

Benchmarking the City of Cape Town as a Water Sensitive City: District Planning aspects

Ms Jessica Fell

Future Water research institute, University of Cape Town

25 August 2021



Building resilience to respond to shocks - Cape Town example (Source: M. Webster, CoCT)

Why now?

CAPE TOWN WATER STRATEGY

- our shared water future -

APRIL 2019



FIVE COMMITMENTS

1

SAFE ACCESS
TO WATER AND
SANITATION



2

WISE USE



5

A WATER
SENSITIVE CITY



3

SUFFICIENT,
RELIABLE WATER
FROM DIVERSE
SOURCES



4

SHARED BENEFITS
FROM REGIONAL
WATER RESOURCES

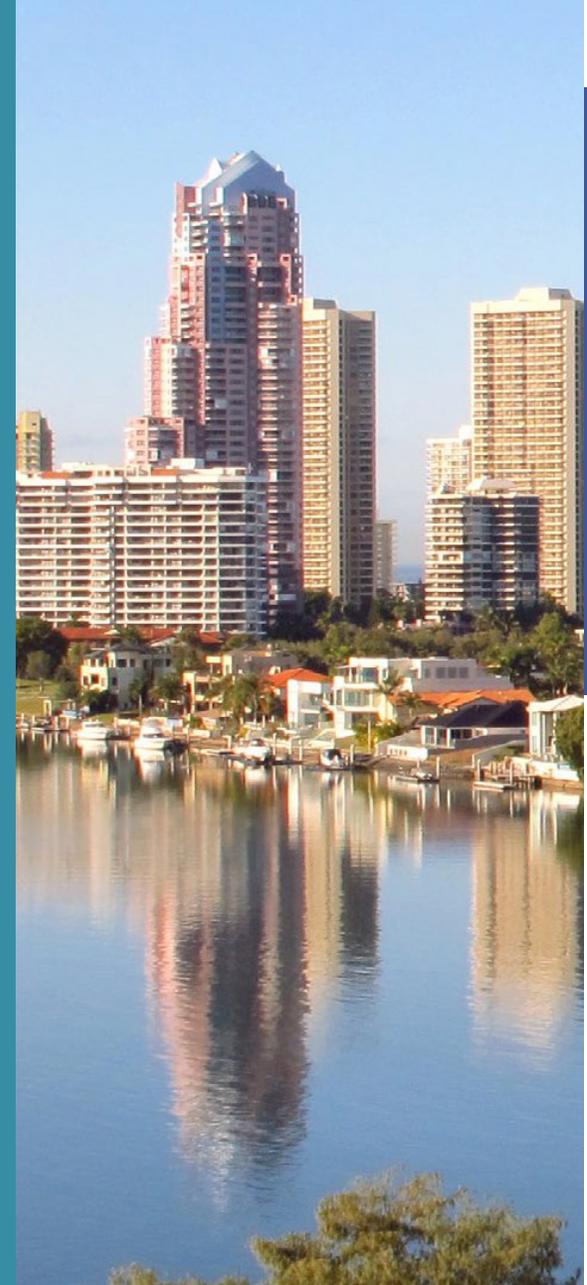


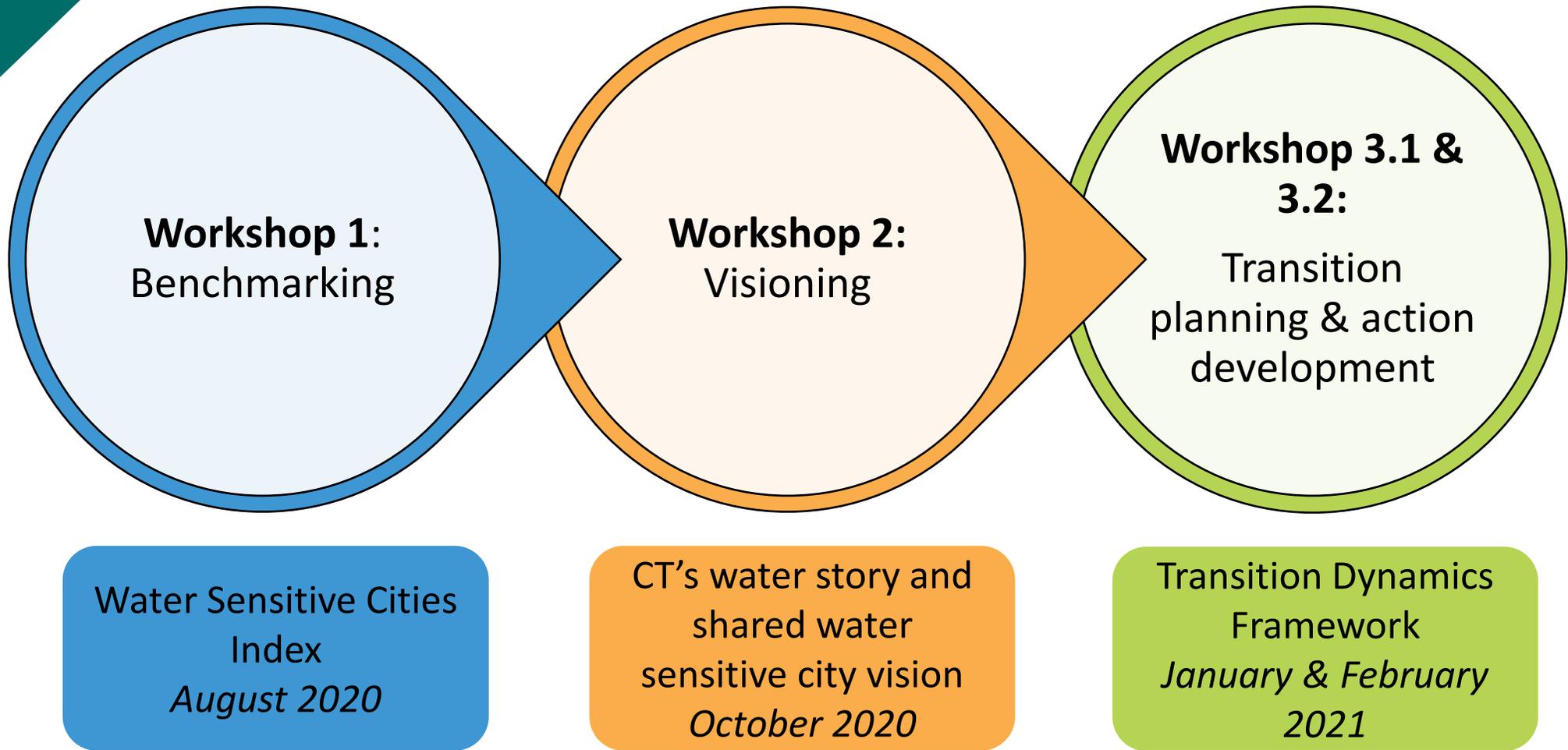
Benchmarking the City of Cape Town as a Water Sensitive City

‘Promote the transition to water sensitive cities within the Western Cape’

through collaboration between the City of Cape Town (CoCT), Western Cape Government and the project team

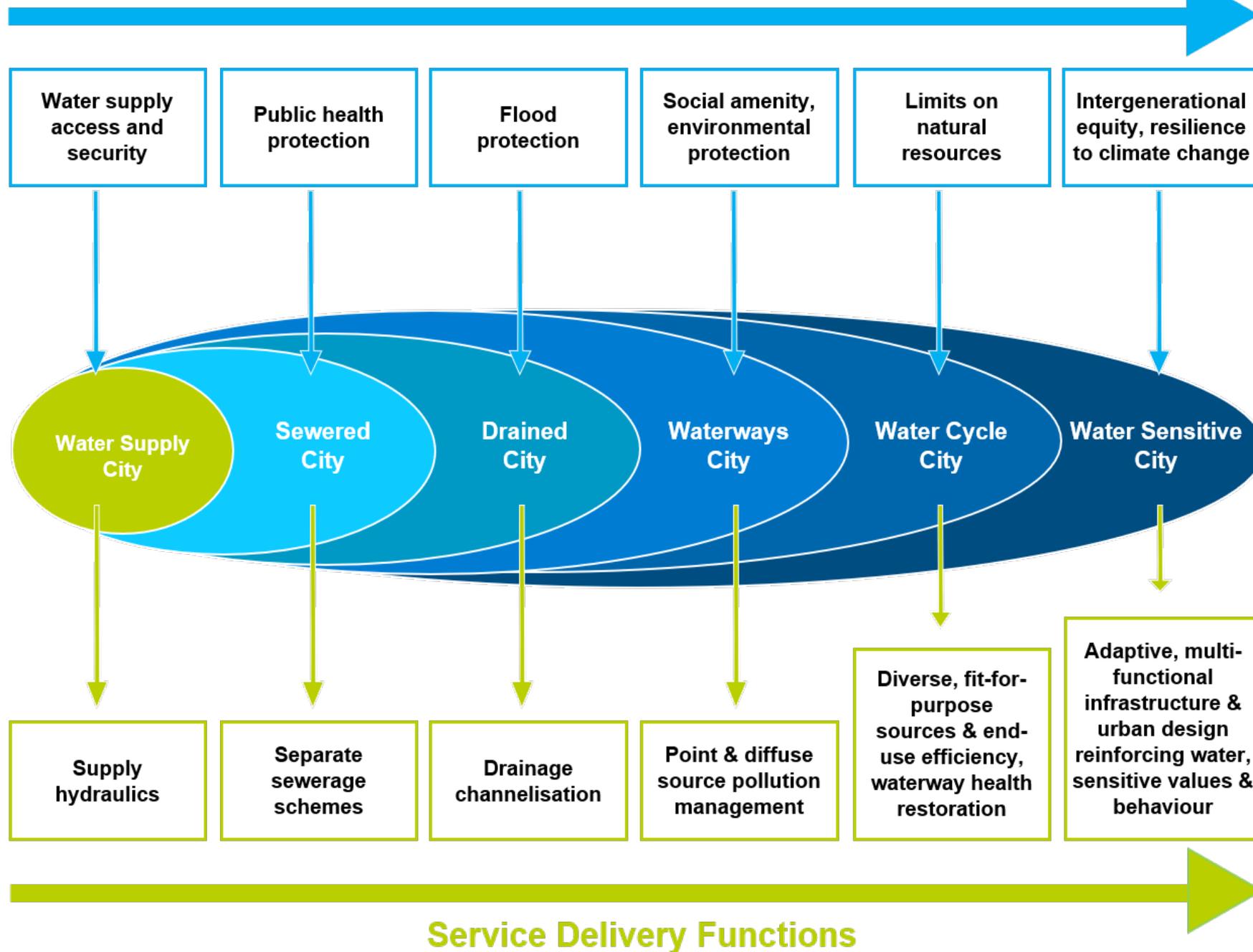
1. To facilitate collaboration between WCG and CoCT to transition CoCT to a water sensitive city
2. To adopt best practice available for the contextual application and adaptation of the CRCWSC Water Sensitive City Index benchmarking tool.
3. Prepare an adapted benchmarking tool appropriate to the South African and specifically, the Western Cape municipal and provincial government context.
4. Develop an implementation guideline to support cities and towns of the Western Cape to undertake and manage the transition towards becoming water sensitive.
5. Communicate the outcomes and usefulness of the project to relevant stakeholders in the Western Cape.



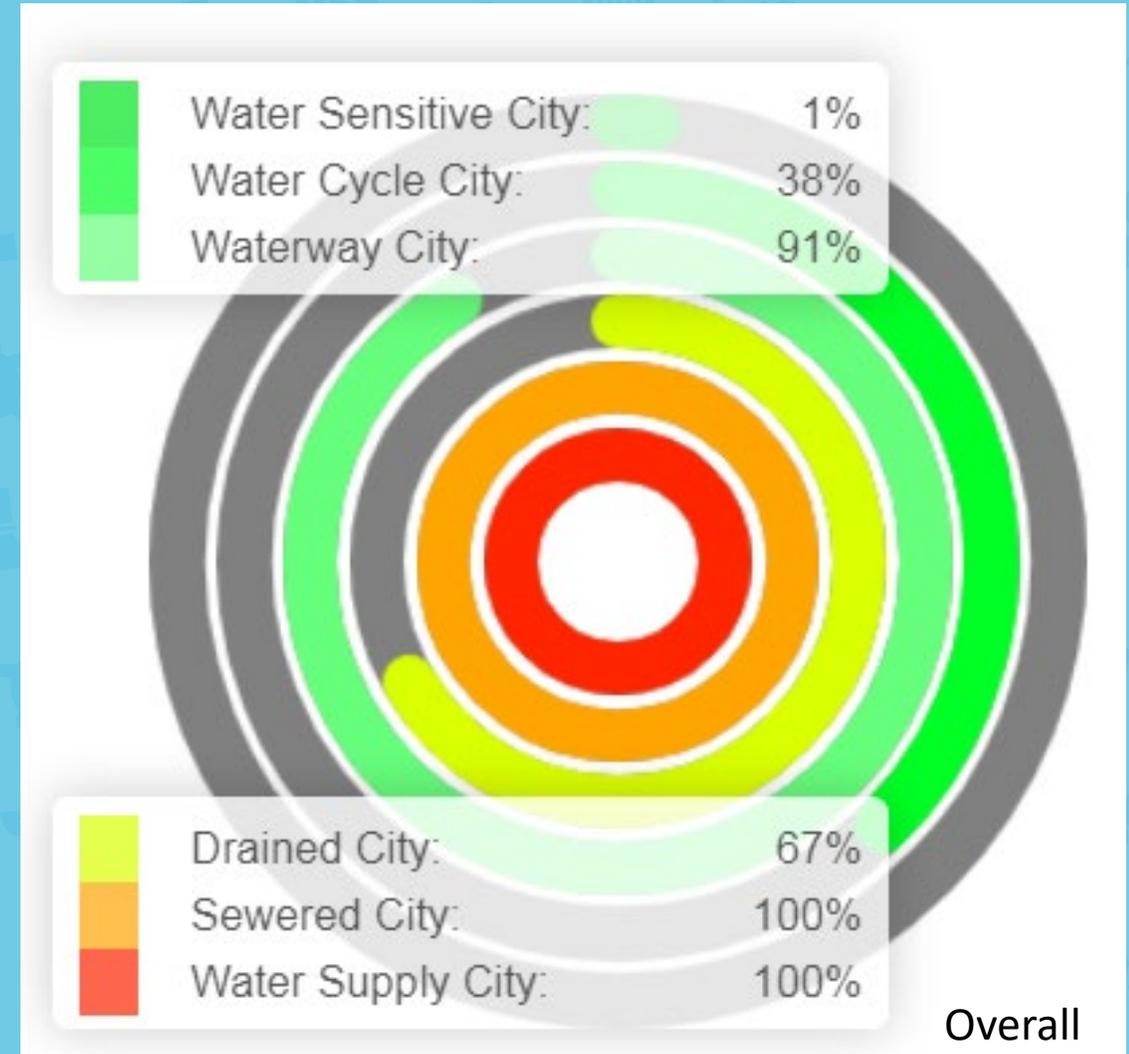
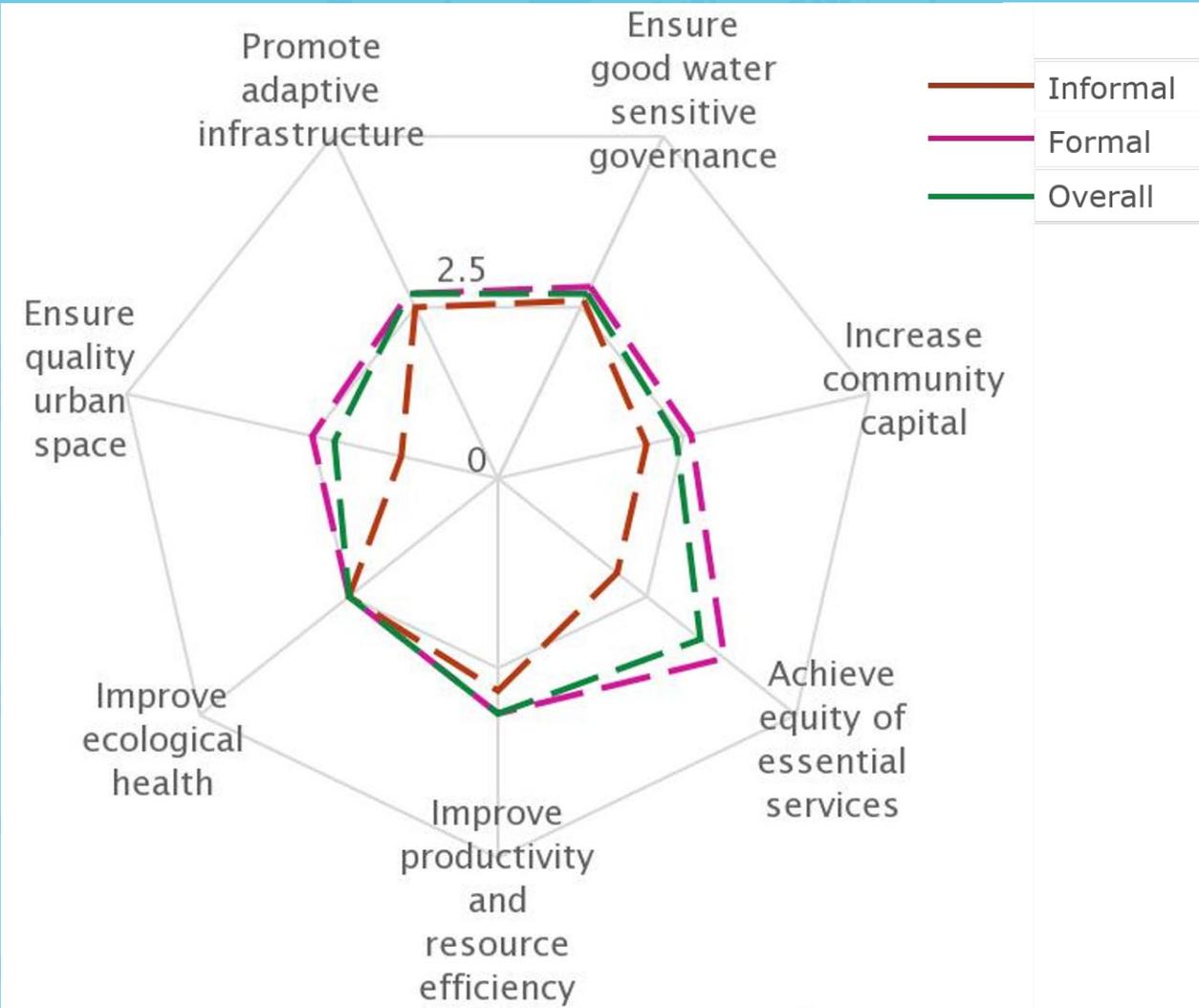


The WSC Transition process in CT

Cumulative Socio-Political Drivers



Socio-Political Goals			Bio-Physical Goals			
1. Ensure good water sensitive governance	2. Increase community capital	3. Achieve equity of essential services	4. Improve productivity and resource efficiency	5. Improve ecological health	6. Ensure quality urban space	7. Promote adaptive infrastructure
1.1 Knowledge, skills and organisational capacity	2.1 Water literacy	3.1 Equitable access to safe and secure water supply	4.1 Benefits across other sectors because of water-related services	5.1 Healthy and biodiverse habitat	6.1 Activating connected pleasant urban green and blue space	7.1 Diverse fit-for-purpose water supply system
1.2 Water is key element in city planning and design	2.2 Connection with water	3.2 Equitable access to safe and reliable sanitation	4.2 Low GHG emissions in water sector	5.2 Surface water quality and flows	6.2 Urban elements functioning as part of the urban water system	7.2 Multi-functional water system infrastructure
1.3 Cross-sector institutional arrangements and processes	2.3 Shared ownership, management and responsibility of water assets	3.3 Equitable access to flood protection	4.3 Low end-user potable water demand	5.3 Groundwater quality and replenishment	6.3 Vegetation coverage	7.3 Integration and intelligent control
1.4 Public engagement, participation and transparency	2.4 Community preparedness and response to extreme events	3.4 Equitable and affordable access to amenity values of water-related assets	4.4 Water-related business opportunities	5.4 Protect existing areas of high ecological value		7.4 Robust infrastructures
1.5 Leadership, long-term vision and commitment	2.5 Culture, heritage and first nations involvement in water planning		4.5 Maximised resource recovery			7.5 Infrastructure and ownership at multiple scales
1.6 Water resourcing and funding to deliver broad societal value						7.6 Adequate maintenance
1.7 Equitable representation of perspectives						
		16	Formal/Informal			
		18	City-wide			



Workshop 1:
Benchmarking

Workshop
2:
Visioning

Workshop 3.1
& 3.2:
Transition
planning &
action
development

“A world class African city that celebrates providing equitable and dignified access to water services that are underpinned by resilient water sensitive infrastructure.”



Healthy waterways and urban spaces mean equitable and dignified access to water services.

Ownership of water by citizens, organisations and government leads to collaboration, valuing the City’s resources and living within those resources.

Holistic management of water resources and resilient infrastructure add amenity, liveability and inclusivity to the City.



Developing the pathways that link a future water sensitive city vision with current water system practice

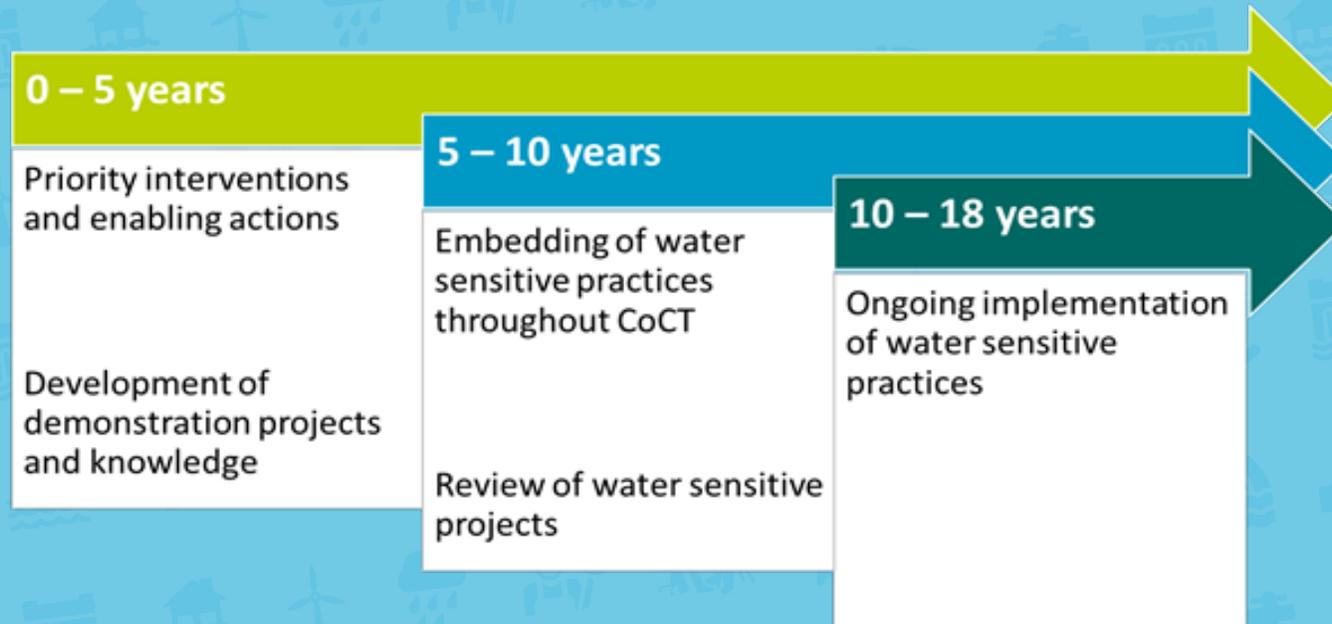
Analysis of a city's current transition barriers and enablers using the CRCWSC's *Transition Dynamics Framework*

Tool	Transition Dynamics Framework
How	2 x half day workshops
Output	Report detailing a Transition Dynamics Framework analysis for actions and transition strategies

Transition phase	Champions	Platforms for connecting	Knowledge	Projects and applications	Tools and instruments
1. Issue emergence	Issue activists		Issue highlighted	Issue examined	
2. Issue definition	Individual champions	Sharing concerns and ideas	Causes and impacts examined	Solutions explored	
3. Shared understanding and issue agreement	Connected champions	Developing a collective voice	Solutions developed	Solutions experimented with	Preliminary practical guidance
4. Knowledge dissemination	Influential champions	Building broad support	Solutions advanced	Solutions demonstrated at scale	Refined guidance and early policy
5. Policy and practice diffusion	Government agency champions	Expanding the community of practice	Capacity building	Widespread implementation and learning	Early regulation and targets
6. Embedding new practice	Multi-stakeholder networks	Guiding consistent application	Monitoring and evaluation	Standardisation and refinement	Comprehensive policy and regulation

Activating an implementation strategy for the City of Cape Town

Phase 1: Ensuring that the fundamental aspects of the transition are in place, which includes **six key priority action areas** – *Champions and Networks, Terminology vs Jargon, Research and Capacity, Indigenous knowledge, Governance and Planning and **Integrated Planning***. As well as identifying demonstration projects and ensuring lessons are learnt from them.



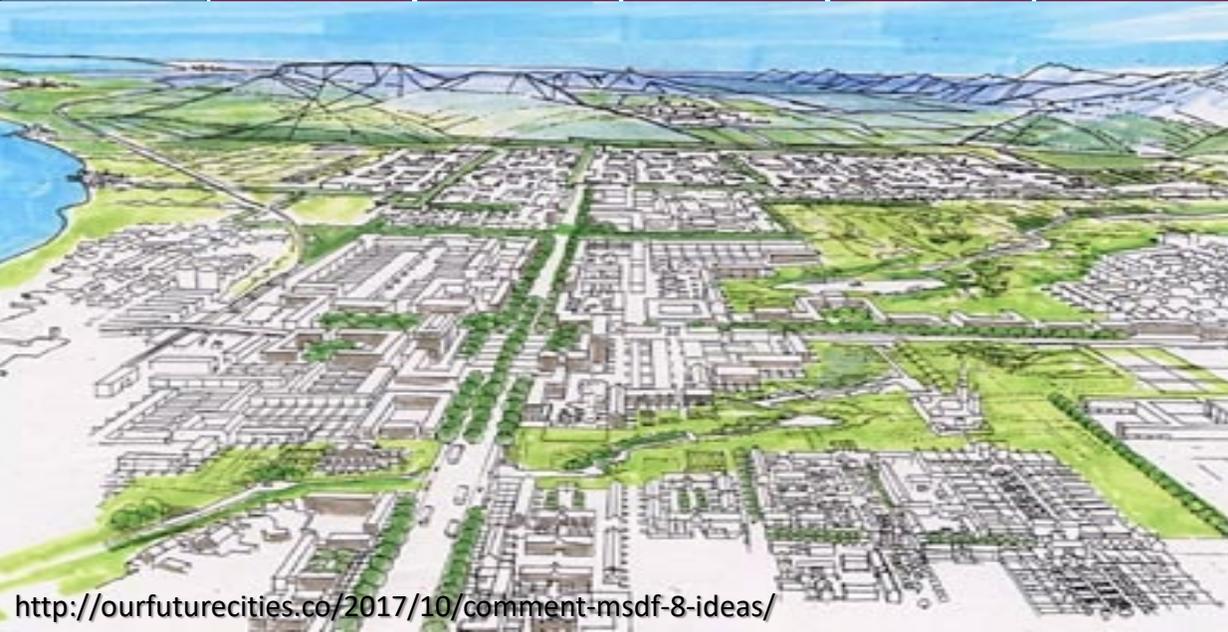
Transition phase	Champions	Platforms for connecting	Knowledge	Projects and applications	Tools and instruments
1. Issue emergence	Issue activists		Issue highlighted	Issue examined	
2. Issue definition	Individual champions	Sharing concerns and ideas	Causes and impacts examined	Solutions explored	Early recognition of issue in policy
3. Shared understanding & issue agreement	Connected champions	Developing a collective voice	Solutions developed	Solutions experimented with	Preliminary practical guidance
4. Knowledge dissemination	Influential champions	Building broad support	Solutions advanced	Solutions demonstrated at scale	Refined guidance and early policy
5. Policy and practice diffusion	Organisational champions	Expanding the community of practice	Capacity building	Widespread implementation and learning	Early regulation and targets
6. Embedding new practice	Multi-stakeholder networks	Guiding consistent application	Monitoring and evaluation	Standardisation and refinement	Comprehensive policy and regulation

Narrative of the Transition Dynamics Framework

Integrated planning is regularly highlighted as an important focus as it is critical in addressing many nexus issues. While the focus on **Water Sensitivity** has gained traction, and policy is supportive, there appears to be a level of disconnect in terms of **implementation into City planning**.

Several examples where there is a disconnect at implementation level (e.g. parking requirements / conflicts between water and housing) were highlighted during the stakeholder engagements. This is to be expected in a city the size of Cape Town, but highlights the importance of supporting and advancing organisational champions and platforms for sharing experience and knowledge – both inside the City and externally.

Key Focus: Incorporation into policy; consolidation of knowledge; identification and support for champions to drive this space; creation of knowledge sharing platforms, demonstration projects at scale.



10. Integrated Planning

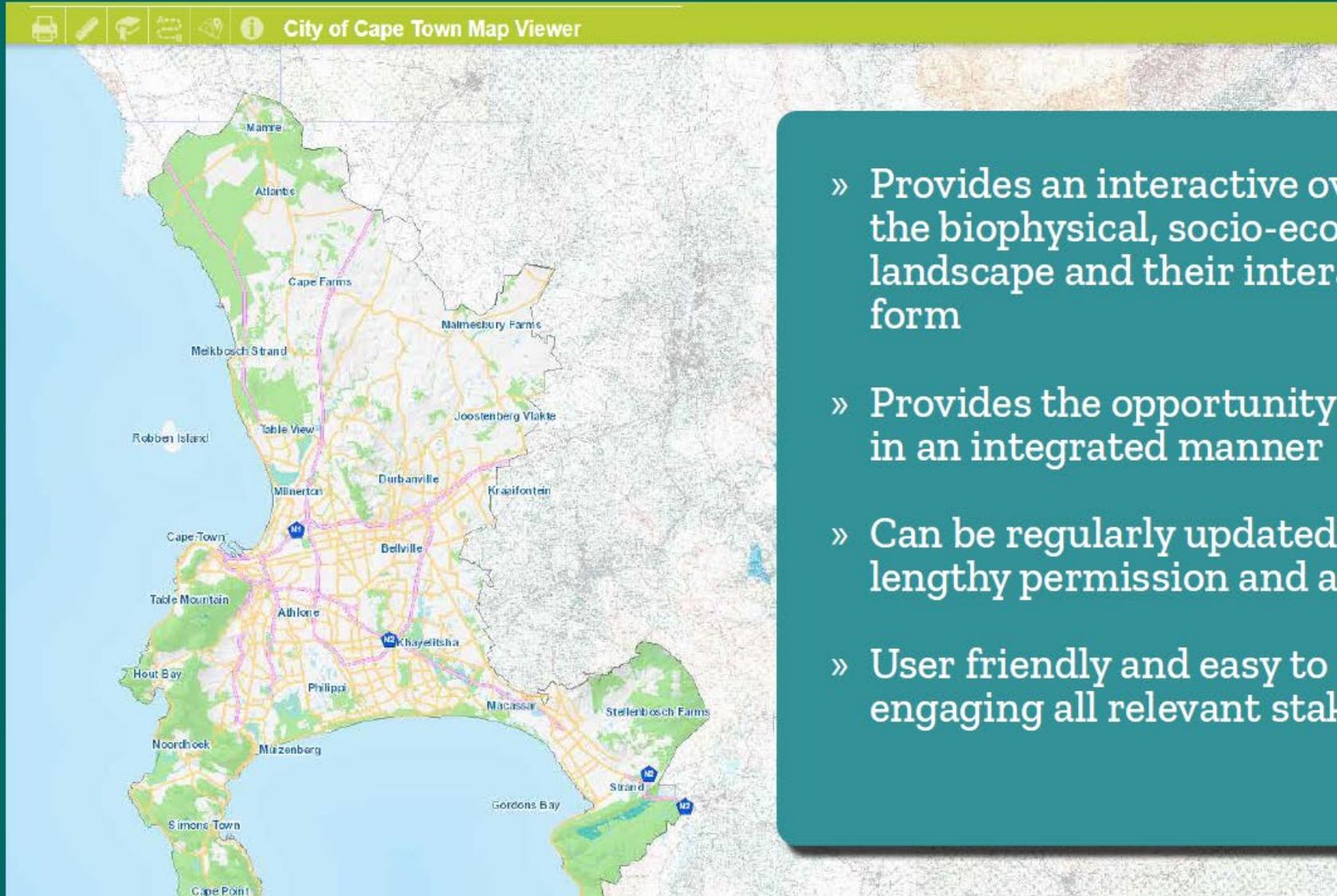
Water Sensitive City goals already align with policy...

WSC GOAL 1 Ensure good water sensitive governance	WSC GOAL 2 Increase community capital	WSC GOAL 3 Achieve equity of essential services	
WSC GOAL 4 Improve productivity and resource efficiency	WSC GOAL 5 Improve ecological health	WSC GOAL 6 Ensure quality urban space	WSC GOAL 7 Promote adaptive infrastructure



Planning discussions - WSC Benchmarking workshop 3.2 (Feb 2021)

- Water Sensitivity has gained traction and policy is supportive, but there appears to be a level of disconnect in terms of implementation into City planning
- Tension between spatial planners and planning for human settlements
- The false perception that planners have carte blanche
- Budget allocation and checking budget before asking planners to include elements in plans
- Using fiscal arguments to land projects
- The confusion around what planners actually do in practice
- Issues of scale



- » Provides an interactive overview of the biophysical, socio-economic and planning landscape and their interactions in a spatial form
- » Provides the opportunity to view different scales in an integrated manner
- » Can be regularly updated without needing lengthy permission and approval processes
- » User friendly and easy to access, thus capable of engaging all relevant stakeholders

Rainwater Harvesting

- Where rainwater harvesting should be enforced
- Where it should be encouraged
- Where it offers little benefit

Groundwater

- Recharge Zones
- Abstraction vs protected zones

Stormwater

- Stormwater networks with appropriate environmental buffers
- Flood inundation layers
- Wetlands
- Strategic water source areas

Indigenous and cultural assets

- Areas where indigenous knowledge should be incorporated
- Areas that require investigation

Water Supply

- Zones fed by infrastructure with significant constraints
- Target water demands per suburb based on:
 - Historical demands
 - Property size

Sanitation & Wastewater

- Zones fed by infrastructure with significant constraints
- Zones where there is adequate capacity in the infrastructure

Overlay Zone Benefits? ... Is this tangible?

- » Provides an opportunity to apply an additional layer of water-sensitive standards to all areas within a defined overlay boundary, regardless of underlying base zoning of the district.
- » Overlay Zones assist with strategically spatially targeting a water-sensitive area
- » Overlay Zones can be a **specific** development directives, **strategic** development directives or **management** mechanisms



MUNICIPAL PLANNING AMENDMENT BY-LAW, 2016

APPROVED BY COUNCIL : 26 MAY 2016
C20/05/16

PROMULGATED 01 JULY 2016
PG 7647; LA 61509