

Italdesign for Avathor

From concept to reality: announcing the launch of One,
the new electric medical device for inclusive
indoor & outdoor mobility

- Avathor One: the story of a concept that becomes reality for the movement of people in wheelchairs or with reduced mobility, on the road or in restricted space, for private use or sharing
- With Avathor One, Italdesign reiterates its commitment to acting as a hub for startups and new enterprises

Moncalieri, April 1, 2025

Research and innovation are fundamental for both technological and social progress. Thanks to demonstrators and concepts, it is possible to explore new ideas and solutions which, if adequately understood and developed, can be transformed into tangible products. As **Italdesign** knows better than most, **visionary ideas can sometimes evolve into real-life products and services that can improve people's quality of life.**

This is precisely what has happened with the **Avathor One** project by Turin startup **Avathor**, which **originated as the evolution of the Italdesign WheeM-i – Wheelchair Mobility Integration – concept.** WheeM-i was designed in 2019 and presented as the first shared, lightweight, sustainable, 100% electric and semi-automated micro-mobility service for people in wheelchairs, co-designed together with the end user. A 'wheel-on' vehicle, it allows wheelchair users to get on board simply by 'driving' their wheelchair directly onto the device, specifically designed to accommodate any model.

Certified as a medical device, Avathor One inherits many of the features of WheeM-i but also introduces some unique characteristics that distinguish it from

the original concept, offering an even more advanced, personalized, and inclusive mobility experience.

"Avathor One is the tangible realization of our vision of truly inclusive and universal mobility," explains Cristiano Bilucaglia, Chairman of Avathor. *"Taking the brilliant WheeM-i concept developed by Italdesign as our starting point, we created an electric device with an attractive and contemporary design that turns mobility into an enjoyable experience for all. Avathor One isn't just functional, it is also aesthetically sophisticated, a product that people will be proud to use, regardless of their mobility needs. The intuitive interface with joystick makes it incredibly easy and gratifying to use, while the advanced safety systems – from the anti-collision perimeter radar sensors to the rear camera – guarantee worry-free movement. Whether it be wheelchair users, individuals with reduced mobility or anyone with temporary mobility difficulties, Avathor One offers everyone a smooth, comfortable, and safe driving experience."* He concluded: *"We have created a device which both solves practical problems but also elevates the mobility experience to new levels of excellence and style, perfectly embodying our vision of inclusive technology that does not compromise on either design or performance."*

*"This project represents a real success for us for **three main reasons**,"* comments Antonio Casu, CEO of Italdesign. *"Firstly, it demonstrates our ability to create cutting-edge solutions and gives us the chance to reaffirm the incredible potential of our innovative WheeM-i concept, which promoted the inclusion and independence of wheelchair users. Secondly, it underlines our commitment to acting as a hub for startups and newcomers that offers fertile ground for their growth and development. Finally, Avathor One confirms our dedication to supporting projects that look to the future and contribute to creating a positive impact on society and the environment, making the world more accessible and sustainable."*

Avathor One: functional design that puts innovation at the service of people.

From its ergonomic design to its smart solutions, Avathor One combines creativity and engineering to offer an intuitive, safe, and connected private or shared mobility experience. The agility and versatility of the device, the result of its reduced dimensions and light, compact structure, enable it to respond promptly to the needs of its users, overcoming physical barriers. Avathor One is fitted with a luggage compartment (for wheelie bags or backpacks) with safety belt above the front bonnet, while its height off the ground enables it to climb steps of up to 8 cm in height and inclines of a 10%, maximum 20%. This makes it **ideal for**

various indoor settings, such as airports, train stations, shopping malls and museums, as well as for circulation in urban areas, pedestrianized zones included, where it can be used without a license. On the sides, the Italdesign logos are testament to the role played by the company, which made its design and product development expertise available to Avathor to help take Avathor One from the concept stage to production. The device is completed with a kit of **omniwheels**, which guarantee smooth and precise omnidirectional movement, making it ideal for use in **restricted spaces** like lifts. These are joined by a series of **swivel wheels**, which are perfect for frequent changes of direction and use on different types of surfaces such as those of **public roads**, which can vary from tarmac and stone paving to concrete and dirt tracks.

Avathor One: accessibility and safety for unrestricted electric mobility.

Avathor One can be switched on in three different customizable ways: using the remote control, turning the ignition key, or remotely via fleet management software to improve operational efficiency, reduce costs and improve safety thanks to the complete real time control this permits over all vehicles.

Avathor One is accessed from the back via a **rear reclinable anodized aluminum ramp**, smooth on the front and treaded on the back, **complete with practical remote control** which allows it to be lowered or lifted also from the outside. The inclination of the ramp is optimized to guarantee **wheelchair users safe and more straightforward access**. For people with reduced mobility, there is a **pull-out bench** with seat covered in neoprene and backrest in waterproof fabric. When not in use this is stored in its compartment inside the ramp. From the **joystick controls on the right - adjustable and adaptable to offer customized control and comfort and a bespoke driving experience** - through to the smart solutions, every element is designed to guarantee safety, independence, and connectivity. **Anti-collision perimeter radar sensors provide the user with real time driving assistance**, detecting obstacles and pedestrians around the vehicle, and slowing it down if necessary. A **rear central camera**, fitted to the outside of the ramp, and an **interactive user display help with maneuvers**. The same intuitive interface helps the person on board quickly and easily manage the vehicle's functions. For emergencies, there is a **quick manual access ramp release system** to prevent users from getting trapped on board the vehicle, while an **emergency button makes it possible to bring the device to an immediate halt**. The **all-in-one LED lighting system integrates** various functions and creates a safe driving environment. In fact, as well as guaranteeing **premium quality lighting**, which enables the user to communicate their intentions clearly and promptly to other vehicles and pedestrians, it also ensures **excellent visibility**.

Finally, thanks to advanced technologies like **geo-fencing** (which makes it possible to set boundaries within which the vehicle can be used) and **IoT** (Internet of Things) management, Avathor One becomes a real everyday benefit, improving the driving experience.

Avathor One: materials and sustainability for a responsible future

Anodized aluminum for the tubular structure and embossed thermoformed plastics for the panels are the **waterproof materials** of the Avathor One protective cell. A handful of elements and a simple structure to emphasize the economic objectives of the device and underline the ease with which it is produced, maintained, and managed.

Thanks to the **e-Power** technology of automotive origin, Avathor One guarantees energy efficiency, reduced emissions, and optimal performance, contributing to the sustainability cause. The minimum autonomy of 50 km, maximum speed restricted to the 10 km/h legal speed limit (even if the vehicle is technically able to reach a velocity of 18-20 km/h), and **power cable integrated in the vehicle** for smart and practical recharging using a **standard 220V power socket** help make Avathor One an efficient vehicle accessible to a wide range of users, promoting the inclusion and the right to mobility of all.

Avathor One: future prospects for inclusive and accessible innovation

The product will hit the market in the second half of 2025, initially being launched in Italy. It will come out in Spain in 2026, and from 2027 will also be available on other markets. The target market includes both the **B2B** and **B2C** sectors. The vehicle will cost under 10,000 euro with the possibility of applying the deductions and incentives available in the sector. The sales network will include direct **B2B** sales and an e-commerce channel. Post-sales assistance will be direct in 2025, expanding into a network in 2026. In 2026, an advanced roof solution will also be introduced to guarantee the comfortable use of the vehicle also in **adverse weather conditions**. A series of **ergonomic accessories for the driving area** based on detailed feedback provided by testers is at the **development** stage.

Avathor One technical data

-Maximum length	1486 mm
-Maximum width	979 mm
-Maximum height	1326 mm
-Front wheel track	825 mm
-Rear wheel track	890 mm
-Wheelbase	960 mm
-Unladen ground clearance	146 mm
-Ground clearance at full load	126 mm
-Curb weight	160 kg
-Diameter front wheels	380 mm
-Diameter rear wheels	180 mm
-Automotive derived e-POWER system	
-Minimum range	50 km
-Smart recharging with standard 220V power socket and power cable integrated in vehicle	
-Maximum speed	Limited to 10 km/h

Company profile

Avathor

Avathor S.r.l. is a Turin-based startup that was founded on 26 January 2024 with the clear mission of removing mobility barriers and promoting inclusion and independence. The company designs, produces and markets innovative electric vehicles for the mobility, in both indoor and outdoor environments, of people with disabilities or reduced mobility, also offering sharing services. The steering committee consists of experts in the area of innovation, sustainability and production:

Mancin S.S. – Founder.

Via the company MRO (Mobility Road Organization), electric mobility experts Mancin S.S. collaborate with leading Italian players and provides business consultancy on the international market.

Ubroker S.p.A. – Co-founder.

Electricity and gas supplier, Ubroker is synonymous with savings and efficiency and is a point of reference in the sector.

Ermanno Silvano – Co-founder.

Former Chairman and Chief Executive Officer of FAST.LOC S.p.A., Ermanno Silvano brings his experience in the automotive, railway and aerospace sectors.

Regitech Group S.r.l. – Co-founder.

With decades of experience in automotive engineering, the Regis family produces customizable light commercial vehicles.

For more information, visit www.avathor.it

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Italdesign

A point of reference for the automotive industry for almost 60 years, Italdesign designs, develops, and produces cutting-edge solutions for the automobile and mobility industry in general, as well as for various industrial sectors globally. The company provides vertical and integrated services to both established and emerging clients. In addition to being an experienced car designer on the international market, in recent years the company has also begun developing systems in automotive electronics, such as Infotainment, ADAS, high-voltage battery systems, and has participated in collaborations for Software- Defined Vehicle (SDV) solutions.

With headquarters in Moncalieri, Turin (Italy), and over 1300 employees in Italy and in its branches in Germany, Spain, China, and the US, Italdesign has received over 200 design awards over the years. For more information, visit www.italdesign.it

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