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CR073

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modernisation with Jacqueline
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[00:00:00] No, no, please be animated. It's just the, uh, yeah, be excited quietly. I love the idea. It's a terrible constraint. Be really enthusiastic and excited, but can you whisper?

Welcome to Cloud Realities, a conversation show exploring the practical and exciting alternate realities that can be unleashed through cloud driven transformation. I'm David Chapman, I'm Sjoukje Zaal and I'm Rob Kernahan.

And this week we are going to be getting into the world of legacy transformation on a massive scale.

What an organization has to do to reposition the legacy transformation problem and how new tech can help with that. But before we go there, Rob came on to a [00:01:00] video. conference yesterday, we were having like a little pre meet about one of the future shows. And in the background, there was two massive pink blocks and what looks like a big coiled up line of black cabling with some sort of plugs on the end.

And Rob's like, and by the way, he's got those at the bottom of a set of stairs. And Rob was saying, well, I thought for my house, it was time I did a health and safety video about. you know, the dangers of leaving, uh, yoga equipment lying around at the bottom of staircases. But David, it's not the only thing I've been thinking about this week.

So I was like, well, Rob, what else are you confused about? Uh, yeah, I mean, health and safety in the home is very important. I don't think we take this seriously. If there's a, there's an alarming stat about people who die trying to put their trousers on. In the house, a simple accident. So it's serious. It's, it's a real thing.

So it's consumer advice, but you should all be making the home videos and educating your family. Anyway, the other thing I was thinking [00:02:00] about, David, it's your fault this one. And it's a bit of an existential crisis. You've caused as well. That was accidental. And it all boils down to is the human. Just a big fancy algorithm and I can't I can't make me mind up.

So on the one hand, you've got this Complexity that can be managed by and the theory goes if you have enough if then else statements you can receive any input and give a perfect input back to that position. Now, obviously that's massive, but it's a philosophical point. And then you look at the human and you go, well, if you break down what the brain is, it's neurons and signals passing and things like that.

And then when babies are born, they're basically useless. And then over a period of time they learn. And we're getting into this world where we're building algorithms that can self learn over time and create these results that are very human. Like, and I'm wondering to myself, Is it just that we are a very, very complex fancy algorithm that's had, you know, millions of years of development and it's just going to catch up and then we'll get the non human sentience.

Or is it that there's [00:03:00] something else in the human condition that means that we will always maintain a difference? And quite frankly, David, it's all your fault. I've become very confused about this particular topic. Well, that actually means that if I get a firmware update, all my issues will be fixed. Oh, no.

What a great idea. If we work all that out, you can just download an update. It's like the whole, you can just learn a language or Kung Fu. It's the matrix. It is the matrix. Yeah. You've got the matrix. But what the matrix envisioned is the ability that we can be codified into a system and we think we're real, which is the whole, are we working in a simulation?

And if we are in a simulation, then we are just a fancy algorithm. And this, this has kind of popped my brain slightly the way through it. Max Tegmark's thinking on it in Life 3.0 where



he talks about we are just, we're Life 2.0 and Life 3.0 won't be a carbon based life form, it'll be a silicon based life form.

And actually that's superior because in carbon based life forms, You know, we've only got very little control about our physical state, you know, we've got [00:04:00] sophisticated with it, perhaps with like hip replacements and knee replacements, and we're getting increasingly good at genetic medicine and all of those sorts of things, but ultimately we can't turn ourselves into a fighter jet.

or a spaceship. Transformers, you mean? And yeah, and exist in a vacuum or transfer our knowledge immediately across a whole army of other, you know, beings. But if, if we are just a fancy algorithm and it's just a matter of time with complexity, we can build like a big robot shell and download ourselves into it.

And I think that'd be quite cool because you never get tired. You could, you could run really fast and jump really high and go into space. Life 3.0 may well be The next evolutionary step of humans. And it's like, is it okay for us to take control of our next evolutionary step? Well, maybe it will be in our destiny.

Who knows? But anyway, as it stands here today, and Elon did say the old intelligence thing, cycle shortening, he said two years, which gets a bit sort of interesting, doesn't it? It does indeed. Well, look. We [00:05:00] will leave that today but it might be a subject we return to you know I do think it is where a point in human history at the moment with the advent of things like AI where these things are very real questions and they're not fanciful questions I don't think and going from that to maybe a closer to home problem but.

A massive and very challenging problem in its own right. I am delighted to introduce Jacqueline Hanson, director of core digital services at Department for Work and Pensions. Jack, lovely to see you. Thanks for joining us today. Maybe you just say hello and tell us a little bit about your role.

Well, hello, and thank you very much for having me on the podcast today. So I work in the department for work and pensions part of UK's government and I'm responsible for some of the very core critical digital services that we run. So I look after things like how we make payments to all of our customers and I look after customer records and also the systems which actually capture and process benefit and pension payments for our customers.

Perhaps we [00:06:00] can start then with, just for those overseas who don't know what the Department for Work and Pensions is and, and how it fits into UK government, Jack, perhaps we could start with just getting a little bit of context and set the scene for us. Okay, I'll do my best. So the Department for Work and Pensions is one of the big departments of state.

Our particular responsibilities are around providing a safety net for people. who have little or no income. So the department itself has four outcomes that we're aiming for. So the first one is around maximizing employment. So helping people get into work to stay in work, but also to support them if they're not in work, we also deliver, deliver financial support to those.

who are entitled to it. So that covers a range of other benefits and pensions that we pay, um, including things like carers allowance, if you're caring for people at home, and also helping with child maintenance arrangements as well for some of our customers. [00:07:00] The third objective that we have is around enabling disabled people to start work, to stay in work and to succeed when they're there, and also to offer additional financial support to um, And our fourth objective is around later life.

So making sure that we can all be resilient in later life. Are we planning for our pensions?



And also as a country, we provide a state pension to people. So largely the department is a big operational beast that pays out, uh, money to people who are entitled and in need. And given that ultra complex societal mission, obviously it works at massive scale as well, too, right?

Yeah, an amazing scale. I mean, I feel for me it's an absolute privilege to work somewhere where everything is at such a great scale, particularly working at the digital heart of that. And I know I've worked with other departments and other companies and I haven't found anybody yet who kind of touches our scale.

So. To give you some context, [00:08:00] we have 22 million customers currently day by day getting money and help from us in DWP. We pay out, I can't say this without smiling on an annual basis, we pay out 260 billion pounds. Incredible numbers. I'm responsible for the system that makes those payments. So I have a few sleepless nights in the year.

No pressure at all, particularly around bank holidays. I do, this time of year is lovely, like the days are getting longer. It's a bit sunny, but for me, it's bank holiday, bank holiday, bank holiday, advancing the payments to make sure that people get them on time. So it's a double edged sword for me, springtime.

So that's the amount of money that we pay out. over 30 different benefits and pensions, both open to new claims and closed where we don't take new claims for those anymore, but we're servicing the caseload that we have. Each of them very different. They've all [00:09:00] got their own rules, legislation, they've got their own digital systems.

And it changes and updates on an ongoing basis as well, right? It's not a static benefit. Yeah. I mean, we're here to serve the government of the day. So I've been over 30 years in DWP. Girl and woman and being through several flavors of government back and forth and every government of the day has its own policies, its own hot topics, the things it wants to pursue on that is then reflected into the welfare system.

and the benefits and pensions that we pay. So yeah, they change through time, even the ones that stay live. Um, so looking after, I don't know, upward of 300 different digital systems of some scale to make sure that we could administer all of these things. And, uh, as an organization for those 200, uh, those 22 million customers, we've got about a hundred thousand staff working nationally.

[00:10:00] Um, from visiting customers at home all the way through to working in job centers, working in service centers, kind of backroom processing, and then corporate functions like myself, where we're in digital in HR and things like that. So what's amazing, I think, is that I spent some time at DWP back in the noughties and loved my time there dealing with the sort of, Scale issues that you're talking about.

DWP has been dealing with this scale in, you know, in a way that completely predates the Internet. So these days we get, you know, we talk about scale on things like social platforms where there is, you know, hundreds of millions of people on it. And, you know, we sort of almost take that for granted. But DWP has been servicing this from, you know, mainframe era all the way through client server era and now into the thoroughly modern era.

So it's a hell of a journey that. Yeah, it's been pretty amazing. And, you know, I referenced the fact I've been around for about 30 years. So I've lived through a fair chunk of it, but [00:11:00] absolutely those mainframe days, building great big monolithic systems that pay a particular benefit. Now moving into kind of more composable architecture, more loosely coupled, how do we manage a benefit journey and bring the right elements together, um, trying to take



advantage of kind of.

Cloud native and our latest thing, which is a hot topic everywhere, you know, we can't have a conversation about digital without mentioning ai. How can AI help us? You'll be almost redundant, Jack. God, at this point, to be honest. Oh God, there, it's there. It's winging. We might as well stop. Do it without AI in it.

I know, exactly. Um, so we're investigating how AI might help us on our journey to help our customers more, I think. The upside downside of all of that for me is we still have some of those very original systems, and it's like an archaeological dig. You can go through all the strata. It's still there. Yeah, right.

The oldest, the [00:12:00] oldest thing I operate today is 50 years old. Yeah, you still have people to operate it. Well, this is one of my major risks really and why I've got such a keen interest in legacy and legacy tech debt because Not only I mean, there's a bunch of things we can talk around about why legacy tech debt is something that needs to be tackled but for me the urgency really comes through the People that I have that know how the code works and the language is programmed in are all maturing, maturing, maturing like fine wine.

Yes. Um, and, and starting to think about what they're going to do with their later life. Right. And I think as well, if you take the citizen view of the department, you have a relationship with the department throughout your entire life, from the day you're born to basically the day you die, and there's a data model that has to sustain through all this tech change, [00:13:00] through all these platforms, going from the legacy to the new.

I mean that in itself is a monumental challenge just to make sure the integrity of that data is sustained and accurate because obviously that's affecting calculations and circs and things like this. So that must be a big pressure as well about making sure the fidelity of that model is good and correct.

Yes, you're spot on and it has been particularly difficult given the the changes that we've gone through in terms of the personnel, how things are built, how we try and connect things together, making sure that the data can flow from you. Ancient systems into modern systems and still be relevant and do the job.

We need it to do And as part of how dwp is trying to transform its services We are looking at how do we refresh that data model? And how do we bring better metadata into our data model so that we really know and understand? The veracity and validity of the data that we're handling just to step back as well to the issues you're [00:14:00] managing in terms of the legacy transformation, dealing with the risks there and just maybe let's return to that a second.

It is set out the other issues that you're perceiving. Presumably things like being able to be more agile in driving change through the systems. Updating the systems are all top of mind for you. What else is going on in that, Jack? Um, I think you've probably pinpointed my, my head. Biggest couple, but I would say they kind of fall into two camps for me.

One is around the technology itself. So we have products coming to end of life and end of support technically, which is quite difficult to handle. Obviously the older things are the harder, even if they're in support, the harder they are to patch, to maintain and keeping kind of security is paramount because we're working with customer data.

That is. Absolutely, first and foremost in all of our minds, so those kind of technical issues are part of the risk that we carry in the legacy estate that I have to manage, as well as our maturing workforce, I should say. The other side [00:15:00] of it is the more business focused



side of it, and that I think is actually where the cost is to the organisation, so rather than risk, there is a cost.

So we are working in my head, it looks like an inverted pyramid. So at the bottom is the kind of tech monolith that we've built that are not adaptable. They're closely coupled within themselves to the business logic to other systems. They just sit there at the bottom of my little inverted pyramid. They do what they do.

And over the years, as if we, as we have kind of accreted, more change and we built more things into those systems or new policies have come along because, you know, kind of government initiatives because we can't change the systems too much themselves around it. We've built another layer of it to kind of fill the gap.

And then beyond that, kind of going up that pyramid starts to grow out are additional business processes we have to put in place. [00:16:00] And then above that, the additional staff then that it takes to run those processes and handle the kind of base IT, the core IT and the extra IT. It's become tail wagging the dog.

Yeah. I mean, so, so what, I mean, so what a problem and beautifully articulated there. So let's zoom back. 15 years and and go back further if you want because I think I was there. I mean, a lot of these problems were in the environment. Even back then, we're about to find out that you created all the problems we've just been talking about.

It was your fault. I think we found the culprit. We found the culprit. All this pain you're now suffering with Legacy Transformation is Dave's fault. That's what we're going to conclude, isn't it? I'm going to tell my team that they're going to feel so much better. We've found patient zero for the problem.

Yeah, yeah. We're just now going to say, just blame Dave. Yeah. New motto for the department. Blame Dave. I like it. It'll be all across the notice boards, like the health and safety thing. And then [00:17:00] just, just blame Dave. Let's remember that one, Rob. Yeah, it's much like on the show, like on the show, to be honest.

Anyway, so getting back to the story, so let's go back and like to go back further if you want, because the problem as you describe it, that inverted pyramid has been, has been growing organically for a period of time, but what's the legacy modernization thread? in that for you. So then, you know, maybe start from whatever date you think is most relevant.

And then, and then bring us through to where you are today and the actions that are being taken today in the sort of in the cloud native world. Okay. I'm not quite sure what you're asking me there. Dave's very good at incredibly obtuse, difficult questions. I think that's one of his best. He's just asked, please explain the world in three sentences.

Steps towards legacy modernization. Start wherever you like and then crack on from there. We'll just go on mute while you answer that question. Where I [00:18:00] was going with that was you start with a giant mainframe estate and then over time, you're decomposing aspects of that estate into different, into different systems, some of which have been problematic in the way you describe in the inverted pyramid.

However. There are tools that are available to us now that perhaps weren't available 10, 20 years ago that can help crack the problem in a different way. So I think what I'm trying to get at is what's been the journey of like trying to resolve the legacy problem in summary and then what's happening today in terms of trying to unpick that problem.

Does that make more sense? That makes perfect sense. Got there. 10 points. Actually, we haven't tried to crack the legacy problem. We keep looking at it and going, that's too hard.



Too hard, yeah. And you're not alone in that, by the way. You know, that dynamic you're describing is a very real problem for a lot of organizations, right?

You look at it and you're like, Yeah. too hard, [00:19:00] too expensive, too high risk, too difficult. And, and we are getting to the point now. We were, we were being lighthearted about it earlier, but it is true to say that they're becoming less and less understood. And these are the critical elements of our businesses and societies.

And it's a weird mix. And I feel conflicted about that when you look at it, because the technology that we built. Many moons ago has served its purpose extremely well. Now it's causing issues with the business have to compensate for that process. There's tech having to be wrapped around it, but the fact that it still does its core mission as designed is testament to the stability of it.

However, it's it is that it's now becoming so difficult to manage that it is time to slay the dragon, as I say, with the legacy. I've done a couple of these projects in the Netherlands, public sector projects, and it was the same there as well. It's so difficult to crack that. It's, it's nearly impossible. I hope not impossible.

I [00:20:00] am dedicated. Um, so I would say we haven't tried to crack it in the past, or we've, we've looked at it and we've thought about it and we've made a little star, but because of the scale we work on, like a small star, it's not. Not enough. You need the momentum behind you. So what we have done and what has changed, I think, is we've built new systems.

So in Universal Credit, that's the most recent brand new benefit that's been brought into being, even though it's past its 10th birthday now, I think, in terms of the build and then into implementation. But we didn't As we would have traditionally have done, build that out on a legacy base, we started from fresh, took an agile approach, showed ourselves actually what a difference it can make to build something in that way, and then how adaptable it is.

So obviously, Universal Credit's been around for a little while. Policy has changed on that. Amazingly, because it's been built as cloud native, and in an agile way, you can make changes to respond to the policy. It is. Amazing. We love it. [00:21:00] The other thing that's happened for us, of course, is technology has moved on.

So I think we have tools now and capabilities that allow us to start to tackle the legacy, like that, that legacy problem that sits at the heart of every state and what Where I am now is over the past year or so working with our CDIO Rich Corbridge, we have been framing the legacy problem for DWP as a whole Mm-Hmm.

In a way that it can understand. So it's not a digital problem, right. It is a DWP problem because it causes that inverted pyramid. Nice. And because. The risk. So these systems get old. We can't maintain them. Eventually, something touching wood now, but something will fail and that will have an impact on customers, which is something we all want to avoid.

So rich has been working really hard with me to frame that for DWP in a way that allows us as [00:22:00] an organization to see it and to feel it as a DWP problem. And what's been the journey of. Framing that problem. So how have you gone about the articulation? It sounds like it's the inverted triangle, but then how was that landed with the perm secretary, the leadership team?

Just take us a little bit through the sort of the human side, if you like, of that conversation. Yeah, I mean, I think the world has moved on in such a way and the conversation about legacy tech debt. So you referred earlier to the fact that it is a common problem. Lots of organizations have it. In fact, you know, Yeah, significant organizations have it, um, it is a



conversation that has been bubbling up and bubbling up.

So I think in a way, Rich and I have just kind of caught the zeitgeist on that at the right moment in time, but certainly, uh, we started with conversations with our permanent secretary. who thankfully for us is [00:23:00] sympathetic, knows and understands and can see the problem. We've talked about it with our departmental executive team, so the highest leadership cadre that we have in DWP.

So some, you know, they're all human beings, some are easier to convince than others. But what we've tried to do is bring the story to life, help them understand the risk profile of the stuff that we have, as well as the impact currently, uh, enjoyed is not the right word, but you know, under undertaken by the rest of the organization.

So there's been that conversation with our executive team alongside that, this is a conversation which is becoming much more prevalent across government as well. So it feels like a dark. Issue that's been hidden under the, you know, in the cupboard under the stairs. But now we're all dragging it into the light because it's starting to hurt everybody.

So we've also had conversations with colleagues in the cabinet office, particularly in [00:24:00] CDDO, which is. kind of digital hub, um, and surfacing the problems. They are trying to bring departments together. So broadening the conversation out. So it's not just DWP. We're all coming together now to share the problems that we've got and to try and help each other, but also raising up the next, the next hill to tackle in that human story is going to talk to treasury because obviously money, To fix anything or to do anything flows from treasury and they are the next kind of key senior stakeholder where we have to change their mindset from return on investment to reduction of risk.

Yeah, yeah. And that's a big thing that you sort of go. I.T. Has sometimes been squashed in the how do you reduce cost? And then that forces optimization, but you don't get the change that you're seeking, which is the legacy. And now you've got to get this. It's either a growth issue. It's a efficiency and productivity issue, or it's a de risking issue.

And that's a completely different thing. Yeah. Not narrative to [00:25:00] have to say, if you don't, the impact will be far greater than when you do. And when you do, there's lots of in tangential benefits that are hard to quantify, but you know, it's the right thing to do. Yeah, it's the exactly. And I think in our kind of legacy world or DWP and its overall estate, We have started to look at transformation.

So this is my best treatment plan for legacy ever is that you do a complete transformation. So we've got two or three benefits in train being transformed, but that takes technology people processes on our scale. That is huge. So it takes many, many years to go through a how do you put the customer correctly at the center of the new thing that you're building?

How do you provide the right experience for them? A better experience for colleagues? Everything that we need to change around that in terms of how people might do their work as well as how citizens might interact with us? These are huge things compared to actually building nice new it. And we've seen that through Universal [00:26:00] Credit.

We know and understand the effort that it takes. So I'm delighted it the department is we, as a department, we're transforming some benefits, but again, that's opened a conversation and helped with the amazing. So in the next five years, you're going to eat this portion of legacy debt that I am sitting on like a dragon with his hoard of anti-treasure.

Um, but it's opened the conversation to, well, what about the rest of it? Yeah, and that has also been quite powerful and is there something in the organizational capability



transformation from a tech point of view that the department has been undertaking for the last five years and the sort of one of one of one of Rob's.

Favorite words here, the confluence of technologies that are the convergence of technologies that are going on at the moment that makes the problem feel more tackleable. Like it allows you to carve it up in a different way or see a different tech and tooling route through it. Yeah, for sure. And I do think there is absolutely a [00:27:00] convergence that's working for me right now.

And also, so as well as the kind of technology, the internal capability we built in DWP, because we've moved from building everything ourselves way back in the day. To outsourced back to in source than over the past 5 to 10 years. We really have built our capability, our intellectual ownership and our desire.

We can see the difference we can make. So we've got an appetite to do these kinds of things. Also, there's been some as agile has developed and thinking about how you can run organizations and tackle challenges. The thinking, the intellectual input around that has changed and that really helps as well.

So as we, as I look at the kind of. Residual legacy challenge. I have the idea that instead of trying to tackle big blocks of it, which is what the department's always looked at before, because, you know, scale, we do big things is, is to try and, um, kind of break out, break it down and say, let's do [00:28:00] some smaller pieces.

Because once you do a smaller piece, you've iterate out from, and that is, I think, quite powerful. Very, very much agree. And I think as well, it's being able to get early wins out on scale. That's deliverable very successfully. It's everybody excited. Everybody sees that that's the right way to do it.

And then you build this organizational momentum behind it that everybody goes. Oh, you're getting results. Yeah, it's often if you open the box, the legacy and you try and tackle the whole thing, it doesn't always go well. And I think that ability to break down the problem into a smaller domain and then get a win Uh, helps the organization understand there's a new way to do things and that new organizational approach that cultural change, though, I think it's probably on such a large scale for your organization that must have been a tough old road is probably still going with the convincing everyone there's a new way to do it, as you say, with the ministers and the perm sec and things like that, all the way down through the organization.

Have you found it? Most people get it quite quickly, or has it been [00:29:00] a, you know, different set of conversations all over the place? Yeah, to be fair, I think it was, it has been a different set of conversations all over the place. And we've had to kind of build a story bank almost of how we bring things to life.

To like for different audiences as you would when you're trying to, I mean, it feels almost like sell here. I am selling the solution to your problems, which is not really how we work at all, but it has taken like a multitude of approaches. However, I do think that as DWP digital. Over the past 10 to 15 years, we have built sufficient credibility with DWP.

So we are part of DWP, but that's where our heart and soul is. We're part of it. And throughout that 10 or 15 years, whilst we've undergone vast capability change in DWP. Digital as we've built our skills and refreshed our skills with external recruits as well. We've built a lot of credibility. So things have been difficult.

Universal credit was very, very difficult at the outset for lots of [00:30:00] reasons that aren't



just about it. But through time, working together as DWP, we've shown what we can do collectively DW, you know, as a whole, not just in digital. And then you start to get A proper working relationship with the organization that is based on trust and credibility, and that means that when we're having conversations about this is a problem, we're heard when we can, when we explain it and do that.

Well, we're understood. And then we're jointly committed to, okay, this is something we need to tackle. Can you help us understand how we might do that? And, you know, this is where I am now with a, let's look at how we might treat the legacy debt we've got, because one size will not fit all in DWP. From a DWP digital perspective, maybe just give us a little sketch of The development and the transformation of the organization has gone on to, to get to that point.

You, you touched earlier that you've gone through a series of sourcing cycles and you're now back and you're building [00:31:00] internal capability, but presumably that's come with a radical amount of capability change, culture change, process change. So what's that journey been like in the last five years? I think it is.

I can reflect back there and go, wow, quite amazing. Um, probably the biggest inflection point was bringing the cape of bringing our capability back in house was the biggest. toughest challenge in all of that. Um, it, we, we'd had many years as an outsourced organization. So the number of people working in our digital community was smaller and we were more focused on supplier management and working in a very waterfall way.

As a result of the contracts and the suppliers that we were working with kind of historically carried forward and then we kind of made the leap to say we're going to try and do [00:32:00] some of this for ourselves because we can see that we could work in an agile way so we adopted agile methodologies and started to bring stuff in house.

We worked with our partner organizations, so suppliers rather than building systems for us, we started to contract in a different way so that we worked with those. Partners to build our capability. So we recruited for ourselves. We started to expand. We recruited fresh new people into the organization who had professional digital skills, but we worked with our partners to upscale people from within DWP who wanted to work in the digital space, right?

And that's a journey we've continued. So I think we have a core base of about, oh, it's probably 4,000 Just over, um, of digital professionals now, where we have built our own capability encouraged by the organization. One thing I will say about DWP that I absolutely love is that it [00:33:00] invests in its people.

Right, right. So not just in the corporate center, but everywhere. But we've had access to lots of training and lots of support to kind of go on that journey and become much more professional. So we are product owners who know what they're doing. We are business analysts who are. Properly accredited and qualified, and we have loads and loads of absolutely superb kind of engineers and dev ops people working in the organization now, but it has been.

It's been a long, slow climb to get there. What's amazing about the story? I think when you when you reflect back on it, it's got so many, it's got so many elements in it that I think a resonant in in many organizations. And if you look at, say, the. The legacy transformation or the legacy modernization and risk concerns over the last 20 years.

It always felt like a problem that was too big and too risky and too expensive, but actually a full scale transformation of the capability, which is [00:34:00] now kind of happening and



happened has has been required to get to a point where there's a level of confidence and a level of understanding. In a way that would be like, right, we can now take this on and that me feels great.

And it's beautiful, isn't it? Because you go from a world where you used to manage suppliers who did it for you to a world where now you can look at a bit of legacy and go, You know what? We're gonna do a cloud native rewrite that business function. We're gonna work with the business to make sure it's right first time.

And that the difference in capability is astonishing when you can. As you're going through it, everything's small increments. But if you actually reflect, you go supply management to digital delivery management, that's a huge gap that you've traversed. Absolutely. And you're right. I think that sense of confidence.

So it was great last year when we started to look at, so what could be a treatment plan? Well, we could refactor. So let's pick a. Which benefit lane would we go after? Where would we practice? The absolute appetite in my own organization for engineers and business analysts, [00:35:00] delivery managers, they're all like, yeah, we want to work on that, we want to do some of that.

And I was like, yes, this is it for me. It doesn't get any better than this because everybody thinks of legacy and technical debt as dull and boring. But right now my organization, our engineers, our product people are like, Give me some of that. I want to do it. Yeah. What a difference we can make, which is just lovely.

And it should be like that, right? Because it's, it's a challenge and like technical people like challenges and they want to modernize, and they want to take things forward and actually resetting that as a major mission versus. Oh, a difficult risky thing. That's over there somewhere. We'll just build around it, you know, and we'll use third parties to build around it because we actually don't know what the right answer is.

Rob's right. It is a profound shift. And I think one that when you see other organizations, I'm hoping will be resonant to them in terms of what good digital transformation looks like. Um, [00:36:00] it never ends. There's always other things that you're going to need to do, but being in a position where you feel like you can do it, I think is.

Is extremely important. And I wonder to bring our conversation to a bit of a close, what advice you might have for other organizations that are maybe where you were five years ago, 10 years ago, you know, what would you advise as the first couple of things to start thinking about in a more material way, perhaps than they have been so far?

Okay. So interestingly, I've had this conversation with one of my sister departments recently, and they're a bit further behind us. Things that have really helped us are, first of all, having the right conversation with your department, so to frame the problem as the problem of your organization, not just a digital problem.

So get it out there, make it understood, so that people can connect to the challenge. is one thing. The other thing that's helped us is to actually [00:37:00] think about it as a program of activity. So try to break it down. So have a scope and then start to break it down into kind of smaller blocks that you can go after somewhere that you can experiment.

Um, and the third thing is, I think comes back to your point about Creating the right appetite. So within your digital teams, making this feel like an exciting thing to do where they can make a difference, because then people kind of flock to your banner.

Shout out for what you've been looking at this week. So each week I do some research on



related ideas and transformation and tech. And this week I thought we should take a look at legacy modernization trends that you should know of. So I think we discussed this several times during our podcast episodes, but I think it's good to look into it in 2024.

Have you got AI in it, Sjoukje? [00:38:00] We're going to be Yes, of course. It is there. All right, okay. Yeah, yeah, yeah. It's coming, it's coming. It's coming, it's coming. Bit of patience. I'll just quickly Google in the background while you're doing it. So legacy modernization is still a very hot topic nowadays. And there are four legacy modernization trends that can really help you shape your modernization strategy.

And I believe that these four trends need to be combined to really effectively modernize your application landscape or migrate successfully to the cloud. So the first one is cloud migration and cloud native development. So migrating your legacy applications to the cloud will give you immediate access to benefits such as scalability and usage based pricing structures.

But the real path to modernization is still through cloud native development. Using microservices, containerization, container orchestration, and other modern technologies to build applications that are really architected for the cloud. Second one, DevOps. Which [00:39:00] will really speed up the delivery of higher quality software by automating and integrating the efforts of development and IT operation teams.

Third one, Dave. Artificial intelligence. Thank God. I feel like we've underexploited that in this episode. If I can't get a bot to do my job in 24 months, I'm going to be very upset. Yes. So by automating code analysis, testing and performance modernization, AI is really changing how developers create and update their applications and accelerating their legacy modernization.

And the last one. Low code development. Like AI, low code development drives a faster and more efficient modernization process. So a question, are these the most important trends nowadays for legacy modernization, or are there important trends missing here? My thinking on this is sort of [00:40:00] twofold. I think represented in both the conversation and in your trends there.

So the big insight from Jack in that conversation for which really resonated was the scale of transformation and organization might have to go on inside it and outside of it to deal with large scale legacy. Systems that still are the linchpin of how the business functions and like almost when you think about it like that it becomes immediately reframed so the first thing for me which I don't I didn't really hear that so much in the challenge in the in the trends that the actual human reframing and systems reframing of the problem really significant I think and then the other thing and I will be joking about it throughout but I think this is a moment where the AI tooling legitimately will create a breakthrough moment with understanding historical code.

Great. It does sound a bit too easy, right? Applying these four technologies and then We've been waiting for it for 30 years. Yeah, double click on yes. I want to just double click on yes [00:41:00] and have it sort out. The one that was in there that I think will be the technology that never made it. And was always just on the fringe was low code.

So low code has always been bubbling around in the background to say, we'll just give the app to the business and they'll write it and they'll work out what it is right. And in principle, it's a great theory. And you think, Oh, yeah, okay, that'll work. Make everything easy. But I think AI and natural language prompts into the system are actually going to usurp low code.

So low code will be the thing that never was. And it will be surpassed before it ever got its



full traction into the business world, because the natural language interface into the system allows people to talk more naturally to get analytics out or to maybe reframe problems or get stuff done. And I do think Uh, unfortunately, it's something that we'll always say, I want, it's a bit like the Sony mini disc.

It never quite made it to the front of the pack. I think there's like a hype cycle diagram you could do with that, Rob. And you know, like showing, you know, the, you know, the, the low code things coming [00:42:00] in, coming in the air, coming out of somewhere and just usurps it just at the last minute. Yeah, this massive spectra of AI comes trampling over everything and just lays destruction to low code and it's way you get this light for all the people.

I'm very sorry if you're a passionate about low. Unfortunately, maybe this is the typical alienating part of the audience again. Sorry, we just lost 20 percent of our listener base. Don't you think because AI is combined with low code in lots of different tooling, right? Isn't a I going to save love go local?

That's a way to frame it. See, but the thing is, I can ask to write code for me. So I bypass low code straight into something that I can compile. You don't need the interpreter. It will definitely reframe what the vision of low code sustains. How do I make it easy for the business to do something? So the problem space is just got an extra shot in the arm from a I just don't think it will be them writing stuff on the keyboard.

That's technical. It will be more natural. So, so Jack, when you, when you listen through those trends and our [00:43:00] incisive, our incisive work there, just unpicking it, what resonated with you? And presumably you've got a lot of that stuff in play at the moment. Yeah, I recognize all of those things. I'm a bit gutted.

I'm going to go have to go back to the department though and tell the low code team they're out of a job. You might want to do that before this goes out.

So we, we have been doing some things in low code. Interestingly, we're doing them kind of in digital. We have a low code team where we're trying to. Take those simpler things and just bang them out to kind of clear the decks of smaller legacy, uh, things that we keep tripping over. The AI one is really interesting because we've been experimenting.

So we have like an AI lab. And one of the things we've been looking at is legacy code. And what we can do to help ourselves with legacy code. So still experimenting at small scale Um, I did make the team laugh when we started because i'm their sponsor and I was like, okay I want to see a chunk of lovely dirty legacy code dumped in And [00:44:00] a new system coming out the end of it.

They're all like ha ha ha ha ha like that could happen That's perfectly reason perfectly reasonable I want magic to happen, and you say and you've got 24 hours to do it. Yeah, that's the just add a little bit extra pressure on. I might go back with that one. Now we're and unicorns as well as unicorns. Um, but it has been interesting to see.

We're starting with, can you get better documentation? Cause we don't understand our legacy systems, but we're hoping that the natural transition as we experiment with a bit more will be, can you put a chat function on top of that documentation so you can ask it stuff and it will tell you and then hopefully into my.

Unicorns and rainbows will get from, you know, what we have as legacy code. Maybe running through, um, very clever AI into some new code, but my engineers are still laughing And they may well do for a while until it gets until it all magically appears I know but the enterprise needs more unicorns [00:45:00] and rainbows and pots of gold and things like this I think



that'll make your job so much more fun, wouldn't it?

Yeah. Did you, did you use the fall for those gamified things that enterprise has tried like five years ago, Rob, where you have to collect like magical coins? I get sucked in with anything like that. I'm like over enthusiastically as well. She's still searching for new coins, right? Yeah, exactly. Hey, I'm top of that leaderboard.

Everyone else is on there. He wins every week now. Just me. I'm the only name on the leaderboard, but at least I win at something. Well, look on that note. Jack thank you so much for joining us today like the insights into massive scale legacy transformation and how the organization's moved with it and how the new technologies being leveraging is truly an inspirational story and we wish you nothing but good luck with what's about to happen next and hopefully you'll come back and share with us some progress at some point.

It's been great fun. Thank you for having me here. Now we end every episode of the show by asking our guests what they're excited about doing next. And that could be something in your personal life, like a great restaurant you got booked at the [00:46:00] weekend, or it could be something in your professional life.

So Jack, what are you excited about doing next? Obviously, my professional life, finding a unicorn. That's what I'm off to do next. Um, but the thing I'm most excited about is going out for dinner, uh, with my husband and my daughter on Saturday. So we're going to a local restaurant in Blackfriars. in Newcastle, uh, which is really good.

So it's a good opportunity to dress up, drink something a bit sparkly and have a good time. Wonderful. Well, have a great time. So a huge thanks to our guests this week. Jack, thank you so much for being on the show. Thanks also to our sound and editing wizards, Ben and Louis, our silent producer, Marcel, and of course, to all of our listeners.

We're on LinkedIn and X, Dave Chapman, Rob KERNahan, and Sjoukje Zaal. Feel free to follow or connect with us and please get in touch if you have any comments or ideas for the show. And of course, If you haven't already done that, rate and subscribe to our podcast. See you in another reality next [00:47:00] week.

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