

Foreword

By: Dr. Andreas Bauer, Chairman IFR Industrial Robot Suppliers Committee



Dear Reader,
Dear Robotics Community,

The robotic industry keeps bucking the macroeconomic trend of, at best, moderate global growths. Even though financial risks have increased once again, the demand for industrial robots continues to accelerate with growth rates in the double digits. Even rather conservative estimates see global robot installations increasing by about 14% to almost 290,000 units in 2016.

And if anything, this demand will grow even more rapidly in the future: Total global sales will reach about 413,000 units in 2019. This means that the worldwide stock of operational industrial robots will increase from about 1,631,600 units at the end of 2015 to 2,589,000 units at the end of 2019, representing an average annual growth rate of 12% between 2016 and 2019, with Asia/Australia still at the top both in sales and stock, followed by the Americas and Europe.

But even though the traditional markets for robots and automation strive the most, it is a global phenomenon that for the majority of producers in a wide range of branches and company sizes, automation is the central competitive factor. Only by modernizing their production facilities with specific regard to that factor, they are able to optimize their processes to meet the ever increasing demands for consumer goods especially in the emerging markets as well as the demand for high quality products in general. An increasing rate of product innovations necessitates a high amount of flexibility in the form of a short time-to-market and the adjustment of processes to shorter life-cycles as well as a higher diversity of products. “Smart automation” and “smart machines” are the answers to those challenges as manifestations of concepts like “Industry 4.0”, “Internet of Things”, etc.

The innovations and advancements in industrial manufacturing which result from those developments in turn pose new challenges for the robotics industry. The technological trends to prepare for are: the human-robot collaboration, simplification of use and installation, compact and light weight robots, two arm robots, mobile solutions, integration of robots in existing systems as well as economically priced and modular robots with limited life cycles.

On the customer side, we can expect further growth of demand which requires the expansion of production capacities. Especially the automotive sector will present continued strong demand along with the electronics sector, which will see an accelerated growth. The same also goes for the metal and machinery industry, the rubber and plastics industry as well as the food and beverage industry. Those demands of course do not only comprise quantity, but also quality. Handling of new materials, energy efficiency, more sophisticated automation concepts and those which link the real-world factory with virtual reality in the spirit of Industry 4.0 and the Internet of Things are just some examples of what is and will be increasingly expected from the robotic industry.

In stark opposition to the benefits robots and automation present to so many industries, there is a growing amount of vague fears in the general public of robots replacing humans in their jobs or presenting other dangers, e.g. military and police robots and drones. Thus it continues to be our responsibility to not only make the best products we can, but also to inform the public about the advantages and benefits of those products. After all, they serve to improve the quality of work (and life in general) by taking over dangerous, tedious and dirty jobs that are not possible or safe for humans to perform. And the increasing significance of human-robot collaboration only further emphasizes the fact that robots are not there to replace or endanger humans, but to assist and support them.

Every period of change entails chances as well as (actual and perceived) risks. This is what makes these times challenging and exciting. With the continued positive developments in robotics, nothing has changed for me since last year: I still see a bright future ahead, and I still think the best is yet to come.

Best wishes,

Dr. Andreas Bauer

A handwritten signature in blue ink, appearing to read 'Andreas Bauer'.