IFR International Federation of Robotics

Press release

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Robots to Create More Than a Million Jobs by 2016

Tokyo, 10 November 2011 – **ROBOTICS will be a major driver for global job creation over the next five years.** The announcement is based on a study conducted by the market research firm, Metra Martech, "Positive Impact of Industrial Robots on Employment", which was published on Thursday in Tokyo.

One million industrial robots currently in operation have been *directly* responsible for the creation of close to three million jobs, the study concluded. A growth in robot use over the next five years will result in the creation of one million high quality jobs around the world. Robots will help to create jobs in some of the most critical industries of this century: consumer electronics, food, solar & wind power, and advanced battery manufacturing to name just a few.

Industrial Robots save production locations and millions of jobs
In additional to the million jobs expected to be directly created by the increased use of robotics, the report's authors also highlighted that saving manufacturing jobs also results in saving jobs throughout the community. This means that restaurants, shops and the service economy also benefit from this valuable ripple effect.

"In world terms three to five million of jobs would not exist if automation and robotics had not been developed to enable cost effective production of millions of electronic products, from Phones to Playstations."

"Positive Impact of Industrial Robots on Employment" by Metra Martech November 2011

The Report highlights that between 2000-2008, manufacturing employment increased in nearly every major industrialised country, even as the use of robotics increased sharply. This same pattern is now being seen in China, Brazil, and other emerging countries as they rapidly increase their use of robotics. In Brazil, the number of robots almost quadrupled during the study period with both production and employment rising by over 20%.

The Report found that manufacturing employment is stronger in countries that continue to accelerate their robot investments.

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"The German and Japanese (automotive) manufacturers who have invested heavily in automation and robots have maintained a lead in the quality market. Germany has increased the number of people employed in the automotive sector."

"Positive Impact of Industrial Robots on Employment" by Metra Martech November 2011

Critical areas of growth in robotic deployment

The report's author, Peter Gorle, highlighted three critical areas of growth in robotic deployment where:

- robots carry out work in areas that would be unsafe for humans
- robots carry out work that would not be economically viable in a high wage economy
- robots carry out work that would be impossible for humans.

Marlin Steel, Baltimore, MD, USA, is an excellent illustration of the points made in the Report regarding the advantages of using robots within an unsafe working environment. Since Marlin began introducing automation a dozen years ago, not only has the company benefited, but so have the employees.

Drew Greenblatt, Marlin Steel's CEO of Marlin Steel bought the company in 1998. At that time, its employees were paid $6/hour with no benefits and they typically produced 300 hand bends in an hour. "*It was a boring job and an unsafe job, with a low level of quality"*, said Mr. Greenblatt. *"Now our employees are paid $25 to $30/hour including bonuses, overtime and great benefits. Each employee oversees four robots that produce 20,000 CNC bends in an hour and the quality has sky rocketed, Last year was our most successful one as a business, exporting to more than 30 countries. We've increased our workforce by more than a quarter. Thanks to the robots, jobs at Marlin are both interesting and safe."*

Odense, Denmark, is an excellent illustration of robots saving jobs in high-wage countries. Shipbuilding in Europe has been in steep decline over the last two to four decades, but robots have been key to efficiency savings at the Odense Steel Shipyard in Denmark. The company has invested in an autonomous, robotic arc welding system that has yielded big dividends. Odense Steel Shipyard has increased productivity by a factor of six when compared with manual welding, speeded up the production time and made quality improvements, whilst also protecting the jobs of qualified welders.

The Report concluded that the growth of the high tech industries such as the electronics and semi conductor sector and pharmaceutical sectors was significantly assisted by robots providing the required quality, precision, speed and traceability cannot be achieved manually. Therefore robots have contributed significantly to the fast paced growth and employment within these sectors.

The Future – where robots will make the most impact beyond 2016

"The future of robotics will be one of much greater ubiquity. Miniaturisation and new sensing capabilities will mean that robotics is used in an increasing number of industries, including those with small and varying lot sizes, materials and product geometries.

Robotics will make great inroads in service industries, especially healthcare where an aging population will require support services, for which human care givers will be too few in number to provide. Robots will likewise play an important role in transportation and in the provision of home services. Robots will also help protect homes and offices, secure borders and monitor the environment in both routine and emergency operations."

"Positive Impact of Industrial Robots on Employment" by Metra Martech November 2011

The next generation of robotics puts us on the cusp of another increase in employment in the robotics industry itself. The Report's authors estimate that 300,000 people are already employed in the industrial robotics sector and an additional 45,000 people will be required by the industry within five years. The service robotics sector is expected to grow even faster than the industrial sector in the medium term and could itself be a major source of future jobs.

About the Report

The report's authors studied companies with more than 250 employees in:

- Automotive sector
- Electronics sector
- Food and Beverages
- Plastics
- Chemicals and Pharmaceuticals

The Report focused on six countries, Brazil, China, Germany, Japan, Republic of Korea and USA which are considered to be representative of the global economy.

Metra Martech is a long established specialist in industrial and economic analysis, with clients including governments and international organisations.

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Do you have any questions? **Gudrun Litzenberger, IFR General Secretary, Telephone +49 69 66 03-1502, email gl@ifr.org is ready to answer.**

The **International Federation of Robotics** was established in 1987 in connection with the 17th International Symposium on Robotics, as a professional non-profit organisation, by robotics organisations from over 15 countries. Since 1970 an International Symposium on Robotics is organised every year on a different continent, in a different country and another city. The Symposium is systematically organised in conjunction with an International Robot Exhibition.

The purpose of the International Federation of Robotics is to promote research, development, use and international co-operation in the entire field of robotics to act as a focal point for organisations and governmental representatives in activities related to robotics.
The IFR is hosted by VDMA Robotics and Automation.

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The IFR Statistical Department, which is hosted by the VDMA Robotics + Automation Association, publishes two studies of World Robotics every year. In 2011:

World Robotics 2011 Industrial Robots:
This unique publication presents comprehensive global statistics on industrial robots in uniform tables allowing consistent country comparisons. It contains detailed statistical data for some 40 countries, broken down by application areas, industrial branches, types of robots and by other technical and economic variables. Data on production, exports and imports are presented for a selection of countries. Trends in robot densities, i.e. number of robots per 10,000 people employed in relevant sectors, are also featured.

World Robotics 2011 Service Robots:
This unique publication presents comprehensive global statistics on service robots, market analysis, case studies and international research strategies of service robots. The study is evaluated in co-operation with our partner, the Fraunhofer IPA, Stuttgart, Germany.

Links:

www.worldrobotics.org
www.ifr.org