

Toyota Mobility Foundation, City of Vichy and Vichy Communauté Launch Innovative Mobility Project for People with Reduced Mobility

VICHY, FRANCE

January 30, 2025

The Toyota Mobility Foundation (hereinafter referred to as “TMF”), in collaboration with the City of Vichy, Vichy Communauté and Les centres de ressources, d’expertise et de performance sportive (hereinafter referred to as “CREPS”) of Vichy and three innovative startups, are proud to announce the launch of a project aimed at improving mobility for individuals with reduced mobility. This initiative underscores TMF’s dedication to fostering inclusive mobility solutions that enhance independence and accessibility, reflecting their broader mission to enable more people go more places and realize their full potential.

Building on the successful partnership announced earlier this year, TMF, the City of Vichy and Vichy Communauté collaborated with three innovative start-ups – Andyamo, Evelity (by Okeenea), and Genny Mobility – to develop and implement the first fully adapted solution tailored specifically for individuals with reduced mobility.

Key Features of the Project:

- **Adapted Wayfinding:** The project introduced a wayfinding system designed to meet the unique needs of people with reduced mobility, providing real-time, accessible route information.
- **Collaborative Innovation:** The initiative brought together the expertise of Andyamo, Evelity, and Genny Mobility, each contributing their specialized knowledge to create a comprehensive solution.
- **Community Engagement:** The project involved local communities, ensuring that the system was user-friendly and met the actual needs of its users.

Partner Contributions:

Evelity app (by Okeenea): Evelity focused on mapping the CREPS of Vichy to enhance accessible entire campus navigation, both indoor and outdoor. Known as an inclusive wayfinding application, Evelity specializes in providing better orientation and navigation for all, with a design inspired by the needs of people with disabilities in complex environments. By leveraging their expertise, Evelity ensured that the CREPS of Vichy, a renowned facility for high-level athletes’ preparation and improvement, became fully navigable for individuals with mobility challenges. This initiative enabled athletes but also visitors to move autonomously and securely within the centre, thereby promoting inclusivity and accessibility.

Another part of the collaboration is creation of the tactile maps for CREPS facilities.

The 3D plans are created with inclusive design principles, ensuring they are accessible to everyone, including people with visual impairments. They incorporate tactile elements, braille, and high-contrast visuals to cater to various sensory needs.

These maps offer a detailed, three-dimensional representation of the building layout, including key landmarks, pathways, and services. As the whole CREPS campus indoors and outdoors is already planned

with consideration of potential mobility challenges of visitors and athletes this 3D plan helps users to visualize the space and plan their routes more effectively. It is a tool that elegantly completes the digital orientation provided by Evelity.

“We are excited to bring our expertise in accessible navigation to the CREPS campus. By mapping the facility, we aimed to provide athletes with mobility challenges the freedom to navigate independently and confidently. This project underscores our commitment to inclusivity and ensuring that all athletes have equal access to top-tier training environments,” said Sylvain Denoncin, President at Okeenea, the editing company of Evelity.

Andyamo: Andyamo developed an accessible pedestrian and multimodal trip planner adapted to each user mobility level (family with kids with stroller, senior, people in manual or electric wheelchair etc.). The trip planner guarantees the accessibility of the public transport lines, stops (to get on and off with a ramp) and the pedestrian routes of the City of Vichy (precision of the sidewalks and pedestrian crossings). This included creating the first pedestrian turn-by-turn navigation system that displayed the right pedestrian instruction at the right moment and improved user position accuracy. Our mission is to improve mobility for all and provide autonomy, safety and freedom especially to people with reduced mobility.

“Our goal is to provide a seamless navigation experience for people with reduced mobility (more than 20% of the French population). By developing an accessible trip planner and turn-by-turn navigation system, we aimed to empower users with the confidence to explore their surroundings independently. This project is a significant step towards making urban mobility more inclusive. We are very proud of what we have done with Toyota Mobility Foundation.” said Sébastien Guillon, CEO and cofounder at Andyamo.

Genny Mobility: Genny Mobility brought its cutting-edge connected personal mobility technology to the project. Known for their innovative mobility devices, Genny Mobility enhances the mapping capabilities across diverse terrains. Their flagship product, the Genny ZERO, is the world's first self-balancing wheelchair.

All Genny devices moving around created a network of devices operating as endpoints for a data analysing system, which statistically generated mappings of the environment.

Through GPS, Genny Mobility could locate the vehicles and place them on a map, adding other available information about the space in which they moved. The terrain on which the Genny vehicles moved had an identifiable profile through thorough data analysis. By continuously passing through the same points, Genny Mobility validated information about the terrain morphology more precisely. The analysis focused on three key patterns: obstacle detection, terrain profiling, and slope detection, ensuring a comprehensive understanding of the environment.

“Our technology allows us to create detailed and accurate mappings of the environment, which is essential for providing safe and reliable navigation for people with reduced mobility. By focusing on obstacle detection, terrain profiling, and slope detection, we can offer a robust solution that enhances the overall mobility experience,” said Giovanni Fulgoni, head of R&D at Genny Mobility.

“We envision a future where mobility solutions are inclusive and accessible to everyone, regardless of their physical abilities. This project in Vichy is just the beginning. Our aim is to develop a scalable and transferable wayfinding application that can benefit cities and regions worldwide. We are committed to driving

innovation in mobility and making a positive impact on communities globally,” said Monica Perez Lobo, Director at Toyota Mobility Foundation Europe.

The project enhances inclusivity and accessibility for people with mobility challenges. By introducing an adapted wayfinding system and detailed 3D plans, the initiative ensures that individuals with reduced mobility can navigate their environments with greater ease and confidence. The project promotes peace of mind by providing real-time, accessible route information and improving indoor navigation at the CREPS training center. This holistic approach empowers individuals to move independently and securely, fostering a more inclusive and accessible community for everyone.

The next steps for the project include:

1. **Expanding Partnerships:** The project aims to collaborate with more partners and innovators to enhance the solution further and ensure a seamless customer experience for people with mobility challenges.
2. **Scaling the Model:** Developing a scalable model that can be replicated in other cities and regions, setting a new standard for inclusive mobility.
3. **Continuous Improvement:** Continuously refining the technology and solutions based on user feedback and data analysis to better meet the needs of individuals with reduced mobility.
4. **Community Engagement:** Engaging with local communities to ensure the solutions are user-friendly and effectively address the actual needs of users.
5. **Promoting Inclusivity:** Fostering a more inclusive and accessible environment by implementing the holistic move-around solution, enabling individuals to move freely and confidently despite their mobility limitations.

These steps aim to create a robust and adaptable mobility solution that people with reduced mobility worldwide can benefit.

About the Toyota Mobility Foundation

The Toyota Mobility Foundation (hereinafter referred to as “TMF”) is committed to contributing to a sustainable society by leveraging the technologies and expertise gained from our various projects and working with a diverse range of partners to promote activities aligned with the United Nations’ Sustainable Development Goals (SDGs). The Toyota Mobility Foundation (Chair Akio Toyoda) was established in August 2014 by the Toyota Motor Corporation (Toyota) to support the development of a more mobile society in which everyone can move freely. The Foundation underscores Toyota’s ongoing commitment to continuous improvement and respect for people. It utilizes Toyota’s expertise and technologies to support strong mobility systems while eliminating disparities in mobility. TMF works in partnership with universities, governments, non-profits, research institutions and other organizations, creating programs that are aligned with the UN Sustainable Development Goals (SDGs) to address mobility issues around the world.

*“TMF aims to create a truly mobile society that will help people live better lives no matter where they are,”
said Chair Akio Toyoda.*