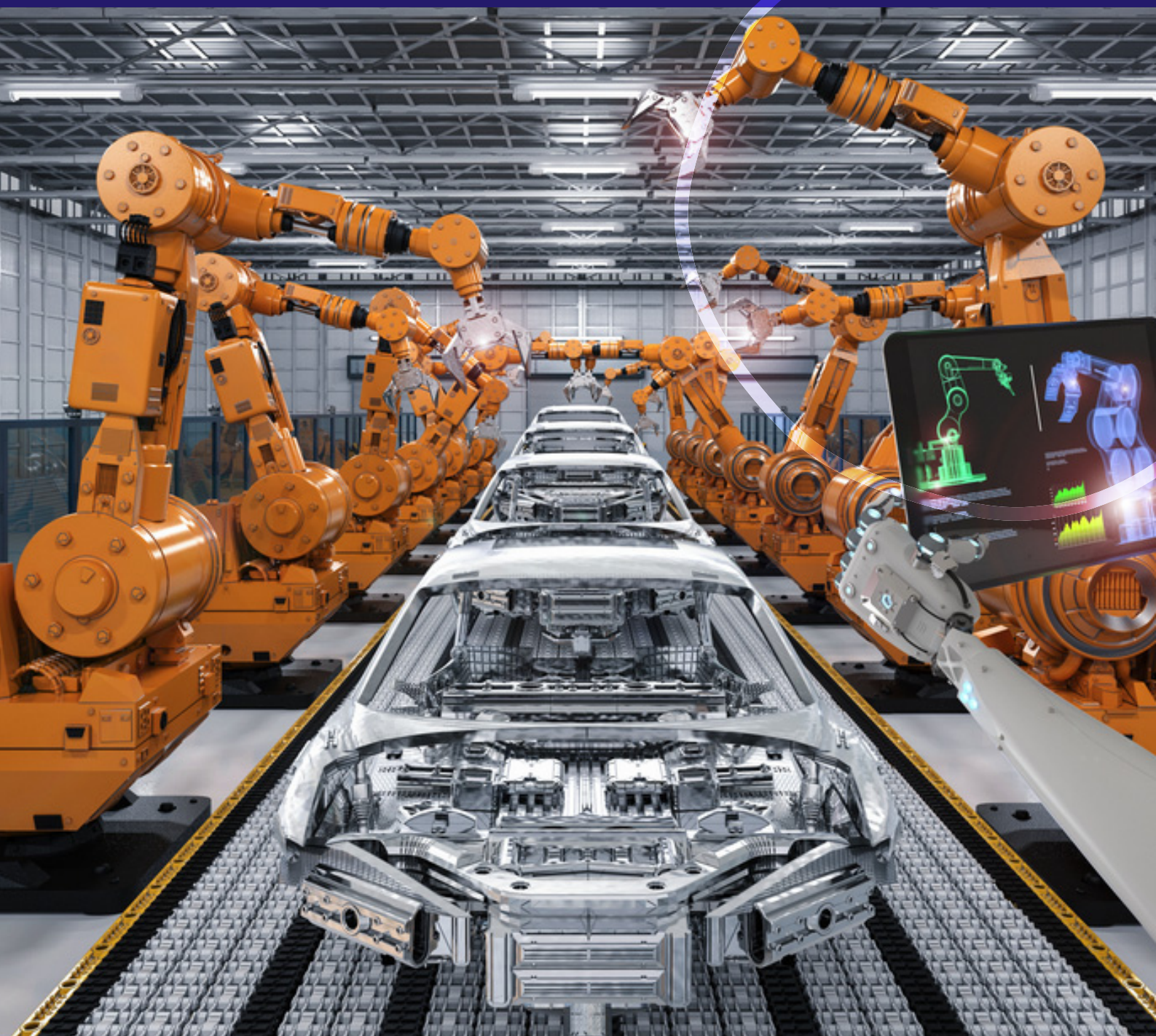
CULTURE CONSULTANCY
thinking culture

Whitepaper

From factory floor to digital industry: how manufacturing can future-proof its culture



What springs to mind...

...when you think of manufacturing? Overalls, factories, getting your hands dirty? It's a common misconception, and one that belies the innovation and forward-thinking that characterises this multifaceted industry.

You cannot overestimate the importance of manufacturing for the UK economy. It accounts for [1] a huge share of total exports (45 per cent). Wages in manufacturing are around 15 per cent higher than the national average, and accounts for 65 per cent of private sector R&D spending.

Manufacturing is highly lucrative and plays a pivotal role in the livelihoods of our population.

So, how can manufacturing businesses that have been occupying two worlds – futuristic Artificial Intelligence (AI) and high-tech robots, juxtaposed with the traditional 'blue-collar' environment – address the challenges caused by two cultures that seem diametrically opposed?

Fast-paced, sexy and clever

Manufacturing is a bit of catch-all term but the scope it covers is vast: chemical, auto, aero, electronic, and mechanical engineering. It is transportation, fast-moving consumer goods (FMCG), pharmaceuticals, construction (eg steel, plastics, carbon). It's the technology we'll be addicted to in 5 years' time. It's human augmentation and virtual reality. This is a seriously clever industry.

Ground-breaking advances happen in manufacturing - every single day. AI-driven machinery, computer-integrated smart factories, meat alternatives and renewable energy sources. These innovations change the way we live as a society, and the impact our modern lives have on the planet. Manufacturing is absolutely a big deal.

All this creativity and capability makes it a sexy, fast-paced arena in which to work. Consequently, it's a fertile ground for cultural shifts and business inflection points. The culture challenges within, say, the financial industries, are well-examined territory. But the culture norms within manufacturing don't grab headlines, and are therefore more concealed – but equally as complex.

Historically, leaders in the industry [2] have focused on material outputs, but evidence suggests that this is now changing, with industry C-suites exploring ways to build a sustainable workforce to ensure productivity and profit. This approach signals that the industry is ready to embrace and explore the skills, knowledge, behaviours and mindsets of its people.

Industry 4.0 – what's the catch?

Perhaps the greatest cultural challenge facing manufacturing right now is the advent of Industry 4.0 -the drive to digitise production. It's an ambitious initiative that is shaping manufacturing from the ground up, impacting SMEs to global market leaders.

According to recent research [3], companies have taken significant steps to adopt digital technologies, with 80 per cent feeling confident that Industrial Digital Technologies (IDTs) will be a reality in their businesses by 2025.

McKinsey estimate that [4] digital collaboration has the potential to unlock more than $100 billion in value, thanks to productivity boosts of 20-30 per cent in collaboration-intensive work processes.

Sounds too good to be true – so what's the catch? Well, businesses will miss opportunities if they neglect their employees and get caught up in the 'sexy manufacturing' hype. These are exciting times for sure, and no-one loves cutting-edge robotics and slick technology more than us. But leaders also need to refocus on their people. What is their place in the business now? Are they being taken along on the journey? Do managers have the core skills needed to adequately support and develop their teams? When the answer to this is no, we've seen the damaging effects first-hand when working with clients in the industry. The palpable disenfranchisement of someone who has been doing their job brilliantly for 10 years, and then feels ill-equipped for today's workplace. Or, the beginning of a 'them and us' culture as younger employees with excellent digital skills are at odds with older, more experienced team members.

Whatever industry you're in, your people are always your greatest asset. Digital transformation isn't just a tech-only exercise. The investment will only pay off if you change your culture to support your new business strategy and required ways of working. It's not just about training employees on how to use the technology, it's about shifting the mindset to 'think digitally'. Manufacturing businesses will also need future-proof leadership and skilled managers in place to ensure the benefits of Industry 4.0 are long-lasting. Some key traits for innovative leaders are adaptability - having an agile mindset where test and learn is possible, without fear of failure. Both leaders and managers need to build resilience to cope with the constantly changing environment, as well us having a strong awareness of technology and the skills required, not only for today but for the workforce of the future.

Developing the ability to collaborate will also be vital as managers strive to innovate and move their organisation closer towards digitisation. What does this mean in practice? It's identifying and developing the talent in their teams, and recruiting the right people, with the right attributes into the right roles, and potentially cooperating with partners and competitors. In a world that is becoming ever more complex, the leaders who learn to effectively collaborate, whilst playing to their strengths are the ones who will succeed. It is always the people who innovate - not the technology.

Manufacturing companies now have the opportunity to build something truly remarkable, and enduring, if they combine digital innovation with proper investment in the workforce. Human skills and expertise increase continuously if you invest in them. Give your people the opportunity, and they will drive your business forward.

Legacy thinking vs future potential

A multi-generational workforce poses plenty of cultural challenges, and manufacturing has one of the highest percentages of workers aged 50+ in the UK economy. Alongside retail, health and education, these industries account for approximately half of all 50+ workers in the UK. [5]

This trend is mirrored in the US, where in 2019, the National Association of Manufacturers estimated that one-quarter of it's workforce was age 55 or older.

Simon Jacobson is Vice President of Gartner's Supply Chain Research team. He specialises in how the merging of technology, people, process and data enables 'Smart Manufacturing', and he believes that 'people are the new constraint.' [6]

Dismantling and challenging 'tribal thinking', and supporting more established employees through the change journey, is 100 per cent possible if you equip leaders with the right tools. At Culture Consultancy, we've worked with teams facing these challenges. We've witnessed how this tribal thinking can manifest itself: resistance to change, lack of motivation, reduced productivity, or a negative influence on the team. All of these behaviours will spell trouble if the leadership team are unable to recognise these as cultural issues, and support people through the change – and maybe even transform them into innovation agents. [7]

Our go-to methodology when working with clients is our 4 E's Human Change Principles: **Educate**, **Engage**, **Empower** and **Enable**.

Employees can only engage with change if they are properly supported.

- Educate your people with the rationale behind actions
- Engage workers by ensuring they're motivated
- Empower employees to take ownership
- Enable them to create the environment and structures you're seeking.

A cause of anxiety for many employees is that digitisation will render human input worthless, and mass redundances will follow. However, the fear that greater automation would mean less people has been proven unfounded. A recent study [8] concluded that businesses who move quickly to adopt the use of robots tend to increase the number of employees, while industry job losses are more concentrated in firms that make this change more slowly. A 20 per cent increase in industrial robots in manufacturing from 2010 to 2015 led to a 3.2 per cent decline in industry-wide employment. And yet, for firms adopting robots during that period, employee hours worked rose by 10.9 per cent, and wages rose modestly as well.

Let's picture this, then: a growing workforce, digitisation that is transforming systems and processes, a widening generational gap and a disparity between economic and educational backgrounds, plus a possible lack of diversity in your team. These are all complex inflection points that are being played out right now in manufacturing businesses, large and small, globally and nationwide.

What's more, these are all about organisational culture, and culture is a powerful differentiator in creating a successful business.

Sticky innovation and how to achieve it.

If manufacturing businesses can build a workplace culture that is specifically designed to support digital transformation and innovation, they stand a strong chance of being fit for the future.

The benefits of embedding a culture of innovation are tangible. For example, increased productivity and enhanced employee experience. Both of which will equate to enhanced performance on an individual and team level. People give their best when they're engaged, aligned to the overall business goals, and when they have their voice heard. All of these things contribute to a culture of innovation.

Customer satisfaction might not obviously be associated with culture, but it's a crucial outcome of innovation. The chain of action goes like this: your leaders are horizon scanning and anticipate changes in their customer market.

From a customer perspective, you feel like the company understands you - they're on your level. They are delivering what you want, in the way you want it, at an acceptable price point. The customer feels satisfied, and will then demonstrate loyalty. All of this impacts positively on your brand reputation. Your key stakeholders then see a positive return on their investment – that can be financial, an investment of time, or an emotional and intellectual investment.
So that's the ultimate goal. But can you actually create a culture? Yes. It starts with gathering intelligence to assess what is working well, and what is inhibiting progress. Then you can design the culture that helps you to achieve your goals: for the manufacturing industry, priorities will be to innovate and to support your people to implement digital transformation. Some finer focus points might be to embrace a collaborative way of working, to develop resilience and ethical leadership, and to work on inclusivity.

The task then is to ensure those focus points are built into your foundations and ingrained in the day-to-day life of the company -so that your culture sticks.

Diversity, inclusion and the STEM conundrum

Leaders stand a good chance of overcoming cultural obstacles if they demonstrate exemplary leadership and embed a future-fit culture. Each person on the payroll has a place within the organisation: their ideas, ways of working, age, experience, education and background all bring something valuable to the table. Each person can contribute and make a genuine difference to business success or failure, and there's much evidence to support the fact that diversity equals profitability.

There have long been general concerns about the lack of diversity within manufacturing, and it could be argued that this alone is the industry's greatest threat.

The statistics are alarming. The UK has the lowest percentage of female engineering professionals in Europe. Just 12.4 per cent of all UK engineers are women. More than 90 per cent of people achieving Science, Technology, Engineering, Mathematics (STEM) apprenticeships are men. Why such disparity? To get a clearer picture, we have to go back to the beginning, when kids are deciding what GCSE's they want to study, or the A levels they need. What messages have girls internalised about who can do certain jobs? Many are perhaps subtly absorbing the false notion that manufacturing/engineering requires physical strength. Are girls being directed into 'softer' subjects such as humanities, languages, and the arts? Why are tool benches and cars marketed towards boys, and toy post offices always aimed at girls? Of course, this doesn't prevent parents from buying chemistry sets and Hot Wheels for their daughter, but all these subtle (and explicit) gender stereotypes shape what our children think is possible, their expectations of the adult world, and their place in society.

The Wise campaign [9] advocates for gender balance in STEM occupations. They looked at the 2019 UCAS data for students studying computer science related degrees, and reported that only 19 per cent were female, with a staggering 81 per cent of students being male. Similarly, the percentage of female students studying engineering and technology degrees made up a mere 19 per cent of the total students between 2017 and 2018.

All this points to the need for a long-term, sustained effort in education, right down to primary school level, to encourage and nurture a love of STEM subjects in girls. Without this, these stats will never change and nor will the industry, which will make UK engineering offerings less competitive.

There's also some exploration needed around women who've studied for a STEM degree but decided not to pursue a career in manufacturing. Is a deeply ingrained 'macho culture' creating an air of hostility – either real or perceived – that's putting female graduates off? What could the industry do to make itself more appealing to female graduates? How can HR managers seek to recruit outside of their usual talent pools?

Then there are the more senior women who have career breaks to start a family, only to find they can't pick their career up where they left off because things have moved on. Efforts could focus on upskilling programmes or 'refresher' keeping in touch days to cover any changes. These women have the requisite core skills and knowledge – why not encourage and welcome them back to the industry?

Manufacturing businesses now have a unique opportunity to kick-start the biggest cultural shift the industry has ever seen. By implementing policies that support gender balance and genuine inclusivity, they can design a culture of innovation for the future.

Covid, Brexit, barriers to growth and beyond

Despite incredibly turbulent times, manufacturers have proven time and again that when faced with adversity, they rise to it. In Spring 2020, when the Covid-19 pandemic was spreading and we went into national lockdown, advanced technologies helped the Government, and essential services, to manage the huge disruption. Fortunately, manufacturers had been embracing cloud computing, wireless connectivity, cybersecurity, automation, robotics and supply chain technologies for some time. These technologies directly aided manufacturers' efforts to manage the complex issues related to the pandemic.

The Ventilator Challenge was another proud moment for the industry. A consortium of 20 firms, including the likes of Rolls-Royce, Airbus, Ford and McLaren, designed and produced 14,000 ventilators for the NHS. From cars and aircraft engines, to life-saving respiratory equipment, this initiative displayed astounding adaptability and innovation.

The necessity of remote working also resulted in huge constraints or opportunities, depending on your viewpoint. Pre-Covid, the acronym WFH was pretty much unheard of in the industry (as it was for many sectors), yet leaders in manufacturing have acknowledged that not all jobs have to be performed onsite.

But, undoubtedly the Covid pandemic hit manufacturing hard. A June 2020 survey [10] found that 91 per cent of SMEs see barriers to growth which has risen from 87 per cent in Q4 2019. Concerns amongst SME manufactures included: volatile cash flow 24 per cent, red tape 11 per cent, bank restrictions on lending 10 per cent, lack of understanding from lenders 7 per cent, high bank fees 6 per cent, and cost of labour 5 per cent. People's concerns about the future of their own business rose by 5 per cent.

Remember when all we had to worry about was Brexit? The uncertainty about its impact on supply chains, importing goods, labour and so on, meant that industry leaders were left trying to plan for the unplannable.

Based on this year alone, the industry has shown true grit and ingenuity which suggests a positive future. The way forward should include a carefully integrated set of policies that address these substantial cultural challenges. Targeted solutions could involve boosting knowledge with specific technical training, enhanced inclusion and diversity, focus on leadership skills, and cultural alignment across divisions/geographical sites.

More than ever before, there is much to be excited and optimistic about.

Case studies

DEVELOPING THE CULTURAL TENETS TO DRIVE SUCCESS

3-stage methodology | Inclusion & diversity

Adaptable for online & in person

The client: Fortune 100 company; a division of a global world-leading manufacturer of construction and mining equipment, engines, industrial gas turbines and diesel-electric locomotives.

We helped them set the cultural tenets they wanted to live by, using our structured 3-stage methodology of insight, design and embed. We helped to create something that aligned with the overall company culture but embodied their greater ambition. We ran one-day culture design workshops that were deliberately 'away from the norm' and 'edgy', to tap into the team's creativity. What leadership legacy did they want to leave behind? How were they going to be more inclusive?

THE NARRATIVE TO ATTRACT THE RIGHT TALENT

Employee Value Proposition (EVP)

Adaptable for online & in person

The client: Covanta, an American energy-from-waste company who were establishing operations in the UK.

We designed a high-level EVP for their staff, which transformed culture and values into a valuable, tangible and measurable asset of the business. It provided staff with a unique narrative to the business that everyone could subscribe to. Covanta's EVP played a crucial role in attracting top UK talent to work for them, and built their reputation as a credible employer. We design EVPs with you, either online or in physical workshop settings, that will increase employee satisfaction, and align and unite staff across the business.

"The whole room felt different, and so did we! This new level of energy and creativity helped us to define and anchor the pillars of our new culture in such a way they could re-define and communicate the new culture across the whole of our Division. The venue contributed towards creating an impactful and memorable experience."

"The attitude of our staff has become refreshingly open and positive with a growing recognition of their important role in our business, and how much more productive we can be as a smoothly functioning team. There is no way we could have achieved this change without the assistance of Culture Consultancy."

END-TO-END CULTURE TRANSFORMATION

3 stage methodology| Culture Assessment™ | Leadership Programme | Top team facilitation

Adaptable for online & in person

The client: EPTA UK, part of a multinational group specialising in commercial refrigeration.

We led an all-encompassing programme to transform EPTA UK's culture and leadership for efficiency and effectiveness, after they acquired two separate companies. We used our 3-stage core methodology, including our Cultural Assessment™ to identify blockers and enablers for future performance. We designed the future EPTA UK culture, and developed expected behaviours and ways of working based on the newly-defined culture. We created and implemented their communications and engagement plan, developed and implemented their cultural roadmap, and ran SMT leadership coaching and facilitation sessions.

DEVELOPING LEADERS TO BUILD A CULTURE OF INNOVATION

3 stage methodology | Innovation Maturity Assessment™ | Next Generation Leadership Programme | Top team facilitation

Adaptable for online & in person

The client: John Hogg, a leading manufacturer of solvent soluble dyes and marker chemicals for the international petroleum industry.

Stage one:

We led a two-phase approach. Stage one: Insight, design and embed a culture with focus on high-performance and quality. We carried out our Culture Assessment™, using data from employee surveys, performance reports, interviews and focus groups to gain a current view of the culture within the business.

Stage two:

To embed a culture of innovation, we ran our Innovation Maturity Assessment™. This assessment builds an understanding of the different levels of innovation maturity across the organisation and acts as a benchmark for developing an understanding of the people, skills and behaviours which will be needed to achieve your innovation goal. We then ran our Next Generation Leadership programme for the SMT. This unique, bespoke, holistic training package included resilience, collaboration, diversity & inclusion, ethics and adopting a tech-savvy approach.

It's time...

So, what next? We've taken a good look at the manufacturing landscape. Now let's look ahead: what type of industry do you want to see in the next year, 5 years or the next decade? Some challenges, like the concerns around a lack of diversity, will take longer to address. But it's absolutely possible.

Firstly, manufacturers are perfectly poised to create a culture of innovation. They've already demonstrated a capacity for agility and responsiveness. The three core components of innovation are a mix of:

Intelligence: the only certainty is uncertainty. Consumer demands, technology and external factors are fluctuating daily. By leveraging intelligence and insights it's possible for the industry to anticipate the direction of travel and get in front of it.

"...Innovation is all about solving real problems so if your intelligence points to problems in product, in integration with users, in sustainability, in 'greenness' or any other area then the chances are that by using informed creativity to provide solutions you are driving towards future success"

'Building a Culture of Innovation', Cris Beswick, Derek Bishop and Jo Geraghty

Collaboration: an innovative culture is characterised by cross-collaboration between teams, leaders, and employees. Drawing on ideas from multiple sources teams can create future-proof solutions. The first step might be to agree on priority areas for innovation. This will get the ball rolling for forward travel, whilst also demonstrating to the whole organisation a collaboration mentality. Combining internal resources with external influence is also a huge measure of an organisation's innovation maturity. Customers, suppliers, external bodies and even rival companies can all form part of the collaborative mix. It will take time to fully embed a collaborative mindset, but there's no time like the present.

Adaptability: to integrate fast-paced change into business solution, adaptability is key. If trends are moving faster than your business is growing, industry leaders have to become comfortable with ambiguity, of knowing the preferred goal but not quite knowing what that end point looks like. Using insights and intelligence to 'best guess' the direction of travel will enable your leadership team to develop a strategy that has some flexibility.

"When the world is changing fast, then permanence is not the solution."

'Building a Culture of Innovation', Cris Beswick, Derek Bishop and Jo Geraghty

Manufacturing also needs **exemplary leaders** so the industry can thrive. What does this look like? For starters, it's inspiring the shared vision, ambitions, or goals and enlisting others to align and focus their contribution to achieving these. It's about modelling the required values and behaviours, enabling teams and individuals to perform to their very best and creating the environment of continuous learning or improvement. This means ensuring managers at all levels of the organisation can lead in a way that combines ethics, purpose, the planet, profit and people. All these elements can happily co-exist, and your capacity for innovation will increase exponentially.

Finally, to secure a profitable, sustainable future, businesses must **focus on their people. People are always your prized asset.** Develop their talents. Upskill your workforce so you can reap the rewards of technological investment. Understand what motivates them. Design an employee experience that means your people will be firing on all cylinders, and will give their best for the organisation every day. Reassess how and where you recruit talent. Create an inclusive culture that accepts and embraces diversity in all its forms: race, ethnicity, age, gender, sexuality, cognitive diversity, background, education and working styles. It all counts.

Talk to us about our Innovation Maturity Assessment™. It will help you to understand and enhance your capacity for innovation, so that your business is futureproof.

Ready to talk culture?

To learn more about how we can help you create the right culture for your business, get in touch.

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References:
[1] https://blogs.lse.ac.uk/businessreview/2020/06/29/manufacturing-matters-for-the-uk-economy-more-than-people-commonly-think/
[2] https://www.themanufacturer.com/articles/the-future-of-manufacturing-is-people-not-things/
[3] https://www.makeuk.org/news-and-events/news/bouncing-back-smarter
[4] https://www.mckinsey.com/business-functions/operations/our-insights/digital-collaboration-for-a-connected-manufacturing-workforce
[5] https://www.cipd.co.uk/Images/megatrends-ageing-gracefully-the-opportunities-of-an-older-workforce-1_tcm18-64897.pdf
[6] https://www.themanufacturer.com/articles/the-future-of-manufacturing-is-people-not-things/
[7] https://www.amazon.co.uk/Building-Culture-Innovation-Practical-Framework/dp/0749474475/ref=sr_1_1?dchild=1&keywords=building+a+culture+of+innovation&qid=1605211789&sr=8-1
[8] https://www.themanufacturer.com/articles/automation-creates-jobs-so-long-as-you-move-quickly/
[9]
https://www.stemwomen.co.uk/blog/2019/09/women-in-stem-percentages-of-women-in-stem-statistics#:~:text=When%20we%20looked%20at%20the,81%25%20of%20students%20being%20male.&text=Similarly%2C%20the%20percentage%20of%20female,students%20between%202017%20and%202018.
[10] https://www.manufacturingmanagement.co.uk/news/smes-concerned-about-barriers-to-growth