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Issue 7

in this issue...

...we tell you about our:

- turbulent times
- illuminating alumni
- conversations of 'and'
- purposefully evolutionary journey
- societal synergy



turbulent times

New Zealand, like the rest of the world, is moving into a transformative phase as we face unprecedented — perhaps — but certainly emergent complex problems that are often coupled with equally complex responses and unintended consequence.

We need to prepare for a world that cannot be foreseen and to have the inherent *fitness* to be able to respond to this. Fitness here referring to the inherent or acquired ability and inclination to respond and adapt to an evolving context. This moves us beyond resilience. Of course, our challenges are not assisted by the legacy of simultaneously ageing assets and outstanding global infrastructure investment requirements, which McKinsey and others estimate to be in the order of USD\$57 trillion through to 2030. So in this context and in a convention of predict and provide, building better and smarter, how can infrastructure and infrastructure practice retain its fitness?

In short, we need to reorient infrastructure practice towards societal outcomes rather than technical solutions and outputs. And whilst we have a pressing need to deliver new assets, we paradoxically need to move our conventional focus from investment decision making and project delivery — and even for that matter — engineering. This is confronting but we are faced with a double edge sword of the need to both disrupt and the inevitability of being disrupted. Our linear conventions are no longer fit — and in an age of complexity and uncertainty, in these turbulent times — we need to rely on our societal aspirations to give some certainty of strategic purpose.



illuminating alumni

We are proud to share with you that two of Anguillid's mentees have recently received recognition for the outstanding achievements in their journey thus far.

For the last five years, Carron has been mentoring **Morgan Meertens** as part of the First Foundation programme. That programme includes mentoring from a student's final year of high school through three years of tertiary study. This was an absolute delight and a privilege for not only did Morgan receive a Vice-Chancellor's Scholarship to Auckland University, she has gone on to complete a conjoint in maths and engineering, graduating with Honours in May. All that hard work has paid off and Morgan is now pursuing a Master's degree which uses geometric singular perturbation theory to assist our understanding of climate modelling.

Anguillid alumna and mentee **Jenny Chu** has also deservedly been in the limelight. Jenny joined Anguillid part-time whilst completing her conjoint in engineering and law and she remains an active part of our wee alumni network. Not only has Jenny built an impressive resume of projects since graduating — including roads of national significance and the City Rail Link — she is actively involved in professional and community initiatives such as Engineers without Borders which she founded here



in New Zealand. In April, Jenny was named Young Engineer of the Year by Engineering New Zealand in recognition of her stellar achievements. We are proud of what Jenny has achieved (and to have nominated her). We know Jenny doesn't rest on her laurels so we have set her the challenge of finding —and mentoring — another woman engineer to pass the baton to in the future!

a conversation of ‘and’ ...

Following on from the previous story, we are delighted to get behind the Diversity Agenda — an industry-wide campaign that is galvanising scores of Kiwi companies around one common goal: 20 percent more women engineers and architects by 2021.

The Diversity Agenda started as a collaboration between Engineering New Zealand, the New Zealand Institute of Architects and the Association of Consulting Engineers. At its inception, it already had 40 organisations signed up as Founding Partners and Change Makers —and that included us!

Anguillid is proud to lend our voice to the cause as a foundation Change Maker. As specialists in complex systems, Anguillid understands diversity is both critical and beneficial; gender is a key part of that equation. We are proud of Anguillid’s own efforts in this area to date, and we share the Agenda’s belief that it’s critically important for leaders in the industry to collectively commit to the campaign for change. This is about inclusion and so we believe this is about a conversation of ‘and’ rather than ‘or’, so we are delighted to see the initiative being so well received and supported thus far.

This is not just about diversity in the workplace though. Our work contributes to and helps to shape society, so this is also about who we listen to and include in the work we do and its effect upon our society — our diversity of both thought and action.

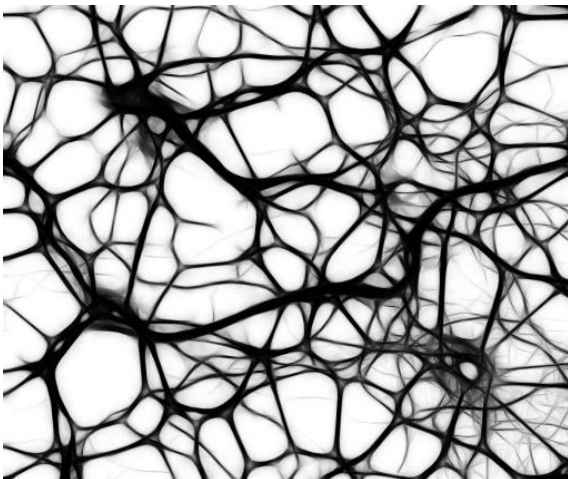
The logo for the Diversity Agenda Change Maker is set against a solid red square background. The text is in white, bold, sans-serif font. The word "DIVERSITY" is at the top, followed by "AGENDA." where the "A" is a stylized white arrow pointing to the right. Below that is "CHANGE" and "MAKER" on separate lines.

**DIVERSITY
AGENDA.
CHANGE
MAKER**

purposefully evolutionary journey

It is hard to believe, but Anguillid has just turned **10!** This was a milestone we probably should have celebrated in style, but...well there isn't really an excuse, so watch this space.

We have, however, refreshed our capabilities (and hence our website). This is more than a superficial or metaphorical dusting off of the cobwebs though as, in turn, it reflects Anguillid's evolutionary journey in light of our recent investment in infrastructure research. The core of our purpose and vision remains the same — sustainability — but better reflects our interest and expertise in complexity and systems thinking, particularly as this applies to infrastructure stewardship. This also better reflects the high-level issues we know you —our clients and your communities — are facing. And we know this because *you told us* as part of our leading-edge research. **Anguillid** is excited about the opportunity to now collaborate with you to address those issues, so please do make contact if we can be of assistance.



“Carron’s biggest thing is that ability to see past ‘job in hand’ to where it fits into a context of a whole industry, a whole way of doing things, and to fit the parts together... to make environmental engineering and planning part of the whole business of making places and transforming the city. [This] is just the sort of thing that we’re going to be needing for the next 20 or 30 years...”

(Local government client, 2013)

societal synergy

Anguillid is pleased to have been able to continue our pro bono community and professional contributions. In addition to the initiatives we've already discussed, we also:

- Have been appointed to the Engineering New Zealand Accreditation Panel;
- Completed two investigations as part of Engineering New Zealand disciplinary processes;
- Interviewed recent graduates as part of the recent Engineering New Zealand speed interviewing session;
- Proof read a Cambridge University PhD thesis and peer reviewed several international academic journal articles for the Institution of Civil Engineers, UK;
- Continue to socialise our research into the strategic intent and management of infrastructure systems. We are delighted that Treasury was able to use one of our concepts within its guidance for Long Term Investment Plans. We also published two additional peer reviewed journal articles stemming from our recent industry research and more papers are in development:
 - Research summary and cross-case analysis: *Strategic intent and the management of infrastructure systems*. <https://www.icevirtuallibrary.com/doi/abs/10.1680/jensu.17.00011>
 - Research methods, system pathology, and diagnostics: *A theoretical exposition on research methods for complex infrastructure systems*. <https://www.icevirtuallibrary.com/doi/abs/10.1680/jensu.17.00078>

We look forward to being able to provide you with a snap shot of our project work next time. This includes strategic business planning advice to an infrastructure service provider. If we can be of assistance and can add value to your outcomes, then please get in touch (details overleaf).

We value your feedback and any suggestions you may have. Please check out our website using either the QR code (right) or www.anguillid.co.nz. As always, if Anguillid can assist you then please contact Carron at carron.blom@anguillid.co.nz or 027 2648 455.



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Ngā mihi/kind regards from the team at

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