



CITY OF CAPE TOWN
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COLLABORATION FOR SUSTAINABLE TRANSFORMATION

**MAYOR'S PORTFOLIO
OF URBAN SUSTAINABILITY**

2023

Making progress possible. Together.

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Published by:
Environmental Management Department
City of Cape Town
44 Wale Street
Cape Town
+27 21 487 2829
www.capetown.gov.za

Project leader: Muofhe Pedzai
Assisted by: Saul Roux
Judy Scott
Myron Sheldon
Produced by: Communication Department,
City of Cape Town
Design and production: Arc SA
Printed by: Tandym Print

Every effort has been made to ensure the accuracy of information in this book at the time of publication. The City of Cape Town accepts no responsibility, and will not be liable, for any errors or omissions contained herein. Send any comments, suggestions or updates to Muofhe.Pedzai@capetown.gov.za.

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FOREWORD

Cape Town faces the challenges of rapid urbanisation and population growth. Every person should have access to opportunity and progress and enjoy social equality, dignity and respect. However, against the backdrop of limited and dwindling natural resources, these aspirations need to be met in a manner that does not deplete Cape Town’s natural capital.

Many of the City of Cape Town’s ongoing projects are tackling these challenges in highly creative and innovative ways. The Mayor’s Portfolio of Urban Sustainability features 30 of these. The selected projects are assessed in terms of their sustainability in a delicate urban ecosystem – in other words, their ability to meet Capetonians’ social and economic needs without compromising the natural system on which we all rely.

In addition to keeping track of sustainability, analysis of these projects also helps change thinking and encourages all City project managers to incorporate sustainability parameters into their planning and implementation.

The portfolio showcases some of the best practices achieved, while also highlighting areas that require improvement to achieve long-term sustainability.

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A MESSAGE FROM THE EXECUTIVE MAYOR

This edition of the Mayor's Portfolio of Urban Sustainability is a celebration of projects undertaken by the City that seek to co-create a more caring, inclusive, prosperous, united, respectful, safe and free city.

In recent years, Cape Town has confronted multiple shocks that have had far-reaching implications for the City's vision to co-create a sustainable city. The Covid-19 pandemic had profound impacts on human health, employment and economic development. We have and continue to confront water scarcity, load-shedding, a decline in inland water quality and increasing climate change risks. At the same time, rapid urbanisation is placing increasing pressure on the city's land, natural assets and natural resources.

However, the City and our residents have repeatedly demonstrated resilience in the face of these shocks, and a commitment to building a sustainable city. This commitment is highlighted in the City's Integrated Development Plan (IDP) which strives to ensure increased economic participation and social mobility; maintain a healthy and sustainable environment; build a climate-resilient and resource-efficient city; and create a more spatially integrated, secure and inclusive city.

Apart from the IDP, the City has a range of policies and strategies that strive towards sustainable development including the Inclusive Economic Growth Strategy, Resilience Strategy, Water Strategy, Climate Change Strategy, Human Settlements Strategy and Environmental Strategy. The Mayor's Portfolio of Urban Sustainability is an essential tool to mainstream implementation of the City's Environmental Strategy. It aims to showcase and celebrate innovative City projects that demonstrate best practice in sustainability in order to mainstream sustainability thinking across the organisation.

This edition of the Mayor's Portfolio includes various projects that show the City's coordinated and integrated response to Covid-19 and other shocks. These demonstrate the ways in which the City is building resilience, adopting adaptive management and responding to public needs in changing contexts. Furthermore, this edition features projects that emphasise the steps the City is taking to enhance service delivery and citizens' experience of service delivery.

Finally, this edition showcases projects that support sustainable economic development and inspire hope. This exemplifies the City of Cape Town's vision to build a City of Hope for all.

Realising this vision requires creative thinking, innovation and collaboration. The Mayor's Portfolio of Urban Sustainability demonstrates and celebrates City projects and project managers that are dedicated to sustainability in City operations, capital projects and broader service delivery.

However, building a sustainable city requires a whole-of-society approach, partnerships and broad stakeholder engagement. We thus invite our residents, businesses and civil society to co-create "a prosperous, inclusive and healthy city where people can see their hopes of a better future for themselves, their children and their community become a reality".



GEORDIN HILL-LEWIS
Executive Mayor



A MESSAGE FROM THE CITY MANAGER

The City of Cape Town ('the City') has a complex task of supporting local economic growth and social welfare. We do this through maintaining and expanding our services, and addressing inequality and poverty. This has to be realised without eroding Cape Town's natural environment and natural assets and enhancing the city's climate resilience. This is the task of pursuing sustainable development.

Yet, the City has and continues to be a pioneer in its efforts to navigate and pursue sustainable change. The Mayor's Portfolio of Urban Sustainability demonstrates this commitment through showcasing projects that incorporate principles of sustainability in planning and implementation of City projects and service delivery. The projects showcased here serve as best practice and inspiration for team members across our organisation. They help build collaborative processes that drive sustainability thinking across departments. Furthermore, they illustrate how the City is leading by example.

Since 2014, the City has published five editions of the Mayor's Portfolio of Urban Sustainability, and a joint Cape Town-Aachen Mayor's Portfolio. Across these publications, over 150 innovative City-managed projects have been profiled. In this edition, we profile 30 new projects, from across different departments, which are contributing to building a sustainable city. This provides a growing body of evidence and valuable lessons on injecting sustainability principles in the City's capital projects and operations.

These lessons include the value of considering sustainability throughout the lifecycle of a project; the importance of partnerships and multistakeholder collaboration in co-creating sustainable change; modes of governance and management in times of increasing uncertainty; and the value of an incremental approach to refining and improving service delivery.

Drawing on these lessons, the Mayor's Portfolio of Urban Sustainability programme is exploring new platforms and mechanisms for mainstreaming sustainability in City projects. These include knowledge partnerships, mentorship programmes, and supporting and expanding the existing community of practice that has developed around the programme. This, in turn, is intended to promote integration, collaboration and innovation, and ultimately influence sustainable service delivery.

Importantly, the Mayor's Portfolio of Urban Sustainability provides an opportunity to celebrate the project managers involved in the projects showcased in this publication. We thank these City pioneers for their innovation and dedication to building a sustainable city, and for living out one of our new team values - the value of innovation. I hope that all members of our team follow this example and find ways to be innovative in their respective fields.

Our city is increasingly faced with shocks, pressures and uncertainty. Addressing these challenges and realising our vision of building a City of Hope for all requires widespread sustainable change in relation to our infrastructure, governance and service delivery. The Mayor's Portfolio provides a small sample of the solutions being driven within the City. However, sustainable transitions require multilevel and multistakeholder governance, and a response that includes the whole of society. We hope this publication provides inspiration for actors across society to partner with our government in realising a sustainable city for the benefit of all our residents - both current and future generations.



LUNGELO MBANDAZAYO
City Manager



INTRODUCTION: BUILDING RESILIENCE AND ACHIEVING A SUSTAINABLE ECONOMIC RECOVERY

Since the publication of the last Mayor’s Portfolio of Urban Sustainability in 2020, Cape Town has been confronted with a series of shocks and pressures, which have posed a number of risks to our ambition of creating a sustainable city. Importantly, the coronavirus (Covid-19) pandemic and the economic and social crisis it triggered have had far-reaching impacts on cities across the globe. In addition to the impact on human health, the effects of Covid-19 in Cape Town have included loss of livelihoods and employment, economic decline and associated revenue loss, and an increase in unlawful land occupation.

At the same time, a global climate and ecological crisis is unfolding. In this context, Cape Town faces a combined environmental and socioeconomic challenge. Rapid urbanisation is placing increasing pressure on land for development and our natural assets. The city’s natural resources, particularly energy, water and biodiversity, are finite and increasingly scarce. This has manifested in resource shocks such as water scarcity, load-shedding (rolling blackouts) and deteriorating trends in inland water quality. Ageing infrastructure such as wastewater treatment plants has resulted in pollution events and elevated health risks. In addition, climate change poses significant challenges and risks, including changing rainfall patterns, fire, drought, floods, severe storms, coastal erosion, sea-level rise and extreme heat.

Moreover, socioeconomic issues such as poverty, unemployment, inequality, spatial injustice, unlawful land occupation and crime continue, while the demand for

services from the municipality increases year on year.

In brief, the City of Cape Town (‘the City’) has the difficult task of supporting local economic development and job creation, extending services, addressing inequality, alleviating poverty and ensuring equitable economic and social opportunities, all without eroding Cape Town’s natural environment and natural assets.

Yet the City also has a long track record of pursuing sustainable change. This commitment is articulated in a range of high-level policies and strategies, not least the Integrated Development Plan (IDP) (2022-2027), which incorporates a major focus on building a sustainable, climate-resilient, resource-efficient and secure city. The IDP acknowledges that “[m]aintaining a quality environment, public spaces and waterways helps to make our city healthier, more liveable, more attractive and more resilient”. With “a resilient city” as one of its identified foundations, the IDP commits the municipality to building a city “that meets its resource needs sustainably, responds to climate change and is able to withstand disaster events”. Other high-level City policies and strategies that strive towards sustainable development include the Inclusive Economic Growth Strategy (IEGS), Social Development Strategy (SDS), Resilience Strategy (2019), Water Strategy (2019), Climate Change Strategy (2021), Human Settlements Strategy (2021) and Environmental Strategy (2017). Notably, the Environmental Strategy seeks to ensure that –

“the intrinsic value of the natural environment is recognised, the benefits the natural environment provides are managed and optimised in a sustainable manner, historical disparities in environmental access are addressed, a low-carbon, resource-efficient and low-impact approach to development is followed, environmental education and awareness is optimised, and the natural environment is managed and promoted as a common asset”.

The Mayor’s Portfolio of Urban Sustainability is an essential tool to support this.

While only a small sample of projects are profiled in the Mayor’s Portfolio, they do provide unique case studies, and therefore also learning opportunities, relating to mainstreaming sustainability. These projects promote and incorporate principles of sustainability and a long-term approach to planning, implementation as well as wider service delivery and decision making. They serve as best practice and inspiration for projects across the administration, while also illustrating how the City is leading by example. Importantly also, the Mayor’s Portfolio serves as a call to citizens to actively partner with the City in co-creating a sustainable Cape Town.

Notably, this edition of the Mayor’s Portfolio provides an opportunity to reflect on various projects that were undertaken as part of the City’s response to Covid-19. Although the City’s pandemic

response and economic recovery actions have gone far beyond the projects discussed here, the profiled initiatives do highlight the municipality’s coordinated and integrated approach to managing a health and economic crisis. Furthermore, a number of projects profiled in this portfolio emphasise the City’s commitment to improving and refining service delivery and enhancing citizen engagement, participation and experience of service delivery.

Finally, this edition showcases projects that support a sustainable economic recovery, inspire hope, demonstrate resilience, and highlight the City’s commitment to ‘building back better’ in a way that reduces poverty and inequality, improves public health, and enhances climate resilience.





OVERVIEW: KEY ELEMENTS OF THE PORTFOLIO

STRATEGIC SUPPORT

To effectively embed sustainability best practice in the City, this portfolio has benefited substantially from the support and guidance of the Policy and Strategy Department, the advisory forum, and the review panel of sustainability practitioners. Based on their input, aspects of sustainability have been successfully incorporated into City projects and have stimulated an ongoing sustainability dialogue in the organisation.

The strategic support for the portfolio ensures that sustainability objectives are upheld in City decision making and puts the municipality on a stronger environmental sustainability footing, encouraging other institutions and organisations to follow suit.

ADVISORY FORUM

The advisory forum, which comprises representatives from the various City directorates, was established to provide high-level strategic input to the Mayor’s Portfolio.

The forum provided insight into projects to be profiled, and advised on mechanisms to ensure the most favourable outcomes and the fulfilment of longer-term objectives.

REVIEW PANEL

The review panel of persons external to the City consists of eminent representatives from the Western Cape government (‘Province’), the academic sector, private-sector professionals and civil-society leaders. They were invited to join the panel based on their knowledge, interest and work in broad areas of urban sustainability.

The panel played an important part in reviewing the processes and moderating the assessment of the projects included in the Mayor’s Portfolio. This was done through group review sessions of project methodology, individual study and analysis of initial project assessments, determination of final assessments, and provision of feedback to project managers.

ASSESSMENT ALGORITHM

The advisory forum and review panel identified and reviewed 12 sustainability objectives or criteria (see page 106) against which change was to be monitored over time. These objectives or criteria were selected based on:

- their relation to the achievement of sustainable development;
- their comprehensibility, regardless of field or specialisation;
- the easy availability of associated data; and
- their ability to accommodate varying time and spatial scales and project contexts.

Each objective or criterion was interpreted by one or more subcriteria or guidelines and was loosely defined to allow for creativity and flexibility in determining the performance of individual projects.

The assessment scale relied more on descriptions than on absolute numbers to avoid a potentially misleading quantitative analysis of project data. Thus, interpretive criteria and guidelines were incorporated.

ASSESSMENT PROCESS

To simplify outcomes, the qualitative scale was linked to a quantitative one, with “poor” equating to 1, and “excellent” to 5. The scoring against each of the 12 axes was represented in a spider diagram, as shown on page 39.

With the assessment framework finalised, each directorate received the opportunity to identify projects that:

- were under way or recently completed, or new and active phases of older projects;
- addressed socioeconomic and environmental issues in an integrated manner and within a framework of good governance, thereby encompassing the principles of sustainability;
- were making a positive difference in their sector, while also crossing sector boundaries and working transversally;
- were innovative or original in their approach;
- demonstrated collaboration and partnership building;
- definitively contributed to the implementation of the City’s Inclusive Economic Growth Strategy, Social Development Strategy Resilience Strategy, Climate Change Strategy, Municipal Spatial Development Framework, Water Strategy, and Environmental Strategy;
- empowered their local or the greater Cape Town community, whether with skills, employment, connections and networks, or knowledge transfer, including empowering City staff with improved thinking, operational strategies and modes of work; and
- encouraged replication through ease of process, creative or cost-effective



use of material, and being a true example of a practical way to achieve sustainability.

Interviews with project managers provided the necessary information on how projects met assessment objectives. This was then translated into an

assessment table, diagram and a project profile, which summarised the challenges addressed by the project and outlined some of its key features.

Project managers were invited to review their respective profiles and initial assessments and were afforded

the opportunity to implement concrete interventions to enhance the sustainability of their projects prior to a final assessment. Following an internal review, the final project profiles and initial assessments were presented to the review panel for verification and formal assessment.



STRATEGIC LINKS

INTEGRATED DEVELOPMENT PLAN

The portfolio links to the priorities and foundations of the City’s Integrated Development Plan (IDP) (2022–2027) (also see page 104), which are as follows:

Economic growth: The guiding priority for everything the City does is to support meaningfully faster economic growth that enables people to lift themselves out of poverty.

Basic services: Economic growth depends on the City doing the basics well. Ending load-shedding over time is a key focus. Securing a reliable supply of water in the future and providing quality sanitation and refuse collection services are essential to enable a life of hope and dignity for communities.

Safety: Crime causes constant fear and anxiety. Making Cape Town a city where all people can live with less fear of crime and violence requires collective action

at scale, where government, the private sector and residents work together to make communities safer.

Housing: The lack of adequate housing is an urgent concern that affects the city’s health and well-being and slows down efforts to unstitch the legacy of apartheid spatial planning. The City must do everything it can to support the accelerated building of homes, both formal and informal, by the private sector to ensure adequate supply of housing to meet Capetonians’ needs.

Public space, environment and amenities: Maintaining a quality environment, public spaces and waterways helps to make our city healthier, more liveable, more attractive and more resilient. The City will work with communities to keep the city clean so that Cape Town is a place that its people take pride in and its visitors love to return to.

Transport: Efficient and sustainable public transport and quality road networks are key enablers to businesses, workers and job seekers. A city that is better connected will be more productive and create more economic opportunities.

A resilient city meets its resource needs sustainably, responds to climate change, and can withstand disaster events. The most significant way to increase the resilience of Cape Town’s communities is to reduce poverty, being the primary driver of household vulnerability to shocks.

A more spatially integrated and inclusive city offers people more equitable access to economic opportunities and



The strategic context of the Mayor’s Portfolio of Urban Sustainability, including the City’s IDP priorities and foundations as well as key City strategies.





social amenities and has fewer barriers to inclusion and well-being. In this regard, the City is committed to investing in public infrastructure to address the injustice of apartheid spatial planning.

Finally, the City strives to be a capable and collaborative city government, which is modernised, financially healthy, administratively efficient, innovative and future focused. The City wishes to empower residents to contribute to decision making. At the same time, it wants to be a collaborative and reliable partner to other government entities, residents and businesses in addressing persistent urban challenges.

CITY STRATEGIES

The City has a suite of key strategies that form part of the overall sustainability model embedded in the IDP. These include the following:

ENVIRONMENTAL STRATEGY

The Mayor's Portfolio aligns with and profiles projects that support the principles and directives of the Environmental Strategy. These include:

- ➔ adopting a long-term approach to decision making, operating and planning for the future;

- ➔ promoting and enhancing equity and accessibility of ecosystem goods and services, natural open spaces, and the social, educational, spiritual and recreational opportunities these provide;
- ➔ recognising, protecting and promoting the social, cultural and economic value of the natural environment for communities, businesses and individuals;
- ➔ focusing on resilience, enabling the city to withstand and mitigate the negative impacts of environmental hazards, and proactively reducing Cape Town's vulnerability;
- ➔ recognising, protecting and, where possible, proactively restoring ecological infrastructure and ecosystem goods and services;
- ➔ proactively preventing adverse environmental impacts, including pollution and waste generation, or minimising and managing those impacts where they cannot be avoided;
- ➔ ensuring that resource efficiency and low-carbon development are embedded in all aspects of the City's work;
- ➔ adopting environmentally sensitive and low-impact urban design, and ensuring the long-term functionality of key ecological infrastructure;

- ➔ prioritising and promoting the education and empowerment of all citizens; and
- ➔ ensuring that the value of both natural and cultural heritage is recognised, protected and promoted, and that the benefits and opportunities it offers communities are realised.

Project managers were challenged to reflect on how their projects, including project design and implementation, promoted best practice in sustainability with specific reference to the principles above.

INCLUSIVE ECONOMIC GROWTH STRATEGY (IEGS)

This portfolio's emphasis on sustainable future growth is closely linked to the objective of the IEGS, namely to develop and grow the local economy. Profiled projects that enhance urban sustainability are those where project design teams sought to create opportunities for investment and job creation.

SOCIAL DEVELOPMENT STRATEGY (SDS)

The SDS orientates the City's work towards an improved quality of life for all Capetonians, especially those who are marginalised. At its core, the SDS focuses on addressing poverty, inequality and social ills, while simultaneously encouraging residents to be active citizens and take ownership of their own development.

MUNICIPAL SPATIAL DEVELOPMENT FRAMEWORK (MSDF)

The core purpose of the MSDF is to provide a long-term vision of the desired spatial form and structure of Cape Town and to align the City's spatial development goals, strategies and policies with relevant national and provincial principles, strategies and policies.

RESILIENCE STRATEGY

The objective of the Resilience Strategy is to ensure that Cape Town becomes stronger and better prepared for, and to help improve our response to, future challenges.

WATER STRATEGY

The Water Strategy outlines the City's five commitments in relation to its constitutional responsibilities to provide water services and manage the urban water environment. By 2040, the Water Strategy envisages a water-sensitive Cape Town "that optimises and integrates the management of water resources to improve resilience, competitiveness and liveability for the prosperity of its people".

CLIMATE CHANGE STRATEGY

The Climate Change Strategy seeks to provide high-level strategic guidance for decision making, planning and the development and implementation of programmes and projects in respect of climate change.

PROJECTS AT A GLANCE



PORTFOLIO SECTIONS

VISION PORTFOLIO

Projects that form part of the vision portfolio have achieved substantial outcomes through innovative and visionary planning. This portfolio section also includes participatory initiatives and outreach programmes that are aimed at promoting sustainability, behaviour change and innovative design and ultimately lead to a paradigm shift in urban sustainability and service delivery.

All of the projects in this section are characterised by:

- ⊕ exemplary foresight;
- ⊕ inclusive and thorough planning and design; and
- ⊕ commitment to sustainability principles.

While these projects may lead to concrete developments in the future, they currently still lack tangible outputs, so they are not accompanied by a formal sustainability assessment.

SOCIAL PORTFOLIO

The projects in this section have a strong social component. Most of them have extensively involved communities in the development of processes and structures. While they promote sustainability as an overall outcome, the projects in this category were originally motivated by the need to address a social problem that had arisen in the community or in the everyday dynamics of Cape Town neighbourhoods.

ECONOMIC PORTFOLIO

Against the backdrop of South Africa’s high unemployment rate and significant inequality, the economic portfolio features projects that are designed and implemented to stimulate economic activity and generate growth.

Projects in this portfolio section are aimed at creating sustainable job opportunities, alleviating poverty and ensuring optimal use of existing resources in a responsible and balanced manner. As a result, these projects perform strongly in the economic field of the assessment.

ECOLOGICAL PORTFOLIO

These projects are directly linked to the capacity of the biosphere to meet current and future generations’ needs, which requires us to use and enhance natural resources responsibly in the short term to ensure their continued availability in the long term. Projects in the ecological portfolio are primarily focused on empowering people and organisations to carry out their activities and obligations in an ecologically sustainable manner.



PORTFOLIO PROJECT SECTIONS

VISION PORTFOLIO		
PROJECT	DESCRIPTION	EVALUATION SUMMARY
Floating solar photovoltaic (PV) pilot	A pilot project at the Kraaifontein wastewater treatment plant (WWTP) to establish the value and investment case for floating solar.	The project demonstrates resource-efficient practices and aims to help address major environmental challenges by promoting improved water quality, reducing evaporation from waterbodies, while diversifying the City’s energy mix for cleaner, affordable and secure power.
Liveable Urban Waterways (LUW) programme	A strategic and transversal programme to demonstrate how water-sensitive design, waterway rehabilitation, nature-based solutions and investment in green infrastructure can achieve multiple benefits for society, the environment and the economy.	The programme demonstrates the importance of a multidisciplinary approach that gives various disciplines and stakeholders an equal opportunity to co-design solutions.
One contact centre for non-emergencies (OCCNE)	A single, integrated contact centre for all non-emergencies that leverages technology and the right skills to ensure fit-for-purpose customer care processes and an excellent customer experience.	This project aims to help the City form a proper overview of its current customer services and explore how technology could be utilised to streamline and modernise the service experience for customers and staff.
Potsdam sustainability campus	Cross-departmental practical learning environment where carbon neutrality in particular and sustainability in general can be unpacked in an experimental and transversal manner.	The project offers a holistic approach to local and global concerns through experimentation and demonstration. By creating possibilities and offering access to information, it encourages social cohesion, economic development and poverty alleviation in communities.

SOCIAL PORTFOLIO		
PROJECT	DESCRIPTION	EVALUATION SUMMARY
Cape Town International Convention Centre (CTICC) and Athlone vaccination centres of hope (Covid-19)	Temporary centres set up to support the vaccination of as many people as possible, as quickly as possible, in response to current and future strains of the coronavirus, in a manner that prioritises the most vulnerable.	The mass vaccination sites are a best-practice example of a public-private partnership and demonstrated resilience, adaptive management and agile response within a rapidly changing environment.
Cultural mapping and planning programme	Strategy to identify, catalogue and better utilise existing cultural assets and resources in Cape Town.	The programme facilitates community engagement, as it helps mostly vulnerable communities engage with the City to implement solutions to community-identified challenges, projects and programmes.
Differential Model of Care med (DMOCmed) Area Central	A model designed to improve access to medication and decongest City facilities by establishing alternative pick-up sites, trailer collection and a home delivery service for clients' monthly medicines.	The project seeks to remove barriers to clinic access and bring care and medicine closer to the point of need by considering various opportunities to serve the community and implement these in a cost-effective way.
Food systems pilot programme	Applying a systems thinking approach, high-quality data and focused interventions to consolidate and coordinate the City's existing food-related actions and mandates to improve the affordability and nutritional value of food.	The food systems programme provides a strong framework for food governance in Cape Town and aligns with numerous international programmes and priorities that seek to address food security issues.
Kommetjie Road and Sir Lowry's Pass fire stations	Centres of emergency response established closer to communities to facilitate easier access and reduce the City's response time to emergencies.	The Kommetjie Road and Sir Lowry's Pass fire stations help the City respond to fire emergencies within the shortest possible time. Often, the fire stations are also the first place local residents turn to for emergency medical care and counselling.
Paint City Safe Space	A safe, controlled and stable environment where people living on Cape Town's streets could reside during the pandemic. The project sought to ensure that street people had access to safe water, sanitation and clinic services.	The facility was established to enhance human dignity, improve living conditions and provide access to high-quality social amenities.

SOCIAL PORTFOLIO		
PROJECT	DESCRIPTION	EVALUATION SUMMARY
Sustainable development goals (SDG) voluntary local review (VLR) 2021	The City's first VLR focused on reviewing SDG implementation in the municipality and reporting on progress towards the 2030 Agenda for Sustainable Development.	The SDG VLR brings the United Nations global goals down to the City's level and provides a baseline by which the City can measure its progress towards its targets.
Substance abuse projects	Early-intervention programmes targeted at learners to mitigate the blight of addiction in communities.	The programme helps improve quality of life and address major social challenges by supporting vulnerable individuals and groups and providing opportunities for social rehabilitation and restoration.
Women and girls resilience programme	Empowering women and girls, particularly those living in vulnerable communities, with essential knowledge and skills for surviving, adapting and thriving in the context of shock events.	The programme demonstrates a collaborative, highly replicable and adaptable approach to building resilience and addressing major social challenges by supporting vulnerable individuals and communities.

ECONOMIC PORTFOLIO		
PROJECT	DESCRIPTION	EVALUATION SUMMARY
#YouthStartCT entrepreneurial challenge	An accelerator programme for start-up entrepreneurs that contributes to skills development, innovation and an entrepreneurship culture in Cape Town.	By creating opportunities for young people to develop entrepreneurial skills and boost their start-up businesses, the programme demonstrates the City's commitment to the development of its youth and recognises their important role in society.
Building energy management	A municipal programme to improve energy efficiency in City buildings, and hence achieve operational cost savings and deliver on the City's net-zero-carbon commitment by 2030 in terms of the C40 Deadline 2020 programme.	This programme is a good example of cooperative governance and transversal management. It illustrates best practice in promoting energy efficiency, increasing the use of renewable energy, and supporting green procurement. It also maximises return on investment, which is evident from the energy and operational savings achieved.

ECONOMIC PORTFOLIO		
PROJECT	DESCRIPTION	EVALUATION SUMMARY
Cape Town Market	A revitalised trading hub that plays a critical role in the local and regional food supply system as a low-cost distribution centre for food.	The market continues to be critical in strengthening food security for the area and the agricultural sector and is an excellent example of the City's approach to unlocking economic opportunities and strengthening community partnerships.
City of Cape Town Vulnerability Viewer	Dynamic tool to provide relevant and insightful vulnerability profiles that could help teams proactively target interventions in vulnerable places and spaces in the city.	This critical decision making tool supported staff optimisation and coordination during Covid-19. As a best-practice example of responsiveness to public needs and adaptive management in changing contexts, it will form a key part of the City's response to future crises.
SAP CRM service request enhancement	Improving the management of customers' service requests and the quality and frequency of engagement with those customers while their requests are being resolved.	This project is a fine example of improving productivity and efficiency, ensuring strategic alignment, and promoting transparent and democratic processes. It enables City teams to respond timeously to service requests. Additional communication with residents who have submitted a service request promotes transparency.
Service delivery turnaround project - phases 1, 2 and 3	Data-driven approach to help the City recover and restore service delivery to residents, reducing the backlog to normal, pre-Covid-19 levels.	This project demonstrates how data can inform and improve the City's responsiveness and the design and delivery of public services. It offers transparency about service delivery successes and failures in ways that support accountability and stimulate public engagement and trust.
South African Renewable Energy Business Incubator (SAREBI)	Business development programme to ensure that trading entrepreneurs have viable business models and sufficient operational support in order to address the complexities of scaling green-tech and manufacturing companies.	SAREBI seeks to address major social challenges, particularly in the Atlantis special economic zone, being a key developmental node to create access to urban goods and services. It is a best-practice example of creating economic opportunities. It also performs strongly in terms of enhancing resource efficiency by supporting and incubating businesses in the green economy space.

ECONOMIC PORTFOLIO		
PROJECT	DESCRIPTION	EVALUATION SUMMARY
W3 bus rapid transit (BRT) road construction as part of integrated rapid transit (IRT) phase 2A	Incorporating the construction of Cape Town's first elevated circle dedicated to MyCiTi buses at the intersection of Govan Mbeki Road (M9) and Jan Smuts Drive (M17). The 'sky circle' will remove MyCiTi buses from the already congested intersection by diverting them overhead, thereby easing traffic flow.	By providing and prioritising quality public transport, the project seeks to improve access to job, learning, social and entertainment opportunities. It will help mitigate congestion and improve safety for pedestrians and cyclists. The project also promotes urban densification and efficient land use. Moreover, it is undertaken with strong community engagement and transparency, including the use of local contractors.
Welmoed cemetery Covid-19 phase 6, and Atlantis cemetery Covid-19 phase 4	Use of reclaimed asphalt for the required road infrastructure to ensure smooth burial services despite material shortages and the increased demand brought about by Covid-19.	The project demonstrated transparency, responsiveness to public needs, and adaptive management in a changing context. The use of reclaimed asphalt secured significant cost savings and diverted waste from landfills.

ECOLOGICAL PORTFOLIO		
PROJECT	DESCRIPTION	EVALUATION SUMMARY
Atlantis alien vegetation removal	An Expanded Public Works Programme (EPWP) project to ensure that sites are development ready by (a) stripping conservation-worthy species in a controlled manner, and (b) ensuring that alien invasive species are removed until development occurs, which, in turn, enhances the safety and security of surrounding existing industrial developments.	This project is a prime example of restoring and rehabilitating degraded ecosystems, enhancing ecosystem goods and services, and building resilience to climate change, particularly through its positive impact on water security and fire-risk reduction. In addition, the project sites in the Atlantis Industria form part of a broader climate adaptation corridor in the Biodiversity Network. Therefore, the clearing of these sites mitigates the risk of alien invasives spreading to areas of high biodiversity importance and reduces the loss of critical species populations.

ECOLOGICAL PORTFOLIO		
PROJECT	DESCRIPTION	EVALUATION SUMMARY
Belhar Gardens rental estate	A 629-unit housing project that integrates energy-saving features to deliver environmental benefits and promotes access to quality, affordable accommodation for underserved households.	By intentionally incorporating green solutions into the design of these housing units, the project promotes resource efficiency and contributes to an improved quality of life, as the cost savings are passed on to tenants.
Bellville catalytic-precinct zero-waste initiative	A catalytic investment strategy to improve waste management in central Bellville and unlock the under-realised economic potential in the waste value chain.	The project scores highly in relation to enhancing resource efficiency, creating economic opportunities, addressing environmental degradation, and promoting education and awareness. Both project components reduce waste sent to landfills and help build a sense of community through collaboration with schools, businesses and non-governmental organisations in the area. The initiative is also highly replicable and adaptable and improves productivity and efficiency.
Electric vehicle (EV) charging station pilot	A catalyst to promote EV uptake and expand charging infrastructure and to demonstrate the role of supporting infrastructure in facilitating the widespread use of EVs.	This pilot project demonstrates the benefits of dedicated internal and external collaborations. Increased cross-cutting collaboration on initiatives and projects has a critical role to play in accomplishing sustainability and climate change goals.
Experiential education garden	A creative outdoor environmental education space that engages and activates all five senses. The experiential environment aims to build confidence while adding to children's physical and social experiences and interactions.	The transformation of a previously underutilised space into an experiential garden that promotes environmental education, awareness, training and communication demonstrates the City's commitment to optimising the use of natural and strategic assets for the benefit of Capetonians.
Helderberg environmental education centre	A multifunctional facility that demonstrates sustainable building techniques, promotes sustainable design thinking, and adds to the existing range of environmental education tools available to visitors to the Helderberg nature reserve.	The project is a best-practice example of enhancing resource efficiency. The centre showcases green construction methods and sustainable design thinking and provides the perfect setting for various environmental education programmes offered to reserve visitors.

ECOLOGICAL PORTFOLIO		
PROJECT	DESCRIPTION	EVALUATION SUMMARY
My Clean Green Home	A practical example of a net-zero-carbon home in Cape Town, demonstrating sustainable design principles, technologies and behaviours that residents and City officials can implement to reduce resource consumption in their homes.	The My Clean Green Home prototype enhances resource efficiency and seeks to promote net-zero-carbon buildings as part of the City's commitment to achieve this standard in all buildings citywide by 2050. The project was undertaken in a highly open and collaborative manner, making use of both existing and new partnerships.
University of Cape Town African Centre for Cities (ACC)-City of Cape Town knowledge partnership	An interdisciplinary programme that provides practical and academic insights and facilitates critical urban research and policy discourses on the dynamics of unsustainable urbanisation processes, both locally and regionally.	This best-practice research partnership between academia and the City has managed to bring people together to build connections and collaborative capacity. As a result, a strong scholarly community of practice has been established.



VISION PORTFOLIO





FLOATING SOLAR PHOTOVOLTAIC (PV) PILOT

PROBLEM STATEMENT

National power utility Eskom and the City share energy supply in Cape Town, with the latter providing around 75% of the municipal area's electrical consumers, and the former serving the remaining 25%. The City intends to develop 300 megawatts (MW) of renewable-energy generation capacity by 2030, including 50 MW generated by City-owned solar PV plants. Representing almost a third of the one gigawatt (1 000 MW) that Cape Town requires at peak consumption, it is a significant goal. For greener and more reliable power, the City needs to diversify its energy mix. As vacant land in Cape Town

is very expensive and rooftop solar PV systems are relatively small, the City aims to explore floating solar PV systems for larger-scale installations.

PROJECT OUTLINE

The City is undertaking a floating solar PV pilot at its Kraaifontein wastewater treatment plant (WWTP) to test the effectiveness of the technology. This is the first floating solar plant developed on City infrastructure. The project provides an opportunity to better understand the technology and its potential application across Cape Town's water resources, which is crucial to establish the value and investment case for this one-of-a-kind solution.

PROJECT DESIGN

The pilot includes three PV systems, one on water and two on adjacent land. The floating portion is made up of a French-designed Hydrelion solar island system with 360 W photovoltaic panels. While both land-based systems also include 360 W panels, they are tilted towards the sun at different angles. The tilts of 12 ° and 32 ° respectively, one to match the floating panels and the other in line with the local optimum, will enable the City to precisely assess the impact of each.

The less-than-optimum 12 ° tilt on the floating panels is offset by the fact that the panels are cooled by the waterbody, which enhances their efficiency. Floating

installations not only allow a higher density of panels, but also save space, producing the same peak output as land-based installations spread over up to 2,5 ha.

The monitoring technology is advanced, resembling a full-scale weather station with temperature and humidity sensors, pluviometry (rainfall measurement) devices, solar irradiance (sunshine) sensors, wind speed and direction sensors, and data recorders. The data from the station will be matched to the performance of the solar systems to demonstrate how well they function in various weather conditions.

To measure evaporation levels, a tank 20 m in diameter houses the floating solar array, which is surrounded by a comparable 'control' tank. A float switch controls the water level in each tank, and a flow meter measures the flow of top-up water, which allows computation of relative evaporation losses. The floating panels prevent evaporation by shielding a portion of the

water surface from the sun. Evaporation losses can amount to several metres of water each year. Therefore, in a water-scarce location such as Cape Town, any decrease in those losses is tremendously beneficial.

PROJECT IMPLEMENTATION

The City is collaborating with Floating Solar, the Water Research Council and the University of Cape Town to test the project. To assist with implementation, the C40 Buildings and Energy Technical Assistance Programme conducted a desktop study on floating solar PV systems around the world, examining costs, benefits, yields, ancillary benefits and risks, as well as an assessment of the likely commercial readiness of these systems in the South African context and on large waterbodies.

Electricity from the solar panels is channelled into the electrical reticulation of the Kraaifontein WWTP. In terms of the WWTP's total requirements, the energy generated by the pilot will be minimal.

Yet the pilot does serve as critical proof of concept and a starting point to evaluate how much of the plant's energy needs may be fulfilled by a large-scale floating solar array. Data will be collected over 12 months to inform the design of larger utility-scale floating solar PV projects.

EVALUATION

This pilot demonstrates innovative, resource-efficient practices, as floating solar may very well be an important component of the City's energy-secure low-carbon future vision. It also aims to help address major environmental challenges by promoting improved water quality, reducing evaporation from waterbodies, saving land space, and diversifying the City's energy mix for cleaner, more affordable and more secure power. Underlying the ultimate success of the project and its associated processes will be effective partnerships and collaboration between the multidisciplinary stakeholders involved.





LIVEABLE URBAN WATERWAYS (LUW) PROGRAMME

PROBLEM STATEMENT

Waterways are dynamic systems that constantly respond to human and biophysical impacts. Years of progressive urban development, land use change and pollution in the catchments have caused severe degradation to Cape Town’s waterways, which have become a neglected part of the urban water cycle. In many places, the city’s waterways are in a dire state – hazardous to the communities they flow through, unsafe and polluted. This is a lost opportunity for Cape Town, and the situation needs to be turned around.

In addition, in its 2019 Water Strategy, the City commits itself to turning Cape Town into a water-sensitive city by 2040. Achieving this ambitious target requires us to collectively develop a new relationship with water across the urban water cycle, and in particular with Cape Town’s waterways. Creating liveable waterways that embody

resilience and sustainability principles is also imperative to be able to adapt to the uncertainties of climate change.

PROJECT OUTLINE

LUW is a strategic and transversal programme that the City has developed in response to the issues mentioned above. The programme seeks to demonstrate how water-sensitive design, waterway rehabilitation, nature-based solutions and investment in green infrastructure can achieve multiple benefits for society, the environment and the economy.

According to the LUW implementation framework, a liveable waterway:

- has acceptable water quality;
- makes space for the water;
- has a functioning ecology;
- connects the waterway to the water table and the floodplain;
- connects communities and is used and enjoyed by communities; and

- provides a range of ecosystem services and economic and social benefits.

PROJECT DESIGN

LUW and the associated waterway rehabilitation projects will be developed with the following core principles in mind:

- Collaboration and partnerships
- A waterway as a connector and a catalyst
- Design with nature
- Design for many uses
- Building in resilience
- Design for attractive and usable public places
- Post-project care and maintenance

A programme team has been established to provide overall leadership and direction. The team includes representatives from the City’s Water and Sanitation, Resilience, Environmental Management, Recreation and Parks, and Urban Planning and Design departments. An external reference group

that will bring together academics, non-governmental organisations, Province and ex-practitioners is also being established to provide guidance and support where appropriate.

LUW will be implemented through eight workstreams that will focus on (a) the implementation framework, (b) communication and engagement, (c) a case study compendium, (d) a monitoring framework, (e) demonstration projects, (f) the project pipeline, (g) a learning lab, and (h) governance. Some of these are already under way and will have typically defined end dates and deliverables, while others are still being established and may continue well into the future.

PROJECT IMPLEMENTATION

With its Catchment, Stormwater and River Management Branch as implementer, the City has budgeted R50 million for five LUW

projects to reduce the risk of flooding and improve ecosystem health, public access to waterways, and water quality. Based on studies, these first five projects will focus on the Grootboschkloof River, the Keyser River between Military and Tokai Main roads, Spaanschemat and Prinskasteel Rivers, Westlake River, and the confluence of the Sand River and Langevelei canal at Coniston Park.

The project team is also developing a 20-year project pipeline that will identify future projects to rehabilitate the 21 catchment areas in Greater Cape Town to contribute to the LUW objectives.

EVALUATION

LUW has been developed directly in response to the City’s Climate Change Strategy, Water Strategy, Resilience Strategy and Environmental Strategy. Against the backdrop of a growing

Cape Town with many waterbodies and waterways that need to be protected, the programme aims to demonstrate how water-sensitive design, waterway rehabilitation, nature-based solutions and investment in green infrastructure can achieve multiple benefits for society, the environment and the economy.

Importantly, the programme demonstrates the value of a multidisciplinary approach, giving various disciplines and perspectives an equal opportunity to co-develop LUW and its individual projects. Another important aspect of the programme is to develop partnerships with all involved in the management of the waterways, including the communities who live next to and use them. This will result in shared solutions that draw on people’s local knowledge and foster a sense of community ownership.





ONE CONTACT CENTRE FOR NON-EMERGENCIES (OCCNE)

PROBLEM STATEMENT

Customers engage with the City for various reasons, including account queries, service requests, housing enquiries, and complaints relating to service delivery. To facilitate engagement, the City has a range of communication channels available, such as face-to-face interaction, eServices, telephone lines, email, SMS, WhatsApp and social media. Other customer entry points include Revenue and Housing walk-in centres, subcouncil offices, the corporate call centre, FreeCall lines and the Mayor’s service desk. However, the current array of communication options can be confusing and overly bureaucratic to customers, as it is not always apparent which is best to address and resolve their questions and complaints. This leads to frustration, low levels of customer satisfaction, high volumes of complaints, and negative publicity.

Moreover, the full value of the contact centre interface between the City and its residents cannot be unlocked in the current data environment. A single, enhanced contact centre interface offers the potential to collect and use data more appropriately and achieve the customer centricity the City seeks.

PROJECT OUTLINE

The one contact centre for non-emergencies (OCCNE) project aims to create a single, integrated, fit-for-purpose contact centre for all regular, day-to-day customer interaction. The unified centre will serve all residents, businesses and other stakeholders across town in a seamless and customer-centric manner. The project seeks to leverage appropriate technology and the right skills to optimise customer care and ensure an excellent customer experience.

PROJECT DESIGN

The City’s corporate call centre performs well in line with the commercial contact centres of large banks and e-commerce platforms. It answers 80% of calls in less than two minutes and achieves a customer satisfaction rating of 4,5 out of 5 on a Likert scale. Meeting customers’ expectations involves ensuring that they are heard and that their problem is addressed in good time. To this end, interaction with the City must be as cheap and easy as possible, using the most accessible communication platforms, whether mobile technology or roving walk-in centres. The OCCNE project aims to provide excellent service with up-to-date information. Moreover, an omni-channel solution that allows conversations to be moved seamlessly between communication channels will avoid duplication of queries

- logged via phone, email and SMS, promoting consistency of service. The primary objectives of the project are to:
- ➔ integrate the City’s existing call centres into one corporate contact centre;
 - ➔ extend the centre’s services to line functions that currently have no contact centres (e.g. Housing, the Bookings Office, Planning);
 - ➔ introduce new technologies to reduce costs and resource demands and make the customer experience seamless; and
 - ➔ review how processes can change to serve the needs of the organisation, its people and, most importantly, the residents and businesses of Cape Town.

PROJECT IMPLEMENTATION

In preparation for an integrated contact centre, the City already has one

contact number for non-emergencies (0860 10 30 89), which will form the foundation for the OCCNE project. Customer Relations has also secured buy-in from several line departments, who have indicated a desire and keenness to integrate into OCCNE. Technology is key to modernise the supporting software and systems and enable customer interaction through all channels, including telephone, email, SMS, social media, WhatsApp, web chat, video chat and self-service. At the time of compiling this portfolio, the MITEL telephony system and the SMOKE post-call survey platform were in the process of being upgraded to enhance the customer experience. Customer Relations has also procured the Qnique software in collaboration with the Public Emergency Contact Centre (PECC) 107 to automate existing quality management systems.

Lastly, to extend the service to line functions with no contact centres, the project team is conducting studies into the top reasons why customers would contact the departments concerned, and establishing operating procedures. The information gathered will be incorporated into the City’s body of knowledge and used to train contact centre agents.

EVALUATION

OCCNE explores the value and viability of consolidating the City’s contact centres and streamlining and modernising the experience for customers and staff by leveraging technology for progress. The aim is to help the City understand what its customers want, where it is underdelivering or meeting expectations, and where proactive planning is required to pre-empt systemic problems or improve service delivery.





POTSDAM SUSTAINABILITY CAMPUS

PROBLEM STATEMENT

Learning and growing is an important part of creativity and innovation. However, it is often difficult for government to experiment and explore innovation in a regulatory 'safe' environment or to unpack the cumulative effect of development opportunities in a focused area.

PROJECT OUTLINE

The Potsdam sustainability campus aims to provide a unique learning space for the City to experiment, demonstrate systems thinking at scale, and promote transversal learning.

Centred on innovation and integrated systems thinking, the initiative proposes a City-owned exhibition platform (living lab) for experimentation with a large array of sustainable practices, materials and technologies. Here, the City will be able

to physically demonstrate the impact of various innovations on the health of Cape Town and its people.

The learning environment cuts across City departments and, in some instances, across tiers of government, thereby taking a transversal approach to meeting sustainable development goals (SDGs) and climate action targets, while influencing citywide policies, plans and projects.

PROJECT DESIGN

On the Potsdam sustainability campus, located on the corner of Blaauwberg and Potsdam roads (Table View), carbon, waste and water neutrality can be explored in an experimental manner, while stimulating community upliftment, social cohesion and poverty alleviation in surrounding communities.

The dynamic 'living lab' is planned to house various cross-sectoral elements. For example, a kitchen that educates communities about healthy cooking and eating could also teach them about valuing waste as part of the circular economy. Real-life classrooms at the initial urban farm have the potential to expand into digital learning opportunities linked to other City assets such as libraries and clinics. The facility will be accessible to all, especially the nearby communities of Dunoon, Table View, Milnerton and Joe Slovo Park.

The site has historically offered a sense of transition, is strategically located within the urban footprint, and carries an agricultural zoning, which is well suited for the purposes of the sustainability campus. The campus will incorporate initial composting, better on-site water management, consideration

of the neighbouring Table Bay nature reserve, wastewater management, and may also encompass circularity.

PROJECT IMPLEMENTATION

While the long-term programme is still in the vision phase, the site has already been secured (i.e. fencing and activation) thanks to transversal partnerships across directorates and even tiers of government. In addition, a host of local and international partners have shown interest in joining the initiative.

Building on the current agricultural zoning of the land, the first five-year chapter of the campus will comprise urban agriculture, which will be linked to waste and water. This is in line with the global focus on resilience and food security, particularly in the aftermath of the Covid-19 pandemic. The first chapter will unlock additional programmes, such as waste, water and energy (sustainable services), innovative

construction (sustainable buildings), developing the circular economy (sustainable business) and transport innovations (sustainable mobility).

The project team is continuously exploring opportunities to connect with other resilience programmes to build on the first chapter. For instance, they have engaged research students to help develop the campus. The students' input included rethinking the existing public transport interchange facility on the site to incorporate sustainable building techniques that speak to climate change and carbon neutrality. The campus offered the students a space to 'play', thereby driving innovation.

EVALUATION

The Potsdam sustainability campus offers a holistic approach to the local and global concerns of resilience and food security. The possibilities and access to information

it offers will encourage social cohesion, economic development and poverty alleviation in communities. In addition, the programme highlights the City's commitment to the global SDGs, sustainable partnerships and sustainable funding opportunities. It also seeks to reduce the negative consequences of environmental degradation of an underutilised City asset by exploring options to mitigate and adapt to environmental change and strengthen resilience.

What makes the Potsdam sustainability campus unique, however, is its wider, integrated scope, with agriculture merely serving as the incubator. The end goal is to extend the concept to other sites across town, each with their own contextual realities, yet still offering a safe space for experimenting and connecting with the wider community and creating new opportunities.



SOCIAL PORTFOLIO





CAPE TOWN INTERNATIONAL CONVENTION CENTRE (CTICC) AND ATHLONE VACCINATION CENTRES OF HOPE (COVID-19)

PROBLEM STATEMENT

Vaccination is one of the most cost-effective public health interventions and is key to the primary prevention of infectious diseases such as Covid-19. During the roll-out of South Africa’s Covid-19 vaccination programme, government undertook to cover the cost of the vaccines, while provinces were responsible for funding the staffing, consumables and any other associated costs required to implement the programme.

In the Western Cape, Province launched a vast and multifaceted vaccination programme. This involved the establishment of multiple vaccine administration locations, including mass vaccination facilities.

PROJECT OUTLINE

The mass vaccination sites were a collaboration between the City, Province, Cape Town International Convention Centre (CTICC) and medical schemes administrator Discovery Health. After three months of rapid project planning and deployment (April to June 2021), the operation ran from July to December 2021.

As its contribution, the City established mass vaccination sites at the CTICC (building 2, halls 1 and 2) and Athlone stadium, with the latter including the first drive-through vaccination site in the Western Cape (eastern stand for walk-in vaccinations, and northern parking area for drive-through vaccinations).

PROJECT DESIGN

The overall objective of the project was to build temporary centres to support the Covid-19 vaccination of as many people as possible, as quickly as possible, in a manner that prioritises the most vulnerable. This aligned with the overarching goal of the country’s vaccination programme, namely to achieve herd immunity.

The project aimed to establish a formalised process for mass vaccinations, prepare the existing CTICC and Athlone stadium facilities to accommodate the vaccination centres, and support vaccination operations for a six-month period. This included the recruitment and appointment of staff and the procurement of equipment and supplies. Layout and process designs were developed based on international best practice. Initial estimates indicated a total

cost of approximately R85 million over the implementation and operational period for both sites, with financial contributions from all partners.

PROJECT IMPLEMENTATION

Between 2 000 and 3 000 vaccines were administered per day, illustrating the significant contribution of mass vaccination sites to the broader vaccination programme.

By using existing facilities, services, procurement mechanisms and partnerships, high-quality sites were delivered rapidly. Leveraging existing assets and skills also proved invaluable in providing cost-effective and rapid solutions to practical problems faced in the course of the project.

The partnership to deliver the programme was established through an agreement between Province and Discovery Health. This included funding, staff and operational responsibilities.

The project utilised existing contracts and mechanisms within the purview of Province, the City and its partners. However, rapid procurement is challenging in the public

sector due to stringent protocols and regulations. This required a concerted effort to achieve project deliverables and deadlines successfully, and appropriate resourcing and strong management support were key to navigating the challenge. This highlights the need for future emergency procurement protocols in support of projects requiring rapid deployment.

Healthcare staff were difficult to source, as different entities in the broader healthcare system competed for the same resources. This complicated recruitment initiatives to staff the centres. However, the project team members responsible for human resources still managed to deliver.

EVALUATION

The mass vaccination sites are best-practice examples of a well-functioning public-private partnership

and the use of existing City structures to provide a service delivery solution. The mass vaccination sites were high-quality social amenities, and location and other equity issues were duly considered throughout the project to ensure that the largest volume of people would be reached in the safest and easiest way possible. The sites were close to public transport and accommodated both insured and uninsured individuals.

By repurposing existing infrastructure and leveraging existing investments, the project demonstrated sound financial management. The project team assessed and harnessed the internal capabilities and key strengths of each partner (private and public sector). Discovery Health, for instance, used their systems and tablets to register people on-site, which facilitated the efficient processing of large volumes of data.

The vaccinations were free of charge, and the centres also provided citizens with access to healthcare professionals and professional nurses, who could consult on various ailments and provide general advice. The sites further supplemented the clinic network of Province and the City in terms of capacity to allow greater public access. The quick vaccination turnaround time of 30 minutes encouraged the public to get the vaccine.

The project is an excellent example of crisis response. It demonstrated resilience, adaptive management and agility in a rapidly changing environment. Another partner, the Lean Institute Africa, rendered invaluable assistance to operationalise the sites and continuously streamline processes and improve results through time studies, analysis and control.





CULTURAL MAPPING AND PLANNING PROGRAMME

PROBLEM STATEMENT

Culture contributes to urban sustainability by promoting cultural rights, recognising the importance of heritage, diversity and creativity as the foundation of urban life, and stimulating engaged citizenship and communities. Unfortunately, however, culture is often an afterthought in modern-day local development. Cape Town's history is also characterised by unequal and segregated growth, resulting in unequal access to and support for culture. Therefore, there is a constant demand for cultural community services.

PROJECT OUTLINE

The City's Arts and Culture Branch adopted a cultural mapping and planning strategy to uncover and capitalise on Cape Town's rich cultural resources. The mapping process enables the City to identify and catalogue cultural resources and assets in communities, employing a variety of research

methodologies and instruments to map both tangible and intangible cultural assets. Cultural planning contributes to four critical areas of development, namely human, social, economic and spatial development. The process also empowers residents to help identify the cultural needs, opportunities and resources in their community and develop a shared vision, strategy and action plan.

PROJECT DESIGN

A sound cultural planning process depends on a proper understanding of the existing cultural resources in the community. For this reason, cultural planning should always include a mapping exercise to better understand the extent of the community's creative products and practices, cultural assets and resources, as well as the presence and use of public and private infrastructure.

The City's cultural mapping and planning process aims to:

- articulate culture more clearly in urban design and development from a particular community's perspective;
- build partnerships and inclusive community collaboration;
- develop a better understanding of the local cultural ecosystem;
- guide resource allocation;
- provide a basis for cultural policy; and
- ensure cultural sustainability.

The programme aids sustainable and just urban development by facilitating meaningful engagement. Community members participate in co-design workshops, where they discuss the resources identified through desktop research and mapping. Workshop outcomes are then captured.

Through an Expanded Public Works Programme (EPWP) project, members from the local community are employed and equipped with training and skills in the cultural sector. This has significantly improved the City's understanding of the various Cape Town neighbourhoods.

PROJECT IMPLEMENTATION

From 2012 to 2017, nodal studies were completed in 37 areas. The cultural mapping frameworks for two areas have been completed. The data gathered will be shared with other City departments and non-profit organisations so that cultural programming and infrastructure can be supported more effectively. Moreover, since project inception, the City has also developed cultural mapping and cultural planning toolkits.

In addition, the methodology and social benefits of the project have received

national and international recognition during the South Africa-European Union Dialogue on Cultural Mapping, Planning and Impact Assessment for Sustainable and Just Urban Development.

EVALUATION

The cultural mapping and planning programme celebrates diversity and contributes to social cohesion and inclusion through art and community storytelling. It is an excellent example of facilitating community engagement, as it assists mostly vulnerable communities to interact effectively with the City. Giving communities a platform and voice also cultivates an environment of tolerance, empathy and appreciation. The programme addresses major social challenges by facilitating an understanding of what the different members of often fragmented

communities hold dear in terms of culture and history. Communities are encouraged to work more closely with the City and other spheres of government to improve the infrastructure, transport, economy and cultural life in their immediate environments. In the process, cultural spaces and facilities are identified to stimulate and build a sense of community and resilience. The project shows the power of cultural action to instil pride and self-worth, build mutual respect and a shared identity, bridge social divides, and strengthen social networks. When new landmark construction programmes are not viable in a place where major cultural infrastructure is still limited, leveraging residents' knowledge often offers urban rejuvenation.

SUSTAINABILITY ASSESSMENT: CULTURAL MAPPING AND PLANNING PROGRAMME





DIFFERENTIAL MODEL OF CARE MED (DMOCMED) AREA CENTRAL

PROBLEM STATEMENT

Patient adherence to treatment is often hampered due to an inability to collect monthly medication. In many instances, this is because of distance from the pick-up location or the sheer overcrowding of facilities. The intention of DMOCmed, which dates back to 2014/15, is to decongest City health facilities and make it easier for residents to get their monthly medicines. Piloting the model at the St Vincent community day centre (CDC) in Belhar, City Health initiated two alternative medication pick-up sites as well as on-site trailer collection. More recently, a door-to-door home delivery service was also launched in response to Covid-19.

PROJECT OUTLINE

DMOCmed represents the final step of patient care, where patients receive their medicine parcels. The model applies to patients who are stable on chronic medication and who receive their

medicines via the chronic dispensing unit (CDU), packaged by provider Medipost, without the need for clinical review. It also applies where medicine parcels can be collected from a designated pick-up point without any queuing. Overall, the model improves access to medication and assists clients with treatment adherence.

PROJECT DESIGN

City Health designed DMOCmed in collaboration with a range of other City departments and external partners. The project is executed in partnership with Metro Health Services (Northern/Tygerberg provincial substructure, with Province providing the medication) and healthcare workers from a non-governmental organisation (NGO) called Touch Nations, who collects medicine parcels daily from the facility pharmacy and distributes them to patients. Another NGO, Anova Health, provides the trailer.

PROJECT IMPLEMENTATION

DMOCmed implementation started in 2014/15 with the establishment of alternative pick-up sites for medicine at the ward councillor's offices in Belhar (Mondays to Fridays, 07:30-11:00) and at the Chestnut satellite clinic (Fridays, 07:30-12:00). These alternative pick-up sites enabled those living further from St Vincent CDC, being the main facility in the area, to obtain their medicines more easily.

This was later supplemented with an on-site trailer at St Vincent, designed and custom-built by Anova to function as an extension of the pharmacy. The trailer is parked in the facility parking lot and allows patients to collect their medication without having to enter the CDC. If patients are unable to collect medication on a specific day, the parcel is kept in the trailer for five days.

The latest addition is home delivery of medication parcels, introduced

in April 2020 in response to the first wave of the pandemic and the associated lockdown.

According to data from July 2021, DMOCmed provided 4 731 patients with their medicine parcels. Of those, 1 290 parcels were sent out for home delivery (with a success rate of 91%), 2 733 were sent to the alternative pick-up sites (with a success rate of 78%), and 708 were channelled to the trailer (with a success rate of 31%). On average, DMOCmed serves 3 762 patients per month.

A major challenge to implementation has been heavy rain hampering both door-to-door delivery and the use of the trailer.

DMOCmed is financially sustainable, and City Health aims to continue and expand the model post-Covid, incorporating additional innovations and ideas suggested by communities, partner NGOs

or Province. City Health further intends to expand the model to other locations and is exploring the use of a community hall as an additional alternative pick-up site.

EVALUATION

DMOCmed helps build a sense of community by facilitating community participation, promoting social cohesion, and encouraging collaboration and partnerships. This is excellently demonstrated by the establishment of the City Health DMOCmed Committee and regular engagement between the committee and other forums such as neighbourhood watches and churches in the area. In general, the project is considered a best-practice partnership between City Health, Province, local NGOs and ward councillors.

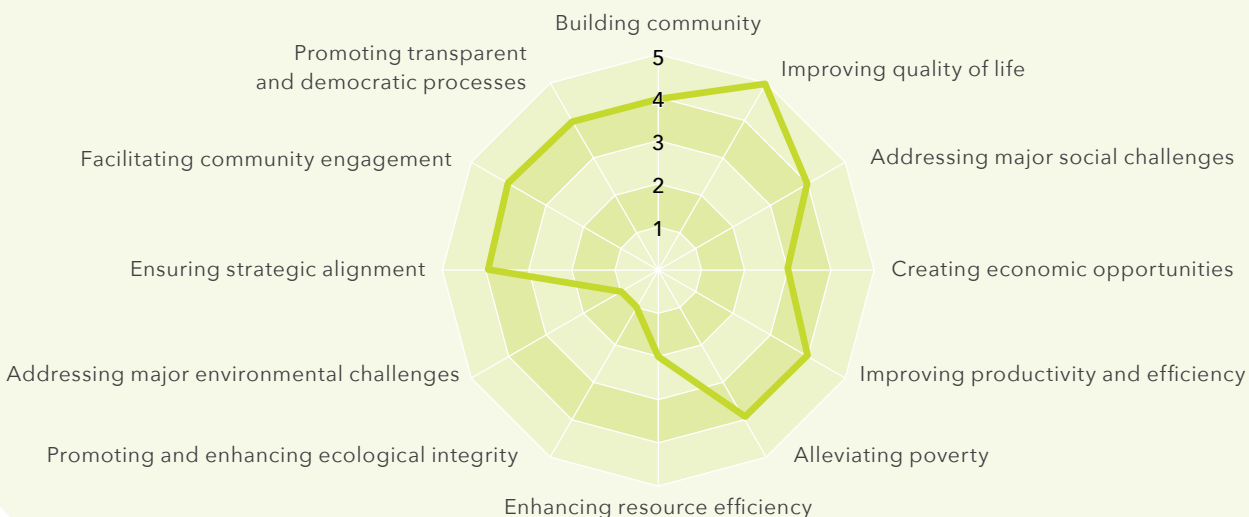
Most importantly, it addresses a major social challenge and improves the

health and well-being of the community by providing access to care and medicine. More than 80% of residents in the community do not have health insurance and rely on City Health's service offering.

The project directly attempts to remove barriers relating to accessing clinics and bringing care and medicine closer to the point of need. Project managers continue to consider various additional opportunities to serve the community and ensure cost-effectiveness in implementation.

Lastly, DMOCmed is a fine example of responsiveness to public needs, and of adaptive management in changing contexts. The model has not only benefited patients by providing efficient, quality care, but has also streamlined processes by decongesting the health facility.

SUSTAINABILITY ASSESSMENT: DIFFERENTIAL MODEL OF CARE MED AREA CENTRAL





KOMMETJIE ROAD AND SIR LOWRY'S PASS FIRE STATIONS

PROBLEM STATEMENT

Cape Town is located in the Cape Floristic Region, which contains vegetation types that are not only prone to fire, but require fire to survive. Consequently, wildfires are relatively frequent and an essential natural occurrence in the city during the summer months.

In the urban environment, fires are a significant risk in dense informal settlements, causing both physical injury and psychological trauma. With the worsening national housing crisis, informal settlements have grown rapidly. While informal settlement fires have numerous complex underlying reasons, a common cause is the use of unsafe fuels for heating, lighting and cooking. High residential densities then allow for the rapid spread of fire and also hamper access for firefighters.

The impact of fire in Cape Town is expected to continue growing due to climate change, urban sprawl, population growth, and increased structural and community vulnerability. To manage this, the City needs to proactively reduce fire risk and the impact of fires on communities and the natural environment. This includes scaling up its firefighting resources and investing in equipment and staff.

PROJECT OUTLINE

Fire stations are centres of emergency response, and frontline personnel work hard to protect lives and homes when called out to fire incidents. The City's Fire and Rescue Service delivers a vast array of services. These include responding to and dealing with all types of fires and emergencies, from structural, informal settlement, mountain and veld fires to small-vessel and motor

vehicle fires. Services also extend to medical emergencies and rescues, including urban search and rescue, diving, motor vehicle extrications, high-angle incidents and hazardous material emergencies.

To strengthen its disaster preparedness and response, the City constructed the Sir Lowry's Pass and Kommetjie Road fire stations to bring these essential services closer to communities. This closer proximity allows for easier access to areas in the immediate vicinity and also reduces the response time to emergencies.

PROJECT DESIGN

The Sir Lowry's Pass fire station is located close to Lwandle informal settlement, while the Kommetjie Road station is situated opposite Masiphumelele informal settlement. Previously, the Masiphumelele community had to rely on Fire and Rescue resources from

Fish Hoek and Simon's Town, while Lwandle used to be served by the Strand and Somerset West fire station. Being located closer to the communities they serve, the new stations are not only able to respond more quickly to emergencies, but can also record, document and research all incidents in the area.

A vital part of the project was to ensure that both fire stations included an emergency care centre to treat and stabilise patients who are unable to reach a healthcare facility in time. Both stations also have facilities to accommodate regular public education and awareness drives.

In addition, thanks to staff's input, the layout of the fire stations supports improved working conditions. A key priority was to provide adequate accommodation for staff, including

temporary staff who support operations during the Cape's fire season. Additional facilities include a gym, adequate ablution facilities and recreational space.

PROJECT IMPLEMENTATION

The Kommetjie Road fire station serves Ocean View, Masiphumelele, Imhoff's Gift and Kommetjie. It also provides support to the Simon's Town and Fish Hoek fire stations. The Sir Lowry's Pass fire station, in turn, serves Riemvasmaak, Uitkyk informal settlement, Rasta Camp, Nomzamo, Lwandle, Sir Lowry's Pass and Chris Nissen Park up to the eastern boundary between Gordon's Bay and Grabouw.

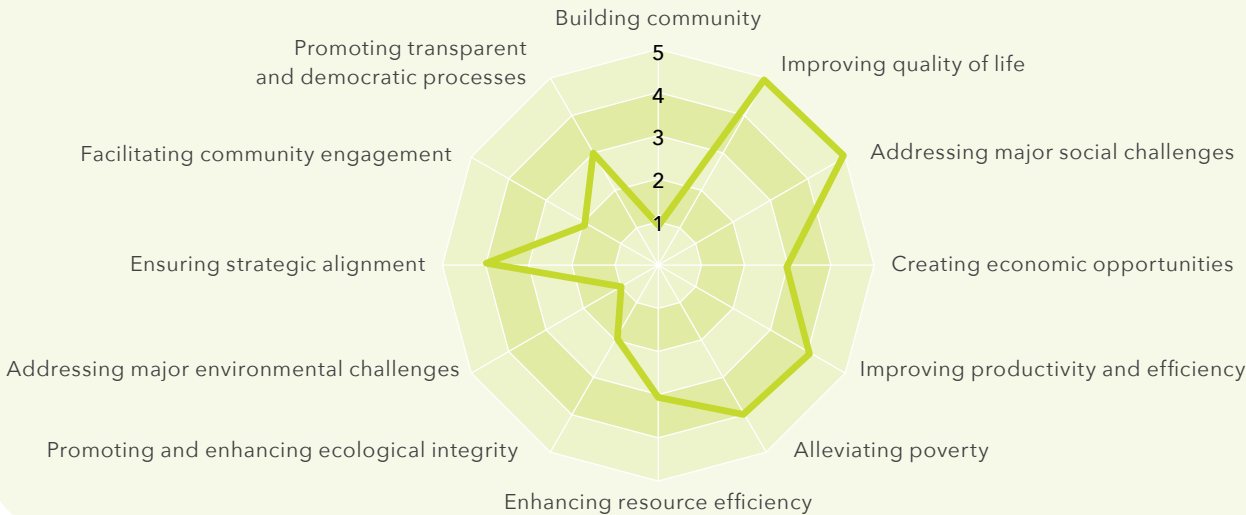
Both fire stations were constructed during the 2015-2018 drought. This necessitated the use of non-potable water for construction, which is not standard industry practice.

At Sir Lowry's Pass, an added challenge was the location of the facility on an old waste management site. While the use of a brownfield site incurred additional costs, it promotes sustainable land management. Moreover, the Sir Lowry's Pass fire station has an on-site retention dam, which supplies the ablution facilities.

EVALUATION

The Kommetjie Road and Sir Lowry's Pass fire stations help the City respond to emergencies in the shortest possible time. Situating these fire stations closer to communities also reduces vulnerability and risk for residents, offering them access to an essential service that improves their quality of life. In addition, the stations' focus on serving communities in vulnerable areas supports the City's efforts to address major social challenges.

SUSTAINABILITY ASSESSMENT: KOMMETJIE ROAD AND SIR LOWRY'S PASS FIRE STATIONS



PAINT CITY SAFE SPACE

PROBLEM STATEMENT

In many ways, street people are the most vulnerable members of our society. Although a range of civil society initiatives provide shelter and care for Cape Town's street dwellers, the problem persists.

PROJECT OUTLINE

In response to Covid-19, the City's Social Development Department partnered with City Health, the Project Management Unit, Recreation and Parks, Disaster Risk Management, Law Enforcement, the Street People Unit, Electricity Services as well as Water and Sanitation to establish the Paint City Safe Space. The facility offers a safe and stable environment for people living on the street, giving them access to safe water, sanitation and clinic services. City Health raised awareness of Covid-19 protocols among the homeless, screened for mental health, tuberculosis (TB) and HIV, and

referred patients for chronic medication. To many of the homeless served here, this was the first time they had received such holistic care.

PROJECT DESIGN

The project was planned for the development of the entire site previously used by Paint City. City Health, including Environmental Health and Personal Primary Healthcare Services, assisted the Social Development Department to establish sleeping units to accommodate street people, taking into account social distancing requirements. They managed to accommodate 150 people while adhering to all disaster risk management legislation. During the initial, hard lockdown, City Health provided daily environmental health, health education and primary healthcare services at the site. This was later changed to once a week.

PROJECT IMPLEMENTATION

Overall, the development of the site was funded by Social Development, while City Health provided health services. Officials from different departments welcomed the first occupants when the facility opened, and 145 street people were screened for Covid-19. Thirty screened positive and were referred for testing. Of the 50 people tested for TB, four tested positive and were referred to hospital. In the first three weeks, all clients underwent a medical evaluation to establish any known medical conditions and to ensure that they received the required treatment. In the first week, 42 clients who were identified as known chronic clients were each issued with a two-month supply of medication.

Services rendered at the site include TB screening, treatment of minor ailments, reproductive health services, referral for

antiretroviral therapy, and chronic care. At the time of interview:

- ➔ 100 TB tests had been undertaken;
- ➔ 250 HIV tests had been performed;
- ➔ 45 chronic patients had been referred to appropriate care;
- ➔ 15 clients had been referred to mental health services; and
- ➔ 110 Covid-19 vaccinations had been administered.

While the Safe Space initially faced challenges with adherence to Covid-19 protocols once clients moved out of the facility, protocols were put in place with regard to quarantining or isolation.

At the time of profiling, only 78 clients were on the premises, with some having either returned to living on the streets or reintegrated with their families. More than half of the chronic clients had left

the site, mostly due to substance abuse issues. While the project was initially in response to Covid-19 and the lockdown, the intention is to continue.

EVALUATION

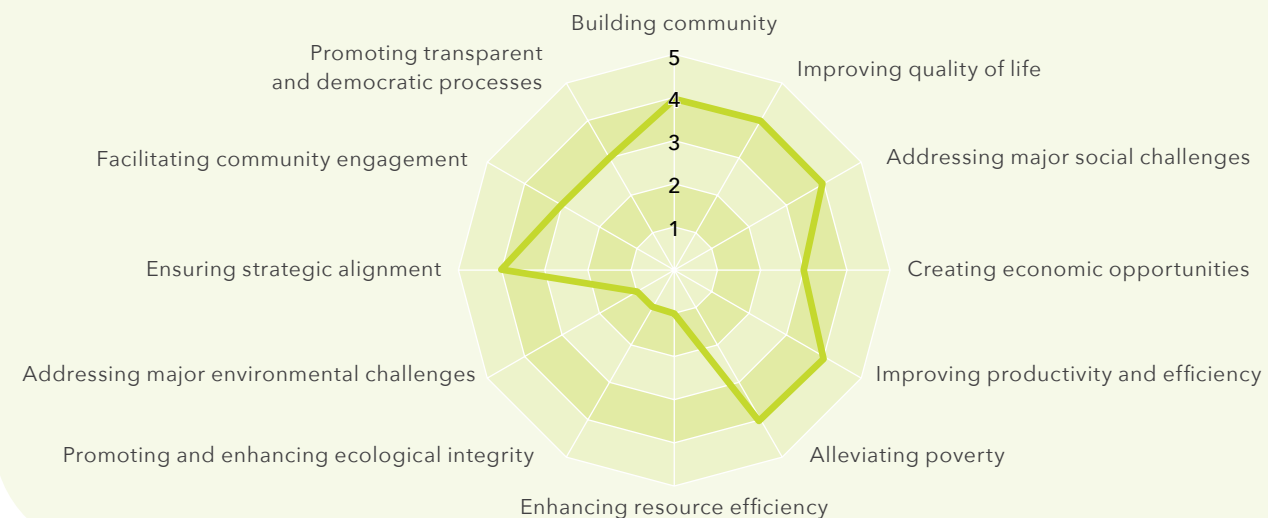
A primary objective of the project was to promote health and well-being. It is also an excellent demonstration of improving access to social opportunities. At the site, the Social Development Department initiated workshops to support clients' exit and reintegration with society, including training and education on substance abuse, hygiene, healthy lifestyles and soft skills.

Various support services were provided to help clients access employment and social opportunities. For instance, all clients were screened to obtain identity documents, and many were assisted in obtaining EPWP work opportunities.

Improving living conditions and providing access to high-quality social amenities, the Paint City Safe Space was established to enhance human dignity, offering sleeping quarters, ablutions, a cafeteria, and even a Saturday thrift store for clients' clothing needs. Environmental Health ensured hygienic conditions and adherence to Covid-19 protocols. Law Enforcement was also on-site 24/7 during the hard lockdown, along with contracted security services, who remain at the site. The site has access and gate control to ensure safety and security.

In general, the Safe Space is a good example of assisting vulnerable groups to meet their basic needs through providing shelter, health care, three meals a day, and clothing. At the same time, it showcases responsiveness, having been established as a direct response to Covid-19 and undertaken in a highly adaptive manner.

SUSTAINABILITY ASSESSMENT: PAINT CITY SAFE SPACE





SUBSTANCE ABUSE PROJECTS

PROBLEM STATEMENT

Many communities in Cape Town carry a significant burden of substance abuse and its impacts, including infants being born with foetal alcohol syndrome (FAS). Although numerous interventions target individuals already struggling with addiction, research has shown that early education and intervention (even prior to initial possible experimentation with drugs or alcohol) is far more effective. To mitigate the scourge of addiction in communities, the City needs to direct its interventions at primary school children. In addition, high school learners require targeted education on FAS and the impacts of child abuse, such as shaken baby syndrome. For increased effectiveness in the longer term, interventions also need to address broader life issues such as personal values, self-respect, peer pressure, bullying, self-confidence, planning, and communication skills.

PROJECT OUTLINE

The City’s Social Development and Early Childhood Development Department offers

two programmes for learners, both aimed at prevention. These are the Essentially Me programme and the FAS/simulator programme. The two programmes equip learners with the tools to:

- ➔ build self-esteem and a self-concept;
- ➔ clarify their dreams for the future;
- ➔ persevere and be tolerant;
- ➔ communicate effectively;
- ➔ manage peer pressure and challenges;
- ➔ reduce risky behaviour;
- ➔ enhance social interpersonal/ intrapersonal skills; and
- ➔ understand the effects and impacts of drugs and substance abuse.

PROJECT DESIGN

Admirably, both the Essentially Me and FAS/simulator programmes were developed in-house by City employees. Essentially Me is aimed at learners aged 9 to 11 and comprises a scheduled hourly interactive meeting every week for nine weeks. The FAS/simulator programme, in turn, is aimed at the age bracket of 12 to 15. This programme runs for six

weeks, and alongside working through self-development material, the learners are taught about FAS specifically and are given ‘simulator babies’, whom they need to look after. Like real-life babies, the dolls cry often and need to be soothed, fed, changed, etc. These simulations have proven an effective deterrent to unplanned teen pregnancies. Both male and female learners participate in the simulation, and each course is designed for a class of approximately 30 participants.

The sessions are presented by students who form part of the EPWP. Graduates with degrees in Social Science and Education are employed, offering them an opportunity to gain valuable work experience. Due to their energy and comparatively young age, the EPWP workers also appear to have a good rapport with the learners. Approximately 20 EPWP graduates are employed as facilitators each year. These facilitators receive extensive training and are given detailed manuals that describe how the subject matter is to be presented. The courses are also augmented by

detailed interactive participatory manuals, and learners earn badges at the end of each week to encourage attendance. As a further incentive, attendees receive materials such as school diaries.

Although these courses were initially designed for school-aged learners, the programmes have since also been rolled out in other contexts such as safe houses and youth camps.

PROJECT IMPLEMENTATION

Both programmes were developed in 2016. During the 2019/20 financial year, they were implemented 42 times and reached 1 570 learners. The feedback from participating schools is very positive, and after initially presenting to one grade, the team is often asked to present the programme to other grades also. Unfortunately, the face-to-face mode of

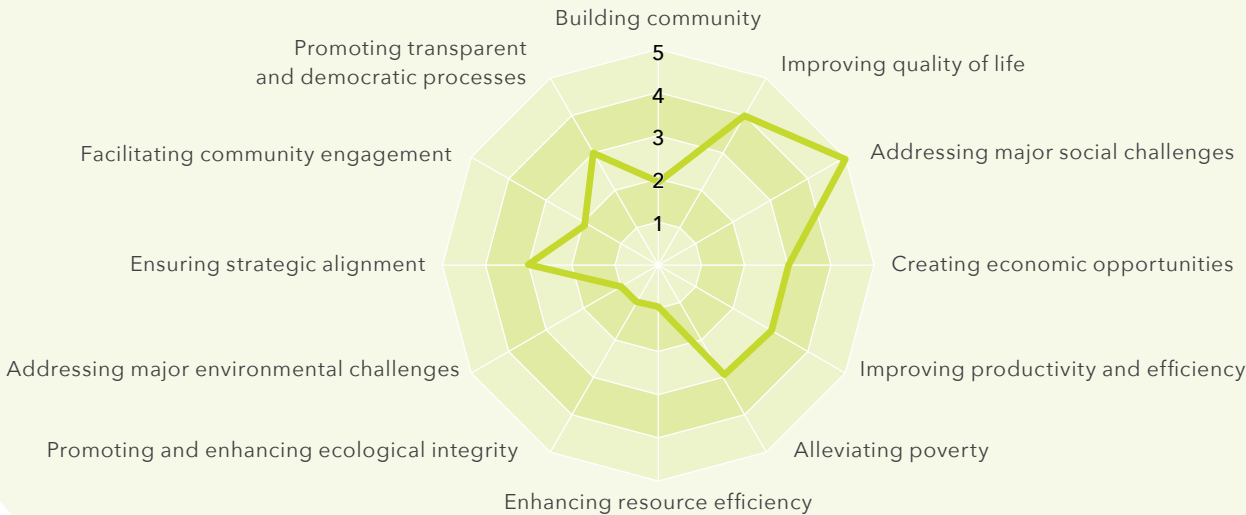
presentation had to be put on hold in 2020 and 2021 due to the Covid-19 pandemic. During this time, 2 000 copies of each activity book were distributed in selected low-fee and no-fees schools in the city. Requests for the course have significantly increased post-Covid, but securing sufficient resources to meet the demand has been a challenge.

EVALUATION

This is an early intervention programme, and as such, measuring its impact in the medium to long term is difficult. It is anticipated that follow-up in later years would show that scholars who had attended the course were less likely to become substance abusers compared to learners in similar communities who received no such intervention.

The substance abuse programme scores highly for improving quality of life, as it promotes health and well-being. It also addresses major social challenges by supporting vulnerable individuals and groups and combating discrimination. Both components of the project promote education, training and awareness and provide opportunities for social rehabilitation and restoration. In terms of the appointment of the EPWP students, the interventions score highly in the subcategories of facilitating skills development and training as well as optimising staff productivity, as City employees can oversee the teams of students rather than having to provide the training themselves. Both programmes are replicable, adaptable, and align with the priorities of the City, Province and the United Nations.

SUSTAINABILITY ASSESSMENT: SUBSTANCE ABUSE PROJECTS





SUSTAINABLE DEVELOPMENT GOALS (SDG) VOLUNTARY LOCAL REVIEW (VLR) 2021

PROBLEM STATEMENT

Cities are critical to the achievement of the SDGs. Alignment with the SDGs also encourages cities to think about long-term development outcomes and allows for ongoing review and stocktaking of progress towards longer-term goals.

However, localisation is a pervasive challenge in achieving sustainable development. There is also often little or no baseline data by which to measure local progress in meeting the global goals. Without metro-level data, regional and national data are often highly generalised and cannot be readily used for targeted intervention.

Although the City has an array of datasets, they have not previously been standardised, correlated, integrated or assessed in a way that aligns specifically with the 17 SDG categories.

PROJECT OUTLINE

The SDG VLR 2021, the City's first, aimed to review SDG implementation in the City and to report on progress in meeting the goals. To this end, it gathered data and information on various initiatives that aligned with the prioritised SDGs, including the projects

contained in the 2018 and 2020 Mayor's Portfolio of Urban Sustainability. The VLR also delivered a data book of reported statistics and trends that can be used to set SDG-aligned indicators and targets.

The VLR sought to:

- take ownership of the SDGs at City level and localise the goals with reference to the 2030 Agenda for Sustainable Development;
- align City actions with national, regional and global development goals; and
- participate in the sharing of collective intelligence and lessons on SDG localisation and VLR production.

PROJECT DESIGN

In 2019, the Executive Mayor of Cape Town signed a declaration committing the City to submit a VLR by 2021.

The research and reporting approach was collaboratively established under the auspices of the University of Cape Town African Centre for Cities (ACC)-City of Cape Town knowledge partnership (see page 90). The VLR report was conceptualised internally by the City, with input from numerous line departments. The report was informed by

key City strategies and plans, including the current IDP, the transversal Resilience Strategy and the City's Covid-19 recovery plan. The final VLR was the product of various alignments and comparative reviews with all City strategies and the nine sector plans.

PROJECT IMPLEMENTATION

The following SDGs were identified as priorities for reporting in the VLR 2021:

- No poverty (SDG 1)
- Zero hunger (SDG 2)
- Clean water and sanitation (SDG 6)
- Decent work and economic growth (SDG 8)
- Industry, innovation and infrastructure (SDG 9)
- Sustainable cities and communities (SDG 11)
- Climate change (SDG 13)
- Global partnerships (SDG 17)

Reports on these prioritised goals provided insight into how the City reported on and implemented the SDG indicators and targets. In the end, the City's VLR 2021 reported on 41 of the 112 prioritised SDG indicators and 29 of the 77 prioritised SDG targets. The report provides a valuable assessment and collective baseline of City SDG achievement at the goal, target and indicator levels for the eight prioritised SDGs, deepening

understanding of the City's current alignment with the global goals.

In the process, the City has built connections with local stakeholders, other South African metros and regional and international organisations with a view to building a standardised approach to VLR production. The City will also be sharing its insights and lessons further afield via the United Nations Economic Commission for Africa, UN Habitat, the United Nations Department of Economic and Social Affairs, and the United Cities and Local Governments network.

The City is currently building its United Nations data online platform, called GitHub, to highlight progress, and discussions are under way to align existing City data platforms with this online repository.

In addition, in its VLR 2021 report, the City developed its own SDG 'traffic light' assessment tool to showcase the different stages of progress. This analysis of City programmes and their SDG alignment has revealed some gaps and challenges that require urgent attention. The report also included an action plan and next steps.

EVALUATION

Evaluation of this project has been challenging, as the impact of the VLR may only be seen in the long term. Its specific outputs are also very difficult to measure. For instance, if poverty is significantly alleviated in the city in the next few years, it is very likely that the SDG VLR would have fed into this, but to measure the level of this influence would prove a challenge. As a result, the impacts of this project are undeniable, yet also intangible.

The VLR's value to the City is in its:

- short-term outcomes, having encouraged the City to holistically reflect on its limitations;
- medium-term outcomes, allowing the City to create and introduce platforms to modernise, improve and advance its limitations; and
- long-term outcomes, enabling the City to reflect and reinforce its vision for the future.

Moreover, it is evident that the SDG VLR strongly aligns with the objectives of the Mayor's Portfolio of Urban Sustainability. It performs particularly strongly in the categories of ensuring strategic alignment, promoting transparent and democratic processes, and improving productivity and efficiency. It brings the United Nations global goals down to the level of the City and provides a baseline by which the City can measure its efficiency in meeting its targets.



THE FOOD SYSTEMS PILOT PROGRAMME

PROBLEM STATEMENT

An unanticipated effect of Covid-19 was the global focus on food, including in Cape Town, where the pandemic compounded the existing challenge of food insecurity. Disaster regulations implemented at the start of the hard lockdown to contain the spread of the virus limited mobility, which hampered access to employment, income, livelihoods and food. The large number of Capetonians who suffered food insecurity as a result highlighted the many ways in which Cape Town's food system can be disrupted. The City subsequently identified food insecurity as a system shock and specifically included in its Resilience Strategy the intent to "[s]trengthen the Cape Town food system by focusing on improving access to affordable and nutritious food for Capetonians". This resulted in the food systems pilot programme, which was launched in July 2021.

PROJECT OUTLINE

Via a multilateral Food Systems Working Group (FSWG), the food systems programme is informed by food research, collaboration between City departments and food system stakeholders, including academics, civil society networks, Province and the private sector, as well as international best practice. The food systems approach integrates a range of actors and value-added activities involved in the production, aggregation,

processing, distribution, consumption and disposal of agricultural, forestry and fishing products. The programme consolidates and coordinates the City's existing food-related actions and mandates, while also adding new food governance and resilience-focused actions.

PROJECT DESIGN

The programme aims to improve the affordability and nutritional value of food for vulnerable communities by using high-quality data and focused interventions. It was informed by Province's foundational food systems work titled "Nourish to flourish" (2015) and gives expression to the City's goal of food security and climate-resilient food systems as articulated in its Climate Change Strategy.

Comprising 40 initiatives in the six thematic areas of food governance, food resilience, food production, food environments, food and health, and food economy, the programme illustrates the City's existing food systems work across town. By working transversally towards resilience, the food systems programme benefits from various partnerships with other spheres of government, academia, NGOs and City partners.

PROJECT IMPLEMENTATION

The FSWG was established in August 2019 to assist with the review of the City's Urban Agriculture Policy, but has since grown

to support the food systems programme. It offers opportunities for transversal collaboration, coordination, networking and cross-pollination to other platforms such as the Western Cape Economic Development Partnership Food Forum, the Nourish to Flourish working group and the University of the Western Cape (UWC) community of practice. The FSWG has also supported City initiatives, research projects and policy processes such as the Urban Agriculture Policy, Informal Trading By-law, and Province's humanitarian food relief programme.

The FSWG, which comprises representatives from 18 City departments and 15 external organisations, has met more than 10 times since inception. In addition, engagements with other cities and intermediaries such as Local Governments for Sustainability (ICLEI) and C40 have broadened the potential to learn.

Some of the successes of the food systems programme are:

- the preparation of an NGO database, which is instrumental in the humanitarian food relief work of both Province and the City;
- coordination of a food infrastructure map for disaster management;
- the integration of food-sensitive planning into the district (spatial) plans;
- input to the Informal Sector Support Framework, which included food

traders as an important part of the food system;

- the renewal of the Cape Town Fresh Produce Market lease and the completion of a business case with ICLEI that identifies a financial system for informal traders to improve their access to credit;
- support for GreenCape's study on the economic value chain of the urban agriculture system;
- continued support for the Philippi agrihub and Potsdam projects;
- support for the urban agriculture programme (food gardens pilot), which helps farmers engage in informal trading; and
- the establishment of a food systems research community of practice.

During the pandemic, the focus of the food systems programme shifted

towards humanitarian aid and evaluating supply chain integrity, and the team demonstrated agility in the face of rapidly changing circumstances. They utilised adaptive management by creating a food infrastructure map for disaster management and running scenarios to examine the risks and vulnerabilities of Cape Town's food system. This analysis is replicable and enhances resilience to future shocks and strains.

EVALUATION

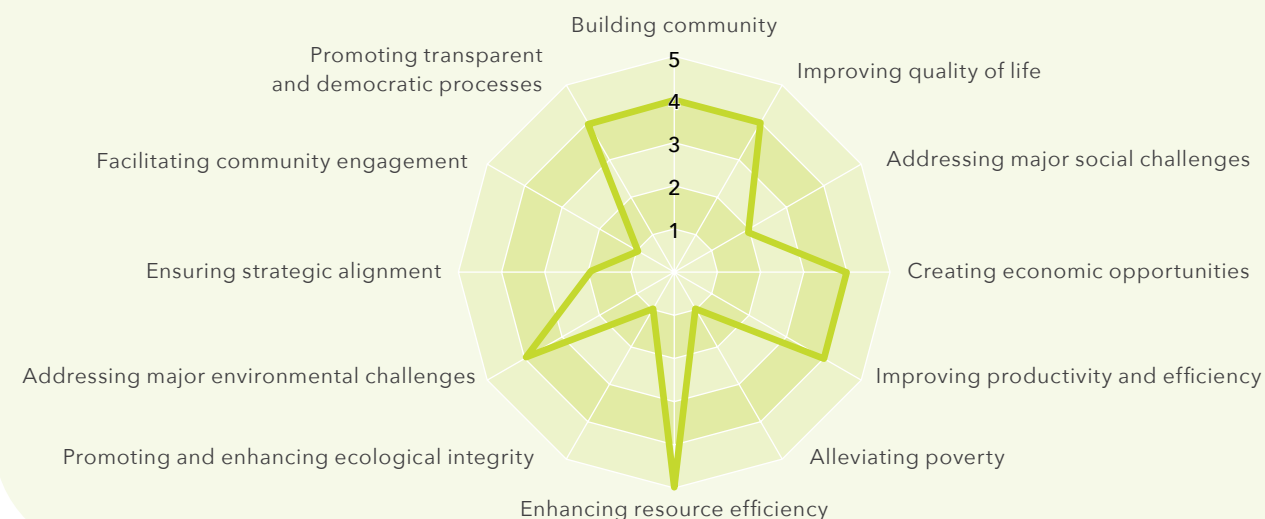
The food systems programme provides a basic, albeit loose, framework for food governance. It aligns with numerous international programmes/priorities that seek to address food security issues, including the Milan Urban Food Policy Pact and the C40 Food Systems Network. This is evident from the programme's alignment

with key City strategies, especially the Resilience Strategy, as well as national, provincial and local government policies and plans relevant to the food system.

The programme is an excellent example of promoting transparent and democratic processes. Key to its transparency is clear communication via the FSWG and reporting. Monitoring and evaluation of actions will occur via an annual food systems programme report that captures all the City's food-related programmes and projects, timelines and project manager details.

Interest in food systems is now greater than ever before. By working together, the City and its partners can play an important part in Cape Town's food system and effect change.

SUSTAINABILITY ASSESSMENT: THE FOOD SYSTEMS PILOT PROGRAMME





WOMEN AND GIRLS RESILIENCE PROGRAMME

PROBLEM STATEMENT

Women and girls often bear a disproportionate burden of having to carry their households and communities through shock events. However, global research has shown that, in general, women’s workload, limited decision-making power and unequal access to and control of resources reduces their ability to prepare, adapt and respond to shock events. Evidence suggests that even during the 2015–2018 drought in Cape Town, women played a disproportionately large role in water-saving initiatives. In addition, during shock events, there is often an increased risk of gender-based violence against females.

A targeted approach to improving the skills and capacities of women and girls, particularly from vulnerable communities, in preparing for and responding to

shock events can pay a multitude of dividends, including improved resilience of households and communities against an array of shocks and stresses.

PROJECT OUTLINE

The women and girls resilience programme trains girls and women in vulnerable communities in disaster first response, including first aid, fire safety and self-defence. The programme also covers issues of long-term resilience, such as biodiversity, climate change and food security. Moreover, the girls receive training in effective leadership and career planning, empowering them with skills that go beyond disaster response.

The programme ensures that the participants leave more empowered, and equipped with the skills and knowledge

required to help change behaviour, make better choices, and ensure that they and their communities are less vulnerable.

PROJECT DESIGN

High schools in certain communities are identified and invited to participate in the programme. Approximately 20 girls in grades 11 and 12 are selected from each participating school. Initially, participants meet for 10 days during the June/July school holidays, although elements of the programme run until December. The sessions are fun and informative, and tasks include the creation and presentation of a poster based on a particular disaster risk management topic. The NGO Fight Back SA teaches the young women how to defend themselves by means of a tailored self-defence programme based on the

principles of Krav Maga, an Israeli martial art. Participants attend a first-aid course and are taught basic firefighting skills. Learners also receive food garden starter kits to complement lessons on longer-term resilience, such as climate change and food security. After completing the programme, the girls have the opportunity to become disaster management volunteers. Those who continue as volunteers also gain access to longer-term mentorship. The City retains its connection with the participating schools and provides assistance with school-based resilience initiatives such as establishing food gardens.

PROJECT IMPLEMENTATION

Since 2017, the programme has trained 80 girls in grades 11 and 12 from schools in Bonteheuwel, Mfuleni, Scottsdene, Wesbank, Delft, Ocean View and Masiphumelele. Unfortunately, it has faced

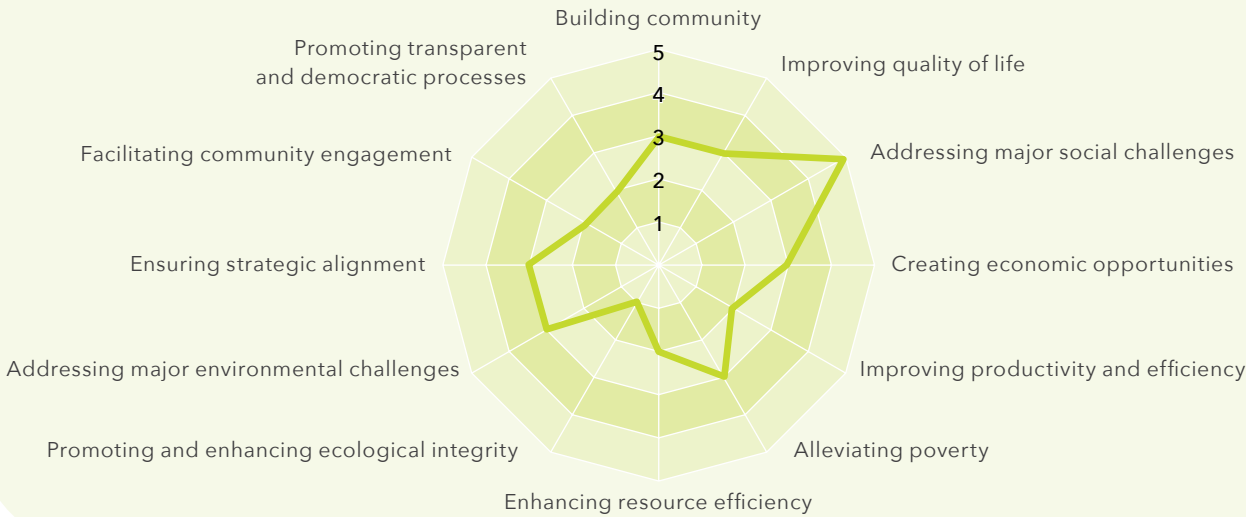
various challenges, including disruptions due to Covid-19 and budgetary constraints. Nevertheless, the feedback from learners and schools is positive. Some of the girls have remained involved as community disaster risk management volunteers, and some have even decided to pursue careers in emergency services such as firefighting and emergency response. The participating schools have also initiated recycling programmes and food gardens.

EVALUATION

The women and girls resilience programme addresses major social challenges by supporting vulnerable individuals and communities. Through the training and recruitment of volunteers, the City also increases community safety and security. The programme supports community building by promoting collaboration between the City, NGOs,

different spheres of government and citizens. Community participation is encouraged through the establishment of food gardens, eco-clubs and volunteer programmes. The programme addresses environmental challenges through lessons on climate change, sustainability, recycling, energy efficiency, water usage and biodiversity. In addition, learners are equipped with information that can be shared with their families and friends to build resilience and stay safe during shock events. Since City employees and NGO volunteers facilitate the programme, it does not create specific job opportunities. However, scholars and volunteers receive mentorship and career guidance. The programme is collaborative, highly replicable and adaptable, and aligns with City, national and international agendas such as the United Nations Disaster Risk Reduction (UNDRR) programme.

SUSTAINABILITY ASSESSMENT: WOMEN AND GIRLS RESILIENCE PROGRAMME



ECONOMIC PORTFOLIO





#YOUTHSTARTCT ENTREPRENEURIAL CHALLENGE

PROBLEM STATEMENT

According to Statistics SA's Labour Force Survey of the first quarter of 2021, young people continue to struggle in the South African labour market. At the time of drafting this portfolio, the unemployment rate among those aged 15-34 was 46,3%. The burden of unemployment is concentrated among the youth, accounting for 59,5% of the total number of unemployed persons.

Global macro-models and analysts associated with Trading Economics, an international supplier of market indicators, project the South African youth unemployment rate at 62%.

To reduce their burden of unemployment, many young Capetonians have taken the initiative to establish a number of small businesses across town. However, these businesses face a myriad of challenges, including access to resources such as capital, limited experience and contacts to promote business, and lack of mentorship on how to establish and run a business.

PROJECT OUTLINE

The #YouthStartCT challenge is an accelerator programme for start-up entrepreneurs. The overarching objective is to contribute to skills development, innovation and the development of an entrepreneurship culture in Cape Town and to support youth capacity development and job creation.

Through practical training and mentorship, the challenge supports young Capetonian entrepreneurs in commercialising, expanding and monetising their businesses.

PROJECT DESIGN

The #YouthStartCT entrepreneurial challenge is open to Cape Town residents who are South African citizens and between the ages of 18 and 35. To qualify, candidates must have a start-up idea that is already creating sustainable jobs or has the potential to do so.

The competition supports youth capacity development and job creation by providing an opportunity for individuals to highlight a specific problem and develop innovative ideas that will benefit customers and,

ultimately, their communities. At the same time, the challenge is about skills transfer and personal competency development. While the level of support varies, it focuses on developing both the entrepreneur and the idea through robust training and mentorship.

The training ensures that each entrepreneur has:

- an idea that is translated into a business model;
- a validated business model through repeated experimentation and piloting, where needed;
- a minimum range of viable products that have been tested with the target customer;
- a financial model and approach to raise capital;
- a marketing strategy;
- a business plan that is investor ready; and
- personal, entrepreneurial and pitching skills.

PROJECT IMPLEMENTATION

The City's Community Services and Health Directorate launched the first

entrepreneurial challenge in 2016, and seven annual instalments have since been hosted. Annually, the competition creates various opportunities for some 100 youth businesses and business ideas to springboard. The project team uses social media and radio advertisements to attract entries.

Winners from recent years include the following:

- **2022:** Hatch of Oak Poultry Farming, a small-scale poultry farming business.
- **2021:** Cloudy Deliveries, a bicycle delivery service that serves Langa residents using 11 bicycles. The team collects whatever is needed, from restaurant meals to groceries and books, thus promoting accessibility in the community, especially for the elderly.
- **2019:** Afriversity, an innovative initiative that teaches learners from

disadvantaged communities and with functional disabilities how to code, design websites and run marketing campaigns for small businesses in their communities.

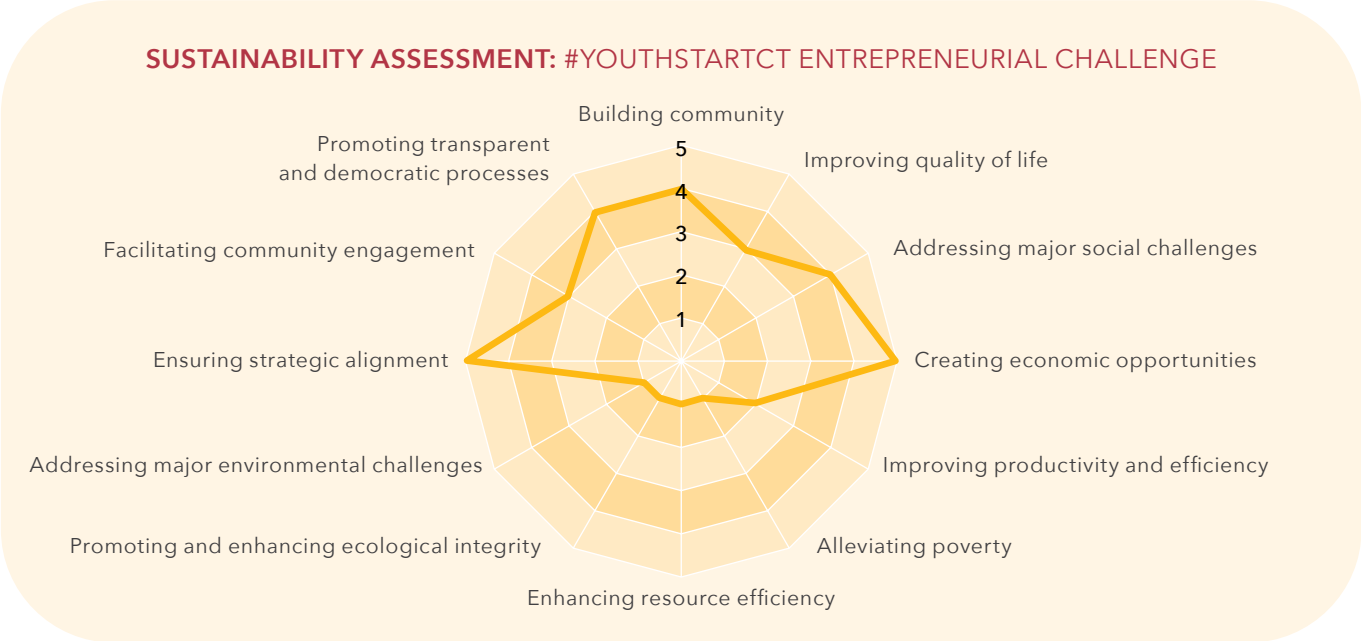
- **2018:** Langa Mountain Tomatoes, a project that produces and supplies tomatoes to local vegetable stalls, supermarkets and restaurants and has created jobs for three people in the area.

The annual #YouthStartCT entrepreneurial challenge is presented in partnership with internal and external stakeholders. In addition to assistance to commercialise their solutions through training and mentorship, winners also receive a range of prizes that promote access to capital, equipment/tools and space, access to further learning and coaching, and market linkages.

EVALUATION

The #YouthStartCT entrepreneurial challenge affords young people an opportunity to grow their businesses and to partner with the City on projects that will uplift job seekers and provide sustainable employment opportunities.

The challenge contributes to the City's response to the triple challenges of unemployment, poverty and income inequality. By creating opportunities for young people to develop entrepreneurial skills and boost their start-up businesses, the programme creates a conducive environment for ideas to thrive. It demonstrates the City's commitment to the development of its youth and recognises the important role young people play in society.



BUILDING ENERGY MANAGEMENT

PROBLEM STATEMENT

Energy-efficiency improvements in City facilities ensure operational cost savings and support the City's 2030 net-zero-carbon commitment. Retrofits of municipal buildings also ensure a safe, secure and healthy environment and support compliance with the Occupational Health and Safety Act 85 of 1993.

PROJECT OUTLINE

The City's municipal energy-efficiency programme has been running since 2008. Funded by the national Department of Mineral Resources and Energy (DMRE), the programme seeks to:

- ➔ improve the energy efficiency of municipal operations;
- ➔ improve indoor environmental quality and compliance with health and safety legislation;
- ➔ support the City's commitment to achieve net-zero carbon in municipal buildings by 2030;
- ➔ foster green procurement and the green economy; and
- ➔ promote innovation by incorporating cutting-edge technology, products and services.

PROJECT DESIGN

In 2020, DMRE provided a capital budget of nearly R11 million and an operating

budget of just over R800 000 for the municipal energy-efficiency programme as part of the national programme for energy efficiency and demand-side management. The primary objectives of the municipal energy-efficiency programme include:

- ➔ the screening of municipal building baselines and consumption profiles along with energy-efficiency assessments to determine optimal opportunities for energy savings;
- ➔ establishing a structured project work plan to retrofit facilities with light-emitting diode (LED) bulbs and passive infrared occupancy sensors, and to use Digital Addressable Lighting Interface (DALI™) and daylight harvesting technology, where applicable; and
- ➔ executing projects in accordance with annual work plans and evaluating and reporting on achieved energy savings.

Secondary objectives include:

- ➔ building capacity in energy-efficiency projects through skills development and job creation;
- ➔ improving collaboration across directorates and with external stakeholders;
- ➔ improving workplace environmental quality through increased compliance with occupational health and safety standards; and

- ➔ raising staff awareness on resource efficiency.

PROJECT IMPLEMENTATION

In the 2019/20 financial year, the City's Generation Development and Municipal Energy-Efficiency Branch undertook a project to retrofit several municipal facilities with LED bulbs and occupancy sensors. A sample of four of the projects outlined below highlight the successes achieved. In all instances, the City conducted a routine energy assessment to determine possible savings opportunities, and the most efficient lighting technology was selected after analysing the result and comparing it to consumption profiles.

- ➔ At Harare library, 227 LED light fittings and nine occupancy sensors were installed, and the existing lighting control interfaces were reprogrammed to make use of daylight harvesting.
- ➔ At the Spyker Street Electricity depot, 504 LED light fittings and 15 occupancy sensors were installed. The retrofit took 30 days from start to finish. A 40% saving to the tune of R255 066 a year was achieved by reducing consumption by 140 000 kWh/annum.
- ➔ At Brackenfell driving licence testing centre, 134 LED light fittings and 24 occupancy sensors were installed. The project took a mere 10 days. A 25% saving valued at R20 535 a year was

achieved by reducing consumption by 11 271 kWh/annum.

- ➔ At Central fire station, 183 LED light fittings and 11 occupancy sensors were installed. The work was completed in 30 days. An 18% saving valued at R94 232 a year was achieved by reducing consumption by 51 722 kWh/annum.

EVALUATION

The municipal energy-efficiency programme is a very strong example of cooperative governance between National Government (DMRE) and the City, as well as transversal management within the City, as the Generation Development and Municipal Energy-Efficiency Branch relies on other line departments who are the owners of the facilities.

Building retrofits improve indoor environmental quality and, therefore,

occupant/staff productivity. The installation of LEDs in public-facing facilities also improves social amenities and community experience.

The behaviour change aspect of the project seeks to promote education, training and awareness among City staff. To this end, the retrofits were accompanied by the putting up of posters on energy savings (Goodwood Traffic Department), the implementation of SmartFacility and associated public-facing dashboards, and the development of full energy management systems (Bellville wastewater treatment plant). SmartFacility and real-time access to energy data in facilities further promote access to information and accurate reporting.

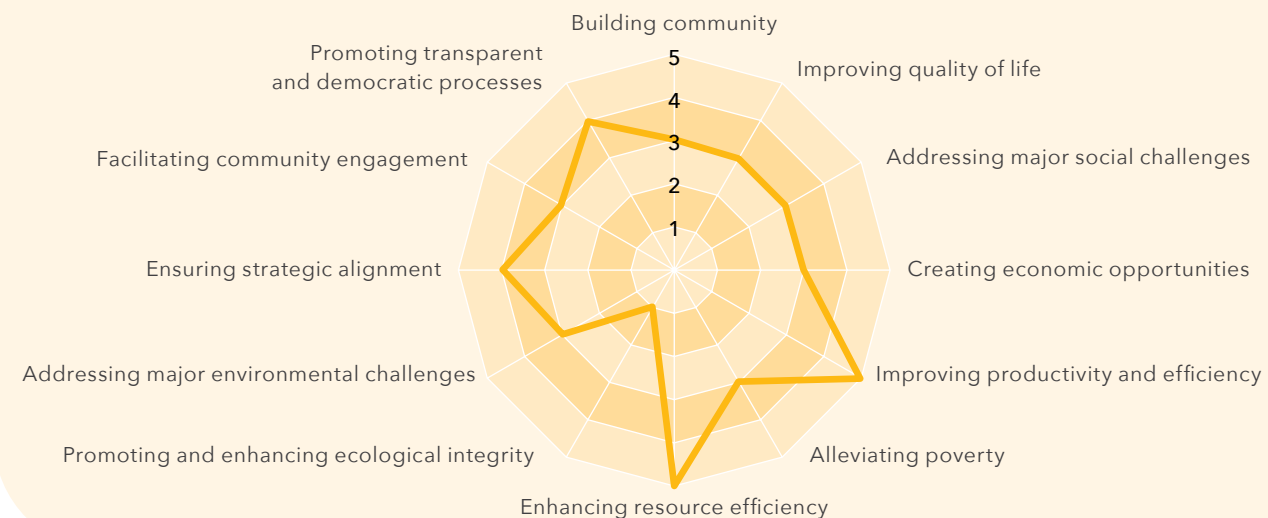
The project is an excellent example of maximising return on investment, which is evident from the energy and

operational savings achieved. This is particularly important in terms of Eskom tariff increases, where significant savings can be realised over time. Moreover, the project showcases the cost-effective use of funds in general, and external funding in particular.

It illustrates best practice in promoting energy efficiency and increasing the use of renewable energy. Energy-efficient retrofits further result in the procurement of environmentally friendly goods and services and support for the green economy.

Finally, the project aligns strongly with international, national and local policy, including the Paris Agreement and C40 Deadline 2020 commitments, the City's Climate Change Strategy and Environmental Strategy, and South Africa's Occupational Health and Safety Act.

SUSTAINABILITY ASSESSMENT: BUILDING ENERGY MANAGEMENT





CAPE TOWN MARKET

PROBLEM STATEMENT

The Cape Town Fresh Produce Market is a strategic economic asset to the City and plays a critical role in the local food supply system. However, over the years, irregular informal traders just outside the market property had increased significantly, posing a social and environmental challenge. The market itself had also become outdated, and some aspects required urgent improvement and upgrading. Moreover, the lease agreement between the City and lessee Cape Town Market (Pty) Ltd was set to expire in February 2024.

PROJECT OUTLINE

In response, the City signed a 40-month development agreement for the refurbishment of the market, along with a new, 30-year lease agreement. This included the relocation of the irregular Buitemark informal traders to a new, lawfully established traders market. The new

R65 million facility boasts 64 purpose-built individual trading stalls and proper access roads, which will benefit small, medium and micro-sized enterprises (SMMEs), emerging farmers and consumers.

In this way, the City has secured this significant strategic economic asset and recapitalised an ageing capital asset at no direct cost to the municipality.

PROJECT DESIGN

The City worked closely with interested parties to transfer the Gunners Circle informal traders to the premises leased by Cape Town Market. This was done with the buy-in of all stakeholders to ensure a long-term sustainable solution. The traders market was originally planned for a vacant field adjacent to the current produce entrance to the market. However, the traders required direct access to Gunners Circle, which meant relocating the truck stop and moving the produce entrance.

The traders market will operate under a sublease from Cape Town Market, as the traders rely on a different business model that is not subject to the statutory obligations of a commission market. To maintain peaceful interaction between the traders market and Cape Town Market required significant managerial skills.

Shares worth R40 million were transferred to an empowerment trust, which increased the black-owned shareholding in Cape Town Market from 26% to 51%. The sole purpose of the trust will be to provide training, business support and working capital to empower small and medium enterprises that utilise the market.

PROJECT IMPLEMENTATION

The market's database comprises over 4 700 suppliers. With annual sales in the region of 300 000 tons, this low-cost distribution centre is a vital contributor to food security. Depending on what

is in season, 850 to 950 suppliers use the market each month. The vast majority of suppliers are commercial farmers, followed by speculators, marketing agencies, smallholders and emerging farmers.

Every day, about 7 600 registered purchasers visit the market. These include wholesalers, retailers, restaurateurs, food processors, hawkers and informal merchants. Approximately 78% are informal traders, who go on to serve customers across the peninsula and beyond.

The improved trading stalls contain the basics needed to operate, such as ablutions, a loading station, and wiring for internet. The market also has improved security and safety measures. Part of the operation now is to protect the space and prevent any form of informal trading at the

site. This forms part of Cape Town Market's role as lessee.

EVALUATION

The funding agreement was finalised in late July 2022, and construction was completed to a high standard within four months.

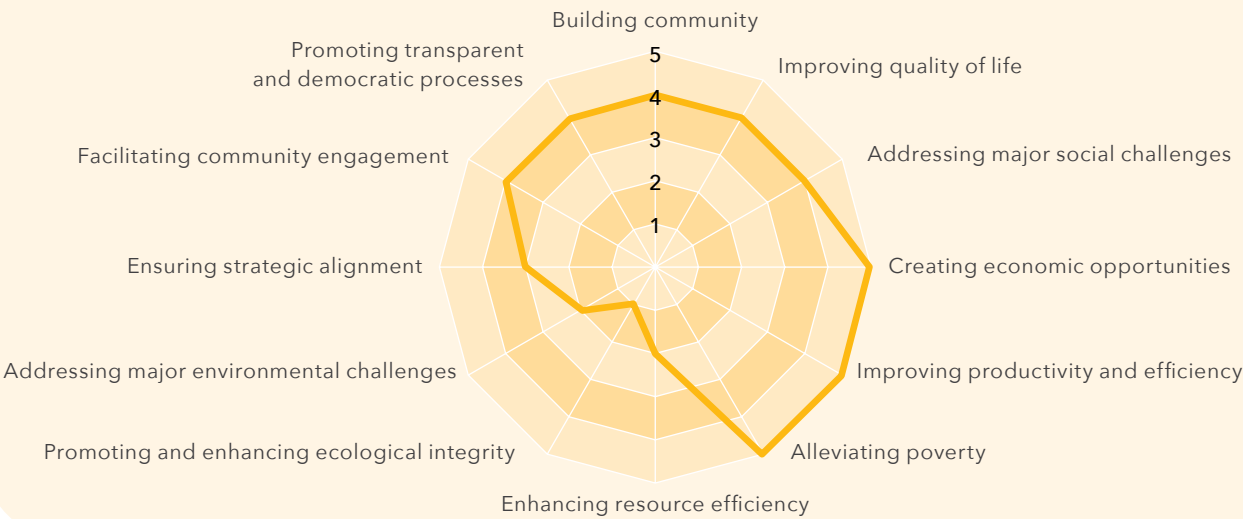
The City's budget was R42 million out of a combined total of R96,5 million. The project team devised a budget strategy to increase the R42 million budget, allowing the City to recapitalise the ageing capital asset at no cost, charging Cape Town Market R1,2 million in monthly rental for 38 months.

Moreover, microloans of R1 000 are offered to small merchants who belong to the empowerment trust. These loans are due in 72 hours, and if borrowers prove dependable, loans are increased to help individuals expand their businesses.

The market not only provides wholesome fresh produce at a low cost, but also distributes unsold edible products to NGOs and charities. This proved particularly useful during the lockdown, when the market delivered thousands of meals to impoverished areas in and around Cape Town every month. Produce no longer suitable for human consumption is given to small-scale pig farmers to use as animal feed. As such, the market continues to be critical in strengthening food security for the area and the agricultural sector as a whole.

The approach the City has followed with the Cape Town Market offers a new perspective on how to address infrastructure deficiencies, and unlocking economic opportunities and strengthening community partnerships to boot.

SUSTAINABILITY ASSESSMENT: CAPE TOWN MARKET





CITY OF CAPE TOWN VULNERABILITY VIEWER

PROBLEM STATEMENT

Few businesses, governments and citizens were unaffected by Covid-19. Municipalities were expected to provide additional services to communities during the nationwide lockdown, while continuing with critical basic service delivery. Like other municipalities across the globe, the City needed to respond to the intertwined health and socioeconomic crisis as effectively and strategically as possible.

Protecting vulnerable populations was the City's top priority. Given the dynamic nature of the pandemic, the City needed to adapt its operational responses rapidly. To achieve this, City teams needed access to a wide range of accurate and timely data to make critical decisions.

PROJECT OUTLINE

The Vulnerability Viewer is a product of the City's Covid-19 response programme, which saw the establishment of cross-functional work streams to address various challenges. The viewer was developed in response

to the need for a dynamic tool to provide relevant and insightful vulnerability profiles that could help teams proactively target interventions in vulnerable places and spaces in Cape Town.

Being overlaid by live Covid-19 case data (in real time as well as spatialised at levels lower than health district), the viewer also provided City response teams with the necessary information to reduce Covid-19 transmission.

PROJECT DESIGN

The Vulnerability Viewer forms part of the City's decision making value chain and supports critical organisational decisions in a timely manner. The dashboard utilised static socioeconomic spatial data and live Covid-19 case data so that multiple operational and strategic response groups could access information quickly and monitor the pandemic in a dynamic and interactive way. To eliminate inefficiencies such as poor quality or inconsistent data, the tool aggregates data from multiple sources.

The current Vulnerability Viewer focuses on:

- a pandemic overview, providing a snapshot of the impact of Covid-19 and the current state of affairs relating to infections in Cape Town;
- socioeconomic vulnerability, offering maps and socioeconomic indicators to highlight vulnerabilities in Cape Town; and
- City operations and responses, matching City staff capacity to identified areas of need.

Datasets include Covid cases, deaths and recoveries, socioeconomic variables such as population density, informality and vulnerability indices, as well as information on the City's available human resources.

Although dashboards are usually built with a very specific focus, the Vulnerability Viewer ended up serving various related needs, with an ever-changing focus. City department and user needs were considered in detail. Adopting such a user-centric approach was key to producing

a sustainable product and ensured a continual flow of information, including a feedback loop.

PROJECT IMPLEMENTATION

A transversal approach was critical to realising the Vulnerability Viewer. The Research Branch (Policy and Strategy Department) took charge of the development of the tool, working in partnership with Organisational Performance Management, Metropolitan Spatial Planning, and various data custodians across line functions.

Rapid results were possible because of the cross-functional team and the substantial existing data and related work the team could leverage. Adapting existing work allowed the team to add more functionality and, thus, serve more needs.

To equip operational teams to use the dashboard, the project team

demonstrated the Vulnerability Viewer on various forums. They also developed a user guide and requested selected champions to use the tool in critical meetings.

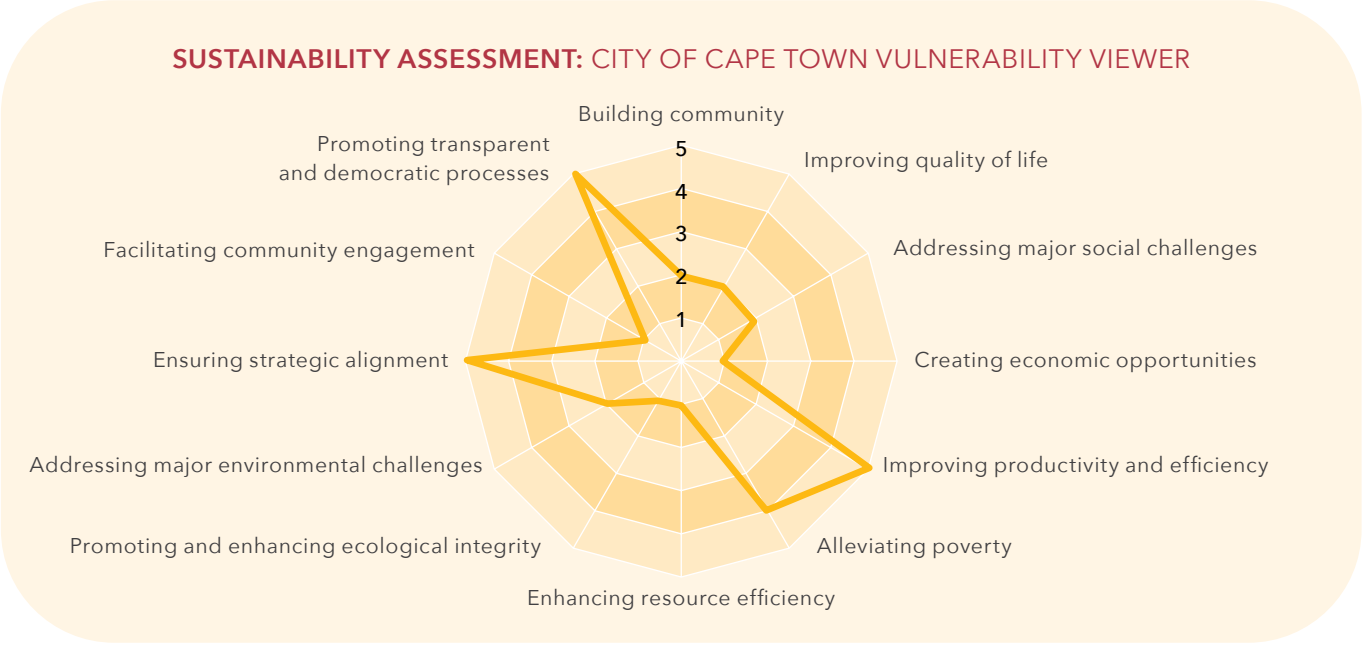
Partly thanks to the implementation of the Vulnerability Viewer, the City's Covid-19 Crisis Coordinating Team was recognised as Apolitical's global public service team of 2020 in the category "Covid-19 rapid responders".

EVALUATION

To address present and future challenges, the City requires both new solutions and more dynamic methods to arrive at such solutions. The Covid-19 pandemic in particular highlighted the need for swift assessment and action in times of crisis, making data and data analytics increasingly vital in addressing future challenges.

The Vulnerability Viewer provided decision makers with a high-level spatial view of live Covid cases as well as important contextual information to make better and faster decisions. Users were able to rapidly analyse situations and act confidently, knowing that their decisions were backed up by data. Similarly, having a single source of truth contributed to staff optimisation and alignment. A range of City departments and services were able to access the same set of data to use as evidence for their services and planning.

As Cape Town now enters the Covid-19 recovery phase, the Vulnerability Viewer will be used for strategic, programmatic and operational work to support sustainable service delivery. At the same time, it will be a key part of the City's response to any future crisis.





SAP CRM SERVICE REQUEST ENHANCEMENT

PROBLEM STATEMENT

The City has been using a SAP service request system for some time. Yet a number of shortfalls in the system started causing some frustration for residents and created service delivery loopholes. The system did not have the capability to provide feedback to service requesters while their request was being resolved. It was also incapable of spotting and grouping requests about the same issue submitted by different residents, which at times resulted in more than one team being dispatched. Moreover, the cumbersome and outdated geolocation feature meant that users frequently had to make do with vague location descriptions. Consequently, City operations teams wasted valuable time trying to locate the fault or issue, which in the event of sewage spills, pipe leakages and safety and security matters, posed the risk of severe secondary impacts.

PROJECT OUTLINE

Therefore, the project to enhance the City's SAP customer relationship management (CRM) service request system aimed to:

- ➔ improve the quality, detail and visibility of information used to provide customer feedback on requested services;
- ➔ improve the frequency of feedback to the customer at key milestones during the delivery of the service;
- ➔ improve service-level agreement (SLA) management;
- ➔ upgrade the geolocation viewer in SAP CRM;
- ➔ implement a text-based category and address search capability; and
- ➔ allow updates in area-based reporting.

At the time of drafting this portfolio, the service request system covered approximately 700 service categories, and over a million service requests were being created per annum.

PROJECT DESIGN

Implementation of the project involved the following six components:

- ➔ SLA management was implemented by inserting the service standard for each complaint type into SAP. This means the City can now monitor performance against service standards and escalate matters that have fallen short of these standards.
- ➔ Three additional customer request statuses were introduced in SAP CRM ("Registered", "Assigned" and "In progress"), which now trigger additional progress updates to the customer. Previously, there were only two statuses ("Open" and "Completed").
- ➔ Customers now receive automated SMS and email communication upon any status change to their service request. Previously, they only received notification when their request was created.

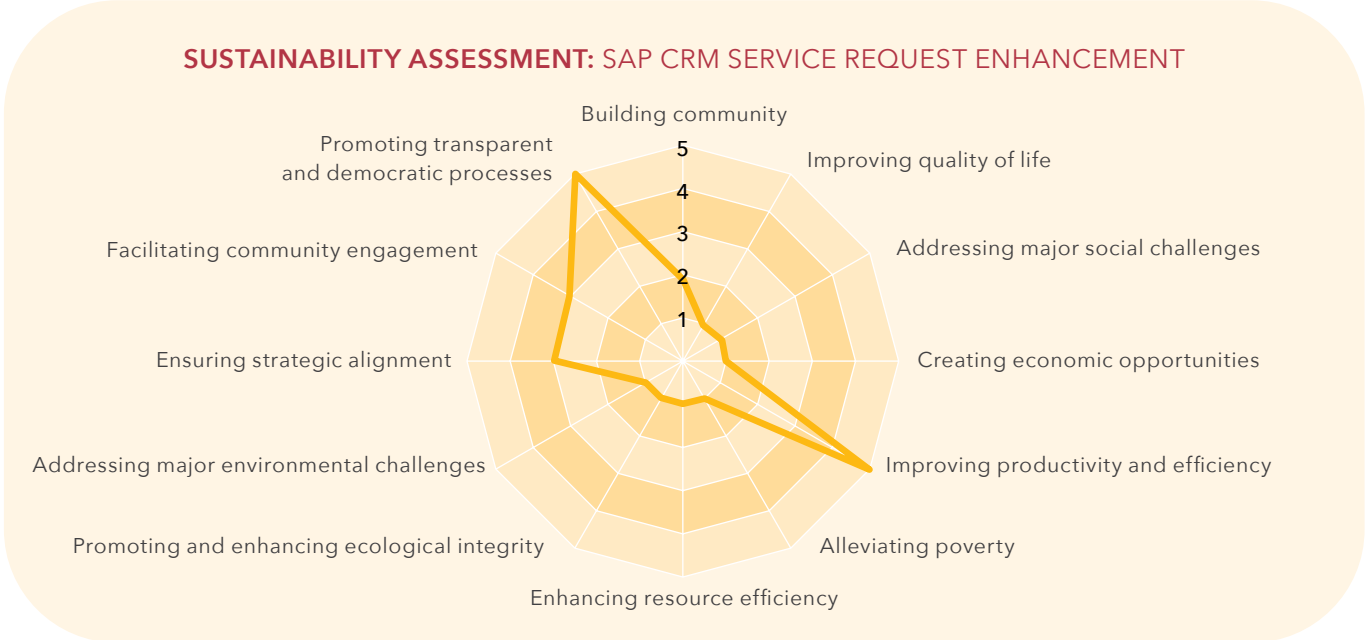
- ➔ A text-based search capability was introduced to simplify the categorisation and location of service requests for SAP CRM users. This reduced a four-step process to only two steps for internal users.
- ➔ SAP CRM now boasts a new and enhanced geolocation viewer to allow spatially enabled service requests. This enhancement eliminates the need to insert the fault location; instead, the location is pulled from a map inserted into SAP CRM for this purpose, geocoding the request at the same time.
- ➔ Finally, problem management was introduced to reduce duplication on the system.

the project staff throughout the project lifecycle. This was key to the success of the project, as it ensured that current internal processes and best practices were considered extensively. Implementation was further supported by training and change management interventions. The project commenced in March 2020 and was completed in June 2021, although further enhancements are currently under way. While funding was provided by the City's Customer Relations and Information Systems and Technology departments, numerous other City departments also participated in, and gave input into, the project.

EVALUATION

This project scores well on improving productivity and efficiency, ensuring strategic alignment, and promoting transparent and democratic processes.

Productivity and efficiency has been improved by the provision of geotags, which enable City teams to identify exactly where they are needed, thereby ensuring a timeous response. In addition, by grouping duplicate requests, the City can prevent the fruitless expenditure associated with dispatching more than one team to respond to the same service request. Moreover, strategic alignment is ensured through the reporting system available via SAP, as the City is able to access data on the percentage of requests responded to within the desired timeframe, residents' feedback, etc. This enables the administration to continue improving its systems for optimal responsiveness. Finally, transparency is promoted through notable additional communication with residents who have submitted a service request.





SERVICE DELIVERY TURNAROUND PROJECT - PHASES 1, 2 AND 3

PROBLEM STATEMENT

Under the strict regulations of the nationwide Covid-19 lockdown, the City could provide only essential services to residents. The immediate transition to remote working to try to contain the virus also posed serious challenges to service delivery. These restrictions on City operations affected the City’s service standards, resulting in large volumes of Covid-19 backlog requests. Furthermore, the pandemic emphasised the need for governments to keep up with citizens’ growing expectations, manage increasing pressure on their budgets, while navigating new challenges. Any failure to adapt to this new environment exposes local government to harmful risks and a consequent decline in public trust.

PROJECT OUTLINE

The service delivery turnaround project is an ongoing transversal initiative designed to recover and improve service delivery. In the context of the pandemic, the project sought to ensure that the City restored service delivery to residents, thus reducing the backlog to its normal band relative to previous years. To this end, the project established a data-driven shared view of service delivery across the organisation. This was essential to identify and develop focused interventions in functional areas that have a considerable effect on the City’s ability to deliver services.

PROJECT DESIGN

The project uses the data from the enhanced SAP CRM system (see page 66) to assess turnaround times and improve responsiveness to service requests. The data provide a starting point to engage with line departments to identify obstacles to service delivery, understand problems more deeply, and find sustainable solutions. As part of the value chain process, the service delivery turnaround project has two primary objectives, namely to improve service standards (the percentage of service requests closed within target) and to reduce the backlog to a normal band (relative to previous years) by ensuring that the City’s capacity to do work is sufficient to meet the demand.

To create a shared view, the project integrates data and the experience on the ground. Where the views differ, data help the service department resolve issues.

PROJECT IMPLEMENTATION

To address the backlog, the project team collaborated with line departments to increase their capacity to respond to the main service requests, namely those relating to water, solid waste management, housing and roads. Between October 2020 and June 2021, the project helped reduce the backlog in service requests across City departments by approximately one week of work, while the service standard improved by 0,7%. This equates to several thousand person-years less time spent by residents

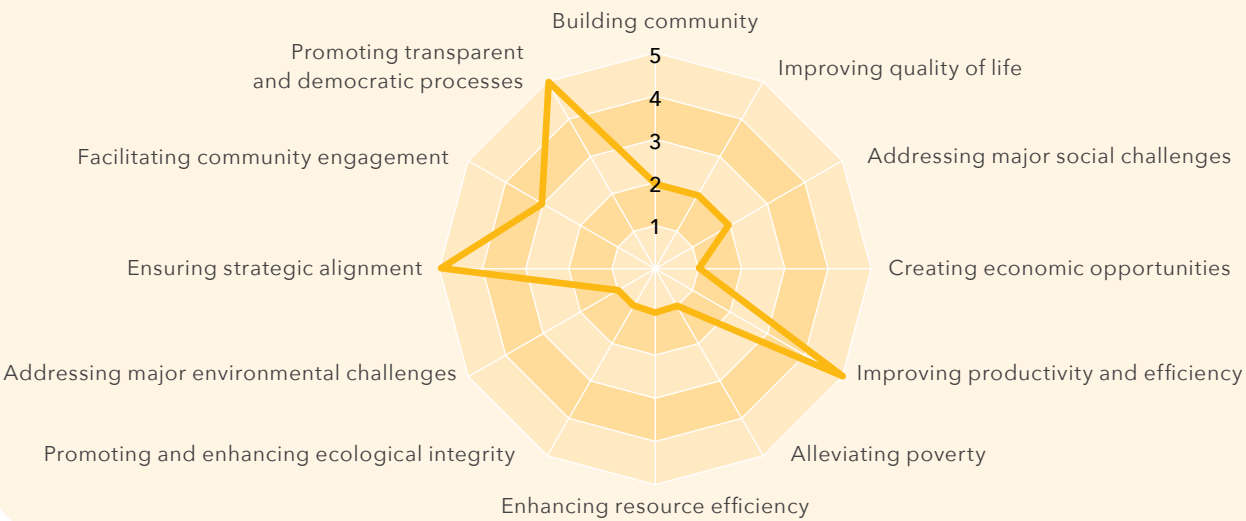
waiting for work to be done. To achieve this, a total system optimisation was required. The process structure adopted ensured that issues were identified as they arose. The iterative co-development and improvement of data products with service departments created deliberate feedback loops between line departments and the project team to ensure a quick response. Moreover, transversal collaboration provided the opportunity to effectively engage with a range of service delivery challenges, while working with domain experts in line departments provided critical insights into data anomalies or otherwise unknowns. Developing a culture of data analysis and use in the City has contributed to

the municipality’s ability to predict new needs and trends and to understand how existing processes and dynamics may be improved. Ensuring that the service departments understand how to use the data products and interpret the metrics has been key in this regard.

EVALUATION

The service delivery turnaround project demonstrates how data can inform and improve the City’s responsiveness and provision of public services. The active use of data plays an important part in ongoing public services design, delivery and improvement. It also offers transparency about successes and failures in ways that support accountability and stimulate public engagement and trust.

SUSTAINABILITY ASSESSMENT: SERVICE DELIVERY TURNAROUND PROJECT





SOUTH AFRICAN RENEWABLE ENERGY BUSINESS INCUBATOR (SAREBI)

PROBLEM STATEMENT

Clean energy innovation not only reduces barriers to the availability and affordability of clean energy for households in local communities, but can also offer sustainable livelihoods to clean-tech entrepreneurs. Therefore, it could go a long way towards addressing both climate change and youth unemployment, which are two of the major threats facing our communities and the economy at large. Yet the failure rate among start-ups and existing small businesses in the green economy is high.

PROJECT OUTLINE

In response, SAREBI has established a business development programme to support entrepreneurs and businesses in the clean energy and resource-efficiency sectors. By providing support services to companies at various stages of business development, from start-up to growth, its mission is to turn clean-tech entrepreneurs into successful business people.

SAREBI's enterprise skills modules aim to bridge the entrepreneurial skills gap

that sees so many start-ups and small businesses fail. The programme consists of action-learning workshops and coaching designed to teach entrepreneurs how to make profitable and sustainable business decisions. It also offers ongoing support for existing businesses.

PROJECT DESIGN

SAREBI's programme focuses on business model innovation and operational support to help trading entrepreneurs address the complexity of scaling green-tech and manufacturing companies and avoid the risk of failure. Its four key objectives are to:

- ➔ measurably improve the business skills of all beneficiaries and clients;
- ➔ unlock value-chain-related enterprise opportunities in the clean-tech sector;
- ➔ promote localisation and increase the level of local content; and
- ➔ contribute to job creation through the development of sustainable small businesses.

The project has a strong focus on businesses that are either located in Atlantis

or have the ability to provide direct services to future occupants of the Atlantis special economic zone (SEZ). By developing black-owned businesses, SAREBI also supports supplier diversity. Moreover, the business incubator programme strongly engages with local development organisations such as GreenCape.

PROJECT IMPLEMENTATION

SAREBI's Business Savvy workshop series covers essential topics such as defining your value proposition, knowing your markets and customers, developing a business model and financial model, and conducting a feasibility study. In addition, through its impact measurement system, SAREBI can analyse data from a wide range of perspectives. This data-driven approach helps create tailored growth programmes for entrepreneurs based on their unique conditions or requirements.

The project team also helps entrepreneurs develop new websites with search engine optimisation (SEO) capacity. Atlantis First Hydraulic Shop and M&B Fire Appliances

are but two of the Atlantis-based programme participants who have benefited from this assistance over and above all the regular features of the operational support package in the incubation programme.

In 2021/22, SAREBI also introduced several new marketing initiatives, including a redesigned programme website, enhanced marketing collateral and programme enhancements.

However, the project also faces challenges such as retaining a steady flow of grant funding and is proactively working on diversifying its revenue model and cutting expenditure. One initiative in this regard has been a re-evaluation of the cost of SAREBI's physical facility against its actual benefit to clients. Considering that workshops are delivered via a digital

platform, access to a physical space is not essential. A substantial reduction in office space and facilities that do not contribute to revenue streams and the core business model has subsequently resulted in significant cost savings and increased flexibility to scale operations and grow the business's footprint.

EVALUATION

SAREBI seeks to address major social challenges, particularly in the Atlantis SEZ, which is a key developmental node to create access to urban goods and services that have traditionally been far removed. It supports preferential procurement from black-owned businesses and promotes training and education.

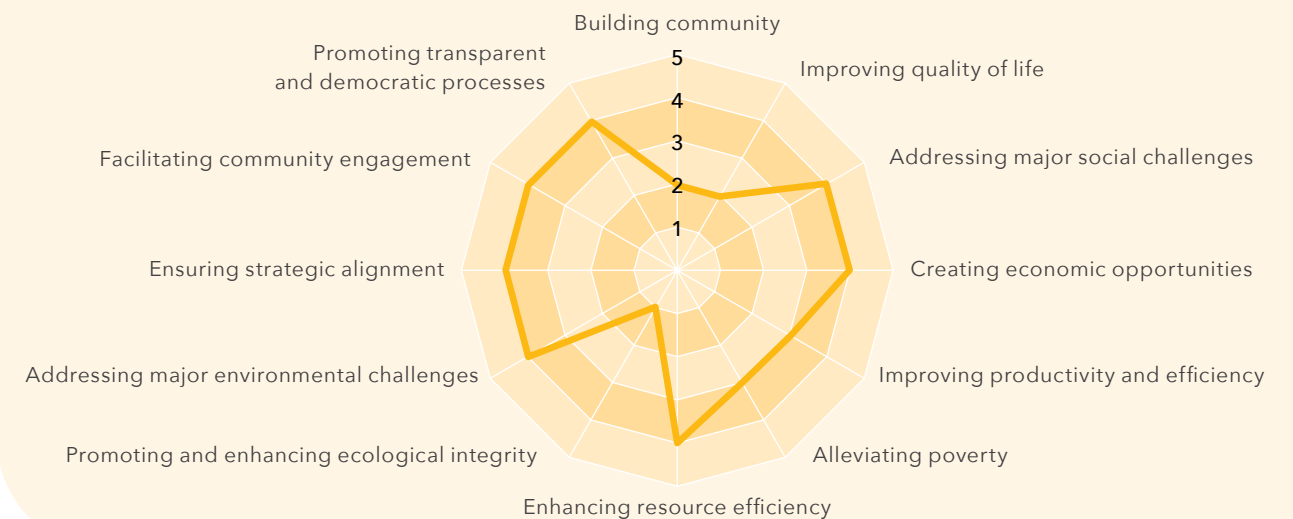
The project is a best practice example of creating economic opportunities. Over the past five years, SAREBI has supported

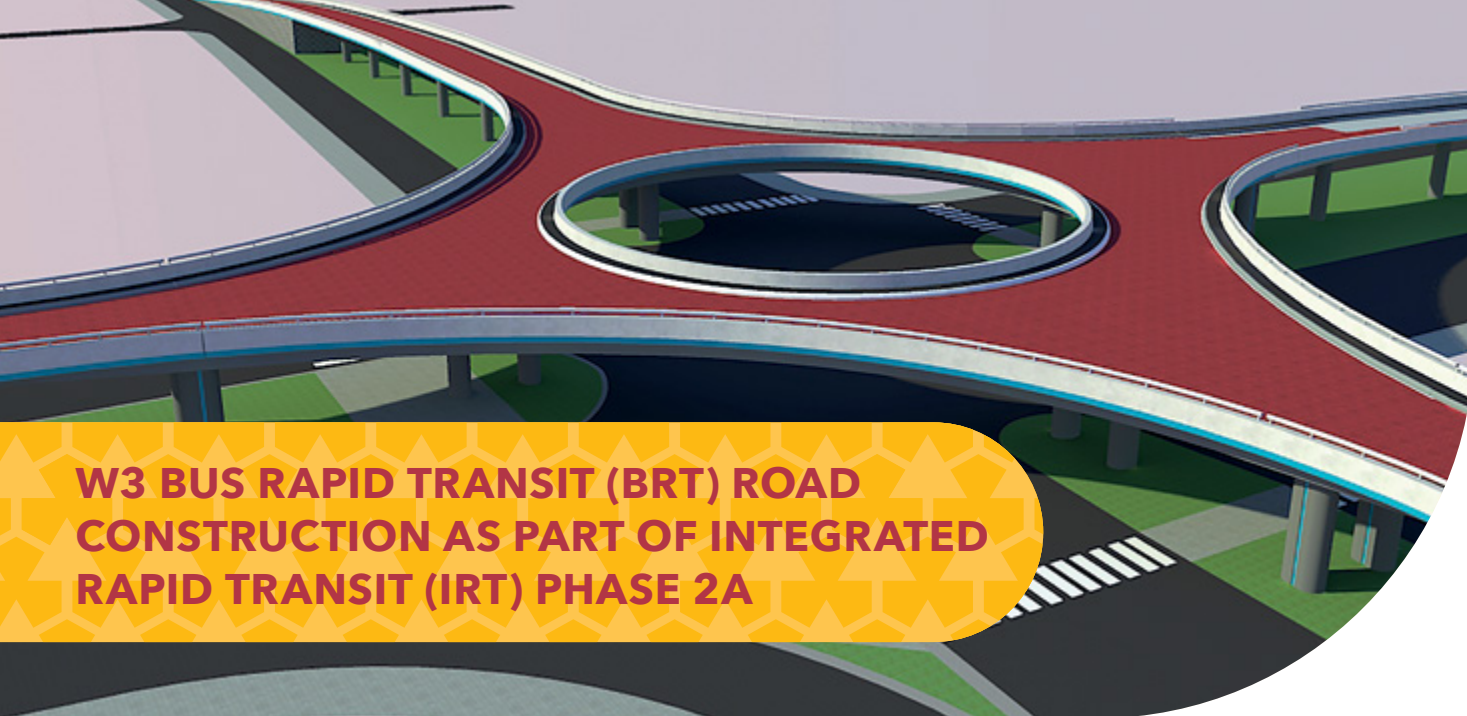
295 clients, resulting in the creation of 190 jobs. Clients are diverse, including black-owned (81,82%), female-owned (45,45%) and youth-owned businesses (22,73%). The incubator's total annual client revenue growth since 2015/16 is 447,54%.

SAREBI also performs strongly in terms of enhancing resource efficiency by supporting and incubating businesses in the green economy space. Aspiring incubates continue to apply to join the programme, which proves that collaboration with the City is having an impact on the lives of entrepreneurs and SMMEs in the clean energy and resource-efficiency sectors.

In addition, the project supports partnerships with National Government's business incubator programme.

SUSTAINABILITY ASSESSMENT: SOUTH AFRICAN RENEWABLE ENERGY BUSINESS INCUBATOR





W3 BUS RAPID TRANSIT (BRT) ROAD CONSTRUCTION AS PART OF INTEGRATED RAPID TRANSIT (IRT) PHASE 2A

PROBLEM STATEMENT

The roll-out of the MyCiTi BRT services to the metro southeast is one of the biggest initiatives the City has ever undertaken. The programme (called MyCiTi phase 2A) involves approximately 19 construction projects over the next five years to build infrastructure for safe, rapid, convenient and affordable public transport for more than 30 communities from Mitchells Plain and Khayelitsha to Wynberg and Claremont. However, a number of these projects will involve much more than creating the usual MyCiTi dedicated bus lanes, stations and stops. The intersection of Govan Mbeki Road and Jan Smuts Drive, for instance, which will be a key point on the phase 2A routes, is already severely congested. Here, the addition of MyCiTi buses would only add to the traffic challenge and cause delays for the bus service.

PROJECT OUTLINE

In addition to dedicated bus lanes, stations, stops, safe non-motorised transport facilities and new signalised intersections, the W3 project will see the construction of the first elevated traffic circle dedicated to MyCiTi buses at the intersection of Govan Mbeki Road and Jan Smuts Drive. This will remove MyCiTi buses from the already congested intersection by diverting them overhead. It will also enable MyCiTi to provide a priority public transport service with the quickest possible travel times, avoiding any traffic delays at the intersection below.

PROJECT DESIGN

The expansion of the MyCiTi service to the metro southeast will see people from as far as Khayelitsha enjoying quality public transport and accessing amenities,

public spaces as well as trade and job opportunities all the way to Wynberg and Claremont. It is expected to be completed within four years.

The epitome of transversality, the project will require close collaboration between City departments such as Transport Planning and Network Management, Transport Infrastructure Implementation, Industry Transition, Transport Shared Services, Property Management, Human Settlements, Water, Housing Development, Energy and Climate Change, Urban Catalytic Investments, and Finance. The City will also liaise closely with the national Department of Transport, National Treasury, and Province.

PROJECT IMPLEMENTATION

With design and procurement completed, the project officially kicked off in July 2022

with preparations for the building of the elevated circle and the upgrade of the Govan Mbeki/Jan Smuts interchange.

EVALUATION

MyCiTi phase 2A will use local contractors, improve safety for pedestrians and cyclists, and help mitigate traffic congestion. It will also offer those living along its footprint easier access to job and learning opportunities as well as social and entertainment options, contributing to an improved quality of life and better access to social opportunities.

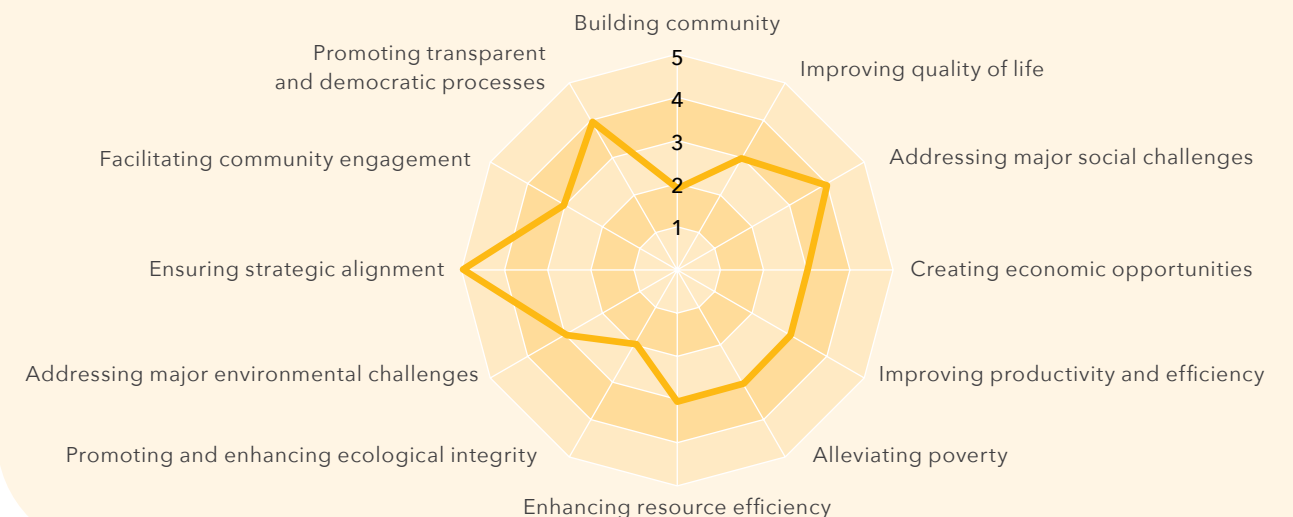
By providing and prioritising quality public transport, the project aims to redress

the legacy of apartheid. Universally accessible services will facilitate access for those using wheelchairs, strollers, bicycles and walkers, thereby supporting vulnerable individuals and groups. The dedicated lanes, non-motorised transport infrastructure and enclosed stations will create a safe environment, which will be enhanced by proper street lighting, security cameras and security personnel at stations. Moreover, the project will promote urban densification, particularly around the Hanover Park MyCiTi station, and can reduce Cape Town's carbon emissions by resulting in fewer vehicles on the road.

The project aligns strongly with the City's IDP, MSDF, the Integrated Public Transport Network (IPTN) Plan and the Comprehensive Integrated Transport Plan (CITP). It is a prime example of cooperative governance, and project roll-out is monitored closely by the national Department of Transport.

As the project affects various communities, the City is utilising all its communication channels to ensure ongoing engagement. All construction information is available on the MyCiTi and City websites, in quarterly newsletters, social media posts, and from the 24/7 Transport Information Centre.

SUSTAINABILITY ASSESSMENT: W3 BUS RAPID TRANSIT ROAD CONSTRUCTION





WELMOED CEMETERY COVID-19 PHASE 6, AND ATLANTIS CEMETERY COVID-19 PHASE 4

PROBLEM STATEMENT

Cemeteries within the bounds of the city require road networks for hearses and family vehicles to access the graves at the time of burial and when visiting deceased loved ones. Prior to Covid-19, the City used laterite material to surface the roads at its cemeteries. However, during the pandemic, laterite was in short supply, while the hard lockdown also resulted in less of the substrate being quarried.

To allow for dignified burials despite the material shortage and the strain of the pandemic, the City needed to find an alternative solution to provide the road infrastructure required to make its cemetery burial blocks more accessible.

PROJECT OUTLINE

To address the regional laterite shortage, the Community Services and Health Directorate approached other City departments to identify possible alternatives. One of the suggestions made was to experiment with reclaimed asphalt from the milling process. This trial began in March 2020 in two of the City's cemeteries – Welmoed cemetery Covid-19 phase 6, and Atlantis cemetery Covid-19 phase 4.

PROJECT DESIGN

The City undertakes daily road maintenance to ensure that its road network remains safe to use. In some instances, the existing layers of a road are milled off and replaced.

Previously, this milled asphalt material was sent to landfill sites, as it had no secondary use. However, in this project, instead of being taken to landfills or to the Roads depots for stockpiling, the reclaimed asphalt was redirected to the two cemeteries, where it was used as a substitute for laterite. At Atlantis cemetery, the Roads depot was able to deliver the substrate to the site, while at Welmoed cemetery, contractor Illizwe Civils transported the material to the site. The contractors WF Construction (Atlantis) and Illizwe Civils (Welmoed) were responsible for constructing the new cemetery roads. The project design emerged organically, as the urgency brought about by the pandemic left little time for formal planning.

In addition to Recreation and Parks (in Community Services and Health), collaborators included the Integrated Transport Implementation design team, the Roads Infrastructure and Management departments, as well as consultants Bosch Projects.

PROJECT IMPLEMENTATION

The initial project was implemented from March to June 2020. At the time of interview, the roads that were surfaced with the reclaimed asphalt mix remain intact. Under normal circumstances, the longevity of the road would be assessed prior to it being used, but in this case, that was not possible. However, the City is currently conducting further analysis and hopes to provide a formal grading for the material. Initial evidence suggests that, in the long term, reclaimed asphalt

may be used as a substitute for laterite on roads with low to medium usage, such as cemetery roads. The recycled substrate may also have other potential uses, such as footpath construction in parks and sidewalks. This will save the City money, as laterite will no longer need to be purchased for these projects. The repurposing of the reclaimed asphalt also reduces the impact on our landfill sites. In addition, the quarrying of laterite will be minimised, thereby reducing the City's dependence on this scarce natural resource.

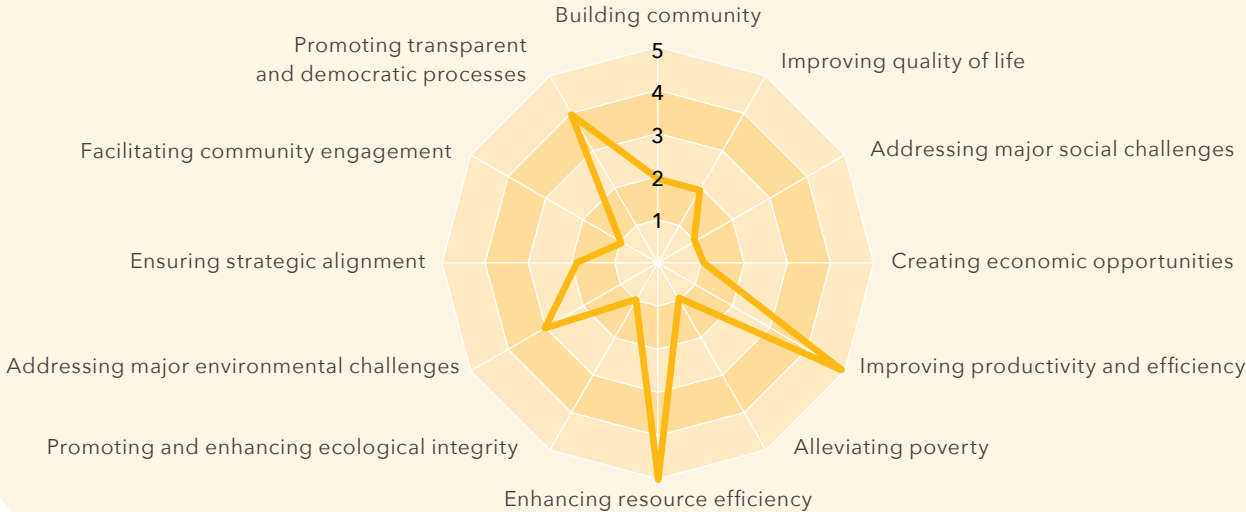
EVALUATION

This project exemplifies the adage 'Necessity is the mother of invention'. By reusing the milled reclaimed asphalt mix, the City was able to maximise its initial investment, and the new substrate

resulted in significant cost savings on the provision of laterite. In addition to promoting resource efficiency, the project also addressed environmental challenges by following a lifecycle approach, diverting waste from landfills. Initial assessments suggest that the reused milled asphalt mix is an environmentally friendly road surface. However, further studies are required before it is used in vulnerable environments, as there is a risk that the asphalt could be contaminated by other chemical and organic substances. If so, this will be addressed through the proposed material grading process.

The project demonstrated transparent and democratic processes by responding to public needs and adapting to a changing context. It is also easily replicable, and plans are under way for it to be formalised and embedded in City processes.

SUSTAINABILITY ASSESSMENT: WELMOED CEMETERY COVID-19 PHASE 6, AND ATLANTIS CEMETERY COVID-19 PHASE 4



ECOLOGICAL PORTFOLIO





ATLANTIS ALIEN VEGETATION REMOVAL

PROBLEM STATEMENT

The spread of invasive species on unoccupied land leads to loss of indigenous plants, an increased fire risk, and reduced water infiltration into underground water reserves, including the Witzands aquifer underlying Atlantis. In addition, sites with heavy infestation become more difficult to manage due to illegal waste disposal, an increased risk of land invasion, and safety and security risks.

Notably, Atlantis is located in an important lowlands fynbos biodiversity corridor, which currently has a low level of formal protection as well as a high level of fragmentation and degradation. Therefore, key indigenous plant species here require urgent protection.

PROJECT OUTLINE

A group of City-owned properties in the Atlantis Industria were chosen for the first phase of alien invasive plant removal and the search and rescue of key indigenous species. These sites included land in the new Atlantis SEZ, which had been established as a green industry hub. By proactively clearing aliens and rescuing indigenous plants, the project sought

to minimise the loss of important plant species, while enhancing the conservation value of the Atlantis Conservation Land Bank area. This, in turn, would help the SEZ catalyse development in the area.

PROJECT DESIGN

The project is an EPWP initiative that makes use of teams of local workers from the greater Atlantis area. The teams manually remove plants from the selected sites, with minimal machinery. The project is currently in its second iteration and will continue in this way as and when budget becomes available.

The primary intent is for sites in Atlantis to be development-ready by ensuring that they are stripped of conservation-worthy species and by removing alien invasives. This, in turn, enhances the safety and security of surrounding industrial developments.

The project represents a partnership between the City's Enterprise and Investment Department (which provided three quarters of the funding), Invasive Species Unit (serving as the formal EPWP project managers) and Kader Asmal

Catchment Management Programme (which provided the rest of the funding). It is managed by Environmental Management, Property Management (as land custodians) and the Atlantis SEZ company.

The initiative serves a number of aims: It enables Property Management to comply with the Biodiversity Act through the removal of alien invasives; it is a useful vehicle for Enterprise and Investment to support job creation without having to manage the project, and it has made the Atlantis SEZ more investment ready.

PROJECT IMPLEMENTATION

The project is being implemented under an EPWP-linked tender held by the Invasive Species Unit.

Some 209 ha of land has been cleared of alien invasives, and an area of 59,54 ha was subject to the search and rescue of indigenous plants.

The project created 60 EPWP jobs. Following input from Atlantis business associations, the service provider was requested to increase the local team complement, and 30 new workers were sourced from the local subcouncil

jobseekers database. The project also provided skills transfer through on-the-job training, induction and ongoing 'toolbox talks', training for those assisting with search-and-rescue operations, and formal training (first aid, and health and safety) for supervisors.

The EPWP framework imposes various complex administrative and management controls. However, the Invasive Species Unit, as the EPWP project manager, supervised the service provider and undertook EPWP-related administrative and reporting duties on behalf of other City line functions.

EVALUATION

The project is an excellent example of facilitating community participation and promoting social cohesion and collaboration. This is evident from the

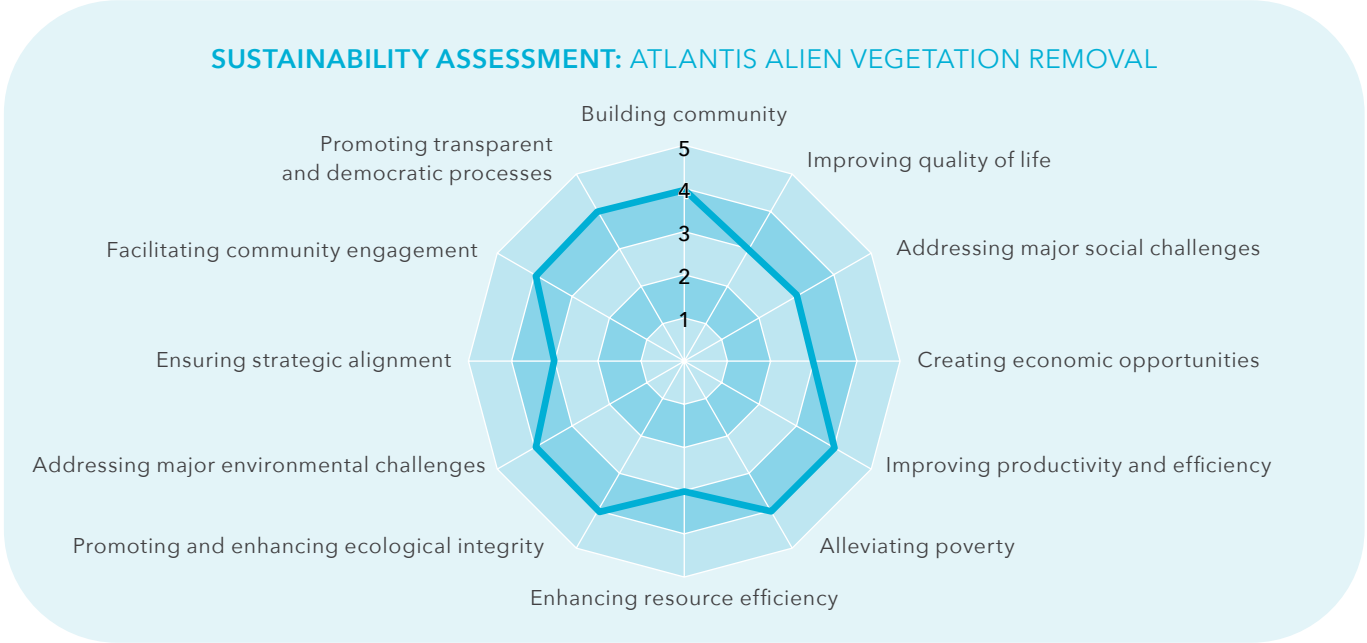
engagement with the local community prior to rolling out the intervention, as well as the hiring of local EPWP workers in response to requests from Atlantis business associations. This ensured that the project was seen as being of real value to the community.

The initiative also provided access to social and economic opportunities by creating jobs for previously disadvantaged workers. Moreover, it offered training as well as administrative and basic business skills transfer to service providers, which they can use for future City-led EPWP and other, external projects. The long-term intent is to upskill EPWP workers and teams to enable them to become independent contractors (SMMEs).

Based on its positive impact on water security and fire risk reduction, the project

is an excellent example of restoring and rehabilitating degraded ecosystems and building resilience to climate change. Notably, alien invasive clearing in Atlantis, above the Witzands aquifer, serves to increase water infiltration, groundwater recharge and, therefore, water availability.

Finally, the project sites in the Atlantis Industria form part of a larger climate adaptation corridor (identified in the Biodiversity Network), and the clearing of these sites reduces the risk of invasive species spreading to areas of high biodiversity importance. Conservation-worthy plants removed from the sites were relocated to appropriate sites in the Atlantis Conservation Land Bank area managed as part of the adjacent Witzands aquifer nature reserve or to a holding nursery area to allow for replanting at a more appropriate time.





BELHAR GARDENS RENTAL ESTATE

PROBLEM STATEMENT

Inadequate housing presents a major challenge to social and economic development. In addition to providing fully subsidised housing to the indigent, it is also important to respond to the housing needs of middle-income earners. At the same time, long-term sustainability requires the use of innovative technologies as well as an acute awareness of how scarce resources are used. It is increasingly important to focus on methods and designs that save water and electricity and to limit the impact on our environment. Therefore, to meet the increasing demand for affordable housing, the City needs to explore how to deliver more affordable housing, in partnership with others, at scale, and with innovation.

PROJECT OUTLINE

The 629-unit Belhar Gardens rental estate is one of South Africa's first social housing projects recognised by the Green Building Council of South Africa for its extensive sustainability focus, having received final EDGE (Excellence in Design for Greater Efficiencies) certification. Considering the significant impact of electricity costs on the total cost of occupying a home, the inclusion of energy-saving features not only delivers environmental benefits by mitigating climate change, but also helps expand access to quality affordable accommodation for underserved individuals and families.

PROJECT DESIGN

Belhar Gardens provides rental housing specifically aimed at individuals or families earning between R3 500 and R22 000 per

month. The rental estate is located in the Belhar restructuring zone, with convenient access to the transport hub in Bellville, two malls, three industrial areas, a range of primary and secondary schools, as well as recreational facilities. Numerous private clinics, dental surgeries as well as the St Vincent local clinic and Tygerberg hospital are also close by. The estate consists of 189 bachelor units, 230 one-bed units and 210 two-bed units. Each unit is fitted with water flow restrictors and water meters that measure the amount of hot and cold water used. This ensures that tenants are aware of their water usage at all times and can implement their own water-saving measures. The project also incorporates energy-efficiency measures such as heat pumps, which can use up to 48% less electricity than conventional geysers.

PROJECT IMPLEMENTATION

Initiated in 2016 and completed in 2018, Belhar Gardens was developed by the Madulammoho Housing Association, a social housing company that partnered with the City. Funding was obtained from Nedbank Corporate and Investment Banking's division for affordable housing development finance and South Africa's Green Fund. To provide people with alternative housing options at different rental levels, Madulammoho developed a stepped approach that allows households to choose housing according to their income. Therefore, should a tenant's income decline, they still have other options to access clean and safe accommodation within their means. The average Belhar Gardens unit consumes 30% less water and energy

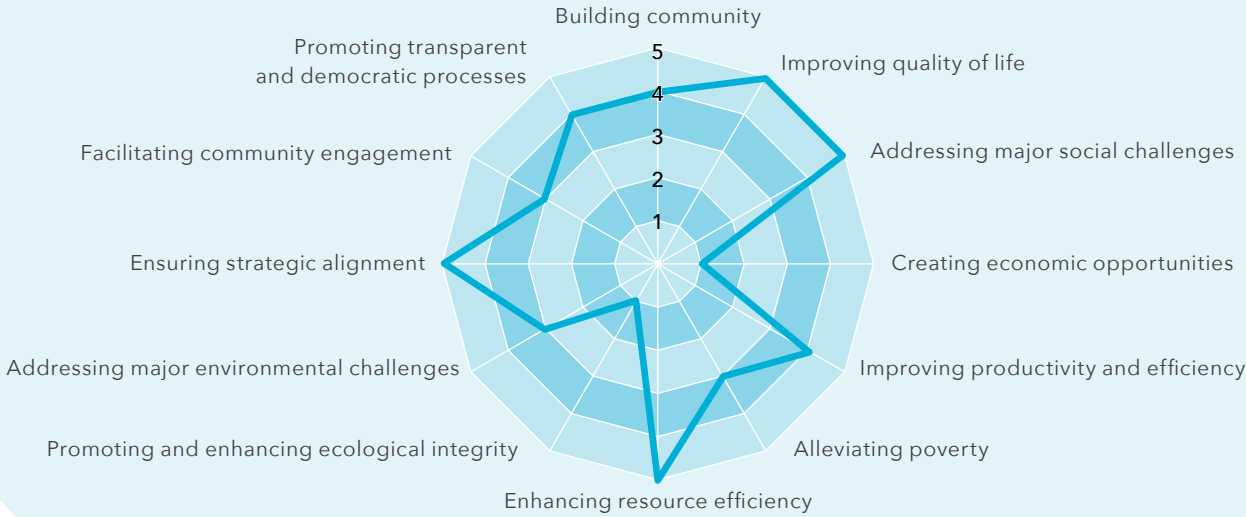
than comparable units in other housing developments with traditional water and energy designs. To further promote these green affordable homes, the development also includes social facilities such as after-school programmes, church and entertainment halls, gardens, and open spaces for recreation. The inclusion of these non-residential facilities promotes residents' holistic wellness and helps build happy and vibrant communities.

EVALUATION

Social housing has the potential to address concerns around urban regeneration and improve housing densities. As this project shows, affordable housing developments can indeed contribute to sustainable development if location, integration and viability are carefully considered. The Belhar Gardens rental estate delivers an improved quality of life as well as

excellent resource efficiency, illustrating that delivering housing is also about delivering sustainable benefits to South Africans. Next to rent, electricity is one of the largest expenses for tenants. Designing resource-efficient units that are intentionally aimed at containing the total cost of accommodation for households reduces the risk that tenants will eventually not be able to afford their rent. Furthermore, savings from green solutions can help households work towards homeownership. The effective and efficient management of the rental units is evident from regular payments for services provided. Since green social housing is still a relatively new initiative in South Africa, Belhar Gardens provides a useful case study, demonstrating that affordable housing can go green and still be viable.

SUSTAINABILITY ASSESSMENT: BELHAR GARDENS RENTAL ESTATE



BELLVILLE CATALYTIC-PRECINCT ZERO-WASTE INITIATIVE

PROBLEM STATEMENT

Over the past decade, central Bellville has experienced significant decline. Business investors have been deterred by safety, security and cleanliness concerns. Waste management has been a particular challenge, and recycling initiatives have been informal, ad hoc and uncoordinated. As businesses moved out of central Bellville, buildings were often left vacant and allowed to fall into disrepair, contributing further to a sense of degradation. Despite its challenges, however, central Bellville is ideal for business ventures because of its central and accessible location. Therefore, to attract new investment, the standard of basic urban management services needs to be restored to acceptable levels.

PROJECT OUTLINE

The Bellville catalytic-precinct zero-waste initiative is one of many projects running concurrently under the City's catalytic land development programme, which supports the administration's strategy of spatial targeting and densification in inner-urban locations through transit-oriented development. Central Bellville is one of three priority areas that were identified for regenerative projects and proactive infrastructure investment.

The zero-waste initiative was implemented in response to research findings that

had revealed major concerns regarding waste management in the area as well as under-realised economic value in the waste value chain.

PROJECT DESIGN

The project has two components, namely the zero-waste schools and the waste trolley initiatives.

The zero-waste schools initiative targets high schools in the vicinity of central Bellville. As part of the Life Orientation curriculum, learners are taught about recycling, waste minimisation and composting. In addition to receiving a comprehensive toolkit and resource directory on responsible waste and environmental management, learners also attend a series of workshops. At the same time, the programme changes the waste infrastructure at schools: A full zero-waste system is implemented, which includes replacing general waste bins with brightly coloured, clearly labelled recycling bins. An ecobrick station is also included at each recycling location. Participants are incentivised through targets and competitions, and waste reduction is measured by the amount of waste collected on a weekly basis. The savings achieved from a reduction in conventional waste disposal as well as the revenue generated by recycling can be reinvested in educational priorities.

The waste trolley initiative, in turn, targets informal waste collectors operating in central Bellville. It recruits individual collectors to participate in a skills development and life skills programme that prioritises personal and economic development. After six months of diligent performance on the programme, collectors are issued with high-visibility vests and become 'formal' waste trolley operators. At this stage, participants are introduced to the owners of local small businesses, with whom they then partner to collect recyclable materials such as cardboard, paper, glass and plastic. Seven months after being admitted to the programme, high-performing participants receive a durable, custom-designed trolley developed by a team of engineers in collaboration with urban management consultants Geocentric. The trolleys include panels that can carry sponsor branding to help carry the cost of the infrastructure. The initiative, which aligns with the national waste picker integration guidelines, is intended to make waste collection safer and more profitable for collectors and help the City achieve waste minimisation targets.

PROJECT IMPLEMENTATION

Through its Urban Catalytic Investment Department, the City has invested approximately R300 000 in these projects. This has been augmented by both

monetary and non-monetary donations and sponsorships from NGOs and the private sector.

The zero-waste schools initiative kicked off in 2019 with a pilot at DF Malan High School, which has approximately 1 000 learners and 90 staff members. By the end of the pilot, the school had diverted over 60% of its waste from landfill. After 18 months, the school had recorded 4 782 kg of waste diverted from landfill, R3 304 in income generated from recycling, and R32 400 saved in annual waste removal expenditure. The initiative is now being rolled out to another four local schools and has been endorsed by all key stakeholders, including Province's Education Department. Further expansion is on the cards. Although the organics composting component of the initiative is still in its infancy, this may also provide a source of funding in the longer term. At the end of 2020, the project won

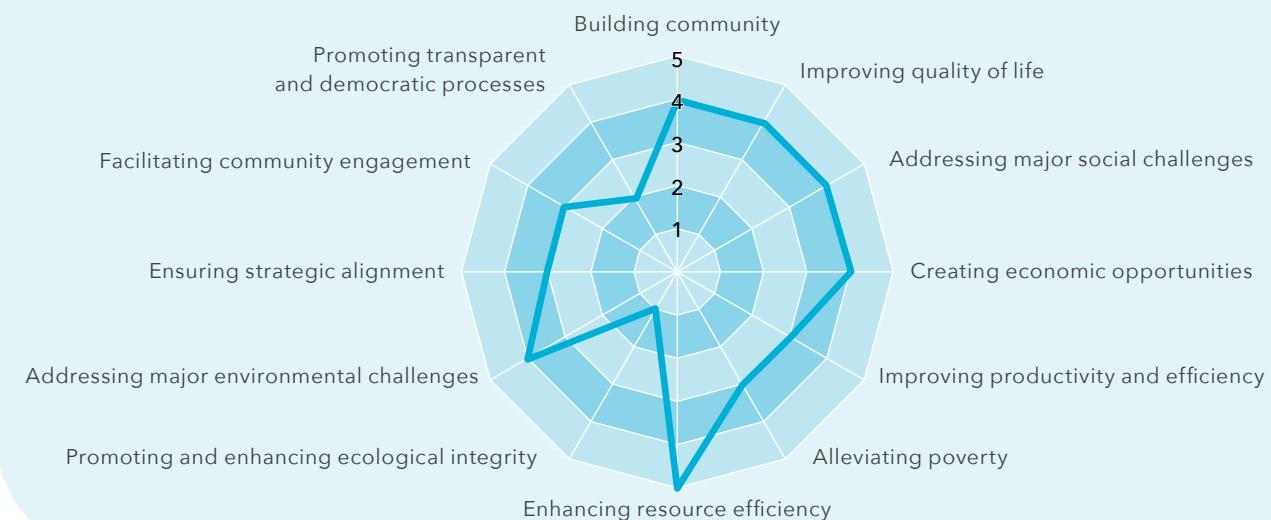
the *Mail & Guardian* Greening the Future award and received an honourable mention in the International Downtown Association's Downtown Achievement Awards in 2021.

Despite some setbacks resulting from the pandemic, the waste trolley initiative too has been successful. It was launched in 2018 following 18 months of extensive research and consultation in collaboration with GreenCape, the Voortrekker Road corridor improvement district (VRCID) and MES, a social upliftment NGO. To date, 90 businesses have subscribed to the trolley project, working with eight trolley operators. Between March and June 2021 alone, nearly 9 500 kg of waste was recycled, 2 636 full waste bags were collected, and R8 100 was paid out to the eight operators. The project was named best community recycling initiative in the 2020 Petco recycling awards.

EVALUATION

Advocating for waste reduction, reuse and recycling, the Bellville catalytic-precinct zero-waste initiative scores highly in terms of enhancing resource efficiency. At the same time, it creates economic opportunities by supporting the informal economy and transferring skills. Both project components have also extensively contributed to community building through collaboration with schools, businesses and NGOs in the area. The initiative addresses environmental degradation by directly reducing waste going to landfill. Through education and awareness at schools, it is also likely to promote positive behaviour change in the community. As a whole, the zero-waste initiative aligns with provincial, national and international priorities and commitments, is highly replicable and adaptable, and improves productivity and efficiency.

SUSTAINABILITY ASSESSMENT: BELLVILLE CATALYTIC-PRECINCT ZERO-WASTE INITIATIVE





ELECTRIC VEHICLE (EV) CHARGING STATION PILOT

PROBLEM STATEMENT

Transportation is the second-largest contributor to carbon intensity in Cape Town. Growing congestion and inefficiencies not only increase the city’s transportation-related greenhouse gas emissions, being a major contributor to climate change, but also degrade the air quality and have a negative impact on residents’ health.

With the transport sector rapidly moving towards electrification worldwide, global export and import markets for traditional internal combustion engine vehicles are shrinking. Meanwhile, EV markets are growing. This inevitable shift to electric mobility requires adequate preparation by the City to ensure a just and inclusive transition for all citizens.

PROJECT OUTLINE

The City collaborated with the United Nations Industrial Development Organisation’s (UNIDO) low-carbon transport project to accept a generous donation of two publicly accessible EV chargers and associated solar PV carport infrastructure. The Sustainable Energy Markets, Facilities Management and the Electricity Generation and Distribution departments worked together to ensure the successful implementation, monitoring and evaluation of the project.

The project creates awareness and promotes the uptake of EVs, while also collecting data that will help the City understand the potential impacts of EV charging on the electricity grid. The stations located at the Bellville and Somerset West civic centres offer EV owners an opportunity to charge their cars for free.

PROJECT DESIGN

The respective locations of the two solar-powered EV charging stations were strategically chosen to solve concerns regarding restricted infrastructure availability, accessibility and so-called ‘range anxiety’ (the worry that the vehicle’s battery may run out of power before reaching the destination).

The City’s web-based SmartFacility dashboard collects data on charger use and customer behaviour, and tracks and displays the system’s energy consumption in near real time. It evaluates and details solar generation, export data, energy usage and charging session count over time. Monitoring charging behaviour helps verify the impact and sustainability of the installation, which informs decisions on future EV infrastructure roll-out. The dashboard also displays significant

comparative information on the sustainability attributes and cost savings of electric and traditional vehicles to educate the public on the environmental, health and financial benefits of EVs.

PROJECT IMPLEMENTATION

Since project inception in December 2020, the stations have supplied over 10 000 km of emissions-free driving, which equates to a saving of over 2 tCO₂e (tons of CO₂-equivalent). The total solar output of the PV system is 19 431 kWh, which surpasses the charger requirements. This excess renewable energy is used in the City’s civic centre buildings to counterbalance carbon-intensive grid electricity.

Installer GridCars trained Facilities Management in the effective monitoring and maintenance of the charging stations.

Transversal collaboration on the City’s role in the e-mobility space continues,

and Sustainable Energy Markets currently coordinates an EV task team with key stakeholders in the industry to foster collaboration and support the growth of the EV ecosystem.

The City’s website contains a publicly accessible page to educate residents about the [benefits of EVs](#). The key aspects and benefits of the pilot and its ties to the City’s carbon-neutrality targets are highlighted in a video. The initiative was also covered in newspaper articles and opinion pieces on *News24*, *BusinessTech*, *Esi-Africa* and social media.

EVALUATION

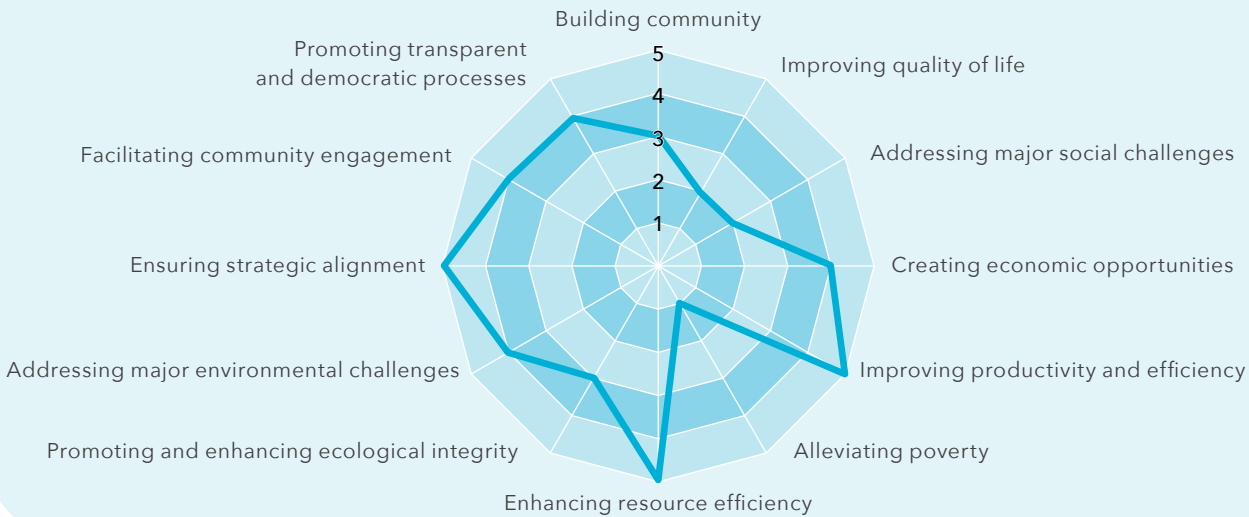
The initiative supports EV adoption and data collection through external collaborations with the UNIDO and GridCars, as well as internal assistance from Facilities Management as well as Electricity Generation and Distribution (the metering team). The pilot displays

exceptional efficiency, considering that UNIDO funded the full capital expenditure, while the continuing operating and maintenance expenses are minimal.

The project aligns with several City strategies, meets the requirements of the national Integrated Resource Plan and Green Transport Strategy, and delivers on the international commitments of the C40 Deadline 2020 and the Paris Agreement.

As part of a strategic catalyst push for EVs across the Western Cape, the eventual large-scale implementation of EV charging stations has the potential to support a significant green-tech economy. The project outcomes highlight the value of focused internal and external cooperation, showing that increased cross-cutting collaboration has a key role to play in achieving sustainability and climate change goals.

SUSTAINABILITY ASSESSMENT: ELECTRIC VEHICLE CHARGING STATION PILOT





EXPERIENTIAL EDUCATION GARDEN

PROBLEM STATEMENT

Knowledge about environmental sustainability empowers citizens to make better-informed and more sustainable decisions. Since most of our attitudes are formed early in life, it is important to offer children an opportunity to develop a sense of wonder about nature at a young age. The approach to environmental education for early-childhood learners is about free discovery, incorporating exploration, fascination with nature, and play. Personal perceptions, attitudes and connections with nature are the key goals at this stage, and facilitating positive experiences varies from child to child. However, modern-day technology and safety concerns have alienated children from nature, making it challenging to inspire positive behaviours and environmental consciousness.

PROJECT OUTLINE

The experiential education garden (EEG) at Green Point Park functions as a creative environmental education space that engages and activates all five basic senses. The experiential environment aims to build confidence, while adding to children’s physical and social experiences and interactions. At the EEG, children learn new skills and are challenged to take responsibility for their actions. The EEG is designed to be a place of discovery and learning for children up to the age of 10. As an outdoor environmental education space, the EEG seeks to expose children to nature and encourage them to fall in love with it.

PROJECT DESIGN

Green Point Park is a very popular recreational space and forms part of the Cape Town Stadium precinct. The park contains many features of interest that

the public can enjoy. These include the biodiversity showcase garden, an outdoor labyrinth, an adventure play park, a wetland garden and water systems, as well as open lawn areas and shaded spaces. The EEG adds another feature of interest to the park. It is located on a previously underutilised natural-grass meadow space next to the City’s Smart Living education centre. The features of the EEG engage and activate all five senses – touch, taste, sight, smell and sound – by drawing on the four elements of nature, namely earth, wind, water and fire. These elements are considered in the environmental education activities offered in order to reconnect children to the environment in a creative and positive way.

PROJECT IMPLEMENTATION

The first phase of the EEG opened in December 2020. It included elements such as a shade structure (pergola), a wooden

- deck, an interactive water feature, a weather station, animal-themed mosaic stepping stones, a crawling tunnel, giant woven bird’s nests, a spider’s-web climbing structure, a climbing tree, balancing poles, sound elements, a sand pit and a boardwalk. The educational value of each of the elements was carefully considered before installation.
- The second phase of the project has been running since September 2021 and is scheduled for completion by June 2024. Some of the planned elements for installation during this phase include:
 - ⊕ a domed classroom or venue structure that depicts and celebrates our Khoekhoe heritage
 - ⊕ light (solar) and wind art sculptures;
 - ⊕ shade structures;
 - ⊕ mosaic seating;
 - ⊕ a display wall;

- ⊕ raised planters filled with species that will stimulate the five senses; and
 - ⊕ a permaculture garden.
- In addition, the My Clean Green Home (see page 92) will be on-site for two years. The design for this net-zero-carbon home incorporates solar power generation, energy-efficient appliances, passive cooling, rainwater harvesting and an edible food garden. The City is hosting educational programmes to promote this pop-up exhibition, giving visitors of all ages the opportunity to experience net-zero-carbon living first hand.
- Well-planned maintenance, proper management and 24-hour security have been critical to promoting usage of the EEG. With the successes and lessons learnt from the project, the City has initiated a similar initiative in Westridge Park (Mitchells Plain) to create more

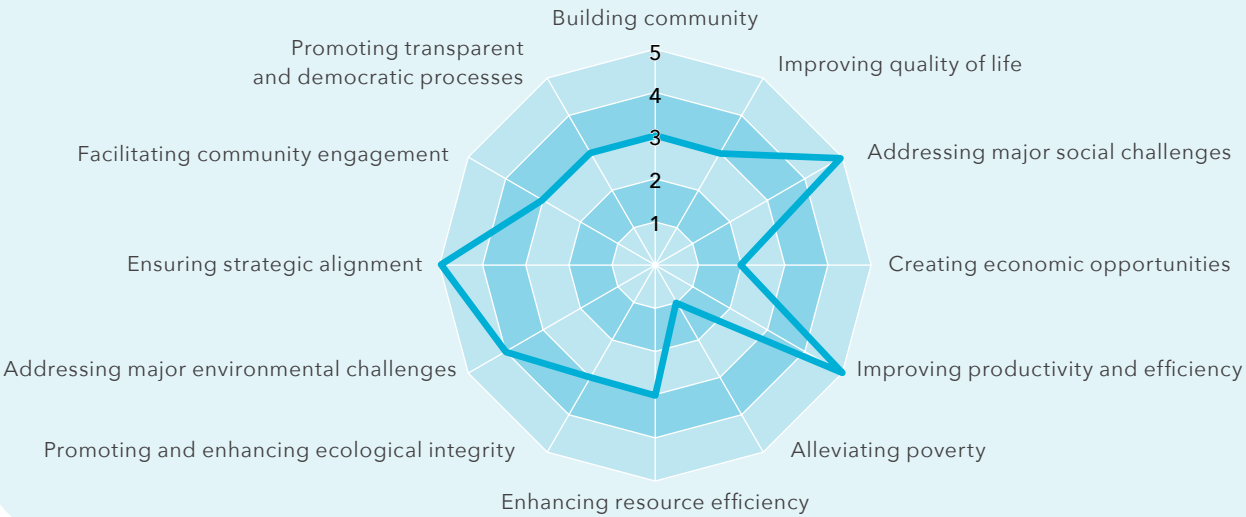
interactive spaces where children can experience nature in a positive way.

EVALUATION

The City prioritises environmental education, awareness, training and communication as a vehicle to improve the quality of the environment in Cape Town. The EEG supports the development of a future generation of environmentally responsive Capetonians by creating an interactive space where children can engage in free play and reconnect with and experience nature in a creative and safe space.

The transformation of a previously underutilised space into an experiential garden demonstrates the City’s commitment to creating an environment that optimises the use of natural and strategic assets for the benefit of Capetonians.

SUSTAINABILITY ASSESSMENT: EXPERIENTIAL EDUCATION GARDEN





HELDERBERG ENVIRONMENTAL EDUCATION CENTRE

PROBLEM STATEMENT

The City’s environmental education centres offer various programmes to raise awareness of ecological issues and challenges. When the existing centre at Helderberg nature reserve became too small to fit an average class size, reserve staff saw an opportunity to create a facility that would accommodate not only visitors, but also show-and-tell elements of environmental sustainability.

Given the negative impact of conventional building materials and methods on natural resources, the project team decided to build a facility that demonstrates sustainable building practices and the use of environmentally responsible material.

PROJECT OUTLINE

The Helderberg environmental education centre is a holistically sustainable facility. Through environmentally responsible material selection and product specification, the centre promotes sustainable design thinking and extends the range of environmental education tools available to visitors. The facility aims to educate communities and organisations

about sustainable buildings and their potential to stimulate the senses, connect people to nature, and inspire positive behaviour change.

PROJECT DESIGN

Located on the slopes of the Helderberg mountains, overlooking False Bay, the Helderberg environmental education centre offers an ideal setting to teach communities in and around Somerset West about the Western Cape’s plant and animal kingdom.

Considerations in the design of the facility included functionality, ecology, thermal impact, groundwater, waste and stormwater impact, light pollution, and reducing carbon emissions. To respond to these, the new centre incorporates sustainability features such as an impressive tyre retaining wall, an ecobrick wall and integrated water treatment, which includes a four-chamber underground blackwater system.

To minimise the impact of the structure on its immediate surroundings, the project team chose to erect the building on already disturbed land. Moreover, constructing

the facility close to the existing reserve buildings reduced the amount of new infrastructure required, as the Helderberg environmental education centre could plug into the existing information technology and electrical infrastructure.

To support economic sustainability, the centre’s multifunctional space was designed to maximise internal useable area, while keeping the facility’s footprint to a minimum.

PROJECT IMPLEMENTATION

Construction of the centre commenced in June 2020 and the building was officially opened in June 2022.

The concept for the enclosure is based on two curved walls, one fitting into the other. To demonstrate alternative construction methods, waste material was used in the following three ways:

- The inner curved wall and foundations were constructed from rammed earth and repurposed builders’ rubble.
- The outer curved retaining wall was constructed from repurposed tyres. Builders’ rubble and ecobricks (plastic

- bottles filled with compacted plastic waste) were used to fill the tyres for the wall. A total of 830 truck tyres were used for the tyre wall, which is approximately 40 m long and 3,4 m high.
 - The internal walls were constructed by stacking ecobricks inside a frame. Instead of conventional cement-based plaster, natural cob was used to plaster over the ecobricks.
 - These three wall types display the principle of carbon burying, having reused and repurposed waste materials that would otherwise have become a burden on one of the City’s landfills.
- The integrated water treatment system not only serves the new facility, but also offers a solution for the burden of wastewater generated by the other reserve buildings.

Wastewater from the new centre, the nearby restaurant, ablutions and the visitor’s centre as well as rainwater from the new facility is captured and sent to the underground blackwater treatment system. Here, the wastewater passes through a four-chamber process before being stored in tanks for the flushing of toilets in the environmental education centre and existing ablution blocks. The treatment system uses bacteria and micro-organisms to break down solids and treat the wastewater – a process that mimics nature without releasing harmful nitrates into the atmosphere.

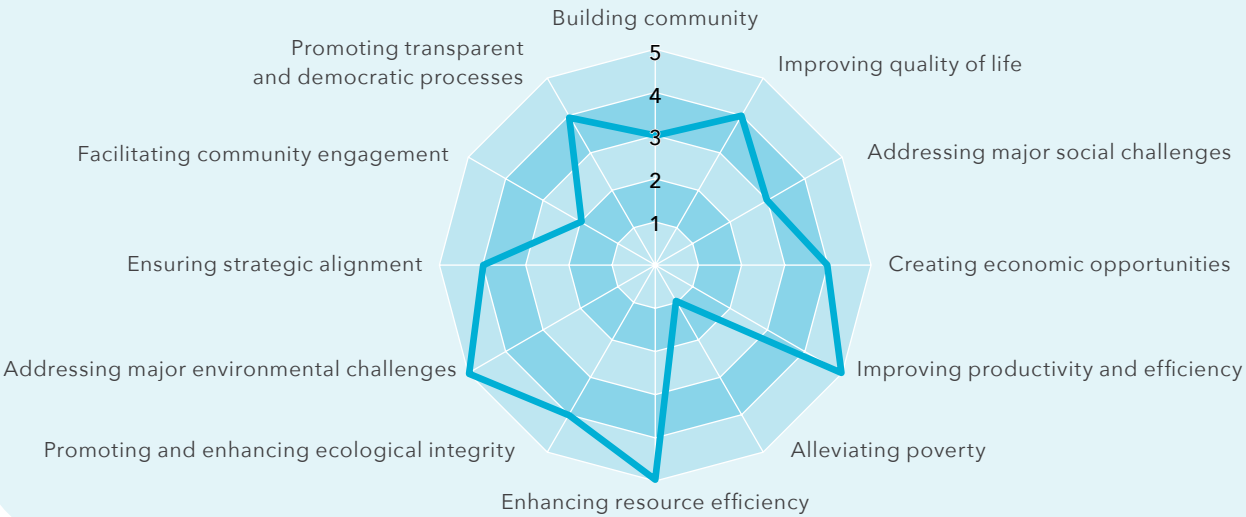
Unique to sustainable building practices, the material selection and construction techniques of this project increased the semi-skilled job opportunities on offer for residents in the Helderberg area, which resulted in 32 additional

EPWP workers employed on-site. These opportunities would not have been possible without implementing green construction practices.

EVALUATION

The Helderberg environmental education centre is a best-practice example of enhancing resource efficiency. By demonstrating alternative construction materials and techniques, the facility serves as a successful case study that can benefit other municipal new-builds in the future. The City’s aim with the centre was to demonstrate sustainable design thinking so that the facility could function as an extended environmental education tool once completed. As such, the centre provides the perfect setting for the City’s various environmental education programmes offered to various schools and interest groups.

SUSTAINABILITY ASSESSMENT: HELDERBERG ENVIRONMENTAL EDUCATION CENTRE





MY CLEAN GREEN HOME

PROBLEM STATEMENT

As part of its Climate Change Strategy, the City has committed to the ambitious target of achieving net-zero-carbon status in all new buildings by 2030 and in all existing structures by 2050. These pledges are consistent with global declarations signed by the City as well as national commitments made under the Paris Agreement. Achieving these targets requires a fundamental shift in how commercial buildings and dwellings are designed, accompanied by public awareness and buy-in to drive change.

PROJECT OUTLINE

As a practical example of a net-zero-carbon home, the My Clean Green Home exhibition forms part of the City's multipronged approach to achieve net-zero-carbon status in Cape Town's buildings. Initially, the exhibition was part of the 2020/21

Cape Town Future Energy Festival, which comprised a series of family-friendly events aimed at involving residents in shaping a sustainable and equitable energy future. A design competition held in collaboration with the Green Building Council of South Africa invited experts and students of the built environment to exhibit sustainable design in action.

PROJECT DESIGN

The My Clean Green Home project showcases design principles, technologies and behaviours that businesses, residents and City officials can implement in their own homes. Moreover, the project has assisted the City to establish partnerships with local, regional and international organisations that support climate change adaptation and mitigation.

Team Mahali's winning entry comprises an innovative modular 'house in a box'

covered by an overarching tree-like structure made from upcycled and locally available materials. The design has since been brought to life for a series of pop-up events across Cape Town.

To overcome Covid-19 lockdown restrictions and give as many residents as possible an opportunity to engage with the net-zero-carbon home, an interactive virtual walkthrough was also developed.

PROJECT IMPLEMENTATION

Two shipping containers were repurposed to create the structure, with an open-plan lounge and kitchen in one container, and a bedroom, bathroom and study area in the other. The permeable facade of wooden pallets provides shading and shields against high winds, while an integrated vertical garden provides edible plants.

Energy-efficient design components include ideal orientation for maximising

natural light and providing warmer winters and cooler summers, solar water heating, double-glazed windows to minimise the need for heating and cooling equipment, and energy-efficient appliances. The rooftop solar PV system provides all the home's power needs.

By integrating efficient water fixtures and promoting water reuse, the home also improves water availability. The low-flow taps and showerhead use no more than six and 10 litres per minute respectively. For increased efficiency, the home includes rainwater collection for the indigenous garden and toilet flushing as well as a greywater system that filters shower water for toilet use.

Those who choose the virtual experience have access to an online energy calculator to determine how energy-efficient

their own homes are, along with tips to promote energy efficiency.

The pop-up exhibition was first displayed in Vangate Mall in the first half of 2021 and then moved to Green Point Park. It will continue to be used as an educational tool for sustainable construction and smart living in partnership with the Environmental Management and Strategic Assets departments.

More than 3 000 people have visited the My Clean Green Home exhibition to learn about how they can contribute to the City's net-zero-carbon targets, while almost 5 000 have taken the virtual tour.

In partnership with the Smart Living programme, budget has been set aside for schools from across Cape Town to visit the exhibition. Moreover, to enable the educational impact of the project to continue beyond the exhibition, activities

and resources will be developed to help teachers reinforce the practices and principles of the My Clean Green Home when returning to the classroom.

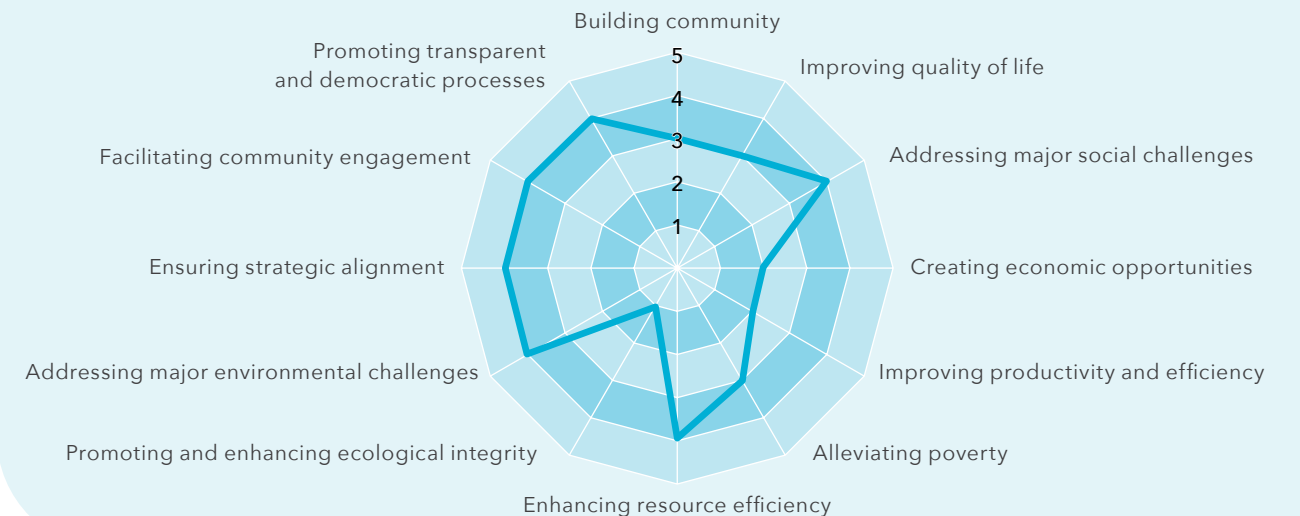
EVALUATION

The My Clean Green Home enhances resource efficiency and seeks to promote net-zero-carbon buildings.

The project fosters much-needed open dialogue between residents and the City, which will go a long way towards realising the City's commitment of achieving net-zero-carbon status in all buildings in Cape Town by 2050. To date, indications are that members of the public are indeed receptive to the need for a shift towards more sustainable living.

The project's success will continue to evolve due to its open and collaborative approach.

SUSTAINABILITY ASSESSMENT: MY CLEAN GREEN HOME



UNIVERSITY OF CAPE TOWN AFRICAN CENTRE FOR CITIES (ACC)-CITY OF CAPE TOWN KNOWLEDGE PARTNERSHIP

PROBLEM STATEMENT

Interdisciplinary knowledge can play a critical part in responding to urban sustainability challenges. Nevertheless, there is often a significant gap between academic and more practical, experience-based knowledge. This academic-practitioner divide poses a challenge to the development of context-specific and policy-relevant forms of knowledge. Crossing the divide requires the co-production of knowledge, developing shared meanings and equipping individuals to function as knowledge intermediaries.

PROJECT OUTLINE

Since 2012, the City has been partnering with the African Centre for Cities (ACC) at the University of Cape Town (UCT) through the then Mistra Urban Futures (MUF) knowledge transfer programme. Established in 2010 as a 10-year programme to collectively tackle complex urban challenges, MUF adopts a co-production approach to generating new knowledge and draws on theory and practice to inform urban sustainability transitions.

MUF selected Cape Town as a local interaction platform, and the City was tasked with facilitating urban research and policy discourses to support sustainable urban futures. Since the conclusion of MUF in 2020, the City and the ACC have continued the programme, now known as the Knowledge Transfer Programme (KTP).

PROJECT DESIGN

The KTP aims to create knowledge platforms that straddle the researcher-practitioner divide and to make City decision making processes more defensible.

The two phases of the KTP up to 2020 included an embedded researcher programme and an official writer's exchange programme. The former sought to embed researchers in relevant City line departments to enable the co-production of policy-relevant knowledge and contribute to theory from local experiences. The latter offered high-performing City staff an opportunity for structured academic engagement to build their capacity, engage with international peers, and profile the City's work internationally. Selected City officials were given a once-off period of four

to eight weeks at UCT, working with an academic partner to write up and reflect on work that they had been engaged in. While this was intended for submission to a recognised academic journal, other co-produced outputs such as reports, models and manuals were also encouraged. This exchange recognised that City officials had collectively accumulated substantial practical knowledge of urban issues and that knowledge transfer would benefit both the City and the academic community.

PROJECT IMPLEMENTATION

Both phases involved the co-production of knowledge relevant to City policies and contributed to theoretical perspectives stemming from local experiences.

Phase 1 centred on designing a green economy, addressing climate change, reconfiguring the spatial distribution of the local economy, and governing the city's energy system. Research in phase 2 was aimed at accelerating transport planning theory and practice in the City's Transport Directorate, informing a transversal approach for the localisation of the global SDGs (see SDG VLR on page 48), and supporting various processes in the City's

Arts and Culture Branch, including cultural mapping and planning (see page 40).

The writer's exchange provided an opportunity to research City processes through close engagement with officials working at the policy and practitioner coalface. City officials and academics co-authored 12 papers and a range of other outputs as part of the programme. In addition, the book *Mainstreaming Climate Change in Urban Development: Lessons from Cape Town* (2019) was published.

Over both KTP phases up to 2020, a total of 116 contributors either published or enrolled in studies across a range of themes relevant to sustainable development in Cape Town.

EVALUATION

A good example of building relationships and collaborative capacity, the KTP is

a best-practice research partnership between academia and the City that established a strong community of practice of engaged scholars.

The partnership seeks to co-create solutions towards realising fair and just cities. In the process, it supports various social sustainability criteria, including addressing major social challenges and promoting sustainable economic development. This is evidenced by project outputs relating to the localisation of SDGs, cultural mapping, transit-oriented development, the green economy, the space economy, climate change adaptation, and energy governance.

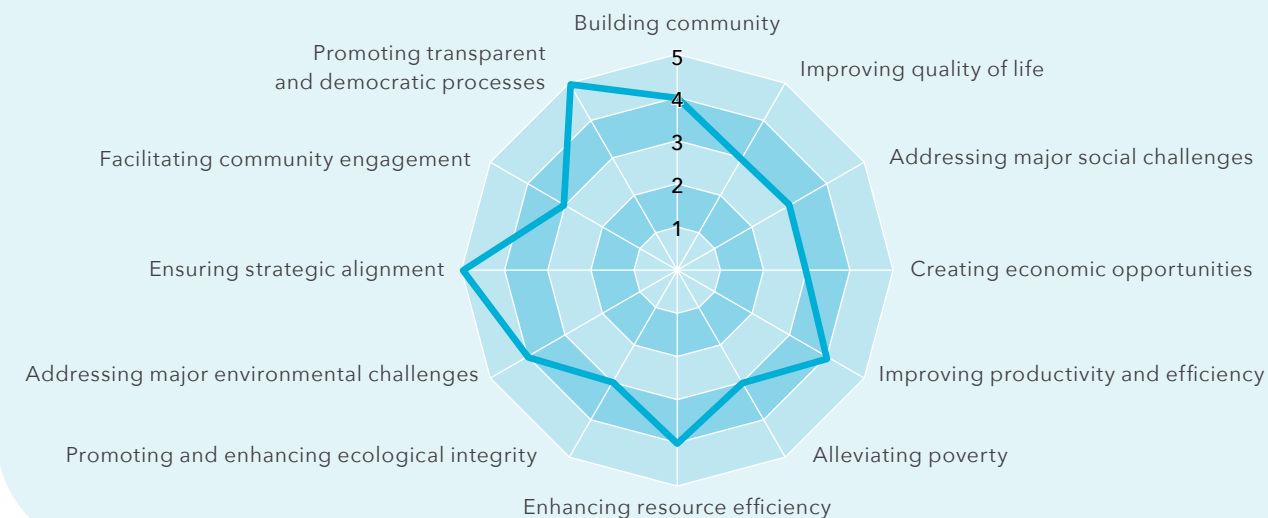
The writer's exchange provided a unique education and training opportunity that increased officials' ability to contribute to policy processes. It created non-hierarchical spaces for interdepartmental reflection

and communication, which enabled collaboration and the generation of new insights. It also promoted improved productivity and efficiency by allowing City officials to engage in professional development appropriate to their experience. The exchange has since been incorporated into the City's training needs identification and workplace skills plan.

Finally, the KTP is also an excellent example of strategic alignment. It has not only managed to localise international frameworks such as the SDGs, Paris Agreement and the New Urban Agenda, but has actively informed City strategy and policy development.

Overall, the KTP provided a unique space for collaboration between the City and UCT to co-produce policy-relevant knowledge towards realising a sustainable and just Cape Town.

SUSTAINABILITY ASSESSMENT: UNIVERSITY OF CAPE TOWN AFRICAN CENTRE FOR CITIES-CITY OF CAPE TOWN KNOWLEDGE PARTNERSHIP





GUEST COLUMN

Experience gained through the Mayor’s Portfolio of Urban Sustainability (MAPS) process suggests the possible broadening of its scope and impact in ways that not only covers City projects and activities, but perhaps also the activities of businesses and civil society across town.

The projects in the portfolio are diverse and contrasting. In the past year alone, we have seen projects ranging from an initiative to create safe and dignified spaces for homeless people, to an incubator for renewable-energy businesses, to an alien vegetation removal programme. There has been much to marvel at.

One project that stood out for me focused on Cape Town’s major fruit and vegetable market. This project is both ordinary and vital to the heartbeat of the city. When Capetonians sit down to a meal, at least four in 10 of the fruit and vegetables they eat will have been bought at the Cape Town Market. Dating back more than five decades, the market, once wholly owned by the City, is now privatised. It brings together more than 13 000 buyers and sellers of fresh produce in a thriving exchange. It serves as a major source of nutrition for Capetonians and is an essential piece of the City’s sustainability jigsaw puzzle.

The aim of the project submitted to us, as the MAPS review panel, was not only to ensure that the City put in place a long-term lease for the market operators. It also sought to improve the facility, establish an empowerment trust, construct access roads and, significantly, relocate a long-standing group of informal traders who had occupied a site immediately outside the market, known as the Buitemark, through building a new, purpose-built trading facility for their use.

The market is a simple place for transactions; yet it’s also a complex institution. It lies at the fulcrum of Cape Town’s food and nutrition value chain. And it involves numerous parties with varying needs and interests. It is a world of sustainability rolled up into a marketplace.

This project, like others that the review panel has assessed over the years, drives home the extensive nature of sustainability and the multifaceted and often messy work required to get and stay on the path to achieving sustainable development at the individual project scale. The MAPS projects involve building sustainability one project at a time and require difficult, cross-cutting activities that bring together many issues and people.

Council officials have designed and implemented the vast majority of projects in the portfolio in ways that are creative and reflect a tireless grappling with the many dimensions of sustainability. The MAPS initiative assesses each project against a rigorous standard. In our review of the projects, we ask whether the projects build community, improve quality of life, address major social challenges, improve City productivity and efficiency, alleviate poverty, facilitate community engagement, and promote transparent and democratic processes.

Of course, each project cannot meet all of these criteria. Rather, the focus is on how each project might meet some of them. In this iteration of the process, the MAPS review panel also broadened its discussion to look at the portfolio as a whole. We asked how the projects might collectively promote sustainability in Cape Town, both as a municipality and as a city. We also drew broad lessons by reflecting on individual projects. Through this, three questions

came to mind that may be worth considering in future iterations of MAPS work:

- Firstly, how can we measure the extent to which the MAPS projects affect sustainability, and how can we do the same for all City projects and activities, not only those submitted to MAPS for evaluation? Answering this will require choosing an appropriate way to measure sustainability impacts at the project and the wider scale.
- Secondly, can the City design and implement a journey towards sustainability built on a base provided by MAPS, and can the journey encompass all City projects and activities, not just those that are voluntarily forwarded to MAPS for assessment? This would mean moving from a portfolio of discrete self-selected projects to seeing the MAPS sustainability criteria becoming the norm for all City projects and activities.
- Thirdly, what role can the City play in building a partnership for sustainability with local businesses and civil society based on the MAPS initiative? This would imply exploring whether the MAPS process can be an exercise not only for City activities, but one that incorporates initiatives undertaken by all key stakeholders – from local business to civil society. This holds the potential of triggering a broad movement around sustainability that would be the pride not only of the public representatives and civil servants of the City, but of the citizens and leaders of Cape Town as a whole.

There is much to learn from the MAPS experience. It guides the way for the City to lead a journey to sustainability

in partnership with stakeholders from across town. Individual MAPS projects provide practical guidance and offer lessons. By way of example, the way in which City staff, working with all relevant stakeholders, found solutions to the challenges of the Cape Town Market may suggest some answers to the questions

above. The multifaceted solutions and the process followed in this one project point to what is possible.

Moreover, drawing observations from a review of the portfolio as a whole may guide the design of Cape Town’s sustainability journey. The prospect

of the City leading this journey as the primary institution representing the citizens of Cape Town is an exciting one indeed.

David Shandler
Member of the Mayor’s Portfolio of Urban Sustainability Expert Review Panel



CONCLUSION



The projects profiled in this edition of the Mayor's Portfolio of Urban Sustainability form part of an ever-growing body of urban sustainability knowledge and practice in the City. As an implementation tool of the City's Environmental Strategy, the portfolio demonstrates best practice to City officials and helps build collaborative processes and mainstreaming sustainability thinking across line functions.

Since the start of the programme, the City has published five editions of the portfolio, including this one, and published a joint Cape Town-Aachen Mayor's Portfolio to celebrate the 20th anniversary of the Aachen-Cape Town Local Agenda 21 partnership. Across these publications, over 150 innovative City-managed projects have been profiled. In the 2020 edition, 10 previously profiled projects were revisited, and 22 projects were profiled for the joint Cape Town-Aachen Mayor's Portfolio. This growing body of evidence of the extent to which sustainability principles are being incorporated into City capital projects and operations offers valuable lessons on mainstreaming sustainability.

- ➔ Firstly, to mainstream sustainability, one needs to consider and incorporate sustainability across the lifecycle of a project, from conception to ongoing monitoring and evaluation.
- ➔ Secondly, sustainability requires a 'whole-of-society' approach, partnerships and broad stakeholder engagement in the pursuit of sustainable outcomes. In particular, knowledge-based partnerships and community participation have been

vital for the City's journey towards sustainability. Various projects showcased in this edition highlight the importance of partnerships, participation and multistakeholder collaboration. These include the University of Cape Town African Centre for Cities (ACC)-City of Cape Town knowledge partnership, the 2021 SDG voluntary local review, the cultural mapping and planning programme, and the Potsdam sustainability campus. This kind of collaboration ensures resource-pooling and coordination and broadens the forms of knowledge available to address urban sustainability challenges.

- ➔ Thirdly, in the context of the Covid-19 pandemic and various environmental and climate shocks, this edition provides lessons for governance and management in times of increasing uncertainty. Featured projects such as the CTICC and Athlone vaccination centres of hope, the Paint City Safe Space and the City's Vulnerability Viewer highlight the importance of building resilience, adopting adaptive management and responding to public needs in changing contexts.
- ➔ Fourthly, a number of projects profiled in this portfolio bring to the fore the importance of gradual, incremental refinement and enhancement of service delivery and citizens' service delivery experience. These include the service delivery turnaround project, the SAP CRM service request enhancement, and the one contact centre for non-emergencies (OCCNE).

- ➔ Finally, this edition showcases projects that demonstrate lessons for supporting a sustainable economic recovery and sustainable urban transitions and addressing poverty, inequality and unemployment alongside environmental degradation and climate risks.

These lessons can also inform the vision, objectives and direction of the Mayor's Portfolio of Urban Sustainability programme itself. This requires reflection and a systematic evaluation of the approach and implementation of the portfolio to explore new platforms and tools for mainstreaming sustainability in project design, implementation and management. To this end, a number of approaches are being explored, including facilitating knowledge partnership opportunities, establishing a mentorship programme, and building on the existing community of practice that has developed around the Mayor's Portfolio of Urban Sustainability.

Expanding and realising the vision of the Mayor's Portfolio of Urban Sustainability and, more broadly, the vision of a sustainable city requires creative thinking and collaboration. Therefore, we invite project managers, partners and supporters of the portfolio to continue engaging with us to support the objectives of the programme, capacitate project managers across the City, and facilitate sustainable change in City operations for the benefit of Cape Town communities, residents, businesses, as well as current and future generations.



EXTRAS



PORTFOLIO EXTRA 1:

MORE ABOUT THE CITY’S INTEGRATED DEVELOPMENT PLAN 2022-2027

The Integrated Development Plan (IDP) is the City’s central strategy, communicating to residents, businesses and investors the municipality’s long-term vision and how it will be achieved. The Municipal Systems Act 32 of 2000 requires every municipality to have an IDP and defines it as a municipality’s principal strategic planning instrument.

The City’s IDP is made up of a strategic plan and an implementation plan. The strategic plan is informed by community needs, stakeholder inputs, a contextual analysis, and an evaluation of the existing state of Cape Town, all of which help identify the challenges that the City needs to address to achieve its vision. Priorities and objectives provide focus in addressing the most critical strategic challenges. The implementation plan, in turn, focuses on only those key strategic programmes, projects and initiatives that are critical to support the achievement of the strategic priorities during the current five-year term of office. The implementation plan also sets out which City departments are accountable for each programme.

The new term-of-office IDP covers the period 2022 to 2027 and aims to ensure that the City addresses what is not working and continues to serve its residents and support Cape Town’s growth. It focuses on the following six priorities, the most important of which is economic growth to reduce poverty:

ECONOMIC GROWTH

The guiding priority for everything the City does is to support meaningfully faster economic growth that enables people to lift themselves out of poverty. Economic growth is needed to rekindle our hope in a more prosperous future for all.

BASIC SERVICES

Economic growth depends on the City doing the basics well. The City is committed to doing all it can to protect Cape Town’s economy from the worst effects of failing service delivery by National Government. Ending load-shedding over time is a key focus. Similarly, securing a reliable supply of water in the future and providing quality sanitation and refuse collection services is essential to enable a life of hope and dignity to communities.

SAFETY

Crime causes constant fear and anxiety, which is a form of oppression. No one can be free so long as high levels of violent crime persist. Crime also chases away investors and economic activity, stealing our hope for a better future. Making Cape Town a city where all people can live with less fear of crime and violence requires collective action at scale, where government, the private sector and residents work together to make communities safer.

HOUSING

The lack of adequate housing is an urgent concern that affects the city’s health and well-being and slows down efforts to unstitch the legacy of apartheid spatial planning. The City must do everything it can to support the accelerated building of both formal and informal homes by the private sector to ensure an adequate supply of housing to meet Capetonians’ needs.

PUBLIC SPACE, ENVIRONMENT AND AMENITIES

Maintaining a quality environment, public spaces and waterways helps make our city healthier, more liveable, more attractive and more resilient. The City will work with communities to keep the city clean so that Cape Town is a place that its people take pride in and its visitors love to return to.

TRANSPORT

Efficient and sustainable public transport and quality road networks are key enablers to businesses, workers and job seekers. A city that is better connected will be more productive and create more economic opportunities. The City will work to make it safer and cheaper for all people to travel, increasing their freedom to enjoy all that our city has to offer. The City will also work to change the dysfunctional nationally managed passenger rail system so that Cape Town can have a greater role in running a train system that works.

To succeed in becoming a city of hope, Cape Town must also be built on the right foundations. The following foundations

are essential to achieving a prosperous, sustainable and inclusive city in the long term:

- A resilient city that meets its resource needs sustainably, responds to climate change and is able to withstand disaster events. The most significant way to increase the resilience of Cape Town’s communities is to reduce poverty, being the primary driver of household vulnerability to shocks.
- A more spatially integrated and inclusive city, where people have more equitable access to economic opportunities and social amenities, and the barriers to inclusion and well-being are reduced. The City is committed to investing in public infrastructure to address the injustice of apartheid spatial planning.
- A capable and collaborative city government that is modernised, financially healthy, administratively efficient, innovative and future focused. The City wants to be a government that empowers residents to contribute to decision making and is a collaborative and reliable partner to other government entities, residents and businesses in addressing persistent urban challenges. It also seeks to be a government that consistently fights for residents’ needs, even when the responsibility to meet those needs rests with National Government, Province or a state-owned enterprise.

The City’s five-year implementation plan is informed by the following 16 objectives, which describe what success looks like in realising the vision of a city of hope:

ECONOMIC GROWTH

- **Objective 1:** Increased jobs and investment in the Cape Town economy

BASIC SERVICES

- **Objective 2:** Improved access to quality and reliable basic services
- **Objective 3:** End load-shedding in Cape Town over time
- **Objective 4:** Well-managed and modernised infrastructure to support economic growth

SAFETY

- **Objective 5:** Effective law enforcement to make communities safer
- **Objective 6:** Strengthen partnerships for safer communities

HOUSING

- **Objective 7:** Increased supply of affordable, well-located homes
- **Objective 8:** Safer, better-quality homes in informal settlements and backyards over time

PUBLIC SPACE, ENVIRONMENT AND AMENITIES

- **Objective 9:** Healthy and sustainable environment
- **Objective 10:** Clean and healthy waterways and beaches
- **Objective 11:** Quality and safe parks and recreational facilities supported by community partnerships

TRANSPORT

- **Objective 12:** A sustainable transport system that is integrated, efficient and provides safe and affordable travel options for all
- **Objective 13:** Safe and quality roads for pedestrians, cyclists and vehicles
- **Objective 14:** A resilient city
- **Objective 15:** A more spatially integrated and inclusive city
- **Objective 16:** A capable and collaborative city government

PORTFOLIO EXTRA 2:
DEFINING THE 12 SUSTAINABILITY
OBJECTIVES OF PROFILED PROJECTS

1. **Building community, for example through:**

➤ facilitating community participation;

➤ promoting collaboration and building partnerships; and

➤ promoting social cohesion.
2. **Improving quality of life, for example through:**

➤ promoting health and wellbeing;

➤ improving living and working conditions and promoting dignified human settlements; and

➤ enhancing participation in arts, culture, sports and heritage.
3. **Addressing major social challenges, for example through:**

➤ addressing the legacy of apartheid;

➤ improving safety and security; and

➤ promoting education, training and awareness.
4. **Creating economic opportunities, for example through:**

➤ creating jobs and promoting job creation;

➤ supporting SMMEs; and

➤ supporting the informal economy.
5. **Improving productivity and efficiency, for example through:**

➤ utilising resources efficiently;

➤ removing barriers to service delivery; and

➤ promoting beneficial partnerships.
6. **Alleviating poverty, for example through:**

➤ meeting basic needs;

➤ supporting livelihood development; and

➤ improving access to income.
7. **Enhancing resource efficiency, for example through:**

➤ improving water availability, reducing demand and increasing efficiency;

➤ promoting energy efficiency and increasing the use of renewable energy; and

➤ promoting urban densification and efficient land use.
8. **Promoting and enhancing ecological integrity, for example through:**

➤ conserving sensitive ecosystems and biodiversity;

➤ promoting implementation of the Biodiversity Network; and

➤ conserving and enhancing ecosystem functions and benefits.
9. **Addressing major environmental challenges, for example through:**

➤ reducing the incidence of invasive species;

➤ reducing waste and pollution and improving air and water quality; and

➤ addressing historical inequities in accessing natural resources.
10. **Ensuring strategic alignment, for example through:**

➤ promoting cooperative governance and aligning with provincial, national and international priorities and responsibilities; and

➤ ensuring alignment with the MSDF, IDP and other key strategies.
11. **Facilitating community engagement, for example through:**

➤ building communities' capacity for engagement;

➤ facilitating public input into governance; and

➤ supporting existing community structures and initiatives.
12. **Promoting transparent and democratic processes, for example through:**

➤ ensuring responsiveness to public needs and displaying adaptive management in changing contexts;

➤ promoting access to information; and

➤ ensuring replicability of project principles and methods.



PORTFOLIO EXTRA 3:
MORE ABOUT PROJECT EVALUATION

A custom-designed table was used to record and assess projects' performance according to sustainability objectives. The table below is an extract from the evaluation of the Helderberg

environmental education centre (see page 88). The objectives were broadly defined so that project managers could relate each objective to their respective projects. A scale of 1 to 5 (where 1 means "Poorly", 2

means "Partly", 3 means "Satisfactorily", 4 means "Very well", and 5 means "Excellently") was employed to assess how well the projects met each objective.



PROJECT TITLE: HELDERBERG ENVIRONMENTAL EDUCATION CENTRE			
HOW DOES THE PROJECT ADDRESS THE FOLLOWING OBJECTIVES?			
Sustainability objective	Project approach	Assessment	Scoring
Creating economic opportunities		Very well	4
i. Creating jobs and promoting job creation	The material selection and construction techniques of this project increased the semi-skilled job opportunities available for residents in the Helderberg area, which resulted in 32 additional EPWP workers employed on-site. These job creation opportunities were possible because of the green construction practices adopted (including easily learned skills and techniques).		
Enhancing resource efficiency		Excellently	5
ii. Reducing, reusing and recycling	The concept for the enclosure is based on two curved walls, one fitting into the other. To demonstrate alternative construction methods, the wall design incorporated waste material in three different ways, showcasing the principle of carbon burying. Materials that would otherwise have become a burden on a landfill were reused, repurposed and given a new life. The new facility now serves as a carbon sink by sequestering waste. The idea of repurposing and upcycling materials means the centre speaks directly to sustainability.		
iii. Improving water availability, reducing demand and increasing efficiency	The Helderberg environmental education centre is equipped with integrated water treatment, which includes a four-chamber underground blackwater system. The integrated water treatment system not only serves the new facility, but also offers a solution to the burden of wastewater generated by the existing reserve facilities. Wastewater from the new facility, the nearby restaurant, ablutions and the visitor's centre as well as rainwater from the new facility is captured and sent to the underground blackwater treatment system. Here, the wastewater passes through a four-chamber process before it is stored in storage tanks for the flushing of toilets in the new facility and existing ablution blocks. This ensures minimum water usage and zero water wastage. The treatment system makes use of bacteria and micro-organisms to break down solids and treat the wastewater - a process that mimics nature without releasing harmful nitrates into the atmosphere.		

PORTFOLIO EXTRA 4:
ABBREVIATIONS

ACC	African Centre for Cities	IDP	Integrated Development Plan	Province	Western Cape provincial government
BRT	bus rapid transit	IEGS	Inclusive Economic Growth Strategy	PV	photovoltaic
CDC	community day centre	IPTN	Integrated Public Transport Network	SAREBI	South African Renewable Energy Business Incubator
City	City of Cape Town	IRT	integrated rapid transit	SDG	sustainable development goal
CRM	customer relationship management	KTP	Knowledge Transfer Partnership	SDS	Social Development Strategy
CTICC	Cape Town International Convention Centre	LED	light-emitting diode	SEZ	special economic zone
CITP	Comprehensive Integrated Transport Plan	LUW	Liveable Urban Waterways	SLA	service-level agreement
DMOCmed	Differential Model of Care med	MSDF	Municipal Spatial Development Framework	SMME	small, medium and micro-sized enterprise
DMRE	Department of Mineral Resources and Energy	MUF	Mistra Urban Futures	TB	tuberculosis
EEG	experiential education garden	MW	megawatt	tCO₂e	tons of carbon-dioxide-equivalent
EPWP	Expanded Public Works Programme	NGO	non-governmental organisation	UCT	University of Cape Town
EV	electric vehicle	OCCNE	one contact centre for non-emergencies	VLR	voluntary local review
FAS	foetal alcohol syndrome	PECC	Public Emergency Contact Centre	WWTP	wastewater treatment plant
FSWG	Food Systems Working Group				



PORTFOLIO EXTRA 5:

ACKNOWLEDGEMENTS AND RESOURCES

The authors wish to thank the stakeholders below, without whose support, guidance and cooperation this edition of the Mayor’s Portfolio of Urban Sustainability would not have been possible:

- ➔ The City’s advisory forum, who gave of their time to help establish a vision for the portfolio and offer practical advice on the choice of projects and assessment procedure
- ➔ The external review panel, comprising Stephen Granger, Bruce Kerswill, David Shandler, Gina Ziervogel, Jenny Cargill, Peter Willis, Rory Williams and Zarina Patel, who provided helpful

advice on the overall portfolio, the methodology as well as specialist insight into the assessment phase

- ➔ The City’s Aletta Kruger and Alison Smith (Publications, Communication Department) and Arc South Africa for coordinating the publication
- ➔ Most importantly, the project managers, who generously gave of their time in sharing their projects, experiences and challenges
- ➔ Bruce Sutherland and Cindy Waxa, official City photographers

FURTHER INFORMATION

Organisations who are interested in further information or wish to discuss the Mayor’s Portfolio of Urban Sustainability with the City are invited to contact:

Muofhe Pedzai, Environmental Management Department
Tel: +27 21 487 2829

PROJECT	PROJECT MANAGER(S)	CONTACT DETAILS
VISION PORTFOLIO		
Floating solar photovoltaic (PV) pilot	Thandiwe Mphuthi*	+27 21 417 0692 Thandiwe.Mphuthi@capetown.gov.za
Liveable Urban Waterways (LUW) programme	Andrew McDonald	+27 21 400 6125 AndrewJohn.McDonald@capetown.gov.za
One contact centre for non-emergencies (OCCNE)	Pearl Nongqongqo	+27 21 427 7036 PearlNolutando.Nongqongqo@capetown.gov.za
Potsdam sustainability campus	Liezel Kruger-Fountain Ashley Hemraj	+27 21 400 9443 Liezel.KrugerFountain@capetown.gov.za +27 21 400 9420 Ashley.Hemraj@capetown.gov.za
SOCIAL PORTFOLIO		
Cape Town International Convention Centre (CTICC) and Athlone vaccination centres of hope (Covid-19)	Mark Cawood Marius Schoeman	Mark.Cawood@capetown.gov.za Marius.Schoeman@capetown.gov.za
Cultural mapping and planning programme	Nikita Beukes	+27 21 400 9532 Nikita.Beukes@capetown.gov.za

* Project manager resigned/retired since interviews were conducted.”

PROJECT	PROJECT MANAGER(S)	CONTACT DETAILS
DMOCmed Area Central	Marilyn Dennis	+27 21 444 6259 Marilyn.Dennis@capetown.gov.za
Food systems pilot programme	Tamsin Faragher	+27 21 400 4996 Tamsin.Faragher@capetown.gov.za
Kommetjie Road and Sir Lowry’s Pass fire stations	Adiel Albertyn	+27 21 597 5172 Adiel.Albertyn@capetown.gov.za
Paint City Safe Space	Marilyn Dennis	+27 21 444 6259 Marilyn.Dennis@capetown.gov.za
Sustainable development goals (SDG) voluntary local review (VLR) 2021	Carol Wright Natasha Primo	+27 21 400 2066 CarolAnne.Wright@capetown.gov.za +27 21 400 3364 Natasha.Primo@capetown.gov.za
Substance abuse projects	Ferial Soeker	+27 21 444 0725 Ferial.Soeker@capetown.gov.za
Women and girls resilience programme	Charlotte Powell	+27 21 597 5013 Charlotte.Powell@capetown.gov.za
ECONOMIC PORTFOLIO		
#YouthStartCT entrepreneurial challenge	Abigail Jacobs-Williams	+27 21 444 0197 Abigail.Jacobs-Williams@capetown.gov.za
Building energy management	Oliver Stotko	+27 21 400 6855 Oliver.Stotko@capetown.gov.za
Cape Town Market	Michael Sims Gary Nevin Magda Murray	+27 84 321 2277 Michael.Sims@capetown.gov.za +27 21 400 3038 Gary.Nevin@capetown.gov.za +27 21 400 4028 Magdalena.Murray@capetown.gov.za
City of Cape Town Vulnerability Viewer	Elmarie Nel	+27 21 400 2703 Elmarie.Nel@capetown.gov.za
SAP CRM service request enhancement	Helourine Seyffert	+27 21 427 7013 Helourine.Seyffert@capetown.gov.za
Service delivery turnaround project - phases 1, 2 and 3	Pearl Nongqongqo Delyno du Toit	021 427 7036 PearlNolutando.Nongqongqo@capetown.gov.za +27 21 400 7154 DelynoJohannes.DuToit@capetown.gov.za
South African Renewable Energy Business Incubator (SAREBI)	Roslyn Sparks	+27 21 400 1700 RoslynGlenda.Sparks@capetown.gov.za
W3 bus rapid transit (BRT) road construction as part of integrated rapid transit (IRTP) phase 2A	Carl Stroud Andrew Harris	CarlWilliam.Stroud@capetown.gov.za Andrew.Harris@capetown.gov.za
Welmoed cemetery Covid-19 phase 6, and Atlantis cemetery Covid-19 phase 4	Layaan Leukes Renee Weyers	+27 21 400 2042 Layaan.Leukes@capetown.gov.za +27 21 400 7461 Renee.Weyers@capetown.gov.za

PROJECT	PROJECT MANAGER(S)	CONTACT DETAILS
ECOLOGICAL PORTFOLIO		
Atlantis alien vegetation removal	Mashudu Phalanndwa Bronwen Griffiths Gerschwin Williams	+27 21 444 3775 Mashudu.Phalanndwa@capetown.gov.za +27 21 400 7016 Bronwen.Griffiths@capetown.gov.za +27 21 417 4005 Gerschwin.Williams@capetown.gov.za
Belhar Gardens rental estate	Renier Erasmus Nomzamo Mlungu	renier@mh.org.za +27 21 400 1655 Nomzamo.Mlungu@capetown.gov.za
Bellville catalytic-precinct zero-waste initiative	Gideon Brand	+27 21 400 9860 Gideon.Brand@capetown.gov.za
Electric vehicle (EV) charging station pilot	Mary Haw	+27 21 400 1245 Mary.Haw@capetown.gov.za
Experiential education garden	Lindie Buirski	+27 21 487 2839 Lindie.Buirski@capetown.gov.za
Helderberg environmental education centre	Mariam Kamalie	+27 21 400 9419 Mariam.Kamalie@capetown.gov.za
University of Cape Town African Centre for Cities (ACC)-City of Cape Town knowledge partnership	Carol Wright Saul Roux	+27 21 400 2066 CarolAnne.Wright@capetown.gov.za +27 21 400 2204 SaulAlexander.Roux@capetown.gov.za
My Clean Green Home	Mary Haw Aatifah Latief	+27 21 400 1245 Mary.Haw@capetown.gov.za Aatifah.Latief@capetown.gov.za



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