City of Cape Town Digital City Strategy

The next phase of our Smart City Journey

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Making progress possible. Together.
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i. background
The nature of information and communication technology

→ **transformative** changing the way we work, play and live
→ **dynamic** characterised by rapid change and evolution
→ **pervasive** touches everything & is “everybody’s business”

“interconnected systems, people and processes continue to feed of each other to keep shifting the frontier of the possible”
The City of Cape Town’s Smart City Journey

Key focus: Transforming municipal service delivery through business process automation strategy

Key focus: Digital infrastructure strategy

Key focus: Making progress possible through active, open engagement

Unicity established
Smart City Strategy

SAR ERP Phase 1
SmartCape launch

SAP ERP Phase 2

Citizen Portal launched

C3 notification system

Broadband fibre roll-out commences

First online transactions via e-service portal

Broadband fibre phase 1 completed

Open Data Portal launched

Launch of “Digital Gateway to Africa”

Digital City Work Group

Oct 2002
Dec 2002
June 2003
Aug 2003
Sept 2003

April 2007
July 2008
July 2009
2012
June 2012
March 2013
July 2013
June 2014
Dec 2014
Feb 2015

2000
Dec 2000
July 2002
Oct 2002
Dec 2002
June 2003

ICT Achiever’s Award: e-Government

Computer World Honors 21 Century Achievement Award (for SAP-ERP programme)

Bill and Melinda Gates Access to Learning Award for SmartCape

City receives ESRI Special Achievement in GIS award

2012
2013
2014
2015
Themes for smart city/ digital city interventions in city-governments around the world:

- **Harnessing technology**: the use of infrastructures (especially ICT) to improve and transform life and work within a city.

- **Unleashing the potential of citizens**: considering the role of people, education, learning and knowledge – as key drivers of a Digital City.

- **Institutional optimisation**: relating to the use of ICT in governance, service delivery and interaction among stakeholders.

- **Growing the digital economy**: focussed on attracting entrepreneurs and growing entrepreneurial businesses to stimulate economic growth and create jobs.

“*We need to harness London’s technical prowess to help the capital work even better as a city, support its growth and help our infrastructure and services to be more responsive to Londoners and business needs.*”

Mayor of London Boris Johnson

“The future of the global economy, in every industry, is tied to technology - and the future for cities that recognize this fact is very bright.”

Former Mayor of New York, Michael Bloomberg
Purpose of the Digital City Strategy

1. Identifying broad **focus areas** for the City’s approach to digital competitiveness;
2. Identifying the City’s **objectives** in relation to each focus areas;
3. Identifying the short and longer term **initiatives** that could support those objectives;
4. Developing an **implementation framework** that identifies primary and supporting role-players who will be responsible for implementation; and
5. Identifying **indicators** to assess the impact of the Strategy.
ii. our strategic priorities
Strategic alignment

• To be a prosperous city that creates an enabling environment for shared economic growth and development
• To achieve effective and equitable service delivery
• To serve the citizens of Cape Town as a well-governed and effectively run administration

“to facilitate competition and private investment, to ensure effective regulation where market failure is apparent, and to intervene directly to meet specific social goals.”

National Development Plan on the role of the state in the ICT sector

Supporting the Transitions in OneCape 2040

**Working Cape**  
(Economic Access Transition)

• Towards an Innovation driven economy with low barriers to entry with high productivity and entrepreneurship rates

**Connecting Cape**  
(Cultural Transition)

• Towards high level of local connectivity and global market fluency

**Educating Cape**  
(Knowledge Transition)

• Towards high quality education for all plus high innovation capacity

**Living Cape**  
(Settlement Transition)

• Towards healthy, accessible, liveable, multi-opportunity communities
iii. the context
Access to ICT

South Africa has the third largest number of internet users in Africa, with 24.9 million citizens being able to access the internet.

Africa: Top 10 Internet countries, Q2 2014

- Nigeria (70.3 millions)
- Egypt (46.2 millions)
- South Africa (24.9 millions)
- Kenya (21.3 millions)
- Morocco (20.2 millions)
- Madagascar (17.3 millions)
- Malawi (12.2 millions)
- Mali (11.9 millions)
- Sudan (9.3 millions)
- Tanzania (7.6 millions)

Household internet access

The Western Cape is the best performing South African province in terms of the percentage of households who have internet access (62.1%).

Source: (Graph) African Ideas); (Data) Statistics South Africa – General Household Survey, 2014.
Technology hubs

South Africa has the highest number of technology hubs in Africa.

Of the 17 technology hubs in South Africa identified/recognised in the World Bank’s iHub Research, five are located in Cape Town, and four have offices or regular events in Cape Town.

- Bandwith Barn
- Umbono
- Silicon Cape
- Impact Amplifier
- Codebridget
- Angel Hub
- Eastern Cape IT Initiative
- Smart Xchange
- CodedInBraam
- Innovation by Design
- Soft Start Technology
- The House 4 Hack
- mLab Southern Africa
- Start-up Garage
- The Hub
- Rlabs
- IvoTech Incubator
The MICT sector in Cape Town

• ICT sector is well established, sophisticated and among the largest and most advanced in Africa.

• City’s has historical strength in advertising, publishing and film

• The Western Cape is a relatively large employer of ICT, media and electronic skills, with 20% of medium-sized employers and 24% of large MICT sector employers located in this province.

• South Africa’s top e-commerce sites in 2014 (Kalahari.com, takealot.com, Groupon and Zando) are all based in Cape Town.

• These and other “magnet companies” in this sector (e.g. Media 24) provide credibility to the MICT sector in Cape Town, contribute to building a skills pool for the sector, and serve to grow future tech-industry entrepreneurs.

In 2013, approximately 1619 businesses in the Western Cape classified themselves as being part of the MICT sector.
iv. four pillars of the digital city strategy
Where are we focussing our efforts?

**DIGITAL GOVERNMENT**
- driving transparency,
- enhancing service delivery and
- promoting citizen engagement through ICT

**DIGITAL INCLUSION**
- closing the digital divide by promoting
digital access, improving digital skills and driving
digital initiatives that enhance quality of life

**DIGITAL ECONOMY**
- creating an enabling environment for the
growth of tech-enabled enterprises and maximizing its
job creation potential

**DIGITAL INFRASTRUCTURE**
- ICT infrastructure roll-out and using
digital solutions to enhance the
effectiveness of critical City infrastructure
**Vision**

The City of Cape Town’s services and processes are “digital by default” and the organisation is harnessing digital tools to stimulate innovation in service delivery.

This makes it possible for the City to reduce costs (“do more with less”) and improve the level and quality of service delivery.

The City of Cape Town is also using digital tools to enhance the quality of the organisation’s engagement with residents. This enables the City to be a caring and responsive government.
driving transparency, enhancing service delivery and promoting citizen engagement through ICT

1. Optimise the City's business processes through ICT
2. Simplify citizen and business interaction with government
3. Create a culture of ICT enabled innovation
4. Enhance evidence-based decision-making by the City
Digital government

- Optimise business processes
- Simplify interaction with citizens and business
- Create a culture of innovation
- Enhance evidence-based decision-making

→ Making the City’s intranet site a useful and navigable portal to share and access information.
→ Continuing to drive and optimise the digital procurement initiative.
→ Maintaining a strong focus on corporate programmes using ICT to optimise business processes.

E.g. allow vendors to submit and track invoices online.
Digital government

- **Optimise business processes**
- **Simplify interaction with citizens and business**
- **Create a culture of innovation**
- **Enhance evidence-based decision-making**

- **maximise online transactions**
  - Designing the City’s website from a user-centric perspective to make it a true “citizen’s portal”.
  - Maximising the number of permit, license and service applications that can be accessed and processed electronically.
  - Developing public participation processes that optimise the use of digital channels to get input on City policies and programmes.
  - Maintaining transparency through an efficient open data system.
  - Using online platforms to mobilise business and resident support for the City’s services and developmental programmes.

- **allow entrepreneurs open access to City data**
Digital government

Optimise business processes
Simplify interaction with citizens and business
Create a culture of innovation
Enhance evidence-based decision-making

City innovation forum exploring solutions to key service challenges

Establishing an internal platform for engagement around ICT-enabled innovation.
Recognising excellence in ICT-enabled innovation in the City of Cape Town.
Investing in innovation in service areas that are a high priority for residents.
Lobbying for changes to national legislation and regulations which stifle local innovation.

City innovation forum exploring solutions to key service challenges

lobby national government for “exemptions” from MFMA rules for service innovations
Digital government

- Optimise business processes
- Simplify interaction with citizens and business
- Create a culture of innovation
- Enhance evidence-based decision-making

→ Establishing easily accessible and compatible data management platforms.
→ Establishing citizen-centric channels for gathering data.
→ Using both internal and external data sources effectively in an evidence-based approach to policy development.

Can we create a citizen portal that will use citizens’ locations to show them projects, policies and city events in their area and allow them to comment/engage/co-design?
Digital inclusion

Vision
The City of Cape Town is contributing to closing the digital divide by promoting digital access, improving digital skills and promoting digital initiatives that enhances quality of life.
closing the digital divide by promoting digital access, improving digital skills and driving digital initiatives that enhance quality of life

1. Enhance community-level access to digital services
2. Improve ICT skills and drive ICT usage
3. Promote and enable programmes that catalyse social transformation through ICT
Digital inclusion

- **Enhance community-level access**
  - Providing public internet access via wi-fi at City buildings and other strategic locations
  - Providing public internet access via wi-fi on MyCiTi busses
  - Continuing to expand the necessary digital infrastructure for public internet access at libraries (SmartCape)
  - Exploring options for improving access to devices that enable ICT usage.

- **Improve ICT skills and drive ICT usage**

- **Catalyse social transformation**

50 mb free wi-fi wherever you see the sign.
Digital inclusion

- Enhance community-level access
- Improve ICT skills and drive ICT usage
- Catalyse social transformation

→ Invest in ICT end-user skills

- End-user training at public libraries
- Train and deploy EPWP workers as ICT ambassadors at public wi-fi sites
- Make portable equipment available for training in areas that lack infrastructure
Digital inclusion

- Enhance community-level access
- Improve ICT skills and drive ICT usage
- Catalyse social transformation

How can we use social media to improve the speed and targeting of our disaster response?

- Using ICT and mobile channels to develop and maintain highly responsive datasets on socio-economic conditions and challenges.
- Establish digital gaming centres aimed at youth.
- Promoting private sector and community innovation in resolving City of Cape Town service challenges.
- Recognise and reward the development of tech-enabled products and services that solve significant service delivery or socio-economic challenges.

Sponsored hackathons to address identified service challenges
Digital economy

Vision
The City of Cape Town is a regional tech-hub and growth in the digital economy makes a significant contribution to job creation.
creating an enabling environment for the growth of tech-enabled enterprises and maximizing its job creation potential

1. Support early-stage entrepreneurship in the tech industry
2. Promote the City of Cape Town as the leading Digital City in Africa
3. Build a strong human capital base for the ICT sector
4. Drive industry growth through improved online service provision
5. Support the productivity and competitiveness of business
6. Create an enabling regulatory environment for the tech industry
7. Promote a culture of innovation
Digital economy

Early stage entrepreneurship
“Leading Digital City”
Build a human capital base
Drive demand
Support productivity
Regulatory environment
Culture of innovation

→ Providing appropriate support for tech-industry incubators.
→ Developing an appropriate model for the City’s direct role in providing seed funding for tech start-ups.
→ Creating an enabling environment for the venture capital industry

“pitching sessions”
Support events that bring together tech entrepreneurs and venture capitalists
Digital economy

Early stage entrepreneurship

“Leading Digital City”

Build a human capital base

Drive demand

Support productivity

Regulatory environment

Culture of innovation

- Enhancing the investment experience of magnet companies.
- Facilitating engagement between role-players in the ICT sector.
- Providing access to economic/market intelligence.
- Investigating the feasibility and potential benefits of a tech-precinct in the City of Cape Town.
- Promote Cape Town as an investment hub for MICT

Could a tech precinct be the next focal area for our investment incentive programme?

→ what can the city do to enhance the investment experience of magnet companies?

→ sharing what we know
Digital economy

Early stage entrepreneurship
“Leading Digital City”

Build a human capital base
Drive demand
Support productivity
Regulatory environment
Culture of innovation

Replicate successes of Java training programme and Animation Academy

→ Supporting and promoting ICT skills initiatives.
→ Partnering with tertiary institutions and the private sector to grow the pool of ICT professionals in Cape Town.
→ Investing in ICT skills for City of Cape Town staff.

Leverage the City’s power as an ICT employer
Digital economy

- Early stage entrepreneurship
- “Leading Digital City”
- Build a human capital base
- Drive demand
- Support productivity
- Regulatory environment
- Culture of innovation

More government services online

= Higher demand for internet services

= Growing market

= Business case for infrastructure and service expansion
Digital economy

- Early stage entrepreneurship
- "Leading Digital City"
- Build a human capital base
- Drive demand
- Support productivity
- Regulatory environment
- Culture of innovation

Create a collaborative space for business where success stories can be shared ➔ Encourage the adoption/ optimal use of ICT

Should this be a key focus of our small business support programme?
Digital economy

- Early stage entrepreneurship
- “Leading Digital City”
- Build a human capital base
- Drive demand
- Support productivity
- Regulatory environment
- Culture of innovation

→ Create an enabling regulatory environment to promote economic activity – continue to cut red tape.
→ Maintain the necessary responsiveness in City policy and by-laws to accommodate new ways of doing business

be ready to respond to “disruptive” product and services
Digital economy

The City must be ready to respond to “disruptive” product and services

→ Providing support for external fora and groups working to promote ICT-enabled innovation.

→ Encouraging the use of City data for ICT innovation by external stakeholders.
Digital infrastructure

Vision
Cape Town’s pervasive digital infrastructure makes it the most connected City in Africa with the lowest telecommunication service tariffs.

The City of Cape Town also makes effective use of technology to optimise the management of and investment in other major infrastructure.

Note:
digital infrastructure is a foundational enabler of the other three pillars of the strategy.

the digital services and applications that are central to an information society, key to competitive business, and increasingly embedded in our personal and social lives could not, and would not, exist without the digital devices that we use, and the digital networks that connect them.
ICT infrastructure roll-out and using digital solutions to enhance the effectiveness of critical City infrastructure

1. Establish telecommunications infrastructure, network services and devices for use by City departments
2. Deploy telecommunications infrastructure and network services that drive down the cost of telecommunications
3. Deploy application infrastructure, systems and devices to improve service delivery efficiency and government communications
4. Encourage, facilitate and enable the deployment of digital infrastructure by the private sector
Digital infrastructure

Infrastructure, systems and devices for City use

Infrastructure and networks that drive down costs

Applications to improve services

Enable private sector infrastructure investment

→ Continued roll-out of the Broadband Infrastructure Project
→ Investment in the corporate network, telephony, video and internet Services
→ Deploying specialised network services for specific City services, including:
   — BRT
   — CCTV for the Strategic Surveillance Unit
   — Clinics (Health)
   — Libraries (via SmartCape)
   — Monitoring and management of the water reticulation System (Utilities)

using ICT to run the City better

using ICT to improve the management of scarce resources
Digital infrastructure

Infrastructure, systems and devices for City use

Infrastructure and networks that drive down costs

Applications to improve services

Enable private sector infrastructure investment

→ Providing network services for other levels of government

→ Providing telecommunications infrastructure and network services for commercial telecommunications service providers

Making City infrastructure available for private sector use

What is the best way to leverage the City’s infrastructure investment to benefit business and residents?
Digital infrastructure

Infrastructure, systems and devices for City use

Infrastructure and networks that drive down costs

Applications to improve services

Enable private sector infrastructure investment

→ Providing the data centres and application servers needed to support the City’s digital systems, applications and communications platforms

→ Strengthening the City’s web hosting capability

→ Providing the necessary infrastructure to optimise the management of and investment in prioritised City services and infrastructure (including: networked monitors, sensors, cameras, meters and switches).

Voice, video and data capability for field staff to enable more effective reporting and more efficient service responses
Digital infrastructure

- Infrastructure, systems and devices for City use
- Infrastructure and networks that drive down costs
- Applications to improve services
- Enable private sector infrastructure investment

re-engineer and streamline the wayleave process

→ Cutting the red tape that delays or inhibits the deployment of digital infrastructure by the private sector.
→ Promoting the use of the City’s digital infrastructure by the private sector.
→ Incentivising the development of digital infrastructure by the private sector.

Require all new roads and road re-development to include a shared utility duct for optic fibre.
v. measuring success
TOP 10 MEASURES OF SUCCESS

1. An increase in the percentage of City business partners are registered on the City’s portal for e-services.
2. An increase in the percentage of City services that is accessible via digital channels.
3. Evidence of service delivery improvements enabled by technology.
4. [Await Western Cape Government Benchmarking results to identify measurable indicator to be tracked as an outcome measure of digital inclusion].
5. Increase in the percentage of citizens that have access to the internet.
6. Increase in the number of MICT companies in Cape Town.
7. Increase in the contribution of the MICT sector the gross domestic product of Cape Town.
8. Greater international recognition of the technology hubs in Cape Town.
9. Increase in the size/length/coverage area of the open access metro area fibre.
10. [?]
Thank You

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