Urban Robotics Foundation

Membership Brochure 2022

A summary of our membership plans and services

December 2021

The Urban Robotics Foundation brings together municipal, advocacy, corporate, and academic stakeholders to ensure robotic technology that is deployed in shared, pedestrianized spaces is implemented in a way that is beneficial and respectful for all users.

Robotic taxis and vans require reserved spaces to load and unload that are safe and adequate for all users.

Bern Grush
Executive Director
Urban Robotics Fundation

Urban delivery and maintenance robots have the potential to reduce urban food and goods delivery costs, traffic, pollution and green-house gases by shifting a significant portion of deliveries from cars and vans to systems that use small, energy-efficient electric robots that can be integrated with cargo bikes, electric goods vans, and micro-warehousing.

Minor technical variations on these same devices can clear sidewalks and pavements of snow, ice, litter, cigarette butts, as well as monitor for parking violations and security breaches. The combined number of benefits is large.

At the same time, vulnerable road users such as pedestrians, cyclists, persons using wheelchairs, seniors, persons with visual or hearing impairments, and all others need regulated vehicle designs and operational restrictions that keep all nearby people safe.

This requires critical care on the part of municipal traffic managers. This may be managed by identifying mapped pathways for restricted use at certain times, and to constrain weight and speed, while applying numerous other traffic rules on a segment-by-segment basis.

Currently, we are drafting the **ISO 4448 standard: Ground-based automated mobility**, to define the parameters and procedures for robotic vehicles such as taxis and goods vans at the curbside, and the movement of robotic service vehicles in urban spaces.

For Municipal Members

Services for municipal members include:

- Education regarding the regulation and orchestration[1] of robotic fleets in shared, public, pedestrianized spaces
- Access to webinars, events, research, and research materials
- Direct input into the parameters and procedures for passenger, goods delivery, and maintenance robots as ISO 4448 is being drafted
- Collaboration to develop the certification guidelines aspect of the ISO 4448 series, and have ongoing and beneficial access to these guidelines as they mature.

For Vulnerable User Advocacy Members

Services for vulnerable user advocacy members include:

- Support for the language and procedures to enable cities to constrain the times, places, speeds, pathways, and volumes of robots in shared public spaces; this means vulnerable road users have the language they need to negotiate directly with their city's traffic department (and eventual orchestration system) to maximize their access to, and safety within, these public spaces
- Provisions of the metrics and procedures required to specify PUDO zones and wider sidewalks in those places where they may be currently inadequate to serve both accessibility and commercial needs.

For Commercial Members

Services for commercial members include:

- Support for operators of passenger, logistic and other service fleets (e.g., maintenance, security) by informing a governance and communication infrastructure that makes negotiating concurrent access to curbs, pavements, walkways, bikeways, laneways, etc. by multiple fleet operators both feasible and safe
- Support for makers of robotic taxis, vans and autonomous mobile robots (e.g., sidewalk robots) by informing a communication infrastructure that enables a common machine and fleet conformance for acceptance into operating fleets and for city deployment.

1 Orchestration refers to a form of traffic management system for coordinating multiple fleets of numerous robots from multiple vendors each on an independent schedule and task. In the case of ISO 4448, the purpose is to ensure safe, smooth, low volumes of robots to guarantee easy, comfortable access for other users sharing the same public space.

Membership Structure for 2022

Members have the following privileges:
Password to the members-only site

- Access to all member services
- Free access to all webinars, training, documents
- Discounts for in-person events
- Input to Draft ISO 4448
- Name and LinkedIn contact in a members-only database visible only to other members (opt out)

Category	$US
Government/Association 1	1000
Government/Association 10	3000
Government/Association 30*	10000
Government/Association 100*	25000
Advocacy (non-profit)	500
Academic	500
Personal/Student	100
Commercial (<101 employees)	3000
Commercial (100-1000 employees)	10000
Commercial (>1000 employees)	25000

Fees are for 2022; subject to change after 2022.

All 2022 fees are discounted 50% if paid before Mar 31, 2022

*Larger government subscribers are typically national, provincial/state, or an association for self-distribution among constituents

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