HOW CAN TECHNOLOGY SUPPORT EMPLOYEES ?

Despite different dystopian messages, technology has not yet taken over many jobs in industry, but it has fundamentally transformed them. In this brAInfood, we look at technologies that support workers in the workplace, also known as OAT: operator assistance technology. We explain what OATs are and give some examples of these technologies.
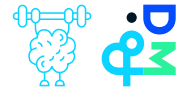
WHAT ARE OATs?

OAT is a **group of technologies that assist workers** in their tasks within a production process. Organisations can deploy these technologies to provide **ergonomic or cognitive support** to workers or to increase the flexibility of their production systems. **Different categories of OATs** exist, such as digital work instruction (DWI) platforms to train or inform operators, flexible robotic systems that take over repetitive or heavy tasks, or collaborative robotic systems (cobots) that perform tasks together with workers.

ARE OATs VALUABLE TO YOU?

OATs can be valuable for organisations that often face **labour shortages or an ageing workforce** and a market that increasingly demands **customisation and personalisation**. OATs can support operators physically or cognitively and enable flexibility within the production process. In practice, OATs are still not always as flexible or easy to programme as expected. Only when OATs are deployed **under the right conditions** will they provide added value.

Purchasing, developing and/or implementing them therefore requires a well-considered decision in which the **people who will work with the technology need to be consulted**. The Knowledge Centre Data & Society will work on various **materials** (workshops, discussion manuals, etc.) in 2023 **to support organisations to involve their employees** in the development and implementation of technology in the workplace. That way, the OAT will be supported by everyone who will eventually work with it or be indirectly impacted by it. So be sure to keep an eye on our website!

COBOTS

Whereas robots are often working separate from humans, **collaborative robots (cobots)** actually **work side-by-side with their human counterpart**. They are easy and intuitive to programme and can respond to the operator's voice or touch. The operator and the cobot work together on the same task, with the cobot taking over heavy weight from the operator, for example. A cobot supports the operator in a smart and flexible way.

DIGITAL WORK INSTRUCTIONS

Digital work instructions provide **explanations and instructions** to operators in the place they need them, for example by projecting text and icons on the workbench. Since these instructions are digital, they can easily be modified and updated. This brings organisations more flexibility, if they need to provide customisation, for example.

Some examples of DWI systems:
- Informed Reality (IR): operators wear glasses on which instructions appear in one of the top corners, for example as a message, photo or video.
- Augmented Reality (AR): concrete instructions are projected onto an image of reality, e.g. an arrow indicating a screw to be used.
- Virtual Reality (VR): with VR an operator steps into another world, for training or to test a new setup.

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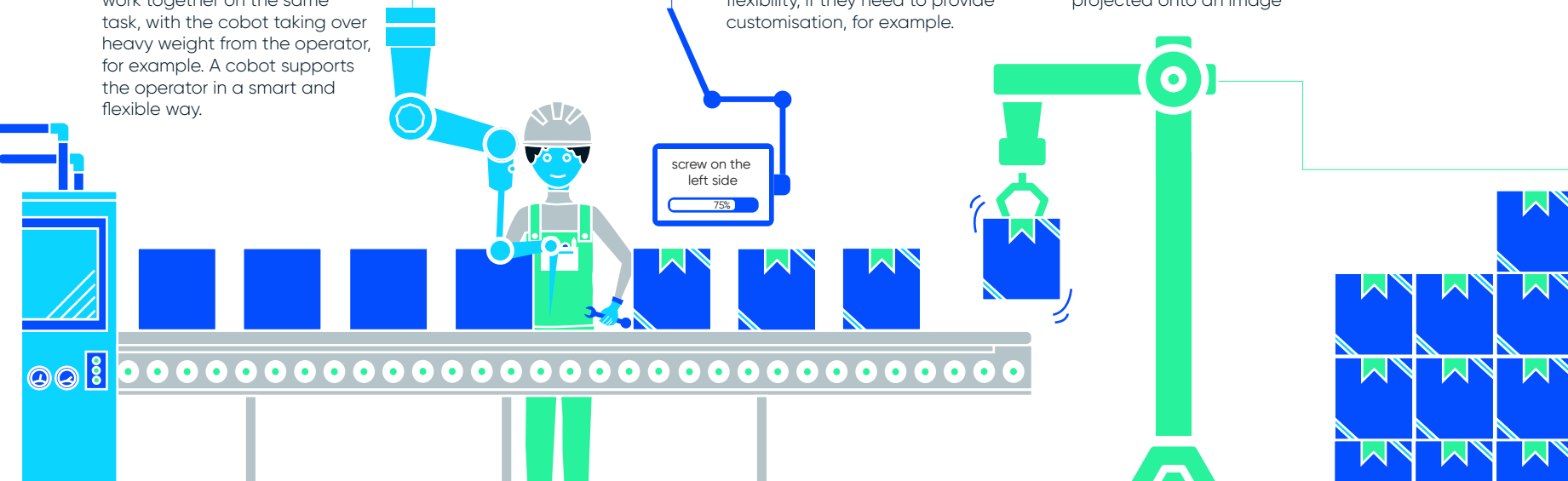
ROBOTS

Robots are taking over **repetitive and unsafe tasks** in manufacturing plants. They are increasingly accurate, easier to programme, cheaper and smaller. As a result, they are increasingly applicable in different environments and now also support operators in physically demanding tasks and precise operations.