

# NUTS & BOLTS

## Strengthening Africa's Innovation and Entrepreneurship Ecosystems

Dr. McLean Sibanda

[www.sibandalegacy.africa](http://www.sibandalegacy.africa)

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# Outline

The Story Behind the Story

Innovation and Entrepreneurship Culture

Incubation and Pipeline Development

Funding the Gap

From s Science Park to an Innovation Agency

Drivers for Growth in Africa

Hubs Enabling Innovation and Entrepreneurship in Africa

Concluding Remarks

# The Story Behind the Story

- 2010 Oct - TIA Group Executive Commercialisation and located at Head Office at Enterprise Building The Innovation Hub
- Call reposition The Innovation Hub to focus on innovation
- February 2011 assumed role
- 45 / 90 Days lessons and repositioning strategy
- Sectorial Reposition: Bioeconomy, Green Economy, Smart Industries
- Resourcing
- Towards Innovation Agency

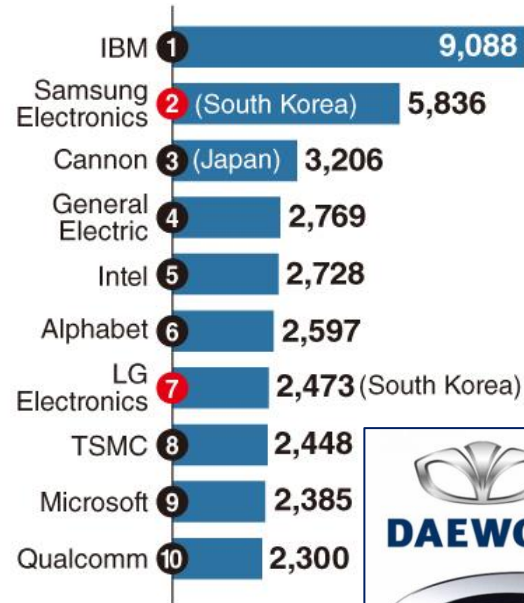


# Innovation and Entrepreneurship Culture

*“... innovation doesn’t come just from giving people incentives; it comes from creating environments where their ideas can connect.” Steven Johnson*

- In early years of development - combination of own R&D capabilities + acquisition of third party IP / tech to kick start industrial activity
- Entrepreneurship about building the future
- Ecosystems are critical to innovation

Top 10 companies with patents granted in US in 2018



# Innovation

- ... the practical implementation of ideas that result in the introduction of new goods or services or improvement in offering goods or services
- Technological and non-technological innovations
- Turning an idea into a solution that adds value from a customer's perspective

CREATIVITY IS  
THINKING UP  
NEW THINGS.

INNOVATION  
IS DOING  
NEW THINGS.

DEJOOST.COM

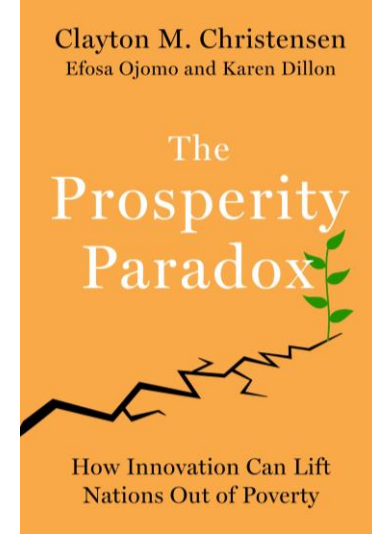


# Innovation (Prosperity Paradox)

- ... is a change in the process by which an organisation transforms
  - Labour
  - Capital
  - Material
  - Information

into products and services of greater value

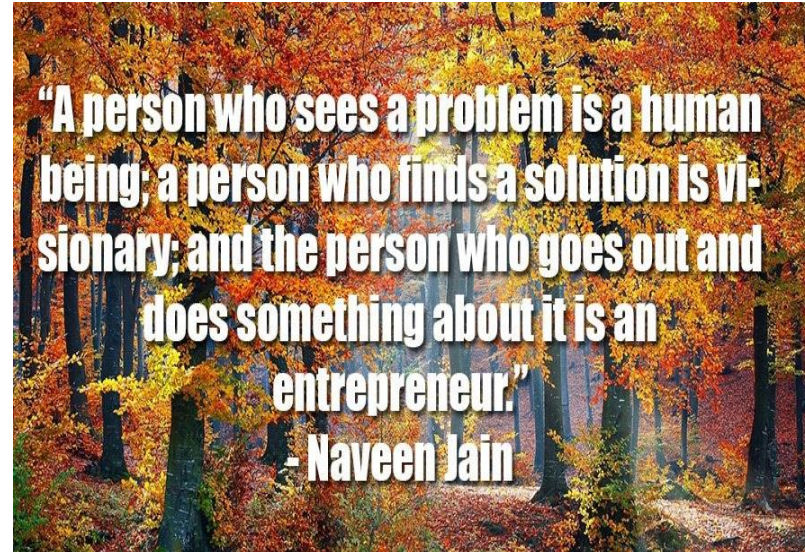
- Three (3) types of innovation
  - Sustaining innovations
  - Efficiency innovation
  - Market-creating innovation



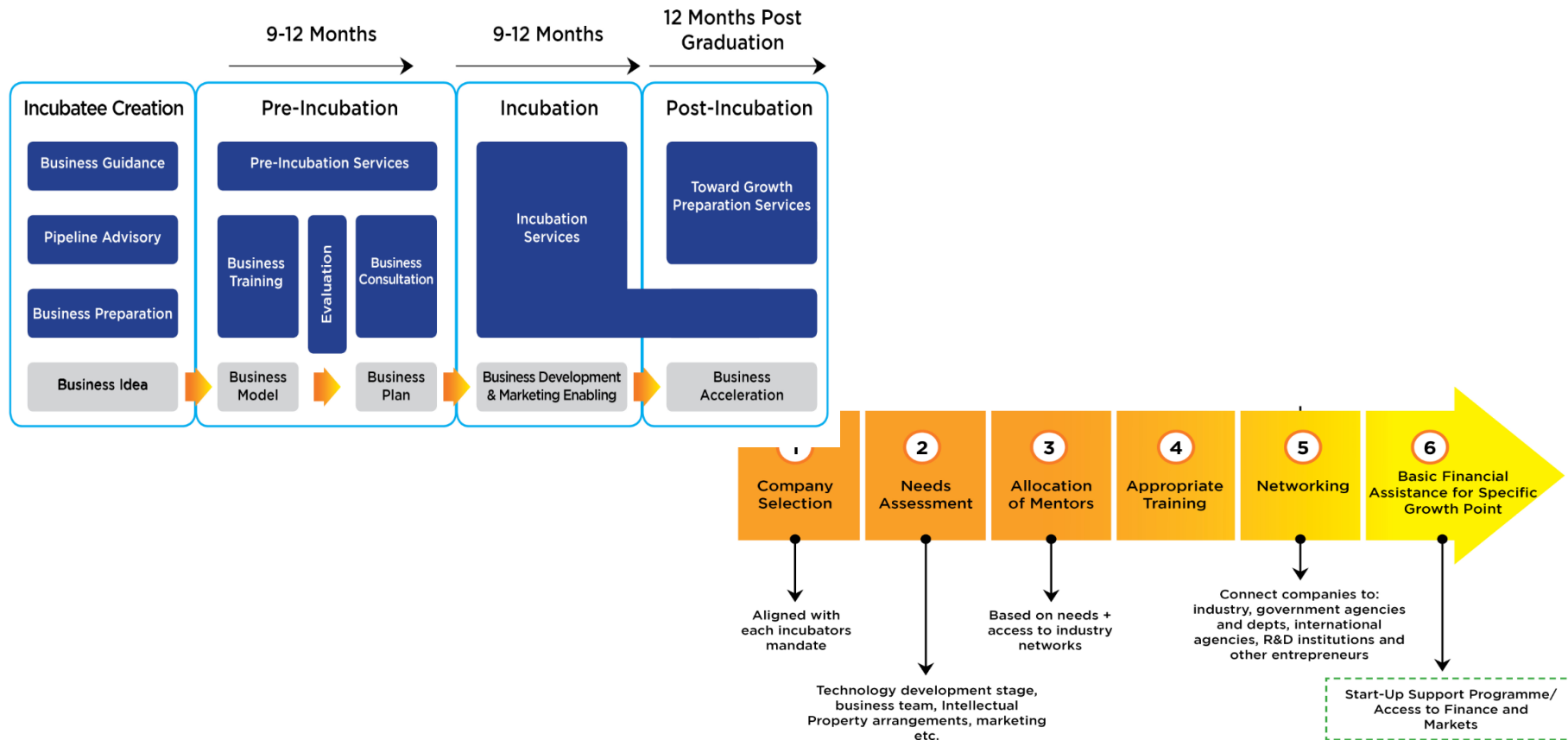
|     | Impact on            | Market creating        | Sustaining                     | Efficiency              |
|-----|----------------------|------------------------|--------------------------------|-------------------------|
| 1.  | Capital              | Uses a lot             | Uses little                    | Frees up                |
| 2.  | Jobs                 | Creates a lot          | Creates a few                  | Eliminates              |
| 3.  | Consumption          | Increases              | Substitutive, so little impact | Very little to none     |
| 4.  | Margins              | Lower                  | Higher                         | Same or higher          |
| 5.  | Payback period*      | Long: 3 years and up   | Short: 1 to 3 years            | Very short: 0 to 1 year |
| 6.  | Payback              | Very high              | Medium                         | Low to medium           |
| 7.  | Strategy             | Emergent and undefined | Deliberate and defined         | Deliberate and defined  |
| 8.  | Value network        | New                    | Same                           | Same                    |
| 9.  | Market               | Creates new            | Already defined                | Already defined         |
| 10. | Economic Development | Significant            | Marginal                       | Can be negative         |

# Entrepreneurship

- Willing and able to *convert a new idea or invention into a successful innovation*
- Innovatively combine *various input factors to generate value to customer*
- ... the value will exceed cost of input factors, and *generate superior returns*
- Three characteristics of an entrepreneur
  1. value producing activity
  2. individual goal
  3. process



# Incubation and Pipeline Development



# Incubation and Pipeline Development

- Competitions to feed incubation pipeline (sectorial approach)
- Celebrate ingenuity of provincial innovators
- Partnerships critical
  - Emory University / Goizueta Business School
  - Industry / Government
  - Academic & Research Institutions
- Prize
  - Cash + seed funding
  - Incubation



# Funding the Gap – the SSP

*... no lack of funding in South Africa the available funding is misplaced, and in certain cases, is controlled by people that have never built a business or understand how to appropriately fund start-ups.”*

- GAP funding ZAR50k-1m
- Quick decision making
- Credible investment committee
- Bridge to other sources of funding

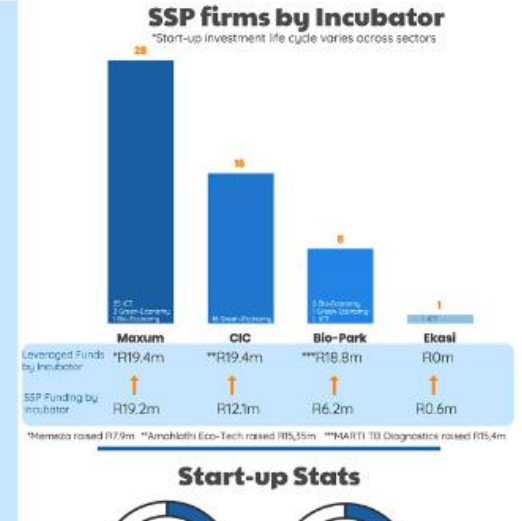
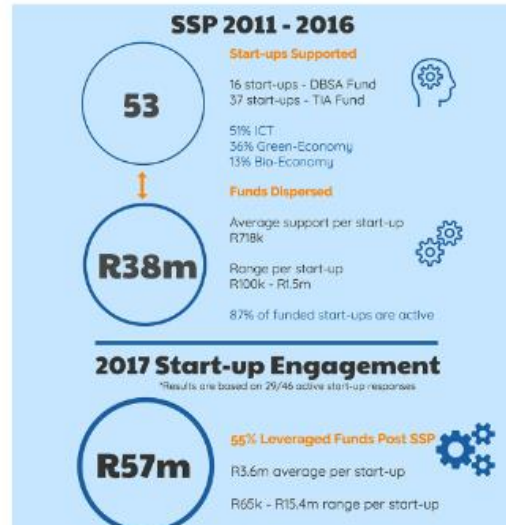


in partnership with:



## SSP Overview

The Start-Up Support Programme (SSP) is a seed fund mechanism. It is aimed at ensuring access to finance for innovative, knowledge economy based small businesses (SMEs) and entrepreneurs. This Gauteng focused funding is provided in order to aid the businesses reach a point of commercialisation.

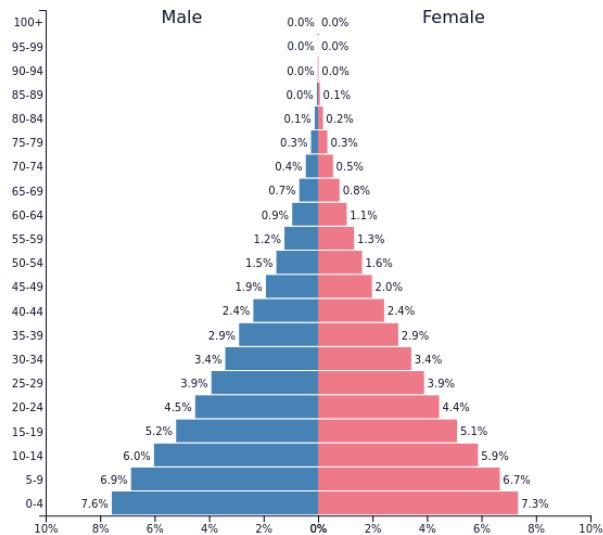


# From a Science Park to Innovation Agency: (Inclusivity, Incubation and Skills for Future)



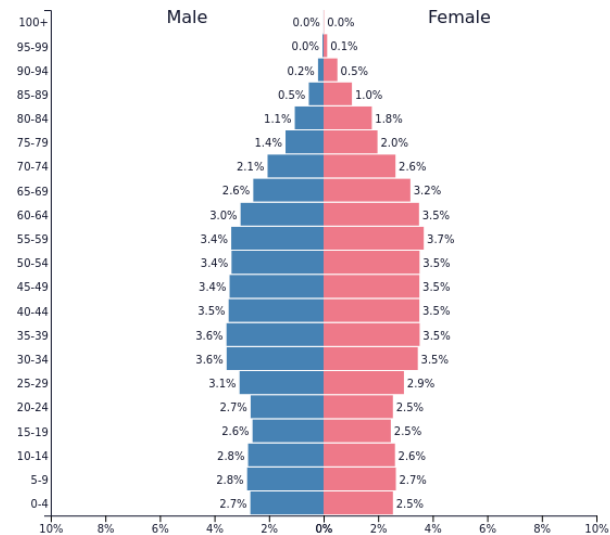
# Africa is Young and Growing

*What does this mean for the rest of the world?*



PopulationPyramid.net

**AFRICA - 2020**  
Population: 1,340,598,113

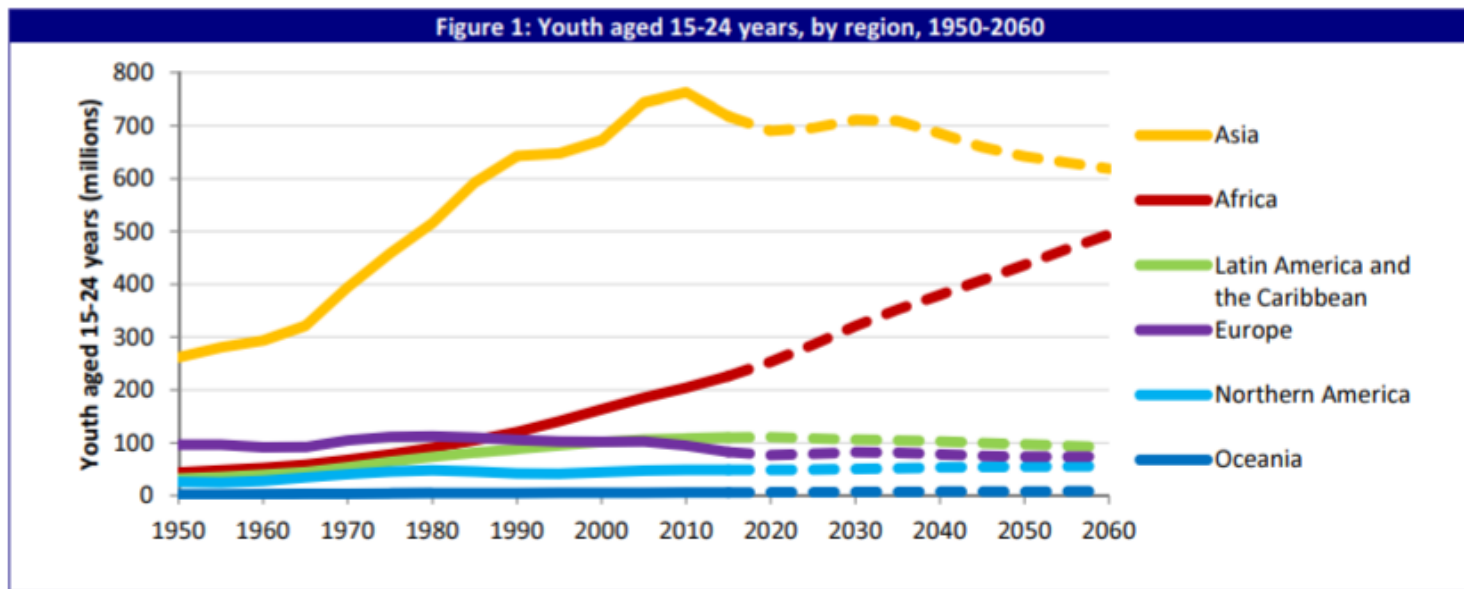


PopulationPyramid.net

**EUROPE - 2020**  
Population: 747,636,045

# Africa is Young and Growing

*What does this mean for the rest of the world?*



Data source: United Nations (2013) *World Population Prospects: The 2012 Revision*.



Nairobi, Kenya

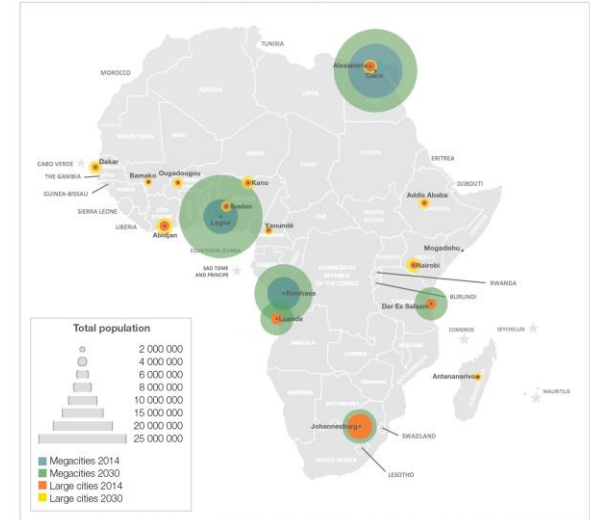


Durban, South Africa



Lagos, Nigeria

Figure 6: Africa's current and emerging megacities and large cities 2014 versus 2030



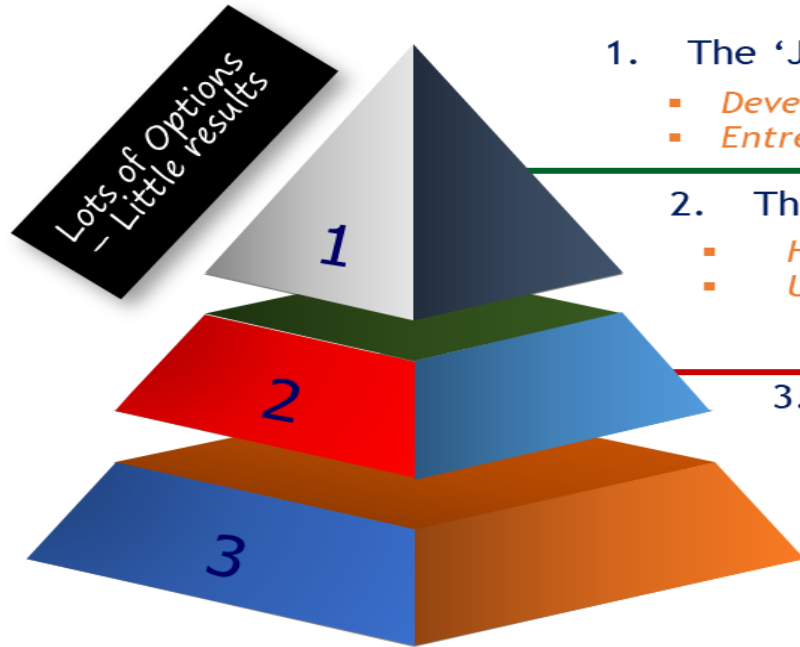
Source: City population data/estimates from UN DESA, urban population growth rates calculated by Fx version 7.22 and based on World Development Indicators.

# Growth of Megacities in Africa

*Unemployment, Inequality, Poverty, Climate Change*

# Innovation and Entrepreneurship

*High Growth SMEs through Science Based Innovation and Technology*



## 1. The 'Jockey': Develop The Entrepreneurial Mindset

- *Development of entrepreneurial skills*
- *Entrepreneurial culture*

## 2. The 'Horse': Develop The Business Model & Business

- *Healthy pipeline of intellectual property / technologies*
- *Understanding of Market and Opportunity*

## 3. The 'Racecourse': Access to market, access to resources, access to finance

- *Right mix of financing instruments*
- *Enabling infrastructure*
- *Market structure / government procurement as source of stimulating innovation*
- *Relook Procurement Regulations*

# Hubs Enabling Innovation & Entrepreneurship



The Innovation Village, Kampala, Uganda



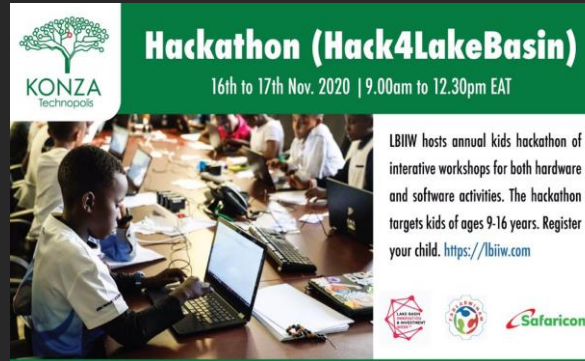
The Bandwidth Barn, Cape Town, South Africa



Co-Creation Hub, Lagos, Nigeria



The Innovation Hub, Pretoria, South Africa



Konza Technopolis, Kenya



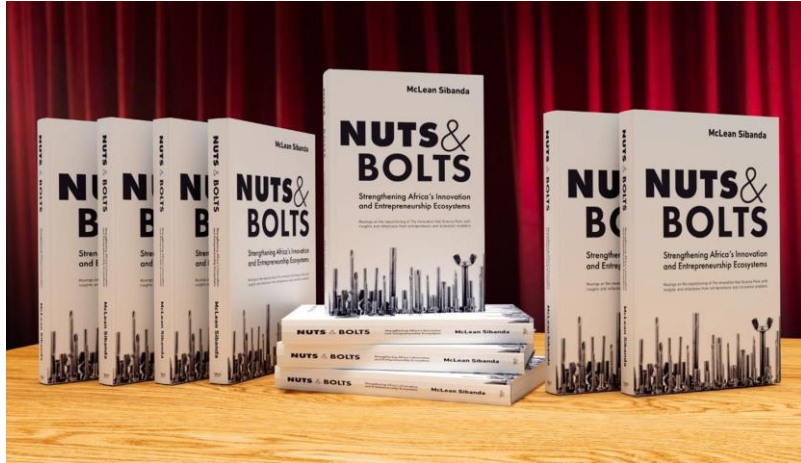
Tshimologong Precinct, Johannesburg, South Africa

# Concluding Remarks

- Beware of fallacy of “Build it and they will come”
- Need for demand led innovations (AfCFTA)
- Cape Town’s Foreshore Highway
  - Conceptualised and designed in late 1960s
  - ... to alleviate future traffic congestion connecting poorer parts to places with higher paying jobs
  - Work began in early 1970s
- Entrepreneurial universities:
  - Effective IP Management / Commercialisation
  - Incentivise entrepreneurship
  - Don’t meddle in tech transfer decision making
  - Partner (incubators, funders, industry, ecosystem)



# Thank you!



@mcleansibanda

**Email:** [mclean.sibanda@gmail.com](mailto:mclean.sibanda@gmail.com)

[mclean@sibandalegacy.africa](mailto:mclean@sibandalegacy.africa)

**Tel / WhatsApp :** +27833780230

"A book written to be understood. Refreshingly honest and open"

**Dr Niel Kruger**

*Lecturer – University of Johannesburg*