

First half of world robotics

IFR Robot Suppliers Group

14 June 2007 Chicago

World
Robotics



World Robotics 2007 Outlook

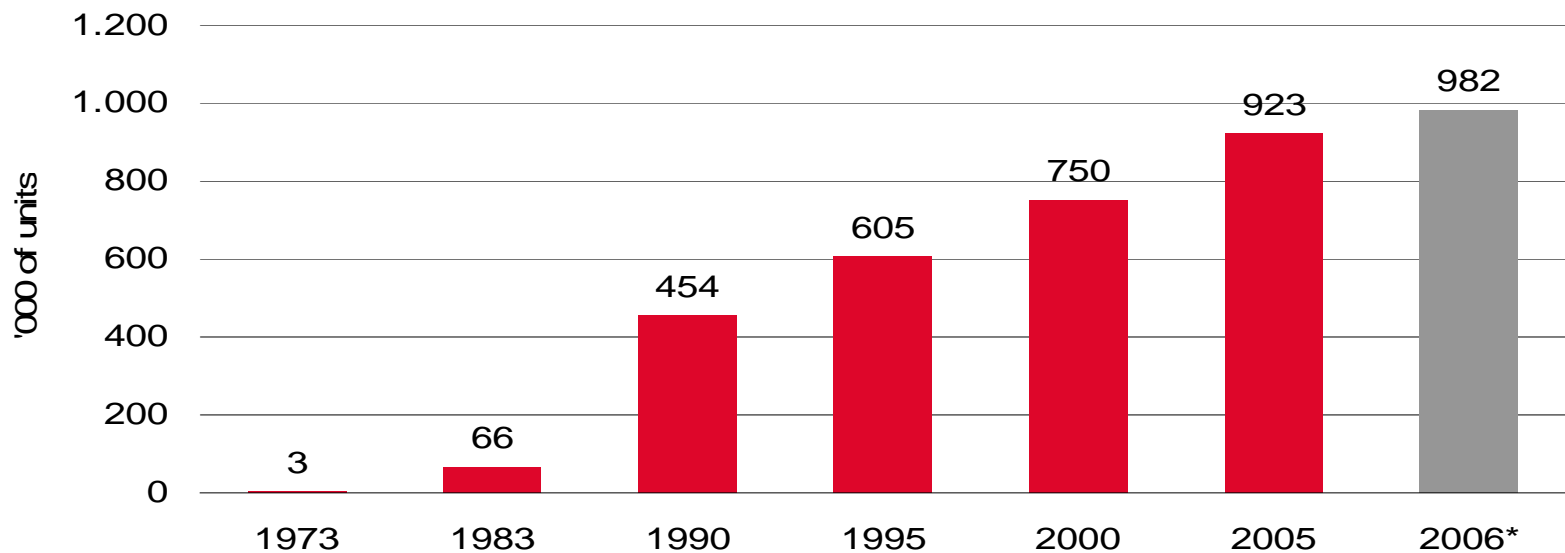


- Industrial Robots
 - Operational stock
 - Yearly installations
 - Applications
 - Industries
 - Forecast - proposal

Industrial Robots – operational stock

A success story

Estimated worldwide operational stock of industrial robots



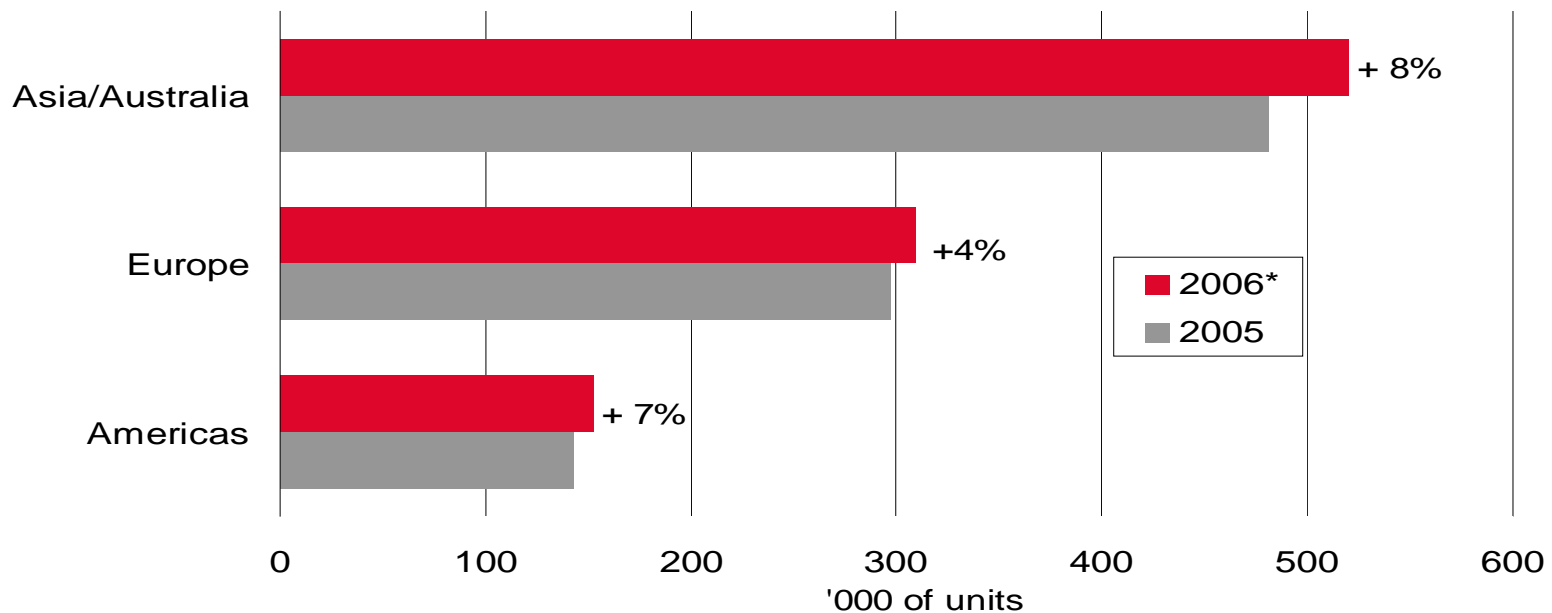
* preliminary data

Quelle: World Robotics 2007

Industrial Robots - operational stock

Slower growth in Europe

Estimated operational stock of industrial robots by regions 2005 - 2006



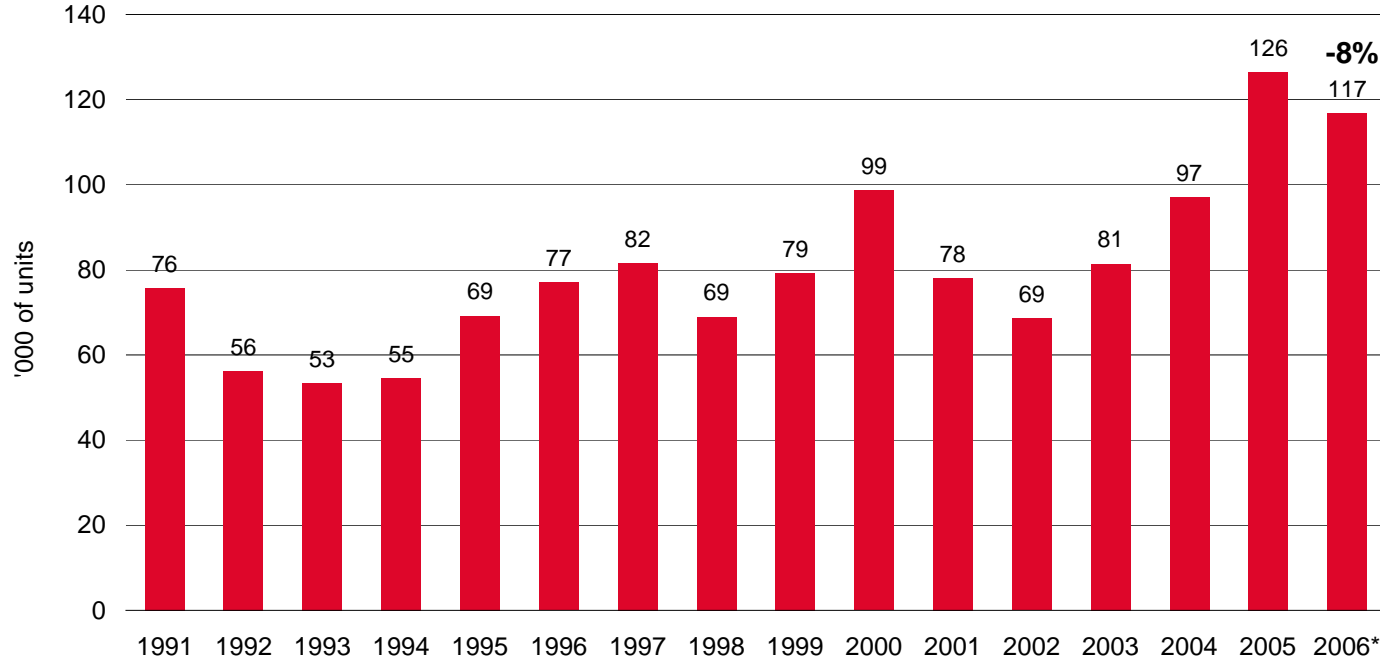
* preliminary data

Source: World Robotics 2007

Industrial Robots – yearly supply

World market decreased by 8%

Estimated worldwide yearly supply of industrial robots
1991 - 2006



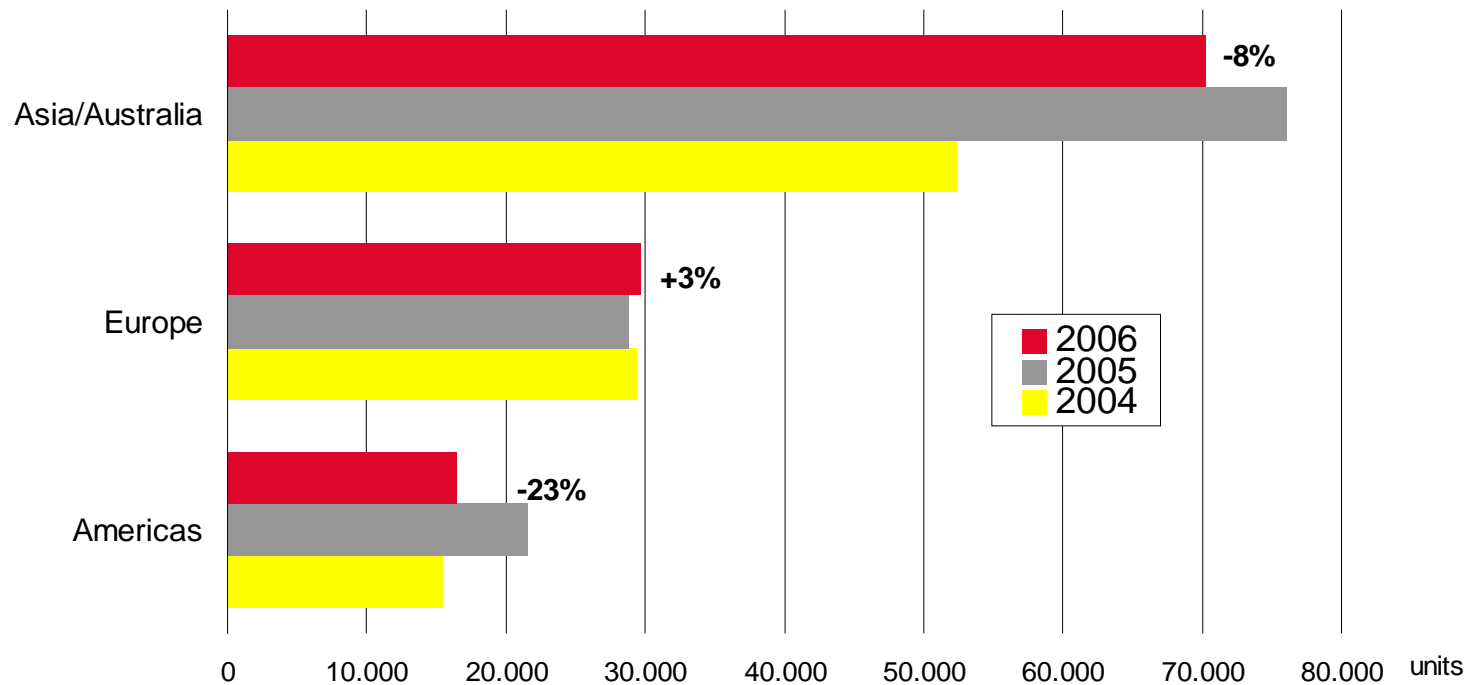
Source: World Robotics 2007

* preliminary data

Industrial Robots – yearly supply

Quite dissimilar in the regions

Estimated yearly supply of industrial robots
by regions 2004 - 2006



* preliminary data

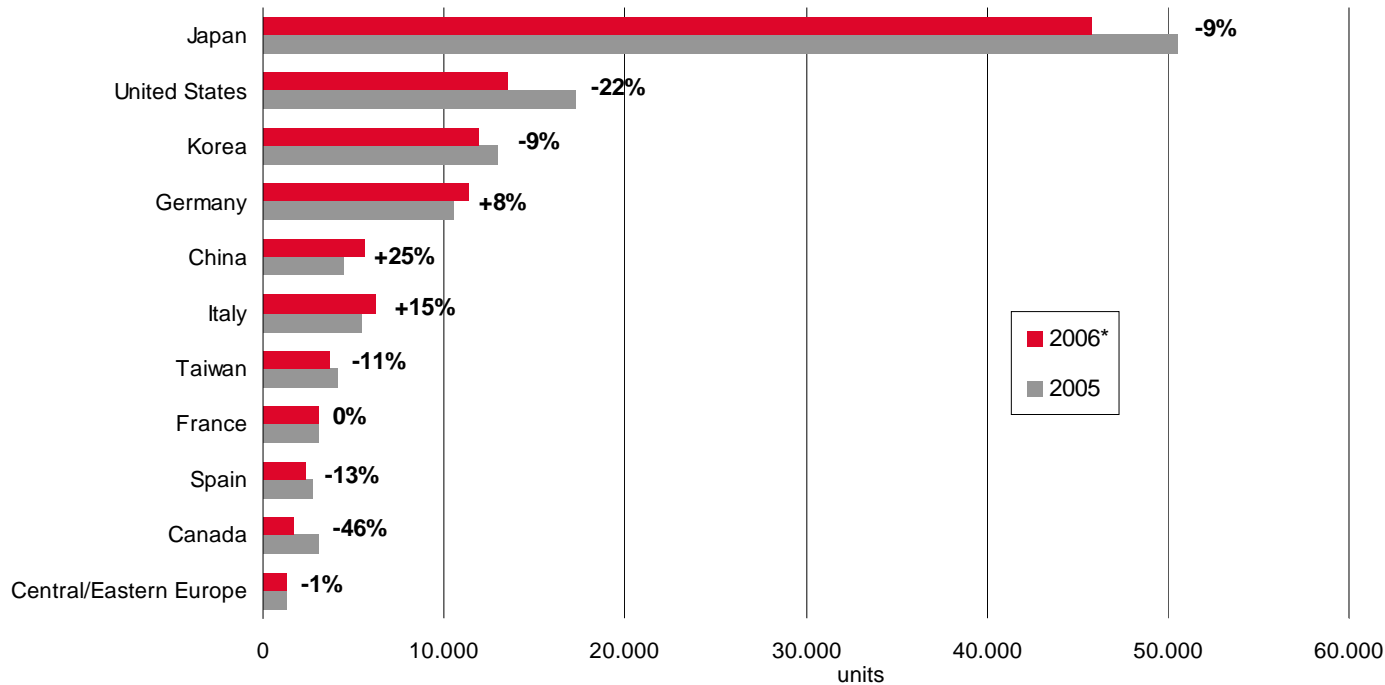
Source: World Robotics 2007

supply

Decrease in the three biggest robot nations

robot nations

Estimated yearly supply of industrial robots by the main countries 2005 - 2006



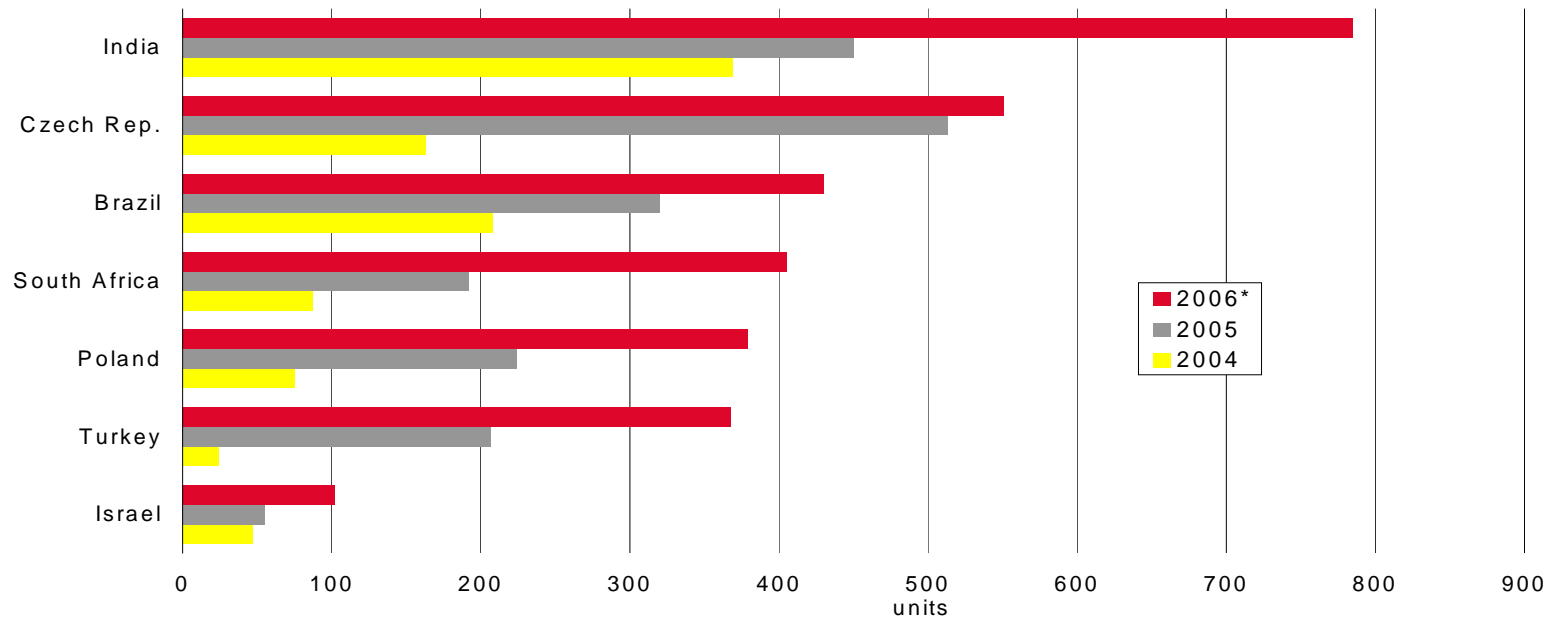
Source: World Robotics 2007

* preliminary data

Industrial Robots – yearly supply

Growing markets

Estimated yearly supply of industrial robots
growing markets 2004 - 2006



* preliminary data

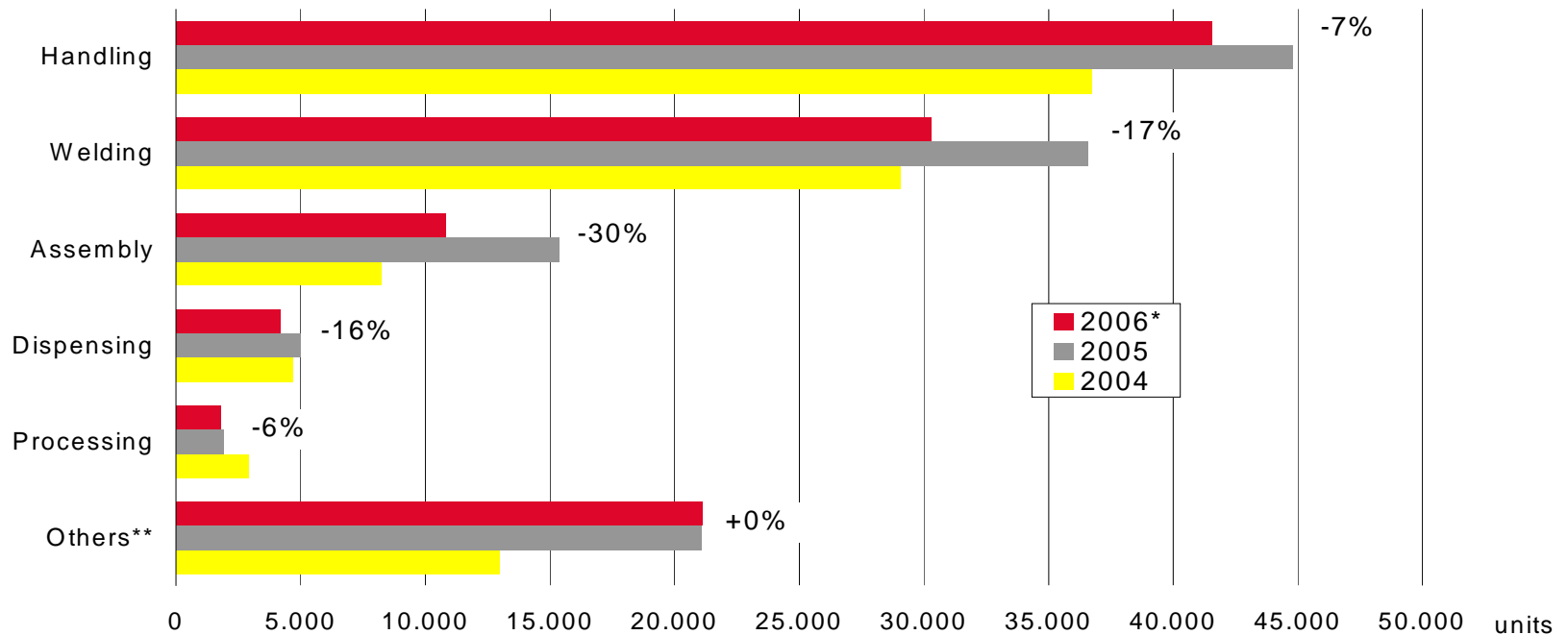
Source: World Robotics 2007

applications

Decrease in nearly all applications

applications

Estimated worldwide yearly supply of industrial robots 2004 - 2006 by applications



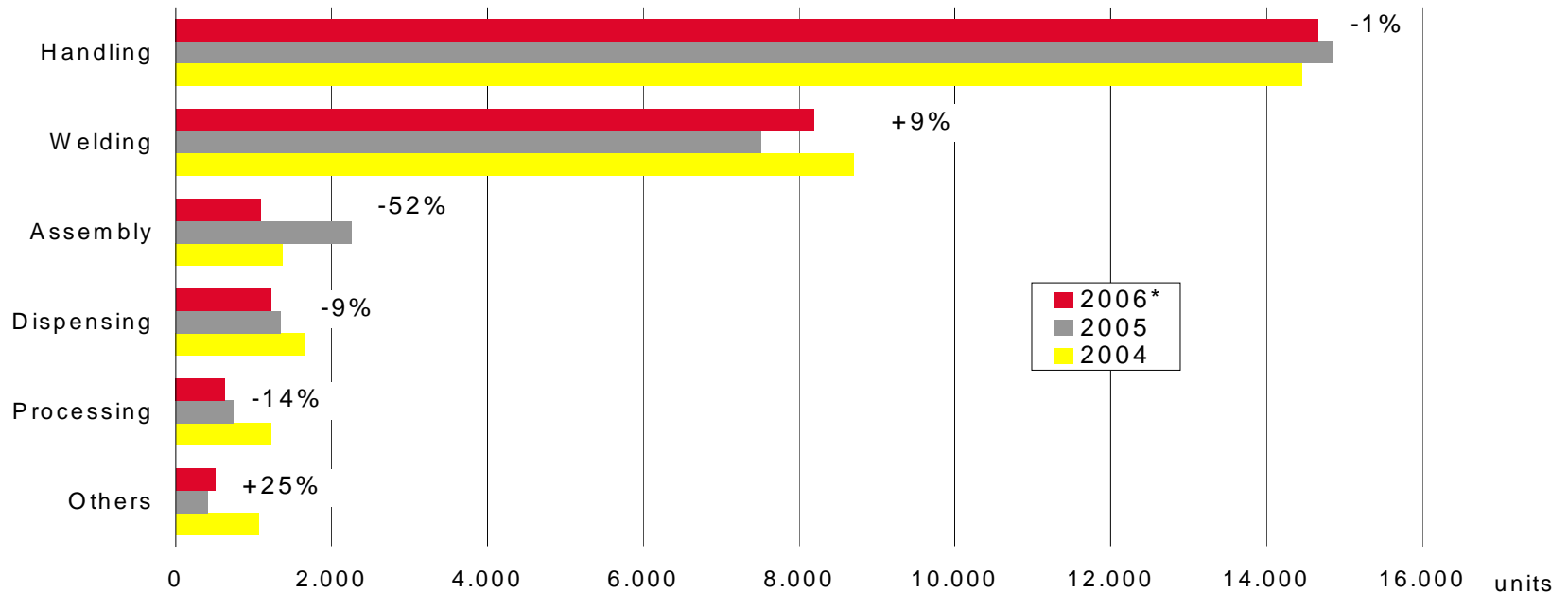
* preliminary data

**including mainly cleanroom applications

Source: World Robotics 2007

Industrial Robots – applications - Europe Welding increased!

Estimated yearly supply in Europe
of industrial robots 2004 - 2006 by applications



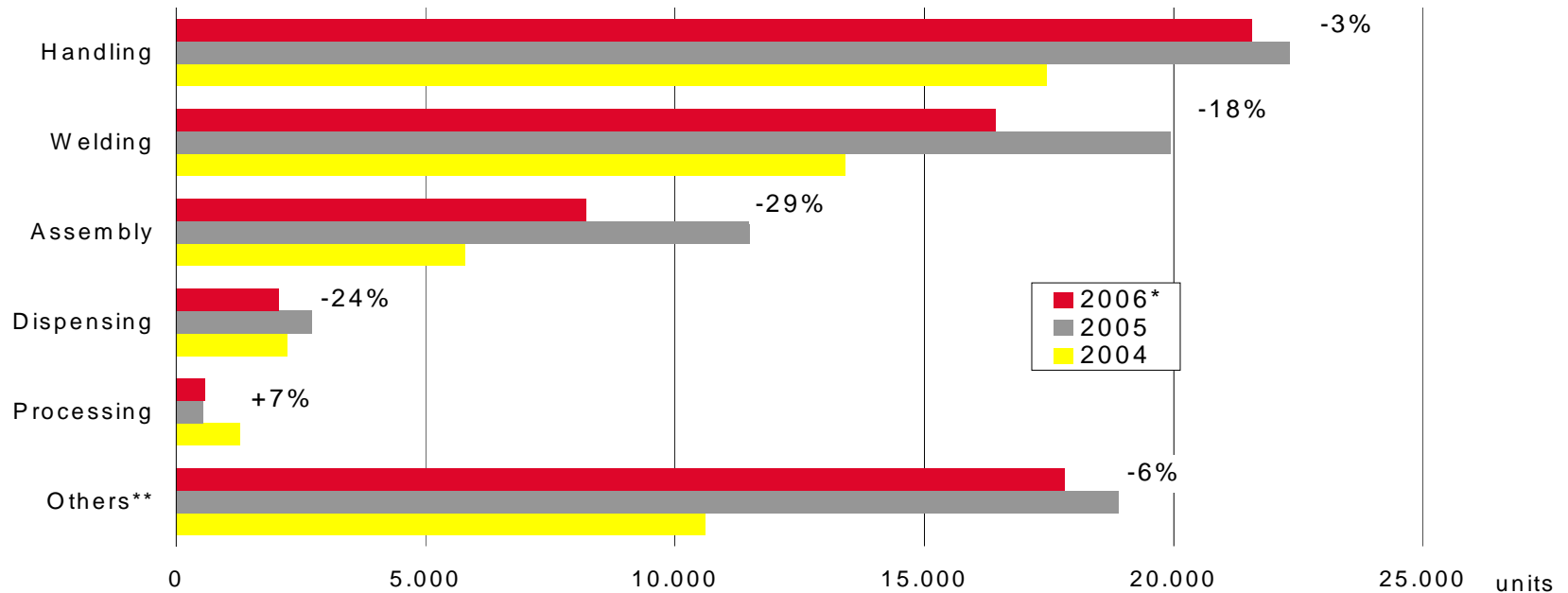
* preliminary data

Source: World Robotics 2007

– Asia

Huge increase in 2005, decrease in 2006

Estimated yearly supply in Asia/Australia
of industrial robots 2004 - 2006 by applications



* preliminary data

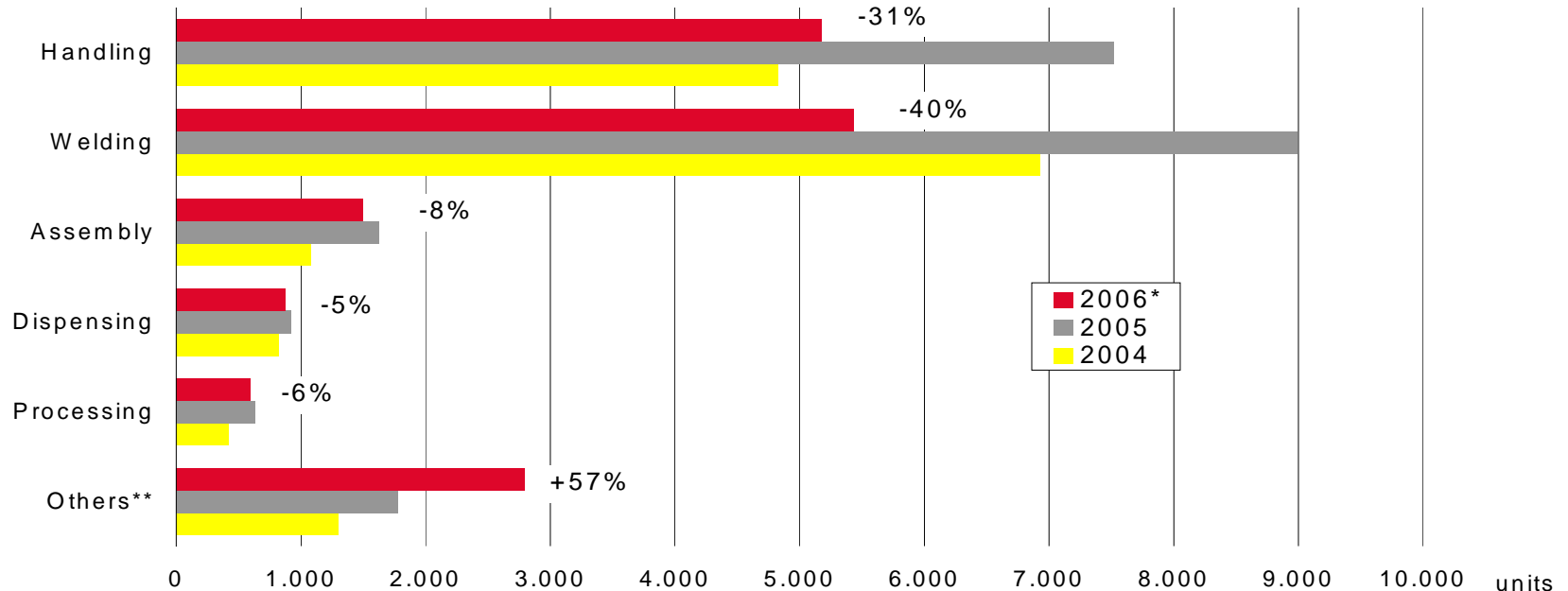
**including mainly cleanroom applications

Source: World Robotics 2007

applications – Americas

Handling and welding down

Estimated yearly supply in Americas
of industrial robots 2004 - 2006 by applications



* preliminary data

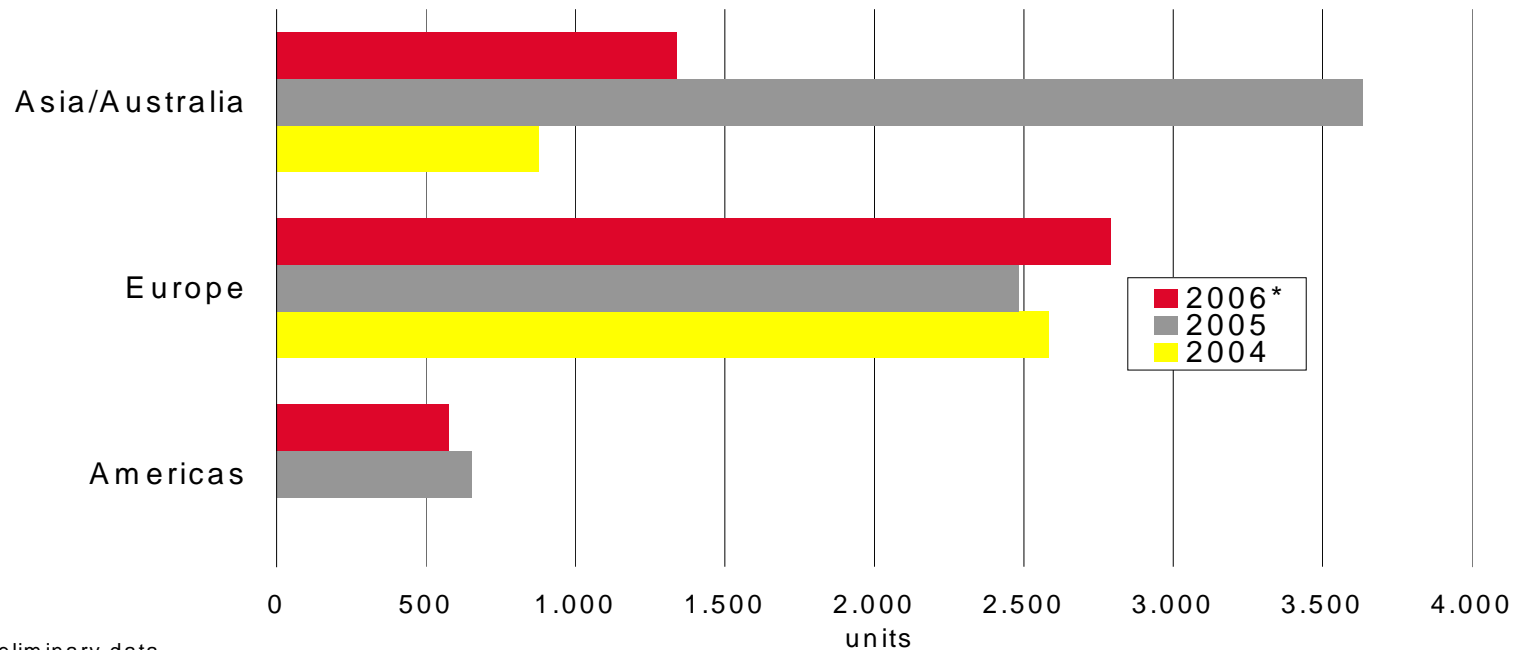
**including mainly cleanroom applications

Source: World Robotics 2007

2nd half of World Robotics

Industrial Robots – Palletizing/packaging Growing demand?

Yearly supply of industrial robots for **palletizing/packaging**
by regions 2004 - 2006

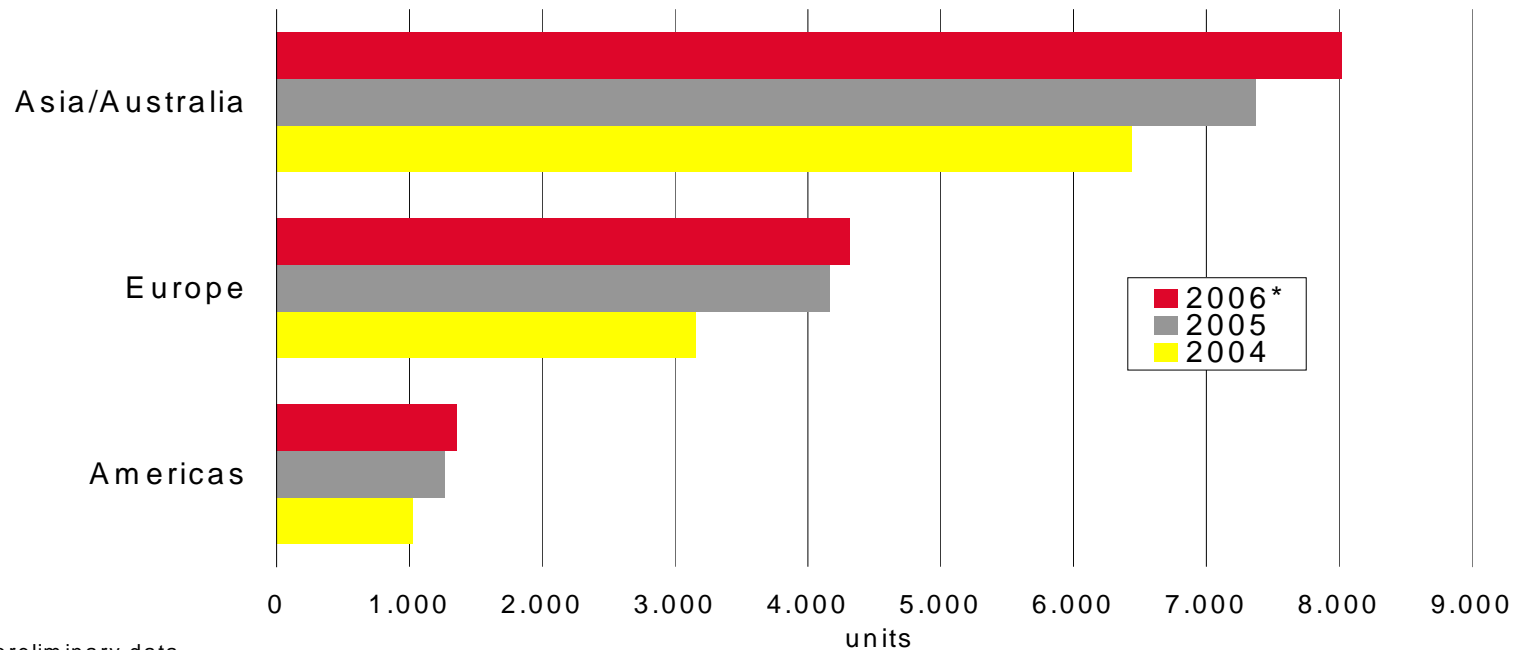


* preliminary data

Source: World Robotics 2007

Industrial Robots – Plastic moulding Steadily growth

Yearly supply of industrial robots for **plastic moulding** by
regions 2004 - 2006

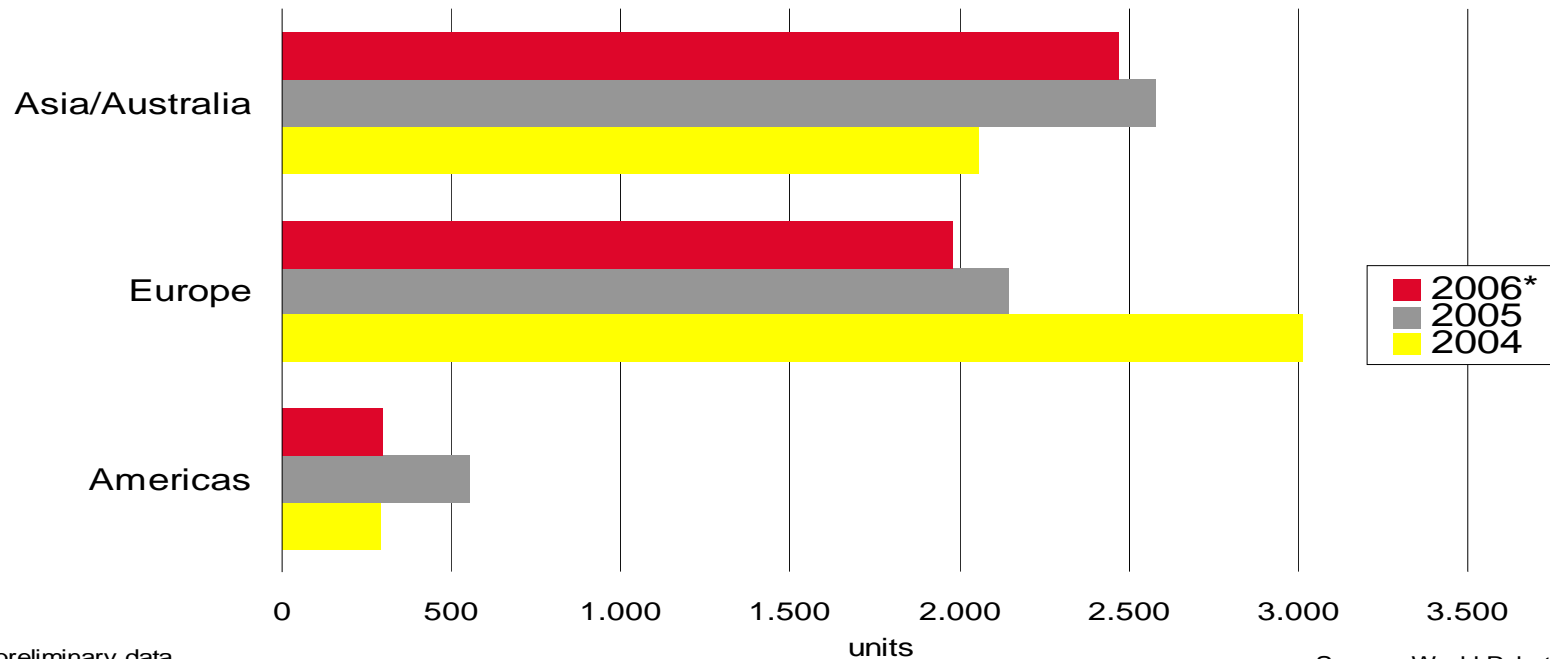


* preliminary data

Source: World Robotics 2007

Handling at machine tools – decreasing development?

Yearly supply of industrial robots for
handling at machine tools by regions 2004 - 2006



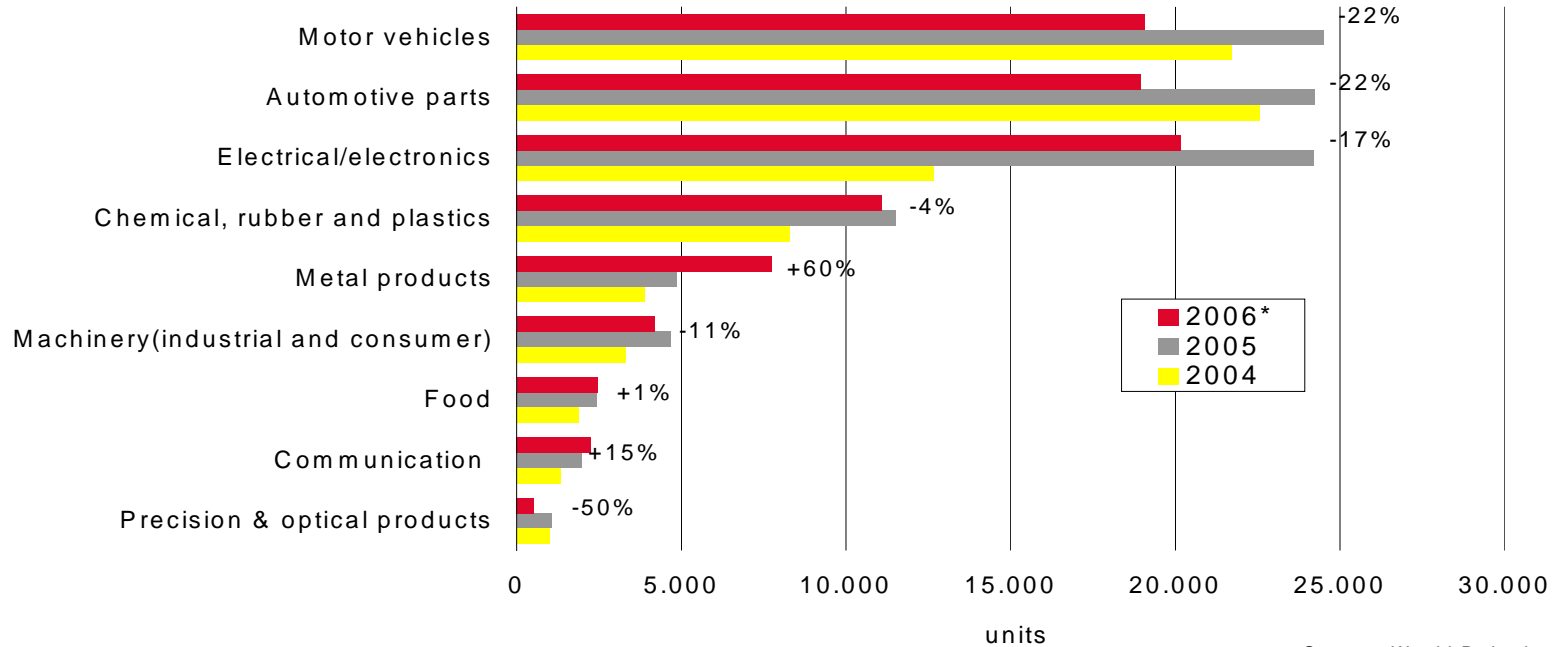
* preliminary data

Source: World Robotics 2007

Industrial Robots – customers

Sharp fall in the main industries

**Worldwide yearly supply
of industrial robots 2004 - 2006 by main industries**



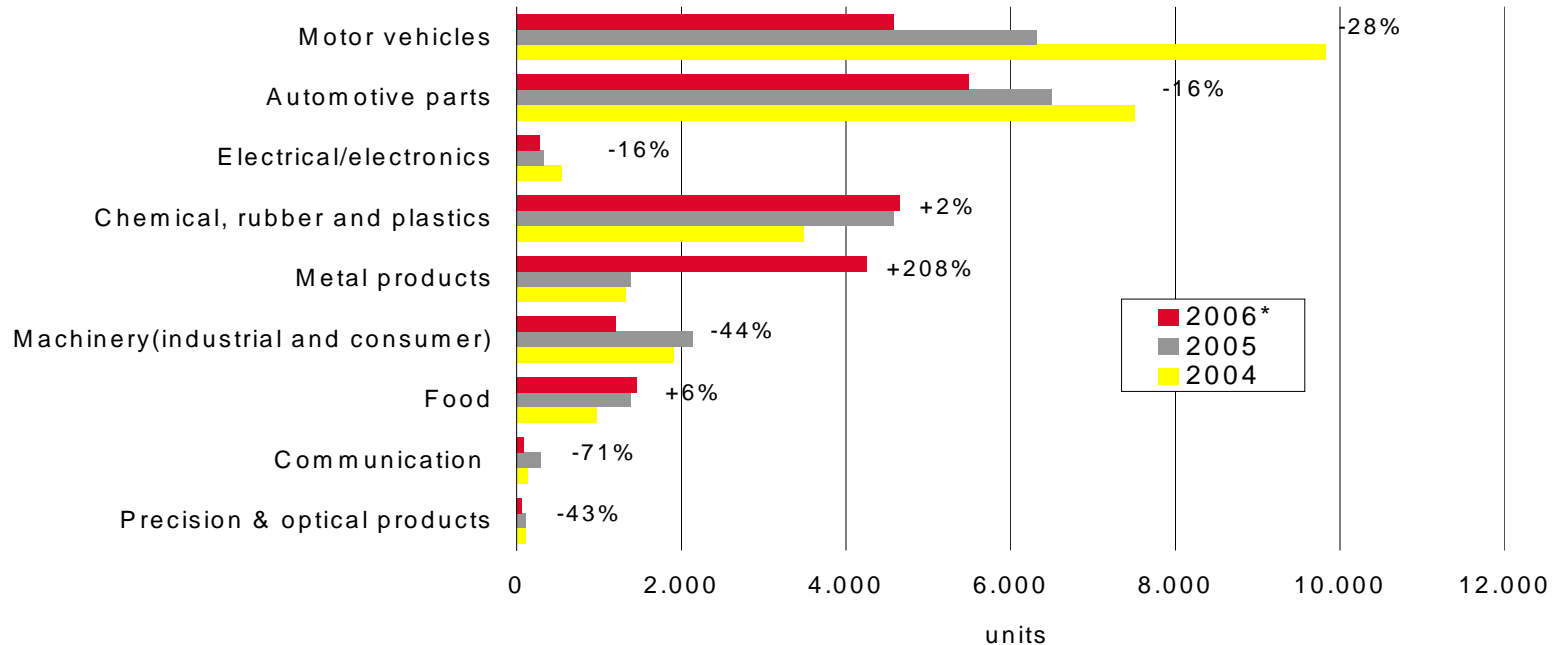
* preliminary data

Source: World Robotics 2007

Industrial Robots – customers

Automotive decreased again!

Yearly supply of industrial robots in Europe
2004 - 2006 by main industries



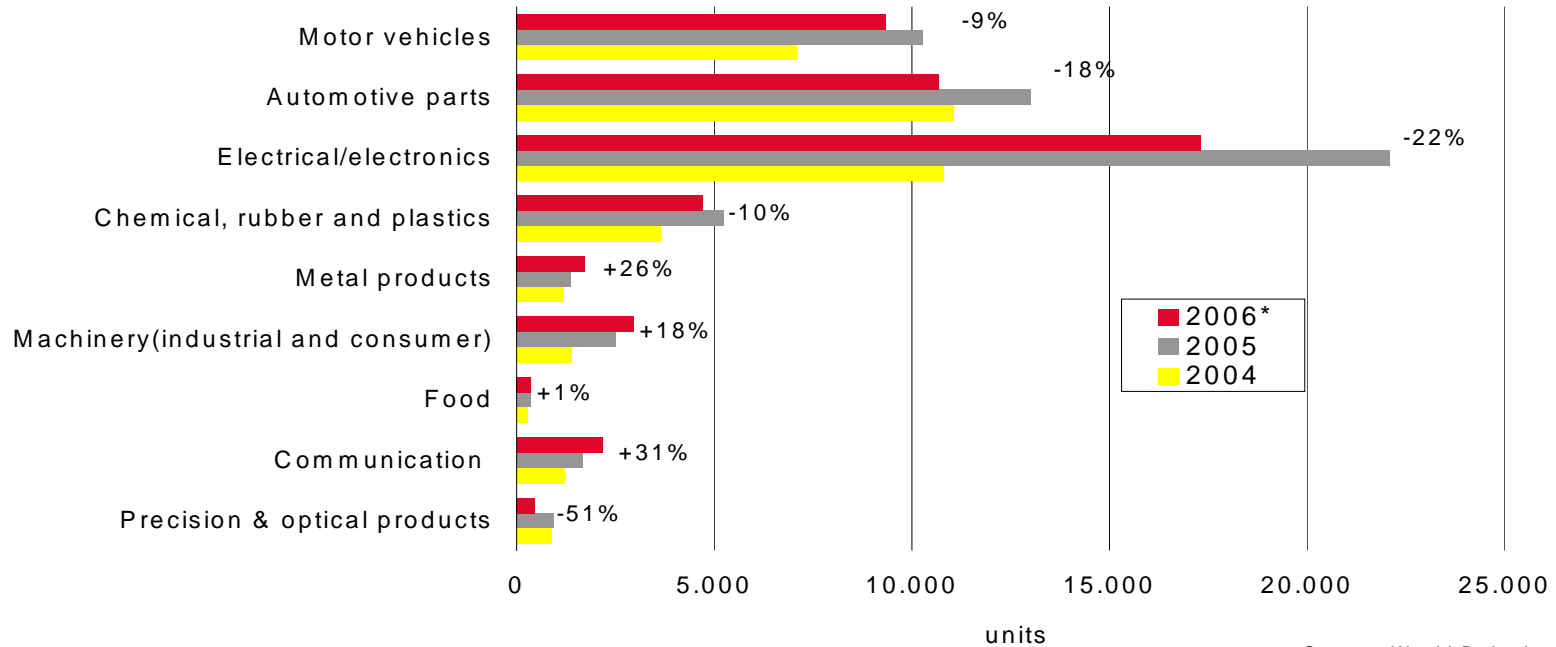
* preliminary data

Source: World Robotics 2007

Industrial Robots – customers

Sharp fall in the main industries

Yearly supply of industrial robots in Asia
2004 - 2006 by main industries

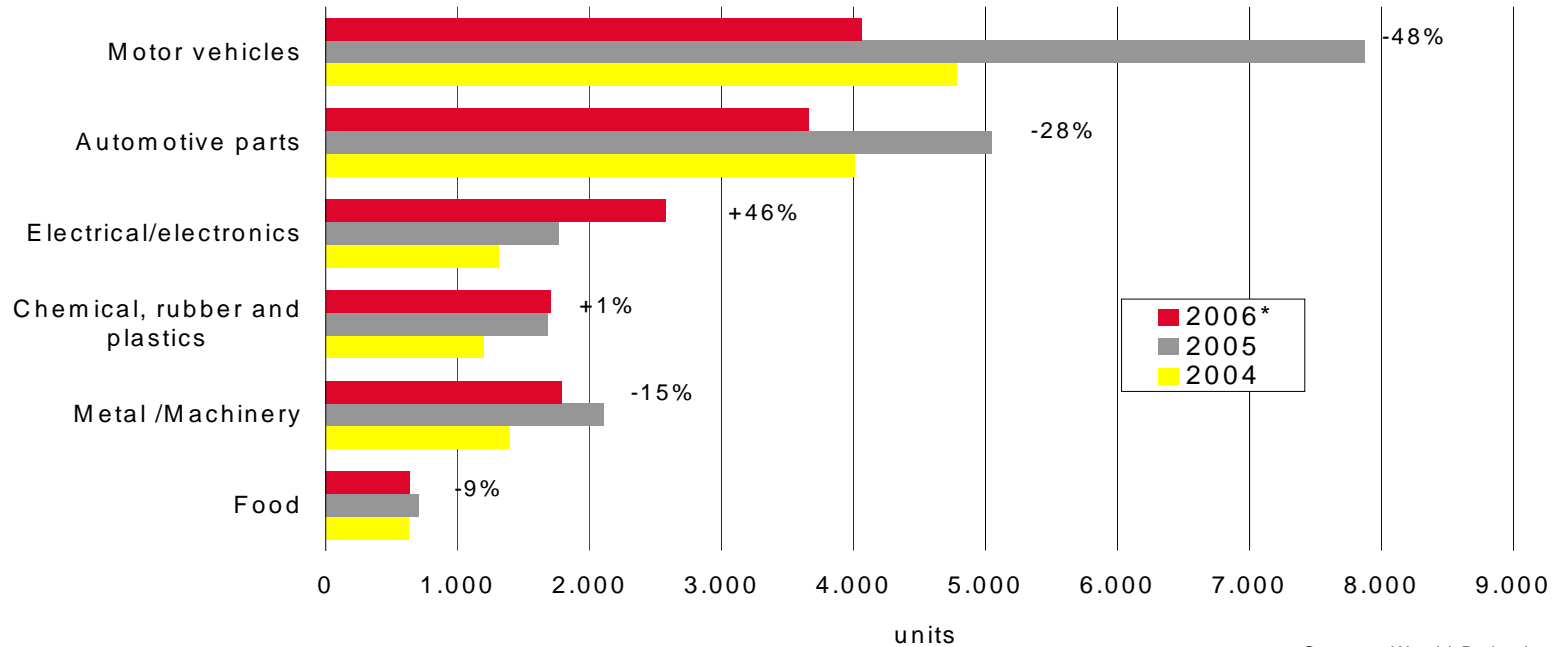


* preliminary data

Source: World Robotics 2007

Industrial Robots – customers Automotive down, electronics up!

Yearly supply of industrial robots in Americas
2004 - 2006 by main industries



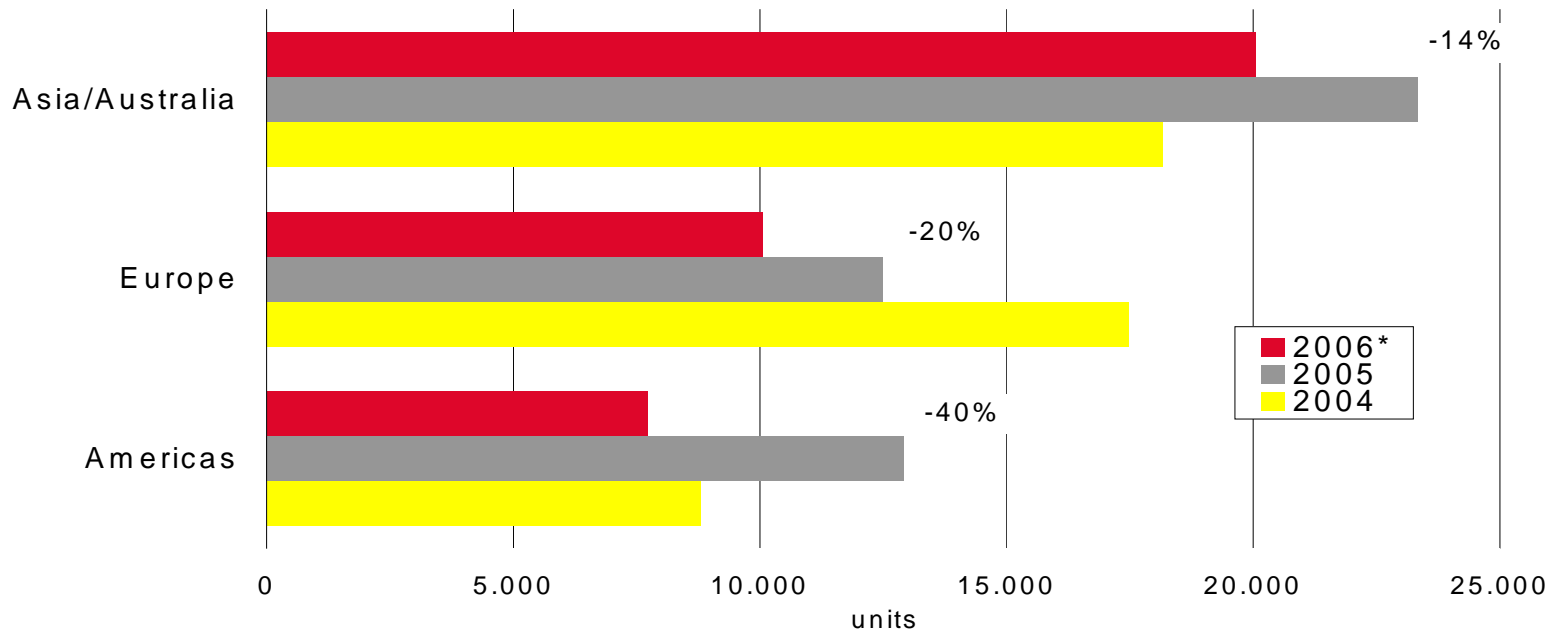
* preliminary data

Source: World Robotics 2007

Industrial Robots – automotive industry

Decreasing investments

Yearly supply of industrial robots to the **automotive industry** by regions 2004 - 2006

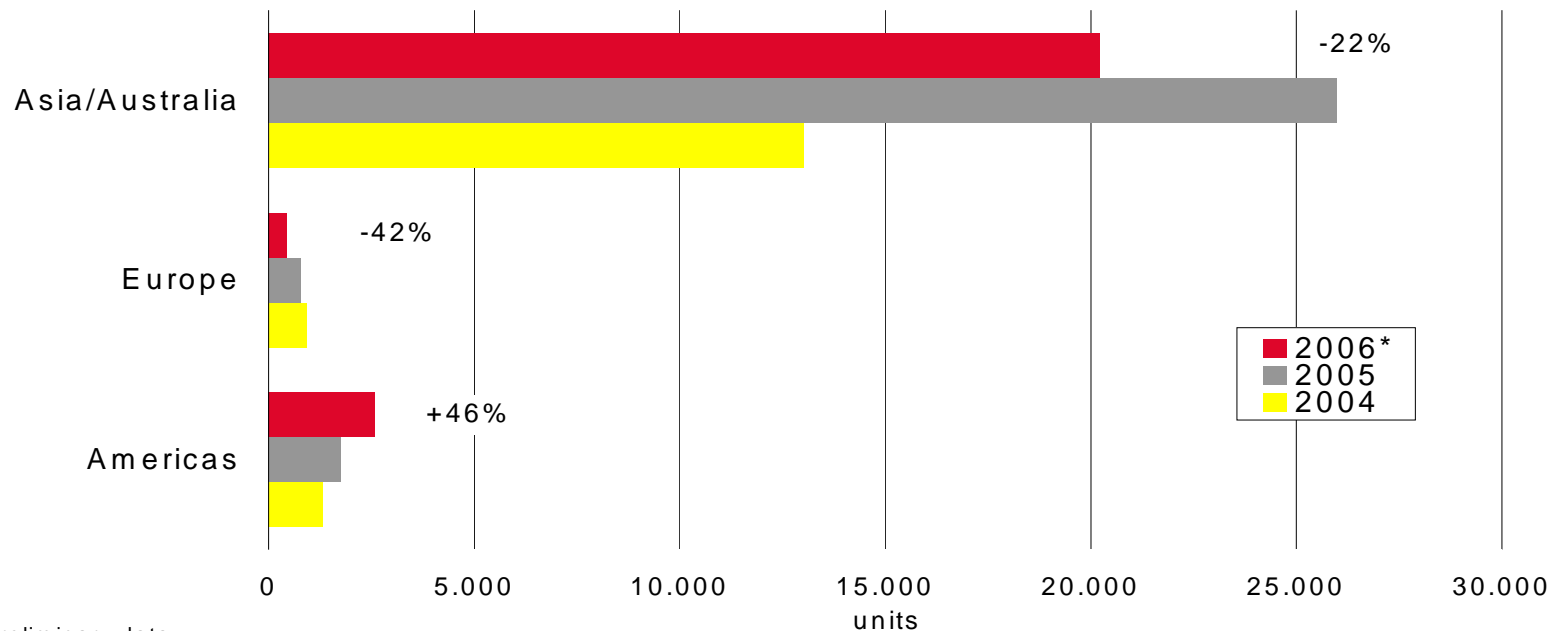


* preliminary data

Source: World Robotics 2007

Industrial Robots – electrical/electronics High increase in Americas

Yearly supply of industrial robots to the
electrical/electronics industry** by regions 2004 - 2006



* preliminary data

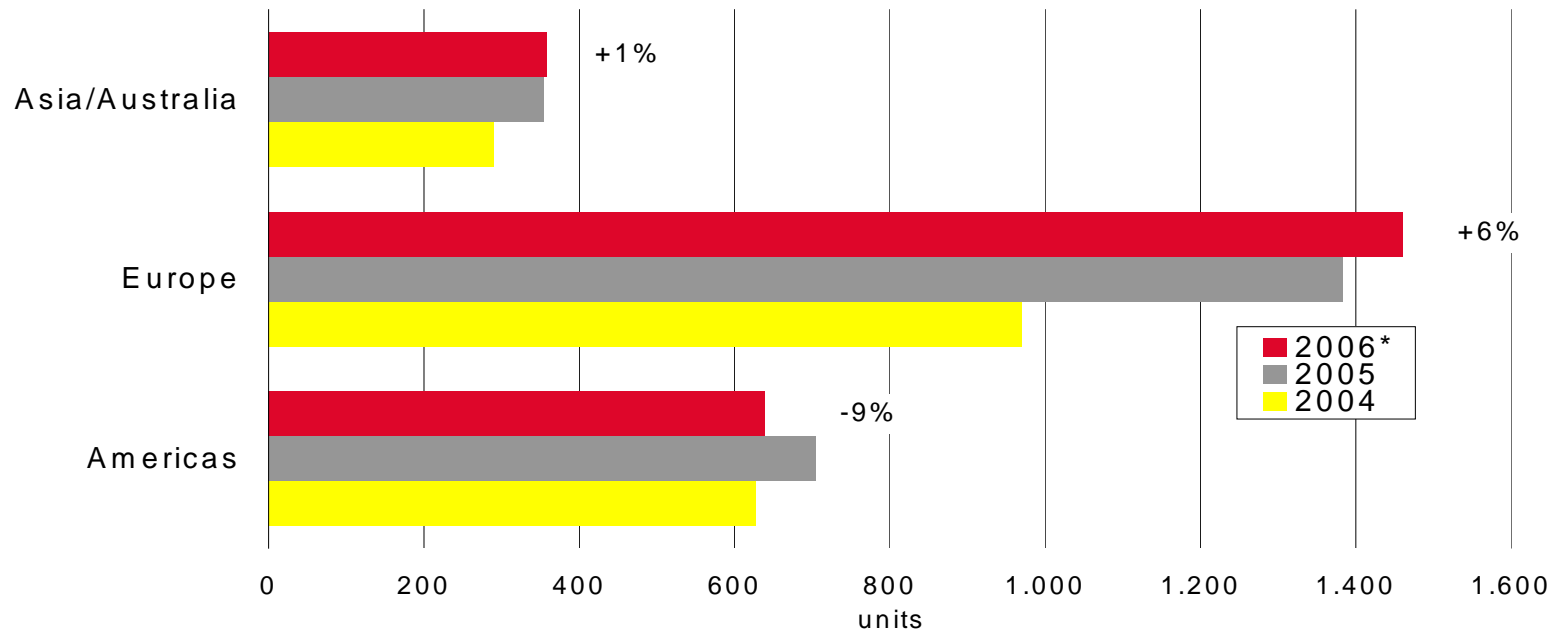
**including computer, communication and medical equipment

Source: World Robotics 2007

Industrial Robots – food industry

European success story

Yearly supply of industrial robots to the **food industry** by regions 2004 - 2006



* preliminary data

Source: World Robotics 2007

Forecasts 2007 – 2010

Markets for industrial robots

- Motor vehicle suppliers
 - Western Europe: new high volume models in ?????, new registration of cars decreasing/stagnating
 - Central and Eastern Europe: high potentials, but still low volumes
 - North America: Competition of Asian, European and American suppliers is going on - continuing investment
 - Japan: re-start of capital investment expected
 - China: still high investments, but already overcapacities
 - India: investments continue to grow, high

Forecasts 2007 – 2010

Markets of industrial robots

- Electrical/electronics industry
 - Japan: New projects were announced
 - North America: growth of investments?
 - Europe: still no relevant market for robots
- Chemical, rubber and plastics industry
 - Growth will continue?
- Metal products industry
 - Reason for the huge growth in Europe?
- Food and beverages industry
 - Growing installations in Europe
 - Still high potentials in Asia and Americas

Forecasts 2007 – 2010

Proposals to be discussed

- Europe
 - 2007: +10%
 - 2008 – 2010: average of 3%-5% per year
- Americas
 - 2007: + 8% – 10%
 - 2008 – 2010: average of 5% per year
- Asia:
 - 2007: +6% – 7%
 - 2008 – 2010: average of 5% per year