Lamiera

fieramilano

18-21/5/2022

fondata nel 1975 SIRI Associazione Italiana di Robotica e Automazione

ROBOTICA: UN'ISTANTANEA DEL SETTORE

I ROBOT DI SERVIZIO NEL MONDO

Rezia Molfino

LAMIALAMIERA - Giovedì 19 maggio

UCIMU-SISTEMI PER PRODURRE

FIERA MILANO

cecimo

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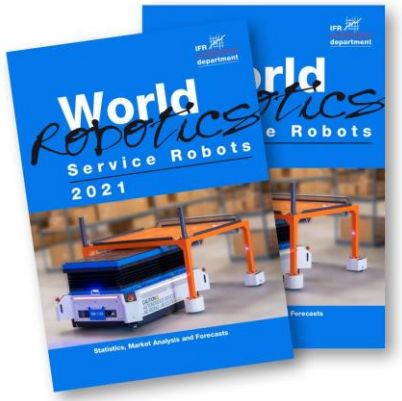
LE FONTI DEI DATI



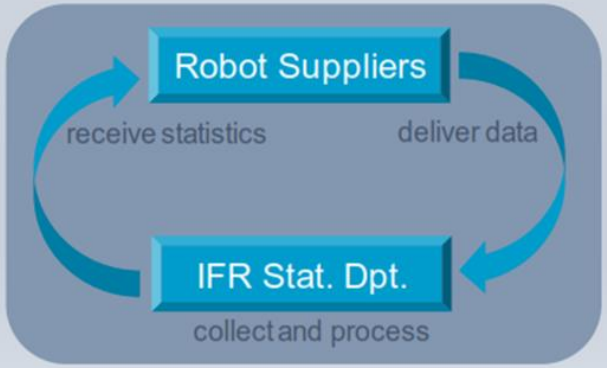
IFR International Federation of Robotics

MARKETSANDMARKETS

Mordor Intelligence

Global Service Robotics Market - Growth, Trends, COVID-19 Impact, and Forecasts (2022 - 2027)

- **Contribute to IFR statistics today:**
  - receive free results – no cost involved; no membership required
  - receive results earlier and in more detail than will be available in World Robotics Service Robots
- **IFR statistics...**
  - enjoy an excellent reputation among the media, financial institutions and policy makers.
  - are antitrust and privacy compliant.
- **As an industry association IFR is...**
  - an institution dedicated to benefit the whole robotics industry.
  - neutral towards all robot suppliers.
  - doing the whole process in-house. No third party involved.



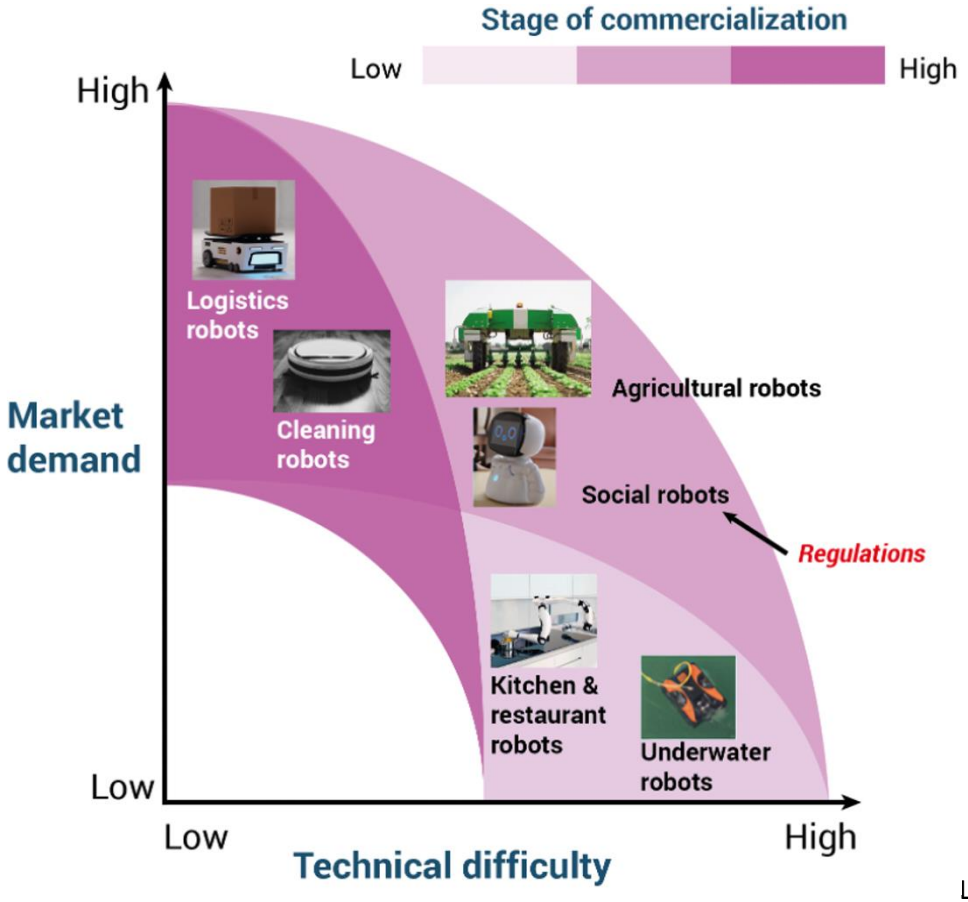
Interested? Send a nonbinding e-mail to statistics@ifr.org

IL MERCATO GLOBALE

April 22, 2022 by [mediaautomate_x11p0n]

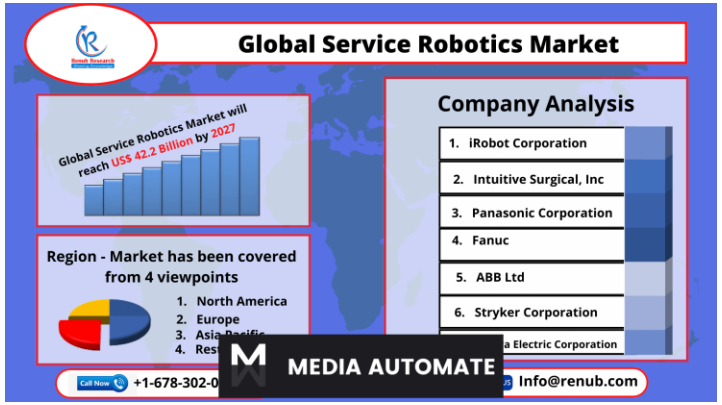
World Service Robotics Market to develop with **24.6%** CAGR from 2022-2027, Propelled by:

- Technological Developments &
- Excessive Labour Prices in Western Nations



The global market for service robots will reach $70.1 billion by 2032

IDTechEx

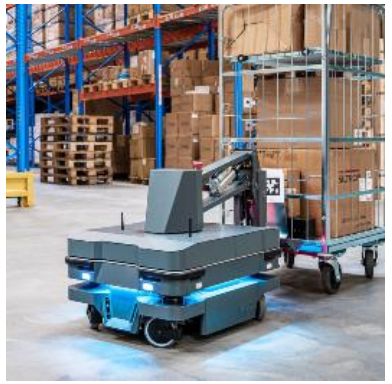


"service robots are employed in Transportation & Logistics, Skilled Cleansing, Medical Robotics, Hospitality, and Agriculture"

Key Gamers: Now we have lined iRobot Company, Panasonic Company, Intuitive Surgical, Inc., Fanuc, Stryker Company, ABB Ltd, and Yaskawa Electrical Company as key gamers of the World Service Robotics Market.

SERVICE ROBOTS VERSUS INDUSTRIAL ROBOTS

November 2021 by ifr.org



Service robots (SR):

- perform tasks excluding industrial automation,
- they usually have an application specific design, often less than 3 axes
- sometimes they are not completely autonomous but remote controlled
- The market is characterized by different customers, prices, distribution channels, suppliers

The blurred lines between industrial and service robots:

- Depending on its application, the same unit can be a SR or an IR.
- The concepts of use change: new applications emerge.
- Business processes are reinvented to make optimal use of collaborative robots.
- Artificial intelligence and machine learning technologies allow robots to autonomously detect and respond to their environment.
- Robots are increasingly supporting humans both at work and in their private life.

IFR: CONSUMER and PROFESSIONAL SERVICE ROBOT DEFINITION

- **A service robot** is an actuated mechanism programmable in two or more axes, moving within its environment, to perform useful tasks for humans or equipment excluding industrial automation applications.
- In some applications, manually controlled **robotic devices** with limited or even without autonomy are included. This is particularly relevant if legal requirements prohibit autonomy (e.g. surgery robots) or the purpose of the application requires only limited autonomy (e.g. assistance robots for disabled people).
- A **consumer service robot** is a service robot built for use by everyone. Neither operation nor setup require a professionally trained operator.
- A **professional service robot** is a service robot built for use by trained professional operators.
- **Autonomous mobile robots** (AMR) are professional service robots. If they are equipped with a manipulator, the manipulator is separately counted as an industrial robot.

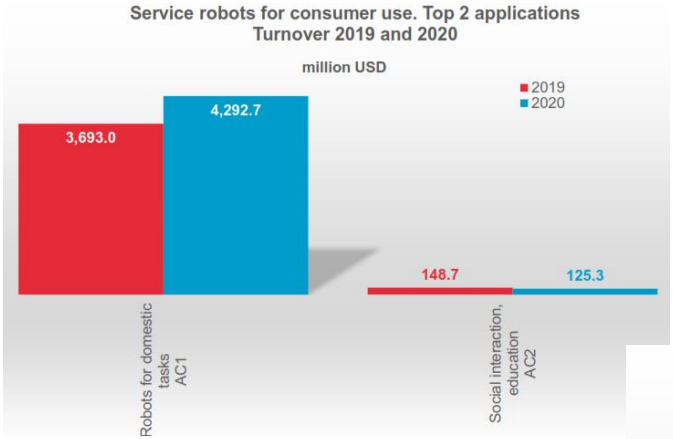
CONSUMER APPLICATIONS

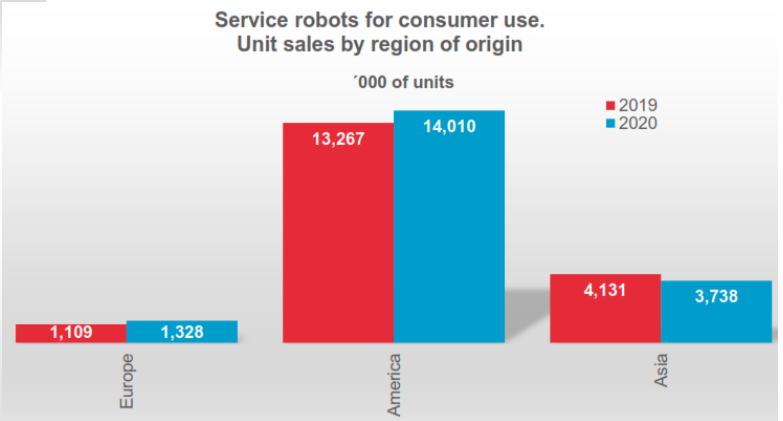
AC1_Robots for domestic tasks
Robots for housekeeping and similar tasks around the house

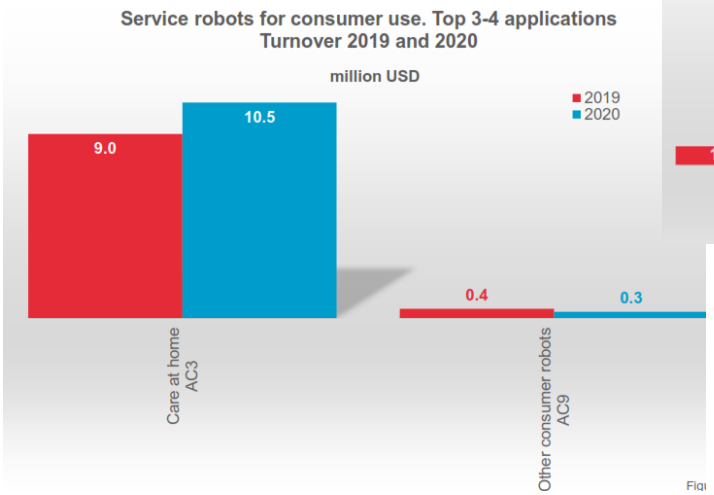
AC2_Social interaction, education
Robots with social interaction functions, robots for children and student education

AC3_Care at home
Robots that support people in need of care (e.g. seniors or handicapped people) in their homes or home-like environments (e.g. retirement homes)

AC4_Other consumer robots
Consumer robots that do not fit into any of above classes







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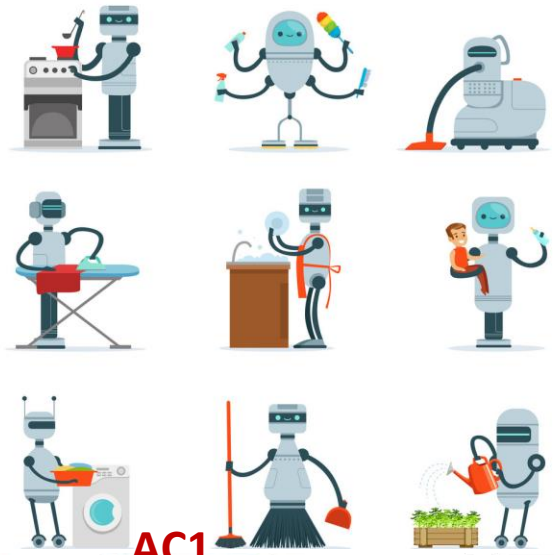


AC1

AC3

PROFESSIONAL APPLICATIONS

AP1_Agriculture Robots for agricultural and farming applications

AP2_Professional cleaning Robots for professional cleaning applications

AP3_Inspection and maintenance Robots for inspection and maintenance

AP4_Construction and demolition Robots for construction and demolition

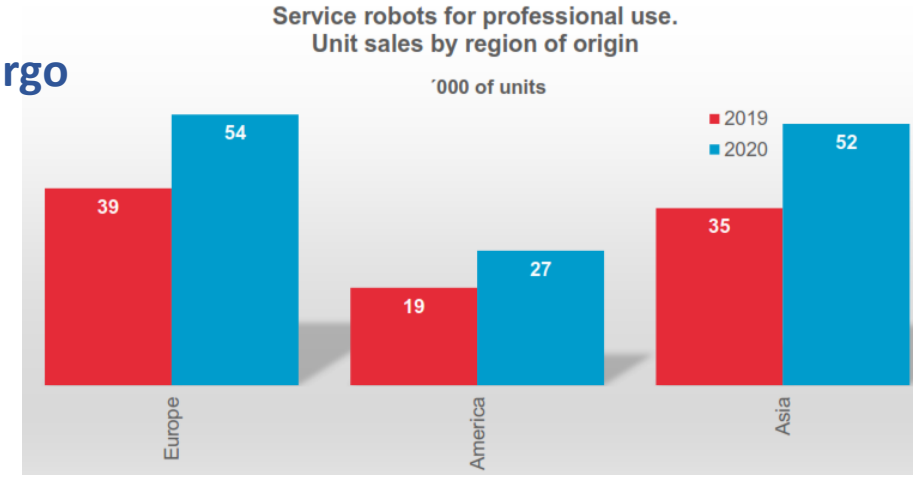
AP5_Transportation and logistics Mobile robots for transportation of goods or cargo and other logistics functions

AP6_Medical robotics Robots in medical applications

AP7_Search and rescue, security Robots for emergency situations

AP8_Hospitality Robots for interaction with guests or visitors

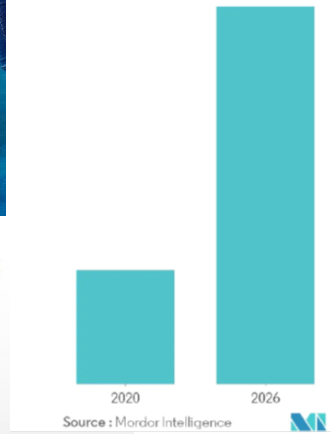
AP9_Other professional service robots Robots that do not fit into any of the above classes



TOP 5 PROFESSIONAL APPLICATIONS

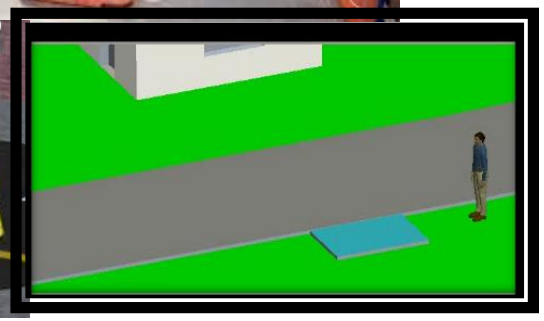
AP6

Market Summary
CAGR 22.18 %



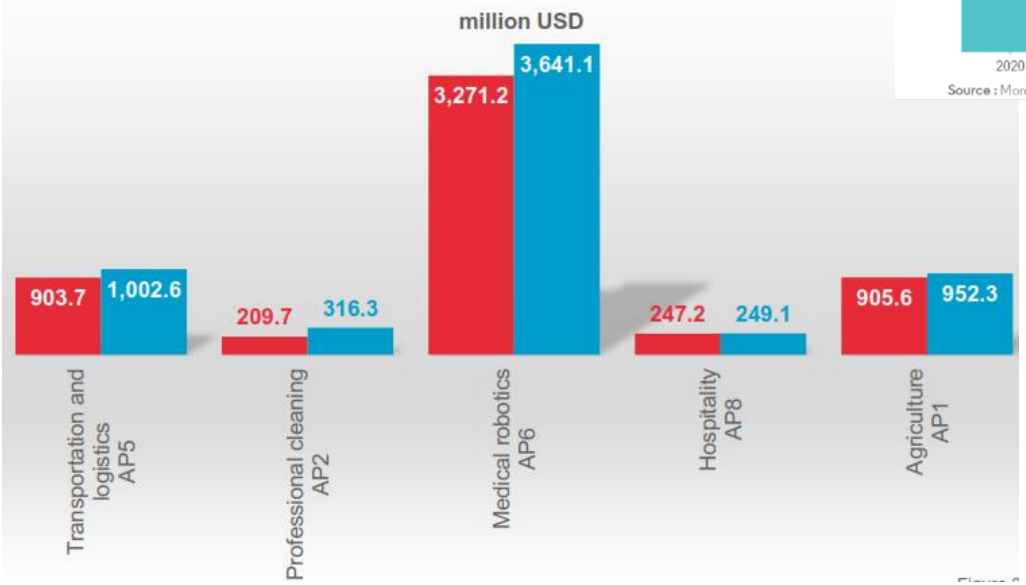
Source : Mordor Intelligence

AP5



AP1

Service robots for professional use. Top 5 applications
Turnover 2019 and 2020

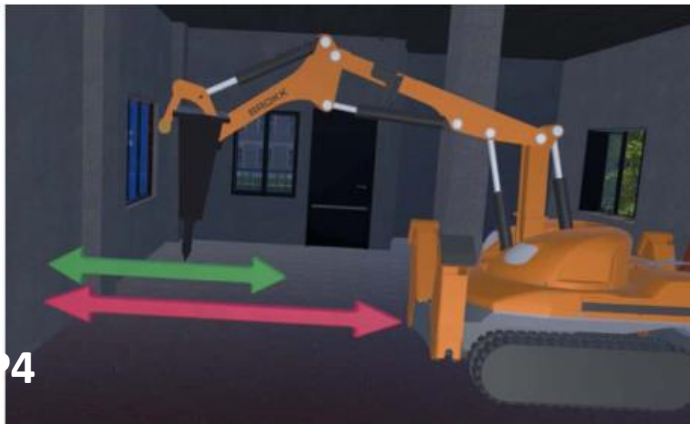


AP2

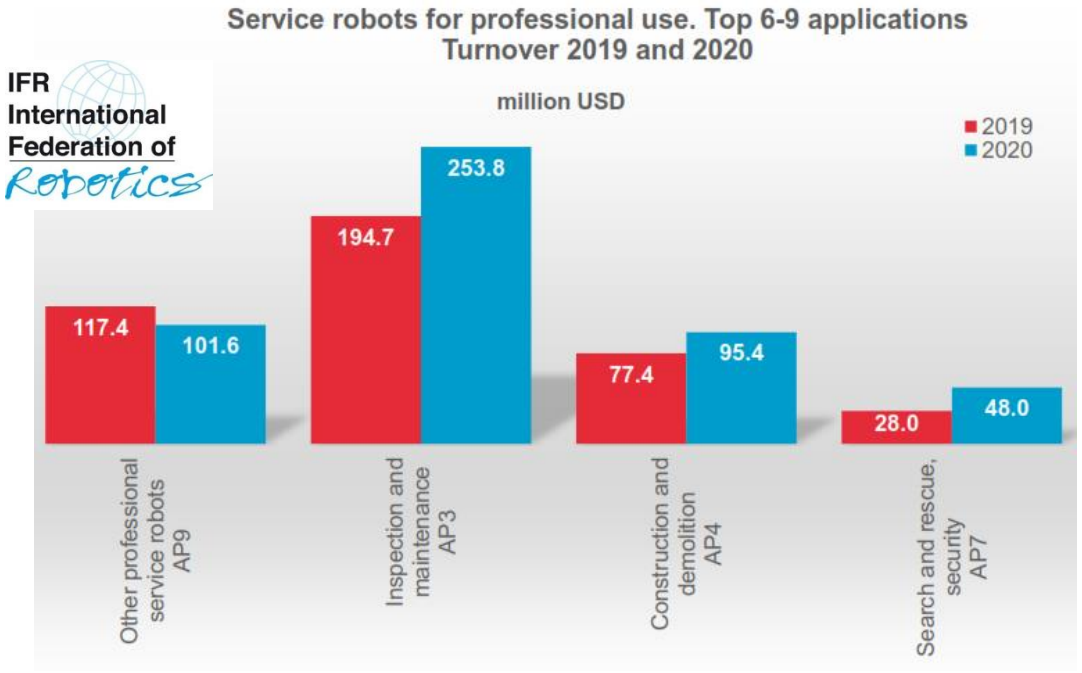
AP8

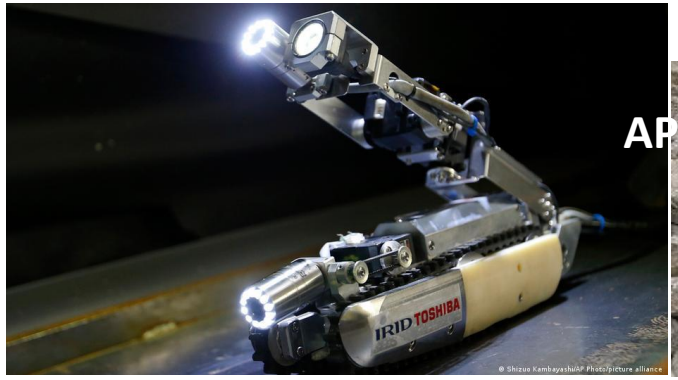
TOP 6-9 PROFESSIONAL APPLICATIONS

AP3



AP4





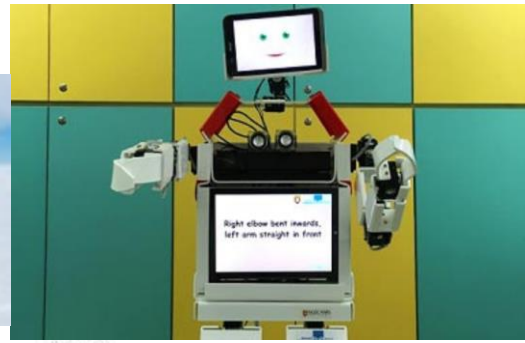
AP7

SERVICE ROBOTS HELP HUMANS AND PLANET

- Improve the quality of life
- Improve health
- Improve the quality and sustainability of food
- Improve the convenience and quality of services
- Contribution to sustainable mobility and logistics to reduce carbon footprint
- Help improving the sustainability of the environment and monitor the climate status
- Support for rapid response interventions to unexpected catastrophic events
- Contribution to the SDGs for sustainable development (UN Agenda 2030)








GRAZIE

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Grazie ai miei studenti del corso Flexible Automation, master Robotics Engineering ed EMARO per le WebSearches su
SERVICE ROBOTICS