Breaking down technology barriers

Digital transformation is currently a hot topic in the public sector and this has lead to more roles being available in this important area. In an industry we might mistakenly view as one dominated by male programmers, here we speak to three women working in technology-related roles about how they got into the sector and their experiences of it

Name: Sarah Parker

Job title: Project Manager at Scottish social housing provider Cairn Housing Association

I didn't plan a career in tech...

Sarah planned to become a teacher but choose to do a genetics degree because she wanted to study a subject. After university she started working as a recruitment consultant and then had the opportunity to get involved with designing operating models. "Technology was something I almost fell into by accident but since then it has been a natural progression," she says.

"Such a huge part of delivering programmes and services are the systems that support them. I was given the chance to go to Saudi Arabia to work alongside Ministry of Labour subsidiaries to design a model for getting more women into training and employment. It became clear that there was a big gap in the systems to support the delivery of the programme. That was my first proper role in technology and from there was no looking back. Translating technological requirements between IT and operational delivery teams is where I found my feet. When I came back to the UK that was what I wanted to continue doing."

The biggest challenges I have needed to overcome...

"Moving to the Middle East and working to gain respect and learn a completely different culture and lifestyle is the biggest career and personal challenge I have had. Day-to-day there are issues around data security, privacy, governance, it is such a huge area of technology. Another challenge is the speed of change - you can be working on something and then something else comes along and overshadows it.

It is about making sure that what you are delivering is helping achieve strategic outcomes and addresses challenges - focusing a bit more on the operations than on the tech itself. The tech is the facilitation system to get you there."

The advice I would give a younger me...

"There is no rush. Take your time to experience lots of different things. It is okay to move around."

Highlight of my tech career is...

"Knowing how the technology I've implemented and the operating models, systems and processes I have worked with support services that have an impact on people's lives. I like to look for social consciousness in the organisations I work in."

Within the next five years I would like to see this happening in the industry...

"I would like to see more investment in educating young people around the opportunities that are available and give them the foundations to enter a career in tech. There is a huge opportunity to get involved in tech, not just in coding and development. A lot of other roles that have evolved, such as project management, which play such a huge role in the success of technology projects and development."

The future tech change I am looking forward to is...

"I am excited to see how some new tech, such as AI, is going to be incorporated and make an impact. We are quite a way off it but having a virtual housing officer that can be there through an Alexa would be helpful for the elderly or more vulnerable customers. Being able to ask a question and get an answer would be a huge leap forward."

My hobbies include...

"I am a keen climber - it is a complete escape. I am also into art and design and baking."

My favourite place is...

"My favourite place is anywhere with a beach. I am happiest near water and my favourite country is Oman - it's beautiful, has amazing terrain, amazing people and is very calm."

Name: Jules Maitland, PhD

Job title: Jules has recently launched a user-experience research and service design firm called All In. She is also an associate of NouLAB in New Brunswick, Canada, where she was formerly the Human-Centred Design Lead.

I didn't plan a career in tech...

Jules started her career in nursing before switching to academia at Glasgow University. This was followed by a move to Canada, where she has resided for the past ten years, to work for the National Research Council (NRC). After the NRC, she spent seven years working in industry before joining NouLAB. She has recently launched her own technology business All In.

What the role involves...

All In aims to help the public sector include users in the design of technology and public services. NouLAB, where Jules is still an associate, brings multi-stakeholder teams together to work on complex social problems, such as affordable housing and economic immigration. To give an example, one of the challenges identified during NouLAB's recent Economic Immigration Lab related to newcomers to New Brunswick finding employment. "It can be difficult for them even to get through the screening process because their credentials aren't recognised or the way they describe their skills doesn't resonate with employers," Jules says. "To that end, one of the lab teams is developing a digital solution which facilitates the newcomer's self-analysis and demonstration of their competencies, translating them into terminology a local employer would appreciate."

Tech found me...

Jules started out as a nurse but, as a strongly empathetic person, found the role emotionally draining. Remembering what had interested her at

school (Maths) and being curious about the growing role of technology and the Internet (in 1999), Jules undertook a distance learning course in programming. After this followed community college in Glasgow, followed by a Software Engineering degree at Glasgow University and then a PHD with a digital health thesis.

The biggest challenge I have to overcome...

"The biggest challenge is to convince some decision makers that users should be involved in the design process. I've come across the argument that industry leaders, or government policy makers, are the experts who know what they're doing and know what is needed (or should be seen to know what they're doing). Yes, they are experts, but they aren't necessarily experts in the lives, values, and needs of their service users."

The advice I would give a younger me...

"Find a mentor and build a network. I didn't realise the benefits of networks when I was younger, such as peer support, opportunities for collaboration and employment. Don't be afraid to reach out, ask questions and be there for others."

Highlight of my tech career is...

"I hope it will be my new business All In. As we move through this phase of digital transformation, I think we have a great opportunity to meaningfully engage the public in the design of services and technologies that affect their everyday lives."

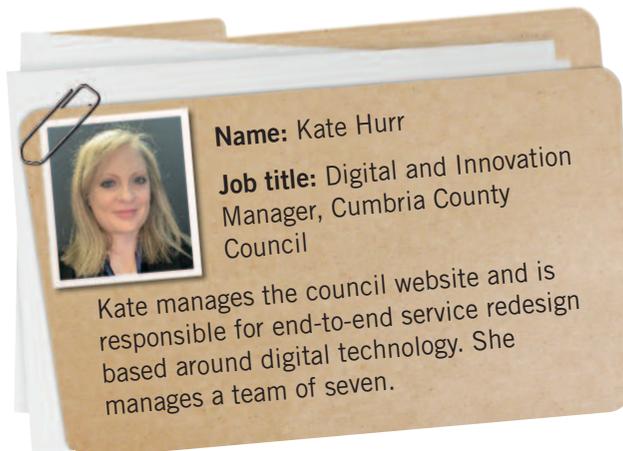### Within the next five years I would like to see...

"I'd like to see the diversity in the range of people coming into technology continue to grow, in terms of backgrounds as well as demographics. There is space and a need for people with creative and humanities backgrounds too. We need people who understand human relationships as much as anything else."

The future tech change I am looking forward to is...

"I feel mindsets are shifting around technical development for the sake of development. I feel we're at the tail end of a pendulum swing and now feeling the effects of extreme capitalism, consumerism and techno-centrism. It feels like people are starting to question it and that we will see a move towards more values-based tech development to help address complex social problems."

If I could meet anyone dead or alive...

"My great grandmother was a trapeze artist in Buffalo Bill's flying circus. I think she'd have a few interesting stories to share."

Name: Kate Hurr

Job title: Digital and Innovation Manager, Cumbria County Council

Kate manages the council website and is responsible for end-to-end service redesign based around digital technology. She manages a team of seven.

I didn't plan a career in tech...

Despite being interested in technology, Kate had not planned to work in tech. She started out in local government 17 years ago as a graduate management trainee in South Wales. Prior to joining Cumbria in April 2016, Kate worked in the area of change, redesign and transformation across a range of areas, including highways, children's services and communications. "One of the reasons I was appointed into the post (Digital and Innovation Manager at Cumbria County Council) is that the council didn't want someone with a tech background and for the role to just to be seen as about tech changes. It is also about culture and process change so they wanted someone with that broader skills base, not just technology."

The biggest challenges I have needed to overcome...

"Culture is the biggest one. Every transformation programme we run has got a culture change element to it. We have done some recent work on our skips and scaffolding service so these can now be applied for online. We worked with the staff internally to completely redesign it and make the process more efficient. The team were so heavily involved in that process they felt like they owned it and it was easier for them to make the changes, see what was happening and be involved.

"The other two big challenges are resources (both money and people), at a time when the council is having to make massive savings, and demographics. We have an ageing population and there can be challenges around supporting our customers in being able to adopt the changes we are making."

The advice I would give a younger me...

"Take every opportunity and make stuff your own. Always be willing to challenge the status quo. Just grasp it and run with it."

Highlight of my tech career is...

"The highlight has been the introduction of our low-code solution we are using for our work in Cumbria as it has masses of potential. The platform means you don't have to be a developer to use it. We can develop our own systems in-house so we are not as reliant on third-party providers to develop systems for us. I am really pleased that I pushed for this platform. To take that as an idea through to implementation has been a massive highlight for me."

Within the next five years I would like to see this happening in the industry...

"There is a big national drive at the moment through the Local Digital Declaration to 'fix the plumbing' around the monopoly of providers to local government in terms of software. I would like to see that change so that we can start to break down some of the barriers in terms of these big providers. I'd also like to see greater levels of collaboration across local authorities, particularly in two-tier areas, and the growth of the low-code platforms which helps give local authorities control over their own destinies."

The future tech change I am looking forward to is...

"The growth of voice-activated technology. In Cumbria we are a bit behind the curve but it could have some benefit in some of our adult settings for our more vulnerable clients and how we can support them in different ways. We also need to broaden our access to younger people. We need to be looking at every channel to broaden communication and engagement with our communities."

My hobbies include...

"My hobby is ultra running. My greatest personal achievement, outside of work and my son, is running the Lakeland 50 twice, which is a 50 mile race through the Lake District."

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