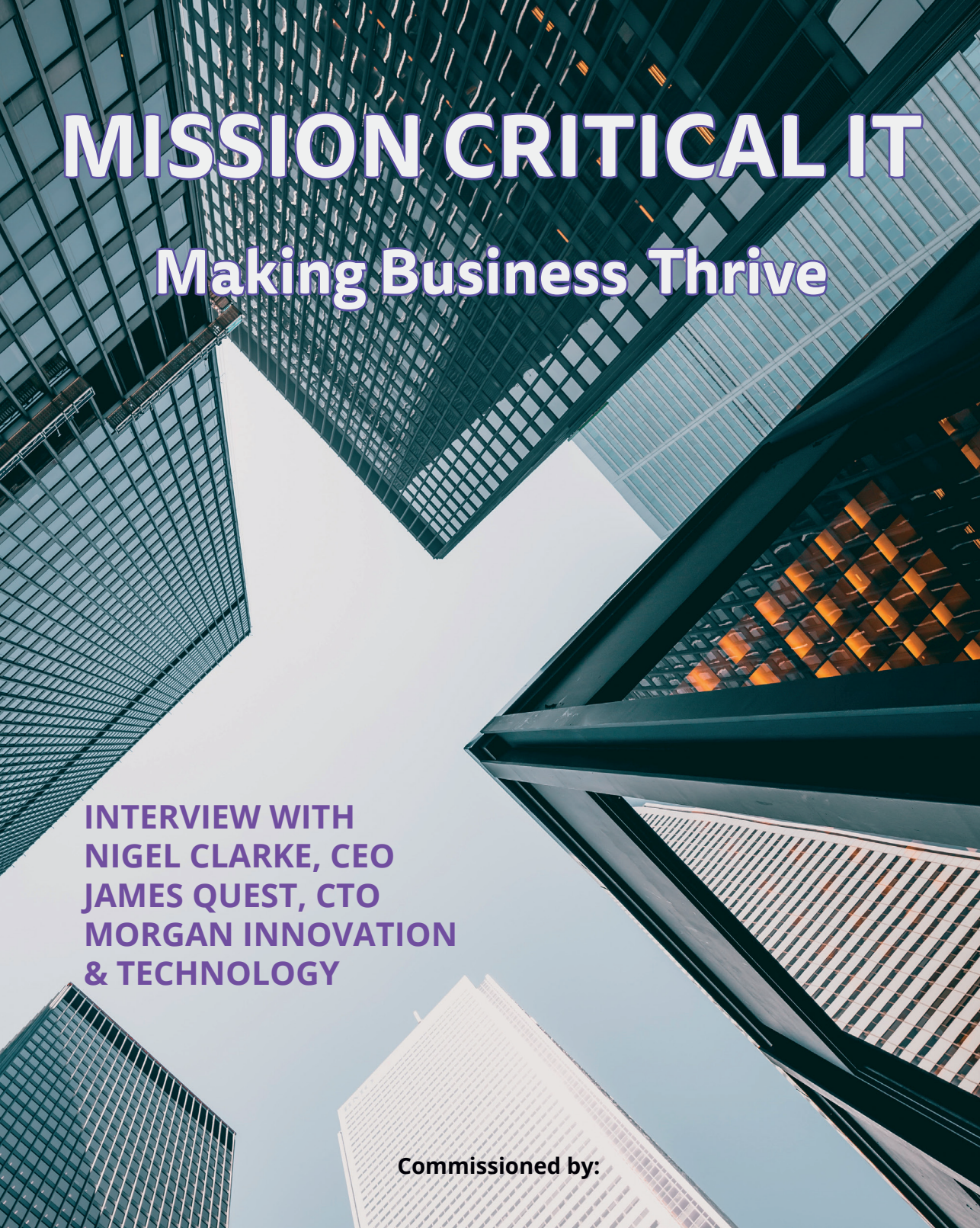

MISSION CRITICAL IT

Making Business Thrive

INTERVIEW WITH
NIGEL CLARKE, CEO
JAMES QUEST, CTO
MORGAN INNOVATION & TECHNOLOGY

Commissioned by:

Tailor Made
TECHNOLOGIES
IT & Communications

Introduction

Interestingly, Bill Gates once said that "the advance of technology is based on making it fit in, so that you don't really even notice because it has become part of everyday life."

Interestingly, because within a timescale which is unprecedented in business, IT has moved from supporting function to in effect, controlling function. So what could the influence of IT be, say, five years down the line?

This is one of the interviews for a book commissioned by Tailor Made Technologies and to be published by DECISION magazine, in which businesses which are really focused on the relationships with their staff and customers, share what they consider to be the issues they have to get right in terms of IT.

How to really be on top of things

“Something is worrying Nigel Clarke, chief executive of product creators Morgan Innovation and Technology. Something quite fundamental which in a way relates directly to the descriptive parts of the company name – the impact of technology on innovation.

“The challenge is that graduates have been taught computer aided design straight away while they were at university rather than first gaining an understanding of the processes a design needs to go through. They aren’t experiencing how to mock something up physically, the proverbial gaffer tape model from cardboard and plastic. But computer-aided design should be a resource, not a replacement of knowledge.

“If we lose that freehand ability because technology allows us, we have defaulted to CAD. Really you should pretty much know in five minutes with a hand-drawn sketch whether a design idea has any chance of working.

“Technology means it is possible to do the job without understanding the background to it, but to really be on top of

Nigel Clarke

something, you need to know the physics behind it. There is a big push for apprenticeships now because they provide practical knowledge, not just pure academic technology.

"I believe you can take positives and negatives from anything, whether manual processes or automation. It's about having the knowledge to identify and use the bits which do the best job for a particular requirement."

With some forty staff, Morgan IAT have twice received The Queen's Award for Enterprise. Products they've developed include Salurate, a screening test that identifies women who will go on to develop pre-eclampsia later in pregnancy, and RealSim, technology using actuators (which receive a signal and perform an action) that replicates the sense of touch to help rehabilitate stroke survivors.

“Within the first fifteen minutes of meeting an inventor I get a gut feeling whether there will be a cultural fit with us,” explains Clarke. “I remember someone coming in with a Lego model of the product they wanted which we turned into a green box that reads radioactivity to make radiotherapy more accurate. The first question we ask ourselves is whether the idea for a new product will positively impact society, and the inventor absolutely fitted the bill for us.

“Technically we can make things work, but we really need to know whether they can be sold, whether there is a market for them.”

A lesson learnt some fifteen years ago when the company invested £50,000 to make a device which would enable medical staff to deconstruct spent needles rather than having to squeeze them into a ‘sharps’ box. Six months of due diligence uncovered the degree of needle stick injuries suffered by medical staff in the NHS, with millions spent on litigation and the cost of employees being off work as a consequence of injury. Instead of the usual sharps box, the device sat at the nurses’ station and a needle would be destroyed straight away in situ after use.

“Surgeons and nursing staff said they loved it,” recalls Clarke. “How many were sold? Two. What we didn’t realise was that litigation costs for example were funded directly by government, a reason why the NHS didn’t see making the investment in that area as an imperative.

"I lived in Hong Kong at the time and they weren't interested either because at the time the head of their hospital authority told me the spent needles were just chucked into landfill!"

Today, what is taking Morgan Innovation and Technology into uncharted territory is its non-invasive device to prevent snoring, a concept brought to them by Professor Joerg Steier, president of the British Sleep Society and former chair of respiratory and sleep medicine at King's College London. Called Zeus (appropriately after the Greek god of thunder) this is their first foray into selling direct to the consumer. "It's a completely new ball game and the only way forward is to bring in sales and marketing people just focused on that product," muses Clarke.

This is a product which epitomises how Morgan Innovation and Technology differentiate themselves. "A lot of companies will

do the product design concepts – there are maybe 150 to 200 of them in the UK," explains chief technical officer James Quest. "The next stage is the electronics and engineering, making that prototype and then going into production. Very few companies do everything from taking the 'back of a napkin' notes through the design stage, specifying the electronics, gaining the necessary approvals, then making the product, which I describe as end-to-end manufacturing.

"Having design and manufacturing under one roof means that production engineers are involved early in the design stage, so that the product is designed for manufacturing."

A seamless process which wasn't easy to maintain with pandemic induced lockdowns. "With a video conference meeting it's harder

James Quest

to chip in – discussions are truncated with people talking over each other or not saying anything," says Clarke. "What you lose with video conferencing is the couple of minutes at the end of a meeting when you turn to someone and say 'what did you mean by….'

"Lockdown meant there was little alternative and we wouldn't have been the only company to have thought we had blitzed it by utilising technology to enable people to work at home. It was only when we began to come back to the office we realised that without working as a team, people can go off on a tangent because working remotely means they haven't always been able to talk things through with colleagues first."

Not that Clarke isn't positive about hybrid working. "We've operated a four day week for the last fifteen years," he reveals. "In staff surveys, it's the number one attribute. We couple that to being flexible, so if a document is going to take a couple of days to compile, it can make sense for someone to write it at home without interruption.

"I've always thought commuting is the enemy of work-life balance. For a corporate in the city they mitigate by creating an out of work experience at the office by providing a health club, restaurant, medical services, even a hairdressing salon on-site.'

Regardless of where people are working, Quest believes the modus operandi for bringing in new technology is a constant. "A gradual approach to introducing new IT is essential because

Graphic for the RealSim product

there is a limit to what people can cope with on top of their usual tasks," he says. "Either its gradual migration or a shock to the system, and if it's the latter, people will try to find ways around using it.

"When we introduced a new version of the PCB design software we use, first we ran it in parallel with the existing system which gave people time to play with it, and because initially they weren't using it on mission-critical work, that gave them confidence.

“With security, all of our data is locked down on our own premises, and every day backup cartridges are distributed to different members of the team to take home. We use software as a service but my concern is that with total reliance on the cloud, there only needs to be a problem with the internet and everything stops, and the company would cease to function until a third party, out of your control, is able to fix it.

“We did face a ransomware attack which started encrypting files but we were backed up and lost perhaps an hour of work. There is always a risk of intrusion regardless of whether you are in the cloud or not. Hacking is becoming so sophisticated that you almost need to engage in some kind of social engineering so people become paranoid about the possibility of phishing.”

Not surprisingly, Morgan IAT are phlegmatic about artificial intelligence and machine learning. “It will help integrate and automate,” says Clarke, “which will allow companies to deploy people where they will make a difference, to make a better use of their talents.”

morgan-iat.co.uk
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About Tailor Made Technologies

Since 1994 Tailor Made Technologies have been delivering professional IT, communications, cloud, and cyber security solutions for businesses, education and public sector organisations across the UK. Through their 28-year track record TMT have been ranked 6th best managed service provider in EMEA and 2nd in the UK, as well as being featured on The Sunday Times Fast Track list for a decade.

Accreditations include ISO 9001, ISO 27001, Investors in People, with TMT's 105 engineers looking after 2200 customers and 11,000 managed devices, meeting 96% of service level agreements.

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About DECISION magazine

First published in 1988, DECISION magazine reflects the business lifestyle, the trials and tribulations, the hopes and aspirations of directors and managing partners responsible for businesses with a turnover of £3million and above in the south of England and London.

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