DIGNITY
Digital transport in and for society

D.4.5
Final Recommendations

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Executive summary

The increasing development of digital mobility solutions is leading to important changes in transport. Digital mobility solutions have great potential to increase passengers' transportation options, improving their experiences and reducing exclusion. However, these benefits will only be available to those who can access and use these services effectively but may exclude others. Among the possible causes of exclusion in the domain of digital mobility products and services are lack of technology access, low digital interface capability, low prior experience with technology and negative attitudes towards new technology. This could lead to greater social inequalities in sustainable urban development.

Different groups of people have been identified as more likely to be affected by digital mobility exclusion: older people, people with low levels of education, people with low levels of income, inhabitants of rural areas, migrants, people with disabilities, etc. Normally, people belong to multiple groups. The intersectionality and the complexity of the issue, as well as the diversity of the agents involved in the digitalisation in mobility, require better coordinated policies to meet the needs of potential vulnerable-to-exclusion citizens. Furthermore, the integration of participatory methodologies, inclusion design principles and co-creation practices, can offer a response to the increasing challenge of accounting for diversity and inclusivity.

This document presents a set of policy recommendations, developed as a final result of the DIGNITY H2020 research initiative, which are intended to address the risks of exclusion associated with the development of digital mobility solutions. The recommendations are mainly addressed to policy makers, public authorities, transport operators and providers etc. and are aimed at promoting the formulation of digitally inclusive transport policies and a more inclusive design of digital mobility products and services.

Document History

Date	Person	Action	Status
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1. Introduction

In the transport and mobility sector, developments such digitalisation, smart applications, local-based digital services, are radically altering mobility patterns, offering a whole range of mobility innovations that meet europeans' fast-changing lifestyles. Nevertheless, while transport public services and products become more interactive and are increasingly offered solely online, different societal groups do not fully benefit from these new opportunities offered by digitalization. In fact, the lack of a proper digital literacy can lead to situations of exclusions from many transport services and facilities, as most of them move online or integrate digital elements. The most vulnerable people experiencing mobility exclusion are mainly linked to situations of multiple social disadvantages related to physical impairment, material deprivation, cultural issues, and demographic variables.

National legislation addressed to ensure access to essential mobility services and products has often a limited reach, since technological advances are faster and permeating the mobility ecosystem. Therefore, the design of inclusive mobility solutions has a key role in maximising social inclusion and improve the user experience. For this reason, the DIGNITY project has developed a set of recommendations for the promotion of an inclusive digital transport system and its related products and services, which should be based on a robust regulatory framework.

1.1. Objectives of this deliverable

This deliverable describes the methodology followed for the development of a set of policy recommendations, one of the main results of the DIGNITY H2020 project. Additionally, the deliverable presents the final list of recommendations compiled through this process. Specifically, it describes the co-creation process and the activities followed to delineate the final recommendations resulting from the overall results of the project and the evaluation of project's pilots. These recommendations, together with the DIGNITY Toolkit, are the basis for the future replication of DIGNITY's approach and outputs, and the formulation of digitally inclusive transport policies towards a more inclusive design of digital mobility services. They are aimed at supporting public authorities, transport operators and private providers in considering needs and requirements of different segments of the population in their decision-making processes.

1.2. Outline of this deliverable

This deliverable consists of 3 sections, including this introduction.

Section 2 provides some background on the methodology followed. Section 3 presents the final results, namely the 'final recommendations booklet'.

2. Methodology

The methodology was mainly based on participatory co-creative activities, which involved all partners of the DIGNITY consortium. Furthermore, it was performed an in-depth analisys of the main project's deliverables and the results of the evaluation of local pilots. Specifically, two co-creation workshops aimed at defining the final recommendations were held during the last year of the project:

- **Leuven co-creation session on policy recommendations:** held in Leuven on March 17th 2022, in the framework of DIGNITY 3rd General Assembly, it was aimed at defining the main areas and aspects that should be included in final recommendations. First, participants worked in groups, specifically using the poster showed in Figure 1, as a base for a brainstorming. Then pooling and discussion sessions allowed the partners to better delineate specifc aspects to be integrated and other elements that needed further discussion.
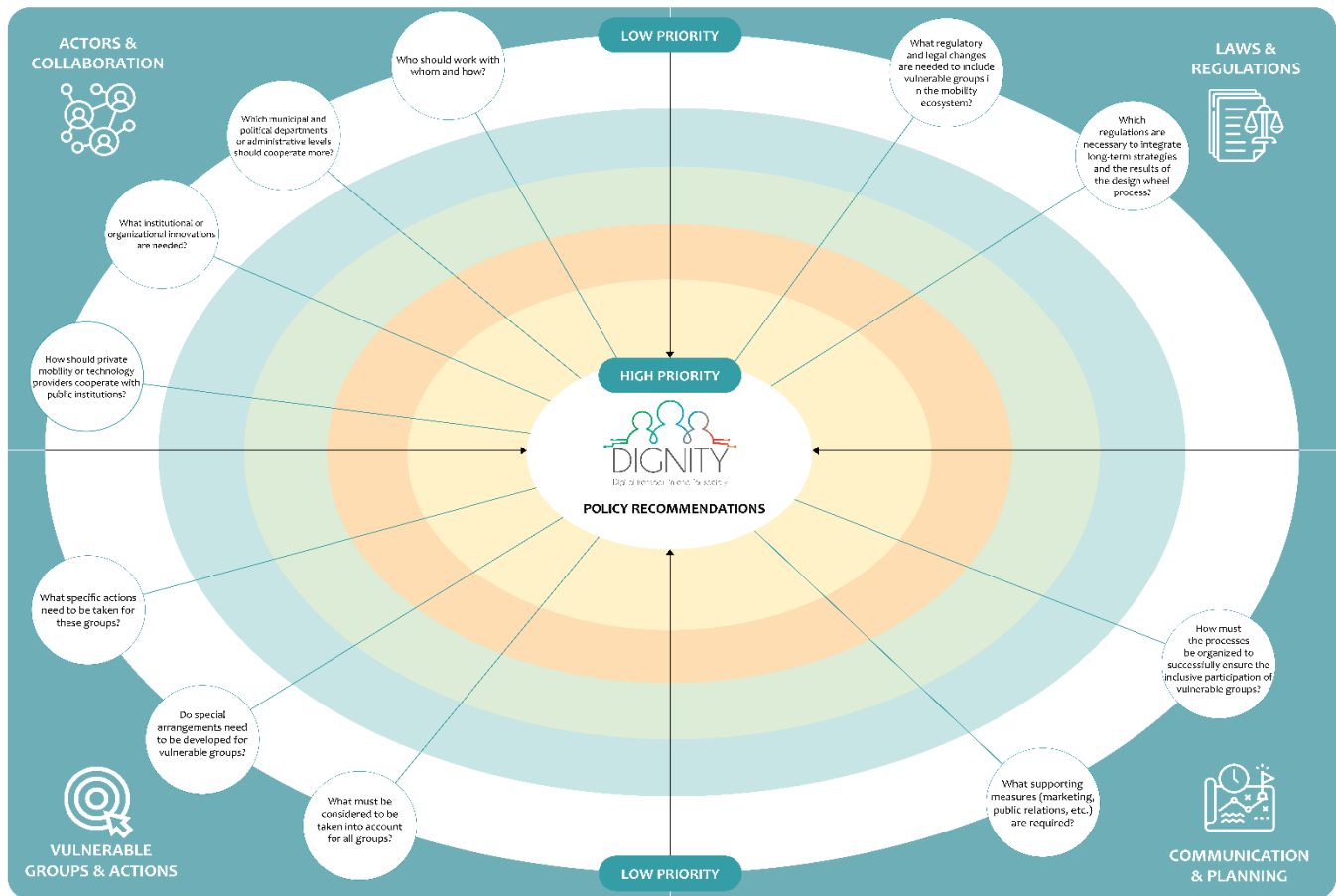

Figure 1. Poster used for group brainstorming.

Figure 2. Brainstorming session in Leuven.

- **Barcelona discussion and validation session:** held in Barcelona on October 18th in the framework of DIGNITY 4th General Assembly, it was aimed at refining and validating a proposal of final recommendations, developed on the results of Leuven's sessions and an in-depth analysis of project deliverables and the evaluation of pilots' experiences. It specifically consisted of group discussion activities and a final pooling session.

Figure 3. Group session in Barcelona.

The proposal discussed in Barcelona was further improved and refined with the cooperation of all research partners and a final version was definitely approved during the 17th SG Meeting held in Brussels at the end of the project.

3. Results: Final recommendations

The final recommendations have been compiled and edited in form of booklet, using a very direct style with easy-to-apply messages. The booklet is addressed to different actors, with special interest in policy-makers, public authorities and transport operators. It will be widely disseminated at different geographical levels. In the following pages, this product is presented.

Moving towards inclusive digital mobility

The increasing development of digital mobility solutions is leading to important changes in transport. Digital mobility solutions have great potential to increase passengers' transportation options, improving their experiences and reducing exclusion. However, these benefits will only be available to those who can access and use these services effectively but may exclude others. Among the possible causes of exclusion in the domain of digital mobility products and services are lack of technology access, low digital interface capability, low prior experience with technology and negative attitudes towards new technology.

This could lead to greater social inequalities in sustainable urban development.

Different groups of people have been identified as more likely to be affected by digital mobility exclusion: older people, people with low levels of education, people with low levels of income, inhabitants of rural areas, migrants, people with disabilities, etc. Normally, people belong to multiple groups. The intersectionality and the complexity of the issue, as well as the diversity of the agents involved in the digitalisation in mobility, require better coordinated policies to meet the needs of potential vulnerable-to-exclusion citizens. Furthermore, the integration of participatory methodologies, inclusion design principles and co-creation practices, can offer a response to the increasing challenge of accounting for diversity and inclusivity.

This document sets out the final policy recommendations, developed as a result of the H2020 research initiative *Digital Transport in and for Society* (DIGNITY), which examined how to foster a sustainable, integrated and user-friendly digital travel eco-system that improves accessibility and social inclusion, along with the travel experience and daily life of all citizens These recommendations are intended to address the risks of exclusion associated with the development of digital mobility solutions.

! ① *Recognise that the digital gap in mobility is a complex and multifactorial issue that requires sound research inputs*

- Recognise that the digital gap is not just a question of technology access (e.g., internet access or ownership of digital devices). Effective use of technology also requires personal digital skills and is heavily affected by attitudes towards technology. It is a complex issue that is also associated with aspects such as poverty, education, social/cultural conditions, inequalities, disability and aging.

- Ensure adequate public funding for rigorous research, which should be used to ground the design of policies on digital inclusion in mobility.

- Support accessible, open access datasets containing mobility and digitalisation information for researchers and public- private entities to improve evidence-based decision-making processes.

② *Ensure a coordinated governance system across multiple sectors and stakeholders*

- Advocate that participatory methodologies and practices are structurally embedded into decision-making processes, so that a wide range of stakeholders are included in the governance system from across public authorities, industry, academia and citizens, and their diverse needs reflected in the formulation of mobility policies.

- Promote coordinated policies involving all relevant administrative units (e.g., transport, ICT and social services) in order to jointly address, with the necessary knowledge and competence, the multiple inequalities that affect mobility in its digital transition.

- Ensure the systematic integration of private actors and end-users in mobility planning and product design. To achieve this, it is important for public administration to make a political commitment to this aim and take a leadership role in turning it into a common practice.

③ *Ensure that digital products and services are co-designed to be inclusive and usable by as many people as possible*

- Promote iterative design processes oriented at the continuous improvement of digital products and services (not focused on a single end-point solution), using co-creation and inclusive design methodologies.

- Encourage that the usability of digital interfaces (e.g. apps, webpages and public ticketing/information machines) is carefully examined and improved as much as possible. The vast majority of the population (including those with minor impairments and with low levels of digital skills) should be able to use these interfaces without difficulty and without the need for special adaptations.

- Advocate easy-to-use, mobile-friendly webpages as an alternative or in addition to smartphone and tablet apps. These are inclusive of many more people, especially those who do not own a smartphone and those who cannot (or do not want to) install an app.

- Provide analogue (non-digital) means to access digital solutions to favour the inclusion of the most vulnerable-to-exclusion segments of the population. This can include face-to-face or telephone assistance, in person ticketing and payment options.

④ *Ensure that accessibility is prioritised above market dynamics*

- Ensure that digital transport services are accessible to vulnerable-to-exclusion people, by developing and implementing appropriate legislation, incentives, and strategic policies.

- Develop common digital accessibility standards and certifications, to be employed in public procurement of digital services and products.

- Regularly evaluate public funded initiatives related to digital inclusion in mobility and implement improvements based on the results of this assessment.

⑤ *Advocate for the use of intersectional approaches when analysing characteristics, needs and requirements of vulnerable-to-exclusion groups*

- Acknowledge that individual characteristics – including gender, age, ethnicity, class, disabilities, etc. - intersect with one another and overlap.

- Make sure that data collected is disaggregated enough to represent sub-groups, in order to allow an in-depth analysis of the population's diverse needs and requirements.

- Apply intersectional approaches when analysing data to properly identify the indicators impacting full fruition of digital technology and to understand the needs and characteristics of all end-users.

⑥ *Promote policies aimed at improving gender inclusion in mobility systems*

- Consider gender as a cross-cutting issue in all groups of population, as vulnerability-to-exclusion in digital mobility is more dependent on socio-economic-demographic factors than on gender itself.

- Encourage the presence of women in the digital sector of mobility - as transport administrators, planners, designers, etc. - to incorporate more adequately their needs and develop innovative, inclusive (digital) mobility policies, services, and products, and promote a better mobility for all.

- Ensure gender representation in co-creation and user involvement during the design and development process of digital transport solutions.

⑦ *Raise awareness of and build capacity on the issue of digital exclusion in mobility*

- Create better conditions for a proper understanding of diversity, vulnerability, exclusion and promote inclusivity in the mobility environment.

- Educate key stakeholders on the issue of digital exclusion in mobility through programs and campaigns. It is particularly important to educate those who develop and deliver digital mobility services (e.g., transport and technology company officials and personnel).

- Encourage and provide opportunities for potentially excluded people to develop their digital literacy skills, e.g., through short training courses in convenient spaces such as libraries, recreation centres and senior centres.

⑧ *Enhance dissemination strategies and diversify communication channels to effectively reach people who are at risk of digital exclusion*

- Provide clear, accurate and consistent information, allowing people at risk of exclusion to make informed decisions on their mobility.

- Use specific and appropriate language and channels for each group targeted (e.g., through involving user organisations).

- Consider non-digital communication options (e.g., mail, in-person services, telephone and peer-to-peer communication) to better reach specific groups (e.g., elderly, migrants).