

# The role of Universities in the Digital Era



**Achieving digital social change: a  
partnership approach**

**Leona Craffert**

# CoLab for eInclusion and Social Innovation:

**The CoLab is a physical and virtual space for transdisciplinary research and projects aimed at developing human and institutional capacity for inclusion in the digital society/economy and social innovation**

## **Key Activity Areas:**

- **Facilitate skills development across the 4 dimensions:**
- **Research & Innovation**
- **Multi-stakeholder collaboration for social change**



# Flow of the presentation

## Introduction

- The changing technological landscape
- Digital divide(s)
- Social Innovation

## Partnership model for social change

- Scaling model for digital inclusion
- Digital solutions development

## Conclusion

# Changing Technological Landscape

“Common to these recent debates is an awareness that, as technological breakthroughs rapidly shift the frontier between the work tasks performed by humans and those performed by machines and algorithms, global labour markets are likely to undergo major transformations. These transformations, if managed wisely, could lead to a new age of good work, good jobs and improved quality of life for all, but if managed poorly, pose the risk of widening skills gaps, greater inequality and broader polarization.” *WEF, Future of Jobs Report, 2018*



## 1st Industrial Revolution

Water and Steam

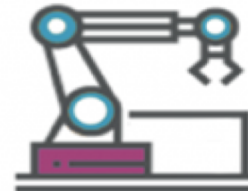
Steam and water power replace human and animal power with machines



## 2nd Industrial Revolution

Electricity

Electricity, internal combustion engines, airplane, telephones, card, radio and mass production



## 3rd Industrial Revolution

Automation

Electronics, the internet and IT increase automaton and mass production



## 4th Industrial Revolution

Cyber-Physical Systems

Driverless cars, smart robotics, the internet of things, 3D printing



# Digital Inclusion (digital divide)

... digital divides will always exist.

Old challenges remain, .... At the same time, new divides are emerging...”<sup>(1)</sup>

.

“In many instances digital technologies have boosted growth, expanded opportunities, and improved service delivery.

**Yet their aggregate impact has fallen short and is unevenly distributed”**  
(2)

1. (Andreasson, K. (2015)., p.xxi

2. Digital Dividends Overview, World Bank Report, 2016, (p2)

# Digital Inclusion (digital divide)

## Voorberg, Bekkers, & Tummers (2014)

“...we define social innovation as the creation of long-lasting outcomes that aim to address **societal needs** by fundamentally **changing the relationships, positions and rules** between the involved stake-holders, through an **open process of participation, exchange and collaboration** with relevant stake-holders, including endusers, thereby crossing organizational boundaries and jurisdictions.” (1)

# Case 1: Accelerating digital inclusion initiatives

## WEF Network Readiness Index (2016)

Overall and Sub-index	RSA: 2016 (N=139)	Belgium: 2016 (N=139)
Overall	65	23
Environmental sub-index	33	22
Readiness sub-index	102	17
Usage sub-index	67	27
• Individual	68	22
• Business	30	17
• Government	105	42
Impact sub-index	92	23
• Economic impact	57	19
• Social impact	112	31

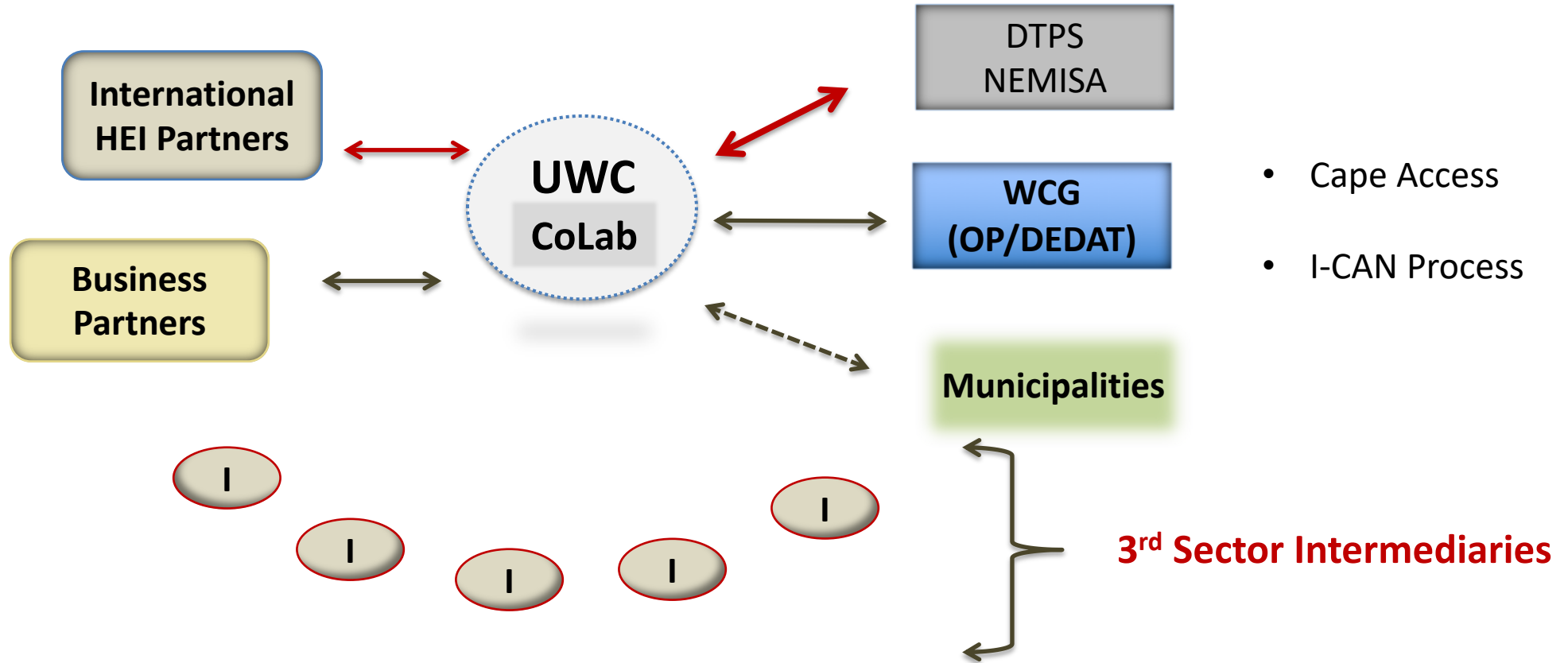


# Case 1: Accelerating digital inclusion Initiatives

Cape Access Program: 70 e-Centres across the WC Province



# Case 1: Accelerating digital inclusion initiatives



SUFF Academy:	George, Oudtshoorn
Tech4Change:	Paarl, Wellington, Delft
Usiba Loluntu:	Gugulethu
Hilltop Centre:	Khayelitsha, Michell's Plain

CWA:	Eersterivier
Nama Skills:	Saladanha
GirlHype:	Metropole
Silulo:	Metropole
Cape Digital Foundation:	IY (Houtbay)

# Case 1: Accelerating digital inclusion initiatives

## Outcome of relationships with Intermediaries and Business:

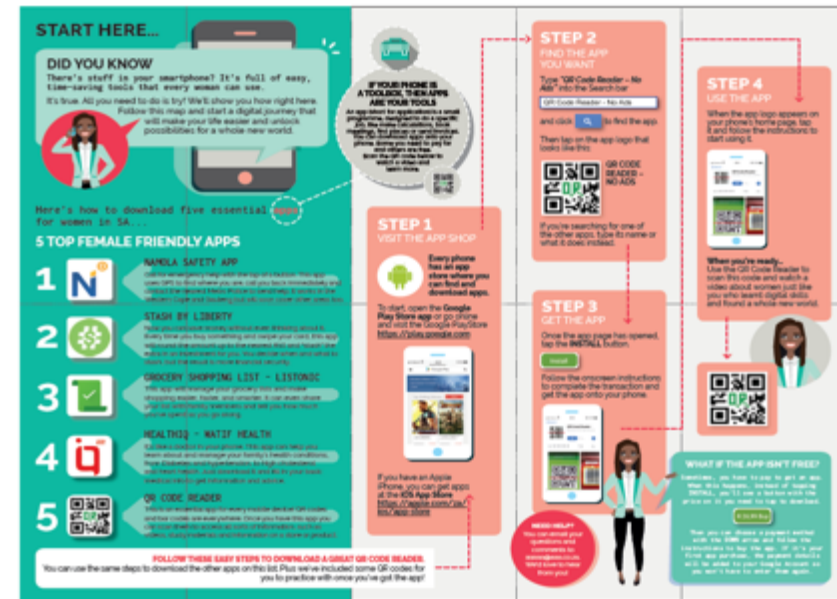
- Touched **1 848** people through **training and coaching interventions** (since October 2017):
  - **1 740** from **disadvantaged communities and NEETS** on topics of digital literacy, online safety (*cyber security*) ; coding, MobileTech for SMEs
  - Remainder consisted of engagement with leaders in the formal sector on topics of data-analytics, AI and digital transformation
- Through partnerships towards systemic change



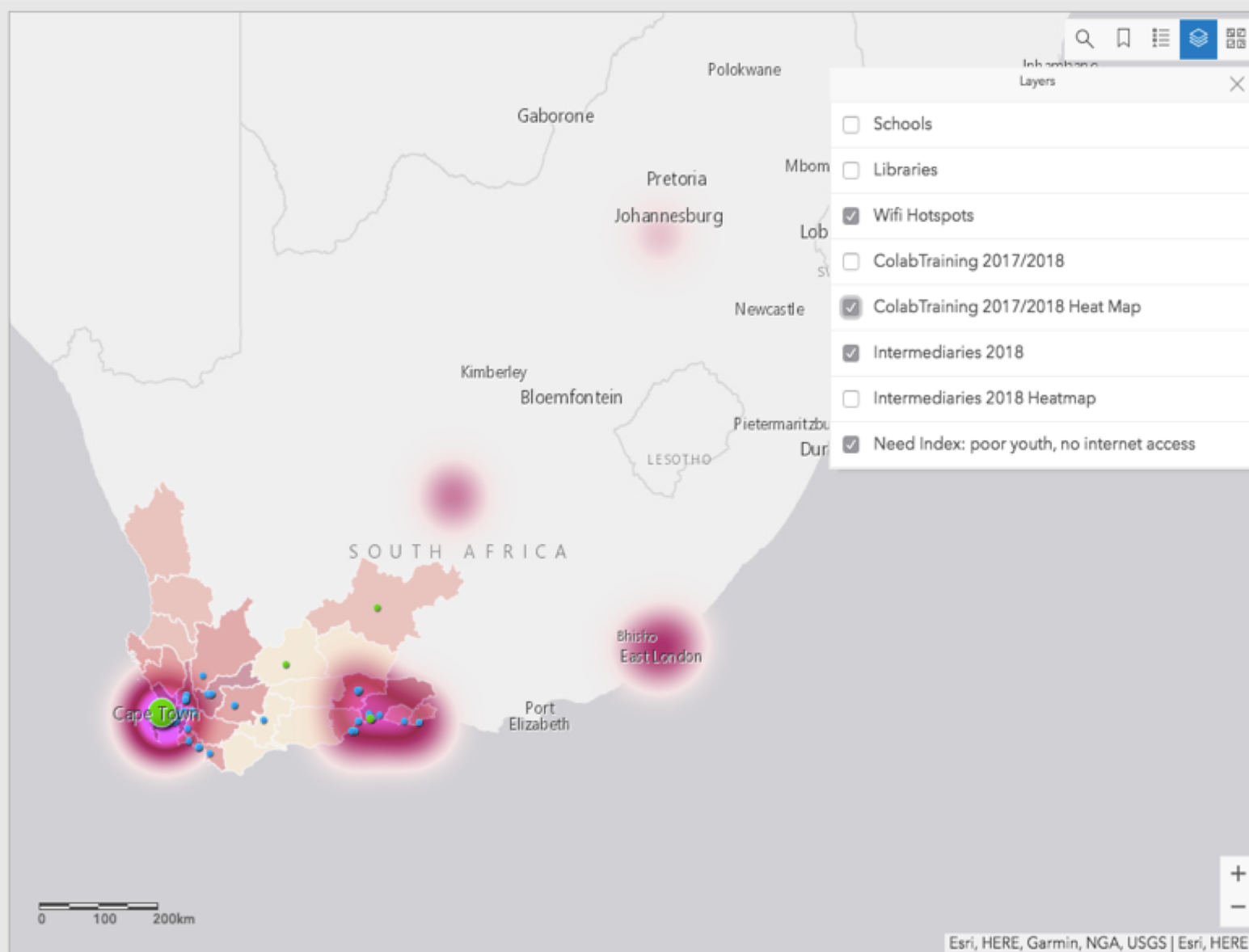
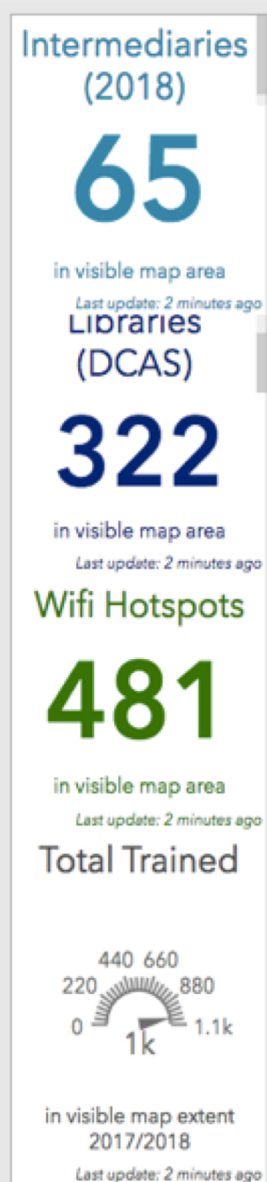
# Case 1: Scaling and accelerating digital inclusion initiatives

## Partnership Outcomes:

- **Partnership model(s)** for testing, adaptation and implementation to scale DI interventions (building the ecosystem)
- **Starter-packs**, focus on youth, women and SMEs to facilitate **mobile skills** development; sharing the benefits - *nudging*
- **Digital Inclusion Data Portal**: that maps and visualises the digital inclusion efforts of **multiple stakeholders** with data analytics for decision making



# CoLab Digital Inclusion Data Portal

[illegible]



## Case 2: User-centric development of digital solutions

The development of a campus mobile application was originally conceptualised at UGent from a Digital Anthropology perspective to facilitate the establishment of a **trusted community** (online and offline) within a particular **spatial-temporal grid** (geographical location) around **community events** and **community relationships**”

UGent, VUB, UWC, HoWest and Mzumbe University, Tanzania, collaborated on:

- Application of user-centric approach (living labs methodology) for the design and development of the digital solution
- Research
- Skills transfer between partners



## Case 2: User-centric development of digital solutions

UDUBS-it process provided the basis for research into SMEs' understanding and use of technology

- With the guidance and support of imec-SMIT researchers, CoLab applied a living labs approach that resulted in the co-development of the “*cognitive engagement board*” as research tool



## Case 2: User-centric development of digital solutions

- Co-design of a training intervention to address the skill needs of micro and small township entrepreneurs, as integral part of the research process – *rapid ethnography* (1)
- **“Last Mile”**: Through partnerships trained 240 micro and small entrepreneurs in using mobile technology (3 weeks).

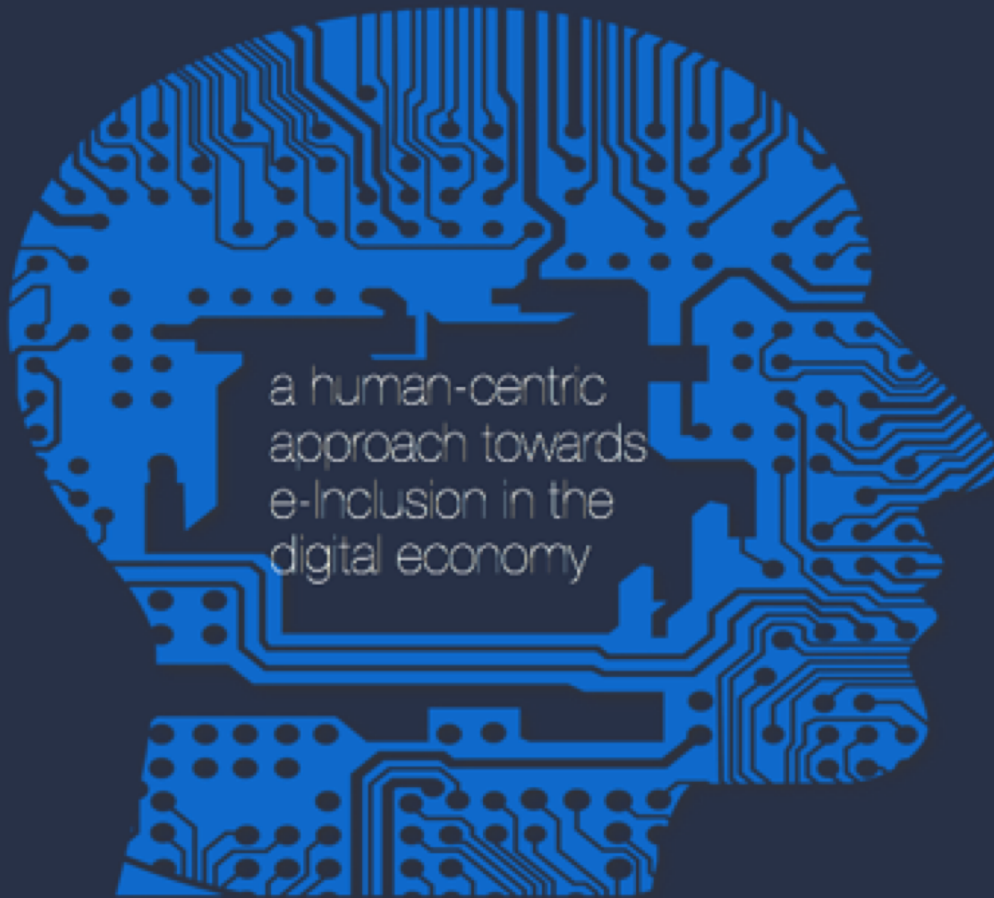


1. Craffert, Visser, Claassen, Van Audenhove, L. (2017). Crossing Conceptual Barriers: A Methodological Approach in a Language-Challenged SMME Environment. In: K. Lawlor., A.P. Buckley (Eds). *Proceedings of the 16<sup>th</sup> European Conference on Research Methodology for Business and Management Studies*, Dublin , 22-23 July. ISBN: 978-1-911218-41-8; ISSN: 2049-0976

## In Conclusion

We do not yet know just how it will unfold, but one thing is clear: the response to it must be **integrated** and **comprehensive**, involving **all stakeholders** of the global polity, from the public and private sectors to academia and civil society.

<https://www.weforum.org/agenda/2016/01/the-fourth-industrial-revolution-what-it-means-and-how-to-respond/>



## The role of Universities in the Digital Era

**Thank You!**

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