

Robotics

10 good reasons to invest in robots



Power and productivity
for a better world™ **ABB**

10

ways that robots can make you more competitive



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Introduction

Robots have been proven to deliver a host of benefits in a wide variety of applications. End users introducing robots to their production processes have typically seen a significant transformation in their productivity and efficiency, with higher levels of output, product quality and flexibility amongst the many improvements noted.

[At a glance](#)

The 10 reasons to invest in robots

The latest statistics from the International Federation of Robotics show a record-breaking number of newly supplied industrial robots across the world. With 1.3 million industrial robots expected to be working in factories by 2014, we have outlined a number of key reasons, plus evidence showing why it's worth investing in robotic automation.

[Find out more](#)

Did you know?

The automotive, metals and electronics industries were the main drivers of robot demand in 2011

Source: IFR World Robotics 2011

To help you decide whether adding a robot to your process could help boost your competitive edge, ABB gives you ten of the most common benefits enjoyed by robot users.

The following pages demonstrate 10 companies world-wide from a range of industries which are enjoying the benefits of robotic automation.

[Watch the 10 reasons movie](#)

Did you know?

Global demand for robots is estimated to grow by 6 percent per year between 2012 and 2014

Source: IFR World Robotics 2011

1. Reduced operating costs

Using robots enables you to reduce both your direct and overhead costs, making a dramatic difference to your competitiveness.

Take energy for example. With no requirement for minimum lighting or heating levels, robots offer a great opportunity to cut your energy bills. Current estimates point to a potential saving of 8 percent for every 1°C reduction in heating levels, while savings of up to 20 percent can be achieved by turning off unnecessary lighting.

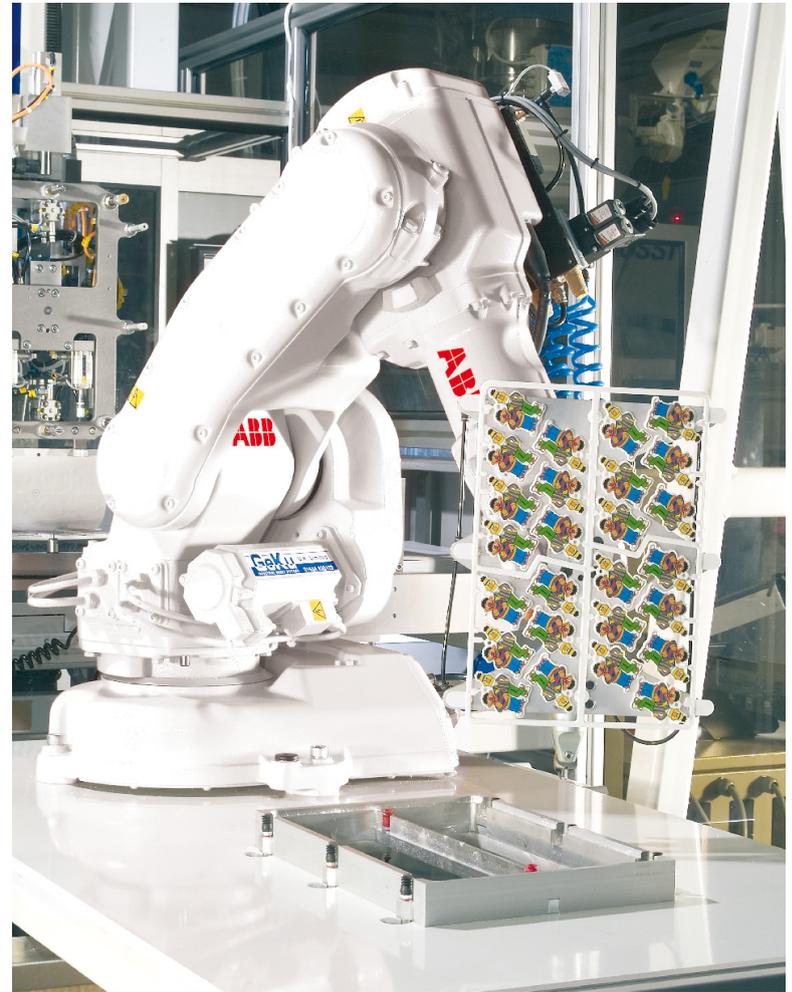
Robots help UK badge-maker enjoy automatic success over Far East rivals

Leading manufacturer of custom moulded plastic novelties, Characteristix Limited, has boosted its manufacturing performance by over 100 percent with the installation of an ABB-robot based manufacturing cell at its factory in Wadebridge, Cornwall.

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Meet the robot

[– IRB 140](#)



2. Improved product quality and consistency

The inherent accuracy and repeatability of robots means you can achieve a consistently high quality finish for every product produced. Robots eliminate the problems associated with tiredness, distraction and the effects of repetitive and tedious tasks.

ABB robots enable Faramo to aim higher for global competition

Faramo, a Portuguese producer of components for steel trolleys and automobile plants, introduced its first ABB robot back in 1992. The introduction of the automated production process enabled Faramo to expand its production line and freed the company from dependence on subcontractors and vulnerability to poor quality and late delivery times.

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Meet the robots

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[- IRB 6000](#)



3. Improved quality of work for employees

With robots you can improve working conditions for your staff. They'll no longer have to work in dusty, hot or hazardous environments.

In addition, by teaching them how to use robots they can learn valuable programming skills and do work that is more stimulating.

ABB robots increase productivity at U.S based Franklin Bronze & Alloy Inc

U.S based Franklin Bronze produces ceramic shells for a multitude of industries.

The company uses an ABB IRB 6600 robot, which has helped increase daily production from 140 to 200, whilst cutting man hours from 56 hours a day to 32.

The robot has also helped to improve quality of life in the workplace. Not only is the environment cleaner, but the job is also less physically fatiguing.

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[- IRB 6600](#)



4. Increased production output rates

Robots can be left running overnight and during weekends with little supervision, so you can increase your output levels and meet customer order deadlines.

A robotic solution will not need time away from production for breaks, sickness, distractions or lapses of concentration. Robots can now also be programmed offline, ensuring new production processes can be quickly introduced for faster production.

Australian industrial spray painter transforms output with ABB robots

Australian company D&M specializes in industrial spray painting. The company installed its first three robotic cells, equipped with spray paint guns, in 1998 and saw both productivity and profitability rise by 80 percent.

The production line handles consecutive operations that seamlessly progress through several stages, including four or five paint applications. The robotic line operates a 12-hour shift and has reduced paint consumption by up to 35 percent.



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[- IRB 5400 spray paint robot](#)

5. Increased product manufacturing flexibility

Robots can add flexibility to your production line. Once programmed, they can easily switch from one process to another, helping you to meet changes in product design or customer demand with the minimum of effort.

ABB robots provide flexible production for Unilever

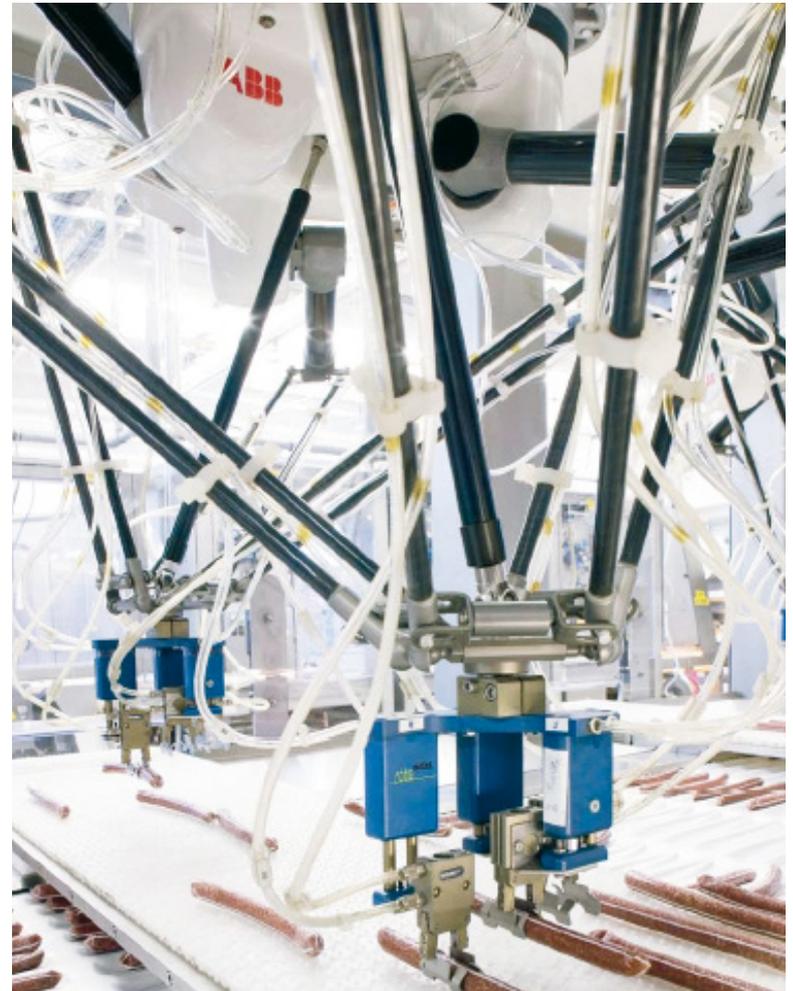
Unilever uses ABB robots at its Schafft plant in Ansbach, Germany.

The automated solution is currently used for packing and placing six different varieties of Unilever's Bifi salamis and has already shown a 25 percent increase in production.

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[Meet the robot](#)

[– IRB 340 FlexPicker](#)



6. Reduced material waste and increased yield

By using robots, you can vastly increase the quality of your products. You will have more products finished first time to the standard required by your customers, and reduce the amount of breakages and waste produced as a result of poor quality or inconsistent finishing.

With products being produced to such a high level each time, you will gain greater yields.

Robots reduce breakages for Roland Murten's twisted pretzels

Roland Murten AG in Switzerland is using ABB's FlexPicker IRB 340 to individually pack twisted-pretzels. A major advantage of using high speed, high-precision, pick robots is that fewer pretzels are broken than with manual handling.

The speed and accuracy of the robots has reduced the number of broken items from 12 percent down to four percent, which now enables 134 kilograms of pretzels to be packed every hour.

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[Meet the robot](#)

[- IRB340 FlexPicker](#)



7. Improved workplace health and safety

Robots can readily take over unpleasant, arduous or health-threatening tasks that may be currently undertaken by manual workers.

By using robots, you can decrease the likelihood of accidents caused by contact with machine tools or other potentially hazardous production machinery or processes. They can also help to eliminate ailments associated with repetitive or intensive processes, such as repetitive strain injuries (RSI) and vibration white finger (VWF).

Robot cell adds muscle to Svedplan's furniture packing

ABB Robotics, together with partner Teamster, installed a robot-based application solution for Swedish furniture manufacturer, Svedplan. The installation of five IRB 4400 robots and three IRB 660 robots to handle heavy lifting tasks has increased production by as much as 45 per cent and work conditions have improved for employees without the loss of jobs.

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Meet the robots

- [– IRB 660](#)
- [– IRB 4400](#)



8. Reduced labour turnover and difficulty of recruiting workers

The high precision demanded by today's industrial processes requires the highest levels of skill and training. With highly-skilled manual workers becoming harder to find and more expensive to employ, robots can provide an ideal alternative.

Once programmed for your process, robots are ready to begin work with none of the costs associated with recruitment or ongoing training. Robots can also offer greater flexibility, both in terms of work patterns and the ability to handle different production tasks.

Italian manufacturer lets robots take the heat

MP Filtri, based in Milan, is one of the world's top manufacturers of hydraulic oil filters.

Foundry work requires skilled personnel, who are often unavailable or difficult to find. ABB's robots have helped improve productivity and precision whilst reducing the time spent finding appropriate employees. For MP Filtri this has resulted in a reduction in employee turnover from 10 percent down to two percent.

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Meet the robot

[- IRB 2400](#)

[- IRB 4400](#)

[- IRB 6600](#)



9. Reduced capital costs (inventory, work in progress)

Using robots to achieve faster, more efficient production lines can help reduce capital costs associated with inventory and work in progress.

By moving products faster in production, businesses can better predict the production rate and ensure a fast and efficient service is delivered.

Automation partners team up to support agriculture with robotics

Danish ABB partner DanRob has helped develop a new robotics solution to support the Danish-based Kverneland Group, a manufacturer of high-quality agricultural machines. Since introducing the robots, Kverneland has reported a drop in production time per part produced from two and a half hours to 45 minutes.

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[Meet the robot](#)

[– IRB 2400](#)



10. Save space in high value manufacturing areas

Robots can be mounted in multiple configurations to help you save highly valuable space in manufacturing areas.

They can also be programmed to work in confined spaces so you don't lose valuable floor space.

Did you know?

ABB's robots can be mounted on shelf systems, walls, or even ceilings.

ABB robots deliver product diversity for Italian pharmaceutical company

Italian pharmaceutical company, IMA, has introduced a new automated robotic production line to improve production at the plant.

IMA's solution is also saving the company floor space, as the overall layout of the new machine takes up less space, and can handle a rate of 150 pieces per minute.

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Meet the robot

[– IRB 340 FlexPicker](#)



Why choose ABB?

As well as an extensive array of robotic solutions, ABB offers a global customer service organization providing a complete portfolio of services designed to increase productivity and performance. Over 1,500 fully trained service engineers and process experts in 35 countries are available to provide service and support for your robot and robot systems.

[Learn more](#)

Conclusion

Robotic automation is presenting an increasingly attractive option for today's companies looking for ways to balance enhanced competitiveness against tightening costs and spiralling overheads.

As this guide has shown, robots are financially affordable and offer long-term savings, plus a raft of benefits, including improved productivity, efficiency, improved health & safety and enhanced employee motivation.

[Take the next step](#)

Contact us

ABB AB

Robotics

Hydrovägen 10

SE-721 36 Västerås, Sweden

Phone: +46 21 325000

www.abb.com/robotics

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