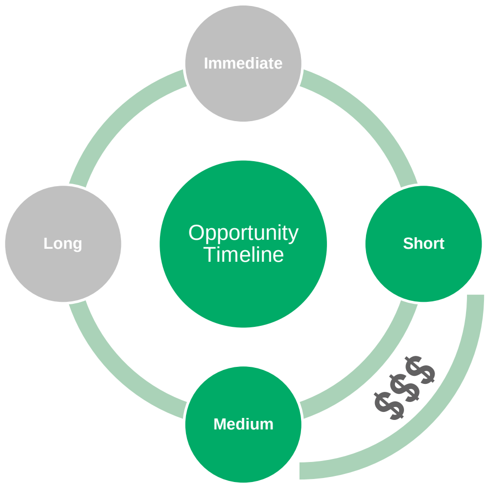
Water

Key opportunities

Non-revenue water reduction: water efficiency



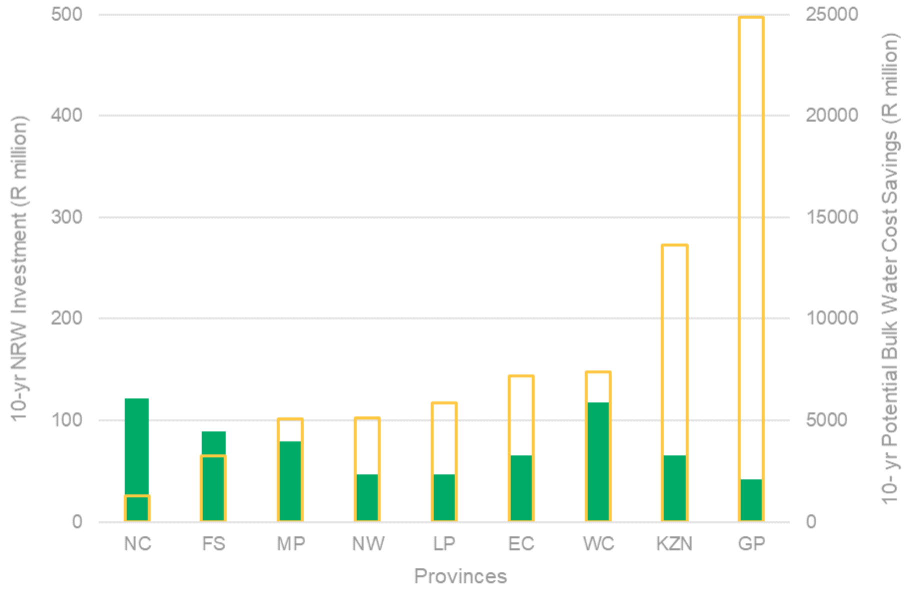
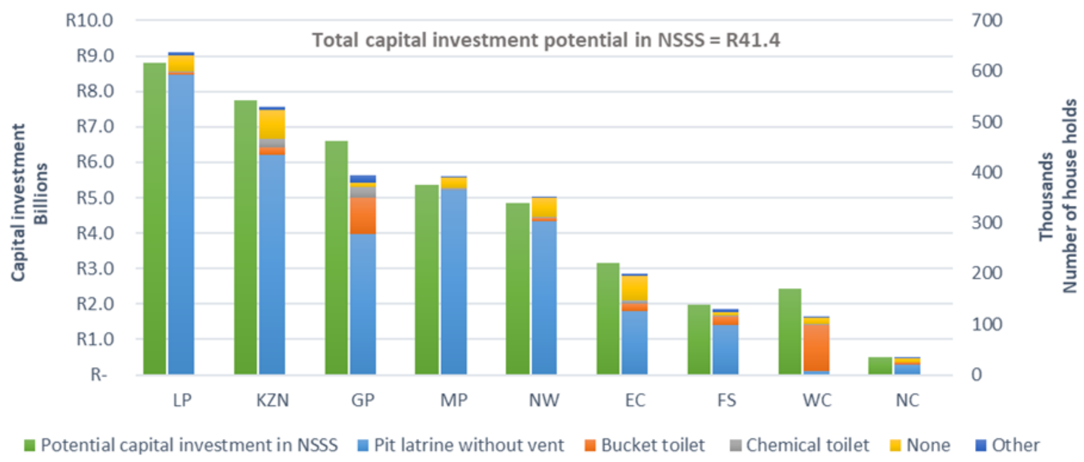


Figure 1: Provincial distribution of DHSWS estimated 10-yr investment requirements (NW&SMP 2019) and the associated annual potential bulk water cost savings (GreenCape analysis 2021)

OPPORTUNITY	KEY DRIVERS	BARRIERS	KEY MARKET SEGMENTS
Non-revenue water reduction (NRW)	– Potential savings (due to reduced water loss & wastage, inaccurate metering and billing) – Increasing water scarcity and droughts – Demonstrated short payback period – Increased project preparation support (DBSA and NT)	– Complex contracting and financing models – Lack of locally verified or demonstrated technologies – Acceptance by the public – Financial insolvency of municipalities and their lack of technical capacity	– 15% reduction in NRW target nationally by 2030, supported by a seed investment of **~R 676 mil** by DHSWS to realise – **~R 7.3 bn** per year in savings in bulk water costs nationally (~R 740 mil in WC) – **~R 5.5 mil** in subsidy for smart metering in WC schools – **~R 1.2 bn** in smart meter installation in CCT over 8 years

Non-sewered sanitation systems (NSSS)



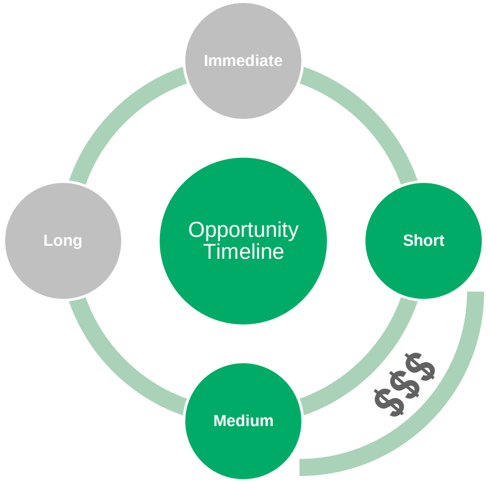
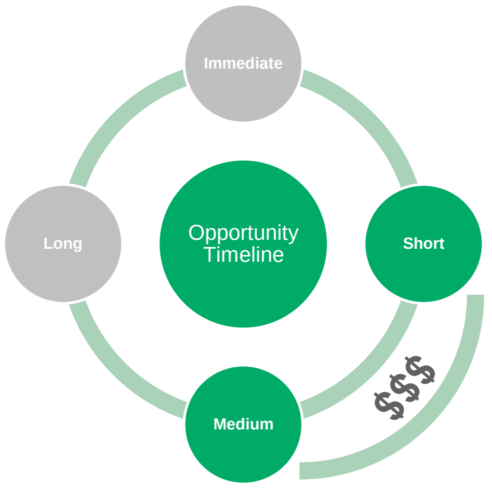


Figure 2: Estimated total capital investment potential for non sewered sanitation by province if providing first time access to sanitation, replacing unventilated pit latrines, bucket and chemical toilets (based on the 2018 general household survey data, StatsSA 2019, GreenCape analysis)

OPPORTUNITY	KEY DRIVERS	BARRIERS	KEY MARKET SEGMENTS
Non-sewered sanitation systems (NSSS)	– Covid-19 pandemic reemphasised the need for universal access to sanitation – Housing provision pressure – Need for rapid implementation options – Constraints on development due to lack of bulk infrastructure – SDGs/NDP strategies and government initiatives aimed at providing universal access to sanitation – Some informal settlements are on private land, making it difficult to install permanent infrastructure – Increase in water and sanitation service delivery protests – Lack of availability of water to flush toilets and use for water borne sanitation	– Policies, bylaws & regulations that make it onerous to install NSSS – Insufficient grant funding for providing access to sanitation – Financial insolvency of municipalities – Public acceptance – Negative perceptions about cost and maintenance requirements – Footprint size of NSSS as some informal settlements are densely populated – Lack of locally proven technologies – Lack of appropriate financing models to implement NSSS	– **~R3.4 bn** has been allocated to improve sanitation in schools over the next 2 years – Estimated total capital investment potential of **~R41.4 bn** in NSSS (~2.44 bn in WC) towards achieving universal access to safe sanitation based on 2018 GHS – **~R4.7 bn** worth of potential NSSS projects in the metros (~2.0 bn in CCT) to replace chemical, bucket toilets, and provide sanitation to households without access

Wastewater sludge beneficiation



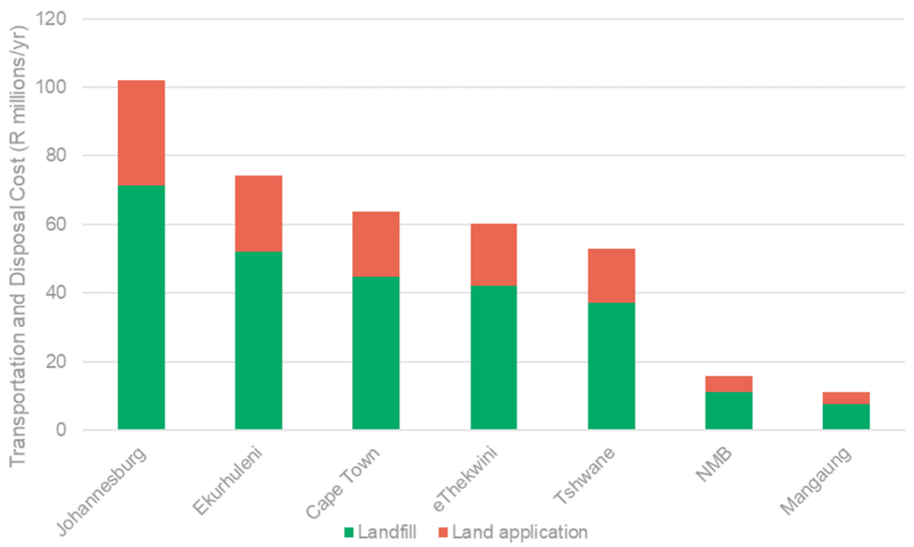


Figure 4: Transportation and disposal costs of wastewater sludge per metro by disposal method (GreenCape analysis, 2021)

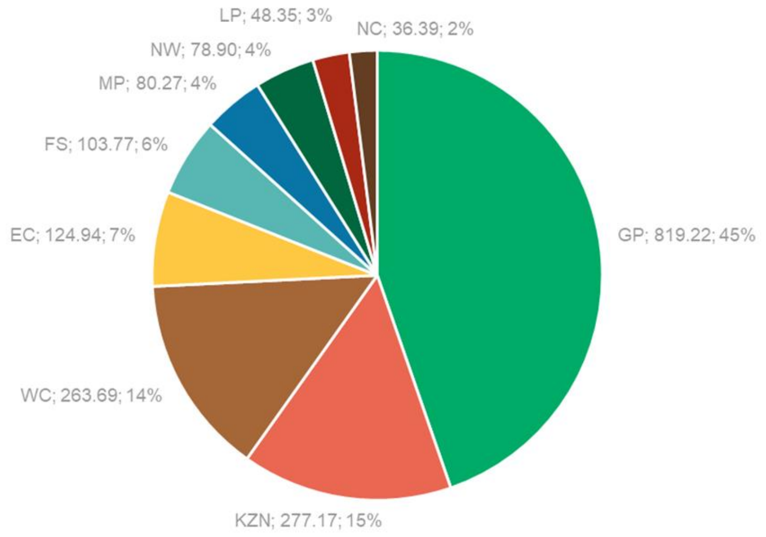


Figure 5: Total sludge (waste activate and primary) production distribution for the Western Cape in dry tons per day (Green Drop 2013, GreenCape analysis 2021)

OPPORTUNITY	KEY DRIVERS	BARRIERS	KEY MARKET SEGMENTS
Wastewater sludge beneficiation	– Increasing landfill disposal fees – Transportation costs – SDGs (7, 11 and 12) – Nitrogen based fertiliser imports threatened by Covid-19 supply chain risks – Imminent organic waste to landfill reduction plan and existing liquid waste to landfill ban	– Current state of policies & regulations (potential driver) – Public and industry perception and lack of capital – Financial insolvency of municipalities – Producer-beneficiater infrastructure gap (potential driver) – Lack of locally verified technologies	Opportunities to transport and beneficiate sludge to the value of **~R 330 mil** per year across all metros, excluding Tshwane (~R 86 mil in WC)

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