



Addressing the Skills Gap in Manufacturing

A People-Centric Approach to Business Success in the 4th Industrial Revolution



The Future of Work is Here. Can Your People Keep Up?

The shortage of skilled workers has become a very real problem for the manufacturing industry – and one that can have a significant negative impact.

Without the right people with the right skills, a manufacturing company simply cannot attain the operational excellence and productivity required to thrive. The ability to bring products to market cost-efficiently – all while meeting strict government regulations – is severely hindered. And digital transformation is throttled.

You may have first noticed the drying-up of suitable talent a few years ago; well paid jobs that used to be filled immediately started taking a month, then two, then three to fill. Before you knew it you had a backlog of openings and very few ideal internal or external candidates with the skills required to step-up.

What's creating this skills gap?

For many it's been the arrival of the 4th industrial revolution – aka Industry 4.0 (I4) – which is often defined as the current and developing environment in which disruptive technologies and trends such as the Internet of Things (IoT), robotics, virtual reality and artificial intelligence are changing the way we live and work¹.

For manufacturers, the trends that characterise I4 are particularly pervasive, and can be seen in smart manufacturing, smart factories, lights-out manufacturing, and the Industrial IoT.

Technology is rapidly accelerating, and herein lies the problem. The skills required to operate these emerging technologies and evolving needs are vastly different to the skills typically required for the manufacturing jobs of decades past. Not only that, but they shelf life of these skills are getting shorter and shorter as technology exponentially accelerates.

This of course dramatically impacts the availability of key skills. Technology is outpacing human adoption and it is proving a serious challenge for industry professionals to continually acquire and evolve the necessary skills. And this, coupled with the struggle to acquire talent in such a highly competitive industry, is a key factor behind manufacturing companies struggling with a skills gap that is impacting the business.

Put simply, if you want your manufacturing company to stay ahead, you need to know how to recruit, retain and continually develop and reskill your people.

In the following chapters we'll look at the main skills gap issues your company needs to address and offer some practical insights into how you can tackle those challenges and drive business success and innovation.

“

The Internet of Things (IoT), robotics, virtual reality and artificial intelligence are changing the way we live and work.



CHAPTER 1

The Labour Shortage and Associated Factors

It wasn't so long ago that your competition for talent existed primarily within your postcode.

But consider this, with a 2018 Deloitte study² suggesting that the manufacturing skills gap shortage will leave 2.4 million positions unfilled in the US alone (putting \$2.5 trillion in manufacturing GDP at risk over the next decade) this seemingly North American problem is beginning to drain talent from across the Atlantic.

"Manufacturers are finding themselves competing for talent globally and against industries they never thought of," explains Mike Bollinger, VP, Global Thought Leadership & Advisory Services at Cornerstone.

We've already seen signs of this in the UK where there was a 24 percent growth in online advertising for Level 3 and above jobs in manufacturing and engineering from 2016 to 2018 - second only to the legal, financial and accounting sector (41 percent)³.

What else is driving the labour shortage?

On the macro side you have near full employment, while on the micro side there's a shortage of supply to meet the demand for the right skilled workers required for I4.

Consider Deloitte's² new 'personas' for manufacturing labour:

- the digital twin engineer
- predictive supply network analyst
- robot teaming coordinator

“

Manufacturers are finding themselves competing for talent globally and against industries they never thought of.

- digital offering manager
- drone data coordinator
- smart factory manager.

These personas differ greatly from the traditional roles typically advertised for in decades past. Compounding this further, the battle for talent isn't helped by the persistent misconception that the manufacturing industry lacks sophistication.

"Manufacturing requires a new technologically savvy worker who operates in unison with sensed machinery and processes," explains Bollinger.

"But knowledge workers span all industries and manufacturing is not top of mind, or as attractive, to the next generation of workers."

So how do you make manufacturing more attractive? Let's delve deeper.



CHAPTER 2

Recruitment and Candidate Attraction

Nearly half of all manufacturing and engineering jobs in the UK (43 percent) are considered hard to fill - the highest of any sector³.

So how do you attract skilled workers when manufacturing is not, say, as trendy as the burgeoning tech start-up industry, or as financially lucrative as the banking sector? It's all about how you position your brand.

"If you're advertising a position along the lines of 'come join the number one plastics manufacturing company in the world', potential candidates today will be like 'yeah, so what?'" says Geoffroy de Lestrang, Director Product Marketing, EMEA, at Cornerstone.

"But if you say, 'help our organisation develop new products for a more sustainable world in plastics', then people will be curious."

Where should you focus your attention to find 14 savvy candidates?

Well, if you're not reaching out to your competitors' talent, you should know that they will be reaching out to yours.

For new graduates, however, you need to go to them. Job fair days at universities and forming partnerships with private and public education organisations are both good starting points. For example, Samsung do open factory tours to college students.

You also need to advertise on the social media platforms your target demographics tend to use, such as Instagram, or even live-streaming video game channels. Chances are that your manufacturing processes are visually entertaining, too, which helps when advertising on multimedia platforms.

"For example, if you work in industrial robotics, a video of two robots carrying a huge exhaust pipe for a truck and a third robot welding is very, very impressive," says de Lestrang.



“

It's all about how you position your brand.

You should also look to cast your talent net wider than STEM students.

“When it comes to understanding clients, trends, and co-workers, you need quite a lot of soft skills, which might not be best learned in an engineering school,” suggests de Lestrangle.

One group that boasts plenty of these skills is the often overlooked 55-plus age demographic.

UK government⁴ research shows this demographic is being sought after more and more - for its experience, loyalty and reliability.

“Would you prefer to hire someone who is 25 and may stay four years in your company? Or someone who is 55 and may stay 10 years in your company until retirement?” asks de Lestrangle.

Where do you look for older workers?

Don't overlook a good old fashioned recommendation.

“People talking to people, as far as we are concerned at Cornerstone, is our recruiting method number one,” says de Lestrangle.

Whoever you recruit, all of your workers - young and old - will need sufficient training programs in place to keep pace with the skills required to navigate I4, which we'll talk about next.



“

When it comes to understanding clients, trends, and co-workers, you need quite a lot of soft skills, which might not be best learned in an engineering school

de Lestrangle



CHAPTER 3

Bridging the Skills Gap

The acceleration of technological innovation that characterises I4 is outpacing the ability of employees to adopt the new technologies and ways of working.

Indeed, in a recent survey, 70 percent of CEOs didn't believe their organisation had the skills to adapt to I4⁵. The same report also found that professionals in manufacturing now need to redevelop their skills every 12 to 18 months⁵.

Learning is the key to closing the gap between technology and adaptability. However, your employees are probably not spending enough time learning. On average, employees spend just 26 hours annually on training⁶.

When you consider that the average 15-year-old Benelux school student spends just as much time on their homework in one month, it's no wonder the skills gap is widening at an alarming rate⁷.

As such, building a strategy around ongoing development should be a business priority. A comprehensive learning solution that provides personalised learning, media-rich online content, and social collaboration is fundamental to building a culture of continual learning.

"Encourage it openly and often; build it in to the work time," advises Bollinger.

And here's the thing: your employees want to learn. According to LinkedIn's 2018 Workplace Learning Report, 94 percent of employees said they would stay at a company longer if it invested in their career development⁸.

Which brings us to our next point: learning should never feel like a chore. Providing a personalised, modern learning experience is a huge factor in encouraging your people to adopt your training programs and develop their skills.

For example, de Lestrage gives the example of online courses⁹ specifically designed by Cornerstone for digital natives to help bolster their interpersonal skills. "It gives them very short tips and tricks in the workforce," says de Lestrage.

"For example, what's the best way to reach your manager? Depending on the topic, is it better to send a note, an email, a text message, or to simply pop your head through their door? If you haven't worked in an office environment before you might not know."

According to LinkedIn's 2018 Workplace Learning Report,

94%

of employees said they would stay at a company longer if it invested in their career development.

CHAPTER 4

Employee Expectations: Retaining Your Talent

Every time a competitor lures away one of your high performing manufacturing employees, it costs you between 90 percent and 200 percent of that employee's annual salary to replace them¹⁰.

So it's critical you help your employees advance their careers internally, before they start looking elsewhere for career development opportunities.

The best way you can do this is by embracing employee-centric development strategies.

"The key question is, 'what's in it for me?' as the employee." says de Lestrangle.

As we said in the previous chapter, one way to motivate, engage and prepare employees for internal job opportunities is through relevant and highly specialised training modules.

But it's not the only way. You can also better retain your existing workforce by using talent management tools and resources that are designed to engage employees in determining

their own successful career paths, or develop a pay-for-performance culture that fosters long-term loyalty.

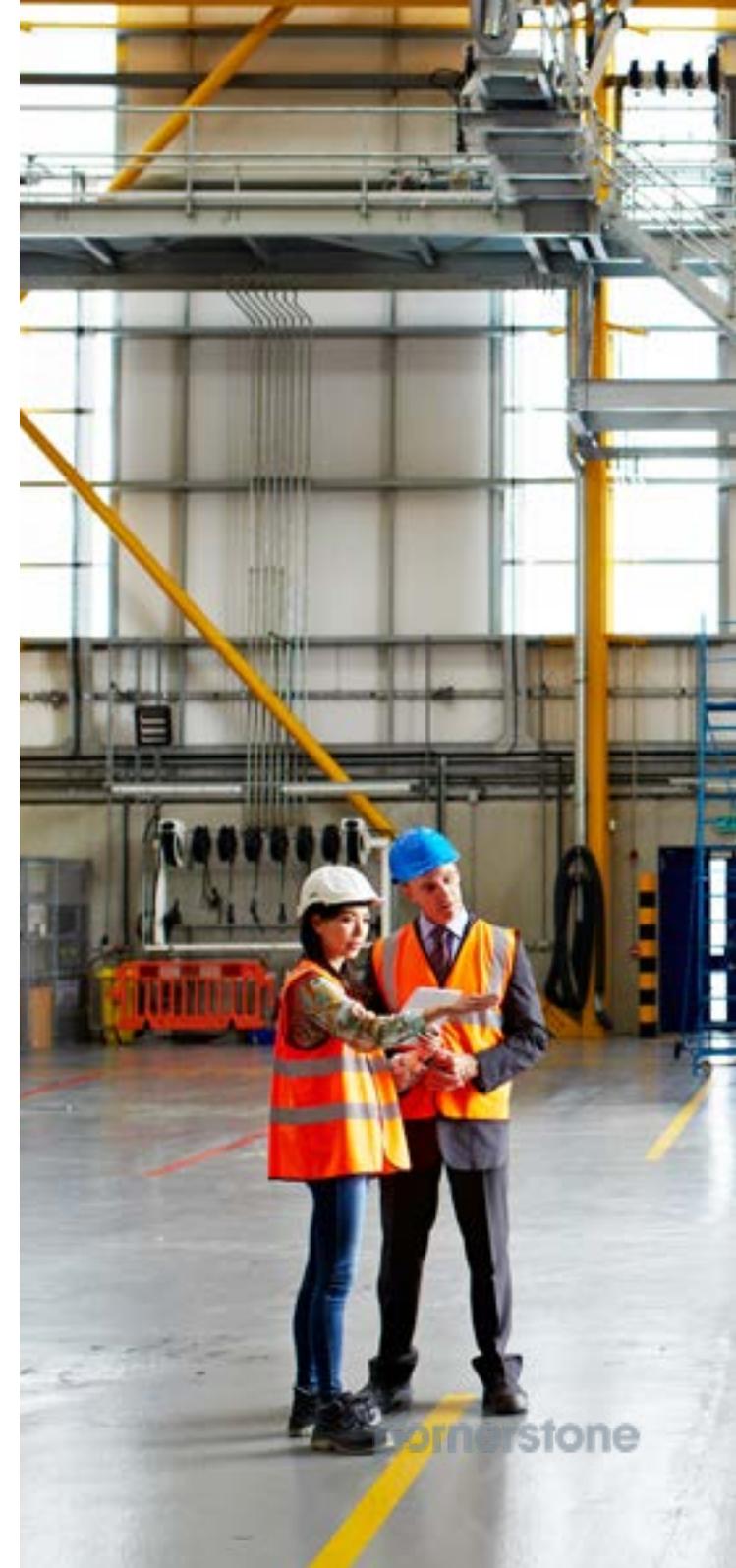
Another strategy is to encourage them to work on internal gig projects for two to four hours a week under a different manager in a related field.

"That's a great way for people to learn new skills, be involved in more projects, expand their own internal network within the organisation, and increase their chances of progressing within the organisation," says de Lestrangle.

You can also identify and fast-track promising talent by collecting and analysing employee performance data via their line managers, who should also be rewarded for identifying talent.

"Acknowledge the fact that the move would not have been possible if the manager had not identified, trained and coached that person. Otherwise, what's in it for them?" says de Lestrangle.

Finally, actively motivate your employees to keep ahead of the skills gap by integrating learning modules with compliance modules - which brings us to our next chapter.



CHAPTER 5

Compliance

Unfortunately, too many businesses view compliance as an impediment or afterthought, rather than an opportunity to attract and further train talent.

A recent survey¹¹ by the Nordic Business Ethics Network found that more than half of Swedish employees, and about one-third of Norwegian and Finnish employees, had noticed unethical behaviour at work that jeopardised safety.

When asked what actions they took after observing the behaviour, almost half of respondents said they did not intervene and/or took no action, with the key reasons being that it might jeopardise their job or that it wouldn't make any difference.

But by fostering a strong culture of compliance you can set yourself apart from your competitors - by building a reputation as an employer who puts employees' interests first.

"Adopting a 'compliant culture' really means your company tries to do the right thing," explains Bollinger.

"That very ethos is attractive to millennials and Gen Z'ers – hence you improve one's reputation and make yourself a more attractive employer."

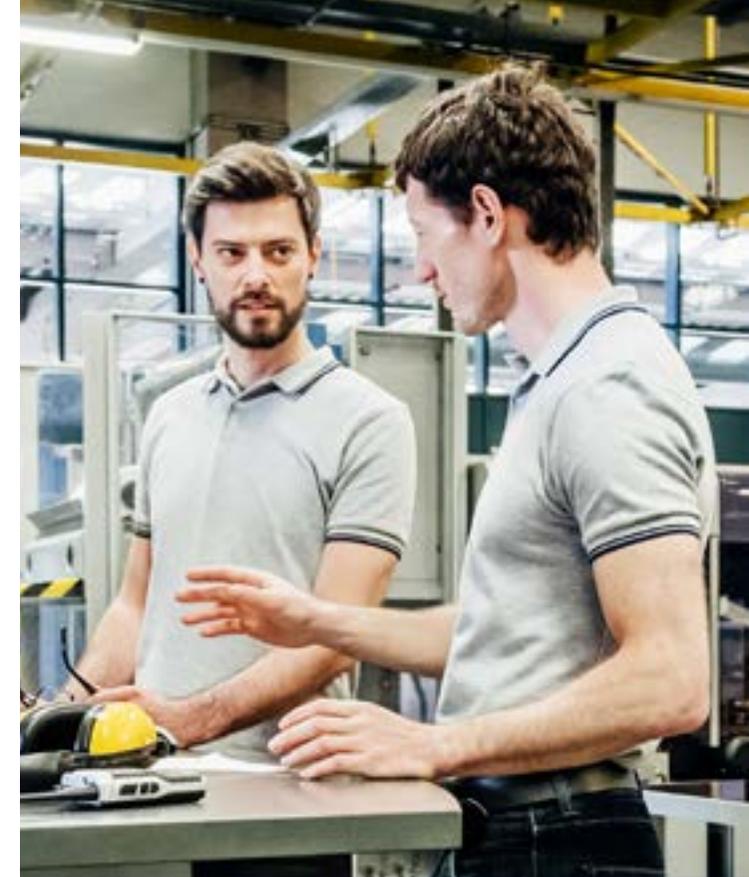
Your company's compliance training needs to be delivered via a state-of-the-art Learning Management System (LMS) platform in order to engage and further train your employees.

This provides the added benefit of opening your employees up to additional training modules and career opportunities.

"It should reinforce a learning culture and generally be a gateway to consume other learning opportunities," says Bollinger.

Adds de Lestrage: "What we try and do is convey additional messages, to give them more curiosity so that they want to learn more.

"This provides the employee with opportunities to discover things so that they can go back to you and say, 'hey, I saw that five minute micro learning video on whatever topic - I'd like to go deeper, it sounds interesting'."



“

By fostering a strong culture of compliance you can set yourself apart from your competitors.

CHAPTER 6

Transitioning into I4

So how can your company best close the skills gap as it transitions into I4?

Well, you'll need to redefine your company's purpose in light of the world's 21st century challenges to ensure you're attracting, retaining and developing the best talent possible.

"That's our core business. That's what we do. That's what we've been doing for 20 years," says de Lestrang.

To help get you started, here's an 10-point checklist your company can use moving forward:

- 1 Candidate attraction: Connect with your target candidate market with a meaningful value statement that connects with their hopes and beliefs. For example, position your company as a leader in making the world more sustainable, not as a leading producer of X.
- 2 Recruitment: Look beyond STEM students – the right talent can be found anywhere. Understanding clients and co-workers requires soft skills, which are often not best learned in an engineering school.

- 3 Loyalty is golden: Gone are the days when younger employees stay at a company their whole career. Expand your search and consider the more loyal 55-plus demographic.
- 4 Market jobs: Manufacturing often involves complex machinery that lends itself to short digital media videos. Use it in your job advertisement videos to pique the interest of candidates.

“

Redefine your company's purpose in light of the world's 21st century challenges.

- 5 Learning on 'the job': Make continuous learning a core part of an employee's job. Build it into their work time.
- 6 Make it enjoyable: Learning shouldn't feel like a chore for your employees. Harness the power of digital media to engage and empower employees to learn.
- 7 Collaboration: Give your employees the opportunity to work on gig projects for a few hours each week under a different department to expose them to internal opportunities.
- 8 Fast-track talent: Discover promising talent more quickly by rewarding line managers who help you identify employees with the potential to take on more highly skilled roles.
- 9 Reputation: Set your company apart from your competitors by building a strong compliance culture. This will make you a more attractive employer.
- 10 Combine compliance with learning: Reinforce a learning culture by ensuring your compliance modules act as a gateway to other learning opportunities.



To find out how Cornerstone can help you address the skills shortage in your organisation and realise the potential of your people, visit us at [csod.co.uk](https://www.csod.co.uk).

Or, contact us at [csod.co.uk/contact-us](https://www.csod.co.uk/contact-us)

References

¹ Erdogdu M, Karaca, C. Institutions and economic policies: effects on social justice, employment, environmental protection and growth. Chapter 5. 2017.

² Deloitte. 2018 skills gap in manufacturing study Future of manufacturing: The jobs are here, but where are the people? 2018.

³ Association of Colleges. Skills shortages and funding gaps: An analysis of the costs of under-investment in skills. 2019.

⁴ IFF research on behalf of the Department for Work and Pensions. Employer experiences of recruiting, retaining and retraining older workers: Qualitative research. 2017.

⁵ Deloitte. Rewriting the rules for the digital age: 2017 Deloitte Global Human Capital Trends. 2017.

⁶ Gallup, State of the Global Workplace 2018

⁷ OECD. Does Homework Perpetuate Inequities in Education? 2014.

⁸ LinkedIn Learning. 2018 Workplace Learning Report: The Rise and Responsibility of Talent Development in the New Labor Market. 2018.

⁹ Cornerstone. Digital Natives are Coming to Work. Are You Ready? 2019.

¹⁰ Society for Human Resource Management. Retaining talent: a guide to analyzing and managing employee turnover. 2008.

¹¹ Nordic Business Ethics Network Nordic Business Ethics Survey 2019.

