

KEYNOTE INTERVIEW

The industrial digital revolution



*The arrival of the pandemic has spurred digital transformation, accelerating trends already in motion, says **Tariq Osman**, partner and co-founder at Argand Partners*

For office staff, the transition from what were once manual, offline processes to more streamlined digital work-from-home workflows during the covid-19 crisis has been less painful than many would have imagined possible just a year ago. But how have the manufacturing and industrial services sectors adapted?

While many industrial businesses have been relatively slow to adopt digital technology and automation, the pandemic, combined with existing macro trends, looks set to hasten the arrival of more modern infrastructure and less dispersed supply chains.

Q How do you define industrial technology?

For one thing, it can mean investing in the companies that provide industrial

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technology. There is plenty of opportunity there. But more often, we see opportunities in far less obvious areas, such as traditional manufacturing and service businesses where investors can apply new technologies to take them to the next level. These are often businesses or entire supply chains that have not yet invested in digital technologies and automation and have not reaped the efficiency and process improvement benefits that these investments unlock. By bringing in modern production capability and by deploying technologies based around data analysis, processing power and storage, investors can build companies that have a

significant competitive advantage.

One example of this is Sigma, a manufacturer of high precision metal components. Under Argand's ownership, the company has invested in automated manufacturing robotics, 3D printing capabilities and unmanned vehicles – something that has enabled its production facilities to achieve world-class safety standards and unmatched quality levels while remaining highly competitive against low labor cost competitors in China. These pioneering investments have brought industrial technology to a sector that has been around for decades.

Q What is driving the deployment of technology in industrial applications?

Even before the pandemic, there were

three main drivers. The first is trade tariffs – and these started before President Trump accelerated the trend. The second is that the Chinese labor market has tightened over recent years so that it has become more expensive to manufacture goods and provide services there. It is no longer the competitive market it once was. And the third is the growing mainstream awareness of environmental issues.

These were already prompting industrial companies to digitize their organizations to reduce their carbon footprints. Companies have been looking to on-shore or near-shore their manufacturing to avoid tariffs, in response to rising labor costs and to avoid the logistical and environmental costs of moving goods around the world. Hardware and software investment were already either being considered or underway to automate more processes as well as to address the need to use more sustainable materials for production—to make aircraft, ships or phones lighter and more durable, for example.

Deploying energy-saving technology can also have a significant impact on costs in manufacturing. One of our portfolio companies, Brintons, has a carpet-weaving factory in Poland close to the Russian border. It's a vast, Soviet-era building, that historically had the highest energy costs across all of Brintons' global manufacturing facilities. We have been working with Siemens to put in place energy-saving building automation systems for heating, ventilation, air conditioning, and cooling applications, and for each weaving machine. These investments have improved efficiency, reduced cost and have made the site more comfortable for our workers.

“Companies that are more advanced in their digital transformation are more resilient”



The covid effect

The pandemic will likely accelerate deployment of technology in industrial applications

We've seen that companies that are more advanced in their digital transformation are more resilient, so I think there will be two big trends that will get a lot of attention in the next two years – with positive and negative consequences.

The global logistics sector has been in structural decline for several years now and the pandemic has highlighted the risks of dispersed supply chains. So, we will see more manufacturing hubs in locations such as Mexico for the US market and countries such as Poland and Turkey for Western Europe. The move closer to home may be seen as positive but it does have implications, and this is the second major trend – that some human labor will be displaced by automation.

We expect robots to be cheaper than human labor in most applications by 2025 and our research suggests robot hours will increase from roughly 1 percent of total manufacturing hours worked currently to around 15 percent by 2030 and up to 50 percent by 2050.

We're still in the eye of the cyclone right now in terms of the pandemic, so further trends have yet to be fully fleshed out, but it does look as though companies that have invested in technology deployment are most likely to gain market share.

Q What types of technology do you see as having the most disruptive effect?

The industrial sector has been the slowest to reap the full benefits of artificial intelligence. It is very much at the early stages, but the opportunity can be massive, and it can be a big competitive differentiator. For every 10 industrial companies we look at, we are lucky to see one that has already invested in AI. Yet industrial companies can use sensors, machines and IT systems powered by AI throughout the value chain.

For example, you can now use this to

track items from, say, a factory in China through the logistics chain, landing in Mexico, right through to a consumer based in New York. Previously, this technology was being used just at a manufacturer or a warehouse, but now it is all connected across multiple companies and the data is being gathered and shared – you can lower costs, improve customer service and provide information on when an item needs maintenance or replacement. This provides an opportunity to invest in companies that use this technology but also in companies that make the sensors and semi-conductors that gather

Analysis

and analyze this data. And many opportunities are in areas where you would least expect them to be.

Q Can you give an example?

Well, you wouldn't expect the honey business to benefit significantly from the use of AI, but one business we looked at sources honey for food manufacturers. Honey is sourced worldwide; it has different taste profiles depending on where it comes from and prices fluctuate according to yield and demand. The company has invested in AI to capture data from apiaries around the world, which helps formulate the right palate through blending the different honeys and uses algorithms to optimize a business that is run by chains of brokers worldwide. This reduces the cost, improves the quality and, because the technology can identify the source of honey down to apiary level, it is helping to root out fake honey, which can be made in a laboratory.

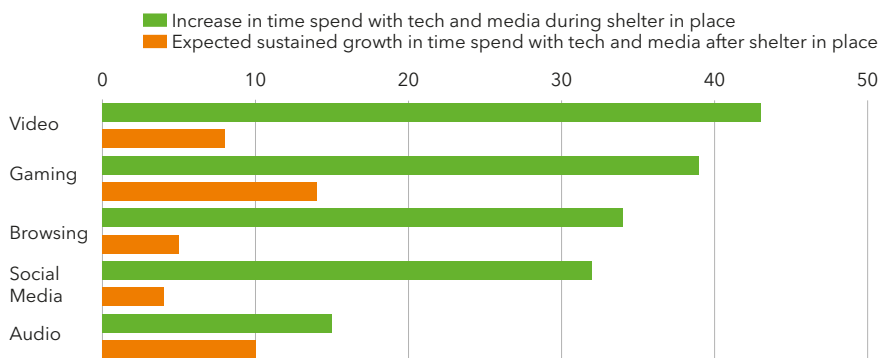
Q What about investments in the technology itself?

We recently invested in a business called Cherry. It's a really interesting business because, even though we started the investment process in September, we completed the deal during the lockdown so we have had a real insight into how the pandemic is playing into some of the trends we've just talked about.

Cherry manufactures high-precision keyboard switch technology that is used in video gaming and professional use peripherals. One application is the use of these keyboards in healthcare, which, pre-covid-19, had been moving slowly towards digital healthcare records. The

"I think the issue moving forward will be how deals get done in the future if travel is less possible"

The covid-19 pandemic has seen significant growth in time spent gaming (%)



Source: Rewire to Restart: The Post-Covid-19 Agenda for Technology and Media Companies, Activate Consulting

pandemic has accelerated this trend by 10 years or more as non-urgent healthcare had to be delivered remotely. The digitization of healthcare records allows people to use smartcards that store all their health data and the peripherals Cherry produces – which have antibacterial and cybersecurity features, by the way – can read these records.

The business also plays into the increased demand for video gaming during lockdown as people looked for things to do. While TV streaming was an option, companies such as Netflix are dependent on Hollywood and sports were cancelled, and so you had a situation where Verizon, for example, saw a 75 percent increase in data transfer linked to video gaming. Demand for video gaming keyboards using Cherry technology has soared, especially as these products can also be used for work, and that demand will continue to be high as people continue to work at least some of the time from home and as digital entertainment is boosted by any pandemic-induced economic downturn.

According to a recent study by Activate Consulting, time spent with video games increased by nearly 40 percent during covid-19. Video games are expected to retain higher growth versus other media after shelter in place ends.

Q What were the challenges to getting a deal across the line during lockdown?

The fact that we'd started evaluating the business last September clearly helped

as we'd already had the chance to visit the management team and manufacturing facilities. However, we were a little nervous around February and March as we weren't sure how the business would be affected by the pandemic. We took a brief pause, especially as the business has a global supply chain and with key suppliers in China and northern Italy. Yet we could see the business had four months of inventory and actually, once we saw the trends start playing out, it became apparent it was an opportunity to grab with both hands. I think the issue moving forward will be more how deals get done in the future if travel is less possible.

Q How do you see deals of the future getting done?

We are starting to experiment with tools to do some of the work remotely, with the use of video-conferencing, for example, and drones. They clearly have some limitations and remote meetings cannot replace the barstool due diligence that helps build trust and relationships, but these tools can improve the efficiency and productivity of due diligence processes.

Drones and the use of body camera footage is interesting because you have the ability to pause and replay sections and that can enable you to see more, and from a different perspective, than if you conducted an on-site visit in some ways. In the past, we looked at a company that provided drones to the mining industry to safely pinpoint where ores are, so we know these technologies can be effective. ■