Paula Palmer

Hello. Welcome back to Stonewater's On the Air Podcast. This episode marks the start of a new theme for this podcast season where we're going to look at the use of technology and housing.

Across the next three episodes, we'll hear all about, firstly, our partnership with Microsoft and what it means to Stonewater and our customers to be Azure best practice. In the second episode, we'll hear all about tackling the digital divide and the role of technology in retirement living. In the final episode of this trilogy, we'll take a look at the benefits of using technology and using data for social housing services.

Let's start today's episode by welcoming our guest host, Paul Blaydes, who is Assistant Director of Data at Stonewater, who knows all about Azure and what it means to be best practice. Hi, Paul. Tell us some more.

Paul Blaydes

Hi, Paula. Thank you very much for having me. Azure best practice, data, things I've been living and breathing, really, let's say, for the last decade. I was asked to join Stonewater as the Assistant Director of Data in Stonewater due to my previous experience around data, deploying data platforms, just generally moving data around financial organisations, and also some history I had within Amazon.

Really, the key aim at the moment with Stonewater is all about trying to leverage data to provide insights so that we can actually identify ways that we can support the customer in a better way. It may be improving a process internally that frees up some resource for our colleagues to actually support the customer better. Or it may be identifying trends or themes that will allow us to support the customer in a much better manner with their property.

Paula Palmer

Excellent. Thanks, Paul. Great to have you here with us today. I'm looking forward to hearing more.

Paul Blaydes

Thanks, Paula. Of course, I'm really pleased to welcome Kishore, who joins us today from Microsoft. Kishore, can you tell us a little bit about the work you do in the housing sector?

Kishore Rajendran

Absolutely. Thank you, Paul and Paula, for inviting me to the podcast. I'm Kishore Rajendran. I'm the Chief Technology Officer at Microsoft, focusing specifically for the social housing sector. I've been in Microsoft for approximately 11 and a half years and have carried out numerous roles in the technical and business management.

Paula Palmer

Thanks, both. Well, it definitely sounds like we've got the right people on the call with us today. Can I start by asking both of you why Stonewater partnered with Microsoft and what are the benefits for the organisation? Paul, let's go with you first.

Paul Blaydes

Thank you very much, Paula. It's quite an interesting one, actually, where Stonewater decided to become one of the first housing organisations to move towards more of that remote working policy programme. That happened as part of COVID, adopting Office 365, giving the colleagues the ability to work remotely from home, wherever they are in the UK.

Paula Palmer

Being part of Azure has given us lots of tools?

Paul Blaydes

Yeah, absolutely. It's not about just the remote side, but there's a whole element of flexibility that the tooling provides you. Previous existing architecture and technology, you had to be in a certain place in a certain location and you were restricted quite heavily.

Where as obviously, a lot of the cloud offerings, it's freeing you up to do things. By freeing you up to do things, you then have more flexibility around scalability. If you're having, taking a good example, "My server is too slow," you don't have to go and get someone to do something, you can just push a button and make it faster.

Kishore Rajendran

Absolutely. The Microsoft housing team was set up approximately five years ago. It's quite an extensive team covering social housing associations of all sizes in the UK. Now we have various roles. Account director, so primarily manages the relationships with our social housing customers. We also have numerous specialists, product specialists, who focus on multiple areas within our Azure Cloud, within our business applications cloud, which is Dynamics and Power Platform and also our Modern Work Cloud.

We also have a significant network of partners that are accredited and ready to support housing associations, specifically partners who have very strong background in the sector and have numerous capabilities. In addition, we're also keen to take the learnings where things have not gone well and where things have been successful to share that to other social housing providers as well to enable that learning across the sector.

Paula Palmer

Sounds like the perfect partnership. But I'm sure like most projects, there have been some bumps along the way. Kishore, could you outline some of the challenges we'll have faced when adopting Azure and some of the support you and your team were able to offer?

Kishore Rajendran

Absolutely. Azure is a very mature cloud. If I were to answer this question around eight or nine years ago, skills would have been a significant challenge. Cloud was really starting to take pace at that time. Fast forward to today, many IT professionals are skilled, either in Azure or with multi-cloud solutions, including our competitors, AWS, Google Cloud and so on. So skills is starting to develop.

However, one of the benefits of the cloud is not just the capability and the security that we get from a significant scale, but it's also the pace of innovation. If we take a look at Azure specifically, every week there is an update that is released in terms of product capability or feature sets.

It's quite challenging to keep up to date from a knowledge perspective. I guess typically organisations, when they start on that journey, making sure that they are skilled and they're on top of all the advancements and also deprecation of various capabilities, staying on top is absolutely a challenge in the cloud world. That is getting better and better through blogs and through communication with both Microsoft and partners to our customers.

But once we get past that journey, I think the second focus point is how do we deploy it not just in a scalable manner but, more importantly, in a secure manner in the present climate. Cyber attacks are becoming more and more common, and housing associations we previously thought were not prone to these types of cyber attacks. We're increasingly seeing that's not the case. We've had one or two high-profile attacks within our sector. We've had multiple failed attacks, as well, we've seen.

Having the opportunity not just to deploy with scale, but also to make sure that we deployed securely. Now, once we focus on those two items, and of course, governance as well, the next step is how do we utilise the vast array of solutions that's present in the Azure cloud to meet our needs. Now, Azure has thousands of capabilities and solutions, both first-party and third-party, and custom-developed solutions for in-house capabilities.

Now, picking and choosing the right building blocks can be quite a tedious process, especially for large, complex implementations. Paul, I guess a question from myself is, when it came to the start of that journey before we get to the individual products, what were some of the learnings from Stonewater that allowed us to successfully kickstart the project?

Paul Blaydes

That's a very good question, Kishore. There was the main challenge around what is it we're trying to implement. We're trying to implement a greenfield data platform, utilising Azure and the components

within it. A Greenfield data platform essentially is a data platform that doesn't exist. If we're taking from a housing concept point of view, you'd look at a greenfield and go, "Oh, that's potentially a building site," because there's nothing there.

Now, because there's nothing there, that means there's no security, no network infrastructure, no user accounts, there's no data, and there's a whole raft of things that you have to consider, over and above, I want all my data to be in one place. The key drive challenge we had was, "How do I make sure that the environments I've put into place are exactly the same?" Because that's one of the big challenges around testing development.

I think it's a challenge that everyone's had, especially with on-premise environments, where, "Oh, this setting wasn't deployed," or, "That wasn't updated." You end up with different environments to do different things. By looking at the Azure piece, we did a lot of work around infrastructure as code and what is that.

Interestingly, I discussed this recently at Data Matters, which Housing Technology put on. Everything within Azure has code behind it. Rather than going and pushing all the various buttons and settings and clicks that you have within Azure, we identified what we wanted a thing to do, took the code behind it, and then used and stored that so that we could then deploy across all environments, ensuring all the settings and things were the same.

Kishore Rajendran

Sounds great, Paul. Where are we in the current journey with Stonewater at present?

Paul Blaydes

It's been an interesting journey with the data platform, as most organisations, I believe, are pushing towards. We've recently looked at adopting Delta Lake, which was, I believe it was quite ambitious and I wouldn't say it was an easy thing to do, but the flexibility it's giving us as an organisation is going to be very powerful.

One of the things I really did like about it, and that's, I guess, how it's sold to me by one of my lead engineers, was that we can run SQL queries over CSV tables. I know they're not CSV tables; they’re JSON, Parquet, and all of those smart things. For me, I just find that mind-breaking. You don't have to have these really expensive SQL instances.

You just spin things up as and when you need them, and you can still run it like a normal SQL Server. It blew my mind slightly. The version we've got off the back of it and the speed at which it's running is just unprecedented. I get very passionate about it, and I should probably stop talking because I could talk about it for a very, very long time.

Paul, I can see this is really your area of expertise and gets you excited. But let's go on to the next question. We want to explore how widespread these technologies are across the housing sector and whether you think we might be ahead of the curve. What do you think, Kishore?

Kishore Rajendran

Use of Azure within our sector is quite extensive quite vast, but it's traditionally just focusing on the basics, infrastructure, implementations of virtual machines, networking, storage, data centre migration, and those types of activities.

When I specifically look at data platforms, majority of the HAs are either at the start of the journey or they are currently putting together a strategy to begin that journey. There are not many HAs that we work with from a Microsoft team that have either implemented or are in the final stages of their data platform journey. This is actually quite a critical component. The reason for that is two reasons actually.

Number 1, the hype related to artificial intelligence of reasons. AI is amazing, but in order for AI to respond and carry out the actions accurately, we need to have a reliable data source, connected reliable data source that they can access to. That's one of the use cases where a data platform is very key when we look at a 3-5 year forward-looking picture. In addition to that, we have to have reporting analytics capabilities, which many HAs struggle with because they do not have a well-designed, executed strategy.

I guess the short answer, Paula, is not many HAs are in the advanced stages of that journey. The majority of them are just in the start, and I think Stonewater, I would class, as absolutely leading in this capability.

Paul Blaydes

Thanks, Kishore. It's great to see that, obviously, more of our housing peers are moving towards this space. It was quite interesting following the talk at Data Matters. I actually had a few directors of data over and heads of data coming up to me saying, "Oh, that's really interesting. We're about to do the same thing," or, "We're aligned on the same area."

It's again, I guess, it goes back to that Lego bricks methodology of, "Azure's got a whole bunch of stuff," and it's, "Well, how did you put it together and what to do with it?" It's good to see that other organisations are heading in the same direction because we do need to take the power of the data. As I said, data matters. For me, being able to actually glean insights and make things work better is going to be critical to the sector.

Paula Palmer

Of course, podcasts like this are a great place to spread the word about all these fantastic technologies, but our priority is to provide customer-centred services that are proactive and efficient. Could you both outline what benefits there are for housing sector customers in using these technologies? Paul?

Paul Blaydes

At Stonewater, the whole point of getting all this data together is so that we can become more of an insights-driven organisation. The idea really is we take information from internal, external, and anything really that's available to identify trends and themes that will allow us to either support our customers in a more efficient way, identify potential opportunities within the organisation to maybe automate certain work, but also then take the information to use more predictive modelling to identify problems before they may happen.

The reality, though, is, for me, what's next? What I find really passionate about data is what it opens us up to at the moment and how much things are changing. I was chatting to, again, one of my lead developers, and he said to me, "Things change so much every month that if you don't stay on top of it and don't pay attention to it, you can not get left behind, but miss some really key things that could optimise your performance or your code." The point really, I guess, is [inaudible 00:15:16], there's so much going on. But let's take Google Maps as a good example.

I saw something in Azure Maps where potentially we can actually provide a 3D drawing of our buildings and have the information available for our colleagues to look at.

Kishore Rajendran

Absolutely, Paul. Azure Maps is an amazing capability. It's effectively a geospatial mapping product that we offer natively as part of Azure, a first-party product from Microsoft. Every HA uses some sort of a GIS solution today.

Now, what Azure Map does is, in addition over and above the existing GIS capabilities that are being used to track our assets, to track various information about our assets, and in addition, link to capabilities such as BIM to identify documents such as warranty statuses or specification of various fixtures and fittings in the units, what Azure Maps does is takes all of those informations and makes it extremely intelligent.

What I mean by that is, for example, Azure Maps has various open-source data from Microsoft and the parties that we can overlay on top of our data. If we think about a few years' time when EV vehicles will be quite normal, we may choose to have an EV fleet post-2030.

If we think about a scenario where an engineer is dispatched to carry out the job, we can link the information we have on the assets that we've imported into Azure Maps. Not only automatically keeping the customer in track, for example, where is that engineer right now based on their current GPS coordinates, but more importantly, dispatching our field resources who have enough EV charge in their vehicle, who have the right parts and fixtures in their vehicles. That's just one very simple example.

But when we look at some complex modelling, we can even add data visualisations, for example. We can even look at a heat map of properties that have many issues raised from customers compared to properties where there are at least amount of issues raised. We can also even look at problems such as where are the damp and mould issues predominantly present, again, using heat maps within our data visualisations.

To summarise a very long answer, it is a GIS solution that can be hugely customised, and we can, yes, add our floor plans and asset plans onto Azure Maps. We can combine that with existing in-house data that we have on assets, on repairs and customers and various other data points that we have, merge that with publicly available data points, including satellite imagery, and then embed AI, Azure OpenAI, of course, to provide amazing outcomes for us to achieve as an organisation and as a sector as well, especially when we start to think about collaboration.

Paul Blaydes

I find these things just absolutely exciting. It's one of these, "Oh, yes, but damp and mould, that's just fine, you know where it is." Well, it's not about the property. It's not about the ones you know about. It's about taking the information we've got and overlaying it against stock. Because there'll be potentially certain scenarios, and there are hundreds of data points you can take out of any property to then have that visualisation and information. I think, for me, is that that's the real power that's going to provide back to the customer. They're getting a much more predictive, which is probably a better word, approach.

Kishore Rajendran

It may seem Power BI could do the job as an example, but where Azure Maps stands out is bringing all of that into a single location, merging that with real-time statistics - traffic information as an example, for the scenario used with the field resources. That's the key USP.

I'm actually glad you have brought up Azure Maps because it is one of those solutions which it's not advertised as much by Microsoft. I think we need to put our hands up. But at the same time, customers, especially social housing, are not aware that these capabilities exist. Thank you for bringing up Azure Maps and allowing me the opportunity to share what some of the capabilities could be achieved through that platform.

Paul Blaydes

Thanks, Kishore. Azure Maps is definitely something that I'm very interested in, mainly because of being able to stitch it with other data sets. The more information we get from our contractors and our partners, the more insights we're going to be able to glean about our properties. Stonewater has a national-based property. It's not like we have one particular area to look at. We have to look at all of those areas.

There's a lot of differences to each one or a lot of nuances with each area that you may not understand until you actually look at it from that thousand-mile view, because you stitch those other data points in together.

I think really that, for me, that's the game changer. That's the bit where really event-based information and streaming information between this is - the faster we have the information, the faster you have the insights. The faster you have the insights, the faster you have the actions. So then, what used to take time, now is done in seconds. It goes back to, I guess, it's something someone told me once. It's about - the speed of society can be directly related to the speed of information.

You're talking - a long time ago was about people on horses with letters, and then you've obviously got your telegrams, and then it got a bit faster with cars and then Royal Mail. You're sending letters to everyone, and then it's e-mail and now it's Teams, WhatsApp. Now it's just notifications. It's just the faster you get the information, the faster you can react to something. That, I think, is an area that's really going to benefit social housing.

That's great. I like that analogy about the communication getting faster, so the actions get faster. It's definitely exciting times. Our last question for today, Kishore, is what's next in terms of Azure and our partnership with yourselves at Microsoft, and what advice would you give to those starting their journey?

Kishore Rajendran

Azure is a constantly evolving platform. If we look at the investments made by Microsoft and our partners, we're just enhancing and adding new capabilities all the time. Now, of course, AI is a very hot topic at present, and Microsoft is significantly investing to make sure that we provide world-class capabilities for our customers to utilise within their own organisations and offer those capabilities to their customers as well, so in our case, our residents.

Now, I know we just spoke about the actions happening straight away. If we think about it, our residents are used to having things in real-time, being able to track real-time, being able to make transactions online in real-time. Those expectations almost are also expected from their social housing providers.

If we report an incident, residents expect to be able to track exactly where that repair is, expect to be tracked what time, approximately, the field operative will be arriving to their property.

If it's self-service capabilities, again, expecting some clear instructions, step-by-step guide. Collaboration within the sector is absolutely required, especially if we're going to be successful in the implementation of various AI capabilities. When it comes to use case implementations, there is an amazing opportunity for

our sector to share learnings and to share the implementations, rather than having to redeploy individually like we do today.

Now, there will be HAs that are at different stages of their technology journey. Of course, it may not be possible for certain HAs to adopt and implement the shared best practices and solutions. But wherever we can enable that, that is amazing. Now, the reason that is amazing is customers can get a consistent experience no matter which social provider that they are with.

Number 2, in the event of mergers and acquisitions, it makes it so much simpler than it is today to integrate data and to integrate systems if we do follow similar standards. Number 3, from a staff training perspective, it allows greater sharing and learning across the sector, which means when it comes to user adoption, we do not need to tackle that at an organisational level. We can tackle that at a sector level, which makes it far more easier and a lot less pushback from users to keep up the pace of innovation that we are seeing and will see into the near future.

Paul Blaydes

It's a very interesting and exciting time, I think, just generally around everyone paying more attention to data now more than ever. I don't know if that's partly due to COVID, where people are working from home a lot more, so people are going a lot more digital and they're realising that they need to have more information, or if it's just a natural evolution of people adopting remote working and moving on to that next level.

One of the things I did enjoy about working at Amazon was all about - they would push and push and push, but also, at the same time, you've got that - how is this impacting the customer experience? If it doesn't make the customer experience better, don't do it. But they were taking that; they were doing this ten years ago.

It's that passion that we can bring to the sector where it's how are we using data to do things that make the customer experience better. That's something that I'm quite passionate about. It's just there's great things. I mean, we've recently done something that's saving hours from a team. It's great. Then they can then spend that time on something else that helps the business.

I guess maybe there's a certain analogy you'd use, I guess in my head it is, sometimes you can see, sometimes, organisations like they're walking through quicksand or walking through muds and things, and then you start to use the data, and what it does is it either solidifies it or lifts them up. So then they're able to run faster and at more pace.
That's where this next step is. This is what Azure or Microsoft is they're enabling organisations to do. The thing I love about Fabric, from what you were saying, is that you don't have to have a technical team. You don't have to have all of the experience under the sun to put the Lego bricks together to create the house.

You can do a lot of it yourself. Yes, there'll be customisation and bespoke and all of the other stuff that goes along with it. But again, it's enabling people and organisations to take control of what they need to do, and they can, to improve.

Paula Palmer

Thank you very much, both. I'm not even going to pretend that I fully understood everything that you've said today, but I think I've understood enough to know that using technology like this and what's to come is only going to help us become more efficient and to help us serve our customers better, which is what we're here for. It's been a really interesting discussion, and I want to thank you both.

Paul Blaydes

Thank you very much, Paula. Lovely to be invited to do this and be able to share some of my passion with yourself and also, Kishore, thank you very much for coming as well and taking the time out of your day.

Kishore Rajendran

Thank you very much, Paul and Paula. It's been a pleasure and looking forward to the upcoming innovations that we can collaborate with Stonewater.

Paula Palmer

I want to thank all of our listeners for joining us again for another episode of On the Air.