Defining the smart organisation

The organisations that were best able to adapt during the Covid-19 lockdowns were those that were digitally prepared.

Ehimare Thomas Aire
Altron Nexus

Throughout 2020, there have been plenty of case studies and examples of organisations that have rapidly accelerated their digital transformation and adapted to the new realities of the world of work. *Brainstorm* has, over the course of the last few months, heard heroic tales of hardware deployment, virtualising infrastructure and lifting and shifting to the cloud. But most of these examples have been in the services sector: offices workers proving beyond all doubt that they can work just as – if not more – effectively and productively from home as from a cubicle.

Covid-19 has also driven home the lesson that traditional industries, too, must learn to digitalise and become 'smart', says Altron Nexus' CTO Ehimare Thomas Aire, speaking at the recent Altron Technology Day.

"The mandate for any business is to be constantly improving productivity," he says. "The focus has always got to be on 'bigger, faster, cheaper' tomorrow."

Digitalisation has a major role to play in achieving that mandate, Aire adds. The understanding of how to merge operational technology (OT) and information technology (IT) is reaching maturity, and while each vertical has different inherent needs, there is a 'smart stack' that connects the specialised, mission-critical OT with the agile, monitor and measure IT environment.

At the base level, this encompasses devices and the Industrial Internet of Things (IIoT) that gather data and control physical processes, and, at the top, the specialised applications that drive industry. These are connected by smart connectivity, which is payload-aware and can manage bandwidth, interference and the switching between public and private networks as the need for security and reliability changes. The final part of the stack is the computing infrastructure layer; increasingly, this is in the cloud and offered as a service – enabling even traditional industrial organisations to cut costs by opting for managed mission-critical services.

Right now, however, the reality is that many organisations are missing out. Aire quotes numbers from the Technology CEO Council to make the point.

"What we see happening is that digital industries – including finance, content, technical and professional services – account for 70% of the total investment in ICT," he says. "But when you look at the contribution to GDP, the opposite is true. Physical industries still make up 70% of the economy, and are massively under-investing in the productivity gains that going smart makes possible."

Digital organisations connect everything, measure everything, achieve insights and execute with precision, he continues. And any business can be a digital business.

Bringing to life

To illustrate the point, Aire cites two examples of organisations that Altron Nexus has worked with recently. One is a municipal entity, which wanted to bring together multiple public systems in one smart 'command and control centre'; the other is a mine that wanted to start collecting and utilising data more effectively and lay the foundations for automation and autonomous vehicles. In both cases, indeed in all cases, Aire says, connectivity is the single most important thing to get right.

"The robustness of your connectivity networks is key," he says. "It's one thing for the phone lines to go down for an hour in your office – you can stomach that without too many knock-on effects. But if the core of your business is digital, and connectivity goes down, that's a different matter. These solutions are mission-critical, so they have to be available."

In the mining example, he continues, building an intelligent network that stretched above and below ground was the hardest part of the job.

"The amount of effort that went into ensuring that there's zero downtime or latency above ground or below ground was phenomenal," he says. "These are not the skills that you need for deploying a run-of-the-mill WiFi build. This is industrial-scale connectivity that can be relied upon."

While the focus is often implementing new technologies, that's only half of the story – and not the more important half.

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"Building a digital culture is most likely the number-one problem as far as the transformation journey goes," Aire says. "There's only so much the infrastructure and applications can do."

It's hard enough to create a digital culture in an organisation that – on the surface – lends itself to one easily, such as a bank. For traditional industries, there is a huge need to train and invest in the right skills.

"There is a major need to drive a culture shift and become more digitally native," he adds. "A data-driven organisation is not about the compute and connectivity, it's about how you use those. It's about saying we don't know what's coming, let's crunch the data and use that insight to make a decision. And your entire organisation needs to be lockstep with that."

New business models

Making the case for investment remains tough, especially in tight economic times, and traditional industries are risk-averse and slow to change by nature (and for very good reason). What's worse is that many organisations have been burned by expensive, but poorly executed digital projects in the past.

"I'm starting to see organisations appoint a chief digital or chief data officer, so their minds are in the right place," says Aire. Even so, boards still need a lot of convincing to make investments.

"The concerns usually come from how do they make it tangible? How do they get past the chicken and egg scenario to prove the benefits and justify the investment?"

Aire says that partners can make it easier by providing solutions that help to smooth out cashflow, using the benefits of digital to develop pay-as-you-use models that reduce up-front costs.

"We need to be more effective and innovative in the way we package our solutions," he says. "We need to meet in the middle as far as we can, enabling 'as a service' approaches."

Because trust and partnership are critical to getting projects off the ground, Aire is proud of Altron Nexus' pedigree.

"We know mission-critical, we've been doing it for decades. We know the public safety space, we know the industrial automation and control space, and we're very comfortable in these spaces." ■