**Public Sector Future podcast**

**Episode 22**

**TRT: 36:15**

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**OLIVIA NEAL:** Hello and welcome to Public Sector Future. This is a show for anyone who cares about using digital approaches in the public sector to deliver better outcomes. I’m your host, Olivia Neal, and together we explore stories from around the world, where public servants have been successful at delivering change.

Today we’re joined by Dr Rami Amin. Rami is based in the Digital Development Practice at the World Bank Group, where he has just authored a new guide for governments looking to migrate to cloud. The report is called Government Migration to Cloud Ecosystems: Multiple options, significant benefits, manageable risks – and today we’re going to be learning more from him about his findings, what surprised him, and how he’d recommend governments get started.

Well, Rami, great to have you here. Welcome to the show.

**RAMI AMIN:** Thanks, Olivia, for inviting me. I’m excited to chat with you. First of all, let me just thank you again for inviting me to speak to the – the Microsoft Public Sector podcast. I’m totally humbled to be speaking. I’ve looked at all of your previous people have been so I – I think – I think it’s absolutely brilliant.

**OLIVIA NEAL:** Fantastic. Well, let’s get started by just giving our audience a bit of top-level context. Could you start by telling us what’s the role of the World Bank and particularly in relations to digital transformation?

**RAMI AMIN:** There’s two very deep embedded questions that I’ll try to pick apart, so firstly, on the role of the World Bank more broadly, just for, you know, listeners who might be outside of global development and then – and then I can talk more specifically around digital transformation.

so the World Bank is a development bank. It’s going to two big things that it can do. It does financing for – for options, leveraged loans and grants and so on. And then secondly, it develops knowledge and provides technical assistance. So you could think of it as a financial bank, but also a knowledge bank, and its overall mission is we have the twin goals of ending extreme poverty and building shared prosperity.

The World Bank’s been around since, well, its early, early versions of it, with a treaty signed in, I think, 1944, so sort of in the – in the post, you know, World War II, to rebuild Europe and then its mission has expanded more broadly to other regions of the world

The World Bank is structured regionally, sort of like a matrix, regionally with regional work that is happening in our six regions, Latin America, Sub-Saharan Africa, Middle East, and so on.

And then thematically. So the big thematic themes would cover everything from infrastructure to human capital and everything in between, even sort of more narrower subjects around, you know, sustainability or gender and so on. So, one of those units in the infrastructure practice is digital development, and this is really where the focus of all the sort of digital connectivity sorts of projects are – are based.

It’s gone through its own evolution in line with, you know, the World Bank evolving since 1944. You can imagine there was no digital development practice 75 years ago, nor was there one 20 years ago. It’s sort of evolved out of an ICT and transport unit and it’s eventually come into its own, as the needs of digital transformation have absolutely skyrocketed and accelerated from our clients. I’ll refer to clients in this discussion as our, you know, governments across the global south, governments in developing countries who come to the World Bank for those two things, financing of development projects and knowledge and technical expertise.

**OLIVIA NEAL:** that’s a fantastic introduction to the role of the World Bank and then that linked into digital transformation. Could you share with us a little bit more about what your role is within this?

**RAMI AMIN:** Yeah, absolutely. So I’m based on the Digital Development Global Practice and I lead multiple projects around the various digital topics.

The orientation of my work makes me a little bit unusual within the practice. So, I’m in a globally oriented unit in our digital practice, and what does that mean, why is this critical? Most of the World Bank’s work has traditionally and currently is very regionally oriented and most people are attached to country offices and they’re traveling and, you know, they’re based in regions and they’re based on sort of that expertise and work and so on in that particular manifestation.

I’m in a globally oriented unit, so the audience of all the work that I do and the topics that I cover will always have the sort of macro, broad, generalist sort of orientation.

**OLIVIA NEAL:** And I think what really comes through when I’ve been reading the report, which is fantastic and so full of strategic and very practical insights, is the global nature of these questions that governments around the world are looking to address, and I think that those global insights that you’re pulling out are – are just so valuable, no matter what region you’re in. And maybe to get into that report a little bit more, could you give us an idea of why was this report commissioned? What’s the need for this now?

**RAMI AMIN:** Yeah, absolutely. I mean, our work is demand-driven, right? When clients, you know, our governments come to us and are – are asking questions around, you know, how do we – how do we accelerate our digital transformation, what are the latest technologies, how can we keep up with the latest innovations in the digital economy, we have to respond, right? We can’t just throw out money for these financed projects. We want to be in a position that can also, you know, help guide putting together what – what the money is going to be used for and also be able to provide the advisory and – and analytical knowledge to support these different topics.

So, very much client-driven with questions around not just government cloud, Olivia, but just cloud computing more broadly, what is cloud computing, what are cloud services, what is the public cloud, what is the private cloud, does public mean all my data is public, right, just – just trying to, you know, parse through some of those questions.

**OLIVIA NEAL:** And I think that’s such a valuable approach to be taking, because I think it’s often easy, if you’re in the technology industry particularly, to assume that we’ve moved past those conversations, that people have that base level of knowledge, and in fact, what you’re doing with this report is setting out an incredibly valuable foundational layer of knowledge, which is helping people get on the same page and have informed and intelligent conversations around these decisions that are being taken all around the world.

**RAMI AMIN:** Yeah, I think so. I mean, that’s certainly our hope, that it does have that – that global knowledge product orientation.

**OLIVIA NEAL:** And I think it’s responding to a real need.

So maybe we could get into the meat of the report itself. Could you just walk us through what – what were your key findings that the report really highlights?

**RAMI AMIN:** Sure, Olivia. So, I guess you could break down this report in two different buckets. The first is around really just laying the groundwork, the lay of the land on what is cloud, what do all these different words and definitions mean, and what are the potential benefits that that they can bring for public service delivery and governments more broadly.

This first bucket will then get into all of the different options that are available, the different cloud models, the different cloud architectures, how different sorts of clouds can be united and work together and so on. And so in that sense, this part of the report isn’t necessarily the most sort of groundbreaking because as you know, many of these models have sort of been extant for a number of years.

World Bank is also incredibly privileged in its – the sorts of relationships that it has, that it has developed over decades and the level of trust that is there with – with the World Bank that, you know, even though they might be hearing one thing from industry or from -- you know, from the private sector, they like to just sort of come to the Bank and – and have these things checked off. So that’s the sort of first objective that is delivered within this report.

The second objective, Olivia, is around helping clients, who once they come up with an idea of, you know what, we need to do a migration, once they’ve gotten to that level, if they want to, you know, choose to take that path, how might they navigate the different sorts of decisions, the different sorts of topics that are now going to come up, where it’s, you know, what – who are the different service providers, what are the different constraints, what are the regulations, how do we approach different contracts with and so on.

So, those are really the two big buckets of this report, what are all the options and the benefits and so on, and then how do we actually approach this as a government, in what way take that step.

**OLIVIA NEAL:** And in that first stage of the discussion, you mentioned previously some of the confusion around what do we mean when we talk about different types of cloud, what do we mean when we talk about public cloud – we sometimes call it hyperscale cloud – and I think that’s one of the areas where – where we obviously have a lot of conversations with government. And I wondered if you could share some of the insights from your report on what you see as the role of public cloud or hyperscale cloud for governments?

**RAMI AMIN:** I have to be careful about, you know, making sure that a lot of the views I give today are sort of from the – the authors of this report and so on, rather than established World Bank guidance on what things are.

I think hyper-scaler service providers are an absolute critical, you know, part of this, of the solutions that are available for governments to choose from. They certainly don’t have to unload all of their – their data and migration to those – those sources. As I mentioned, the report lays out all the different constraints that there might be around data localization, around budgets and so on that might sort of, you know, mitigate the possibility of that.

But hyper-scalers do have a couple really unique features about them, and a lot of those come from the sheer size of these service providers, and the efficiencies that come through that scale. As the as the broader digital industry moves more towards, you know, Software as a Service and Infrastructure as a Service, Platforms as a service, all these different XYZs as a service, you know, there’s increasing benefits from going through these different hyper-scaler service providers to facilitate, you know, better connectivity and delivery of those, and also access to some of those, you know, high-quality softwares and platforms. That has been absolutely a trend that we have observed. The hyper-scaler data – data center provider is really increasing their footprint in those, and I think that trend is going to continue.

But there’s a couple other major benefits of hyper-scalers as I see it, and I think this is in sort of wide agreement across the team, and it’s the points around sustainability and cybersecurity features. Cybersecurity is just the obvious one. You know, if you think about who a lot of our clients are in the global south, they’re operating in radically different environments and contexts where the capacity for cybersecurity just isn’t there.

There’s great benefits from, you know, sort of offloading some of that cybersecurity responsibility when you put your data out to a hyper-scaler who can help secure it in certain ways, but also ensure that the constant updates are going to be there with the latest, you know, access to the latest cybersecurity features that are all informed and defined now by the latest AI and machine learning in real time and so on, that clients can have access to that.

The sustainability is the other point that I absolutely have to say something about. I mean, I’m in absolute awe at the size of these data centers of hyper-scalers and all the engineering that is now going into them and the investment and the engineering and the innovation to radically improve the sustainability impact. The way that we see it, Olivia, for our clients and just the sustainability in question, this is how our team is looking at it, that there’s sort of three big buckets here.

So firstly, there’s all the benefit, all the sort of reductions in demands on – on energy and so on by going to these hyper-scale cloud service providers. Then there’s the – the issue of renewables and the overall footprint that can come from, you know, the reduction. And then finally, the water sustainability questions.

So some of these are different sorts of calculations for all these different cloud service providers, but I do think that as hyper-scalers continue to invest in really doing the best that they can in these different things, you know, governments can also take in on that.

And this matters for a few reasons, but I’ll just mention one. You know, as governments are also beginning to increase their, you know, climate goals, their sustainability goals, you know, developed world as much as the developing worlds, and so taking up some of these solutions can, you know, sometimes help them in those – in those broader sustainable objectives as well, Olivia.

**OLIVIA NEAL:** And I think that’s an interesting point that comes back to when you were talking about the goals of the World Bank and thinking about shared prosperity and how to ensure that for all of the countries that you’re working with, what’s coming across is there really is that ecosystem between you can see investments being made, in this case in the area of cloud, which you want to be able to enable countries to take advantage of in a way that works for them, with that knowledge, with that understanding and equipping them to take the – the decisions which are going to help them move forward and – and not get stuck in approaches which might not deliver as many benefits as they could get.

And there’s that ecosystem of the role that the World Bank plays in both the financing side and the knowledge bank side, the role that tech companies, and companies in other areas of course, can play in moving those markets forward, and then the governments of course in being equipped to take advantage of those. There’s a really interesting kind of ecosystem at play.

**RAMI AMIN:** Yeah, I absolutely agree with that. I mean, the ecosystem approach is how we look at a lot of the different emerging technologies. So I mentioned, you know, I lead on a few different projects. I’ll mention one other one within the sort of broader emerging technologies theme, which is around 5G

And when you’re talking to a government about how to take, you know, the most advantage and receive the most benefits, or what we call in our from the World Bank side, the digital dividends that can be yielded from these different digital technologies, you’ve got to consider all of the risks as well, and to minimize those risks and maximize those benefits, you’ve got to take a macro level ecosystem approach.

**OLIVIA NEAL:** And as you’ve been conducting this research, is there anything that has surprised you or any lessons that you’ve learned yourself as you’ve gone through this process?

**RAMI AMIN:** Yeah, absolutely. I would say probably around the training and the misconceptions and just how prevalent those misconceptions around different cloud solutions and what they mean. You know, the word “public” really triggers a lot of people, right, especially, you know, people like us at the World Bank who, you know, put data protection and cybersecurity at the sort of top of our agenda. You know, people will get sort of confused.

When I say “people,” I don’t just mean, you know, staff in client countries within public and private sectors within our client governments. I mean even on the World Bank end. Cloud wasn’t around 20 years ago, right? It was a very different skillset that was needed for, you know, the sort of 1.0 level of digital transformation, which was largely just getting things connected to begin with. So, you know, also seeing that a lot of those debates and misconceptions transpiring beyond the Bank, those are transpiring within the Bank.

We’re still sort of debating some of these things internally, quite hotly so, in fact. And the debates, they continue because, you know, as long as – as quickly as we sort of figure something out, you know, and go to, you know, advise, you know, just as quickly with innovations and, you know, the impact of sustainability and the role in AI and cooling and HVAC and so on, it’s already evolved, right? So, I think this has just been a fascinating insight, the recognition that we have to continually keep training and staying on top of this discussion

**OLIVIA NEAL:** I think that’s a great point, and I think the digital transformation space has evolved so quickly in the past two, five, ten years, that it’s something where increasingly we’re expecting people in government and in financing organizations, who have no background in technology, who have got policy backgrounds, legal backgrounds, they’re economists, to have quite a deep understanding of technology and be able to make informed decisions on it, when it’s not something that they’ve had the opportunity to build those skills on, and even if they have, as you say, things move on so quickly.

So that constant ability to create this knowledge and keep informed on it is something that is – is new to many people, and is often intimidating and it’s difficult to take those – those kinds of balanced and informed decisions without these base levels of knowledge.

**RAMI AMIN:** Yeah, I absolutely agree. I think there’s two different approaches with, closing that knowledge gap. One of it is just internal training and I think, you know, our management absolutely deserves much credit here.

But also, you know, making the right, you know, hiring decisions that are needed to bring in new people into teams, to not replace, but to complement, you know, the people who have been around for a couple decades and have enormous insight.

**OLIVIA NEAL:** And so, in the report you give some really great guidance and – and very practical steps for people to take if they’re looking to move forward with a digital transformation journey, if they’re looking to move forward with thinking about cloud adoption. And you look at policy elements, strategic elements, and operational elements.

I would highly recommend people go and read the full report to get the full insights, but is there anything in there that you’d particularly highlight for governments to start doing now? What should they do now? What practical steps can they take to help make sure they are taking advantage of all the potential that this approach has?

**RAMI AMIN:** Yeah, I mean, well, you know, it goes back to the ecosystem question, doesn’t it, Olivia? I mean, we give lots of – I mean, we feel like a lot of things should be done in sort of, you know, simultaneous and in concurrence. You beautifully laid out the three-part framework that we’re – we’re guiding. Like all good models, you want to sort of reduce it to the least number of steps. And we think about this in terms of policy steps, strategic steps, and operational steps.

Policy, it’s, you know, what are those big, big picture question and big picture thinking that government as a whole or ministries might have for what they want to achieve where data, data is involved, where data is a part of that, and where public service delivery is a part of that.

And, you know, the whole thing with digital transformation is this isn’t just, you know, digitizing things. It’s really maybe rethinking those old questions of public service delivery from the very beginning, you know, rethinking them entirely, what ought be the mission of government, ought we be delivering new types of services, ought we be unloading certain things to the private sector, right? These are the sorts of questions that, you know, a true digital transformation journey really entails.

But, if I wanted to get really granular and just mention two very granular things, I think it’s got to be around the data classification issue firstly, and well, a very related one, thinking about data localization rules and laws. You know, these are absolutely, you know, at the top of discussions within World Bank’s side, within the IFC side.

And, you know, the sort of technical advice that we have to give to clients when they ask about it, not all data needs to have the same level of security, right? And furthermore, applying that level of security to certain things and levels of protection might actually mitigate, you know, the sorts of data flows and remixing of data and so on that – that great use of data can yield.

So, I think really having governments have the appropriate people to sit down and look at the data that is out there within their own ministries and have a serious think about how to classify that different data for when they eventually do have to make those decisions around what combination of public versus private versus hybrid versus multi and all of the above that is going to be most suitable for that country.

And so the data localization, as I said, that’s the sort of second thing that might take a lot more time to resolve because, you know, you might have to go through, you know, , rule changes within a country to resolve the sorts of data localization rules that are most optimal for a government. And the World Bank certainly won’t, you know, prescribe what a government ought to do. These are very, very contextual.

**OLIVIA NEAL:** And bearing in mind that you’ve just said that this is a very contextual issue and we can’t necessarily apply the lessons from one country to another and there will always be regional issues, you’ve reviewed a number of countries as you’ve gone through this process. Is there any example that’s particularly stood out to you as something that has worked really well or where a government has made good progress, which might be something that people in other countries would want to go and look at?

**RAMI AMIN:** Yeah, absolutely. I’m so glad you asked about that, Olivia. In our report we do, in fact, highlight in the annex a number of cloud approaches we can say that governments have taken. Some of these approaches have been actual policy directives and – and others it’s just examples about, you know, how a country such as Moldova or – or Israel, you know, , how they approached these different decisions.

You know, the cloud-first policy of the UK is, you know, something that we think it’s a very good model to sort of look at. And we’re not the first to say that on the record. All sorts of, you know, organizations and so on have lauded the UK’s leadership on this, which is, you know, getting the UK to a position of – of not just leading on policy, but also thought leadership that other countries can look to, and not just countries in the global south, but even developed countries who might be considered very highly digitally mature in terms of technology and connectivity and so on.

You know, Australia is also absolutely a leader. The Scandinavians are real leaders in cloud policies and how they integrate these within their governments. And Singapore’s, you know, government cloud model, the GCloud, the so-called GCloud is also a really unique case study for us.

You know, we cover these not just in our report in a sort of, you know, an objective, descriptive sense. We also cover some of these in – in some web content that we’ll be putting out on the World Bank’s website to describe some of these different examples, as well as, you know, the journey that a country like Rwanda, with a really sort of intrepid and forward-looking government, incredibly forward-looking government in Rwanda when it comes to ICT and digital transformation.

And it can be helpful for, you know, other countries who are at sort of similar levels to sort of think about, okay, what does another – we can see what the United States and the UK does, but what about a country that is, you know, on our par with similar levels of GDP and economic growth and other sorts of constraints.

**OLIVIA NEAL:** Fantastic. Well, we will be including the link to the report and then also to all of this web content as well with this podcast. So go to our show page to find all the links to what Rami has been describing here. So where do you go next with this? So this report will be released, people can access it. What’s your next area of focus going to be?

**RAMI AMIN:** Yeah, great question, Olivia. So the World Bank’s cloud agenda is really starting to pick up in big ways, even though we’ve already sort of done, you know, previous investments and so on with cloud infrastructure.

And I think a lot of this has been triggered with the World Development Report 2021. So this is the sort of flagship report that the World Bank puts out every year. And the theme of the 2021 report was data, right, data for development, and to have the best of data, the remixing of data to yield all sorts of new and innovative applications within the domain of economic development, cloud is a really important part of that story.

So I think that has been an absolute trigger for not just this piece, which I think COVID-19 also was a trigger for this government cloud piece, but for other bits of cloud work that we’ll be doing at the World Bank.

So, later this year, and then certainly concurrently, I, as well as some of my colleagues in digital development, colleagues over at the International Finance Corporation, are collaborating on a flagship global report that will come out that takes the discussion way beyond government cloud to talk also about a real in-depth discussion about these sustainability issues, a real in-depth discussion around the legal and regulatory and policy issues and a very deep discussion around, you know, what’s in it economically.

So, you know, we and my colleague at the IFC are currently leading a report that’s going to look at when a government comes and says, “Okay, what can I expect in terms of, you know, employment or GDP effects or so on in the private, I mean, what’s in it for me, why should I make all these investments, we’re already going in this particular trajectory within digital transformation, now we’ve got to leapfrog here,” so we want to be able to answer those questions on what to expect in terms of employment and GDP growth and so on.

**OLIVIA NEAL:** Well, I can’t wait to read those next pieces as well. Thank you so much for all of the time that you’ve spent sharing the insights from the report today. As I said, highly recommend going and reading the full report to – to really get the full flavor and the full benefit.

And thank you for the leadership that you’re providing in this space. It’s so needed. And as you said at the beginning, when this comes from an organization, from authors within an organization like the World Bank, that really does help people build their knowledge and their expertise and make the right decisions for them.

**RAMI AMIN:** Yeah, I mean, thank you. And, yeah, I mean, like I said, there’s a huge team behind this, this report, and I’m very much indebted to Ed Hsu for really initiating this, you know, under our former director and leadership at the time, and, you know, incredible support from our Global Practice Unit and our incoming director, Christine, to, you know, really push this, this cloud agenda forward.

And enormous thanks also goes to the trust fund within the World Bank, the Digital Development Partnership, which has, you know, financed this – this activity and continues to – to support this work. So yeah, there’s a huge team here. I just happen to be the voice on this podcast. So thanks very much for the invitation, Olivia. Thank you.

**OLIVIA NEAL:** Thank you to Dr Rami Amin for taking the time to explore the findings of the his new report with us today. If you’re working on any of these issues I really do recommend taking the time to read the full report, it’s full of really useful insights. You can find a link to the full report on our website, at wwps.microsoft.com

If you enjoy today’s episode and want to help other people find it, please share, rate and review the show.

Please reach out send us your questions and your feedback. You can find me on Twitter @LivNeal or on LinkedIn, or you can email us at [ask-ps@microsoft.com](mailto:ask-ps@microsoft.com). Thank you for listening and see you next time.

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