Capgemini invent

FUTURE SIGHT PODCAST

Ep.16: Can automation protect jobs?

Episode Transcript

Liz Lugnier: This is Future Sight, a show from Capgemini Invent. I'm Liz Lugnier. On this show, we explore new ways for you to adapt and grow for the future in business. This week, we're bringing you a deep dive into automation within the workforce. We'll be exploring the strategies to upskill your workforce, to help them make better decisions by using the tools of the future.

We'll also look at how automation might actually have a role in protecting jobs rather than taking them away. Joining me on the show today, I have Michael.

Michael Priddis: Hi, my name is Michael and I am the founder and CEO of Faethm.

Liz Lugnier: And returning to the show – Claudia.

Claudia Crummenerl: Hi, my name is Claudia. I am responsible for Capgemini Invent Workforce & Organization.

Liz Lugnier: Firstly, please explain to us what the impact of automation has been on the workforce in general, during the past 50 years.

Claudia: I think what we can see is, especially in the last year that technology influences work and the way we do work and it influences specific tasks and how we execute them. And I think since, I don't know, the 1800s, it has helped us to be more productive and to free up time for more valuable tasks as humans.

In essence, I think we can say technology has influenced how we work, how we live and how we want to lead our lives in the future.

Michael: It's interesting, in just the last 50 years—I think mankind has been automating since the wheel—what's happening in the last 30, 40 years is that with the advent of computing is the key driver for automation, the speed of automation and the effects of automation have become much more pronounced.

Many of us will remember back about 10 years or so when the media was full of stories about chess boards and Moore's law, and what has become known now is the exponential change in technology's impact on jobs, and the effect of automation around the world we're starting to see, really ramp up.

But when you said the last 50 years, really, that goes back to the last industrial revolution. The different industrial revolutions have used different types of technology to power automation. Initially it was coal and steam, and then it was electrical in the second industrial revolution. The third industrial revolution is really about computing and the fourth industrial revolution where we are today is about network computing, intelligence, and artificial intelligence particularly.

What we're seeing is not just a steady state, progressive automation, we really start to see a kind of a ramp. People talk about exponential change in tech, it is a fairly kind of general term, but really, we are seeing very pronounced effects in technology. And it's easy to kind of pick on particular examples, but one of them that's quite new is the story of a company called UIPath.

UIPath is one of the world's robotic process automation companies, they use AI, arrange different types of AI actually, but they package all of that into a product and a platform around process automation. In 2015, UIPath had 20 staff. Last month, they listed on the New York stock exchange on a valuation at 37 billion.

And that's probably a pretty clear example as to what's been happening, not as much the last 50, but the last 5 years. We really start to see that all around. These technologies are really starting to have an effect. And one of the big problems that they give us all is this idea of future of work. This is not a future problem. This is the challenge facing everybody today.

Claudia: To even build on that, what I felt in the last year through the pandemic, this has even accelerated. What we've seen in terms of speed, and maybe also in terms of acceptance, I guess, is that automation and technology have to play a role in how we work and how we live, has even more so accelerated. And the need for technology to keep us safe and to make sure we're still able to work is a widely accepted notion. I would assume the speed is even accelerating more than in the last four years or five years that you're talking about Michael.

Michael: We've been seeing for the last year or so, that COVID has been a slingshot to 2023. Firms got clients in 21 industries in 26 different countries.

And if you're going back to 2019, we were seeing many of those companies start experiments with new technologies. They put robotic process automation into finance. They might have put robots in their warehouses and started looking at autonomous vehicles in mines or manufacturing sites. Many of those companies have been experimenting with these technologies since 2019, when COVID came along, they really started scaling those technologies.

They really needed to no longer just trial the effect. They needed to keep their people safe, but they also needed to keep their companies going and sustainable. We've seen that COVID do two things as far as automation goes. Number one is drive demand for technology. And number two is to use that technology to try and keep people safe to augment them, not just to automate.

Liz Lugnier: Have you seen benefits for both companies in the workforce from an automation perspective because of COVID-19, have there been any negative impacts as well?

Michael: On the negative side, to start with that first, one of the things that I'm reading more and more about is loneliness. And I think loneliness is the kind of extreme example of people isolated to the extent that they're missing that human contact. The kind of less bad but still not great example is the impact on things like collaboration and information sharing, the impact on culture.

From my own perspective, running a company that is growing very quickly means that I haven't met many of my colleagues. On the flip side, we hear a lot about liberation, a lot about freedom or a lot about choice. We hear a lot about people that are experiencing a new type of work. One of the big things that we realized is that we did a big study on diversity and inclusion in the US, we just did on the US market.

One of the things that a lot of our clients were saying is that people who might not have had a voice in a meeting, now do. We have had more positive experiences with technology and the way the tech has positively affected things. And then I think as well, this speeding up of technology has led to the augmentation of many people.

It's not an automation story really, but the augmentation of people. And that's a good news story. It's not about mass job loss, about universal basic income, about what we're going to do with all these millions of people with nothing to do. It's all about how we train people, give people the skills that they need to use these technologies to be augmented and to drive the levels of capacity and productivity.

The much more nuanced stories than the media have led us to believe.

Liz Lugnier: Well, you're talking about burnout. So how can automation help with burnout?

Claudia: Yeah, I think it's interesting. What, for example, Microsoft already does in terms of adjustments to teams to help you manage the switch between private and work life, and also allows you to regulate when you receive messages and how you organize your day.

I think, technology companies already are on the way to help ease that stress. I do think it's not just the technology topic as such. It's a cultural and a leadership topic more so because the pressure felt, to contribute and to perform, doesn't come from sitting in front of a computer. It's more of an emotional topic.

Liz Lugnier: We've talked about the impact of COVID on automation and the workforce, but have any specific sectors witnessed a heavy impact regarding automation? Anything in particular that comes to mind?

Michael: Basically, every sector is doing something with emerging technology and automation. It just looks different and it's differently obvious.

Any service-based major company, banks, telecoms, retail side, they are all spending a lot of money on process automation. It could be programmed intelligence. It could be artificial intelligence, which is to say attended or unattended robots. But these are software robots that are embedded in processes to expedite, automate, facilitate information flow across the organization.

But on the other end of the scale mining companies are all about autonomous vehicles. I've been there in the mines and I've seen those first autonomous vehicles, 400 ton coal trucks driving around on their own. The characteristic though that all companies, regardless of industry, have in common, is that automation, at the moment, is almost exclusively on internal and fully controlled environments. There are very few companies right now that want to automate anything that's customer relationship. Customers are all important customers, a source of revenue or reputation. You get it wrong, you don't get them back very easily.

Claudia: And I think that's the big difference from a couple of years ago. We started some of the digital transformation work with a recent piece of research with the MIT. And in the beginning, you could see big gaps of industries investing into technology and where, especially consumer products and so forth. But I absolutely agree that today, there is no industry that doesn't look at automation and AI and how to make work more effective and how to reduce simple routine tasks through automation.

Michael: One of the industries that we're seeing a lot happening, is government. Governments in many countries now have one of the most active sectors when it comes to using technology to augment, using technology to automate, then to lift the customer experience they provide on, if the sophistication of what they're doing, the government is shot to the front much more so than it was just a couple of years ago.

Liz Lugnier: You're talking about how automation is coming to a lot of different places. And you're talking about how you're augmenting a lot of jobs. What would you say that the biggest jobs that are at risk of going away or what jobs do you see evolving or being augmented the most, when it comes to automation in the next few decades?

Michael: Anything to do with routine processes to any job involved in routine is counted for automation. That could be any type of clerical and administrative role, basic research roles, and lots to do with a kind of calculation processing, reporting compliance.

Any of these sorts of roles are just candidates for automation. You tend to point automation activities at high volume routine activities, but it doesn't follow that the automation of the task or the process leads to the automation of the job.

Claudia: And I think you, you mentioned it, Michael, it's two different things.

The possibility that the technology allows us to do, and then the decision an organization is also taking on whether there are automating those tasks and what they will do with the people and how they will recombine the tasks that remain to positions or new jobs or different jobs or augmented jobs.

I think the conversation in the media is very frightening and creates a lot of anxiety with workers. But we forget it's a decision as well, how much you invest in technology, how much you want to really work on that bottom line, which is an organizational decision. And then it also needs to entail the people decision that you mentioned.

Michael: Yeah. The values have changed in the last 18 months as a result of COVID. And that has changed the way that a lot of companies view their responsibility to their employees. And one of the things that we're seeing is a renewed emphasis on where do we reskill? Where do we upskill? How do we transition people?

And what are those jobs of the future so that we can make sure that people have a pathway to those future jobs. The CEO of Woolworth's, which is Australia's largest employer wrote a newspaper article in the national media here in February. The headline of which is “No one left behind: my vision for the future of work at Woolworth's”. On the same day, they announced a $50 million fund to spend on reskilling and upskilling all of their staff.

But they're spending a lot of money on automation in the warehouses, in the stores, in the head office. They're automating, but they're investing in learning and development and to quote the CEO “No one is left behind”. That's not a headline that I think we would have seen two years ago.

Liz Lugnier: Let’s talk a little bit about how we can shape the workforce for the future. How can we implement new strategies to predict future trends and automation?

Claudia: When I look at some of the conversations we had, I don't know when we started our conversation a couple of years ago. I think that the very big focus wasn't trying to quantify that impact and launch first ideas, first pilots.

I think we now moved into a phase where you just mentioned Michael, the Woolworth example. I think organizations are ready to scale these initiatives and they have tested and piloted some of it. And now they're investing more into learning infrastructure and how they upskill and reskill their organization.

They invest into new ways of recruiting. I mean, the last year has shown us that skills can be deployed from anywhere to anywhere because of technology. They're looking for new talents and where they can get the best talents. What was before maybe a conversation around outplacement or helping them find another job is how we can really shape the workforce in our ecosystem to make sure that the employees still have a job. For me, an example is during COVID in Germany, they popped up lots of sharing ideas of the workforce. Some of the

workers that weren't needed in one company anymore, they were deployed in another to make sure that they had employment.

Liz Lugnier: Coming back to the question, why is it so important for us to think further ahead and be ahead of the curve than to be reactive on this topic?

Michael: There was a really solid, reliable, dependable strategy that companies used to talk about a lot, which is being a fast follower. And even the biggest companies in the world who would quite often say, well, we're not going to be leading edge.

We're going to be leading edge. We will be fast forwards. There's a really big problem with that in today's world, which is that, on an exponential curve, even if you're a fast follower, it means that somebody else has started. And because they're moving exponentially. Even if you're moving, they're moving faster.

It's no longer a good idea to wait and see what your competitors do because you'd miss all of the experiments or the hidden learnings, all of the trials and error benefits that they get from innovating internally. You wait until they produce something that you can see. I mean, you try and follow but they're pulling ahead.

And in an exponential era, which is what we're in, being a fast follower, just guarantees that you're going to become a smaller dog in the rear-view mirror of the companies that are leading. And we're seeing that around the world. When we see the kind of spikes in industry investment, quickly followed by, you know, the whole startup ecosystems, and then the way that national economies change, you can't afford to wait in that type of world.

Claudia: We did a study on the maturity of organization, and then we can see exactly the effect you described. Before, when we did the digital maturity research, there were different types of organizations, different clusters. In 2020, there were two, there were the ones that were moving ahead and that are progressing.

And there were the other ones that are kind of having a hard time to follow. The gap between the ones that are experimenting with technology and moving ahead is getting bigger and bigger. We can see that in the research we did last year as well.

Liz Lugnier: This sounds like a path that you're both very passionate about, but Michael, in particular, I know that you have your company Faethm. Can you tell us a little bit about it? Why did you found it? What was your motivation? What kind of insights does it give to the future of automation in the workforce?

Michael: I used to be a partner with the Boston Consulting Group, and I just started to see a pattern going back to about 2010, which is that mostly in these large enterprises, HR back then was a fulfillment center.

It didn't have a seat at this kind of strategy table. It wasn't driving strategy. It was responding to strategy. It was being driven really by marketing technology. And the problem that I started to see was that, you know, these technologies, these, these products, these businesses that we were building, we've been engaged to build this disruptive product. But I could see that it was going to be disruptive inside the organizations. And, it led to me suggesting that we build a data platform to help companies and governments around the world, to understand and to manage and navigate what has become known as the fourth industrial revolution. And we set Faethm up in 2016.

We spent 18 months building the first version of the platform, really to help companies to understand the true and actual effect, not the media hyperbole, but the true effects of technology on jobs, and then number one, to help reskill people to jobs in the future. Now, what we've done with Capgemini is its own story. We went all over Europe, London, Paris, Stockholm, Utrecht, met a bunch of companies, with Capgemini and through Claudia and her team and her leadership of this in Europe. Capgemini is probably one of the most advanced consulting firms in this space across Europe, because they were the first to go to market and to use our software with a bunch of different countries in Europe.

Claudia: I think what is interesting about Faethm is that it solves two problems. One is there is still a lot of uncertainty about how many jobs are going to be impacted and to what degree. And it's very diverse. It was ranging to plus a hundred million minus 800 million. The range was impressive. There are still studies published.

I mean the last year alone, there's more studies coming out about how many jobs are going to be impacted. So, it helps with the real data of the organization, which is obviously limited to what is okay from a data privacy point of view, but it actually stops the guessing. The second part, of what it does, it allows the conversation around

how you want to invest in technology and then how you want to invest in your people. It helps leaders to make appropriate decisions on how to really future-proof their workforce.

Liz Lugnier: How did you go about compiling this information that's behind Faethm?

Michael: The starting point was for us to develop an occupational ontology. So, we now describe 5,608 different occupations, about a hundred thousand different job titles.

We have a time and task model of 20,000 skills, 26,000 tasks. We have every census for every major country in the US, UK, Canada, Australia. We've got data on 2 billion of the world's workforce. What then sits around that ontology, a topical data sets that describe different things, impacts on work, where it gives us the ability to show.

When you introduce a technology, you automate some tasks, augment and add others. There's a lot of jargon in what I've just said. Let me simplify it with a couple of examples. Voice AI, we all know what that is, is nowhere near maturity, but we know that it's being used. If you run a bank, you cannot deploy voice AI on the same day in France, Finland and the Philippines, because there's different levels of connectivity, a whole bunch of different issues at work that either speed up or slow down your ability to deploy this technology.

We describe all of that in data. We then trained another AI to understand we need deploy that software into that bank, which of the processes and tasks that are affected and when. What that means is that our clients can then scenario model the impact of technology on their jobs and understand what to do with their people.

That's the first thing. Second thing is when COVID started in February last year, we thought that a pandemic might happen. And in February and March, we built a COVID resilience module for all of our clients. We swapped out the technology curves for a pandemic and epidemic curve for every country. And that work was featured in MIT technology review in April.

In April last year, two months into the pandemic, MIT did a nine-page article about the neural network that we built to show how companies and governments, what COVID transmission risks look like through all of their jobs and their people.

Claudia: I think what is interesting in this for organizations is actually when you think about jobs and how they're structured and you decompose the jobs, it actually allows organizations to completely rethink the way they think about talent and the way they think about organization, because it allows you to move to a more skill-based organization than a structure, or like a hierarchy or boxes of jobs, because that's not how you will think in the future. It's around what kind of skills people bring, and what kind of role do you build, or even compose for them in the future in order to be the best they can.

Liz Lugnier: Can you talk a little bit about what upskilling is and why it's such a vital strategy to get things right for companies these days?

Claudia: I mean, generally upskilling means that you're helping employees to acquire additional skills and help them augment their capabilities and competencies. There's more ways of skilling as cross-skilling, reskilling, and so forth.

But I guess upskilling has been the term because we can see real lacking key skills in data area technology. So, the necessity to make sure people understand technology and have a basic understanding of AI technology is crucial. I think it was actually UIPath which offered AI and automation skills training to all their employees and made it kind of a program for everybody to attend.

There's a program in Finland. There's a small startup that has the ambition that every Finnish citizen has a basic understanding of AI. I think this whole idea of increasing the savviness of each and every one around technology automation, AI is quite crucial.

Liz Lugnier: Has the impact of automation been the same across all job levels or has it been different depending on the job level and the skill required for them?

Claudia: Yeah, I think automation is also a story that shows us the inequalities in the workforce and the impact of it. The risk of automation is uneven across the workforce. What we could see in the data and also in the different projects that we've done with Faethm is that for example, automation risks are higher in less educated workers who are more likely to be in jobs that have routine tasks with higher risk of being automated.

Additionally, in the pandemic, we could see that the risk for minority communities, so Black workers or Hispanic workers that were mainly in a service area or in more routine tasks have been more impacted. And lastly, what we can see in our projects that a lot of the female workforce is also impacted to a higher degree because they may be in some companies still where diversity hasn't been such a topic, they may have been impacted to a higher degree.

The automation story is not just about learning and reskilling challenge, but it's also about solving that inequality challenge and how we deal—as organizations and as institutions, as governments—with these inequalities and make sure that everybody is taken along.

Liz Lugnier: Is there any specific sector where we really need more reskilling than others?

Michael: Every sector. When a politician says, "we're going to solve all this with a culture of lifelong learning", and everyone who knows it goes "oh that's a great idea". There is no country on earth that is yet set up to deliver lifelong learning. We think about this, right? It's a lifelong learning is 40 years (well, hopefully more) of training for you, for me, for everyone that you see. There's no funding mechanism. There's no content; there's no delivery. There's no general awareness. And yet we all know that it's important. The main challenge, I think for lifelong learning is more about sectors. It's about how government industry and academia innovate together to be able to provide meaningful learning and development for people on demand, in person, online, in whatever sort of format. They're investing in all these kinds of new content each year, we're not teaching history or geography or another language where the content stays the same year on year. We're teaching dynamic topics that change all the time. So, we need to be investing in this. This is an all new industry.

Claudia: I think we talk about client like industry organizations or government, but actually this is a problem or a challenge that no single entity can solve alone because there's so many pieces that need to go together. Institutions, governments, industry organizations, and the individuals, each and every one of us has to participate to make this happen, this lifelong learning culture.

Liz Lugnier: How do you create an effective system for upskilling and this lifelong learning culture to make sure that it's efficient in gain to the core of the issue? How do you create a forward-thinking strategy rather than a reactive one?

Michael: This is the way that Faethm deals with governments all over the world. There's been a number of governments that publish the insights and the reports, and so on that they get from buying and using our software. We are showing governments in every continent at the moment, except for Africa, where the future supply and demand of labor is what that means for economic policy and industry policy, what that means for re-skilling and upskilling policy, where they need to be investing, where they don't need to be investing, how they handle things like stranded workforces.

Think of the coal miners in Western Pennsylvania. These guys are part of, what's known as a stranded workforce. The coal mining industry in Western Pennsylvania will not be there in 20 years' time. And that's not as a result of policy gone wrong or right. It's a result of climate change.

It's a result of industry investment in renewables and so on. There is a stranded workforce in Western Pennsylvania, but all those coal miners, but also all of the people in the communities whose salaries hang off those jobs. What we're doing is helping governments deal with these sources of stranded workforces and identify how they need to re-skill those individual people with those community colleges.

What is the investment in a particular community college to get this individual coal miner from a job that's in decline into a job building all this new infrastructure Biden's 4 trillion will be funding? Now that's a real example, that's something we're involved in.

Liz Lugnier: I am from Western Pennsylvania. Yes, that is very true. And I know those stranded workers personally, I grew up in a coal mining area, so absolutely.

Michael: I'm sitting here in Sydney, Australia and Faethm has about 90 employees. And those people are in our platform. And it's the AIs that are doing the walking for us here. It's not us.

We're not going there in person. We have the analytics and the software to be able to identify through US census, who those people are, to be able to identify the jobs that they're in, to be able to identify whether those jobs are in growth or decline to be able to identify what the next job is, to be able to identify what the gap is and then the skills needed.

Back to your question, that's exactly how we're informing, reskilling and upskilling as far away from Sydney and as niche an issue as coal mining in Western Pennsylvania.

Liz Lugnier: Yeah. Especially because the people that I grew up often feel that they've been lost in the noise that exists.

Michael: One of the reasons for my interest in this is that I grew up in the Northwest of the UK.

It's an industrial area, but my first job was designing software processes and so on for clients. I worked in a consulting firm, but the clients typically were call center companies or shared services companies. And 20 something years ago, I was designing the software and business processes and so on for industries that can now be automated.

Like you, I know people, well, I certainly knew people doing work that will not be here in five or 10 years' time. This is quite a personal thing that I'm doing, but there are many, many examples that all of us have, when we know individual people in jobs that you now refer to stranded workforces. This is a good example of how we're helping governments to re-skill those people.

Liz Lugnier: What do you think some of the new technology disruptors will be in the future of the workforce?

Michael: One interesting one, this will say short term, is battery technology. That sounds pretty dumb, but when it comes to de-carbonization gains to net neutral or net zero emissions, the shift away from oil and gas, the demand for electric vehicles, the growth in renewables.

What we're seeing is a massive shift in the electrical industry worldwide. And one of the key parts of that is battery tech. Being able to capture and store faster, greater amounts, and basically make machines more efficient, and to get them off oil and gas. That's a near term like 2, 3, 4-year horizon impact that will fundamentally reshape how we move, how we get around.

It will free up an awful lot of petrol station space in every suburb in the country. It will require us to do an awful lot more with renewables. It will require us to breeze through the electrical grid and electrical infrastructure. That's a massive driver of new jobs as well as a disruptive effect on the oil and gas industry.

And we're expecting a tipping point in electrical vehicle usage in about 2023, 2024, because there'll be so many electric vehicles in China, Japan, and South Korea. It won't become economical to run the current petrol and oil and gas industry in those countries. And that will have a disruptive effect on the pricing of all of those products or buyers.

Claudia: I am excited or curious to see how biotechnology is going to evolve. Currently, we're limited in our thinking and the productivity or the work, but the speed we enter information into the computer and get it like can compress it on the way back, if there's different connections between the computer or the AI and us, I think what it could do to productivity and how we live and how things are progressing. That would be interesting to see.

Liz Lugnier: We started this conversation kind of talking about how the media has given us all this fear about how automation is taking away jobs from the workforce potentially. But how do you think technology can play a role in protecting workers in the future?

Claudia: I mean, it did already during COVID, right? Some of the technology helping us to identify risks, I think that we'll continue identifying where it's safe to go, identifying risks and also helping to reduce accidents. I think about some of the technology that's currently used in manufacturing companies or in utilities companies too, to make sure the safety of the workers is the first priority. It helps us to be safer actually.

Michael: This is a good news story. This is not the end of work; the future of work is not about job losses. The future of work is about learning and development. This is an opportunity for all of us. This is not something to be feared. I would ignore most of the media that you've read on this.

I would not think that automation equals job loss. And I would think about the way that people can pathway into new jobs in the future through skills development. And that's something that's an opportunity for everybody. This is a good news story.

Liz Lugnier: It's clear that AI has a critical role in creating effective automation systems. But at the same time, the true effectiveness is driven from the human element of the workforce. To make the best use of the tools available to us, we'll need to ensure that we train our staff to learn the best time and place to use technology.

A big thank you to Michael and Claudia. You can find out more about them and their work in the show notes. If you've enjoyed this episode, please make sure you follow us on Apple podcasts, Spotify, or wherever you find podcasts. This podcast was brought to you by Capgemini Invent. We'll see you soon.

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