

Foreword

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Dear Reader,

2020, so far, has been a challenging year for all of us. The Corona pandemic is having a crucial impact both on the business world as well as on our private lives. Only in the next years, we might be able to see what comprehensive impact this period had on the economy in general and on the service robotics market in particular. For the moment, we hope that you are all safe and able to cope with these unusual times appropriately.

As it is the case with every edition of the “World Robotics Service Robots”, the version now in front of your eyes presents numbers and market data from the previous year. Nevertheless, in order not to neglect the significant impact the pandemic is having on the service robotics market, in chapter 3, we decided to mention some of the more recent developments aiming to support this situation. We are curious to see the numbers next year that might reflect these potentials even better.

One of the most prominent applications for fighting Corona are cleaning and disinfection robots. Increased hygienic demands open this new niche for service robots. Over 30 disinfection robot types from diverse manufacturers were newly registered in 2020. In this area, we expect a double-digit growth, also in the coming years. Companies delivering food or purchases are facing a rapidly growing demand. Following this grown interest, a worldwide spread of food and medication delivery robots could be observed this year. That is why also the market for robots supporting last mile deliveries should face a remarkable growth. This growth strengthens an already successful market, since AGVs and mobile robots have already been among the fastest growing segments in service robotics during the last years.

Besides the mentioned areas experiencing a strong push through the pandemic, concerning service robots for professional use, several other domains are on the rise. When taking into account the units sold, inspection and maintenance or public relations robots show significantly rising numbers. With respect to the systems' value, logistics, medical, and field robots are leading the market. Thanks to continuous market observation from IFR and Fraunhofer IPA, this yearbook now lists more than 900 service robot providers worldwide.

Robots for personal and domestic use have also experienced strong global growth thanks to three mass-market product categories: floor-cleaning robots, robo-mowers and robots for edutainment and interaction. In addition, as in the previous years, the variety of assistive robots available to support handicapped or elderly people continues to increase. Future product visions point to domestic robots of higher sophistication,

capability, and value, such as assistive robots for supporting the elderly and able to support with a larger variety of household chores.

Service robots have also been receiving continued mainstream media coverage bringing this robotics area to a wider public audience. The growing interest in service robotics is influenced by the variety and number of new start-ups (aged less than six years) which account for some 25% of all service robot companies. Furthermore, large companies are increasingly investing into robotics, often through the acquisition of the many originating start-ups.

Both, the professional and the domestic service robotics domain also benefit from recent technical innovations: Fundamental developments in the fields of digitization, cloud technologies, 5G and artificial intelligence, specifically in machine learning, are leading to a technology push in service robotics. On the other side, we see a strong market pull, specifically for professional service robots. Besides Corona, this is caused by current challenges such as the lack of skilled workers in several professions, demographic changes or sustainability requirements. Using service robots can help companies to improve their competitiveness and innovative strength. New business models at the same time significantly lower the financial barriers to decide for the use of a service robot in volatile markets. A prominent example is “Robot-as-a-service” which means that the user only pays for the tasks the service robot fulfilled successfully.

The “World Robotics Service Robots” has established itself as the widely acknowledged reference publication in statistics, forecasts, market analysis, and profitability of robot investments. Robot suppliers, media, government bodies, financial analysts and technology scouts are among its readers. It specifically provides profiles of the numerous service robot manufacturers worldwide. The many hyperlinks pointing to online resources invite you to further investigate his topic of interest by looking into selected publications and company websites.

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In case you have suggestions or questions or any further inquiries related to service robotics, please do not hesitate to contact us!

Best wishes and stay healthy,

Dr. Birgit Graf, Dr. Kai Pfeiffer
