The Quadra Helix approach to partnerships

A case study of the Quadra-Helix Model in the Development of Partnerships

By Anne Gatende
Introduction

• Show case the implementation of working partnerships between Governments, Universities and Businesses

And...

To contextualize it within the
The Triple Helix model

The triple Helix model of innovation is based on the interactional spheres of three institutions: Government, Universities, and Business. We are moving towards a new way of using knowledge in the economy. There is a shift from the hands-off approach linear model of innovation with initiatives taken by the triple helix.
Innovation System and Cluster Development
Co-evolution - a frame of understanding and practice

WHAT? Triple Helix Process
The Sweden Model

Prof Per Erickson former Rector Lund University and first rector of BTH where the science park
Professor
Research Division Technoscience Studies
Department of Technology and Aesthetics
Faculty of Computing
Blekinge Institute of Technology (BTH)
Director of SICD, the Swedish Innovation Centre for Development, LU
Open Innovation Centre, Lund University
Adjunct Professor
Nelson Mandela African Institute of Science and Technology, Tanzania
Mission

Background
SICD includes collaboration between Swedish and African partners since 2003 and Bolivian partners since 2007

Strategies and Activity
Continuous Process Support for Cluster and Innovation System Development
Policy Development
PhD Training, Sida sandwich model
Facilitator Training / Training of Trainers
Fundraising
R&D projects

Sponsors
Sida
VINNOVA
BTH
Innovation and cluster based initiative for accelerating socio-economic development

**Start in bottom up practices. After explicit results both bottom up and top down**

2003  The spark, Gothenburg Conference / EA, Sida and VINNOVA

2004  ISCP-EA created / Innovation System and Clusters Program - East Africa with SICD as Swedish cooperating partner

2005  Operative cluster development led by university / training + start of cluster initiatives in EA

2007  Bolivia started cluster development led by university / UMSS and UMSA

2008  PACF launched with regional chapters / first EA and ECOWAS

2008  Sida and VINNOVA decided SICD to be hosted by BTH

2009  Second generation training with med EA training team + SICD, CLUSTERPEDIA (download at sicd.se)

2009  Training and new cluster initiatives in Ghana, Nigeria, Senegal, Gambia, Ethiopia

2010 2 Sida supported PhD students, MAK, Uganda, doctors 2013

2012  Evaluation of Sida’s support / Evaluation of Sida’s Support to Innovation Systems and Clusters, a Research Cooperation Initiative, Sida Evaluation 2012:5

2013  Sida supported PhD student, UMSS, Bolivia (2015 one more)

2015  SICD is hosted by LU open innovation Centre, Lund University

All the time continuous cluster development and innovation system development including yearly conferences for knowledge exchange and policy anchoring
HOW? *Triple Helix Process*

How to get the three main actors to collaborate?

There are no easy recipes.

Challenges in the Triple Helix Process

*Faith in co-evolution*

- trust
- relevance
- situated knowledges
- robust knowledges
- distributed knowledge production
- Intermediary actor

![Diagram showing the interaction between Industry, University, and Government with shared alliance and shared direction.](image)
The Current Scenario in CSO Engagement

• Weak governments resulting in vulnerable citizens
• Silo mentality left hand does not know what the right hand is doing resulting in mistrust and poorly coordinated activity
• Each looks for relevance and does not find it
• Organizing round tables like this one is a major challenge
**University**: UDSM / IMS (Institute of Marine Science)

**Government**: i.e. Ministry of Agriculture, Local, district Gov., COSTECH

**Industry**: small family firms; from 20 participants in 1 village 2006 to 3,000 participants in 11 villages 2013

**Facilitator**: Dr Flower Msuya, IMS

- Product innovation, process innovation
- Socio-economic development especially so for women
- Infrastructure development
- Handling environmental issues
- Development of local innovation system

“The Role of Universities in Inclusive Innovation – cluster development in East Africa”

Free download of the book at sicd.se
Triple Helix-model for innovation development

Examples from
Tanzania
Bolivia
MECI is located in Morogoro, Tanzania.

Initiative started in November 2005 with 5 firms and 5 Tinsmiths groups with 88 employees.

To date there are 44 registered enterprises.

39 Wood working enterprises joined in 2009.

More than 450 employees.
### National Level R&D & Knowledge Institutions

- TZ Commission for Science & Technology
- College of Engineering & Technology UDSM
- TZ Industrial Research & Dev. Organisation
- TEMDO
- CAMARTEC
- Sokoine University of Agriculture

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**National level Collaboration**
Morogoro Engineering Cl: Turnover 2003-2010 (TZS)

- Sorghum Dehuller
- Palm Oil Extractor
- Wood Working Machinery

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Current 9 CIs in Morogoro Region

Morogoro Fruit & Vegetable Processors CI
Morogoro Engineering CI
Morogoro Rice Processing CI
Morogoro Wood CI
Morogoro Poultry CI
Morogoro Tourism CI
Morogoro Beef CI
Morogoro Textile & Garments CI
Morogoro Grain Milling CI
UNIVERSIDAD MAYOR DE SAN SIMÓN, Cochabamba – Bolivia

Food Cluster
Leather Cluster

University: UMSS / UTT

Government: i.e. Vice Ministry of Science & Technology, CBBA local and district Government, SENASAG (authority for certification)

Industry: from 15 SMEs 2008 to 55 SMEs 2012 in Food Cluster
from 11 SMEs 2008 to 51 SMEs 2012 in Leather Cluster

Coordinator: Eduardo Zambrana
Facilitators: Carlos Acevedo
            Wendy Sanzetenea

➢ Product innovation, process innovation
➢ Socio-economic development
➢ Development of innovations system locally, regionally, nationally
➢ Mobilizing researchers and students at UMSS
➢ UTT > Innovation Centre
Experiences and Results

Exemples

**Bolivia / UMSS, Cochabamba**

- Sustainable innovation system in spite of political majority (through a number of regional elections)

- Strong influence in development of national innovation system at Vice Ministry of Science & Technology

- UMSS Innovation team with about 35 researchers across faculty borders.
Experiences, Results and Challenges

TRUST
All the time has to be nurtured

Example Tourism Cluster Bagamoyo, facilitators’ situation

CO-OPETION
Cooperation
in training and joint learning, jointly win large bids, influence the (public) bid process, quality assurance

Competition
stay on the market, gain market shares, take part of the scarce resources at the university and concerning infrastructure (transport etc.), competition inwards and outwards

TRIPLE HELIX practice
Sustainability, policy support, national breakthrough particularly in Uganda, Tanzania and Bolivia

CONTEXT- adaptation
EA => focused quantitative goals - many clusters, national coordination taken different forms
Bolivia => focused pilot clusters, innovation processes and innovation system
**Process support** to innovation systems- and cluster development

Process support promotes the creation of innovations, innovation systems and clusters in order to develop human resources and eradicate poverty. In particular, it aims to:

* Increase access to technology and scientific findings that address poverty-related needs
* Create jobs with a special focus on women and youth
* Improve positions in national, regional and global value chains for local businesses and farmers (firms and farms)
* Improve production processes for better product quality, efficacy and safety of people and the environment
* Improving public services through social, financial and technical innovations
An example From Kenya

HPC 2013  BROKERING IN 2014  PARTNERSHIPS IN 2015
Quadro Helix Partnership And The Science Park Concept

Public
Private

University

Government

Civil Society

Business

Donor Agencies
NGOs,

Governors forum MPs, MCAs, Ministers, Executive

Science Park
The Partnership
Together we bring unique sets of skills and footprint to identify, nurture and mature graduate entrepreneurs

This partnership exists to foster entrepreneurship and job creation among graduates.
The Problem
We are graduating tens of thousand of youth but not creating enough jobs for them

At a glance...

University enrolment increased by 22.8% from 361,379 in 2013 to 443,783 in 2014

Unemployment rate has increased from 12% to 40% in last 2 years

The Result:
1. Social ills: Crime, Drug trafficking, youth radicalization, insecurity, prostitution
2. Brain Drain
3. Poverty
4. Poor leadership
5. Frustrated and uninspired learners/youth
Partnership Objectives

GEA and ICL will work together to spur growth in youth enterprise and work towards the attainment of the following objectives

1. **To foster a culture of entrepreneurship among university students** for the development of practical business models
2. **Provide structured training and mentorship** on entrepreneurship for development of profitable business enterprises
3. **To link existing county businesses to innovations and technology** for profit maximization
4. **To create business acceleration** at the different stages of growth through establishment of Biashara Centers.
5. **To empower county citizens on digital literacy** and 21st century skills for job creation and enterprise development
6. To Support county develop **County Specific Business plans** and establish international Corporate Volunteer programs
Our overall results per county

We shall systemically change our education

TRANSFORMATIVE EDUCATION FOR SUSTAINABLE DEVELOPMENT

A MODEL COUNTY

SCHOOL

COMMUNITY

TTI

MKU

100 GRADUATES
ENTREPRENEURS

500 ARTISANS

50,000 Equipped Students with Digital Literacy and 21st century Skills!

20,000 Digitally Empowered Citizens!
Our overall results in 2016 (2 counties)

We shall enable the county to start and grow sustainable SMEs

- 200 MKU graduates
- 70 County based SMEs enhanced
- 350 Sustainable jobs created
- 1000 TVET students enrolled
- 40,000 County Citizens reached
- 1000 TVET students enrolled
THE QUADRA HELIX PARTNERSHIPS

Qudrahelix Council

CSO-Broker

Business

Academia

Government
Quadro Helix Partnership And The Science Park Concept

Governors forum MPs, MCAs, Ministers, Executive

Donor Agencies NGOs,

Science Park
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Shared Alliance
Shared Direction
Collaboration

- Shared context
- Shared alliance
- Shared direction
Application to the Humanitarian context