

# TRANSCRIPT OF PODCAST

WORK WITH PURPOSE

BUILDING DIGITAL CAPABILITY IN THE PUBLIC SECTOR

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DAVID PEMBROKE:

Welcome to Work with Purpose, a podcast about the Australian Public Sector and how it serves the Australian community. My name is David Pembroke. As we begin today's podcast, I'd like to acknowledge the traditional custodians of the land on which we are meeting today, the Ngunnawal people, and pay my respects to their elders past, present, and emerging, and acknowledge the ongoing contribution they make to the life of our city and this region. I'd also like to acknowledge the custodians of all the lands from where anybody listening to this podcast today is joining us.

Reliable and accessible data is the key for the conception, delivery, and measurement of public policy and programs. The building of this digital capability and literacy remains at the top of many leaders of the APS's wish list. Indeed, the APS Reform Office is undertaking a review of this important capability to understand the current levels of digital capability in the public service, and indeed what steps need to be taken to build those skill sets in more public servants across the APS.

To contribute to this important conversation, the Institute of Public Administration in the ACT is hosting the Australian Government Data Forum on the 17th of May in collaboration with the Graduate Data Network, the Office of the National Data Commissioner, and the APS Data Profession. The forum will focus on how data can be used to inform the delivery of policy and programs with insights from experts across the public and private sectors. Well, we're lucky today to be joined by two of the organisers of the forum from the Graduate Data Network. The Graduate Data Network was established in April of 2018, and now has over 1,000 members from over 40 different Commonwealth state and territory agencies. Members are from both data specialists and non-specialist backgrounds, and they're all very keen to drive the effective use of data for the benefit of all Australians.

So joining me is Moira Mclaughlin. She is the Graduate Data Network's Project Lead for the Australian Government Data Forum. Since completing the graduate program at the Australian Institute of Health and Welfare, Moira has been on secondment with the Department of the Senate. Her experience as a data and information analyst has helped her to build her data sharing infrastructure and reporting skills to understand better the diverse experiences and stories about Australians from across our country. So welcome to you, Moira.

MOIRA MCLAUGHLIN:

Hi, David. Thanks for having me.

DAVID PEMBROKE:

And we also have joining us, Sam McMurray. Sam is a data scientist at the Australian Tax Office and also the co-chair of

the Graduate Data Network. After completing the data stream of the ATO's graduate program, he's now working on enhancing the natural language processing capability as a data scientist within the ATO's Smarter Data Branch. He has a passion for building data understanding within the APS and for accelerating existing business processes by incorporating data-driven approaches. Welcome to you, Sam.

SAM MCMURRAY: Thank you, David. Yeah, thanks very much for having me.

DAVID PEMBROKE: So listen, I'll start, first of all, Moira, if I may with you. Can you just tell us a little bit about the Graduate Data Network and what its goals are?

MOIRA MCLAUGHLIN: Yeah, absolutely, David. I think that was a really great introduction there before. I think the Graduate Data Network is really all about giving graduates in the APS an opportunity to come together, network, build their skills in a way that's unique and different to their everyday workload, as well as create a really solid foundation of those beginning their career in data, and how people across all levels of the APS can really have an input and say, and give back to really interesting and unique projects.

DAVID PEMBROKE: And so for you, Sam, what was the motivation for you to join the Graduate Data Network?

SAM MCMURRAY: Well my first exposure to the GDN was last year's Data Forum, which was just amazing. And I thought that any group of graduates who could contribute to putting together such an awesome event was definitely worth a checkout. So I had a look, I talked with a couple of people who'd done it, and it just looked really, really interesting. They were working on projects, they were connecting with other grads, they were able to put their skills into practice. So it just seemed like a really exciting opportunity, and just another thing that I could jump on inside of the graduate year to really get my hands onto data. But it didn't end up being all that data in the end, but still, that was my motivation for joining for sure.

DAVID PEMBROKE: And what has surprised you about being a member of the Graduate Data Network? What has happened that you were surprised has happened in the last 12 months?

SAM MCMURRAY: Yeah. Well, I think it was just the people within it. So I'm coming from a data technical background and I was really looking forward to get my hands dirty on a machine learning project or something like that. But it turns out a lot of our members are from the policy side or from non-technical backgrounds. So engaging with them and seeing, okay, what kind of work can we do together that's going to be

useful for the APS in general? So I think the big realisation for me was understanding that, yeah, there's a lot more to data than just my small technical background area. And so working on the projects, we were able to... None of them ended up being specifically data science projects. They were all a data event, or they were a report, or there were a summary of current policies and programs to help uplift data capability. So it was very interesting for me to see that and get exposure to those different people and those different types of work.

DAVID PEMBROKE:

And so for you, Moira, what about you in the last 12 months, what surprised you, or delighted you, or helped you as you have been a member of this Graduate Data Network?

MOIRA MCLAUGHLIN:

Absolutely. I think I can really mimic some of the sentiments Sam just mentioned. It's been such a learning experience, and a lot of my role as the forum project lead was actually learning how to communicate about data to people that may be on the policy side of things or might just be beginning their journey with data. So that was certainly a learning curve and a really big positive that I've taken away from the experience, working with the forum. So I think Sam honestly summed it up really well.

DAVID PEMBROKE:

So listen, the APS Reform Office, as I did mention in the introduction, are taking a very good hard look at both data and digital as the professional streams, and it's because of the demand and because of the importance. Now, Moira, you work as a data and information analyst. What do you find most attractive about having data as such an important part of your career in the APS?

MOIRA MCLAUGHLIN:

Yeah, really great question. I think for me, as someone who's just beginning in their career, I've been really struck by the diversity of opportunities across the APS. So having been able to build some of my capabilities around programming languages, writing and exploring data visualisations, I think what I've found is I'm able to apply that to such a broad scope of work, whether that's more the health and welfare area or more kind of expenditure areas, as well as being able to relate that back to policy. So for me, I think the most attractive part about working with data is the scope and the opportunities it opens, as well as being able to branch out into unexpected, new and interesting areas of data.

DAVID PEMBROKE:

And what about for you, Sam?

SAM MCMURRAY:

Yeah. No, I 100% agree with Moira that the applicability of data and what you can do with even just a few technical skills, you can learn these technical skills and then apply them in any area. Within the ATO, you've got tax, you've got

law, you got a lot of different areas, but you can use a lot of the same techniques. And I think the reason why I loved data, or I was very interested in it to begin with and still am, is the problem solving aspect of it. You're always coming across something which you haven't really seen before, and you have to go and research, find a new technique or an old technique, or talk to someone and find out how I can overcome this little challenge to tell the story or to integrate a new data set or something like that.

DAVID PEMBROKE:

So Sam, can you give us an example perhaps from some of your work there at the ATO as to how you've used your skills, your data skills and collaboration skills as well with your policy colleagues as well to create benefit for the Australian people?

SAM MCMURRAY:

Yeah. Well, I think maybe this is one of the points I was referring to early is that I hadn't had much exposure to explaining it to someone whose background is in policy. My experience, so when I was in my first graduate rotation, I was in a team that was working on fraud analytics. So we were working with some very interesting cloud infrastructure. We were trying to identify how we can find fraudulent activity in the data we were looking at. So that was completely new to me and even to a lot of the team. We had to come across different things. We had to interact with external contractors who knew a lot of the cloud infrastructure side, and we had to combine that with the data that we were getting from our side. So it's amazing how much you have to collaborate even within the technical areas between data science and data engineering, data analysts who were going to eventually communicate it to the business. So there's a lot of collaboration that goes on in these data science projects and I've definitely experienced that since I've joined the ATO.

DAVID PEMBROKE:

And in terms of that, how much success did you have in identifying the fraud?

SAM MCMURRAY:

Yeah. Well, it's hard. Actually, it's very hard to get good results because it's not even just about having the right techniques, which undoubtedly, we did not. We're doing the best we could, but there's always new techniques coming out. But it's also have connecting it to the data and making sure that we've got good feedback from business, making sure if we identify an instance of fraud or we think we have, how well can we say to business, "We think we've got this case. What do you reckon? Does this match up with your experience?" So I think one of the huge challenges was getting the interaction and getting this feedback loop from the people we're trying to help out and to help improve the speed of their decision making. That was one thing, I think we did get some feedback in the end, but it was definitely a challenge to make that feedback loop happen.

DAVID PEMBROKE:

So Moira, to you, good policy and programs should be based on the best available evidence and comprehensive data. At the Australian Institute of Health and Welfare. You've worked on a novel national data compendium to establish leading statistical information on the prevalence of family, domestic and sexual violence. How has the release of this particular piece of work helped in delivering and developing better policy in this field?

MOIRA MCLAUGHLIN:

Yeah, thanks David. So I was really fortunate to join the Family Domestic and Sexual Violence Unit in my graduate year at AHW. So I think it's a really emerging area and we've seen a lot of interest, particularly in recent budgets. And a lot of conversations about the way that we can address such a prolific issue across Australia. And it's also an issue that is often hard to identify or talk about or capture, particularly in a numerical way. So it's been a really interesting space to be in. And once we are able to release our major project that is really capturing rates of the statistics and rates of violence across Australia, it's going to be a critical step in our ability to communicate with policy makers, program rollout, as well as ensuring that we're targeting funding on a needs basis.

So I think that it's incredibly important to... I think what we've been doing by capturing this data and really consolidating it and centralising it at the AHW, it's a really critical step in being able to establish a baseline. From there, I think we're looking at the measures to capture and explain progress across government, as well as areas of improvement. So I think it's one of those areas as most areas of health and welfare are, it's really difficult to capture and quantify that. And I think we've seen some really good examples, particularly in the disability unit, where we can have some frameworks in place, so we can measure progress and really communicate that in a meaningful way that translates on a practical level as well as I think just being able to... I think it's a really difficult task to kind of do well, and it's going to take a really long time to implement and refine the process as well. So I'm really excited that I was able to be a part of that throughout my grad year.

DAVID PEMBROKE:

So again, vast, complex, challenging work, but can you give me perhaps... or give us just a little bit of an insight into maybe one of the parts of that particular piece of work that you had to work on to solve a particular problem using the skills that you do have in that data information analyst role?

MOIRA MCLAUGHLIN:

Yeah, absolutely. So in my role as a data and information analyst, I've been doing a lot of authoring on particular topic pages. So that entails, for example, looking at the intersection of housing and family, domestic and sexual violence. So from there, it's looking at the current landscape, where are we getting information, what information do we have? How can we translate the data that

we're currently getting from housing services and translate that in a way that is able to be understood by the general public as well as policymakers, as well as lawmakers, and also people in the industry itself? So I think the goal there is to really communicate this information effectively as well as a government, establish a consensus or understanding about the current data and statistics.

DAVID PEMBROKE:

So Sam, in your role at the ATO, you work on enhancing natural language processing capability. For our listeners who might not be familiar about what natural language processing is, it is a subfield of artificial intelligence, which looks at how computers can better understand the natural spoken word and written language. Why does this sort of technology matter for the future of government programs?

SAM MCMURRAY:

Well, I think this is an absolutely huge area. I mean, just to lead it off with a buzzword, one of the most popular recent technologies that have come out in this field, which is ChatGPT and GPT 3.5 GPT 4, this is going to dramatically disrupt all of the things that we do, I believe in the future. But in my team, we're not quite at the ChatGPT level yet, but what we do is basically help humans and the people within our organisation have more informed and more timely decisions because you don't want to be, as a case officer, thumbing through thousands and thousands of emails, thousands and thousands of documents. You want to get a computer and these models, these language models that we can develop with NLP, to do that for you. And to either summarise or categorise these documents, send you the stuff that you'll be most interested in.

So a huge part of it is how do we automate, and the team that I sit in is the intelligence automation team, it's how do we automate these processes so that I can do less menial work, all of that reading through emails. Of course, it's necessary at some point. But if I can have the computer and the models to give you interesting information, which is going to help you make that decision faster, then we've succeeded. So yeah, specifically the work we're working on now is, yeah, we are working on one case within the ATO, so it's a tax-related case. And we've requested information from a certain company, and they've given us a few gigabytes of emails, but it would take a long time, weeks, months to go through all of this and incorporate that data into a decision.

But the team, now we're working with large language models, we're working with different methods to try and make that data simpler or to categorise it so that the data doesn't have to be gone through manually by a case officer, which is, as I said, can take a very, very long time.

DAVID PEMBROKE:

How do you manage the challenge of remaining optimistic, yet not overwhelmed when you do see the pace of change and the challenges that you are seeking to solve?

SAM MCMURRAY:

Well, how do I remain optimistic? Yeah, because it is daunting because once you have access to the technology like ChatGPT and related technologies, basically it's going to help anyone do much more than they could by themselves. So as long as the people behind the decisions being made, which I have full faith in the ATO, the Australian government, APS in general of course, so I'm very optimistic that we can use these things to really speed up the time to production, the time to delivery of a lot of the products that we deliver, a lot of the data products. So hugely optimistic about that. I think it's going to really upgrade the way everyone in our organisations do work, the way we handle data, the way we interact with others even. So yeah, I'm very excited about that part for sure.

DAVID PEMBROKE:

And what about you, Moira, that balance between optimism and perhaps being challenged by just how much, how big, how fast this technology is changing?

MOIRA MCLAUGHLIN:

Yeah, absolutely. Great question. I think it's really a double-edged sword. Particularly in the area I work in, we're having these leaps and bounds in technology, but it can sometimes be outpaced, from what I've seen, in the ability to have a workforce or have the skills or be able to have the infrastructure to really take advantage of those developments. So I think you need to, for me at least, stay optimistic that people are so interested in having these conversations and they're so interested in incorporating new and diverse techniques that any progress is good progress really. So I think by the very nature of the people that are using data, I think they really embrace change and flexibility and they're dynamic. So I think it's a double-edged sword, but I think that's also something that I really love about data and I love about the changing landscape that I work in as well.

DAVID PEMBROKE:

So how do you stay on top? How do you learn and what tools do you learn about using data and improving your skills?

MOIRA MCLAUGHLIN:

For me personally, I'm really fortunate that the AHW has quite a lot of inbuilt teams. So people are constantly updating their skills, doing training. But I think that really needs to be complimented by your taking initiative for yourself to go out there, look at areas or new programming languages or technologies that you may be interested in. So for me, I think a lot of the learning I've done myself has come from a needs basis, needing to optimise processes or needing to refine the way that I'm explaining specific data sets.

So I think that really drawing on the resources around you, having conversations with people in the field, looking to your supervisors and superiors. I think that's something I've really learned from the Graduate Data Network is that there's just



an abundance of people that are willing to help, willing to get in there and have those conversations. And really, there's just such a wonderful culture of learning and support.

DAVID PEMBROKE:

And to you, Sam, what tools have you found useful in learning more about using data and improving your skills?

SAM MCMURRAY:

Yeah. Well, I mean very similar to Moira. The culture that we have in the ATO and specifically the data science branch it's absolutely focused on learning. Everyone is super willing to help you out if you have an issue, just, "Hey, manager, what do you think about this? Do you know anyone in the team who's worked on this thing before?" So yeah, you're definitely not alone. And I think within the data technical side, there's a lot of introverts in the team, so really if you can be bold enough to make the step and reach out and say, "Hey, have you done this before?" You do get a lot of amazing connections. Because a lot of the stuff we've been working on with the NLP, there's been previous projects, previous proof of concepts that have been done. And really, it's not that efficient to just stay by yourself and try and put together a solution yourself when there's a wealth information and even just a wealth of code and a wealth of project experience that's out there.

Yeah. But on a technical side, of course, I think doing training programs, all the ones we have available, I think with the APS Academy, which has been released by the APS Data Profession is a great start, and it's constantly expanding its roster of courses that you can do. But I think, like Moira said, a lot of it is you can do so much just with a bottom-up approach. You have a problem, and you just look for a solution to that for what you're doing and then you slowly build up and you're able to learn based round of project. I have something I'm trying to do, and I get the tools later. I understand what I'm trying to do and then I find the tools that I need to complete it. So I think a lot of it's available. And Google absolutely is one of your best friends in a data technical role, there's no doubt about that.

DAVID PEMBROKE:

Are there any gaps that you've identified that you think perhaps maybe the APS we could do this, or we could do that, which would help us? Or do you feel that most of the tools, most of the culture, most of the mindset is in place and it's just really taking advantage of what is already there?

SAM MCMURRAY:

Yeah, I think there is so much there. And I was looking back on one of Dr. Gruen's speech from last year's Data Forum, and he mentioned that the data profession is made up of much more than just data scientists, technical analysts. So if that's your idea, really, it's about the people who are doing data visualisation, data management, data governance. So everyone's doing some amazing work in all these different

fields. And the challenge, and I think we're definitely doing this well and with a lot of the data sharing and the data governance activities that have been going on, we've been able to share a lot of knowledge around this area. But I think if we can do anything more, it is how do we integrate these teams which often sit in different parts of the office, work on different projects? How can we get talking more and more?

So yeah, one thing, the Graduate Data Network, at least on the graduate level, that's where my head's been for 12 months now, yeah, I think there's a lot of aspects, even just for grads. One of the best experiences I had was within my rotations, but I was, to my chagrin, placed amongst the litigation team, which is a different part of the office to the data science team. And I was like, "Oh no, I'm not going to be able to talk to anyone." But over the six months that I was sitting amongst them, I was able to talk and look at the problems and the issues that they're facing, trying to load up all their emails, load up all of their data that they're trying to do for day-to-day case officer activities.

And just see it from a data lens and say, "Hey, I'm pretty sure we've already solved a problem similar to that in the data science team. It'd be awesome if we could port that over." Of course, nothing happens overnight, but it was just really exciting to see that once you do start talking and you place a grad in a random place and they start talking to the people around them, you realise, "Oh, there's a lot more that we can do for each other within the organisation." And I think it plays out on the interdepartmental level as well, being able to share knowledge, share experience. Yeah.

DAVID PEMBROKE:

And what about for you, Moira, can you see any immediate gaps that might be able to be closed?

MOIRA MCLAUGHLIN:

Yeah, I think that was a really fantastic example that Sam just gave. Then I think from my experience, and to a similar point, it's making sure that we have that consistent data literacy across different agencies, across people who are using data in really different ways, to make sure that we're actually using it effectively and efficiently. Another perspective would be putting in place standards or procedures, making sure that people have access to the tools and resources that they need. I think some areas are really fantastic at implementing new tools such as R or Python, and then there are some other teams that may struggle to implement those more efficient technologies. And as we kind of mentioned before, this technology is evolving rapidly, and so it can be really hard to put in place these technologies in a regulated way. So I think that's something that's really exciting that's coming out of the ONDC is how do we make the standards consistent across the board. And something that I'm looking forward to seeing is that as these technologies evolve, how we can incorporate them and really make the APS more efficient.

DAVID PEMBROKE:

Yeah. So the Office of the National Data Commissioner, the APS Data Profession, IPAA, and the Graduate Data Network are coming together, May 17, to bring that forum, the Australian Government Data Forum together. A question to both of you before we wrap it up, what's one session that you are looking forward to and why should people attend the Australian Government Data Forum? So give me one session that you're looking forward to and a reason, a compelling reason as to why people should attend the Australian Government Data Forum. I'll start with you, Moira.

MOIRA MCLAUGHLIN:

I think the session I'm most looking forward to is Closing the Gap showcase. It's going to be a fantastic opportunity to look at an in-depth case study of the work that's being done in indigenous communities. And it'll be fantastic to see the diverse perspectives and ways that we're using data in a really tangible, meaningful way. So I think that will be really fantastic to hear from some industry leaders there. And why I think you should attend? Oh, well, I think I just took so much learning, so many people that I met at last year's forum. I've maintained those friendships. It's just a fantastic day all round. And most importantly, it's a good excuse not to go into work.

DAVID PEMBROKE:

Fair enough. Sam, okay, the challenge is yours. What session and why?

SAM MCMURRAY:

Well, I'm an AI data nerd through and through, so I can't not mention the fact that there's going to be a breakout session on AI and emerging technologies. So I'm very excited for that. It's going to be a discussion about all the things that are happening. Hopefully ChatGPT comes up, hopefully all of the large language model stuff comes up. But also there'll be Dr. Denis Bauer from CSIRO, talking about her bioinformatics and the huge developments that have been happening in that space, which is a huge part. It's going to be very interesting to me. So for all of the other data-minded people, I'll definitely recommend going to that. But it's so hard to choose because every session is going to be amazing.

Look, why should you go to the data forum? 100% like Moira, I loved the last one. It was my first real exposure to the work we do across the APS. You get this massive bird's eye view of everything that happens. I thought the ATO does is an amazing work, but really, we're just one of many departments who work with many different stakeholders, many different data sets. It really blew my mind last year, how big it is, how many people are involved, and how invested the APS is in getting the data capability up, the data sharing, all of these aspects. And yeah, I think it's a great way out and I'm super excited to attend. So I hope you'd love to join in-person and online as well.

DAVID PEMBROKE:

Excellent. Well, certainly a compelling conversation today, and probably what I take away from both of you is that this is business as usual. This is core operating capability now in this day and age of digital technologies. And so really, there will be something for everyone at the Australian Government Data Forum, whether you're in policy, whether you're in program, service delivery, whatever it is, I'm sure there will be something for you there. So a very big thanks to you, Moira McLaughlin, and also to you Sam McMurray. Thank you for joining me today. And that date again for that Australian Government Data Forum is the 17th of May in-person at the Rex Hotel, but also you can join it online. And there will be speakers such as Dr. Kendra Vant from Xero, and also the ANU Vice Chancellor Professor Brian Schmidt, who will also be speaking there.

So a big thanks to Moira and to Sam for joining us today. And if you are attending, why not join the inaugural APS Data Awards Dinner, which is on afterwards? And I'm sure both Sam and Moira will be there. The awards dinner will highlight some of the innovative and resourceful solutions that are being developed and delivered across the APS, and really will help people to see and understand just how data is making a difference to the lives of people in the Australian community. And there's also the opportunity to have a night out with colleagues. And I think that was one of the key messages that Sam brought across, and Moira really, is that the Graduate Data Network has been about coming together and meeting people, sharing experiences, sharing knowledge, and in many unexpected ways. So I'm sure if you do attend the APS Data Awards dinner, you will be rewarded by attending.

And there's also some great jazz music there as well by As Famous As the Moon. So make sure to register for those two great events. You can do that via the IPAA ACT website, which is the website, [www.act.ipaa.org.au/events](http://www.act.ipaa.org.au/events). And don't forget, if you are working for a department or an agency, you're likely to be a member of IPAA ACT. And if you do attend, you will pay the member rate.

So before we let you go, just make sure that you are connecting with IPAA ACT or contentgroup on LinkedIn about the latest from Work with Purpose, or by sending us an email at [events@act.ipaa.org.au](mailto:events@act.ipaa.org.au). Work with Purpose is produced in collaboration between contentgroup and the Institute of Public Administration of Australia ACT and supported as always by the Australian Public Service Commission. We'll be back with another episode in a fortnight. But in the meantime, you can catch up on the over 80 past episodes of Work with Purpose. It certainly is a treasure trove of information about the Australian Public Service, and indeed how the APS services the Australian people.

So you can listen to prior episodes of Work with Purpose on all podcasts platforms, Spotify, Apple, Stitcher. And indeed,

a rating or review also helps us to be found. So if you did have time to leave a kind rating or a review, that would be much appreciated by us here at Work with Purpose. But a big thanks again to Moira and to Sam for coming on today. Thanks to you for coming back once again. We'll be back at the same time in two weeks. My name is David Pembroke, and it's bye for now.