

Robotics

10  
good reasons  
to invest in  
**ROBOTS**



Power and productivity  
for a better world™



# 10 ways that robots can make you more competitive

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# Introduction

Robots deliver a **host of benefits** in a wide variety of applications and are proven to **transform productivity** and efficiency for the better. Integrating them into existing facilities results in much **faster output**, higher **quality** and **greater flexibility** in virtually all production processes.

The latest statistics from the International Federation of Robotics (IFR) indicate a record-breaking number of industrial robots are being installed worldwide. And it's no wonder; with **growing evidence** showing why it's worth investing in robotic automation the global robotic ranks are expected to swell to **1.3 million machines** by 2014.



[Find out more from the IFR](#)



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# The 10 reasons to invest in robots

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

Not only have we outlined these key reasons, the following pages illustrate **10 real-world successes** from a range of industries worldwide that have reaped the **benefits of robotic automation**.

## 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



[Watch the 10 reasons movie](#)

[Read the 10 reasons infographic](#)



# 01 Reduced operating costs

Robots enable you to **reduce 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.



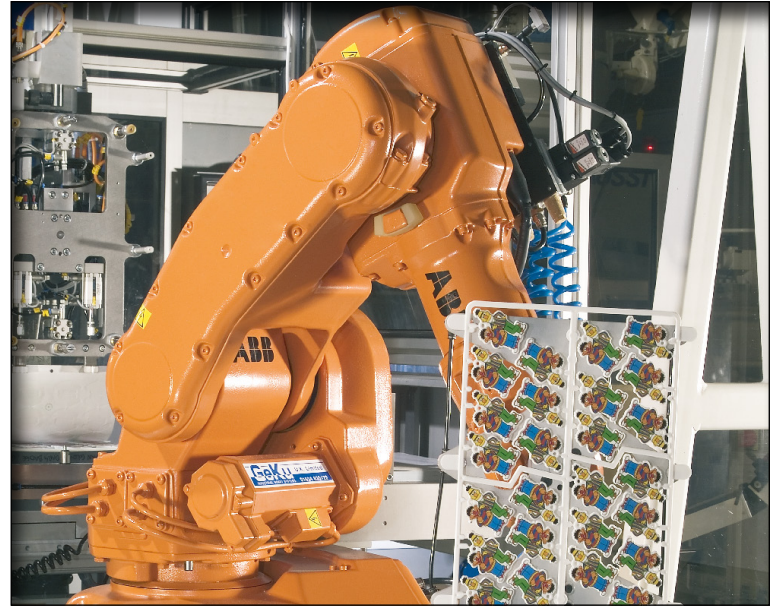
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# In the real world

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.



An ABB IRB 140 robot handles custom molded plastic parts for UK-based Characteristix Limited.



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Meet the robot:  
-IRB 140



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# 02 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.

## Did you know?

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

Source: IFR World Robotics 2011



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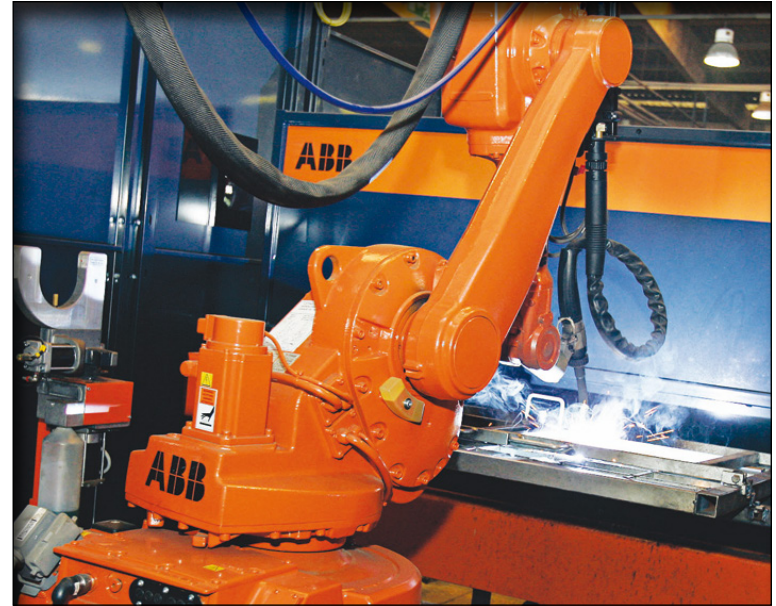




# In the real world

## 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.



An ABB IRB 1600 robot welds parts in small series production runs for Portuguese company Faramo.



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[Meet the robot:  
-IRB 1600](#)



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# 03 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 and challenging.



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## In the real world

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 increased daily production from 140 to 200 parts, while cutting man hours from 56 hours a day to 32. Quality of life in the workplace has also improved; not only is the environment cleaner, but work is less physically fatiguing.



An ABB IRB 6600 robot is part of a complete shelling system for investment casting company Franklin Bronze and Alloy.



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[Meet the robot:  
-IRB 6600](#)



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# 04 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.



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# In the real world

## 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 robotic line operates on a 12-hour shift and has reduced paint consumption by up to 35 percent.



An ABB IRB 5400 paint robot has helped D&M Auto Industrial Spray Painting stay competitive in the automotive market.



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[Meet the robot  
-IRB 5400](#)



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# 05 Increased product manufacturing flexibility

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



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# In the real world

## 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.



Several ABB FlexPicker robots pack salamis at a blistering rate for Unilever's Bifi brand.



[Get the full story](#)

[Meet the robot:  
-IRB 360 FlexPicker](#)



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# 06 Reduced waste and increased yield

By using robots, you can **vastly increase the quality** of your products. You will have more products finished on the first run 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**.



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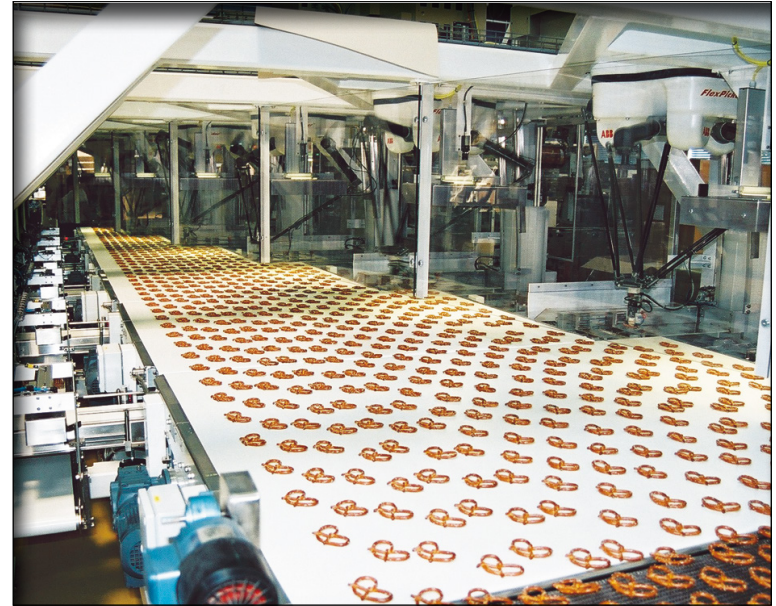




# In the real world

## Robots reduce breakages for Roland Murten's twisted pretzels

Roland Murten AG of Switzerland has found a major advantage of using high speed, high-precision, ABB IRB 340 FlexPicker robots to pick and pack pretzels is that fewer 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.



Several ABB FlexPicker robots gently handle pretzels for Switzerland-based Roland Murten AG.



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[Meet the robot:  
-IRB 360 FlexPicker](#)



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# 07 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).



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# In the real world

## 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 percent and work conditions have improved for employees without the loss of jobs.

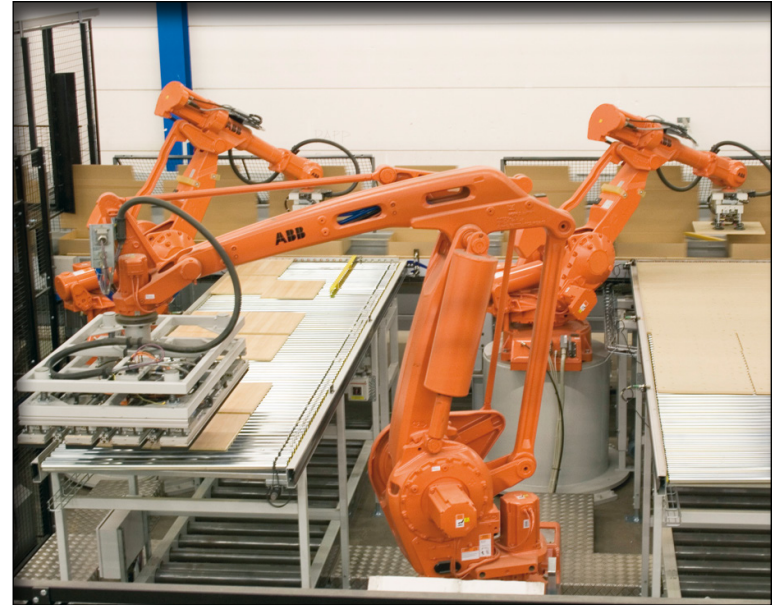


ABB packaging robots assemble perfect flat packs for Swedish furniture manufacturer, Svedplan.



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Meet the robot:  
-IRB 660



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# 08 Reduced turnover and recruitment difficulty

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**.



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# In the real world

## 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 while 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.



ABB robots excel at enduring the punishing heat of foundry work for Italy-based MP Filtri.



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Meet the robot:  
[-IRB 6600](#)



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# 09 Reduced capital costs

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.



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# In the real world

## 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.



An ABB IRB 2400 robot welds heavy duty agricultural machinery for Danish-based Kverneland Group.



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[Meet the robot:  
-IRB 2400](#)



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# 10 Save space in 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



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# In the real world

ABB robots deliver product diversity for pharmaceutical companies

Italian automation specialist, Industria Macchine Automatiche (IMA), has designed a new automated robotic production line to improve production at pharmaceutical and cosmetics plants. IMA's solution saves on floor space, as the overall layout of the new machine takes up less space and can handle a rate of 150 pieces per minute.



ABB FlexPicker robots pack tubes of pharmaceuticals in a compact cell built by Italy-based Industria Macchine Automatiche.



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[Meet the robot:  
-IRB 360 FlexPicker](#)



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# 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 53 countries** are available to provide **service and support** for your robot and robot systems.



[Learn more](#)



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# Conclusion

Robotic automation presents 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.

We hope you've enjoyed reading!



[Take the next step](#)



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