



IFR INFOGRAPHIC

SERVICE ROBOTS
IMPACT OF ROBOTS ON HUMAN LIFE

KEY FINDINGS

- 01

SERVICE ROBOTICS ENTERS A PHASE OF INDUSTRIALIZATION
- 02

LABOR SHORTAGE STRONGEST DRIVER
- 03

AI MAKING SERVICE ROBOTS MORE ACCESSIBLE
- 04

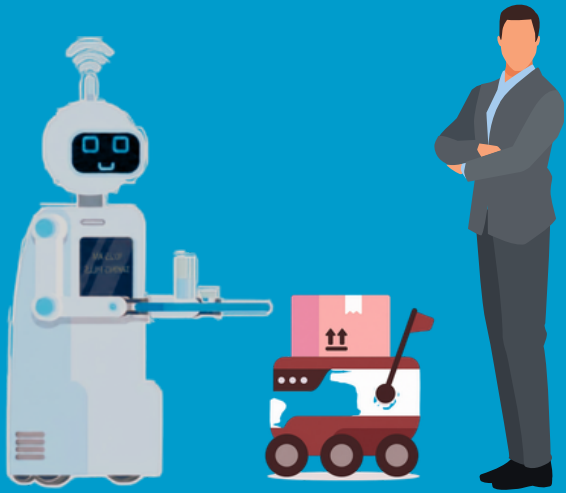
SERVICE ROBOTS AS ADAPTIVE MULTI-PURPOSE PLATFORMS
- 05

NO SINGLE FORM FACTOR WILL DOMINATE SERVICE ROBOTICS
- 06

STRONG GROWTH IN LABOR-CONSTRAINED SECTORS
- 07

TRUST AND SAFETY BECOME CRITICAL ADOPTION FACTORS
- 08

ADOPTION ADVANCES AT DIFFERENT SPEEDS ACROSS REGIONS



WHAT IS A SERVICE ROBOT?

A **service robot** is a robot that **performs useful tasks for humans** or equipment outside industrial manufacturing automation.

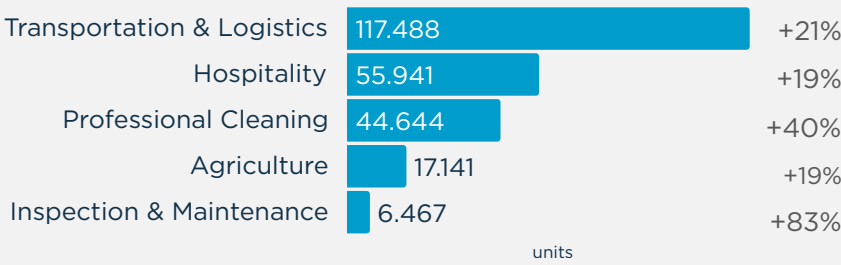
Professional service robots are deployed in **commercial or institutional environments**.

Consumer service robots are intended primarily for personal or domestic use (e.g. robotic vacuum cleaners)

SERVICE ROBOTS:
PROFESSIONAL VS. CONSUMER USE

Professional Use				Consumer Use	
Agriculture & Farming	Professional Cleaning	Inspection & Maintenance	Transportation of Goods	Domestic Tasks	Social Interaction
Construction & Demolition	Rescue and Security	Guest & Visitor Interaction		Care at Home	

MARKET FOR PROFESSIONAL SERVICE ROBOTS



MULTI-PURPOSE ROBOTS

Customer Interaction

Cleaning

Inspection

Security

Delivery

WHY ORGANIZATIONS AUTOMATE

- DEMOGRAPHIC CHANGE
- LABOR SHORTAGES
- GLOBAL COMPETITION
- SUPPLY CHAIN RESILIENCE
- PRODUCTIVITY & QUALITY

PREREQUISITES FOR ADOPTION

- SAFETY
- CYBER-SECURITY
- PRIVACY
- AI GOVERNANCE
- ACCOUNTABILITY

POLICY RECOMMENDATIONS

- Develop risk-based and innovation-friendly regulatory frameworks.
- Harmonize international standards for safety, cybersecurity, and human-robot interaction.
- Clarify liability regimes for autonomous systems operating in public and professional environments.
- Support the development of research and testing infrastructure, including simulation platforms and physical AI datasets.
- Facilitate the adoption of autonomous systems by SMEs and public institutions through demonstration projects, awareness initiatives and skills development.
- Integrate cybersecurity and data governance into certification and lifecycle management requirements.

CASE STUDIES & SUCCESS STORIES



FULL POSITION PAPER

