

# Meeting the manufacturing skills crisis

*Using staff assessments to improve manufacturing performance and safety*



Questionmark Viewpoint

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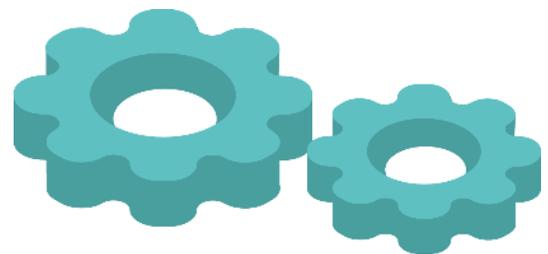
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## Introduction

Commentators have long predicted that technology will replace humans in manufacturing. The evidence says otherwise.

A recent study by Deloitte demonstrated that technical innovation in the production process creates, rather than reduces, the need for more human input.<sup>1</sup>

This means the pace of change requires manufacturing workers to constantly upskill. New technologies have to be understood. New processes must be mastered.

Employers need to drive up the quality of products and more must be done to minimize the risk of health and safety breaches.

Yet, despite this promising future, manufacturers are struggling to find the people they need to fill vacant positions. If this trajectory continues, 2.4million positions will be vacant in the US alone by 2028.<sup>2</sup>

Those that can fill positions now worry about their ability to continue to do so. Meanwhile, workers fear that their current skills base will soon be redundant.

This white paper explores the pressing people-related challenges facing manufacturers. It illustrates how employers can use the information from staff assessments to make better decisions and overcome the problems that are common across the industry.

### Questionmark Viewpoint

Questionmark Viewpoint is a series of white papers and reports that we produce to explore the challenges that our customers are facing, and which we help them address. These papers are based on what we are hearing from customers, and on research from other experts.

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<sup>1</sup> <https://www2.deloitte.com/tr/en/pages/technology/articles/technology-and-people.html>

<sup>2</sup> <https://www2.deloitte.com/us/en/pages/about-deloitte/articles/2018-manufacturing-skills-gap-study.html>

## Typical people-related challenges across manufacturing

People remain at the heart of the manufacturing industry. How they are managed, developed and utilized can determine the success or failure of an enterprise.

But seven common global challenges are preventing employers from realizing their team's potential.

### 1) *Recruiting people with the right skills*

A 'blue-collar drought', whereby too few people are looking to enter the manufacturing industry is creating problems in the recruitment process.<sup>3</sup> There are not enough people with the right skills to fill vacant positions across the industry. According to a study by Deloitte, if employers fail to address the problem of unfilled positions, it will cost the US economy \$2.5 trillion in lost GDP by 2028.<sup>4</sup>

However, despite the pressing need to fill positions, employing people that lack the correct skills can also be dangerous. This points to a serious skills gap.

A survey for McQuaig Global Talent Recruitment found that the biggest barrier for manufacturers was finding people with the right skills for the job. Some 63% of manufacturing hirers noted a skills shortage as the biggest problem.<sup>5</sup>

### 2) *Outdated skills among the existing workforce*

Too many manufacturing employees simply do not have the skills they now need to do their jobs, given the ever-changing needs. A study by Capgemini showed that 37% of manufacturing workers believe their skill set will be redundant in the next five years.<sup>6</sup>

Research from McKinsey found that 87% of the hours production workers spend on tasks will soon be automated.<sup>7</sup> This does not mean that technology will reduce the need for

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<sup>3</sup> <https://www.shrm.org/hr-today/news/all-things-work/pages/the-blue-collar-drought.aspx>

<sup>4</sup> <https://www2.deloitte.com/us/en/pages/about-deloitte/articles/2018-manufacturing-skills-gap-study.html>

<sup>5</sup> <https://blog.mcquaig.com/the-big-challenges-for-manufacturing-recruitment>

<sup>6</sup> <https://www.randstad.com/workforce-insights/talent-management/manufacturing-recruitment-challenges-opportunities/>

<sup>7</sup> <https://www.mckinsey.com/business-functions/operations/our-insights/human-plus-machine-a-new-era-of-automation-in-manufacturing>

human labor. Analysis by Deloitte shows that innovations in production technology are increasing, rather than reducing, the number of jobs required.<sup>8</sup> But it does show that workers need new skills to thrive in a changing world.

### 3) *High staff turnover*

Keeping staff can be as challenging as finding them. A study suggests that 43% of manufacturers have an annual staff turnover rate of at least 20%.<sup>9</sup>

Even when a candidate has the right skills to succeed, they are not always a constructive addition to the team. Over half (53%) of hirers in manufacturing struggle to find recruits that are a good cultural fit.<sup>10</sup>

### 4) *Human error*

The lack of essential skills is not just preventing manufacturers from taking advantage of new opportunities. It is undermining quality and safety.

Over 80% of errors in the manufacturing process are caused by human error.<sup>11</sup> Two major causes are a breakdown of communication and a failure to follow written procedures.<sup>12</sup>

Human error contributes to almost all manufacturing health and safety breaches across the US. In many cases, employees make mistakes because they have not been trained effectively.<sup>13</sup>

### 5) *Lack of effective personal development*

Despite the need to develop new skills among the workforce, there is not enough effective personal development across the industry.

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<sup>8</sup> <https://www2.deloitte.com/tr/en/pages/technology/articles/technology-and-people.html>

<sup>9</sup> <https://www.thefabricator.com/thefabricator/blog/shopmanagement/new-manufacturing-report-shows-how-worker-turnover-costs-the-industry>

<sup>10</sup> <https://blog.mcquaug.com/the-big-challenges-for-manufacturing-recruitment>

<sup>11</sup> <https://learnaboutgmp.com/good-manufacturing-practices-cgmp/the-top-7-how-to-reduce-manufacturing-human-error/>

<sup>12</sup> <https://humanerrorsolutions.com/5-ways-of-reducing-human-error-in-manufacturing/>

<sup>13</sup> <https://www.hse.gov.uk/humanfactors/topics/humanfail.htm>

According to a survey by training providers Tooling U-SME, three-quarters of manufacturing employers do not have a talent development plan in place. Just 36% set aside a budget for employee development, potentially contributing to high staff turnover levels.<sup>14</sup>

Even when learning and development programs are in place, they do not always provide a good return on investment. Research shows that across global sectors and industries only 25% of training is effective.<sup>15</sup>

### 6) *Lack of diversity*

Manufacturing continues to be a male-dominated industry. Just 20% of its global workforce is made up of women.<sup>16</sup>

The impression that manufacturing employers do not nurture diversity could be putting people, particularly, young people off from entering the industry. The vast majority (88%) of millennials and GenZs (people born after 1980) identify working in a diverse environment as a priority.<sup>17</sup>

### 7) *An aging workforce*

In the US, almost a quarter of the manufacturing workforce is aged over 55. In the UK, manufacturing is one of just four industries that employ almost half of workers aged over 50.<sup>18</sup>

This creates problems for succession planning. It also makes it harder to plug the growing skills gap. Without new workers coming up the ranks it is harder for employers to develop the skills they need for innovation and to take advantage of new opportunities.

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<sup>14</sup> <https://www.thefabricator.com/thefabricator/blog/shopmanagement/new-manufacturing-report-shows-how-worker-turnover-costs-the-industry>

<sup>15</sup> <https://trainlikeachampion.blog/infographic-why-corporate-training-is-a-colossal-waste-and-what-to-do-about-it/>

<sup>16</sup> <https://www.randstad.com/workforce-insights/talent-management/manufacturing-recruitment-challenges-opportunities/>

<sup>17</sup> [https://yello.co/wp-content/uploads/2018/10/TL\\_2018\\_Diversity\\_Study.pdf](https://yello.co/wp-content/uploads/2018/10/TL_2018_Diversity_Study.pdf)

<sup>18</sup> <https://www.randstad.com/workforce-insights/talent-management/manufacturing-recruitment-challenges-opportunities/>

## Making better decisions with assessments

People remain a manufacturing employer's most important asset. But while managers often wield vast amounts of data on the systems and processes that underpin the production process, rarely do they have similarly meaningful and reliable information on the people they employ.

Online staff assessments help employers understand what the workforce can do and unlock valuable information on how to do better.

Assessments identify where strengths and weaknesses lie. They shine a light on pockets of productivity and reveal where extra support and training is required. They give leaders the vital information they need to make better decisions on recruitment, training, promotions, and personal development.

Assessments can specifically help manufacturers in the following ways:

- **Improving the quality of hire** – testing candidates before deciding to hire them, to ensure that recruits have what it takes to hit the ground running and drive innovation.

After implementing assessment technology, 76% of corporations have seen an increase in the quality of hire.<sup>19</sup>

As well as testing the skills of employees, assessments can cast light on a potential recruit's attitude and mentality. This will help employers decide if they are a good cultural fit.

- **Transforming training and improve quality** – ineffective training leads to errors and confusion. It undermines quality.

By assessing staff during and after training, employers can ensure that the right lessons are being learned. By assessing the skills of the workforce before beginning training, employers gain a clear sense of what skills staff already possess and can eliminate unnecessary training.

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<sup>19</sup> Brandon Hall Group, Assessing Assessments: Value and Impact

- **Reduce health and safety risk** – too often health and safety incidents occur because employers don't understand the procedures. By training teams on correct practice, and testing them when the training is finished, employers can ensure staff understand what they need to do. The risk is reduced.
- **Nurture a diverse workforce** – when making decisions on promotions or recruitment, assessments can identify which candidates have the appropriate skills and competencies for the job.

Any unconscious biases can be challenged. Where training is introduced to promote diversity and equality, assessments can measure what participants have learned.

We have worked with manufacturers around the world, helping them to make better decisions and meet the challenges outlined in this paper.

If you are interested in beginning a conversation with us, please visit our website and book a demo:

[www.questionmark.com/sectors-and-uses/manufacturing](http://www.questionmark.com/sectors-and-uses/manufacturing)





## About Questionmark

We help organizations and their people unlock their potential to deliver better performance. Questionmark provides a secure enterprise-grade assessment platform and professional services to leading organizations around the world, delivered with care and unequalled expertise. Its full-service online assessment tool and professional services help customers to improve their performance and meet their compliance requirements. Questionmark enables organizations to unlock their potential by delivering assessments which are valid, reliable and fair, which can be defended.

Questionmark offers secure powerful integration with learning management systems (LMS), learning record stores (LRS) and proctoring services making it easy to bring everything together in one place. Questionmark's cloud-based assessment management platform offers rapid deployment, scalability for high-volume test delivery, 24/7 support, and the peace-of-mind of secure, audited U.S., Australian and European-based data centers.

## Working with Questionmark

To further explore how Questionmark could work for your organization, or to book a free consultation and demo, please see: <https://www.questionmark.com/request-demo/>

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