

SMART CITY NELSON MANDELA BAY

“STARTING SMALL IN A BIG WAY”



THE FIRST CONVERSATION

27 MARCH 2017

PROPELLA BUSINESS INCUBATOR

1. WHAT IS A SMART CITY?

“The World Economic Forum have warned that leaders have five-years to make a meaningful shift to prepare business and employees for the digital economy... The starting point is to build collaborative relationships with customers, the community and the supply chain to encourage small innovations in the digital economy that make a big difference.”¹

It is within this context that the Nelson Mandela Bay SMART CITY initiative has been proposed. The Nelson Mandela Bay SMART CITY initiative seeks to develop a smart city in Nelson Mandela Bay based on a partnership approach, to address social and economic challenges prevalent in Nelson Mandela Bay.

While there are varied definitions of what a smart city is, essentially the smart city concept is about addressing the current challenges of citizens of a city, using ICT (information and communication technology) enabled infrastructure, particularly as it is applied to the economy, mobility and the environment (including safety and security). The backbone of a smart city is access to and utilisation of data.



¹ Hancock, C. Time ripe to adopt smart city concept. [The Herald](#), 10 February 2017

The objective of a smart city is sustainable development that results in improved quality of life and well being of all citizens. Therefore, the role of the citizen both in identifying / conceptualising and configuring solutions is at the heart of the smart city concept. The smart city concept provides an opportunity for both established and emerging entrepreneurs to develop solutions to identified challenges.

The Smart city approach requires the public and private sectors to come together with communities, including Non-Governmental Organisations, to define the developmental challenges of the region and to develop smart (i.e. digitally-based) effective solutions to these challenges.

2. THE FIRST CONVERSATION

To this end, 50 representatives of civil society, Non-Governmental Organisations, local government, government agencies, the University and other academic institutions and organised business actively participated in *The First Conversation*. Propella Business Incubator hosted this conversation in partnership with the Kamva Leadership Institute and the Regional Innovation Forum, at Propella Business Incubator in Humeral, Port Elizabeth, on 27 March 2017.

Robust dialogue was the order of the day, as participants were eager to share ideas to shape the Nelson Mandela Bay SMART CITY concept, guided by four keys questions:

- What current strategies and projects are in place or planned in Nelson Mandela Bay that contribute to a SMART CITY?
- What target groups will be involved and / or benefit?
- Dream with a Deadline: What does Nelson Mandela Bay as a SMART CITY look like and by when?
- What contribution can you make to the SMART CITY movement?

A recurring notion that emanated from these conversations is the idea of “starting small in a big way”. It is this catch phrase that may be used to summarise the overarching dialogue of the day: participants pledged to begin to communicate and work together to start the development of a SMART CITY.

3. THE QUESTIONS

A summary of the conversations, in response to the four questions posed, is presented below.

3.1 What current strategies and projects are in place or planned in Nelson Mandela Bay that contribute to a SMART CITY?

Participants identified the following projects (planned or existing) that should form part of the SMART CITY Nelson Mandela Bay initiative:

- Propella Business Incubator, focusing on the development and commercialisation of smart technologies

- Regional Innovation Forum that seeks to stimulate, promote and support innovation in the Nelson Mandela Bay region
- SMART CITY ISO standards already developed (ISO/TS 37151) and available to measure SMART CITY success and progress
- Transnet is positioning itself as a smart port
- Project Nelson Mandela Bay’s Connected City working group has developed a *Know Your City* app that provides information about Nelson Mandela Bay (developed by the Code Group) to tourists and citizens
- Project Nelson Mandela Bay Smart City working group concentrates on the educational opportunities in the city
- A Municipal Area Network is required to share data
- Smart parking (specifically applied to disabled parking) developed and to be commercially available soon
- Full and free WiFi is required for the whole of Nelson Mandela Bay
- iGEM is successfully implemented in the city that includes 51 children across all phases including a two-year maths, science and leadership education programme
- Ready For Life already has established smart education programmes in the city
- IDM Solutions provides smart metering, energy measurement and verification and resource efficiency services
- Nelson Mandela Metropolitan University provides free WiFi on all campuses
- Several wind farms in the region

- Innovative energy generation and measurement, e.g. net (smart) metering through the Small Embedded Generation Programme of the municipality that currently employs a Time of Use tariff that is the only programme of its kind in the country
- Renewable energy trading enabled through wheeling of excess energy through the municipal electrical grid
- Project Nomola is a crime prevention programme
- Solar water heating systems rolled out in townships
- University has developed a solar car and is working on electric vehicles currently
- University has developed a crime monitoring service that predicts where crime is likely to happen based on an algorithm
- Free WiFi to certain settlements, e.g. Walmer Township

It is evident from this list, which is not exhaustive, that already there is much happening in Nelson Mandela Bay, but that often programmes and / or research and development are undertaken in isolation. There is a definite need to **connect** and **collaborate** through **consistent communication**.



3.2 Which target groups will be involved and / or benefit?

The following target groups were identified as being involved and / or benefitting from developing Nelson Mandela Bay as a SMART CITY:

- Local government (Nelson Mandela Bay Municipality)
- Business (including high energy users)
- Communities
- Academia
- Tourists
- The “younger generation” must be involved in the initiative
- SMART technologies developed to improve specific sectors: agriculture (food security and food technology) energy, healthcare (e-health and mobile clinics that may access stored patient data), governance, education, policing, waste management and logistics

3.3 Dream with A Deadline: What does Nelson Mandela Bay as a SMART CITY look like and by when?

The realisation of the Nelson Mandela Bay SMART CITY dream is envisaged as:

- An institution to drive the SMART CITY initiative must be identified within three (3) months of the first conversation
- Identification of other initiatives that should be included in the SMART CITY initiative
- Identification funding opportunities
- One consolidated guiding plan that all participants buy into and work towards
- Between one and three years to provide free WiFi to Nelson Mandela Bay and develop a Municipal Area Network
- Functional SMART CITY app developed
- Establishment of an active data centre that collects, analyses and processes big data
- Smart City Media Drive
- Effective public transport system
- E-governance
- Data transfer costs are significantly reduced, as SMART CITY is reliant on exchange of big data
- Expansion of Project Nelson Mandela Bay's Connected City app to be established as the tourism information post

Based on the dialogue, participants envisage a SMART CITY where there is the enabling infrastructure, e.g. free WiFi in the city to enable access by all citizens and tourists to ICT-based services. Data is centrally collected, analysed and used to make key decisions that result in a healthier and safer environment for where citizens can access business and social opportunities and tourists can enjoy an informed visit to the city.

3.4 What contribution can you make to the SMART CITY movement?

The potential to develop Nelson Mandela Bay as a SMART CITY will be dependent on the co-operation of prospective partners to co-create smart solutions to challenges in the city. Therefore, it is imperative that prospective partners commit to working together to develop smart solutions that will result in sustainable development that benefits all communities in the city and ultimately enables a better quality of life for all citizens.



Participants pledged the following commitments to the SMART CITY initiative:

- Co-ordination of efforts and integrated planning
- Propella Business Incubator can spearhead technology commercialisation
- Regional Innovation Forum can provide initial co-ordination support, dependent on funding from the Department of Science and Technology
- Students are critical to the development of apps to enable SMART CITY
- Improved collaboration by all participants
- Business is able to share and analyse data (within the parameters of the POPI Act)

- Explore crowd funding options, including nominal contribution by participants at SMART CITY events
- Media strategy required to raise awareness of the SMART CITY initiative and to inform people about how they can be involved in improving their own lives

4. WHAT HAPPENS NEXT?

There is a definite need, as expressed by participants, to **connect** and **collaborate** through **consistent communication**. The next steps in continuing collaboration and communication in the SMART CITY initiative are:

i) Define the SMART CITY **collective community**

What: Develop a SMART CITY website page (or sub-page) that provides a portal for people to register to participate in the Nelson Mandela Bay SMART CITY initiative. This, together with participants in the first conversation, will be used to develop a database of the collective community

When: April 2017

Who: Regional Innovation Forum (RIF)

ii) Host the **second conversation**

What: Host the second conversation to provide feedback from the first conversation and to elicit input needed to develop a SMART CITY Nelson Mandela Bay strategy.

When: April 2017

Who: RIF, in partnership with Propella Business Incubator and Kamva Leadership Institute to host and all participants in the first conversation, and more, invited to participate.

iii) Develop a **SMART CITY strategy**

What: Develop a SMART CITY strategy, including hosting a strategic planning session

When: Host strategic planning session in May and draft strategy to be developed by June 2017

Who: Regional Innovation Forum, in partnership with Propella Business Incubator and Kamva Leadership Institute and representatives of civil society, government, academia and business.

iv) **Communicate** the SMART CITY strategy and activities

What: Develop and implement a communication strategy to effectively communicate the SMART CITY vision, opportunities for citizens to be involved and exciting SMART CITY developments. This will include a social media strategy including Facebook, Twitter and LinkedIn.

When: Strategy developed by end June 2017 and on going.

Who: Kamva Leadership Institute