having Co-Leaders for each Research Program and have discussed with relevant researchers who are interested or have been approached in being Co-Leaders. We now have identified Co-Leaders for most Research Programs.

Research Programs	Current Lead	Co-Lead
Data for Discovery	James McGree	Moe Wynn
Data Science Models and Methods	Paul Corry	Timothy Moroney
Computational Algorithms	Chris Drovandi	Matt Simpson
Data Focused Decision Making	David Lovell	Margot Brereton
Applied Data Science	Richi Nayak	Simon Denman

We anticipate that the role of a Research Program Co-Leader is to:

- establishing and organising a community of researchers through activities that bring researchers around the Domain to interact with one another and achieve the Centre's vision.

- fostering and nurturing collaborations for grant development and research proposals for internal/external funding opportunities.

- engaging researchers with other groups within QUT and external organisations to co-develop and/or deploy methodology to solve end-user problems.

- cultivating a culture of collaboration and celebration of successes to grow the profile of Centre Participants together with the Centre.

- encouraging a rich research environment and creating opportunities for students and early career researchers in their research journey/careers.

- working with the Centre Manager on activities and outcomes within the Domain for promoting, communicating, and reporting of Centre Participants and the Centre.

Research Program Co-Leader will become Chief Investigators of the Centre to formalise their leadership role within the Centre.

One of the key value propositions of the Centre to its participants is to bring together researchers from different disciplines and research expertise working within a domain they would not have ordinarily done so without the Centre acting as a catalyst.

The domains provide an applied focus and bring together multiple concentrations of research expertise and groupings to focus on a domain area. The domains act as an umbrella for the more applied areas for researchers with different expertise to work on a common theme.

After receiving suggestions on alternative Domains, we have now regrouped the Domains into 'confirmed' Domains and 'waitlist' Domains. The 'waitlist' Domains are Domains that we could add on where we get a larger concentration of Centre Participants in that Domain.

Domains	Co-Lead	Co-Lead
Health and Biological Systems	Dale Nyholt	Dimitri Perrin
Environment and Natural Systems	Kate Helmstedt	Jinglan Zhang
Business and Industry Systems	Adam Clements	Ashish Bhaskar
Social Systems	Char-Lee Moyle	Timothy Graham

We anticipate that the role of a Domain Leader is similar to a Co-Leader of a Research Program, albeit with a different focus – i.e. on a Domain area.

Appointments

The Centre advertised for 6 postdoctoral positions with a closing date of 23 March. There

was a total of 87 applicants, with 16 applicants invited to interviews. Interviews were held via Zoom between 17 to 23 April. Announcement by the VC on a recruitment halt meant that the recruitment process ceased temporarily. Recruitment with the new COVID-19 principles was communicated around 18 May. The Centre has submitted four postdocs for appointments in eRecruit that are currently pending the elevated approval process. One postdoc is pending discussions on possible transitional arrangements from one contract and project commitments to the CDS position. With the sixth postdoc position, next appointable candidates are being reviewed as both the first and second preferred candidates declined the position. The Centre is also discussing the possibility of a new female only position specifically for one of the research programs (Data-Focused Decision Making).

Centre Participants

Since the last Management Committee in March 2020, the Centre has continued to grow its Centre Participants

Participation Type	No of Participants (as of March 2020)	No of Participants (as of June 2020)
Core Team (CIs)	6	6
Research Program and Domain Co-Leaders (CIs)	0	13
Associate Investigators (AIs)	45	45 (13 previously Associate Investigators now Co-leaders)
DataScience@QUT (AIs)	26	28
Centre Affiliate	1	3
Students	13	45
Key Partners	8	8
DataScience.Info subscribers	118	179

We have also recently implemented an onboarding process to welcome new Centre Participants. This process includes a welcome letter and a welcome pack which summarises key information about the Centre for the individual and setting them up with a website profile and affiliation to the relevant Centre Research Programs and Domains.

3. Activities/Events

Since the last Management Committee, the Centre has commenced its proposed centre activities and events.

Data Science in the News

A short video series (or other modes of communications) where Centre Participants have a platform to evidence-based comments on the relationship between data science and what's topical in the news.

The Centre teamed up with the Queensland Academy of Arts & Sciences to present the 'Data Science in the News' series, with 6 webinars on data science and COVID19.
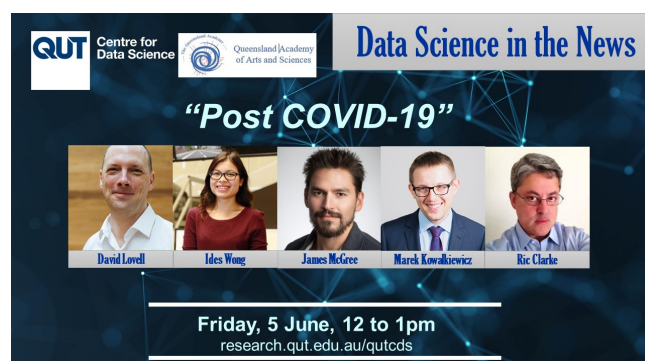
Data Science in the News – Webinar Stats (as of 9 June 2020)

	No of Registrations	No of Live Webinar Participants	No of Views on Recorded Webinar
COVID-19 webinar #1 (27 March)	357	223	148
COVID-19 webinar #2 (14 April)	200	172	104
COVID-19 webinar #3 (24 April)	165	127	199
COVID-19 webinar #4 (8 May)	114	79	91
COVID-19 webinar #5 (22 May)	223	110	45
COVID-19 webinar #6 (5 June)	113	77	11
George Floyd webinar #1 (19 June)	TBA	TBA	TBA

QUT Media worked with Raja Jurdak with a media release on the tracking of COVID19. The media release attracted high quality media interest from ABC's flagship current affairs and other news outlets.

We have had positive feedback from participants on the COVID19 webinar series including a scientist from Food Standards Australia New Zealand who will be sharing the webinar link with colleagues across the food regulatory system as there were lots of overlaps in ideas for the food regulatory system. With the sixth webinar, there are also follow up discussions between the panellists, and QUT Acting Provost Professor Robina Xavier who is also a Director of QAAS wrote to thank the Centre and panellists for taking the time putting this series together and to share their work to the wider network.

In partnership with the **QUT Carumba Institute**, we plan to have a series of webinars on the death of George Floyd in Minneapolis USA. His death highlights many important issues and questions. It prompts us to reflect on the role that data and data analysis play in these issues and, in turn, how these issues might inform our work as data scientists. The aim is to bring together speakers to discuss this topic from a range of perspectives, with the aim of exploring how data and data science can contribute to meaningful conversations, decisions and changes as a result of this tragic event.

Data Science Under the Hood

The primary aim of this seminar series is to disseminate, to the DataScience@QUT network, fundamental and cutting-edge data science methods that have been developed across several disciplines. This will service to expand the knowledge base of our Centre Participants, to foster interdisciplinary data collaborations by increasing awareness and highlighting challenges. The talks are designed to be accessible to the wider DataScience@QUT community. Assoc Prof Chris Drovandi is the convenor of this series.
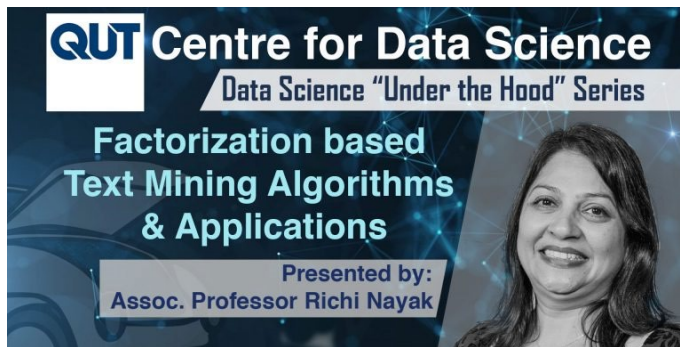
The first seminar was held on 30 April via a Zoom webinar, presented by Assoc Prof Richi Nayak (Centre Core Team, SEF). It was well received, with 42 online attendees. Prof Adam Clements (from QUT Business School) touched based with Richi after the seminar to further discussed about her methodology. There was a request for the seminar to be made available online from a Director of a unit from the Agency for Meteorology, Climatology, and Geophysics of the Republic of Indonesia (BMKG)
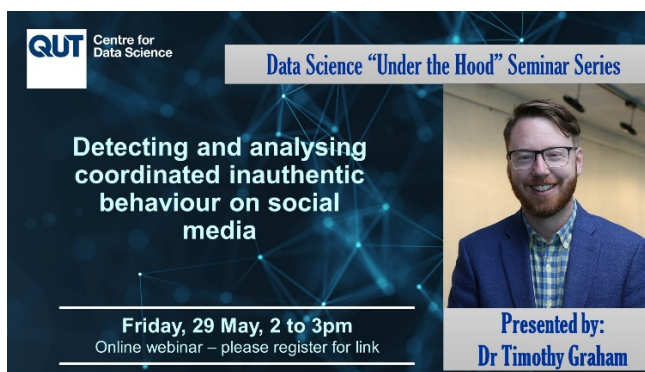
The second seminar was held on 29 May via a Zoom webinar, presented by Dr Timothy Graham (Associate Investigator, School of Communication). There were 50 online attendees, with requests made for the seminar made to be posted online.
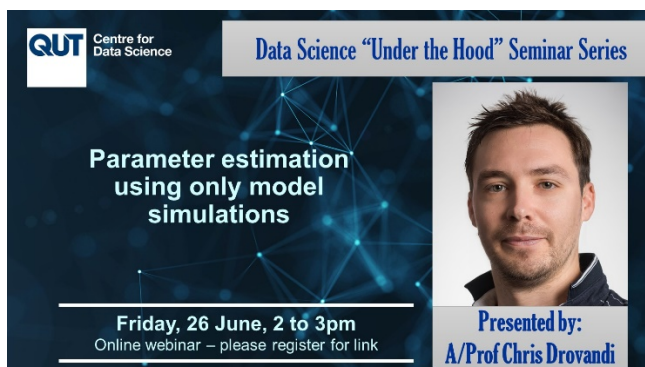
The third will be held on 26 June as a Zoom webinar too, presented by A/Prof Chris Drovandi (Centre Program Leader, School of Mathematical Sciences).

Data Science for HDR Networking

A networking session to build a community of HDRs interested in all things data science. Assoc Prof Richi Nayak is the HDR convenor for the Centre.

The Centre's inaugural HDR Networking session was held online on 7 May. It was originally scheduled for 2 April but was delayed due to the impact of COVID19 around teaching.

We invited three industry speakers who have undergone their PhDs to share their journey from PhD to Now. There were 34 student registrants. It was very well received by the students.

"I particularly appreciated the advice about planning ahead (professional & personally) and having a goal at the start of my journey. It opened my eyes to the wide range of exciting possibilities that can be embarked on. I am very motivated and encouraged after these 3 presentations. Thank you CDS!" --- quote from a student.

Data Science @ Work

The Data Science @ Work series is an industry focused session with examples of how data science have been used and implemented successfully or to show the value of data science at work. The Centre plans to start this series soon.

4. Research Initiatives

COVID19 Expression of Interest

As many organisations on the front line of COVID19 are facing challenges in dealing with data, the Centre created a register of participants who would be prepared to donate their skills and time to help organisations with data-related challenges in tackling COVID19 via an expression of interest process at the end of March. This is purely a pro bono service and will only last for the urgent period of the pandemic. Coordinators for this is D.Prof Kerrie Mengersen (Director) and Dr Dimitri Perrin (Associate Investigator, School of Computer Science)

An initial meeting of all who responded to discuss ideas, opportunities and areas where we might focus our support efforts led to:

- A creation of a Slack workspace to facilitate the discussions between all working on COVID19 (whether as a 'volunteer' or as part of their research).

- Sharing of datasets now listed on the Centre's wiki page and website.

- Discussions with Queensland Health about efforts to combine Transport and Main Roads data with epidemiological modelling to develop a "COVID19 barometer" (led by Dr Dimitri Perrin).

Centre Research Programs

We have now organised our Centre Participants and their affiliations into the various Research Programs within the Centre. Co-Leaders of each Research Programs are organising initial meetings for Centre Participants in each Research Program in June and July.

The aim and objective of these initial meetings include:

- To engage, encourage and support Research Programs so that the whole of our work together is greater than what we could achieve individually

- To suggest a scope for each Research Program that enables Centre Participants to be productive

- To set out the concept of each Research Program

We anticipate that support/resources/initiatives available for each Research Program will include:
- Co-funded scholarships
- Distinguished Visitors Program
- Communication support
- Industry development support through a Senior Associate for Industry Engagement (Data Science) – Geremy Farr-Wharton
- Professional support through a Centre Manager – Joyce Wang

Centre Domains

One of the key value propositions of the Centre to its participants is to bring together researchers from different disciplines and research expertise working within a domain they would not have ordinarily done so without the Centre acting as a catalyst.

The domains provide an applied focus and bring together multiple concentrations of research expertise and groupings to focus on a domain area. The domains act as an umbrella for the more applied areas for researchers with different expertise to work on a common theme.

After receiving suggestions on alternative Domains, we have now regrouped the Domains into 'confirmed' Domains and 'waitlist' Domains. The 'waitlist' Domains are Domains that we could add on where we get a larger concentration of Centre Participants in that Domain.

Co-Leaders of each Domain will be organising initial meetings for Centre Participants in each Domain Research Program in upcoming months.

Co-Funded Scholarships

The Centre is committed to expanding the capacity of new HDR scholarships in the Data Science community at QUT. As such, we are proposing up to 28 co-funded scholarships (funding available up to 2024 only).

Aims

To grow the capacity of new HDR scholarships *in addition* to the usual QUT annual scholarship rounds, or schemes where scholarships are well provided for (e.g. Australian Government Research Training Program, QUT Postgraduate Research Award).

To encourage research collaboration across at least two research groups within QUT.

To grow collaborative projects and partnerships between QUT and organisations outside of universities to solve challenging societal issues.

To leverage investment from industry and other research end-users.

What

Co-funded scholarships of up to $10,000 per year for 3 years. Funding is available up till 2024 only.

Available co-funded scholarships include:

- *Industry/End-User* co-funded scholarships where the research students will work with industry and end-users, and where the remaining scholarship funding required is funded by industry and other end-user organisations.

- *Data Science @ QUT Networks* co-funded scholarships where research students will ideally work across at least two research groups within QUT. The remaining scholarship funding is obtained by other sources of funding that are not the usual QUT annual scholarship rounds, or schemes where scholarships are well provided for.

- *Data Science Domains* co-funded scholarships where research students will work predominantly within a Centre domain across at least two research groups within QUT. Centre domains provide an applied focus and brings together multiple concentrations of research expertise and grouping to focus on a domain area.

With international PhD scholarships and international school fees, there is no blanket international fee scholarships, and will depend on each partner and circumstances managed through the partners agreement. It is expected that the external party will cover the students' health insurance.

Matching Scholarship

The DVCR announced further targeted support for Tier 1 and 2 Centres, making available one PhD scholarship to each Tier 1 and 2 Centre if their applicant can enrol and commence

by 1 September 2020.

The Centre proceeded with an Expression of Interest to all its Centre Participants, with six EOIs submitted within a very short timeframe. The selection committee decided to put forward Miguel Canizares, with Dr Andrew Gibson as principal supervisor (DataScience@QUT Rep, School of Information Systems) and positioned under the Centre's Data Focused Decision-Making research program.

The Centre has also identified another PhD scholarship candidate to match the DVCR's offer with a second Centre funded scholarship – Stefani Sotomayor. This will also add to the gender diversity of our scholarship students.

Australian Data Science Network (ADSN)

The Australian Data Science Network (ADSN) seeks to connect the concentrations of expertise in data science across Australia, in order to improve communication, encourage collaboration, expand opportunities, and promote our individual and collective capabilities.

The rationale for the ADSN:

- Data science is now a recognised profession that includes a wide range of disciplines and activities focused on extracting insights from data. It is a fast-growing area of research and one of the strongest enablers for government, business and society.

- Australia has an impressive and expanding footprint in data science. We have active academic research centres, government and corporate concentrations of expertise, and accredited university and professional courses. However, this footprint is spread over a large continent; the field of data science is very fast-moving; demand for data science capability and capacity is exploding; and there is increasing interest not only in individual groups but also in collective and national profiles.

- Australia does not yet have a collective or national profile in data science. Entities such as Data61, AMSI and some professional societies address this to some extent, but this is not their primary focus. We believe an Australian Data Science Network will provide a more comprehensive and inclusive solution to connect expertise in data science across Australia, to improve communication, encourage collaboration, expand opportunities, and promote our individual and collective capabilities.

Prof David Lovell (Centre Deputy Director) convened the first Partner's meeting on 1 May to share where we are at establishing the ADSN and obtain input into decisions about next steps. There was widespread support for the ADSN.

The ADSN requires a collective effort and there were discussions around ongoing commitment to participate, activities that can be promoted via the ADSN, providing support for running the ADSN online presences.

Next steps for the Centre are to design and implement the AustralianDataScience.Net channels; gather content and launch AustralianDataScience.Net. To date, the Centre has purchased AustralianDataScience.Net web domain; grabbed a twitter handle

@AustralianData https://twitter.com/AustralianData; engaged a web design Team at GoDaddy to produce a Premium Site and got this purchase discounted from $4100 to $3100. The Centre will also be seeking and funding a part-time resource to coalesce all the infrastructural requirements of AustralianDataScience.Net.

5. Communications

Work to Date

Twitter followers have grown from 142 in March to 299 (as of 10 June).

Tim Macuga has been undertaking the Communications Officer role for the Centre at 0.1 FTE and his time with the Centre ended in April. The Centre would like to thank Tim for his time and as a Science Communicator, the Centre has requested that he provides some insights into the work he has done so far.

The Centre would also like to thank SEF for providing the resources to appoint Tim for this time.

Report by Tim Macuga

The bulk of the communications work has been getting the 'comms' infrastructure set up. That included prioritising three things: the website, social media, and a working relationship with SEF and QUT media. These are now all in place.

The most important thing about communications is 'consistency'. Communications needs to be ongoing and consistent so that the Centre can 1) build an audience, and 2) maintain that audience. It is not like a light switch that can be turned on and off when needed. If that happens, there will not be an audience when it is time to communicate something important.

Moving forward, someone must continue to work to not only maintain what has been established but to 'grow' it. That is no small task.

The website must be 'current'. It must have the latest events, news, and research. There is nothing worse than going to a website and seeing outdated content. A priority must now be to identify and communicate the research that is starting to take place because of the Centre. Until now, the research has only been about the broad 'research themes'.

When it comes to the website, we must continue to build the momentum that was created with the launch of the 'Data Science in the News' series. The 'Data Science in the News' webpage continues to drive people to the CDS website. It must have the latest events, and videos from the previous webinars to stay relevant. The videos, themselves, take several hours each to be done properly. A relationship is in place with QUT to quickly get those videos on its 'QUTube' YouTube channel so that they can be embedded onto the CDS website. Typically, QUT asks for a week to get a video on the channel, but they now understand the timeliness of those videos getting on quickly.

The series is a unique event for the Centre, and we must now seek to leverage this opportunity to work with some of the people who are taking part in the series. That means identifying possible news stories with them that we could pitch to QUT media. It also means identifying other promotional opportunities to spread the word about the series.

The next thing is the Twitter account. It is rare for QUT to allow this type of Centre to get its own Twitter account, but Tim was able to convince the social media team to allow it. Part of that was based on the fact they knew Tim and knew he would maintain it. It is essential that the account does not go stale. When it comes to growing the Centre's audience, this is a tremendous opportunity. More than anything else, social media requires a consistent effort so that people can see the Centre is 'active'. Right now, Tim has worked with Joyce and James to get them set up on the account and has offered to counsel them on this. However, it is not clear yet whether they have enough capacity to maintain the account.

Finally, the Centre has a good working relationship with SEF and QUT media. In particular, Debra Nowland with QUT media has offered to work the Centre to give us exposure. One key thing that has to happen, though, is that we consistently give her story ideas. A regular catch-up with Centre leaders to brainstorm ideas on this would be ideal. At least one good story a month would be a great goal to set.

So right now, most everything is in place for the Centre to succeed at communications. It is important, though, that all the work that was needed to establish all this does not go by the wayside by not giving communications the 'consistent' attention it requires.

Gaps and Missed Opportunities

The Centre Managers of the three Science and Engineering Faculty (SEF) based Tier 1 Centres have provided their joint feedback and recommendations to SEF in relation to the current state of communications support provided to the Centres. The current state of communications support provided to the Centres is unsustainable and is unlikely to provide the level of support needed to meet the objectives of the Centres.

Currently, professional staff for Centres consists of one Centre Manager per Centre. It is recommended that dedicated communications personnel are deployed or employed to assist SEF-based Centres, at a minimum of 1.0FTE to assist equally across each Centre.

The success of a Research Centre is not only measured by metrics of grant and publication success, but also by the level of engagement and visibility across a wide range of audiences. There is a vast array of platforms that Centres can tap into to showcase and highlight their academic successes, each requiring a nuanced skillset to provide the desired outcome of Centre visibility and prestige. Some of these platforms and the associated resourcing requirements are listed in *Appendix 1*.

Duplicate Webpages

Currently there are two main QUT webpages for the Centre, and there is a potential for confusion between the two.

(1) https://research.qut.edu.au/qutcds/

(2) https://www.qut.edu.au/research/centre-for-data-science

The first webpage is the official webpage of the Centre. This is the main webpage that provides all the relevant information about the Centre and is maintained by the Centre.

The second webpage is navigated via the QUT website > Research > Our Research, which lists all the QUT research centres. While it is good to have the Centre profiled on the main QUT 'Our Research' area, web users should be quickly prompted visually to refer to the Centre's webpage at the onset. In the second webpage, any links to the Centre's webpage is found all the way down, and even then, they are linked to each of the Centre's research programs rather than then very first page of the main website.

6. Industry Engagement and Key Partners

The Centre would like to thank Geremy Farr-Wharton for his work in leading external engagements for the Centre.

Some of our industry engagement activities include:

- Presentation at Engineers Australia event "Big Data for Transportation" in March by Paul Corry and Ashish Bhaskar. Some useful future contacts were noted.

- Attendance at the Brisbane Airport Corporation "Raise Your Glasses" event in March by Paul Corry and David Lovell. Subsequent discussions with BAC were held on possible engagement mechanisms around data science.

- Discussions with Services Australia (formerly DHS) on opportunities with the Centre.

More details on the Centre's industry engagement with key partners and other potential partners are as below.

Partner	Maturity	Development	Target Partnership Value
Australian Bureau of Statistics (Strategic Partner)	Early (and promising)	- Looking to establish 100% funded Chair (Lev D-E) for 3 years. - Looking to establish co-funded PhD Scholarships - Looking to establish funded Postdoc Projects - Looking to establish funded Research Consultancies	- $250k-$500k p/a (3 years)
Australian Institute of Maritime Sciences (Strategic Partner)	Progressed	- Several established projects. - Opportunity for Postdoc projects - Opportunity to scale work into the future	- $100k-$400k+ p/a (level of uncertainty at this stage) (3 years)
Aboriginal & Torres Strait Islander Community Health Service (Brisbane) (Collaborative Partner)	Pre-initialisation	- Research consultancy pre-initialised - Significant future collaboration opportunities	- <$50k p/a (3 years)
Brisbane Airport Corporation (Strategic Partner)	Early (Halted – COVID-19)	- 4 x funded postdoctoral projects)	- $100k-$300k p/a (level of uncertainty) (3 years)
Cancer Council Queensland (Collaborative Partner)	Early-to-Mid	- Partner on an ARC Linkage - Exploration of a DH CRC funded commercial research project	- NA
Carumba Institute (Collaborative Partner)	Mid	- Establishing an Indigenous Australian Data Science PhD Program (3 x PhD Scholarships - Initially)	- NA
Children's Health Queensland (Strategic Partner)	Early	- Several PhD Scholarships - Several Commercial Research Projects	- $50k-100k+ p/a (level of uncertainty) (3 years)
Qld Department of Environment and Science (Strategic Partner)	Early (and promising)	- Looking to establish a schedule of activities targeting priority areas of partnership. - Exploring a 3-year partnership	- $250-$400k p/a (level of uncertainty) (3 years)
Qld Department of Natural Resources, Mining and Energy – Geological Survey of Queensland Group	Early-(and promising)	- Established commercial research project - Significant opportunity for future projects targeting 3 priority areas.	- $200k-$300k p/a

(Strategic Partner)			
Qld Department of Innovation and Tourism Industry Development (Strategic Partner)	Matured	- Established a longitudinal study to monitor key aspects of the Queen's Wharf Brisbane Precinct	- NA (potentially ad hoc funding of <$100k)
QSuper (Strategic Partner)	Early (a level of uncertainty – COVID-19)	- Opportunity for a range of projects.	- $300k+ p/a
REDD Digital (Collaborative Partner)	Early-to-Mid	- Potential PhD scholarships	- <$50k p/a (3 years)
United Nations Statistical Division (Collaborative Partner	Early	- Potential for commercial research projects	- NA

Consortiums	Maturity	Development	Target Partnership Value
- Australian Institute of Sport - Queensland Academy of Sport - QUT Centre for Data Science	Mid	- 0.5FTE Industry Research Fellow - 3+ x PhD Scholarships	$125k+ p/a (3 years)
- Qld Department of Environment and Science - QUT Centre for Data Science - Qld Department of Natural Resources, Mining and Energy – Geological Survey of Queensland Group - Telstra	Early	- Schedule of Activities targeting key priorities in Water Data Quality.	$500k - 1m p/a (level of uncertainty) (2 Years)

7. Research Grants

Research Grants Success

In 2020, Centre Participants obtained a total of 28 new grants and consultancies. These include:

- 7 ARC Discovery Projects

PROJECT INVESTIGATORS	PROJECT TITLE	2020 YTD
[1] Margot Brereton, [2] Andrew Bradley, [3] Laurianne Sitbon, **[4] David Lovell**, [5] Benoit Favre	Human-Machine Teaming:Designing Synergistic Learning of Humans and Machines	168,049

PROJECT INVESTIGATORS	PROJECT TITLE	2020 YTD
[1] Christopher Drovandi, [2] Chris Oates, [3] Anthony Lee	Advances in Sequential Monte Carlo Methods for Complex Bayesian Models	134,854
[1] Clinton Fookes, [2] Subramanian Sridharan, [4] Yingli Tian, **[5] Simon Denman**	Unlocking Mass Mobile Video Analytics with Advanced Neural Memory Networks	134,854
[1] Axel Bruns, [2] Stephen Harrington, [3] Scott Wright, **[4] Daniel Angus**, [5] Jennifer Stromer-Galley, [6] Karin Wahl-Jorgensen	Evaluating the Challenge of 'Fake News' and Other Malinformation	148,340
[1] James McGree, [2] Jennifer Firn, [3] Eric Seabloom, [4] Elizabeth Borer	Precision Ecology: The Modern Era of Designed Experiments in Plant Ecology	124,481
[1] David Thambiratnam, [2] Manicka Dhanasekar, [3] Hung Chan, [4] Yan Zhuge	Mitigating Vehicular Crashes into Masonry Buildings	134,854
[1] Daniel Angus, [2] Jean Burgess, [3] Nicholas Carah	Using Machine Vision to Explore Instagram's Everyday Promotional Cultures	95,435

- 1 ARC Linkage Project

PROJECT INVESTIGATORS	PROJECT TITLE	2020 YTD
[1] Robin Drogemuller, [1] Xiangyu Wang, [2] Peng Wu, [4] Keith Hampson, [5] Sherif Mohamed, [7] Vivian Wing-Yan Tam, [8] Khoa Le, [8] Carrie Dossick, [10] Zhiyou Wu, [11] Brett Belstead, [12] William Hackney	Asset intelligence: Maximising Operational Effectiveness for the Digital Era	5,000

A second ARC Linkage project with **Professor Daniel Angus** as a CI (administered through The University of Queensland) has also been announced, with the Foundation for Alcohol Research and Education Limited as an industry partner. This project aims to determine how young people engage with alcohol and nightlife marketing on social media platforms like Facebook, Instagram, and Snapchat. (Announced Funding $265,949).

Associate Professor James McGree is a Chief Investigator on the recently announced Australian Government's Medical Research Future Fund (MRFF) for coronavirus-related research. The project team is led out of the University of New South Wales by Associate Professor Meg Jardine and will work on "Repurposing existing medications to reduce severe acute respiratory distress in patients with COVID-19: the CLARITY trial". It will examine whether Angiotensin Receptor Blockers (ARBs) – a widely-used blood pressure medication – can shorten the duration of severe COVID-19 disease and reduce the risk of developing severe disease in high-risk SARS-CoV-2-positive patients.

For a more detailed list of new 2020 grants/consultancies of Centre Participants, see *Appendix 2*.

Research Grant Development

In addition to the work around industry engagement highlighted in the previous section, some of the grant development work by Centre Participants includes:

- Assoc Prof James McGree (Core Team) has submitted in April a QUT Notice of Intent to apply for an ARC Research Hub for transforming data science capabilities in agribusiness. This has been approved.

- Prof David Lovell is on the CRC Longevity bid team with Laurie Buys (bid Director).

Research Grant Income

The research grant income of the Centre's Associate Investigators and DataScience@QUT Representatives are as below (as at 16 June, information from RISS via the Division of Research and Innovation). Note that this catches all research grant income even if Centre Participants are only one of many Project Investigators.

	2018	2019	YTD 2020
Research	10,554,120	9,637,160	15,152,572
Collaborative Research (CRC)	1,501,805	1,146,930	1,846,728
Commercial Research	4,755,563	3,604,514	2,534,036
Consultancy	1,205,720	679,376	100,620
Grand Total	18,017,208	15,067,980	19,633,956

A more detailed list can be found in *Appendix 3*.

8. Key Performance Indicators (KPIs)

The Centre celebrates with its Centre Participants in their major awards and prizes. These include:

- Professor Lidia Morawska has been elected a Fellow of the Australian Academy of Science, an acknowledgement of her outstanding contributions to science and society.

- Dr Susanna Cramb has been recognised as a Super Star of STEM by Science and

Technology of Australia

- The Virtual Reef Diver team is the winner of the Asia-Pacific Spatial Excellence Award (APSEA), Award for People and Community

- The Australian Cancer Atlas team is the winner of the Asia-Pacific Spatial Excellence Award (APSEA), Award for Spatial Enablement

- Jayanta Sarkar's paper titled "*What Does Attending Early Childhood Program Mean for Child Health in India*?" published in **Health Economics** (one of the top field journals in health) that investigated the deleterious effects of preschool attendance on child health in India has been awarded the **Best Research Paper Prize** by the Australian Health Economics Society in 2019. It was shortlisted in top 5 by panel of Australian experts, then judged by top international scholars from Yale and Michigan).

The Centre submitted its strategic plans and KPIs earlier this year to the Deputy Vice-Chancellor and Vice President (Research and Innovation). These have been shared with the Vice Chancellor and President and have been commended for their alignment with QUT objectives.

A status update on our year-to-date KPIs for each of our high-level goals is as below

High Level Goals	Operational Plan	KPI Measures (per annum unless otherwise stated)	YTD KPI
To create an active Centre that is inclusive and representative of Data Science expertise across QUT	Recruit Associate Investigators (AIs) across QUT	50 AIs	54 AIs
	Create a DataScience@QUT Network	25 DataScience@QUT Network participants	28 DataScience@QUT Network participants
	Develop a successful program of joint activities for the Centre	2 DataScience for HDR Networking session 9 DataScience Under the Hood seminars	1 DataScience for HDR Networking session 3 DataScience Under the Hood seminars
	Develop equity and diversity policy in line with QUT and	% of female Centre Participants – 30%	Associate Investigators ~37%

To become internationally respected and renowned for world-class, frontier research in data science	professional policies		DataScience@QUT ~22% Students ~34% Total ~32%
		Women in Data Science networking session	TBC
	Develop a set of internationally leading core research projects aligned to Centre Research Programs	10 core projects	7 ARC Discovery grants
	*Appoint CDS postdocs	6 postdocs	Refer to item 2 - Appointments on page 5
	*Provide CDS PhD Scholarship top-ups	6 scholarship top-ups	5 scholarship top-ups awarded. The 6th student rejected QUT's scholarship for another Australian university
	Enlist other CDS researchers and students	CDS researchers and students to come from 5 Schools	CDS researchers and students come from 17 Schools and Institutes (Mathematical Sciences, Computer Science, Information Systems, Built Environment, Civil and Environmental Engineering, Electrical Engineering and Robotics, Earth and Atmospheric Sciences, Biology and Environmental Science, Biomedical Sciences, Public Health and Social Work, IHBI, IFE, Economics and Finance, Communications, ACE, Law, Management)
		50 peer-reviewed journal articles by Centre Participants	115 peer-reviewed journal articles by Centre Participants 59 are in the top 10%

			journals (as per latest 2018 Scopus Citescore)
To amplify impact of CDS through external partnerships in research and translation		5 joint publications between different groups at QUT	>5
	*Award CDS research excellence prizes	5 CDS awards	TBA
	*Fund and organise a Distinguished Visitors Seminar Program	5 Distinguished Visitors	TBA
	Develop a Key Partners Program in collaboration with Office of Industry Engagement	4 Data Science @ Work key partners events	TBA
	*Develop a program of Data Science Workshops aligned to CDS Domains	3 collaborative workshops	TBA
	Identify and publicise external funding opportunities in collaboration with Office of Research Services and Office of Industry Engagement	5 CAT1 joint research grant applications	TBC – reporting for research centres are currently limited and require further development. A manual workaround is being looked at local level. See industry updates in Item 7 above on partnership development work to bring grants/consultancies in.
To advance the Centre and QUT as a	Develop and lead an Australia Data Science Network	10 ASDN members	11 ASDN members

national leader in Data Science	(ASDN)		
	Develop and promote collaborations with international cognate centres	3 international collaborators	TBA
	*Develop an ASDN website	ADSN website	AustralianDataScience.net purchased
	*Develop a social media program for CDS and ASDN	100 Twitter followers	299 @QUTDataScience Twitter followers @AustralianData Twitter for ADSN grabbed
To train world class postgraduates, researchers and practitioners within the Centre research culture To increase participation in Data Science research	Encourage and promote joint research supervision in collaboration with relevant Faculties/Schools	25 HDRs	45 HDRs
	*Organise external networking events	4 industry events	TBC
	*Develop and implement a CDS undergraduate VRES program in collaboration with relevant Faculties/Schools	5 undergraduates in VRES program	TBC
To increase general capability in Data Science	Develop a CDS Professional Sabbatical Program in collaboration with relevant Faculty International and Engagement teams	2 participants	TBC
	Promote and support QUT and national internship	2 participants	TBC

	programs for CDS ECRs and postgraduates in collaboration with relevant Faculty International and Engagement teams		

*Budget Item

9. Budget

There have been some changes to the budget since the last Management Committee in March. The changes are:

- Removal of 1.0 FTE Level D and 2.0 FTE Level C

- Creating new co-funded scholarships – 28 per year x $10,000/pa, from Years 1-3.

- Decrease in Conference Support and Distinguished Visitors Program in 2020 considering travel restrictions

Please see *Appendix 4* for the budget.

In terms of actual expenditure incurred to date, there has been minimal actual expenditure except for the initial start-up of the Australian Data Science Network website domain and start up.

10. Queens Wharf Brisbane Longitudinal Benefits and Impact Study: Phase 3

June 2020 Update

- Data Study was conducted over 2 months (Jan-Feb) by Daniel Kennedy to look at other sources of data for the study. A point of focus was determining if Telstra data could be replaced by an alternative data source. The report was presented, and 3 forums were held with lead CI's to ascertain the path forward.

- All teams presented their internal briefs in February, Connectivity study to present once confirmation of data moving forward.

- Kerrie Mengersen met with DITID in April to discuss the possibility of releasing the Phase 1 & 2 reports, dashboard and or an Executive Summary publicly. A follow up a letter was then sent to Minister Kate Jones seeking approval. A response is expected in the coming weeks.

- Geremy Farr-Wharton has been working on a pitch to present to DITID in July to then use in meetings with Industry to seek funding for future phases.

- Due to COVID impact we have moved timelines to now have phase 3 over 12 months from August 2020 – August 2021. We are now seeking extra funding from DITID to cover this.

- Updated Phase 3 and beyond Proposal and Budget being finalised

Proposed Updated Timeline

- April 2020 DITID Data Brief and fortnightly liaising for data requirements and setting up of all new data agreements

- July 2020 Project Manager to produce Project Plan

- August 2020 Study teams to produce Study Plans

- September 2020 All data agreements to be in place

- October 2020 to April 2021 "Operational period"

- March 2021 Interim report due

- July/August 2021 Final report due

Financial Update @ close of May 2020

Funding received to date: $299,994.29
Expenditure to date: $29,640.62
Balance @ close of May: $270,353.67

We are seeking further funding from DITID of $113,000 for the "rescoped budget shortfall" for phase 3 ($80K +16% overheads) and for DITID to cover the cost to the Telstra data should that be the way DITID want to proceed. We are awaiting a response at this stage.

11. Appendices

Appendix 1 – Communication platforms and the associated resourcing requirements

- **Website**
  To build a successful website requires not only excellent skills in programs such as WordPress, Photoshop, Illustrator, as well as video editing skills; but time, to source images, program links and obtain and write content.

  These new Centre webpages not only need to be filled, but they need to be built, with content including: new projects, photos, news stories, online recordings of webinars, grant successes, publications, events, participants, funding opportunities, industry partners, contact details, participation forms

  Estimated set-up time per Centre: 2000 hrs; estimated maintenance time per Centre: 37hrs/week.

- **Promotional Flyers**
  These are largely written with a specific audience in mind. For example, a flyer written for an academic workshop will not be suitable for a parliamentary showcase, which in turn will not be suitable for a primary school visit. Therefore, an entire suite of flyers need to be written and designed each with a specific audience in mind. As the focus of the Centre shifts over time, these flyers will also need to be updated and changed. Examples of target audiences to be addressed are: University staff, postgraduates, undergraduates, government, public adult, high schools, primary schools, industry, conferences.

  Estimated set-up time per Centre: 37 hrs; estimated maintenance time per Centre: 3 hrs/week.

- **News Stories and Research Showcase**
  News stories are central to highlighting our research strengths in the public eye and as such the Centres should play a significant role in contributing to these. The current approach for news stories is ad-hoc and not streamlined. If one were to take a more structured approach and produce a small showcase piece for each person in a Centre, this would require significant time resources and resources and draw out information that engage various target audiences, as well as communication expertise. For this platform alone, it is clear to see that 1.0 FTE could be allocated to each Centre, just to compile and execute news stories to increase visibility.

  Estimated set-up time per Centre: 2000 hrs; estimated maintenance time per Centre: 37hrs/week.

- **Social Media Platforms**
Currently Data Science and Materials Science Centres have one social media account at present (Twitter). The Data Science Twitter account was managed by Tim Macuga, a communications specialist from ACEMS at 0.2 FTE until April 2020. The Materials Science platform is managed a volunteer from within the Centre's research community. However, Twitter is only one platform in the social media marketplace and there are lost opportunities for not engaging with a wider audience over more platforms such as Instagram, Facebook and Linkedin. For example, use of Instagram would enhance engagement with postgraduate and undergraduate students, and is the main platform used by Australian students, where Facebook and Linkedin are predominately used by industry, both nationally and internationally. These additional avenues have not been trialled yet, as without dedicated support systems in place, they would be bound to fail. These platforms, and indeed the current Twitter accounts, should be managed in co-ordination with other communication platforms used by the Centre and with dedicated support.

  Estimated set-up time per Centre: 2 hrs; estimated maintenance time per Centre: 2hrs/week/platform.

- **Wiki Sites**
These sites are useful repositories for information in that they are viewed only by internal staff. The types of information suitable for these are meeting outcomes, strategic documents, news events, forms and templates etc. The usefulness of these sites comes from the ability for all QUT staff to view this content, not just those currently participating in the Centre. These platforms are used successfully by large groups such as IFE and other Tier 1 Centres. But, again the whole site needs to be built from scratch for each Centre, and then maintained. This is a different software platform again, requiring specific technical skills to use it effectively. It has been left to the Centres to build and populate these sites with content.

  Estimated set-up time per Centre: 100 hrs; estimated maintenance time per Centre: 2 hrs/week.

- **Events Planning and Marketing**
Events planning and marketing require experienced and specific skillsets to execute these successfully. The types of events that regularly occur across the Centres are seminars, social gatherings, workshops, conferences, awards nights, launches, grand lectures, student excursions and incursions, outreach and public events to name a few. During the planning stages, specific actions needed to be performed include location scouting, printed and digital flyer preparation, invitation preparations, speech writing, organising catering and sourcing additional promotional materials. The marketing campaign is in addition to these core actions, and call for additional resources to be developed and deployed leading up to event, engaging with all the communications platforms used to promote the Centres, as well as targeted marketing avenues for

specific events, for example, the target market for a public event, is different to an industry showcase, which is in turn different to an internal student conference. It takes skill and training to execute this successfully. Currently there is no official event planning and marketing support offered to the Centres, with very limited support provided by SEF communications and IFE communications teams, with this role falling largely to the Centre Managers. While each feel that these events are of the utmost importance, and they would play a large part in their execution, to rely solely on the Centre Managers is a missed opportunity to maximise the success of these events and thereby enhance the visibility and success of QUT's research Centres.

Estimated set-up time per Centre: 0 hrs; estimated maintenance time per Centre: 4 hrs/week.