



Future-fit cities: From shared values to climate action

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1 Introduction

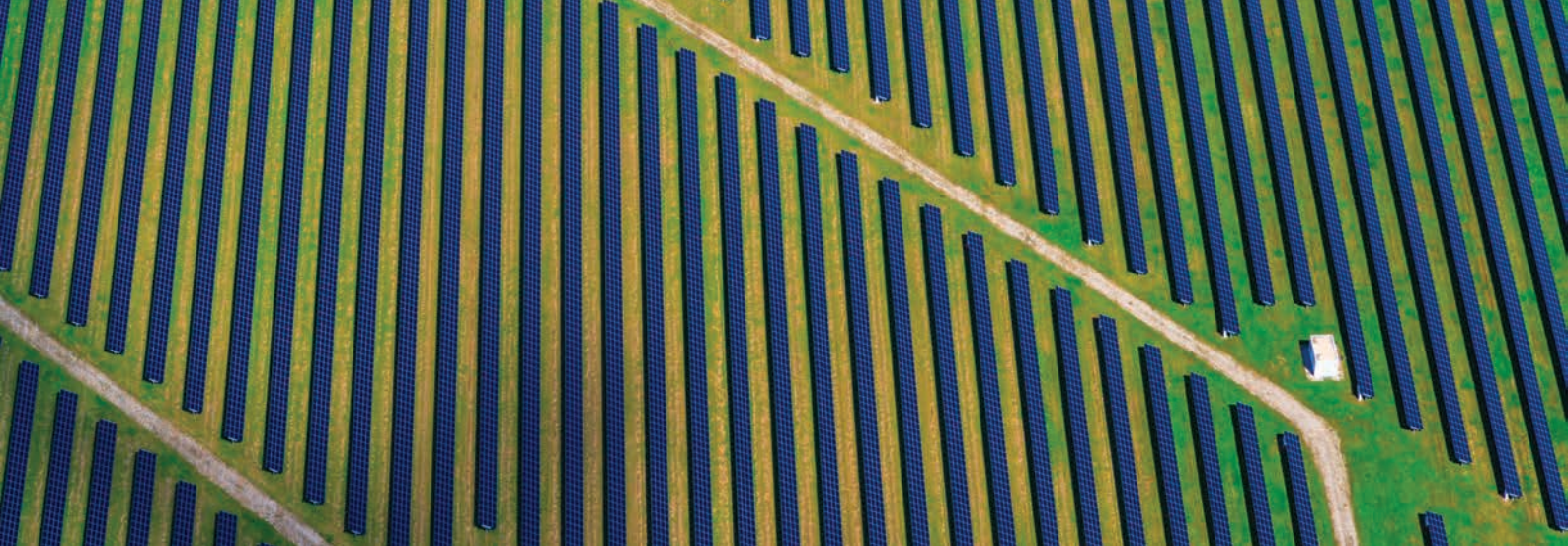
As governments, businesses and society push forward their efforts to collectively move towards a more sustainable future, the role of cities and local government in this shift is increasingly necessary to ensure that these efforts become practical and of substance on the ground.

For the third consecutive year and contrary to what was seen globally, South Africa's carbon intensity saw an increase (0.9% in 2020) even with the hard lockdowns experienced across the country. However, climate is not just an environmental issue and will continue to have a significant impact on jobs, livelihoods, GDP, health, migration, and urbanisation. Given the role of cities in the implementation of national policies, service delivery, infrastructure, planning and finance, cities can play a vital role in championing the implementation of best practice.

The COVID-19 pandemic has highlighted the need for robust long-term planning to ensure that economies and societies around the world can be resilient to future global and local shocks.

While the pandemic has caused significant economic and social disruption, it has also given us a unique opportunity to design recovery plans that allow us to build back better by ensuring a just transition to a world that is more socially, economically and environmentally inclusive. As organisations across the globe seek to rebound as quickly as possible from the devastating impact of COVID-19, sustainability will prove a crucial lever in building a very different post-pandemic world.





The World Economic Forum (WEF) Global Risk Report for 2021¹ now includes the risk of infectious disease, as a result of COVID-19, in its top five risks in terms of likelihood and magnitude for the first time in its history. However, the risks associated with climate action failure, biodiversity loss and human-made environmental disasters still remain in the top five risks in terms of likelihood and magnitude.

The latest [*Intergovernmental Panel on Climate Change \(IPCC\) report*](#)² brings to light the latest scientific evidence on the current state of the global climate and the unquestionable impact of human behaviour on global warming. Assessments of the current global effort show that the world is not on track to meet the targets set out in the Glasgow Climate Pact's temperature goals. The report has been described as a "code-red" for humanity and demands for an immediate and sustained reduction in greenhouse gas emissions to stabilise the climate and transformational change led by governments and businesses.

The report warns that temperatures will continue to rise to at least the mid-century under all emissions reduction scenarios with many changes in the climate system becoming larger in direct relation to increasing global warming, putting our biodiversity, water, crops and cities at high risk.

The scale of the challenge has increased significantly, requiring steeper reductions in our lifetime.

Building successful future cities means understanding the principles of resilience and learning to adapt to the shocks and stress that will challenge the viability of all cities in the future. Cities have always faced myriad challenges, from the tensions of sustaining economic activity to fostering social cohesion among large groups of people and everything in between.

Over the past few decades, the realities of climate change have moved to the centre of cities' risk calculations. The compound effects of climate events, including the devastation of drought and the realities of heat waves and fires, for example, demonstrate the need for cities to consider their own resilience. This means learning to address interrelated risks, not only to survive them should they occur, but for cities to thrive in adapting to them. While climate change is an existential threat to cities, it also presents one of the greatest opportunities to foster meaningful reform to benefit residents here in South Africa and across Africa.

Following the 26th Congress of the Parties (COP 26) in Glasgow, there is increasing momentum to build resilience for all and transition to net-zero carbon emissions within the next few decades. The pursuit of keeping global warming to 1.5 degrees Celsius

has been reaffirmed in principle and the framework for working carbon markets is emerging.

New mechanisms for resilience finance have also been tabled with the potential for what these instruments might yield being displayed by bilateral deals. This is especially true of the multibillion dollar deal announced to help finance South Africa's transition away from coal power, which was made in an agreement between South Africa and the United States of America, the United Kingdom, France, Germany, and the European Union.

While the results of COP 26 may not have satisfied many policymakers and activists, it is undeniable that climate change has moved into a different phase of global attention and the pressure created by the congress has the potential to stimulate the next round of sustained international action similar to the catalytic effect the Paris Agreement of 2015 provided to much of the world.

The question for South African cities will be a consideration of how they can leverage this moment to their advantage. The mechanics by which many South African cities operate are in need of reform. While the formation of large metros decades ago has provided the potential for financially viable institutions, many of the supporting frameworks around metros require a degree of change.

¹ World Economic Forum, 2021. The Global Risks Report 2021. 16th Edition. Geneva. Switzerland.

² Intergovernmental Panel on Climate Change. AR6 Climate Change 2021: The Physical Science Basis. <https://www.ipcc.ch/report/ar6/wg1/>

South Africa is one of the top five countries in terms of carbon emitted per unit of energy. To meet net zero global objectives, the challenge will be to transform its carbon-intensive economy, and simultaneously meet its development needs and objectives through a just transition.

While there is much attention now on how the new energy deal will finance the transition from coal for the state energy utility, there needs to be greater attention on how the metros negotiate this shift. While most metros are largely concerned with electricity distribution, the effects of load-shedding have already transformed the fundamentals of the electricity distribution business with many households and businesses investing in their own individual resilience and getting off the grid, actions which are changing the very business models of metros in real time.

A just energy transition in South Africa must consider the full energy value chain and the investments required to ensure not just a transition away from coal, but also financially sustainable vehicles through which distribution can happen. Without sufficient attention, metros run the risk of having these municipal utilities fail and the consequences of that

level of government insolvency for residents will be as dramatic as the consequences of failing to address climate change. It is also true that the largest or major source of emissions for all metros is from vehicles. As exciting and necessary as the automotive industry's transition to electric vehicles is, the focus in South Africa must be on creating viable means of mass public transportation. Weaknesses in the state-owned enterprises that control rail mean that a new dispensation needs to be explored, possibly with additional players and markets to create new entities and companies that can address both backlogs in mass public transport as well as future needs.

Thinking about African cities more broadly, projections estimate that 70% of the world's population will live in cities by 2050. Much of this urbanisation will be in Africa, which will need to adapt its existing cities to the realities of this population growth while also managing climate change requirements. These include building in resilience against fires and floods, especially in cities where large areas are occupied by informal structures.

There will also be a need to build new African cities to cater for the movement away from rural areas and this will mean large national programmes of investing in secondary cities. Building these secondary cities provides an opportunity for all partners, whether at the level of national government or multilateral agencies, as examples, to invest in green infrastructure and a means to

showcase the potential of international financing tools in financing the climate transition in a meaningful way. From an urban design perspective, there are opportunities to cater for the need to build resilience to help these new cities withstand the inevitable shocks and stresses they will face.

Cities have the potential to be at the forefront of driving major change and they have long been engines of economic activity and social dynamism. With the right ambition, they can also be leaders in the race to resilience and ensure that the multiple levers needed to engineer climate resilience manifest in place and space and to the benefit of large population densities.

PwC is committed to partnering with cities on this journey and our New Equation strategy provides a framework to build meaningful relationships built on trust and sustainability. The moment for building cities' resilience for the future is now and we are ready to play our part.



This document calls for:

- a balanced approach to sustainability that enables South Africa to step closer towards the newly agreed Glasgow Climate pact targets whilst not leaving the most vulnerable behind.
- a lessons-focused approach, drawing on lessons learnt from countries such as the UK, Germany, Australia, Canada and the Netherlands, which all transitioned away from fossil-fuel based economies, but applying a local approach.
- a focus on getting the financing right and aligning investment across sectors, identifying new bonds and creating mechanisms to disburse funding to the local level. Municipal leaders need to prioritise green investments as ‘must-have’ considerations.
- a focus on skills development and education that accompanies the move to renewable energy and also increases access to new technology and jobs.
- increasing access to finance, but through the consideration of a comprehensive toolkit of green finance instruments and context-appropriate financial interventions rather than a one-size-fits-all approach. A key consideration should also be a focus on funding intermediary cities given their key role in a broader national framework of urban development, and their potential for national economic development and poverty reduction.
- a focus on implementation of the plans produced – what is most actionable and how can we work together to action and prioritise climate action plans?
- a comprehensive and systems-based approach including all spheres of government, business and the community.

2 Benefits of a sustainable recovery for South African cities

The risks cities face from climate change will not necessarily manifest in entirely new risks or impacts, instead they are likely to magnify the likelihood and magnitude of existing risks and impacts such as increasing water insecurity (e.g. the Cape Town drought in 2018) or the increasing numbers of deaths from heat waves around the world, predominantly in cities.

Cities are also likely to also see a large in-migration from rural inhabitants who are pressured by drought or other climate extremes³. As such, tackling the climate change problem isn't just about the environment, but also about the impacts these changes will have on the social, economic and environmental sectors.

The risks and impacts associated with climate change can be tackled in two ways, mitigation and adaptation. A lot of focus worldwide is currently on the mitigation aspects with cities increasingly making mitigation commitments such as net zero building commitments through the C40 initiative.

However, while mitigation is vital, adaptation thinking and planning cannot be delayed. As the latest IPCC (Intergovernmental Panel on Climate Change) report on climate change shows, the impacts of climate change are already with us and we can no longer think about these impacts as a future problem. These impacts are likely to worsen over time, making it vitally important for cities to develop appropriate adaptation strategies to protect their societies, economies and environments as soon as possible, as those that delay are likely to experience increased disruption across these sectors.

Because climate change is a human problem rather than just an environmental problem, any mitigation or adaptation strategy needs to start with the human side of the matter through thinking around the just transition, as any plans that ignore this will not receive the buy-in needed and will not fulfil the ultimate purpose. By effectively taking into account these considerations, the ultimate benefits through the development and implementation of these strategies could result in:

- reduced impact on service demand, delivery and costs in the long term
- greater equality and inclusivity, including localisation of jobs and goods
- increased focus on social and economic improvement and poverty reduction (just transition) at the forefront of actions
- increased impetus for governments to modernise key economic sectors in an integrated way
- smarter and more resource efficient services
- enhanced energy security
- cleaner and safer urban environment with reduced local air pollution.

³ The World Bank Group, 2011. Guide to Climate Change Adaptation in Cities. Washington, United States of America.

Cities that are able to proactively develop adaptation strategies to become future fit will be able to provide safer, healthier, more stable and equitable and resilient environments for their citizens into the future.

These will be the cities that will be attractive to business because of the stable environment they will be able to offer. Ultimately climate mitigation and adaptation planning should form the core of any cities' long term planning, rather than a siloed focus due to the cross cutting nature of the impacts on all other departments. By building this into the core of decision making, cities will be able to ensure the long term viabilities of future projects as well as their own safety and health.

3 The cities climate crisis

Increasing environmental, economic, social and resource pressures in cities.

The demand for basic urban services, affluence and an increased demand for global services and products contribute to increasing environmental pressures worldwide and in South Africa. Lifestyle and consumption choices are profoundly changing the size, structure, and density of cities. A preference for suburban living has had a negative impact on both rural and urban environments alike, as it disadvantages public transport and creates severe traffic congestion contributing to greenhouse gas emissions.

As the cost of climate change increases, some of the most important challenges for cities now include unprecedented environmental, economic, social and resource pressures, which can be seen in the table below.

Pressures caused by the cost of climate change

| Spatial transformation | Energy transition and climate change impacts | Resource use and waste management | Socio-economic pressures |
|--|--|---|---|
| <ul style="list-style-type: none"> • Revitalising existing infrastructure and developments • Locked into long-term urban infrastructure • Transport and mobility implications of spatial planning • Prerequisite of affordable housing with access to transport, jobs, and public services for health and safety | <ul style="list-style-type: none"> • Vulnerability to natural disasters • Responsible for 70% of global GHGs • Stress on water availability and ecosystem goods/ services | <ul style="list-style-type: none"> • About two-thirds of the world's energy consumption • Global waste to grow by 70% by 2050 unless urgent action is taken⁴ • Unsustainable and costly resource consumption • Nexus for the "take-make-waste" linear economy • 75% of natural resource consumption | <ul style="list-style-type: none"> • Unequal access to economic and social opportunities • Local production and global supply chains • Drive for economic development and community revitalisation • Call for more efficient and healthy urban services |



If cities are not careful to curb the rise in use of fossil fuel energy, pollution and traffic congestion, reducing greenhouse gas emissions would appear out of reach. Just as cities are major contributors towards climate change, they and their populations are equally vulnerable to its impacts including flooding, storms, droughts and rising temperatures. This intensified population growth and increased urban activity has led to the need for greener cities. Coupled with this, is the need to adapt to the socio-economic aspects of the transition which comes with both positive and negative impacts on employment, including both the number of jobs and the quality of jobs created or transformed.

⁴ <https://www.worldbank.org/en/news/press-release/2018/09/20/global-waste-to-grow-by-70-percent-by-2050-unless-urgent-action-is-taken-world-bank-report>

A pivotal point: What has the global health crisis taught us?

The global COVID-19 pandemic has brought both a sense of urgency and the need for additional resilience to address the climate crisis. Global health, economic and climate crises are intertwined and require sophisticated public and private leadership to start driving towards a healthier and more resilient future. Cities have been at the epicentre of the COVID-19 pandemic. The World Economic Forum⁵ sets out the following lessons from COVID-19 that can be applied to climate change:









- **The time to act is now.** Failure to set ambitious targets at scale and speed threatens the future of humanity.
- **Resilience through working together.** Meaningful partnerships and policy work are needed to drive change.
- **Focus on innovation.** Accelerated leaps have taken place in response to an urgent need for innovative solutions. Digital is critical. COVID-19 forced a new way of working and connecting overnight. Digitalisation can be used to generate both innovation and funding to address the climate crisis.
- **Importance of transparency in leadership.** The COVID-19 crisis has demonstrated the importance of transparency in building trust. Local governments, cities and businesses will need to take climate action into their own hands, much like their response to COVID-19.
- **With a rapidly changing world comes a need for new skills and a job market that pivots.** Governments need to ensure an environment that allows for job creation, particularly when balancing this with other priorities such as low carbon targets.

The role of cities and acting towards net zero

Cities have specific responsibilities and should use these functions to help shift towards a lower carbon economy:

- City development strategies (CDS): these institutional and community planning processes contemplate a city's possible futures, resulting in a strategy for the long term (a 10-to-50-year period). They are coordinated, cross-sector, multi-issue development of an urban jurisdiction that inform and are informed by medium (e.g. Integrated Development Plans (IDPs) and Spatial Development Frameworks (SDFs)) and shorter-term plans and initiatives.
- Building public health and community resilience.
- Land-use planning (including housing and pedestrian access); can you create a '15-minute city' in terms of accessibility and services?
- Infrastructure planning.
- Protecting natural capital and supporting green infrastructure.
- Working with businesses and industry.
- Transitioning in a way that is just and supports economic growth and job creation.

Supporting post COVID-19 economic development and the transition to a low carbon future requires governments to prioritise investment. National recovery programmes present an opportunity for governments to more closely align and integrate their public policies with climate change mitigation objectives. Directing investment towards sectors and technologies that can accelerate the transition and enhance resilience to future shocks should be top of mind for policy makers. Such investments include:

| | |
|---|--|
|  Green construction and buildings | create low-carbon-built environments where people will love to live. |
|  Renewable energy | invest in renewable energy generation and electrification for low-carbon cities. |
|  Active transport | foster pedestrian and cycling schemes for healthy, active citizens. |
|  Nature-based solutions | deliver green spaces that benefit citizens and their cities. |
|  R&D for clean technologies | foster a culture of green innovation for long-term benefits. |
|  Clean mobility | promote clean and shared transport for connected, accessible cities. |
|  Waste and resources | support workers and create a circular economy for clean resource-smart cities. |
|  A just transition | to mitigate the negative impacts of climate change policy and transitioning to a lower-carbon economy on workers and affected communities. |

⁵ <https://www.weforum.org/agenda/2020/09/5-things-covid-19-has-taught-us-about-curbing-climate-change/>

Achieving this low carbon future and economic recovery requires some fiscal, financial and governance reforms from national governments:

- **Fiscal reform:** eliminate fossil fuel subsidies and make it attractive for the private sector to invest in low-carbon infrastructure and services.
- **Governance reform:** develop national strategies for cities and robust plans to deliver economic and social development in the context of the global health and climate emergency.
- **Financial reform:** fiscal support for local governments and reforming municipal financing systems.

The following are some of the actions that can be taken by municipal leaders:

- Coordinate and support local climate action, bringing together local government, businesses, civil society and the community.
- Enable access to financing for climate related impact.

- Adopt legislation explicitly outlining roles and powers of different tiers of government, including own source revenues and access to capital markets (pertaining to climate change).
- Revitalise existing infrastructure and developments, taking a sustainable lens to these.
- Work with local businesses to align corporate net zero strategies to enable a wider sustainable impact on the local community.
- Ensure that both socio-economic impact assessments and environmental impact assessments are taken forward to identify what the impacts would be of critical decisions, particularly surrounding infrastructure.
- Strengthen capacity of built environment professionals to pursue zero-carbon climate developments.
- Establish local partnerships to develop a coordinated adaptation response.
- Enable integrated land and transport planning.
- Authorise and encourage local governments to adopt sustainability/climate plans and policies that go beyond national policies.
- Enhance green spaces to offset the urban heat island effect.
- Develop specific plans – e.g. community flood plan, heatwave plan, business engagement, drain maintenance.
- Establish regulatory sandboxes for low carbon innovations within cities.
- Business support – promote financial and technical support to businesses to build resilience.



Drivers for change

We see a number of main drivers for government clients around the globe acting on net zero and working towards future-fit cities:

- **International politics:** The race to net zero has seen over 120 countries commit to being carbon neutral by 2050. With the recent Glasgow Climate pact agreed at COP26 in November this year and the recent IPCC report flagging the climate crisis as ‘red-alert’ for humanity, the pressure to demonstrate meaningful climate action is on. To date, there is evidence that global emissions in the EU-27 have decreased by 21% since 1990. Contributing factors include an increased drive towards energy efficiency and shift towards the uptake of renewables⁶. A number of nations and a growing number of organisations/businesses are committed to actioning net zero focused initiatives. An estimated 64 countries have implemented or scheduled the implementation of carbon pricing initiatives⁷, moreover, the World Bank Group has accepted the challenge and committed itself to align its operations with the Glasgow Climate Pact objective July 1, 2023⁸.
- **South African politics:** Climate adaptation and mitigation actions are being integrated and accounted for in various policy frameworks. South Africa’s National Development Plan (NDP) 2030 sets out the objective of eliminating poverty and inequality through just transition – transitioning to a low-carbon and climate resilient economy and a just society. South Africa’s Medium Term Strategic Framework 2019-2024 (MTSF), developed by the Department of Planning, Monitoring and Evaluation (DPME), sets out the key steps to be taken to advance the NDP by setting out targeted actions on climate change adaptation and mitigation. Furthermore, in support of South Africa’s National Climate Change Response Policy (NCCRP), the forthcoming Climate Change Bill (in draft), developed by the Department of Environment, Forestry and Fisheries (DEFF), will form the legislative foundation for the country’s climate change adaptation and mitigation response, requiring every organ of state to work together on the policies, plans, programmes and decisions that affect or will be affected by climate change.
- **Public pressure and interventions:** Business, investors, financial institutions and civil society are increasingly holding governments and the private sector to account in taking action on progress towards net zero. In South Africa, the Centre for Environmental Rights is a team that is advocating for the advancement of environmental rights in the country. It is made up of activist lawyers who work with communities and civil society organisations to realise their constitutional right to a healthy environment by advocating and litigating for environmental justice.⁹ Additionally, the Climate Action Partnership (CAP) is an alliance of South African environmental NGOs dedicated to reducing the impacts of climate change and increasing the resilience of South Africa’s biodiversity and communities¹⁰. These initiatives indicate society’s commitment to enabling a just and sustainable environment, through driving engagement and encouraging governmental accountability. To retain support, governments should be transparent about their progress towards net zero and be open to engagements with the public.
- **Cost of inaction:** Inaction towards climate mitigation and adaptation response comes with consequences and governments are faced with the challenge of mitigating environmental impacts now, to avoid the growing cost of inaction. Some of the physical impacts associated with climate change include (but are not limited to) extreme weather patterns such as floods, droughts and storms, rising sea levels and the loss of biodiversity. These impacts could consequently pose significant risks to society in the form of damaged infrastructure and the displacement of society, as well as health risks. Failure to act on these risks comes at a cost. According to the IPCC, adaptation and response is an increasing cost to society and the per-capita impact of ‘no action’ and would result in a reduction of global GDP per capita by 30%.
- **Risks to public health:** Extreme weather patterns and air pollution amongst other climate-change related factors pose a threat to human health. Health risks in South Africa that climate change would aggravate over the next few decades include heat stress; vector-borne diseases (such as malaria, dengue fever and yellow fever); extreme weather events; air pollution; communicable diseases (such as HIV/AIDS, TB and cholera) and non-communicable diseases (such as cardio-vascular and respiratory diseases). It is evident that governments have a massive responsibility to mitigate the health impacts of climate change.

⁶ https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Climate_change_-_driving_forces

⁷ <https://www.worldbank.org/en/topic/climatechange/overview>

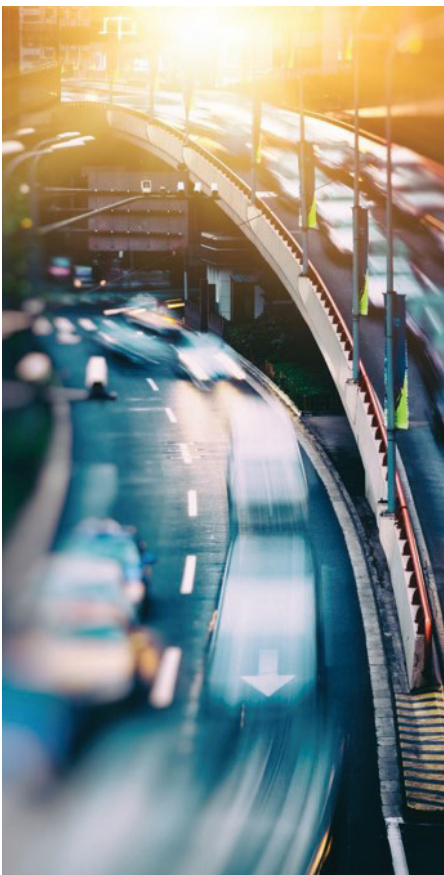
⁸ <https://www.worldbank.org/en/topic/climatechange/overview#2>

⁹ <https://cer.org.za/>

¹⁰ <http://www.cap.org.za/>

4 The state of South African cities

The urban challenges addressed in section 2 are applicable worldwide. However, the South African context presents a unique set of challenges in the fight to address climate change.



South Africa's position

South Africa's context

The legacy of Apartheid has resulted in several behavioural, institutional and policy-related difficulties in making meaningful progress on the road to becoming sustainable. Some examples of these challenges include:

- Spatial disaggregation.
- Cities at different maturities.
- The economic and functional state of state-owned enterprises (SOEs).
- Power plays between governmental institutions.
- Dispersal of urban development competences.
- Division of authority (national vs provincial).
- Skills gap: the transition to a low carbon economy comes with both positive and negative impacts on employment, including both the number of jobs and the quality of jobs created or transformed and, South Africa (like other countries), needs to balance this and help generate the skills that will match this future.

The extent to which South African cities are in disarray is set out in the June 2021 local government audit outcomes which push for stability and leadership¹¹. Just 27 of 257 municipalities have a clean bill of financial health, according to the local government 2019/20 audit.

To help reverse this situation and the climate crisis that our cities find themselves in, there is a real call for strong leadership and transversality – for city departments to work collectively towards common goals, for cities to work with provincial and national government and support each other, and for cities to work hand in hand with local businesses and community – and to learn from and gather support from the international community.

As stated by the Green Climate Fund:

‘decisions taken by city leaders on where, what and how investment will be directed to support green development need to be considered – adopting a system-based approach. A system-based approach recognises the interconnectedness of sectors and the importance of sequencing. It also recognises that cities will evolve to different levels of ‘green’ at different rates and that this development is not uniform’.¹²

Finance is critical to this. Municipal leaders across the board could do more to appropriately prioritise green investments. This means that ‘green’ must no longer be in the

¹¹ <https://www.dailymaverick.co.za/article/2021-06-22-local-government-failures-another-year-another-inspection-another-bad-outcome-with-a-few-exceptions/>

¹² <https://www.greenclimate.fund/project/fp086>



domain of ‘nice-to-have’ and become part of ‘must-have’ considerations. Investments in green infrastructure, whether new-build or retrofits, have tremendous cost-savings, helping to realise a double bottom line with both financial and environmental benefits. The treasurers and chief financial officers of cities across Africa can play a pivotal role in achieving the ambitions of the green agenda without compromising their responsibilities.

Rapid innovation and falling costs have created an overwhelming commercial case for renewable energy, with fierce competition for market share as this new global market accelerates. In our 2020 PwC Africa Oil and Gas review, it became evident that Africa will be caught in this rapid decline in global fossil fuels demand, with an estimated \$1tn more in lost revenue than budgeted for African producers over the next 20 years. So how does Africa close the funding gap to achieve access to sustainable and affordable energy?

It is widely acknowledged that governments and the public sector alone cannot meet Africa’s energy funding requirements. Except for a small handful, the vast majority of countries in Africa still have fully integrated utilities, often loss making and constraining market reform. Lack of cost-reflective revenue collection and investment into maintaining robust networks are commonplace. Governments are under further financial stress as they divert funds and resources in response to the COVID-19 pandemic.

Current thinking focuses on closing the energy funding gap through the ability to attract blended investment across the public and private sectors as well as across the electricity value-chain. A significant increase in donor and multilateral credit enhancement for utilities combined with technical support and accelerated market reform certainly seems to be top of mind.

The current state of South Africa’s climate

According to the Climate Action Tracker (CAT), an independent scientific analysis that tracks government climate action and measures it against the globally agreed Glasgow Climate Pact aim of ‘holding warming well below 2°C, and pursuing efforts to limit warming to 1.5°C’, South Africa’s overall climate targets and policies are rated at ‘insufficient’ to keep temperatures rising below 2 degrees celsius (as at 29 October 2021).¹³ This is an improvement from the overall 2020 rating where South Africa was regarded to be highly ‘insufficient’ (as at 22 September 2020). In totality, this indicates that there is an opportunity for South Africa to make improvements in order to meet the net zero emission goal.

| Climate Action Tracker: South Africa (as at 29 October) | | | |
|---|--------------------------|------------------------|---------------------|
| Overall rating: INSUFFICIENT | | | |
| Policies & action | Domestic target | Fair share target | Climate finance |
| Almost sufficient | Almost sufficient | Insufficient | Not assessed |
| <2°C world | <2°C world | <3°C world | |
| Net zero target | 2050 | Information incomplete | |
| Land use & forestry | | Not significant | |

Source: Climate Action Tracker

CAT estimates that South Africa’s emissions could reduce between 8–10% towards 2030 (below the pre-COVID-19 projection). Stringent climate policies, diverting away from carbon-intensive investments, and having a green economic recovery are examples of factors that could contribute towards reducing emissions. A key milestone worth recognising for South Africa is the approval of the Integrated Resource Plan (IRP2019) in October 2019, which signaled the shift in the energy policy from coal towards renewables; the successful implementation of the IRP roadmap could positively contribute towards emissions reduction.¹⁴

¹³ <https://climateactiontracker.org/countries/south-africa/>

¹⁴ <https://climateactiontracker.org/countries/south-africa/policies-action/>

The [PwC Net Zero Economy Index](#) shows that, based on current trends in energy consumption and CO₂ emissions generation, the century's global carbon budget would be used up by the end of this decade. For example:

South Africa

- It is predicted that by 2035, South Africa could see warming of 0.5–1°C across most parts of the country with parts of the western interior seeing rises of 2°C.
- South Africa's Low Emission Development Strategy 2050 published in February 2020, presents the country's vision following a low-carbon growth trajectory, making a fair contribution to the global effort to limit the average temperature increase.
- South Africa continues to show little progress in decoupling emissions from GDP. Along with Indonesia, South Africa reported an increase in carbon intensity for consecutive years.
- South Africa remains the worst performer in the G20 with a carbon intensity in 2019 of 599 (tCO₂/\$m GDP), with China the second worst performer scoring 443. Both are well above the global average of 286.¹⁵

Government narrative to date

Despite the above figures, and given the need to balance pressing issues such as energy security and unemployment, initial proposals by the South African government for post-COVID-19 economic recovery indicated an intention to focus on carbon-intensive investments instead of prioritising a 'green' recovery and the associated opportunities for value chain localisation, air pollution reduction and job creation. The social and economic costs of the pandemic have been huge¹⁶ – exacerbating issues that were already present before the crisis. With unemployment at 32.5% and unemployment among the youth approximately 50%¹⁷, together with poor educational outcomes, widening the skills gap does not promote a prosperous future.

However, in recent months, there has been some change to this narrative. Given the ageing fleet of coal fired power stations that must be decommissioned over the next 20 years, this transition is a must. However, this must be done by balancing the country's capacity to generate power, moving to lower carbon options whilst ensuring this is done in a way that supports the economy and job creation.

South Africa has a unique opportunity to successfully transition to renewable energy and away from coal and could be the first to do this in the global south.

President Ramaphosa signaled government's intention in the February 2021 [State of the Nation Address](#) (SONA) of ensuring that 'no African child will be left behind in the transition to a low-carbon, climate resilient and sustainable society'. To understand what this means, it is important to understand the baseline: where South Africa currently stands in terms of its socioeconomic context. Furthermore, the president announced that the Presidential Climate Change Coordinating Commission will create a plan for a just transition to a low-carbon economy and climate resilient society. Moreover, actions put in place to drive SA towards being a green economy were noted and thus far metros have already prepared their Climate Action Plans.

¹⁵ <https://climateactiontracker.org/countries/south-africa/2020-09-22/>

¹⁶ The COVID-19 crisis has pushed significantly more people out of jobs. An additional 2.2m people were without work during the April–June period. PwC estimates that only 900,000 of them returned to a job by year-end — a net loss of 1.3m jobs. The prediction for 2021 is that fewer than 500,000 jobs are expected to be recovered. Following this scenario, PwC estimates it will take around nine years for the country to return to pre-COVID-19 unemployment levels.

¹⁷ Stats SA. Quarterly Labour Force Survey (QLFS) – Q1:2021. <http://www.statssa.gov.za/publications/P0211/Media%20release%20QLFS%20Q1%202021.pdf>



Key State of the Nation Address Climate Action themes:

- **Net zero commitments:** South Africa's commitment to continue the reduction of GHG (in accordance with UN Framework Convention on Climate Change). Eskom has committed to net zero emissions by 2050 and to increase its renewables capacity.
- **Embedding just transition:** Eskom is looking to partner with investors in its journey to stimulate local economic activity and manufacturing as part of the just transition – creating a plan for a just transition to a low carbon economy and climate resilient society.
- **Policy amendment: Electricity Regulation Act:** Increase the licensing threshold for embedded generation within the next three months, therefore, extending capacity onto the grid.

The success of the above will lie in coordination and transversality, working together across departments, city boundaries, provinces, business and community lines, and strong intentional financing mechanisms.

The window of opportunity to pivot is here to build back better, together... now. The COVID-19 recovery package presents a unique opportunity to focus and accelerate cleaner and more sustainable infrastructure and industry, while generating new business and employment opportunities and developing recovery programmes that are socially just. There is also growing global awareness of the need for a transition to low carbon economies as evidenced in the National Development Plan 2030.

South African cities: Plans and actions

To date, 6,150 cities participating in the Global Covenant of Mayors and representing 20% of urban residents globally have developed climate action plans¹⁸.

Like many cities globally, the [City of Cape Town](#), [eThekweni Municipality](#) and the [City of Johannesburg](#) have outlined their climate and sustainability ambitions in line with the Glasgow Climate Pact. However, innovative financial models and implementation plans will be imperative to following through with meaningful action.

South African cities have strategic development plans with accompanying capital investment plans, but their climate ambitions are often not directly tied into their more concrete planning and financial priorities. It is clear that in order to reach the ambitious goals set out in the Climate Action Plans (CAP), these cities will require coordinated support from various stakeholders: national and provincial government, the private sector, civil society and their respective citizens.

¹⁸ Cities Climate Finance Leadership Alliance. 2021. 2021 State of Cities Climate Finance. <https://www.citiesclimatefinance.org/2021/06/2021-state-of-cities-climate-finance/>

A summary of Climate Action Plan goals from City of Cape Town, City of Johannesburg and eThekweni Municipality

| Energy | Transport and Mobility | Building/ Infrastructure | Circular waste |
|---|--|--|--|
| City of Cape Town | | | |
| <p>Carbon-neutral energy for work creation and economic development</p> <ul style="list-style-type: none"> • Move as quickly as prices and opportunities allow towards 100% carbon-neutral electricity supply by 2050. • Get technologically commercially ready to operate the metropolitan distribution grid of the future. | <p>Mobility for quality of life and livelihoods</p> <ul style="list-style-type: none"> • Prepare for a scenario of complete transition to electric or alternative fuel-powered freight, bus, taxi and passenger vehicles by 2050. • Support the restoration, rehabilitation and expansion of the rail system to a carrying capacity of 30% above 2010 levels by 2030. | <p>Zero-emission buildings and precinct</p> <ul style="list-style-type: none"> • All new buildings (residential, commercial and municipal) to be net zero carbon by 2030. • All existing residential and commercial buildings to be retrofitted with energy-efficient technologies to be net zero carbon in operation by 2050. | <p>Circular waste economy</p> <ul style="list-style-type: none"> • Develop and implement an integrated waste management strategy that is financially feasible, and maximises material efficiency by prioritising waste avoidance, reduction, treatment and recycling in line with national targets. • Reduce organic waste disposal to landfill through better waste separation, treatment and utilisation. |
| City of Johannesburg | | | |
| <p>Affordable clean energy</p> <ul style="list-style-type: none"> • By 2030, 35% of electricity consumed is generated from renewable energy sources. • By 2050, all residents have access to safe, affordable and net zero emissions energy. | <p>Green transport</p> <ul style="list-style-type: none"> • By 2030, 70% of commuters use public transport, walk or cycle. • By 2050, 90% of commuters use public transport, walk or cycle and all residents have access to safe, affordable and net zero emissions transport. | <p>Optimised energy efficiency in buildings</p> <ul style="list-style-type: none"> • By 2030, new buildings operate at net zero emissions. In addition, the city commits to only developing, owning and occupying assets with net zero emissions operations. • By 2050, all buildings operate at net zero emissions. <p>Resilient infrastructure</p> <ul style="list-style-type: none"> • By 2030, all current backlogs of upgrades to urban stormwater infrastructure have been addressed and updated stormwater guidelines have been developed. • By 2050, the city has 30% green cover (including green roofs) for city and passive building cooling. | <p>Alternative waste management</p> <ul style="list-style-type: none"> • By 2030, per capita municipal solid waste generation has been reduced by at least 15%. The volume of municipal solid waste sent to landfill or incinerated has been reduced by at least by 50%, and at least 70% of waste is diverted away from landfill and incineration, compared to 2016. • By 2050, 100% of solid waste is diverted from landfill and remaining methane emissions from waste are captured. |
| eThekweni Municipality | | | |
| <p>Securing carbon neutral energy for all</p> <ul style="list-style-type: none"> • 100% of electricity purchased by eThekweni is produced from renewable energy sources. • Reduce electricity consumption by 40% by 2050 across residential, commercial, municipal and industrial consumers. | <p>Moving towards clean, efficient and affordable transport</p> <ul style="list-style-type: none"> • Expand the Integrated Rapid Public Transport Network (IRPTN) with a strong focus on Transit Oriented Development (TOD). • Facilitating a switch of all vehicles to low carbon options. | <p>Securing carbon neutral energy for all</p> <ul style="list-style-type: none"> • eThekweni's municipality infrastructure is net zero: • Retrofit all municipal buildings post municipal buildings energy audits. • Follow through on existing municipal SEEG initiatives; expand to include solar, wind, hydropower, biogas, biomass and waste water initiatives. | <p>Striving towards zero waste</p> <ul style="list-style-type: none"> • Divert waste disposed to landfill sites by 50% in 2023 (Phakisa targets) and by 90% by 2050 through reuse, recycle, recovery and re-engineering. • Scale up recycling infrastructure, facilitate waste reduction and present a waste-to-energy facility in the eThekweni Municipality Area. |

Detailed Climate Action Plans can be accessed at the following links: [City of Cape Town](#), [eThekweni Municipality](#) and the [City of Johannesburg](#)

5 What's happening globally, and what can be done locally?

Despite the setback of the global COVID-19 pandemic, cities across the globe have made strides in their efforts to tackle climate change five years on from the Glasgow Climate Pact.

The culmination of COP26: What are cities doing and how does this benefit them?

Since 2015, progress on low-carbon solutions has accelerated and the global economy is reshaping in accordance with the commitments set out in the Glasgow Climate Pact.

Such progress globally (as cited by the UN¹⁹) includes: increasing competition in sectors for low carbon solutions, a decline in the cost of renewables enabling cheaper, more efficient and non-damaging energy solutions, a focus on nature-centric solutions (e.g. plant-based proteins are becoming mainstreamed in supermarkets and restaurants), a growing popularity in electric vehicles with a number of large car makers recently publishing commitments to convert to only building electric vehicles within the next 10–15 years.

The emergence of new jobs is also a significant development. For example, building towards a net zero economy can create 35m new jobs in sectors like renewable energy and transport. This job creation will support countries' economies and enable a managed transition from employment in the fossil fuel industry (and linked industries) if taken forward with carefully considered systems and timelines which manage risk.

As COP26 ends, there is increasing pressure from international communities for cities to demonstrate progress. While momentum has gathered and some steps have been taken, there are concerns that the COVID-19 pandemic may have slowed the momentum on global climate change efforts.

All countries party to the Glasgow Climate Pact are required to submit climate commitments demonstrating how they plan to keep temperatures below 1.5°C/2°C. However, most countries are yet to present sufficiently ambitious targets, and the world remains on a trajectory to 3°C of heating. Despite this, there is an opportunity for parties to identify new funding mechanisms, lean in to help develop new job skills and unite behind a green recovery and truly #buildbackbetter.

Climate change adaptation and mitigation are both equally important and time-sensitive – the more we reduce emissions right now, the easier it will be to adapt to the changes we can no longer avoid.

Cities around the world are successfully adopting and implementing climate change mitigation strategies. Without going through them in detail, it's worth noting the following themes stand out as critical and effective ways to mitigate greenhouse gas emissions and slow the clock on rising global temperatures.

¹⁹ <https://unclimatesummit.org/5-ways-the-global-economy-has-changed-since-paris/>



Just transition

a unique case for South Africa.



Net zero

recommended actions to help cities become carbon free.



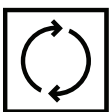
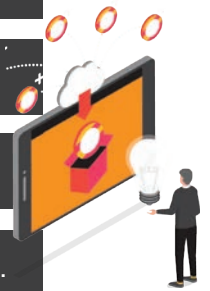
Circular economy

case for a healthy city and urban system.



Green finance

opportunity to scale up financing in sustainability and climate projects.



Just transition

Just transition: Securing livelihoods in the shift to a low-carbon economy

The energy transition is a pathway towards the transformation of the global energy sector from fossil-based to zero-carbon by the second half of this century. While this is a great economic intervention, it is important to ensure that workers' and communities' livelihoods are secured in the long run and the benefits of a green economy are shared widely. For economies to get this right, collaborative engagement between government, businesses, trade unions and communities is essential around issues such as policy, the restructuring of businesses, investment opportunities, protecting employee rights, skills development, health and safety and alternative community initiatives.

There is a massive opportunity for investors to play a role in facilitating a green, inclusive economy. Responsible investments are key; thus all ESG dimensions must be properly incorporated in decision-making.

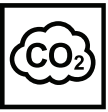
PwC sees these as essential elements of the transition roadmap to achieve a city's targeted just transition aspirations:

- accessible and affordable energy
- economic opportunities for workers and communities
- corporate and business reform
- liberalisation of the energy market, including shifting energy purchases from Eskom to independent power producers
- internal city efficiency improvement, including the development and roll out of new, clean and efficient technology programmes.

For further information, please refer to the following document: [*What a Just transition means for jobs in South Africa*](#)

South Africa is well positioned to build on lessons learnt from the implementation of these just transition strategies to give effect to policy commitments and government's developmental agenda. However, the following need to be prioritised:

- **Accelerating the shift towards renewable energy:** proactively updating city utilities from fossil fuels to renewable energy through programmes to support solar PV and small wind generation, combined heat and power systems, and other community energy schemes.
- **Driving the adoption of smart grid technologies.**
- **Increasing energy efficiency:** transitioning towards renewable energy generation and reduction in carbon emissions through energy-saving solutions.
- **Increasing resilience:** assessment of each city's complex and interconnected infrastructure and institutional systems that span the physical, economic, institutional, and socio-political environment.
- **Cities and energy markets:** supporting cities to become active players in their local energy markets.



Net zero

Net zero: Recommended actions to help cities become carbon free

As part of the goal of limiting global warming to the preferred 1.5°C mark, global GHG emissions will need to reach net zero by 2050 to avoid the worst climate impact. Businesses and governments around the world have recognised this urgency and have joined the UN's Race to Zero campaign, submitting their emissions reduction plans.

A credible net zero strategy first reduces emissions as much as possible, then balances residual emissions with carbon removals. The backbone of a credible net zero strategy is a science-based reduction target. SBTi supports companies to set science-based targets to decarbonise their value chain emissions.

Conventional emissions reduction techniques alone are not enough to reach net zero by 2050. So how does a city afflicted by fossil fuels, traffic and carbon-emitting processes, transform its urban environment to achieve net zero?

The following are actions cities are encouraged to take to achieve their net zero commitments:

- **Buildings:** city building retrofits, smart LED lighting.
- **Transportation and mobility:** fleet electrification, combustion vehicle and freight reduction; mobility alternatives, public transit; EV charging.
- **Electricity:** LED smart streetlights, municipal solar installations and renewable supply.
- **Industry:** clean industrial heat; efficient motors; operator training.
- **Biological resources:** urban forestry; organic waste diversion and encouraging plant-based diets.

The UN noted that many nations are lagging behind in transitioning to net zero (UN, 2020), and urged every nation, city and financial institution to adopt plans for the transition. While some countries such as Norway (2030) and Finland (2035) are leading the race, some of the biggest emitters such as China (2060) have set target dates after 2050 and have no clear plans yet on how they will achieve these. South Africa stands to lose out if it doesn't move soon.



Circular economy

Circular economy: Bringing prosperity to citizens

Cities account for 85% of global GDP generation and are also huge users of materials and nutrients, accounting for 75% of natural resource consumption. Cities also produce 50% of global waste and 60–80% of greenhouse gas emissions. These are symptoms of the ‘take, make, waste’ linear economy.

With their abundant resources, data, capital and talent, cities are well positioned to drive a global transition to a circular economy based on the principles of designing out waste and pollution, keeping products and materials in use, and regenerating natural systems.

In a finite-resources world, cities must start designing circular services and systems which aim to decouple economic growth from virgin material extraction, promote regenerative resources and keep materials in the loops as long as possible. For South Africa in particular, the latest [National Waste Management Strategy](#) brings the circular economy into the country’s legislation.

Developing the circular economy will include the following aspects:

- **Re-evaluating existing stocks and the flow of materials:** support cities to generate and use this information to develop optimal strategies to reuse and benefitiate resources.
- **Collaboration:** facilitate partnerships between representatives of cities and/other role-players to accelerate circular economy activities.
- **Embedding circularity:** review city policies and strategies, for example with a focus on prioritising reduction over recycling, upcycling over downcycling and reusing over throwing away. Identifying opportunities for cities and their partners to embrace circular economy principles that provide a framework for stimulating local entrepreneurship and innovation.





Green finance

Green finance: Opportunity to scale up financing in sustainability and climate projects.

With rapid urbanisation in cities comes a need for an extension of municipal infrastructure. However, cash-constrained municipalities, especially in secondary and tertiary cities, face extreme challenges in securing infrastructure finance and are often heavily reliant on central government transfers. However, capital-intensive, climate-resilient infrastructure and emissions reduction strategies demand support from financial institutions to help cities decarbonise their infrastructure and industry. Cities are now pressured more than ever to source funding from different financial mechanisms, besides funds from the central government, in order to meet municipal infrastructure needs.

Considerations for cities include:

New forms of blended finance and ways to raise subnational debt and equity are now emerging to meet this challenge. One of the popular green finance tools is green bonds. By 2023, the green bond market is estimated to be valued at \$2.36tn globally.

Donor governments and agencies, development banks and private companies are now actively expanding their climate-focused funding portfolio for long term sustainability and can help maneuver governments and cities towards climate focused goals.

South African cities build their budgets around the Medium-Term Revenue and Expenditure Framework (MTREF), which results in accelerated payments of borrowing for municipal infrastructure and a resulting mismatch between useful

life of assets and their financing. To avoid challenges in debt capacity and allow for more robust domestic financial markets with higher levels of competition between commercial banks and development finance institutions, municipalities can design and implement long-term capital investment plans that extend beyond the current three-year budgeting cycle.

At the core of addressing these green solutions is empowering municipalities to have access to the necessary finances and implementing them effectively through embedding proper best practices. Cities, other secondary municipalities, and institutions need to work together more than ever to finance a sustainable future.

More information can be found in PwC's latest blog, [Green African Cities](#).

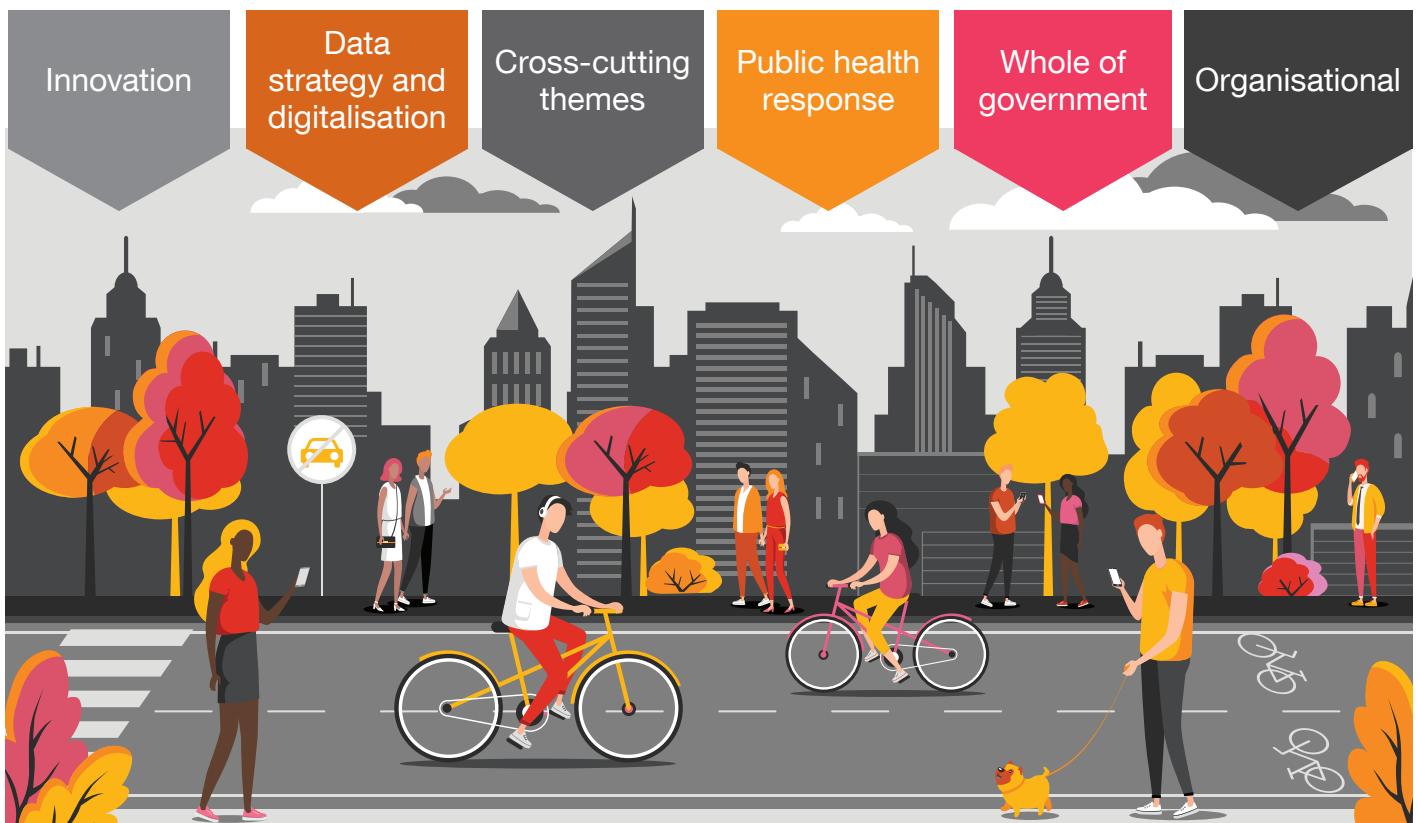


6 The role for cities, businesses and communities

How are we solving today at a sub national level while simultaneously contributing to the global and national agenda for a better tomorrow?

There is an important role for collaborative planning when it comes to cities and the sustainability agenda. Collaborative planning can build inclusiveness into both policy and action through shared agenda-setting and learning opportunities²⁰ in addition to managing a very complex ecosystem. Cities can play a convening role in facilitating dialogue between diverse stakeholders so that a shared vision can be developed and trust can be built as a catalyst for change.

The business community can also play a role in creating and responding to the changes necessary for a climate-resilient development that goes hand in hand with job creation. This will require great leadership, coordination and innovation that should not belong to one single grouping but enable a comprehensive approach.



²⁰ P. Healey: Collaborative planning: Shaping places in fragmented societies (2nd ed.), Palgrave MacMillan, London (2006)

- **Strengthened partnerships:** Private sector, NGOs, civil society, spheres of government and academia.
- **Leadership enablement:** Provide leaders with the tools and capabilities required for systems-based decision making and skills to manage strategically vs crisis management.
- **Integrating culture-led change:** Ensuring that all projects are data led and clearly tie back into programme level with actual proven metrics. Shifting behaviour to interconnected approaches vs siloed.

Given the current complexities facing South Africa, why sign up to a green recovery and what are the benefits? This is a fine balancing act in developing countries where different spheres of government have to deal with difficult and pressing problems everyday such as water and energy security, access to basic services and the provision of safe and secure places to live.

Many of the governments hardest hit by climate change happen to be without support. For example, policies that increase public, affordable water connections will need to target the most socially vulnerable, leveraging and integrating existing networks of small-scale, decentralised and informal providers and systems. [*South Africa's National Development Framework*](#) focuses on human settlements and how to make towns more efficient, along with energy and water security. However, there needs to be a balance between the most immediate needs and planning for the future as well as identifying any possible limitations within existing policy frameworks or funding mechanisms.

There is also a clear need to look at job losses and job creation that might accompany such 'green' initiatives. Do you need a higher skilled labour force? If so, South Africa does not yet have this in the same way the more developed world does. Furthermore, local governments do not necessarily have the capacity to take forward the large-scale change required by the Glasgow Climate Pact. In smaller municipalities, one person might be solely responsible for 'climate' which is a tall ask, especially when this is stacked up against the pressure for the short-term provision of services.

It is expected that the transition to a net zero economy will increase the net number of jobs (ILO, 2018). However, there are likely to be delays between job losses and job creation, the need for skills and skills development which means that unemployment may rise in some sectors or roles, while it decreases in others. Such a transition will occur in an already unequal workforce with women likely to be disproportionately affected.

Stakeholders who are driving the transition, including governments and businesses, must consider how it will impact workers differently, including men and women, formal and informal workers, as well as seeking to overcome existing inequalities that are embedded in global value chains.

As set out at the start of this document, cities, the private sector and communities can all play a role in further developing:

- a balanced approach that sees social inclusion and a Just Transition as critical. With existing high unemployment at 34%, and in the youth age bracket 74%, people will be impacted negatively and new jobs and new skills have to be planned and structured
- diverse market participants in a collaborative environment can germinate potential paths for policymakers to take to address enabling environment barriers
- a focus on getting the financing²¹ right and aligning investment across sectors, including technical assistance to cohorts of projects on financial structuring, technical issues and gender, equality and social inclusion
- a focus on skills development and education that increases access to new technology and jobs
- a lessons-focused approach, drawing on international best practice, but applying a local and systems-based approach including all spheres of government, business and the community
- a comprehensive and systems-based approach including all spheres of government, business and the community.



²¹ <https://www.ukpact.co.uk/blog/in-finance-green-is-the-new-black>

7 How PwC can help

The urgency of the climate crisis requires swift and ambitious action to reduce emissions now. To reflect this, our net zero commitment is underpinned by a science-based target to reduce our emissions by 50% in absolute terms from 2019 levels. This is in line with a 1.5 degree scenario to prevent the worst impacts of climate change, as set out in the Glasgow Climate Pact. This bold commitment means we are decarbonising the way we operate and decoupling our business growth from our emissions.

PwC's New Equation strategy and net zero commitments

As outlined in our global strategy, *The New Equation*, we have committed to transforming our business model to decarbonise our value chain, increasing transparency, and supporting the development of robust ESG reporting frameworks and standards. We will also engage our clients and work with suppliers to tackle their climate impact. Our global reach means we can play an integral role in driving the transition to a net zero economy.

PwC is in a unique position to tackle ESG issues. Not only do we have a broad geographical footprint and mix of functional skills sets, but also a deep pool of sustainability experts in many of our network firms. Our leadership is committed to taking action on the following ESG issues:

- inclusion and diversity
- net zero
- digital skills
- our impact in the community.

We established our new global ESG Platform in 2020 to amplify our impact and help us better connect our expertise on this important topic across industries and lines of service. We focus on strategy, reporting and transformation.





Purpose

To help our clients meet environmental goals and improve people's lives through the provision of critically needed sustainable infrastructure.



Vision

To be a truly global market leading capital projects and infrastructure CP&I business – advising our clients on the integration and mainstreaming of ESG into all stages of the infrastructure project lifecycle (from strategy and planning, construction, operations and decommissioning).



Mission

- Help governments and DFIs achieve a green and socially inclusive recovery through the design and delivery of sustainable infrastructure investment programmes, and create the policy and financial frameworks to attract private investment
- Help infrastructure owners and operators decarbonise their infrastructure assets and operations, and meet ESG requirements
- Help investors find infrastructure assets that meet their ESG and financial risk/return objectives
- Help EPC companies develop their ESG credentials so they can successfully bid to develop and build sustainable infrastructure projects

PwC can assist cities in developing actionable climate plans with accompanying budgets that align directly with their other strategic documents and subsequently assist with their implementation. This would cover stages from:

1. stakeholder engagement across municipal departments and in the community through
2. detailed technical and financial planning at the strategic and project level and
3. project implementation of priority projects validated by the municipal council.

Accompanying this support, PwC would assist the municipalities to source the funds required for each of the stages (pre-transaction technical assistance and capital for transactions themselves).



The Future Cities team

Our experts help cities to better understand how they can drive more equitable growth, social inclusion, community and economic prosperity. Our Cities practice is a multidisciplinary centre of excellence, and our approach to developing solutions for cities is grounded in our citizen-centric methodology and guided by our future cities model.

In working towards the SDG 2030 Agenda, PwC endeavors to support African cities in fortifying their finances, becoming resilient and ready to service their citizens. Through rigorous thought leadership, we have developed a methodology around supporting municipalities in becoming 'Future Cities'. In terms of delivery, we work with the following core themes:

- **Integrated municipal financial management:** Delivering critical infrastructure means having an integrated municipal structure where the urban economy is approached not in silos but cohesively.
- **Financial sustainability:** We will work with the target cities to improve their ability to attract local and international capital and identify financially sustainable projects and partnerships that will be key to addressing infrastructure and service delivery gaps, all with the objective of reducing poverty and inequality, and creating more connected and inclusive spaces.
- **Innovative financing mechanisms:** Recognising the limited capacity of local-government resources to fund infrastructure, PwC has developed strategies around innovative mechanisms such as land-value capture to support municipalities in leveraging their assets or financing instruments via the debt market to fund critical infrastructure.

- **Data:** African cities of the future need to be investment and data ready. Right now, they are making huge investments that will affect generations to come; it is crucial that they get this right.
- **Local context and social inclusion:** It is essential to understand the specifics of these cities, and where the gaps between the future cities' vision and reality lie. In many ways, they are still trying to get the basics right: for example, transport and housing need to be developed so that people of all income levels, communities and genders can either travel easily to their jobs or find jobs in the places that they live.
- **Community:** People are at the heart of this change. African cities of today will not only need to continue implementing relevant technical systems to transform. They will also need to shape a vision of urban growth that is supported by leaders and staff in public administration and underpinned by community-based participation and decision-making. We will work with them to raise awareness, support skills development and identify the behavioral changes and broad engagement needed for success. Multi-generational inclusion must be a core guiding principle for cities to transform sustainably, reduce poverty and gender inequality and prosper.

Find out more

[PwC South Africa – Future Cities Where Next for Government in South Africa](#)

The Sustainability and Climate Change team

Furthermore, our sustainability experts help our clients in defining their sustainability strategy; advising on policy; operational change; risk management; reporting; monitoring and assuring their progress – all through a sustainability lens. We help our clients integrate environmental, social and governance issues into their operations and embrace the challenges of today's business environment as opportunities for long term and sustainable growth.

Find out more

[PwC – Sustainability and Climate Change Sustainability and climate change services](#)

PwC South Africa – Strategy& Economics

Our PwC South Africa Strategy& Economics team, located in Gauteng, provides strategic advice and economic analysis to corporations, government bodies and intermediaries in South Africa. Our team has extensive experience managing and conducting high quality, independent, and rigorous research, applying both quantitative and qualitative research methodologies to find innovative solutions to clients' needs. We have deep technical expertise in macroeconomic analysis, economic impact assessments, and economic modelling, focusing on South Africa's economy.

Find out more

[PwC South Africa – Strategy& Economics Circular economy in cities: Transitioning, barriers and opportunities](#)

PwC South Africa – Physical Asset Lifecycle Management

At PwC, our Physical Asset Lifecycle Management (PALM) team provides South African and African cities with services across the full infrastructure lifecycle from project concept development, alignment of projects to organisational strategy, investment and fund sourcing strategies, project implementation, project assurance through to asset maintenance. Our PALM team combines a deep South African and African cities business understanding with specialist construction, engineering and project management expertise to support our city clients on some of the world's most iconic projects.

Find out more

[PwC South Africa – Physical Asset Lifecycle Management Unlocking South Africa's hydrogen potential Operational sustainability transformation of Energy Utilities](#)

PwC Water Network

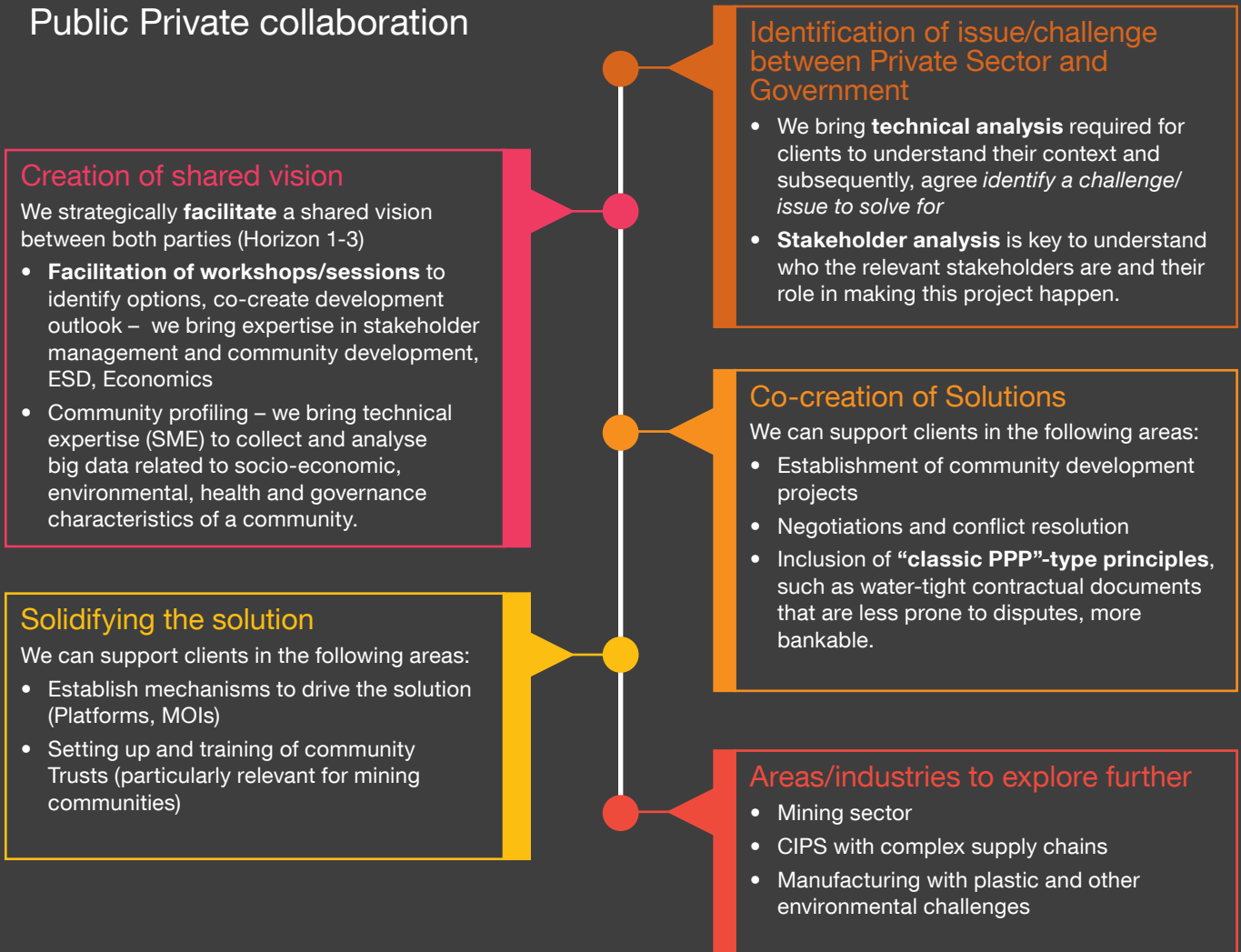
At PwC, we are not only watching developments in the water sector, but we are also analysing the changes from the perspective of how they will impact our clients and how we can best help organisations prepare and manage the changes. PwC's Global Water Network operates out of 15 hubs spread over six regions. The network provides clients with access to global capabilities and regional insights by bringing together relevant experts (indicated below) from across the globe. Experts range from water policy experts, environmental economists, engineering and infrastructure specialists, sustainability experts and water resource and climate change specialists.

For additional insights visit: [PwC's Sustainable Water Services](#)

Our value proposition

Co-creating long-lasting partnerships that result in maximum impact through collaboration.
Co-creating solutions to solve important problems.

Public Private collaboration



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At PwC, our purpose is to build trust in society and solve important problems. We're a network of firms in 156 countries with over 295,000 people who are committed to delivering quality in assurance, advisory and tax services. Find out more and tell us what matters to you by visiting us at www.pwc.com.

PwC refers to the PwC network and/or one or more of its member firms, each of which is a separate legal entity. Please see www.pwc.com/structure for further details.

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