

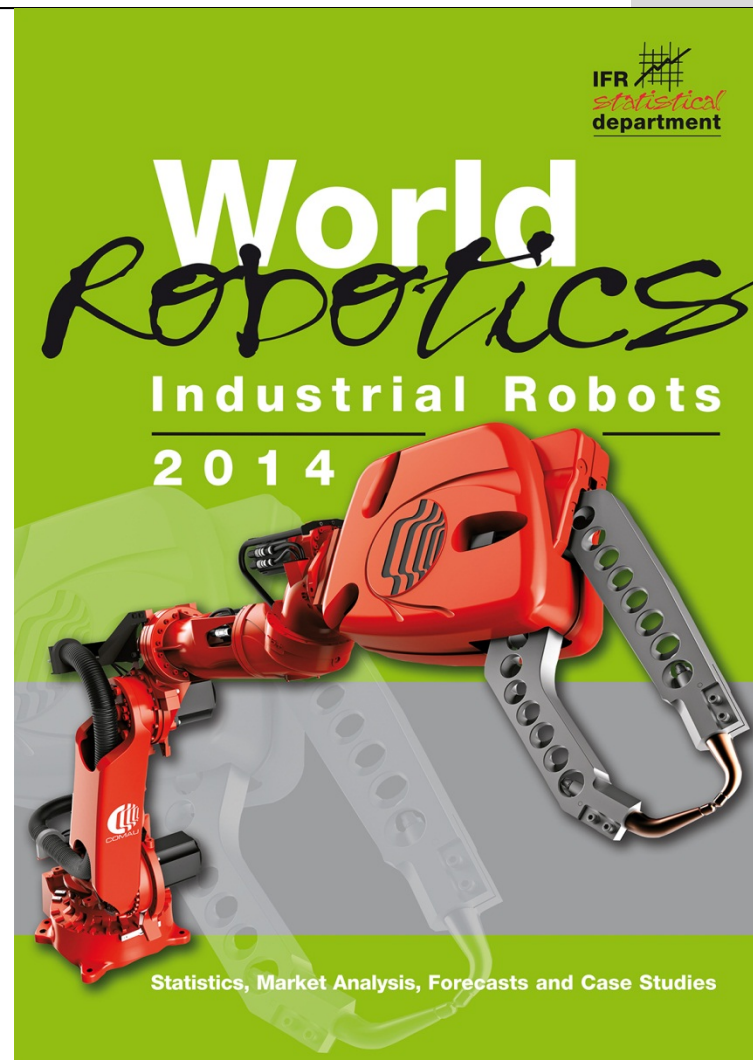
Global robotics industry: Record beats record

Outlook on World Robotics 2014

Arturo Baroncelli
President
International Federation of Robotics

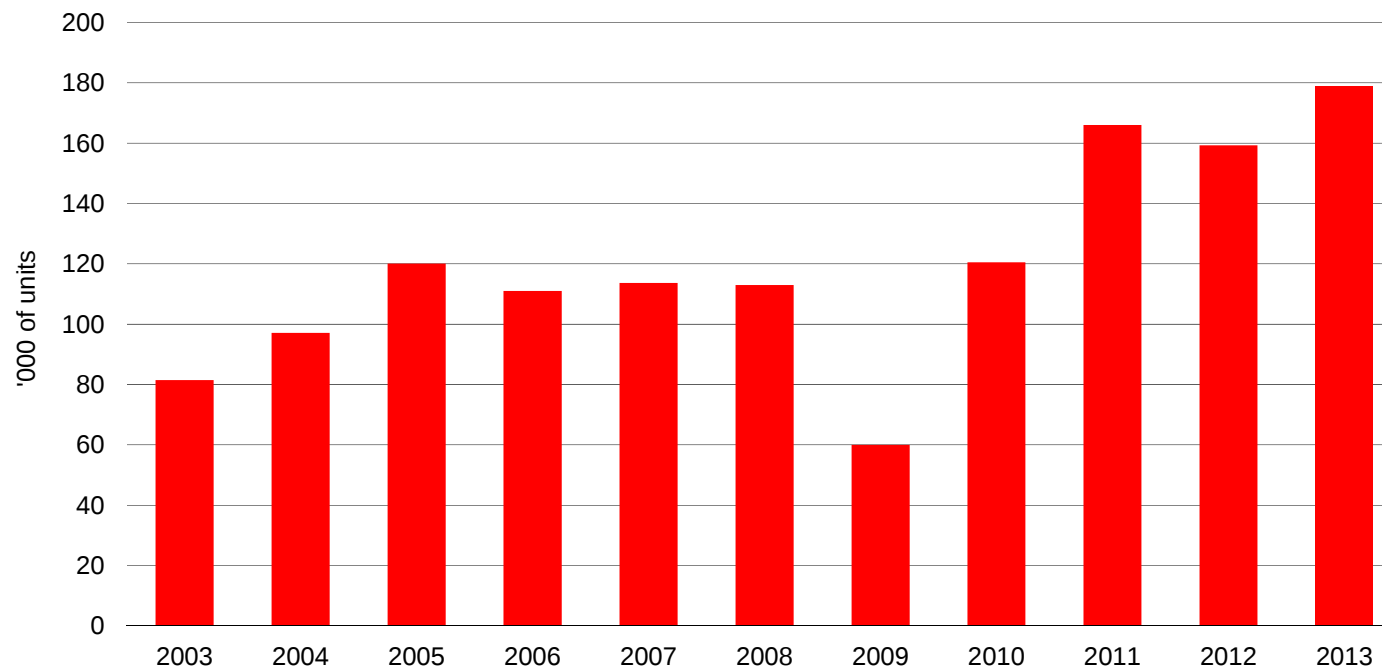
www.worldrobotics.org

www.ifr.org



2013: all-time high of 179,000 industrial robots sold

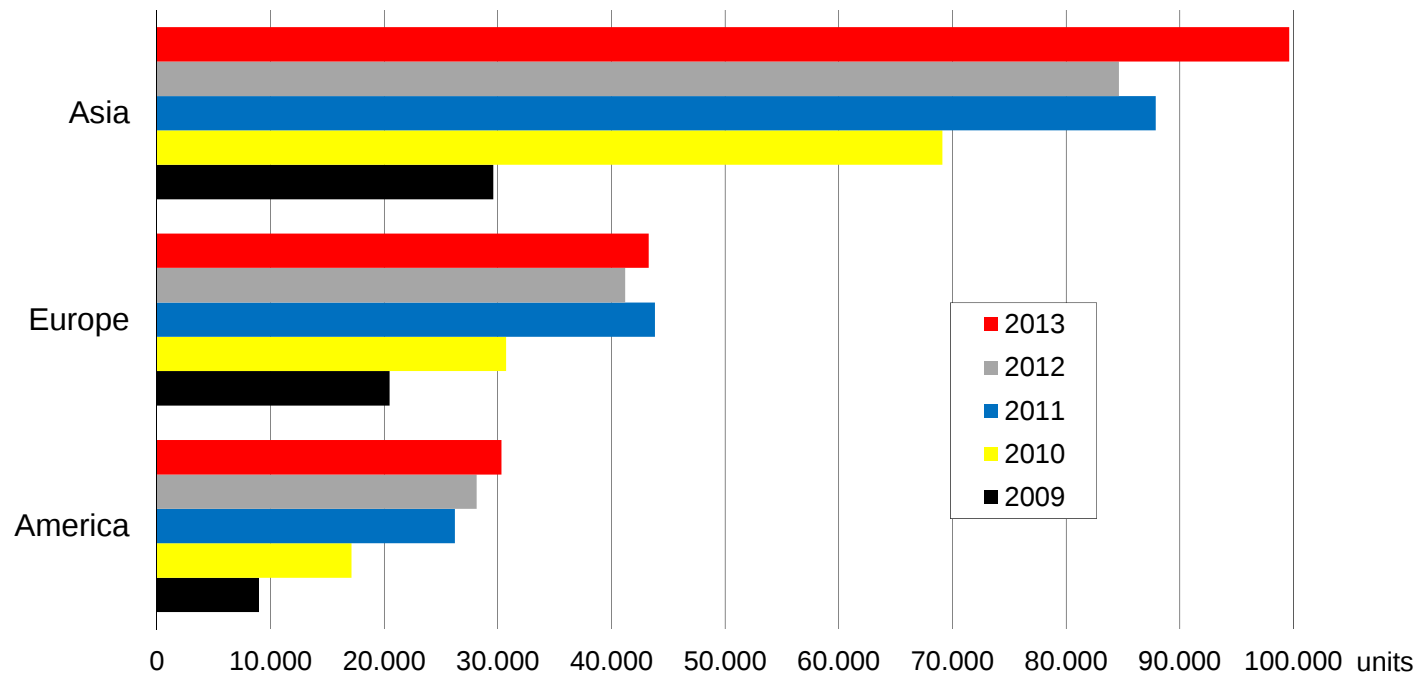
**Worldwide annual supply of industrial robots
2003 - 2013**



Source: IFR Statistical Department

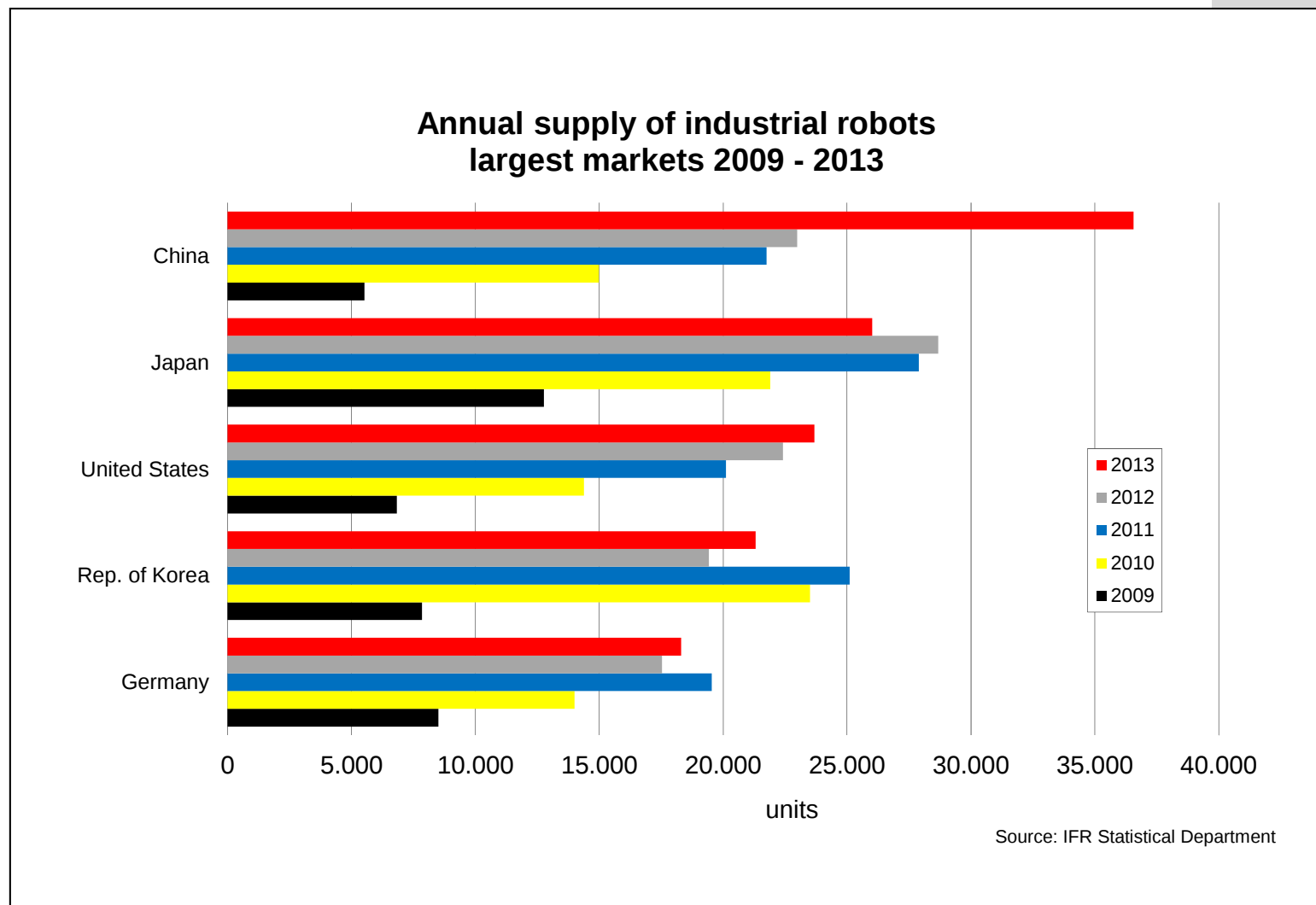
Remarkable increase in all regions

**Annual supply of industrial robots
by regions 2009 - 2013**



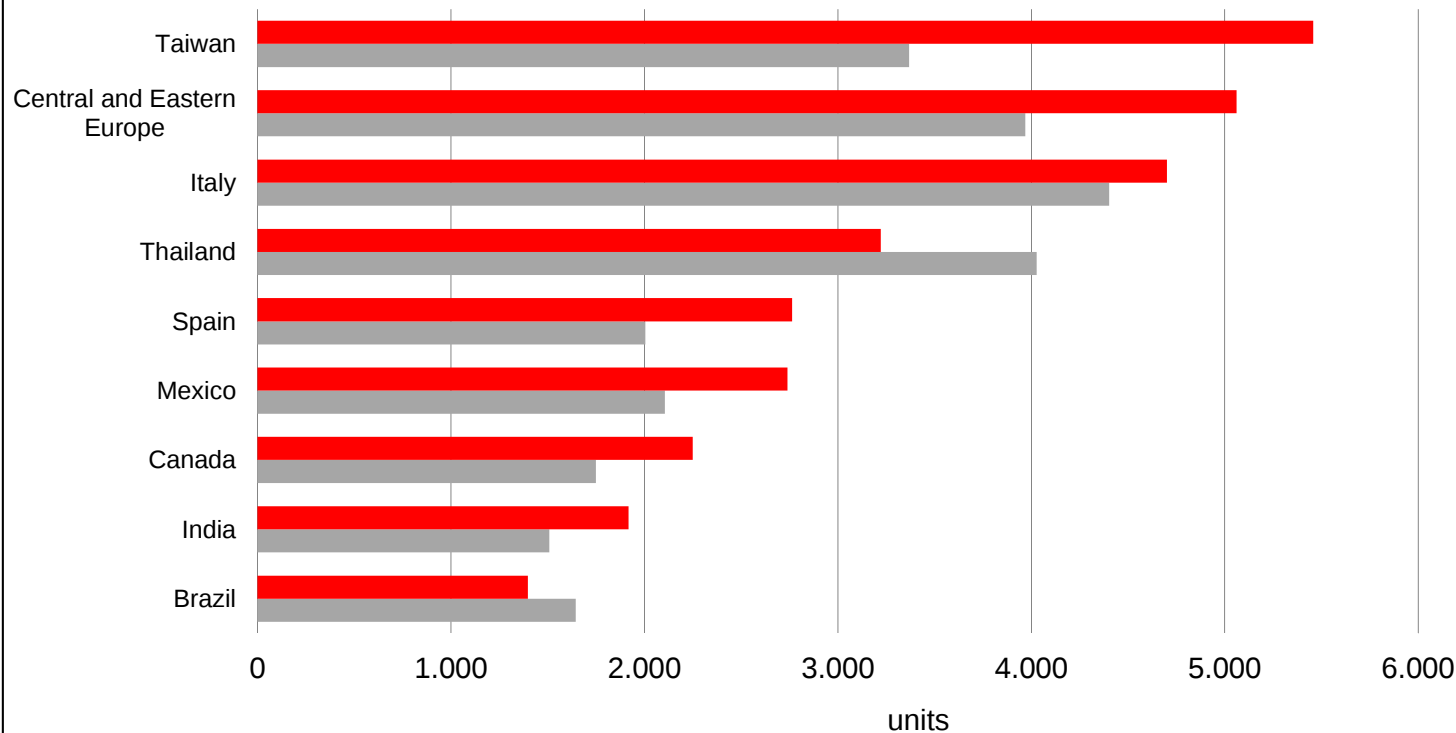
Source: IFR Statistical Department

China: biggest and fastest growing robot market



Considerable increase also in other robot markets

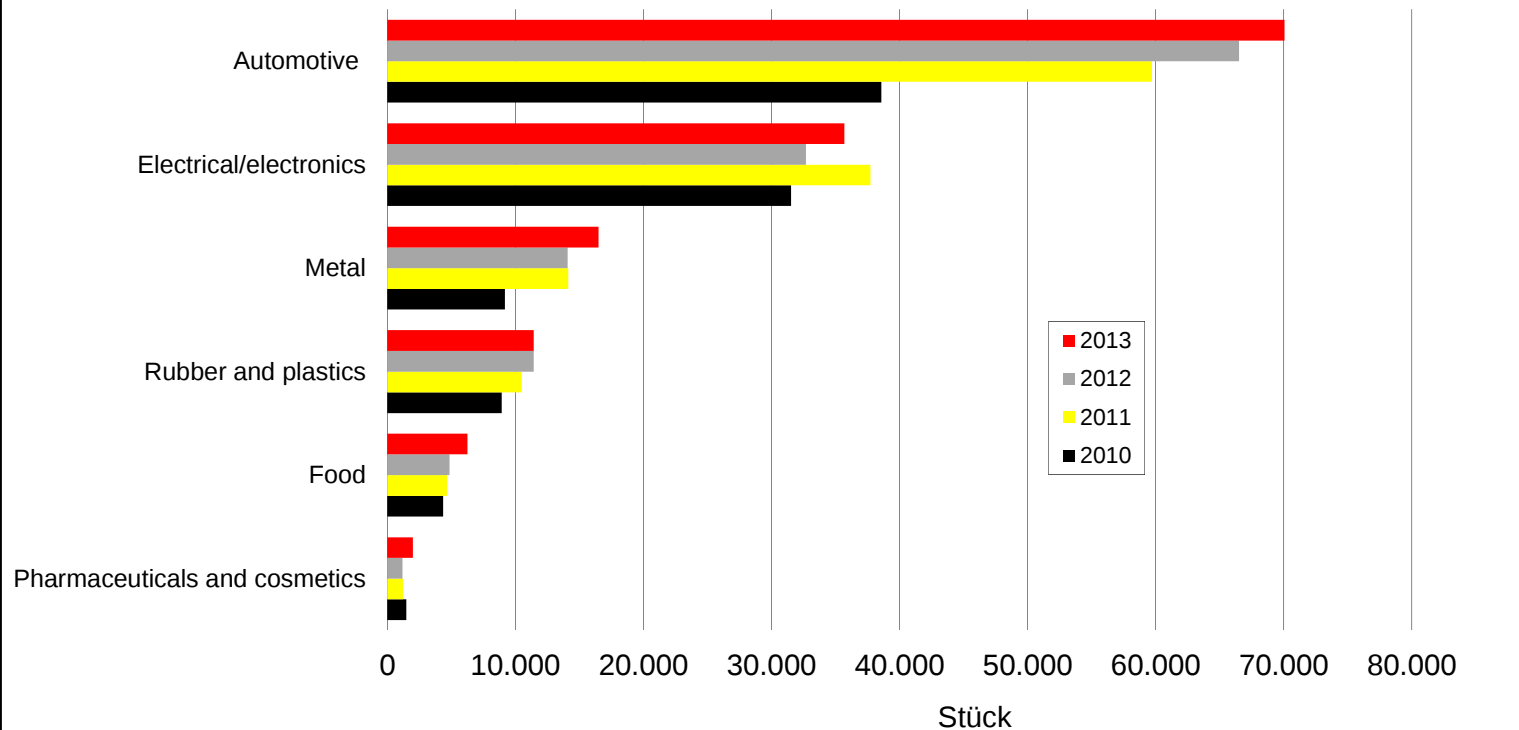
**Annual supply of industrial robots
of other important countries 2013**



Source: IFR Statistical Department

Main drivers of the growth in 2013: Automotive, electronics and metal

Estimated worldwide annual supply of industrial robots
at year-end by main industries 2010 - 2013



Source: IFR Statistical Department

The trend towards automation is accelerating

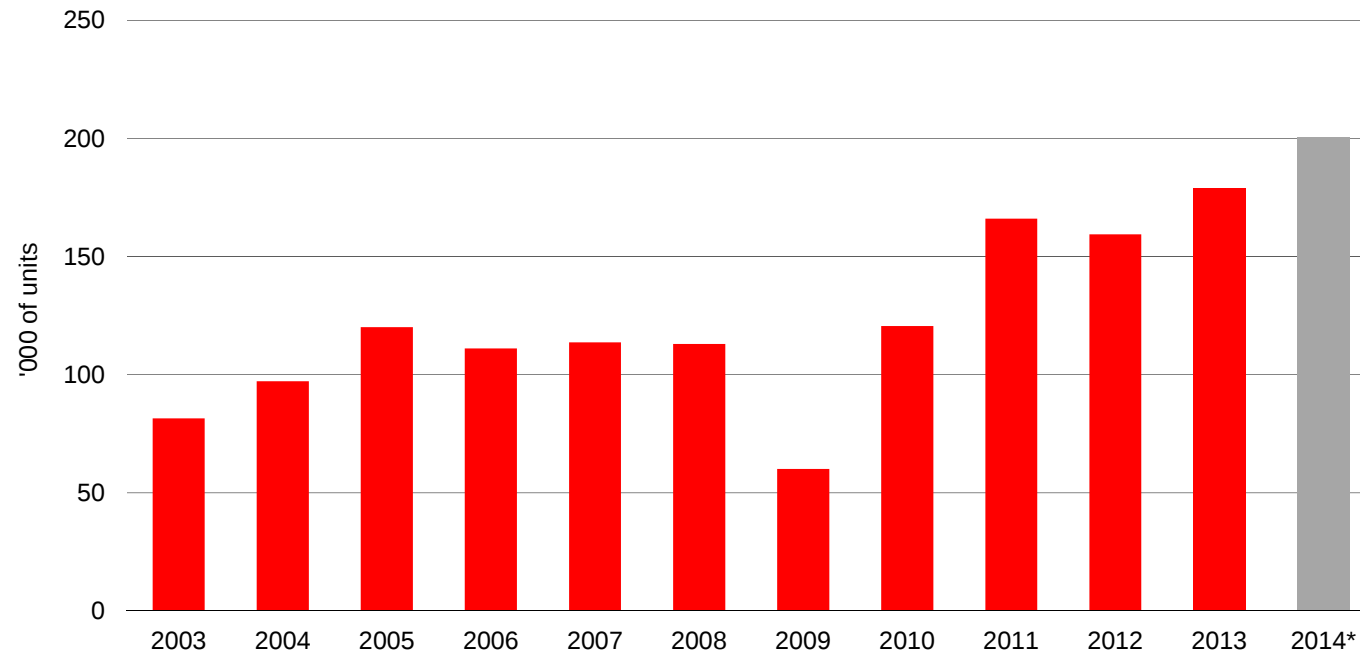
- Energy-efficiency and new materials
- The need of a global competitiveness requires increased productivity and quality.
- Growing consumer markets require expansion of production capacities.
- Decreasing life-cycles of products and increasing variety of products
- Robots improve the quality of work by taking over dangerous, tedious and dirty jobs that are not possible or safe for humans to perform

Human-machine collaboration

- The break-through of the human-machine collaboration is just beginning
- People without experience in using robots can program and integrate a robot in the process because it
 - is capable of understanding human-like instructions
 - has modular plug-and-produce components
- Major challenge safety
 - The robot is working close to the worker without a fence
 - Lightweight robots with integrated vision guidance and better sensor
 - ISO: Technical Specification for collaboration of humans and industrial robots in order to provide reliable safety requirements.

Continued increase of robot sales in 2014

**Worldwide annual supply of industrial robots
2003 - 2014***



* Forecast

Source: IFR Statistical Department

Publication of World Robotics 2014

Final detailed results, forecast 2014 to 2017 on industrial and on service robots:

In September 2014

