



BUSINESS PLAN

2020/21

Draft 2

Table of Contents

Official Sign-off	562
List of Acronyms	563
Chapter 1: Executive Summary	565
1.1 Executive Summary	566
Chapter 2: Strategic Overview	567
2.1 Our Vision	568
2.2 Mission	568
2.3 Values	568
2.4 Core Mandate	568
2.5 The Business Model	570
2.6 Legislation and policy environment	570
2.7 Strategic objectives	571
Chapter 3: Strategic Analysis	577
3.1 Infrastructure backlog and challenges	578
3.2 Environmental Analysis	584
3.2.1 SWOT	584
3.2.1 PESTLE	585
3.3 Risk Assessment	585
3.3.1 Approach to risk management	586
3.3.2 Understanding the risks that could affect the plan	587
3.3.3 Risks and mitigation strategies	587
CHAPTER 4: STRATEGIC RESPONSE – IMPLEMENTATION, PERFORMANCE	589
4.1 Key performance area	590
4.1.1 Strategic Goal 1	590
4.1.2 Strategic Goal 2	603
4.1.3 Strategic Goal 3	606
4.1.4 Strategic Goal 4	610
4.1.5 Strategic Goal 5	615
4.1.6 Strategic Goal 6	620
4.2 Past Performance	626
4.3 Corporate scorecard	627
4.3.1 Institutional SDBIP and UISP Indicators	627
4.3.2 Entity scorecard	629
4.3.3 Circular 88 Indicators	644
4.3.4 KPI Definition	650
4.3.5 Service Standards Charter	663
Table 26: Service standards	663
Chapter 5: Financial Impact	666
5.1 Financial Indicators	667
5.2 Controls over operating costs	669
5.3 Contracted Services	671
5.4 Cash Generated from operations	672
5.5 Solvency	673
5.6 Capital Projects	674

5.7 Revenue and Tariff Analysis	675
5.6.1 Proposed Tariff Increase	676
5.6.2 Proposed Water Restriction Tariff	677
Chapter 6: Management and Organisational Structures	679
6.1 Organisational structure	680
6.2 Management Team	680
6.3 Capacity Analysis	682
6.4 Employment Equity	682
Chapter 7: Communications and Stakeholder Management	684
7.1 Stakeholder Matrix	685
Chapter 8: Audit Resolution	688
8.1 Progress on Resolution of Internal Audit Findings	689
8.2 Progress on Resolution of AGSA Audit Findings	690
ANNEXURES:	691
Annexure A: Summary of Capital programmes	691
Annexure B: Strategic Risk Register	Error! Bookmark not defined.

Official Sign-off

It is hereby certified that this Business Plan:

Was developed by the Management of Johannesburg Water under the guidance of the Managing Director Ntshavheni Mukwevho.

Takes into account all the relevant policies, legislation and other mandates for which Johannesburg Water is responsible.

Accurately reflects the strategic outcome-oriented priorities, goals and objectives, which Johannesburg Water will endeavour to achieve over the period 2020-2021.

Ntshavheni Mukwevho

Managing Director

Johannesburg Water

List of Acronyms

Acronym	Description
ABET	Adult Basic Education and Training
AGSA	Auditor General South Africa
AMI	Advanced Metering Infrastructure
ARPL	Artisan Recognition of Prior Learning
B-BBEE	Broad-Based Black Economic Empowerment
BP	Business Plan
BSC	Balanced Scorecard
CAPEX	Capital Expenditure
CIDB	Construction Industry Development Board
CoJ	City of Johannesburg
CRM	Customer Relations Management
DWS	Department of Water and Sanitation
EAM	Enterprise Asset Management
EE	Employment Equity
EMS	Environmental Management System
EPWP	Expanded Public Works Programme
EWSETA	Energy and Water Sector Education and Training Authority
FY	Financial Year
GDS	Growth and Development Strategy
HH	Households
ICT	Information and Communications Technology
IDP	Integrated Development Plan
ISO	International Organisation for Standardisation
KI	Kilolitre
KPI	Key Performance Indicator
LCD	Litres per capita per day
LGSETA	Local Government Sector Education and Training Authority
LoS	Level of Service
MFMA	Municipal Finance Management Act of 2003
MI	Megalitre
MTEF	Medium-Term Expenditure Framework

4.564

NDP	National Development Plan
NOSA	National Occupational Safety Association
NQF	National Qualifications Framework
NRW	Non-Revenue Water
OHS	Occupational Health and Safety
OPEX	Operational Expenditure
PESTLE	Political, Economic, Social, Technological, Legal, Environmental
PPE	Property, Plant and Equipment
PPM	Project Portfolio Management
PWD	People with Disabilities
RSSC	Revenue Shared Services Centre
RW	Rand Water
SANS	South African National Standard
SAP	Systems, Applications and Products
SCM	Supply Chain Management
SDA	Service Delivery Agreement
SDBIP	Service Delivery Budget Implementation Plan
SETA	Sector Education and Training Authority
SLA	Service Level Agreement
SMME	Small, Medium and Micro Enterprise
SSC	Sustainable Services Cluster
STS	Standards Transfer Specification
SWOT	Strengths, Weaknesses, Opportunities and Threats
TOD	Transit-Oriented Development
VIPs	Ventilated Improved Pit-latrines
WC/WDM	Water Conservation/Water Demand Management
WDM	Water Demand Management
WWTW	Wastewater Treatment Works

Chapter 1: Executive Summary

1.1 Executive Summary

The business plan for 2020/21 is premised on the political direction contained in the three strategic documents of the shareholder namely the Growth and Development Strategy (GDS 2040), Integrated Development Plan 2016/21 and the Service Delivery Budget Implementation Plan 2020/21 (SDBIP). Johannesburg Water's mandate is contained in the Service Delivery Agreement (SDA). The plan responds to the following priorities of Government of local unity.

1. Good governance
2. Financial sustainability
3. Integrated human settlements
4. Sustainable service delivery
5. Job opportunity and creation
6. Safer city
7. Active and engage citizenry
8. Economic development
9. Green-Blue economy
10. Smart city

The company will deliver on its mandate organised through six Strategic Goals, as follows have been developed to respond to the shareholder mandate

- Utilise infrastructure delivery to create jobs, support Small, Medium and Micro Enterprises (SMMEs) and attract investment
- To deliver water and sanitation services of good quality that are accessible, reliable and efficient, in an environmentally responsible/sustainable way.
- Improve customer and stakeholder satisfaction.
- Enhance sound financial management, sustainability and clean governance.
- Use of technology for effective and efficient operations.
- Invest in our staff to sustain optimal performance and a service-focused culture with committed people.

This plan will be delivered with current assets worth R11.4 billion and the additional R1.4 billion allocated capital budget, revenue budget of R13.8 billion based on the annual average tariff increase of 8.6%. The Human capital of 2 716 employees will be utilised to deliver of the plan.

During the roll-out of the plan, employment opportunities will be created through the co-production methodologies. These opportunities will be as a result of upgrading, renewal of existing and addition of new water and sewer infrastructure respectively.

The entity will be held accountable to agreed service standards and performance indicators and targets as contained in the plan. These are performance indicators the entity contracts with the communities that it serves.

Chapter 2: Strategic Overview

2.1 Our Vision

To be a World-Class African water and sanitation utility

2.2 Mission

To provide all the people of Johannesburg with access to quality water and sanitation services by doing the following:

- Delivering a professional, sustainable, affordable and cost-effective service
- Upgrading services in marginalised areas
- Creating a customer-focused culture that responds to the needs of citizens, customers and business
- Valuing and developing its employees to build a sustainable capacity
- Safeguarding public health and safety within the City of Johannesburg (CoJ)
- Preserving natural resources for future generations
- Managing assets and leveraging on technology

2.3 Values

- We value and promote **Teamwork**
- We take **Accountability** for our individual and team performance
- We deliver a **Customer Service** that we have promised
- We ensure that **Communication** with our stakeholders is a priority
- We build **Cost Effectiveness** in our business activities

2.4 Core Mandate

Johannesburg Water SOC Ltd, a municipal entity wholly owned by the CoJ was incorporated on 21 November 2000 and commenced business on 1 January 2001.

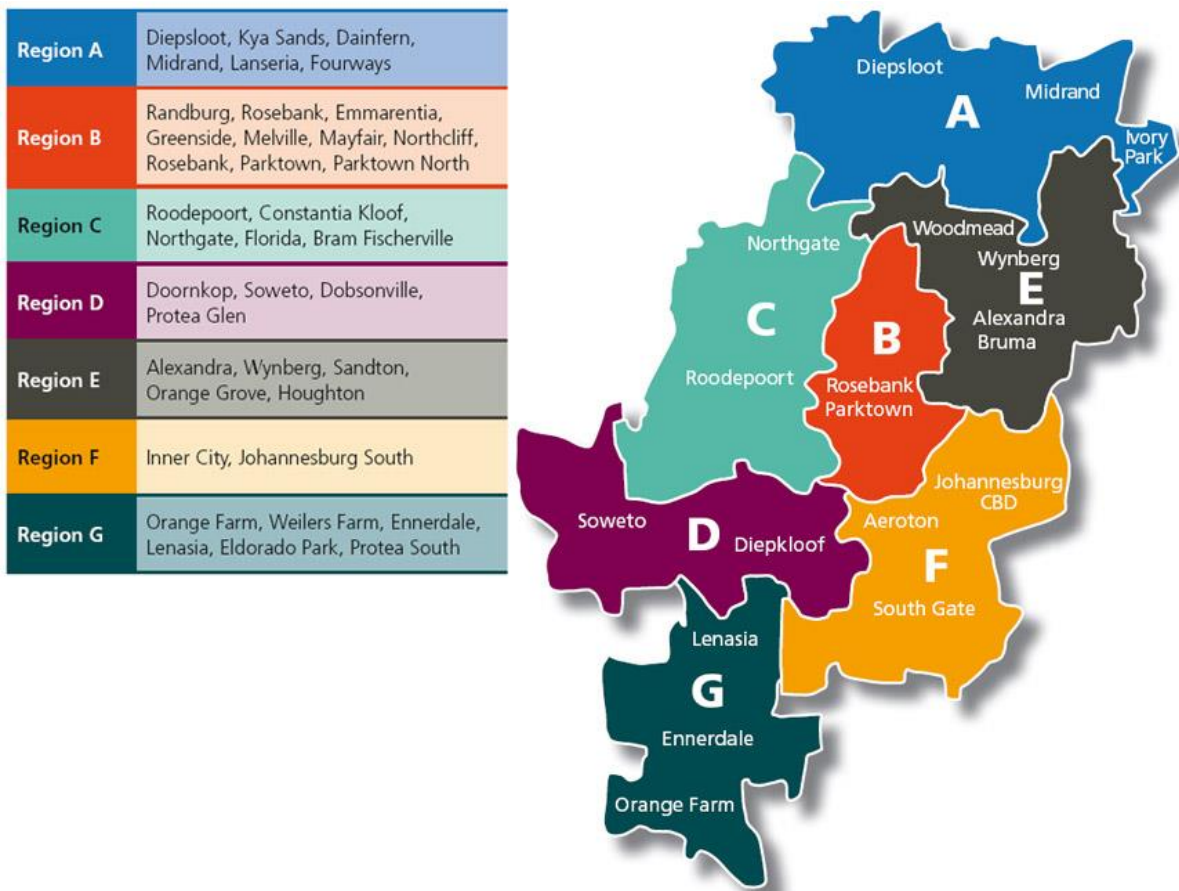
The mandate of Johannesburg Water is to provide water and sanitation services to the residents of Johannesburg. The company's strategic objectives are linked to the Shareholder's objectives through the GDS 2040, IDP, SDBIP and cluster plans. Johannesburg Water is assigned to the Sustainable Services Cluster. In addition, the relationship between the company and the shareholder is governed through the SDA, which is reviewed from time to time and prescribes the company's mandate.

The entity provides services to an area stretching from Orange Farm in the south of Johannesburg to Midrand in the north, Roodepoort in the west and Alexandra in the east as per figure 1. The entity has no competitors to the services offered.

The company has six operating regions, with 10 network depots and six wastewater treatment plants with a total number of 2 716 employees (June 2019).

The entity supplies 1.6 billion litres of potable water per day, procured from Rand Water, through a water distribution network of 12 288 km, 127 reservoirs and water towers, and 37 water pump stations. Wastewater is then collected and reticulated via 11 710 km of wastewater networks and 39 sewer pump stations. Johannesburg Water treats 926 MI per day of sewage at its six wastewater treatment works (WWTW), which includes the biogas-to-energy plant, where methane gas is converted to energy.

Figure 1: City Regions



2.5 The Business Model

Johannesburg Water adopted a business model or strategy to provide water and sanitation services. The value proposition is to provide potable water and sanitation to formal and informal households, as well as businesses and Industries, while providing the shareholder with a revenue stream. The defined communication channels and the relationship are premised on the annual IDP public participation process, which holds the Company accountable to these communities that are served as required by legislation. The Company will achieve this mandate through key activities that are supported by key resources. Three key partners have been identified in the value chain. Table 1 below depicts the Company's Business Model.

Table1: Johannesburg Water Business model:

Key Partners	Key Activities	Value Propositions	Customer Relationships	Customer Segments
<ol style="list-style-type: none"> Rand water City Power Department of water and Sanitation 	<ol style="list-style-type: none"> Distribution of potable water Servicing of pit-latrines Collection of wastewater Treatment of wastewater Infrastructure renewal and expansion 	<ol style="list-style-type: none"> Piped potable water Tanked potable basic water Piped sanitation services Permanent basic sanitation Temporary basic sanitation services 	<ol style="list-style-type: none"> Integrated Development plan – Public participation 	<ol style="list-style-type: none"> Residents of Johannesburg in formal areas Residents of Johannesburg in informal areas Businesses of Johannesburg Industries of Johannesburg
	Key Resources/Input <ol style="list-style-type: none"> Financial Capital Working Capital Intellectual Capital Human Capital Social and Relationship Capital Natural Capital 		Channels <ol style="list-style-type: none"> Call-centre Facebook Twitter Walk-in centres Depots SMS 	
Cost Structure <ol style="list-style-type: none"> Cost of sale R6.396 billion Operational expenditure: R5.974 billion Gross Profit margin = 53.6% Net Profit R1.538 billion 			Revenue Streams <ol style="list-style-type: none"> Revenue R13.8 billion (Water purchases and sanitation services) 	

2.6 Legislation and policy environment

The following legislation is applicable to the Johannesburg Water operating environment

- Basic Conditions of Employment Act, No.75 of 1997
- Broad-Based Black Economic Empowerment Act, No. 53 of 2003
- Companies Act, No.71 of 2008

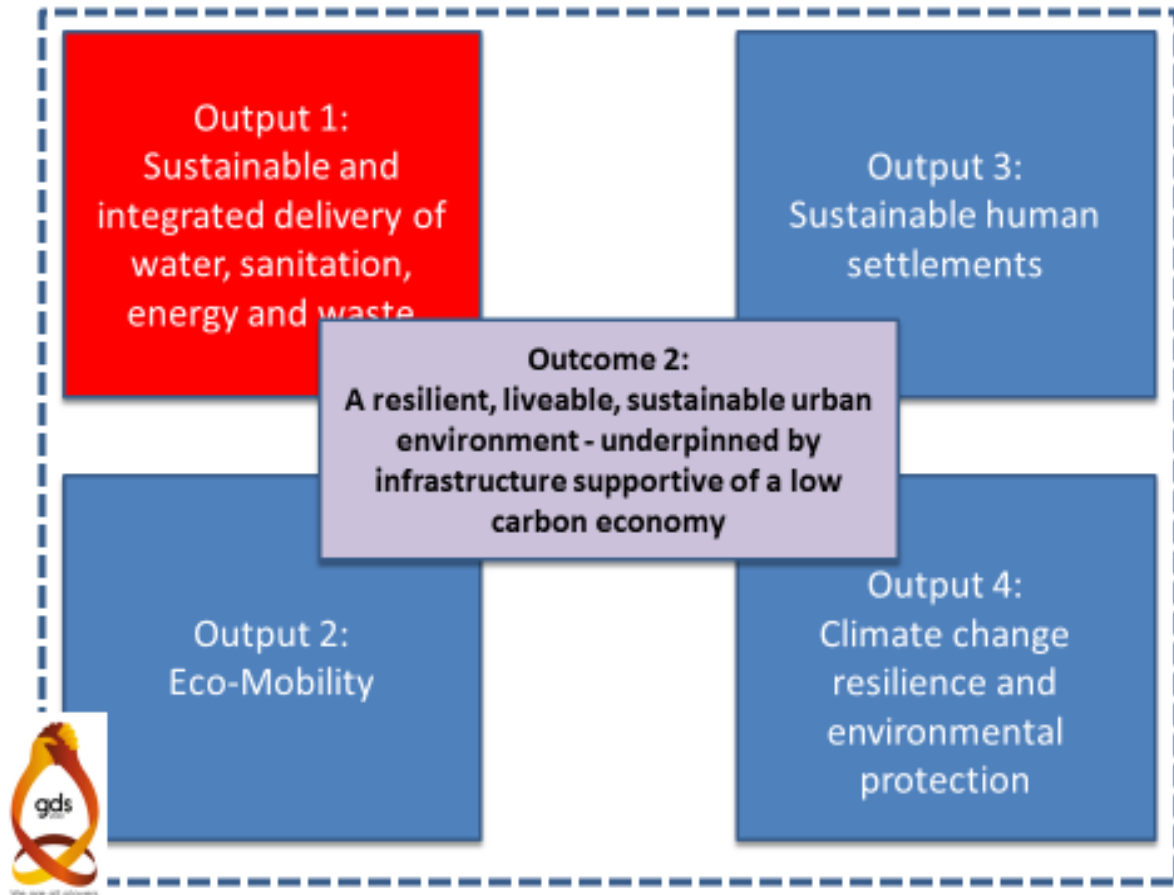
- Compensation for Occupational Injuries and Diseases Act, No.130 of 1993
- Disaster Management Act, No.57 of 2002
- Employment Equity Act, No.55 of 1998
- Hazardous Substances Act, No.15 of 1973
- Income Tax Act, No.58 of 1962
- Infrastructure Development Act, No.23 of 2014
- Labour Relations Act, No.66 of 1995
- Legal Metrology Act, No.9 of 2014
- Local Government: Municipal Finance Management Act, No.56 of 2003
- National Environmental Management - Biodiversity Act, No.10 of 2004
- National Environmental Management Act, No.107 of 1998
- National Environmental Management: Waste Act, No.59 of 2008
- National Water Act, No.36 of 1998
- Occupational Health and Safety Act, No.81 of 1993
- Preferential Procurement Policy Framework Act, No.5 of 2000
- Prevention and Combating of Corrupt Activities Act, No.12 of 2004
- Promotion of Access to Information Act, No.2 of 2000
- Promotion of Equality and Prevention of Unfair Discrimination Act, No.4 of 2000
- Protection of Personal Information Act, No.4 of 2013
- Skills Development Amendment Act, No.97 of 1998
- Skills Development Levies Act, No.9 of 1999
- Protected Disclosures Act, No.26 of 2000
- Unemployment Insurance Contributions Act, No.4 of 2002
- Unemployment Insurance Act, No. 3 of 2001
- Value-Added Tax Act, No.89 of 1991
- Water Services Act, No.108 of 1997

2.7 Strategic objectives

The focal point of the Johannesburg Water 2020/21 Business Plan (BP) is to accelerate the 2020/21 strategic course of the government of local unity as outlined during the Mayoral Lekgotla in support of the 2016/21 IDP, read with the GDS 2040. The revised Shareholder Strategy advocates a paradigm shift in terms of how service delivery will be conducted within the CoJ leading to the year 2021.

In executing the mandate, the organisation has taken cognisance of the vision of the City, which is detailed in the GDS 2040. It is in this light that the business plan has been developed to support the GDS outcome 2 being *“A resilient, liveable, sustainable urban environment - underpinned by infrastructure supportive of a low carbon economy”* as depicted in figure 2 below.

Figure 2: GDS Outcome 2



In order to realise the GDS outcome 2, the Sustainable Technical Cluster developed 10 supporting programmes. Three programmes (programme 3, 9 and 8) of the following 10 cluster programmes directly impact to Johannesburg Water operations and are linked to 3 GDS outputs (output 1, 3 and 4) respectively.

1. Good Governance
2. Financial Sustainability
3. Integrated human settlements
4. Sustainable service delivery
5. Job opportunities and creation
6. Safer city
7. Active and engage citizenry
8. Economic development and growth
9. Sustainable Environment development
10. Smart city

Long-term planning is critical to many aspects of the organisation. Associated activities include managing long-term debt and asset values, infrastructure maintenance, ensuring that water supply is sufficient to meet long-term demand, and increasing the sustainability of current water supplies. It is important that the organisation identify, characterise, and prioritise key threats and begin to devise response options that address the most salient risks. The CoJ is following closely the “Cities of the Future” approach, which employs a strategy where the delivery of all urban infrastructure and services is planned through a partnership approach between all stakeholders and other sectors together to meet sustainability and liveability objectives.

The following are the long-term key drivers impacting provision of water and sanitation services to achieve growth and developmental needs of the city towards the year 2040:

- Resource Sustainability
- Water Infrastructure
- Coverage of water and sanitation
- Strategic Partnerships
- Climate change
- Protection of the environment

Based on the 2020/21 IDP review, the CoJ priorities and priority programmes are outlined in Table 2 and 3 below respectively and adopted where applicable for the development of this plan.

Table 2: Strategic Priorities

Priority	Priority Description
Priority 1	Good Governance
Priority 2	Financial Sustainability
Priority 3	Integrated human settlement
Priority 4	Sustainable service delivery
Priority 5	Job opportunity and creation
Priority 6	Safer City
Priority 7	Active and engage citizenry
Priority 8	Economic development and growth
Priority 9	Sustainable environmental development
Priority 10	Smart City

Table 3: Priority Programmes

Priority Programmes	Priority Description
1	Accelerated and visible service delivery and reintroduce co-production in the delivery of basic services.
2	Improve and strengthen financial position.
3	Impact the housing market including the integration, development and maintenance hostels and flats.
4	A safer City by reintroducing ward-based policing (Joburg 10+) and effective by-law enforcement.

4.574

Priority Programmes	Priority Description
5	Job opportunities and creation.
6	Development and support of SMME.
7	Community Based Planning and enhanced community engagement, including Mayoral Izimbizo.
8	Manage displaced communities and homelessness.
9	Combat drug, substance abuse and gender based violence.
10	Combat corruption, fraud and maladministration.
11	Combat illegal land invasion and promote regulated land use.
12	Formalisation of informal settlements and rapid land release

For ease of implementation and reporting on the CoJ's priorities, the CoJ has divided the 2016/21 IDP into various clusters, with the Sustainable Services Cluster (SSC) being the cluster in which Johannesburg Water, among others, falls under. Out of the ten City priorities outlined, the SSC has deliverables and outcomes aligned to **priorities 1, 2, 3, 4, 5, 7, 8, 9 and 10** and these are the main areas of focus in the implementation of the set priorities.

The business plan has also taken into account the strategic goals and the associated risks. The goals depicted in table 4 below are structured to support achievement of the GDS 2040 outcomes and priorities of the city.

Table 4: Strategic Goals

Goal	Goal Description
Strategic goal 1	Utilise infrastructure delivery to create jobs, support Small, Medium and Micro Enterprises (SMMEs) and attract investment.
Objective	Rolling out infrastructure, which attracts the investment in the CoJ. While rolling out infrastructure, jobs will be created with emphasis on developing SMMEs.
Strategic goal 2	To deliver water and sanitation services of good quality that are accessible, reliable and efficient, in an environmentally responsible/sustainable way.
Objective	To roll-out additional level of service one (LoS1) water and sanitation basic services where there is inadequate provision of water and to improve the reliability of the provision of these services. This will be done with consideration not to pollute the environment.
Strategic goal 3	Improve customer and stakeholder satisfaction.
Objective	To enhance internal and external communication, influence behavioural change towards water conservation and proper use of water and sewer infrastructure, which will lead to improved customer satisfaction.
Strategic goal 4	Enhance sound financial management, sustainability and clean governance.
Objective	To enhance the way the Company is doing business, with a focus on sound financial management, financial sustainability and clean governance
Strategic goal 5	Use of technology for effective and efficient operations.
Objective	To spearhead the use of information and communications technology for the effective and efficient operations company-wide.
Strategic goal 6	Invest in our staff to sustain optimal performance and a service-focused culture with committed people.
Objective	To ensure that staff is consistently developed to a competent level and keeps abreast with changing environment. Performance is the key driver, which requires competent staff. Staff satisfaction remains key in order to have a committed workforce.

Outlined below are key strategic interventions that Johannesburg Water intends to implement in order to realise the City priorities, read with the GDS 2040 outcomes.

- Implementation of a **Job Creation Programme**, that will increase the number of Expanded Public Works Programme (EPWP) jobs created as well as the number of SMMEs supported through co-production.
- Continued implementation of the **Informal Settlements Upgrade Programme** to ascertain that residents have access to basic water and sanitation services as projected.
- Implementation of the **Infrastructure Investment Programme**, with special emphasis on investment that is focussed on renewal and refurbishment and preventative maintenance.
- Implementation and enhancement of the **Water Service Programme**, where the quality and standard of water provided is maintained, new water meters are connected within the prescribed timeframes and timeous response to water interruptions and water bursts is upheld.
- Implementation of the **Sanitation Service Programme**, where there is a reduction of wastewater spills at the Wastewater Treatment Works (WWTW) and timeous response to sewer blockages, as reported.
- Implementation of the **Water Revenue Programme**, through continued implementation of efforts to reduce the levels of Non-Revenue Water (NRW) and improvement of meter reading levels as this will go a long way in addressing the financial sustainability of Johannesburg Water.
- Implementation of the **Water Demand Management Programme**, where household consumption of water per day is maintained at acceptable levels.
- In response to the implementation of the **Climate Change Programme**, Johannesburg Water will continue to maintain the Biogas programme, in which methane gas is converted to electrical energy to offset the greenhouse gas emissions.

Table 5 below depicts the alignment of strategic goals, priorities and priority programmes where applicable

Table 5: Strategic Goals alignment to the City's priorities and programmes

2011 GDS Outcomes	OUTPUTS	STRATEGIC PRIORITIES	PRIORITY PROGRAMMES	JW STRATEGIC GOAL
2. Provide a resilient, liveable, sustainable urban environment – underpinned by smart infrastructure supportive of a low carbon economy	<ul style="list-style-type: none"> • Sustainable/integrated infrastructure services • Eco-mobility • Sustainable human settlements • Climate change resilience and environmental protection 	<ul style="list-style-type: none"> • Integrated human settlements • Sustainable service delivery • Sustainable Environmental development 	<ul style="list-style-type: none"> • Accelerated and visible service delivery and re-introduction of co-production in the delivery of the basic service • Impact the housing market including the integration; development and maintenance of hostels and flats • Combat illegal land invasion and promote regulated land use • Formalisation of informal settlements and accelerated rapid land release 	<p>Strategic Goal 2</p> <p>Deliver water and sanitation service of good quality that is accessible, reliable and efficient in an environmentally responsible/sustainable way</p>
3. An inclusive, job-intensive, resilient, competitive and smart economy that harnesses the potential of citizens	<ul style="list-style-type: none"> • Job intensive economic growth • Promotion and support to small businesses • Increased competitiveness of the economy 	<ul style="list-style-type: none"> • Economic development • Job opportunity and creation • Smart city 	<ul style="list-style-type: none"> • Job opportunities and creation • Development and support of SMMEs 	<p>Strategic Goal 1</p> <p>Utilise infrastructure delivery to create jobs, support SMMEs and attract investments.</p>
4. A high performing metropolitan government that proactively contributes to and builds a sustainable, socially inclusive, locally integrated and globally competitive Gauteng City Region	<ul style="list-style-type: none"> • effective citizen Gauteng City Region • Responsive, account, efficient metro • Financially and administratively sustainable and resilient city • Citizen empowerment and participation • Customer care and service • Global positioning of Johannesburg • Building cooperative and intergovernmental partnerships • A responsive, corruption-free, efficient and productive metropolitan government 	<ul style="list-style-type: none"> • Good governance • Financial sustainability • Active and engaged citizenry 	<ul style="list-style-type: none"> • Improve and strengthen financial position • Combat corruption; fraud and maladministration • Community based planning and enhanced community engagement, including mayoral izimbizo 	<p>Strategic Goal 3</p> <p>Improve customer and stakeholder satisfaction.</p> <p>Strategic Goal 4</p> <p>Enhance sound financial management, sustainability and clean governance.</p>

Chapter 3: Strategic Analysis

3.1 Infrastructure backlog and challenges

Johannesburg Water has total infrastructure assets with current replacement cost of R83 billion as at 30 June 2019. The infrastructure consists mainly of water networks (12 288 km), sewer networks (11 710 km), water and sewer pump stations (76), reservoirs and water towers (126 with combined capacity of 1 928 MI) and WWTW (6 with combined capacity of 1 043 MI/day).

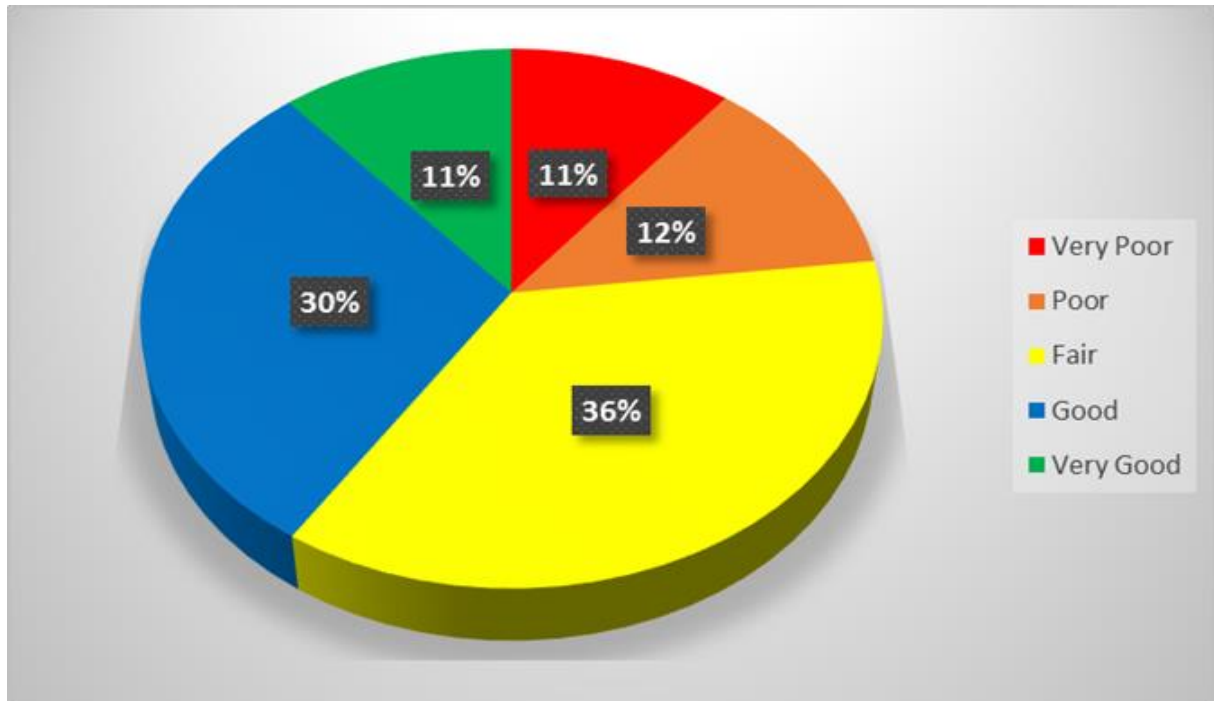
Asset Management Plans (AMP) dictates a renewal rate of 2% per year of assets replacement value as per industry norm

An asset renewal rate is defined as the yearly proportion of an asset that needs to be replenished to ensure the asset is replaced by the end of its expected useful life. Short expected useful life assets, such as electro-mechanical equipment, will have a higher renewal rate compared to long expected useful life assets, such as civil infrastructure norm.

Current expenditure pattern indicates that an average renewal rate of 1.1% has been achieved with current funding allocations. The Company has infrastructure renewal backlog of approximately R10.8 billion as a result of underfunding which has also lead to having 25% of asset base that has remaining useful life of less than 10 years as indicated in figure 4 and table 6. The renewal backlog requirement is categorised as follows:

- Water mains replacement: R1.4 billion
- Sewer mains replacement: R3.4 billion
- Water and sewer capacity upgrading backlog: R3.5 billion
- Wastewater treatment works capacity upgrading and equipment replacement R2.5 billion.

Figure 3 below indicates the entire assets portfolio and its current conditions. The condition of infrastructure assets is assessed by means of a generic five-point grading scale. Where physical inspections were not possible (e.g. pipes) the condition was extrapolated from historical performance data such as burst and blockages.

Figure 3: Assets condition profile distribution based on age

The resultant value of critical assets that require replacement/renewal is R20.4 billion (over the next 10-year period). This equates to a requirement of R2 billion per annum over the next 10 years for capital replacement/renewal, which is currently a barrier due to funding allocation/availability. In addition to the aforementioned existing infrastructure backlog, R1.2 billion would be required annually for the upgrade and expansion for new infrastructure. The total combined is R3.2 billion for the upgrade and renewal of infrastructure.

The total water upgrading and renewal requirement is R1.4 billion per year and is further detailed below:

- Water pipes renewals requirement of 185 km amounting to R660 million to replace 1.5% of its asset value.
- Reservoirs rehabilitation require R189 million.
- Water pump stations renewals require R16 million.
- Water upgrading and extensions require R553 million.

The outcome of the water networks infrastructure renewal/replacement is to reduce bursts, improved response times and improved water supply.

The total sewer upgrading and renewal requirement is R1.8 billion per year and is further detailed below:

- Sewer pipe renewals requirement of 176 km amounting to R700 million to replace 1.5% of its asset value.

4.580

- Sewer pump stations renewals R7 million.
- WWTW renewal of R437 million
- WWTW capacity upgrading of R366 million
- Sewer upgrading and extensions require R276 million.

The outcomes of the wastewater infrastructure renewal/replacement is to reduce sewer blockages, improved response time and reduce sewer spills at WWTW and improved effluent/sludge quality.

Figure 4: Remaining Useful Life

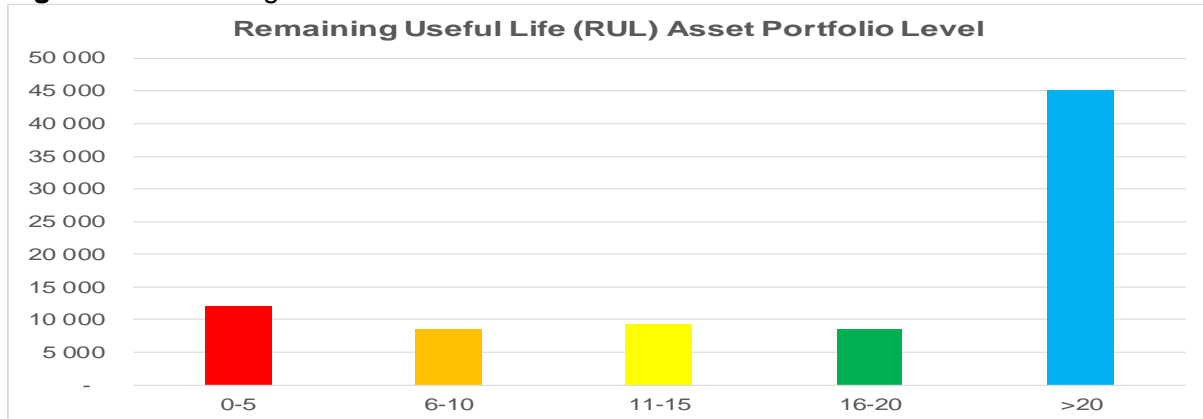


Table 6: Remaining Useful Life of Assets

Asset Group	Remaining Useful Life (years) (CRC Amounts - R Million)					Total
	0-5	6-10	11-15	16-20	>20	
Water Supply Network	5 715	2 928	4 678	790	19 063	33 174
Waste Water Network	4 311	2 751	4 190	5 000	22 748	38 999
Waste Water Treatment Works	1 766	2 603	332	2 610	3 095	10 406
Operational Buildings	167	146	37	89	162	601
Total	11 959	8 429	9 235	8 488	45 069	83 180
Composition	14%	10%	11%	10%	54%	100%

4.581

The short- and medium-term interventions to alleviate challenges with infrastructure failures are as follows:

- Improved pressure management, which includes preventative maintenance on all Pressure Reducing Valves (PRV), extending smart controlled PRV installations and establish more Pressure Management areas in the water reticulation in areas experiencing 90m static supply pressures.
- Implement a Preventative Maintenance Programme on all 300 mm diameter valves and greater as well as hydrants.
- Improve sewer preventative maintenance from covering 1 500 km per year with hydro jetting to a further 1 000 km per year with depot based cleaning via manual sweeping of sewer lines.
- Improved productivity of teams to attend to six water and five sewer jobs per day per team.
- Implement a Workforce Optimisation Programme which will include, central dispatching of teams, electronic job cards, route planning and improved customer feedback.
- Increase capacity at WWTW – Expand Northern Works by 50 MI/day, New Lanseria Works (50 MI/day) and expansion of Ennerdale Works by 8 MI/day.
- Construct four new reservoirs and five towers which will serve a total of 67 750 household equivalent
 - Reservoirs planned for construction are Woodmead - 22 MI, Halfway House - 20 MI, Lenasia high level 10 MI and Carlswald – 20 MI.
 - Towers planned for construction are Aeroton – 1.4MI, Blue Hills – 1.8 MI, Crown Gardens – 1.1 MI , , Erand – 0.75 MI and Robertville - 2.25 MI

In response to infrastructure, renewal needs or backlogs, the proposed budget for Johannesburg Water over the next three years amounts to R4.6 billion.

It is estimated that, on average, Johannesburg Water pipe replacements per year should amount to R660 million for water and R700 million for sewer, in order to meet the pipe renewal target of replacing 1.5% of its asset value per year. Over the past ten-year period, Johannesburg Water has never met the 1.5% renewal rate due to funding limitations. Figure 5 below provides detailed past performance of infrastructure renewal rate, which included pipe replacement at a target of 1.5%.

Figure 5: Johannesburg Water infrastructure renewal rate

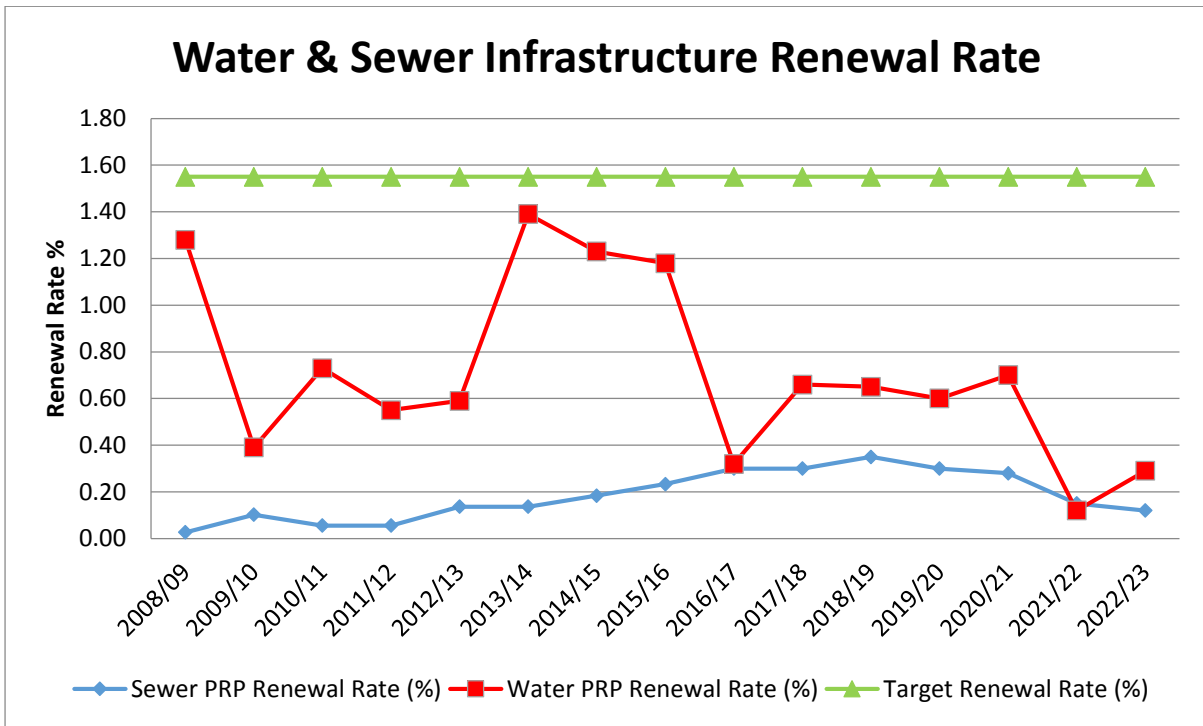


Figure 6 below shows that the number of blockages and bursts per km has been increasing since 2012/13 financial year till 2016/17 for water and 2017/18 for sewer after which it started to decline, while figure 7 also shows the increase in the number of bursts and blockages per year till 2016/17 for burst and 2017/18 for blockages after which the number started to decline. Figures 6 and 7 below do affirm that lower capital funding on renewal rate has a direct impact on quality of services rendered to the citizens but an increase will lower the failure rates and lead to more satisfied customers.

Figure 6: Number of bursts/blockages per km

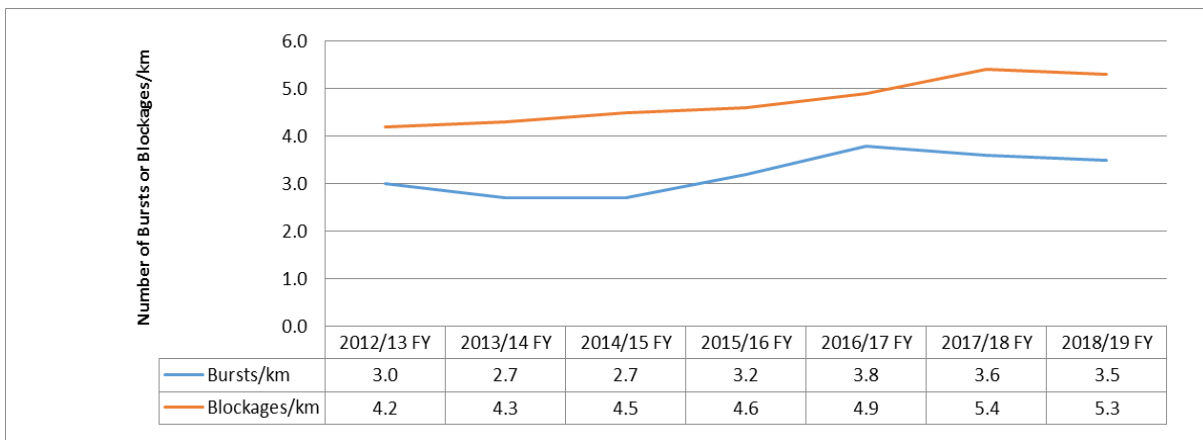
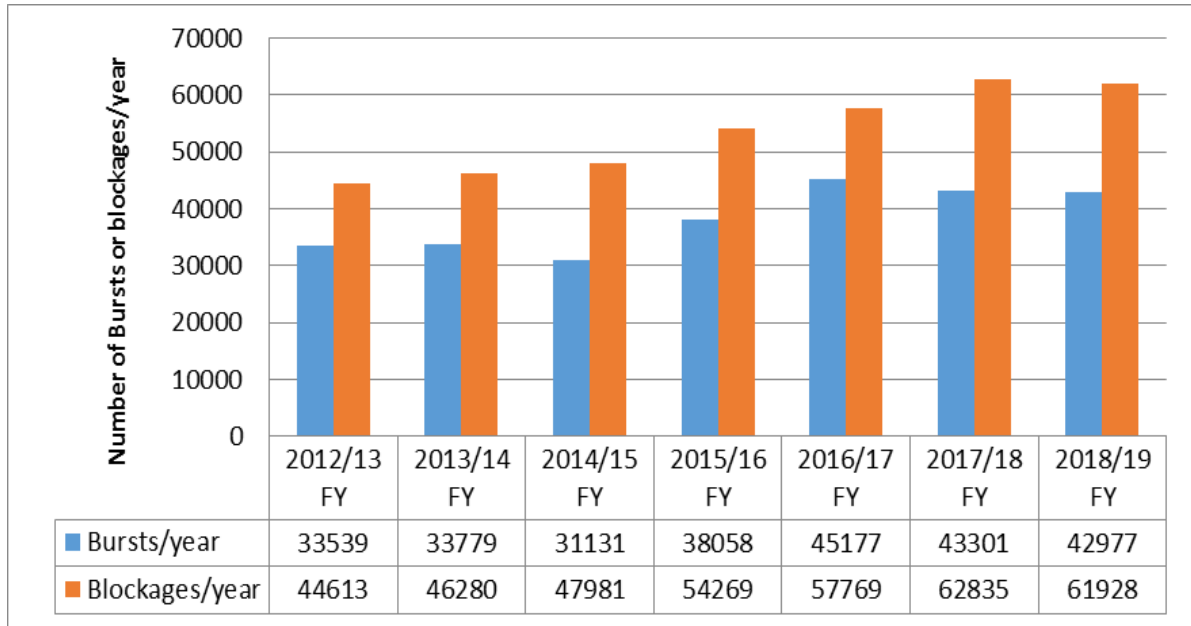


Figure 7: Burst/blockages per year



3.2 Environmental Analysis

In terms of the planning cycle, the entity undertakes environmental Scanning, which provides the input, required to develop an informed business plan taking into consideration all internal and external factors.

3.2.1 SWOT

The Strength, Weakness, Opportunity and Threat (SWOT) analysis as outlined in Table 7 below highlights the operating environment opportunities and threats, together with Johannesburg Water's strength and weaknesses. Johannesburg Water's strategic goals, as identified, strive to enhance the strength and opportunities and in the same breath apply mitigating strategies to address the weaknesses and threats identified.

Table 7: SWOT analysis

Internal factors	<p>Strengths</p> <ul style="list-style-type: none"> ➤ Industry knowledge. ➤ Committed and skilled personnel ➤ Risk resilient. ➤ Disaster management mechanism. ➤ Corporate governance structure. ➤ Secured customer base. ➤ Stakeholder Communication 	<p>Weaknesses</p> <ul style="list-style-type: none"> ➤ Inadequate replacement rate/ Infrastructure backlog ➤ Inadequate capital investment/ funding. ➤ Inadequate credit control ➤ Reactive maintenance programme. ➤ Business continuity. ➤ Supply chain management ➤ Accessibility of entity to customers
	<p>External factors</p>	<p>Opportunities</p> <ul style="list-style-type: none"> ➤ Alternative water sources such as treated AMD as well as boreholes. ➤ New smart city technologies (including smart meter) ➤ Effluent reuse. ➤ Growth of the organisation through the initiatives of the city, ➤ Increase in revenue and customers ➤ Alternative energy sources

3.2.1 PESTLE

The Political, Economic, Social, Technological, Legislative and Environmental (PESTLE) model involves the collection and portrayal of information about external factors, which have, or may have, an impact on Johannesburg Water. These factors are detailed in Table 8 below.

Table 8: PESTLE strategic analysis

Category	Factors
Political	<ul style="list-style-type: none"> ➤ Revised local government arrangements. ➤ Service delivery protests. ➤ Non-payment for services and illegal connections.
Economic	<ul style="list-style-type: none"> ➤ Increased bulk water tariffs. ➤ Low economic growth rate. ➤ High unemployment rate. ➤ Low payment and/or non-payment for services. ➤ Inability to raise independent funding ➤ Sovereign Rating of the country
Social	<ul style="list-style-type: none"> ➤ Urbanisation. ➤ Increased need for services in informal settlements. ➤ High density settlements. ➤ Consumer awareness/ignorance on infrastructure usage i.e. abuse of infrastructure, vandalism etc. ➤ Consumer awareness of water as a scarce resource.
Technological	<ul style="list-style-type: none"> ➤ Rapid change in technology. ➤ Smart City requirements [(Standard Transfer Specification (STS) Smart Metering Pilot Project)]. ➤ Communication infrastructure gaps. ➤ Inadequate research and technology. ➤ Lack of high technology skills ➤ Increase level of cyber-attacks
Legislative	<ul style="list-style-type: none"> ➤ Compliance to legislative prescripts relevant to Johannesburg Water.
Environmental	<ul style="list-style-type: none"> ➤ Climate change. ➤ Quality and environmental standards. ➤ Increased water demand. ➤ Carbon emissions. ➤ Acid Mine Drainage (AMD). ➤ Alternative water sources.

3.3 Risk Assessment

Good governance and assurance processes are essential for the company to ensure that customer expectations are met as well as stakeholder and regulatory expectations around trust and openness.

The company has an established Risk, Compliance and Business Continuity Department to enable the efficient and effective governance of significant risks and related opportunities to the organisation. This assists the company to accomplish its objectives by bringing a systematic and disciplined approach to evaluate and improve the integrity and effectiveness of the company's systems of risk management and control for governance, management and operational functions.

Johannesburg Water will concentrate on effectively assessing and addressing strategic, reputational, operational, financial, and legal or compliance related risks to the company as well as enhancing efficiency and effectiveness of business performance through reviews of business processes and activities of the company.

3.3.1 Approach to risk management

Effective risk management is essential for the company to manage uncertainties and achieve its objectives. It is embedded in the normal business process and culture, and overseen by an independent Audit and Risk Committee. This improves the ability to predict and prepare for challenges to the achievement of our priorities and supports the creation and protection of value within the company. The process itself is an interactive process in which information is continuously updated and analyzed.

Risk Management as applied throughout the organisation, is centered on improving internal controls, operational efficiencies, and excelling in delivery of services to our customers. Risk taking is a necessary element of our service delivery model, and calculated risks are taken, within the risk appetite levels that have been carefully developed and defined by management to ensure that, in pursuit of the objectives, the company will remain sustainable and compliant with legislative requirements. The reputation of the company and its ability to continue doing business are essential elements of risk management and control framework, and consistently applied throughout the organisation.

Overall, the company consider the mechanisms within the current framework which ensure that risks are allocated to those best placed to manage them. The mechanisms also ensure that the rewards gained from our efficient delivery of services are shared between Johannesburg Water and stakeholders, in a way that is reflective of the risk allocation. Risk identification is embedded in all management systems.

A network of risk champions work with leadership teams to prompt risk identification, consistent measurement and review. Each risk is allocated to a risk owner who is responsible for the monitoring, management and reporting of that risk through the risk management process for the life of the risk. The risk plan has been examined and considered its resilience to changes in circumstances, the operating environment and inherent uncertainty to identify any further risks specifically associated with the delivery of the plan.

Risks are managed in line with the following key principles:

- Transparent risk culture: all risks are measured, managed, monitored and reported.
- Proactive approach: risk management is dynamic with risks and opportunities identified and escalated to be managed at the appropriate level in the business.
- Risk governance: all risks are subject to appropriate controls and governance.
- Risk appetite: a clearly defined risk appetite framework is aligned to the business strategy and reflects the Board's approach to risk taking.

3.3.2 Understanding the risks that could affect the plan

As the company progresses through the strategies, actions and initiatives of the 2020/21 Business Plan, the activities of the Company are aligned with the priorities of the Integrated Development Plan, in particular the priority to uphold Good governance. To align to this priority, the company has development the “Enhancement of sound financial management, sustainability and clean governance” as one of its strategic goals. A fundamental of good governance is that sound legislation, administrative, monitoring and service delivery systems exist to help establish accountability for results.

The strategy to improve company identification of and response to strategic and operational risks will support the Business Plan (BP) strategy to accelerate implementation and advance effectiveness in service delivery. The strategy to enhance efficiency and effectiveness of business performance will likewise support the BP strategy to deliver water and sanitation services of good quality that is accessible, reliable and efficient in an environmentally responsible/sustainable way. Lastly, the strategy to develop and promote a systematic governance approach to setting the best course of action – which includes the implementation of Enterprise Risk Management, will support the BP strategy to “Enhance sound financial management, sustainability and clean governance”.

3.3.3 Risks and mitigation strategies

The annual assessment reveals the level of risk the business will be taking and the balance between those risks. The Board is clear that its appetite for service risk, safety risk and risks to compliance with our regulatory and environmental commitments remains cautious. The actions required to monitor and manage strategic risk to appetite have been agreed and are being put in place.

The approach to risk management and resilience has highlighted the risks with a Residual Risk Score >9 on a scale of 1-25 which need to be mitigated to improve the resilience of the service which Johannesburg Water provides to its customers. This business plan takes into account the below known risks but there may be additional risks unknown to the organisation and other risks, currently believed to be immaterial, which could develop into material risks. These are shown in the summarised version of the Strategic Risk register in table 9 below. A detailed Strategic Risk Register is attached as an annexure.

Table 9: Strategic Risk register

Strategic Goal	Risk Name	Inherent Rating	Residual Rating
Utilise infrastructure delivery to create jobs, support SMMEs and attract investment.	Delayed infrastructure delivery	Very High (20)	High (12)
Deliver water and sanitation services of good quality, that is accessible, reliable and efficient in an environmentally responsible/sustainable way	Lack of accessibility of services	Moderate (9)	Low (5)
Improve customer and stakeholder satisfaction	Security of supply/ Demand outstripping supply	Very High (25)	High (13)
Enhance sound financial management, sustainability and clean governance	Financial sustainability and governance	Very High (25)	High (13)
Use of technology for effective and efficient operations	Public health, safety and environment	High (12)	Low (5.5)
Invest in our staff to sustain optimal performance and service focused	Service quality/ delivery perception	High (16)	Moderate (8)
Use of technology for effective and efficient operations	Inadequate IMS & Technology Capability	Very High (20)	Moderate (10)
Invest in our staff to sustain optimal performance and service focused	Unethical behaviour	High (12)	Low (5)
Invest in our staff to sustain optimal performance and service focused	Ineffective human capital	High (16)	Moderate (8)

CHAPTER 4: STRATEGIC RESPONSE – IMPLEMENTATION, PERFORMANCE

4.1 Key performance area

This section entails Johannesburg Water implementation plans to respond to priorities identified. The response is executed through strategic goals that are aligned to CoJ strategic priorities and priority programmes.

Strategic Goal 1	Priority 5: Job Opportunity and Creation
Utilise infrastructure delivery to create jobs, support SMMEs and attract investments	Priority 8: Economic development and growth
	Priority Programmes: <ul style="list-style-type: none"> • Job Opportunities and creation • Development and support of SMME

4.1.1 Strategic Goal 1

This goal is about rolling out infrastructure, which attracts the investment in the CoJ. While rolling out infrastructure, jobs will be created with emphasis on developing SMMEs.

4.1.1.1 Infrastructure Investment Programme

The CoJ has identified 10 priorities in order to streamline strategic key performance areas with a view to enhancing performance and strengthening the ability of the CoJ in achieving IDP 2016-21 and GDS 2040 outcomes. In order to contribute to the accomplishment of GDS 2040, Johannesburg Water has identified various infrastructure investment programmes that are key in the achievement of CoJ's strategic objectives. Focus is mainly on upgrade and renewals of networks, expansion of wastewater treatment works, storage capacity and water demand management initiatives. The programmes have also taken into account the national outcomes from the National Development Plan (NDP) as reflected below:

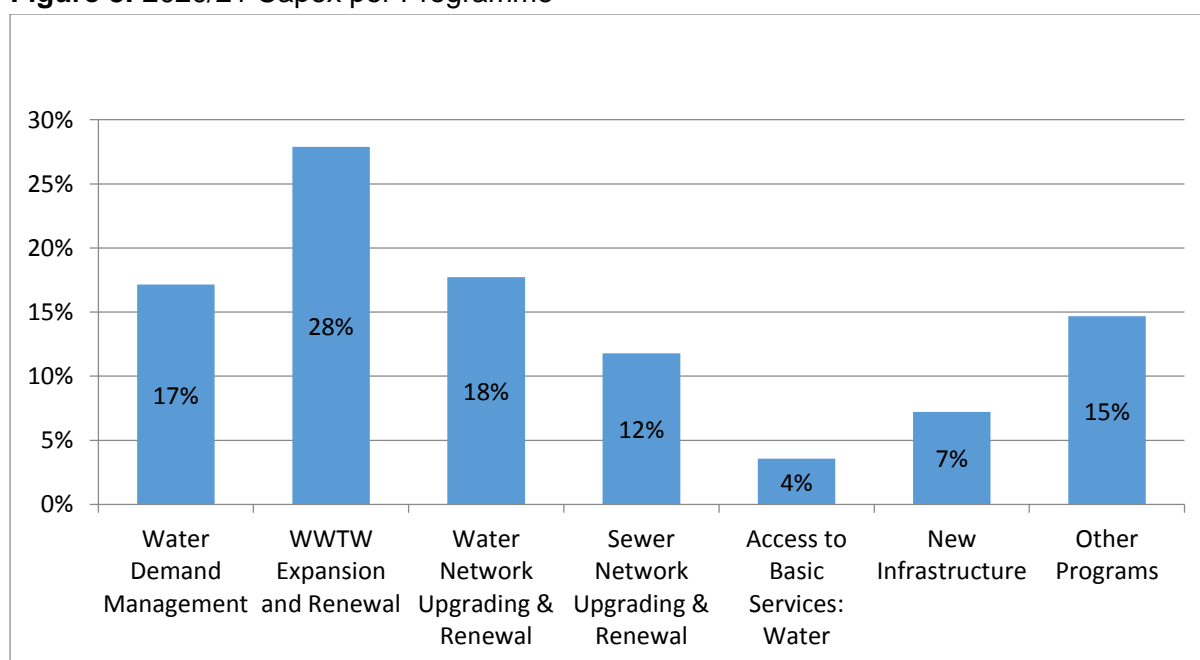
- **Outcome 2:** A long and healthy life for all South Africans.
- **Outcome 4:** Decent employment through inclusive economic growth.
- **Outcome 5:** A skilled and capable workforce to support an inclusive growth path.
- **Outcome 6:** An efficient, competitive and responsive economic infrastructure network.
- **Outcome 8:** Sustainable human settlements and improved quality of household life.
- **Outcome 10:** Environmental assets and natural resources that is well protected and continually enhanced.

In response to infrastructure, renewal needs or backlogs, the proposed budget for Johannesburg Water over the next three years amounts to R4.6 billion. Table 10 below provides a detailed breakdown of the capital budget per category. In 2020/21, a total of R 1.4 billion will be invested in various programmes. These programmes have been structured in a manner that they respond to political direction, CoJ priorities, and Johannesburg Water strategic goals.

Table 10: Three-year capital budget

Category	2020/21 R'000	2021/22 R'000	2022/23 R'000
Corporate Requirements	54,000	24,000	26,000
Water Demand Management	240,000	299,250	140,000
Operate and Maintain	117,350	95,350	107,350
Upgrading and Renewal	398,000	301,000	605,000
New Infrastructure	96,000	181,000	195,000
Planning and Engineering Studies	34,000	35,000	35,000
Marginalised Areas Program	70,000	50,000	50,000
Bulk Wastewater	390,567	508,900	516,915
Total	1,399,917	1,494,500	1,675,265
Renewal Rate	0.97%	0.72%	0.71%

Figure 8 below indicates the split of the Capex programme with a bigger emphasis on infrastructure upgrade and renewal to ensure that the existing infrastructure does not deteriorate.

Figure 8: 2020/21 Capex per Programme

4.1.1.2 Wastewater Treatment Works (WWTW) Programme

In support of GDS 2040 outcomes, Johannesburg Water has planned to roll out a series of high-level projects and interventions that seek to increase the current infrastructure capacity in order to support the CoJ's economic development needs. Lanseria (50 MI) wastewater treatment works is one of the major capital projects intended to be implemented. The project

is expected to be implemented over 8 years and has been included in the 3-year capital plan. Upon completion, the project will provide additional capacity to at least 50 000 HH equivalent. This project will also relieve the current pressure on Northern WWTW, while also unlocking economic development, which will result in job creation and poverty alleviation within the CoJ. This project will further positively contribute in protecting the environment and mitigating against climate change in that with less pressure on Northern WWTW, spills into the environment will be reduced. The treatment of sewer at the new Lanseria works will also, be done in a more energy efficient manner with newer technologies for pumps motors and gearboxes being implemented. It will further positively impact on the environment in that a number of network pump stations will be decommissioned due to the fact that sewer will then flow by gravity to the new works instead of being pumped to Northern WWTW. The detailed design, including all reports and drawings for the new works, is completed. With the environmental authorisation granted and the Water Use Licence expected to be approved in the near future, the procurement process, to appoint contractors, is set to begin in order for the works to be constructed within the envisaged timeframe.

Johannesburg Water will continue to roll out bulk wastewater infrastructure projects, which include upgrades, renewals and expansion in six WWTW. Design work of the Northern WWTW Unit 5 Module 2 has been initiated in the financial year 2018/19. It is envisaged that construction will commence towards the end of 2019/20 financial year. Upon completion, the project will provide the CoJ with an additional 50 Ml/day sewerage treatment capacity. As a result of the additional capacity, the CoJ will be in an advantageous position for unlocking development as an additional 50 000 HH equivalent can be connected to the works. Through this process more jobs will be created within the CoJ, and SMMEs will be supported through sub-contracting during the implementation of the project. The upgrading of Ennerdale WWTW with an additional 8 Ml/day will commence in 2020/21. This will provide capacity to an additional 16 000 HH equivalent.

The renewal of bulk wastewater electromechanical infrastructure through the implementation of the Infrastructure Renewal Plans are key projects intended to maintain current treatment capacity and to improve plant availability through enhanced improvements to electrical and mechanical efficiencies, which will improve effluent compliance. These projects are at varying project stages at Northern, Olivantsvlei, Bushkoppies and Goudkoppies WWTWs with some in the procurement phase, it is envisaged that the remaining projects will be completed within the next three to five years. Table 11 below reflects the 2020/21 projects and anticipated upgrading and renewal budget for subsequent years.

Table 11: Wastewater Treatment Works Programme

Project	Additional Capacity	2020/21 Budget (R'000)	2021/22 Budget (R'000)	2022/23 Budget (R'000)	Output
Olifantsvlei Heating and Mixing	Operational efficiency Improvement	42,000	29,500	30,000	Operational efficiency Improvement Job Creation and Support SMMEs

4.593

Project	Additional Capacity	2020/21 Budget (R'000)	2021/22 Budget (R'000)	2022/23 Budget (R'000)	Output
Bushkoppies Balancing Tank	Operational efficiency Improvement	22,476	50,000	70,000	SMMEs support
Ennerdale	8 MI/d	8,600	28,000	38,000	Additional 16 000 h/h equivalent
Goudkoppies Refurbishment	Operational efficiency Improvement	12,000	40,000	40,000	Environmental protection
Northern Works Expansion and Refurbishment (Unit 5 Module 2) – 50 MI/d	50 MI/d	135,491	263,900	183,915	Additional 50 000 h/h equivalent
					Attract Investment, Create Jobs and Support SMMEs
Driefontein Concrete Lining	Operational efficiency Improvement	2,000	3,500	10,000	Operational efficiency Improvement ,Job Creation, SMME's support and Environmental protection
Lanseria WWTW (50 MI/d)	50 MI/d	165,000	78,000	140,000	Additional 50 000 h/h equivalent
					Attract Investment, Create Jobs and Support SMMEs
WWTW Replacement General (Including Ennerdale)	General upgrade/ refurbishment	3,000	16,000	5,000	Operational efficiency Improvement , Job Creation, SMMEs support and Environmental protection
Total	108 MI/d	390,567	508,900	516,915	

4.1.1.3 Pipe Replacement Programme

In order to ensure continued provision of quality services, Johannesburg Water intends to replace 373 km water pipes in the prioritized suburbs, across the city from 2016/17 FY to 2020/21 FY. To date, the Company has managed to replace a total of 244.6 km of water network in various areas across the city. This represents 65.6% of the 5-year target.

This programme is designed towards ensuring continued reduction of Non-Revenue water (NRW), pipe bursts and sewer blockages throughout the CoJ and to sustain a good level of service to CoJ customers. Johannesburg Water will continue, in the coming year, to replace water and sewer network infrastructure that has remaining useful life of less than two years.

4.594

In order to ensure continued provision of quality services, Johannesburg Water intends to continue with the Pipe Replacement Programme in the current IDP period and a total of 373 km of water network and 176 km of sewer network will be replaced. As highlighted above, 244.6 km of water has been replaced to date against a 5 year target of 373km, while 169.1km of sewer has been replaced to date against a 5-year target of 176 km. This represents 65.6% and 96% achievement for water and sewer respectively against the 5-year target. In 2020/21, a total of 52 km of water and 30 km of sewer networks will be replaced. It should be noted that the planned 2020/21 pipe replacement only represent 0.70% and 0.30% renewal rate of water and sewer respectively, which falls short of the required 1.5% renewal rate per year. The reductions are due to budget reprioritisation and the focusing on Water Demand Management (WDM) initiatives and bulk main renewal.

In rolling out the Pipe Replacement Programme, Johannesburg Water intends to use the co-production method by employing local SMMEs and local labourers, to create jobs and transform the social and economic standing of the CoJ residents. The rolling out of pipe replacement will ensure that the number of bursts per km and number of blockages per km are reduced, which will result in improved levels of service in the CoJ.

In order to improve the quality level of service Johannesburg Water renders to its communities, the Pipe Replacement Programme has been identified as critical in ensuring reduction of water burst frequency. Table 12 below details a plan of water pipe replacement with an average renewal rate of 0.4% per year.

Table 12: Water Pipe Replacement Plan (m)

JW Depots	2020/21	2021/22	2022/23	Total
	Length (m)	Length (m)	Length (m)	Length (m)
Region A-Midrand	8 000	3 810	1 818	13 628
Region B-Sandton	12 000	3 810	1 818	17 628
Region C-Roodeport/Randburg	10 000	3 810	5 455	19 264
Region D-Central	10 000	3 810	9 091	22 900
Region E-Soweto	6 000	1 905	3 636	11 541
Region F-Orange Farm	6 000	1 905	5 455	13 359
Total	52 000	19 048	27 273	98 320
Renewal rate	0.70%	0.12%	0.29%	0.37%

Table 13 below, outlines the detailed sewer pipe replacement plan per region for three years city-wide. These sewer projects will also assist in reducing the high sewer blockages experienced in these areas.

Table 13: Sewer Pipe Replacement Plan

JW Depot	2020/21	2021/22	2023/23	Total
	Length (m)	Length (m)	Length (m)	Length (m)
Region A-Midrand	1 429	-	1 299	2 727
Region B-Sandton	4 286	5 391	7 792	17 469
Region C-Roodeport/Randburg	4 286	4 043	3 896	12 225
Region D-Central	8 571	-	1 299	9 870

4.595

Region E-Soweto	5 714	-	2 597	8 312
Region F-OF	5 714	-	1 299	7 013
Total	30 000	9 434	18 182	57 616
Renewal rate	0.28%	0.15%	0.12%	0.18%

4.1.1.4 Upgrades and storage infrastructure

The Reservoir Storage Upgrade Programme is informed by the need to provide a 24-hour storage capacity in all of Johannesburg Water's reservoirs. The storage capacity is required to mitigate against service disruption should network bursts occur or should there be a supply disruption from the bulk supplier Rand Water and to maintain adequate supply pressure in the reticulation system.

In the 2020/21, Johannesburg Water will continue on rolling out network infrastructure upgrades projects. These projects will enable the CoJ to be a preferred investment destination given its ability to offer business opportunities through its infrastructure. Infrastructure upgrade project will ensure continuous development of key municipal developmental nodes within the CoJ.

In rolling out network upgrade projects, Johannesburg Water will also construct a total of four new reservoir storages and five water towers. Over the remainder of the five-year period, it is projected that the opportunity to provide additional capacity of 67 750 HH equivalent will be created. Table 14 below provides detailed descriptions of the planned reservoirs and their projected outputs.

Table 14: Storage capacity projects and output

Project	Storage Capacity	Proposed Budget 2020/21	Output	CoJ Region	Status
		(R'000)			
Erand Tower	0.75 MI	15,000	Additional water storage of 500 h/h equivalent	A	Bid Specification Committee stage
Woodmead Reservoir	22 MI	10,000	Additional 22 000 h/h equivalent	E	Designs completed, awaiting approval of pipe line servitude
Halfway House Reservoir	20 MI	10,000	Additional 20 000 h/h equivalent	A	Land acquisition process underway, awaiting approval of pipe line servitude

4.596

Project	Storage Capacity	Proposed Budget 2020/21	Output	CoJ Region	Status
Blue Hills Tower	1.8 MI	5,000	Additional 1 000 h/h equivalent	A	Awaiting appointment of the panel of consultants
Robertville Tower	2.25 MI	15,000	Additional 2 250 h/h equivalent	C	Bid Specification Committee stage
Aeroton Direct Tower	1.4 MI	3,000	Additional 1 000 h/h equivalent	F	Construction
Crown Gardens Tower	1.1 MI	8,000	Additional 1 000 h/h equivalent	F	Construction
Lenasia High Level Reservoir	10 MI	20,000	Additional 10 000 h/h equivalent	G	Bid Adjudication Committee stage
Carlswald Reservoir	20 MI	10,000	Additional 20 000 h/h equivalent	A	Land acquisition and subdivision of land processes at advanced stage.
Total	79.3 MI	96,000	Additional 67 750 H/H equivalent		

Leaking Reservoirs

Assessments were carried out on Johannesburg Water reservoir infrastructure, which includes the reservoir, tower and the surrounding pipe work. During this assessment, 42 reservoirs were identified to have leakages due to structural defects and or surrounding pipe infrastructure. Due to the large number of reservoirs needed attention Johannesburg Water resolved to approach the repairs to the reservoir in a phased approach starting with the worst affected reservoirs first.

4.1.1.5 Transit-Oriented Development (TOD) & Inner City Programme

In an effort to re-energise the CoJ's economy, the CoJ has identified economic developmental nodes that need attention in the current IDP period, namely the Inner City, Randburg, Roodepoort (Mining Belt) and Transit-Oriented Development (TOD) areas. In support of the political strategic direction, Johannesburg Water has planned various projects that seek to support economic activities within the identified nodes. Johannesburg Water has also planned to finalise the refurbishment of Hector Norris pump station starting in the 2019/20 financial year. With regards to the Randburg and Roodepoort nodes, Johannesburg Water will align its programme with the CoJ vision and strategic direction of these two nodes. TOD areas are one

of the CoJ's special programmes that are designed to correct the imbalances of the past. The programme is geared towards ensuring that high-density human settlements are developed within the CoJ. This initiative will ensure that people come closer to the CoJ or working zones, while also being provided with mobility through public transport (Rea-vaya).

In support of TOD, Johannesburg Water has identified various capital projects that are geared to support the expected population and economic activities within the nodes. The Company will provide additional water supply infrastructure and sanitation services capacity to support higher density settlements. It should be noted that the current system has sufficient capacity to support development in the short-term and that funding will be allocated to ensure the ultimate development scenario is supported.

The Inner City Programme, comprising the Johannesburg Central Business District (CBD) and adjacent suburbs, has been defined as a priority development node for the CoJ. Similar to the TOD areas, its vision is to provide higher density mixed use development in support of the GDS 2040.

Johannesburg Water has defined a number of upgrading and renewal projects required to support the proposed development. A total revised need of approximately R581 million has been identified for infrastructure upgrading and renewal. In the 2019/20 financial years, a provision of R305 million is divided between water (R86 million) and sewer (R219 million) for renewals respectively, has been made. These budgetary allocations form part of Johannesburg Water's infrastructure renewal and upgrade programme. The following programmes will be the key focus areas for water and sewers from 2019/20 through to 2021/22.

- Upgrade Hector Norris pump station and city-wide pipe replacement.
- Water Pipe Replacement Programme - Johannesburg, Hurlingham, Vrededorp, Fleurhof, Fordsburg, Saxonwold, Greenside, City West, Malvern, and Jeppestown.
- Perth Empire Corridor Water Upgrade - 7.2 km of water pipelines, 26 MI Brixton reservoir, 2 MI Brixton tower.
- Sewer Pipe Replacement Programme - Wolhuter, Bertrams, Fordsburg, Yeoville, Troyeville and Jeppestown, Belle-vue, Fairview, Doornfontein, Lorentville, Berea, Belle-vue East, Judith's Paarl, Salisbury Claims, Malvern, New Doornfontein, Highlands, Johannesburg, City and Suburban, Vrededorp, Newtown, Marshalls Town, Ferreiras dorp, page View, City and Suburban Ext. 2, City West.

4.1.1.6 Repairs and maintenance (water and sewer networks)

The ratio of operating budget to carrying value of Property, Plant and Equipment (PPE) for repairs and maintenance is currently at an annualised percentage of 10.9% (this includes labour as required by the Accounting Standards Board). This exceeds the 10% in alignment with the CoJ priorities. It must be highlighted that the current expenditure on repairs and

maintenance is mainly on a reactive basis, which is not ideal (0.22% is preventative). The aim therefore was started in the 2018/19 financial year to create a balance between reactive and preventative maintenance and to move to a 50/50 split of the targeted 10%. It is possible if Johannesburg Water increases the current rate of capital expenditure on replacement /refurbishment of existing infrastructure. The plan is to increase the rate of preventative maintenance on all electro-mechanical equipment, large diameter valves (>300 mm diameter), hydrants and sewer network infrastructure. Sewer network preventative cleaning will move from 1 500 km per year to 2 500 km per year. The change from reactive to preventative maintenance will be achieved with the existing human resources at Johannesburg Water. This is possible when a renewal rate of 2% is spent on replacement/refurbishment of existing infrastructure. It implies that fewer failures need to be attended to and that, therefore, resources usually used to do reactive work will be freed up to do preventative work. Increased preventative maintenance will ensure reduced infrastructure failures and improved service standards, which is in line with the CoJ's priorities.

4.1.1.7 Water conservation and demand management

Water demand is projected to outweigh supply in the coming years; thus it is important for Johannesburg Water to reduce its demand. Although water demand reduced over the past few years from 309 litres per capita per day to 285 litres per capita per day, efforts need to be intensified to reduce it to the norm of 175 litres per capita per day progressively as stipulated in the National Water and Sanitation Master Plan. In support of this reduction, Johannesburg Water will continue to implement its Water Conservation and Water Demand Management five-year strategy consisting of the following initiatives:

Bulk metering

A review of bulk meter status was undertaken and the results indicated that, only 54% of Johannesburg's internal bulk meters are operational. Johannesburg Water is in the process to procure service providers to assist with the repair and maintenance of bulk management meters as well as the supply and delivery of spare parts for these meters. This initiative will therefore focus on getting all internal bulk meters 100% operational in the next year so that these zones can be reduced to adequate sizes, which will aid considerably in leak detection. The installation of check meters downstream of the Rand Water meters will also assist with monitoring the accuracy of the bulk water supply from Rand Water. The aim is to have all management meters operational and check meters installed where there are no management meters closer to the big Rand Water bulk meters, which supply 90% of the water into the CoJ, by 2021/20.

Active leak detection and minimum night flow analysis

28 supply zones were analysed by comparing actual night flows with expected night flows. A prioritised list of supply zones has been compiled in which active leakage detection will be carried out. The aim is to survey at least 10,000 km of water infrastructure for leaks per year. Assuming that the excess night flow could be reduced by half for all zones with an actual flow four times (or more) higher than the expected flow, a total water saving of 5 918 MI/annum could be achieved.

Pressure management

Several new potential Pressure Reducing Valves (PRV) zones were identified through an analysis of pipe burst data. In light of the high number of proposed PRV zones that have been defined, a considerable amount of work was done in prioritising these PRV zones to ensure that money is spent on the most cost-effective projects first. Through a phased approach, 13 new PRV zones were established in Soweto (Braamfisherville, Slovoville, Doornkop and Zondi) and a further eight in Naturena and Eagles Nest areas. Johannesburg Water also plans to create 16 PRV zones in Protea Glen, Tshepisoong and Meadowlands. The estimated saving from this initiative will be 2 257 MI/annum.

Johannesburg Water will continue with preventative maintenance on all its existing PRV installations. This will include extending the existing smart control PRV stations with another 37 in the next year. It estimates that a saving of 2 300 MI/annum will be obtained through this continued refurbishment of existing PRV zones.

Retrofitting and removal of wasteful devices

Johannesburg Water is completing the Soweto Infrastructure Upgrade and Renewal Project in Soweto. This project includes the retrofitting and removal of wasteful devices on private property, replacement of mid-block mains, upgrading of water infrastructure and metering of individual properties. To date, a saving of more than 447 000 MI has been achieved in this project.

Johannesburg Water commenced with a similar project in the Orange Farm area. Johannesburg Water supplies approximately 29 765 MI/annum (2019) into the Orange Farm area. About 58 % of the supplied water is lost due to leaks on the municipal system (25%) and on property leaks (33%). The project objectives are as follows:

- Reduce high water losses and NRW.
- Ensure all customers are metered.
- Ensure water conservation awareness to customers.
- Improve service delivery to customers.

The project will be implemented over four years commencing in the 2019/20 financial year and will cost R511 million. The anticipated saving will be 11 817 MI/annum, equivalent to R120 million/annum with a payback period of five years. Investigations concluded in other similar areas indicated the need to further expand the same project in Alexandra and Ivory Park.

Drought Management Plan

Under the National Water Act, No.36 of 1998, the Drought Management Plans must be drafted by Water Management Institutions (such as City of Johannesburg/Johannesburg Water).

The construction of two major dams in the Integrated Vaal River System (IVRS) had ensured that there was sufficient water despite the latest droughts. The historical inherent resilience in the IVRS is now under threat due emerging issues such as climate change, high water losses and to some extent, the delay in construction of Lesotho Highlands Water phase two in Polihali Dam.

Johannesburg Water is in the process to develop a Drought Management Plan to guide the CoJ with implementation plans to deal with a possible drought situation. Johannesburg Water

is currently benchmarking this plan with events that happened in the Western Cape during the recent drought.

The Water Security Plan for Gauteng City Region re-emphasised the immediate challenge facing Gauteng, which is to keep water consumption at sustainable limits until the Lesotho Highlands Water Project Phase 2 project is complete. The CoJ's Water Conservation Water Demand Management strategy is aimed at addressing the immediate challenge within the CoJ

Alternative water resource

As part of the broader water resilience strategy for the CoJ, investigation are underway on the alternative water sources. Johannesburg Water has started a close working partnership with Rand Water and the entities have identified additional programmes (acid mine drainage, ground water, effluent reuse, etc.) as a strategic intervention to manage the resilience of the system as shown below in table 15.

Table 15. Alternative resource opportunities identified in partnership with RW (within CoJ)

Description	Additional Estimated Capacity once complete (MI/d)
Return treatment Olifantsfontein and Waterval	95
Return treatment Northern Works	100
Return treatment Bushkoppies and Goudkoppies	100
Borehole 5 minor yield sites each < 27 MI/d	135
Borehole 10 major yield sites each > 27 MI/d	270
Dewatering water Gautrain - Emergency Shaft 2	15
Dewatering water Gautrain - Emergency Shaft 3	
Dewatering water Gautrain - Emergency Shaft 4	
WWTW to Potable: Lanseria	100

4.1.1.8 Reducing the Non-Revenue Water (NRW)

NRW is at 38.6% (2018) in the CoJ, commercial losses at 6.9%, unbilled authorised consumption at 13.7% and physical losses at 17.9%. The unbilled authorised consumption and apparent (non-technical) losses pose major challenges to NRW. This is attributable to the following:

- Consumers that are not on the billing database (e.g. formal stands, not deemed stands).
- Unbilled unmetered stands – formal stands where the individual water consumption is not metered (large areas).
- Deemed customers (flat rate customers).
- Illegal connections (both conventional and prepaid areas).
- Meter inaccuracies.

The deemed customers category is unique to the CoJ. There are currently 106 681 customers within this category. These customers are being billed on a flat rate of 20 kl, 10 kl or 6 kl. However, investigations have indicated that the actual consumption to these deemed customers range between 50 kl and 60 kl. The difference between the flat rate being billed and the actual consumption is therefore NRW and is catered for under unbilled authorised consumption as the deemed shortfall. The areas benefitting in this category are Soweto, Orange Farm and Alexandra . In order to bridge the gap in the commercial aspects of the business, the implementation of the following initiatives will be focused on:

- The Metering and Revenue Project is in progress with the intention to target and deal with the apparent (commercial) losses by ensuring that all water consumers are on the billing database and are billed correctly.
- Converting all deemed areas into metered areas – phase two starting with Orange Farm.
- Rolling out of the Standards Transfer Specification (STS),-type metering (smart metering) – Cosmo City identified as the pilot area.
- Improving meter reading ratio.

4.1.1.9 Job Creation Programme and SMME Support through co-production

The NDP has targeted to reduce South Africa's unemployment rate to 6% in 2030. The *Quarterly Labour Force Survey* (Quarter 3, 2019) indicates the national unemployment rate is at 29.1% (the CoJ is at 32.3%) with more than 50% being unemployed female youth. In line with the CoJ's commitment of supporting SMMEs, Johannesburg Water will continue to implement various programmes that are geared toward job creation, SMME development and empowerment.

In its endeavour to reduce unemployment within the CoJ, Johannesburg Water will complete the Learnership Contractor Development Programme in 2020/21. The Programme intends to capacitate local SMMEs to achieve Construction Industry Development Board (CIDB) grading four by the end of December 2020. The Programme is currently in its third phase and it is anticipated that, upon completion, trained contractors will assist the CoJ in the roll-out of the Pipe Replacement Programme.

Other programmes identified include repairs and maintenance of infrastructure, with more focus on townships. The programme intends to use local SMMEs in delivering services within the CoJ. As an entity of the CoJ, the Company will ensure maximum participation of youth, women and people with disabilities (PWDs) in the Job Creation Programme in order to transform the economic and social standing of the CoJ community. In the 2020/21 financial year, Johannesburg Water has planned to support 116 local SMMEs through rolling out of infrastructure projects. To further boost the development of SMMEs, Johannesburg Water will also include measures that require user departments to implement the following initiatives:

- (i) To set aside at least 30% of budgets for SMME procurement where feasible.
- (ii) To unbundle large projects to suit SMME CIDB grading and capacity in particular instances.

4.602

- (iii) To encourage larger businesses not only to sub-contract but also to form partnerships with SMMEs through joint ventures that will result in transfer of skills and improve their capacity and expertise.

Tables 16 below detail the number of SMMEs to be supported and the number of jobs to be created as a result of the implementation of the various programmes (i.e. pipe renewal, installation of basic services, water demand management, among others).

Table 16: Job Creation Plan – 2020/21

Programme Name	No. of Entities	Entities Owned by Youth	entities Owned by Women	entities Owned by Disabled	No. of Jobs Created	CAPEX Budget (R'000)	OPEX Budgets (R'000)	COJ Region
Pipe Renewal	35	18	15	2	760	27 860		Citywide
O&M	4	2	1	0	96	3 500	1 500	Citywide
Installation of Basic Services (Water and sanitation)	-	-	-	-	250	7 000	2 200	Citywide
Water Demand Management	21	10	11	2	458	16 800		C,D,G
Other Projects	54	20	34		1168	42 770		Citywide
Total	116	50	61	4	2 674	97 930	1 500	

Strategic Goal 2 Deliver water and sanitation services of good quality that is accessible, reliable and efficient in an environmentally responsible/sustainable way	Priority 3: Integrated human settlement.
	Priority 4: Sustainable service delivery
	Priority 9 :Sustainable environmental development
	Priority Programmes: <ul style="list-style-type: none"> • Accelerated and visible service delivery and reintroduce co-production in the delivery of basic services. • Community Based Planning and enhanced community engagement, including Mayoral Izimbizo

4.1.2 Strategic Goal 2

The purpose of this goal is to roll-out additional level of service (LoS) one water and sanitation basic services where there is inadequate provision of water and to improve the reliability of the provision of these services. This will be done with consideration not to pollute the environment.

4.1.2.1 Informal Settlements Upgrade Programme

The Programme is aimed at improving service delivery through the upgrading of level of service from nominal service to LoS1 where water, in the form of communal standpipes and sanitation in the form of Ventilated Improved Pit-latrines (VIP), waterborne toilets and ablution blocks, is provided. The Programme also provides an opportunity for job creation during project implementation.

The criteria for selection of informal settlements benefiting from the basic services programme entail the following:

- Alignment with the Upgrading of Informal Settlements Programme (UISP) driven by the CoJ Housing department where informal settlements are categorised for interim and emergency provision of water and sanitation services. The interim service is an equivalent of LoS 1, whilst the emergency service equates nominal services.
- Other factors considered includes the feasibility of provision of related infrastructure where in many instances there are limitations due to improper settlement layout, densification or congestion of households within the settlement, land tenure especially privately owned land with no permission to occupy and other geo-technical factors like high water level and poor soil conditions.
- Funding availability determines the number of households that can be provided access to basic service services.

4.1.2.2 Provision of basic service – water

Basic water service in informal settlements will be provided to 10 933 households in 2019/20 financial year. This will increase the coverage to 171 258 (93.13%) of the 183 895 households by end of 2019/20. The remaining (backlog) 12 920 households are being provided water

4.604

services at nominal service (water tankers). The plan for 2020/21 is to clear the backlog by providing access to basic water to 12 920 households, thereby increasing the coverage to 183 895 thus reaching 100% households in informal settlements as per table 17.

Table 17: Additional households to be provided with basic water

Region	Ward	Settlements	Targeted HH
E	75	M1 Hostel	650
A	95	Erf 1132	393
D	21	Naledi 1	358
G	5	Dark City	291
B	68	Slovo (Ashanti)	500
C	71	Matholesville	108
C	68	New Canada	202
D	24	Lindelani	200
A	79	Mbona	50
C	44	Braam Fischerville	105
F	65	Cleveland	379
G	6	Doornkuil Plots	467
G	6	Mountain View	200
G	122	Patsing	47
G	9	Volta	405
G	119	Bushkoppies (Compound)	120
G	119	Fun Valley	44
G	7	Finetwon North	4 269
G	122	Eikenhof	283
C	83	Princess Plot 16	3 849
TOTAL			12 920

4.1.2.3 Provision of basic service – sanitation

Basic sanitation service in informal settlements will be provided to 4 285 households in by end of 2019/20 financial year. This will increase the coverage to 80 809 (43.94%) of the 183 895 households by end of 2019/20. The balance of 103 086 households (backlog) are being provided with a nominal service (chemical toilets). In 2020/21, the plan is to upgrade 5 053 households to basic service level and this will result in the coverage being increased to 85 862 (46.69%) households in informal settlements in informal settlements. Table 18 below reflects the settlements planned for provision of basic sanitation in 2020/21 FY.

Table 18: Additional households to be provided with sanitation

Region	Ward	Settlements	Targeted HH
C	83	Princess Plot 16	3 640
C	113	Zandspruit	1 201
D	53	Bottom Compound (Slovo)	212

TOTAL	5 053
--------------	--------------

4.1.2.4 Nominal water and sanitation services

Nominal (water and sanitation) services provided to informal settlements has increased (54%) significantly during the past 24 months and it is envisaged that this number will increase further. Nominal water services are provided through stationery water tanks, which are filled up daily via mobile water tanks. Nominal sewer services are provided through chemical toilets, which are serviced twice a week. Johannesburg Water is aiming to provide chemical toilets at a ratio of one toilet to seven households and water tanks at a distance as determined on site and as per density of the settlement. Johannesburg Water provides these services via service providers appointed through framework contracts.

Strategic Goal 3 Improve Customer and Stakeholder Satisfaction	Priority 4: Sustainable service delivery
	Priority 7: Active and engaged citizenry
	Priority Programmes: <ul style="list-style-type: none"> • Accelerated and visible service delivery and reintroduce co-production in the delivery of basic services. • Community Based Planning and enhanced community engagement, including Mayoral Izimbizo

4.1.3 Strategic Goal 3

The purpose of this goal is to enhance internal and external communication, influence behavioural change towards water conservation and proper use of water and sewer infrastructure, which will lead to improved customer satisfaction.

4.1.3.1 *Improve internal communication*

To improve internal communication, the Company will continue to conduct the following effective and efficient activities aimed at ensuring that our internal stakeholders are kept informed of the developments taking place within the Company:

- Hold quarterly staff engagements
- Provide regular electronic updates of Executive Committee
- Update and populate the intranet with recent Company information
- Publicise Company values and policies to all employees

4.1.3.2 *Improve external communication with our Stakeholders*

The purpose of improving external communication is to ensure that there is an effective two-way communication between Johannesburg Water and external stakeholders and to ensure that our stakeholders are kept informed of the service delivery issues and developments taking place in their communities. This external communication plan will entail the following;

- Buy media space on targeted print and electronic platforms such as community based radio stations and Caxton newspapers as well as on key commercial radio stations and newspapers. These platforms will be used to disseminate regular information about planned and unplanned service disruptions
- Develop a Business WhatsApp which will enable customers to log queries and receive a reference number instantly
- Enhance the current channels of external communication with our stakeholders which will include updating and increasing the SMS database
- Invite and encourage members of the community to follow the Company on various social media platforms

4.607

- Publicise the Company's call centre number and customer service email address and encourage customers to log their service delivery queries through the call centre.
- Establish a dedicated WhatsApp group for all the proportional representative (PR) councillors of the CoJ to ensure that there is an effective two-way communication with that section of our stakeholders which presently may seem left out in the communication loop

4.1.3.3 Improve external stakeholder engagement

The purpose of external stakeholder engagement is to inform and educate stakeholders about the importance of water conservation and proper use of sewer infrastructure. To achieve these objectives, the following activities will be conducted;

Targeted stakeholder engagement

The purpose of this activity is to conduct targeted stakeholder engagement with the aim of conveying targeted messages about Johannesburg Water and its various activities. Johannesburg Water will identify targeted stakeholders to engage with them on water and sanitation related issues, with the aim of holding at least four stakeholder forums per year.

Project support

The purpose of these activities is to ensure effective public participation aimed at ensuring community and political buy-in to help minimise unnecessary project stoppages. Johannesburg Water will improve public participation by identifying key stakeholders per region such as local business forums, community members, lobby groups and other interested parties. The purpose of this process will be to determine the level of influence for these stakeholders and therefore develop an engagement plan based on their level of influence in the community. It is anticipated that if buy-in is acquired from these key stakeholders they will ensure that the project is implemented smoothly without any stoppages.

4.1.3.4 Improve customer satisfaction levels

Johannesburg Water, CoJ and the Gauteng Provincial Government conducted a number of Customer Satisfaction Surveys. Key findings of these surveys indicated an overall satisfaction of our customers and stakeholders.

However, there were key issues raised by some of our key stakeholders such as challenges in dealing with sanitation issues as well as service interruption without prior notifications. Failure by the Company to resolve stakeholders' concerns within the stated turnaround times and inaccurate meter readings were identified as areas of great concern.

The Company will improve its performance and turn around by implementing the Workforce Optimisation, which is a digitalisation of the job scheduling function for the operations team. This will further allow the customer to be consistently updated via sms/social media on progress of addressing their query. Presently this function is heavily managed through a manual process, which is inefficient. The digitalisation process comprises a software solution

for the planning and automation of the job scheduling function. The use of mobile technology will enable the workforce to access the planned jobs electronically.

To improve on the response times, the operations team will implement the first-line response function. This is to assist in reducing time of water wastage when bursts occur in that dedicated teams per depot will be tasked to isolate the water supply.

Targeted engagement more especially with domestic customers will be made to improve communication on planned and unplanned service disruption. Through the use of the SMS notifications, customers will be kept informed of the progress to resolve their query to a point when the query has been closed off. We will continue to publicise the meter reading schedule on our website and encourage our customers to visit it regularly for updates.

There will be regular monitoring of the quality of meter readings. These will include the use of advance technology in the process of meter reading. Furthermore, the Company will maximise its Revenue Enhancement Project which aims to investigate stands that are not metered or where meters are not on the billing system.

The Company will also conduct capacity building programmes for its call centre agents to ensure that there is effective and efficient communication from call centre agents. Various media platforms will also be used to inform and educate customers of planned and unplanned service disruptions. These initiatives are aimed at ensuring that our stakeholders are kept informed and updated of service delivery interruptions and ensure that customer satisfaction levels are improved annually.

4.1.3.5 Public education

Various public education and awareness campaigns will be conducted aimed mainly at contributing towards the overall Water Demand Management Strategy, which will include influencing behavioural change towards water conservation and proper use of sewer infrastructure.

Various outreach programs such as street corner exhibitions, educational tours to the waste water treatments plants; door to door campaigns; distribution of public education material school education programs will be conducted.

Furthermore, targeted messaging through the use of the various media platforms, including print, electronic and social media to reach out to more stakeholders will be utilised to inform and educate customers and stakeholders.

Through the use of various effective communications channels the following key messages will be disseminated to our external stakeholders:

- A communication drive aimed at educating and informing stakeholders about water conservation

4.609

- proper use of sewer infrastructure
- safety for our employees
- the importance of registering for the Extended Social Package
- necessary safety precautions during infrastructure upgrading projects

Pro-active and unsolicited messages will be sent out to our external stakeholders to inform and educate them on issues indicated above, using mainly the various social media platforms, SMS messages, print and electronic media as well as through the use of wall murals and other similar platforms such as Billboards in taxi ranks and shopping malls where there is always a huge traffic of people in those areas.

Strategic Goal 4 Enhance sound financial management, sustainability and clean governance	Priority 1: Good Governance
	Priority 2: Financial Sustainability
	Programme: Combat corruption, fraud and maladministration

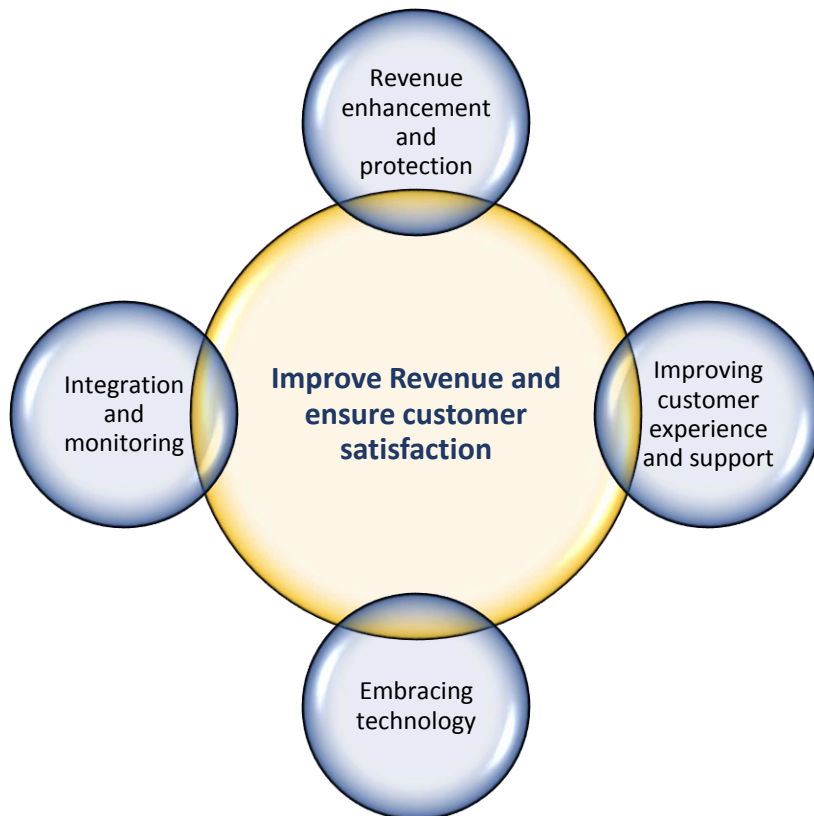
4.1.4 Strategic Goal 4

The purpose of this goal is to enhance the way the Company is doing business, with a focus on sound financial management, financial sustainability and clean governance.

4.1.4.1 Metering & Revenue Focus Areas

Revenue improvement as an integral part of financial sustainability is premised on four pillars as depicted in figure 9 below.

Figure 9: Revenue improvement



1. Revenue enhancement and protection

Revenue accuracy and completeness is an integral part of financial sustainability, as part of revenue enhancement, a stand audit will be conducted to verify metering data and to improve billing. A follow-up process to ensure metering and subsequent billing of the identified stands will be improved and closely monitored.

By-law enforcement will be intensified to ensure revenue protection and reduction of non-revenue losses. Tariffs to manage illegal water consumption due to construction activities will be developed and Municipal Courts system will be used to manage regular illegal connection offenders.

The 95% meter reading ratio will be maintained to ensure revenue realisation and improved payment levels. Revenue forecasting will be conducted to monitor revenue trends and movement in comparison to the budget and in bulk purchases.

2. Embracing Technology

Metering and Revenue will continue to introduce the latest technology to measure and monitor consumption, the focus will be primarily on the implementation Advanced Metering Infrastructure (AMI) for Large Water Users to improve billing and improve payment levels. Improved technology will also be employed to enhance the surveying and auditing of meters for revenue enhancement, reduction of non-revenue water losses and by-law enforcement. The implementation of the STS Prepaid technology in designated areas will continue in order to improve the customer experience, increase revenue and reduce non-revenue water losses.

3. Improving customer experience and support

In improving the customer experience and making it easier to for customers to do business with the Company, a customer portal will be developed and implemented, where metering data, meter readings, billing and query-related information will accessible for customers to view and submit certain information for billing and account correction. This portal will also be used to communicate crucial messages that impacts the customer's bill.

Furthermore, a customer support section will be created to improve query resolution and to provide support to key customers as well as reduce delays in responding to customer queries. Increasing customer awareness on tariff implementation, meter reading and query management processes will also form part of improving the customer experience and support.

4. Integrate and monitor

Systems and process integration for effective revenue management will form an integral part of revenue improvement. This will include:

- Maintaining a metering database for tracking of new, changed and removed meters
- Automating the creation of work orders and monitoring the resolution technical queries before the next meter reading order creation.
- Improving prepayment database to accurately monitor consumption patterns.

- Developing systematic monitoring of revenue movements through improved technology and innovative analytical methods

4.1.4.2 *Clean governance*

The Board of Directors and Executive Management are committed to the principles of transparency, integrity and accountability as advocated by the King IV Code on Corporate Governance. Through this process, the shareholder and other stakeholders will derive assurance that Johannesburg Water is being ethically managed according to prudently determined risk parameters in compliance with generally accepted corporate practices.

Johannesburg Water has entrenched its risk management reviews and reporting. Compliance assessments are conducted in terms of the Companies, Act 71 of 2008, the Municipal Systems Act 32 of 2000 and the Municipal Finance Management Act 56 of 2003. Annual Board assessments and evaluations are conducted and an annual report for the previous year was completed in accordance with the terms of Section 121 of the Municipal Finance Management Act. All of the above gives assurance of Johannesburg Water's resolve to uphold governance and ethical practices.

Furthermore, the CoJ's Governance Framework assists the CoJ as a group to better understand the governance structure and principles required to ensure effectiveness and accountability. The Framework also aims to improve the capacity and capability of the Board of Directors and Executive Management to effectively manage Johannesburg Water and efficiently account to the CoJ as sole shareholder.

Johannesburg Water received unqualified audit opinions from 2013/14 to 2018/19 financial years and it has nevertheless taken the findings in the Auditor General South Africa's management letter seriously by implementing mitigating controls to reduce the level of the control deficiencies and thereby improve the resolution rate of the findings. The outcomes of the findings reflect an improvement in the control environment component of the business but more effort will be focused on ensuring that consequence management is implemented where warranted. The resolution of findings is a matter of course overseen by the Audit Committee on a quarterly basis.

The Board provides effective leadership based on a principled foundation and Johannesburg Water subscribes to high ethical standards. Responsible leadership, characterised by the values of responsibility, accountability, fairness and transparency has been a defining characteristic of Johannesburg Water since the Company's establishment in November 2000.

The fundamental objective has always been to do business ethically while building a sustainable company that recognises the short- and long-term impact of its activities on the economy, society and the environment. In its deliberations, decisions and actions, the Board is sensitive to the legitimate interests and expectations of Johannesburg Water's stakeholders. To this end, and to enhance clean governance, Johannesburg Water will be undertaking a comprehensive ethics risk assessment and will use the outcome as a measure of identifying challenges and activities to mitigate any challenges.

The Board and Management recognise that Johannesburg Water is formed under a political structure. As such, it has a social and moral standing in society with all the attendant responsibilities. The Board is therefore responsible for ensuring that Johannesburg Water protects, enhances and invests in the wellbeing of the economic, social, and natural environment, and to pursue its activities within the limits of social, political and environmental responsibilities outlined in international conventions on human rights.

4.1.4.3 System of internal controls

Johannesburg Water has employed the services of Internal Auditing as per the MFMA Section 165 (1, 2) requirements. The Internal Audit Department (IAD) is an independent, objective assurance and consulting activity designed to add value and improve Johannesburg Water's operations. The IAD assists Johannesburg Water accomplish its objectives by bringing a systematic, disciplined approach to evaluate and improve the effectiveness of risk management, control and governance processes.

IAD adds value in ensuring that Johannesburg Water accomplishes its objectives by:

- Applying the principles of Combined Assurance by integrating and aligning assurance processes within Johannesburg Water to maximize risk and governance oversight and control efficiencies, and optimise overall assurance to the Board, considering the Company's risk appetite.
- Providing and ensuring that both the unresolved IAD and the AGSA findings are prioritised as part of the plan and through a finding register. This will assist management in improving on the finding resolution rate.
- Conducting investigations into UIFWE's and other non-compliance transgressions not requiring forensic investigation.

The resolution rate for IAD findings for the 2018/19 financial year was at 78% and AGSA was at 89%. IAD will continue to follow up on unresolved findings to ensure management resolution rate improves with specific emphasis on addressing the root causes to reduce the instances of repeat findings.

Johannesburg Water has prioritized Fraud Risk Management as per the MFMA. This environment is zero tolerant to acts of fraud and corrupt activities. This means that JW will investigate any individual, a group, or a company from internal or external, committing or trying to commit fraud or corrupt activities through its systems, officials or clients with everything it has even to the court of law.

Internal Auditing, Risk Management, Internal Controls and Tip-offs Anonymous Hotline assist in detecting fraudulent and corrupt activities. All reported cases internally and externally are registered, monitored and investigated by Group Forensic Investigation Services (GFIS) to ensure that they are resolved and people are held accountable. All forensic investigations that arise from time to time are referred to GFIS. Johannesburg Water's Internal Audit Department has been mandated by the Board to investigate matters, which are of administrative compliance nature and not requiring forensic investigations including UIFWE and internal investigations for disciplinary matters.

In order to enhance clean governance, Johannesburg Water will introduce controls and minimise and reduce deviation purchases, avoid irregular and revitalise the Bid Committee processes to improve cycle times. This will be achieved through having framework contracts

4.614

and the implementation of a visible project management tool to monitor and manage Bid Committee processes and to ensure strict compliance with supply chain management prescripts. The board has resolved that all incidents of irregular expenditure arising out of deficient supply chain management processes be investigated by the Internal Audit Department with a view to ensuring the further strengthening of internal controls to prevent the recurrence of incidents that result in irregular expenditure. Fraud campaigns will be embarked upon as part of fraud risk management.

The Company noted the findings the year 2018/2019 from Auditor General South Africa (AGSA), the following mitigating controls will be implemented to improve the control environment for the prevention and detection of non-compliance with Supply Chain Management (SCM) laws and regulations to ensure that SCM prescripts are complied and adhered to during the procurement process.

- Supply Chain Management Structure is being enhanced and capacitated with skilled resources.
- SCM Policy and Tender document under review in conjunction with Legal department
- Bid Specification Committee will be capacitated with a finance resource
- Turnaround tender process will be improved from six to three months
- Deviations to be subjected to Bid Adjudication Committee
- User department to be advised to adequately utilise the demand management plans to identify procurement needs of a similar nature and combine items and treat as one (1) transaction for the purpose of procurement to avoid non-compliance with SCM policy.
- The Request For Quotation (RFQ) process to be automated and use SAP Requisitions to source quotations instead of spread sheets
- SAP to be enhanced for notification for repetitively procured inventory to prohibit continuous buying of the same commodity which could exceed R200,000
- The Database to be interfaced with Central Supplier Database (CSD) to shorten the RFQ.
- Contracts / Framework Agreements to be put in place for Inventory procurement and deviations below R200, 000.
- Continuous engagement and training of SMMEs

Strategic Goal 5 Priority 10: Smart City

use of technology
for effective and
efficient operations

4.1.5 Strategic Goal 5

The purpose of this goal is to spearhead the use of information and communications technology for the effective and efficient operations company-wide.

The Information and Communication Technology (ICT) unit plays a key role in strategically supporting the entity to deliver better services through the use of information systems and technology. While progress was made in the delivery of some of projects for the previous financial year; security, digital transformation and governance form the pillars for projects for 2020/21. Innovation within the business processes will also be a focal point for the year.

*4.1.5.1 ICT Security***Security Awareness Campaign**

In the world of ever increasing security threats and cyber-attacks, the protection of an organisation's information systems is paramount. In addition to the campaign, vulnerability assessments will be conducted to assess the entity's security posture against malware and a cyber-attack. The Company will conduct a security awareness campaign, including assessments and analysis, to heighten the importance of data and information security.

*4.1.5.2 Digital Transformation***Workforce Optimisation**

The goal is to provide a technology platform that optimises the service delivery value-chain end-to-end from the time a customer engages with Johannesburg Water through to fulfilment of a service request. Track all activities prior to, during, and after service to optimise performance in relation to customer/asset engagement. Throughout the value-chain, customers are informed of their service request activities at every event. A semi-automated technology solution for the planning and scheduling of workforce activities with real-time communication to customers will be deployed.

Business Analytics

The implementation of operational dashboards through the use of Business Analytics will continue into the new financial year with a plan to deliver more dashboards to business. Notwithstanding some challenges encountered in the early days of the project, good progress

has been achieved through the establishment of the technology platform and data governance principles.

Customer Relationship Management

Today, customers have a number of ways to engage with Johannesburg Water for municipal services. The many channels of communications however create a challenging environment to capture, track and respond to citizens in an effective and organised manner. The objective is to implement a Customer Relationship Management system that will allow the entity to capture, track and respond to customer queries in an efficient way ensuring that service requests never go unattended.

Smart Citizen Mobile Application

The Smart Citizen Mobile App is a mobile application for smartphones that empowers citizens to engage the entity to report incidents on water and sewer services through a cost effective communication channel.

WhatsApp for Business

WhatsApp application has overtaken and almost become the de facto messaging platform for people on smart phones. Over one billion WhatsApp accounts are active every day. WhatsApp for Business leverages on WhatsApp to connect with customers or specific target audiences. The objective is to expand and improve communication with customers and stakeholders.

4.1.5.3 ICT Governance

Enterprise Asset Management

This objective speaks to the implementation of an Information Technology solution for the entity's Enterprise Asset Management project. The solution is a hybrid of two systems to manage the entity's assets from cradle to grave. In addition to improving the confidence data level of the entity's assets including, conditioning and value, the solution will ensure the entity's ability to be fully compliant in terms of Generally Recognised Accounting Practices (GRAP) 17 and delivering a complete and accurate asset register and asset unbundling according to a defined hierarchy, i.e. componentisation.

mSCOA Compliance

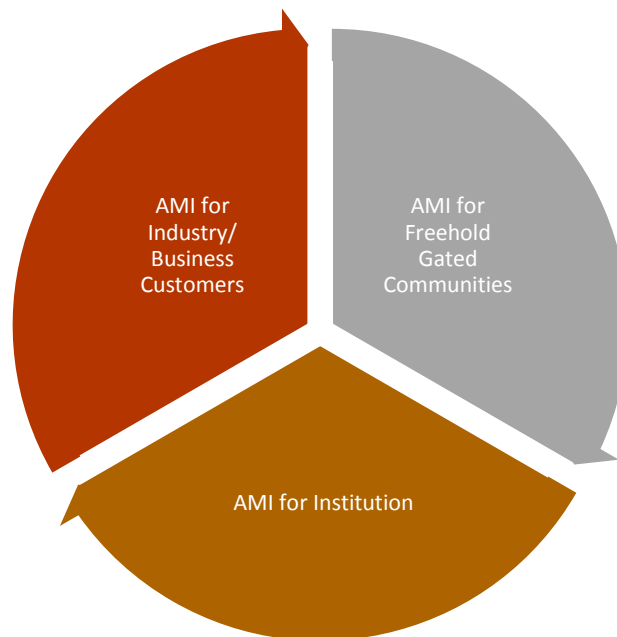
The establishment of a single ERP system for the CoJ and its municipal entities is an enormous undertaking taking into account transactional volume and complexity. Adding to this is meeting National Treasury's mSCOA compliance requirements. Johannesburg Water will continue to support the City in the project with the aid of skilled resources to ensure that Johannesburg Water migrates onto the new system with minimal disruption to business.

4.1.5.4 Smart City

Advanced Metering Infrastructure (AMI) for Large Water Users

In support of the Smart Cities Programme, AMI for selected large water users as indicated in figure 10 is planned for rollout in the 2020/21. The customers are segmented to deal with different needs and approach to supplying the meters

Figure 10: AMI categories



Online E.Coli Project (Smart Cities)

Project: Potable Water Reticulation E. coli monitoring

When contamination of water has been identified through laboratory analysis, various actors play a role to resolve the challenge. One major problem becomes the long waiting periods before results are obtained (18 to 24 hours). Mobile, online, real-time monitoring system that can produce shorter periods (15 minutes to 3 hours) on-site and remotely (data can be received via mobile phone and/or computer) are essential.

Online and Real-time Biofouling Monitoring (Smart Cities)

Project: Biofouling Monitoring

Biofouling is caused by a build-up of silt, scale, corrosion by-products and microorganisms. Biofouling at its extreme will lead to biofilm formation, water quality deterioration and sooner than later, under deposit corrosion. It is therefore, prudent to monitor the growth of biofilm or biofouling itself as a proactive water quality monitoring, cleaning regiment early warning system and microbiologically induces corrosion prevention strategy. The current cleaning

Standard Operating Procedure is focused only on reservoirs and has no view on the pipeline; however, laboratory data has suggested that “water restrictions” could disturb biofilm formed and reduce water quality when water agitation is returned to the system. An innovative real-time, remote, online in-situ biofilm monitoring and control system will be tested. The possible application is that the equipment could be used for potable water analysis to proactively improving cleaning regiments in reservoirs. The equipment could also be used in conjunction with other instruments including on-line *E. coli*.

Information Technologies – Internet of Things

Project: Internet of Things (IoT) enabled devices to be used for remote bulk meter reading and analytics

Incorrect meter reading, revenue recovery, non-proactive leak detection and illegal connections could be very costly. Smart devices that are IoT enabled, has the ability to make a normal meter to have smart characteristics at a fraction of the cost. A study is planned to generate empirical evidence to such claims. Smart meters normally come with the ability to take automated meter readings, leak detection and illegal connections analytics. A comparative study approach is required for informed decision-making and risk reduction.

4.1.5.5 Innovation & Technology

Research, Development and Innovation (RDI) seeks to address major operational challenges, exploit opportunities and solve problems. RDI enhances performance, efficiency and productivity. RDI also improves quality of service, minimises risk prior to full scale implementation and advantages the organisations competitiveness. For RDI to be impactful within organisations like, Johannesburg Water, it becomes imperative to collaborate through partnerships, twining agreements, benchmarking initiatives and becoming part of the RDI Ecosystem. The following activities are underway:

Treated Wastewater Effluent *E.Coli* monitoring

Water Use Licence Application (WULA) is moving towards specifying Zero *E.Coli* in the final treated wastewater effluent. *E. coli* results are currently produced in the laboratory via advanced but manual and accredited laboratory analysis. The problem is that the results become available for process optimisation only after 18 to 24 hours. Online, real-time monitoring system that can produce shorter periods (15 minutes to 3 hours) on-site and remotely for monitoring purposes and process optimisation and/or use the monitoring system to control and optimise chemical dosing of liquid chlorine in real-time. The monitoring system will be installed in the on-line instrument room at the WWTW.

Optimisation of biogas production process at Driefontein WWTW and Northern WWTW

The aim of the project is to investigate and recommend suitable additives for biogas enhancement at Northern Works and Driefontein WWTW. The process and product development entails Sludge Characterization; Co-substrate Identification & Analysis; Life

Cycle Assessment; Pilot Plant Simulation and Lab Studies; Mass and Energy Balance; and Process Simulation Model.

Piloting and demonstration for struvite treatment, isolation and/or phosphate recovery

Struvite is nutrient rich; however, without proper treatment it could cost the treatment facility a lot of money from operational challenges to replacement. Removal of the phosphate rich Struvite could also be recognised as reducing the sludge nutrient value for agricultural purposes. Global phosphorus pool has been greatly reduced, hence the high economic value for phosphate (phosphoric acid).

A study would be done that can prove or demonstrates technical capability to either treat the struvite in-situ or isolate the Struvite using a reactor and/or further purification of the Struvite to 60-70% phosphoric acid (phosphate).

Operational digitisation through employing Industry 4.0 strategies

The aim of this project is to deliver on Industry 4.0 at Johannesburg Water. The project seeks to develop the skills of staff at Johannesburg Water, through post-graduate research. The project would also focus on SMME development.

Prepaid – Customer Interface Units (CIU): Project Pulse detection and sensing for household and bulk meters

The project is aimed at piloting for monitoring of prepayment meters to improve understanding of customer purchasing and consumption trends to effectively address illegal connections, e.g. non-buying customers. Customer Interface Unit (CIU) with the capability to transmit data from the meter to the server on a daily basis using IoT. This will enhance monitoring of the meter allowing for tracking customer behaviour in relation to water consumption, meter tempering and ghost vending. Other areas of interest and research are: Possible leak detection (Automated notification), meter bypass detection notification, based on meter information and consumption analysis, ability to profile time of usage per zone / area / stand, automatic generation of consumption report per zone / area / stand. Automatic generation of consumption report per zone / area / stand, centralised meter reading; and various reports available: Billing reports; Installation reports; Water Balance Reports.

Development of guidelines for the identification of suitable bio-remediation agents and service providers for dams and streams

The aim of this project is the 'development, preliminary testing and finalisation of a guideline document for the identification, appointment and management of bio-remediation products and services to facilitate effective reaction to sewage spills for the remediation of dams and streams.

Evacuation and treatment of grey water nuisance in informal settlements.

The aim of this project will therefore be the development, testing and demonstration of a grey water (polluted run-off water) collection, conveyancing, treatment and beneficial usage or safe reuse in informal settlements. Other objectives are to develop or identify and ecologically friendly system that could improve biodiversity in a specific area; socially acceptable system with beautification benefits.

Strategic Goal 6

Invest in our staff to sustain optimal performance and service-focused culture with committed people

Priority 4 : Sustainable Service delivery

Programme: Accelerated and visible service delivery and reintroduce co-production in the delivery of basic services.

4.1.6 Strategic Goal 6

The purpose of this goal is to ensure that staff is consistently developed to a competent level and keeps abreast with changing environment. Performance is the key driver, which requires competent staff. Staff satisfaction remains key in order to have a committed workforce.

4.1.6.1 Skills development

Johannesburg Water set aside a training budget equal to an average of 1.8% of total annual payroll. This is significantly more than what is prescribed in the Skills Development Levies Act, No.9 of 1999, which is 1% of annual payroll. At present Johannesburg Water has a number of initiatives being planned and implemented for internal staff, unemployed youth and for people with disabilities. These programmes includes the following and are mainly focused on Skills Programmes, Learnerships, Apprenticeships, Management and Development Programmes – some of which culminates into full qualifications.

The Company intends to recruit 15 unemployed youth from people living with disabilities as Apprentices. This project is in line with the approved Talent Management Strategy and in support of the Company's EE Targets. Learnerships for Water Reticulation and Water and Wastewater Treatment Works will be implemented and are planned on various NQF Levels. Artisan Recognition of Prior Learning Programme (ARPL) for experienced workers in technical related trades is a continuous process and will be implemented on an "As and When" basis. Of the 100 employees who participated in this project, 22 qualified as artisans. The rest are being rolled out in terms of Gap Training, Trade Test Preparation and Trade Test until 2021. Employees will receive recognised Trade Certificates after successfully completing the ARPL Programme.

There are currently 81 employees actively enrolled for Abet Levels 1 – 4 in Numeracy and Literacy (25 more than last FY). This is a continuous programme with new learners enrolling each year. This opportunity is available for interested employees to voluntarily enrol on an annual basis.

The Company signed Collaborative Agreements with the Energy and Water Sector Education and Training Authority (EWSETA) and the Local Government Sector Education Authority (LGSETA) for social responsibility training initiatives. A Memorandum of Understanding (MOU) will also be signed with Tshwane University of Technology (TUT) for Work Integrated

4.621

Learning (WIL) projects. These initiatives will be implemented dependent on funding and grants approved and received from various SETAs. Funding to train 97 Apprentices in various Trades in the next 3-years has been secured from the LGSETA and project implementation will start in January 2020. Table 19 below indicates the social responsibility projects planned by Johannesburg Water.

Table 19: Planned social responsibility projects

Potential funder or co-funder	Target group	Details of training	Planned commencement date
LGSETA	10 unemployed youth	Plumbing Apprenticeship	30 Nov 2020
LGSETA	97 unemployed youth	Various Trades	13 January 2020
Johannesburg Water/SETA	15 unemployed youth with disabilities	Various programmes	01 July 2020

Johannesburg Water is committed and focused to develop current and future skills of employees, but also to provide learning opportunities to learners from previously disadvantaged communities. These interventions increase their portability within the Company and marketability for jobs in industries outside the company.

The Company adopts a holistic approach towards skills development initiatives. Training interventions planned from the 2020/21 financial year are categorised in four, namely:

- **Technical Training Programmes** which includes apprenticeships; technical learnerships; technical skills programmes and ARPL.
- **Occupational Health and Safety (OHS) and Compliance Training.**
- **Non-Technical Training Programmes;** which include Adult Education and Training (AET); learnerships (non-technical related programmes); soft skills programmes, Management Development Programmes and RPL.
- The Company has a **Subsidised Education System (Sub-Ed)** in place to assist employees to obtain approved qualifications through tertiary institutions. Enrolments for Sub-Ed are conducted twice a year.

Workshops and courses are specially arranged based on specific requests to ensure technicians; technologist and engineers are equipped with relevant and current knowledge and skills in the different engineering fields. Accumulation of continuous professional development points ensures that employees are able to perform optimally in their professions and retain their professional registration.

Johannesburg Water is actively working with the EWSETA, LGSETA and the DWS to implement the newly developed Water Reticulation Practitioner occupational qualification accredited by the Quality Council for Trades and Occupations (QCTO). During the period, 2020 – 2022 Johannesburg Water will engage in a process of accrediting the Fennell Training Centre as an Assessment Centre for this qualification. Budget needs to be made available to

4.622

refurbish and upgrade the Training Centre to meet the minimum requirements for a Skills Development Provider and Assessment Centre. The Accreditation process is highly focused on the conduciveness of the learning facility, availability of training aids and equipment and the implementation of an effective Quality Management System. The Human Resources Department will also be introducing and piloting a system to measure Return on Investment in Training and Development in FY 2020/21.

As part of Johannesburg Water's capacity development initiatives, two programmes are in place to develop students and graduates, namely the internship and bursary schemes. The aim of these programmes is to develop skilled human resources in predominantly scarce skills to assist Johannesburg Water in achieving its core mandate of service delivery.

The Bursary Programme focuses predominantly on the field of civil engineering where students join Johannesburg Water as trainees after completion of their studies. The programme not only contributes towards youth empowerment and poverty alleviation but it also ensures that there is a pipeline of scarce skills being developed within Johannesburg Water. There are currently 13 bursars and the programme has been running since 2002 with all successful graduates having been employed in permanent positions. The Bursary Programme is a valuable source and pipeline for skills. There are 13 bursars in the 2019/20 financial year and four (4) of these will be joining Johannesburg Water as trainees in the 2020/21 financial year, resulting in the recruitment of additional bursars to maintain the original number that can be accommodated. The Bursary Programme is ongoing and it is estimated that there will be, on average, 16 bursars at any given time over the long-term, contributing to a skilled and capable workforce.

The Internship Programme is an enabling platform where unemployed graduates are provided with the opportunity to gain practical workplace experience and enhance their skills. While the intention of this programme is social responsibility, the unintended consequence is an additional pool of suitably qualified and experienced potential employees. The Internship Programme provides for at least 15 interns per year and has been running since 2003 with interns appointed on one-year internships. To date, over 100 internships have been successfully completed. While it is not the intention of the programme to create a skills pipeline for Johannesburg Water, many interns are, in fact, appointed on a permanent basis within Johannesburg Water. While the interns complete their internships at various times depending on when they were recruited, it is the intention to have at least 20 interns across the various disciplines in the 2020/21 financial year.

Johannesburg Water also partners with the National Research Foundation (NRF) and the Department of Science and Technology (DST) to accommodate at least four interns annually in the field of science.

4.1.6.2 Talent management

Johannesburg Water manages and retains talent through development and implementation of programmes such as succession planning, specialist career grade for engineers and scientists as well as through the Engineering Capacitation Programme, which is aimed at

4.623

developing engineers by providing the necessary exposure to enable engineers to register professionally with the Engineering Council of South Africa.

4.1.6.3 Retention of scarce skills

Johannesburg Water has an active Retention strategy, which aims to improve retention rates particularly of scarce skills, while at the same time decreasing the associated costs of high turnover. Since the implementation of this strategy, turnover has decreased significantly with turnover for both scarce skills and all staff being consistently maintained below 97% over the past few years.

There are a number of programmes in place that cement the low turnover rate and encourage retention. These include the availability of career counselling, proper on-boarding and induction programmes as well as regular analysis of exits. In addition, a management coaching programme has been in place since 2012 and a new group of fifteen senior and middle managers will attend the program in 2020. In terms of scarce skills, two specific programmes have been implemented, namely the Engineering Capacitation Programme and the Specialist Career Grade. Both programmes promote the professional development of engineers and scientists. Johannesburg Water has managed to build up its engineering capacity to 38 professionally registered engineers, technologists and technicians with the Engineering Council of South Africa. The long-term output of this programme is 50 registered professionals by the 2022/23 financial year. The target for 2020/21 is 45 professionally registered Engineers

As part of retaining talent within Johannesburg Water, the Board approved a Succession Plan/Policy in line with the entity's Talent Management Strategy. The overall objective of the talent management and succession planning process is to facilitate structured identification and growth of employees, as well as aid the retention of talent, in the process, create, and strengthen the talent pool of the entity.

Succession planning is carried out through functional talent forums. The talent forums identify key positions at all levels for which succession planning is considered important. Succession plans, which identify individuals as well as their competency gaps, are drawn up and the identified individuals sign a succession planning agreement whereby they acknowledge their responsibilities as part of the succession planning process.

4.1.6.4 Health and safety

Johannesburg Water continues to be committed to protecting its employees, customers and the public from risks arising out of work related activities as mandated by the Constitution of the Republic to provide a healthy and safe working environment for all.

One of Johannesburg Water's basic tenets on continual improvement in OHS management and performance to prevent injuries and ill-health was confirmed by the retaining of a National Occupational Safety Association (NOSA) 4-star rating during the 2018/19 financial year.

Johannesburg Water has since resolved to move from NOSA and adopted the International Organisation for Standardisation (ISO) 45001: Safety Management System and 14001: Environmental Management System in an integrated manner. Johannesburg Water intends to be certified for the integrated management system during the 2020/21 financial year. The organisation will opt for corporate certification that includes all activities within the organisation's value chain. The first certification will be piloted in Head Office, Driefontein WWTW, Avalon Prepayment Depot, Fennel Road Depot and Cydna Laboratory. Once the system is certified in these sites, certification will then be rolled out to the rest of Johannesburg Water sites in phases.

4.1.6.5 Recruitment

In an increasing competitive national and global market for limited skills, it is critical that Johannesburg Water provides a comprehensive working environment that will attract, retain and motivate the right calibre of employees. Our recruitment process serves as the first stage in ensuring that Johannesburg Water provides quality service and sustainable optimal performance. Identifying and attracting suitable applicants depends on the effectiveness of our sourcing strategies. The job design system ensures that job profiles, which are utilised to draw advertisement, are able to attract the right candidates for the job. Optimising our talent sourcing and recruitment is therefore one of the top priorities.

Reducing the time taken to fill vacancies has also been prioritised and a target of 10 weeks has been set for the filling of a vacancy for the 2019/20. Johannesburg Water has, thus far, operated at an average 12 weeks turnaround time for recruitment based on the 2018/19 assessment and the target will remain at 10 weeks in 2019/20 and ultimately nine weeks by 2021. Based on the assessment of the past three years it is envisaged that the transition from traditional recruitment to an automated system will assist in improving the turnaround time however its change management process may take longer than anticipated. To further assist to accelerate the filling of positions the recruitment and selection policy and the standard operating procedure for recruitment has been reviewed to ensure that the timelines are specified and adhered to. Furthermore, certain phases of the recruitment process will be automated.

Johannesburg Water's economic and financial circumstances and ability to fund the filling of vacancies continue to be the biggest threat to filling vacancies. To date, Johannesburg Water has managed to fill funded vacancies within the requisite time period and even in the scarce skills categories although taking longer; it has been possible to attract appropriate talent.

4.1.6.6 Employee Wellness

Emanating from the 2019 wellness campaign results (where employees were tested on lifestyle diseases) the Company through Employee Wellness section commenced with Healthy Lifestyle Awareness Campaign in conjunction with the introduction of the new appointed Employee Wellness Company to all Johannesburg Water work sites.

4.625

Despite the fact that participation is voluntary, on annual basis participation exceed 50% of staff compliment. These can be construed as an indication that employees needs and appreciates the service, which is being provided.

The results of lifestyle diseases tests indicate that out of those who participated the majority display symptoms of high blood pressure, high glucose level, obesity and cholesterol.

The Healthy Lifestyle Awareness campaign is aimed at empowering individuals with skills, which will help them enjoy healthier lives. As a result, productivity together with staff moral will be positively impacted and absenteeism will be negatively impacted.

For the Company to experience the noticeable outcome, the campaign has to be repeated over a particular period before behaviour change can be noticeable among employees.

The Employee Wellness Unit will embark on Healthy lifestyle campaign annually with focus areas determined by the imminent Employee Wellness Event results, which take place in February of each year. The results will indicate if the healthy lifestyle awareness campaign was impactful or not.

All Employee Wellness Interventions and campaigns are aimed at preventing or reducing absenteeism but for absenteeism to be negatively impacted it needs an integrated approach requiring line management's involvement in managing absenteeism.

Despite the fact that participation is voluntary, on annual basis participation exceed 50% of staff compliment. These can be construed as an indication that employees needs and appreciates the service, which is being provided.

The results of lifestyle diseases tests indicate that out of those who participated the majority display symptoms of high blood pressure, high glucose level, obesity and cholesterol.

The Healthy Lifestyle Awareness campaign is aimed at empowering individuals with skills, which will help them enjoy healthier lives. As a result, productivity together with staff moral will be positively impacted and absenteeism will be negatively impacted.

For the Company to experience the noticeable outcome, the campaign has to be repeated over a particular period before behaviour change can be noticeable among employees.

The Employee Wellness Unit will embark on Healthy lifestyle campaign annually with focus areas determined by the imminent Employee Wellness Event results, which take place in February of each year. The results will indicate if the healthy lifestyle awareness campaign was impactful or not.

All Employee Wellness Interventions and campaigns are aimed at preventing or reducing absenteeism but for absenteeism to be negatively impacted it needs an integrated approach requiring line management's involvement in managing absenteeism.

4.2 Past Performance

Table 20 below assess the service delivery past performance which are mainly encapsulated in strategic goal 1- 3.

Table 20: Service delivery past performance

Strategic goals or objectives	Achievements 2018/19	Achievements 2017/18
Strategic Goal 1:	<ul style="list-style-type: none"> ▪ 529 sewer blockages per 100 km of pipe length ▪ 350 pipe bursts per 100 km of pipe length ▪ 1.23% renewal rate on the network and WWTW ▪ 120 SMMEs supported ▪ 126% B-BBEE procurement spend ▪ 99.7% capex spent ▪ 2 630 EPWP job opportunities created 	<ul style="list-style-type: none"> ▪ 539.39 sewer blockages per 100 km of pipe length ▪ 358.09 pipe bursts per 100 km of pipe length ▪ 0.87% renewal rate on the network and WWTW ▪ 81 SMMEs supported ▪ 126% B-BBEE procurement spend ▪ 84.33% capex spent ▪ 995 EPWP job opportunities created
Strategic Goal 2:	<ul style="list-style-type: none"> ▪ 99.7% water quality compliance ▪ 87.18% households provided with access to basic water ▪ 41.61% households provided with basic sanitation 	<ul style="list-style-type: none"> ▪ 99.9% water quality compliance ▪ 82.68% households provided with access to basic water ▪ 38.06% households provided with basic sanitation
Strategic Goal 3:	<ul style="list-style-type: none"> ▪ 286 water consumption per capita (l/c/d) ▪ 96% response time to sewer blockages ▪ 91% response time to water bursts ▪ 90% of accounts billed on actual consumption 	<ul style="list-style-type: none"> ▪ 285 water consumption per capita (l/c/d) ▪ 96% response time to sewer blockages ▪ 90% response time to water bursts ▪ 83% of accounts billed on actual consumption

4.3 Corporate scorecard

The company is required to report performance information to various stakeholders in various forms and as such three scorecards are included in the business plan to satisfy the requirement.

4.3.1 Institutional SDBIP and UISP Indicators

Table 21 below tabulates the two Key Performance indicators that the company supports in the institutional SDBIP. The UISP indicators are the same as the ones contained in the institutional SDBIP

Table 21: Institutional SDBIP

IDP Programme	KPI No	Key Performance Indicator/Predictive Outcome Indicator	Baseline 2018/19	Target 2020/21	Target 2021/22	Key Interventions	2020/21 Budget (per programme)		2020/21 Quarterly Targets				Means of Verification
							Capex	Opex	Q1	Q2	Q3	Q4	
Integrated human settlements	1	Number of additional households provided access to basic water at minimum LoS1 in informal Settlements.	8 287	12 920	0	standpipes	50,000		1 000	3 650	8 3000	12 920	Contractor's completion certificate

4.628

	2	Number of additional households provided access to basic sanitation at minimum LoS1 in informal Settlements.	6 528	5 053	5 720	Ventilated Improved Pit latrines and ablution blocks		75,000	500	2 100	4 000	5053	Contractor's completion certificate
--	---	--	-------	-------	-------	--	--	--------	-----	-------	-------	------	-------------------------------------

4.3.2 Entity scorecard

Table 22 below represents the draft entity balanced scorecard

Table 22: Entity balanced scorecard

City priorities	Strategic goals	KPI	Weight	Baseline 2018/19	2019/20 Q2 Actual	2020/21 Target	Q1 Target	Q2 Target	Q3 Target	Q4 Target	2021/22 Target	2022/23 Target	KPI owner	REF #
Priority 8: Economic Development and growth Priority 5: Job Opportunity and creation	Strategic goal 1: Utilise infrastructure delivery to create jobs, support SMMEs and attract investments Weight: 25%	Number of sewer blockages per 100 km of network length	20%	539.93 sewer blockages per 100 km of network length	286.08 sewer blockages per 100 km of network length	584 sewer blockages per 100 km of network length	146 sewer blockages per 100 km of network length	292 sewer blockages per 100 km of network length	438 sewer blockages per 100 km of network length	584 sewer blockages per 100 km of network length	599 sewer blockages per 100 km of network length	613 sewer blockages per 100km of network length	COO	1
		Number of water pipe bursts per 100 km of network length	20%	358.09 water pipe bursts per 100 km of network length	221.16 water pipe bursts per 100 km of network length	452 water pipe bursts per 100 km of network length	113 water pipe bursts per 100 km of network length	226 water pipe bursts per 100 km of network length	339 water pipe bursts per 100 km of network length	452 water pipe bursts per 100 km of network length	464 water pipe bursts per 100 km of network length	476 water pipe bursts per 100km of network length	COO	2
		Renewal rate of water and sewer networks; and WWTW	20%	0.87 % renewal rate of water and sewer networks; and WWTW	0.88% Renewal rate of water and sewer networks;	0.97% renewal rate of water and sewer networks; and WWTW	0.10% renewal rate of water and sewer networks;	0.35% renewal rate of water and sewer networks; and WWTW based on value	0.58% renewal rate of water and sewer networks; and WWTW	0.97% renewal rate of water and sewer networks;	1.5% renewal rate of water and sewer networks;	1.5% renewal rate of water and sewer networks	COO	3

4.630

City priorities	Strategic goals	KPI	Weight	Baseline 2018/19	2019/20 Q2 Actual	2020/21 Target	Q1 Target	Q2 Target	Q3 Target	Q4 Target	2021/22 Target	2022/23 Target	KPI owner	REF #
		based on value		based on value	and WWTW based on value	based on value	and WWTW based on value		based on value	and WWTW based on value	and WWTW based on value	; and WWTW based on value		
		% Capex spend	10%	84.33%	63% Capex spend	95% Capex spend	10% Capex spend	35% Capex spend	60% Capex spend	95% Capex spend	95% Capex spend	95% Capex spend	COO	4
		% total B-BBEE procurement spent on qualifying SMMEs	10%	126% B-BBEE procurement spent on qualifying SMMEs	126% B-BBEE procurement spent on qualifying SMMEs	125% B-BBEE procurement spent on qualifying SMMEs	125% B-BBEE procurement spent on qualifying SMMEs	125% B-BBEE procurement spent on qualifying SMMEs	125% B-BBEE procurement spent on qualifying SMMEs	125% B-BBEE procurement spent on qualifying SMMEs	125% B-BBEE procurement spent on qualifying SMMEs	125% B-BBEE procurement spent on qualifying SMMEs	FD	5
		Number of job opportunities created based on EPWP	10%	995 job opportunities created based on EPWP	1 061 job opportunities created based on EPWP	2 674 job opportunities created based on EPWP	267 job opportunities created based on EPWP	936 job opportunities created based on EPWP	1 604 job opportunities created based on EPWP	2 674 job opportunities created based on EPWP	2 854 job opportunities created based on EPWP	3200 job opportunities created based on EPWP	COO	6
		Number of SMMEs supported through community upliftment projects	10%	81 SMMEs supported through community upliftment projects	137 SMMEs supported through community upliftment projects	124 SMMEs supported through community upliftment projects	12 SMMEs supported through community upliftment projects	38 SMMEs supported through community upliftment projects	74 SMMEs supported through community upliftment projects	124 SMMEs supported through community upliftment projects	133 SMMEs supported through community upliftment projects	151 SMMEs supported through community upliftment projects	COO	7
Priority 4:	Strategic goal 2:	% compliance with drinking	10%	99.9% compliance with drinking	99.5% compliance with	99% compliance with drinking	99% compliance with	99% compliance with drinking	99% compliance with	99% compliance with	99% compliance with	99% compliance with	COO	8

4.631

City priorities	Strategic goals	KPI	Weight	Baseline 2018/19	2019/20 Q2 Actual	2020/21 Target	Q1 Target	Q2 Target	Q3 Target	Q4 Target	2021/22 Target	2022/23 Target	KPI owner	REF #
Sustainable service delivery Priority 7: Active and engage citizenry	Deliver water and sanitation service of good quality that is accessible, reliable and efficient in an environmentally responsible/sustainable way Weight: 21%	water quality standard on E. Coli (SANS 241)		water quality standard on E. Coli (SANS 241)	drinking water quality standard on E. Coli (SANS 241)	water quality standard on E. Coli (SANS 241)	drinking water quality standard on E. Coli (SANS 241)	water quality standard on E. Coli (SANS 241)	drinking water quality standard on E. Coli (SANS 241)	drinking water quality standard on E. Coli (SANS 241)	drinking water quality standard on E. Coli (SANS 241)	drinking water quality standard on E. Coli (SANS 241)		
		Number of additional households provided access to basic water at minimum LoS1 in informal Settlements.	32.5%	8 287 additional households provided access to basic water at minimum LoS1 in informal Settlements	10 933 additional households provided access to basic water at minimum LoS1 in informal Settlements	12 920 additional households provided access to basic water at minimum LoS1 in informal Settlements	1 000 additional households provided access to basic water at minimum LoS1 in informal Settlements	3 650 additional households provided access to basic water at minimum LoS1 in informal Settlements	8 300 additional households provided access to basic water at minimum LoS1 in informal Settlements	12 920 additional households provided access to basic water at minimum LoS1 in informal Settlements	0 additional households provided access to basic water at minimum LoS1 in informal Settlements	0 additional households provided access to basic water at minimum LoS1 in informal Settlements	COO	9
		Number of additional households provided access to basic sanitation at minimum LoS1 in informal Settlements.	32,5%	6 528 additional households provided access to basic sanitation at minimum LoS1 in informal Settlements	4 285 additional households provided access to basic sanitation at minimum LoS1 in informal Settlements	5 053 additional households provided access to basic sanitation at minimum LoS1 in informal Settlements	500 additional households provided access to basic sanitation at minimum LoS1 in informal Settlements	2 100 additional households provided access to basic sanitation at minimum LoS1 in informal Settlements	4 000 additional households provided access to basic sanitation at minimum LoS1 in informal Settlements	5 053 additional households provided access to basic sanitation at minimum LoS1 in informal Settlements	5 720 additional households provided access to basic sanitation at minimum LoS1 in informal Settlements	5 434 additional households provided access to basic sanitation at minimum LoS1 in informal Settlements	COO	10

4.632

City priorities	Strategic goals	KPI	Weight	Baseline 2018/19	2019/20 Q2 Actual	2020/21 Target	Q1 Target	Q2 Target	Q3 Target	Q4 Target	2021/22 Target	2022/23 Target	KPI owner	REF #		
							Settlements			Settlements	Settlements	Settlements				
		% final effluent compliance in all WWTW	25%	72% final effluent compliance in all WWTW	75.8% final effluent compliance in all WWTW	90% final effluent compliance in all WWTW	90% final effluent compliance in all WWTW	90% final effluent compliance in all WWTW	90% final effluent compliance in all WWTW	90% final effluent compliance in all WWTW	90% final effluent compliance in all WWTW	90% final effluent compliance in all WWTW	COO	11		
Priority 4: Sustainable service delivery Priority 7: Active and engage citizenry	Strategic goal: 3 Improve customer and stakeholder satisfaction Weight: 20%	Water consumption per capita	30%	284.92 l/c/d water consumption per capita	284.29 l/c/d water consumption per capita	284 l/c/d water consumption per capita	284 l/c/d water consumption per capita	284 l/c/d water consumption per capita	284 l/c/d water consumption per capita	284 l/c/d water consumption per capita	282 l/c/d water consumption per capita	280 l/c/d water consumption per capita	COO	12		
		% water bursts restored within 48 hours of notification	30%	89.09% water bursts restored within 48 hours of notification	92.05% water bursts restored within 48 hours of notification	95% water bursts restored within 48 hours of notification	95% water bursts restored within 48 hours of notification	95% water bursts restored within 48 hours of notification	95% water bursts restored within 48 hours of notification	95% water bursts restored within 48 hours of notification	95% water bursts restored within 48 hours of notification	95% water bursts restored within 48 hours of notification	95% water bursts restored within 48 hours of notification	COO	13	
		% sewer blockage cleared within 24 hours of notification	30%	94.94% sewer blockage cleared within 24 hours of notification	95.84% sewer blockage cleared within 24 hours of notification	97% sewer blockage cleared within 24 hours of notification	97% sewer blockage cleared within 24 hours of notification	97% sewer blockage cleared within 24 hours of notification	97% sewer blockage cleared within 24 hours of notification	97% sewer blockage cleared within 24 hours of notification	97% sewer blockage cleared within 24 hours of notification	97% sewer blockage cleared within 24 hours of notification	97% sewer blockage cleared within 24 hours of notification	97% sewer blockage cleared within 24 hours of notification	COO	14
		% actual water meter readings submitted to bill	10%	83.1% accounts billed on actual reading on a monthly basis	85.89% accounts billed on actual reading	95% actual water meter readings submitted to bill	95% actual water meter readings	95% actual water meter readings	95% actual water meter readings	95% actual water meter readings	95% actual water meter readings	95% actual water meter readings	95% actual water meter readings	95% actual water meter readings	FD	15

4.633

City priorities	Strategic goals	KPI	Weight	Baseline 2018/19	2019/20 Q2 Actual	2020/21 Target	Q1 Target	Q2 Target	Q3 Target	Q4 Target	2021/22 Target	2022/23 Target	KPI owner	REF #
							submitted to bill		submitted to bill	submitted to bill	submitted to bill	submitted to bill		
Priority 1: Good governance Priority 2: Financial Sustainability	Strategic goal 4: Enhance sound financial management, sustainability and clean governance Weight: 20%	% NRW	40%	38.44% NRW	AT	32% NRW (Physical = 14.8, commercial = 17.2)	AT	AT	AT	32% NRW (Physical = 14.8, commercial = 17.2)	30% NRW (Physical = 14, commercial = 16)	28% NRW (Physical = 13, commercial = 15)	COO	16
		Rand net profit before bad debt provision	40%	R3,797 million net profit before bad debt provision	R2,188 million net profit before bad debt provision	R3,770 million net profit before bad debt provision	R943 million net profit before bad debt provision	R1,885 million net profit before bad debt provision	R2,828 million net profit before bad debt provision	R3,770 million net profit before bad debt provision	R4,367 million net profit before bad debt provision	R5,108 million net profit before bad debt provision	FD	17
		Audit opinion	10%	Clean audit opinion	AT	Clean audit opinion	AT	AT	AT	Clean audit opinion	Clean audit opinion	Clean audit opinion	FD	18
		Percentage of AG findings contributing to non-achievement of clean audit	10%	New	New	0% AG findings contributing to non-achievement of clean audit	AT	AT	AT	0% AG findings contributing to non-achievement of clean audit	0% AG findings contributing to non-achievement of clean audit	0% AG findings contributing to non-achievement of clean audit	FD	19
Priority 10: Smart City	Strategic goal 5: Use of technology for effective and	Number of business units fully deployed with Business Analytics Dashboard	25%	0 - Number of business units fully deployed with Business Analytics Dashboard	Ops unit 25% deployed with Business Analytics Dashboard	3 Business units (F,IT and HR) fully deployed with Business Analytics Dashboard	0 - business units fully deployed with Business Analytics	1 business unit fully deployed with Business Analytics Dashboard	2 business units fully deployed with Business Analytics Dashboard	3 business units (F,IT and HR) fully deployed with Business	3 Business Unit Dashboards to be done.	KPI obsolete	FD	20

4.634

City priorities	Strategic goals	KPI	Weight	Baseline 2018/19	2019/20 Q2 Actual	2020/21 Target	Q1 Target	Q2 Target	Q3 Target	Q4 Target	2021/22 Target	2022/23 Target	KPI owner	REF #
	efficient operations Weight: 4%						Dashbo ard			s Analytic s Dashbo ard				
		Percentage Deployment of service failure reporting Application (App)	50%	New	New	100% Deployment of service failure reporting Application (App)	25% Deploye nt of service failure reporting Applicatio n (App)	50% Deployment of service failure reporting Application (App)	75% Deployment of service failure reporting Application (App)	100% Deploy ment of service failure reportin g Applicat ion (App)	N/A	N/A	FD	21
		Percentage Deployment of workforce optimisation system	25%	New	New	100% Deployment of workforce optimisation system	0% deployme nt of workforce optimisati on system	25% deployment of workforce optimisation system	75% deployment of workforce optimisation system	100% deployme nt of workforce optimisati on system	N/A	N/A	FD	22
Priority4 : Sustainable Service delivery	Strategic goal 6: Invest in our staff to sustain optimal performance and service-focused culture with	Percentage female employee	25%	28.95%	30.67% female employee	33.11% female employees)	32.12% female employees	32.45% female employees	32.78% female employees	33.11% female employees	33.11% female employees	34.43% female employees	HR&CS	23
		Percentage staff designated as PWDs	25%	3.95%	3.79% staff designa ted as PWDs	3.98% staff designate d as PWDs	3.94% staff designated as PWDs	3.95% staff designated as PWDs	3.96% staff designated as PWDs	3.98 % staff designa ted as PWDs	3.98% staff designat ed as PWDs	4.02% staff designat ed as PWDs	HR&CS	24

4.635

City priorities	Strategic goals	KPI	Weight	Baseline 2018/19	2019/20 Q2 Actual	2020/21 Target	Q1 Target	Q2 Target	Q3 Target	Q4 Target	2021/22 Target	2022/23 Target	KPI owner	REF #
		Percentage implementation of Internal Training Plan	10%	New target	New target	85% implementation	Annually calculated target of 85% implementation of the plan	Annually calculated target of 85% implementation of the plan	Annually calculated target of 85% implementation of the plan	Annually calculated target of 85% implementation of the plan	85% implementation of the plan	85% implementation of the plan	HR&CS	25
		Disabling Injury Frequency rate	25%	New target	New Target	1	1	1	1	1	1	1	HR&CS	26

Table 23: Entity day to day

Key Performance Indicator	Ref No	Baseline	2019/20 Target	Quarterly Performance targets				2019/20 budget per projects R 000						Means of verification
				Q1	Q2	Q3	Q4	Total budget		Quarterly Budget target capex and opex				
								Capex R'000	Opex R'000	Q1	Q2	Q3	Q4	
Number of sewer blockages per 100 km of network length	1	539.93 sewer blockages per 100 km of network length	539.93 sewer blockages per 100 km of network length	286.08 sewer blockages per 100 km of network length	584 sewer blockages per 100 km of network length	146 sewer blockages per 100 km of network length	292 sewer blockages per 100 km of network length	168,000	0	42,000	84,000	125,000	168,000	System-generated Ops indicator report, IMQS infrastructure lengths and Excel calculation sheet.
Number of water pipe bursts per 100 km of network length	2	358.09 water pipe bursts per 100 km of network length	358.09 water pipe bursts per 100 km of network length	221.16 water pipe bursts per 100 km of network length	452 water pipe bursts per 100 km of network length	113 water pipe bursts per 100 km of network length	226 water pipe bursts per 100 km of network length	252,000	0	63,000	126,000	189,000	252,000	System-generated Ops indicator report, IMQS infrastructure lengths and Excel calculation sheet.
Renewal rate of water and sewer networks; and WWTW based on value	3	0.87 % renewal rate of water and sewer networks; and WWTW	0.87 % renewal rate of water and sewer networks;	0.88% Renewal rate of water and sewer networks; and WWTW based on value	0.97% renewal rate of water and sewer	0.10% renewal rate of water and sewer	0.35% renewal rate of water and sewer	676,000		67,000	236,000	405,000	676,000	Excel calculation sheet on renewal rate based on asset

4.637

Key Performance Indicator	Ref No	Baseline	2019/20 Target	Quarterly Performance targets				2019/20 budget per projects R 000						Means of verification
				Q1	Q2	Q3	Q4	Total budget		Quarterly Budget target capex and opex				
								Capex R'000	Opex R'000	Q1	Q2	Q3	Q4	
		based on value	and WWTW based on value		networks; and WWTW based on value	networks; and WWTW based on value	networks; and WWTW based on value							value.
% Capex spend	4	84.33%	84.33%	63% Capex spend	95% Capex spend	10% Capex spend	35% Capex spend	1,100,000		110,000	385,000	660,000	1,100,000	Reports drawn from SAP system
% total B-BBEE procurement spent on qualifying SMMEs	5	126% B-BBEE procurement spent on qualifying SMMEs	126% B-BBEE procurement spent on qualifying SMMEs	126% B-BBEE procurement spent on qualifying SMMEs	125% B-BBEE procurement spent on qualifying SMMEs	125% B-BBEE procurement spent on qualifying SMMEs	125% B-BBEE procurement spent on qualifying SMMEs	See note 1						Reports drawn from SAP and downloaded onto Excel spreadsheet.
Number of job opportunities created based on EPWP	6	995 job opportunities created based on EPWP	995 job opportunities created based on EPWP	1061 job opportunities created based on EPWP	2674 job opportunities created based on EPWP	267 job opportunities created based on EPWP	936 job opportunities created based on EPWP	25,000		2,500	8,750	15,000	25,000	IDs, Contracts, Timesheets, Proof of Payment, UIF
Number of SMMEs supported through community upliftment projects	7	81 SMMEs supported through community upliftment projects	81 SMMEs supported through community upliftment projects	137 SMMEs supported through community upliftment projects	124 SMMEs supported through community upliftment projects	12 SMMEs supported through community upliftment projects	38 SMMEs supported through community upliftment projects	61,000	4,800	6,100	21,300	36,600	65,800	Contracts, Proof of Payment, CSD, CIPC,

4.638

Key Performance Indicator	Ref No	Baseline	2019/20 Target	Quarterly Performance targets				2019/20 budget per projects R 000						Means of verification	
				Q1	Q2	Q3	Q4	Total budget		Quarterly Budget target capex and opex					
								Capex R'000	Opex R'000	Q1	Q2	Q3	Q4		
					upliftment projects	community upliftment projects	community upliftment projects								
% compliance with drinking water quality standard on E. Coli (SANS 241)	8	99.,9% compliance with drinking water quality standard on E. Coli (SANS 241)	99.,9% compliance with drinking water quality standard on E. Coli (SANS 241)	99.5% compliance with drinking water quality standard on E. Coli (SANS 241)	99% compliance with drinking water quality standard on E. Coli (SANS 241)	99% compliance with drinking water quality standard on E. Coli (SANS 241)	99% compliance with drinking water quality standard on E. Coli (SANS 241)	0	17,600	4,400	8,800	13,200	17,600	System-generated drinking water quality report on Lab Information Management System (LIMS)	
Number of additional households provided access to basic water at minimum LoS1 in informal Settlements.	9	8 287 additional households provided access to basic water at minimum LoS1 in informal Settlements	8 287 additional households provided access to basic water at minimum LoS1 in informal Settlements	10 933 additional households provided access to basic water at minimum LoS1 in informal Settlements	12 920 additional households provided access to basic water at minimum LoS1 in informal Settlements	1 000 additional households provided access to basic water at minimum LoS1 in informal Settlements	3650 additional households provided access to basic water at minimum LoS1 in informal Settlements	50 000	-	5 000	20 000	35 000	50 000	Completion Certificates	

4.639

Key Performance Indicator	Ref No	Baseline	2019/20 Target	Quarterly Performance targets				2019/20 budget per projects R 000						Means of verification
				Q1	Q2	Q3	Q4	Total budget		Quarterly Budget target capex and opex				
								Capex R'000	Opex R'000	Q1	Q2	Q3	Q4	
Number of additional households provided access to basic sanitation at minimum LoS1 in informal Settlements.	10	6 528 additional households provided access to basic sanitation at minimum LoS1 in informal Settlements	6 528 additional households provided access to basic sanitation at minimum LoS1 in informal Settlements	4 285 additional households provided access to basic sanitation at minimum LoS1 in informal Settlements	5 053 additional households provided access to basic sanitation at minimum LoS1 in informal Settlements	500 additional households provided access to basic sanitation at minimum LoS1 in informal Settlements	2 100 additional households provided access to basic sanitation at minimum LoS1 in informal Settlements	-	75 000	8 000	20 000	45 000	75 000	Completion Certificates
% final effluent compliance in all WWTW	11	72% final effluent compliance in all WWTW	72% final effluent compliance in all WWTW	75.8% final effluent compliance in all WWTW	90% final effluent compliance in all WWTW	90% final effluent compliance in all WWTW	90% final effluent compliance in all WWTW	392,000	728,000	280,000	560,000	840,000	1,120,000	System-generated effluent quality LIMS reports and Excel calculation sheets.

4.640

Key Performance Indicator	Ref No	Baseline	2019/20 Target	Quarterly Performance targets				2019/20 budget per projects R 000						Means of verification
				Q1	Q2	Q3	Q4	Total budget		Quarterly Budget target capex and opex				
								Capex R'000	Opex R'000	Q1	Q2	Q3	Q4	
Water consumption per capita	12	284.92 l/c/d water consumption per capita	284.92 l/c/d water consumption per capita	284.29 l/c/d water consumption per capita	284 l/c/d water consumption per capita	284 l/c/d water consumption per capita	284 l/c/d water consumption per capita	165,000	-	25,000	50,000	100,000	165,000	Bulk system input volumes Excel sheet based on RW and cross-boundary invoices and Excel Calculation sheet.
% water bursts restored within 48 hours of notification	13	89.09% water bursts restored within 48 hours of notification	89.09% water bursts restored within 48 hours of notification	92.05% water bursts restored within 48 hours of notification	95% water bursts restored within 48 hours of notification	95% water bursts restored within 48 hours of notification	95% water bursts restored within 48 hours of notification	0	476,500	119,100	238,250	357,350	476,500	System-generated regional response-time Report.(RR)
% sewer blockage cleared within 24 hours of notification	14	94.94% sewer blockage cleared within 24 hours of notification	94.94% sewer blockage cleared within 24 hours of notification	95.84% sewer blockage cleared within 24 hours of notification	97% sewer blockage cleared within 24 hours of notification	97% sewer blockage cleared within 24 hours of notification	97% sewer blockage cleared within 24 hours of notification	0	317,600	79,400	158,800	238,200	317,600	System-generated regional response-time Report.(RR)

4.641

Key Performance Indicator	Ref No	Baseline	2019/20 Target	Quarterly Performance targets				2019/20 budget per projects R 000						Means of verification
				Q1	Q2	Q3	Q4	Total budget		Quarterly Budget target capex and opex				
								Capex R'000	Opex R'000	Q1	Q2	Q3	Q4	
% actual water meter readings submitted to bill	15	83.1% accounts billed on actual reading on a monthly basis	83.1% accounts billed on actual reading on a monthly basis	85.89% accounts billed on actual reading	95% actual water meter readings submitted to bill	95% actual water meter readings submitted to bill	95% actual water meter readings submitted to bill	77,600	54,000	25,800	64,500	90,300	131,600	
% NRW	16	38.44% NRW	38.44% NRW	AT	32% NRW (Physical = 14.8, commercial = 17.2)	AT	AT	238,000	36,000	68,500	137,000	205,500	274,000	CoJ zonal water balance Excel calculation sheet.
Rand net profit before bad debt provision	17	R3,797 million net profit before bad debt provision	R3,684 million net profit before bad debt provision	R2,188 million net profit before bad debt provision	R3,888 million net profit before bad debt provision	R972 million net profit before bad debt provision	R1,944 million net profit before bad debt provision	See note 1						Annual Financial Statements.
Audit opinion	18	Clean audit opinion	Clean audit opinion	AT	Clean audit opinion	AT	AT	See note 1						AGSA Audit Report.
Percentage of AG findings contributing to non-achievement of clean audit	19	New	New	New	0% AG finding contributing to non-achievement of	AT	AT	See note 1						AGSA Management Report.

4.642

Key Performance Indicator	Ref No	Baseline	2019/20 Target	Quarterly Performance targets				2019/20 budget per projects R 000						Means of verification
				Q1	Q2	Q3	Q4	Total budget		Quarterly Budget target capex and opex				
								Capex R'000	Opex R'000	Q1	Q2	Q3	Q4	
					clean audit									
Number of business units fully deployed with Business Analytics Dashboard	20	0 - Number of business units fully deployed with Business Analytics Dashboard	0 - Number of business units fully deployed with Business Analytics Dashboard	Ops unit 25% deployed with Business Analytics Dashboard	Three Business units (FI, IT and HR) fully deployed with Business Analytics Dashboard	0 - business units fully deployed with Business Analytics Dashboard	1 business unit fully deployed with Business Analytics Dashboard	2,000,000	-	604,500	60,272	928,563	400,000	A dashboard targeted. There will be a Specification plan. The Specification Document will consist of KPIs for each business unit.
Percentage deployment of service failure reporting Application (App)	21	New	100% Deployment of service failure reporting Application (App)	25% Deployment of service failure reporting Application (App)	50% Deployment of service failure reporting Application (App)	75% Deployment of service failure reporting Application (App)	100% Deployment of service failure reporting Application (App)	1,300	0	0	0	0	1,300	Project scope
Percentage deployment of workforce optimisation system	22	New	100% Deployment of workforce optimisation system	25% Deployment of workforce optimisation system	50% Deployment of workforce optimisation system	75% deployment of workforce optimisation system	100% deployment of workforce optimisation system	20,000	0	0	0	0	20,000	Project scope

4.643

Key Performance Indicator	Ref No	Baseline	2019/20 Target	Quarterly Performance targets				2019/20 budget per projects R 000						Means of verification
				Q1	Q2	Q3	Q4	Total budget		Quarterly Budget target capex and opex				
								Capex R'000	Opex R'000	Q1	Q2	Q3	Q4	
						ion system	tion system							
% female employees	23	28.95%	28.95%	30.67% female employee	33.11% female employees)	32.12% female employees	32.45% female employees	See note 1						SAP Human Resources Information Management (HRIM) system reports.
% staff designated as PWDs	24	3.95%	3.95%	3.79% staff designated as PWDs	3.98 % staff designated as PWDs	3.94% staff designated as PWDs	3.95% staff designated as PWDs	See note 1						SAP Human Resources Information Management (HRIM) system reports.
Percentage implementation of Internal Training Plan	25	New target	New target	New target	85% implementation	Annually calculated target of 85% implementation of the plan	Annually calculated target of 85% implementation of the plan		11,000	2,750	5.500	8250	11,000	Verified ITP.
Disabling Injury Frequency	26	New target	New target	New Target	1	1	1	See note 1						Excel spreadsheet.

Note 1: Not project based but day-to-day multifaceted activities, impractical to ring-fence shared budget.

4.3.3 Circular 88 Indicators

Table 24 below indicates National Treasury Circular 88 Key performance indicators and targets

Table 24: Circular 88 Indicators

No	Key Performance Indicator	Ref No	2018/19 Baseline	2020/21 Target	2021/22 Target	Quarterly Targets				Quarterly Performance targets		2020/21 budget per projects R 000				Means of Verification
										Total Budget		Quarterly Budget target capex and Opex				
						Q1	Q2	Q3	Q4	Capex	Opex	Q1	Q2	Q3	Q4	
1	Number of households with access to basic sanitation	WS1.1	6 528 new households provided access to basic sanitation minimum LoS1 in informal settlements	5 053 new households provided access to basic sanitation minimum LoS1 in informal settlements	5 720 new households provided access to basic sanitation minimum LoS1 in informal settlements	500 new households provided access to basic sanitation minimum LoS1 in informal settlements.	2 100 new households provided access to basic sanitation minimum LoS1 in informal settlements.	4 000 new households provided access to basic sanitation minimum LoS1 in informal settlements.	5 053 new households provided access to basic sanitation minimum LoS1 in informal settlements.	-	75 000	8 000	20 000	45 000	75 000	Completion Certificates
2	Number of new sewer connections meeting	WS1.11	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

4.645

No	Key Performance Indicator	Ref No	2018/19 Baseline	2020/21 Target	2021/22 Target	Quarterly Targets				Quarterly Performance targets		2020/21 budget per projects R 000				Means of Verification
										Total Budget		Quarterly Budget target capex and Opex				
						Q1	Q2	Q3	Q4	Capex	Opex	Q1	Q2	Q3	Q4	
	minimum standards															
	Number of households with access to basic water supply	WS2.1	8 287 new households provided access to basic water at minimum LoS1 in informal settlement	12 920 new households provided access to basic water at minimum LoS1 in informal settlement	0 new households provided access to basic water at minimum LoS1 in informal settlement	1000 new households provided access to basic water at minimum LoS1 in informal settlements.	3 650 new households provided access to basic water at minimum LoS1 in informal settlements.	8 300 new households provided access to basic water at minimum LoS1 in informal settlements.	12 920 new households provided access to basic water at minimum LoS1 in informal settlements.	50 000	-	5 000	20 000	35 000	50 000	Completion Certificates
3	Frequency of sewer blockages	WS3.1	539.93 sewer blockages per 100km of network length	584 sewer blockage per 100km of network length	599 sewer blockages per 100km of network length	146 sewer blockages per 100km of network length	292 sewer blockages per 100km of network length	438 sewer blockages per 100km of network length	599 sewer blockage per 100km of network length	168,000	0	42,000	84,000	125,000	168,000	System-generated Ops indicator report, IMQS infrastructure lengths and Excel calculation sheet.

4.646

No	Key Performance Indicator	Ref No	2018/19 Baseline	2020/21 Target	2021/22 Target	Quarterly Targets				Quarterly Performance targets		2020/21 budget per projects R 000				Means of Verification
										Total Budget		Quarterly Budget target capex and Opex				
						Q1	Q2	Q3	Q4	Capex	Opex	Q1	Q2	Q3	Q4	
4	Percentage of complaints /callouts responded to within 24 hours (sanitation /wastewater)	WS3.11	94.94% sewer blockage cleared within 24 hours of notification	97% sewer blockage cleared within 24 hours of notification	97% sewer blockage cleared within 24 hours of notification	97% sewer blockage cleared within 24 hours of notification	97% sewer blockage cleared within 24 hours of notification	97% sewer blockage cleared within 24 hours of notification	97% sewer blockage cleared within 24 hours of notification	0	317,600	79,400	158,800	238,200	317,600	System-generated regional response-time Report.(RRR)
5	Frequency of mains failures	WS3.2	358.09 water pipe bursts per 100km of network length	452 water pipe bursts per 100km network length	464 water pipe bursts per 100km of network length	113 water pipe bursts per 100km of network length	226 water pipe bursts per 100km of network length	339 water pipe bursts per 100km of network length	452 water pipe bursts per 100km network length	252,000	0	63,000	126,000	189,000	252,000	System-generated Ops indicator report, IMQS infrastructure lengths and Excel calculation sheet.
6	Percentage of complaints /callouts responded to within 24 hours (water)	WS3.21	89.09% Water bursts restored within 24 hrs of notification	95% Water bursts restored within 24 hrs of notification	95% Water bursts restored within 24 hrs of notification	95% Water bursts restored within 24 hrs of notification	95% Water bursts restored within 24 hrs of notification	95% Water bursts restored within 24 hrs of notification	95% Water bursts restored within 24 hrs of notification	0	476,500	119,100	238,250	357,350	476,500	System-generated regional response-time Report.(RRR)

4.647

No	Key Performance Indicator	Ref No	2018/19 Baseline	2020/21 Target	2021/22 Target	Quarterly Targets				Quarterly Performance targets		2020/21 budget per projects R 000				Means of Verification
										Total Budget		Quarterly Budget target capex and Opex				
						Q1	Q2	Q3	Q4	Capex	Opex	Q1	Q2	Q3	Q4	
7	Frequency of unplanned water service interruptions	WS3.3	358.09 water pipe bursts per 100km of network length	452 water pipe bursts per 100km network length	464 water pipe bursts per 100km of network length	113 water pipe bursts per 100km of network length	226 water pipe bursts per 100km of network length	339 water pipe bursts per 100km of network length	452 water pipe bursts per 100km network length	252,000	0	63,000	126,000	189,000	252,000	System-generated Ops indicator report, IMQS infrastructure lengths and Excel calculation sheet.
8	Percentage of Drinking Water Compliance to SANS 241	WS4.1	99.9% compliance with drinking water quality standard on E. Coli (SANS 241)	99% compliance with drinking water quality standard on E. Coli (SANS 241)	99% compliance with drinking water quality standard on E. Coli (SANS 241)	99% compliance with drinking water quality standard on E. Coli (SANS 241)	99% compliance with drinking water quality standard on E. Coli (SANS 241)	99% compliance with drinking water quality standard on E. Coli (SANS 241)	99% compliance with drinking water quality standard on E. Coli (SANS 241)	0	17,600	4,400	8,800	13,200	17,600	System-generated drinking water quality report on Lab Information Management System (LIMS)
9	Percentage of wastewater samples compliant to water use license conditions	WS4.2	72% final effluent compliance in all WWTW.	90% final effluent compliance in all WWTW	90% final effluent compliance in all WWTW	90% final effluent compliance in all WWTW	90% final effluent compliance in all WWTW	90% final effluent compliance in all WWTW	90% final effluent compliance in all WWTW	392,000	728,000	280,000	560,000	840,000	1,120,000	System-generated effluent quality LIMS reports and Excel calculation sheets.

4.648

No	Key Performance Indicator	Ref No	2018/19 Baseline	2020/21 Target	2021/22 Target	Quarterly Targets				Quarterly Performance targets		2020/21 budget per projects R 000				Means of Verification
										Total Budget		Quarterly Budget target capex and Opex				
						Q1	Q2	Q3	Q4	Capex	Opex	Q1	Q2	Q3	Q4	
10	Percentage of industries with trade effluent inspected for compliance	WS4.21	New	95% of industries with trade effluent inspected for	95% of industries with trade effluent inspected for	95% of industries with trade effluent inspected for compliance	95% of industries with trade effluent inspected for compliance	95% of industries with trade effluent inspected for compliance	95% of industries with trade effluent inspected for compliance	See Note 1						
11	Percentage of wastewater safely treated	WS4.22	72% final effluent compliance in all WWTW.	90% final effluent compliance in all WWTW	90% final effluent compliance in all WWTW	90% final effluent compliance in all WWTW	90% final effluent compliance in all WWTW	90% final effluent compliance in all WWTW	90% final effluent compliance in all WWTW	392,000	728,000	280,000	560,000	840,000	1,120,000	System-generated effluent quality LIMS reports and Excel calculation sheets.
12	Percentage of non-revenue water	WS5.1	38.6%	32% NRW (Physical = 14.8%, commercial =17.2%)	30% NRW (Physical = 14%, commercial =16%)	Annual Target	Annual Target	Annual Target	32% NRW (Physical = 14.8%, commercial =17.2%)	238,000	36,000	68,500	137,000	205,500	274,000	CoJ zonal water balance Excel calculation sheet.
13	Total water losses	WS5.2	24.8%	21%	21%	Annual Target	Annual Target	Annual Target	21%	Same as above	Same as above	Same as above	Same as above	Same as above	Same as above	Same as above

4.649

No	Key Performance Indicator	Ref No	2018/19 Baseline	2020/21 Target	2021/22 Target	Quarterly Targets				Quarterly Performance targets		2020/21 budget per projects R 000				Means of Verification
										Total Budget		Quarterly Budget target capex and Opex				
						Q1	Q2	Q3	Q4	Capex	Opex	Q1	Q2	Q3	Q4	
14	Total per capita consumption of water	WS5.3	284.92 l/c/d water consumption per capita	284 l/c/d water consumption per capita	282 l/c/d water consumption per capita	284 l/c/d water consumption per capita	284 l/c/d water consumption per capita	284 l/c/d water consumption per capita	284 l/c/d water consumption per capita	Same as above	Same as above	Same as above	Same as above	Same as above	Same as above	Bulk system input volumes Excel sheet based on RW and cross-boundary invoices and Excel calculation sheet.
15	Water connections metered as a percentage of total connections	WS5.31	286 water consumption per capita	295 water consumption per capita	295 water consumption per capita	295 LCD water consumption per capita	295 LCD water consumption per capita	295 LCD water consumption per capita	295 LCD water consumption per capita	165,000	-	25,000	50,000	100,000	165,000	System-generated regional response-time Report.(RRR
16	Percentage of water reused	WS5.4	New	60%	60%	54.8%	56%	58%	60%	See Note 1						System-generated regional response-time Report.(RRR

4.3.4 KPI Definition

Table 25 below indicates the KPI definition, calculation formula and the means of verification.

Table25: KPI Definitions

KPI NO.	INDICATOR TITLE	SHORT DEFINITION	PURPOSE / IMPORTANCE	SOURCE / COLLECTION OF DATA	METHOD OF CALCULATION	DATA LIMITATION	TYPE OF INDICATOR	CALCULATION TYPE	REPORTING CYCLE	NEW INDICATOR	DESIRED PERFORMANCE	INDICATOR RESPONSIBILITY
1	Number of sewer blockages per 100 km of network length.	Frequency of sewer blockages being experienced as an indication of the sewer infrastructure performance and condition.	Indicates the deterioration of the sewer infrastructure due to age. Assist in identifying and motivating sewer pipe replacement activities.	System-generated Ops indicator report, IMQS infrastructure lengths and Excel calculation sheet.	(A) Number of works orders received sewer main blockages/(B) total length of sewer mains/100 (C) A / B = Number of blockages per 100 km (monthly)	No Limitation	The indicator indicate the efficiency of the sewer network.	Performance is cumulative.	Reported quarterly	Continue without change from the previous financial year.	Performance should be lower than the target set.	GM: Operations
2	Number of water pipe bursts per 100 km on network length.	Frequency of water bursts being experienced as an indication of water	Indicates the deterioration of the water infrastructure due to age. Assist in	System-generated Ops indicator report, IMQS infrastructure lengths and	(A) Number of works orders received R&M mains + number of	No Limitation	The indicator indicate the efficiency of the water network.	Performance is cumulative.	Reported quarterly	Continue without change from the previous	Performance should be lower than the target set.	GM: Operations

4.651

KPI NO.	INDICATOR TITLE	SHORT DEFINITION	PURPOSE / IMPORTANCE	SOURCE / COLLECTION OF DATA	METHOD OF CALCULATION	DATA LIMITATION	TYPE OF INDICATOR	CALCULATION TYPE	REPORTING CYCLE	NEW INDICATOR	DESIRED PERFORMANCE	INDICATOR RESPONSIBILITY
		infrastructure performance and condition.	identifying and motivating water pipe replacement activities.	Excel calculation sheet.	works orders received R&M valves and hydrants /(B) Total length of water mains/100 C) A / B = Number of bursts per 100 km (monthly)					financial year.		
3	Renewal rate of water and sewer networks and WWTW based on value.	Renewal rate of water and sewer networks; and WWTW electromechanical components based on value.	Measurement of renewal of the asset base to prevent failure and ensure efficient service delivery	Excel calculation sheet on renewal rate based on asset value.	Percentage renewal rate = total cost of infrastructure renewal expenditure divided by (network replacement cost + WWTW electro-mechanical replacement cost)x100%	N/A	N/A	N/A	Monthly	N/A	1% renewal rate	COO
4	% Capex spend.	The rand value expressed as a percentage of capital budget spend against the allocated budget.		Reports drawn from SAP system.	A = CAPEX spend B = CAPEX allocated % CAPEX spend= (A/B)*100	N/A	N/A	N/A	Monthly	N/A	95 % Capex Spent	COO
5	% total B-BBEE procurement spent on	The definition of the formula is to calculate the B-BBEE	The purpose is to determine B-BBEE	Reports drawn from SAP and downloaded	A = B/C x 100%	If ERP (SAP) has a downtime, information	KPI measures equity	Cumulative	Monthly, quarterly and annual	Continuing	Higher performance is desirable	Financial Director

4.652

KPI NO.	INDICATOR TITLE	SHORT DEFINITION	PURPOSE / IMPORTANCE	SOURCE / COLLECTION OF DATA	METHOD OF CALCULATION	DATA LIMITATION	TYPE OF INDICATOR	CALCULATION TYPE	REPORTING CYCLE	NEW INDICATOR	DESIRED PERFORMANCE	INDICATOR RESPONSIBILITY
	qualifying SMMEs.	<p>procurement spend percentage (%) for qualifying SMMEs (i.e. EMEs and QSEs) in the said category.</p> <p>It is the B-BBEE procurement spend value recognised for qualifying SMMEs, which comprises the total measured procurement spend for each supplier in this category with a valid B-BBEE scorecard/ certificate or affidavit divided by the overall value of goods and services procured within the relevant financial year, comprising operational and capital expenditure.</p>	<p>procurement spend percentage (%) within this SMME group and an achievement of at least 125%. It also indicates that most of the SMME suppliers used by the entity are a level two, which equates to 125% B-BBEE recognition.</p>	onto Excel spreadsheet.	<p>(A) = The percentage total of B-BBEE procurement spent on qualifying SMMEs</p> <p>(B) = Sum total of individual SMMEs procurement spend for the reporting period multiplied by the applicable B-BBEE recognition level per qualifying SMME</p> <p>(C) = Total procurement spend for all qualifying SMMEs for the reporting period. Total B-BBEE procurement spend</p>	cannot be extracted from SAP						

4.653

KPI NO.	INDICATOR TITLE	SHORT DEFINITION	PURPOSE / IMPORTANCE	SOURCE / COLLECTION OF DATA	METHOD OF CALCULATION	DATA LIMITATION	TYPE OF INDICATOR	CALCULATION TYPE	REPORTING CYCLE	NEW INDICATOR	DESIRED PERFORMANCE	INDICATOR RESPONSIBILITY
		EMEs are all Exempted Micro Enterprises with a turnover of less than R10m and QSEs are Qualifying Small Enterprises with a turnover of between R10m –R50m.										
6	Number of job opportunities created, based on EPWP.	The EPWP was initiated by the South African Government and is aimed at creating 4.5 million work opportunities by employing labour-intensive methods.	Promote economic development and attract investment towards achieving 5% economic growth	IDs, Contracts, Timesheets, Proof of Payment, UIF	Excel database sheet with number of jobs created.	N/A	N/A	N/A	Monthly	N/A	100% job opportunities created based on EPWP	COO
7	Number of SMMEs supported through community upliftment projects.	SMME support through community upliftment projects will assist with economic development, job creation	Promote economic development and attract investment towards achieving 5% economic growth	Contracts, Proof of Payment, CSD, CIPC,	Excel database sheet with number of SMMEs supported.	N/A	N/A	N/A	Monthly	N/A	100% SMMEs supported through community upliftment projects	COO

4.654

KPI NO.	INDICATOR TITLE	SHORT DEFINITION	PURPOSE / IMPORTANCE	SOURCE / COLLECTION OF DATA	METHOD OF CALCULATION	DATA LIMITATION	TYPE OF INDICATOR	CALCULATION TYPE	REPORTING CYCLE	NEW INDICATOR	DESIRED PERFORMANCE	INDICATOR RESPONSIBILITY
		and poverty alleviation.										
8	% compliance with drinking water quality standard on E. Coli (SANS 241).	% of drinking water samples complying with the SANS 241 E. Coli standard to the number of drinking water samples taken.	Indicator is intended to show compliance with Public Safety with Drinking Water that is piped to households	System-generated drinking water quality report on Lab Information Management System (LIMS)	A) Number of tests Complying/(B) Number of tests (C) A / B X100% = % compliance (monthly)	Strike Service Delivery Protests No access to sampling points	Measuring Outcome / Output i.e. if water is suitable for drinking	Cumulative	Monthly, quarterly & annually	Continues without change from the previous year.	targeted performance or higher is desirable	Senior Manager: Operations Support; General Manager: Operations Chief Operations Officer
9	Number of new households provided access to basic water at minimum LoS1 in informal settlements.	A basic water service refers to provision of water in informal settlements through the installation of communal standpipes.	Number of households provided access to basic water service	Completion Certificates	N/A	None	Outcomes and impact on service delivery	The numbers reported are cumulative only for monthly, quarterly and annual reporting.	Quarterly reporting	N/A	Actual performance to be determined during implementation	COO
10	Number of new households provided access to basic sanitation at minimum LoS1 in informal settlements.	A basic sanitation service refers to provision of sanitation in informal settlements through the installation of VIPs and ablution blocks.	Service delivery Providing the right to access water in line with the constitution.	Completion certificates	N/A	None	Outcomes and Impact on service delivery	The numbers reported are cumulative only for monthly, quarterly and annual reporting.	Quarterly reporting	N/A	Actual performance to be determined during implementation	COO

4.655

KPI NO.	INDICATOR TITLE	SHORT DEFINITION	PURPOSE / IMPORTANCE	SOURCE / COLLECTION OF DATA	METHOD OF CALCULATION	DATA LIMITATION	TYPE OF INDICATOR	CALCULATION TYPE	REPORTING CYCLE	NEW INDICATOR	DESIRED PERFORMANCE	INDICATOR RESPONSIBILITY
11	% final effluent compliance in all WWTW.	The overall % compliance of the wastewater treatment plants to the compliance parameters as stipulated in their individual water use licences.	Indicator is intended to show if the WWTW are not discharging water containing waste in a manner which may detrimentally impact on a water resource	The information comes from a system-generated effluent quality LIMS reports and Excel calculation sheets. It is collected through sampling, analysis and reporting of results for effluent samples	(Total number of daily samples per works per indicator per month complying with the limit in the water use licence) / (total number of daily samples per works per indicator per month) x 100% = % monthly compliance per works per indicator in the water use licence	Strike Service Delivery Protests No access to sampling points	Measuring Impact	Cumulative	Monthly, quarterly & annually	Continues without change from the previous year.	targeted performance or higher is desirable	Senior Manager: Operations Support; General Manager: Operations Chief Operations Officer
12	Water consumption per capita per day.	Volume of water supplied to each person per day, including losses being experienced on the reticulation system.	Indicator shows the water demand of the CoJ per person per day.	Bulk system input volumes Excel sheet based on RW and cross-boundary invoices and Excel calculation sheet. Population based on SENSUS 2011	(A) System input volume in the period under review, (B) population as per Census 2011 with 3, 5% growth per year and (C) the number of days of the	No Limitation	The indicator indicate the water demand of the CoJ.	Performance is cumulative.	Reported quarterly	Continue without change from the previous financial year.	Performance should be lower than the target set.	GM: Operations

4.656

KPI NO.	INDICATOR TITLE	SHORT DEFINITION	PURPOSE / IMPORTANCE	SOURCE / COLLECTION OF DATA	METHOD OF CALCULATION	DATA LIMITATION	TYPE OF INDICATOR	CALCULATION TYPE	REPORTING CYCLE	NEW INDICATOR	DESIRED PERFORMANCE	INDICATOR RESPONSIBILITY
				including growth.	period under review. (D) H/H water consumption per capita per Day = a/b/c							
13	% water bursts restored within 48 hours of notification.	The % of water bursts repaired within 48 hours to the number of water burst reported as one of the service delivery functions linked to customer satisfaction.	Indicator shows how fast water infrastructure failures are addressed	System-generated regional response-time Report.(RRR)	(A) Number of WO completed (major and minor bursts) in time (B) Number of WO received (major and minor bursts) A/B X100% = % response time (monthly)	No Limitation	The indicator indicate the efficiency/outputs of the water teams.	Performance is cumulative.	Reported monthly	Continue without change from the previous financial year.	Performance should be higher than the target set.	GM: Operations
14	% of sewer blockages cleared within 24 hours of notification.	The % of sewer blockages cleared within 24 hours to the number of sewer blockages reported as one of the service delivery functions linked to customer satisfaction.	Indicator shows how fast sewer infrastructure failures are addressed.	System-generated regional response-time Report.(RRR)	Number of WO completed (sewer main blockages) in time (B) Number of WO received (sewer main blockages) A/BX100% = % response time (monthly)	No Limitation	The indicator indicate the efficiency/outputs of the sewer teams.	Performance is cumulative.	Reported monthly	Continue without change from the previous financial year.	Performance should be higher than the target set.	GM: Operations

4.657

KPI NO.	INDICATOR TITLE	SHORT DEFINITION	PURPOSE / IMPORTANCE	SOURCE / COLLECTION OF DATA	METHOD OF CALCULATION	DATA LIMITATION	TYPE OF INDICATOR	CALCULATION TYPE	REPORTING CYCLE	NEW INDICATOR	DESIRED PERFORMANCE	INDICATOR RESPONSIBILITY
15	% actual water meter readings submitted to bill	% actual water meter readings submitted to bill	Percentage actual water meter readings submitted to CoJ to bill by CoJ. Intended to show that meters have been read and an actual readings have been submitted for billing	Meter Reading System Export	Number of actual water meter readings submitted to CoJ to bill / Number of water meters downloaded from the CoJ Billing system X100%= %	Inability to submit a reading on some technical faults where a reading could be obtained and used (e.g. meter covered, meter inside the property)	Input	Non-Cumulative	Annually	KPI Definition Changed	To meet Target	Senior Manager: Metering
16	% NRW.	% reduction of the three components of NRW, including physical (real) losses, commercial (apparent) losses and authorised unbilled metered and non-metered consumption.	Indicator indicates the difference between water procured and put into the system and actual water supplied and billed to the customer.	CoJ zonal water balance Excel calculation sheet.	Using sum of prior 12 months moving data (A), Total System Input Volume (B), Billed Metered Consumption (C), Billed Unmetered Consumption (D), Unbilled Unmetered Consumption (E), $(A - B - C)/A * 100 = \% \text{ NRW (F)}$, $(A - B - C - D)/A * 100 = \% \text{ Water Losses}$	No Limitation	The indicator indicate the efficiency/outputs of the water infrastructure as well as billing systems.	Performance is cumulative.	Reported quarterly	Continue without change from the previous financial year.	Performance should be lower than the target set.	GM: Operations

4.658

KPI NO.	INDICATOR TITLE	SHORT DEFINITION	PURPOSE / IMPORTANCE	SOURCE / COLLECTION OF DATA	METHOD OF CALCULATION	DATA LIMITATION	TYPE OF INDICATOR	CALCULATION TYPE	REPORTING CYCLE	NEW INDICATOR	DESIRED PERFORMANCE	INDICATOR RESPONSIBILITY
					(G), (28%*F)/A*100= % Apparent Losses (Commercial Losses)(H), F -G= % Real Losses (Physical Losses) (I) D/A*100%= % Unbilled Unmetered Consumption (Commercial Losses) (J), G+I = % Commercial Losses							
17	Rand net profit before bad debt provision.	Bad debts are accounts receivable that a business cannot collect. The provision is used to estimate bad debts, which businesses incur because customers sometimes cannot pay their bills on time, or at all. Bad debt	The indicator intends to show the amount of profit from business activities after expenses, which are in the control of Johannesburg Water, have been deducted.	Annual Financial Statements.	Net profit + bad debt provision (Statement of Financial Performance element)	The calculation of the bad debt figure is based upon the debtors aging which is received from CoJ. JW is thus dependent upon debtors aging from CoJ.	The indicator is an output measurement being indicative of financial economy and efficiency.	The indicator is cumulative.	The indicator is reported monthly, quarterly and annually.	No changes to the indicator.	A performance higher than the targeted performance is desirable.	Financial Director

4.659

KPI NO.	INDICATOR TITLE	SHORT DEFINITION	PURPOSE / IMPORTANCE	SOURCE / COLLECTION OF DATA	METHOD OF CALCULATION	DATA LIMITATION	TYPE OF INDICATOR	CALCULATION TYPE	REPORTING CYCLE	NEW INDICATOR	DESIRED PERFORMANCE	INDICATOR RESPONSIBILITY
		provisions are recorded as an expense on the income statement; reduce the net profit as an allowance for doubtful debts, which, in turn, reduce accounts receivable on the balance sheet.										
18	Audit opinion.	The financial statements are free from material misstatements (in other words, A financially unqualified audit opinion) and there are no material findings on reporting on performance objectives or non-compliance with legislation.	The indicator is indicative of the organisation's financial governance in terms of audit standards.	AGSA Audit Report.	An audit opinion is issued by AGSA by means of a final audit report.	There are no data limitations.	The indicator measures outcomes and are indicative of financial and governance efficiency.	It is a report received on an annual basis.	It is reported annually.	No significant changes to the indicator.	An outcome, which has improved from the prior year or better than the targeted outcome, is desirable.	Financial Director

4.660

KPI NO.	INDICATOR TITLE	SHORT DEFINITION	PURPOSE / IMPORTANCE	SOURCE / COLLECTION OF DATA	METHOD OF CALCULATION	DATA LIMITATION	TYPE OF INDICATOR	CALCULATION TYPE	REPORTING CYCLE	NEW INDICATOR	DESIRED PERFORMANCE	INDICATOR RESPONSIBILITY
19	Percentage of AG finding contributing to non-achievement of clean audit	The financial statements are free from material misstatements (in other words, A financially unqualified audit opinion) and there are no material findings on reporting on performance objectives or non-compliance with legislation.	The indicator is indicative of the organisation's financial governance in terms of audit standards	AGSA Management Report.	Number of AG findings contributing to non-achievement of clean audit/Total number of findingsx100 %	There might be instances of findings where the finding stems from circumstances beyond the control of JW.	The indicator measures outputs in the form of the number of audit findings.	It is a report received on an annual basis.	It is reported annually.	New target	An outcome lower than the targeted performance is required	All Executives.
20	Number of business units fully deployed with Business Analytics Dashboard.	Develop digital dashboards for business units.	Provides information on key operational indicators for a department and function for an operation. Information is readily accessible.	A dashboard for the business unit targeted. There will be a specification document and a project plan. The specification document will consist of KPIs for each business unit.	There is no KPI calculation formula.	Dashboards are dependent on data from information systems to feed the EDW.	Dashboards provide insight, based on metrics, into operation and functions to translate into meaningful information, e.g. trends, performance, etc.	Cumulative	Reported on quarterly but based on an annual target.	Not a new target. Similar to previous years'.	Meet target.	CIO
21	Percentage Deployment of service failure	Full Deployment of service failure		Project scope	Achieved project scope activities/Tot	None	Output	Once-off	Annual	Yes	Meet target	CIO

4.661

KPI NO.	INDICATOR TITLE	SHORT DEFINITION	PURPOSE / IMPORTANCE	SOURCE / COLLECTION OF DATA	METHOD OF CALCULATION	DATA LIMITATION	TYPE OF INDICATOR	CALCULATION TYPE	REPORTING CYCLE	NEW INDICATOR	DESIRED PERFORMANCE	INDICATOR RESPONSIBILITY
	reporting Application (App)	reporting Application (App) as per project scope			al project scope activities x100%							
22	Percentage Deployment of workforce optimisation system	Full Deployment of workforce optimisation system as per project scope		Project scope	Achieved project scope activities/Total project scope activities x100%	None	Output	Once-off	Annual	Yes	Meet target	CIO
23	% of female employees	Total female employees as a % of the total staff complement as at the end of the year		SAP Human Resources Information Management (HRIM) system reports.	No of female employee/ total staff complement x100%	None	Output	Cumulative	Annual	no	YES	Executive Manager HR and CS
24	% of staff designated as PWDs	The total number of people living with disabilities employed by the Company as a % of the total staff complement of the Company as at the end of the year and every quarter.		SAP Human Resources Information Management (HRIM) system reports.	No. of people living with disabilities employed/total staff complement x100%	None	Output	Cumulative	Annual	no	YES	Executive Manager HR and CS
25	Percentage implementation of Internal Training Plan	Percentage implementation of the		Verified ITP.	= (actual training events/ planned	None	Number of Training Events implemented as per SAP	Average percentage	Annual Target, monthly	85% Implementation	100% Implementation	Executive Manager HR &CS

4.662

KPI NO.	INDICATOR TITLE	SHORT DEFINITION	PURPOSE / IMPORTANCE	SOURCE / COLLECTION OF DATA	METHOD OF CALCULATION	DATA LIMITATION	TYPE OF INDICATOR	CALCULATION TYPE	REPORTING CYCLE	NEW INDICATOR	DESIRED PERFORMANCE	INDICATOR RESPONSIBILITY
		Internal Training Plan			training events X 100% = % Implementation		Report and Attendance Registers	Training event implemented/ Training events planned x 100% = % (211/211 x 100% = 100%)	reporting cycle			
26	Disabling injury frequency rate.	Disabling injury frequency rate intends to calculate the rate at which employees are injured while executing their duties. The target is ≤ 1	Data comes from the work related injuries (IODs) and the company's man hours	Excel spreadsheet.	DIFR = Number of disabling injuries X 200 000 / Total hours man-hours worked	Criminal elements, community unrest, and accidents that may result in employee injuries	The indicator is measuring the activities and impacts thereof from health and safety perspective	The performance of the indicator is non-cumulative	The performance is reported quarterly	The indicator continues from the previous FY	The performance that is less than or equals to 1 is desirable. The performance that is greater than 1 is not desirable	OHSE & DM Manager: Edward Nduvheni

4.3.5 Service Standards Charter

Table 25 below depicts the service standards indicators and targets

.Table 26: Service standards

No	Key Performance Indicator	Baseline 2018/19	2020/21 Target	2021/22 Target	Quarterly Performance targets				2020/21 budget per projects R 000						Means of Verification
					Q1	Q2	Q3	Q4	Total budget		Quarterly Budget target capex and Opex				
									Capex	Opex	Q1	Q2	Q3	Q4	
1	Percentage of water supply interruptions concluded within 12 hours of notification.	99%	95%	95%	95%	95%	95%	95%	n/a	n/a	n/a	n/a	n/a	n/a	Planned interruption notices and monthly planned interruption matrix
2	Percentage of fire hydrants repaired within 48 hours of notification.	81%	95%	95%	95%	95%	95%	95%	0	476,500	119,100	238,250	357,350	476,500	System-generated regional response-time Report.(RRR)
3	Percentage of stolen meters replaced within	96%	95%	95%	95%	95%	95%	95%	Included in no 2 above	Included in no 2 above	Included in no 2 above	Included in no 2 above	Included in no 2 above	Included in no 2 above	System-generated regional

4.664

No	Key Performance Indicator	Baseline 2018/19	2020/21 Target	2021/22 Target	Quarterly Performance targets				2020/21 budget per projects R 000						Means of Verification	
					Q1	Q2	Q3	Q4	Total budget		Quarterly Budget target capex and Opex					
									Capex	Opex	Q1	Q2	Q3	Q4		
	24 hours of notification.															response-time Report.(RRR)
4	Percentage of defective meters repaired within 3 days of notification.	92%	95%	95%	95%	95%	95%	95%	Included in no 2 above	Included in no 2 above	Included in no 2 above	Included in no 2 above	Included in no 2 above	Included in no 2 above	Included in no 2 above	System-generated regional response-time Report.(RRR)
5	Percentage of leaking valves repaired within 48 hours of notification.	91%	95%	95%	95%	95%	95%	95%	Included in no 2 above	Included in no 2 above	Included in no 2 above	Included in no 2 above	Included in no 2 above	Included in no 2 above	Included in no 2 above	System-generated regional response-time Report.(RRR)
6	Percentage of missing manhole covers replaced within 24 hours of notification.	93%	95%	95%	95%	95%	95%	95%	Included in no 2 above	Included in no 2 above	Included in no 2 above	Included in no 2 above	Included in no 2 above	Included in no 2 above	Included in no 2 above	System-generated regional response-time Report.(RRR)
7	Percentage within 48 hours of notification.	91%	95%	95%	95%	95%	95%	95%	Included in no 2 above	Included in no 2 above	Included in no 2 above	Included in no 2 above	Included in no 2 above	Included in no 2 above	Included in no 2 above	System-generated regional response-time Report.(RRR)
8	Percentage sewer blockages cleared within 24 hours of notification.	96%	95%	95%	95%	95%	95%	95%	0	317,600	79,400	158,800	238,200	317,600	317,600	System-generated regional response-time Report.(RRR)

4.665

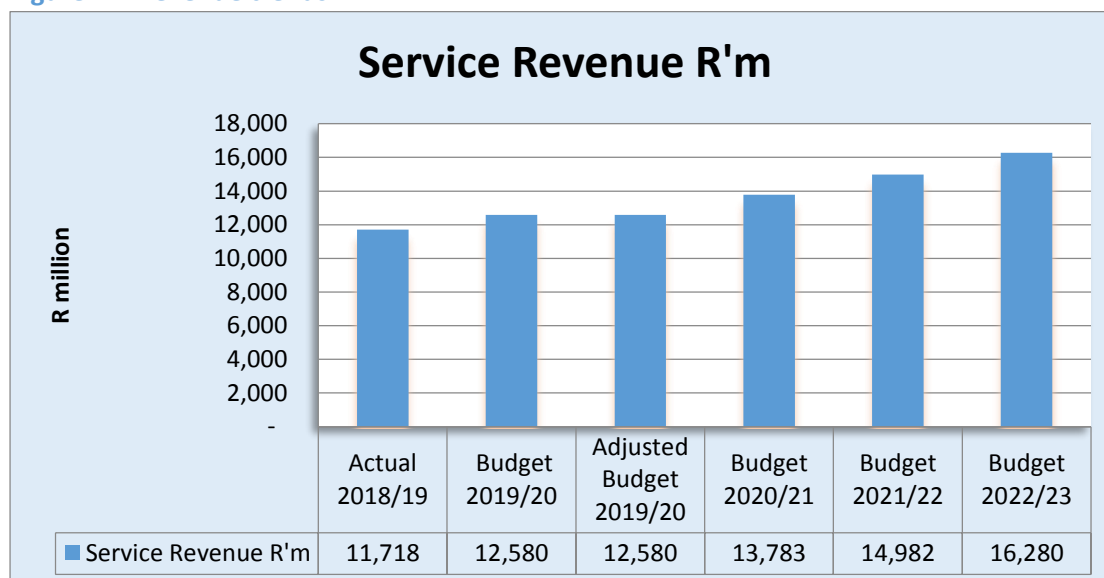
No	Key Performance Indicator	Baseline 2018/19	2020/21 Target	2021/22 Target	Quarterly Performance targets				2020/21 budget per projects R 000						Means of Verification
					Q1	Q2	Q3	Q4	Total budget		Quarterly Budget target capex and Opex				
									Capex	Opex	Q1	Q2	Q3	Q4	
9	Percentage of new water connections completed within 15 days of receiving request from customer.	75%	95%	95%	95%	95%	95%	95%	Included in no 2 above	Included in no 2 above	Included in no 2 above	Included in no 2 above	Included in no 2 above	Included in no 2 above	System-generated regional response-time Report.(RRR)
10	% actual water meter readings submitted to bill	90%	95%	95%	95%	95%	95%	95%							Monthly Meter Reading Report
11	Percentage of planned service interruption communiqués send within 7 days.	100%	95%	95%	95%	95%	95%	95%	n/a	n/a	n/a	n/a	n/a	n/a	Daily supply system status update report
12	Percentage unplanned interruption communiqués send immediately.	100%	95%	95%	95%	95%	95%	95%	n/a	n/a	n/a	n/a	n/a	n/a	Daily supply system status update report

Chapter 5: Financial Impact

5.1 Financial Indicators

Revenue is budgeted to increase to R13.8 billion in the 2020/21 financial year as per figure 11 below, which is an increase of 9.56% on the budget of R12.6 billion in 2019/20. This is mainly due to a tariff increase as well as the current consumption patterns, which reflect an increase from per capita usage and population growth.

Figure 11: Revenue trends



The average proposed tariff increase for 2020/21 is projected at 8.6%. This is based on the RW proposed tariff increase of 6.6% and a retail margin of 2% to fund capital projects. The increase is above both the inflation rate and the inflation target set by the South African Reserve Bank and may have a negative impact on consumer payment levels. The increase, however, does not adequately cover funding for the capital expenditure required to replace infrastructure reaching the end of its useful life over the next few years. Therefore, additional loans will be required to fund the shortfall.

Bulk purchases consist of the purchase of potable water from Rand Water. The price is determined by a combination of a government pricing strategy, which is determined by operating costs and loan repayments for capital infrastructure for the raw water, as well as the costs incurred by Rand Water for the treatment of the water. For 2020/21, the increase from Rand Water will be 6.6%.

The bulk water volume purchases budget has been based on current consumption patterns, which reflect an increase from per capita usage and population growth. The impact of water demand management initiatives, such as pressure valve management, active leakage control and the prepaid metering project, have been factored into the budget. These initiatives are expected to yield a reduction in the cost of water purchases. 3 600 Mega litres are expected to be saved in 2020/21 financial year.

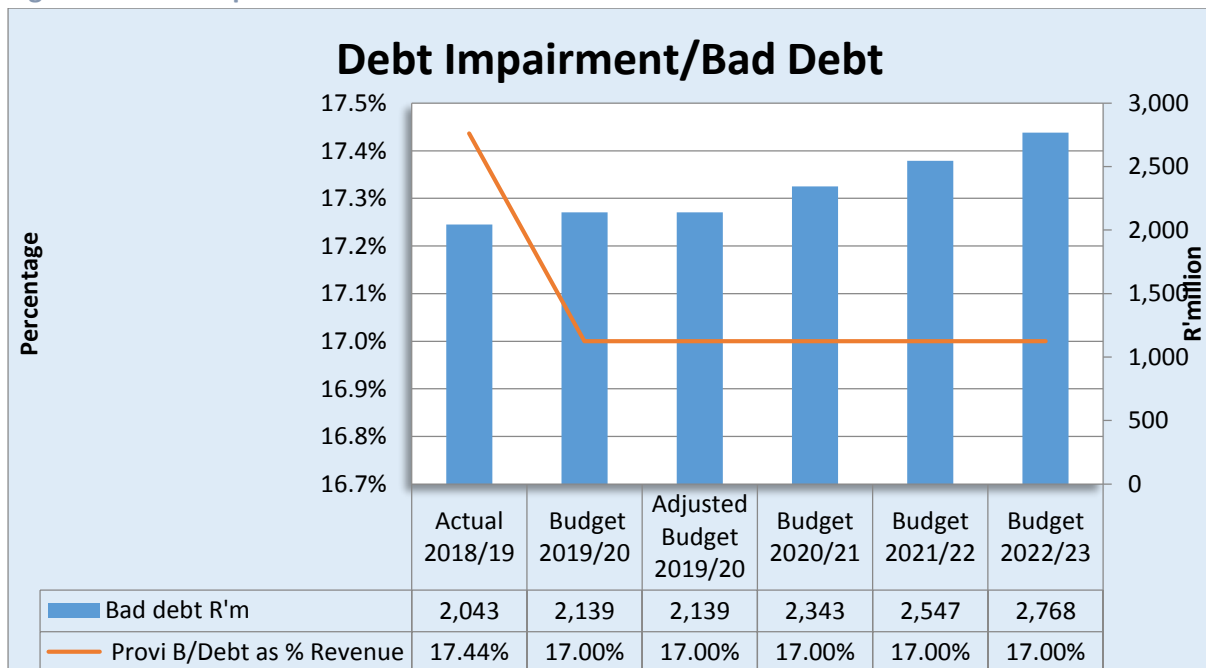
Figure 12: Net Profit



The net profit of the company in 2019/20 as per the original budget approved was R1.546 billion. It is forecasted to increase to R1.611 billion based on the approved adjustment budget. The budgeted profit for 2020/21 indicates a profit of R1.427 billion as per figure 12 above.

Debt impairment has been increasing steadily over a number of years, as reflected in Figure 13.

Figure 13: Debt Impairment

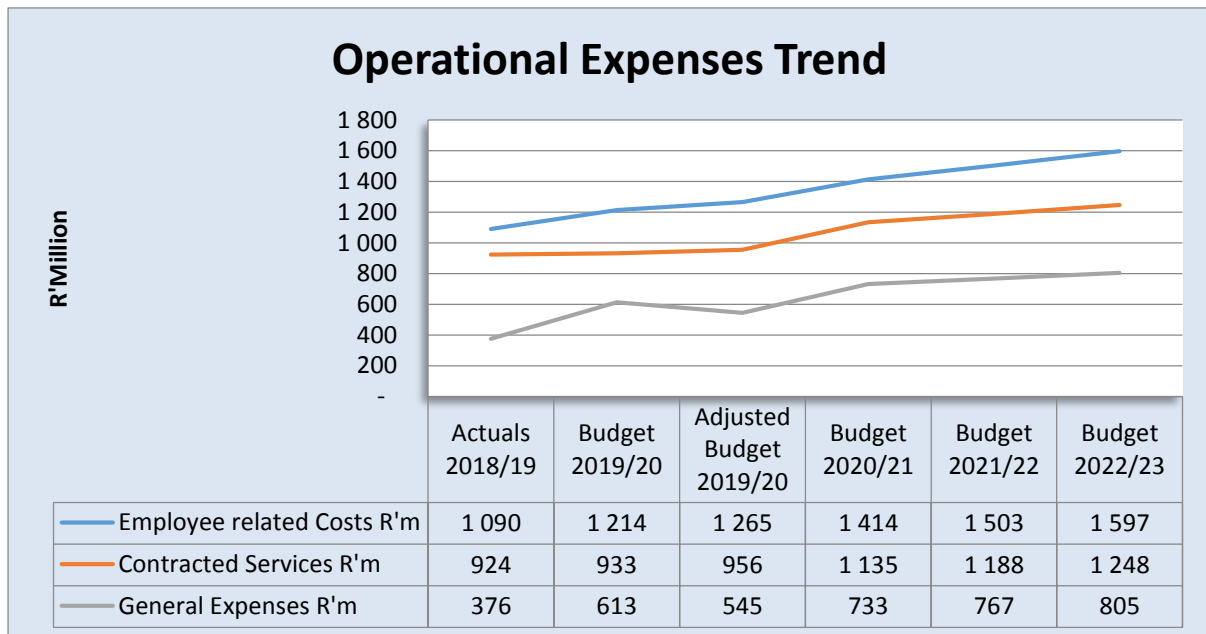


Debt impairment for 2020/21 is projected at R2.3 billion, as compared to the adjusted budget of R2.1 billion for 2019/20 and the actual debt impairment of R2.0 billion on 2018/19 financial year. The debt impairment budget is based on the collection rate of 83%. The non-payment by consumers is of concern since it has a direct negative impact on availability of funds for service delivery and capital expenditure. To improve the situation, enforcement of the credit control policy will continue by disconnecting all non-paying customers and regular reviews to ensure that customers are not illegally reconnected. Additionally, credit control efforts will increase to ensure monies are collected from all residents for services rendered. The credit control team at Johannesburg Water will continue to work with the credit control team at Revenue Shared Services Centre (RSSC) in order to improve collection.

5.2 Controls over operating costs

General expenses increased from the original budget of R613 million in 2019/20 to R733 million for 2020/21 which is above the 5.2% inflation indicator given by CoJ. The budget for contracted services increased from R933 million in the 2019/20 to R1.135 billion for 2020/21. This is to accommodate the retrofitting and Metering project which aim to reduce the levels of water losses. There was a need to also increase the salaries budget by an additional R56 million to accommodate the additional requirements needed by the departments as indicated in table 26. The operating costs per major category are reflected in figure 14 below.

Figure 14: Operational Expenses



Employee-related cost is budgeted to increase from R1.231 billion in 2019/20 to R1.366 billion in 2020/21. The reasons are as follows:

Table 26: Employee related costs

Revised Budget 2019/20	1 265 007
•Salary increases at 6,4%	80 959
•2019/20 strategic appointments- full year	32 715
•New positions	35 000
Proposed Budget 2020/21	1 413 682

The total employee related cost increase was budgeted as 6.4%..

2019/20 strategic appointments refer to positions filled in the 2019/20 as well security supervisory staff appointed to support the insourcing of security guards as per the mayoral resolution. The adjustment is to account for the full year impact in the 2020/21 financial year. Johannesburg water has identified 175 positions to be filled and has prioritised the funding of only 60 positions due to funding constraints.

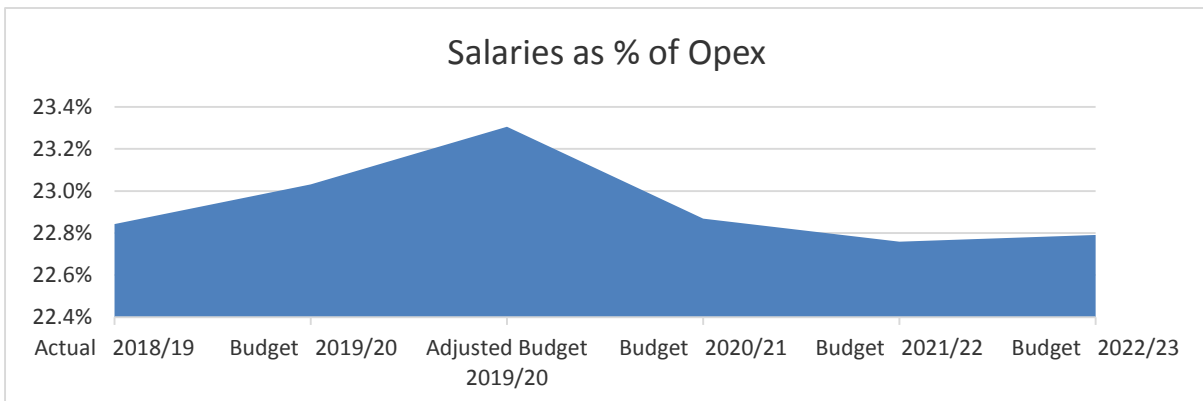
Motivations for the different requested positions:

- Revenue Maximisation (Metering)
 - Johannesburg Water is in the process of insourcing all meter reading work and funding is needed to enable Revenue Maximisation as well as Revenue Enhancement through efforts in credit disconnections.

- Waste Water Treatment Works
 - The positions will be used for work to be undertaken at wastewater treatment works to produce the effluent and bio-solids at the lowest unit cost and of the highest quality possible. Adequate qualified and well trained staff members will be required.

- Supply Chain Management
 - In order for SCM to perform its functions fully and alleviate findings from Auditor General, it is imperative to increase capacity and prudent that adequate capacity is maintained within the department to ensure that a backlog does not develop.

Figure 15: Salary Trends



Johannesburg Water ended the 2018/19 year on 22.84% salaries to operating expenses. The approved budget for 2019/20 is 23% and the adjusted budget is projected to be 23.3%. The budget for 2020/21 is set at 22.87%, the ratio is within the National Treasury's benchmark of 30%.

5.3 Contracted Services

Table 27 below illustrates the proposed changes on contracted services

Table 27: Proposed changes on contracted Services (excluding COJ service fee)

2019/20 budget	686,106
Repairs and Maintenance	38,152
Inflation adjustment at 5.2%	35 677
Reductions due to reprioritization	-80 466
Other initiatives	
Retrofitting	171 638
Metering and Audit project	31,045
Proposed budget for 2020/21	882,152

The retrofitting project is aimed at reducing the consumption and wastage in deemed areas. The anticipated savings are over 3 000 mega litres per year, which equates to R40 million per year. This saving has been incorporated in the proposed budget under cost of sales. The Metering project aims to improve the meter reading ratio and thereby improving revenue billing.

Table 28: General Expense

2019/20 budget	545 404
Inflation adjustment at 5,2%	28 361
Reductions due to reprioritization	-72 145
Electricity cost	116 102
Purchase of Materials and services for repairs	114 956
Proposed budget for 2020/21	732 678

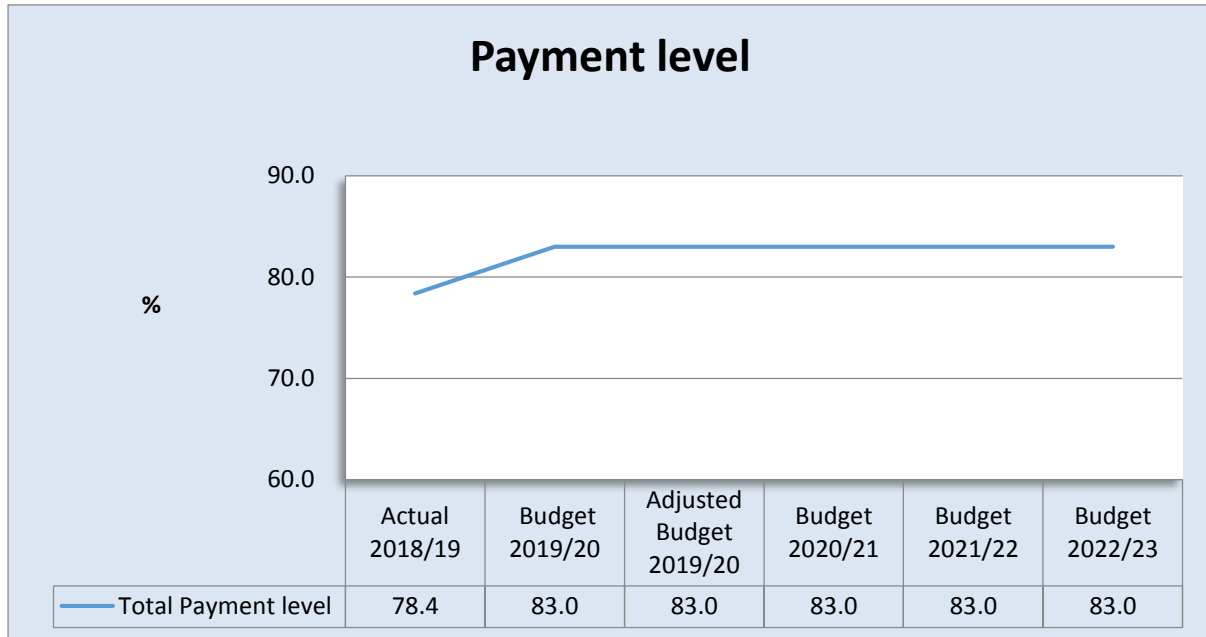
Electricity Cost has increased sharply over the past years and this was not previously incorporated in the budget. This has resulted in a significant over expenditure in this line item and the proposed budget aims to align the budget to the expected outcome

The purchase of materials has been incorporated in the 2021 budget as part of the project to improve first line response for repair work. This is in line with the strategic objectives of the company and the City.

5.4 Cash Generated from operations

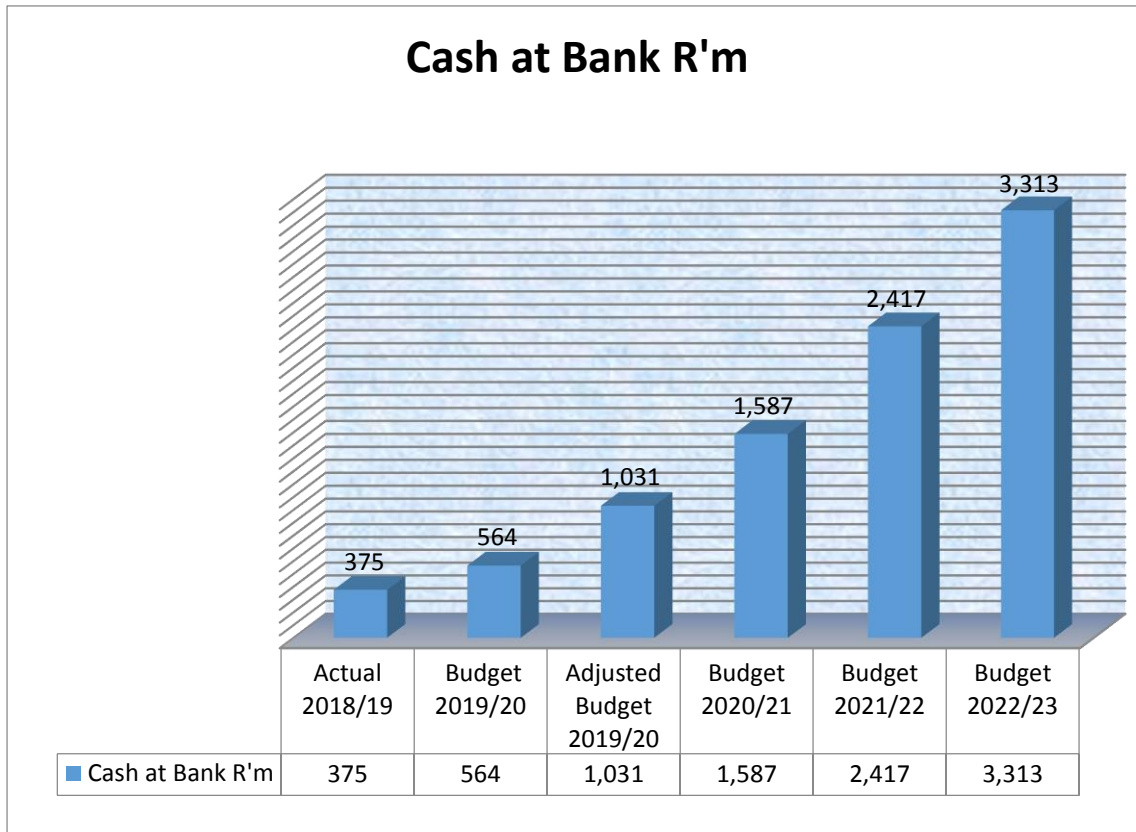
The low payment level from customers remains a concern. During 2018/19, the payment level was 78.4% and the forecast for 2019/20 is 83%. The budgeted payment level in 2020/21 is at 83% as per figure 16 and this will require strict implementation of the credit control policy within CoJ and the increased law enforcement to effectively deal with illegal connections.

Figure 16: Payment Levels



The cash balance is swept to CoJ in terms of the treasury management arrangement. At the end of 2018/19, Johannesburg Water had cash reserves of R375 million. The projected cash reserve for the Medium-Term Revenue Expenditure Framework (MTREF) is reflected in figure 17.

Figure 17: Projected Cash Reserve

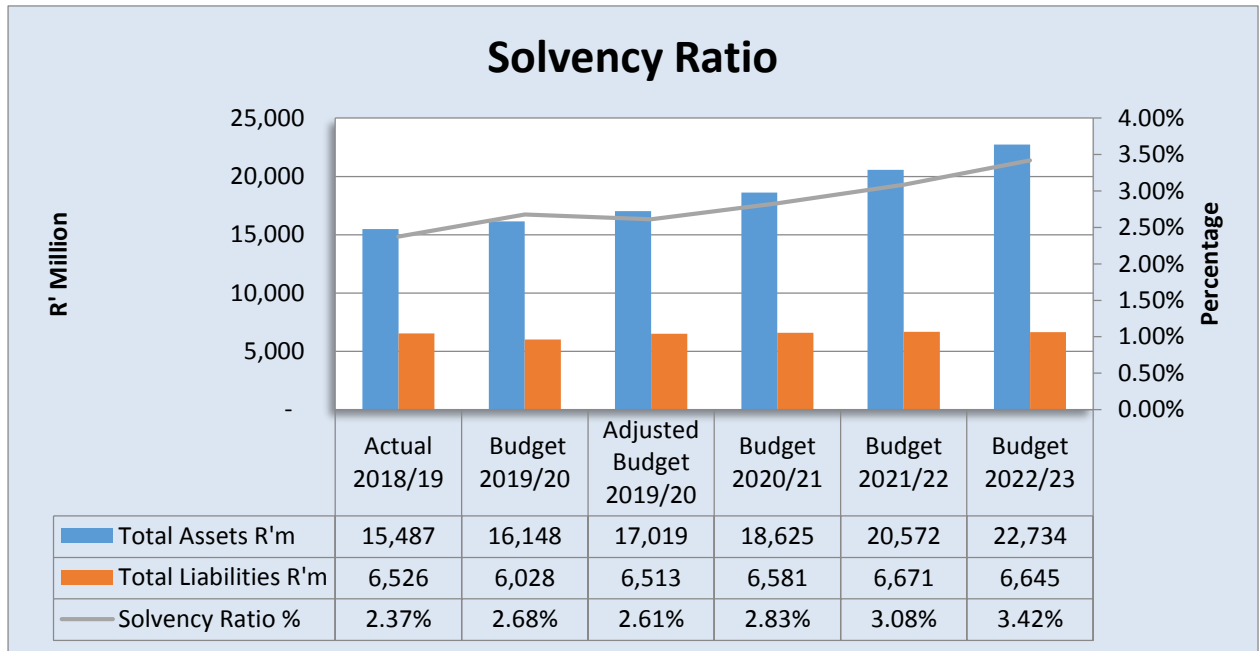


The cash position for 30 June 2021 is budgeted at R1.5 billion (forecast 2019/20: R1, 031 million). The increase in Cash at Bank in 2020/21 and 2021/22 is due to increase in forecasted revenue collected at 83%. Every percentage not met in Payment level collections will result in a R139 million forgone and failure to collect funds at forecasted rates will have an impact on the solvency of Johannesburg Water.

5.5 Solvency

Johannesburg Water budgeted to be in a strong solvency position, with its total assets exceeding the total liabilities by R12 billion in 2020/21 financial year. The solvency ratio as at 30 June 21 is budgeted at 1:2.83 as illustrated in Figure 18.

Figure 18: Solvency Ratio



5.6 Capital Projects

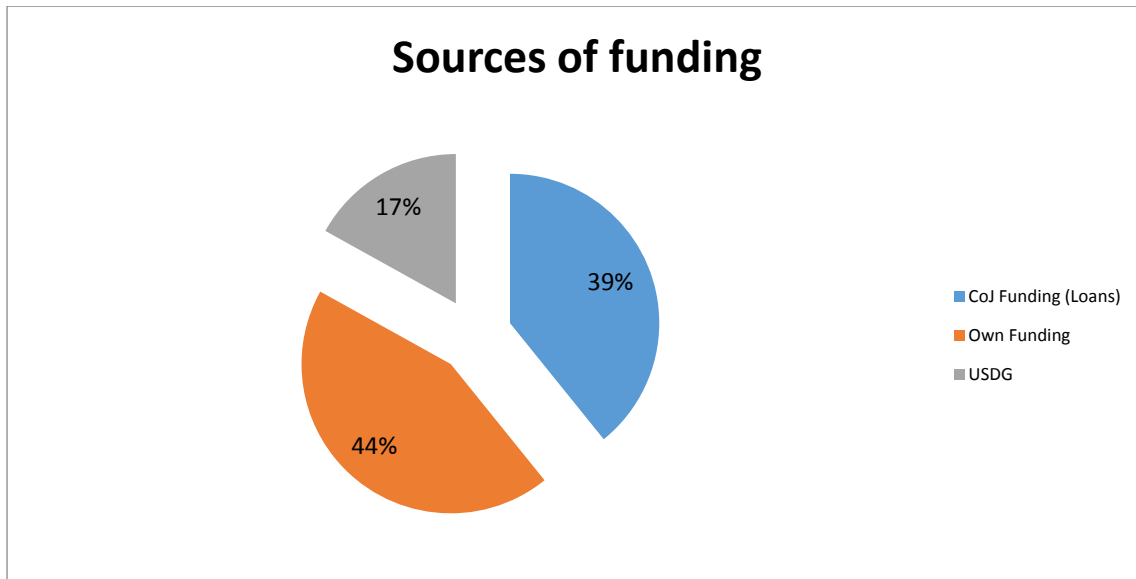
The capital expenditure is budgeted as follows:

- 2020/21 R1.4 billion
- 2021/22 R1.5 million
- 2022/23 R1.7 billion

The capital budget has increased from what was previously approved by CoJ to address backlogs, upgrading and renewal of ageing infrastructure and new infrastructure requirements.

The source of funding for CAPEX is reflected in figure 19 below. Own funding depends largely on improved payment levels. The affordability of funding for infrastructure remains a challenge, especially if payment levels do not improve or deteriorate due to prevalent economic conditions.

Figure 19: Sources of Funding



5.7 Revenue and Tariff Analysis

Johannesburg Water will be providing free 6kl of water to all customers. Indigents through the Expanded Social Package (ESP) continued to receive up to 15 kℓ per month per household. It is proposed that the differential tariff increases continue to be applied to different tariff bands for domestic water and prepaid water and sanitation tariffs.

The anticipated increase to Water tariffs is 8.6%, which is above Rand Water tariff increase of 6.6%. The cost of water from RW in the 2020/21 year will be R10.82 per kilolitre.

An increase of 10.7% and 13.7% is applied to institutional consumption up to 200 kℓ per customer and for consumption exceeding 200 kℓ respectively. The tariff for all other services provided is to be increased by 8.6% for 2019/20. The total average tariff increase for all services provided would be 8.6%.

The intention of Johannesburg Water is to roll out pre-paid meters to other areas commencing in the new financial year. There is however, a large discrepancy in the tariff for pre-paid water. An attempt was made to narrow the gap to avoid further losses when prepaid is rolled out to other areas.

The trend of tariff increases can potentially make it unaffordable for households to afford water sold and other services provided by Johannesburg Water. This may increase the provision for bad debts and negatively impact the financial sustainability of the CoJ. To improve the situation, enforcement of the credit control policy by disconnecting all non-paying customers and regular reviews to ensure that customers are not illegally reconnected will continue and

4.676

increase credit control efforts to ensure monies are collected from all residents for services rendered.

The second contributor to the affordability of Johannesburg Water services is the sovereign credit downgrade of the country, which will have the following impact:

- More South Africans pay more on interest
- Food, electricity and petrol prices increase
- Unemployment increases due to retrenchments and factory shut downs
- Low confidence therefore low investments and no new jobs created
- The rand will be worth less making imported goods more expensive.

Johannesburg Water is currently in process of investigating and to set up special tariffs which will be used during drought seasons.

5.6.1 Proposed Tariff Increase

Domestic water and prepaid water and sanitation tariffs will be increased as per table 29 below.

Table 29: Metered area domestic

Bands	2019/20	2020/21	2021/22	2022/23
0-6	R9,10	R0,00	R0,00	R0,00
>6-10	R9,66	R19,99	R21,71	R23,58
>10-15	R16,49	R26,99	R29,31	R31,83
>15-20	R23,99	R32,99	R35,83	R38,91
>20-30	R32,95	R36,47	R39,61	R43,01
>30-40	R36,51	R39,65	R43,06	R46,76
>40-50	R46,62	R50,63	R54,98	R59,71
>50	R49,66	R53,93	R58,57	R63,60

Prepaid metered domestic

Bands	2019/20	2020/21	2021/22	2022/23
0-6	R8,32	R0,00	R0,00	R0,00
>6-10	R8,32	R17,83	R19,36	R21,03
>10-15	R10,68	R19,15	R20,80	R22,59
>15-20	R19,86	R27,20	R29,54	R32,08
>20-30	R31,54	R35,35	R38,39	R41,69
>30-40	R34,19	R37,26	R40,46	R43,94
>40-50	R44,97	R48,97	R53,18	R57,76
>50	R49,60	R53,99	R58,63	R63,68

4.677

Institutional and industrial/commercial tariffs are to be increased by:

- Consumption up to 200 kℓ at 8.6%
- Consumption exceeding 200 kℓ at 8.6%
- All other tariffs increased by 8.6%.
- Demand levy increased by 8.6%

5.6.2 Proposed Water Restriction Tariff

The water restriction tariffs were introduced in 2016/17. The aim of these tariffs is to encourage residents to save water during water restrictions. These tariffs are applicable for consumption over 20 kℓ per month. Table 30 below depicts water restriction tariffs per band (consumption levels).

Table 30: Proposed Water Restriction Tariff – Domestic

DOMESTIC WATER RESTRICTIONS									
Band	Normal Tariff	Level 1 15%	Level 2 20%	Level 3 25%	Level 4 30%	Level 5 35%	Level 6 40%	Level 7 45%	Level 8 50%
0-6	-	10,69	10,87	13,34	13,84	17,79	21,74	22,73	24,21
> 6-10	19,99	11,86	13,06	15,21	15,74	20,46	24,13	25,17	27,28
>10-15	20,40	21,31	30,43	35,45	37,41	47,98	53,71	55,49	62,66
>15-20	27,79	34,52	46,89	59,93	61,10	72,44	83,37	88,85	104,21
>20-30	38,40	59,03	68,02	88,74	91,23	125,05	132,39	143,12	146,82
>30-40	43,00	71,37	79,33	110,22	113,00	148,64	166,53	178,61	198,48
>40-50	53,99	96,20	106,32	145,81	151,88	214,66	232,86	253,17	293,92
>50	57,79	107,76	129,44	166,92	188,18	254,62	268,00	296,91	323,89

Table 31: Proposed Water Restriction Tariff – Domestic

PRE-PAID WATER RESTRICTIONS									
Band	Normal Tariff	Level 1 15%	Level 2 20%	Level 3 25%	Level 4 30%	Level 5 35%	Level 6 40%	Level 7 45%	Level 8 50%
0-6	-	10,69	10,87	13,34	13,84	17,79	21,74	22,73	24,21
6-10	17,83	11,10	12,22	14,22	14,72	19,13	22,56	23,55	25,51
>10-15	19,15	14,99	21,42	24,94	26,34	33,77	37,80	39,06	44,10
>15-20	27,20	31,03	42,16	53,87	54,92	65,11	74,95	79,87	93,69
>20-30	35,35	61,38	70,72	92,25	94,86	130,02	137,64	148,80	152,63
>30-40	37,26	72,58	80,68	112,10	114,92	151,17	169,36	181,66	201,85
>40-50	48,97	100,77	111,38	152,76	159,11	224,88	243,93	265,22	307,90
>50	53,99	116,87	140,38	181,04	204,09	276,16	290,66	322,02	351,27

Table 32: Proposed Private Dwelling – Domestic Sanitation

Proposed Private Dwelling Sanitation				
ERF Size (m ²)	2019/20	2020/21	2021/22	2022/23
	(R/erf/month)	(R/erf/month)	(R/erf/month)	(R/erf/month)
Up to and including 300m ²	213,94	232,34	252,32	274,02
Larger than 300m ² to 1000m ²	416,47	452,29	491,18	533,42
Larger than 1000m ² to 2000m ²	630,05	684,23	743,08	806,98
Larger than 2000m ²	907,8	985,87	1 070,66	1 162,74

Table 33: Proposed Private Dwelling – Prepaid Sanitation

Pre-paid Domestic Sanitation				
Kilolitres per connection per month	2019/20	2020/21	2021/22	2021/23
	Tariff Subsidised (R/kl)	Tariff Subsidised (R/kl)	Tariff Subsidised (R/kl)	Tariff Subsidised (R/kl)
0-10	8,21	8,92	9,68	10,52
>10-15	10,39	11,28	12,25	13,31
>15-20	12,54	13,62	14,79	16,06
>20-30	18,61	20,21	21,95	23,84
>30-40	18,61	20,21	21,95	23,84
>40-60	18,61	20,21	21,95	23,84
>60	18,61	20,21	21,95	23,84

Chapter 6: Management and Organisational Structures

6.1 Organisational structure

The organisational structure is depicted in figure 20 below.

Figure 20: Organisational structure



6.2 Management Team

The management team consists of eight executive managers with one vacancy as depicted in table 34. There is an acting incumbent in the vacant position of Executive Manager: Stakeholder Relations and Communication while the recruitment process has commenced.

Table 34: Executive Management

Name	Position	Qualifications	Skills and expertise
Ntshavheni Mukwevho	Managing Director	<ul style="list-style-type: none"> ▪ BTech: Eng (Civil) ▪ Master of Business Leadership (MBL) ▪ Pr Tech Eng ▪ Certificate in Municipal Finance Management 	<ul style="list-style-type: none"> ▪ Engineering and operations management ▪ Construction management ▪ Project management ▪ Water purification and distribution system ▪ Sewerage collection systems
Derrick Kgwale	Chief Operations Officer	<ul style="list-style-type: none"> ▪ BTech: Eng (Civil) ▪ Master of Business Leadership (MBL) ▪ Project Management Diploma ▪ Programme in Asset and Maintenance Management ▪ Project Management Programme (PMP) Certificate 	<ul style="list-style-type: none"> ▪ Engineering and operations ▪ Project management ▪ Construction management
Johan Koekemoer	Financial Director	<ul style="list-style-type: none"> ▪ BCom Honours ▪ CA (SA) ▪ Certificate in Municipal Finance Management 	<ul style="list-style-type: none"> ▪ Financial and management accounting ▪ Meter reading ▪ Supply chain management ▪ Debt counselling ▪ IT and telecommunications sector
Shaniseka Mathebula	Chief Audit Executive	<ul style="list-style-type: none"> ▪ BCompt ▪ Postgraduate Diploma: Internal Auditing ▪ Certified Internal Auditor (CIA) ▪ Associate General Accountant (AGA) SAICA 	<ul style="list-style-type: none"> ▪ Internal audit ▪ Financial management ▪ Governance, risk management and internal control
Thokozile Hlakoane	Executive Manager: Risk and Compliance	<ul style="list-style-type: none"> ▪ 	<ul style="list-style-type: none"> ▪
Raisibe Gavine	Executive Manager: Human Resources and Corporate Services	<ul style="list-style-type: none"> ▪ 	<ul style="list-style-type: none"> ▪
Kethabile Mabe	Executive Manager: Governance and Legal Services	<ul style="list-style-type: none"> ▪ 	<ul style="list-style-type: none"> ▪
Vacant	Executive Manager: Stakeholder Relations and Communication	<ul style="list-style-type: none"> ▪ 	<ul style="list-style-type: none"> ▪

6.3 Capacity Analysis

Johannesburg Water capacity analysis requirements takes cognisance of training needs, attrition due to resignations, retention of scarce skills, retirements, employee wellbeing and addressing the changing needs of the staff complement due to growth and restructuring. In an endeavour to achieve optimal performance and remain service focused, the Company also addresses culture. Regular assessments of job satisfaction levels are carried out; the last assessment was conducted in the 2016/17 financial year and the implementation plans for the improvement areas was rolled out in 2017/18, 2018/2019 and will be concluded in 2019/2020 financial year. The organisational diagnosis (survey) will be conducted in 2020/21 with specific focus on cultural/engagement survey aimed to diagnose impact of culture on performance and commitment by Johannesburg Water to retain valued employees/top talent, preceded by formulation of the implementation plan clearly defining the programmes i.e. Performance Management Moderation, Reward and Recognition Programme, Performance Management Improvement Training for Supervisors and Managers, Team Building for Team Functioning, and Performance Training for Employees. Employees agree and sign Annual Performance Plans and these are aligned to the Company's Balanced Scorecard (BSC). Johannesburg Water established the departmental committees as well as Corporate Moderation Committee tasked with responsibility of aligning and improving individual, team, department and company performance in enabling the sustained achievement of company strategic objectives. The success of the Moderation committee will be measured in the year 2020/21.

6.4 Employment Equity

Johannesburg Water acknowledges the need to develop a culture of diversity that goes beyond achieving the numbers through workforce representation. The society we service is very diverse and as such, it is important to develop a diverse workforce to serve the community. An Employment Equity (EE) Plan has been put in place effective from 1 January 2018 for the next five years until 31 December 2022. The current targets set for People with Disabilities (PWD) in 2019/20 financial year is 3.93% and 31.79% percentage of female representation. These targets will increase to 3.98% and 33.11 by 2020/21 financial year. The representation of females is at 30.51% to date and it is envisaged that by 30 June 2020, the actual representation would be above 31.79%. The targets are in line with the Company's EE Plan. There are programmes in place such as the Coaching and Mentoring and Mentee programme targeting female employees that will build a capable female pool that will be able to participate in appointment opportunities at all occupational levels. There is also an initiative to put together an apprenticeship programme for persons with disability that can be trained in line with identified entry-level position. The project is currently underway with the preparatory work with the first learners anticipated to commence training in July 2020.

The EE Plan for the period January 2018 until December 2022 provides a target of 34.43% Females by December 2022 and 4.02% PWD by December 2022 the employment of females and PWDs. In support of the above, Johannesburg Water will be rolling out a structured approach for the employment of PWDs to support the current recruitment efforts. As

4.683

Johannesburg Water continues to employ more PWDs, it is imperative to sensitise Johannesburg Water employees and managers on disability awareness in order to ensure that the working environment is supportive and non-discriminatory to all employees. Members of the EE Committee have been trained on disability awareness and they will be conducting awareness sessions in their respective workplaces. Johannesburg Water places importance in ensuring that all our workplaces are accessible, as such from time to time an audit is conducted to identify the barriers and put in place mechanisms to mitigate them. In order to ensure that Johannesburg Water is transformed, targets are cascaded to departments as well. This will ensure that all departments are diversified. The EE Committee will continue to monitor EE and equitable employment practices within Johannesburg Water and advise Departments accordingly.

Chapter 7: Communications and Stakeholder Management

7.1 Stakeholder Matrix

Table 35 below depicts the stakeholder matrix and the communication channels for different stakeholders

Table 35: Stakeholder matrix

Stakeholder	What matters to them?	What concerns them? (Risks)	How does JW respond to their concerns?	How does JW communicate with them?
Customers	<ul style="list-style-type: none"> • Recognition/affirmation/ Valued • Dignity • 24/7 access • Quality services – access, safety, reliability, affordability • Responsive JW (seen) • Batho Pele • Company excellence – correct statements, effective customer service and problem resolved first time. 	<ul style="list-style-type: none"> • Cost of services • Perceived lack of quality of water • Sanitation/health • Customer experience – service interruptions, lack of consultation, lack of information, smart meters imposed, unprofessionalism of frontline staff 	<ul style="list-style-type: none"> • Frontline staff training • Education and awareness campaigns • Improve alerts of interruptions • Correct meter readings • Proper Reinstatement 	<ul style="list-style-type: none"> • Unmediated engagement • Social media • SMS gateway • Out-of-home media • Own media • Electronic media • Broadcast media • Multi –channel distribution • Councillors
Employees and Trade Unions	<ul style="list-style-type: none"> • Job security • Clear vision/direction • Conditions of service • Recognition/affirmation/ valued • Fairness • Opinions count • Two-way communication • Responsive JW 	<ul style="list-style-type: none"> • Gap between executive management and junior levels • Information gatekeeping • New technology • Increased cost of living • Inconsistent application of Performance Assessments 	<ul style="list-style-type: none"> • Communicate decisions of Top Management • Quarterly MD engagement with staff • Mandatory quarterly business units and staff meetings • Scheduled meetings with unions • Information on intranet • Include unions on intranet 	<ul style="list-style-type: none"> • Unmediated engagement • Internal social media network • Incentives/recognition • Electronic and print media • Push notifications

4.686

Stakeholder	What matters to them?	What concerns them? (Risks)	How does JW respond to their concerns?	How does JW communicate with them?
Suppliers and Service Providers	<ul style="list-style-type: none"> Realistic Terms of Reference /Specifications Fair competition Transparent procurement procedures Cash flow 	<ul style="list-style-type: none"> Delayed payment Non-payment Changes in contract price Variance orders Ineffective dispute resolution Termination of contracts B-BBEE compliance 	<ul style="list-style-type: none"> Communicate track record Strengthen dispute unlocking mechanism Company procedures and policies 	<ul style="list-style-type: none"> Unmediated engagement Correspondence Project update meetings Emails Website
Communities and Community Leaders	<ul style="list-style-type: none"> Recognition Equality Batho Pele Agenda must be accommodated Responsive JW 	<ul style="list-style-type: none"> Lack of Batho Pele Safety Employment opportunities 	<ul style="list-style-type: none"> Action list Safety protocol Complaints procedure and access Feedback results of above Emails 	<ul style="list-style-type: none"> Unmediated engagement Online media Traditional methods e.g. Public Meetings Weekly telephone calls to Ward Councillors Electronic and social media Broadcast media SMS notifications Push notifications
Government and Regulatory Bodies	<ul style="list-style-type: none"> Provision of Services Compliance Consultation Information Sharing Disaster/Crisis Management Plan Policy compliance 	<ul style="list-style-type: none"> Non-compliance to standards Non-compliance in finance and administration legislation and policy Lack of information sharing 	<ul style="list-style-type: none"> Interventions Success of interventions Access information 	<ul style="list-style-type: none"> Compliance Reports Traditional methods Presentations
Media	<ul style="list-style-type: none"> Reliable source Information integrity Effective media liaison Sufficient data Human angle 	<ul style="list-style-type: none"> Access Content Integrity Lack of information 	<ul style="list-style-type: none"> Timeous news alerts Check/verify Newsroom visits 	<ul style="list-style-type: none"> Unmediated engagement Online media Social media Email updates

4.687

Stakeholder	What matters to them?	What concerns them? (Risks)	How does JW respond to their concerns?	How does JW communicate with them?
			<ul style="list-style-type: none"> • Incidental media briefings • Educational tours 	
Special Interest and Peer Groups	<ul style="list-style-type: none"> • Access to information • Information sharing • Recognition • Brand Ambassadors 	<ul style="list-style-type: none"> • Lack of credible information • Partnerships 	<ul style="list-style-type: none"> • Access channels • JW agenda/opportunities for partnership 	<ul style="list-style-type: none"> • Unmediated engagement • Online media • Traditional methods

Chapter 8: Audit Resolution

8.1 Progress on Resolution of Internal Audit Findings

The report provides the status of the resolutions for the entire financial year as follow ups are not done on a quarterly basis. The plan was to execute planned audits in the first two quarters of the financial year, and then to conduct follow-up audits in Quarter 3 and Quarter 4. Table 36 depicts follow-up audits that were undertaken during 2018/19 as at 30 June 2019.

Table 36: Resolution of internal audit findings: Quarter 1 to Quarter 4

No.	Internal audit projects	No. of findings raised	No. of findings resolved	Resolution percentage
QUARTER 1- 4				
1.	Opening balance 2017/18	48	28	58%
	Subtotal:	10	6	
	2015/16	5	3	
	2016/17	33	19	
	2017/18			
2.	Planning and Implementation of Capital Projects Follow-up Audit	9	9	100%
3.	Access to Sanitation and Water in Informal Settlements Follow-up Audit	13	13	100%
4.	Compliance with Broad-Based Black Economic Empowerment Act Follow-up Audit	1	1	100%
5.	Leave Management Follow-up Audit	8	8	100%
6.	Fleet Management Follow Up Audit	13	11	85%
7.	ICT Infrastructure Review at Depots Follow-up	6	2	33%
8.	Management of All Company Policies	7	6	86%
9.	Compliance with National Water Act No 36 of 1998	5	5	100%
10.	Prepayment Metering Management Processes	13	13	100%
11.	HR – Personnel Management Head Count	4	4	100%
12.	CDS – Application Controls Review	6	5	83%
13.	Business Continuity Management and Implementation of DRP	4	2	50%
	Current year subtotal	89	79	89%
Total		137	107	78%

The resolution rate for the period ended 30 June 2019 was 78%, being 107 findings resolved from 137 findings.

8.2 Progress on Resolution of AGSA Audit Findings

AGSA Management Letter follow-up 2018/19

The outcome of the 2017/18 AGSA annual audit review for Johannesburg Water had a total of 85 findings, comprising 67 new audit findings, while 18 were repeat AGSA findings. The AGSA findings were categorised as follows:

- 17 (20%) of the total AGSA findings were rated as those “Affecting Auditor’s Opinion”
- 45 (53%) of the total AGSA findings were rated as “Other Important Matters”
- 23 (27%) of the total AGSA findings were rated as “Administrative Matters”

Table 37 depicts progress on resolving AGSA audit findings for 2017/18 as at 30 June 2019.

Table 37: Progress on AGSA findings

Financial year	Total findings	Repeat findings	Resolved	In progress	Unresolved
2017/18	67	0	60	2	5
2016/17	11	11	11	0	0
2015/16	1	1	1	0	0
2014/15 and 2013/14	6	6	4	0	2
Total	*85		76	2	7
Percentages			**89%	3%	8%

* The total, excluding four items with the CoJ dependency, would be 81 findings.

** The resolution rate adjusted, for four findings, which are dependent on CoJ, is 94%.

Analysis of the resolution rate

The 89% (76) resolution status of the AGSA’s findings per audit classification rating is as follows:

- 76% (13) of the 17 findings rated as “Affecting Auditors Opinion” were verified as resolved.
- 89% (40) of the 45 findings rated as “Other Important Matters” were verified as resolved.
- 100% (23) of the 23 findings rated as “Administrative Matters” were verified as resolved.

ANNEXURES:

Annexure A: Summary of Capital programmes

Name of Program	Project Name	Capital Budget 2020/21 (R'000)	Capital Budget 2021/22 (R'000)	Capital Budget 2022/23 (R'000)	Return on Investment	COJ Regions
Water Demand Management	Infrastructure Upgrade and Renewal (Retrofitting & leaks repair)	240,000	299,250	140,000	Total water savings of 36 000 ML per annum (R 245 Million water saving per annum at a current rate of R 6.81/ kl)	City Wide
	Pipe Replacement	180,000	30,000	75,000	Potential Water savings of 1 296 ML/annum on completion of programme equivalent to R 8.8 Million/year).	City Wide
	O & M Category	117,350	95,350	107,350	Potential Water savings of 1 296 ML/annum on completion of programme equivalent to R 8.8 Million/year).	City Wide
Bulk Wastewater Expansion and Upgrades	Olifantsvlei heating and mixing / refurbishment	42,000	29,500	30,000	Treatment service continuity	D & F
	Bushkoppies balancing tank / refurbishment	22,476	50,000	70,000	Treatment service continuity	D

4.692

Name of Program	Project Name	Capital Budget 2020/21 (R'000)	Capital Budget 2021/22 (R'000)	Capital Budget 2022/23 (R'000)	Return on Investment	COJ Regions
	Goudkoppies (Refurbishment)	12,000	40,000	40,000	Treatment service continuity	D & F
	Northern Works Upgrade & Refurbishment) 460 MI/d	135,491	263,900	183,915	Treatment service continuity	A, B,C & E
	Driefontein concrete lining over-flow / refurbishment	2,000	3,500	10,000	Treatment service continuity	C
	Lanseria 50MI/d	165,000	78,000	140,000	Treatment capacity for 50 000 HH equivalent	A & C
	Ennerdale (refurbishment)	8,600	28,000	38,000	Treatment service continuity	G
	WWTW General (Biogas)	3,000	16,000	5,000	Treatment service continuity	City
	Erand Tower 0.75	15,000	18,000	10,000	Storage capacity 500 HH equivalent	A
Reservoirs	Blue Hills Tower 1.8 MI	5,000	10,000	10,000	Storage capacity for 1 800 HH equivalent	A
	Robertville Tower 2.25MI	15,000	20,000	5,000	Storage capacity for 2250 HH equivalent	C
	Woodmead Reservoir 20MI	10,000	20,000	30,000	Storage capacity for 20 000 HH equivalent	E
	Halfway House Reservoir 20MI	10,000	20,000	40,000	Storage capacity for 20 000 HH equivalent	A

4.693

Name of Program	Project Name	Capital Budget 2020/21 (R'000)	Capital Budget 2021/22 (R'000)	Capital Budget 2022/23 (R'000)	Return on Investment	COJ Regions
	Aeroton Tower 1.4 MI	3,000			Storage capacity 1 000 HH equivalent	F
	Crown Gardens Tower 1.1 MI	8,000			Storage capacity upgrade for 1 100 HH equivalent	F
	Lenasia High Level Reservoir 10 MI	20000	25000		Storage capacity 10,000 HH equivalent	G
	Pretoriusrand Reservoir 10MI		10000	0	Storage capacity for 10 000 HH equivalent	A
	Pretoriusrand Tower 1.2MI		5000	0	Storage capacity for 1 200 HH equivalent	A
	Diepsloot Reservoir 40 MI		5000	10000	Storage capacity upgrade for 40 000 HH equivalent	A
	Winchester Hills Reservoir 12 MI		5000	0	Storage capacity for 12 000 HH equivalent	F
	Kensington booster 4.2 MI		13000	10000	Storage capacity 1,400 HH equivalent	F
	Dobsonville Reservoir 15 MI			5,000	Storage capacity 15,000 HH equivalent	D
	Crosby Tower 1.4 MI				Storage capacity 1,400 HH equivalent	B
	Linbro Park Tower 3.9 MI		5000	25000	Storage capacity 3,900 HH equivalent	E

4.694

Name of Program	Project Name	Capital Budget 2020/21 (R'000)	Capital Budget 2021/22 (R'000)	Capital Budget 2022/23 (R'000)	Return on Investment	COJ Regions
	Carlswald Reservoir 20 MI	10000	20000	10000	Storage capacity 20,000 HH equivalent	A
	Doornkop West Reservoir 85 MI		5000	40000	Storage capacity 1,500 HH equivalent	C
Sewer Upgrade	Sewer Pipe Replacement (City Wide)	155,000	151,000	185,000	Reduced number of blockages per 100 meters.	City Wide
Water Upgrade	Water Pipe Upgrade (Networks)	83,000	120,000	345,000	To maintain capacity for current demand and create capacity for future demand to support developments	City Wide
Other	Small projects, IT, engineering studies and operational capital	138,000	109,000	111,000	Water supply continuity	City Wide
TOTAL		1,399,917	1,494,500	1,675,265		

JOHANNESBURG WATER - STRATEGIC RISK REGISTER - FY2020-2021																	
Risk #	Mayoral Priority	City's Risk	Strategic Goals	City Top Risks	Risk Category	Risk Owner	Joburg Water - Risk Description	Root Causes/ Background to the risk	Consequences	Impact	Likelihood	Inherent Risk	Current strategies & controls	Control Effectiveness	Residual risk	Impact	Like-likelihood
1	1. Promote Economic development and attract investment towards achieving 5% economic growth that reduces unemployment. 2. Ensure pro-poor development that addresses inequality and poverty and provides meaningful redress. 9. Preserve our resources for future generations.	1. Inability to meet high increasing demand of service delivery (housing, water, electricity, transport, food)	2	Inability to meet community expectations and demands	Service Delivery	Chief Operations Officer	Security of supply/ Demand outstripping supply Demand outstripping supply due to inability by JW to ensure continued water supply to customers	1. Climate Change - Drought/severe weather conditions 2. Contamination of surface water (acid mine drainage) 3. Environmental pollution due to sewerage overflows 4. Higher than projected demand growth 5. Inadequate security of assets 6. Inefficient use of water 7. Infrastructure renewal and maintenance backlogs 8. Infrastructure supply constraints 9. Interrupted power supply 10. Resource constraints	1. Water restrictions. 2. Impaired reputation. 3. Service delivery protests.	Catastrophic 5	Almost Certain 5	Very High 25	1. Education and awareness to raise the level of understanding of the value of water and ensure meaningful buy-in and ownership by community 2. Quarterly Forums with Rand Water 3. Participation in SALGA/DWS Stakeholder forums 4. Active and Passive Leakage detection 5. Pressure Management 6. Water Pipe Replacement 7. Water tankers and Reservoir (within 48 hrs) 8. Disincentive tariffs to discourage excessive water use. 9. Promote effluent re-use	Fair 50%	High 13	5	2.5
2	8. Encourage innovation and efficiency through Smart City programme	1. Inadequate ICT governance. 2. Cyber Threats	5	Inadequate IT governance and IT delivery (ICT Risks)	Technology	Chief Information Officer	Inadequate IMS & Technology Capability Inadequate IMS and technology capability, leading to inadequate support to business operations	1. Dependence on City of Johannesburg/ centralised systems 2. Inadequate business continuity management 3. Inadequate governance of ICT 4. Inadequate ICT infrastructure management 5. Inadequate information security 6. Ineffective information technology and Operations Technology continuity 7. Insufficient management systems 8. Lack of integration of systems 9. Lack of IT specialised skills and resources 10. Inadequate Cyber Security	1. Lack of continuity during disasters 2. Outdated technology. 3. Failure to support CoJ vision of smart city. 4. Service delivery inefficiencies. 5. Litigation	Catastrophic 5	Likely 4	Very High 20	1. Disaster recovery plan 2. ICT Governance framework in place and implemented 3. ICT Strategy 4. Support services in place to support ICT operations 5. Succession planning policy	Fair 50%	Moderate 10	5	2
3	1. Promote Economic development and attract investment towards achieving 5% economic growth that reduces unemployment. 2. Ensure pro-poor development that addresses inequality and poverty and provides meaningful redress. 3. Preserve our resources for future generations.	1. Inability to achieve set economic growth targets (GVA 5% by 2021) 2. Inadequate maintenance of assets and infrastructure. 3. Inadequate Contract Management	1; 2; 3	Financial sustainability of the City	Service Delivery	Chief Operations Officer	Delayed infrastructure delivery Compromised Infrastructure leading to disruption to operations and impacting on service delivery.	1. Delayed decisions from shareholder (regarding job creation and SMME support targets) 2. Disruption of operations/projects (community/contractor employee protests). 3. Inadequate asset management 4. Inadequate protection of assets 5. Inadequate skilled labour (for job-creation) 6. Ineffective procurement processes 7. Insufficient funding 8. Non-optimal asset replacement and maintenance (Old infrastructure replacement backlogs). 9. Poor contract Management 10. Reliance on 3rd party contractors. 11. Sand ingress leading to blockages which may compromise infrastructure	1. Impaired organisational performance. 2. Poor service delivery. 3. Impaired reputation.	Catastrophic 5	Likely 4	Very High 20	1. A communication Plan is in Place to address and inform communities upfront before implementation on future/upcoming projects and local content development 2. Asset Management Planning (AMP) 3. Asset Management Policies and Procedures in place. 4. Training and development of relevant personnel 5. Supply Chain Management Policy & procedures developed and implemented 6. Three year budgeting process (Approved infrastructure budget) 7. Standard Operating Procedure for project implementation. 8. integrated project management system.	Fair 50%	Moderate 10	5	2
4	1. Promote Economic development and attract investment towards achieving 5% economic growth that reduces unemployment. 2. Ensure pro-poor development that addresses inequality and poverty and provides meaningful redress. 9. Preserve our resources for future generations.		2		Service Delivery	Chief Operations Officer	Lack of accessibility of services Inability by JW to ensure and provide access to all communities	1. Change in Legislation 2. Community Unrest 3. Delays in procurement processes 4. Inaccessibility of informal settlements 5. Increase in informal settlement 6. Insufficient funding 7. Urbanisation	1. Impaired organisational performance.(Service Delivery) 2. Stakeholder dissatisfaction and protests 3. Impaired reputation. 4. Impact on public health	Moderate 3	Possible 3	Moderate 9	1. Pro-active Stakeholder engagements 2. Continuous enhancement of adjudication and evaluation committees 3. Implementation of alternative technologies on sanitation focusing on off grid systems 4. Implementation of the roll out plan for basic & nominal services as well as infrastructure services 5. Implementation of the roll out plan for basic & nominal services as well as infrastructure services	Fair 50%	Low 5	3	1.5
5	4. Create a sense of security through improved public safety. 9. Preserve our resources for future generations.	1. Security of supply and environmental degradation.	2	Crime, health and security risks	Regulatory/Legal	Chief Operations Officer	Public health, safety and environment Public safety threatened during JW operations in the communities, by JW assets and related services. This includes drinking water quality status failure.	1. Contamination of potable water 2. Delays in rehabilitation of excavations (reinstatements) 3. Encroachment into JW servitudes 4. Inadequate safety measures during repair and maintenance 5. Inadequate sanitation provision 6. Infrastructure failure 7. Pollution of water from Informal settlements 8. Poor drinking water quality 9. Solid waste and illegal disposals 10. Spillage	1. Civil claims. 2. Negative impact on company reputation. 3. Deteriorating river water quality.	Major 4	Possible 3	High 12	1. Adherence to SOP affecting public health and safety 2. Infrastructure maintenance program 3. Insurance (including public liability) 4. Water safety planning - catchment, treatment and distribution 5. Management of encroachment into servitudes 6. Health and Hygiene awareness program 7. Provision of nominal services as and when required 8. Preventative Sewer Maintenance 9. Upgrade of waste water treatment works	Fair 50%	Moderate 6	4	1.5

6	7. Enhance our Financial Sustainability	1. Inability to secure financial sustainability	4	Financial sustainability of the City	Financial	Financial Director	Financial sustainability and governance Inability by JW to sustain a sound financial status as well as clean governance	1. Balance between water conservation and revenue collection 2. Inadequate Board sub-committees (disestablishment of committees dealing with service delivery and ICT matters) 3. Inaccurate customer database 4. Increasing bad debts 5. Increasing cost of sales 6. Lack of cost recovery 7. Large degree of indigence allowed 8. Low payment levels 9. Physical and commercial losses 10. Un-affordable services 11. Un-sustainable tariffs 12. Under collection 13. Unfilled Board vacancies 14. Unwillingness to pay (political motivated or otherwise) 15. Water supply reduction	1. Failure to meet financial obligations. 2. Increased financial dependency on shareholder (CoJ).	Catastrophic Almost Certain Very High 25	1. Active and Passive Leakage control 2. Education and communication on WC/WDM. 3. Mains Replacement 4. Monthly Financial Reporting 5. Pressure Management 6. Ongoing engagement with CoJ regarding cash payment controls 7. Provision of support to the City's revenue mgt strategy 8. SLA agency agreement between City of Johannesburg and Johannesburg Water 9. Credit control Management 10. Expanded social package (ESP) for customers that cannot afford water 11. A process to increase tariffs and ensure that they are cost reflective is in place 12. Stakeholder negotiations between the City and Department of Water and Sanitation on Rand Water Tariffs 13. Securing grant funding and shareholder loans for capital expenditure 14. Systems in place to replace faulty meters - T-codes replacement project 15. Board of directors has the appropriate mix of knowledge, skills and experience required to govern the company 16. Board committees are in place to attend and maintain direct oversight over those matters which would otherwise have been dealt with by disestablished committees 17. Promotion of expanded social package (ESP) for customers that cannot afford water 18. Progressive review of implementation of cost reflective water tariffs 19. Full capacitation of the Board 20. ICT and Service delivery Committee in place	Poor 90%	High	8	5	4.5		
7	5. Create an honest and transparent city that fights corruption.	1. Theft, fraud and corruption	3,4,6		Governance, Risk & Compliance	EM:Governance & Legal	Unethical behaviour	1. Fraud, bribery and corruption 2. Ineffective oversight and poor internal controls 3. Non-adherence with Legislation and statutes 4. Non-compliance with policies and procedures 5. Poor organisational culture	1. Impaired reputation. 2. Financial losses 3. Irregular, Fruitless and Wasteful expenditure 4. Delayed service delivery	Major Possible High 12	1. Anti-Fraud Awareness Campaigns 2. Anti-fraud Policy implemented and includes ethics 3. Code of conduct 4. Declaration of interest by all staff and service providers 5. Delegation of authority 6. Robust procure to pay system 7. Segregation of duties 8. Systems controls 9. Compliance Management framework (including policy and process in place 10. Mandatory ethics training for all staff 11. Board and sub-committees in place 12. Competitive bidding processes 13. Effective Bid Committees in place 14. Independant fraud investigations (outsourced to GFIS)	Fair 50%	Moderate	6	4	1.5		
8	3. Create a culture of enhanced service delivery with pride. 6. Create a city that responds to the needs of citizens, customers, stakeholders and businesses	1. Inadequate stakeholder engagement	3	Inadequate stakeholder engagement and relations management	Customer and Stakeholder	Executive Manager: Stakeholder Relations & Communication	Service quality/ delivery perception Failures in communication and stakeholder engagement as well as service delivery that affect customer and stakeholder satisfaction	1. Inadequate community and stakeholder liaison engagement and advocacy programs 2. Cost of water and sanitation 3. Incorrect meter readings 4. Inefficient entry points 5. Infrastructure back-log 6. Perceived biased procurement process 7. Slow pace of adopting new communication technology 8. Billing issues (fragmentation of device management value chain)	1. Impaired reputation. 2. Service delivery protests. 3. Loss of revenue.	Major Likely High 16	1. Customer service charter in place 2. Productivity improvement project 3. Revenue and Metering project 4. Awareness campaigns 5. Communication plan 6. Consultations prior, during and post project implementation meetings 7. Public bid briefing sessions and open tender adjudication 8. Targeted stakeholder engagement 9. Inventory Management through framework contracts 10. Use of social media platforms	Good 20%	Moderate	8	4	0.8		
9	3. Create a culture of enhanced service delivery with pride. 6. Create a city that responds to the needs of citizens, customers, stakeholders and businesses.	1. Inadequate implementation of performance management system	3,6		Human Capital	Executive Manager: Human Resources & Corporate Services	Ineffective human capital	1. Inadequate performance management. 2. Inadequate succession (leadership pipeline). 3. Inadequate processes to preserve institutional memory. 4. Inadequate skills and capacity 5. Security of staff	1. Impaired performance. 2. Loss of staff. 3. Impaired reputation.	Major Likely High 16	1. Performance management policy and framework. 2. Succession planning policy. 3. Training and Development Policy and compliance with WSP 4. Individual scorecards aligned to Corporate scorecard 5. Knowledge management forum 6. Knowledge management policy 7. Recruitment policy and processes 8. Functional talent forum in place 9. Moderation Committee in place 10. Talent management strategy in place	Fair 50%	Moderate	8	4	2		
LEGEND:		3-5	Low	< 6														
		6-10	Moderate	* 6 < 12														
		12-16	High	* 12 < 18														