

Special Edition | Technology reimagined: where do we go next?

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JOHN COTTERELL (JC): Hi. Welcome to this special edition of Tech Reimagined. I'm John Cotterell, the CEO of Endava, and for one special episode your host on Tech Reimagined. Joining me is JT Batson, the Co-founder and CEO at Hudson MX, and Larry Lorden, Co-founder, CTO at Illio.

So, in Part 1 we took a look back at the significant changes that we've seen around technology, and today we're going to make some predictions about the future. So, here we go. What are some emerging technologies that people should keep an eye out for, and how will this impact your industry? Let's start with JT.

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JT BATSON (JTB): You would think that the start-up person is supposed to be the grand visionary around where technology is headed, but we tend to be so focussed on what's right in front of us. But in the advertising industry I think the big change going on is what the future of identity will be.

So, the cookie has been the big driver of identity for advertising for the past 15 years, and many large companies built off of that from a foundational technology, and it's certainly the foundation of most digital advertising strategies of any scale. And that's all being upended by privacy laws and changes by the big platforms, and so you're seeing lots of new companies formed and lots of big tectonic moves going on right now around who's going to control and what's going to power the future of identity on the web and the associated advertising?

That I think is something that would be really exciting to watch and what's cool about it is, it is both a technical challenge and a business or marketplace or ecosystem challenge. I love when those things converge, because you really get to see technologists and businesspeople at their best when they have to figure that out at the same time.

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JC: Yes. Interesting one, because it's probably going to get handled in completely different ways in different parts of the world as well.

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JTB: Correct.

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JC: Yes. Larry, any emerging technologies that you think we should be watching?

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LARRY LORDEN (LL): Yes. I think the gaming industry is always a little bit ahead of the curve in a lot of areas, and one of the things obviously that's been huge for a long time now, but is getting even slicker and better, is collaboration online. And I think some of the things that we're seeing in gaming we'll start to see in the world of software development. So, collaboration tools like Zoom, Slack, Teams, etc. they're all well and good, but I think we'll start to see more purpose-built collaboration tools coming into things like IDEs, and you'll start to see AI play in there as well.

So, you'll start to collaborate more on projects with people directly from the IDE, I think, and including AI, and I wouldn't be surprised to see if you've got small modules of functionality that you want to

build to be able to almost say, “Right. We’re going to create a mission to create this and I need to find a Level 8 React developer, and I need to find a, blah, this type of tester.” And you can kind of go on a mission together, even if you’ve never met the people, collaborate, have the AI check various bits and pieces, be like a little assistant for you, etc.

And I think you’ll start to see software development done in a really flexible way that hasn’t been done before. If you think about it, people can team up online and they go on a mission together, I don’t see why you couldn’t do that professionally. I think it’s a little bit further out, but I think that’s got so many attractions to it in being able to get the best talent for a particular problem that really needs it and just do that almost on tap, I think. So, I think collaboration tools and the way that people collaborate on projects will become quite different.

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JC: Yes, almost certainly one of those areas where the long-term impact’s going to be much deeper than what we imagine at the moment. So, for me the technology that I get excited about is autonomous vehicles. I think you can see the steppingstones for that. Things like Uber and drone deliveries and so on will slowly build momentum, but then the impact of truly autonomous vehicles is going to blow those changes out the water.

[00:04:50] You can imagine, we only need to build 20% of the cars that we’ve had before, because they don’t need to park up and the driving professions are going to change, distribution and the way in which things are distributed will be completely changed, there’ll be new monetization models, electric as opposed to internal combustion becomes truly affordable and so on. Now that’s probably a 20- or 30-year cycle to get there, but when you think of the depth of change that’s going to drive across society, I think it’s one of those big ones that’s going to come through.

As we look at these technologies that are developing and changing society in some of the ways that you’ve both touched on as well, what do you think some of the things that we need to, as societies, as technologists, take into account as we develop some of those maybe human identity with AI type issues, sustainability and so on? Are there any things that are sitting high on your list of things we need to be worrying about?

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LL: I think for me as somebody with teenage kids, I would say digital competency versus analogue real-world competency. So, not necessarily talking about my kids in particular, but kids now they’ll talk to their friends, they’ll play games with friends and they can do everything remotely, right? So, they’re doing school remotely at the moment. My daughter is because somebody she was in contact with had COVID.

And so there’s a danger that the speed that kids grow up in the digital world far exceeds the speed with which they experience and can grow up in the physical world. So, they become incredibly competent digitally at the expense of becoming competent outside of the digital realm. And then because they’re very competent, they get more comfortable, it becomes more attractive to spend more time in the digital world, etc.

And so I think you’re going to get this – if we’re not careful we’ll get a generation who are super-competent online and not really able to do things that we’ve almost taken for granted to be able to do otherwise. And then you’ve got the reverse situation where you’ve got a generation who are not at all familiar with digital tools and things like that, often a more elderly generation or maybe a generation that don’t have – or people who don’t have access to the technology, and they risk getting left behind by not having access to it.

And so you've got a situation where you've got some people with no kind of real-world experience, and other people who are left behind because they don't have the digital experience. So, we've got to try and figure out, I think, how we can bridge those gaps. We've also just seen in the American elections the polarising effect of the feedback loops as well. So, when people are online all the time and the algorithms are kind of sharing with them more of the things that they've liked, and so they only see more of those sorts of things. We've got to figure out how to deal with that as well so that we don't end up with a very polarised society.

So, that's, I think, the danger of digital, is that it accentuates people's natural biases towards the things that they're comfortable with, whether that is spending time online or whether it is a particular viewpoint, and we have to figure out how we actually help people navigate that.

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JC: JT, any thoughts on this?

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JTB: So, I graduated college in 2005. Google had just recently gone public and Facebook had a year or two before just opened their office across the street from campus in Downtown Palo Alto. And so many of my friends joined those companies and/or started their own companies, which became very well-known famous digital companies that we all interact with on a fairly regular basis, if not a million times a day. And very much the ethos in Silicon Valley then was around, "Our work changes the world, and we're the white knights of business. We're out making the world a better place." Whereas the folks in New York City and London, were I'm in New York City and Silicon Valley in that time, were folks who did want to do cool things and build software or build technologies that made the world a better place.

And I think the challenge has happened in that as those companies have gotten more and more powerful, and in certain instances incredibly powerful, which both of you just referenced, the self-reflection and the introspection corporately and individually around the responsibility that these companies now have and the decisions they do or don't make have material impact on the world, on people, on lives, on health, on safety.

And I think there's still that undercurrent from a large swath of people that are in very senior leadership roles in Silicon Valley where when they started they viewed themselves as the good guys, and they did not set out to try to necessarily get rich. They didn't necessarily set out to be these corporate titans of industry. They wanted to build cool things, and they've struggled really embracing the responsibility that comes with that, and we're all in some way, shape or form paying for it.

And that can have lots of different applications in terms of where it's relevant. But I live it, I saw it, I know a lot of these folks, and while they are very often very good, smart, caring people, it's something that as an ecosystem in industry we have to tackle.

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JC: Yes. I mean, you see that with the Google strapline, don't you? The 'Do No Evil.'

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JTB: Absolutely.

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JC: And suddenly they're tied up in all sorts of webs that they didn't intend to get into, and they didn't – it wasn't deliberate that they ended up with all this complexity hitting them, but their responsibility has hit a level where they're going to have to work through it and tackle it.

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JTB: Correct, and I think the way you described it there is spot on. I think by virtue of their success they ended up in the middle of things that they never in a million years thought they'd be in the middle of. And at a basic level, if you take Facebook or Google – you know, Facebook connecting more people and getting more people connected and they built it to share more information. That's a good thing. Freer access to information is good. So, you can paper over all sorts of other problems by sort of having that as your headline, but it turns out there's a little more to it than that, and that's something that none of them have perfectly grappled with yet.

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JC: Yes.

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LL: I think it's partly a symptom of just the rate of change of things. The technology can accelerate things so fast that our ability to actually see that many steps ahead and see the impact it's going to have is pretty much impossible. You can't guess at what's going to happen, and we're seeing that, I think, in almost every area, whether that is things like materials, technologies. You know, you've got these things like wonder materials like plastic that was this amazing thing and now is a real problem, because you just can't see that far ahead and see the problems that these things will be causing.

And the thing is, as we're able to generate new ideas, and new materials, new software at a faster and faster rate, our ability to predict the impact those things will have, we still won't be able to understand the impact they will have, and then some of those are going to cause quite big problems I think. And I have no idea how we will go about solving for that.

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JC: Yes. So, as you guys are doing your jobs day to day and so on and looking at – JT, you mentioned that you get very, very focussed on the here and now and what you need to deliver to move the business through to that next step. I was just wondering, how do you guys stay up to date with the sort of trends and technologies? Do you have any places that you go for that?

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JTB: I would say for me it's some combination of Twitter, plus a handful of friends and former colleagues who are off doing interesting things, usually outside of the narrow world I play in day to day, and probing them on what they're up to. I would say those are probably the two informal ways that – you know, obviously read the news and as much business press and technology press as you can, but I'd say probably the two most useful things are a subset of people on Twitter who I follow, and probing friends and former colleagues who are off doing interesting things.

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JC: Great, and Larry?

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LL: Yes. For me, I agree with the people side of it. We've got a great team at Illio and they are going to online conferences, various other things, and we share lots of information in our social

channels as it were, so I can see what's going on that they're involved with or interested in. Podcasts. There's some really good podcasts out there that I highly recommend. The Postlight one is good. A16Z, Exponent, Twenty Minute CV, those are good ones. I still manage a bit of time in the evenings to do a bit of reading. So, I still manage to read a bit. So, I'd say, yes, those are my go-to places for finding ideas.

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JC: Do you still manage to get to the podcasts? I know you used to do it while you were in the car heading to work. Now that that's not happening are you still getting to them?

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LL: Yes. Not as much now. Not as much. So, now I might go out for a walk just by myself for a while and listen to a podcast, or maybe it's mowing the lawn or doing some kind of chore or job around the house.

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JTB: Yes, that was the point I was just going to make when you talked about podcasts. It's like, wow, I went from religiously listening to a handful of ones every day. I was trying to think of the last time that I've actually listened with any regularity, and it's probably March which is wild given how that was a key part of my media diet on a daily basis.

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LL: Yes. I actually found myself in the summer actually wanting to mow the lawn so I could put the headphones on and catch up with some podcasts.

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JTB: I think parents everywhere listen to that advice, and encourage your children to listen to podcasts as an incentive for them to want to mow the lawn.

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JC: Yes. So, as we're looking forward a bit, what types of technology would each of you like to see developed over the next ten years or so? JT, any thoughts?

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JTB: Sure. You know, I believe there is a dearth of technology and software focussed on local and regional governments enabling them to provide better and more efficient services to citizens, and the sort of structures, at least in the United States, how software is procured creates all sorts of screwy misalignment which leads to less than ideal experiences for citizens in a way.

And a recent example of where this materially hurt millions and millions of Americans was during the first wave of shutdowns in the COVID era. You had all sorts of people going on unemployment benefits, and a lot of the unemployment systems in the US, which are run by each State, each State does their own unemployment programme, were legacy mainframe systems where they didn't have enough engineers to work on those systems to keep them up and going.

And millions of people had delays in getting their unemployment benefits, which was literally the difference between putting food on the table and keeping a roof over their head. And so that's obviously an extreme example, but it's one that certainly brings to life the opportunity for technology and innovation to come to that sector of our life.

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JC: Have you encountered what they're doing in Estonia at all?

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JTB: I have not. What are they doing?

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JC: Yes, so it's interesting. So, Estonia somehow as a government have tackled the technology question in its full breadth in a way that almost hasn't happened in any other part of the world, and I think we're all going to be beating a path over there to try and work out how they've done it from a government point of view.

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JTB: That's great.

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JC: Everything, from being able to set up a new company in minutes to from anywhere in the world you can establish a corporate entity in Estonia, but go through the proper processes, because they've made it digital.

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JTB: Our challenge here in the States is, one of our historic benefits as a country is we're sort of a laboratory of democracy and you've got thousands and thousands and thousands of different jurisdictions who set their own rules and make their own decisions and so you get the innovation from people being able to experiment. But as we know from a technology standpoint, massive fragmentation makes it really hard to invest in technology, and so a feature for a large part of our experiment as a democracy is absolutely a material bug when it relates to how to solve digitising government. So, I'm certainly going to do some research on Estonia. I appreciate you flagging that.

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JC: Yes. Larry, have you got an area?

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LL: I would love to see some innovation around eco tech, just because I think the whole COVID thing and what's going on just with ecology generally, Greta Thunberg and all that sort of stuff, has made me and probably lots of other, obviously lots of other people realise that we need to take a bit more of a responsible attitude to what we consume and what we throw away. So, I'd love to see some more innovation around that. Not just in helping us consume the same amount that we are, but just helping people consume less maybe, make things more repairable, etc. I think we have to solve that problem.

And another one that I think is going to happen that will benefit everyone is more of a personalised medicine. So, we've seen the price of gene sequencing come down from probably hundreds of thousands of dollars to a thousand dollars, or whatever, and I think the ability for people to benefit from having properly personalised treatment is something that will probably happen in the next ten years, but could bring huge benefits. So, I'd love to see some progress in that space.

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JC: Actually, for me in this space it's something around what you were touching on earlier JT, which is around identity. You know, how to safely and without impairing people's freedom, give

unique identifiers to people enabling better online activity basically, because you know who you're dealing with. And if we can crack it, it would transform the safety of the online world, not just payments and commerce but also all of those things around false news and everything because it would be clearer where it had all come from. But the challenge, of course, is how you do that while avoiding the sort of Brave New World or Minority Report type traps, and if we can all make significant progress with that over the next ten years I think it would be transformative to online safety and online activity.

So, technology is one part of the puzzle, and I think we've touched on this quite a bit as we've been looking ahead. I'm just wondering what you guys think about what the people skills are that you think the next generation of leaders is going to need, and why?

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LL: For me, I kind of mentioned it a little bit in Part 1, but I think management and motivation of remote teams is going to become critical. So, how you make people feel seen and valued when you might never have met them in the flesh, right? How do you make more of a transactional relationship with team members who are remote that you don't necessarily get to see that often? We're seeing more and more companies now announce that they've got permanent work from home policies and things like that. And there'll be some companies who will still want offices and get people together, and I think that will be a tremendous opportunity to collaborate.

But I think if you want to get the best talent globally and you want to increase the size of your catchment for the talent, then you'll have to figure out how do you recruit, incentivise, reward people when you just don't physically see them. So, I think that's going to be a new skill that people will have to get to grips with. I think HR departments will need to definitely upskill to be able to help people figure that one out, and it's going to take probably some new – you know, there's probably some new businesses in there for people helping companies figure this stuff out as well.

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JC: Yes, it's going to be an interesting area. JT?

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JTB: Yes. I don't know that this is a new thing, but I think it is an area where I'm constantly stunned at the lack of it as I interact with different businesses in leadership, and that's empathy and having that flow through all aspects of how you operate. And whether it's thinking through parental leave programmes, or whether it's thinking through remote work programmes, or whether it's thinking through training, how you communicate, how you compensate. All sorts of things, how you interact with your customers, all of these that sort of can flow through so much, and something that historically companies conceivable could get away with not having that be a core leadership value. And I feel like more and more that's going to bite organisations in the rear, and something that I think is going to be super-important for us all as we go forward.

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JC: Yes. And of course quite a lot of that we've seen starting to play out over the last year. There's no doubt with this pandemic that technology has enabled people to reimagine how they live and work, but guys what's one positive impact of technology that you've taken from the last six months? JT?

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JTB: The speed with which vaccines have been developed for COVID, it is truly remarkable and something that I hope that we can learn from what worked well with that in the collective focus and apply that to other big problems we have.

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JC: It's interesting, isn't it? If you imagine that this pandemic had hit ten years earlier, and the maturity of both of those technologies being very, very much below where it is today, how much harder it would have been for us as a world to have coped with this pandemic. It's just interesting how short that timeframe is over which we've been able to have in place the technology to make an impact on it. Larry, any positives for you out of the technology?

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LL: Again, we went from an office to working from home, and literally didn't miss a beat, and I think for most of us, and certainly me, I don't really miss the commute I have to say. I miss not listening to podcasts, but the commute itself I'm really not missing. That's definitely been a positive for me. And the fact that we can work remotely and still have a laugh online, still have a good interaction with the team online has been really, really encouraging.

And then just at a personal level, I'm quite a big board gamer and I've been playing quite regularly on Board Game Arena with some old school friends, and I'm actually interacting with my friends now. You know, these are people I went to school with a long time ago and we're seeing more of each other now than we have in any time since we were last at school together just because the technology has enabled us to easily catch up. And we can do things that we would do if we were physically meeting, but we can do them online. So, that's been great. I'm still looking forward to actually meeting up with them properly, but in the meantime that's been a really good way to keep up friendships and things.

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JC: OK. So, just to finish something with a bit of a fun twist both of you. So, what science fiction technology do you most wish we had working today? JT?

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JTB: On the monitor in the office where I am right now is actually a cartoon of flying cars. It's rotating through, so it must have known you were going to ask that question. I don't know what the specific technology is, but I sure would love to be able to get other places faster and easier than it is today, both for personal and for business reasons. So, whoever could make that happen, I will be forever grateful.

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JC: A sort of "Beam me up Scottie," teleportation thing.

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JTB: Exactly, exactly.

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JC: And can I just be on a deserted beach for a few hours and pop back.

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LL: Exactly. That's exactly it. The teleporter would be mine as well for that very reason.



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JC: Yes, especially in COVID times, that's just a winner isn't it?

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JTB: Yes please.

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LL: It really is, yes.

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JC: OK. So, unfortunately that's all we've got time for today, but thank you Larry and JT for sharing some fascinating insights about the future of technology. I hope that you've all enjoyed this special edition of our podcast and if you haven't already, don't forget to subscribe so that you can get all the latest episodes as soon as they're released.

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