# Digitalization, global societies and the digital divide.

# A study of the perception of people with disabilities towards the digital transition in the European context.

**A research project**

**Author**                                                                  **Research Area**

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**Keywords**

Digitalization, digital technologies, Digital Decade, European Union, disability, techno-ableism, hacker pedagogy.

## 1.      General presentation of the project and state of the art

> "*The future is already here — it's just not very evenly distributed.*"
>
> William Gibson

### 1.1.    Global digitalization and narratives

Digitalization in a global society refers to the pervasive integration of digital technologies into all aspects of life, transforming the way individuals, businesses, and governments operate and interact. Gibson's quote is often used by literature to provide a picture of the phenomenon, successfully capturing the vision towards the future and its fragmentation.

The concept is, in fact, promoted by international institutions as a revolution, or a disrupting transition (Balbi, 2022; Quintarelli, 2019), emphasizing the role of digital technologies in achieving global goals and empowering people (ITU & UNDP 2023). Both the United Nations and the European Union have provided a Digital Strategy, asserting the need to invest in digital infrastructures, data, skills and literacy, while setting milestones to stress on urgency and acceleration (European Commission, 2022; United Nations, 2022).

### 1.2.    Disability and the *digital divide*

While international data on disability suffer from diverse definitions and paradigms between countries (Genova, 2023), the World Health Organization estimates that 16% of the global population currently experiences significant disability (WHO, 2022).

In this paradigm of growth proposed by the digital transition, the *digital divide* is described as the inequal access to digital technologies and digital capabilities, involving territorial, as well as socio-economical, disparities (Lythreatis et al., 2022; Mardikyan et al., 2014; Zhu et al., 2015).

The *Disability and Development Report* (2024) underlines how the 2030 Agenda is leaving people with disabilities behind, promoting the prevalent concept that the digital transformation needs to be inclusive, making digital technologies and infrastructures accessible and affordable.

## 1.3.    The context of the European Union

Not far from the global trend, the European Commission (2023) has defined the period ending in 2030 as the Digital Decade, underlining the need for investments in digital technologies, while stressing for an approach based on accessibility and democracy.

The compass that guides the Digital transformation in Europe is built on four indicators: Digital Skills; Digital infrastructure; Digital transformation of businesses; Digitalisation of public services. The Digital Economy and Society Index (DESI) provides a comparable overview of digitalization, showing differences between European countries in the path towards digital targets (European Commission, 2023).

## 1.4.    Theoretical background

When discussing the impact of technologies on disability, a critical literature emphasizes how often innovation is perceived as unavoidable, leaving people with disabilities unheard and pointed out for refusing to adopt such new technologies (Roulstone et al., 2016). It's the case of techno-ableism, described by Shew (2023) as "*a rhetoric of disability that at once talks about empowering disabled people through technologies while at the same time reinforcing ableist tropes about what body-minds are good to have and who counts as worthy*" (Shew, 2020; p. 43).

The need for participation and engagement in shaping technologies is part of a social and philosophical debate about whether the technique (as the methods, knowledge and procedures employed to design and build technology) is essentially neutral or can be influenced by political ideas and perspectives (Boncinelli, 2006; F. Nascimento, 2019; Simondon, 2017). Also, the role of experts is discussed, along the dynamics of power, hierarchy and authority regarding technical objects (Dotson, 2014; Milani, 2022; Sennett, 2008).

The research chooses what can be called a *hacker approach* to technology. The activity of hacking, often misinterpreted by mainstream culture, refers to the act of exploring, disassembling and playing with different technologies, motivated by curiosity and creativity, to find and create alternative functions and purposes (Mazzini, 2023). By scholars, the term is often used to describe a process of thinking when a concept is deeply investigated at his core to provide diverse options and perspectives (Beskorsa et al., 2023).

Milani (2022) describes how the *hacker approach* (or *hacker pedagogy*) is inspired by the *Pedagogy of the Oppressed* of Paulo Freire (2022), as it creates the condition to explore the dynamics of power within the technical objects and structures. In fact, is not required for a person to be an expert. Hacking is a matter of understanding technology by dismantling the physical and

the conceptual structure. For this reason, it is considered a grassroots practice (Antoniadis, 2018; Meyer & Ermoshina, 2019; Milone, 2014), that could show interest in the context of disability, where the 'nothing about us, without us' slogan is a crucial statement.

The theoretical background, in fact, underlines how technological narratives can be highly political and need to be deeply investigated by the same actors who often feel discriminated and ignored, to expose power dynamics and forms of oppression.

## 1.5. Research questions

International narratives of digitalization clearly define how disability is perceived by the digital transition, picturing the *digital divide* as a gap to bridge in the direction of unavoidable progress.

- But how is the digital transition perceived by disability?
- People with disabilities' wellbeing in the use of digital tools goes in the same direction of the Digital Strategies?
- In which forms digitalization can be an opportunity towards accessibility, and when it could lead to an imposed innovation?

The research aims to investigate the case of the European Union, as it provides a well-define narrative of digitalization, along with standardize and comparable data between countries.

A co-research group, involving disability stakeholders coordinated by researchers, will explore through a *hacker approach* the European narratives of the digital transition and digital divide, as well as mainstream digital technologies and infrastructures, such as Artificial Intelligence, Internet of Things (IoT) and digital data, with the intent of providing guidelines and questions for an interview protocol.

The interview will then involve European disability stakeholders, and will try to capture the perception towards digitalization, the digital transformation in Europe and digital technologies, in search of barriers, forms of ableism and discrimination hidden in the digital policies.

The research also wants to provide an overview among European countries to set the scope on an international level, comparing stakeholders' perceptions between countries who show different characteristics in the DESI statistics. In fact, the '*smart*' transition is often perceived as a global and universal phenomenon, but it remains influenced by territorial characteristics (Martel, 2015).

## 2. Research Objectives

▪ To frame digitalization in the context and narratives of the European digital transition, with a focus on the mostly promoted digital technologies and the attention of policies in the European Union towards accessibility in digitalization.

▪ To deeply investigate, through a research collaboration with disability stakeholders, digitalization and the digital divide in the context of the European Union, to expose barriers

and discrimination in the form of technical and design choices, and infrastructural organization.

- To compare different approaches to the European digital transformation, and how it impacts on the perception and trust of people with disabilities towards mainstream technologies.
- To contribute to the literature concerning *hacker pedagogy* and experiment the grassroots approach in the context of disability.

## 3.     Methodology

Co-research is a methodological approach that actively involves members of a community or interest group in the research process. This approach is based on the premise that those directly involved in or affected by a given phenomenon or problem have valuable knowledge and unique perspectives that can enrich the research process (Decataldo & Russo, 2022).

Co-research wishes, in fact, to overcome extractive research methodologies, in which the researcher stands in a dimension of superiority and detachment with the subject, deriving information and knowledge from it, without any involvement in the process. The act of participation, moreover, is directed at making the results of the research bear fruit in the social context concerned, designing actions with a positive and emancipatory impact for the reality involved (Giorgi et al., 2021).

In the first phase of the research, a co-research group will be formed, with the involvement of disability stakeholders coordinated by researchers. This phase of the research will be conducted in Italy, as it requires sustained involvement and clear communication, and the need for proximity and language can become barriers.

The need for a collaborative and participative approach to the construction of the research tools in considered essential to investigate inequalities without the risk of bias and prejudices.

In the second phase, the interview will be conducted with European disability stakeholders form different countries, investigating perception towards digitalization in the European Union. To identify disability stakeholders in Europe, the research will get in contact with possible gatekeepers, such as representative organizations at the European level like *Inclusion Europe[1]*, involved is self-advocacy and disability rights.

The comparative aspect between European countries is considered essential to capture digitalization as a global phenomenon, including national policies and cultural aspects influencing the European narratives and strategies towards the digital revolution and disability.

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[1] https://www.inclusion-europe.eu/

## 4.    Expected Results

- A critical overview of the European digital revolution from the three different contexts, specifically towards accessibility and inclusivity policies and narratives regarding digitalization.
- An understanding of power and discriminatory dynamics within digital technologies, through the lens of disability stakeholders.
- A comparative overview between countries, observing differences in stakeholders' perception and in the digitalization approaches and progress.

## 5.    Description of the research in the three-year period

| Phase | Sep 2024 – Feb 2025 | Mar 2025 – Aug -2025 | Sep 2025 – Feb 2026 | Mar 2026 – Aug -2026 | Sep 2026 – Feb 2027 | Mar 2027 – Aug -2027 |
|---|---|---|---|---|---|---|
| 1.1 | | | | | | |
| 1.2 | | | | | | |
| 2 | | | | | | |
| 3 | | | | | | |
| 4 | | | | | | |

| Phase 1.1 | Researcher's formation on the topics of the research, on the methodology aspects and the European Union policy and legislation framework. |
|---|---|
| Phase 1.2 | Construction of a Literature Review. |
| Phase 2 | Co-Research experience in Italy and construction of the Interview protocol. |
| Phase 3 | Interviews with European disability stakeholders |
| Phase 4 | Comparative analysis of the collected data and discussion of the results. |

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