

# FAECAL SLUDGE TRANSPORTATION & LOGISTICS IN SUB-SAHARAN AFRICA

The 2030 Collection & Transportation  
Market of the Sanitation Economy

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# Acknowledgements

## TOILET BOARD COALITION

Founded in 2015, the Toilet Board Coalition accelerates business solutions to the global sanitation crisis. The Coalition facilitates vital partnerships between small and medium-sized enterprises (SMEs), corporates, NGOs, investors and governments who share a commitment to achieve access to sanitation and hygiene for all by 2030 (SDG 6).

Through its sector-leading Accelerator, the Coalition provides business model coaching, corporate mentorship and access to investment to Sanitation Economy entrepreneurs serving low-income markets. To date, the Coalition has graduated 70 SMEs, impacting more than 3 million people daily and unlocking US\$33 million in finance. Its 80+ Members' diverse approach to sanitation proudly leads to essential innovation in toilet design, circular recovery of biological resources, and smart digital technologies to ensure safe and sustainable sanitation for all.

*The opinions expressed in this paper are those of the author(s) and do not necessarily reflect the position of AFD. It is therefore published under the sole responsibility of its author(s) or its partner institutions.*

With thanks to our leaders:



\*Kimberly-Clark


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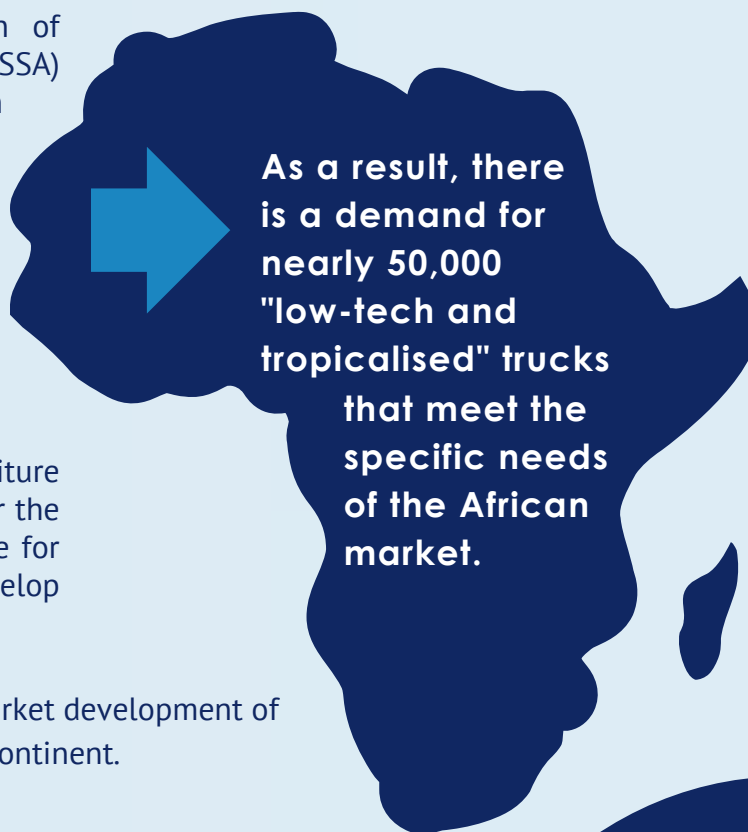
# Executive Summary

The demand for emptying and transportation of faecal waste services in Sub-Saharan Africa (SSA) already surpasses the supply of businesses, and in particular trucks, to meet the need in the region.

**\$** The current truck offering is too expensive (even second-hand because of operations and maintenance costs) and ill-suited to the market context and demands.

 Furthermore, the capital expenditure required and financial tools available for the purchase of these vehicles is prohibitive for local entrepreneurs wanting to develop sustainable businesses.

 This technological barrier has stalled market development of sustainable sanitation solutions on the continent.



As a result, there is a demand for nearly 50,000 "low-tech and tropicalised" trucks that meet the specific needs of the African market.

We have modelled two cost scenarios against current demand trend and trend required for achievement of SDG6 targets by 2030. This market comes with a unique set of challenges and opportunities, which this publication outlines.

The highest cost   
 2030 target scenario **US\$ 14.27** Bn market potential

2030 trend scenario **US\$ 7.47** Bn market potential

The lowest cost   
 2030 target scenario **US\$ 4.76** Bn market potential

2030 trend scenario **US\$ 2.49** Bn market potential





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# Introduction

Over the coming seven years, Africa will install millions of sanitation devices on a quest to achieve universal access to sanitation before the end of the United Nations' Sustainable Development Goals (SDGs) era. Many of these toilets will not be connected to sewer lines as they are costly in terms of time, finances and planetary resources. Instead, on-site and decentralised sanitation systems will be focused on. As these devices fill up, climate-friendly and sustainable collection and treatment solutions are urgently needed.

Governments, investors and multi-lateral donors are investing in on-site sanitation systems and treatment solutions in urban areas. However, one crucial element of this value chain, the collection and transportation of human waste (faecal sludge), faces obstacles that have limited the development of this vital market.

**This report examines the rapidly-emerging vacuum truck market in Sub-Saharan Africa (SSA), focusing on 2030, and identifies key barriers to its successful development and expansion.**

[Click here for the Faecal Sludge Transportation & Logistics Lab Report](#)

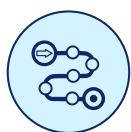
## Methodology

The vacuum truck market size at country and regional levels was estimated, considering four scenarios regarding acquisition cost (highest and lowest cost) and waste collection trend (2030 SDG target and current evolution) and using published literature, government data, reports and other relevant sources. These findings were cross-validated through interviews with sector experts. Baseline figures for 2023 were established, with projections working towards the assumptions regarding waste collection.

The report includes a comprehensive regional-level analysis, market projections, insights, and showcase of local businesses to provide a holistic view of the vacuum truck market.



**1. Regional-level Analysis:** the analysis used the PEST (Political, Economic, Social and Technological) method, incorporating desk research. It considered all regions of SSA, focusing on social factors like population, urbanisation levels and access to emptyable facilities.



**2. Market Projection:** this phase involved calculating the estimated number of required trucks for 2023 and projecting towards 2030. Economic potential estimates for the same periods were also considered to frame the market opportunities.



**3. Market Insights:** market insights were obtained through interviews, consultations and desk research. A SWOT (strengths, weaknesses, opportunities and threats) analysis was conducted to assess the current market, identifying drivers, barriers and opportunities that impact the vacuum truck industry.



**4. SME Feature:** this phase involved researching existing and emerging solutions, evaluating their effectiveness and sustainability, and gathering stakeholder feedback. The aim was to identify investable solutions that address market needs and capitalise on previously-identified opportunities. This feature is published as a separate document that can be found at [toiletboard.org](http://toiletboard.org).

The report combines extensive quantitative and qualitative analysis, providing a holistic view of the vacuum truck market, including macro-overviews, market dynamics and micro-details by region. It also considered aspects such as mergers and acquisitions, emerging market trends, and the impact of COVID-19 to understand market dynamics and their influence on the industry.

While care was taken to use recent data and address data gaps, the report acknowledges the following limitations and assumptions:



### Limitations:

- **Data quality:** accuracy relies on available data, which may be incomplete or outdated.
- **Universal access assumption:** assumes universal access without accounting for complex challenges.
- **Reliance on published literature:** may introduce biases and limitations inherent in secondary sources.
- **Interview bias:** insights from interviews are subjective and may lack comprehensive representation.



### Assumptions:

- **Economic projections:** market projections hinge on assumptions about economic potential.
- **PEST analysis:** predictions based on political, economic, social and technological factors may not always align with actual developments.
- **COVID-19 impact:** consideration of COVID-19 impact involves assumptions about the pandemic's duration and influence on trends.
- **SME feature evaluation:** assessment of solutions assumes their effectiveness and sustainability.

For the detailed methodology, please see [ANNEX 1](#).

## Background

### Faecal Sludge Management Value Chain

The Faecal Sludge Management (FSM) value chain is the collection (emptying), transportation and disposal of faecal sludge from on-site sanitation systems. It is a subset of the broader wastewater management sector or Sanitation Economy and encompasses the following key aspects:

- 1. Faecal sludge collection/emptying:** this involves the organised collection of faecal sludge from various sources, including pit latrines, septic tanks and other sanitation facilities. Collection methods may vary, depending on the type of infrastructure and available resources. It can involve manual emptying or mechanised emptying using vacuum trucks, and/or specialised equipment designed for faecal sludge removal.
- 2. Transportation of faecal sludge:** once collected, faecal waste needs to be transported to treatment facilities or to designated disposal points. Specialised vehicles, such as vacuum trucks, are employed to transport faecal waste safely by utilising tanks.
- 3. Faecal sludge disposal and resource recovery:** the subsequent step involves the safe and responsible disposal of faecal sludge. This critical aspect is imperative for managing public health risks, mitigating environmental hazards, and harnessing potential opportunities for resource recovery.

These steps are critical in FSM, as they help prevent the build-up of sludge and reduce the risk of disease transmission. Proper emptying, transportation and disposal procedures also help to minimise environmental contamination and ensure that the faecal sludge is safely and effectively treated. This is an important component of the overall management process and requires skilled operators and appropriate equipment.



## Faecal Sludge Management Context in Sub-Saharan Africa

With a population of 1.43 billion, FSM is an essential service for protecting public health and the environment in SSA, where access to improved sanitation facilities is currently low (35%).



**Low-income populations:** the majority of the population in SSA are considered low-income, with 35% estimated to be living in extreme poverty, which makes it difficult for households to pay for sanitation services. This is compounded by the fact that most people in the region work in the informal sector, which means they have irregular incomes and no social safety nets, so large expenditures for emptying can be difficult. In addition, many households are in slums or informal settlements, where there is little infrastructure and poor access to basic services, such as water and sanitation.



**Limited public sector funding:** the governments of SSA countries face numerous challenges when it comes to providing sanitation services to their citizens. These include limited financial resources, weak institutional capacity, and political instability. As a result, public funding for FSM is often inadequate, which leaves a gap that private sector actors must fill.



**Political and institutional factors:** these can have a significant impact on FSM in SSA. Weak governance, corruption and political instability can all undermine efforts to provide sanitation services to communities. In addition, inadequate institutional capacity can limit the ability of governments to regulate and monitor sanitation services, which can undermine public trust in these services. Addressing these political and institutional challenges will require strengthening governance and institutional capacities.



**Growing demand for sanitation services:** despite the economic challenges, there is a growing demand for sanitation services in SSA. This is due to a variety of factors, including rapid urbanisation, nearly 7,700 clusters, population growth (2.5%) and increasing awareness of the health and environmental risks associated with poor sanitation. The demand for FSM services is expected to increase in the coming years, as more people move to cities and the need for improved sanitation infrastructure becomes more pressing.

In parallel, the social context of FSM in SSA is complex and multifaceted, shaped by a range of social, cultural, religious and political factors that affect sanitation service delivery.



**Cultural practices and beliefs:** cultural practices and beliefs can influence the way that people in SSA approach sanitation and FSM. For example: in some communities, it is considered taboo to discuss or handle faecal sludge, which can create barriers to the adoption of improved sanitation facilities and the use of FSM services. In addition, cultural beliefs about illness and disease can lead people to rely on traditional healers rather than seeking medical treatment, which can exacerbate the spread of waterborne diseases.



**Community perceptions:** when there is a lack of understanding about the health and environmental benefits of safe and sustainable FSM practices, sanitation services are not seen as a priority, leading to a reluctance to invest in sanitation infrastructure or adopt new technologies and practices.



**Gender and social equity:** the burden of poor sanitation often falls on women and girls and is more prevalent among marginalised and vulnerable populations, such as refugees and internally displaced persons. This exacerbates already precarious living conditions, exposing them to health risks and limiting opportunities for education and employment.

## Manual vs Mechanised Emptying

In SSA, the management of faecal sludge involves both manual and mechanical pit-emptying practices, each with its own characteristics and challenges. The manual pit-emptying sector operates predominantly as an informal and unregulated activity, with over 10,000 manual pit emptiers estimated to provide their services to approximately 45% of households in the region. Countries such as Nigeria, Ghana and Kenya have some of the highest numbers of manual pit emptiers, primarily due to a lack of widespread sewage infrastructure, limited financial resources and rapid urbanisation.

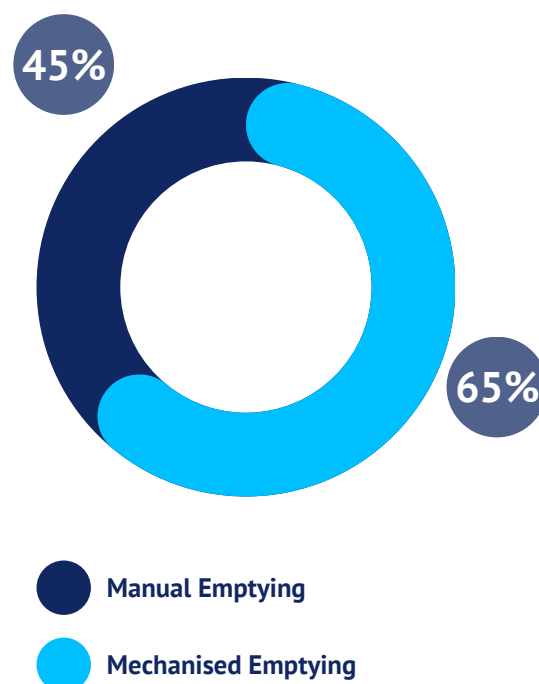


Figure 1: Manual vs Mechanised Emptying



In contrast, the market share for mechanised pit emptying varies across different countries in SSA. This variation is influenced by factors such as urbanisation and access to advanced sanitation facilities. According to the World Bank, some countries have a market share of less than 5% for mechanised emptying, while others have as much as 70%. Estimates from the Bill & Melinda Gates Foundation suggest an average of 65% market share across the region for mechanised emptying services. This indicates a growing adoption of mechanised technologies in certain areas, complementing the prevalent manual pit emptying practices.

For more on manual emptying please see [ANNEX 2](#).

## Mechanical Emptying

Mechanical faecal sludge emptying, which is considered for the scope of this publication, involves the use of specialised equipment (vacuum truck) to extract faecal sludge from sanitation facilities, such as pit latrines or septic tanks, and transport it to designated disposal or treatment sites.

A vacuum truck is a tank truck fitted with a vacuum pump designed to suck pneumatically liquids, sludges or slurries from locations, including underground spaces, into the truck's tank. In addition to the vacuum pump, some vacuum trucks are equipped with water pressure systems. This water pressure functionality allows the truck not only to suck materials but also apply water pressure, facilitating the cleaning or flushing of surfaces during the collection process.

The price for mechanical emptying ranges from US\$ 4/m<sup>3</sup> to US\$ 11/m<sup>3</sup>, depending on the region and the specific requirements of the job.

**Factors that can influence the cost include the size and condition of the pit, the distance to the disposal site, the volume of waste and any additional services or equipment needed.**





## Market Regulation

In SSA manual pit emptying is a widespread but largely unregulated practice, posing risks to workers and public health.

On the other hand, regulations for mechanised emptying services also vary across SSA countries. Many SSA countries have specific policies and regulations to promote mechanised emptying and enhance sanitation services. Most have established permit requirements, necessitating that service providers obtain permits from regulatory bodies before offering mechanised emptying services.

- Ghana's Environmental Sanitation Policy of 2010, for example, outlines a framework for the adoption of mechanised emptying and other innovative sanitation technologies to improve public health and environmental outcomes.
- Uganda has also developed regulations and guidelines for the operation of mechanical pit-emptying services. These regulations outline requirements for service providers, including permits, safety measures and waste disposal procedures to promote the use of mechanised technologies.
- Some countries (Burkina Faso, Kenya, Rwanda, Ivory Coast, Senegal, South Africa, etc.) have also embraced mechanical pit-emptying technologies, enhancing both safety and efficiency.

**These efforts aim to ensure safe and efficient faecal sludge management in SSA and play a crucial role in paving the way for market development. By establishing standards, permits and guidelines for both manual and mechanised pit-emptying services, countries are creating a framework that promotes professionalism, accountability and improved service delivery.**

With proper regulations in place, the market for pit-emptying services can develop in a more structured manner. This encourages the participation of formal service providers, promotes competition and fosters innovation in the sanitation sector.



# A Look Ahead: Faecal Sludge Logistics Through 2030

## Market Forecasts

### How many trucks are needed per region?

The estimated number of vacuum trucks required for mechanised emptying across Sub-Saharan Africa (SSA) in 2023 is 16,346, considering population data, urbanisation and sanitation needs. Countries with larger populations and existing wastewater treatment infrastructure have a higher demand for vacuum trucks. By 2030, assuming the achievement of Sustainable Development Goal 6 (SDG6) and fully mechanised emptying, the estimated demand for vacuum trucks in SSA will increase to 47,571 vehicles. Anticipating these future needs and implementing appropriate policies and investments is crucial for establishing efficient and sustainable emptying systems in the region.

A contrast analysis shows that, if we continue with the current trend of waste collection in SSA, the market may fall short of the estimated demand for vacuum trucks by 2030 (-47,7%). This could lead to inadequate sanitation services and increased health and environmental risks. It underscores the importance of proactive measures to meet future waste management needs.

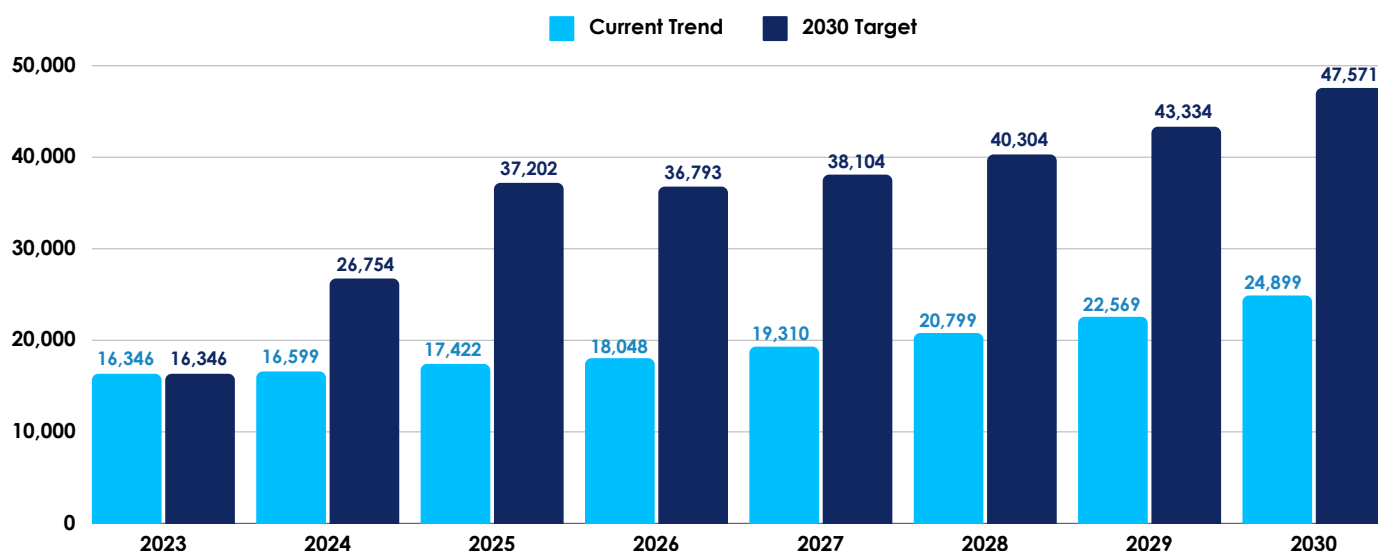
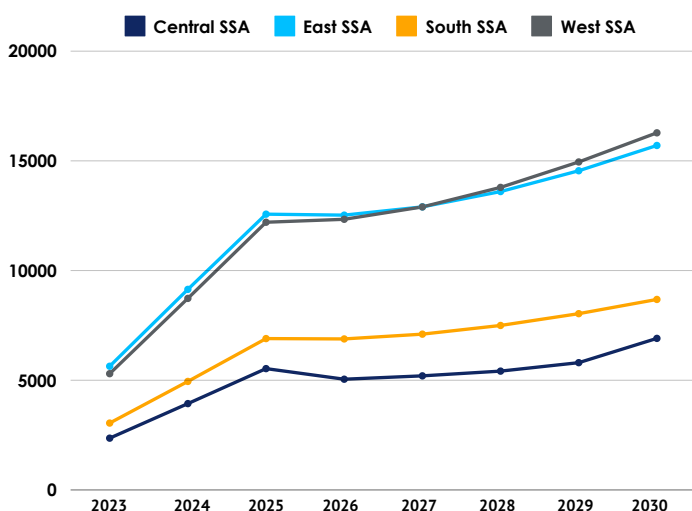


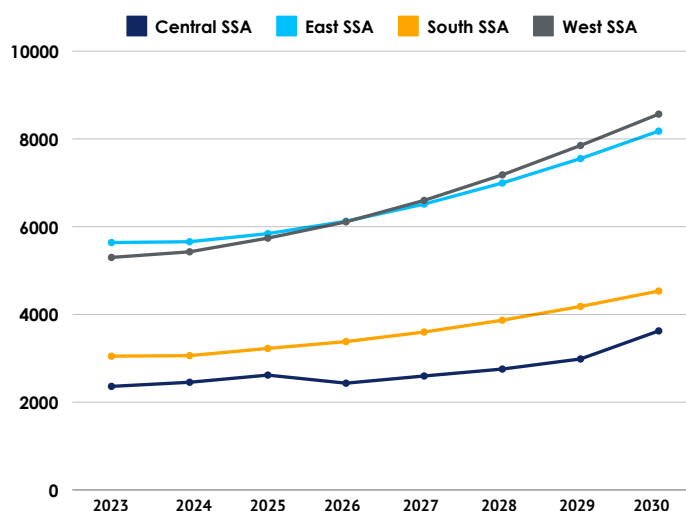
Figure 2: Required number of vacuum trucks in SSA

**Figure 3: Required number of vacuum trucks in the regions of SSA**

Following 2030 waste collection SDG target:



Following the current waste collection evolution:



**Table 1: Requested number of vacuum trucks in SSA**

Waste collection evolution	West		Central		East		South		Total Sub-Saharan Africa yearly truck market	
	2030 Target	Current Trend	2030 Target	Current Trend	2030 Target	Current Trend	2030 Target	Current Trend	2030 Target	Current Trend
2030	16,278	8,565	6,908	3,624	15,701	8,178	8,683	4,533	47,571	24,899

**West SSA:** Benin, Burkina Faso, Cape Verde, Ivory Coast, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone, Togo.

**Central SSA:** Cameroon, Congo, Equatorial Guinea, Central African Republic, Democratic Republic of Congo, Chad, Gabon.

**East SSA:** Burundi, Comoros, Djibouti, Ethiopia, Eritrea, Kenya, Rwanda, Seychelles, Somalia, South Sudan, Sudan, Tanzania, Uganda.

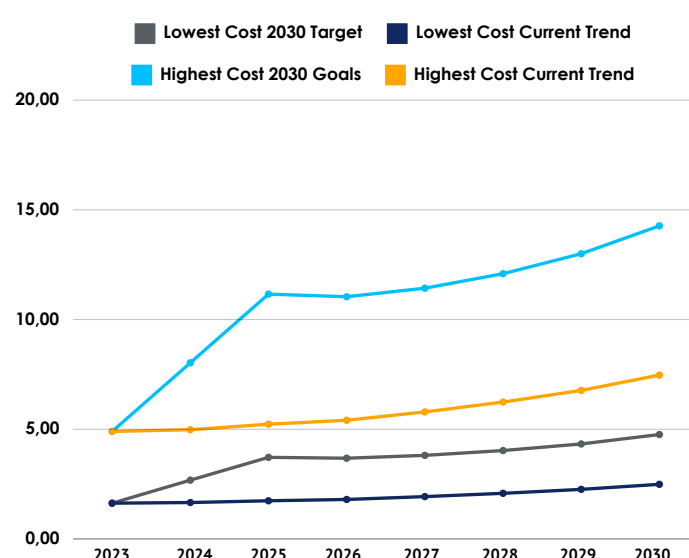
**South SSA:** South Africa, Angola, Botswana, Lesotho, Malawi, Mozambique, Namibia, Swaziland (Eswatini), Zambia, Zimbabwe, Madagascar, Mauritius, Sao Tome and Principe.

The economic market potential of vacuum trucks in SSA can be analysed across four scenarios: lowest cost (US\$ 100,000)-2030 target, lowest cost-current trend, highest cost (US\$ 300,000) -2030 target and highest cost-current trend.

In the lowest cost-2030 target scenario, the market potential is estimated at US\$ 4.76 bn by 2030, with a gradual increase from US\$ 1.63 bn in 2023. This scenario assumes efficient and cost-effective implementation to meet the 2030 target. In contrast, the lowest cost-current trend scenario forecasts a market potential of US\$ 2.49 bn in 2030, significantly lower than the target. This indicates that, without improvements, the market potential may fall short of the 2030 target.

The highest cost-2030 target scenario projects a market potential of US\$ 14.27 bn by 2030, with a gradual increase from US\$ 4.90 bn in 2023. This reflects a more ambitious and costly approach to achieving the target. Conversely, the highest cost-current trend scenario anticipates a market potential of US\$ 7.47 bn in 2030, higher than the lowest cost-current trend scenario but lower than the target under the highest cost scenario. This underscores the challenges of meeting the target with the current trend.

**Figure 4: Economic potential of vacuum trucks in SSA**



**Table 2: Economic potential of vacuum trucks in the regions of SSA (US\$ billion) following the current trend of the waste collection**

Truck Cost	West		Central		East		South		Total Sub-Saharan Africa economic potential (current trend)	
	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest
2030	0.86	2.57	0.36	1.09	0.82	2.45	0.45	1.36	2.49	7.47

**Table 3: Economic potential of vacuum trucks in the regions of SSA (US\$ billion) following 2030 SDG target regarding waste collection**

Truck Cost	West		Central		East		South		Total Sub-Saharan Africa economic potential (2030 target)	
	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest
2030	1.63	4.88	0.69	2.07	1.57	4.71	0.87	2.60	<b>4.76</b>	<b>14.27</b>

For further information on the calculations please see [ANNEX 3](#).

## Truck Supply & Demand

### The Trucks Available

- Many trucks used in SSA for waste management are imported from regions such as Europe, North America and China and cost, on average, more than US\$ 35,000 to purchase secondhand or upwards of US\$ 300,000 to purchase new. These trucks may not be specifically designed or adapted to withstand the harsh African climate, challenging terrains and inadequate road infrastructure. As a result, they may experience frequent breakdowns, higher maintenance costs and difficulties.



- In some countries like Kenya, Burkina Faso, Rwanda etc, a few variations of truck sourcing were seen, including local manufacturing with used parts.
- In many cases, emptiers, especially in regions with limited resources or smaller sanitation businesses (Madagascar, Gambia ... ), do not own the trucks. Instead, they form partnerships with local municipalities or dealers who own and provide the necessary equipment.
- The capacity of the trucks in Africa is around 10m<sup>3</sup>.
- The trucks have high fuel consumption rates.
- In some cases, the trucks may be technologically advanced and designed for high-capacity operations, but they may not be suitable for the low-resource settings prevalent in many African countries. These trucks often require specialised maintenance and spare parts, which are not readily available or affordable, leading to longer downtime and operational disruptions.
- The trucks available for purchase do not offer significant customisation options to meet the specific needs and requirements of African markets. These can include features such as tropicalised components, alternative power sources (hybrid, gasoline or diesel fuelled) or modifications for better manoeuvrability in crowded urban areas.
- The high upfront cost of purchasing new trucks makes it difficult for local entrepreneurs to enter the market or expand their operations.



**Table 4: Average price of second-hand trucks**

	Mercedes	Isuzu	Nissan	Renault	MAN	Foton	Cappellotto	SINOTRUK	Scania	Iveco
Price US\$	35,000	45,000	45,000	40,000	25,000	25,000	35,000	43,000	40,000	30,000

*Note: prices vary between countries*



## The Trucks Required

- **Durability and reliability:** it is essential that faecal sludge trucks in SSA be designed to withstand harsh conditions and require minimal maintenance. Many roads are unpaved and in poor condition and the availability of spare parts and technical support may be limited.
- **Manoeuvrability:** trucks that have a compact design, short wheelbase and high ground clearance are suitable for SSA, where they will need to be able to manoeuvre easily narrow streets, between buildings and in other areas with limited space.
- **Large capacity:** a large tank capacity enables the truck to empty more waste per trip, reducing the frequency of trips required and increasing the efficiency of the service.
- **Versatility:** faecal sludge trucks that can handle different types of waste, both solid and liquid, are ideal as waste may be heterogeneous.
- **Ease of maintenance:** the truck should be easy to maintain and repair, and spare parts should be readily available locally.
- **Fuel efficiency:** faecal sludge trucks that are fuel-efficient reduce operating costs and make the emptying service more affordable for communities.
- **Safety features:** many communities in SSA have limited infrastructure and are poorly lit. Faecal sludge trucks that have safety features, such as reversal cameras, safety alarms and lighting, increase safety.
- **Customisability:** faecal sludge trucks that can be customised to fit specific needs and budgets will allow businesses to adapt their services to the needs of different communities.
- **Sustainability:** the truck should be designed with environmental sustainability in mind, with features such as emissions efficiency.
- **Interoperability:** faecal sludge trucks should be designed to work seamlessly with other sanitation technologies at the emptying and the treatment and disposal stages.
- **User-friendliness:** the truck should be user-friendly, with simple and easy-to-use controls and mechanisms, to allow for ease of operation and reduction of the risk of accidents. Operators should receive adequate training to ensure safe and efficient operation of the trucks. The level of education among operators may influence their understanding of sanitation practices, health risks and environmental concerns, contributing to better overall service delivery. The user-friendliness of the vehicles is key in this effort.



## Market Challenges & Opportunities



### Challenges

The vacuum truck market in SSA presents several challenges due to the growing need for improved sanitation services and faecal sludge management.

- **High costs:** the high initial investment (new truck: US\$ 100,000 – US\$ 350,000; second-hand truck: US\$ 25,000 – US\$ 45,000), variable costs (truck maintenance, fuel costs, dumping fees and daily wages around US\$ 21,000) and fixed costs (personnel wages, contributions to staff pension and medical coverage, office rent, office equipment depreciation costs, overhead costs, phone, electricity, supplies, transportation, marketing, company registration, licensing fees, loan payments and other fixed miscellaneous charges: US\$ 7,000) pose barriers to entry and expansion in the market, especially for small and medium-sized enterprises (SMEs). **Limited access to affordable financing options further exacerbates the financial challenges.**
- **Infrastructure limitations:** in many areas of SSA, inadequate road infrastructure and poor accessibility to remote locations can hinder the efficient operation of vacuum trucks. The trucks require suitable roads and access points to reach sanitation facilities, which may not be available in certain regions. **Investing in infrastructure will help ensure efficient mechanical emptying.**
- **Limited technical expertise:** the availability of trained personnel with technical expertise in operating, maintaining and repairing vacuum trucks is limited in some areas. The lack of a skilled workforce poses challenges to the successful operation and maintenance of complicated trucks. **Training programmes and capacity-building initiatives are needed to address this challenge.**
- **Spare parts and maintenance:** limited availability of spare parts and reliable maintenance services leads to delays in repairs and maintenance, affecting the operational efficiency of the trucks and business growth. **Establishing a robust supply chain for spare parts and ensuring access to quality maintenance services will help reduce costs.**
- **Regulatory and policy environment:** inconsistencies and gaps in regulations and policies related to the import, sale and operation of vacuum trucks pose challenges to business. Cumbersome bureaucratic procedures, unclear guidelines and inadequate enforcement mechanisms all slow market development. **Establishing clear and supportive regulatory frameworks is essential to facilitate the growth of the vacuum truck market.**

- **Market competition:** informal operators and unregulated pit-emptying practices which offer lower-cost services to the community pose challenges to the growth of formalised vacuum truck businesses. **Creating a level playing field and demonstrating the advantages of professional vacuum truck services are key to overcoming this challenge.**
- **Sustainability and environmental considerations:** ensuring sustainable waste management practices, including the proper treatment and disposal of faecal sludge, is a significant challenge. **Establishing appropriate treatment facilities, incentivising environmentally-friendly practices and developing regulatory standards for waste reuse will protect the environment and public health.**



## Opportunities

The vacuum truck market in SSA presents several opportunities due to the urgent need for improved sanitation services and faecal sludge management.

- **Increasing and predictable demand for improved sanitation:** the demand for vacuum trucks is driven by the need to service the sanitation infrastructure, including emptying pit latrines, septic tanks and other on-site sanitation facilities. **This demand will continue to grow as SSA progresses towards the achievement of SDG 6.**
- **Rapid urbanisation:** urban areas with dense populations and limited space often require mechanised pit-emptying services. **This presents opportunities for companies to expand their operations and cater to the sanitation needs of urban communities with innovative technologies.**
- **Government initiatives and policies:** many governments in SSA are recognising the importance of improving sanitation services and faecal sludge management. They are implementing policies and initiatives to promote better sanitation practices, including the use of vacuum trucks. **These government interventions create a favourable environment for businesses and organisations operating in the vacuum truck market.**
- **International funding and support:** various international organisations, development agencies and foundations are actively involved in supporting sanitation programmes in SSA. These entities provide financial assistance, technical expertise and capacity-building support to improve the sanitation infrastructure, which includes the acquisition and use of vacuum trucks. **Businesses and organisations can tap into these funding opportunities and partnerships to expand their presence in the market.**
- **Public-private partnerships:** collaboration between the public and private sectors can unlock opportunities in the vacuum truck market. Public-private partnerships can help address challenges related to financing, infrastructure development and capacity building. **Joint initiatives can improve the efficiency and effectiveness of faecal sludge management services and create a sustainable market for vacuum trucks.**

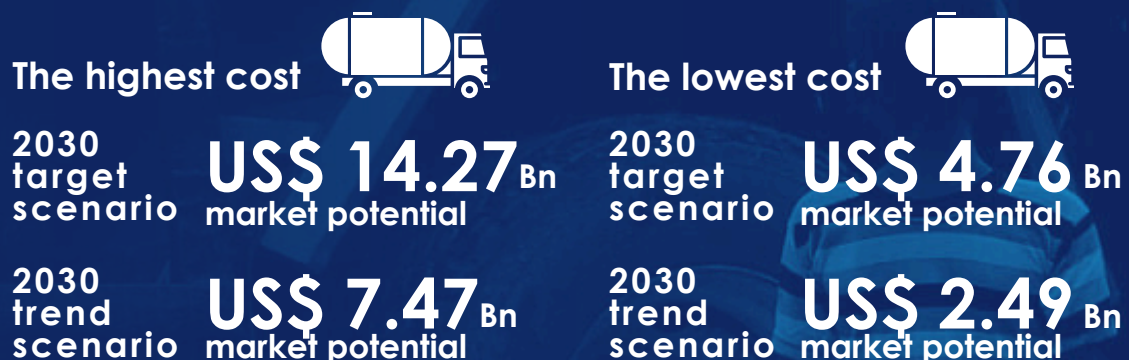
- **Innovative solutions and technologies:** companies can explore the development and deployment of more efficient, environmentally-friendly and cost-effective vacuum trucks. This includes innovations in waste treatment systems, automation of processes, digital solutions for monitoring and management, and the integration of renewable energy sources. **There is room for the adoption of innovative technologies in the vacuum truck market in SSA.**

By capitalising on these opportunities, businesses, entrepreneurs and organisations can contribute to improving sanitation conditions, protecting public health and fostering sustainable development in SSA.

For further information on the market players, please see [ANNEX 4](#).

# Conclusion

The faecal sludge collection and transportation market in Sub-Saharan Africa presents a market opportunity for truck manufacturers to develop new trucks uniquely suited to the African context. The current truck offering is too expensive and ill-suited to the market context and demands, however there is a sizeable opportunity for nearly 50,000 new "low-tech and tropicalised" trucks that meet the specific needs of the African market.



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