INMO ORTHO

Powered by AI and Parametric Design


Feet rotating during walk

Problems with traditional orthoses

Less effective/comfort
NOT designed to patient specific needs and body type

Expensive
Labor-intensive, costs $500-800

Wasteful
12 steps of substrative manufacturing

Long production
Patients take several trips for a month to receive a product

Custom orthosis based on 3D scan of the patient

Custom fit
Patient and prescription specific parametric design

Affordable and accessible
Automated workflow decreases price by 90%

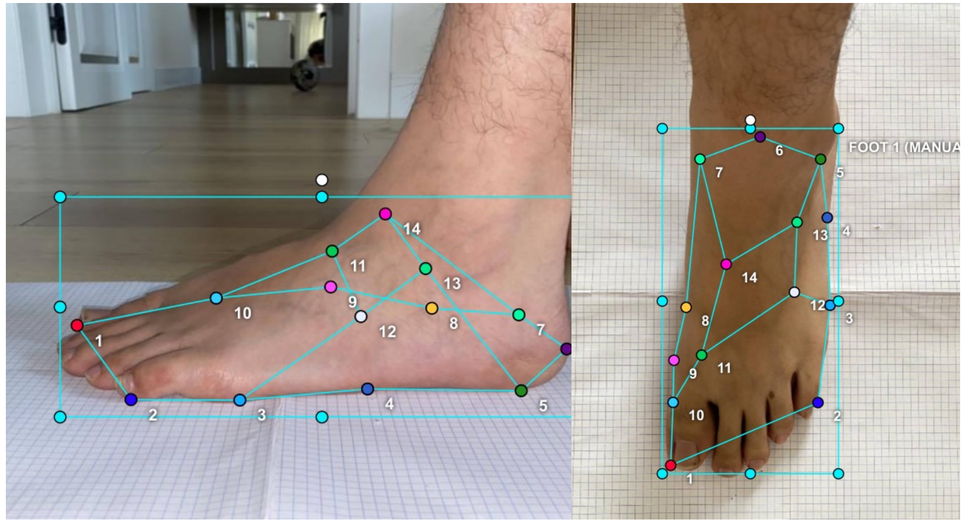
Environmentally friendly
We use bio-plastic in additive manufacturing

Rapid production
Algorithmic code enables fast 3D modelling, and production

1. Custom fit to every patient

- Design specifically for patients’ needs
- Based on 3D model of the patients
- Enhanced comfort allows long wear

AI: Object and Point detection



- Object (feet) detection from picture
- Pressure Point detection and annotation

2. Based on clinical trial

The effect of 3D Printed Ankle Foot Orthoses (AFO) on walking ability in stroke patients in Mongolia

Authors: Kherlen Oyunbaatar, Tergel Bayarsaikhan

Principal Investigator: Dr. Baljinnyam Avirmed MD, PhD, Chair of Department of Rehabilitation, MNUMS

Partner Organizations: JICA Mongolia, KITE Mongolia, Rehabilitation Clinic, Songinokhairkhan District Hospital, Mongolia-Japan Teaching Hospital

Key Partner: JICA volunteer Physical and Occupational Therapists

Pilot Study Result

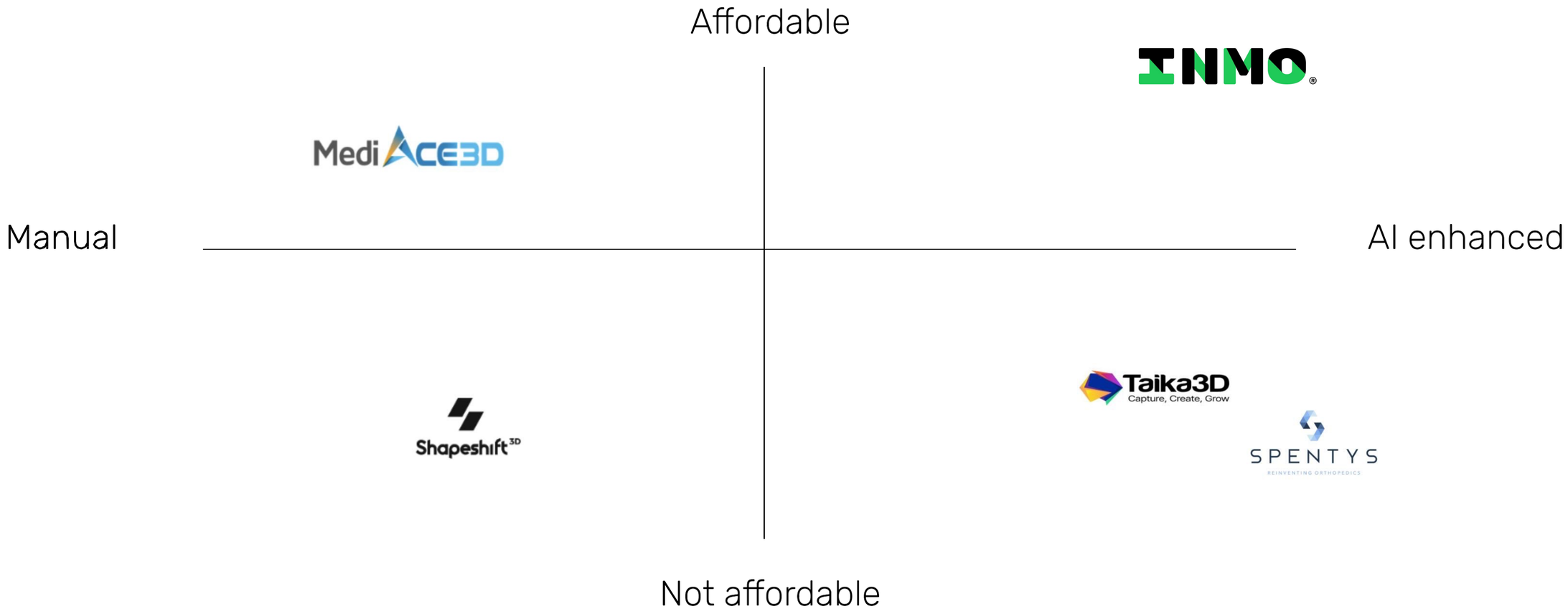
Walking Speed (m/s)	0.27	0.42	faster
Timed Up-and-Go Test (s)	29.1	23.4	Easier and faster to get up and go
Body Sway (number)	15.7	12.5	More balanced, less risk of falling

Post-stroke Hemiplegia Patient

3. Sustainable

- Additive manufacturing 3D Printing
- Manufacturing waste ~ 0
- Made with recyclable bio-plastic PLA

Competitive Landscape and Advantage



Business model B2C
Local/ Mongolian Market

Phase 1 - 2024-2026

3D printing orthosis in house (D2C)

- 60'000 people AFO
- Our 3D printed orthosis $50-80
- Compared with $300-800 traditional custom

First year sales

1500 customers – 2.5% of SAM

$100K in revenue

Business model B2C
Global Market

Central Asia

1000 hospitals – 5% of TAM

$500K in revenue

Phase 2 - 2026 - Future

Orthosis modelling platform for hospitals (B2B)

- Number of clinics in Mongolia 15, in Japan 13’614

Ask

Expertise

- AI/ML trainer
- Software developer

About INMO

Kherlen O.
CEO
Biomedical Engineer

Tergel B.
Founder
Parametric Designer

Dr. Baljinnyam
Orthosis Specialist
Rehabilitation Doctor

Ariundalai D.
Accountant
ACCA, CPA

MICS MONGOLIA OPEN INNOVATION AND CO-CREATION FOR SDGs (MICS)-2023

JICA Japan International Cooperation Agency

Grant Award
"Best Co-Creation Project"

KITE

Angel Investment

Creating effective and sustainable solutions for all