Intro: Hello and welcome to the CPA Australia podcast. Your weekly source of business, leadership and public practise accounting information.

Nisha Iyer: Welcome to the CPA Congress 2018 podcast series. My name is Nisha Iyer and I'm one of the conference producers of CPA Congress. I would like to welcome our guest today, Fahim Khondaker, Principle Advisor, Data Analytics and Insights at BDO Australia, who will discuss how to modernise Short Data Analytic Strategy to drive business results.

Welcome Fahim. So let's jump straight into the questions. So Fahim, Data Analytics means different things to different people. What does it mean to you?

Fahim K: Well, I'm an accountant so I actually came to Data Analytics from the accounting side of things, and the business side of things, rather than the technical data base angle of it. And, when I was getting introduced into the field, I found there was a lot of complexity about it, so I thought it would be easier if I could dedicate myself to simplify that message for myself first, and then I found that I was able to share that message with non-technical people as well.

So I've come up with a small definition of Analytics that kinda resonates with me, which was Analytics is essentially the collation of data from multiple sources. To derive new insights that probably weren't possible before, because you've now got data from different sources, to realise some sort of value for your organisation. And value in the business context is either to make money or to save money, but if you are a government or a charity, it could be to fulfil your organization's purpose.

Nisha Iyer: So, what are the components of Data Analytics?

Fahim K: The components are ever changing, right? And its very hard to keep up with it, but so far as of today in 2018, we're sitting on Data Analytics Stack that we've developed in our team. And essentially there are about six layers to it and it's top-down and bottom-up. So, it comprises of commercial and strategic roles as well as technical roles.

So, starting at the very top, the commercial role side of things, I think there's a role for advocacy and promotion of Data Analytics and I think every organisation needs that. It needs someone at the top, the very top to promote it.

Then we're jumping into the business acumen side of things. I think Analytics just being a purely technical thing without the business context is kind of useless, keep in mind my definition earlier was talking about realising value for an organisation, so the business acumen skill set which anybody in any part of the business can bring to the table, whether you're an accountant, or you're in marketing, or whether you're the sales person or the operational person, it doesn't matter, you have something to contribute to a Data Analytics project or programme.

And then going right down to the bottom layer, if I start with the technical, it's the technology layer. So, this is about the back-end IT environment that we all think of when we think Data Analytics. The software that we can use and that's ever changing, there's

always new software coming out. So, that's the software that we see and also the software that we don't see, that goes behind the scenes, that does all the calculations and used for the fancy calculations and algorithms.

Above that technology layer is essentially a layer that we call Data Engineering. And you'll hear this term when you Google it, that Data Engineering's all about collating and collecting data. So, getting data out of systems, out of IT systems, mashing it together, bringing new datasets, downloading new datasets from publicly available sources and things like that, or even buying data. You can buy data these days as well. So, bringing that all together, transforming it, getting it ready to solve the Analytics problem that you're gonna solve.

The next layer up, so if you can keep up, I'm working bottom-up of six layers, so I'm up to number four on the list which is Data Science. Data Science is all the fancy stuff. So, all the Sky net, Artificial Intelligence, machine learning, your old networks, all of that. Those are really, that's the futuristic side of things. That's where lots of advancement's happening, but all it is really is advanced mathematics and advanced statistics in software coding, right. And lots of computer processing power as well to enable that. So, yeah, that's the stuff that brings you relationships between your data points that you may not have known before, and things like that. And that's where the algorithms and the programmes come in.

The final layer is this layer number three which is where both the business side and the technical side meet. And this is the layer we call Analytics, and this is the visualisation layout. This is storytelling, this is where you've got your business problem that's been articulated to people who've got the technical capability to bring data together to solve it. But the Analytics layer then has to be the two of you working together to tell that story, to make sure that people will actually get the outcome that they're trying to. And also act upon what they're gonna see.

Nisha Iyer: And what are the steps involved in a Data Analytics project and who is typically involved?

Fahim K: So in terms of the steps and the approach to taking on a Data Analytics project, depends on what type of organisation you are. Most of us don't work for a Google or a Facebook, or an Amazon or a E-bay or organisations that have so much data that it makes sense to have a team that just focuses on the data, just to see what they can find. Most of us don't have that, most of us work for organisations that are smaller, or, and as a result, we need to use Analytics to solve business problems, rather than just "hey, let's just explore the data and see what we can find." It's also quite a testament to the management of our organisations. Most of our management, executive management know what they're doing in running the business. So, they, most executive managers will be able to tell you "these are my top five problems, or this is what I'm trying to solve."

So we all as [00:06:15] out there, and we try narrow it down to one problem if we can, and tackle one problem at a time. And essentially what we try do is define that problem, articulate it as much as possible, and then think of it from a data perspective. In terms of what data would be needed to help solve that problem.

Okay, and we even pause right there as well and we hypothesise. What would that answer look like? And the reason we hypothesise at that point is, I always like to ask people, "What if the answer was 40%?" And they look at me funny and go, "Why do you care if the answer is 40%?" I say, "Well, I need to know what you are gonna do if the answer is 40%. Because if you don't know what you're gonna do at 40%, all analytics is gonna do, is prove to you that it's 39.72%. And if you're not willing to act at 40%, you're not going to be willing to act at 39.72%." So there's a lot of resource effort that can be saved if you are willing to just hypothesise and define your problem and work what action you're gonna take to solve that problem, once you know the answer first.

So that's step one, working out that purpose. Step two then, is to do the data collation phase, where we identify all the relevant datasets that we need to get hold of. Collate them as much as, as best as we can. Now there are ways to do it. One is to go to the back-end of a computer system and get the data direct from the database, or modern day software allows you to export datasets in CSV flat files from the beginning, and in some instances, you might have to create new data, you may have to do a survey or come up with some datasets for that as well. Then there's obviously the layer of external data that you can use as well.

There's tonnes of data available publicly these days. The 2016 ABS Census came with what's known as a Table Builder on the ABS website, and you can get cross-sections of any dataset from the ABS. So you can tell, show me how much ... what the average weekly income of people in Melbourne between the ages of 20 and 25 are. And then split that via gender for me, and you can do that at the click of few buttons on the ABS website yourself and download that dataset.

So, that sort of data is publicly available as well, so you might want to incorporate some of that into your project, but obviously keep in mind, we've already defined what his project is, so we kinda know what data we're targeting. We're not just, it's not an ad hoc rat race for what data would be relevant.

So, once you've done that, it's into the Analysis phase and this is where all the calculations happen and if you need advanced algorithms and probability models and predictive models to be built, that's the step that that happens in. And, also the visualisation of that data, this is where you're working together with everyone involved in the project to get that right.

The final step is a presentation step to your stakeholder whoever sponsored the project. There's no such thing, or I always like to say, that there's no such thing as a Data Analytics presentation, it's always a collaboration exercise, because if you've done your job right you're gonna show people new insights, right? And so new insights should lead to more new requests and more insights, or the pursuit of further knowledge and curiosity and that's obviously, that's the inner essence of being human, right, we're all curious about that sort of thing. So, that presentation phase is there.

And [00:09:33] all those four steps, so it's purpose, collation, analysis, presentation. Covering all four steps is this notion of stakeholder engagement. Now stakeholder engagement is essential for any programme of any type, not just Data Analytics, but I

think it's even more essential in Data Analytics because there's still the level of mistrust in analytics, there's a layer of black box, if you will. There's a technical layer that some people don't understand and appreciate that they need people to walk them through that. So, keep making sure that you engage all your stakeholders at the appropriate times and the appropriate ways, and reduce as much of that black box as possible.

To ultimately trust what they are seeing, have faith in the work that's gone into it, enough to take action. And, sometimes doing nothing can be action as well, as long as it's done with a purpose, like you go "Yip, that confirms what we expected. We're gonna do nothing about it." But that's the ultimate goal, you want action out of whatever the Analytics project is.

Nisha Iyer: How does Analytics link to strategy?

Fahim K: That's a really interesting question. Because when you Google Strategy, there's obviously a whole raft of material on there, on Strategy. Same with Data Strategy, there's a whole raft of material on Data Strategy. I've recently come across a definition of Data Strategy that resonated with me, by a gentleman named Evan Levy. I think he's the Director of some programming at SAS or Data Management programmes at SAS and will probably put a reference to his white paper and the show notes as well. And essentially, he said that a Data Strategy is all of the ways that an organisation essentially acquires, manages, stores, shares and uses data. Okay, that has lots of technical elements to it. Like the notion of storing, managing. Most of us aren't involved in that, right? And he goes on to talk about all the elements of a Data Strategy.

Move aside, to the other side which is your typical Business Strategy. Typical Business Strategy is, for completeness, it's essentially a future plan that's well articulated, that considers a company's or an organization's future direction and future state and where they want to be. And, if it's done correctly it'll consider internal and external factors. It'll engage its peoples to achieve that strategy and ultimately it might even get to the point of transforming the organisation towards achieving that strategy.

So, that's kind of the realm that we live in. I don't know if there's a need for yet another Strategy called a Data Analytics Strategy on top of that? For me personally I think if you know the why you're using Data Analytics, how to do it and what it is, it's sufficient to live within those two definitions of Data Strategy, and what you call Business Strategy.

Nisha Iyer: So. What are the barriers to the successful implementation of Data Analytics in strategy planning?

Fahim K: There's quite a few barriers. The biggest one if you were to distil it, is, it probably comes down to trust. Okay, and that's with or without data. The thing we all know Simon Sinek who is really famous as a motivational speaker, slash, corporate motivational speaker and he's made a whole career out of talking about trust and collaboration. Not in the realm of data, just in business, where we all know each other and we know what, we kinda know what we all do in different parts of the business. Yet, we still don't collaborate enough.

Now, add to that in the realm of Data Analytics a layer of technical complexity, and straight away you've got that issue. So, that lack of trust, that lack of transparency. So it's very very important to be able to show people engaged in any project related to Data Analytics why you're doing it, what you're doing, how does it work, all of that so that more people are brought on the journey with you.

We also find the other barrier is probably the fear of change. Technology, obviously we're going through quite a huge disruption, at a ridiculously fast rate. Probably faster than the Industrial Revolution, maybe, I don't know, I didn't live through that time, but it's going really, really fast and with the way people's mental health, work-life balance, all those things, there's this innate fear that we all have within us, which is that, is Data Analytics the type of thing that'll replace me?

You hear all the marketing tools about AI and you see all these great ads about how Google ran an ad recently where the computer called a hairdresser and made the appointment and called a restaurant and booked, reserved a table. And people see that sort of stuff, right? It touches them at a human innate level and go, okay, so what value do I add?

Obviously, the new generation of graduates and people getting educated, are okay with that because they'll be trained in how to live in that world. But it's the existing, the people that are existing right now who are thinking "Okay, how am I gonna get retrained or what does that mean for me? Yes, it'll make my life easier, but do I then have to focus on other parts of my work?" And not everybody has other parts of work that they can focus on, right? And so, I think we have to be honest with that and there's a change management process that needs to happen.

And then the final reason I think that puts a barrier up is, it's sometimes one of those things that sets a benchmark where there never was one before. So, suddenly people are, have this attitude that "Oh, if we know that, that'll become my new KPI and I'll try block it from becoming a KPI if I'm able to do so." Which is unfortunate because you want to instil a culture in your organisation where people want to know more, and people want to know everything, and measure performance in every way, and hopefully the leadership will allow people the comfort and the environment where people are willing to learn that, and then see how they can pivot with the organisation and take the organisation further.

Nisha Iyer: And finally, Fahim. What does the future hold for financial accountants in the world of Analytics?

Fahim K: This is an interesting question, in the sense that from an accounting perspective, a lot of the software is moving towards automating some of the really important knowledge that we have about financial statements, and accounting standards, and all of that, and application of that, and that's kinda being programmed and automated quite quickly. So, the compliance function is being done very very quickly.

A little bit, I must be honest, I'm a little bit worried about the future accountant in terms of how they were going to learn that skill if they've never had done it manually. So, if you've grown up your whole life not having done long division, and you just know that long division is done by putting, punching numbers in a calculator. Have you actually learned what long division is? So, that's going to be an interesting play that I'm keeping an eye on. From an accountant's perspective, it's now going to be more important than ever to understand the underlying drivers behind what it is that we do.

So, I spoke this morning at the CPA Congress in Melbourne and I think the slides will be in the show notes as well, and one of the topics or one of the areas that I needed to speak about, was what value does an accountant, like, how does Data Analytics having that in your arsenal, how does that help you as an accountant, and help you enable better decision making throughout your organisation.

I distilled that right down to something that most accountants know, which is a basic equation for profit which is revenue minus expenses equals profit. And I figured, okay, let's start there. Okay? And let's go with something that we know, and that's something that software can tell us, and we know that better than anybody. Okay, that's the [00:17:38].

And, if we break down revenue, revenue is price times quantity or price times volume. And we can start looking at, okay, we have control over our price. What analytics do we need to work out who sets the price in our market. What volumes are we selling? What does that look like? Do we have analytics that can help us with that?

On the expense side, you've got variable costs and you've got fixed costs. And we can start analysing each of those components. And ultimately we can start breaking down the underlying drivers behind each of those variables and Analytics can help us with that. So, we bring our expertise, we bring our knowledge and going right back to my Data Analytics Stack, we bring the business acumen and the financial acumen and the commercial acumen, and we pair up, either ourselves, we skill up ourselves in technical capability or we pair up with technical teams and work together with them to solve those underlying drivers and those working through, finding those.

I did recommend in my presentation this morning, that you use a relatively well established framework when you're thinking about these things. There're things like the business model canvas which is a very well known framework or the balance score card which most accountants will be aware of. What that does is it ensures that you have coverage across all aspects of your organisation, there's a lot of research that goes into those frameworks, so, you can start there, and that's a great place to start.

The other thing I think accountants need to get, will have to get better at, or, what Analytics will help them get better at and emphasise the point is this notion of leading and lagging indicators. So, we've done in accounting, we do budgeting all the time, right? And that's something traditional, that's a traditional role. This is now really further diving into that process and getting even deeper understanding of early signs of certain things about to happen, getting automated systems in place to give us those

warnings and if we live in, if we work in organisations with regular updates we can take action, and what action we're going to take.

And, finally I think it's very important to remember that the accounting profession has intrinsic trust. And we can lend that intrinsic trust to the profession of Data Analytics. So, we've got a lot to add to this sector I think. And there's no reason to hold back or be fearful of it. I think it's a world of opportunity as long as we approach it with a willingness to learn and curiosity.

Nisha Iyer: Thank you Fahim. Really interesting insights and a great way to look at how Data Analytics will continue to drive business results.

It is something we can't avoid in the future and it has been great to hear your insights and I'm sure our listeners have enjoyed this podcast.

Fahim K: Thank you very much. It's been a pleasure.

Outro: Thank you for listening to the CPA Australia podcast. To download the transcript and to access the show notes for this episode, please visit www.cpaaustralia.com.au/podcast/104.