

## Section II: Schedule of Requirements

### **Provision of Consultancy Services in Conducting Implementation Research on Uptake of Affordable and Quality Lower Limb Prosthetic Technologies in Low- and Middle-Income Countries.**

**eSourcing reference: RFP/2024/54412**

#### **I. Background**

The United Nations Office for Project Services (UNOPS) is an operational arm of the United Nations, supporting the successful implementation of its partners' peacebuilding, humanitarian, and development projects around the world. Mandated as a central resource of the United Nations, UNOPS provides sustainable project management, procurement, and infrastructure services to a wide range of governments, donors, and United Nations organisations. With over 6,000 personnel spread across 80 countries, UNOPS offers its partners the logistical, technical, and management knowledge they need, where they need it. By implementing around 1,000 projects for our partners at any given time, UNOPS makes significant contributions to results on the ground, often in the most challenging environments.

UNOPS offers short- and long-term work opportunities in diverse and challenging environments across the globe. We are looking for creative, results-focused professionals with skills in a range of disciplines.

With over 6,000 UNOPS personnel and approximately 7,000 personnel recruited on behalf of UNOPS partners spread across 80 countries, our workforce represents a wide range of nationalities and cultures. We promote a balanced, diverse workforce - a strength that helps us better understand and address our partners' needs, and continually strive to improve our gender balance through initiatives and policies that encourage the recruitment of qualified female candidates.

The United Nations Office of Project Services (UNOPS) office in Geneva acts as the hosting agency of ATscale.

**ATscale, the Global Partnership for Assistive Technology** is a cross-sectoral partnership with the goal of reaching 500 million additional people with assistive technology by 2030 to support them in participating in education, work, and everyday life. Today, over 2.5 billion people need at least one form of assistive product (AP), such as wheelchairs, eyeglasses, or hearing aids, in some countries as few as 3% have access to the assistive technology (AT) they require. The number of people who need assistive technology is expected to grow to more than 3.5 billion people by 2050.

The large and unmet need for AT worldwide disproportionately affects those who are poor and vulnerable. Today, in low- and middle-income countries (LMICs), nearly 900 million people need at least one form of AT yet do not have access. In low-income countries, only 10% of people have the AT they need, in stark contrast to 90% in high-income countries.

Access to appropriate assistive technology enables persons with loss of function, impairments and non-communicable diseases as well as the ageing population to

participate in education, work, family and community life. Lack of access to assistive technology has significant consequences for individuals, their families, and the wider society. Without assistive technology, individuals may experience isolation and exclusion from education, the labour market, and civic life. Lack of access to appropriate assistive technology is associated with poorer health outcomes including premature death, mental ill health as well as chronic health conditions and secondary complications, all of the above leading to a higher burden on health systems. Increasing accessibility and affordability of assistive technology unlocks unrealized economic potential and provides socioeconomic benefits for individuals, families, and countries by increasing productivity and participation in the workforce.

The global context for increasing access to AT is more challenging than ever, with the world facing a financial crisis, an energy crisis, unprecedented global tensions, and climate-driven disasters. Those in need of assistive technology, including persons with disabilities, are generally those most impacted by such upheavals, yet often remain invisible and neglected. ATscale was established to help address this gross inequity. The voice and role of ATscale are more important than ever. ATscale seeks to harness civil society, governments, development partners, and the private sector to make optimal, catalytic use of much-needed resources. For more information, please visit the ATscale website: <https://atscalepartnership.org>

Guided by its 2024 operational plan, ATscale intends to make strategic and timely investments toward global public goods that will benefit many, if not all, low- and middle-income countries. This includes gathering market intelligence, supporting market-shaping approaches, and addressing critical gaps in policies, standards, guidance, and tools that can help countries accelerate access to AT with a focus on five key products, that is, wheelchairs, lower limb prostheses, eyeglasses, hearing aids, and digital devices.

## **II. Rationale for the consultancy**

ATscale is seeking consultancy services to conduct implementation research on uptake of affordable and quality lower limb prosthetic technologies in LMICs.

There is significant unmet need for lower limb prostheses with around 65 million people living with limb amputation and only 5–15% of people who need prosthetic devices in LMICs having access to them. This need for prostheses is expected to double by 2050 with the majority of this burden falling in LMICs. Factors that drive the need for lower limb prostheses in LMICs include growing populations, an increased prevalence of traumatic injuries from road crashes, conflicts and wars, and a growing prevalence of diabetes which, when poorly controlled, can result in lower limb amputation.

Traditional service delivery models for lower limb prostheses have limitations in production capacity due to the need for specialised infrastructure and personnel, which are both limited in most LMICs. Scaling traditional service models presents a significant challenge due to a requirement for both new centres and personnel if using standard technology and processes.

The process of producing the prosthetic socket is the major limitation in traditional technology and processes as a prosthetist must devote a significant amount of time for each limb. Hence prosthetic socket production has been identified as a significant

bottleneck to scaling production. Prosthetic components that are both suitable for users in demanding environments and competitively priced are also required for scaling production.

### **III. Scope of Consultancy Service**

Emerging technologies in the area of lower limb prosthetics have an opportunity to improve access to services for people with limb absence. Socket fitting technologies in particular may allow prosthetists to increase the number of people serviced with prosthetic limbs. There is a need for evidence regarding the relative effectiveness and cost-effectiveness of innovative new products and services. Further there is a need for implementation research to address barriers which slow or halt uptake of innovative service delivery approaches.

### **IV. Objectives**

ATscale seeks to conduct a scientific study of affordable and quality lower limb prosthetic technologies. Technologies can also include service delivery systems. The scope of work is two (2) years, that is, twenty-four (24) months. The work has the following objectives:

- Consult and develop consensus with key partners to identify and select affordable and quality lower limb prosthetic technologies (including service delivery systems) that hold promise, and that may transform how lower limb prosthetic services are provided in LMICs.
- Conduct implementation research to explore the barriers to uptake of the selected technologies, thus helping to overcome implementation challenges for the products and services under consideration as well as developing a body of knowledge about their implementation.
- Determine effectiveness and cost-effectiveness of selected technologies.

### **V. Expected Activities**

The selected organisation will work with the ATscale Secretariat to implement activities that focus on lower limb prosthetic services. Deliverables are aimed at three groups:

1. Prosthetic manufacturers that seek to enter prosthetic markets in LMICs.
2. Prosthetic services providers.
3. Government officials of LMICs as well as relevant organisations and agencies (such as regulatory bodies or procurement agencies) that work to improve access to prosthetic services in LMICs.

Activities may include but are not limited to:

- Conduct a literature review (including both peer-reviewed literature and grey literature) to summarise previous, current and expected activities related to the development of affordable and quality lower limb prosthetic technologies.
- Consult and develop consensus with key partners to identify affordable and quality lower limb prosthetic technologies which may positively transform prosthetic service

delivery. Screen and prioritise the technologies. With input from experts, select the technologies to be evaluated in the implementation study.

- Develop an implementation study protocol to evaluate the relative effectiveness and the cost-effectiveness of the selected technologies in LMICs. Amongst other elements, the study protocol should include the following:
  - Background information.
  - Introduction: Technology description and context in LMICs.
  - Study objectives including research questions.
  - Study design.
  - Description of outcome measures.
  - Participant recruitment and enrollment, including inclusion / exclusion criteria.
  - Participant discontinuation.
  - Products overview.
  - Study procedures.
  - Statistical methods.
  - Data handling / Data quality assurance / Data monitoring.
  - Protocol violations / Stopping rules.
  - Ethical / Regulatory considerations.
  - References.
  - Abbreviation list.
  - Supporting document list.
- Propose relevant LMICs (2–3) to conduct the study according to the developed study protocol, and relevant partners.
- Implement the research according to the agreed objectives and study protocol, and oversee the daily management of the implementation study.
- Leverage existing tools to determine effectiveness and cost- effectiveness of the selected technologies within the scope of the implementation research.
- Support the development of partnerships between manufacturers (and/or intellectual property owners) and governments (and/or multi-country procurement platforms) for implementation at scale.

The selected offeror will be responsible for producing a technical report and a guidance document for interested stakeholders. Furthermore, the selected organisation will be responsible for drafting the implementation study and its results as a manuscript and to submit the manuscript for publication in a peer-reviewed journal.

In consultation with ATscale, the selected organisation will establish a Technical Advisory Group (TAG) to include independent experts and other organisations delivering services in LMICs such as UN agencies, international organisations and professional societies, INGOs and NGOs. The selected organisation will regularly consult the TAG to seek input. Relevant ministries/departments from selected countries should also be engaged with the TAG.

In the financial proposal the bidding organisation is expected to provide details on budget and timelines as well as a detailed narrative on the suggested methodology to fit the scope

of work and the expected activities. All additional materials submitted with proposals must be in English in either accessible PDF, DOCX or HTML formats.

## **VI. Outputs/Deliverables**

In close consultation with the ATscale Secretariat, the selected organisation will be responsible for the following five deliverables throughout the project:

1. Literature review and Technical Advisory Group (TAG): TAG constituted, scoping completed, selection criteria established with expert panel, technology/ies, countries and sites selected.
2. Implementation study: Procurement of selected technologies or services completed, study protocol established, ethical approval and relevant research permits obtained for the implementation study, implementation plan developed, updates on progress made in implementation and data collection shared, persons of concern (research participants) for implementation study (people with absence of lower limb, and professionals/personnel involved in prosthetic services delivery: clinicians/technicians, service managers/policymakers, procurement specialists, etc.) selected, most likely through partnerships with providers of prosthetic services. The partnerships shall include a plan for ongoing maintenance and follow-up care after the prosthesis fitting and following the study completion.
3. Raw data report: Exhaustive raw data report that includes all the data collected during the implementation research, organised, presented and anonymised to comply with ethical and confidentiality requirements shared.
4. Technical report: Detailed technical report describing the prosthetic technologies (including the technologies selected), study design, methodology and methods, selection criteria (technologies, countries, sites, research participants), key findings (results), discussion, strengths and limitations, and implications shared. The specific elements to be included in the report will be discussed and expanded upon by the TAG.
5. Country guidance document and publication: In close consultation with the ATscale Secretariat, the selected organisation will develop and deliver a guidance document (max. 25–30 pages) that can support countries and relevant stakeholders in implementing the selected technologies at scale, and that includes learnings that may be applicable to other technologies implemented in similar contexts. The selected organisation will draft the implementation study and its results as a manuscript and will submit the manuscript for publication in a peer-reviewed journal. The selected organisation will be responsible for all communication during the publication process, including potential revisions to the manuscript based on reviewer comments

## **VII. Inputs**

The selected organisation will use a global approach, and all necessary means of communication to deliver outputs/deliverables. This includes, but is not limited to:

- The creation and leadership of the Technical Advisory Group (TAG), including virtual and/or physical consultation meetings.
- The procurement of a number of lower limb prosthetic components and services from manufacturers.
- The use of validated tools for measuring the outcomes of the implementation research, such as the Lower Extremity Amputation Dataset (LEAD), the Consensus Outcome Measures for Prosthetic and Amputation Services (COMPASS) and other outcome measurement tools as required and appropriate. Other tools looking at broader contextual factors may be required.
- Country and context information from a variety of sources to inform the initial implementation planning.
- Any other relevant inputs suggested by the selected organisation.

All inputs related costs (e.g. ethics clearance handling fees, any participant compensation, software licence for visioconference, open access fees for any peer-reviewed publication, etc) shall be included in the budget to be submitted.

ATscale strategy overview, product narratives, and investment case provide information on the content of ATscale's work and are available on the ATscale website. Strategy Overview — ATscale, The Case for Investing in Assistive Technology — ATscale and <https://atscalepartnership.org/product-narratives> (with the Product Narrative on prostheses being the most relevant).

## VIII. Time frame of the service

The service is to commence at the beginning of 2025, with a twenty-four (24) month duration. Tentative dates are 15 January ~~March~~-2025 to 14 January ~~March~~ 2027.

## IX. Payment Schedule and Reporting Requirements

Fixed payments will be made upon submission and acceptance of the deliverables indicated in the Expected Activities and Outputs/Deliverables sections above.

The final payment schedule will be established at the contract signature stage and is to be proposed by the bidders in the financial proposal.

*Example of payment schedule:*

<b>Payment Schedule</b>	<b>Deliverables</b>	<b>Cost</b>
<b>Payment 1:</b> First Interim Progress Report - within x months of signing the agreement ( <b>The number of months will be decided</b>	<b>1. Literature review and Technical Advisory Group (TAG):</b> TAG constituted, scoping completed, selection criteria established with expert	Total cost to be determined in the contract as per price proposal in Form B



<b>after the award with discussion of the awarded offeror)</b>	panel, technology/ies, countries and sites selected.	
<b>Payment 2:</b> Second Interim Progress Report - within x months of signing the agreement <b>The number of months will be decided after the award with discussion of the awarded offeror)</b>	<b>2. Implementation study:</b> Procurement of selected technologies or services completed, study protocol established (including methodology, methods, participant criteria), ethical approval and relevant research permits obtained for the implementation study, a implementation plan developed, updates on progress made in implementation and data collection shared, persons of concern (research participants) for implementation study selected	Total cost to be determined in the contract as per price proposal in Form B
<b>Payment 3:</b> Technical Report - within x months of signing the agreement <b>The number of months will be decided after the award with discussion of the awarded offeror)</b>	<b>3. Raw data report:</b> Exhaustive raw data report that includes all the data collected during the implementation research, organised, presented and anonymised to comply with ethical and confidentiality requirements shared.  <b>4. Technical report:</b> Detailed technical report describing the prosthetic technologies (including the technologies selected), study design, methodology and methods, selection criteria (technologies, countries, sites, research participants), key findings (results), discussion, strengths and limitations, and implications shared.	Total cost to be determined in the contract as per price proposal in Form B
<b>Payment 4:</b> Country Guidance Document, article submitted for publication in peer-reviewed journal, final technical report - within 24 months of signing the agreement	<b>5. Country guidance document and publication:</b> The selected organisation will develop and deliver a guidance document that can support countries in implementing the technologies at scale, and that includes learnings that may be applicable to other technologies implemented in similar contexts. The selected organisation will draft the implementation study and its results as a manuscript and to submit the manuscript for	Total cost to be determined in the contract as per price proposal in Form B

	<i>publication in a peer- reviewed journal.</i>	
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## **X. Minimum requirements for Service provider and key personnel**

The **bidding organisation** (and/or its potential partners) should possess the minimum requirements:

- To have a proven track record of over 10 years of conducting high quality research in the field of implementation research.
- To have a proven experience of at least 1 year in collaborating with key stakeholders in the field of prosthetic services delivery in several LMICs.
- At least 5 years of experience in lower limb prosthetic services delivery in at least one LMIC.

The **principal investigator (or team leader)** from the bidding organisation should have experience managing similar projects and should meet the following minimum requirements:

- A PhD in Health Sciences or Public Health, Prosthetics and Orthotics, Rehabilitation or an equivalent field.
- 15 years of professional experience and 10 years of research experience in the field of health sciences.
- Experience with the management and coordination of multi-country implementation research projects.
- Experience and track record of producing publications and other dissemination of research results.
- Fluency in English language.

The CV of the proposed principal investigator (or team leader) should be annexed to the proposal.

Overall, the **proposed team** should possess the following:

- Experience with assistive technology or medical devices or health products, rehabilitation, market-shaping, and/or related fields.
- Excellent English skills both written and orally.
- Ability to assess and critically appraise complex systems and programmes.
- Experience working with prosthetics manufacturers is an asset.
- Experience with evaluating the market entry of a new service or product through research conducted directly with manufacturers, suppliers and distributors, regulatory agencies, and other market forces, is an asset.

Collaborations and consortium approaches between organisations/offerors will be accepted and are encouraged in order to meet the requirements specified above. In particular,



collaboration and partnership with research institutions (institutions, specialised schools, universities, etc.) are highly recommended and should be described in the proposal.

## **XI. Working Relationship**

The selected organisation is expected to work closely with a designated contact person within the ATscale Secretariat. Frequent communication will be required to describe the services, specific requirements and progress. Regular meetings will be held to discuss the process and content of developing the services.

The above mentioned TAG (expected activities) will be settled and managed by the selected organisation. Members of the ATscale Secretariat will participate in TAG meetings.

## **XII. Sustainability considerations**

**Supplier Sustainability:** ATscale is committed to maintaining the highest level of integrity. This includes respect for universally recognized principles on human rights, including labour rights, equality, health and safety, environmental responsibility, quality management and anti-corruption. Offerors must complete the attached DRiVE Supplier Sustainability Questionnaire.

**Inclusion:** ATscale values diversity and particularly encourages offerors who promote personnel with a lived experience of disability and/or using assistive technology within their workforce or proposed key personnel to apply.

**Gender:** Offerors must provide a clear statement and supporting documentation that outlines how gender is mainstreamed internally. This should include the organisation's current or future plans/activities with regards to: gender diversity in the recruitment process, equal pay, equal opportunities between men and women, prevention of sexual exploitation and abuse or any form of discrimination, paid parental leave policies for men and women.

To the extent possible, ATscale encourages suppliers to maintain gender-equal representation and geographic diversity in defining the proposed personnel team.

UNOPS would like to highlight the following Conditions for UNOPS Contracts:

- Article 2 - Responsibility for Employees
- Article 3 - Assignment of Personnel
- Article 9 - Copyright, Patents and Other Proprietary Rights
- Article 10 - Publicity, and Use of the Name, Emblem or Official Seal of UNOPS
- Article 13 - Termination