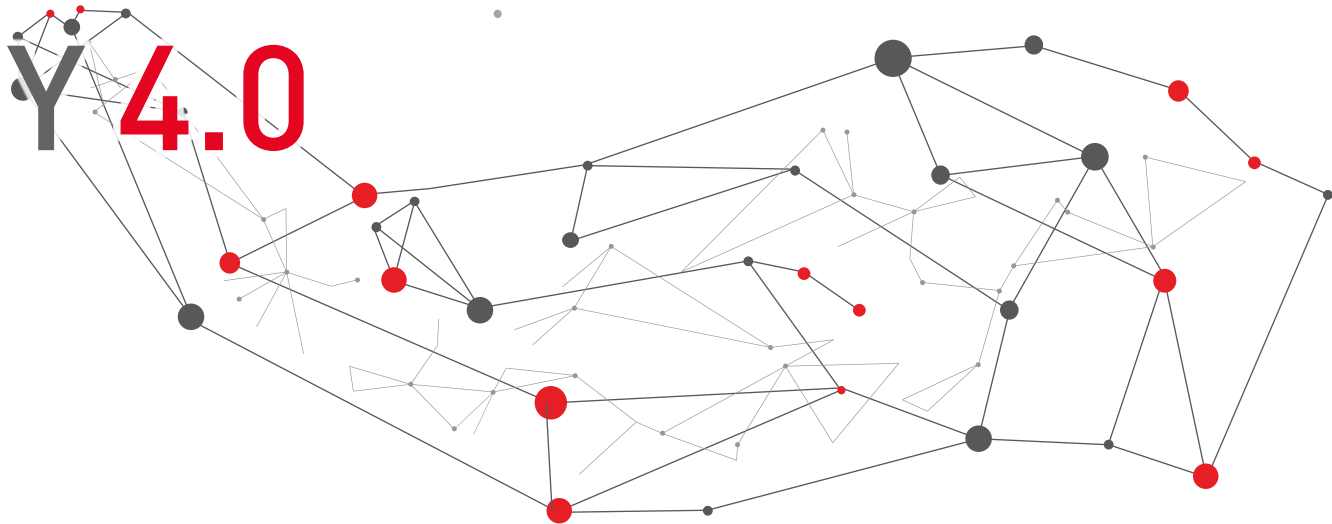


DESOUTTER 4.0



HUMAN FACTOR & INDUSTRY 4.0





HUMAN FACTOR & INDUSTRY 4.0

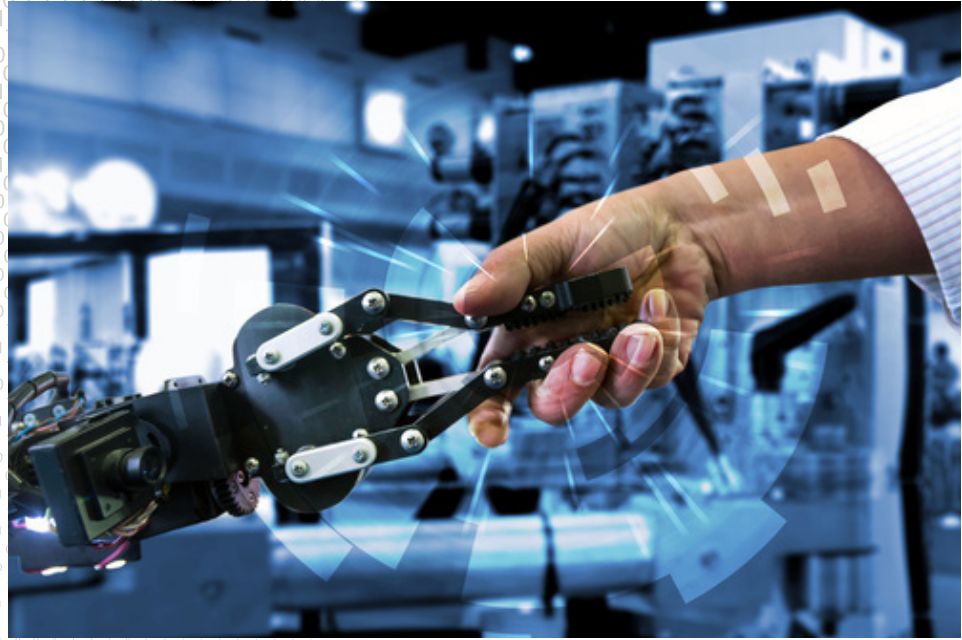
The rise of automation and the adoption of 'intelligent' tools is helping us produce more bespoke solutions to customer requirements, particularly in high tech sectors like the automotive and aerospace industries. Ford's apocryphal selling slogan that 'you can have any color as long as it's black' has long been consigned to history. Now, even the most basic car brand offers a wide selection of colors and features which make every order unique. This level of customization raises new challenges around the role of humans in the production process, particularly around skills development and error reduction.

In the past, an assembly worker was valued because they could perform the same task competently on the same line day after day. In today's more flexible manufacturing environment that same worker may be required to rivet body panels one shift and wire up a lighting system on the next. Traditional training in all these skills takes time – and the pace of technological change can render such learning obsolete very quickly. So how can we ensure that modern assembly workers feel valued and competent, and can access the information they need to complete diverse tasks efficiently and without error?

HOW TO BOOST FLEXIBILITY WITH OPERATORS SATISFACTION ?

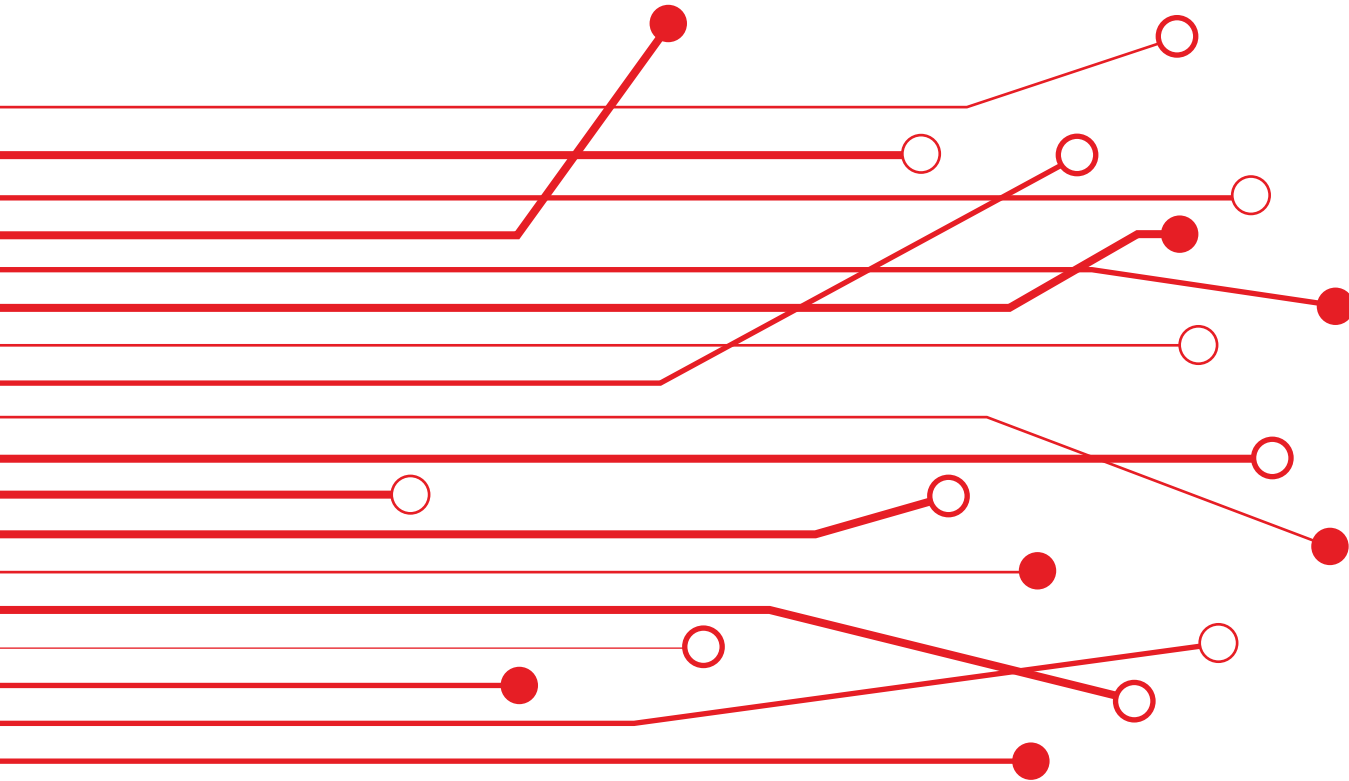
Your answer is **PivotWare**, a comprehensive process control platform that guides operators through a specific set of assembly tasks as part of an automated process. A graphic and textual display shows them exactly what tools to use, what components to apply and where to fix them. The system verifies that each step has been completed correctly before allowing the operator to move to the next stage. The platform is programmable by the customer using software tools provided, so responsiveness to changes in production requirements is unhampered by any need for specialist intervention. The clear user interface helps to focus on relevant aspects. It also helps the operator to learn continuously as processes and products manufactured change overtime.





As automation continues to create new roles and new challenges, intuitive human-machine interfaces like **PivotWare** will become increasingly important. Not only does this platform deliver improved quality, reduced rework and increased volume production in automated environments, it also supports validation and traceability requirements.

HOW TO DECREASE RISK OF ERRORS WHILE BOOSTING FLEXIBILITY?



Human beings are sociable creatures. Given the ability to move around the workplace unfettered, the temptation to take their wireless tools with them – perhaps to help a colleague working on another part of the assembly line – can be irresistible. However, these unscheduled fastening tasks introduce a high probability of error. For operations managers, this can be a real headache. Chaining tools down to the workbench again negates all the benefits of wireless technology. It can also send out the wrong signals: maybe the managers don't trust their operators with the equipment!

The torque reaction-free operation also makes the tool more comfortable to use. **E-PULSE** does not expose workers to the sorts of forces through the hand and arm that can lead to harmful repetitive strain injuries. Ultimately, this can lead to a reduction in the amount of health-related absenteeism, boosting plant productivity.

Ultimately, forward-thinking companies recognise that they have to invest in the latest technologies if they want to achieve long-term improvements in production efficiency. Put simply, to achieve quality insurance, simplified maintenance and operator comfort, you have to make sure your workers have the right tools for the job.

Digitalization may also help to include people that may have been excluded in the past. For example, HMI can help people working without suffering because of the weight of one or another thing to wear.





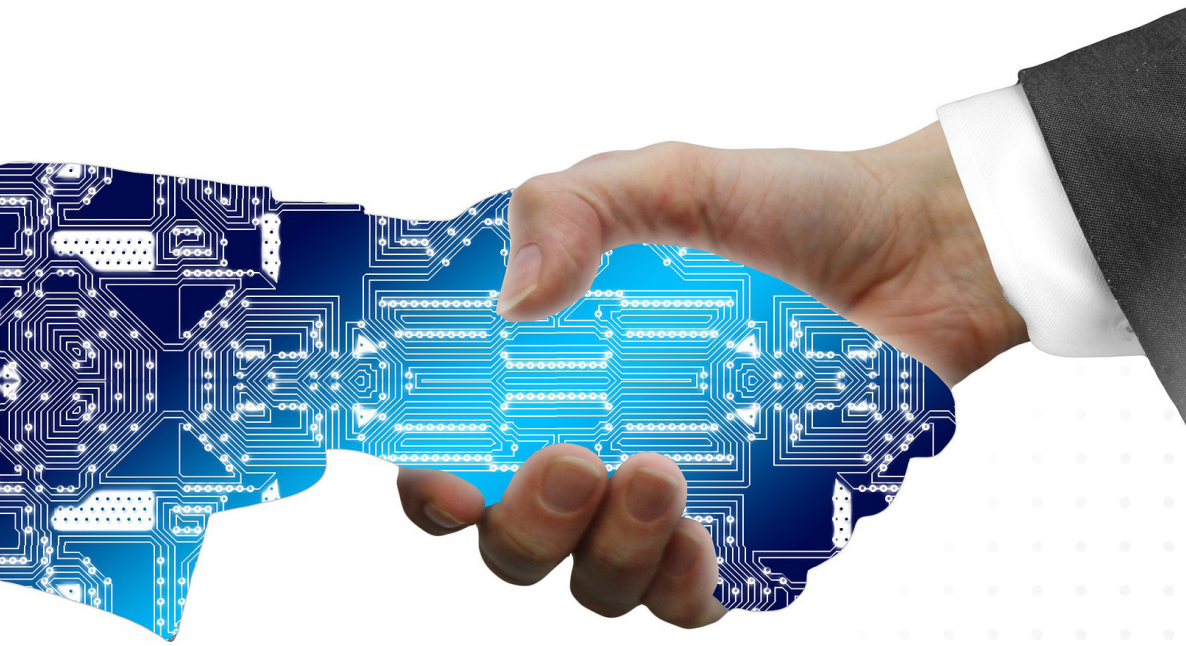
PivotWare guides IAC operators through assembly tasks as part of an automated process, using a graphic and textual display to show them exactly what tools to use, what components to apply and where to fix them. The system verifies that each step has been completed correctly before allowing the operator to move to the next stage. The platform is programmable by the customer using the software tools provided, ensuring that IAC can respond quickly to changes in production requirements without any need for specialist intervention. In addition, the **PivotWare** platform collects meaningful data in real time, with reporting options available at the click of a button.



HOW TO DEAL WITH MASS CUSTOMIZATION

Such sophisticated engineering presents challenges on the shop-floor. Aerospace workers are expected to drill many thousands of holes per aircraft body, with each construction material having its own defined set of technical characteristics. Meeting that flexibility requires some really clever tooling.

Application-based customization is one feature that figures strongly, offering a scalable and flexible solution which allows customers to add new features whenever the requirements on their production lines change. While **CONNECT** comes with a standard functions package that will meet 80% of assembly line requirements, users have the option to add what features they need to make the hub their own. Customizing **CONNECT** simply involves activating the required feature and you're ready to go. This level of agility enables customers to reconfigure their assembly lines within minutes rather than hours. Imagine how much this will boost uptime and productivity!



CONCLUSION

Moreover we think that assisting workers & investing in better work places might become really important aspects of differentiation for companies to enhance their employer branding.

George Bernard Shaw famously said "Progress is impossible without change". This gives us a simple choice: we can sit back and let change happen to us, or we can be catalysts for change ourselves. At Desoutter, we very much embrace the latter approach.