

USAf Impact Case Study Submission

Title of the Impact Case Study:

Circumfort: Supporting Post-Circumcision Healing to Improve Public Health Outcomes

Submitting University:

Cape Peninsula University of Technology (CPUT)

Name, Position and Email Address of Contact Person:

Dr Revel Iyer, Director: Technology Transfer Office

Email: iyerr@cput.ac.za

Summary of the Impact

Circumfort is a patented medical device that accelerates healing after male circumcision, reducing infection risks and discomfort while encouraging higher uptake of medical male circumcision (MMC). Developed at CPUT, the technology addresses a major public health concern in South Africa, where MMC reduces the risk of HIV acquisition by 60%. Since commercialisation, Circumfort has generated measurable health, social, and economic impact: over 57,500 units sold to public health partners, improved community-based manufacturing, and employment opportunities for township-based groups, contributing both to HIV prevention and social upliftment.

Underpinning Academic Work

The Circumfort device originated from a student innovation project at CPUT in 2013 by Musa Joy Morgan. Supported by the CPUT Technology Transfer Office (TTO), the innovation was patented (South Africa and ARIPO) and developed into a market-ready product. This project exemplifies applied academic innovation in the field of Medical and Health Sciences, with strong links to engineering and technology. The academic foundation lies in combining medical research on post-circumcision recovery with user-centred product design to address barriers to MMC uptake.

Narrative Description of the Impact

1. Public Health Benefit

South Africa has one of the world's highest HIV prevalence rates, with medical male circumcision promoted nationally as a key HIV prevention strategy. Circumfort improves the circumcision healing process by holding the penis upright, reducing bleeding, lowering infection risks, and shortening recovery time. By reducing pain and complications, Circumfort encourages more men to undergo MMC, indirectly contributing to lower HIV transmission.

2. Reach and Significance

Healthcare Reach - Bulk orders were placed by health partners, including 7,500 units in 2016, 17,000 units in 2017, and 33,000 units in 2018, showing significant adoption.

3. Community and Social Reach

Circumfort's production model deliberately involved township-based groups. Through a partnership with the Swiss Mission Church Active Ageing Project, 30 elderly community members assemble components, with the company sponsoring meals in return. This provided income, dignity, and social protection for vulnerable elders.

4. Employment Creation

The Stoelberg Foundation (licensee company) grew from 3 employees to 9, of whom 7 were full-time. Local assembly partnerships extended benefits to broader township communities.

5. Economic Impact

Circumfort created a viable spin-out company, demonstrating successful university-led innovation and technology transfer with social benefit.

6. Awards and Recognition

The innovation won the CPUT Innovation Prize (2014), GAP Medical Award (2015), and multiple entrepreneurship awards (2018), underscoring its innovation significance.

7. Timeframe

The impact occurred between 2014 and 2019, with commercial sales beginning in 2016 and continuing through subsequent years.

8. Causal Link to Academic Work

The impact derives directly from research and innovation at CPUT. The invention was developed, patented, supported by TTO capacity-building, and transitioned into a spin-out enterprise. Without this academic basis, the societal health, employment, and community impact would not have materialised.

Evidence and Sources to Corroborate the Impact

Sales Figures: Verified commercial adoption through procurement orders (7,500 units – 2016; 17,000 units – 2017; 33,000 units – 2018).

Employment Figures: Company growth from 3 to 9 employees, with additional community-based assembly work.

Health Outcomes: Scientific evidence supports MMC reducing HIV risk by 60% (WHO/UNAIDS clinical studies). Circumfort adoption addresses barriers to MMC by reducing pain and complications.

Recognition: Awards from CPUT (2014), GAP Medical (2015), Gauteng Government (2018), and TIA Youth Innovation Fund support.

Patents and Licensing: Patented in SA and ARIPO; licensed to Stoelberg Foundation (2015).

Any Other Relevant Information

Circumfort represents a model of university innovation addressing South Africa's most pressing health challenge (HIV/AIDS) while simultaneously advancing township revitalisation, job creation, and elder community participation. It is a clear demonstration of how research and innovation from a South African university contributes directly to societal wellbeing.

Signed off on behalf of the University by:

Name: Prof Marshall Sheldon 

Position: DVC: Research, Technology Innovation and Partnerships

Contact: dvcresearch@cput.ac.za

Date: 2 September 2025