Manufacturing: retrofit for the future

Gaining competitive advantage and digitalisation with smart finance

Author - Stefania Moruzzi

SIEMENS

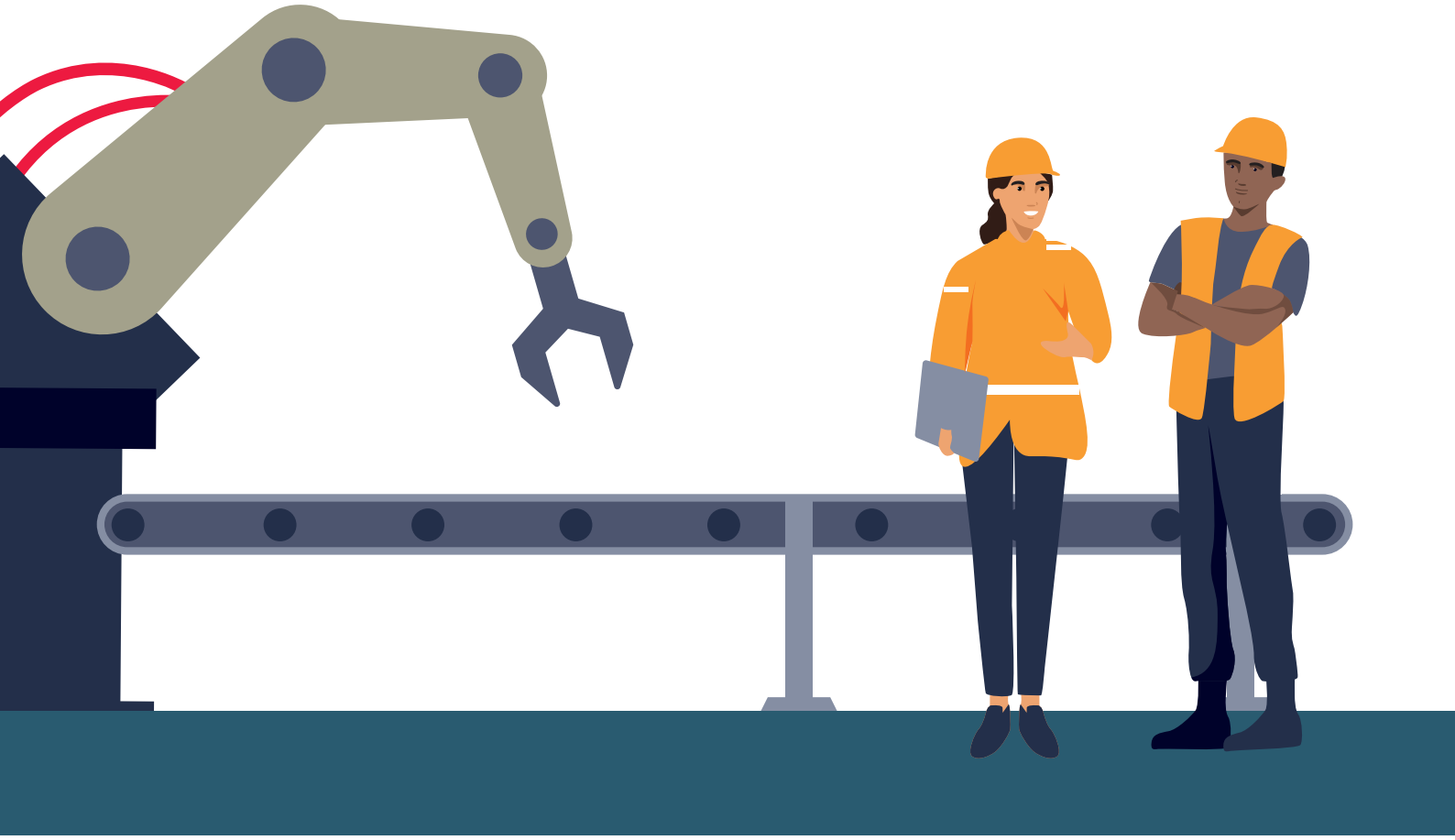
Manufacturing: retrofit for the future

Gaining competitive advantage and digitalisation with smart finance.

Challenges to the market

It's safe to say that we are in the era of digital transformation in manufacturing. Digitalised equipment and technology impact every aspect of industrial production from quality to meeting supply/demand and efficiency and even service and after sales.

This means that when it comes to investing in new equipment, manufacturers are likely only considering investing in technology that is digital-ready.



So, what's standing in their way?

Supply chain disruption, for one, represents a significant obstacle. Almost 2 years on from the start of the COVID-19 pandemic, supply chain issues continue to hamper the acquisition of new equipment in most industries and are driving up costs.

Production schedules have been upset by input shortages, longer supplier lead times and capacity constraints. Meanwhile, delays to all forms of shipping – via land, sea, or air – alongside the disruptions caused by Brexit and COVID-19 are leading to longer vendor lead times for the supply of machinery.[1]

The situation is exacerbated by a global semiconductor shortage – the chips that digitalised technologies rely on.

The recent market uncertainty and geopolitical volatility has exposed global manufacturing's reliance on a small number of suppliers and while efforts are being made to increase onshore chip production, setting up foundries will take several years and billions in investment.[2]

Unsurprisingly, the pandemic shutdowns and problems it has caused manufacturers have left many reluctant to invest. However, historical evidence shows that those who invest during a downturn are likely to gain long-term competitive advantage.[3] Indeed, as vaccination rates increase and bottlenecks ease, confidence is returning to the sector.[4]

This puts greater pressure on those manufacturers that have deferred investment in Industry 4.0, as they are at even greater risk of being left behind by competitors who maintained momentum during the downturn.

> "Production schedules have been upset by input shortages, longer supplier lead times and capacity constraints."

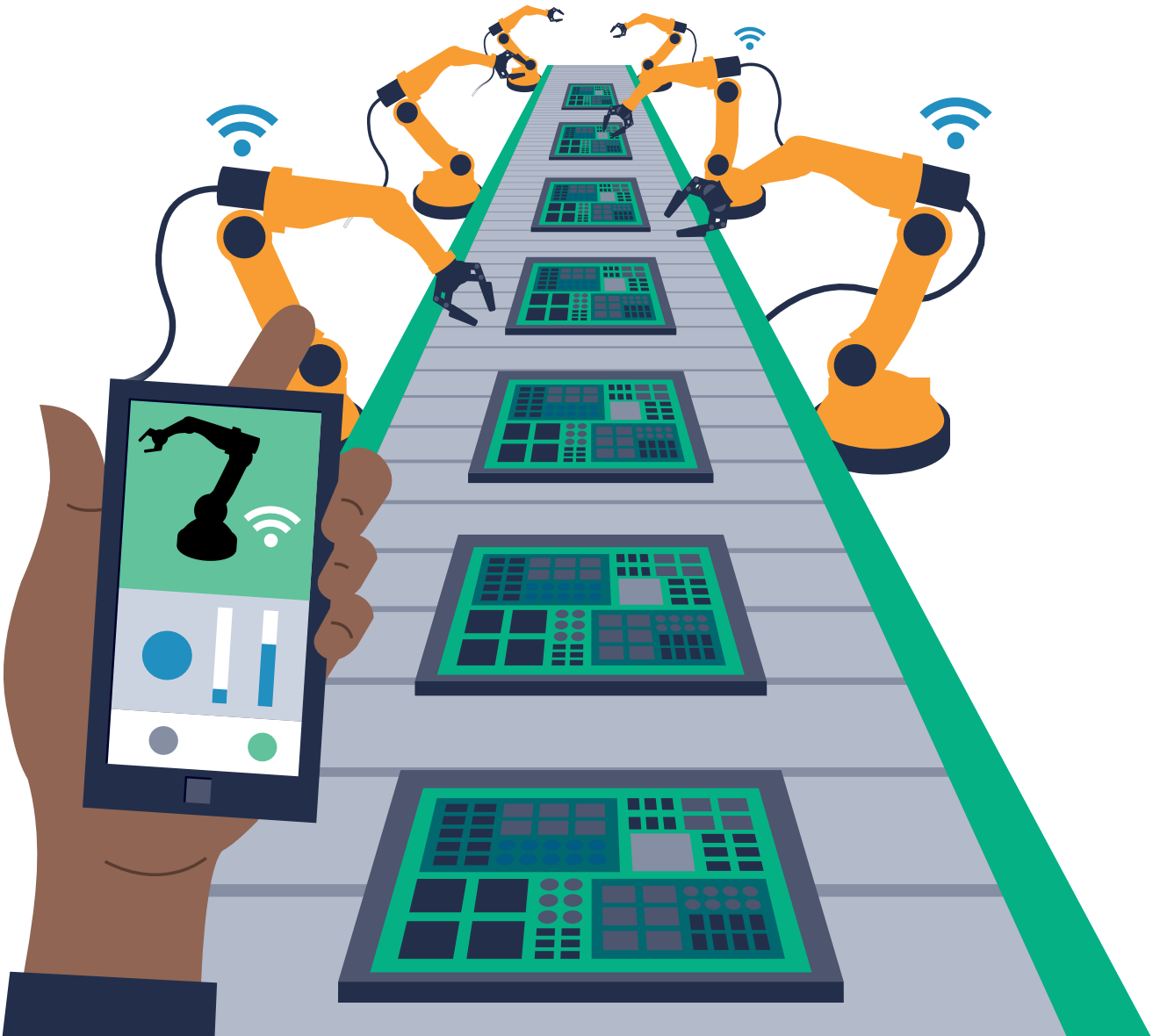
Losing competitive advantage

Given the well-known benefits of Industry 4.0 – enhanced operating agility, flexibility, and efficiency – the fact remains that every month that goes by where a manufacturer doesn't invest is a month of lost production improvement, output efficiency and opportunities for reduced energy costs. Quite simply, it's a month's worth of lost competitive advantage.

Research shows that digitalisation has a significant impact on productivity, and this correlation is nowhere stronger than in the manufacturing sector.[5] Therefore, despite the challenges facing the industry, manufacturers are increasingly aware that they need to invest in equipment upgrades to stay ahead of the game. If they don't, their competitors will, and they risk losing market share as a result.

By deploying new financing methods, available from specialist financiers, manufacturers can secure these savings and efficiencies while putting no capital at risk. In this way, retained profits are preserved for strategically important development activities – such as commercial growth, tactical sales initiatives, talent recruitment, product development or new market penetration.

However, with the limited access to new digital technologies and lengthy lead times for delivery from vendors, manufacturers must consider other pathways to Industry 4.0.



Retrofit – sustainable alternatives for digitalisation

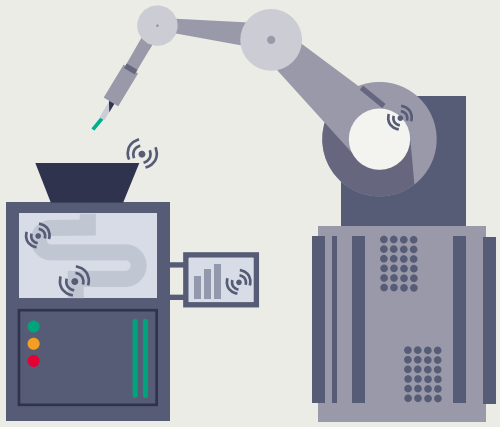
Given the reduced access to new machinery caused by pandemic disruptions, manufacturers are increasingly turning to retrofitting - or refurbished equipment acquisition - for their digitalisation needs.

Retrofitting consists of updating existing equipment in situ to add in digital sensors, new components or enhanced software that increases machine efficiency and productivity. As a result, it becomes easier to maintain, adjust and test the production environment. Similarly, it can also be more rapidly fixed.

Within the equipment supply chain, several OEMs – anywhere from materials handling to production line and packaging – are taking back end-of-life equipment and refurbishing and digitalising it. They are adding in new components that rival those in the latest models and are then able to offer these out to market again.

Of course, while this doesn't overcome the overall shortage of processor chips, it does compress time to market for industrial equipment, at a time when many companies are competing for access to digitalised equipment and technology. Digital retrofitting is compatible with most machinery, as the mechanical lifeline of a piece of equipment is typically much longer than that of many of its technological components.

> "Digital retrofitting is compatible with most machinery."



Refurbishing old equipment can also help businesses to comply with sustainability objectives as it relies upon reuse of original infrastructure. Instead of replacing entire units, the process requires reusing the base frame of the original machine and only replacing specific components. Likewise, while out-of-date machines are more likely to suffer downtime, their modernised version will be more agile to manage supply chain disruption, more efficient and generally more productive.

Not only will this impact costs, it's also likely to impact areas such as energy efficiency.

The question remains, how can manufacturers invest in digitalisation at a time when many businesses may have a cautious attitude to investment or lack the capital funds to purchase equipment outright?

Smart finance: making investment affordable

With substantial benefits to be gained from retrofitting and modernisation measures, manufacturers are now under pressure to start investing in digitalisation as soon as possible. Retrofitting represents the perfect starting point for businesses still wary of lengthy delays to brand new models caused by supply chain challenges.

Smart financing arrangements (usually based on a leasing structure) help organisations acquire new equipment or retrofit existing machinery without having to deploy retained capital or over-burden their banking.

Specifically, an agreed specialist carries out refurbishment as per a business' required specifications.

While retrofit work often takes place on-site, refurbishment is likely to require offsite attention. When an OEM retrieves older equipment from the field, it needs time to refurbish that equipment with new components and digital capabilities before it can offer it back to the market.

Extended payment terms can delay payments for new components while the equipment is undergoing refurbishment. In this way, some of the refurbishment costs can be delayed up to the point of re-sale, improving the OEM's cash flow.

Equally, with a smart financing partner like Siemens Financial Services, the equipment can be offered back to the market with a payment plan in place, making the acquisition more affordable for the manufacturer, and covering a financing period of a few years until brand new replacements are available without the delivery delays we are seeing today.

Smart financing enables the acquisition of technology and equipment for competitive advantage, in a way that is financially sustainable and tailored to the organisation's specific business and cash-flow needs.

Smart financing offers three major advantages over generalist finance: technology expertise which understands real business outcomes; a breadth of financing solutions which can meet every organisation's exact needs; and smooth, sophisticated processes which makes the use of smart finance seamless and easy.

Technology expertise leverages deep understanding of the technology & how it is applied in practice, plus the benefits & return on investment it delivers in real-world applications.

Breadth of financing solutions offers a true spectrum of financing products and solutions which can be flexed & customised to fit each organisation's individual circumstances.

Smooth processes put customer experience front and centre – delivering speed and ease, supported by digital tools, techniques, and specialist sector experts.

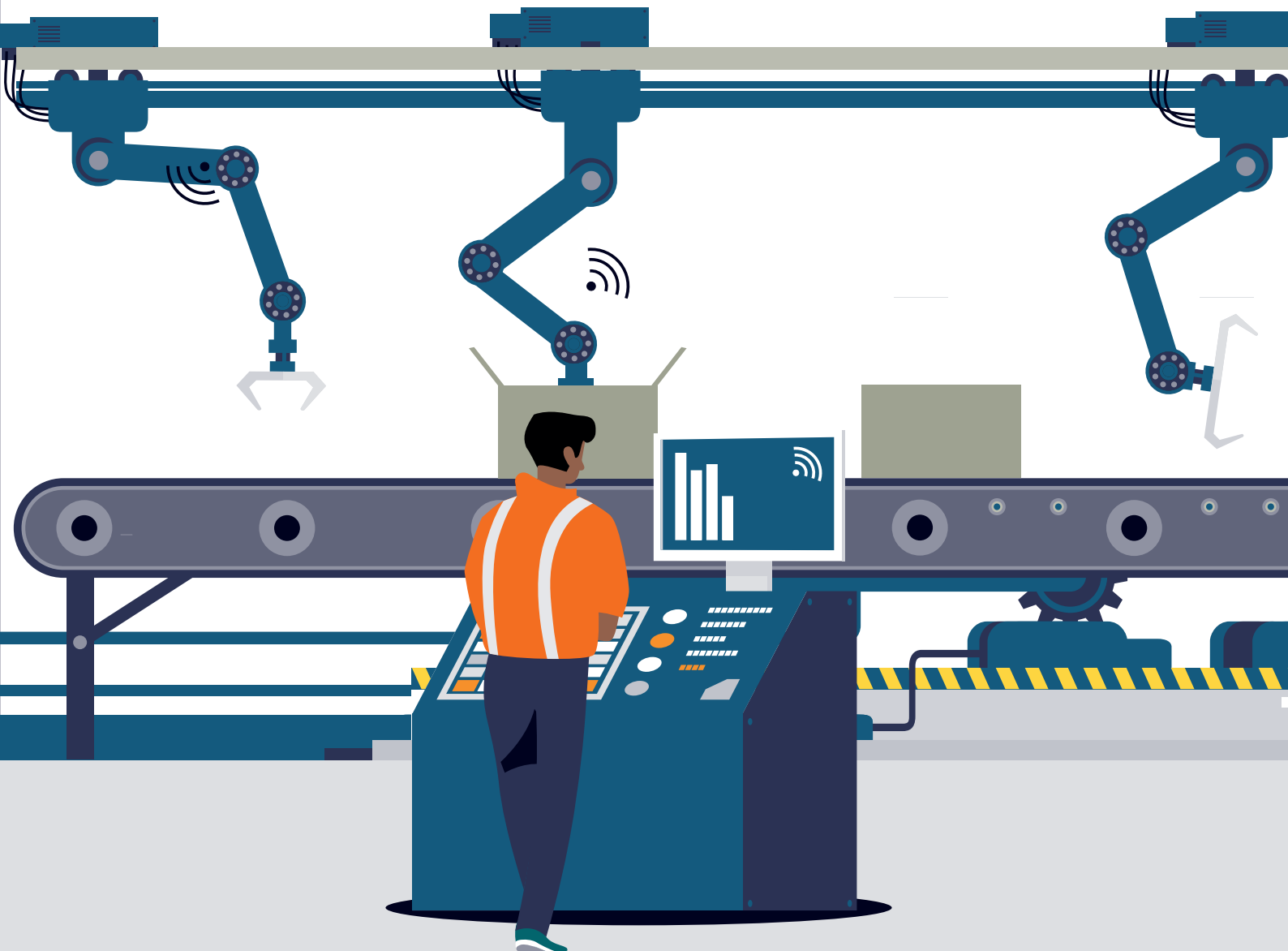
Conclusions

There's no better time for manufacturers to start their digitalisation journey and reap the rewards of more agile, flexible and efficient production processes in the face of ongoing volatility.

Where investment in brand new equipment is not possible or severely delayed due to supply shortages, retrofit or refurbished models provide an ideal option for organisations.

Not only is it better for environment, it also enables manufacturers to digitalise the factory floor sooner.

With support from knowledgeable, specialist financiers, smart finance solutions can make investment in digital transformation affordable and manageable for manufacturers.



References

1. IHS Markit / CIPS UK Manufacturing PMI (Oct 2021)
2. The Engineer, Chips Act to protect EU against semiconductor shortages (9 Feb 2022)
3. Bain & Co., Beyond the Downturn: Recession Strategies to Take the Lead, 16 May 2019); Harvard Business Review, Roaring Out of Recession, Mar 2010); Harvard Business Review, How to Survive a Recession and Thrive Afterward (May/ June 2019)
4. PwC, Global M&A Trends in Industrial Manufacturing & Automotive Sectors: 2022 Outlook (2022)
5. European Commission, Digitalisation & Beyond: The COVID-19 Pandemic & Productivity Growth in G20 Countries (July 2021)

www.siemens.co.uk/financing