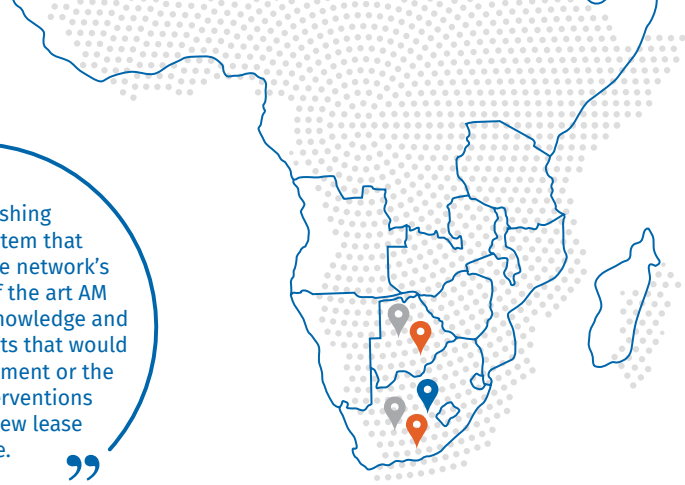




“By establishing an AM ecosystem that makes use of the network’s existing state of the art AM platforms work; knowledge and skills base, patients that would not receive treatment or the necessary interventions now have a new lease on life.”



## DEVELOPING ADDITIVE MANUFACTURING ECOSYSTEM

### ABOUT THE PROJECT

The project will support manufacturing of innovative medical products, Additive Manufacturing (AM) of patient-specific implants and cutting/positioning guides through state of the art technology platforms. Also termed 3D Printing, AM is a disruptive technology and core part of Industry 4.0. AM enables direct manufacturing of complex geometries with ease, without the need of traditional tools such as moulds or dies. AM also allows a high degree of customization, making it ideally suited for patient specific medical device applications. Another unique AM process trait is to combine multiple parts (representing complex assemblies) and produce assemblies as single units. BITRI and the University of Botswana will design medical products and CUT will manufacture the same using existing manufacturing capabilities.

Beyond offering patients quality of life, beneficiaries are state and private patients, hospitals and medical insurance providers also termed 3D Printing, is a disruptive technology and core part of Industry 4.0. In addition to impacting on industry, it benefits people’s quality of life. Each case is unique, resulting in complex design and manufacturing processes to be followed, to not fail patients or surgeons. The medical AM process chain also benefits hospitals as theatre time is reduced by 30% or more; patients recover faster; reduced hospital time; and quicker turnaround of beds.

### KEY OBJECTIVES

1. Establishing an AM ecosystem through creating awareness
2. Institutional capacity for regional innovation capacity (AM user/ operational training)
3. Design and manufacture of 10 client specific implants and devices (Identification of AM devices and implants for commercialisation) and develop a commercialisation strategy
4. Develop human capacity via workshops and short courses for joint solutions to medical challenge
5. Institutional capacity for regional innovation capacity (AM user/ operational training)

### PROJECT PARTNERS

University of Botswana

Central University of Technology  
(South Africa)

Botswana Institute of Technology  
Research and Innovation



### PROJECT COORDINATOR

Central University of Technology

### IMPLEMENTING COUNTRIES

Botswana

South Africa