The Research Behind the Assistive Technology Passport

Summary of the research evidence underpinning the development of the Assistive Technology Passport.

Introduction

The Assistive Technology (AT) Passport was developed as part of a doctoral research programme at Maynooth University, which explored ways to improve access to assistive technology for people with disabilities and older people.

Assistive technology enables people to participate in education, employment, communication, mobility, community life, and independent living. It is increasingly recognised as a critical enabler of human rights, inclusion, participation, and equality under the United Nations Convention on the Rights of Persons with Disabilities (Smith et al., 2024; United Nations, 2006).

Despite its importance, access to assistive technology remains a significant global challenge. The World Health Organisation (WHO) and UNICEF estimate that only one in ten people worldwide who need assistive technology have access to it, leaving approximately one billion people with unmet needs (World Health Organisation & UNICEF, 2022).

Research consistently identifies a set of barriers to effective AT access, including fragmented service provision, poor inter-sectoral coordination, limited information on available supports, inadequate training, inconsistent pathways to provision, and insufficient user involvement in decision-making (de Witte et al., 2018; Howard et al., 2022; MacLachlan & Scherer, 2018; World Health Organization, 2016).

In Ireland, these challenges were highlighted in Assistive Technology for People with Disabilities and Older People: A Discussion Paper, jointly published by Enable Ireland and the Disability Federation of Ireland (O'Donnell et al., 2016). The paper first proposed the concept of an Assistive Technology Passport to improve continuity, communication, and access across systems.

The Assistive Technology Passport is a personalised, portable record of an individual's assistive technology needs, preferences, equipment history, communication requirements, and support arrangements. It builds on evidence that passport-style tools can improve communication, support transitions, strengthen self-advocacy, and promote continuity across health, education, employment, and disability services (Abrahams, 2019; Maalim & MacLachlan, 2022).

What Was the Research About?

The doctoral research examined whether an Assistive Technology Passport could improve access to assistive technology and support more coordinated, person-centred service delivery (Maalim, 2023).

Four research questions guided the study:

1. Is there a need for an Assistive Technology Passport?
2. What role could an AT Passport play in improving access to assistive technology?
3. What information, functionality, and design features should it contain?
4. How could it be successfully implemented and adopted across sectors?

To address these questions, the study employed a mixed-methods design comprising four interconnected research phases:

- A review of passport-type tools used in health, education, social care, and employment.
- In-depth interviews with assistive technology users and stakeholders.
- A survey exploring assistive technology experiences and educational transitions.
- A two-round Delphi study designed to establish expert consensus on Passport functionality, design, security, and implementation.

Together, these different forms of evidence informed the development of an evidence-based implementation and adoption framework for the Assistive Technology Passport (Maalim, 2023).

AT Passport Publications

The development of the Assistive Technology Passport has been documented in a connected body of publications. The 2016 discussion paper first proposed the Passport as a user-owned record and a central connector within a wider assistive technology ecosystem (O'Donnell et al., 2016). Maalim et al. (2019) subsequently applied a systems-thinking approach and reviewed passport-type tools in health and social care contexts, helping to refine the concept of user ownership, continuity, coordination, and empowerment.

Maalim and MacLachlan (2022) examined the lived experiences of assistive technology users through the capability approach and presented the Passport as a person-centred resource to expand users' opportunities, agency, and participation. Maalim's (2023) doctoral thesis then integrated qualitative interviews, survey findings, and a Delphi consensus study to develop an implementation and adoption framework for the Passport.

The later conference paper by Maalim and MacLachlan (2025) situates the research within the broader field of inclusive technology and participation. Together, these publications trace the AT Passport's progression from an Irish policy proposal, through conceptual and empirical research, to an evidence-informed framework for implementation and adoption.

What People Told Us

Participants consistently described assistive technology as enabling independence, communication, participation, self-determination, and quality of life.

Their experiences closely align with wider research showing that assistive technology is valued not merely because it makes tasks easier, but because it enables people to participate in activities that might otherwise be impossible (Buchanan & Layton, 2019; McNicholl et al., 2021).

John (pseudonym)

> *"It's the bridge, and I've always seen technology as a bridge between not being able to do something and actually doing it" (Maalim, 2023, p. 123).*

Scott (pseudonym)

> *"For most people, technology makes things easier, but for someone with a disability, it makes things possible" (Maalim, 2023, p. 123).*

Participants described a range of barriers that affected their ability to access and use assistive technology, including:

- Fragmented service provision.
- Poor communication between agencies.
- Limited information about AT supports and funding.
- Delays in assessment, provision, maintenance, and repair.
- Inconsistent professional knowledge and expertise.
- Repeatedly having to explain their needs when moving between services.
- Difficult transitions between education, health, employment, and community settings.

These barriers mirror those identified internationally in research on assistive technology systems (Boot et al., 2018; Howard et al., 2022; World Health Organization & UNICEF, 2022).

Why Participants Felt an AT Passport Was Needed

A recurring finding was that users often had to repeatedly explain their disability, support requirements, and assistive technology needs whenever they encountered a new service, organisation, or professional. Many participants felt that important information was routinely lost during transitions.

Grace (pseudonym)

> *"I guess that's where a passport would come in for people like us, where we wouldn't have to fight for all that again" (Maalim, 2023, p. 133).*

Scott (pseudonym)

> *"So I think firstly, as a wheelchair user, the convenience of having that there and having all of that on record … it makes sense" (Maalim, 2023, p. 133).*

Fiona (pseudonym)

> *"It's absolutely beneficial at the moment within service provision and within … AT funding and stuff like that" (Maalim, 2023, p. 133).*

John (pseudonym)

> *"And if you're in a community of special schools or residential centre, you have the support, but if you're trying to spread the whole thing in regular schooling, you know you'll find difficulty" (Maalim, 2023, p. 133).*

Participants consistently viewed the Assistive Technology Passport as a practical solution that could improve continuity, reduce duplication, support communication, and keep important information centred on the individual rather than on organisations or services.

What Role Could an AT Passport Play?

Participants identified five key functions of the Assistive Technology Passport (Maalim, 2023):

1. Supporting Transitions

Helping individuals transition more smoothly between services, educational settings, workplaces, and life stages.

2. Providing Information

Providing clear information on assistive technology services, support pathways, and funding opportunities.

3. Recording the AT Journey

Capturing an individual's assistive technology history, preferences, assessment results, support requirements, and outcomes.

4. Improving Communication

Supporting information sharing among users, families, professionals, and organisations.

5. Enhancing Access to AT

Acting as a practical mechanism to improve access to assistive technology and the wider supports associated with it.

These findings align with evidence from healthcare, disability, adjustment, and workplace accommodation passports, each of which demonstrates benefits for continuity, communication, and person-centred support (Abrahams, 2019; Maalim & MacLachlan, 2022).

What Did the Survey Show?

The survey findings reinforced many of the themes identified in the interviews (Maalim, 2023). Participants who had documented records of their assistive technology needs and support requirements reported:

- Better understanding of assistive technology.
- Greater confidence discussing their support needs.
- Better communication experiences.
- More positive educational transition experiences.

The results suggest that structured, accessible, and portable information improves communication and service continuity, particularly during periods of transition.

These findings align with broader research showing that information continuity, user engagement, and coordinated service provision are key contributors to successful assistive technology outcomes (de Witte et al., 2018; McNicholl et al., 2021).

What Did Experts Agree an AT Passport Should Do?

A two-round Delphi study with assistive technology users and experts established strong consensus on the functionality, design, privacy, and security requirements for the Assistive Technology Passport (Maalim, 2023).

Core Functions

Experts agreed that an AT Passport should:

- Facilitate transitions between services and life stages (87% agreement).
- Support effective communication (84% agreement).
- Record an individual's assistive technology journey (80% agreement).
- Provide information about AT services and supports (80% agreement).
- Facilitate access to assistive technology supports (82% agreement).
- Remain voluntary and user-controlled (97% agreement).

Key Design Principles

Design principle	Agreement
Simple and easy to use	94%
User experience at the core	90%
Accessible and inclusive	89%
User-controlled	88%
Flexible and adaptable	85%
Digitally accessible	84%
Interoperable with existing systems	83%

Source: Maalim (2023).

Interoperable means able to work effectively with systems already in use across health, education, employment, and social care services.

These findings align with international recommendations that promote universal design, user-centred design, accessibility, interoperability, and meaningful user participation in assistive technology systems (Smith et al., 2018; Steinfeld & Maisel, 2012; World Health Organization & UNICEF, 2022).

Privacy and Security

The strongest area of consensus concerned privacy and security. Experts agreed that the Passport should:

Privacy and security requirements	Agreement
Maintain confidentiality	95%
Operate on a secure and reliable platform	95%
Support user-controlled access	94%
Securely store identifiable information	92%
Comply with GDPR requirements	88%
Include user authentication	88%
Support data verification	82%

Source: Maalim (2023).

These findings align with broader evidence identifying trust, privacy, security, and user control as key factors in the adoption of digital systems and assistive technologies (European Parliament & Council of the European Union, 2016; Youm, 2020).

Why Does This Matter?

Research consistently shows that successful access to assistive technology depends on far more than the availability of devices. It also depends on:

- Effective communication.
- User involvement.
- Coordinated services.
- Professional expertise.
- Information continuity.
- Policy support.
- Interoperable systems.

The Assistive Technology Passport was developed to address these challenges.

Rather than focusing solely on equipment, the Passport aims to support the wider ecosystem that enables successful access to and use of assistive technology. Improving communication, reducing duplication, supporting continuity, and keeping the individual at the centre of decision-making can strengthen access to assistive technology across health, education, employment, social care, and community settings.

The research therefore provides a robust evidence base for the Assistive Technology Passport as an innovative, person-centred approach to improving access to assistive technology.

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