

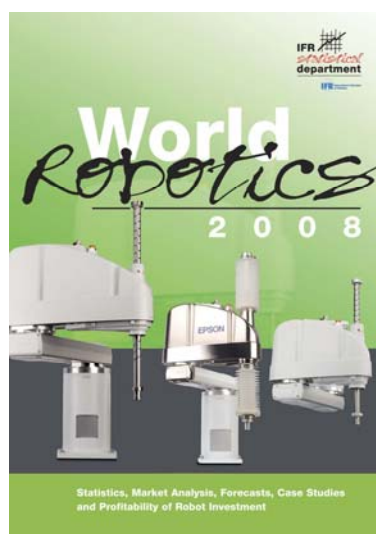
**World Robotics 2008
Welcome to the Press Conference**



Industrial robots are meeting the changing demands of their customers



- Total world supply of industrial robots up to 2007
- Distribution in the main regions (Americas, Asia, Europe)
- Applications
- Industries
- Forecast 2008
- Service Robots

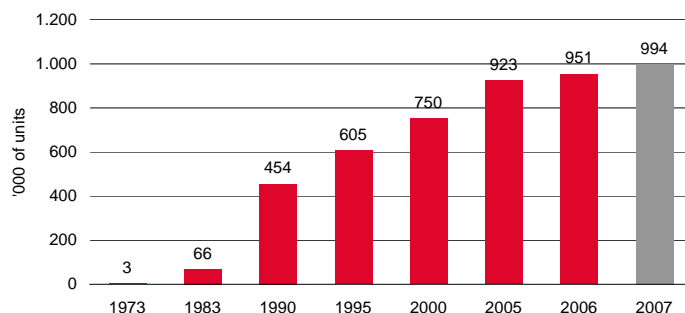


World Robotics 2008 - First results Press conference 11 June 2008

- **Åke Lindqvist**, IFR Vice President
Chairman IFR Robot Suppliers,
ATC Vice Chairman (Automation Technology Council),
RIA (Robotics Industry Association of North America)
Board of Directors & RIA Chairman Statistics Committee
Group Vice President, ABB Inc, USA
- **Tokuo Iikura**, Executive Director, JARA (Japanese
Robotics Association), Japan
- **Yasushi Tomita**, General Manager, Overseas Sales
Department, Yaskawa Electric Corporation, Japan
- **Stefan Müller**, IFR President,
Chairman, EUnited Robotics
Senior Consultant, KUKA Roboter, Germany
- **Gudrun Litzenberger**, Director IFR Statistical Department

World Robotics 2008 – First results World: 1 million industrial robots operating

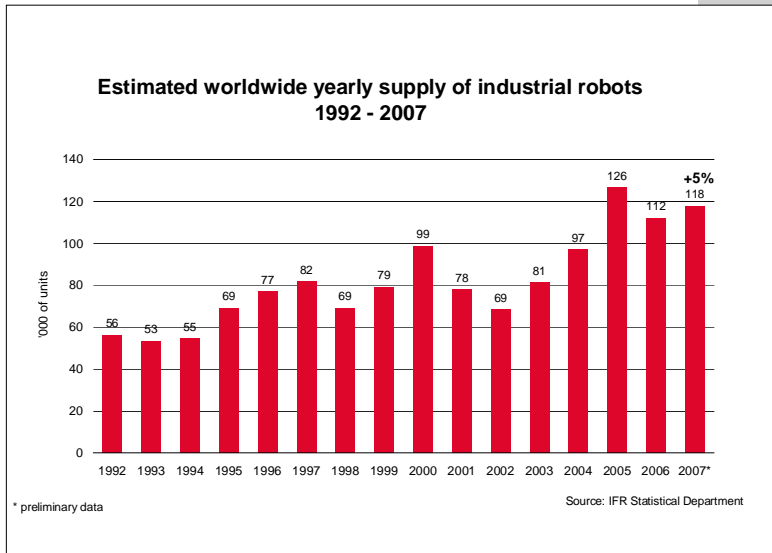
Estimated worldwide operational stock of
industrial robots



* preliminary data

Quelle: IFR Statistical Department

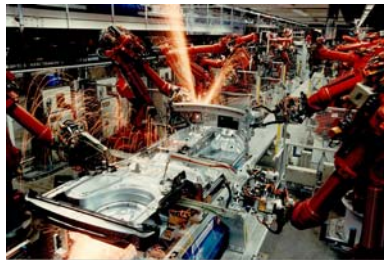
World Robotics 2008 – First results World: Increase of 5% in 2007



World Robotics 2008 – First results World: Automotive is changing

■ Automotive industry

- Significant growth in unit sales only in the growing markets
- In the mature car markets only growth in value of turnover
- Reorganisation of the business with the suppliers
- Boosting investments as well as
- Reduction of capacity and relocation of production sites



Source: Comau

World Robotics 2008 – First results World: Automotive is changing

■ Non-automotive sectors

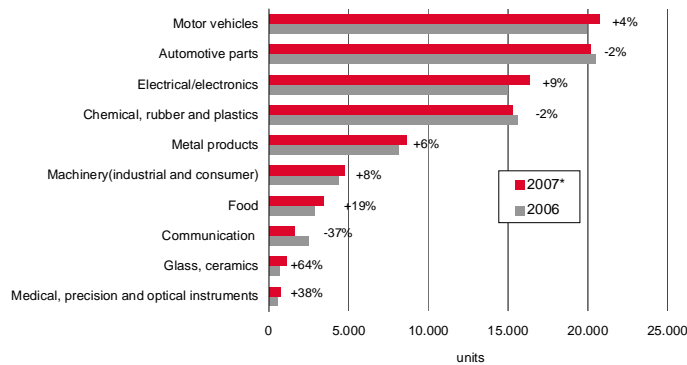
- Trend towards automation
- Tailored solutions of the robot suppliers
- Continued increase:
 - metal
 - food and beverage
 - glass/ceramics
 - pharmaceutical
 - medical devices
 - photovoltaic



Source: FANUC

World Robotics 2008 – Customers Growth in non-automotive sectors

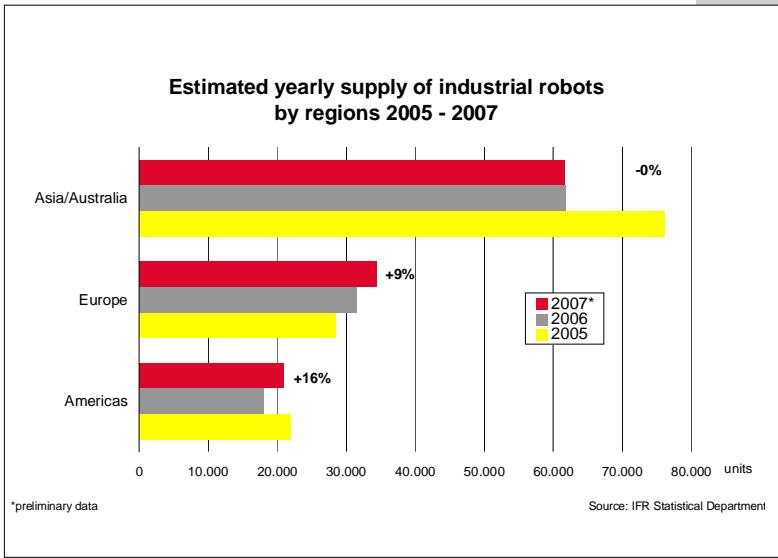
Worldwide yearly supply
of industrial robots 2006 - 2007* by main industries



* preliminary data

Source: IFR Statistical Department

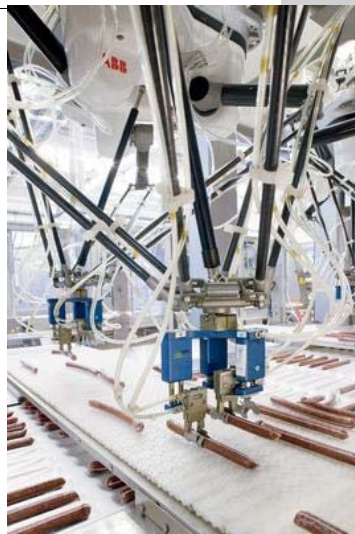
World Robotics 2008 – World Different results in the regions



World Robotics 2008 - First results Americas

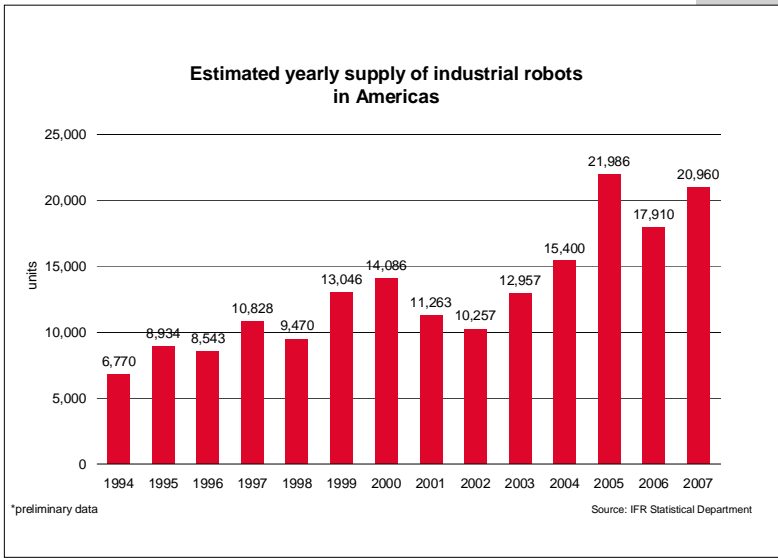
Presented by

Åke Lindqvist
IFR Vice President
 Chairman, **IFR Robot Supplier Group**
ATC Vice Chairman (Automation Technology Council),
RIA (Robotics Industry Association of North America)
 Board of Directors & RIA
 Chairman Statistics Committee
 Group Vice President, **ABB Inc**,
 USA

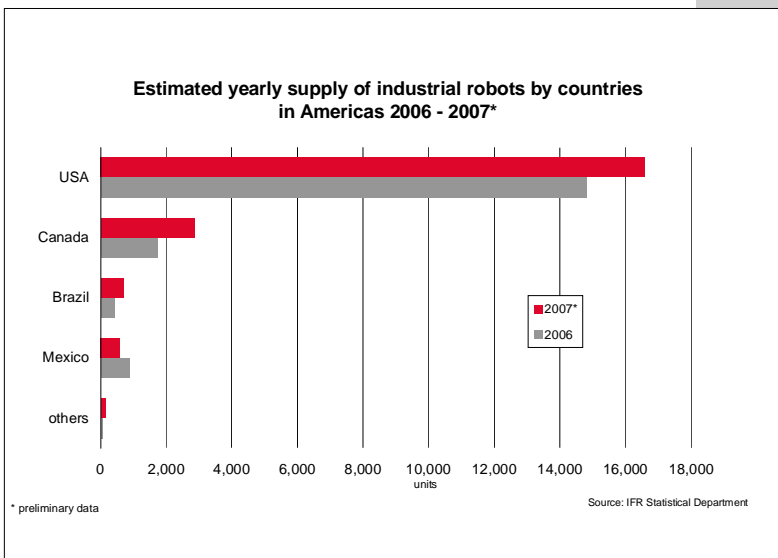


Source: ABB

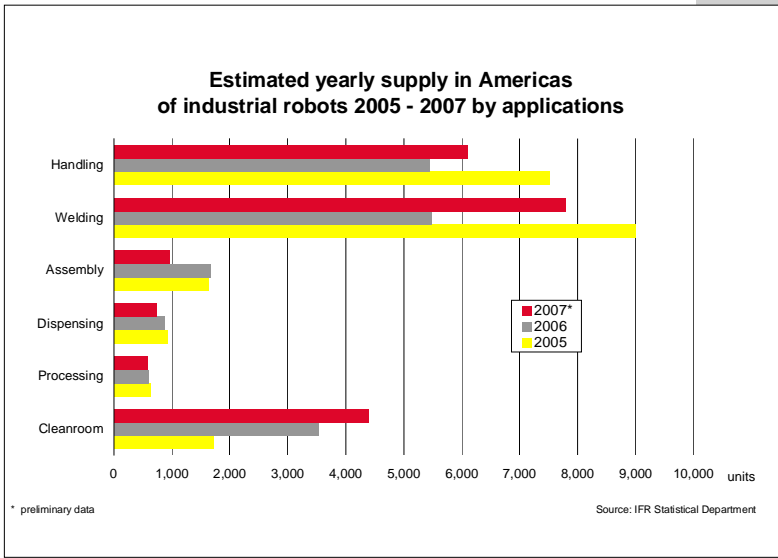
World Robotics 2008 - Americas Recovery



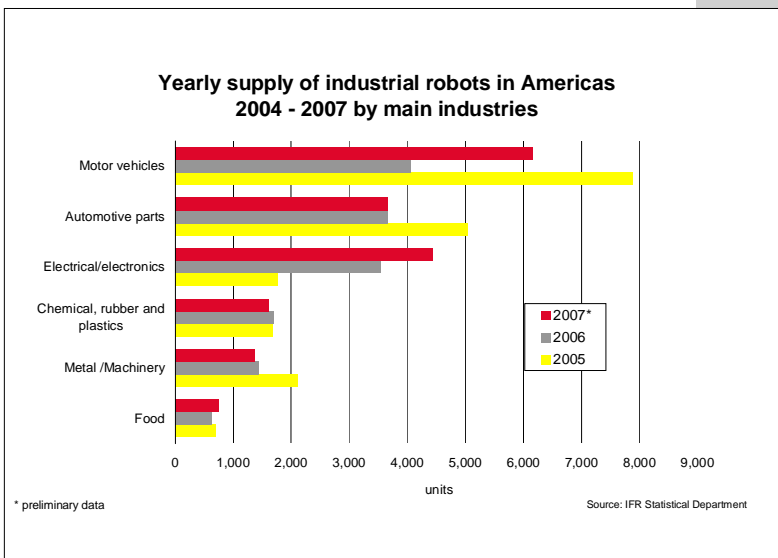
World Robotics 2008 – Americas Canada and Brazil more than 60% increase



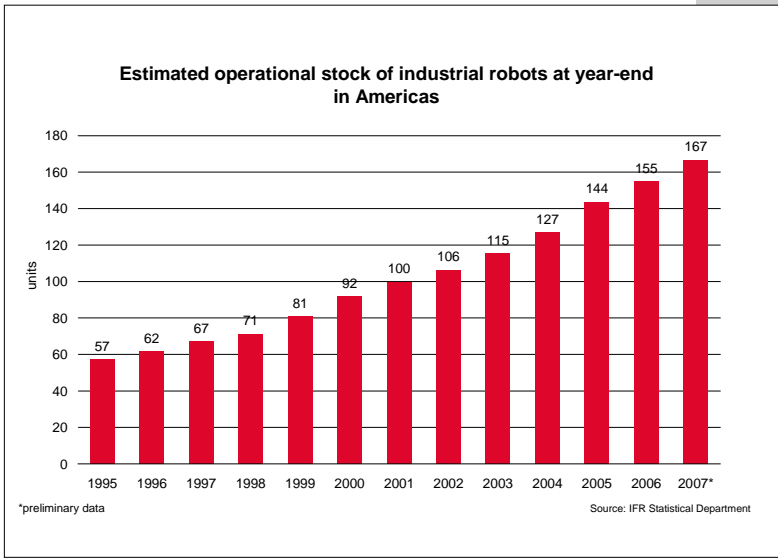
World Robotics 2008 – Americas Cleanroom applications increasing



World Robotics 2008 – Americas High investments of motor vehicle suppliers



World Robotics 2008 – Americas Stock increased by 8%



World Robotics 2008 - First results Asia

Presented by

Gudrun Litzenberger, Director
IFR Statistical Department

Japan Robot Association (JARA)

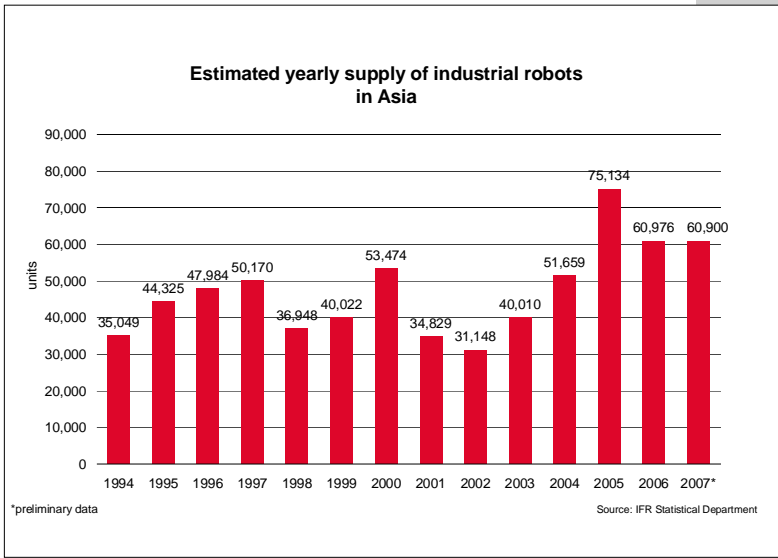
Report on JARA (Japanese
Robot Association) **member
statistics:**

Yasushi Tomita, General
Manager, Overseas Sales
Department, **Yaskawa Electric**
Corporation, Japan

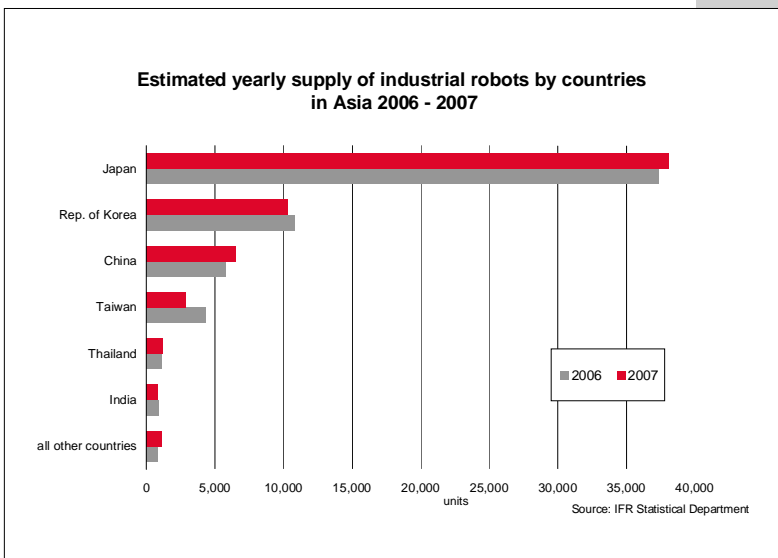


Source: Motoman

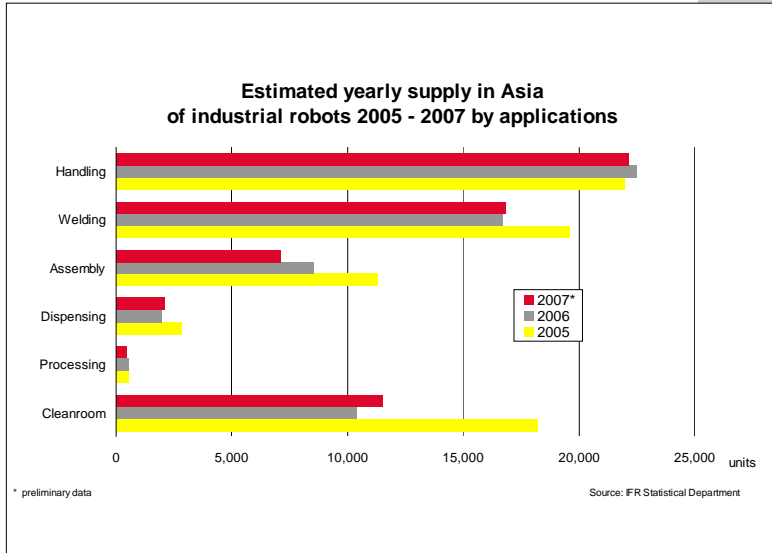
World Robotics 2008 - Asia Demand at a plateau



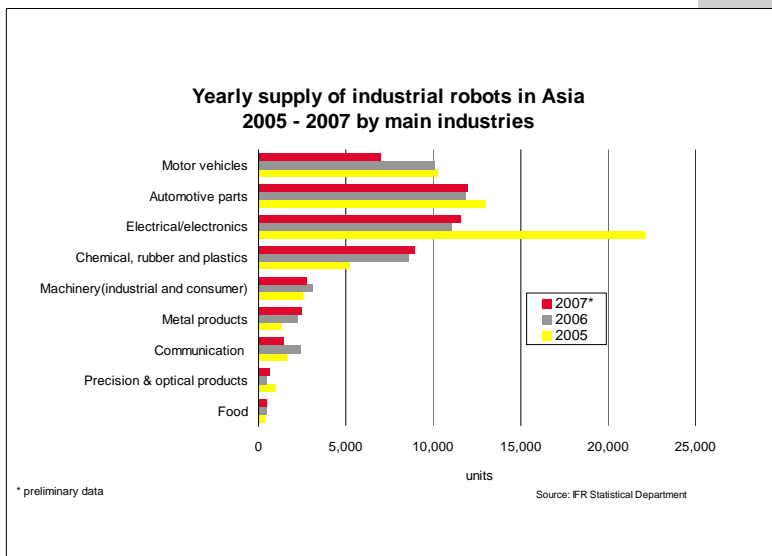
World Robotics 2008 - Asia Robot sales in China continued to increase



World Robotics 2008 - Asia



World Robotics 2008 – Asia Motor vehicle down



World Robotics 2008 - First results Europe

Presented by

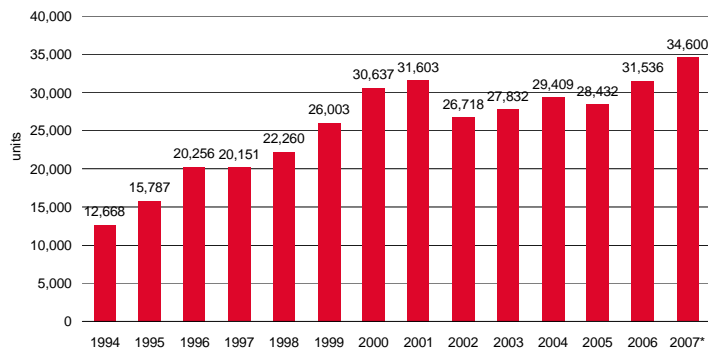
Stefan Müller
Chairman,
International Federation of Robotics (IFR),
Chairman,
EUnited Robotics
Senior Consultant,
KUKA Roboter, Germany



Source: KUKA

World Robotics 2008 – Europe Continued growth

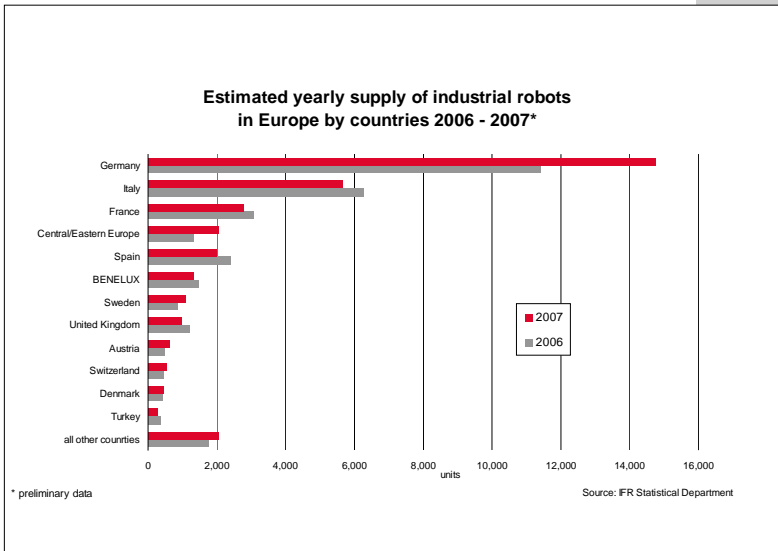
Estimated yearly supply of industrial robots in Europe



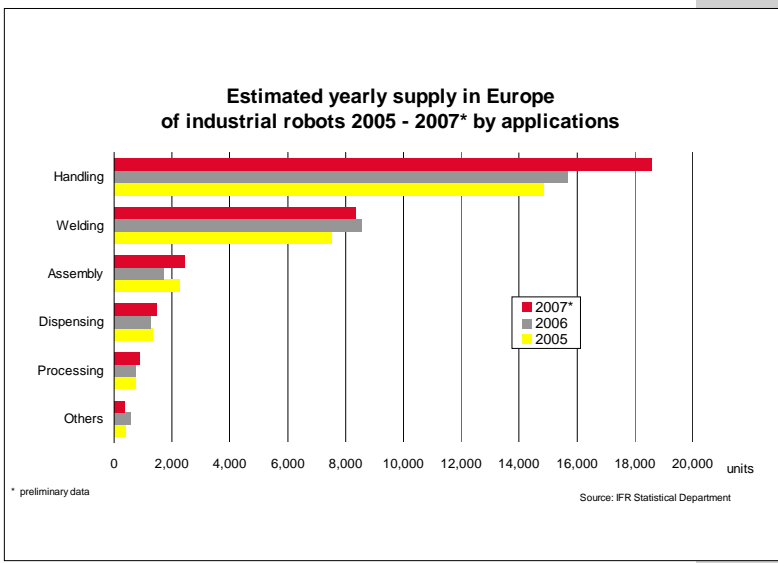
*preliminary data

Source: IFR Statistical Department

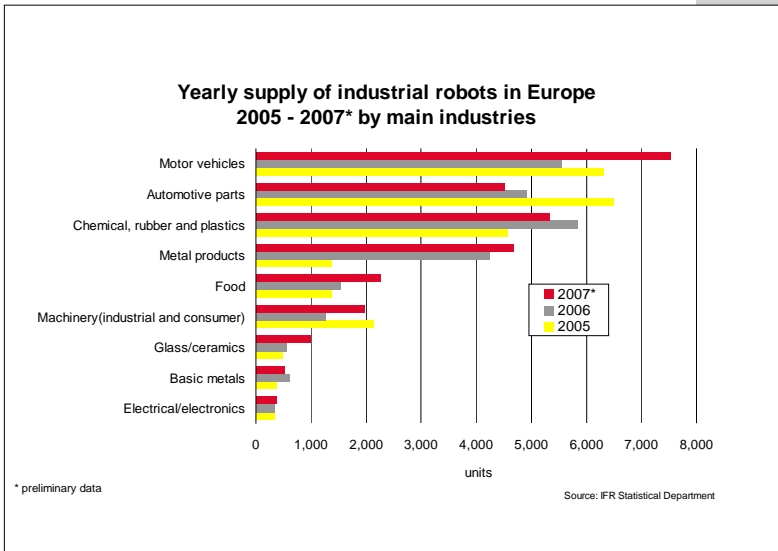
World Robotics 2008 – Europe Germany engine of growth



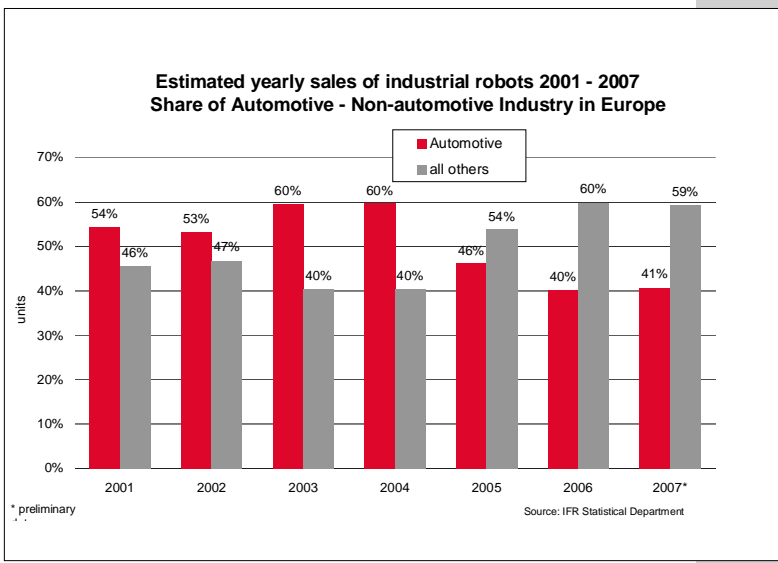
World Robotics 2008 – Europe Material handling is surging



World Robotics 2008 – Europe Strong non-automotive sectors

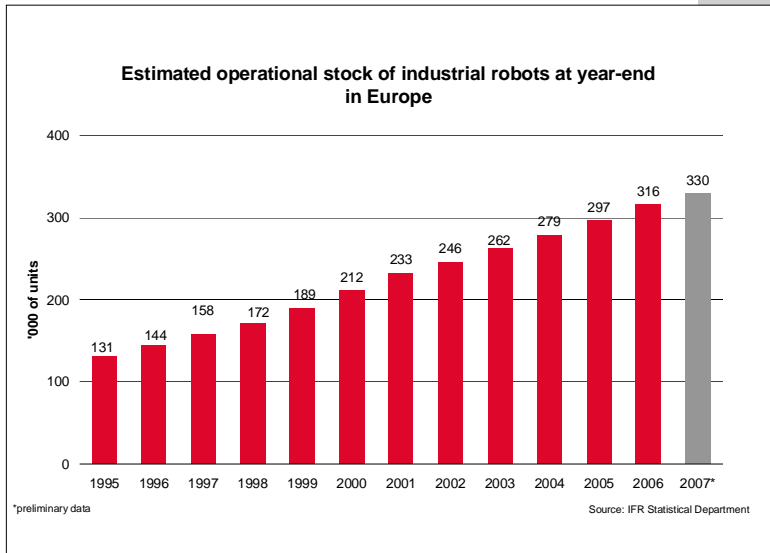


World Robotics 2008 – Europe Demand of non-automotive is growing



World Robotics 2008 – Europe

33% of the robots worldwide operating in Europe



Forecast 2008

Technical trends

- Improvements in sensor technology
 - Robot Vision
 - Force sensing
 - Environment recognition
- Improvements in communication
 - Human-Machine Interface
 - Remote Operation
- Improvements in System Technology
 - Off-Line Programming
 - Safety
 - Multi-robots Cooperation



Source: Motoman

Forecast 2008 Customers

- Automotive will remain main customer, but
- Non-automotive is growing, i.e.
 - Metal
 - Food
 - Glass/Ceramics
 - Furniture
 - Semi-conductors
 - Photovoltaics.....
- Small and medium enterprises
- High quality and environmental standards boost automation



Source: KUKA

World Robotics 2007 - Service Robots in 2010 abt. 7.2 million service robots sold

- Up to 2006
 - almost 40,000 service robots for professional use
 - about 3.5 million service robots for private use
- Forecast 2007 - 2010
 - another 35,000 service robots for professional use
 - another 3.6 million service robots for private use



Source: Robotech

Service Robots for professional use Increasing demand

- Most established professional robots, high growth rates expected

- Military robots
- Surveillance and security robots
- Milking robots
- Underwater systems
- Robot assisted surgery or therapy



Source: Robowatch

Service Robots for personal/domestic use Surging demand

- Low-cost products – many units
- Market for entertainment robots is boosting
- Vacuuming cleaners and lawn mowers are establishing in the households
- Handicap assistance – the future market



Source: Bluebotics

World Robotics 2008 - Press Conference Discussion

IFR
statistical
department

IFR International Federation of Robotics



Source: Robotio

Thank you!
Your questions,
please!

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