

# WCG DIGITAL GOVERNMENT PROGRAMME

**BUDGET COMMITTEE** 

2 June 2023

HR Arendse and A Mazomba



# WCG DIGITAL GOVERNMENT PROGRAMME

# The future of *Citizens' Services is changing*

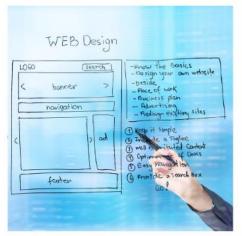
- Citizens demand that public sector meets the level of innovation in private sector services that enables convenience, speed and smartness
- Employees need tools and systems that will improve their efficiencies and effectiveness
- Political principals and departmental decision-makers need immediate, valid and accurate information to inform their decision-making and planning

# **OUR DIGITAL GOVERNMENT GOALS**

To optimise and transform existing public services and to create new public services by maximising the value of our data assets, digital technologies and people.



Digitally empowered citizens



Optimised and integrated services



Connected
Government and
Sound ICT
Govenrnance



Digitally empowered Employees



Data for better planning and decision-making

# APPROACH TO DIGITALISING SERVICES





### THROUGH DIGITAL TRANSFORMATION WE MUST:

Adopt an enterprise view to developing solutions

Develop Digital Service Chains by considering citizen service journeys and high value digital opportunities

Explore "Invisible Services" – those services that citizens are not even aware of

Digitalise services identified by our citizens/users

Digitalise service through applying co-design principles

Build public trust and confidence which will promote reuse of and sharing of information and data

Maximise value from technology investments.

# **Our Design Principles**

# **DESIGN FOR ONE**

### **One Touch**

We will design for the least number of touch point by citizens/ businesses

We will integrate as many of the service chains as possible across local, provincial and national governmental spheres

### **One Citizen**

**Tell us once:** we will request citizens/ businesses to provide their information once and we will reuse across all services

All government departments will treat citizens/business as one and the same citizen/businesses

### **One Government**

Our citizens/businesses will interact with one government, irrespective of the service or the sphere of government rendering it

Our citizens/businesses will access all digital services from one platform using multiple channels

# Single Citizen Form linked to Life Course Approach

### 1st Thousand days

Birth
Birth Registration
Immunisation
Social Grant
Health Care

### 0-5 years old

ECD
Immunisations
School Admission
Social Grant
Health Care
Library Membership

### 6-10 Years

School Admission
Schooling
Social Grant
Health Care

### 11-18 Years

Schooling
School Bursary
High School Admission
Social Grant
Health Care
Tertiary Educ. Admission
Tertiary Educ. Bursary
Learners' License
Identity Registration
Passport
Internship Application

### 19+ Years Old

**Tertiary Education** 

Bursary Drivers' License Drivers' License renewal Internship **Employment** Social Grant Marriage Registration Home Ownership Title Deed Registration Building Plans Registr. Municipal Home Rental Municipal Utilities Pmnt Fine Payment Vehicle Registration Vehicle License Renewal

**Voter Registration** 

Pay Taxes

Claim UIF

### 19+ Years Old

Pension
Old age care
Accommodation

### **Business**

Business Registration
Liquor License
Start-up Capital
SMME Support
Export/Import
Halaal certification
Events Permit
Abnormal Load Permit
Submit Bids
Tour Guide Registration







- A critical enabler of modernising public services
- Provides reliable authentication and enables a range of services via web or mobile applications
- Has the potential to generate significant economic and social benefits, including increased financial, social and political inclusion
- Fosters integration between systems/ services
- Enhances administrative efficiency
- Streamlines registration and authentication on the part of the citizen
- Streamlines relations between government and private sector

# Citizen Master Data

Name Surname Maiden Name Gender **Identity Number** Citizen Digital ID **Nationality** Date of Birth Marital Status **Employment Status** Address City Municipality Province e-mail Address Telephone Number Cell Phone Number



# STRATEGIC PARTNERSHIPS

WCG must collaborate with government, private sector and NPO entities to realise true integrated services to our citizens

Local and national government integration of systems

WCG playing a more prominent role at national level WCG to develop apps for adoption at national level

Master Data sharing at national (central) level – to create the single instance of the citizens

Collaborating with DCDT and SITA on 4IR Initiatives

Exploring use cases for AI projects
Developing policy on Crypto Currency
Guardrails for ChatCPT

Partnering with Provincial Departments on initiatives of mutual interest

Meeting between Eastern Cape, Northern Cape and SITA Scheduled for June 2023

Engaging NPOs, Businesses and Educational Institutions to collaborate on WCG initiatives

Partnering with Tertiary Institutions, training academies and IT Industry to develop strong local pool of young Cybersecurity and Cloud Technologies experts

# **Phase 1: Optimise**

# Phase 2: Integrate

# **Phase 3: Transform**

### Year 1

Leveraging and integrating

### Year 2 - 3

Expanding digital Services, extend capabilities and implement new platforms/capabilities

### Year 4-5

Mature Capabilities and platforms and ensure value realisation

### **Approach**

Intent

Integrate required solutions with existing platforms and Capabilities

Optimise and expand solutions and transition to new platforms and capabilities

Transform key citizenfocused solutions (digital first)

# Digital Deliverables

Integrate Provincial CRM
Rationalise WCG Contact
Numbers
Modernise WCG Digital
Experience Platform
Expand portfolio of Services
accessible via WCG mobile app
Unified Communication
Toolset for WCG employees

Single Citizen ID
Entrench use of self-service
solutions and online booking
Application Portfolio
Optimisation
Comprehensive consolidated
WCG Citizen and Stakeholder

database

Single Citizen Form (Life Course
Approach)
Omni-channel Service Delivery
Proactive service provision based
on credible data
Real-time data and evidencebased decision-making
Pervasive connectivity that
includes access to digital content
by learners outside of school

DOTP Ombudsman (Complaints System)

DOA - Land Use Management System (Electronic Filing)

DOA - Inventory Asset Database

DOCS - Safety and Security Resilience Scorecard (SSRS)

**DEA&DP Site Inspection** 

DEA&DP S24G Online System

DOI - Digitisation of the Individual Subsidy Process

DOI - Enquiry Logging System

DOI - Digital Application for Pre-emptive Rights

DCAS - Cultural Initiation process digital information service

DCAS- Provincial Sport Online Funding Application

# KEY NEW/ ENHANCED DIGITAL SERVICES

DEDAT-Online Funding: Tourism Export Competitive Enhancement Programme

DEDAT-Online Funding Application System -Booster Fund

DSD - NPO: Maintain Enhance and Support

DOTP- Foundation Digital Experience Platform (FDXP)

DOH - Comprehensive Utilisation of Theatres (CUT)

DOH - Virtual Healthcare Services: Telemedicine NSH & WFH

DOH - eCCR

DSD - Complaints Register

DCAS - Archives Virtual Tours

PT Customer Relationship Management (CRM)



# **KEY PIPELINE PROJECTS**

- Broadband 2.0
- New Digital Experience Platform (DXP)
- New Mobile Application Platform for WCG
- Install digital access facilities at WCG service points
- Establish Cape Access Mobile Service Delivery facilities
- Strengthen the Telehealth services within the Department of Health
- Expand connectivity access to other departments housed in Thusong Centres







# WCG Digital Government Programmes



### **OBJECTIVES**

- Citizens have easy access to information and services
- High level of awareness of services and standards amongst citizens
- Access to services is affordable
- Citizens are digitally skilled to access services
- Digital services are accessible to the disabled

# Digitally Empowered Citizens



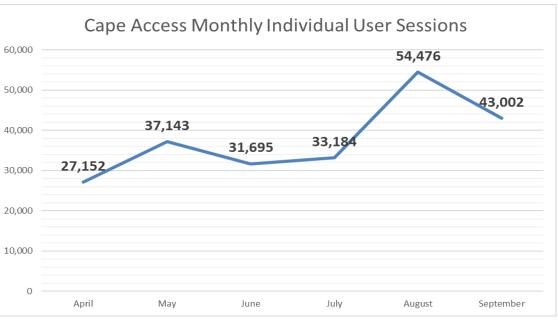


- 6Gb Per person per month free data
- An average of 250,000 users per months
- An average aver 2Gb of data per person per month
- Total volumes of data downloaded in last month:
   1Tb









- 74 Cape Access e-centres across the province equipped with 12 – 24 computers for public use
- Citizens have 45 minutes per day free access
- Informal and Accredited ICT training
- Average of 37,500 user sessions per month
- Utilised by learners, tertiary students and businesses

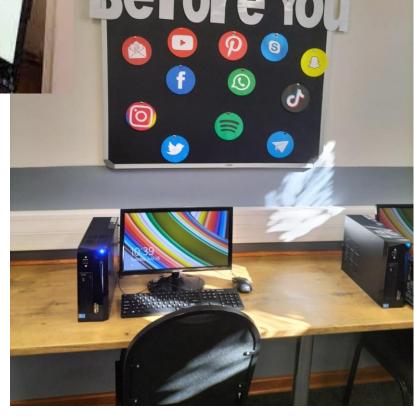


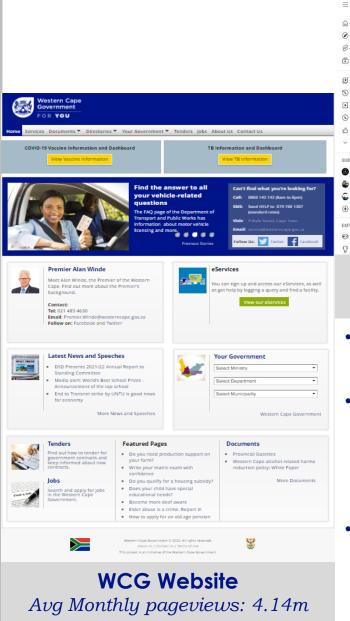
Cape Access Programme





- Dept of Cultural affairs and Sport equipped 260 libraries with 4 – 8 computers
- A total of 685,525 users registered across the province
- Provides unassisted access to ICTs in almost all our rural communities
- In some communities there will be both RLCP and Cape Access facilities







westerncapegov

x Q J

ch floral kingdom, pristine beaches, a globally renowned win

Average monthly video views: 13,687

- WCG operates 14 citizen contact channels
   15<sup>th</sup> channel WCED Chatbot in POC
- This include our WCG Portal, Social Media channels such as Facebook, YouTube and Twitter as well as the traditional channels email, telephone and SMS
- On average we experience 30 million contacts per month, with the WCG Portal and our Facebook page attracting the most pageviews/impressions



Watch Late

Rud Smail Motor Car



**Facebook** 

Average monthly impressions: 26,45m

### **OBJECTIVES**

- Digitalisation/ automation of citizen-facing services
- Back-end processes are mapped and roles and responsibilities between frontoffice and back- office clearly defined
- Digital transformation of prioritised citizen-facing information and services

# Optimised and Integrated Services







- WCG App with scalable menu architecture
- Enables cross departmental services
- Single Authentication
- Single set of Master Data
- Auto-populates applications for any new service
- Integrates with CRM Solution accessible via WCG Portal

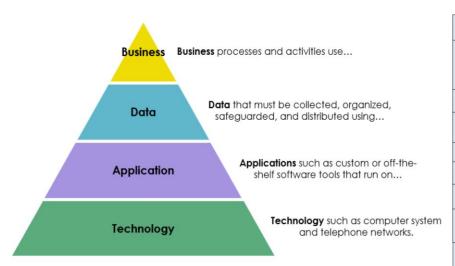


The Western Cape Department of Human Settlements' mobile housing app has seen

The app, which was developed during the 2020/21 financial period, was used by as many

great success in bringing residents closer to housing opportunities.

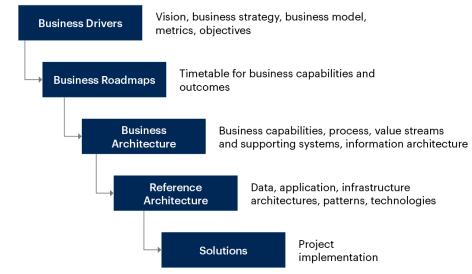
as 2 100 individuals.



SITA Profile Desktops					Tablets				
311A Frome	PC3	PC4	PC_AIO2	Note1	Note3	Note4	Note5	Note_WS	Note_Tab
Item Name	Midrange PC	Advanced PC	Midrange AIO PC	Chromebook / Mobile thin client / Netbook	Thin and light notebook	Midrange business notebook	Advanced business laptop	Mobile technical workstation	Convertible / 2- in-1 laptop
Platform	X64 8-core	X64 8-core	X648-core	Entry-level 2- core	X64 4-core	X64 4-core	X64 4-core	X64 8-core	X64 4-core
CPU	10g i3	10g i5	10g i3	AMD / ARM / Intel 1GHz	10g i5	10g i3	10g i3	10g i7	10g i5
Memory	8GB DDR-4	8GB DDR-4	8GB DDR-4	4GB	8GB DDR-4	8GB DDR-4	16GB DDR-4	16GB DDR-4	8GB DDR-4
Disk	240GB SSD	240GB SSD	240GB SSD	32GB	240GB SSD	240GB SSD	240GB SSD	480GB NVMe, RAID support	240GB SSD
Video adaptor	Integrated	Integrated	Integrated	Integrated	Integrated	Integrated	Discrete Pro, OpenGL	Discrete Pro, OpenGL	Integrated
Connectivity	GigE	GigE	GigE	WiFi 5, 100BaseT pref, BT 4	WiFi 6, Gigabit, BT 5, WWAN upgr.	WiFi 6, Gigabit, BT 5, WWAN upgr.	WiFi 6, Gigabit, BT 5, WWAN upgr.	WiFi 6, Gigabit, BT 5, WWAN upgr.	WiFi 6, Gigabit, BT 5, WWAN upgr.
Screen Size	21+" LCD, 90+ ppi, anti-glare	23+" LCD, 90+ ppi, anti-glare	23+"LCD, 90+ ppi, anti-glare	10"+ LCD, 100+ ppi	12-14" LCD, 110+ ppi, anti- glare	14"+ LCD, 120+ ppi, anti-glare	14"+ LCD, 130+ ppi, anti-glare	11"+ multi- touch LCD, 110+ ppi	14"+ LCD, 130+ ppi, anti-glare

- Architecture services responsible for enterprise, systems, security and technology designs
- Ensures strategic alignment, integration and interoperability of solutions
- EAB approves ICT standards for the WCG
  - Ensures the compliance to the relevant prescripts (i.to. legislation, policies, principles, best practice and standards).
  - Ensuring optimal Total Cost of Ownership and efficient utilisation of WCG financial resources

### **Enterprise and Reference Architectures**



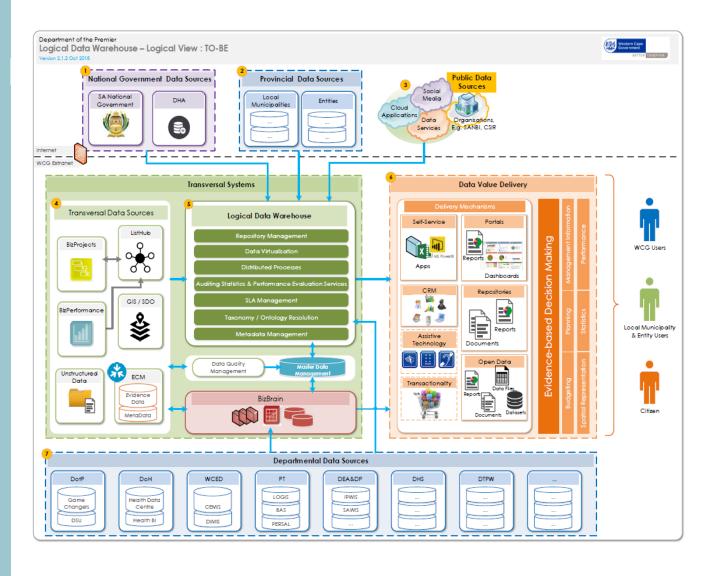
Source: Gartner

Impact	Strategy	2022		2023		2024				
Add	Planned/In Dev	21		5%	16		4%	0		0%
	Maintain	98	22%		103	22%		77	17%	17%
Кеер	Retain	4	1%	26%	4	1%	1% 24%		0%	
	Sustain / Tolerate	13	3%		4	1%		1	0%	
	Enhance / Invest	30	7%		24	5%	5%		2%	
Change	Replace/Modernise	2	0%	7%	0	0%	4%	0	0%	2%
	Replatform	2	0%		1	0%		0	0%	
Assess	Evaluate	4		1%	3		1%	0		0%
Reduce	Retire/Discontinue	7	2%	2%	6	1%	1%	0	0%	0%
	Consolidate	0	0%	2/0	2	0%		0	0%	0,0
	Blank	269		60%	287		66%	363		81%
Net Result		+13			+8			0		

- 450+ solutions in our applications inventory
- Assessing for duplications
- Roadmap being developed for applications to determine which to keep, enhance, reduce or to migrate
- New applications assessed for duplication of functionality prior to Enterprise Architecture approval







- Data governance and specifically security thereof is critical to WCG and our citizens
- We have established significant data management capacity in the WCG
- Capabilities in place to integrate national and municipal data sources
- Technologies are in place to enable self services
- Data is shared across selected applications
- Open data Policy at final draft phase

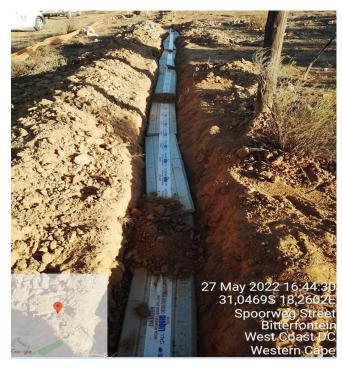


### **OBJECTIVES**

- Stable high speed broadband connectivity to all WCG government sites
- Sound level of ICT Governance maturity
- Robust and secure ICT infrastructure

# Connected Government and Sound ICT Governance





	10mbps	100mbps	1Gbps	10Gbps	Total
Corporate Sites	-	6	138	3	147
Health Facilities	11	29	245	-	285
Schools	10	82	1159	-	1251
Libraries	17	38	147 -		202
Cape Access Centres	-	5	24	-	29
Total	38	160	1713	3	1914



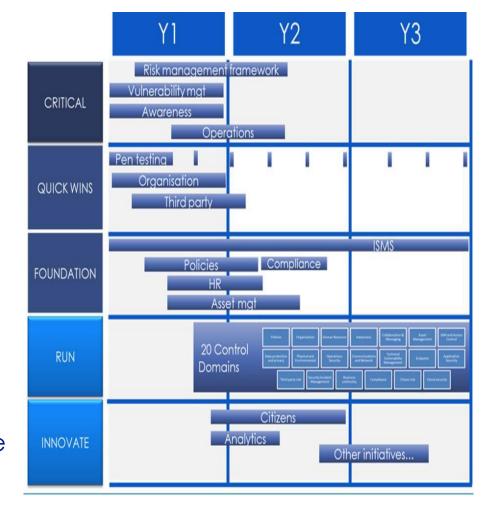
- The WCG Broadband provides services to just over 1900 sites which include all WCG facilities and to certain municipal buildings such as libraries (RLCP); Thusong Centres and Cape Access Centres
- Province connects and provides ICT services to more than 28,000 Corporate and Health users as well as connectivity to close to R1.2m learners in schools



# **Broadband Connectivity**



- Cybersecurity is provincial strategic risk
- New cybersecurity strategy final draft in consultation phase
- Monthly cybersecurity awareness campaigns to educate users in cyber risks and potential impact
- Outdated computers (Windows 7 devices) on our network is major risk – project underway to eliminate
- Security of citizen-facing services is critical as compromised citizen data will negatively impact on uptake and usage of our digital services





# Information Security

Inherent Impact	Inherent Likelihood	Inherent Rating	Residual Impact	Residual Likelihood	Residual Rating
4	4	16	3	3	9
Risk Owner		Risk Subcategory		Tolerance level	4

### **Contributing Factors**

**H** Attack by an external source (e.g., cyber attack)

**H** Ageing, unsupported, unmanaged technology (Hardware and software)

**H** Attack and or Data/ Information leakage by an internal source (staff or Contractor)

**M** Limited user adherence to ICT policies and procedures

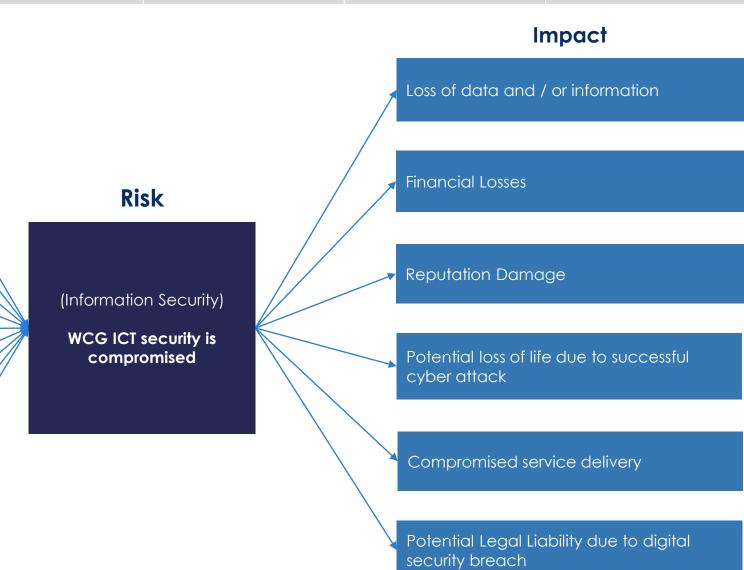
M Lack of 3<sup>rd</sup> party accountability

**M** Lack of ICT and Domain specific policies, procedures and/or standards

**M** Limited capacity to effectively manage the cyber security environment

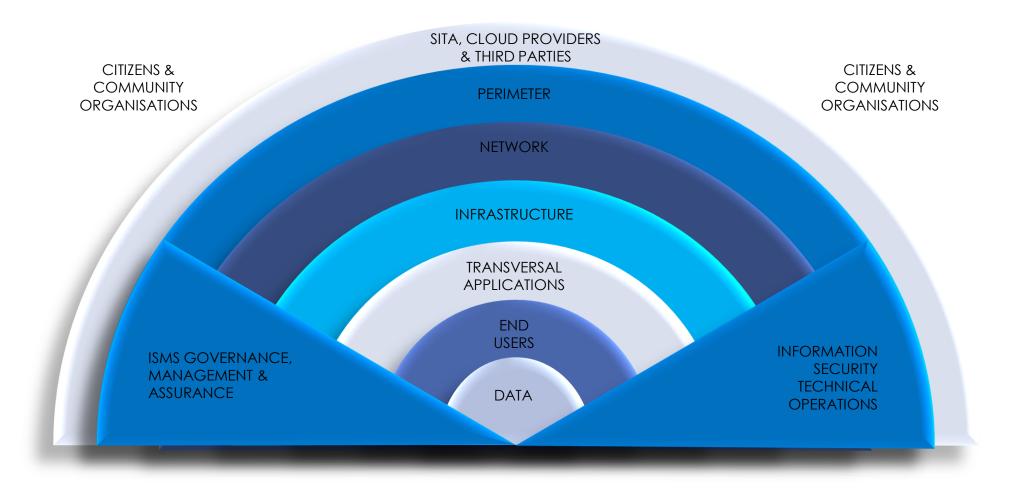
**M** Limitations of the ICT monitoring and reporting tools and response procedures

**M** Multiple entry and exit access points to the internet



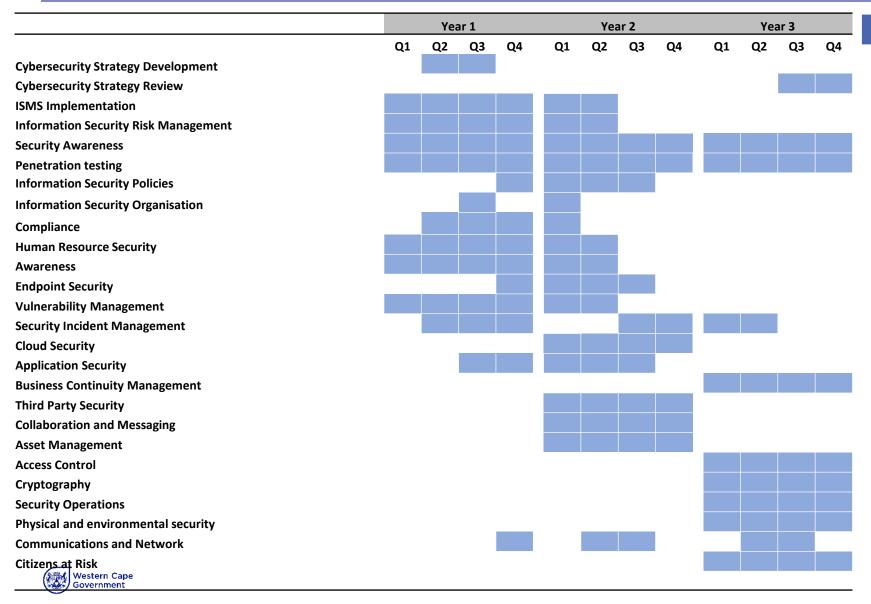
# The Scope of the ISMS will align to the principle of defense in depth

The ISMS must cover a full range of ICT architectural layers



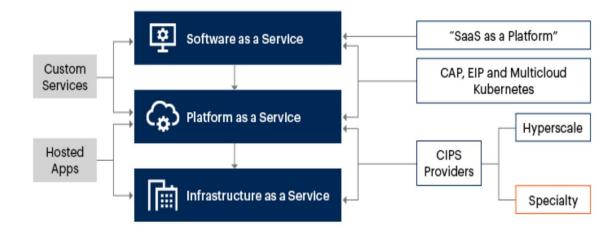


# **Cyber Security Implementation Plan**



## Interim Key Initiatives

- ISMS Implementation ISO 27001 compliance
- Implementing information security capabilities across all security domains
- Review and update policies and controls catalogue
- Asset management (CMDB) implementation
- Technology Refresh
- Cryptography alignment to industry standards
- Security Operations Centre Enhancement
- Third Party Risk Management
- Data Loss Prevention Implementation
- Data Classification
- Application Security
- Identity and Access Management



- 95% of applications have been migrated to the cloud
- WCG solutions hosted with two major cloud service providers as well as SITA
- Cloud enables access to solutions from anywhere, thereby facilitating mobile workforce
- Key advantages are availability, enhanced security, scalability and reduced dependence on physical ICT equipment



Cost reduction

Advantages of

cloud solutions:

Security

Multitenancy

(日)

Scalability and

Cloud Services

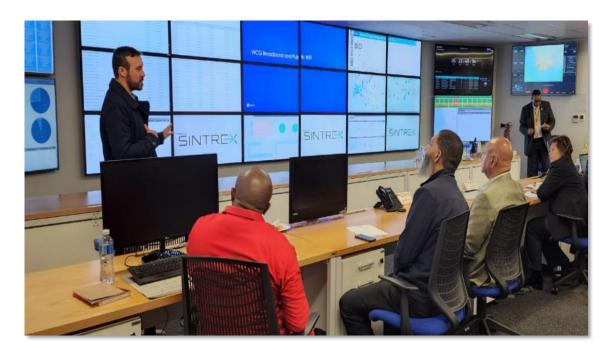


- Ageing infrastructure is a key contributor to cyber security risks
- WCG has a structured Infrastructure refresh programme for which earmarked funding is allocated
  - o Focus on infrastructure equipment older than 8 years
  - New approach to focus on business impact, not on age
- Refresh enables VOIP technologies leading to cost savings
- Significant procurement challenges being experienced when procuring through SITA





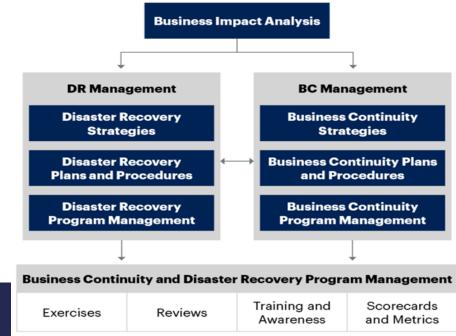
# Infrastructure Refresh



- Continuous Network Monitoring at NIOC
- BCP/DRP based on Business Impact Assessment of key applications
- Infrastructure Refresh plan in progress
- Cloud Migration of 98% of workloads
- Awaiting SITA Tier 3 data centre relocation
- Electrical back-up generation capacity have been installed at almost all sites – not feasible for smaller sites
- UPS installations on all our infrastructure
- Close collaboration with Disaster Management Centre

### **External Factors**

- Temporary loss of a third-party IT service provider
- Cloud service unavailability (public or private cloud)
- Energy supply outage
- Water supply scarcity
- Loss of Internet Service Provider (ISP) service



# Business Continuity Management

### **OBJECTIVES**

- A customer-focused innovation culture embedded in the organisation
- Trained and competent frontline and back-office staff
- Staff capacitated with the appropriate tool sets and information to execute their functions
- High performance ICT workforce

# Digitally Empowered Employees















Microsoft Teams

Word

- Modernised Employee Experience
- Enables our digital workforce
- Provides Mobility, Automation, Security
- Consistency experience irrespective of Platform
- 25,550 Corporate users, 2,475 Education campus users, 300 Library Subscriptions and 820 DOA users (WCED and DOA; 738 Nursing College







- 1,855 Wi Fi Access points Devices deployed throughout the organisation
- Provides secure access to the corporate network
- Provides for guest Wi Fi access at certain spaces
- Promotes mobility within the corporate environment
- Promotes collaboration within boardrooms





Basic ICT Skills

Designed to assist the user to acquire the fundamental knowledge and skills to use a computer device.



**CAT Lab Training** 

Designed for CAT lab facilitators, this course covers all you nee to know about how to manage the CAT lab







ICT Skills for Teachers



Data Analytics and BI

Learn how to extract valuable insights from your data

- ICT Training Unit offers end user training to all Government Employees.
- This training model, developed by the Unit, includes:
  - ICT Skills Assessments (to determine digital literacy skills)
  - Learners' placement on an ICT learning pathway
  - Facilitation Skills for Departmental Trainers
- Delivery modes include Online (Self-directed, self paced);
   webinars and Face-to-face (Limited to basic)
- Provides 2,000 training opportunities annually
- Recently trained 80 CDWs in basic ICTs on request of municipalities

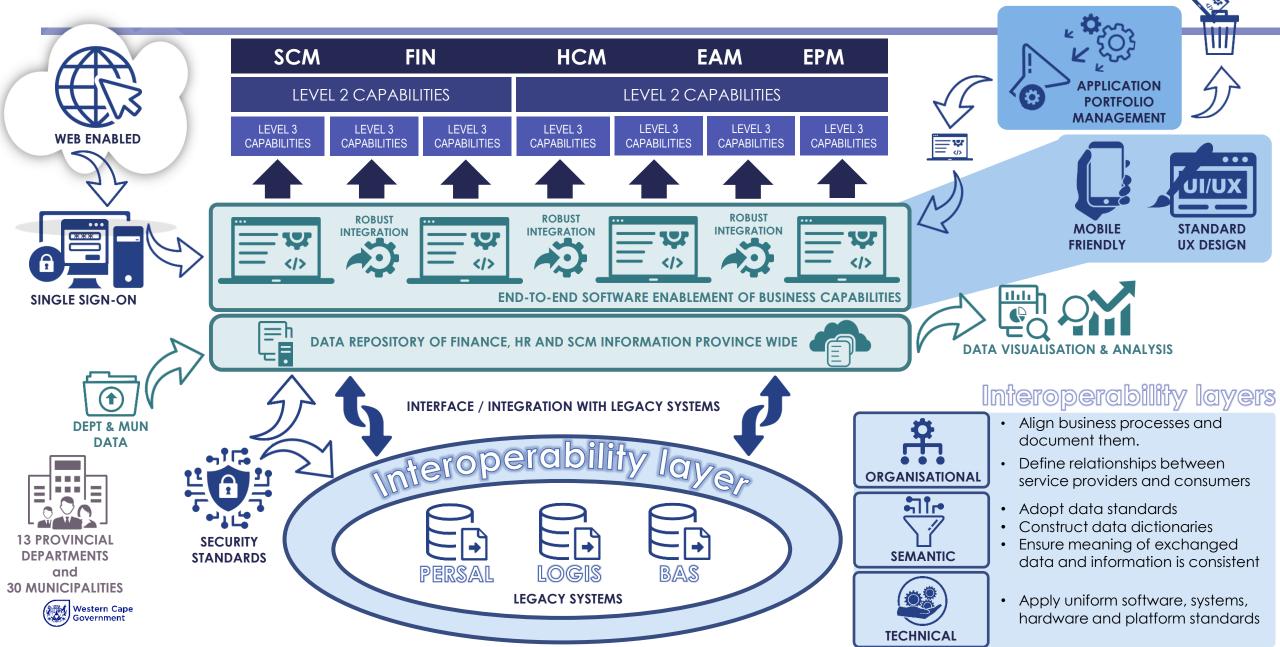


# PROVINCIAL TREASURY - DIGITAL TRANSFORMATION INITIATIVES

Aphiwe Mazomba



# PT – Modernisation of Financial Systems



# PT and NT Initiatives

WCG Initiatives (completed) WCG Initiatives (pipeline)

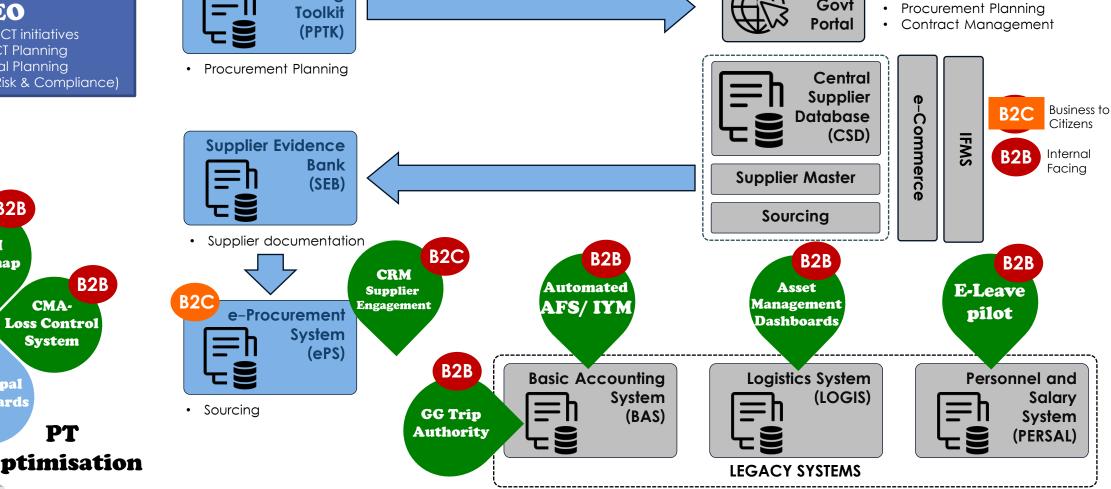
NT Systems Landscape







Tenders





**B2B** 

**APM** 

Roadmap

Municipal

B<sub>2</sub>C

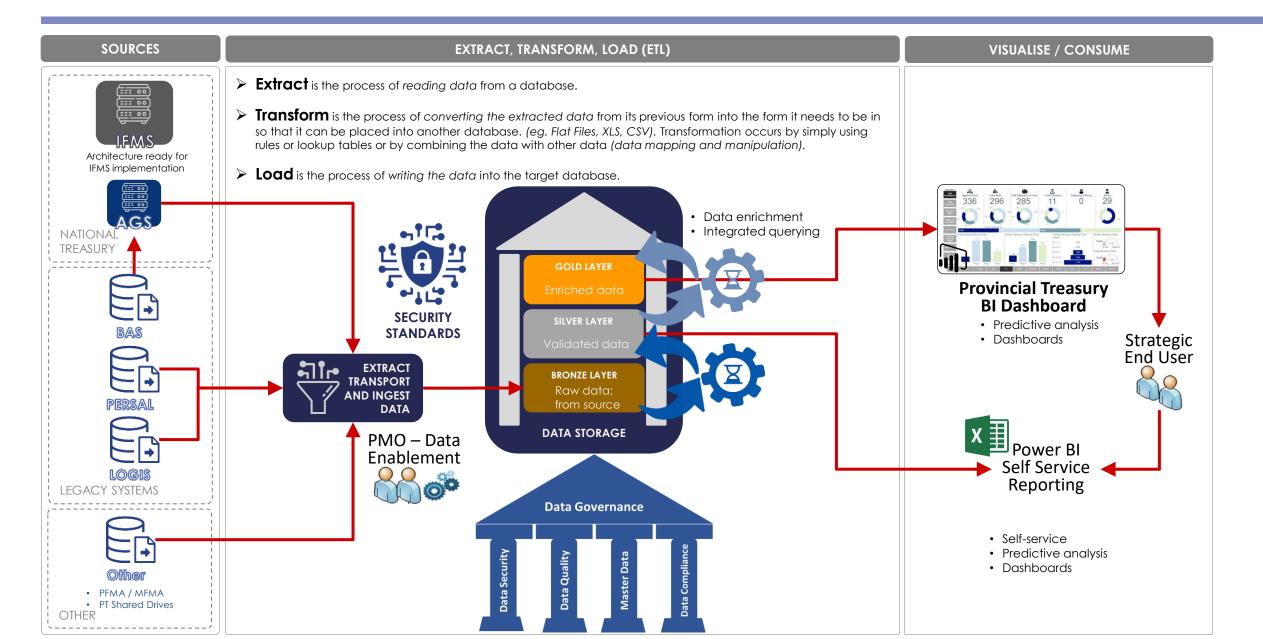
Bursary

system

Build data pipelines from source to sink (consumption)



# PT Data Warehousing



# **WAY FORWARD**

- Building strategic partnerships and driving national systems development and/or integration
- Explore opportunities and mitigate threats of 4IR technologies such as AI, ChatGPT and Crypto currency
- Expanding citizens' access to ICTs, connectivity and digital skills training
- Increasing the number of and quality of citizen services and information available via digital channels – especially the mobile app
- Optimising our portfolio of applications
- Modernising our Financial Systems
- Strengthening our ICT governance to ensure information security and high availability of citizen digital services
- Expanding connectivity through the WCG Broadband service



Thank you

# Contact Us



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