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Strategic Facilities Management Contingencies Implemented by Office Real Estate Owners in Response to Drought Risks in Cape Town

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Introduction

- Climate change has impacted the natural water supply in South Africa, which is a relatively arid/water vulnerable country.

- Cape Town (southwest South Africa), has a Mediterranean climate, i.e., winter rains (June – August), with hot windy summers (November – March).

- Cape Town experienced unusually low rainfall for several years (2015-2017).

- 2017 the lowest rainfall on record for Cape Town.

Cape Town Residents Queue for Water

Source: Financial Times (2018)

Research Question

What strategic FM contingencies have office real estate owners implemented to mitigate the potential risks of drought?

Green Office Buildings in South Africa

- The Green Building Council South Africa (GBCSA) was established in 2007.
- The first office building was awarded green certification in South Africa in 2009.
- There has been an exponential increase in green certified office buildings, which incorporate green building features and initiative (GBFIs).
- Water management features and initiatives (WMFIs) is a subsect of GBFIs, which specifically focus on environmentally conscious water management.
- Examples of WMFIs:
  - Spray or low flow taps
  - Low flow shower heads
  - Grey water treatment systems
  - Rain collection systems
  - Water monitoring systems

Water Management Cape Town Water Strategy (2019)

- Safe access to water and sanitation.
- Sufficient reliable water from diverse sources.
- Shared benefits from regional water resources.
- Transform Cape Town to a water-sensitive city.
- Strategy to change the way all stakeholders (people, organisations, institutions, government) think about water, change/sustain usage habits and implement a diversified water resource mix.

Linking Strategic Facilities Management to Water Management

- Water management is a key strategic FM line item for asset and portfolio managers, which directly impacts commercial tenants, and thus real estate performance.

- Several South African listed property funds emphasised the importance of sustainability, and green certified buildings, which include WMFIs.

- Sustainability, specifically water conservation during the 2018 drought period, became one of the primary objectives of property owners in Cape Town.

Research Methodology

- Qualitative multiple case study comprising purposive and convenience sampling.
- Real estate companies owning office portfolios located in the Cape Town CBD were identified and considered suitable as they were directly impacted by the 2018 drought.
- Executives and upper management were targeted as respondents for the research to obtain thick descriptions.
- The respondents all understood the strategic objectives of the organisation and had oversight of the real estate operations.
- Semi-structured interviews were conducted and the transcripts imported into NVivo qualitative data analysis software.

Respondent Labelling

Respondent Label	Position in the company	Size of office portfolio – gross lettable area (GLA)
CS1R1	Asset manager 1	85,000m^2 – 100,000m^2
CS1R2	Asset manager 2	85,000m^2 – 100,000m^2
CS1R3	Property manager 1	85,000m^2 – 100,000m^2
CS2R1	Chief Operations Officer (COO)	>100,000m^2
CS3R1	Operations Director (OD)	>100,000m^2
Key to respondent labelling: CS1 = Case Study Number; R = Respondent		

Theme 1: Strategy towards water management features and initiatives (WMFIs)

- CS1R1 stated that green building was a strategic focus for CS1, e.g., the planned implementation of grey water systems boreholes.
- Since the drought, CS1's strategic approach to green buildings and WMFIs has changed and there is a greater emphasis on water-saving installations.
- CS1 work with tenants to identify and install WMFIs (e.g., waterless urinals), which results in reduced operating costs for both landlord and tenant.
- CS2 had already installed several capital-intensive WMFIs prior to the drought, as strategic plans to meet the ESG requirements were in place.
- CS2R1 WMFIs accelerated when the drought started.

Theme 1: Strategy towards water management features and initiatives (WMFIs), continued

- CS2's executive team met with the facilities managers and reviewed every building and identified both small ("low hanging fruit") and bigger interventions that could reduce water consumption.
- CS3R1 said that before the drought CS3 had no strategic approach to reduce water consumption.
- CS3R1 identified WMFIs requiring more attention due to increased water costs.
- CS3 now assess WMFIs for all potential acquisitions.

Theme 2: Implementation of water management features and initiatives (WMFIs)

- CS1 installed consumption-reducing taps during the drought.
- CS1 planned larger capex-intensive for development.
- CS1 actively removed/deactivated certain water fixtures to reduce consumption.
- CS2 and CS3 installed industrial sized water storage tanks during the drought for rainwater collection from the roof.

Theme 3: Drought preparedness

- All three case studies were adequately prepared for the drought because long-term water savings is part of general property management.

- All three case studies developed risk management plans in advance, which took the form of various WMFIs and developing strategic FM budgets that contain a drought contingency line item.

- All three case studies have learnt which WMFIs are effective for future droughts.

Theme 4: Benchmarking and consumption

- CS1 obtained benchmarking data from their utility meter service providers, resulting in the assessment of water consumption performance on a per square meterage basis.
- CS1 benchmark against the requirements needed for four and five-star Green Star SA certified buildings.
- CS2 and CS3 does not have a benchmarking programme, but their meter reading service provides monthly reports, including consumption data for the previous month, three months and twelve months, respectively.
- CS2 and CS3 benchmark against their historical consumption data.

Theme 5: Barriers and drivers of water management features and initiatives (WMFIs)

Barriers

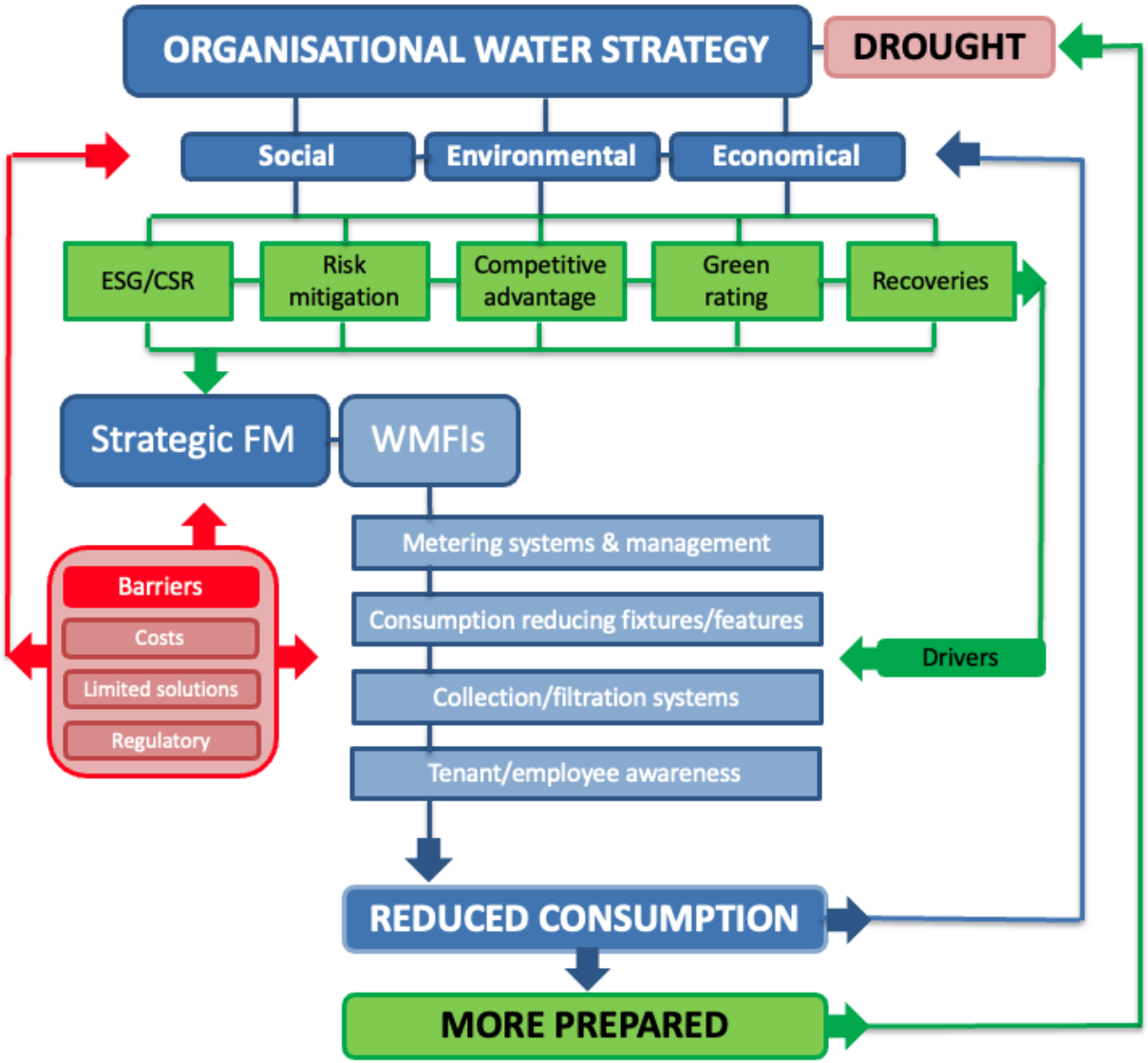
- All three case studies cited costs as a barrier for the implementation of WMFIs.
- CS1R1 stated WMFI implementation is easier for a new development than a retro-fit.
- CS2R1 stated that some WMFIs reduce water consumption but increase electricity costs, e.g., pump and filtration systems.
- CS1R1 stated there was a lack of knowledge pertaining to WMFIs.
- Regulation is an obstacle for water licenses (e.g., permission to dig for boreholes).

Theme 5: Barriers and drivers of water management features and initiatives (WMFIs), continued

Drivers

- WMFIs result in lower recoveries (reduced gross rental) compared to competing building.
- WMFIs contribute to increased tenant retention, which results in enhanced building value.
- WMFIs as a form of strategic FM can assist property owners to identify underused and redundant building features/facilities.
- WMFIs implementation addressed organisational CSR and ESG objectives.
- WMFIs are increasingly incorporated into green lease structures.
- Regulation (e.g., water usage limits) support implementation of WMFIs.

Link between TBL Strategic FM and WMFIs



Conclusions

- All three case studies were relatively well prepared to address the challenges presented by the drought.
- The physical implementation of WMFIs was reactive for CS1 and CS3, where CS2 only needed to accelerate their WMFIs strategy.
- There are challenges pertaining to accurate benchmarking and education of the specialist WMFIs practitioners within the office real estate sector.
- The drought was viewed as an opportunity to continue with further advancement of WMFIs as a form of long-term strategic FM in the South African office sector.

Thank you

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