The EntteR Project: Women-Led Innovation in Assistive Technologies for Gender-Focused Communicational Accessibility Strategies

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Abstract

This paper presents the implementation of the project Technological Hub for the Accessibility of People with Rett Syndrome and Other Neurological Conditions, developed to address the social demand for communicational accessibility through the creation of a mobile scientific-technological device for the sustainable development of personalized strategies. The initiative, named EntteR: Accessibility Strategies, was led by two women researchers and primarily targeted girls with Rett syndrome, a neurological condition that affects almost exclusively females. The strategies were developed following the Cyclic Incremental Model for the Development of Technology-Mediated Accessibility Strategies, based on the principle of adaptive recursion, incorporating functional assessment, user-centered design, and iterative adjustments. The communicational accessibility systems were developed through the integration of technologies, predominantly including eye-tracking software and augmentative communication software, among them Tobii Dynavox devices and the AsTeRICS Grid platform. The project demonstrates the transformative potential of assistive technologies in improving communicational accessibility for individuals with motor conditions affecting speech and writing, while also highlighting the role of women in driving technology-based social innovation. EntteR emerges as a gender-focused initiative that effectively links science, technology, and community.

Keywords

Women-Led Innovation, Assistive Technologies, Eye-Tracking Systems, Augmentative Communication, User-Centered Design.[1]

1. Introduction

Access to communication is a fundamental human right and an essential requirement for social participation, self-determination, and the exercise of other rights. However, in many Latin American contexts, structural, technological, and territorial constraints continue to significantly shape the realization of this right, particularly among populations with neurological conditions. These constraints include, among other factors, the limited availability of accessible assistive technologies, insufficient coverage of specialized services, and pronounced territorial disparities in the distribution of resources.

Within this broad population, individuals with Rett syndrome provide a paradigmatic example of the intersections between disability, technology, and rights. Rett syndrome is a non-degenerative neurodevelopmental disorder of genetic origin that primarily affects females, with an estimated incidence of approximately one in every 10,000 live female births. This Rare Disease (EPF) results from mutations in the MECP2 gene, located on the X chromosome. This gene, often described as a

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"master regulatory gene," plays a crucial role in producing proteins necessary for the proper functioning of the central nervous system and multiple physiological processes.

Clinically, Rett syndrome is characterized by an initial period of apparently typical development, followed—between six and eighteen months of age—by progressive regression. During this phase, girls lose previously acquired abilities in linguistic, motor, and coordination domains and do not reach the milestones typical of standard neurodevelopment. Regression includes the loss of functional hand use, replaced by the emergence of repetitive movements and hand stereotypies, hallmark features of the syndrome [1].

The population with neurological conditions is broad and heterogeneous. It includes, in addition to Rett syndrome, individuals with Chronic Non-Progressive Encephalopathy (ECNE)—within which Infantile Cerebral Palsy is situated—congenital brain malformations such as microcephaly, schizencephaly, or agenesis of the corpus callosum; Acquired Neurological Injury (DNA), resulting, for example, from a Stroke (ACV) or Traumatic Brain Injury (TEC); as well as neurodegenerative diseases, including Amyotrophic Lateral Sclerosis (ELA).

Alterations of the central nervous system observed in this population are commonly associated with significant motor limitations and impairments in speech functions. These conditions substantially restrict the development and functional use of expressive language, which in turn interferes with access to communication. As a result, their social participation is compromised, and additional obstacles arise in the exercise of fundamental rights [1].

In response to this scenario, the project *EntteR: Estrategias de Accesibilidad* (public-facing name of the project *"Punto tecnológico para la accesibilidad de personas con síndrome de Rett y otras condiciones neurológicas"*) emerged as a scientific-technological initiative aimed at addressing the need to ensure communication accessibility for individuals with neurological conditions, with particular emphasis on girls and women with Rett syndrome. This project constitutes a device for social and technological innovation developed within the framework of a national policy on technological linkage, which grants it a strategic character by articulating applied research, knowledge transfer, and engagement with the communities involved.

The project employed various technologies aimed at developing adapted technological solutions that resulted in communication accessibility systems personalized to the needs of each user. Notable among these are eye-tracking technologies [2] and Augmentative Communication technologies [3], whose combination offers high potential as part of a broader set of resources. For the design and implementation of these strategies, a proprietary methodological model, *the Cyclical Incremental Model for the Development of Technology-Mediated Accessibility Strategies*—was applied, conceived to guide the integration and customization of technologies based on users' real needs and contexts of use.

This paper presents the implementation experience of EntteR during its first year of development, highlighting its character as an innovation initiative led by women in the field of assistive technologies. From an interdisciplinary and gender-aware perspective, the paper underscores how women's technical leadership and the consideration of diversity-oriented design shape the generation of technological solutions with high social value. This approach seeks to demonstrate that the intersection of innovation, accessibility, and gender perspectives not only broadens the scope and relevance of technological solutions but also enhances their capacity to transform lived realities.

Based on these considerations, it is pertinent to situate the EntteR project within the scientific-technological and social context that gave rise to it, to understand the policies, frameworks, and partnerships that made its development possible.

2. Scientific-Technological and Social Context of the Project

The landscape of communication accessibility needs, together with the recent evolution of public policies in the region, provides the framework within which EntteR was conceived. In recent years, Latin America has strengthened policies aimed at articulating science, technology, and social inclusion. In Argentina, the *National Plan for Science, Technology, and Innovation 2030* [4] prioritize innovation geared toward addressing structural challenges, including the inclusion of persons with disabilities and the reduction of gender gaps in science and technology. This framework identifies accessibility and gender equity as strategic and complementary dimensions, promoting the development of assistive technologies [5] with emphasis on universal design [6], community participation, and the mainstreaming of gender perspectives.

Within this context, the EntteR project emerged in response to the national call *Proyectos Especiales de Innovación Social* (PEIS 2023) [7], promoted by the Ministry of Science, Technology, and Innovation and the National Scientific and Technical Research Council (CONICET). The aim was to create a mobile scientific-technological device capable of developing sustainable communication accessibility strategies for individuals with Rett syndrome and other neurological conditions.

To achieve this aim, the project was structured around five strategic components, which in turn defined the operational phases of implementation. These components included: work organization, internal communication, and resource management; the development and validation of technical, ethical, and methodological conditions; the design of personalized accessibility strategies; capacity building and collective skills development; and the systematization, production, and dissemination of knowledge. This operational dynamic enabled the convergence of strategic components with concrete actions, ensuring coherence and efficiency throughout the process.

The implementation of this work structure advanced along three complementary axes: technological and social development, through the creation and implementation of relevant and sustainable accessibility solutions; knowledge transfer, by strengthening the capacities of support groups, the technical team, and the broader community; and knowledge generation and communication, through the systematization of experience and its dissemination in scientific and public outreach arenas.

The associative core of the project was built through collaboration between a group of CONICET researchers [8] and the Rett Syndrome Foundation [9], while also incorporating various entities from the National System of Science and Technology, a private rehabilitation center, and support groups composed of families, teachers, and therapists. The combination of a rigorous technical approach with territorial engagement allowed for the design of socially meaningful solutions, grounded in evidence and with potential for replication in other contexts.

One of the most significant features of the project was the formation of a technical-scientific team led by women, a factor that substantially influenced the conception, development, and implementation of EntteR, and which is addressed in the following section.

3. Women-Led Innovation

EntteR was directed by a technical-scientific team with female leadership from its formulation through its implementation, situated within a field historically dominated by men: information and communication technologies applied to disability. This leadership was reflected not only in the overall direction of the project, but also in the team's interdisciplinary and gender-balanced composition, which included professionals from engineering, computer science, health, and communication, with a significant representation of women in technical and strategic roles.

In the case of EntteR, the interdisciplinary approach—complemented by a transdisciplinary perspective on communication accessibility—was essential to ensuring a diversity-centered framework. This is evident, for example, in the adoption of methodological models oriented toward user-centered planning and co-creation in the field alongside support groups.

The gender perspective was not limited to the demographic dimension—women-led project aimed at a population largely composed of girls and women—but informed all technical decisions, with the aim of promoting gender equity, sustainability, and social relevance, in alignment with the principles of responsible innovation [10] and accessibility as a right [11].

Beyond these considerations in management and decision-making, project implementation was organized around an operational dynamic structured in phases, designed to articulate strategic components and guide the development of field actions. In Phase 3, this dynamic incorporated a proprietary methodological model, the *Cyclical Incremental Model for the Development of Technology-Mediated Accessibility Strategies*—oriented toward integrating and personalizing technologies according to the needs of each user. This model is described in detail in the following section.

4. Cyclical Incremental Model for the Development of Technology-Mediated Accessibility Strategies

Phase Three of the project, dedicated to the development of accessibility strategies, was structured around a *Cyclical Incremental Model for the Development of Technology-Mediated Accessibility Strategies*, designed by the technical team and grounded in the principle of adaptive recursivity [12, 13]. This model proposes an iterative process composed of interdependent stages that enable the adjustment and optimization of each strategy based on feedback obtained during implementation.

The cyclical nature of the model implies that, when significant changes occur—whether in the technologies available, in the competencies of the user, or in their contexts of participation—it is possible to return to earlier stages, including the initial one, in order to comprehensively redesign the strategy. Its incremental character ensures that in every iteration, solutions are refined and optimized through accumulated experience, incorporating micro-adjustments and improvements without losing prior progress.

This approach guarantees continuous feedback across stages, supporting the creation of individualized strategies that integrate assistive technologies of varying levels of complexity and that are evaluated in real contexts of use. User-centered design, support-group participation, and continuous improvement constitute guiding principles that ensure the relevance and sustainability of the Model.

What follows is a synthesis of the stages, their aims, the methodological approaches applied, and the main verifiable technical outputs produced in each one, which collectively enable the documentation and evaluation of its implementation.

1. Initial Assessment of Accessibility Requirements
In this stage, the user's environment of use, interaction scenarios, and target tasks are determined. Communication accessibility barriers are identified, and technical specifications for designing or adapting solutions are generated through on-site observation, interviews, questionnaires, and the review of medical and educational reports, followed by interdisciplinary validation. The outputs include a functional diagnostic report, baseline audiovisual records, and the validation of technical specifications.

2. Integration of Technologies for a Communication Accessibility System
In this phase, technological solutions are selected, integrated, and personalized according to the specifications obtained. The process includes incremental user-centered design, hardware and software integration, and iterative prototyping with interoperability testing and functional validation. Outputs include a user-specific map of implemented solutions, documentation of testing rounds, and validated configuration protocols.

3. Training for the Autonomous Management of Accessibility Solutions
This stage focuses on developing the technical competencies of the support group so they can manage, maintain, and reconfigure the implemented solutions. An interaction-based learning approach is used, including tutorials and technical guides, in-person or remote training sessions, and scenario simulations.

4. Iterative Optimization of the Accessibility Strategy
In the final stage, the strategy is continuously reviewed and improved, incorporating changes derived from the user's development, their interaction contexts, and available technological innovations. This is accomplished through cyclical incremental redesign, the reuse and

adjustment of technologies and procedures, and the incorporation of progressive enhancements. Documented records of changes, satisfaction assessments, and formal criteria for updating the strategy are produced as part of this stage.

The transition from the cyclical incremental model to technical implementation marked the shift from methodological formulation to the practical application of accessibility strategies. The guidelines established in the model's stages directly informed technical decisions, ensuring that each solution responded to the previously identified accessibility requirements and progressively adapted to users' competencies and contexts. This connection between design and execution enabled the selection, integration, and configuration of assistive technologies to be carried out iteratively, ensuring relevance, sustainability, and validation in real-use environments, as detailed below.

5. Implementation and Scope During the First Year

Based on an initial survey using questionnaires designed during the project's methodological definition stage, 28 potential participants were identified across the provinces of Santa Fe, Buenos Aires, and Entre Ríos. Of these, 8 had a diagnosis of Rett syndrome and 20 presented other neurological conditions. The age distribution included 21 children between 2 and 12 years old, 6 young people between 19 and 32 years old, and 1 adult aged 71.

For the selection of the first working group, the following inclusion criteria were established:

- Residing within Argentine territory.
- Holding a valid *Certificado Único de Discapacidad* (CUD).
- Presenting Rett syndrome or other neurological conditions that prevent autonomous speaking or writing.
- Having at least one member of the user's support group committed to participating in the development of the strategy.
- Being willing to sign one of the three versions of the Informed Consent Form and to receive the Information Sheet and Confidentiality Commitment.
- Being linked to one of the institutions that form the associative framework of EntteR.

Exclusion criteria were defined as the absence or refusal of any of the above conditions.

Additionally, prioritization for inclusion was guided by:

1. Urgency regarding communication accessibility, prioritizing those with the greatest need.
2. Place of residence, optimizing travel routes to address multiple cases in the same journey.
3. Institutional equity, ensuring representation of the organizations that make up the EntteR associative framework.

In this first cycle, 10 communication accessibility strategies were developed: 2 girls with Rett syndrome aged 5 and 9, and 7 individuals with other neurological conditions. The latter group included five children aged 3, 5, 7, 11, and 12; two young adults aged 19 and 24; and one 71-year-old man.

Nine participants resided in Rosario and one in Santa Fe de la Vera Cruz. Implementations took place in educational, home, rehabilitation, and EntteR-based settings.

5.1. Strategic Objectives per Accessibility Strategy

In the initial assessments of each user's accessibility requirements, three fundamental strategic objectives were identified. These objectives subsequently guided the development of the communication accessibility systems.

1. Develop functional expressive language:
   The aim was to increase autonomy and functionality in expressive language by expanding vocabulary use and the complexity of phrase construction. This included facilitating the expression of responses, requests, and more complex ideas (such as desires and emotions) through Augmentative Communication systems.

2. Facilitate the subjective appropriation of technologies:
   This objective focused on supporting users in appropriating Augmentative Communication devices and developing the digital competencies required to interact with computerized devices using alternative access methods (eye-gaze interaction, touch interaction, or alternative peripherals).

3. Promote autonomy in accessing information and communication:
   Users were provided access to commonly used digital services (such as WhatsApp, YouTube, Spotify, Netflix, Disney Plus), news on digital newspapers, games (both recreational and serious games for learning), and remote communication applications (Meet, Zoom). This enabled users to strengthen their social participation.

5.2. Technologies and Configurations

The integration of assistive technologies of varying complexity was organized into communication accessibility systems, selected and configured through an iterative process of testing and continuous adjustment. The selection of technologies for each system was guided by the principles of universal design and by their adaptability to the specific motor and communicational capacities and limitations of each user. Technological decision-making in EntteR was not reduced to selecting "which device" or "which software," but rather to determining how to integrate hardware, software, ergonomics, and context of use in order to build personalized communication accessibility systems.

The main technological tools used, together with the technical details and the rationale for their selection, were as follows:

1. Eye-tracking devices and digital environment control (All commercial or proprietary high-cost technologies)

   Tobii Dynavox I-13 and I-16 series were selected for their robustness and accuracy in eye tracking, and were integrated with the users' operating environments. These devices were combined with TD Control, which enables full computer interface control via eye gaze, and with the TD Snap and Communicator 5 AAC systems, designed to support Augmentative Communication through highly customizable interfaces, including pictogram selection, grapheme-based input, and the composition of complex phrases.

   The PCEye 5 standalone eye tracker was adapted to notebooks and configured with TD Control for interaction and visual training. This configuration was essential for users in the early stages of familiarization with eye-tracking technology, allowing for the gradual development of visual control competencies.

   The integration of the Hiru eye tracker (Irisbond) with the Microsoft Surface tablet was also assessed as an alternative to diversify eye-tracking options, ensuring adaptability to different user profiles and contexts.

2. Augmentative Communication software

   The interactive, configurable, and free-access communicator AsTeRICS Grid was installed on tablets and on 2-in-1 notebooks with convertible or detachable touchscreens, allowing for the use of larger display surfaces. When used on notebooks, AsTeRICS Grid was integrated, as required, with the PCEye 5 eye tracker configured with TD Control, independently from the I-13 or I-16 series.

3. Visual training and cause-and-effect learning

   For the development of digital competencies and familiarization with technological interaction, commercial high-cost applications such as Look to Learn, Look to Lab (Smartbox), and Sensory Eye FX (Sensory Guru) were used. These programs were selected for their ability to develop gaze control and understanding of cause-and-effect interactions with screens.

   In early familiarization phases, low-cost applications such as Buho Boo (developed by Argentine creator Matías Gravano), Piano niños, música y canciones (Orange Studios Games), and Guía.pum were employed. These applications, centered on cause-and-effect logic, were essential for establishing a foundational understanding that user actions (e.g., eye movements or touch input) generate responses in the system, forming the basis for more complex interactions.

4. Creation of materials

   For the creation of personalized play-based and educational materials, tools such as Boardmaker (Tobii Dynavox, proprietary and high-cost), Microsoft PowerPoint (commercial but more accessible), and WordWall (developed by Josh Smith, very low cost) were used. These tools enabled the adaptation of curricular and interest-based content into accessible formats.

5. Low- and mid-tech systems

   Sound-recording and message-playback buttons were implemented, as well as combinations of these devices to support communicative sequences. These mid-tech tools offered practical, low-cost solutions for more direct communication needs or as complements to high- and low-tech AAC systems.

   For contexts where digital AAC tools could not be used, printed cards, physical boards, and communication books with freely accessible pictograms from ARASAAC—a platform funded by the Government of Aragón (Spain)—were created. ARASAAC was selected for its free access, broad recognition, and widespread utility in communication accessibility contexts, ensuring interoperability and user familiarity across environments.

6. Alternative peripherals and ergonomic adaptations

   A critical component involved ergonomic adaptations to ensure physical access to the selected device. This included the incorporation of assistive technologies that support appropriate body posture—such as adjustable tables, arm supports, silicone cases, and adjustable tablet stands—and the use of alternative peripherals (button-based consoles and joysticks), adapted peripherals (adding a switch to a mouse, incorporating perforated acrylic overlays for keyboards, or creating capacitive touch extensions), and variations on traditional peripherals (trackballs, standalone touchpads, mini-keyboards).

5.3. Representative Examples (Case Development)

To illustrate how the intervention logic and technological selection described above were implemented, five representative examples of the strategies developed during the first year are presented below. These cases were selected for their diversity in age, diagnosis, and context, as well as for the type of solutions implemented. Far from being isolated interventions, they constitute evidence of the model's potential for replicability across diverse contexts, while maintaining methodological fidelity and social relevance.

Example 1 – Eight-year-old boy with severe microcephaly and agenesis of the corpus callosum. Implementation in a rehabilitation center. 10" Android tablet (4 GB RAM, 64 GB) with silicone case and Bluetooth speaker. AsTeRICS Grid communicator with ARASAAC pictograms, navigable boards, and printed physical versions. Direct touch access validated in two sessions.

Example 2 – Twenty-four-year-old young adult with ECNE and no head control. Home-based implementation. Tobii Dynavox I-16 with TD Snap and calibrated eye tracking; Boardmaker 7 for interactive games; visual training with Look to Learn, Look Lab, and Sensory Eye FX.
Use of low-tech communicators with human facilitation and indirect selection through manual scanning.

Example 3 – Five-year-old girl with Rett syndrome. Home and therapeutic implementation.
Tobii Dynavox I-16 with TD Control for navigation and TD Snap for communication; integration with Communicator 5 and Boardmaker 7; thematic personalization (Peppa Pig) using Gomis, Issuu, and WordWall; recording buttons used in school contexts. Use of low-tech communicators with human facilitation and indirect selection through manual scanning.

Example 4 – Twelve-year-old girl with unspecified atypical development. 11" Android tablet with AsTeRICS Grid; cause-and-effect apps (El Búho Boo, Juegos Infantiles Pum); digital stories on Issuu; LSA resources (LSApp, Señas en Familia). Multimodal modeling (voice, sign, pictogram) is used for curricular support and school learning.

Example 5 – Nineteen-year-old young adult with acrocallosal syndrome. Android tablet with robust stand and AsTeRICS Grid communicator; bilateral arm supports and capacitive tactile extensions. Need identified for an alternative peripheral device to be developed using 3D technology and Arduino.

6. Systematization and Operational Results

The documentation and analysis of the first year of implementation were based on first-hand data collection instruments that made it possible to record the operational dynamics and performance of the solutions developed:

Matrix of variables and indicators:
Included sociodemographic data, clinical characteristics, communication competencies, type of access, technologies implemented, level of autonomy, and qualitative observations.

Audiovisual records:
Documented user–technology interaction in real contexts, serving both as material for technical analysis and for training support groups.

Field notes:
Prepared by the technical team and support groups during testing and daily use, capturing ergonomic, motivational, and contextual details that complemented the quantitative information.

6.1. Data Analysis

Quantitative:

The questionnaires administered were systematized and the information was organized into tables and simple graphs to identify general trends—such as age distribution, predominant diagnoses, most effective types of physical access, and most frequently used technologies—without aiming for statistical inference given the small number of cases.

Qualitative:

A thematic analysis was applied to interview transcripts and observational notes, identifying patterns such as recurring barriers, the most effective adaptation strategies, and perceived changes in communicational interaction and motivation for use. Support groups reported concrete improvements in users' ability to initiate interactions, expand vocabulary, and sustain longer exchanges.

Triangulation:

The integration of data allowed objective information (e.g., frequency of use of a given software or access method) to be contrasted with the subjective perceptions of usability expressed by support groups, strengthening the validity of the findings.

6.2. First-Year Outputs

Ten technical reports (one per strategy), containing exhaustive documentation of processes, configurations, technical rationale, and recommendations, which served as support for the procurement and management of equipment within public and private health and education systems.

Digital repositories for each case**,** including tutorials, licenses, access credentials, and organized audiovisual material, facilitating the autonomous management of the implemented solutions by support groups.

Training for support groups and didactic materials: technical guides and pedagogical resources used for training family members, therapists, and teachers.

Community and academic events: including internal training for the EntteR team, capacity building for university students, and open workshops, thereby consolidating knowledge transfer and fostering social awareness.

Design and implementation of an internal and external communication plan: channels and modes of communication among EntteR members, as well as scientific dissemination and public outreach strategies across social networks and media, highlighting both technical advances and women's leadership within the project.

The implementation of this cycle operationally validated the Cyclical Incremental Model based on adaptive recursively as an effective framework for designing, developing, and optimizing communication accessibility strategies. Its iterative nature allowed for fine adjustments informed by accumulated experience and by changes in users' conditions or in available technologies, ensuring relevant and sustainable solutions.

Although this cycle did not include formal impact measurement in terms of quantifiable changes in autonomy or functional language use, the qualitative results documented indicate concrete progress in communication, participation, and user motivation. Quantitative evaluation of these effects is proposed as an objective for future cycles or dedicated research efforts. The diversity of cases addressed, and the robustness of the documentation generated confirm the model's transferability to other contexts involving complex neurological conditions, with the capacity to adapt resources to varying technological availability, user profiles, and environments of use.

7. Discussion: Making Women's Leadership Visible in Masculinized Techno-Scientific Contexts

The experience of EntteR makes it possible to interrogate the place of women in science and technology, particularly within a field historically dominated by men such as computing. In Latin America, where patriarchal structures shape both access to and the legitimacy of technical knowledge, making women's leadership visible in innovation projects is not merely an act of symbolic justice: it is a concrete strategy for challenging dominant meanings, enabling alternative futures, and dismantling myths about who can (and should) occupy positions of scientific leadership.

In line with the theory of the glass ceiling, numerous studies have shown that women face invisible structural barriers to accessing leadership roles in science and technology, even when they possess equal or higher credentials than their male peers [14]. These barriers do not stem from differences in ability, but from persistent imaginaries that associate computing, engineering, or robotics with masculine qualities such as control, abstraction, or technical efficiency.

As Judith Butler argues [15], gender is not an essence but a socially constructed performance, naturalized through repeated acts. Within this framework, the subordinate place assigned to women in the technological field is not the result of an ontological difference, but of a set of practices that consolidate roles, knowledges, and exclusions.

From feminist epistemology, authors such as Sandra Harding (1991) [16] have argued that including women's perspectives in science not only addresses historical asymmetries, but improves the quality and social relevance of knowledge. This idea has been updated in recent years by Masiero [17], who contends that gender imbalance in computing environments not only silences women's voices, but limits the field's ability to approach complex problems with contextual sensitivity.

In this sense, women's leadership in EntteR enabled the integration of collaborative approaches, the inclusion of situated knowledge from families, and the design of technological solutions centered on the subjective experience of users. Not because women "lead better," but because their active and visible presence disrupts symbolic structures that delegitimize their role in science and expands the horizon of possibility for others.

8. Conclusions and Future Challenges

During its first year of implementation, the EntteR project validated an effective technical-operational model for the development of communication accessibility strategies, grounded in the situated adaptation of assistive technologies. Its application demonstrated that it is possible to develop technically viable and sustainable solutions without overlooking the subjective, contextual, and social dimensions that shape technology use.

The methodology based on a cyclical incremental model, the interdisciplinary collaboration with territorial actors, and the technical team's commitment to a user-centered perspective constitute the pillars of an innovative, adaptable, and replicable approach. Moreover, the systematic construction of technical evidence (reports, protocols, audiovisual documentation) strengthens the project's potential for scalability.

At the same time, EntteR makes visible that women's leadership in the computing field is not only possible but necessary. In a regional context marked by structural inequalities, providing concrete evidence that women can successfully lead technological processes with high social impact is a way to influence the symbolic and material redistribution of power within the scientific-technological sphere.

Future challenges include:

- Expanding the project's territorial reach and institutional scope.
- Formalizing mechanisms for methodological transfer to health and education systems.
- Maintaining continuous technological updating, in dialogue with advances in AI and Augmentative Communication.

Incorporating impact measurement of the developed communication accessibility systems on functional language use, through satisfaction scales and indicators of communicational autonomy.

Establishing mixed funding strategies to ensure medium-term operational sustainability.

EntteR is not only a successful technical initiative; it is also a concrete intervention in the ways technology is conceived, produced, and distributed in Latin America. As such, it opens pathways for new forms of leading, innovating, and transforming from an inclusive, critical, and situated perspective.

9.

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12.Declaration on Generative AI

The author(s) have not employed any Generative AI tools.

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