

How my Artificial Intelligence (AI) concerns turned to enthusiasm



How AI can help you Master Enterprise Productivity

By Grant Kinchin, Artificial Intelligence Propositions Manager, Fujitsu

shaping tomorrow with you

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The AI feeding frenzy needs to stop

The inexorable rise of Alexa and Google Home isn't causing many people to lose sleep, but in the workplace, it is a different story. The 'Rise of the Robots' and the coming of automation is fueling a frenzy of dystopian futures where few people work, and we're ruled over by robots. Let's face it, that's old news. The Terminator came out in 1984. And 1984 came out in 1948! Actually, what we need to be talking about is utopia. A potential utopia of rising productivity.

Fujitsu's Grant Kinchin argues that we need to stop worrying and accept AI as a positive development.



AI – the answer to Mastering Enterprise Productivity?



The productivity boost is long overdue



Augmenting capabilities and human potential



AI is all about helping us work smarter



Raising productivity by focusing human intelligence where it matters most



The human centric way to raise productivity

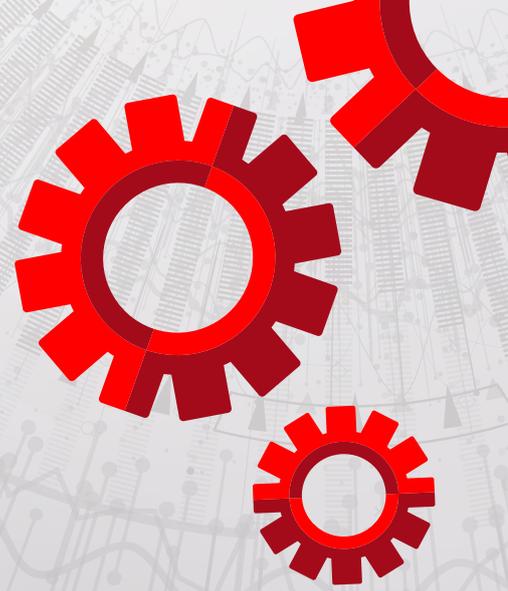


AI – the answer to Mastering Enterprise Productivity?

We're living through a new industrial revolution. The first industrial revolution was based on steam, the second on electricity, the third saw the rise of the computer and the fourth is digital. Industrial revolutions are defined by measurable increases in productivity. Ask an economist to define enterprise productivity and you'll get a very simple answer: it is the collective value produced by workers and machines per hour. But for the digital era, that's not enough.

We are in a world where the customer is king, and organizations need to work harder to keep their business. They need to deliver on the outcomes customers want, and only then scale their business to meet higher numbers of customers. Therefore, outcomes lead, and output follows. As outcomes change organizations need to adapt, and adaptive work requires greater intelligence. At Fujitsu, we believe that in this new industrial phase, Artificial Intelligence (AI) will be instrumental in boosting the productivity of both machines and people.

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The productivity boost is long overdue

And it's a boost that is long overdue. The global economy has experienced slow growth since the financial crisis of 2007/08 – especially in advanced economies – and there's a real need to take steps to turn the situation around. Governments and businesses are looking for ways to increase productivity to support growth and raise incomes. They're hoping that digital transformation will deliver both. But, the problem is that 'digital' is often viewed as a double-edged sword, especially for the individual employee.

Over the last few years, many experts, politicians and commentators have been predicting that technology is about to replace humans, and this has created fear across workforces. The fear is simple – that AI and machines, which can learn to do complex tasks and never take a break, a holiday or get sick, will cause mass unemployment. 'Automation could wipe out a third of jobs by the 2030s'¹ and 'Rise of the Robots: Nearly 40% of jobs could be taken over by droids and AI'² are headlines that appear in popular press with increasing regularity.

That's not to say the fear isn't real, it is, but I believe that the reality will be very different. In fact, AI will be beneficial to us all if we adopt a human-centric approach to AI. In my experience, I haven't seen people replaced by AI. On the contrary, I'm seeing them being augmented. And that's the key word, 'augment'.

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Augmenting capabilities and human potential

As a vehicle for the augmentation of human capabilities, AI is hard to beat. From complex decision making, automating mundane tasks and rapid information and sensor data processing, AI certainly has a role to play. But there are things that humans are simply better at, and will be for many years to come. For example, AI needs training so in most cases is ill-suited to dealing with new situations. Humans also excel when it comes to creative tasks, empathy and actually dealing with other real people. Forget what you hear about laboratory experiments, we are talking about real people in the real world here.

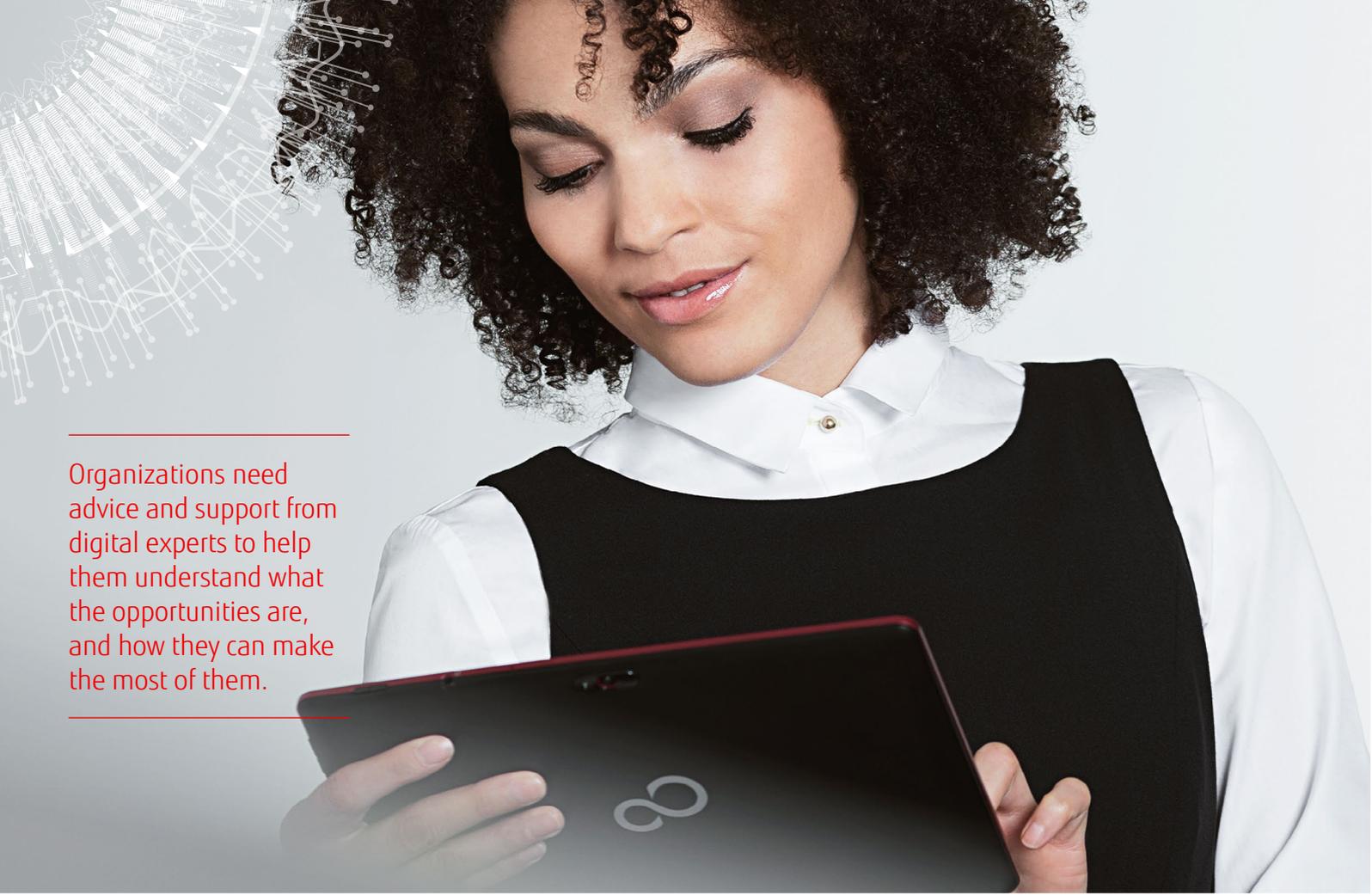
I'm an optimist. I believe that AI (and most other digital technologies) can transform the way we work, live and play in very positive ways. AI can help us be better at what we do. It can open new opportunities for us to do more intellectual, creative and human work. That's why using the word 'augment' alongside 'artificial' is important. Artificial Intelligence might be an accurate description

of a digital entity (be it a machine or an algorithm) that can intelligently carry out tasks, and then learn from experience to improve and adapt with change. But, what it is really doing is augmenting capabilities. It carries out tasks that a human could do, but really does not need to do because the AI can do it better, faster, and for longer. If you consider those capabilities in a wider, more human context you can see that the work that AI does frees people from repetitive task-based roles to be more intuitive and creative.

Productivity depends on how machines and people are combined to optimize quality, customer service, and innovation. That depends on a broad ecosystem of people and things. AI should not be a solution looking for a problem. It must be part of a more strategic plan to augment the capabilities of a production line or a group of people within a business function, so they can address specific productivity challenges.

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AI is all about helping us work smarter

Many organizations might not be aware of the capabilities that AI can now offer, which means they need advice and support from digital experts to help them understand what the opportunities are, and how they can make the most of them. It's an emerging, innovative sector with immense possibilities. In such a fast moving and dynamic marketplace disruptors can leapfrog incumbent enterprises (and their legacy systems) to leverage the power of digital more nimbly. Enterprises therefore need to find a way to adapt their workforces to benefit from the AI's potential. But that doesn't mean that the people – their skills, expertise and experience – are redundant. They just need to be more cleverly deployed.

As I've stressed, AI can, and should be applied to optimize or completely automate tasks, which require speedy judgments and actions that are, by their nature, repetitive. The machines have the ability to learn quickly and improve what they do from 'experience', which means that they can adapt swiftly to keep ahead of change. There will always be new challenges, which arise from changing customer needs, or shifting market trends, and that demands creativity and new ideas. So AI, through its ability to learn and evolve new capabilities can play a vital role to meet these challenges. It's how AI augments the human potential to be creative and make clever decisions.

That's why, at Fujitsu, we believe AI must be applied in a human-centric way. It must make life better for the people who work with it. It should fill in the gaps that exist in the organizational resource model of many enterprises without displacing people. It should do those tasks that don't make the most of a human being's full potential. It can also provide powerful insights to enable us to make more informed decisions, based on our experience and knowledge. Either way, AI can help organizations to achieve much higher productivity by augmenting capabilities whilst freeing people to focus on higher value tasks.



Raising productivity by focusing human intelligence where it matters most

Humans excel at creative and imaginative work. They can come up with the unexpected idea for a product or a process that can transform a business, and do so in more profound ways than any machine. And even if machines could be trained to be creative, we have a moral duty to keep humans at the heart of our enterprises.

The headlines I mentioned earlier might suggest that AI is a threat to the workforce and society, but the reality is very different. I like a quote from Stanford University computer scientist, Andrew Ng, which reads, "I don't work on preventing AI from turning evil for the same reason that I don't work on combating over-population on the planet Mars."³

I've been working with a customer who produce blades for massive wind turbines. They've seen a rapid rise in demand as more emphasis is placed on renewable energies. The ability to manufacture blades to a very high specification is key to winning and keeping contracts. So, quality control is necessarily intricate and time consuming. Each blade is scanned with specialized ultrasonic technology and the scans are then checked manually by experts to see if there are any, often very fine, defects.

The company produces over 5,000 blades per year, and it was taking between six and eight hours to fully check each one of them. There was a clear need to speed that process up. Our job was to enable the business to maintain quality whilst increasing production to meet rising demand. We applied our idea of human-centric AI. We did not want to replace the experts, only help them focus on the parts of blades where there were real problems. Using AI to carry out the image recognition meant that we could train an

algorithm to automate analysis of all areas of the blade for defects. Now, the Quality Control experts only have to inspect those sections of the blade which the AI solution highlights as potentially defective. This freed them from needing to laboriously scan the entire surface of every blade, allowing more time to focus on the critical areas and ensure the right decisions were made.

So, our human-centric approach enhanced the contribution that those quality control engineers could make, as well as reducing the risk of human error. The technology did the routine work whilst the engineers focused on the real problems. We cut the time it took to assess each blade down to just over an hour, achieving an 83% efficiency improvement.

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The human centric way to raise productivity



AI isn't about downsizing or replacing people, it's about augmenting their capabilities and potential.

The fact that skilled operators could now focus on important data was a big step forward. For me, that represents the true value of AI. It is truly effective only when it augments what people can do. A human centric view of AI is one that deploys the technology to free people from the workloads that hinder productivity.

AI isn't about downsizing or replacing people, it's about augmenting their capabilities and potential. Popular culture might not reflect that reality – yet – but more and more business people are starting to look at AI differently. The head of Xerox's European Research Centre, Antonietta Grasso, agrees: "Instead of dividing up work between computers and humans, I expect to see a world where humans and machines work together to tackle problems at lightning speed."⁴ And when it comes to enterprise productivity, speed is vital. To achieve it, we need a human-centric approach to not just AI, but to digital transformation as a whole.



Contact details

Ask Fujitsu
+44 (0) 123 579 7711
askfujitsu@uk.fujitsu.com
#EnablingDigital
Ref: 3819

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