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Schedule

- **Welcoming and presentation of the participants of the CEO Round Table**
Gudrun Litzenberger, IFR General Secretary
- **Preview on World Robotics Industrial Robots 2016**
Joe Gemma, IFR President
- **Discussion “Workplace 4.0 – The Role of Robots”**
- **Get together and personal interviews with international robot experts**

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International Federation of Robotics

Represents the global robotics industry

Robotics turnover 2014: \$32 billion

>50 members:

National robot associations

R&D institutes

Robot suppliers

Integrators

Sponsor of the annual International Symposium on Robotics (ISR)

Co-Sponsor of the IERA Award

Primary resource for world-wide data on use of robotics – IFR Statistical Department



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Panel

Robot user (aerospace)

- **Dr. Phil Crothers**, Senior Manager Materials and Manufacturing Technology, Research and Technology – Europe, **Boeing**, USA

Robot User (food, beverage,)

- **Daniel Magnin**, Corporate Filling & Packing Technologies Manager (CT-PACK) **Nestlé**, Switzerland

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Robot Suppliers

- **Per Vegard Nerseth**, Managing Director, **ABB Robotics**, Switzerland
- **Stefan Lampa**, CEO, **KUKA** Roboter, Germany
- **Masahiro Ogawa**, Corporate Vice President and General Manager of Robot Division, **Yaskawa**, Japan
- **Dr. Esben H. Østergaard**, CTO and Co-Founder, **Universal Robots**, Denmark
- **Dr. Daokui Qu**, CEO and Founder **SIASUN Robot and Automation Co. Ltd.**, China

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Moderator:

- **Ken Fouhy**, Editor in Chief, VDI nachrichten, Germany

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World Robotics 2016 Preview

Joe Gemma, President
International Federation of Robotics IFR

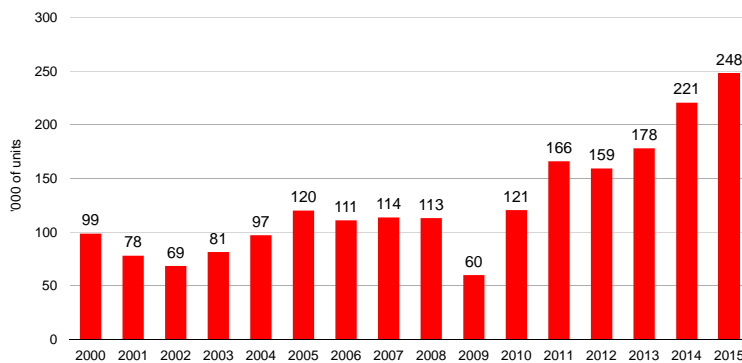
22 June 2016, Munich

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Final results 2015: New record +12% increase

Worldwide annual supply of industrial robots
2000 - 2015

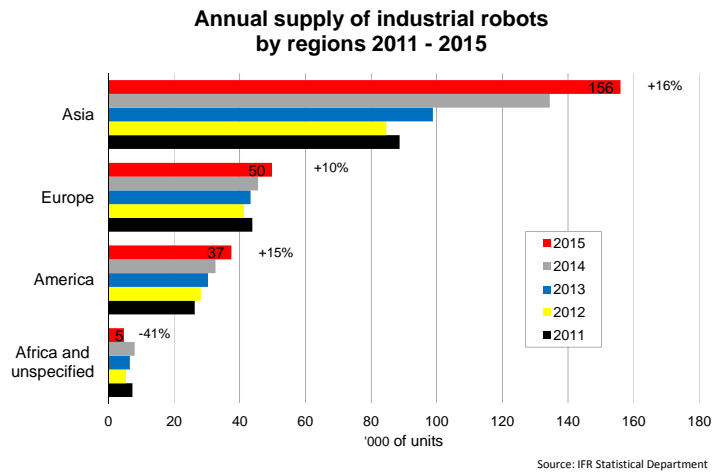


Source: IFR Statistical Department

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2015: considerable increase in all regions

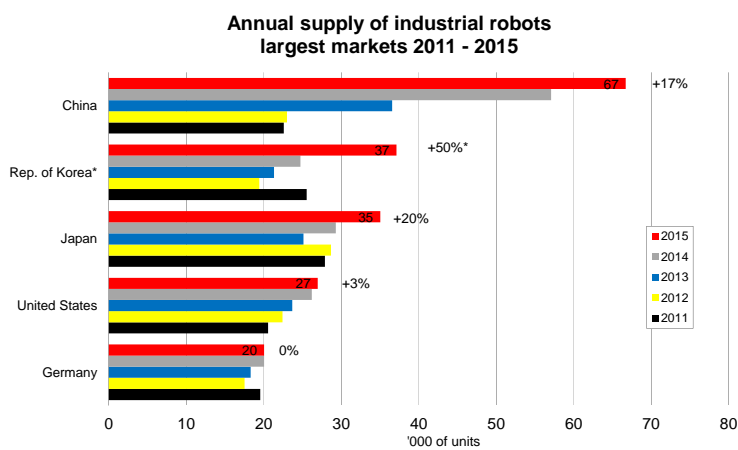


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2015: 75% of the global supply in 5 markets



*increase 2015 partly due to additional companies reporting only in 2015

Source: IFR Statistical Department

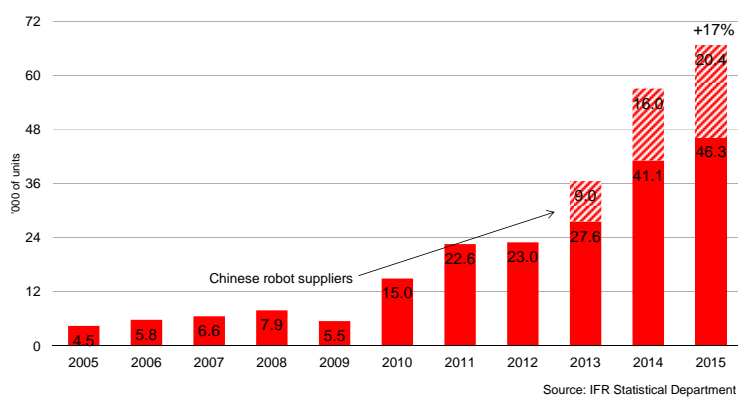
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China 2015: +17% 31% from Chinese robot suppliers

Annual supply of industrial robots to China
2005 - 2015

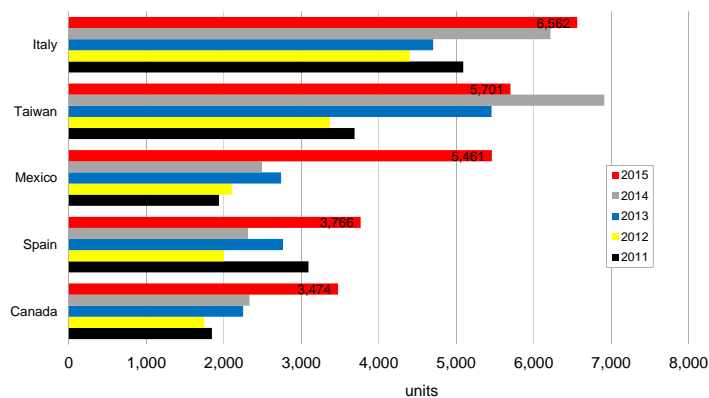


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Continued growth in Italy Mexico – emerging robot market

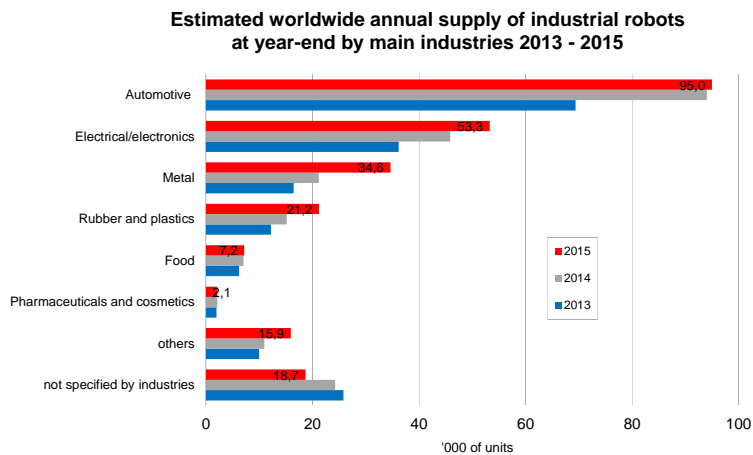
Annual supply of industrial robots
largest markets - continued 2011 - 2015



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Main drivers 2015: electronics, metal, rubber and plastics



Source: IFR Statistical Department

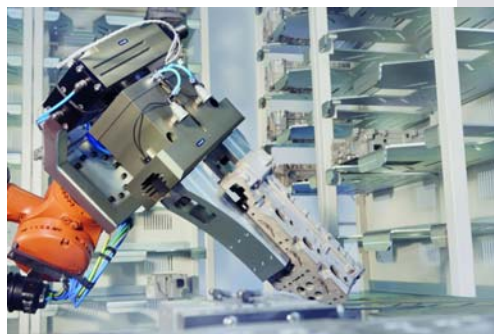
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Continued double-digit growth of industrial robots

- Continued need to automate production processes
 - Flexible manufacturing
 - Increasing demand for consumer goods
 - High quality
 - Sustainability

↓
Digitalization of the factory – Industry 4.0



Source: Schunk

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Source: IFR Statistical Department

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Robots will play an important role in the new era of manufacturing

- Jobs in the factory will change
 - Workers will be freed from repetitive routine tasks
 - Workers will focus on jobs that require judgment, common sense, creativity, problem-solving skills and dexterity
 - Human robot collaboration = robots assist workers in a variety of tasks
 - Mobile robots will optimize the logistic of the production processes
 - Simplification of the use of robots enables more companies to use robots

Source: IFR Statistical Department

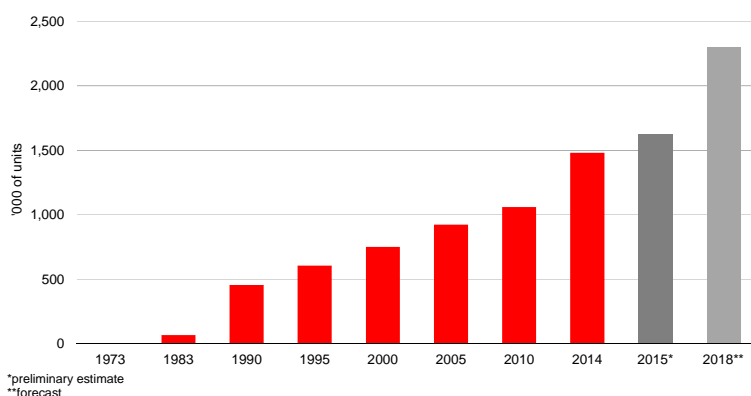
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2018: 2.3 million robots in operation

Worldwide estimated operational stock of industrial robots



Source: IFR World Robotics 2015

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