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[00:00:00] Dave Chapman

I knew this was going to be tricky. There's a lot of words in your, uh, a lot of words in your titles. Bear with me. We're counting, Dave. That's one. He does this a lot. It's normally three. We're not using this as the pre titles this time. Go on back and do it.

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 joining us this week I am delighted to say is David Robertson from MIT Sloan School of Management, Houghton School at University of Pennsylvania, an author of a number of different books, Enterprise Architecture as Strategy, Brick by Brick, and The Power of Little Ideas, the latter two books, both based on looking at the super [00:01:00] fascinating company Lego and the journey they've been on over the course of the last few years.

And from a personal point of view, I'm very excited about At this because back in the day when I was at D W P I used enterprise architecture strategy as a cortex for the team that I was working with at the time. So, David, amazing to see you and delighted to see you in person, uh, here in Amsterdam where we are recording a couple of shows this week.

So David, would you like to just introduce yourself and, uh, say a little bit about what you do? Yeah, so my name is David Robertson. I'm on the faculty at the MIT Sloan School, and also I have a faculty appointment at the Horton School at the University of Pennsylvania. But mostly what I do is I talk about Lego.

Uh, I enjoy, uh, telling the story of the company. And there's a lot of lessons, a lot of boring lessons about, uh, Innovation, management and governance that you can say in a very entertaining way if you illustrate it with brightly colored pictures of toys. And so really what [00:02:00] I do is I talk about Lego. So this is a real pleasure because enterprise architecture is strategy, Dave, which I think was Thank you.

A first book that you wrote with some colleagues, including Jeannie Ross, was hugely influential on me back at a point in my career where I was running an enterprise architecture team at DWP, which is one of the large government agencies in London. And we used enterprise architecture as strategy actually to help us create directional architecture and connect it much more effectively to sort of business strategy.

So again, it's a real pleasure to talk about this with you. And I'm wondering... What was, what was going on with you and the, and your colleagues that caused you to write that book in the first place? So what was the moment of inspiration where you felt like you had something? Yeah, so I came back into academia.

I'm kind of an accidental academic in that in age 43, I decided to move out of my career in [00:03:00] management of technology companies and back into academia. And I reconnected with the people that had funded my PhD, the Center for Information Systems Research at MIT, and connected them and started talking about things that we could do together.

And they were interested in really understanding architecture, that it was a critical issue. It was occupying. The minds of of business leaders as well as CIOs everywhere, and I started doing the European side of the research, and they did the American side, and we found that there was really a set of crucial business issues around architecture.

And so we decided to write the book, Enterprise Architecture as Strategy, as a way of really helping enterprise architects talk about architecture from a business standpoint. In more than one company, we went in and we asked them, when was the last time your management team talked about architecture? And they said, well, does the security of Blackberries [00:04:00] count?

And that was it. Yeah, I mean, BlackBerry, of course, well known for pushing forward in an organization's enterprise strategy. When you look back at that period now, what are your big takeaways still from that book? Well, that architecture can prevent strategy. And often does, uh, that we found a lot of companies that just couldn't execute their strategy.

And because of that, they ended up firing their CIO when the issue was much deeper than that. Um, we also found companies that had managed their architecture very effectively. And they'd done that by including architecture transformation in every business project and said, you know, if you want to accomplish this business goal, you can do it in a way that puts us further behind and makes the next goal harder.

Or you can do it in a way that makes the next goal. easier. And there's really no cost difference in those projects, but let's do it the right way. And so they were able to make architecture transformation happen in a way that was really business [00:05:00] driven. Uh, so there was just enough architecture transformation.

to support the business initiative. And then we also put a framework around, you know, different architectures. How standardized do you want things to be across the organization? How integrated do you think, want things to be across the organization? And, uh, um, and where do you want to end up without a value judgment at all?

That's in some cases a very chaotic open architecture is the right thing for a diversified conglomerate to have. It doesn't always have to be whiteboard coherent. To actually have value, I think one of the things that I think AWS talk about sometimes is living with inefficiency, because actually some of the inefficiency can actually drive greater innovation and greater efficacy.

Absolutely. Yeah. And, um. My role really on the book was to help do the research, and I learned a tremendous amount from Peter Weil and Jeannie Ross, uh, who are really the drivers of the book. Um, but my unique, I think, contribution to the book was the pasta [00:06:00] theory of enterprise architecture. That, uh, we, you could see architectures as different types of pasta.

Right. That, um, many companies had just. Spaghetti architectures where things had grown up very organically, and it was a mess. And if you just, I think that's the one strand or you could say explosion in a spaghetti factory, but then if you're able to make the next transition, it would be to lasagna architecture where you'd have layers and you'd have some standardization of layers, but then maybe some mess within the layers.

But where a lot of companies wanted to get to was ravioli. Uh, which is more of a service oriented architecture. We'd have modules, um, that could be connected in different ways that could kind of slide around and in each of which of the perfect thoughtful. That's right. Yeah. And, and that, uh, yeah, then would give you the agility that you want.

It's a lot easier to eat ravioli than lasagna or spaghetti and that and that concept of the composable architectures. We've been chasing it for decades. And I think now with cloud, we're starting to get to a [00:07:00] point where assembled architectures to get Powerful results. Covid showed that you can do it now, and I think we've hit a maturity curve where actually they are achievable.

Whereas previously it took an awful lot of base engineering to get you to a position to make a component reusable, and now we're in a, in a much better place with cloud. So I think there's been this, it still stands true today as the way you should architect. It's just the technology has come to a point where you can actually do it quickly.

Yeah, it's caught up. It's caught up. Yeah, it's caught up, absolutely. And you need to do it that way. Yeah. Yeah. Because otherwise it's never going to work. You just don't get the pace either, do you? Nope. But I think that the core, one of the core issues that we identified in the book is still just as relevant as it always was, which was about governance, that if you don't have some kind of central organization that's thinking about this, and you don't always need authority, but you do need influence over the business decisions that happen.

And if you don't have that, um, then you end up with spaghetti. I mean, it's always going to happen that way if, if, uh, if it's not managed. So as fascinating as the subject of architecture and [00:08:00] governance are, and I know Rob, you're very passionate about, very passionate about both of those. How on earth do you get from looking at The what some might say the important, but you know, slightly dry side of of I.

T. and I. T. planning and taking things forward to looking at innovation at Lego. What's the bridge between those two things in your head? Well, a couple of things happened. Number one, I was teaching at I. M. D. the Swiss business school. And what I found in 2002 and 2003 was that nobody wanted to talk about I.

T. Right. We just come out of the crash and everybody was tired of hearing about, you know, the amount that we need to spend on that and so forth. I honestly think a lot of the rise of ERP in the, in the late nineties and early noughties, coupled with the millennium bug, lots of organizations just like enough.

You know, check out bang, bang. Absolutely. Yeah. Yeah. Uh, including Lego, by the way, but, uh, I, uh, I started really thinking about innovation and I [00:09:00] started thinking about it because number one, there was no demand to talk about architecture, but number two, it was a, uh, dispersed company wide. Effort that needed to be managed centrally, but wasn't always the responsibility of a central organization.

In fact, companies that think of innovation is happening in a central innovation unit often are not very good at innovation. Yeah, yeah, that mode of innovation of we've got a special room on the second floor and it's got grass on the wall. It's really helps you being creative. With all the post its you want.

Yeah, exactly. That's how innovation is driven. No, I see innovation as more like a... Blacksmiths forge most of the time. It's like you got to roll your sleeves up and it's a sweaty, difficult endeavor. And you've, you've got to push hard. And, you know, it's not a clinical or necessarily even super creative exercise a lot of the time.

Yeah. And if you don't manage it, then you end up with very [00:10:00] incremental innovation that, uh, a lot of processes and structure about innovation. I really. trailing indicators of innovation success. And what I mean by that is that we tend to innovate tomorrow the way we innovated yesterday. And, um, and that tends to lead us into commoditization of our products and services that we tend to organize and hire people and reward people for doing pretty much the same thing again and again and again.

But our competitors catch up with us. So I thought the idea of innovation governance was something that wasn't being talked about, and I just spent a lot of time thinking about, uh, architecture governance. And so I was going to write a traditional business book about innovation governance, and it would have, you know, each chapter was a different case study with a different point and piece of the framework.

And it comes to the thrilling conclusion in chapter seven, uh, bringing it all together. And so I started doing the research and I found some companies like a governance thriller. Oh, yeah. [00:11:00] Yeah. I see. We'll be on the edge of your seat.

But uh And, and, uh, you know, ING Direct I thought was a wonderful story. I, I did the chapter on Lego and I saw this company that were, was doing some really interesting things with innovation. They'd just come out of their brush with bankruptcy. We're now in about 2007 or eight and they'd really come out of it and we're starting to grow and we're doing some really.

Interesting things. And I did a case study on their turnaround and the executives I taught at IMD really seem to respond to it. And I realized that Lego let me say some really boring things in a really interesting and fun way, right? When you, when you talk about innovation, governance and roles and responsibilities and things like that, but you illustrate it with brightly colored toys and everybody remembers loving as a kid, then they're willing to it.

Stay with you. The notion of what that company does as a [00:12:00] living like is, is exciting and creative by definition, isn't it? So it's, there's a really good parallel between their product and innovation as a practice. Absolutely. Yes. And they've been very innovative, but also they've been innovative at different ways in the life of the company that they innovated one way for a while and that worked and then it stopped working.

They tried innovating another way and that almost put them out of business, but they learned something from that and they innovated in another way. And that worked tremendously well. And I ended up writing the book really is the hero myth, the Greek tragedy, you know, where the hero rises up. Okay. and then becomes complacent or arrogant, and then suffers a fall, but learns something from that fall and comes back stronger than ever.

And that's, that's the way I wrote the, the Brick by Brick, the book about Lego's turnaround. So maybe take us a little bit through that journey. So how does it start from the period you were looking at Lego initially, which was what, what was the start period that you looked at? Yeah. So I, [00:13:00] I mean, I wrote a chapter about the beginning from the thirties up through the seventies, but the, the story really starts in the late seventies when the grandson of the founder, a guy named Kilkirk, Chris Johnson takes over, he'd come back from his MBA at my old school IMD and really had all these ideas about how to professionalize Lego and they worked brilliantly.

Um, he, uh, he did a couple of things. Number one, he created separate business units for the separate companies. Audiences. So he created a different business unit for the toddlers, uh, that, that used Duplo and then the five to nine year olds had a business unit. And then the, uh, the older kids, the kind of nine to 16 year olds had a, had a different business unit.

And the, uh, the older kids, they introduced a new building system called technique that worked really well. Um, the main part of the company, they, they did something very important. They introduced the minifigure. It's an idea that had been exploring for a while, but the first real minifigures came out in 78.

And that changed the [00:14:00] play experience because it made it much more of a personalized play experience. Right. But it's that intense focus around the end user duplo versus technique versus normal, almost like analogous to a product based organization today. They are there to serve a consumer out. Come experience.

So they're experienced centric. So that creates huge success. So it's that relentless focus on who's going to be handling your product at the end. That sounds like it works so well. Yeah, and it was a start on a road down to from just a A story, you know, a situation. They introduced the first fantasy sets in 1978.

There was a space set and a castle set with, you know, good guys and bad guys and doing battle against evil. And, um, that launched them on a 15 year period of 14 percent annual growth. And it was really just making a better box of bricks, a new play theme. It came out with pirates and wild west and robots and things like that.

And, and that was, that worked for 15 years. They doubled in size every five years for 15 years. [00:15:00] And then the string ran out and you know, one of the things that, um, Lego shows is that no innovation lasts forever that competitors catch up. Um, in Lego's case, the patent ran out, the brick was patented in 58 and all of a sudden they had, uh, five years of no growth.

And that's when they really got themselves into trouble. Um, because Two years, we're now at the late 90s, 99, and two years before, 97, a Harvard Business School professor wrote the book, Clay Christensen wrote the book, An Innovator's Dilemma, about how disruptive technologies could change the fortunes of companies.

And what he, he used examples from digital photography and steel mills and disc drives and showed that digital technologies, uh, electronic technologies, disruptive technologies could initially seem not very good and be ignored by the company because they really only took away the lowest profit customers, but then [00:16:00] Technology changes a lot faster than customer needs and all of a sudden they're taking over the market and if you're Kodak, you're out of business and Lego became convinced in the late 90s that they were being disrupted.

And so they, um, they hired new people. They, um, invested tremendously in new types of play experiences. They changed their whole mission statement and they challenge people to reinvent the future of play. And that really started in the late 90s, and it led to Star Wars, right? It led to, in 1999, they went through a huge internal debate where some people were saying, over my dead body, will there ever be Lego Star Wars?

Yeah, like the licensing element of it, sort of thing. No. Licensing different brands. No, it wasn't that, although it was. I mean, it was new in the sense of it was the first time they'd really put a play theme around somebody else's story. But no, LEGO has this ethos, and it's very deeply held that they would not glorify modern warfare, right?

You'll never see a World War II LEGO set. And [00:17:00] so this idea that there would be a LEGO play theme with war in the title, right? was just, uh, I mean, for some people, it was personally offensive. Um, but people argue, well, wait a sec. We've had these castle sets with, you know, knights in shining armor battling evil, you know, for 20 years.

So, the shorthand for the debate was, is this G. I. Joe or Ivanhoe? Right. And the way they resolved it was they asked German moms. They, they said, we can't ask people for the United States because they're just too interested, you know, too comfortable with violence. Um, but if German moms say that Lego Star Wars is okay, then we'll offer it and German moms loved it.

And so they offered Star Wars and it actually was one of the reasons they almost went bankrupt in 2003 and I'll get to that in a second. But they came out with all kinds of new play experiences, digital, electronic, and I could go through them all. Some of them weren't very good. Uh, some of them were good, but [00:18:00] not very Lego y.

So they came out with some electronic toys for toddlers that were, I think, actually pretty good toys. But nobody believed that Lego could do it. Nobody wanted it from Lego. You know, the brand just didn't allow Lego to do some of these play experiences. And so they ended up getting a lot of their profits.

And by the way, one of the key things is that they did an ERP implementation that was a failure in 99. And so they lost all understanding of their product line profitability. Oh, wow. And so when things fell apart in 2003, they had gotten most of their profitability from two toys, Lego Star Wars and Lego Harry Potter.

And what they didn't understand, and because of their ERP implementation, was they, they, really didn't get data on was that most of their toys were unprofitable and that those toys Lego Star Wars and Lego Harry Potter were very dependent on the presence [00:19:00] of a movie that the demand was much less, much more cyclical than any other toy.

And so they didn't really understand the business that they gotten themselves into and they didn't understand how much it was dominating their profits. And so when. Um, there was a, a Lego Star Wars, sorry, there was a Star Wars movie in 99 in 2002. There was a Harry Potter movie in 2001 and 2002. There was no movie from either franchise in 2003 or the first half of 2004.

And so, uh, the sales from those two toys fell off a cliff. 94 percent of the other toys were unprofitable and the company almost went bankrupt. Right. What was the realization at that point and what were they doing specifically that pulled them out of that? Well, I think two things. Number one, they found that they had lost touch with their core customers, that their core customers wanted a creative construction experience and Lego had stopped offering that.

And many of those core customers were just personally offended. I mean, they really were angry [00:20:00] at Lego for offering some of these toys that It didn't have any kind of creative construction experience. But the other thing that they learned from their brush with bankruptcy came from a toy called Bionicle.

And Bionicle was new to the world in the sense that nobody had ever made a buildable action figure. I don't know if you know what it looks like. Yeah, I know. I remember them. I do remember them. Yeah, but it has a ball and socket joint. They're kind of not very accepted by the Lego world. But um, Uh, they, they really are the toy that saved Lego because Lego thought that it was being disrupted by digital play experiences, but Bionicle was hugely popular.

I mean, they sold 190 million of these buildable action figures over the nine year life of the toy. I mean, that's more than the population of Italy, Germany, and the UK combined. And without the, the sales and the profits from Bionicle, Lego would not be with us today. But what they found was that when kids played the Bionicle video games, when they watched the direct to DVD [00:21:00] movies, where they, you know, played with the digital.

Parts of the Bionicle toy line, they wanted more boxes of plastic pieces, not fewer. In other words, the digital didn't disrupt, it complimented. Yeah, yeah, yeah, absolutely. And that's been Lego's formula really ever since. That it found that if you want to tell a story through a box of bricks, then you've got to have other ways of telling that story.

Be it a TV show, be it a comic book, be it a... Uh, more recently, a movie or a physical play experience, you've got to find ways to tell that story. And you can tell those stories in very profitable ways outside of the box of bricks. And so it's this virtuous spiral where you get more and more people coming to your theme parks, more and more people buying the video games, more and more people going to the movies.

And every time they do that, they buy more and more of those boxes of bricks. So returning to. You're jumping in point to Lego then, which is an interest in innovation governance. You've just taken us on a very compelling journey of Lego over the last, [00:22:00] um, you know, thirty, forty years. What role was innovation playing in some of those pivots?

It sounded like some of them were intentional pull outs of difficult situations and others... You know, there was a circumstantial situation where they almost accidentally discovered certain things. How does the innovation thread wind through that in your mind? And this notion of innovation governance, when did that come in?

Yeah, you can summarize the different phases of Lego and this is an oversimplification, but it's, it's, it's very true that from 78 to 93, that 15 years of 14 percent annual growth, that was really a fairly incremental innovation period. They were just making a better box of bricks with a different play theme.

And so it's not out of the box in any sense. It's really inside the box, you know, literally and metaphorically inside the box. But then they hit the no growth period in the mid 90s. And they get caught up in this innovating outside the box. Let's reinvent the future of play. Let's, let's [00:23:00] really do something new and different.

Let's make something insanely great to you, Steve Jobs, this term. Um, and of course, innovating outside the box almost put them out of business. And what happened, uh, when they came back from that journey of innovating outside the box is that they'd forgotten the difference between sufficient and necessary.

Um, that they had realized that it wasn't sufficient to just offer a box of bricks, but it was necessary to offer a creative construction experience. In other words, when they went outside the box and left their core customers behind, basically they said, well, why, why should we buy an electronic toy from Lego?

Why should we buy, you know, all these other play experiences from Lego? We can get that better from Mattel and Hasbro and other companies. When they came back to that brick, to the brick, And started innovating around it, you know, telling stories through comic books, through events at the Lego store, through theme parks, through TV shows, through movies, etc.

That's when people came back to the [00:24:00] brand. And that's when sales took off. They had eight years of 24 percent annual sales growth, 36 percent annual profit growth from that new strategy. And so it isn't innovating inside the box, but it isn't innovating outside the box, it's innovating around the box. And to your question about governance, you govern those completely differently.

That if all you're doing is... An incrementally better version of your current product for current customers. That's very easy governance. Companies know how to do that quite well. If you're innovating outside the box, then of course, there's much less governance needed there. You're encouraging people to do really great things and you're funding them.

Lego was very lax in terms of its controls about, you know, is this a profitable toy or not, you know, let's experiment. Let's do something. Let's see what comes out of it. And Bionicle came out of that, you know, and it's tremendous success. But there was many, many more failures when you just challenge people to do great things and not worry about the cost.

When they came [00:25:00] back inside the box, the challenge was that it changed the role of the product manager pretty significantly. In fact, to call Legos product managers, that term, I think, is to understate what they do. Because they have to think about not just what is the product, but How are we going to promote this through events at the Lego store?

What kinds of things are we going to do online to support that? Total experience, isn't it? The whole thing about what is the total experience across all channels, all mediums, physical, virtual. What's the new ride at the Legoland theme park, etc.? I mean, you really have to think much more broadly. You're a solution integrator.

You're not a product manager. And that's a very different form of governance of the innovation process. How do they actually… organize around that with a, with a setting of like monthly innovation steering groups, like that were the practical mechanism of, of actually governing this stuff. Cause it seems also to me that.

The outside of the box innovation governance, though, you're right. You know, you want that to be [00:26:00] more freeing and you want it to be something where they're discovering new things. But actually, that's going to result in much bigger decisions for the organization. Yeah. And so, uh, they went through different, uh, it's a complex question to answer because depending on what year I'm talking about, I'd have a different answer for you.

But where they ended up was, um, they ended up creating. This thing called the innovation matrix, which I really like. You could also call it really the business canvas matrix and think about the matrix this way, that the different columns are actually different categories of if you're familiar with the business canvas, then, you know, that's very similar to their innovation categories.

Maybe just say a word on that for those who haven't heard of what the business canvases. Yeah, the business canvas is just a categorization of different types of innovation. Do you want to innovate in the. Product. Do you want to innovate in a complimentary service? Do you want to innovate in terms of how you communicate with your customers?

Do you want to innovate in terms of your business model? You know, how you make money? Do you give it [00:27:00] away and charge for a service or a freemium model, right? You can, do you want to innovate in terms of how you connect with your suppliers? Do you innovate, want to innovate in terms of how you communicate with them?

Not talk to your customers, but how you help your customers talk to you and talk to each other. And so it's just categories of innovation. And their categories are different than the business model canvas. But the, the frameworks have the same intellectual grandparents. And so it really is just a categorization of different types of innovation.

And on the vertical dimension is how incremental or radical it is. Um, so you could do something that you've done for the past five years, and you know how to do well, management doesn't really need to pay much attention to that. But if you could picture those of you familiar with the business model canvas, picture a different dimension, which is how new is this to the company?

How new is this to the world? Because as you get to the top part of that matrix, then you start to need more management support. You know, are you doing the right thing? Is this [00:28:00] working out or not? Should we kill this or go forward with it? And is there a ratio of where? A percentage of effort goes into each of those, so you want a few radical.

And maybe more in the traditional space, etc. Is there a balance to be struck there that you can sort of oversee that you're doing too much of one or not of the other? Is that a way to think about it? And Lego, of course, got that very wrong in that period between 99 and 2002. And so they're very sensitive to that.

Where they ended up going was they ended up reorganizing their innovation efforts around quadrants of the matrix. So things at the top were done in this, um, This innovation center where their challenge was obviously Lego, but never seen before. They'd had the traditional groups, you know, still split around, you know, very young kids, two to four, five to nine, nine to 16.

And then they had other support groups that would handle relations with partners. You know, for example, there's somebody out in LA who's just thinking about the [00:29:00] relationship with LucasArts, the people that own the intellectual property for Star Wars. And so they made. Organizational groups around the different parts, and that made it easy to form the governance organization, which would be the management group that would review the efforts of the different product managers to make sure that they had the resources they needed from the different parts of the organization to accomplish the goals that they signed up for.

Right. So they had their innovation tracks split as a result of that, of that matrix, and then govern the innovation tracks differently. That's right. Yes. And to, to the question about how much do they put? Well, they could just decide to fund different parts more or less, depending on the demand of the organization.

And they realized that they really did not ever want to lose that core of you know, let's make really great construction sets. So they had a sort of golden thread that runs through that. It's almost like the organizational purpose. They had a series of different innovation tracks running for the different types of [00:30:00] innovation they're doing.

Where did that all come together? Did they actually leave that coming together like at their board level or their exec, their ex co level? Or did they have a level below that that was like a head of innovation that was pulling all of those threads together? Well, I think the company was much smaller then.

And so they were able to have a couple of people at the board level who are just the management board level, not the not the board of directors level, who were able to really communicate this strategy that we are going to really think about what these kids want and build the stories that will really excite them and make them want to play in this world of Lego.

There was this one Amazing meaning that happened right as they were coming out of bankruptcy. So the worst of it was in 2003. In 2004, they really started on this architecture transformation, this enterprise architecture transformation, which we can talk about. But then in 2005, they, um, There's a guy named Jake McKee who took the [00:31:00] management, um, Yoren V.

Knudstorp, who was the CEO, and Kelker Christiansen, who is the chairman of the board, to a meeting in Washington, D. C., and they spent three days with passionate LEGO fans, and they got an earful. Um, and, you know, they came back and they said, you know, your customers will tell you what you can do with their brand.

And in particular, they heard a lot about quality, you know, they're really struggling. They're thinking, well, you know, there's all these competitors making Lego bricks that look like Lego snapped together with Lego for half the price or less. It's still true today. Should we make a cheaper brick? And their, their fan community said, no.

If you do that, we will leave, leave this brand. The other thing they learned was that they, you need that creative construction experience. And then the third thing they learned was related to the dark gray color, that the scandal of the dark gray, that they had done a, um, a supplier consolidation. They found that there was, it's because.[00:32:00]

During that experimentation period, anybody could go out and say, buy a different color resin from a different company and buy, you know, something else from another company. And they found that there was just too many different vendors out there. So they did a rationalization of the colors. But think if you were somebody who is starting in 1999, had Been investing thousands of frustrating dollars, euros or, or pounds in, in Lego per year.

And then all of a sudden the dark gray color changes, changes, and you can't combine your sets together. Don't exchange. Yeah. And so they learned the importance of consistency. Mm-hmm. , um, you, you go and you throw all the Lego on the floor and you build it, but it doesn't quite look right 'cause it's all different colors and Eagle D.

Piggledy. And it's, uh, it's, well, it can be frustrating. Yeah. You sound like, uh, you're scarred personally from that. Yeah, I'm with him. Yeah, yeah. And he's built the Millennium Falcon, which to me just does look like 10, 000 grey bricks. It's a fascinating thing to build that. It takes ages, but it is. You stand back, you build it.

It's the creative [00:33:00] experience. That's the bit I love. And then I never touched it again. All I wanted to do was that nine hours of build. And then that was me done. And this goes to the point, which is the core thing is I wanted to be the experience, the experience of building it didn't play with it. I mean, to that point of consistency, when you ever get a similar sort of kids set, not necessarily one of the ones that use this or Lego block, but any other type of kids set that comes with some building instructions.

And that's more like getting instructions on how to build a wardrobe, you know, like they're awful yet. Then you go to like Legos books and. building extremely complex things. Their instructions, which is, you know, often when you look at the end point of the Millennium Falcon, it's like a deeply detailed, quite giant thing that you've built, but actually each step of the way was so beautifully documented and so consistent in how it was documented that it gives you a buzz of experience.

Absolutely. Yeah. I mean, my favorite Lego kit of all time is the Aston Martin DB5. Just a [00:34:00] stunning piece of engineering. You don't realize that you could do that with Lego pieces. No, it is good. Yeah. I've, uh, I may well have built that myself. Uh, it's, it's good stuff. So looking at that, then in, in the book, Brick by Brick, you went through that journey and then you went on to write another book inspired by Lego called The Power of Little Ideas.

So what was it? From your first experience looking at the organization that inspired you enough to go on and dive a little deeper. Well, it was teaching this to executive groups and talking about it with a variety of different groups. And somebody said, well, okay, that's great. But, um, we don't have the luxury of a crisis.

I mean, luxury Lego had the luxury of being almost bankrupt, and it's it's hard to understate how close they were to bankruptcy, and that has a marvelous focusing ability and makes people willing to change. What if you're actually in a company that's relatively healthy, but sees that there's a possibility that this may be happening to you?

Yeah, maybe out in the medium [00:35:00] term. It's like when everyone's like, well, everything looks pretty good right now. So Why do we need to change? Sales are higher this year than they were the year before, but maybe a little less, you know, growth than before. And so, uh, the power of little ideas, the goal of that was to just answer the question, which somebody asked me in class one day, how do you do what Lego did in our company?

And, um, it, the, to summarize that book, the answer was to ask the question, where are you not going to innovate? It's kind of a counterintuitive question, but it's almost like, what is your brick? What is the thing that you did yesterday that you're going to do today that you're going to do tomorrow? What are the things that made your company great that your customers are depending on you to continue to do?

And Lego is lucky in that that's a very easy question to answer. But a lot of companies are much more diversified than that. And so you may have multiple answers to that question, but you do have that answers to the question. And then the second question is also not an innovation question. That's more, [00:36:00] what are your customers trying to do with your product?

It's familiar with the jobs to be done framework, if you're familiar with that. But it's, it's really asking the question, you know, why, what are they trying to accomplish? What is the, what else are they trying to do with your product and how can we help them with that? And then the Lego. Approached innovation this this around the box.

The third question is, well, what else could we do? And it may not be us, right? It may be that we're partnering with outside companies. It may be that we're we're investing in an acquisition But what else can we do to help customers get more value from our products and for lego? The answer to that was you know events at the lego store.

It was comic books. It was tv shows it became movies And then of course, uh, these theme parks and discovery centers, which led to, um, major acquisition by the company in 2019. [00:37:00]

Sjoukje, what you've been looking at this week? So each week I will do some research on what's trending in tech. And this week I want to focus on agile and IT architecture. So with the introduction of agile, the architecture profession changed enormously as well. Also, during the pandemic, organizations realized that their current architecture didn't work anymore and they really need to adapt to changes rapidly.

So instead of designing systems upfront, creating architectures and document them, there is now a need for just enough architecture. And there are a couple of pillars around that, that can help to implement architecture in an agile way. And these are. Just enough documentations and also just enough governance, but also make decisions just in time and break everything up in iteration size chunks.

So a question for you, David. How is Lego using architecture nowadays? And does this also connect [00:38:00] to Agile architecture? Well, so as the business has changed, uh, Lego has realized that it really, uh, Has a growth opportunity in physical experiences. So, uh, right near where we are in the Netherlands, up in Den Haag, there's a discovery center, which is an indoor playground.

And you can't get in as an adult unless you're accompanied by a child. Um, and you can't get out as a child unless you're accompanied by an adult. And inside is this Lego world. Uh, you know, there's climbing gyms, there's birthday rooms, there's movie theaters, there's little cars you can drive. And those, along with the theme parks, seem to be hugely popular and great ways of encouraging people to buy more LEGO.

And so that has created, LEGO acquired the company, Merlin Entertainments, in 2019. And of course, sales doubled. Tanked. They couldn't have timed that worse. Um, but that is their source of growth. But if you go to the Discovery Center in Den Haag [00:39:00] and you come out through the Lego store, well, then maybe you're a VIP from the Lego Discovery Center.

You go quite often with your kids, you have birthdays there, and then you buy something in the Lego store and you're a VIP in Lego and you're getting points for every time you buy these boxes of bricks. They don't know that you're the same person. And so this change in business strategy has created a change in architecture challenge.

And they're really struggling to, it's not so much agile, it's kind of getting a view of, an integrated view of the customer, that they really need that. And how are they actually getting after that then? So, if I understood that correctly, they've got physical environments, digital environments, physical products.

And what they're trying to do is use enterprise architecture to sort of stitch that together in a way that then they can see. Customer, and they know that it's a challenge. They're wrestling with that challenge. They're investing a tremendous amount in that challenge, I guess, with with [00:40:00] Capgemini. And I think that that strategy is still working itself out.

It's a classic though, when two complimentary business models come together to create something about a total experience. We've talked about inflexible, rigid architectures. Never the twain shall meet your data's locked in silos in weird formats and everything else. And I think what we need to think about here is again, going back to the composable architecture point, the freedom of data, the freedom to be able to access to the same data sets to create different views over the top.

How are you going to create that better experience for the individual? So they feel connected into both ecosystems. I think that's where architectural adaptation has to occur. Underpinned cloud, data lakes, etc. The ability to get hold of data as and when you need it. And then you don't have this horrible change process you need to go through to bring the traditional architectures out and connect the data sets and everything else together.

And it just feels like, yeah, there is a total experience to be had. But the time to do that. can be quite frustrating for an organization because it can be an 18 month plus type journey to get this new thing out that is [00:41:00] the two coming together and fused. I use Lego to teach agile development methods.

There's a really wonderful exercise you can do in just a couple minutes to show people how much more powerful agile development methods are. And that is I give out a little kit with six pieces in it. And I challenged everybody in the room to make a duck. But half the room I give one set of instructions, which is a more sequential development process.

And the other half I give a different set of instructions, which is a agile development process. So the first group, uh, they are told to, um, number one, the challenge is to make as many. different ducks, significantly different ducks is you can in just a few minutes. I usually use four minutes and the first group is told you have two minutes to design the ducks that you're going to build and, and write them down and then two minutes to build them and you have to build each duck.

And then you, once you're done, you can start to design and build others. The second group is told to design and build. So design, [00:42:00] build, design, build, design, build, and at the end, you can compare the best ducks and who has the most ducks and always the agile group does much better. And so it's just a wonderful way of showing how when you use an agile development process that you learn along the way.

In a really important, significant way, that is the key. You learn early and can adapt and adjust much faster. I think the thing that traditional architecture approaches had was they struggled to be able to work in that way. And over the last 20 years, we've seen architecture have to adapt to be able to learn, to be more agile, like.

And if you were to draw a little sort of 32nd picture of enterprise architecture of 20 years ago versus enterprise architecture in the cloud era, what are the key differences for you, Rob? When we exited the waterfall era, that worked very well with enterprise architecture and designed it all up front.

There was lots of governance control and everything else. Agile came in, threw the baby out with the bathwater and forgot [00:43:00] about thinking about architectural. principles, but just enough to be able to get the right answer. And that created a new type of technology debt. And now I think we see the rise of architecture coming back with the importance of strategic thinking and making sure that there's guidance and principles and direction that we want to think about, but it's not rigid, that we're so fixed that when we learn, we can't change that.

That's underpinned by more flexible technology. Let's not forget the power of the new ways of controlling data and using cloud to be more composable allows us to adapt much faster as well. So what we've seen is the rise in the fall and the rise of architecture coming out of it in a completely different way.

I mean, you can certainly see that, can't you? With the ever growing focus, not just in Lego, but like in many product organizations today on the customer experience and the joined up customer experience, how important it is to design around that. And of course that leads you to. multi platform architectures quite quickly, really, and the, and the need to pull that together.

So, I guess, David, the thing that I'm wondering about, having gone on the last 25 year [00:44:00] journey from writing Enterprise Architecture as Strategy back in the late 90s and early noughties, and now having looked at a number of organizations during which the technology landscape has changed, what are your reflections on Enterprise Architecture as Strategy and the work that you did and what, what new themes do you think you'd find in it if you were looking at that piece of work today?

I think that where I come back to is almost where I started, that architecture is just as much a preventer of strategy as it always has been, and just as much of a necessary exercise to do if you're going to execute your strategy, and you need to be thinking about it as you go forward. I mean, Lego right now has this huge architecture challenge, and it's going to need good governance to make it happen.

And if it doesn't, it you. If it doesn't do this well, it's not going to achieve the growth goals that it has for itself. So I almost come back to where I started 20 years ago. And what a, what a [00:45:00] good place to end the conversation for today. So thank you very much for spending the time and sharing your insights with us this afternoon.

It's somewhere on the outskirts of Amsterdam. Random outskirts of Amsterdam I think are best described as. Well, thanks for very much for having me. It's been a pleasure. It really has. And we end every episode of this show by, um, asking our guests what they're excited about doing next. And that can be anything from a great restaurant booked at the weekend, all the way through to something you're excited about in your professional life.

So, David, what are you excited about doing next? Well, I was excited about something, but now you've ruined it. Not on purpose. Well done, Dave. Again. Again. Again. Oh, is this a theme? Yeah, Dave ruins everything, that's the... No, I was, uh, I am working on, uh, the next version of the Lego book. I think where they're going now is just as interesting, if not more interesting than the book I wrote, uh, ten years ago.

Um, but now you're making me think that, uh, uh, [00:46:00] More interesting book to rewrite would be Enterprise Architecture as Strategy, that really what's happened technologically as well as organizationally and strategically, it makes that book just as important now as it was then and significantly different now.

Yeah, I think the world is a world's a different place and technology is a different place. It's got a lot better as well. So you can do so much more. So yeah. Yeah, so thanks for nothing, Dave. But we will look forward to volume two of Enterprise Architecture Strategy. Yes, I will definitely read it when it comes out.

Son of Enterprise Architecture.

So a huge thanks to our guests this week. David, thank you so much for being on the show. Thanks to our producer Marcel, our sound and editing wizards, Ben and Louis, 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 week [00:47:00]

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