

Digitalization and Smart Factories: Manufacturing Trends in Industry 4.0

Change is in the air.

We've already seen incredible innovation in the manufacturing industry. Countless new manufacturing trends have revolutionized the factory floor. Smarter, faster, and more efficient processes mean that work can be done at an unprecedented rate.

In the future, digitalization will play a bigger role than ever in manufacturing. The onset of industry 4.0 means that more and more analogue processes will become digitized in the name of efficiency, cost effectiveness, and improved work conditions.

But this also means that in order to be a true leader in the world of manufacturing, you'll have to be able to keep up.

Safety.

Despite advances in automated technologies, there will still be a high demand for living, breathing human workers on the shop floor of the future. As we continue to change the role of factory workers, it is essential that safety remain a top priority for any manufacturing process. As you know, any lapse in safety can be devastating. In addition to the obvious moral and public repercussions of an industrial accident, unsafe work conditions can cost your business millions.

Thankfully, as factories become smarter, safety innovations are scaling to match. How do smarter factories and better digital work elements help to ensure safety for our workers?



- As interactions between humans and their automated counterparts increase, they have to get along! Advances in monitoring systems and safety features such as better motion-sensing lasers will ensure that relations between humans and robots are safe and efficient.
 - Dramatic industrial accidents are our worst fear. But what about the toll that routine manual labor can take on a worker's body? Exosuits, designed to enhance the natural motions of the human body, will help reduce the inevitable physical stress of factory jobs.
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- Safety hinges on the assumption that everyone on the factory floor knows exactly what he/she is doing. As manufacturing processes and machinery become more complex and the workforce changes, old instructions can quickly become irrelevant. Today's workers need adaptable, easy-to-use instructions that provide crystal clear guidance at a moments notice.



Growing Skill Gap in the Manufacturing Workforce.

It's an unfortunate fact that a large portion of our workforce will retire every year, simply due to age. As older employees resign, a new and less experienced group of workers will take their place. This will cause a series of unique challenges for the manufacturing industry.

- This older generation of workers possesses an incredible amount of valuable knowledge and experience. They have likely been working in this field for many years, and have a fantastic understanding of processes and equipment.
- However, much of this know-how is not recorded in a standardized, easily-accessible way. Instead, it's passed along by word of mouth through a workforce phenomenon known as "tribal knowledge."
- Careful! Some of your best data and information is at risk of being lost forever if it is not successfully captured in a permanent digital format. Don't lose out to "tribal knowledge."

"Translate tribal knowledge into digital work instructions."



- Fortunately, our new generation of factory workers is incredibly technology-savvy. You can capitalize on this by implementing an instructional system that can efficiently translate recorded "tribal knowledge" into simple digital work instructions.

Automation Driving a Changing Workforce.

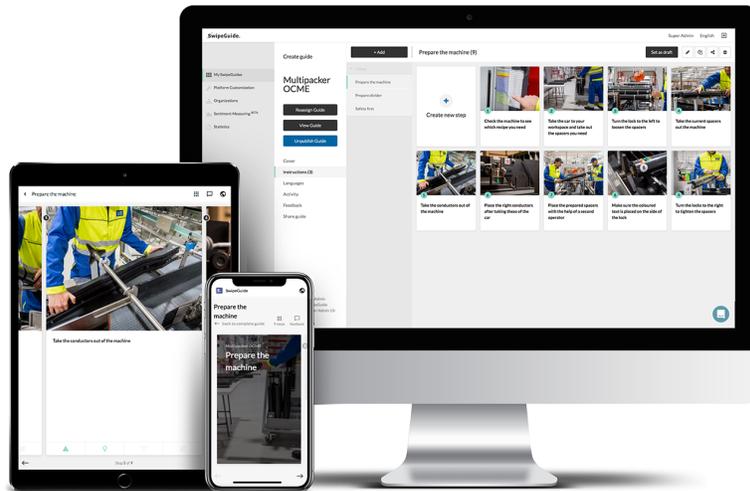
Incredible technological advances are increasing the number of robotic workers on the factory floor.

However, this does not spell the end for humans in manufacturing.

- Most reputable sources predict that instead of being replaced by robots, humans on the factory floor will adapt to new roles that optimize the effectiveness of their automated counterparts.
- There will likely always be a need for living beings in any workforce. Instead of operating machinery, humans in smart factories will likely be optimizing instructions for digital processes and robot employees.
- This means that the ideal worker of the future will have to be highly adaptable and have a great understanding of technology.
- Similarly, your instructional procedure will also need to be agile and highly adaptable. An instructional platform should implement machine learning and integrate fully with the emerging trends in the new world of the digital factory.

"Humans on the factory floor will adapt to new roles."

Wearable and Mobile Technology.



In the future, wearable and mobile technology will be used to add a practical digital experience to a real-life application. Similar to the exosuits used to assist workers with difficult or repetitive tasks, wearable tech works with a human worker to optimize their efficiency on the factory floor. a little bit of body text

- Wearables will continue to develop for use in quality control applications. As human workers finish a product, smart glasses can be used to display digital images of the correct assembly directly into a workers field of view. Much as you might compare notes with a friend, workers will be able to use these hands-free digital overlays to check their work against the industry standard.
- Unobtrusive, digital devices will also help our changing workforce adapt to the increase of automated factory processes. Instead of all information being routed to a central control room, devices such as smart helmets and glasses will allow important diagnostic and operational information to be distributed visually to a worker anywhere on the factory floor.
- Perhaps the most exciting advancements in mobile and wearable technology come in the field of digital workplace instructions. Instead of a cumbersome paper manual, relevant instructional information about any factory process will be readily available via a dedicated wearable. These instructions will allow workers to perform every task on the factory floor safely, with much less downtime.

Incredible Manufacturing Intelligence.

There is no doubt that the years to come will bring smarter, safer, and faster factories to the world of manufacturing. Look for new players in the world of digital manufacturing technology, and also for expansion of some of the most exciting trends already implemented. The sheer amount of innovation happening is enough to make your head spin.

Make sure that you keep an eye on manufacturing trends in order to stay ahead of the curve. Nobody expects the world of digital innovation to slow down any time soon, so you'll need highly adaptive, scalable solutions for every aspect of your business.

SwipeGuide lets your team create digital instructions that utilize highly visual, minimalist design elements that allow your workforce to learn at the highest capacity. This is a digital instructional platform that will react to the needs of your workers as they need it.

The logo for SwipeGuide features the word "SwipeGuide." in a bold, white, sans-serif font. A white diagonal line starts from the top left and passes through the letter 'i' in "Swipe".

SwipeGuide.

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