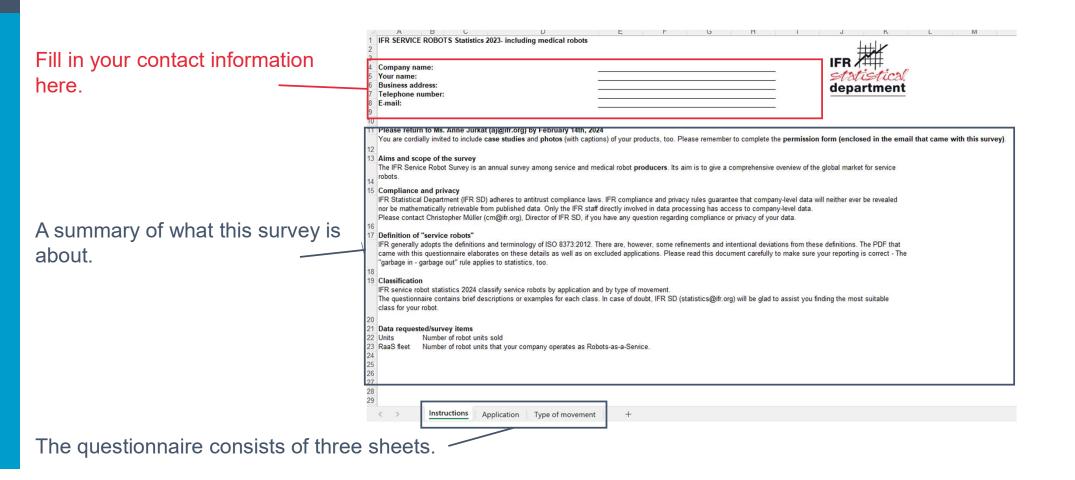


# WALKTROUGH IFR service and medical robot statistics questionnaire

Cover page





### Questionnaire service and medical robots - by application



Enter your sold units for the years 2022 and 2023 and the number of robots you offered for RaaS

Description of service robot application classes

1	A B		C	DE		F	G
				Unit sales			
				Number of rob means the p robot hardwar to the c	roperty of the te is thinsferred		
3		Application	Description	2022	2025	2022	2023
	AC	Consumer robots	Robots intended for use by everyone. No professional training required.	0		0	0
1	AC1	Robots for domestic tasks	Robots for housekeeping and similar tasks around the house	0	0	0	0
	AC11	Domestic floor cleaning (indoor)	Wet and dry cleaning of floors, e.g. vacuuming and wiping of floors				
	AC12	Domestic window cleaning	Cleaning of windows				1
	AC13	Gardening	Gardening tasks, e.g. lawn mowing				
	AC14	Domestic cleaning (outdoor)	Outdoor cleaning tasks around the home, e.g. pool cleaning, yard cleaning				
	AC19	Other domestic tasks	Domestic tasks other than ACT1 to ACT4	<u> </u>			
	AC2	Social interaction, education	Robots with social interaction functions, robots for children and student education	0	0	0	0
2	AC21	Social interaction, companions	Main purpose of the robot is to interact with and entertain users at home				
3	AC22	Education	Robots desigend specifically to educate children or students				
	AC3	Care at home	Robots that support people in need of care (e.g. seniors or handicappedpeople) in their homes or home-like environments (e.g. retirement homes)	0	0	0	0
5	AC31	Mobility assistants	Robotic wheelchairs, robotic rollators/walkers, exoskeletons for walking disabilities. Includes robotic devices.				
3	AC32	Manipulation aids	Hopots that support seniors or disabled people in the manipulation or their environment (e.g. meai assistance robot, manipulators mounted to wheelphairs) includes robotin devices				
7	AC39	Other care robots	Robots for care at home that do not fit into AC31 or AC32. Includes robotic devices.				
3	AC9	Other consumer robots	Consumer robots that do not fit into any of above classes	0	0	0	0
9	AC99	Other consumer robots	Consumer robots that do not fit into any of above classes				
D	AP	Professional service robots	Robots intended for use by trained professionals.	0	0	0	0
	AP1	Agriculture	Robots for agricultural and farming applications	0	0	0	0
2	AP11	Cultivation	Plowing, seeding, harvesting, weeding, fertilizing, pesticide spraying offor crop plants and fuit indoors (greenhouse) and outdoors (field, vineyard)				
3	AP12	Milking	Milking				
4	AP13	Other livestock farming	Livestock farming, except milking, e.g. feeding, barn cleaning				
5	AP19	Other agriculture	Agriculture, but none of the above				

#### No suitable class found?



You offer robots for applications not explicitly mentioned here?

We may add more classes in the future but this only makes sense if there are sufficient robot suppliers in this class. **Spread the word among your peers and rivals and encourage them to report!** 

If you have questions, comments or suggestions, contact us at statistics@ifr.org

Interested in representing your company in the global industry association? Contact IFR secretariat at secretariat@ifr.org

No suitable class found? Put it in "other".

14	A	В	C	D	E	F	G
1			Unit	it sales	RaaS fleet		
						Number of r	robots offered for
					bot units. "Sales"		Service business
					property of the are is transferred		aS are all types of nodels where the
					are is transferred customer.		hodels where the
2							the robot supplier.
3		Application	Description	2022	2023	2022	2023
7	AP6	Medical robotics	Robots in medical applications	0	0	0	0
8	AP61	Diagnostics	Robotic diagnostic systems. Includes robotic devices.				
9	AP62	Surgery	Robots for invasive therapy (surgery). Includes robotic devices.				
0	AP63	Henabilitation and non-invasive therany	Robots for therapy (except surgery) and rehabilitation of patients after surgery or accidents. Includes robotic devices.				
1	AP64	Medical laboratory analysis	Handling or processing of samples in medical laboratories				
2	AP69	Other medical robots	Other robots for medical applications. Note: Robots for transportation in hospitals are included in class AP52				
3	AP7	Search and rescue, security	Robots for emergency situations	0	0	0	0
4	AP71	Firefighting	Robots for Firefighting. Includes robotic devices.				
5	AP72	Disaster relief	Robots for detection or rescue of survivors. Includes robotic devices.				
6	AP73	Security services	Robots for security functions, e.g. surveillance, bomb squad support. Includes robotic devices.				
7	AP8	Hospitality	Robots for interaction with guests or visitors	0	0	0	0
8	AP81	Food and drink preparation	Robots for food or drink preparation				
9	AP82	Mobile guidance, information, telepresence	Robotic information desks or guides, e.g. in museums, shops, hotel receptions. Robots for virtual participation in real-world events. Note: Telepresence robots specifically designed for the medical field are covered in AP69				
0	AP9	Other professional service robots	Robots that do not fit into any of the above classes	0	0	0	0

## Questionnaire service and medical robots - by type of movement

Type of movement does not distinguish between service robots for consumer and professional use.

Enter your sold units for the years 2022 and 2023 and the number of robots you offered for RaaS

						sales	RaaS fleet	
						Number of units robots. Sales mean the proverty of the robot hardware is transferred to the customer.		offered for Robot- ess models. RaaS usiness models erty of the robot ins at the robot lifer.
			Туре	Description	2022	2023	2022	2023
		А	Ground-based	Robots that move or stand on the ground	0	0	0	0
		A1	Rolling	Rolling on wheels or chains		$\mathbf{h}$		
		A2	Walking	Walking on legs				
		A3	Fixed in place	Immobile, cannot change physical location by itself, standing on the gound, desk or other fixed place, also hanging				
Description of		A4	Other ground-based	Gound-based but none of the above (A1-A3), e.g. crawling, snakeing, climbing				
service robot		В	Water-based	Robots that swim or dive	0	0	0	0
movement		B1	Swimming	Swim on the surface of the water, Note: If the robot can both swim and dive, it is counted as diving (B2)				
		B2	Diving	Dive under the surface of the water				
types	C C1 C2 D D1 D2	С	Aerial	Robots that move through the air	0	0	0	0
		C1	Fly	Fly in the air				
		C2	Hover	Hover above ground				
		D	Wearables	Robots that are worn by people	0	0	0	0
		D1	Exoskeletons	Powered human exoskeletons				
		D2	Other wearables	Wearable robots other than D1				
		E	Others	Robots that are not A-D	0	0	0	0
	E1	E1	Other robots	Robots that do not fit into classes A-D, e.g. robots for orbital space Robots that fit into multiple classes, e.g. hybrid robots for water and ground or air				

Dr. Susanne Bieller | SEPT 2021

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Robotics

#### Submission



That's it!

Save and mail to aj@ifr.org and you're eligible to receive the results for free!\* \*If your report is complete and consistent.

We're always looking for case studies that show how service robots improve our lives. Have an interesting story? Contact us to put it on <u>www.ifr.org</u>.

We're also looking for robot pictures to use in our presentations and publications, including World Robotics Service Robots. Attach your footage (and the permission form) when you send us your data!

Want to see your robot on the World Robotics Service Robots cover? Contact us to talk about sponsoring opportunities!