

Sustainable Socio-Technical Systems

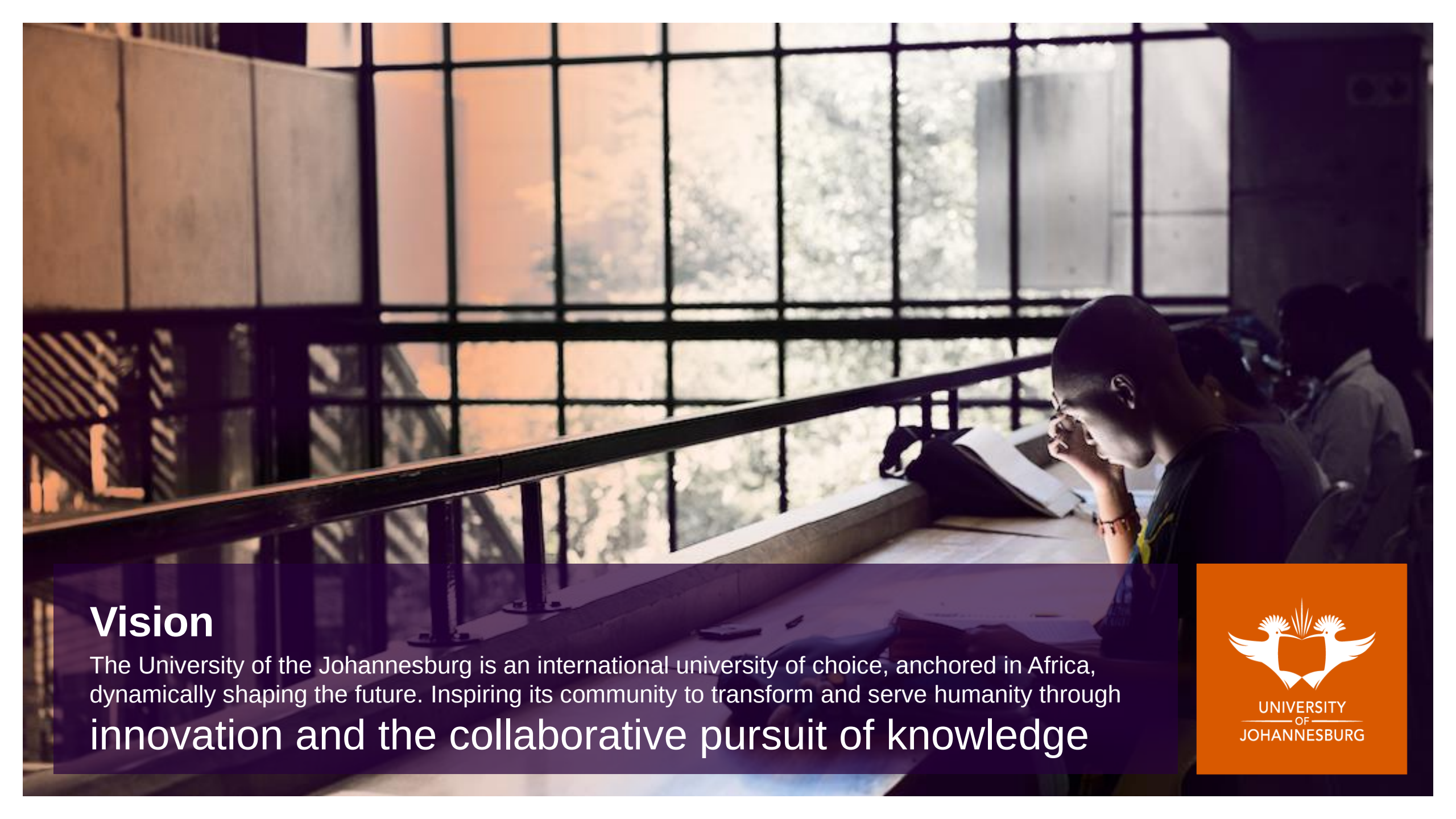
Activating young citizens in the 4th Industrial Revolution

Inner City Partnership Forum

26 February 2019



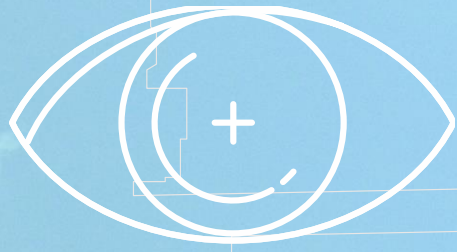
UNIVERSITY
OF
JOHANNESBURG

A photograph of a student sitting at a desk in a library or study hall, looking down at a book. The desk is long and wooden, with a metal railing in front of it. Large windows with a grid pattern are in the background, letting in bright light. Other students are visible in the background, also studying.

Vision

The University of the Johannesburg is an international university of choice, anchored in Africa, dynamically shaping the future. Inspiring its community to transform and serve humanity through innovation and the collaborative pursuit of knowledge





OUR VISION

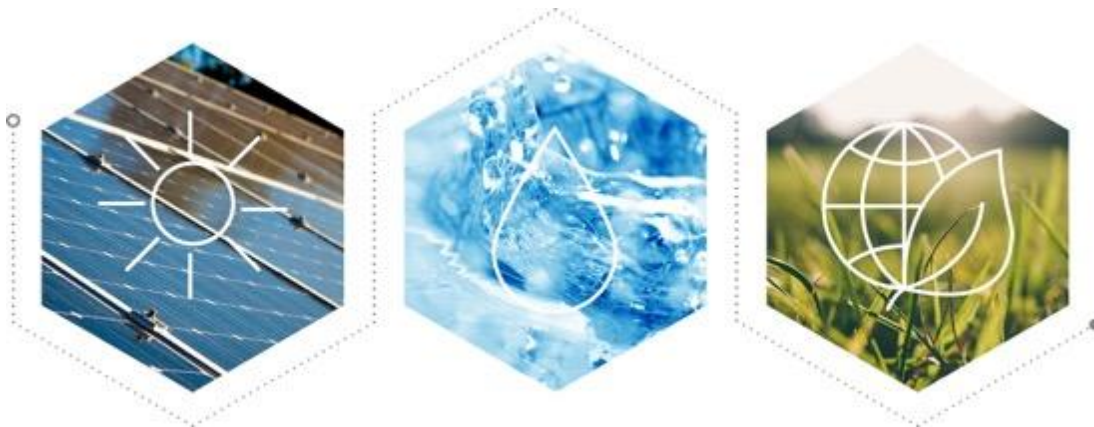
To be a leading Technology Station that stimulates and supports technological innovation in a vibrant green economy towards equitable socio-economic success



OUR MISSION

Providing **technical oriented enterprise development support** in the water, energy and environment sector through appropriate **technological innovations** in order to **grow South Africa's socio-economy** in a sustainable manner.

Support SMEs through **green economy** projects by providing **engineering services**



ENERGY

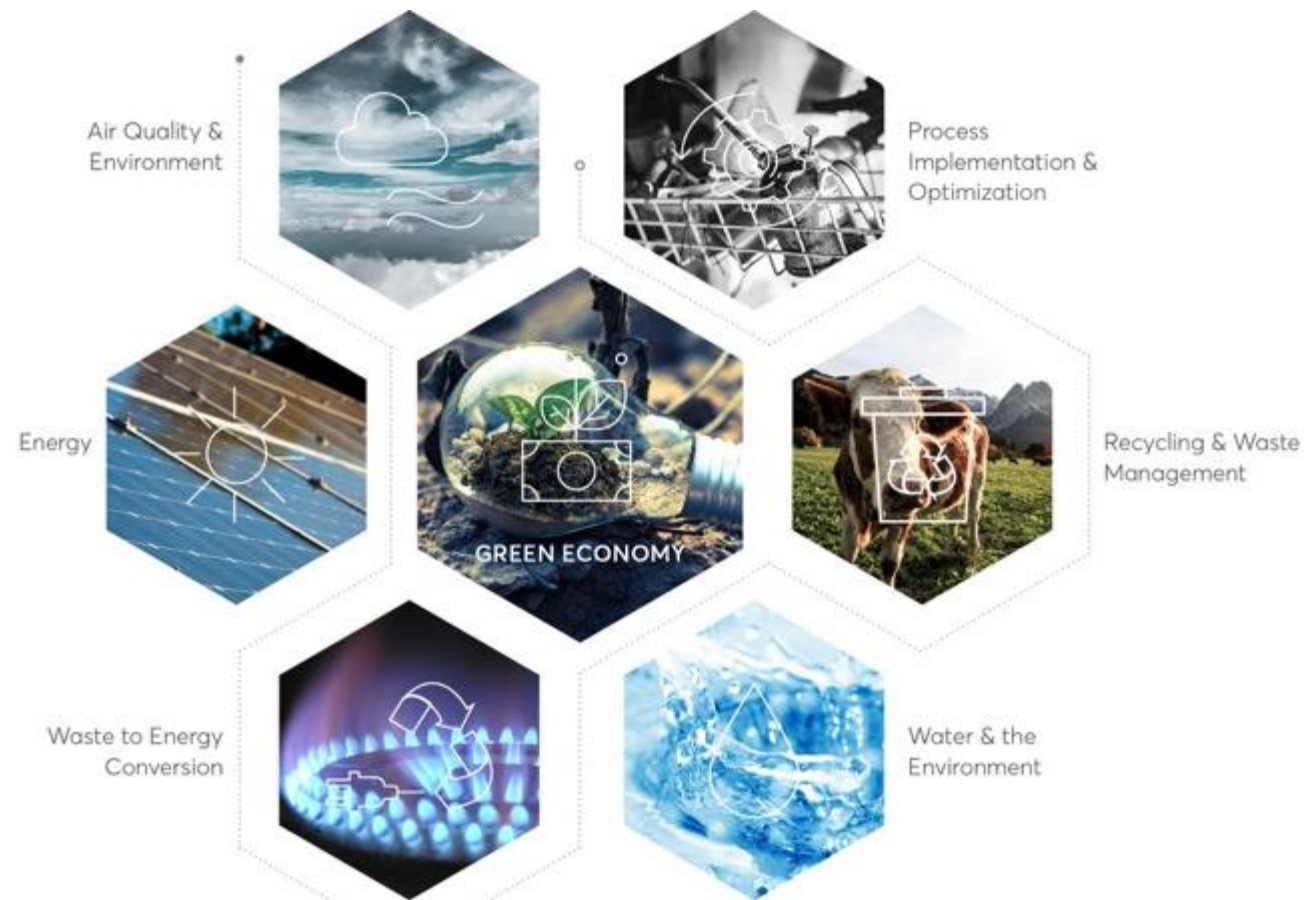
- Renewable energy solutions
- Energy efficiency
- Waste to Energy conversion
- Energy micro-Grids / Mini Grids
- Energy Storage

WATER

- Water quality management
- Salt Water Purification & desalination

ENVIRONMENT

- Waste optimization
- Air Quality Management
- Environment efficiency



Support SMEs through **green economy** projects by providing **engineering services**

METROBUS NAMA AIR QUALITY INITIATIVE

- Biogas in transport applications
- Technology innovation change management framework
- Nationally Appropriate Mitigation Action relating to air quality control
- GIZ, CoJ, ICCT & Metrobus Collaboration



- Urban Agriculture Initiatives
- City Parks Links
- Bezuidenhout Park
- Skills Development
- 6m² Digester



A change agent for promoting health, transforming communities and enhancing environments

THE GREENHOUSE PROJECT

- Joubert Park
- City Parks Links
- Urban Agriculture
- Waste Management
- Existing biodigester
- Business case for small-scale biogas production & liquid fertiliser



WASTE MANAGEMENT SOLUTIONS AND E-MOBILITY

- Human Capital
- Community based, smart waste management solutions
- E-mobility
- Small scale manufacturing and services economy
- Last mile logistics solution



The background of the slide is a blurred photograph showing several pairs of hands. Some hands are holding smartphones, while others are holding or pointing at papers. The scene appears to be a collaborative workspace or a field research setting. The overall tone is professional and focused on data collection and technology use.

ResearchGO

We are team of UJ researchers, academics and commercial partners

We are behavioural economists, data scientists, engineers, social scientist and ICT specialists that specialize in developing smart tools to support

data collection

in difficult to reach areas, at scale

We work with a youth employment accelerator to provide employment opportunities to local young people

ResearchGO developed fieldwork and data management smart tools which

- 📍 Allows users to manage large groups of fieldworkers
- 📍 Geolocate survey data offline
- 📍 Schedule remote interview locations
- 📍 Manage the logistics and quality for survey data collection over large geographical areas

A team of researchers at UJ developed a methodology which allows us to activate unemployed youth from local communities to participate in the gig-economy using smart tools to allocate work, monitor quality, and execute micro-data collection at scale in urban and rural areas

The **ResearchGO** platform combines several important components into one coherent solution, including:

- 📍 Logistics planning and optimisation
- 📍 Data collector deployment
- 📍 Remote cohort management
- 📍 Live data storage and sharing
- 📍 Execution monitoring
- 📍 Quality assurance and fraud detection
- 📍 Automated communication system linked to data quality screening
- 📍 Handset device security and management
- 📍 Invoice generation and automatic payments to support staff



Township Economists



The **Tshepo1Million** initiative, a provincial youth employment strategy contracted the team to identify, map and surveying **80 000** township enterprises across 9 township areas in 10 weeks activating **800** unemployed youth to survey the enterprises

The team returned to map the risk profiles of **15000** of these enterprises in 2018

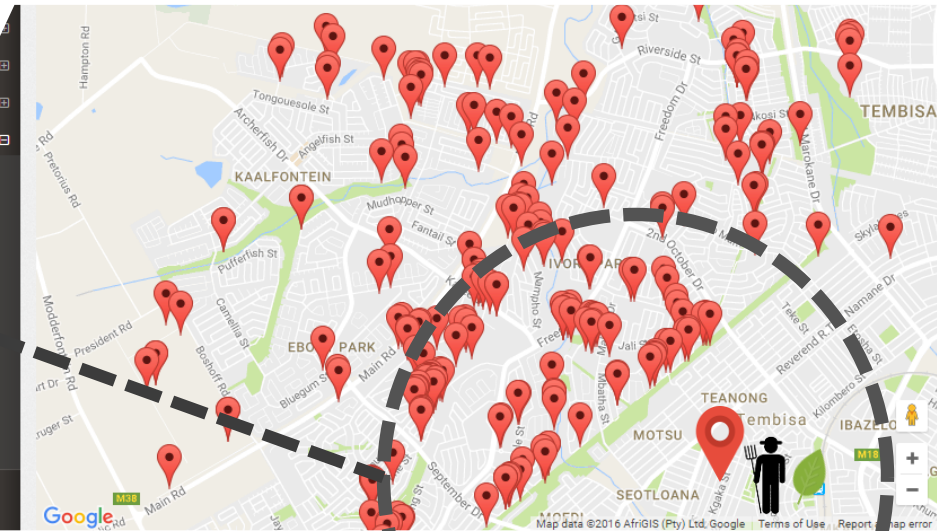


Crowd sourcing food in Ivory Park



28 Data collectors registered 697 gardens and conducted 509 baseline studies to connect and expand an urban food ecosystem to unlock opportunities and advance local economies.

Over the past 8 months we have run a pilot with 75 active farmers around Gauteng, North West, and Limpopo trading close to R300 000 worth of produce online



Mapping 39 464 random interviews



The team implemented the **Gauteng City Regional Observatory** 2017 Quality of Life survey

QoL surveys were administered to a minimum of 22 220 randomly selected respondents across all 529 wards in the Gauteng Province, incorporating online fieldworker management system and smart logistics, training and employing 500 local young people in the process



Community development workers

The CDWs programme was established in 2003 to address deficiencies in service delivery to communities, specifically to improve services to the poor.

The CDWs are deployed to maintain direct contact with the people where they live and to ensure that government sharply improves the qualities of the outcomes of public expenditure.

Require the development of a smart knowledge management system to connect CDWs to the DPSA



GCRO QoL

Select focus block:

Set Home

☒ I'm ready!

I'm sick.

I'm busy.

CALL CENTER!

CANCEL

OK



Version 2.07

GCRO QoL

Callback survey



Version 2.07



March 2018



SUN	MON	TUE	WED	THU	FRI	SAT
25	26	27	28	1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31
1	2	3	4	5	6	7



Unknown



Profile



Groups



Bank and Personal Details



Tutorials



Report a Bug



Debug



Survey - GCRO QoL

Create

History

Heading

Appointment #: 565925
 Survey #: Return to do FC
 Address: 124 Gordon Rd, Bergbron, Randburg, 1712
 Allowed dates : 2017-08-01 to 2020-08-01
 Allowed times : 00:00:00 to 00:00:00
 Distance : Calculating...

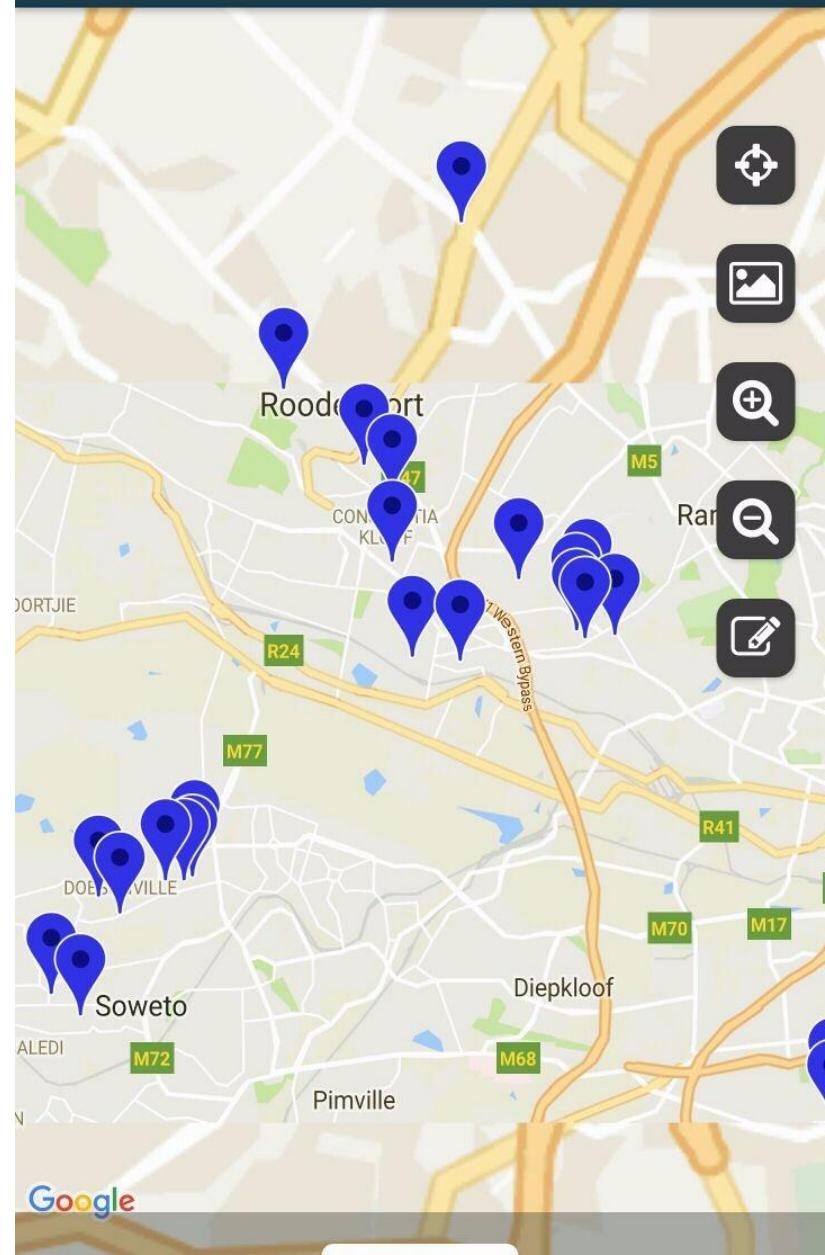
Appointment #: 565926
 Survey #: Return to do FC
 Address: 65 Newlands Rd, Newlands, Randburg, 20
 Allowed dates : 2017-08-01 to 2020-08-01
 Allowed times : 00:00:00 to 00:00:00
 Distance : Calculating...

Appointment #: 673394
 Survey #: Return to do QoL last chance
 Address: 2196 Dondola St, Zola, Soweto, 1878, Sol
 Allowed dates : 2017-08-01 to 2020-08-01
 Allowed times : 00:00:00 to 00:00:00
 Distance : Calculating...

Appointment #: 673395
 Survey #: Return to do FC
 Address: Thebevapelo St. Tladi. Soweto. 1868. Sou



Survey - GCRO QoL



SID#15929 - For target ID TID#2047547, GTI ID GID#

approved

ion

a Ave
Gauteng
Google Maps



Groups
at Groups
Surveys
Events
Survey Sites

Issues

Name

Dur

Nickey Janse van Rensburg

Survey Responses by Interaction

Interaction	Survey Name	Submitted By	Date Submitted	Date Updated	Appointment Date and Time	Duration
✓ II#127393						
	GCRO QoL	Thabelo mudau	2017-11-03 17:38:10	2017-11-29 06:47:47		43.437s
	Adults at dwelling unit	Thabelo mudau	2017-11-03 17:38:11	2017-11-29 06:47:50		2m 54.152s
	Scheduling with	Thabelo mudau	2017-11-03 17:38:12	2017-11-29 06:47:53		11.632s
	Consent	Thabelo mudau	2017-11-03 17:38:41	2017-11-29 06:49:10		36.326s
	Fieldworker observation	Thabelo mudau	2017-11-03 17:38:13	2017-11-29 06:47:55		40.413s
	1. Dwelling & services I	Thabelo mudau	2017-11-03 17:38:14	2017-11-29 06:47:56		6m 51.204s
	1. Dwelling & services II	Thabelo mudau	2017-11-03 17:38:15	2017-11-29 06:47:59		7.384s
	1. Dwelling & services IV	Thabelo mudau	2017-11-03 17:38:16	2017-11-29 06:48:01		1m 32.756s
	2. Satisfaction with services	Thabelo mudau	2017-11-03 17:38:17	2017-11-29 06:48:07		28.24s
	3. Migration	Thabelo mudau	2017-11-03 17:38:19	2017-11-29 06:48:13		1m 51.034s
	4. Neighbourhood	Thabelo mudau	2017-11-03 17:38:20	2017-11-29 06:48:16		48.884s

Satellite



Issues

Name	Created By	Level
Duration not valid	Jonathan Claassens	High
Location Distance Error	Jonathan Claassens	High
Selected Adult Gender Mismatch	Jonathan Claassens	High
Permission Granter not Selected Adult	Jonathan Claassens	Low



Enterprise and Supplier development

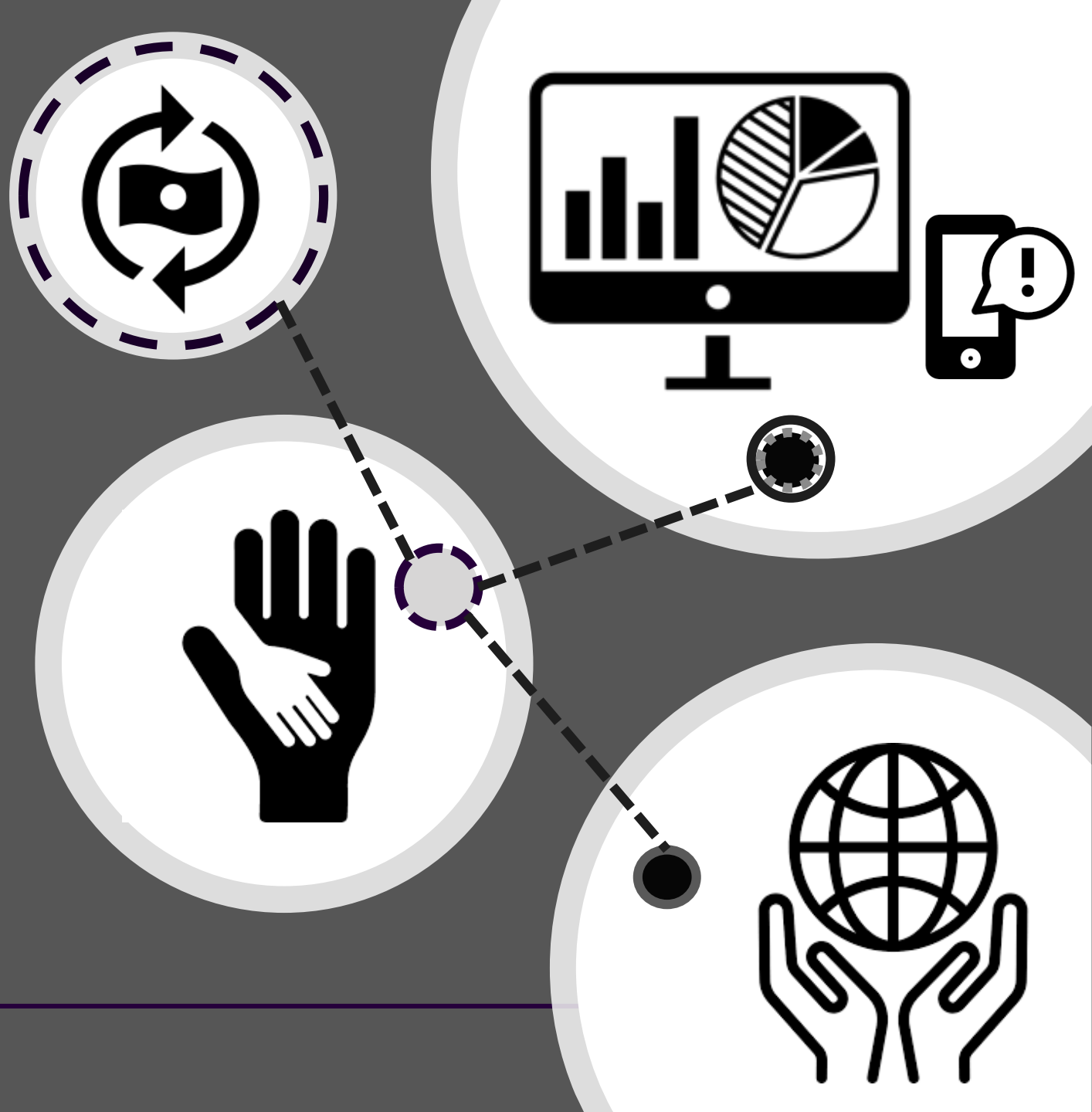
- Targeted, focused support enabling data driven decision making
- Supply chain development and vetting linked to Projects which creates job opportunities
- Supply centric, matching (skills & services) which enables strategic sourcing
- Identifying opportunities for unemployed youth to develop supply chains in partnership with CEO initiative and YES for Youth
- Supporting capacitation through machine and blended learning to support online skills development





Development Projects

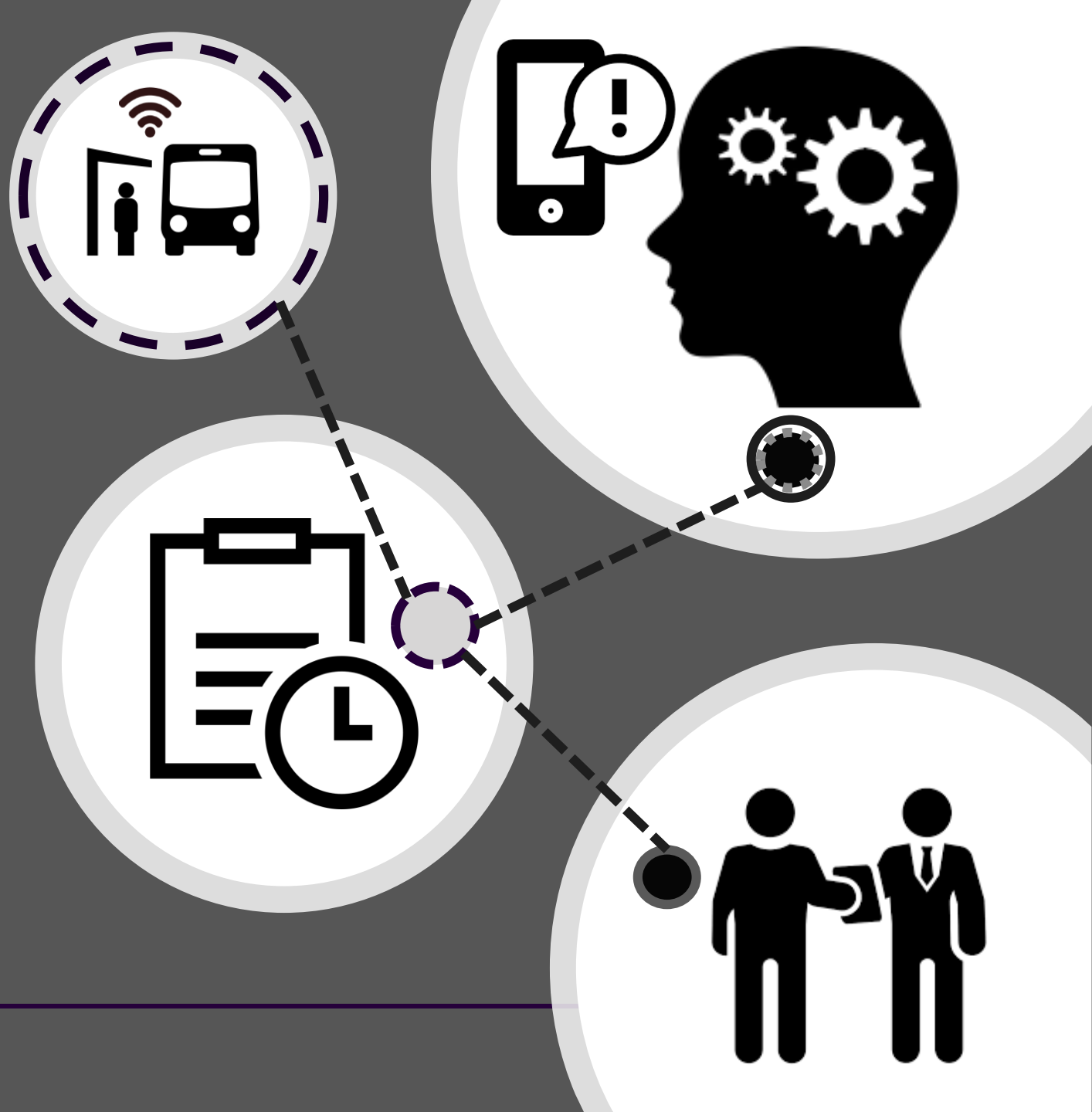
- Data driven decision making
- Auditable interventions
- Evidence based reporting
- Longitudinal impact monitoring and tracking of development projects
- Digital community enablement and active citizenship

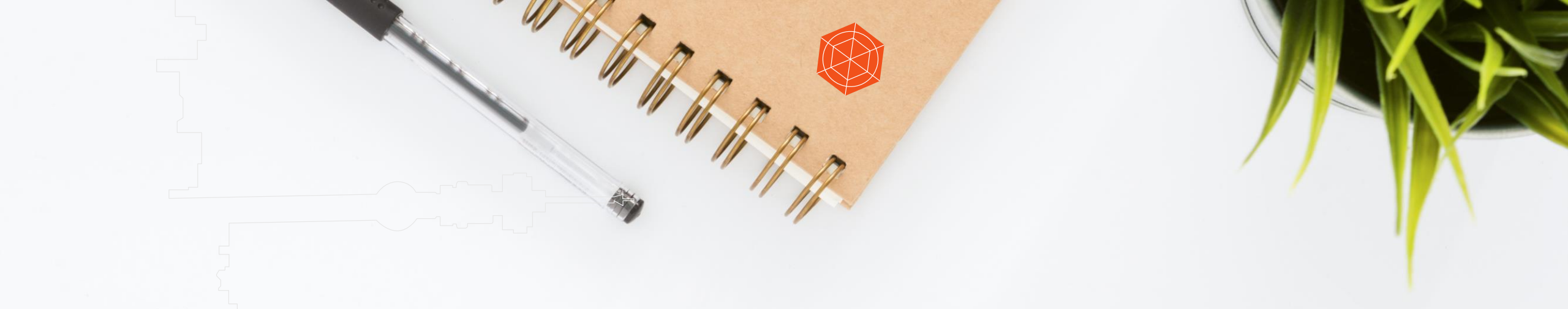




Job seeker support

- GIS database matching employers/enterprises to job seekers
- Gig-economy skills development and opportunities
- Payment engine to pay as you earn
- Practical support for job seekers
- On the job, online training and evaluation
- Meta-data and rating systems





For further information contact

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