



Interview

Eva MacNamara and Clotilde Robin

→ A collaborative partnership that was formed in the midst of lockdown is challenging the ‘hero myth’ of conventional working practices, and creating alternative role models for structural engineers.

Helena Russell finds out more.

How does a structural engineer gain the tools for successful collaboration in the professional environment, and what benefits does this process offer? While mentorship schemes are widely employed, their hierarchical arrangement can have drawbacks. Mentees may be reluctant to challenge a more experienced member of staff, or put forward a suggestion that could result in them being labelled radical, or a potential risk-taker. In extreme cases, the personality and professional style of the mentor may restrict or channel the development of their charge.

Team working might have taken a body blow in the pandemic, but ironically it was during this time that Expedition Associate Directors Eva MacNamara and Clotilde Robin established what they call their ‘duo’ collaborative working practice. They believe it not only makes their work more enjoyable and productive, but it gives clients a better outcome, and challenges the ‘hero myth’ of projects by offering unconventional role models.

An unlikely duo

When Robin joined Expedition in 2020, she barely had time to acquaint herself with new colleague MacNamara before the office closed its doors, and they found themselves trying to work out how to progress the innovative modular AVA bridge project in the online world (**see box**).

MacNamara recalls: ‘The Covid period was very challenging for us both, in terms of the project we were working on, and also coping with our home lives with children. We rapidly developed a shorthand of understanding; when you have gone through blood, sweat and tears over a project together, it really creates that environment. We also quickly recognised that we are just different enough that we don’t agree with each other all the time. That kind of positive tension is really great for business and for moving things forward.’

Robin agrees: ‘AVA was a very challenging project, not just in its innovation but also its disruptive

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nature in terms of the method of design. In six months, we realised that challenging one another and being honest with each other was beneficial.'

She believes in pushing back at times, to build confidence in the other person – being trusted to do something spurs them to make the effort. If one party dominates, the other might lose confidence or skills. 'One might be a step ahead, but the other must be capable of catching up for the dynamic to work,' Robin adds.

'We want to demonstrate that it's possible to be two people working together; our colleagues find it more relaxing as they can see that despite the different styles of the two individuals, both are progressing,' Robin continues. 'We want others in our team to have this peer relationship, which is different from mentoring. It's not me supporting a young engineer; I'm saying, 'find your partner in crime, work together and push yourselves together'.'

Both admit that the pairing was not an obvious one. Their differences in approach are obvious in interview – Robin frequently jumps in to answer a question quickly, with strong opinions and immediate thoughts, whereas MacNamara takes more time to respond, waiting patiently for Robin to finish with the confidence of someone who knows she will be given the chance to speak.

'It wasn't a given that we would get on well – people thought we might be too competitive,' admits Robin. 'I am more direct, which could upset people. It's clear that if you are too different, and aren't able to understand one another, collaboration might be too difficult. But test a few and you will find the right person – there are no rules for this!' she says.

Going their own way

Despite sharing common experiences, many of which relate to being female engineers in a male-dominated world, MacNamara and Robin arrived at Expedition from very different routes. Cambridge graduate MacNamara began her career at Atelier One more than 15 years ago, which was 'always something random or different and I didn't really know what standard was. It set me up for always challenging things and looking for other options.'

French-born Robin followed a Master's degree at École Nationale des Ponts et Chaussées with



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postgraduate studies at UC Berkeley and Centre des Hautes Etudes de la Construction. She joined Setec TPI in Paris, where she stayed for seven years, working on the Third Bosphorus Bridge, among other large-scale projects. A five-year stint at COWI, where she consolidated her bridge design specialism, was followed by the move to Expedition.

She is aware of the difficulty that anyone who doesn't fit the normal engineering stereotype will have in finding positive role models in the industry, especially as they progress.

'When I was in Paris, I was working on buildings, art installations and bridges – larger projects and more delivery. As a young engineer, I had a very strong mentor, which I appreciated at the time. But in such a relationship, you are developing your skills to be like someone else and there's not much opportunity for peer review. At a higher level, you realise there are not so many female role models; why struggle to fit in, why not go your own way?'

The jury is out for Robin on how much gender influences their collaborative approach, but it's hard to imagine such partnerships in male-dominated sectors of the industry. Establishing a relationship in which both partners compete, but can still support and nurture the other's ambitions, might be a challenge for those who thrive on competition. MacNamara takes a wider view, musing not just on the role that gender and shared experiences feed into the partnership, but also how being honest, mindful and proactive in seeking support from each other on a daily basis merits greater recognition in the working environment.

'We are trying to disrupt the historical model – finding what works for us and not trying to fit into a different mould,' says MacNamara. 'It certainly speaks to the female engineers, especially the younger ones who might feel that they are not heroes, and aren't going to make it,' agrees Robin. 'I am more than

happy to tell them that they don't have to make it by themselves, they can find a partner. But this is not just about gender; more than anything we want to say there is not a unique way of leadership.'

Complementary approaches

Their own partnership approach is not a formal strategy at Expedition, but they observe it starting to influence the way that other staff work. Robin says: 'We are encouraging people to go to business development meetings with different partners – you never know who you are going to be talking to and that individual might be more sensitive or receptive to one than the other. Some clients prefer my direct manner, they know where they stand. With others you can't go directly to the point, you need to take them on a journey.' There is also a benefit for the client, MacNamara points out. 'Because we each know how the other works, we can get more directly to the right solution.'

Finding the right person can take a while, she agrees. 'You have to be honest with yourself – what are my strengths and weaknesses, and how can I find someone who complements me? There is a need for self-reflection. If you are honest with yourself and recognise the skills of your colleagues, you can find a good partner.'

Finding the right person is only the start though; honesty, trust and identifying a common purpose are all key ingredients for a thriving partnership. Face-to-face contact is also critical, Robin says, advocating the need for regular in-person meetings, despite the physical effort required: 'We try to do it even if days are busy and we end up having long conversations on regenerative design or preloaded bolts over WhatsApp on the tube journey home!' she says.



tse@istructe.org



@IStructE
#TheStructuralEngineer



#TheStructuralEngineer



HONESTY, TRUST AND IDENTIFYING A COMMON PURPOSE ARE ALL KEY INGREDIENTS FOR A THRIVING PARTNERSHIP



Case study: AVA – an innovative modular footbridge

The AVA project, which has been jointly funded by Innovate UK, the Department for Transport and Network Rail, is an initiative to develop an innovative modular footbridge design intended to revolutionise the delivery of accessible footbridges at railway stations.

The aim is to exploit manufacturing technology and bulk procurement to slash cost, programme and embodied carbon for railway footbridges. A full-scale prototype is due to be erected over Network Rail's test track at Widmerpool in Nottinghamshire this year, and plans are already in place for the next iteration of the design, which has been commissioned by Greater Anglia to replace an ageing concrete overbridge at Stowmarket station in Suffolk.

The bridge superstructure is assembled from 1.2m long modules created by bolting together elements cut and folded from flat stainless steel sheets. The modules can be configured to suit each location and, once connected, are fitted out as much as possible before final erection. The prototype also includes a new 'plug and play' lift.

Expedition is providing structural engineering and construction innovation services to the project team; it was during the most intensive part on this scheme that MacNamara and Robin established their

working practice. 'I joined the project after Eva had developed the concept, to focus on the delivery,' Robin recalls. 'We quickly agreed that we should share the pain and the success on both the technical and commercial fronts by upgrading each other's skills in this collaborative process.' The crunch point came when Robin contracted Covid the week before she was due to deliver the detailed design.

'We couldn't postpone the deadline – I was trying every morning to get on with it. But Eva stepped in and, because we had already built up this relationship, she took pride in being able to support me. Also, I realised that I didn't need to feel that I had to do it all myself.'

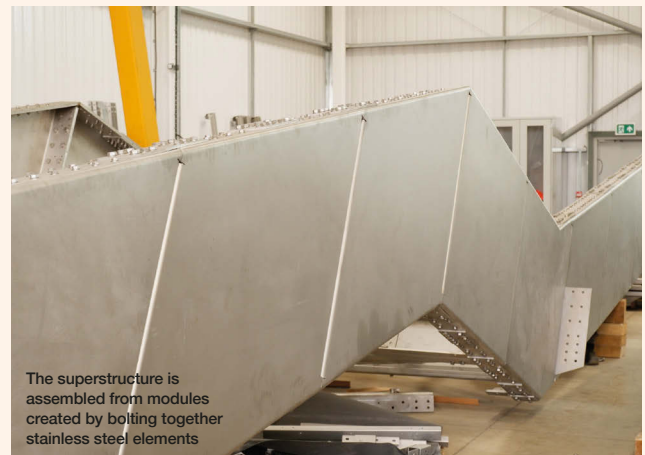
The second point in the establishment of their working practice came when the pandemic and acceleration of the first-of-a-kind deployment led to them having to work on both the Widmerpool and Stowmarket schemes concurrently. 'It would have been overwhelming for one person to be in charge of both of these; we split them between us, each taking on the one that suited our abilities best, but with the realisation that both of us had the ability to do either.'

Eva agrees: 'The innovation aspect of the AVA project was always going to be a challenge. But the whole concept would

fall down if we weren't able to get this industrialised pipeline production going. When you are in the thick of a challenging project, stepping out of it to see the long-term view is very difficult, and one person would have ended up getting very bogged down in the detail.'

The conventional approach would have been delegation,

but you don't get the same level of commitment from people, or it could become two separate projects with different leaders, Robin says. 'If those two people don't interact in the same way, and are not aware of all the changes and the reasons for them, you lose the benefits of the prototype in the first iteration.'



The superstructure is assembled from modules created by bolting together stainless steel elements