

START-UP TO SCALE-UP: PRODUCTIVITY, LEADERSHIP AND SKILLS

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The pandemic has brought serious challenges to the UK economy. But, as the ONS has found, better-led businesses have fared better and have been more resilient throughout these uncertain times. SME manufacturers place great emphasis on investment in their people to improve productivity. To scale up post pandemic, investing in management and leadership skills will be vitally important.

Management skills such as communication, team-working and problem-solving are essential skills: they enable manufacturing SMEs to make the most of their employees' technical skills and will help workers progress within their roles and within the organisation. Good leadership will also be central to the ability of SMEs to enhance their firms' capacity to innovate and remain competitive in an increasingly hybrid and digital world.

Good leadership is not a 'nice to have'. It is vital to the success of individuals and businesses across the manufacturing sector to scale up. To increase your firm's productivity and competitiveness, or to sharpen your management skills, please visit the CMI's Education and Learning page:

www.managers.org.uk/education-and-learning/

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PRODUCTIVITY, LEADERSHIP AND SKILLS

For years now, manufacturers have identified access to skills as one of the biggest challenges faced by businesses today. Whether that is to grow and scale, or just to stay afloat, current shortages in labour are having an impact on businesses on a day-to-day basis. A key element of productivity and skills that is often overlooked in manufacturing is leadership, but this is recognised as a relevant factor for the wider scale-up community. This chapter highlights the views of manufacturers on how they improve productivity, the role of digitalisation, their priorities for leadership skills and how a lack of skills affects a business at the incremental level.

Scale-up companies tend to demonstrate greater levels of productivity than companies that are not scale-up. This is one of the key differences between companies that scale up quickly and companies that may grow modestly, or in a linear fashion. When a business scales up, it is in effect increasing its output substantially, while the use of inputs, such as labour and capital, increases at a slower rate. This leads to economies of scale.

In the last three years, SME manufacturers have taken several steps to materially improve productivity in their businesses.

ONLY 11% OF SME MANUFACTURERS HAVE DONE NOTHING TO MAKE PRODUCTIVITY IMPROVEMENTS

SME manufacturers prefer to invest in people more than in technology or products and operations to improve productivity

Types of productivity improvements: from most common actions to least common

PEOPLE

- Training to upskill existing staff (51%)
- Leadership strategies to increase motivation (42%)
- Hiring new workers (36%)

TECHNOLOGY

- Introducing new advanced technologies (e.g., 3D printing or AI) (30%)
- Introducing / incorporating more simple technologies (e.g., smartphones) (23%)

PRODUCTS AND OPERATIONS

- Streamlined product offering (23%)
- Prioritising cost cutting over higher output (17%)

Source: Make UK Start-up to Scale-up survey 2021

Just over half of SME manufacturers indicated that they prioritise investment in training to upskill existing workers to improve productivity. While second to this was utilising leadership strategies to increase worker productivity, this includes using various motivation tactics and established models such as “Kaizen”. The top three is completed by the hiring of new workers with relevant skills, with 36% of manufacturers indicating that they do so.

It is intriguing that SME manufacturers place greater emphasis on investment in people to improve productivity, rather than on more reliance on technology adoption and innovation of processes. However, 30% of SME manufacturers did indicate that advanced technologies, such as 3D printing, machine learning or automation, have been applied to improve productivity. Moreover, 23% indicated relying on the introduction of simple technologies to improve productivity – for example, connecting operating machinery to smartphones or tablets through cloud services to better monitor the conditions of machinery and reduce the costs of repair and maintenance.

The choice of favouring skills-based solutions to productivity over technology-based ones may be down to the perceived costs of both options. Applying leadership techniques and upskilling may seem more cost effective in the short run for manufacturers, given that there is a lower cost to failure, whereas the introduction of technologies may be a risky investment and have a high cost of entry.

It is not a bad thing that SME manufacturers value the contributions of skills and people to their productivity. As already highlighted, skills are the biggest barrier hindering SME manufacturers from achieving their growth ambitions, so it stands to reason that many of their productivity investments focus on solving those challenges. However, the priorities may also highlight either that SMEs undervalue the productivity-enhancing opportunities technology could bring, or that the barriers to adopt are so great that people-based options are just easier to access. The two should be utilised in combination as the manufacturing industry is both highly skilled and increasingly digitalised.

The role of digitalisation and technology in scaling up

Make UK evidence shows that manufacturers who invest in and adopt new digital technologies are more productive, efficient and resilient. The pandemic, without a doubt, put that to the test. For manufacturers who are planning to increase their production and expand into new markets, advanced digital technologies are the best tools for growth. Our recent report, “Industry 4.0 Green Manufacturing: an Enabler”, shows the impact of adopting technologies such as additive manufacturing (3D printing), robotics, AI or digital twins.¹⁸ Most manufacturers in the report see significant benefits to adopting these technologies. For example, 56% of manufacturers say they have helped to reduce costs and improve their productivity. In addition, 38% have benefited from greater flexibility and innovation, and 33% are witnessing better energy efficiency.

The research highlighted that manufacturers are turning to innovative new financing models to help overcome barriers such as access to finance. For example, if the upfront costs of investing in new, digital equipment are prohibitive, it may be worth exploring a leasing or “equipment as a service” contract, eliminating commitment restrictions and allowing manufacturers to spread costs over time. Such examples demonstrate the ways in which digitalisation can support manufacturing scale-ups, and how easing other barriers to entry, such as finance or skills, can help manufactures overcome their technology challenges.

Training costs are not cheap, and manufacturers could benefit from a tax credit system to reduce costs such as R&D Tax Credits

Contracts Engineering Ltd (CEL) recently completed the first stage of a lean / 5S training at a cost of approximately £5,000, and the business is going through an additional team development training that is running at a cost of £1,200 per day over three days in 2021Q3. CEL could not access any grant funding to support the costs of this training, and historically, if CEL could get a grant, the bureaucratic application process involved, to achieve only 25-33% of funding, deterred access.

A mechanism like R&D Tax Credits, which would allow growing SMEs like CEL to substantially increase spend on training allowing them to also reduce taxes, would lead to an improvement in terms of savings and would eliminate the extra steps needed to communicate with grant consultants.



Made Smarter needs to be rolled out nationally

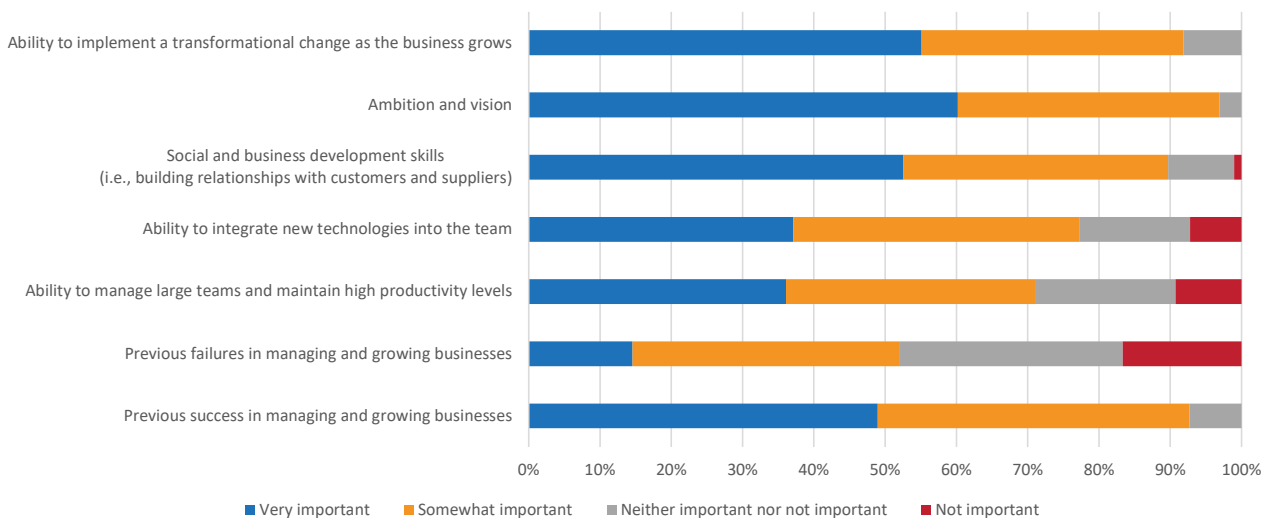
There are a few solutions already available to help SME manufacturers take that critical step forward in adopting technology. One of these includes the successful Made Smarter programme, which places significant values on its pillars – Leadership, Innovation, Adoption and Skills – and has demonstrated that supporting SME manufacturers to adopt emerging technologies can bring about a material change in a business’s productivity. For example, ELE Advanced Technologies (ELE), a manufacturer of components for aerospace, power and automotive subsectors, found that productivity increased by 10% after introducing a condition monitoring solution. It also led to new jobs.

The new technology, which was supported by Made Smarter, used real-time data to predict problems, enabling a faster turnaround to repair and to prevent breakdowns.¹⁹

Though the programme is not nationally available yet, it is well established in the North West, and access has recently increased to further UK regions, including the West Midlands, Yorkshire and the Humber, and the North East, which is a positive development for the manufacturing sector. Going forward, Make UK would like to see the Made Smarter programme rolled out nationally so that all manufacturers could benefit from the programme.

Leadership is critical to the success of a business

Chart 10: The importance of leadership qualities to the success of a business



Source: Make UK Start-up to Scale-up survey 2021

¹⁹ See full case study: “ELE Advanced Technologies: Powering growth through technology”, Made Smarter, undated (<https://www.madesmarter.uk/resources/case-study-ele-advanced-technologies/>).



97% of SME manufactures say ambition and vision is very or somewhat important to the success of their business

Naturally, without clear goals to grow, and without leaders within a business who have the vision and direction to achieve those goals, it becomes impossible to scale up. As expected, most SME manufacturers believe ambition is critical to growing.

Alongside ambition and vision, 93% of SME manufacturers said past success of growing a business is very or somewhat important. The fundamental difference when comparing technical and engineering skills with leadership skills is a greater emphasis on previous experience for the latter. While experience is important to both, the added risk associated with a failure in leadership means SME manufacturers are less willing to compromise on this aspect.

Interestingly, a much smaller share (52%) of manufacturers place value on leadership experience that includes the failure to grow as important. This may be down to a cultural difference in the UK business environment, which may often punish failure more than it rewards success. Although a riskier venture, there is value in the experience of failure, and SME manufacturers should consider whether their future leaders might be able to come from such a group.

The only other qualities to gather a share of less than 90% of SME manufactures indicating very or somewhat important include the ability to manage teams (71%) and the ability to integrate new technologies (77%). Though both sit within a majority view for SME manufacturers, more SMEs (90%) indicated that having social and business development skills is critical to being successful.

HELP TO GROW: DIGITAL

Earlier this year, the Government announced the Help to Grow: Digital scheme (along with Help to Grow: Management) to support the growth of SMEs looking to take a step towards digitalisation. The scheme aims to support 100,000 SMEs over three years with online advice and guidance, and a voucher worth up to £5,000 to cover the cost of eligible software enhancements. For the time being, the scheme is not fully suitable for manufacturers who access a more diverse range of software to improve productivity, but we believe that over time there is capacity for this scheme to evolve into a useful tool for the industry.

In addition, linking elements of the Digital scheme with Help to Grow: Management (HtGM) can be an enabler to coupling management skills with effective digital adoption.

The key to improving the pool of quality leaders can be influenced by the Government by increasing opportunities to network and offering schemes that allow leaders to access mentors and training. This should be done in partnership with industries and with trade associations like Make UK, who can help support the building of networks for new and existing leaders.

In terms of training and support, many solutions already exist that allow firms to seek out mentors and training for leadership. For example, the recent HtGM scheme includes a set of courses designed to support leaders in SME businesses to improve decision making and productivity. To understand whether such schemes are effective, it is important that the Government aims to maximise take-up. Without high-quality leaders, the UK manufacturing industry will not only struggle to scale up but will also struggle to meet the UK's other targets, such as levelling up, net zero and a global Britain.

Going forward, the HtGM or similar solutions should be expanded, if there is growing evidence of its effectiveness, by increasing access as well as widening the pool of talent that qualifies, such as young people, to develop our future leaders. For example, recently the Chartered Management Institute (CMI) published research on "Work Ready Graduates", that highlighted 78% of employers believe that graduates are not fully equipped with the skills they needed to be work ready.²⁰ In the long term, these same graduates may not be ready to be our future leaders. Alongside soft skills, building management and leadership skills from an early age is critical to the success of building an environment for SME manufacturers to scale up, and solutions such as HtGM may offer a short-term answer. In the long term, the shortage of graduates with the skills the manufacturing industry needs should be addressed by higher-education institutions.

HELP TO GROW: MANAGEMENT

The Government announced the Help to Grow: Management (along with the Digital scheme) in 2021 to support small businesses to improve their management skills. This is an executive development programme to support SMEs to boost their business performance and growth potential. SME business leaders will develop their strategic skills to increase their business's long-term productivity, resilience and capacity to innovate. The objective is to upskill 30,000 SMEs over the next three years.

Currently, the programme is targeting SMEs with between 5 and 249 employees and which have been operating for at least one year. It is aimed at senior decision-makers and will be 90% funded by the Government and delivered by universities across the UK. This scheme can be particularly useful to manufacturers who often lack leadership skills as much as technical skills.



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How a lack of access to skills affects businesses at an incremental level

There is a lot of debate around how a lack of skills has affected the growth of the manufacturing industry. But there is little information on how the inability to access a specific skill today impacts the productivity of a business today. This is because it is difficult to measure the impact at an incremental level, but it's the day-to-day impact that accumulates to a long-term systemic issue, like the one we face now. The example below highlights how difficulties in accessing software skills affects workstreams in a manufacturing business.

²⁰ "Work Ready Graduates: Building Employability Skills for a Hybrid World", CMI, September 2021 (https://www.managers.org.uk/wp-content/uploads/2021/09/employability-skills-research_work-ready-graduates.pdf).

PYRONIX DEMONSTRATES HOW A LACK OF SOFTWARE SKILLS AFFECTS DAY-TO-DAY BUSINESS OPERATIONS



Pyronix is a leading manufacturer of electronic security equipment, such as alarms, for various markets, including for residential, commercial and industrial use. The manufacturer is a leading innovator of new technologies within the security market. The organisation turnover is approximately £36 million, with 250 employees, and has been in operation for around 30 years.

As many manufacturers will agree, a lack of available skills, particularly in the area of software and programming, has resulted in a material impact in business performance than otherwise would have been the case should those vacancies have been easier to fill. Sebastian Herrera, CEO of Pyronix, explains how access to skills affects the business on a more incremental, day-to-day level.

More specifically, the current lack of developers is affecting live projects in the business, such as a lack of VUE JavaScript developers, or VUE 3 developers, creating barriers to Pyronix being able to progress new LAN / WAN control panel configurators to the market, with an estimated delay of six months to the overall project. A second project, known as Pyronix HomeControl2.0, a mobile app, was forced to be delayed by approximately six months owing to a failure to recruit the necessary talent. However, as some good news, the company has recently successfully offered the role to an Android developer, which will bring about much-needed progress in its development plans.

Such impacts may appear trivial on the grand scale of the scale-up debate, but they emphasise today the challenges manufacturers face that in turn affect their goals in the future. This example shows that even the most innovative companies face challenges that could have been avoided with the appropriate level of investment in creating the ideal environment for SME growth. Within those six months, the UK risks a competing international entity that is not challenged by the same skills constraints entering the market with a substitute product before Pyronix is able to complete that project.

Make UK has published several reports recently covering various issues in skills, which readers are encouraged to explore further as they are relevant to supporting the growth of SMEs. These are:

- [Green Skills Guiding Principles](#) ▶
- [Unlocking the Skills Needed for a Digital and Green Future](#) ▶
- [Digital Skills for a Digital Manufacturing Future](#) ▶
- [Retain, Recruit, Revise: Four Years on from the Apprenticeship Levy](#) ▶



Make UK is backing manufacturing – helping our sector to engineer a digital, global and green future. From the First Industrial Revolution to the emergence of the Fourth, the manufacturing sector has been the UK’s economic engine and the world’s workshop. The 20,000 manufacturers we represent have created the new technologies of today and are designing the innovations of tomorrow. By investing in their people, they continue to compete on a global stage, providing the solutions to the world’s biggest challenges. Together, manufacturing is changing, adapting and transforming to meet the future needs of the UK economy. A forward-thinking, bold and versatile sector, manufacturers are engineering their own future.

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