

2022



Global Alliance of Assistive Technology Organizations



## **AT Outcomes Grand Challenge Consultation**

**AT Outcomes and Impact –  
A Global Grand Challenge**



Together we make change possible

# Table of Contents

|   |    |
|---|----|
| WHAT IS THE GAATO AT OUTCOMES AND IMPACT GRAND CHALLENGE PROJECT? .....                   | 2  |
| <i>Why did we launch it?</i> .....  | 2  |
| <i>What did we do?</i> .....  | 3  |
| HOW DID WE DO IT? THE GAATO AT OUTCOMES AND IMPACT GRAND CHALLENGE METHOD.....            | 3  |
| <i>A participatory approach: from local to global</i> .....                               | 3  |
| <i>An inclusive approach: stakeholder diversity</i> .....                                 | 4  |
| <i>Grand Challenge participants - ‘hundreds of voices’ from around the world...</i> ..... | 4  |
| GRAND CHALLENGE RESULTS – OUR LONGLIST AND SHORTLIST OF GRAND CHALLENGES .....            | 5  |
| <i>The Six GAATO AT Outcomes Grand Challenges</i> .....                                   | 5  |
| <i>GAATO Outcomes and Impact Model - ‘Drive the Change’</i> .....                         | 6  |
| <i>The Longlist of GAATO AT Outcomes Grand Challenges</i> .....                           | 7  |
| RELATED OUTCOMES OF THE GRAND CHALLENGE PROCESS .....                                     | 8  |
| MULTI-LEVEL IMPLICATIONS OF THE 2022 GRAND CHALLENGES.....                                | 8  |
| <i>The Grand Challenge process:</i> .....   | 8  |
| COLLATERAL.....   | 9  |
| CONTACTS .....  | 10 |

Documented by

Dr Natasha Layton & Dr Emma Smith

Edited by Esther Dakin-Poole

©GAATO

# What is the GAATO AT Outcomes and Impact Grand Challenge project?

Leading up to the Global Report on Assistive Technology, the Global Alliance of Assistive Technology Organisations (GAATO)<sup>1</sup> invited stakeholders from around the world to share views on AT Outcomes and Impacts through a Grand Challenge process. We aimed to identify and clarify the set of current challenges that needed to be addressed to successfully measure assistive technology outcomes and impact at the individual, community, local, national, and global level.

## Why did we launch it?

With growing recognition of the needs of people with disabilities, there is a corresponding recognition of increased need for assistive technology interventions. However, best methods for implementing assistive technology interventions remain poorly documented and there is limited evidence of best practice.

Consequently, it is difficult to establish comprehensive best practice guidance for the range of stakeholders engaged in assistive technology provision. Policy makers and assistive technology personnel, providers in the supply chain, product designers and manufacturers, and most importantly to people who need assistive technology and services themselves, need documented outcomes and impact of assistive technology to make better decisions.

Each of these stakeholders has unique needs for outcomes and documented impacts, but the complexity of the range of stakeholders, and of the interventions themselves, has proven to be challenging to measure and document. These challenges exist at every level – local, national, regional, and global.

It is time for the assistive technology field and all its stakeholders to raise our voices together to improve access to assistive technology for all. Naming the top challenges for defining, acquiring, documenting, and using assistive technology outcome and impact evidence which:

- Prioritises the voices from countries and regions and raises awareness of these voices globally.
- Provides a focus for researchers, funders, and others to prioritise efforts.

Sets out baseline challenges against which we can measure change and improvement.

- Directs stakeholder collaboration – if there are solutions to the challenges best met across stakeholders, let's work on them together.

---

<sup>1</sup> [www.gaato.org](http://www.gaato.org)

## What did we do?

Informed by the WHO 'P' AT system model (Fig. 1) and across global 'places', we invited AT users and personnel involved in AT products, provision, policy and procurement, considering the full diversity of stakeholders who might be involved in promotion, partnership, and impact on the pace of change in AT.

Participants exchanged experiences and challenges encountered in measuring and evaluating AT Outcomes and Impacts. We used a global consultation process to consolidate and further refine those challenges.

Figure 1. Diagram of the World Health Organization AT system model.



## How did we do it? The GAATO AT Outcomes and Impact Grand Challenge method

### A participatory approach: from local to global

**Regions first:** Our collaborative consensus method was in-depth, involving 4 hours of focus-group type consensus building using online democratic voting software. We started with individuals, in regions, in their preferred language and timezone. We asked: *what do you think are major gaps or challenges in the area of Assistive Technology OUTCOMES*. The top priority areas were then discussed and put forward.

Content analysis coding by three independent practitioner/academics synthesised the 109 outcome statements into a longlist of 39.

**Global review:** The longlist of 39 outcomes was presented at a global civil society forum<sup>2</sup>, and global stakeholders were invited to a two-phase consensus-building survey process to help refine and deliver a final shortlist.

## An inclusive approach: stakeholder diversity

Advertising through global networks as well as working with regional partners, we invited the broadest range possible of stakeholders to attend regional consultations<sup>3</sup>. These included stakeholders who were AT users, service providers; AT advisors, AT suppliers, producers, or industry bodies, researchers, educators, supporters or caregivers, and AT innovators/ developers. Settings included industry or manufacture; academic institutions, government hospitals or health systems, civil society organisations (NGO, INGO, OPD), education or school settings, sales/service delivery, training, and others.

### Grand Challenge participants ‘hundreds of voices’ from around the world...

**5** GAATO AT Outcomes Working Group volunteers developed the innovative collaborative consensus method

**7** regional leadership teams from all WHO Regions collaborated with the GAATO Working Group to organise, host and document Regional Consultations

**7** Grand Challenge Regional Consultations (Western Pacific; Latin America; Brazil; North America; Europe; Africa; Middle East) were held between August and September 2021

**307** participants from 57 countries participated in 9 languages (English, Mandarin, Japanese; Spanish, Portuguese, Greek, Italian, French, Arabic)

**400** registrants to the Global Disability Summit (Feb 2022)

**31** global stakeholders and regional leaders reviewed and refined the Grand Challenges Longlist across two Surveys in Mar/Apr 2022

**Hundreds of voices contributed to the Global Grand Challenges in AT Outcomes and Impact**

---

<sup>2</sup> <https://www.globaldisabilitysummit.org/pages/global-disability-summit-2022-norway>

<sup>3</sup> up to our technical capacity limit of 100 per session

# Grand Challenge Results – our longlist *and* shortlist of Grand Challenges

- Regional consultations – 109 separate outcome statements and multiple statements on other factors influencing our ability to achieve AT outcomes
- Consolidation phase – to a longlist of 39 outcome challenge statements
- Global consultations

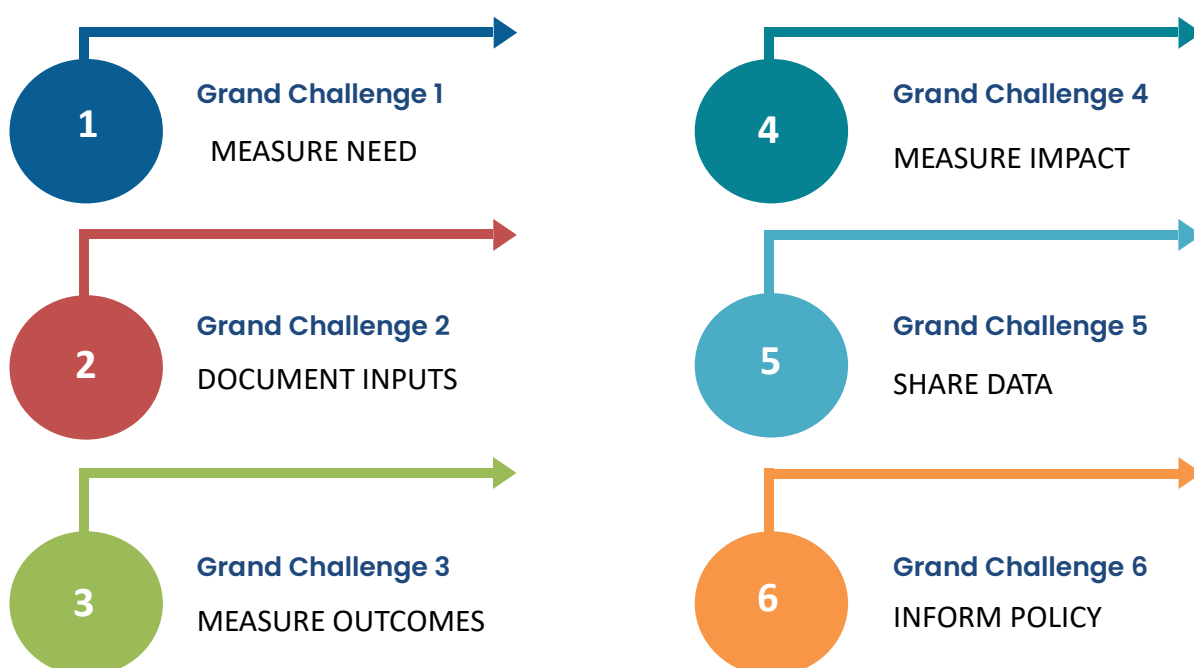
**SURVEY 1** to bring 39 down to a shortlist - but no consensus regarding outcome areas to be combined or eliminated.

**SURVEY 2** to comment on shortlist expressed in Impact model of AT Outcomes, coherence for longlist, and any narrative.

## The Six GAATO AT Outcomes Grand Challenges

This shortlist of 6 Grand Challenges has been achieved through a global consultation process. The shortlist represents a longlist of 39 Challenges drawn from locally led regional consultations across each WHO region, including multiple stakeholders and language groups.

### The 6 Grand Challenges



## GAATO Outcomes and Impact Model - 'Drive the Change'

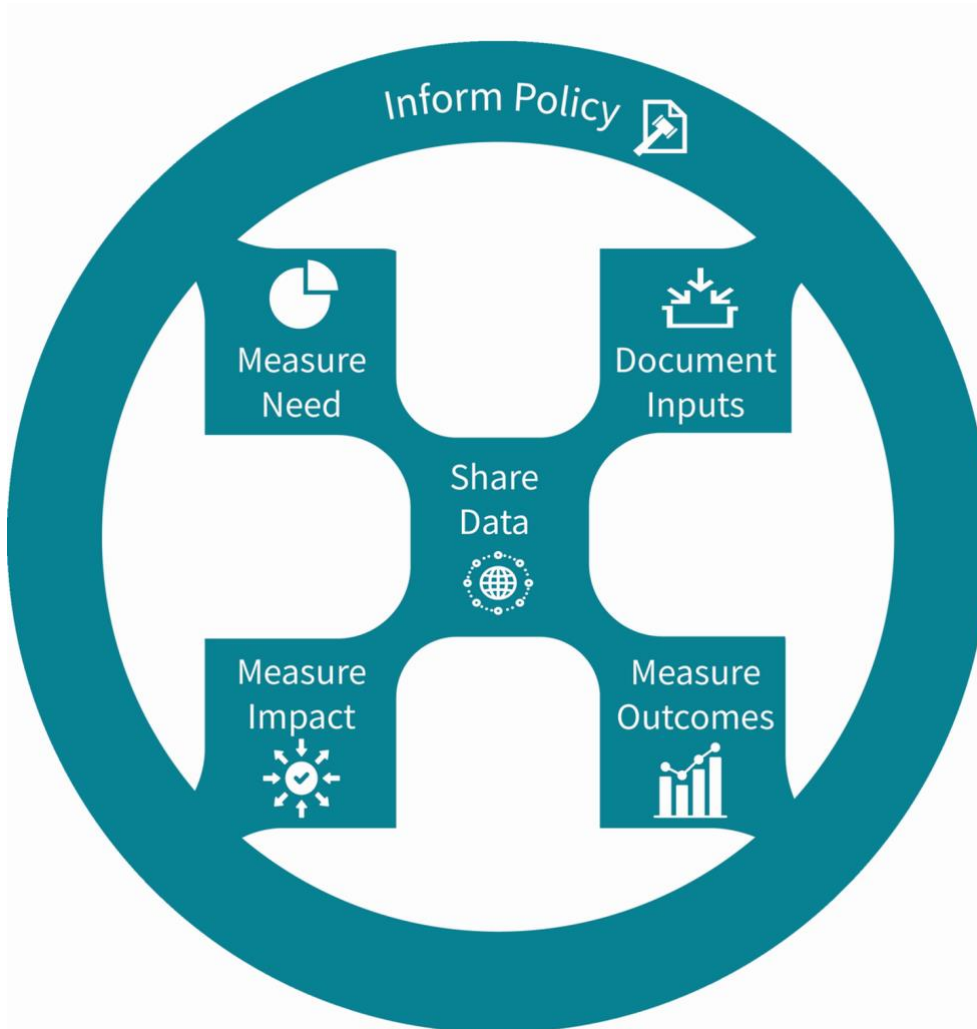


Figure 2. GAATO Outcomes and Impact Model - 'Drive the Change' illustrating the connectivity of the 6 Global Grand Challenges in measuring AT outcomes and impacts as determined by the GAATO global consultations 2021-22.

## The Longlist of GAATO AT Outcomes Grand Challenges

1. There is limited awareness of the importance of AT outcomes.
2. We do not have adequate strategies to direct data collection for research or decision making.
3. We do not have adequate methods to measure cost effectiveness of AT, including cost-effectiveness across the lifespan and the cost of failing to provide AT.
4. We do not have adequate approaches to maximize the use of existing data.
5. AT personnel do not have adequate education and/or training in outcomes measurement.
6. We do not have measures to evaluate the skills of AT personnel, including competency in outcomes measurement.
7. We do not integrate clinical experience and expertise well into outcomes measurement.
8. Existing outcome measures are not adequate for interdisciplinary use, or in non-health sectors (social services, education etc).
9. We do not have outcome measures which address needs across settings (i.e. home and work).
10. We do not have systems that use data and evidence to guide selection of assistive products.
11. Existing outcome measures do not adequately address all assistive products.
12. We do not have adequate systems for monitoring policy related outcomes (e.g. policy effectiveness, economic evaluation).
13. We do not have adequate tools to measure supply chain impacts associated with standards and regulation implementation.
14. We do not have adequate infrastructure or systems for outcomes data collection.
15. In high income countries where AT is considered a right, we often fail to measure outcomes as there is no incentive to do so.
16. We do not have methods to measure the impact and potential cost-benefit of emerging and disruptive technologies.
17. We do not have ways to collect, aggregate, and share data cooperatively on a local, national, regional or global level.
18. Existing outcome measures are not standardized or inclusive of different regions, languages, and cultures.
19. It is difficult to measure outcomes which are relevant to the perspectives of all stakeholders, including industry.
20. Terminology across outcomes and outcome measures are not consistent or standardized.
21. Existing outcome measures are not inclusive of a range of client populations.
22. It is more difficult to evaluate AT outcomes for a person with more complex needs.
23. We do not have evidence of reliability and validity of existing outcome measures.
24. Existing outcome measures do not value both quantitative and qualitative data.
25. Existing outcome measures do not adequately capture all stakeholder perspectives on the impact of AT on the life of an AT user in a holistic way, including quality of life, wellbeing, and health.
26. It is difficult to measure the impact of assistive technology across the lifespan.
27. It is difficult to capture outcomes for people living in rural and remote areas, often due to difficulty completing follow up.
28. We often do not have consistent or standardized baseline data to compare with after the implementation of new programs or policies.
29. We do not have adequate systems to measure population unmet need.
30. It is difficult to measure outcomes consistently across countries with differing income level, resources, and socioeconomic status.
31. Data collection is often not incentivized or funded.
32. We do not understand which objective indicators are required for decision making and policy development.



33. Existing outcome measures do not differentiate well between outcomes related to AT service provision vs. outcomes related to the products themselves.
34. We are not well equipped to measure the impact of service provision (including products) on the broader ecosystem around an AT user (e.g. care providers, family, workplaces).
35. We do not have adequate tools to measure how usability affects assistive product outcomes.
36. It is unclear who is responsible for collecting outcomes data in the service provision process.
37. Even where data does exist, those who collect it often do not have the necessary expertise to analyze and report it.
38. Data collection is often driven by academic needs, which may not be practical or useful for the people collecting it on the ground.
39. We do not adequately collect and use feedback on products from AT users.

## Related outcomes of the Grand Challenge process

- ✓ Identified existing and new regional leadership
- ✓ Brought together stakeholders, many for the first time, in regions
- ✓ Seeded new and emerging AT communities of practice
- ✓ Provided a platform for a positive engagement from local to global for individuals, Organizations of Persons with Disabilities and other advocates, civil society and non-governmental organizations, Governments, and global coordinating organizations
- ✓ Demonstrated a model for democratic, multistakeholder action research
- ✓ Compiled an open access dataset on AT challenges, to support future research and development
- ✓ Compiled a set of broader, more general AT issues to inform future priority setting
- ✓ Provided authorship and leadership opportunities

## Multi-level implications of the 2022 Grand Challenges

### The Grand Challenge process:

- ✓ Identified existing and new regional leadership
- ✓ Brought together stakeholders, many for the first time, in regions
- ✓ Seeded new and emerging AT communities of practice
- ✓ Provided a platform for a positive engagement from local to global for individuals, Organizations of Persons with Disabilities and other advocates, civil society and non-governmental organizations, Governments, and global coordinating organizations
- ✓ Demonstrated a model for democratic, multistakeholder action research
- ✓ Compiled an open access dataset on AT challenges, to support future research and development
- ✓ Compiled a set of broader, more general AT issues to inform future priority setting
- ✓ Provided authorship and leadership opportunities

## The newly identified Grand Challenges enabled GAATO to:

- ✓ Develop and describe a snapshot of what is needed to be able to measure assistive technology outcomes and impact at the individual, community, local, national, and global level.
- ✓ Clarify what people think is needed as tools for data collection, data storage and use, outcomes related systems and their implementation, best practices, and policies.
- ✓ Inform the WHO / UNICEF Global Report on Assistive Technology (2022)
- ✓ Create and provide a blueprint to ensure AT outcomes actions are appropriate for AT stakeholders in the specific regions.

## To address these Grand Challenges, multilevel actions will be required:

- ✓ Commitment from governments to evaluate outcomes and impact of AT provision.
- ✓ Commitment from funders and global coordinating bodies to address challenges in AT Outcomes.
- ✓ Establishment of regional or international research teams to address key challenges through an interdisciplinary approach.
- ✓ Development of a global initiative to share comparable AT need, use, and outcomes data on a regional or global level.
- ✓ Development of novel, or cross-cultural adaptation and validation of existing, AT outcomes tools.
- ✓ Implementation and knowledge translation of existing AT outcomes tools.

## Collateral

GAATO also hold the following outputs related to this project:

- A web presence for the publicly released Grand Challenge Findings <https://www.gaato.org/grand-challenges>
- A full project report which steps through background literature, method and results adhering to academic procedures.
- A detailed research protocol.
- Datasets pertaining to longlist, shortlist, analysis frameworks, and other issues identified.
- Several peer-reviewed publications are planned to report these findings in the scholarly literature.

## Contacts

GAATO welcome discussions and partnerships regarding utilizing the Grand Challenges data. Please contact [secretary@gaato.org](mailto:secretary@gaato.org) or [international@arata.org.au](mailto:international@arata.org.au)

### References

1. MacLachlan, M.; Scherer, M. Systems thinking for assistive technology: a commentary on the GREAT summit. *Disability and Rehabilitation: Assistive Technology* **2018**, *13*, 492-496, doi:10.1080/17483107.2018.1472306.