The People Challenge: Embracing the Trends Hitting Manufacturing in 2023

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What is the people challenge in manufacturing?

People are the strongest and weakest link in a $12 trillion global manufacturing industry.

Workforce inconsistencies cause hundreds of $billions of downtime, quality and safety losses every year. Human error is the cause of:

23% unplanned downtime

68% of defects

70% of safety incidents

At the same time, 71% of the value created for manufacturers comes from human knowledge and action, and 72% of factory tasks are performed by humans.

Global manufacturing's worsening skills shortage is an acute, recognised issue today.

There is a growing manufacturing skills gap that has to be closed to protect output, quality and safety today. Traditional training is too slow given the speed of operational change and record levels of employee turnover. And knowledge transfer is hard given the use of pen and paper in plants.

The problem is set to cost $1 trillion by 2030 in the US alone.

In addition, the skills gap is harming manufacturers' ability to transform for future success, given that industrial transformation requires that workers be empowered to adopt automation, AI technologies and lean methods.

Manufacturers urgently need new ways of upskilling workers on the job, whilst better supporting them to be agile, productive and safe.

The Key Trends in 'The People Challenge' Facing Manufacturing

Section 2

From interviews with industry thought leaders and current clients we are seeing the following trends and issues, are you?

Whilst outlining the key trends, we aim to provide a structure and suggestions about how to make the steps towards solving the people crisis with industry best practices and an intuitive and enabling Connected Worker Platform.

Trends

1. Ageing workforce & knowledge erosion
2. Attracting people to manufacturing roles and capturing knowledge is an ongoing challenge.
3. Retaining people in manufacturing roles is a challenge
4. Retiring workforce - the loss/gap of knowledge & skills
5. Training people in manufacturing roles (quickly & standardised)

1. Ageing workforce & knowledge erosion

In recent years, the manufacturing industry has seen a large number of experienced workers retiring and leaving the industry, taking their knowledge and expertise with them. This has led to a knowledge gap, as there are not enough experienced workers to pass on their knowledge to the next generation.

Pew Research shows that as the Baby Boomers retire it's estimated that there will be around 2.1 million unfilled manufacturing jobs by 2023, with 3.2 million more baby boomers retiring in Q3 of 2020 than in 2019!

Speaking with one of our customers, a large scale FMCG manufacturing company, they have shared that around 40% of their workforce will be retiring within the next year and there will be difficulty replacing them.

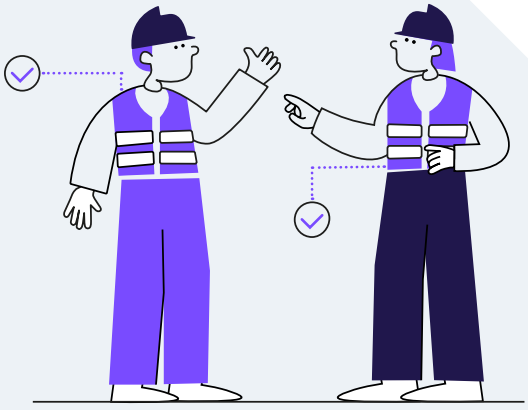
This generational trend, and the skill shortage it brings, leaves manufacturing organisations exposed to a lack of industrial knowledge as well as a drop in productivity.

With many of the previously industrial countries seeing a decline in birth rate and an ageing population. It is becoming a business imperative within manufacturing to capture and share their knowledge with new hires and employees.
This is being hindered by the following challenge:

2. Attracting people to manufacturing roles and capturing knowledge is an ongoing challenge.

There are a few reasons why attracting people to manufacturing roles and capturing knowledge is a challenge today. One reason is that the manufacturing industry has a perception problem, with many people viewing it as dirty, dangerous, and low-paying work. This has led to a shortage of skilled workers, as many young people are not interested in pursuing careers in manufacturing.

Another reason is that the manufacturing industry is rapidly changing, with new technologies such as automation, robotics, and the Internet of Things (IoT) being adopted at a rapid pace. This has led to a skills gap, as many workers do not have the necessary skills to operate and maintain these new technologies.



However, this perception is changing as the industry is becoming more automated, and the jobs in manufacturing are requiring more technical and cognitive skills which are not necessarily gender-specific.

Despite the progress, the manufacturing sector is still facing the challenge of gender imbalance, and it's important for the industry to continue working to attract and retain more women in manufacturing roles.

There is a growing awareness of the importance of diversity and inclusion in the workplace, which has led to more efforts to recruit and retain women in manufacturing roles.

Overall, the perception of manufacturing, the rapidly changing technology, and the lack of knowledge capture and retention are some of the main challenges facing the manufacturing industry today.

3. Retaining people in manufacturing roles is a challenge

In 2022, turnover in manufacturing was over 20%, with reasons such as that workers were unable to work from home like other industries and therefore continued going into the workplace to perform demanding work during a stressful time.

In comparison to past years where many workers would stay in the same role, in the same company for 20+ years, there is definitely a retaining challenge with younger, newer workers.

There are a few reasons why retaining people in manufacturing roles is a challenge. One reason is that the industry has a high turnover rate, with many workers leaving for other jobs or retiring. This can be due to a lack of job security, as automation and technology are replacing many traditional manufacturing jobs.

With the rapid advancement of technology, automation and robotics, a skills gap has emerged, as many workers do not have the necessary skills to operate and maintain these new technologies. This can lead to feelings of inadequacy and frustration, leading to them leaving the industry.

Additionally, the lack of opportunities for career advancement and professional development can also contribute to worker dissatisfaction and high turnover rates.

Leadership, and good leadership, is key in retaining workers. Poor managers, leaders and coaches will almost certainly result in people looking for other roles.

Servant leadership is a topic we at Zaptic are extremely interested and passionate about. Listen to our ZapChat Podcast episode with VP of Manufacturing, General Mills, on Servant Leadership; what it is; why it's important; and how to enable it.

Good leadership enables, empowers and engages with people - allowing them to give the best they can to the business and their roles.

4. Retiring workforce - The loss/gap of knowledge & skills

With older, loyal workers who have attained knowledge and invaluable experience over their time starting to come to the end of their working lives, the challenge of being able to retain that knowledge becomes increasingly present.

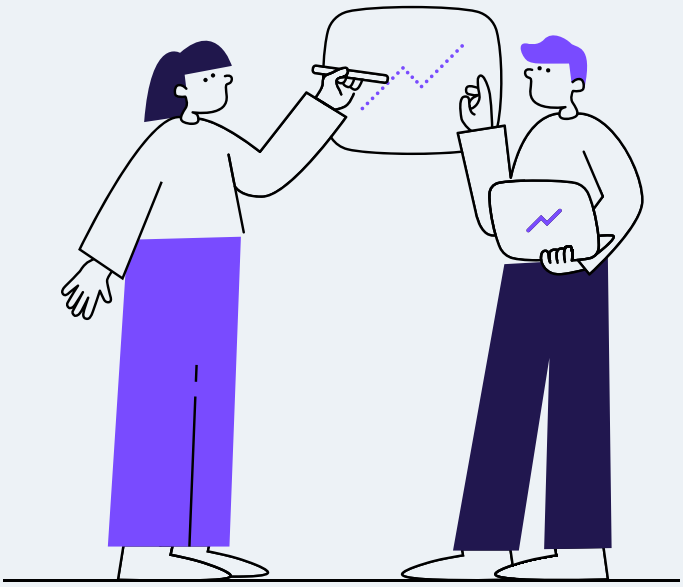
Currently, a lot of information is captured on paper, spreadsheets and other manual systems, or worse - in peoples' heads! This is decentralised, siloed and inefficient for global organisations, like the kind we work with, as it is hard to relocate, use in real time and standardise across one site, let alone across global sites.

The loss of knowledge retention is an issue in the manufacturing industry because it can lead to a number of problems. One issue is that it can slow down the pace of production and increase the risk of errors and mistakes. When experienced workers retire or leave the industry, they take their knowledge and expertise with them, leaving a gap that can be difficult to fill. This can lead to delays and inefficiencies in the manufacturing process, as new workers may not have the same level of experience and expertise.

Another issue is that it can lead to a loss of competitiveness in the global market. As experienced workers retire or leave the industry, they take their knowledge and expertise with them, leaving a gap that can be difficult to fill. This can lead to a loss of competitiveness, as the industry may not be able to keep up with the latest technologies and best practices.

Finally, the loss of knowledge retention can also be a significant barrier to innovation, as it can impede the ability to develop new products, processes, and technologies.

Unless organisations find an efficient way to log best practices, knowledge and work instruction in an easy to use format for new employees starting, this knowledge will soon be lost causing inefficiencies and potentially mistakes.



5. Training people in manufacturing roles (quickly & standardised)

The current ways of onboarding and training are slow, decentralised, typically off-the-job, or involve shadowing an experienced operator which is time and resource intensive.

There are a few challenges with training people in manufacturing roles, some of them are:

1. Lack of resources: Many manufacturers may not have the resources or funding to provide comprehensive training programs for their workers. This can make it difficult to attract and retain skilled workers, as well as to keep them up-to-date with the latest technologies and best practices.
2. Rapidly changing technologies: The manufacturing industry is rapidly changing, with new technologies such as automation, robotics, and the Internet of Things (IoT) being adopted at a rapid pace. This can make it difficult to provide training that is relevant and up-to-date, as the technology is constantly evolving.
3. Skills gap: Many workers do not have the necessary skills to operate and maintain the new technologies being adopted by the manufacturing industry. This can make it difficult to find and train new workers, as well as to retain existing workers who may not have the skills needed to advance in their careers.
4. Lack of standardisation: The manufacturing industry lacks standardisation in the way that training is delivered, making it challenging for workers to transfer their skills from one company to another.
5. Limited access to training: Workers in remote or rural areas may have limited access to training opportunities, making it difficult for them to acquire the skills needed to succeed in the manufacturing industry.

Related to the challenge of the retiring workforce, having work instruction in paper, spreadsheets or other manual systems means that often information is out-of-date or not the current best practice.

Having best practices, knowledge and work instruction in an efficient and easy to use format, centralised and standardised will help to ensure that all operators work from the same instruction and can easily suggest new ways of doing things that can be tracked and implemented across the board.

What can be done to support/overcome?

Industry responsibility

Large manufacturing companies have a responsibility to change the perception of the industry by highlighting the modern, high-tech nature of the work, as well as the opportunities fo career advancement and professional development.

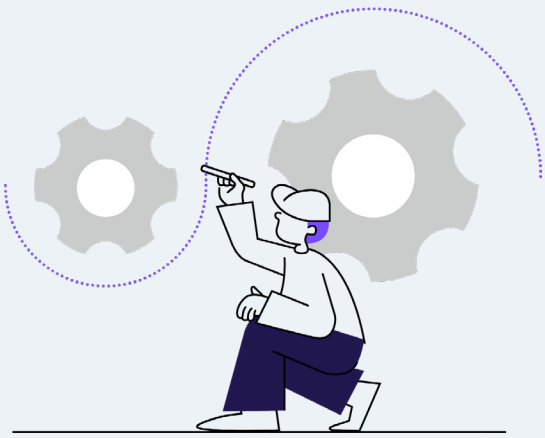
Many large-scale manufacturers have hundreds of thousands of suppliers. In 2018, Procter and Gamble stated that it has over 75,000 suppliers. It would be safe to say that just because it may be easier to attract talent to large, household name companies, does not mean that the industry as a whole won't experience challenges.

Our customers such as General Mills, Carlsberg, Hovis and Danone have a responsibility to make manufacturing attractive as a whole, helping smaller companies down their supply chain. Afterall, this affects them as well. If the supply chain organisations are understaffed and under performing, as a result the knock on effect will eventually reach the larger manufacturers.

Encouraging diversity and inclusion is another key area in which large manufacturing companies have a responsibility. They need to create a diverse and inclusive workforce, to ensure that workers from all backgrounds have an equal opportunity to succeed in the industry.

Working together, the manufacturing industry can support each other and begin to solve these challenges that everyone is feeling the pressure of.

SECTION 3



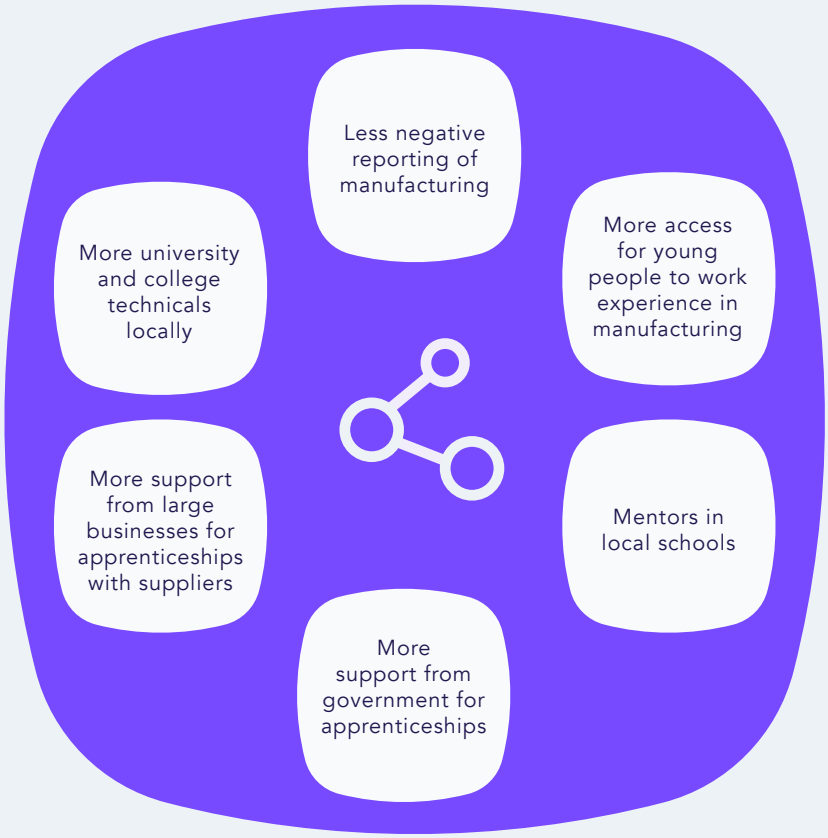
Marketing Manufacturing

Although the image of modern manufacturing is changing, the process is slow. Previously, Manufacturing was a relatively unclean and dark environment to spend 8+hours of your day, with a high number of health and safety incidents, lacking proper procedures and processes.

With modern manufacturing being quite different from this, there is some work needed to market manufacturing to younger generations, to show this change and that these roles are skilled, technologically advanced and involve a strong career path.

With these changes, the advancement in technology and the rise in consumer demands, gone are the days that the front line workforce are 'unskilled'. Peoples' roles have grown in complexity. Because of this, manufacturers are placing priority on upskilling operators with Learning & Development.

The Manufacturer researched some ways in which the industry could encourage more people into manufacturing roles.



Manufacturing companies have a responsibility to promote the industry as a whole, to attract new workers and to show the opportunities and benefits of working in the industry.

Investing in Technology

There are many reasons to invest in technology from increasing efficiencies, reducing overall costs, gathering and analysing data & trends and reducing paper processes. However another major reason is to improve the daily lives of workers and make their roles easier, more fulfilling, more attractive and more rewarding.

A few key outcomes of investing in technology are:

1. Automation: The implementation of automation and robotics can automate repetitive and dangerous tasks, which can lead to a reduction in the need for manual labour. This can lead to the creation of new roles that require skills in areas such as programming, maintenance, and troubleshooting.

   Enabling workers to have less manual tasks will allow them to have more time to perform skilled tasks, autonomous maintenance and best practice suggestions.

2. Increase in productivity: The use of technology can increase the overall productivity of the manufacturing process, which can lead to an increase in output and efficiency. This can lead to the need for workers to be re-skilled and trained in new technologies and processes. In terms of attracting younger generations, there is an expectation that technology will play a significant role in their day to day. Especially in manufacturing. Reducing the amount of paper and using technology to manage daily tasks and processes will improve the productivity and enjoyment of frontline workers roles.

3. New roles: The adoption of new technologies such as IoT, big data, and artificial intelligence can lead to the creation of new roles in areas such as data analysis, process optimization, and predictive maintenance.

As manufacturing jobs become more skilled with technology and automation taking on manual, somewhat 'boring' tasks, people are enabled to perform more fulfilling roles leading to increased retention, less employee turnover and more productivity and motivation.

Assess your People Strategy

Section 4

Below are some questions to consider when thinking about your People Strategy. These should give you an indication of any gaps you may have, why you may have them, and what you should strive to have.

Questions	Why	Insights
What is your employee turnover rate?	High turnover above market conditions is an indicator of poor morale and culture	The best companies even in highly volatile markets expect numbers for mature markets TO<3%, volatile markets <10%
What is your employee sickness/absence rate	High levels of sickness and absence is an indicator of poor morale, culture and not taking care of an ageing workforce	The best companies see absence rate <3%
What is your Total injury rate (TIR) by site and total for the company	High TIR, lost work days and accidents are indicators of poor morale, culture and lack of Leadership accountability	The best companies see TIR <0.5%, the very best expect 0%
How many open vacancies do you have?	Long term inability to fill vacancies is an indicator of poor culture, lack of attractiveness of your business and poor HR practises	You should expect open vacancies to be <5% and vacancies open more than 3 months should be 0%
How high is your overtime rate?	High overtime leads to tired workers and leaders, indicating a crisis driven and unstable manufacturing and supply operation. Overtime should never be a long term strategy but is a tactical fix.	The best companies should expect overtime to be <5%, the very best companies expect <2%

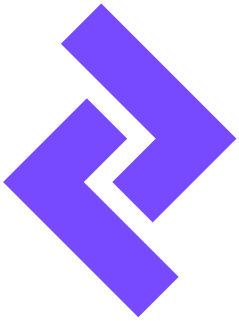
Connected Worker Platform & Your People

A connected worker platform can help make manufacturing jobs easier by providing a number of benefits. Some of these benefits include:

1. Improved communication: A connected worker platform can provide real-time communication between workers, supervisors, and managers, which can help improve collaboration, coordination, and problem-solving.
2. Enhanced training: A connected worker platform can provide access to training materials, videos, and other resources, which can help workers stay up-to-date with the latest technologies and best practices.
3. Increased efficiency: A connected worker platform can provide access to real-time data and analytics, which can help workers make more informed decisions and improve the overall efficiency of the manufacturing process.
4. Better safety: A connected worker platform can provide access to safety procedures and protocols, as well as real-time monitoring of the manufacturing process, which can help improve the overall safety of the workplace.
5. Remote access: A connected worker platform can allow workers to access the platform from anywhere, which allows them to work remotely and increase the flexibility and efficiency of the manufacturing process.

Overall, a connected worker platform can help make manufacturing jobs easier, more attractive and enjoyable by improving communication, enhancing training, increasing efficiency, improving safety, and allowing for remote access.

Connected Workers help to address your People Challenge.



"Today, an operator in the line knows exactly what he needs to do at this machine, at this time. Zaptic enables the operators to do what they need to do and with this, we drive Overall Equipment Effectiveness (OEE) Improvement."

Carlos Zaramello
Senior Director

Continuous Improvement
Carlsberg Excellence

"What is really important to us is that the system is intuitive. With Zaptic, It's intuitive and it requires less time to train thousands of operators and it gives them the opportunity to execute their job autonomously using the tablet to perform their work properly."

Cédric Meyer
Global Excellence
Senior Manager

Zaptic's connected worker platform

Section 6

Zaptic provides a connected worker platform for job instruction and collaboration for frontline teams, and a no-code toolkit designed to accelerate digital transformation of daily operations.

Our mission is to improve the lives of frontline workers, by supporting safety, autonomy, productivity and continuous learning in frontline jobs.

Using Zaptic, global manufacturing and service organisations are closing an industry 4.0 blindspot by moving daily operations out of spreadsheets, paper and tribal knowledge.

Companies such as Carlsberg, Hovis, Celgard, Solenis and Monster are using Zaptic to not only unlock measurable improvements in productivity, quality and safety, but also enable a smooth transfer of knowledge between the retiring and new generation of workers to improve market resiliency.

www.zaptic.com

Carlsberg

DANONE

SOLENIS

Berry

HOVIS

MONSTER ENERGY