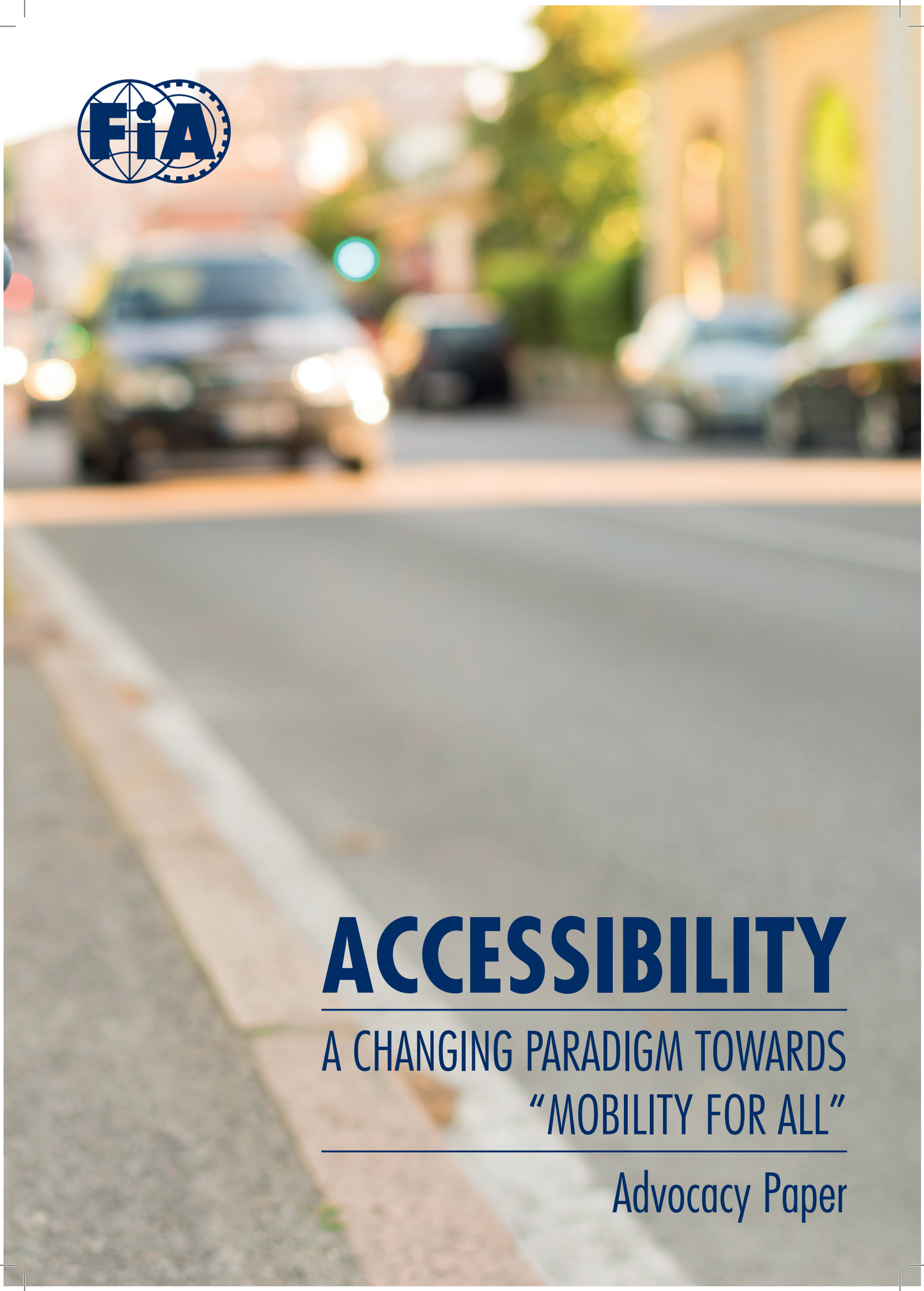


ACCESSIBILITY

A CHANGING PARADIGM TOWARDS "MOBILITY FOR ALL"

Advocacy Paper

FOREWORD

Dear friends,

The global commitment to sustainable development goals and their targets mandates us to enable transportation systems that are safe, environmentally sustainable and accessible for everyone.

Transport for all means advantages for all. Accessible mobility enhances our lifestyles, economic opportunities and travel patterns. Using universal design and architectural accessibility features can ensure maximum benefits to people of all ages and abilities.

As a driver of mobility enhancing global initiatives, the FIA is committed to promoting accessible and inclusive transport solutions.

Recommendations to the Clubs, included in this paper, are aimed at helping FIA Members promote the use of Universal Design principles in transport policy-making. Vulnerable road users have an equal right to personal mobility and the full benefits of transportation.

It is our role to support and advocate for inclusive policies that make accessibility a systematic concern in the planning and implementation of transport systems around the world.

With best wishes,

Jean Todt
FIA President

CONTEXT

The first ever report on disability produced by WHO (2011) estimated more than a billion people in the world are suffering from some form of disability. The magnitude of this issue results not only from disease and accidents, but also aging and longer life expectancy. A drastic demographic change has become the principal scene for social policymaking, carrying a direct impact on transport policy. More and more people with limited physical capacities strive to live equitable and dynamic lives and enjoy accessible mobility services. The physical treatment alone is meaningless if nothing is done to improve their access to targeted destinations. For that, regulators should think about how to upgrade road infrastructure, vehicle and communication services with consideration of needs of disabled road users and advocate for respective changes in mobility action plans at both national international levels.

A tendency of implementing regulations and design guidelines which explicitly address accessibility needs is not novel in the transport sector. However, accessibility is not yet a systematic consideration in transport infrastructure planning. A shift towards a more standardised vision of accessible mobility solutions was brought about with the introduction of Universal Design (UD). This concept of inclusive architectural and technological solutions adds value to both disabled and non-disabled road users Universal Design plays an important role in changing this social paradigm and shaping interconnectivity among people, devices and locations with a specific attention to users who temporarily or permanently must cope with extreme, untypical or urgent daily challenges.

WHAT IS SPECIAL ABOUT UNIVERSAL DESIGN?

Benefits of transport systems designed in an inclusive way go far beyond simply meeting laws and regulations, as improved access to transport integrates all users in the mobility ecosystem in a fair and convenient way. Users with physical impairments are the primary beneficiaries of optimised design solutions, though accessibility benefits are spread to all travellers.

To maximize benefits of "universally designed" transport systems, legal and regulatory processes of establishing accessibility standards should be embraced by larger group of transport stakeholders, including road operators and mobility service providers. In the long run, mandating UD application makes transportation providers better off as it has a capacity to reduce operating and maintenance costs while increasing ridership . Enforcing a minimal threshold of compliance to accessibility standards helps to ensure a clear measurement system that can be used as an indicator of sustainable mobility systems.

It is a generally accepted fact that easy-to-use, intuitive and effective design solutions in transportation contribute to the sustainable urbanisation and healthy environment of a city and its level of inclusiveness. Strategic design improvements in infrastructure can change the entire perception of a city and its overall liveability, thus attracting more tourists, investors and dwellers. Investment in accessible transport results in sugnificant economic gains. For thatm efficient regulations are needed to ensure that a cost-benefit ratio is on the consumer side.

7 principles of Universal Design

Principle 1: Equitable use

When equitable use of the same transport mode is not possible, adequate equivalents should be provided. Design itself should stay appealing and plausible to all users.

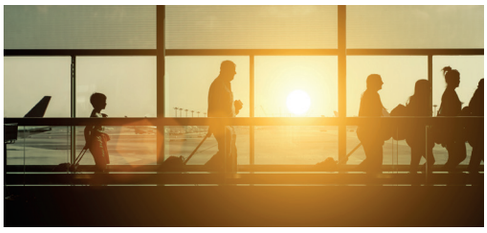
Example: In Morocco, there is a specific private taxi company for disable people at the airport.

Principle 2 : Flexibility in use

Accommodating a wide range of preferences of mobility users is key to sustaining the "universality" of the approach. Universal Design must be adaptable to a given context, city size and transport system.

Example: In Barcelona metro: blind people designed the ticket machines thus machines are intuitive to use.

Principle 3: Simple and intuitive use



While technologies enabling innovative inclusive solutions are complex, their practical application should eliminate unnecessary complexity.

Example: Moving sidewalks in airports, train station and subway stations.

Principle 4: Perceptible Information

Design conveys important messages to final users of services and infrastructure it is applied to. It can and should be used as a strategic communication tool to both enforce road safety measures and navigate users among available transport solutions.

Example: Pedestrian crossings enhanced with a sensor system.

Principle 5: Tolerance for error

Universally designed infrastructure and devices should have high tolerance of mistakes.

Example: Providing warning messages on automatic doors and gates in public transportation to prevent accident and injuries from automated systems.

Principle 6 : Low Physical Effort

Universal design has a capacity to eliminate significant physical obstacles in access to transport services and systems. From the technological perspective, mobile apps, electronic payment terminals can minimise the required physical effort. From the architectural point of view, solutions like shorter pedestrian routes to access buildings in order to reduce users' efforts carrying or transporting loads should be applied.

Example: Elimination of obstacles by putting platforms over the gap between the train and the track.

Principle 7: Size and Space for Approach and Use

All comfort components should be included and adequate space for assistive devices and personal assistance is to be preserved.

Example: Wide gates at subway stations that accommodate all users.

THREE DIMENSIONS OF UNIVERSAL DESIGN IN THE MOBILITY ECOSYSTEM

The need to address existing gaps in accessible mobility solutions is clear, the question is, therefore, how to address this issue via practical solutions. People often associate "accessible transport" with accessible vehicles, designed to accommodate the needs of disabled and elderly people. However, vehicles enhanced with the Universal Design solutions should not be advertised specifically for the disabled. They should be positioned as cars with improvements for everyone.

The application of Universal Design principles by car manufacturers is certainly a way of making transport systems more inclusive. Yet, users with limited physical capacities face additional barriers in external environments even if a car is compliant with all accessibility standards. Therefore, Universal Design should be better integrated in the urban context, in bus transit and rail systems, sidewalks, crossings, road signals and markings. Appropriate legislation should mandate the implementation of more accessible fixed infrastructure elements that provide a solution, for vulnerable road users but also lead to an overall improvement of the mobility ecosystem.

Information and Communication Technologies ICT and technological innovations have become the main driver of smart mobility and sustainable transport systems. In order to unlock the full potential of ICT solutions, technologies should accommodate a diversity of mobility users, including those that have physical impairments or age limitations.

Firstly, information on external environment, safety hazards, fuel consumption, speed limits, conveyed by the car to drivers and passengers, should be more intuitive and comprehensive. Universal Design can make visual, cognitive and physical features of a vehicle clear and convenient to all users. Accessible solutions are not necessarily technologically complex. More convenient seat sliding systems in hatchback vehicles, easier to use connectivity technologies, root optimisation systems are among the most common examples of Universal Design principles applied to in-vehicle devices.

Secondly, ICTs are largely integrated in the functional system of mobility services. Payment methods, route optimisation and navigation services can significantly facilitate the usability for people with varying capacities. Reducing physical efforts in planning and executing a trip incentivises users to travel when they need and how they want it. People with limited physical capacities should no longer fear uncertainties and possible risks on the road as they can enjoy real-time information on accessible route selections. The use of technologies in the overall transportation system design is imperative for social inclusion and thus, essential for sustainable growth.

WHAT HAMPERS THE PROGRESS?

Assuming that processes permitting the implementation of inclusive mobility systems are politically clear and technically feasible, why are most of the roads, vehicles and devices below proper accessibility standards?

- Firstly, roads' sidewalks and other fixed road facilities are a long-lived public good. Many of the existing road infrastructure elements were built back when accessibility was not a priority for designers, operators, or policymakers. Structural improvements are a lengthy and resource-demanding process, and the progress only comes gradually.
- The lack of political will to apply accessibility standards in transportation is also explained by the common perception that such solutions incur significant additional costs comparing to conventional transport planning.
- Secondly, the diversity of existing disabilities leads to evolving accessibility standards over time, therefore some of the past solutions are already obsolete and non-compliant with the highest existing standards.
- Finally, accessibility has not been a priotity in a number of broader planning processes linked to transportation. To date, building codes and regulations on the land use establish minimum, if any, requirements for accessibility standards in built environments and transportation system. The focus has been placed on enhanced capacity rather than user equality. Architectural and design innovations are changing this paradigm.

What are the main goals of Universal Design in application to mobility? What are the existing regulatory standards?

Inclusive transport systems are critical to reducing the vulnerability and dependency of people with constrained capabilities, thereby improving their quality of lives and opportunities for success. In fact, accessible mobility can, if properly implemented, mitigate the economic cost of disability, improving access to markets, people and jobs. By making vehicles and their supporting infrastructure more inclusive, Universal Design can ultimately promote the economic growth and social equity.

However, a global perspective is imperative for more practical solutions. At the international level, a lot has been done to protect the interests of people with limited physical capabilities at the highest regulatory level. The UN Convention on the Rights of Persons with Disabilities, the UN Standard Rules on the Equalization of Opportunities, the EC European Accessibility Act are among some of the most important frameworks protecting the rights and interests of disabled/elderly people. Nevertheless, accessibility in transports is not always a priority target, especially when it comes to the planning and implementation of transport modes and mobility services in developing countries . The policy agenda of the emerging part of the world is strongly lagging behind with regard to most of the robust and equitable accessibility standards already embraced in the West. Universal Design experts should aim at offering solutions that leave no country behind. This requires cost-effective and evidence-based action plans developed in accordance to specific national priorities.

To make sure such action plans are realised, design accessibility should be strongly encouraged through incentives that reward it as a strongly-encouraged condition for funding to strengthen accessibility mobility solutions. The following considerations will help us progress towards practical actions:

- Consideration of vulnerable and disabled social groups should be undertaken at the conceptual stage of transport planning process. The process itself needs to be inclusive to stimulate thinking and discussions about inclusive transport design and eventually make Universal Design an accepted part of the process.
- The lack of accessibility solutions can come at an economic cost in both developed and developing countries. Both personal and broader societal costs are increased if inaccessibility in transport is persistent. Developed countries are already working towards shared linkages between accessible transport and economic growth and promote social equity. However, the fundamental components of inclusive transport, i.e. planning, design, construction and implementation are still missing in the policy agenda of many developed and developing states.
- The economic merits of Universal Design are twofold: firstly, Universal Design solutions are cost-effective, minimising additional costs passed on to final users. To ensure all stakeholders make fair contributions to the implementation of the UD system, a cost-benefit assessment is required. Where the UD approach is not immediately affordable, the implementation should be gradual. Secondly, Universal Design expands economic opportunities by increasing the connectivity of more users and thus, advancing the process of economic growth.
- Equal attention should be given to accessibility standards across all transport modes. Authorities should be aware that the needs of disabled consumers are still vehicle-centred (including buses and trains) and appropriate technological improvement should be applied across motorized mobility modes..
- Accessibility is intrinsically linked to the overall liveability of cities and quality of public areas. Accessible mobility defines several dimensions of the built city environment including sidewalks, quality of roads and traffic measures. Urban planners and city mayors should encourage transport experts to develop sustainable mobility plans in cities that strive for highest accessibility standards.
- Disability is a multifaceted issue. To make design and transport planning inclusive for all, user diversity should be better assessed and understood. When calling for a staged implementation of accessibility standards, public authorities, car manufacturers, and transportation companies should bear in mind that mobility plans work best when people with disabilities are identified as one of the target audiences.
- Travel patterns are largely affected by "substitution" technologies. An increasing number of technological advancements enhance the level of connectivity between markets and people, whereas virtual travel opportunities more and more often eliminate a need for a physical trip. Inclusive design should be applied more widely in order to ensure "inclusive" deployment of all technologies in the mobility ecosystem.

UNIVERSAL DESIGN POLICIES: WITH OR WITHOUT LIMITS?

Providing people with greater independence in mobility choices is not an easy task. The development of policies based on the concept of Universal Design implies a number of qualitative and quantitative obstacles that are to be considered by Clubs when advocating for specific measures for inclusive transportation.

- Universal Design is a progressive step forward in making mobility systems more inclusive, yet, there should be a clear understanding that certain instruments of Universal Design are not universally applicable. Cost-benefit assessment, public consultations and various feasibility studies should be undertaken to identify the best approach for introducing accessible transport solutions. Universal Design is a novel approach in building sustainable mobility ecosystems, and there are few testimonies and fewer case studies on its practical implementation. To overcome the uncertainty barrier, public authorities should develop their understanding about the basics of Universal Design and provide training on its application in various transport projects.
- Implementation of Universal Design solutions is capital-intensive and resource-demanding. However, if its principles are incorporated into standards and guidelines during the early stages of policy-making, the cost of implementation will be significantly reduced. Public authorities often lack information about the overall advantages of Universal Design solutions, forgetting the fact that UD projects benefit all users and not only the disabled group. Therefore, information on good practices, lessons learned as well as feedback from final users will help in tuning the development of policies around accessible transport.
- Universal Design solutions go beyond the accessibility realm. They can positively contribute to a wider range of sustainable mobility targets: foster the shift towards multimodality, improve traffic management systems, and protect vulnerable road users. A comprehensive cost-benefit analysis will reflect the broader societal gains of accessible transportation. There needs to be a proven mechanism to prioritise the most valuable projects, routes, modes etc.

RECOMMENDATIONS TO THE CLUBS

The summary above sets clear principles and highlights the main challenges in the development of accessible transport. The participatory approach is a necessary approach to help us make progress towards integrating Universal Design principles into mobility policies and, consequently, mobility services. Clubs can act as mediators between road users and policymakers by implementing practical initiatives targeted at a wide array of mobility users. While guidelines and technical standards on accessible mobility systems are available, there is a lack of practical evidence (conclusive research, audits, etc.) and hence limited leverage for Clubs to influence political decision-making. At the same time, Clubs have a capacity to mediate the interaction between a regulatory approach, the industry's technical capacity, but mostly importantly, consumer needs. This can be attained through focus group discussions, open meetings, field testing and public consultations.

A measurable output of these various consultative processes could be a guide, a manual or a set of recommendations that can be used by all transport stakeholders involved in designing accessibility-related policies.

1 Encourage FIA Club representatives to attend relevant transport/mobility commissions at the local and national levels and participate in accessibility-related decision-making processes.

Clubs' engagement will help bringing Members' perspective to policies targeting accessible mobility solutions. National transport ministries often lack the capacity to break down the traditional methods of designing transport policies. For public authorities, Universal Design is a novel and under-utilised concept which requires a set of coordinated efforts and additional resources. Clubs perspective will help policy objectives meet user needs, pointing to the gaps between current situation and future vision of accessible transport systems.

Call for inclusive and transparent consultation processes and represent the voice of consumers in the policy-making exercise.

Clubs should participate in the process of standardisation of accessibility regulations and codes to harmonise accessibility for all modes of transport. Present the portfolio of mobility services and identify synergies between aggregation of services and optimisation of accessibility

Clubs should present accessibility as a business model. Accessible solutions in vehicle design can scale up commercialisation not only at the B2C level, targeting a final user, but also at the B2B level, expanding the capacity of certain services such as car rental, car sharing and others (for example: car rentals offering accessible vehicles are likely to attract an additional pool of customers while also improving brand and social responsibility image).

2 Encourage FIA Clubs to carry out continuous monitoring initiatives to assess progress made in accessible transportation through legislative measures and concrete solutions.

Clubs hold extensive experience in monitoring regulatory developments and advocating for a "customer first" focus. It is essential to see how accessibility solutions evolve over time, therefore Clubs should aim at progressively monitoring and assessing all factors enabling more accessible journeys. This includes the monitoring of relevant consultations, public seminars and meetings, but also surveillance on the ground to see how successfully mobility services reduce difficulties in field conditions.

Scale up best practices in accessible mobility systems by facilitating a regional approach and encouraging a dialogue between local authorities.

Clubs should aim at disseminating the message on inclusive mobility among all relevant stakeholders. Sharing common challenges and opportunities in the planning, implementation and evaluation stages of accessible mobility services among regional Member Clubs and their respective governments is a way toward reciprocity and ultimately, progress.

3 Clubs should act as initiators of change and catalysers of Universal Design solutions in mobility ecosystems to maximise benefits for all consumer groups.

The FIA is committed to assist its Member Clubs in facilitating the implementation of new accessibility concepts. Strategic support will be extended by the FIA to proactive Clubs willing to implement accessibility innovation, spread knowledge of Universal Design and its benefits, and reach out to relevant stakeholders involved in the field such as end-users, operators, authorities, designers and manufacturers. One of the FIA and its Members' advantages is their presence and positions in their respective local and regional authorities. To leverage on this, Clubs should serve their Members in a concrete and practical way, seizing the moment to make mobility more equitable and inclusive. This can be done through projects and initiatives targeted to better understand the discrepancies between accessible mobility demand and supply to further bring evidence to political decision-making.

Develop and test an "accessibility route" programme in local communities.

Clubs can apply measurement systems to test paths that connect accessible elements (doors, sidewalks, roads, crossing points, etc.) during an individual trip.

Develop a star-rating programme to assess accessibility elements in vehicle design.

Certain FIA Clubs have already developed methodologies to inspect accessibility standards of vehicles. A more structured rating system will result in additional assessment credibility. Consequently, once it is put in place, it is expected to influence consumer reliance on and manufacturers' consideration of the commonly-accepted assessment system.

Incentivise transit operators, NGOs, transport agents to expand the outreach and educational programmes for disabled and elderly people.

Clubs should act as mediators between their users requiring special assistance and mobility actors holding valuable knowledge and expertise of accessible innovation.

Promote educational and training activities that build the capacity of users with physical impairments.

Clubs should consider offering a special curriculum of driving classes for aged and/or disabled drivers to train them for newly designed infrastructure facilities and promote the application of preventive measures.

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