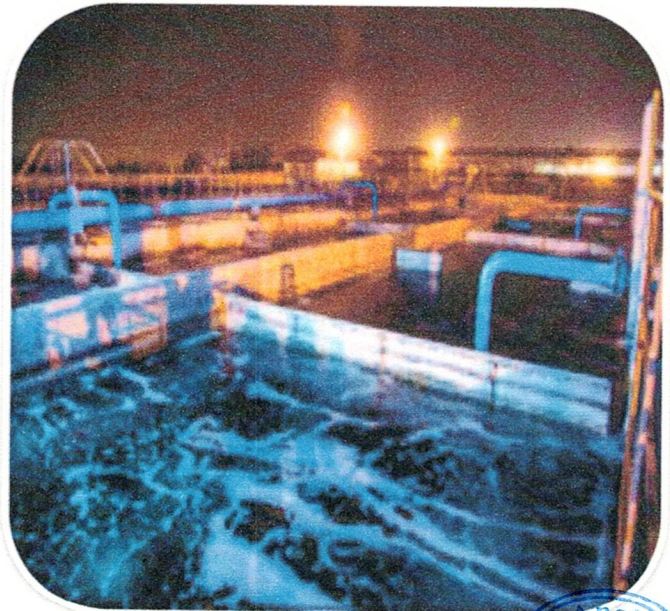


Industry Report on Environmental, Municipal & Sanitation Equipment Industry

For Quality Enviro Engineers Limited



Date: 28 September 2026



Contents

Global Economic Review	2
GDP Growth – Region & Country Wise.....	3
Inflation Rate – Region & Country Wise	4
Global Trade.....	5
India Economic Review	8
GDP Growth	8
Inflation	9
Trends in Merchandise and Services Trade	9
Upside and Downside to Economic Growth Outlook.....	11
Environmental, Waste Management & Municipal Equipment Manufacturers Industry	12
Introduction	12
Industry Segmentation	13
Value Chain Analysis	16
Environmental & Municipal-Equipment Market – A Brief	18
Urban Local Bodies (ULBs).....	19
India Environmental-Services & Sanitation Sector Overview.....	22
Waste Management Equipment - Operating Sub Sector	24
QEEL Positioning	25
Custom Engineering & Fabrication - QEEL does bespoke fabrication	26
Core segments - QEEL	28
A. Air Pollution Management Equipment & Dust Pollution Control	29
B. Liquid Waste Management Equipment & Sewerage Management	33
C. Water Distribution Vehicles & Wastewater Treatment Equipment	37
D. Solid Waste Management Equipment	39
E. Urban Cleaning & Sanitation	43
F. Municipal Utility Vehicles, Access & Material Handling	46
G. Allied Services	47
H. Trading	48
Demand & Supply Dynamics	49
Demand Drivers	49
Restraints & Challenges.....	49
Porter's Five Forces Analysis	51
Government Initiatives, Policies & Regulation	51
Government Schemes and Budget Allocations.....	52
Government Policies/Schemes	55
Company's Planned entry into Broader Waste-Management Industry	56
Competitive landscape	57
Peer Comparison	57
Environmental Equipment Manufacturers Sector Comparison:	57
TPS Infrastructure Limited.....	57
Waste Management Service Providers Sector Comparison:	58
Antony Waste Handling Cell Ltd.	58
SWOT Analysis	61
Industry Outlook.....	62

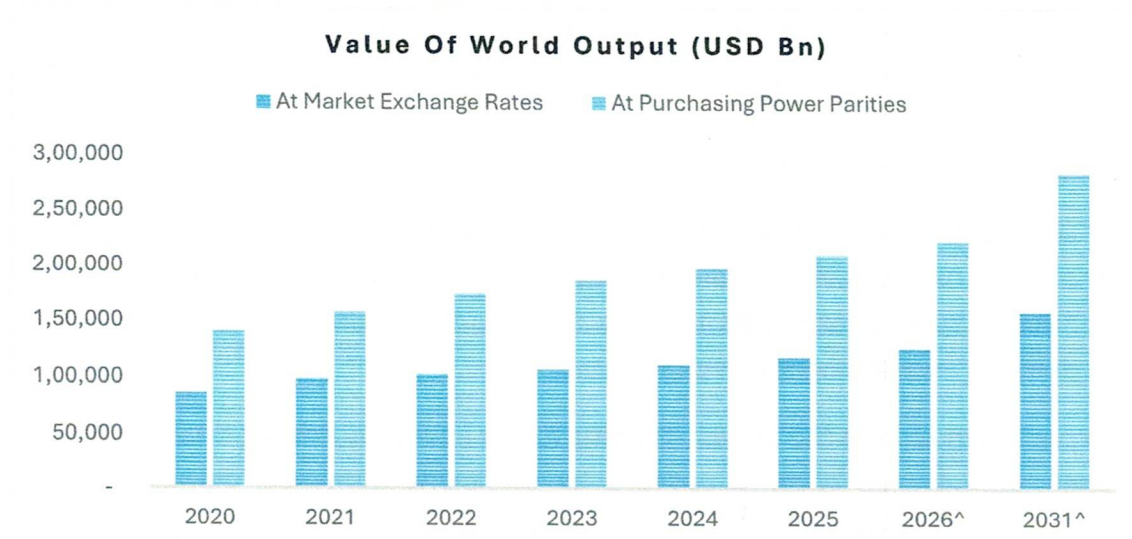


Global Economic Review

Global economic output is projected to reach USD 126.3 trillion at market exchange rates and USD 222.8 trillion at purchasing power parities (PPP) in 2026, reflecting continued growth despite an uncertain global environment. The latest IMF projections as per July 2026 report indicate that global activity has remained more resilient than expected, supported by lower inflation in many economies, easing financial conditions, and stronger-than-expected domestic demand in several major emerging markets.

Growth during 2025-26 has been shaped by a combination of positive and adverse developments. Lower inflation has allowed several central banks to begin reducing interest rates, supporting consumption and investment. At the same time, trade policy uncertainty, including higher tariffs and changes in global trade arrangements, has affected trade and business investment decisions. Ongoing geopolitical conflicts, particularly in the Middle East and Eastern Europe, have disrupted energy markets, increased transport costs, and added uncertainty to the global outlook.

Another feature is the growing contribution of emerging and developing economies to global output. This is reflected in the widening gap between market exchange rate and PPP-based estimates, indicating that these economies continue to account for a larger share of global production and consumption. At the same time, advances in digital technologies and artificial intelligence are supporting investment and productivity in technology-intensive sectors, partly offsetting the impact of weaker global trade and geopolitical risks. Overall, while global output is expected to continue expanding over the medium term, the pace of growth will depend on the evolution of trade policies, geopolitical developments, inflation trends, and the ability of countries to maintain stable macroeconomic conditions.



Note: Projections from 2025 onwards

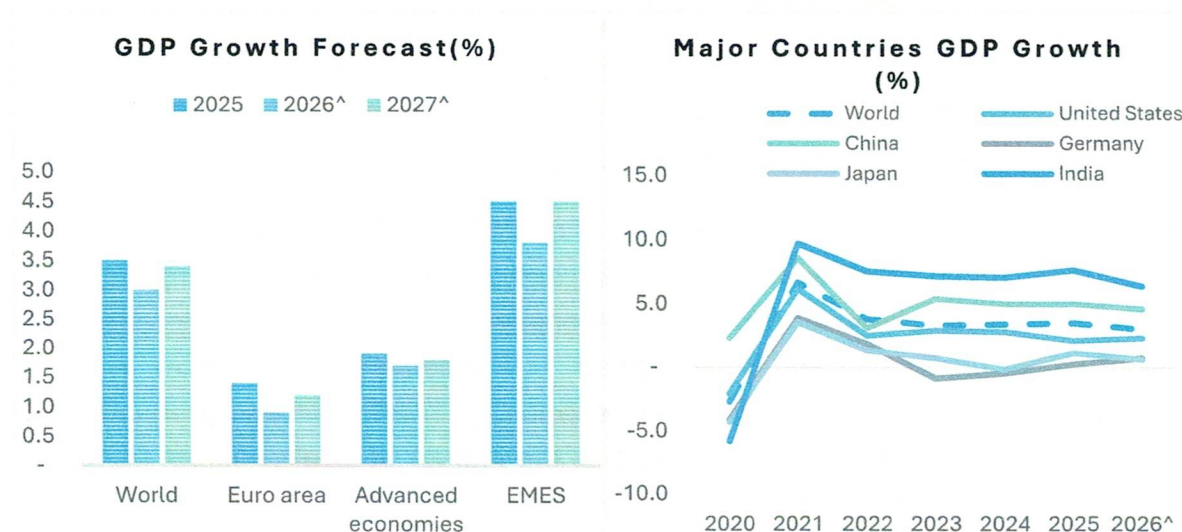
Source: IMF World Economic Outlook Update, July 2026



GDP Growth – Region & Country Wise

The IMF projects global GDP growth to moderate from 3.5% in 2025 to 3.0% in 2026, before improving to 3.4% in 2027. The slowdown is mainly attributed to weaker global trade, higher trade barriers, continued geopolitical tensions, and policy uncertainty, which have affected investment and business confidence. While easing inflation and gradual reductions in interest rates are expected to support economic activity, growth across advanced economies is likely to remain modest.

Regionally, advanced economies, euro area and EMES all are expected to decline in growth to 1.7%, 0.9% and 3.8% in 2026, reflecting weak manufacturing activity, lower external demand amid uncertain global trade activity.



Note: Data for Calendar year. For India data and forecasts are presented on a fiscal year basis based on GDP at market prices

Source: IMF World Economic Outlook Update, July 2026

Among major economies, the United States is expected to record stable growth supported by private consumption and a resilient labour market, while China's growth is projected to moderate due to continued weakness in the property sector, slower export growth, and structural adjustments in the economy.

The Euro area, led by a modest recovery in Germany, is projected to record gradual improvement, although growth remains constrained by weak industrial activity and lower export demand. Japan is expected to grow at a moderate pace, reflecting subdued domestic demand and demographic challenges.

India is expected to remain the fastest-growing major economy among other countries, with growth of 6.4% in 2026, supported by sufficient domestic demand, public investment, and sustained economic activity. Overall, the projections indicate that emerging economies, particularly India and the ASEAN region, will continue to play an important role in supporting global growth amid a challenging external environment.



GDP Per Capita Comparison

Among country groups, advanced economies are expected to maintain the highest per capita income, rising to USD 66,175 in 2026, while emerging market and developing economies (EMDEs) are projected to reach USD 7,563, reflecting continued income convergence but with a wide gap compared to advanced economies.

Among major economies, the United States continues to record the highest GDP per capita, followed by Germany and the United Kingdom. China's per capita income is projected to rise steadily, reflecting continued economic expansion, while India's GDP per capita is expected to increase from USD 2,675 in 2025 to USD 2,813 in 2026 and further to USD 4,421 by 2031, supported by sustained economic growth. The projections indicate a broad-based rise in global income levels, although the gap between advanced and developing economies is expected to remain substantial over the medium term.

GDP per capita, current prices (in USD)							
Year	2010	2015	2020	2025 ^	2026 ^	2027^	2031 ^
World	9,820	10,433	11,213	14,715	15,679	16,234	18,848
Advanced Economies	42,032	43,032	47,631	62,337	66,175	68,767	78,891
EMED	4,025	4,835	5,208	7,052	7,563	7,857	9,564
Euro Area	36,973	34,016	37,733	50,263	54,178	55,838	63,108
United States	48,586	57,007	64,518	89,991	94,430	98,278	1,12,242
United Kingdom	39,821	45,266	40,844	57,608	61,056	63,704	75,761
Germany	43,220	42,109	47,954	60,439	65,303	67,613	76,426
Japan	45,547	35,711	41,234	35,973	35,703	37,391	43,038
China	4,578	8,173	10,700	13,968	14,874	15,678	19,883
India	1,348	1,567	1,862	2,675	2,813	3,075	4,421

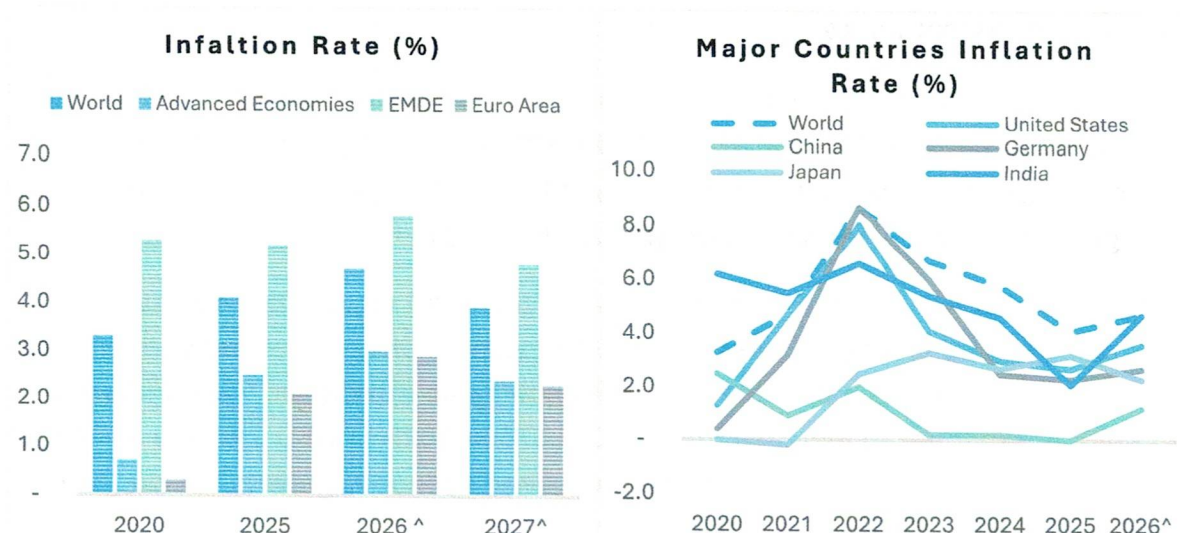
*Notes: Data is for calendar year. For India data and forecasts are presented on a fiscal year basis.
^Estimated by IMF for 2025 2026 and 2031.
Source: <https://www.imf.org/>*

Inflation Rate – Region & Country Wise

Global inflation is projected to remain above pre-pandemic levels in 2026 before easing gradually over the medium term. Global inflation is projected to increase from 4.1% in 2025 to 4.7% in 2026, before easing to 3.9% in 2027 and 3.2% by 2031. The increase reflects the impact of higher trade tariffs, supply chain adjustments, and continued geopolitical tensions, and latest energy crisis which have raised production and import costs in many economies. Although inflation has moderated from the highs seen during 2022–23, price pressures remain uneven across regions.

Inflation in advanced economies is expected to rise from 2.5% in 2025 to 3.0% in 2026, while Emerging Market and Developing Economies (EMDEs) are projected to record higher inflation at 5.8%, reflecting rising domestic demand and higher food and energy prices.





Note: Projections from 2025 onwards.

Source: IMF World Economic Outlook Update, July 2026

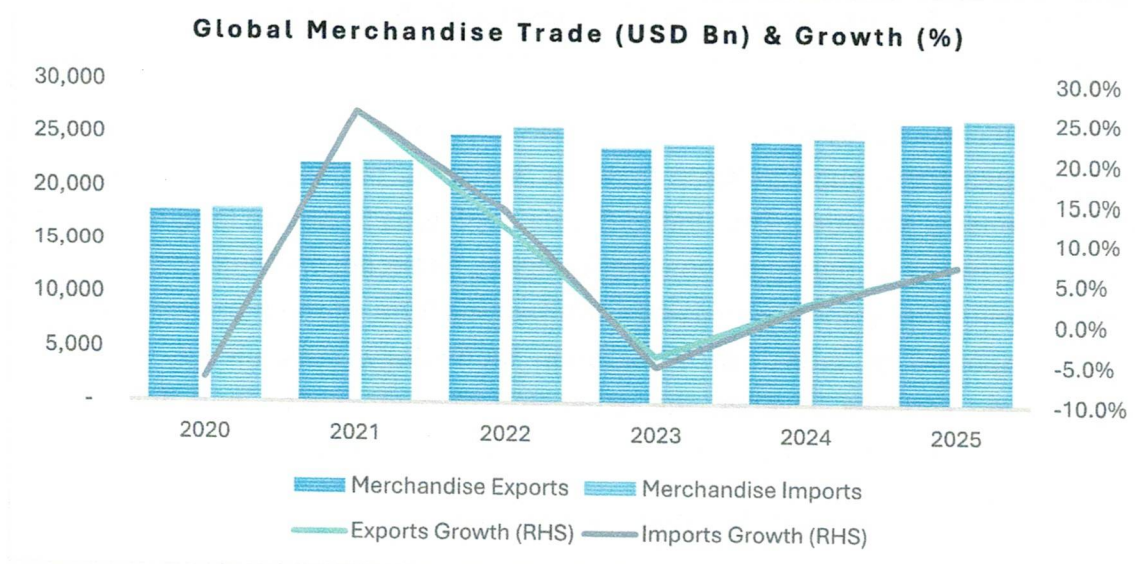
Among major economies, inflation is expected to stay moderate and is projected at 3.6% in the United States, 2.7% in Germany, and 2.3% in Japan in 2026. While China is expected to continue experiencing relatively low inflation at 1.2%. India's inflation is projected at 4.7% in 2026, remaining within the Reserve Bank of India's tolerance band prudent monetary policy, although food price volatility and global commodity prices remain key risks.

Global Trade

Global merchandise trade is showing signs of improvement, with exports and imports growing by around 7% in 2025, supported by global demand, changes in supply chain conditions amid US tariff and frontloading activity before tariff implementation, trade deals across countries. Saying that, the future trade is expected to maintain a positive growth path, but the pace of expansion will depend on the strength of the global economic recovery, trade policies and geopolitical developments.

Global merchandise trade continues to be led by Asia, which remains the largest contributor to both exports and imports. In 2025, Asia's merchandise exports have reached USD 9,770 billion, while imports at USD 8,730 billion, reflecting its central role in global manufacturing, supply chains, and consumption. The Euro area and G-7 economies have also maintained a major share of global trade, driven by advanced manufacturing and high-value goods. Among major economies, China remains the largest merchandise exporter, supported by its manufacturing base and integration into global supply chains, while the United States continues to be one of the largest import markets.

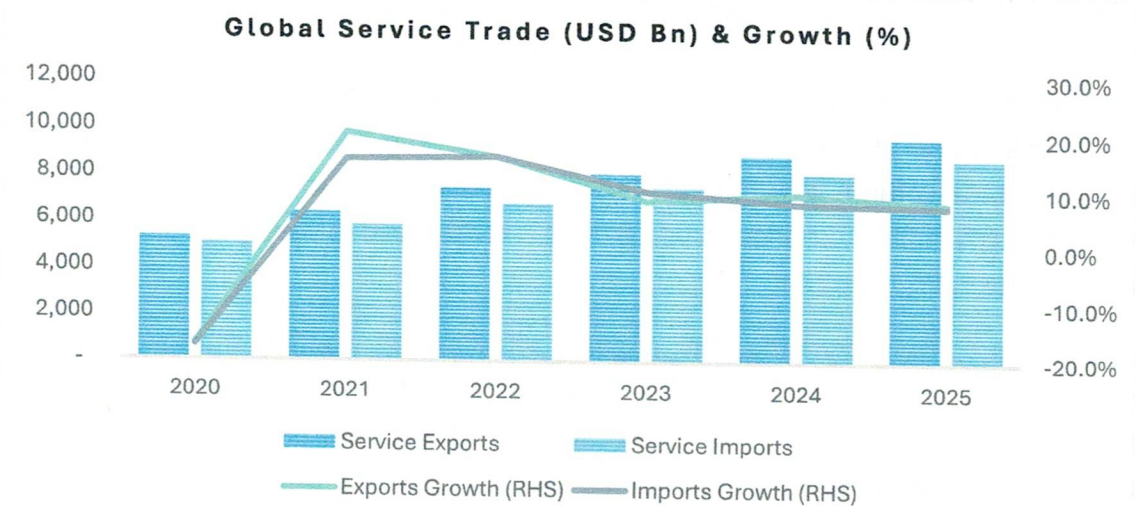




Source: WTO Trade Stats, B2K analytics

Merchandise Exports & Imports					
Merchandise Exports (USD Bn)			Merchandise Imports (USD Bn)		
Region/Year	2020	2025	Region	2020	2025
Asia	6,682	9,770	Asia	6,084	8,730
Euro Area	4,555	6,332	Euro Area	4,265	6,090
G-7	5,228	7,208	G-7	6,282	8,786
United States	1,425	2,185	United States	2,407	3,507
China	2,590	3,772	China	2,066	2,583
Germany	1,383	1,764	Germany	1,172	1,543
Japan	641	738	UK	638	949
Netherlands	675	989	Netherlands	595	870
India	276	445	India	373	754

Source: WTO Trade Stats, B2K Analytics



Source: WTO Trade Stats, B2K analytics

Global services trade continues to expand, supported by the recovery of international travel, business services, digital services, and technology-related activities. Service



exports are projected to reach around USD 9.6 trillion in 2025, while imports are expected to reach USD 8.7 trillion, reflecting continued growth in cross-border services activity.

Advanced economies, particularly the G-7 and Euro area, remain the largest participants in global services trade such as from financial services, professional services, and technology-intensive activities. The United States continues to be the leading services exporter, supported by its dominant position in digital, financial, and business services. Asia is also gaining importance, with rising contributions from economies such as China and India, supported by growth in information technology, outsourcing, and other knowledge-based services. Overall, the expansion of digitalisation and demand for knowledge-based services is expected to remain a key driver of services trade.

Global Service Exports & Imports					
Service Exports (USD Bn)			Service Imports (USD Bn)		
Country/Year	2020	2025	Country	2020	2025
World	5,257	9,594	World	4,993	8,716
G-7	2,028	3,446	G-7	1,607	2,908
Euro Area	1,789	3,097	Euro Area	1,735	2,788
Asia	1,259	2,376	Asia	1,370	2,383
United States	717	1,212	United States	438	885
United Kingdom	395	713	China	378	621
Ireland	332	565	Germany	324	597
Germany	329	512	Ireland	404	536
China	278	506	United Kingdom	223	445
India	203	412	India	153	278

Source: WTO Trade Stats, B2K Analytics

Trade Outlook

According to the World Trade Organization's (WTO) Global Trade Outlook and Statistics report for March 2026, world trade is set to slow in 2026 after a better-than-expected performance in 2025. In 2025, the combined value of goods and services trade reached USD 34.65 trillion, up 7% from the prior year. For 2026, the baseline scenario projects merchandise trade volume growth declining sharply from 4.6% in 2025 to 1.9%, before recovering to 2.6% in 2027. Services trade growth is forecasted to ease from 5.3% to 4.8% in 2026, rising to 5.1% in 2027.

Risks are tilted to the downside. The ongoing Middle East conflict threatens critical transport corridors. Traffic through the Strait of Hormuz has collapsed from 138 commercial vessels per day to near zero, while disruptions have cancelled over 40,000 flights and raised transport and insurance costs. Persistently elevated energy prices could lower merchandise trade and services trade growth by 0.5 and 0.7 percentage points respectively in 2026. On the upside, AI-related investment contributed to nearly half of goods trade growth in 2025 and up to 70% of productive investment in some regions. Continued momentum in AI spending could support trade above baseline forecasts. On balance, though, risks remain centred on energy prices and geopolitical

tensions, and with a swift resolution to the conflict looking increasingly unlikely, growth may fall below WTO forecasts.

India Economic Review

India's GVA grew by 7.9% in FY2026, supported by growth in the services and industrial sectors. The services sector, which contributes more than half of total GVA, is expected to grow by 9.7%, driven by financial services, IT, professional services, and trade-related activities.

The industry sector is projected to grow by 7.6%, with manufacturing and construction supporting overall growth through investment and domestic demand. The agriculture sector is expected to grow by 3.3%, depending on rural demand and weather conditions. The economic growth is expected to be supported mainly by services and industry activity.

India GVA and its Components: YoY Changes at 2022-23 prices				
Sectors	FY2024	FY2025 (FRE)	FY2026 (PE)	Share in GVA (FY2026)
Agriculture, Livestock, Forestry & Fishing	2.7%	4.1%	3.3%	17.71%
Industry	9.7%	8.5%	7.6%	28.98%
Mining and quarrying	0.9%	13.5%	7.1%	2.10%
Manufacturing	10.7%	10.0%	8.8%	15.59%
Electricity, gas, water supply & other utility services	11.7%	2.8%	2.1%	2.34%
Construction	9.7%	6.6%	7.2%	8.95%
Services	8.0%	7.5%	9.7%	53.31%
Trade, Hotels, Transport, Communication & Services related to Broadcasting, Storage	10.1%	8.4%	11.3%	14.65%
Financial, Real Estate, IT, Professional Services & Ownership of Dwelling	5.5%	10.7%	10.5%	26.25%
Public administration, defence and other services	6.8%	6.6%	6.3%	12.42%
Total GVA	7.4%	7.1%	7.9%	100.0%
Source: MoSPI, B2K Analytics				

GDP Growth

India's economy exhibited resilience to external adversities supported by domestic demand, investment activity, and steady performance across major sectors.

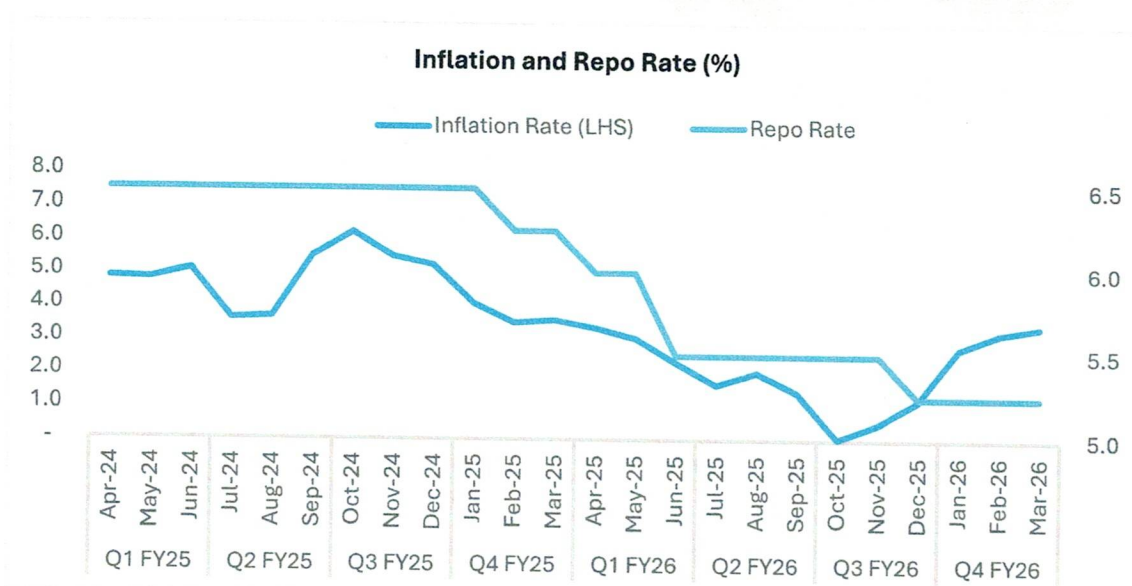
- Recent provisional estimates for GDP growth projects that Real GDP grew by 7.8% during FY2026, with Private Final Consumption Expenditure (PFCE) improving by 7.2% and remaining an important driver of growth.
- Gross Fixed Capital Formation (GFCF) continues to support economic activity, with growth reaching 8.0% in FY2026, reflecting continued investment in infrastructure, capacity expansion, and business activity.
- Government Final Consumption Expenditure (GFCE) has also contributed positively, though growth moderated in FY2026 from 6.6% in the last year to 5.9%..

India's growth outlook remains supported by a combination of consumption and investment demand, with private consumption and capital formation expected to remain key contributors to economic expansion.

Inflation

India's inflation has moderated during FY2026, moving below the Reserve Bank of India's target of 4% for most of the year. Headline inflation declined from 3.3% in April 2025 to 1.2% in December 2025 but has increasing slightly to 3.4% by March 2026. The moderation in inflation was mainly due to lower food prices and easing supply-side pressures.

With inflation remaining under control, the RBI reduced the repo rate from 6.5% in January 2025 to 5.3% by December 2025, maintaining the rate through August 2026. Core inflation remained stable at around 3.3% in the final quarter of FY2026, indicating that underlying price pressures were contained. Overall, the inflation and interest rate trends provided a supportive environment for consumption and investment.



Source: RBI, MoSPI, B2K Analytics

Trends in Merchandise and Services Trade

India's total trade balance remained in deficit during FY2026, mainly due to a rise in merchandise imports. Merchandise exports remained broadly stable, while imports increased widening the merchandise trade deficit to USD 333.6 billion. The increase in imports reflects higher domestic demand and purchases of key items such as crude oil, electronics, machinery, and gold. In contrast, the services sector continued to support the external sector with trade surplus widened to USD 21669 billion, led by IT, business, financial, and professional services.



This helped offset part of the merchandise trade deficit, although it was not sufficient to eliminate the overall trade gap despite amid an uncertain global environment, geopolitical challenges and the tariff rates imposed by the US.

India's Total Trade Balance (USD Bn)				
Items	FY24	FY25	FY26	YoY
Trade: Merchandise				
Merchandise Exports	437.12	438.01	442.03	0.92%
Merchandise Imports	678.35	720.27	775.68	7.69%
Trade Balance: Merchandise	-241.22	-282.26	-333.65	18.21%
Trade: Services				
Service Exports	341.062	387.553	421.292	8.71%
Service Imports	178.311	198.717	204.677	3.00%
Trade Balance: Service	162.75	188.84	216.62	14.71%
Total Trade Balance	-78.47	-93.42	-117.03	-
Source: CMIE, B2K Analytics				

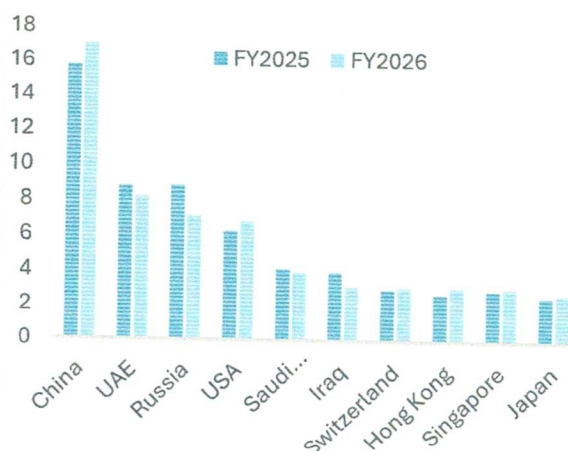
The United States continue to remain India's largest export destination in FY2026, although its share decreased slightly to 19.7% from 19.8% in FY2025. Exports to UAE, China, Germany and Hong Kong improved while exports to the Netherlands, UK, Singapore, Bangladesh and Saudi Arabia declined during FY2026.

On the import side, China remains to be India's largest import partner, with its share rising to 17.0% in FY2026 from 15.8% in FY2025. The shares of imports from the US, Switzerland, Hong Kong, Singapore and Japan also increased, while imports from UAE, Russia, Saudi Arabia, and Iraq declined compared with the previous year. Overall, India's trade pattern remained concentrated among a few major partners, with gradual diversification in few markets.

Share In Exports: Top 10 (%)



Share In Imports: Top 10 (%)



Source: CMIE, B2K Analytics

Upside and Downside to Economic Growth Outlook

Upside	Downside
• MPC's Balancing Act: Extended rate pause has supported growth by maintaining favourable financial conditions. • Benign Inflation Supporting Demand: Medium inflation, GST rationalisation and income tax relief are supporting disposable income simultaneously. • Infrastructure and Manufacturing Push: Higher government capital spending and PLI linked manufacturing capacity is translating into improved industrial activity. • Growth in Digital and Services Sector: Expansion in IT, financial services, and digital businesses is supportive to India's growth momentum. • Favourable Domestic Demand Conditions: Rising consumption, urbanisation, and improving business confidence supporting economic activity.	• Global Trade Policy Uncertainty: Imposition of trade restrictions and changes in tariffs and could affect exports, investment decisions, and supply chains. • Geopolitical Tensions and Energy Prices: Conflicts in key regions could increase crude oil prices and create inflation pressures. • Slower Global Growth: Weak economic activity in major economies could reduce demand for Indian exports. • External Sector Pressure: Higher merchandise imports and a wider trade deficit could exert pressure on the current account balance. • Private Investment Recovery: Delays in private sector investment growth could limit the pace of industrial expansion.



Environmental, Waste Management & Municipal Equipment Manufacturers Industry

Introduction

The industry can be broadly classified under the Industrial Products & Capital Goods industry, as its business is primarily focused on manufacturing and supplying machinery and equipment used by municipalities, government bodies, waste-management operators and other institutional customers. Within this broad industry, the company falls under the Environmental & Waste Management Equipment segment, which includes equipment used for waste collection, handling, processing, cleaning and related environmental applications.

Within the environmental equipment segment, the company is more specifically positioned in Municipal & Waste Management Equipment. Its product portfolio includes garbage compactors, garbage tippers, dumper placers, sewer suction and jetting machines, road sweepers, waste bins, water tankers and other specialised municipal equipment. Therefore, its business is more closely aligned with waste-handling and municipal equipment manufacturing rather than pure environmental consulting or environmental engineering services.

This classification provides a more relevant classification for Quality Enviro Engineers Limited (QEEL), comprising manufacturers and suppliers of waste collection equipment, material-handling machinery, sewer and drain cleaning equipment, road-cleaning machinery and other municipal infrastructure equipment, rather than companies focused primarily on wastewater treatment, environmental consulting, large-scale environmental EPC projects, only waste management or equipment companies.

Industrial Machinery & Equipment	Environmental & Waste Management Equipment	Municipal & Urban Infrastructure Equipment	Environmental Engineering & Solutions	Industrial Services
General Industrial Machinery	Waste Collection Equipment	Garbage Compactors	Solid Waste Management Solutions	Installation & Commissioning
Material Handling Equipment	Waste Handling Equipment	Garbage Tippers	Wastewater Treatment	Maintenance & AMC
Process Equipment	Waste Processing Equipment	Dumper Placers	Pollution Control	Equipment Upgradation
Specialised Machinery	Waste Sorting & Segregation Equipment	Road Sweepers	Resource Recovery	Technical & Engineering Services
	Recycling Equipment	Sewer Cleaning Equipment	Environmental EPC / Project Services	
	Waste Treatment Equipment	Drain Cleaning Equipment		
		Water / Utility Equipment		



Industry Segmentation

The waste management equipment industry can be segmented across various dimensions such as source type, by types of waste product/equipment type, automation level and operation, and end-user. This provides a useful framework for analysing the for companies such as Quality Enviro Engineers Limited.



By Source Types

- Household/Residential
- Industrial Commercial



By Types of Waste

- Solid Waste
- Liquid Waste
- Hazardous Waste
- Specialized Waste
- Residual Waste



By Automation Level & Operation

- Manual / Low-automation Equipment
- Semi-Automated Equipment
- Fully Automated Equipment
- Electric / Alternative-Fuel Equipment
- Mobile Equipment
- Stationary Equipment



By Product / Equipment Type

- Waste Collection & Handling
- Waste Transportation
- Waste Processing & Recycling
- Municipal Cleaning
- Sewer & Drain Cleaning
- Waste Treatment & Resource Recovery
- Specialised Environmental



By End-User

- Municipalities & Urban Local Bodies (ULBs)
- Government Agencies & Public Institutions
- Waste Management Companies
- Industrial & Manufacturing Companies

1. By source type

Household / Residential:	Waste generated from homes and residential communities, such as food, paper, plastics, glass, metals, textiles, and garden waste
Industrial:	Waste generated from manufacturing, mining, construction, energy, and processing activities, including chemicals, metals, sludge, ash, and hazardous waste
Commercial:	Waste generated by businesses and establishments such as shops, restaurants, offices, hospitals, schools, and transport services

2. Types of waste: the classification can be viewed by type of machinery required:

- Solid Waste → Collection, Compaction, Transportation, Sorting & Processing Equipment
- Liquid Waste → Suction, Jetting, Desludging, Pumping & Treatment Equipment
- Hazardous Waste → Specialised Handling, Treatment & Disposal Equipment
- Specialised Waste → Recycling, Shredding, Separation & Recovery Equipment
- Other Waste → Sweeping, Crushing, Screening, Handling & Remediation Equipment

For QEEL, the most areas are solid-waste collection and handling, municipal cleaning, sewer and drain management and selected environmental utility equipment. The broader specialised recycling and waste-treatment categories can be viewed as adjacent markets, depending on the company's product and technology capabilities.

Solid Waste: includes discarded materials that are primarily in solid or semi-solid form and are generated from households, commercial establishments, institutions, industries, construction activities, and municipal operations Key Categories • Municipal/household waste • Commercial & institutional waste • Organic/biodegradable waste • Recyclable waste • Inert waste • Construction & demolition waste • Bulky waste • Street-sweeping/municipal-service waste	Hazardous Waste: comprises waste that presents risks to human health, safety, property, because of toxicity, corrosivity, flammability, reactivity, infectivity, or ecotoxicity Key Categories • Chemical waste • Toxic waste • Flammable waste • Corrosive waste • Reactive waste • Oil & petroleum waste • Solvent waste • Pesticide waste • Heavy-metal-containing waste • Contaminated materials/containers • Hazardous industrial waste	Specialized Waste: covers waste streams that may not necessarily be hazardous in every case but require special collection, segregation, transportation, treatment, recycling, or disposal arrangements because of their composition, size, volume, source, or regulatory requirements Key Categories • E-waste • Biomedical/healthcare waste • Batteries • Tyres • End-of-life vehicles • Sanitary waste • Agricultural/animal waste • Asbestos-containing waste • Radioactive waste • Sector-specific wastes
 Liquid Waste: consists of discarded materials predominantly in liquid form and can originate from domestic, commercial, institutional, municipal, agricultural, and industrial activities Key Categories • Domestic wastewater • Greywater • Blackwater/sewage • Industrial/process wastewater • Commercial wastewater • Septage/fecal sludge • Leachate • Agricultural runoff • Contaminated drainage/stormwater	Residual Waste: refers to the fraction of waste that remains after prevention, reuse, segregation, recycling, composting, material recovery, and other feasible recovery processes have been carried out Key Categories • Non-recyclable waste • Contaminated recyclables • Non-compostable waste • MRF/recycling rejects • Composting/biological-treatment rejects • Thermal-treatment residues • Treatment sludge/residues • Landfill-bound waste	

The list is not exhaustive

3. By Automation Level & Operation

Manual / Low-automation Equipment	Equipment requiring significant operator involvement, such as basic bins, containers and manually operated handling systems.
Semi-Automated Equipment	Machinery with hydraulic, mechanical or electronic assistance but requiring regular operator intervention, such as compactors, tippers and sewer-cleaning machines.
Fully Automated Equipment	Systems using sensors, automated controls, programmable systems and limited operator intervention, particularly in advanced sorting, processing and treatment facilities.
Electric / Alternative-Fuel Equipment	Battery-electric, CNG or other lower-emission equipment, particularly relevant for municipal collection and cleaning applications.
Mobile Equipment	Vehicle-mounted or mobile machinery such as garbage compactors, road sweepers, sewer machines and water tankers.
Stationary Equipment	Fixed machinery such as conveyors, shredders, screens, sorting systems and waste-processing equipment.



4. By Product / Equipment Type

Waste Collection & Handling Equipment	Garbage compactors, garbage tippers, dumper placers, waste bins, containers and lifting systems
Waste Transportation Equipment	Waste collection vehicles, hook loaders, tippers, transfer-station equipment and specialised waste transport vehicles
Waste Processing & Recycling Equipment	Shredders, crushers, screens, conveyors, balers and sorting/segregation systems.
Municipal Cleaning Equipment	Road sweepers, vacuum sweepers, litter collectors, fogging machines and related cleaning equipment.
Sewer & Drain Cleaning Equipment	Sewer suction machines, jetting machines, desilting machines and combination sewer-cleaning equipment.
Waste Treatment & Resource Recovery Equipment	Composting, biomethanation, waste-to-energy and other treatment systems.
Specialised Environmental Equipment	Water tankers, anti-smog equipment, mobile sanitation equipment and other environmental utility machinery.

5. By End-User

Municipalities & Urban Local Bodies (ULBs)	Waste collection, road cleaning, sewer management and municipal sanitation equipment.
Government Agencies & Public Institutions	Equipment for railways, cantonment boards, government facilities and other public infrastructure.
Waste Management Companies	Collection, transportation, sorting, processing and treatment equipment.
Industrial & Manufacturing Companies	Equipment for handling and processing industrial and production-related waste.
Commercial & Institutional Establishments	Equipment for waste management in malls, hotels, hospitals, educational institutions and large commercial facilities.
Infrastructure & Construction Companies	Equipment for construction and demolition waste handling and site management.
Recycling & Resource Recovery Companies	Sorting, shredding, baling and other equipment used for material recovery and recycling.

For Quality Enviro Engineers Limited, the most relevant addressable segments are waste collection & handling, municipal cleaning, sewer & drain cleaning and specialised environmental equipment, with ULBs, municipal corporations, government institutions and waste-management contractors being particularly relevant customer groups.



Value Chain Analysis

The waste management industry value chain covers the complete process of handling waste, starting from its generation and ending with recycling, resource recovery or safe disposal. Waste is generated by households, industries, commercial establishments and institutions. The process begins with waste collection, followed by transportation to sorting or treatment facilities. At these facilities, waste is segregated into different categories such as recyclable, organic and non-recyclable waste. The segregated waste then undergoes different treatment and processing methods such as composting, shredding, recycling, waste-to-energy conversion or other treatment processes. Materials such as metals, plastics, paper, compost, biogas and refuse-derived fuel can be recovered during this process, while the remaining waste is sent for final disposal. Thus, the overall value chain can be viewed as waste generation → collection → transportation → sorting → processing/treatment → resource recovery → recycling/reuse → final disposal.

Key Supplier Segments: The waste management industry relies on suppliers that provide essential equipment, technology, materials, and services:

- **Equipment Manufacturers:** Produce garbage trucks, parts, dumpsters, compactors, balers, shredders, sorting systems, landfill equipment, incinerators, and pollution-control systems. – QEEL focus area
- **Chemical & Treatment Suppliers:** Provide chemicals, microbes, enzymes, leachate and wastewater treatment systems, and emissions-control solutions for hazardous waste, medical waste, composting, and incineration.
- **Technology Providers:** Offer route optimization, waste tracking, billing software, IoT sensors, data analytics, and recyclable-material marketplaces. These asset-light businesses benefit from the sector's stability.
- **Ancillary Services:** Provide specialist staffing, equipment maintenance, cleaning and remediation, consulting, and engineering services. Examples include baling-wire manufacturers and dumpster suppliers, which support waste operators without directly handling waste.

The waste management equipment industry (important layer for QEEL) supports these activities by providing the machinery and systems required at different stages of waste handling and treatment. Its value chain starts with the sourcing of raw materials and components, such as steel, motors, pumps, hydraulic systems, electrical components and automation systems. These inputs are used to manufacture equipment such as waste compactors, conveyors, shredders, crushers, screens, magnetic separators, balers and other waste-processing systems. Equipment manufacturers may also undertake system integration, where multiple machines are combined into a complete waste-processing or treatment plant. This is followed by installation, commissioning and testing at the customer's site. After installation, equipment

companies can also provide maintenance, spare parts, repairs, upgrades and capacity expansion, creating an ongoing relationship with customers beyond the initial equipment sale.

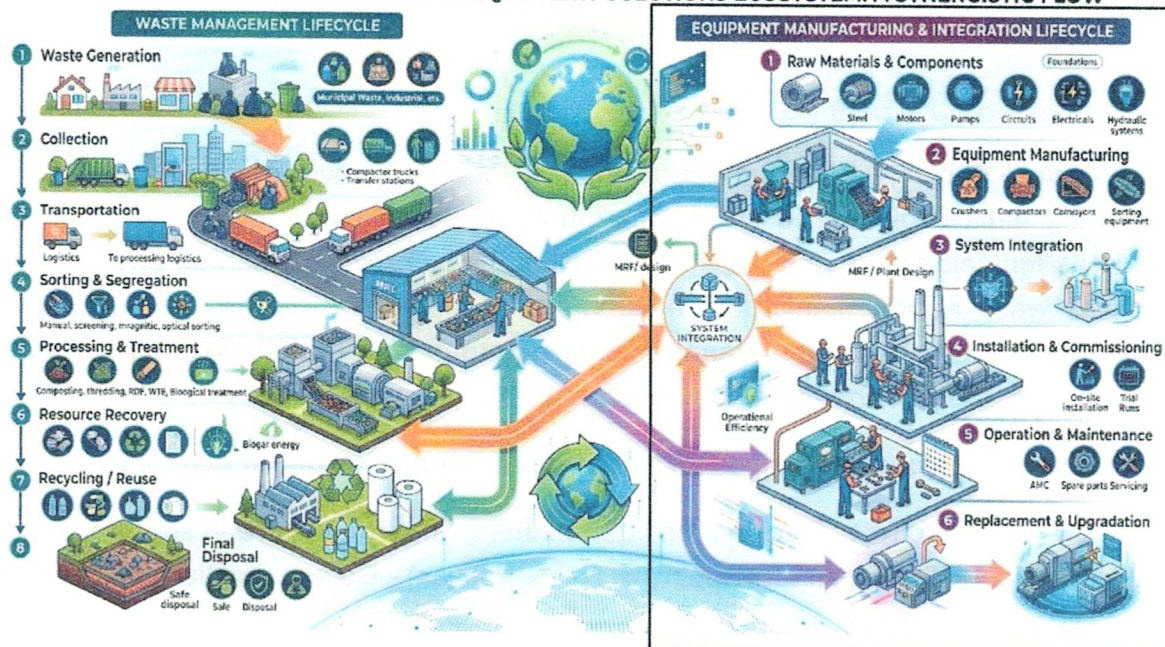
The company uses a range of raw materials, components and consumables involved in their manufacturing process such as for fabrication, hydraulic, mechanical, electrical, pneumatic and vehicle components for manufacturing and assembling equipment and machinery. Key materials include MS/SS sheets, pipes, structural sections, hydraulic cylinders and pumps, valves, hoses, shafts, gears, bearings, motors, batteries, PLCs, VFDs, sensors, pneumatic components, and commercial vehicle chassis. These are primarily used for fabrication, fluid handling, mechanical transmission, electrical control, automation, and vehicle-mounted equipment.

Other essential inputs include paints and coatings, hardware and general manufacturing consumables. Primers, industrial paints and epoxy coatings provide corrosion protection and finishing, while nuts, bolts, fasteners, clamps and bushes support assembly. Welding electrodes and wires, cutting and grinding consumables, industrial gases, oils and lubricants, and personal protective equipment are used in fabrication, assembly, maintenance, and safe manufacturing operations.

When both value chains are integrated, the equipment industry can be seen as an enabling layer within the broader waste management industry. For example, collection and transportation require vehicles, containers and compactors; sorting requires conveyors, screens and separation systems; processing requires shredders, crushers and other processing machinery; while treatment and resource recovery require specialised treatment and recovery systems. Therefore, the performance of the waste management value chain depends partly on the availability, efficiency and reliability of the equipment used at each stage. This creates opportunities for equipment manufacturers not only through the supply of individual machines but also through complete system design, engineering, installation and plant integration.



INTEGRATED WASTE MANAGEMENT & EQUIPMENT SOLUTIONS ECOSYSTEM: A SYNERGISTIC FLOW



For QEEL, the value chain can therefore be understood from the perspective of solving a customer's waste management requirement.

The company addresses customer-specific waste-processing requirements through system design, equipment sourcing/manufacturing, integration, installation and commissioning, along with operation and maintenance support. QEEL's solutions help customers improve waste-processing efficiency, recover valuable materials or energy, and reduce waste requiring final disposal.

Environmental & Municipal-Equipment Market – A Brief

The industry comprises the manufacture and supply of specialised machinery, vehicles, systems and supporting equipment used for municipal cleaning, solid-waste management, sewer and drain maintenance, wastewater handling and other environmental-services applications. The product universe spans the full municipal sanitation cycle from waste collection and street cleaning to transportation, processing, sewer maintenance and disposal. Government guidelines specifically identify equipment such as refuse compactors, dumper placers, tipper trucks, drain-cleaning/jetting machines and mechanised sweeper trucks as part of municipal solid-waste management infrastructure.

The customer base is diverse, with demand coming from both public-sector institutions and private service providers such as ULBs, municipal corporations, cantonment boards, industrial estates, ports, railways, private sanitation contractors. The principal buyers are Urban Local Bodies (ULBs), municipal corporations, municipalities and Nagar palikas, which procure equipment for daily street sweeping, door-to-door waste collection, transportation, drain cleaning and other sanitation services. Government



programmes and municipal service obligations have also increased the requirement for mechanised and specialised equipment.

Urban Local Bodies (ULBs)

Urban Local Bodies (ULBs) are institutions of local self-government responsible for governing India's towns and cities. They include Municipal Corporations, Municipal Councils/Municipalities, and Nagar Panchayats. ULBs provide essential civic services such as water supply, sanitation, solid waste management, roads, drainage, street lighting, public health, urban planning, and maintenance of public spaces. They also collect local taxes and regulate construction and land use.

The government broadly classifies them into **three categories under Article 243Q**:

1. Nagar Panchayat - Govern areas transitioning from rural to urban settlements.
2. Municipal Council (Municipality or Nagar Palikas) - Govern smaller and medium-sized urban areas.
3. Municipal Corporation (Nagar Nigams) – Govern larger urban area.

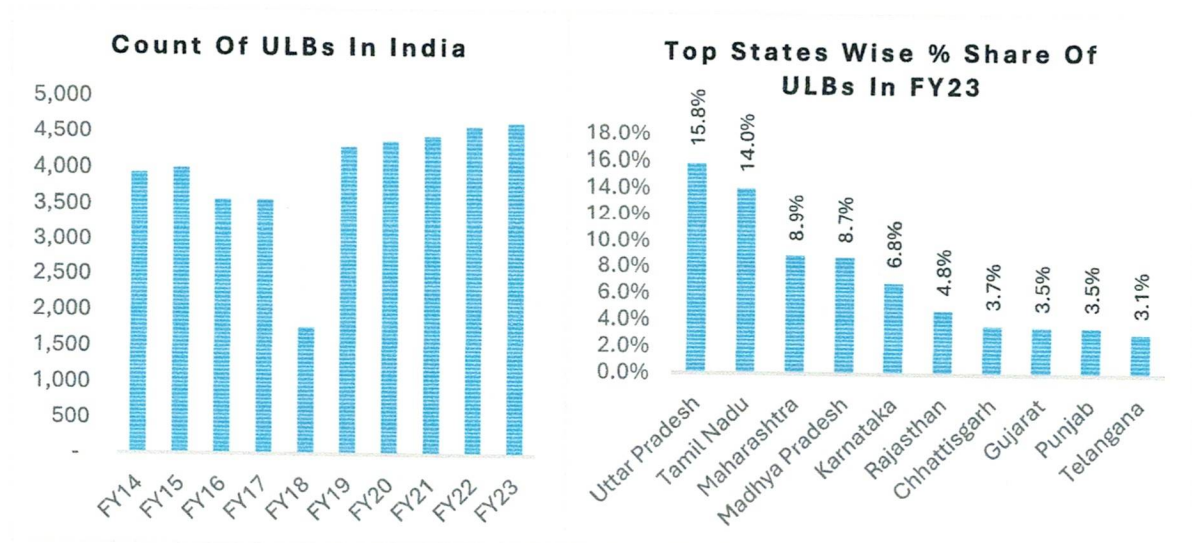
ULBs play a crucial role in urban development and improving citizens' quality of life. However, many face challenges such as inadequate financial resources, limited technical capacity, infrastructure gaps, rapid urbanisation, and fragmented governance. Strengthening the financial, administrative, and planning capacities of ULBs is therefore essential for creating efficient, inclusive, sustainable, and resilient cities in India.

The number of ULBs in India has expanded, increasing from 3,939 in FY14 to 4,641 in FY23. While the number saw a sharp decline in FY18 due to lack of availability of data for that year, the growth has been consistent over years and reaching an all-time high in FY23. This expansion reflects the growing scale of urbanisation and the increasing need for organized municipal services and infrastructure.

Uttar Pradesh had the highest number of ULBs in FY23, with 734, followed by Tamil Nadu (649) and Maharashtra (411). Other states with a sizeable ULB base include Madhya Pradesh (406), Karnataka (316), Rajasthan (221), and Chhattisgarh (170). Gujarat, Punjab, and Telangana also had over 140 ULBs each. **Basically, these 10 states account for ~73% of the ULBs.**

The concentration of ULBs across these states highlights their large and diverse urban systems, creating substantial demand for municipal services, waste management, sanitation, and related urban infrastructure.





Source: CPCB, B2K Analytics

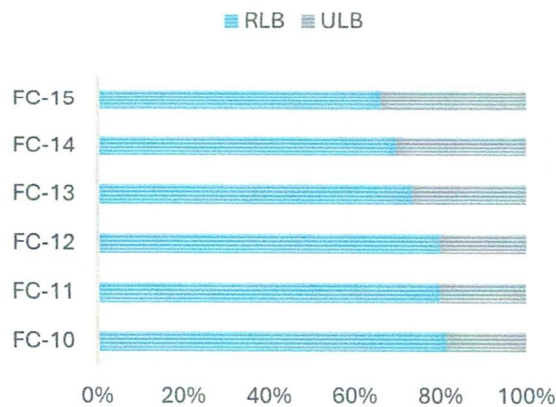
Budget Allocation for ULBs

The recommended grants by finance commission show a progressive increase in the allocation of funds to ULBs relative to Rural Local Bodies (RLBs). Total recommended grants increased substantially from 5,381 under FC-10 to 3,57,860 under FC-15. While the RLB share declined from 81% to 66%, the **ULB share increased from 19% to 34%** during the same period. This trend indicates a growing emphasis on urban local governance and infrastructure, reflecting the increasing importance of urban areas and the need for greater financial support to address their expanding service-delivery and development requirements.

The grants provided to ULBs as mentioned in the budget document has increased from Rs 12,594 crore in FY18 to Rs 19,260 crore in FY25, indicating an overall upward trend in financial support to urban local governments. Although the grants fluctuated during the period, they reached Rs 26,023 crore in FY26 (RE) and are budgeted to rise sharply to Rs 45,272 crore in FY27 (BE). The grants recorded a CAGR of 15.3%, reflecting sturdy growth in financial allocations to ULBs.

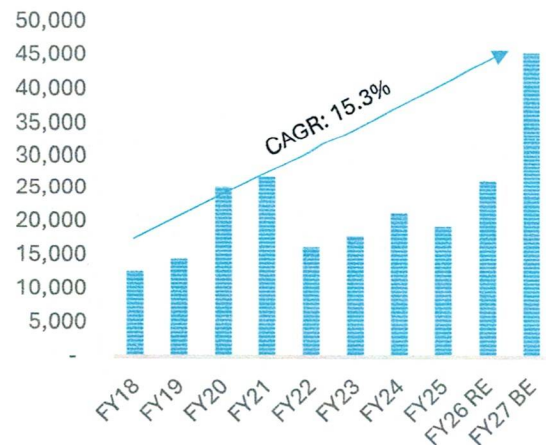


Recommended Grants To Local Bodies by FC



Source: Finance Commission (FC), B2K Analytics

Actual Grants for ULBs

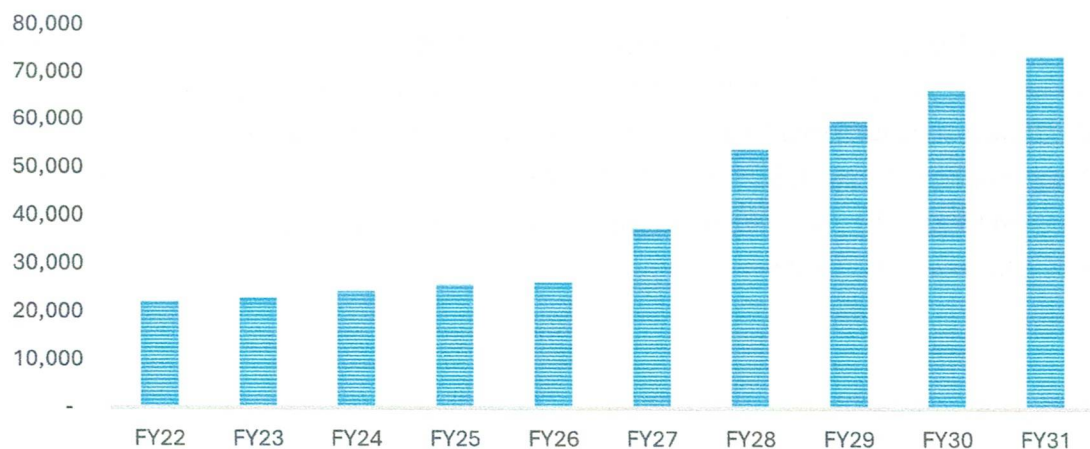


Note: FY18–FY25 figures are actuals, while FY26 is Revised Estimate (RE) and FY27 is Budget Estimate (BE).

Source: Union Budget, B2K Analytics

Projections: The Finance Commission recommended grants for ULBs show a steady and substantial increase from FY22 to FY31. The recommended allocation rises to Rs 73,433 crore in FY31, representing an increase of nearly 3.3 times over the period and the allocation increases more sharply from Rs 37,272 crore in FY27 onward. This upward trend reflects the growing emphasis on strengthening and providing greater financial resources for urban infrastructure.

ULB Grants Recommended By Finance Commission



Note: The ULB grants for all the estimates and not actual. Also, from FY27 till FY31 the numbers are projected.

Source: Finance Commission, B2K Analytics

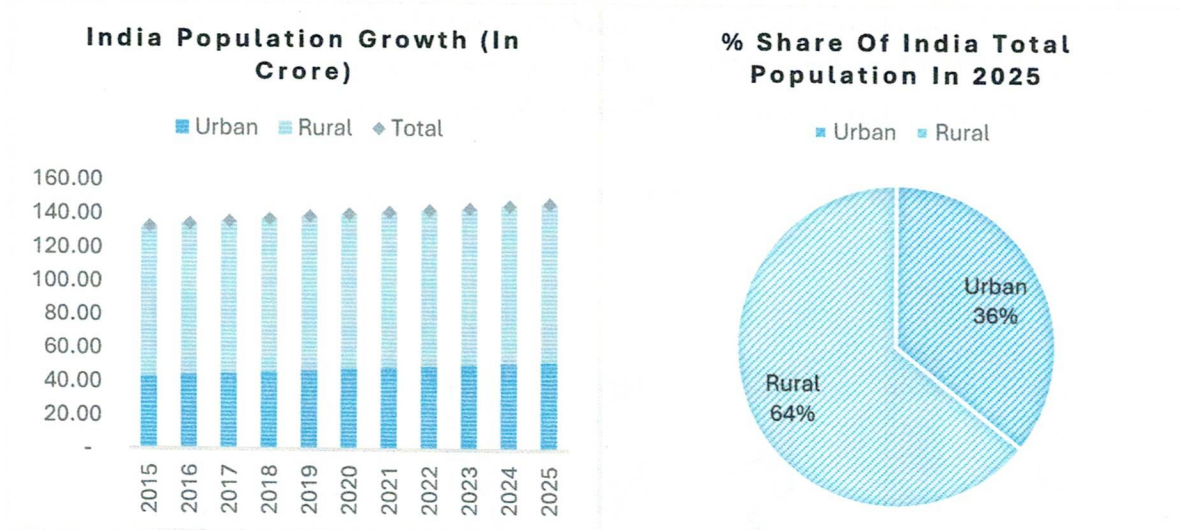
Underlying Driver Supporting the Growth:

ULBs in India have gained increasing importance with the country's rapid urbanisation and growing urban population. The urban population increased from 43.22 crore in 2015



to 52.24 crore in 2025, raising the demand for better urban infrastructure and public services.

Correspondingly, financial support to ULBs has increased with recommended grants. This growing financial allocation reflects the increasing focus on strengthening ULBs, improving service delivery, developing urban infrastructure, and enhancing local governance. The trend indicates that ULBs are becoming increasingly important institutions for managing India's expanding urban economy and population.



Source: World Bank, B2K Analytics

India Environmental-Services & Sanitation Sector Overview

India's environmental services and sanitation sector includes waste management, wastewater and sewage treatment, sanitation, recycling, pollution control, and related infrastructure and operations. The sector is growing due to rapid urbanisation, rising waste generation, water scarcity, public-health needs, stricter environmental regulations, and increased investment in municipal infrastructure.

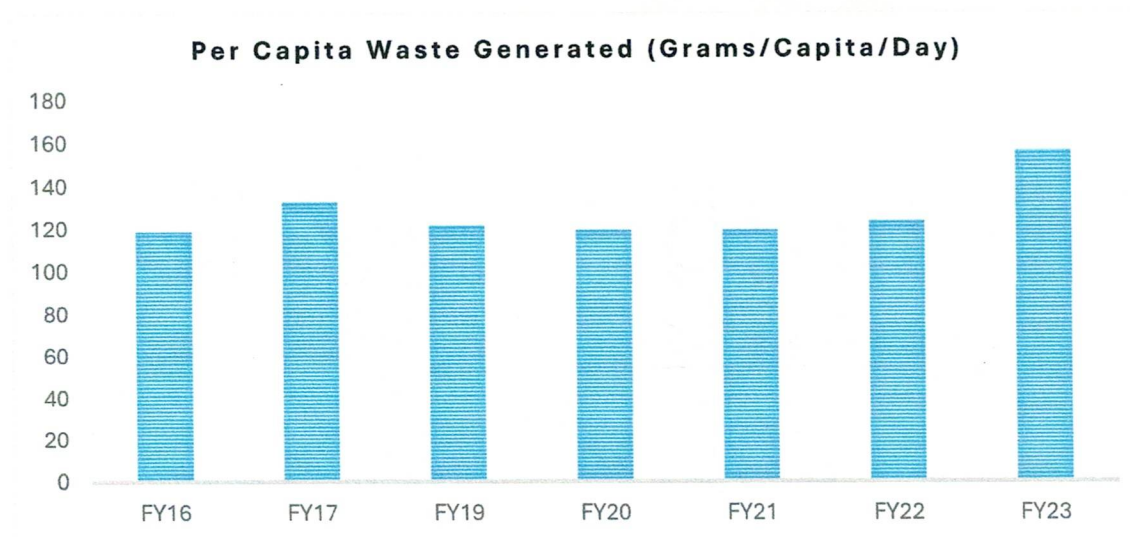
The sector is also becoming more formalised with government initiatives such as SBM-U 2.0 driving demand for scientific waste processing, source segregation, material recovery, construction and demolition waste management, and wastewater treatment and reuse. **The Solid Waste Management Rules, 2026, effective from 1 April 2026,** require four-way waste segregation at source, clearer responsibilities for bulk waste generators, online waste tracking, and environmental compensation based on the polluter-pays principle. These measures are expected to increase demand for waste collection, segregation, processing, recycling, and monitoring services.



Per-capita Waste Generation & Collection Processing Gap

Waste management is a growing challenge in India. The urban population increased from 43.22 crore in 2015 to 52.24 crore in 2025, increasing the need for better urban infrastructure and public services. With rising population and economic growth, India has more waste generation, making efficient waste collection, treatment and disposal increasingly important.

Per capita waste generation in India remained stable over past years, staying around 119–133 grams per person per day. It fell from 132.78 grams in FY17 to 119.07 grams in FY21, before rising to 123.45 grams in FY22. In FY23, waste generation increased sharply to 155.87 grams per person per day, up 26.3% from the previous year.



Source: CPCB (Central Pollution Control Board), B2K Analytics

This rise shows that waste generation is increasing with urbanisation, higher consumption and changing lifestyles, creating a greater need for better waste collection, treatment and recycling.

Public-procurement Backdrop

Municipal capex:

- Urban local bodies are increasing spending on mechanised sanitation, waste collection, transport, processing and landfill-management equipment, supporting demand for municipal waste-management solutions.

GeM:

- Government e-Marketplace (GeM) is an increasingly important procurement channel for standardised waste-management equipment, improving access to government buyers while increasing price and compliance transparency.

Centrally sponsored schemes:

- Programmes such as Swachh Bharat Mission–Urban (SBM-U) and broader urban infrastructure initiatives provide funding support for solid-waste-management infrastructure, creating a pipeline of public-sector equipment tenders.

Implication for QEE:

- Public procurement remains a key demand driver, but growth depends on municipal budgets, tender cycles, eligibility requirements and competitive pricing.

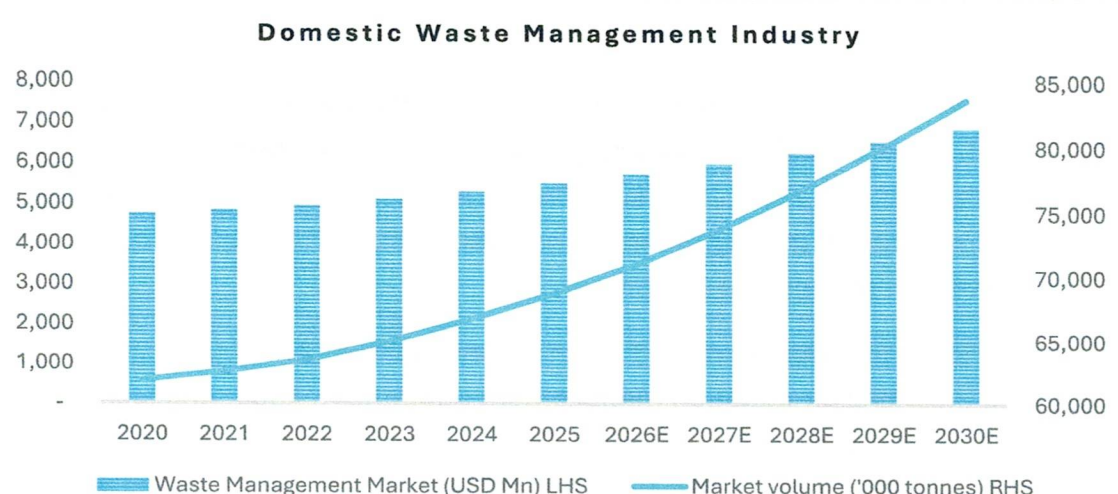
Waste Management Equipment - Operating Sub Sector

Waste management equipment differs fundamentally from general capital goods and construction equipment, as it is specifically designed to address the operational and environmental requirements of waste management. Such equipment must meet stringent standards of quality, reliability, regulatory compliance, process efficiency and long-term operational performance.

The waste management equipment sub-sector covers broad range of equipment used across the municipal waste management value chain, covering activities from source-level collection and storage to transportation, compaction, cleaning, segregation, processing and disposal. The equipment is designed to support the efficient handling and processing of waste while enabling municipalities and waste-management operators to improve operational efficiency and comply with applicable environmental and regulatory requirements.

Quality Enviro Engineers Limited (QEEL) specialises in the design and delivery of engineered environmental solutions, with its capabilities focused on application-specific requirements where technical expertise, engineering precision and equipment reliability are critical to operational performance.

India Waste Management Industry: The domestic industry is showing steady and sustained growth, driven by rising waste generation, urbanisation, industrial activity and increasing emphasis on formal waste management. The market has grown from USD 4,742 million in 2020 to USD 6,887 million by 2030, with sustained growth also in market volume. This indicates that the sector is expanding not only in value but also in volume of waste requiring equipment's for collection, treatment and disposal.



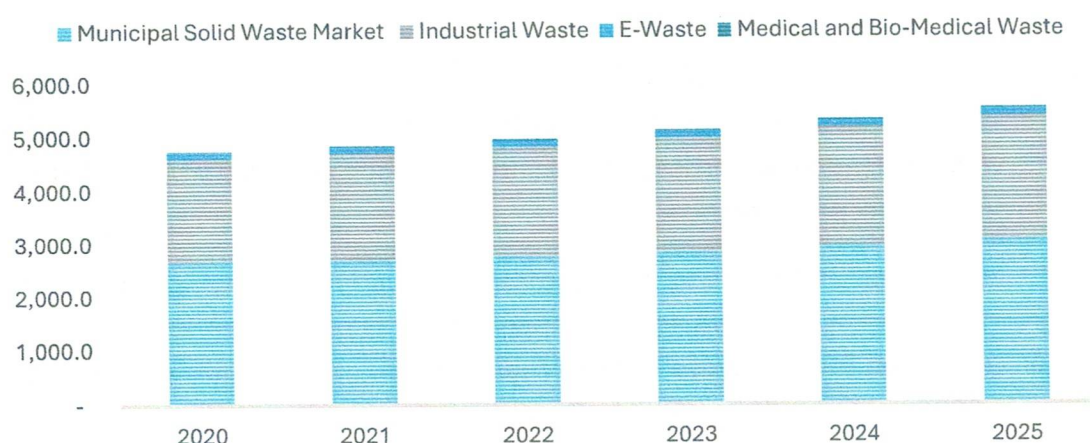
Source: EMIS, MarketLine, B2K Analytics

Municipal solid waste remains the largest segment, reflecting the growing pressure on urban local bodies to manage increasing waste volumes. The municipal waste market

increased steadily through 2025, indicating continued demand for collection, processing, recycling and disposal services. At the same time, the industrial waste segment is also expanding, supported by growth in manufacturing and commercial activity. This creates opportunities for specialised waste handling, recycling and resource-recovery solutions beyond conventional municipal waste management.

The e-waste and medical & biomedical waste segments, although smaller in size, are strategically important and growing consistently. Rising electronic consumption and shorter product replacement cycles are likely to increase e-waste volumes, while expanding healthcare infrastructure will continue to generate medical waste. These segments require specialised collection, treatment and compliance systems, potentially offering higher-value opportunities compared with conventional waste disposal.

Domestic Waste Management Industry (USD Mn)



Source: EMIS, MarketLine, B2K Analytics

QEEL Positioning

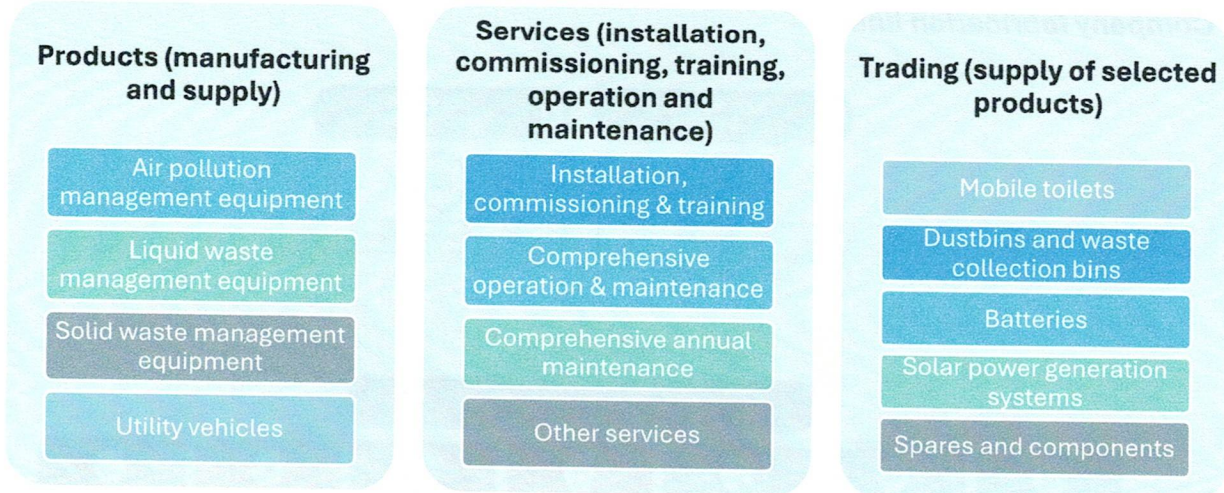
QEEL operates primarily in the equipment/OEM segment of the environmental solutions value chain, with capabilities in engineering, manufacturing, system integration, and product customisation. Its application-specific solutions are supported by technical assistance, commissioning, training, spares, and after-sales services, enabling lifecycle support beyond the initial supply of equipment.

QEEL is engaged in the manufacturing and supply of environmental engineering solutions and equipment, including air pollution management equipment, liquid and solid waste management equipment, and utility vehicles. The Company also provides installation, commissioning, operation and maintenance (O&M), and annual maintenance services to support the efficient and reliable performance of its systems.

In addition, QEEL trades and supplies products such as mobile toilets, dustbins and waste collection bins, batteries, solar power generation systems, spares, and components. Through its integrated product and service capabilities, the Company

provides environmental engineering solutions, waste management equipment, sanitation, and utility solutions to industrial, commercial, institutional, and infrastructure customers.

QEEL Companies' business activities



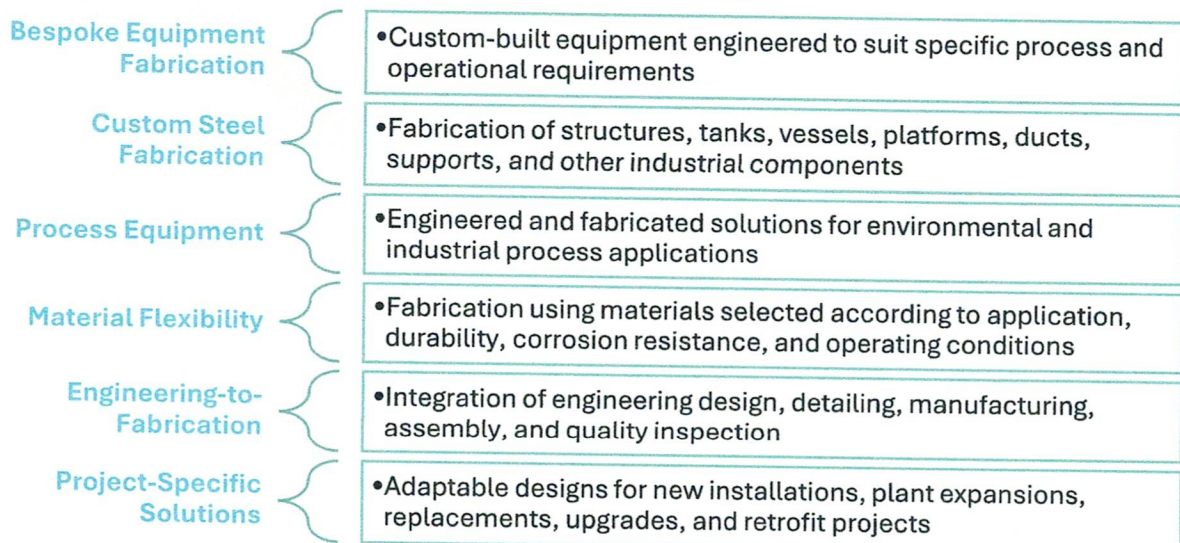
Note: List is not exhaustive. It is as per company

QEEL's capabilities include engineering, fabrication/manufacturing, system integration, product customisation, and technical development.

Custom Engineering & Fabrication - QEEL does bespoke fabrication

QEEL provides custom engineering, manufacturing & bespoke fabrication solutions designed to meet the specific requirements of industrial and environmental applications. From concept and engineering design through fabrication and finishing, QEEL delivers equipment and components tailored to project specifications, operating conditions, and site requirements. This capability supports the company's broader product portfolio.

Key Capabilities



QEEL's business involves the design and fabrication of customised equipment and assemblies tailored to specific customer requirements. The company combines its engineering and manufacturing capabilities to deliver fit-for-purpose solutions across its environmental management product offerings.

Company fabrication line



Core segments - QEEL

The report specifically covers **key equipment categories** for better understanding of the industry as well as company.



Air & dust pollution control: Anti-smog gun; fogging machine; water sprinkler system; Air Purifiers; Fog Cannons/ Fog Mist Generators



Liquid Waste Management: Amphibious Excavator; Dewater & recycling units (including recycling-capable sewer/ jetting units)



Sewer & drainage cleaning: Sewer suction machine; sewer suction-cum jetting machine; super sucker; nala / open-drain cleaning machine



Solid-waste collection & handling: Garbage tipper; dumper placer; hook loader; refuse compactor; underground bins with compactor; minidor garbage lifter; Hopper Tipplers; Portable compactors



Bins & waste storage: Industrial dustbins; underground bins; moulded (Sintex-type) bins; free-stand litter bins; foot pedal dustbins; wheel barrows



Road / street sweeping: Truck-mounted road sweeper; ride-on sweeper; tractor-mounted / tractor-attached sweeper



Sanitation & mobile toilets: Mobile toilet van; bio mobile toilet; portable toilet cabin; E-rikshaw Dustbins



Water-distribution vehicles: Four-wheeler water tanker; trailer-mounted water tanker



Access & material handling: Sky lift / hydraulic aerial access platform; hydraulic ladder; recovery van; Knuckle Boom Crane; Cattle Catcher



Allied Services: Waste-management services; streetlight repairing / maintenance services; Installation & commissioning; Maintenance & After sale Support

The list is not exhaustive. It's as per company.

Thus, the MSWM Equipment - Operating Sub-Sector can be characterised as a B2G/B2B, infrastructure-linked equipment market, with demand largely driven by municipal capex, PPP contracts, urbanisation, regulatory compliance and the increasing mechanisation of waste-management operations.



A. Air Pollution Management Equipment & Dust Pollution Control

Infrastructure Development and QEEL Role

Rapid infrastructure development across sectors such as airports, railway stations, housing projects, industrial corridors, roads, and associated utilities is essential for economic growth and urban development. However, large-scale construction and infrastructure activity can also generate enormous air and dust pollution if emissions are not effectively managed.

How Infrastructure Activities Contribute to Air & Dust Pollution

Infrastructure projects typically involve excavation, demolition, earthwork, material handling, transportation, concrete work, and construction of large structures. These activities can release particulate matter (PM10 and PM2.5) as well as other pollutants into the surrounding environment.

- **Earthwork and excavation:** Excavation, grading, trenching, and movement of loose soil can generate substantial quantities of fugitive dust.
- **Material handling:** Cement, sand, aggregates, fly ash, soil, and other fine materials can become airborne during loading, unloading, conveying, and storage.
- **Construction and demolition:** Cutting, drilling, crushing, demolition, and surface preparation can generate fine and coarse particulate matter.
- **Heavy vehicle movement:** Trucks, cranes, earthmovers, and other construction equipment contribute to exhaust emissions and can also resuspend dust from unpaved or poorly maintained roads.
- **Concrete and batching operations:** Ready-mix plants, concrete batching, aggregate handling, and associated processes can produce dust if appropriate extraction and filtration systems are not installed.
- **Industrial corridors:** Large industrial developments may combine construction-related fugitive dust with emissions from manufacturing, material processing, logistics, and utility operations.
- **Airports and railway infrastructure:** Construction of terminals, runways, tracks, stations, warehouses, and associated facilities can involve extensive earthwork and material movement, creating temporary but potentially significant dust loads.

Where QEEL Comes into Play

QEEL can support infrastructure developers, EPC contractors, and industrial project owners with engineered air pollution and dust-control solutions tailored to the requirements of individual sites and processes. QEEL's role can extend from assessment and system design to equipment engineering, fabrication, installation, and

commissioning, helping projects incorporate pollution-control measures as an integral part of their infrastructure.

QEEL's Key Areas of Contribution

- **Dust Collection & Extraction Systems:** Engineered systems to capture dust at its source from material handling, processing, transfer points, and other dust-generating operations.
- **Bag Filters and Filtration Systems:** Dust filtration solutions designed to separate particulate matter from process or exhaust air before discharge.
- **Fume & Air Extraction:** Local exhaust and ventilation systems for areas where fumes, dust, or process emissions need to be captured and controlled.
- **Dust Suppression Solutions:** Appropriate dust-management systems for construction and material-handling environments to minimize fugitive emissions.
- **Ducting & Air Distribution:** Custom-engineered ducting and associated components for efficient movement of contaminated air to pollution-control equipment.
- **Custom Fabrication:** QEEL's bespoke fabrication capabilities enable equipment, ducting, hoods, supports, platforms, and related components to be manufactured according to project-specific requirements.
- **Turnkey Engineering:** Integration of engineering, fabrication, installation, testing, and commissioning to provide a coordinated pollution-control solution.

Supporting Cleaner Infrastructure: For major infrastructure developments, pollution control should not be treated as an afterthought. Effective dust and air-emission management can be incorporated into the project during the planning and engineering stages, allowing pollution-control systems to be designed around the site's layout, processes, emission sources, and regulatory requirements.

QEEL brings together environmental engineering, pollution-control expertise, and custom fabrication to help infrastructure and industrial projects manage air emissions at their source. By providing application-specific solutions, QEEL contributes to the development of infrastructure that is not only productive and efficient, but also more environmentally responsible.

Air Pollution Management Equipment's

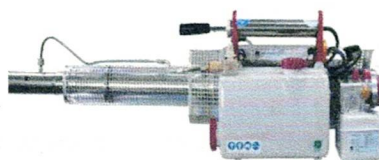
QEEL offers a range of air pollution management equipment designed to control airborne dust, particulate matter and other pollutants across industrial, construction, municipal and infrastructure applications.





Anti-Smog Gun:

- Mobile dust suppression equipment that uses high-pressure water mist to suppress airborne dust and particulate matter over relatively large areas. It is suitable for construction sites, roads, mining areas, demolition activities and other dust-intensive operations



Fogging Machine:

- Equipment that generates a fine mist to support dust suppression and, depending on configuration and application, odour control and disinfection. Its compact and mobile design enables deployment across municipal, industrial and commercial environments



Water Sprinkler System:

- A mechanised system used for controlled spraying of water on roads, open areas, construction sites and other surfaces to reduce dust generation. The system can be mounted on utility vehicles or integrated with fixed infrastructure based on application requirements



Air Purifiers:

- Air filtration systems designed to remove particulate matter and other airborne contaminants from enclosed or controlled environments. These systems are suitable for offices, commercial premises, industrial facilities, healthcare and institutional applications



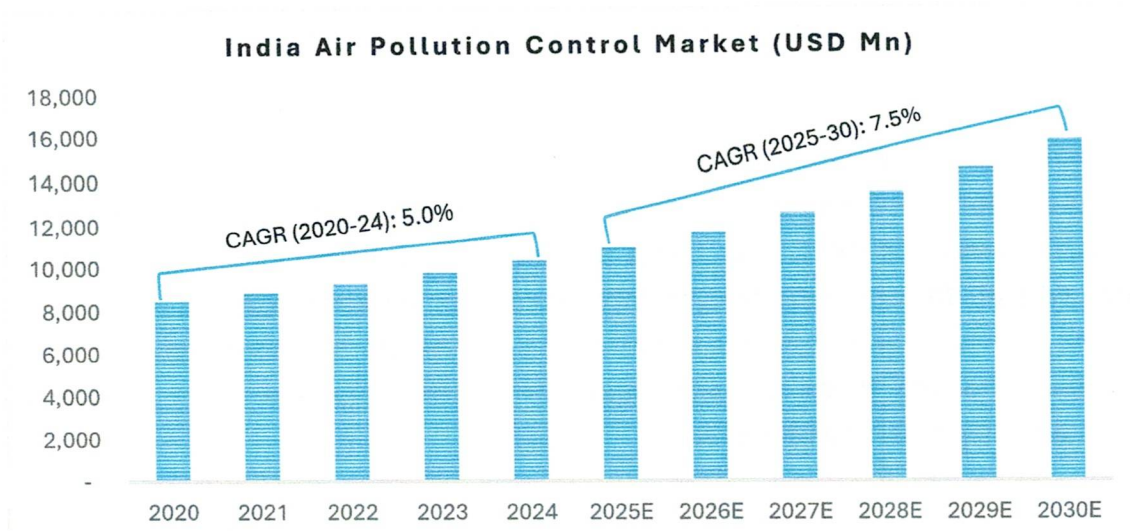
Fog Cannons / Fog Mist Generators:

- High-capacity dust suppression systems that disperse ultra-fine water droplets over a wide area to capture and settle airborne dust. They are commonly deployed at construction sites, waste-management facilities, material-handling areas, mining operations and other locations with high particulate emissions

Note: List is not exhaustive. It is as per company

The India air pollution control market grows from USD 8.5 billion in 2020 to an estimated USD 15.7 billion by 2030. The market grew at 5.0% CAGR during 2020-24 and is expected to accelerate to 7.5% CAGR during 2025-30. The faster growth expected in the coming years reflects increasing focus on air quality, stricter pollution control requirements and higher spending by industries and public authorities.

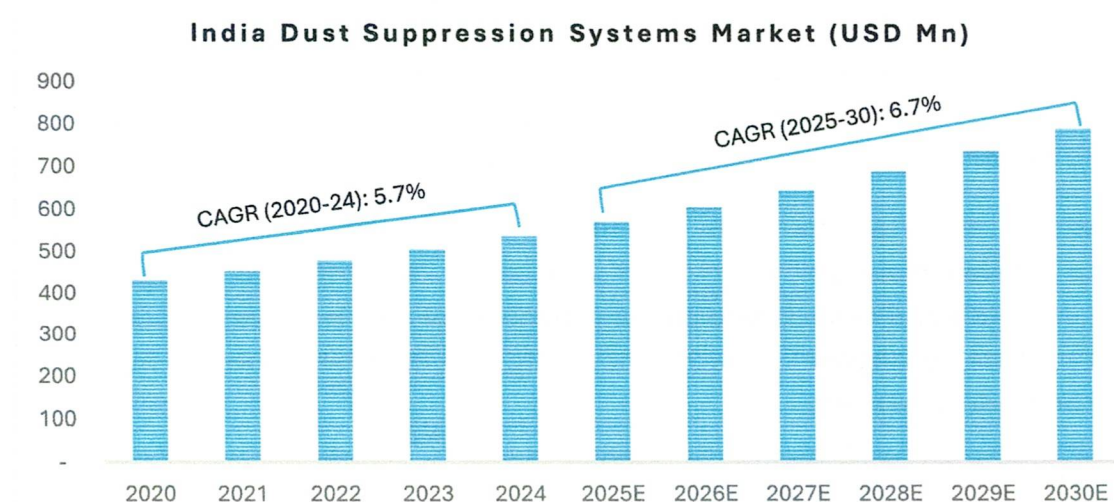
Growing industrial activity is also expected to increase demand for pollution control systems. The market is moving into a higher-growth phase, creating opportunities for companies providing air filtration, emission control and pollution monitoring solutions. Industrial and urban pollution control is likely to remain the main demand driver.



Source: EMIS, Technavio, B2K Analytics

India Dust Suppression Systems Market: The market grows at decent pace, increasing from USD 430 million in 2020 to an estimated USD 790 million by 2030. Growth is expected to improve from 5.7% CAGR during 2020-24 to 6.7% CAGR during 2025-30. The higher growth outlook is mainly supported by rising industrial activity, construction, mining and infrastructure development, where dust control is important for both worker safety and environmental compliance. Increasing focus on air quality and workplace safety is also expected to support demand.

The market is therefore entering a stronger growth phase, with greater adoption of dust control solutions across industrial and infrastructure projects. Overall, demand is likely to remain supported by stricter pollution norms and the need for safer and cleaner work environments.



Source: EMIS, Technavio, B2K Analytics

B. Liquid Waste Management Equipment & Sewerage Management



Liquid Waste & Sewerage Management Equipment comprises systems and equipment used for the collection, treatment, processing and safe disposal or reuse of sewage and other liquid waste. For QEEL, this forms part of its core environmental engineering business, wherein the company designs, fabricates, supplies and integrates customised equipment and systems to address customers' liquid waste and sewerage treatment requirements, helping them manage wastewater effectively and meet applicable treatment and disposal requirements.



Amphibious Excavator:

Specialised excavator designed for desilting and sludge removal in ponds, canals, drains and other waterlogged or soft terrains



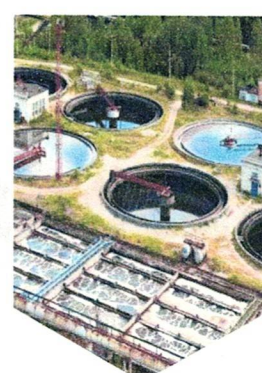
Dewatering & Recycling Units:

Mobile systems designed to separate water from sludge and liquid waste, enabling water recovery, reuse and reduction of waste volume



Recycling-Capable Sewer/Jetting Units:

Integrated sewer-cleaning systems that combine high-pressure jetting, suction and water recycling to remove sludge, silt and blockages while reducing fresh-water consumption



Liquid Waste Recycling:

Treatment and recovery solutions that enable reuse of recovered water and minimize wastewater disposal and transportation requirements

Note: List is not exhaustive. It is as per company

Liquid Waste Management: The market is expected to grow firmly, from USD 7.7 billion in 2020 to USD 13.0 billion by 2030. The market grew at a 5.2% CAGR during 2021-24 and is expected to grow slightly faster at 5.6% CAGR during 2025-30.

This growth is mainly supported by urbanisation, rising industrial activity, higher wastewater generation and stricter environmental norms. Growing focus on wastewater treatment, recycling and reuse is also creating demand for new treatment facilities. The market offers a stable long-term growth opportunity, with increasing demand from both municipal and industrial users.





Source: EMIS, Technavio, B2K Analytics

Sewer & Drainage Cleaning: Sewer & Drainage Cleaning involves the use of specialised equipment for removing sewage, sludge, silt and other blockages from underground sewers, drains and open drainage channels. Equipment such as sewer suction machines, sewer suction-cum-jetting machines, super suckers and nala/open-drain cleaning machines enables mechanised cleaning, suction and high-pressure jetting operations, dewatering and recycling units, and weed harvesters. For QEEL, this segment is relevant to its environmental and municipal equipment business, as these solutions address urban sanitation, sewer maintenance and drainage-cleaning requirements of municipalities and other customers.



Sewer Suction Machine

- Specialised equipment used to suction and remove sewage, sludge, silt and other accumulated material from sewer lines and drainage systems



Sewer Suction-cum-Jetting Machine

- Combines suction and high-pressure water jetting to remove blockages, clean sewer lines and extract accumulated waste



Super Sucker

- High-capacity vacuum equipment designed for the rapid removal of sludge, slurry, silt and other liquid or semi-solid waste

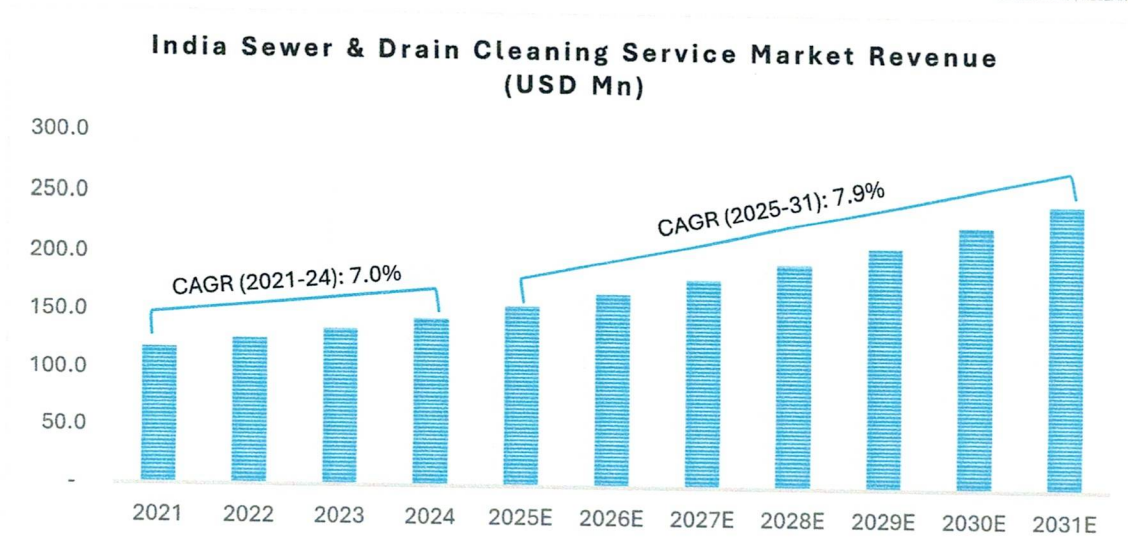


Nala / Open-Drain Cleaning Machine

- Equipment designed for mechanised cleaning of open drains and waterways by removing silt, debris, sludge and other accumulated waste

Note: List is not exhaustive. It is as per company

The market grows at decent pace from USD 118 million in 2021 to an estimated USD 246 million by 2031. The market grew at a 7.0% CAGR during 2021-24 and is expected to grow faster at 7.9% CAGR during 2025-31.



Source: EMIS, The Insights Partner's Analysis, B2K Analytics

The growth is supported by rapid urbanisation, expansion of sewer networks, ageing drainage systems and increasing focus on clean and safe urban infrastructure. Growing use of professional and mechanised cleaning services is also likely to reduce dependence on manual cleaning methods.

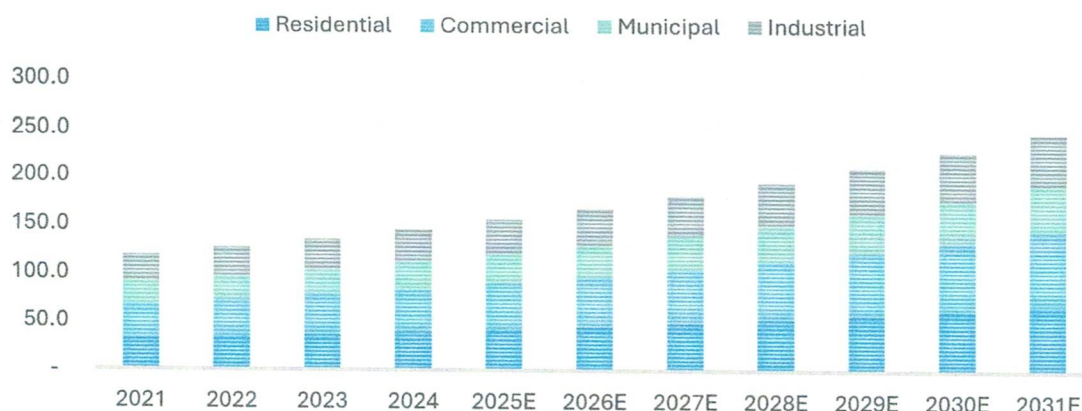
The rise in growth rate in the forecast period indicates further strengthening demand for regular sewer and drain maintenance. Municipal bodies, housing projects, commercial areas and industries are likely to remain key users of these services. The market presents growing opportunity with demand shifting towards mechanised, safer and more reliable sewer and drain cleaning services.

Segment Details

- Commercial customers form the largest segment, increasing from USD 35.5 million in 2021 to an estimated USD 77.4 million by 2031. This segment is also expected to grow the fastest, at 8.4% CAGR during 2024-31, supported by the expansion of offices, malls, hotels, commercial buildings and other large facilities that require regular drain and sewer maintenance.
- Residential demand is the second-largest segment and is expected to reach USD 67.9 million by 2031. Its growth is supported by increasing urban housing, higher awareness of hygiene and the need for regular drainage maintenance in residential.

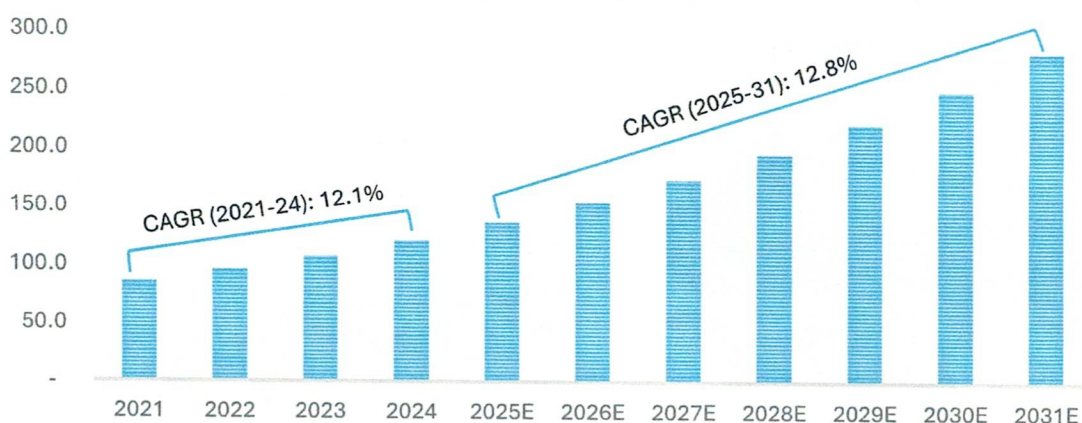


India Sewer & Drain Cleaning Service Market Revenue (USD Mn)



Source: EMIS, The Insights Partner's Analysis, B2K Analytics

India Drain Cleaning Equipment Market Revenue (USD Mn)



Source: EMIS, The Insights Partner's Analysis, B2K Analytics

- The industrial segment has stable growth and is expected to reach USD 53.3 million by 2031. Demand is likely to be driven by factories and industrial facilities that require regular cleaning and maintenance of drainage and wastewater systems.
- The municipal segment, while smaller, remains important because of the large public sewer networks managed by local authorities. It is expected to grow from USD 28.3 million in 2024 to USD 47.1 million by 2031, supported by increasing focus on urban sanitation and maintenance of public drainage systems.
- Commercial and residential customers are expected to remain the main growth drivers with highest CAGR among all the segments, while industrial and municipal demand will provide decent opportunities.

The India drain cleaning equipment market is growing rapidly, increasing from USD 86 million in 2021 to an estimated USD 282 million by 2031. The faster growth expected in the coming years points to increasing demand for mechanised drain and sewer cleaning. Municipal bodies, commercial facilities, industries and service providers are likely to

invest more in equipment to improve cleaning efficiency and reduce dependence on manual cleaning.

The market is also supported by the expansion of urban drainage networks, ageing sewer systems and greater focus on worker safety and hygiene. As professional cleaning services become more common, demand for specialised equipment is expected to rise alongside the services market.

C. Water Distribution Vehicles & Wastewater Treatment Equipment



Water-distribution vehicles are specialised vehicles used for the storage, transportation and controlled distribution of water, while Water & Wastewater Management covers systems and equipment for the treatment, handling, reuse and disposal of water and wastewater. For QEEL, these activities are relevant to its environmental engineering business, as the company provides equipment and customised solutions for water and wastewater management requirements, including utility vehicles that support the transportation and distribution of water and liquid waste.



Four-Wheeler Water Tanker:

- Compact, mobile water-supply vehicle designed for efficient water transportation and distribution in urban areas, construction sites, public spaces and emergency water-supply operations

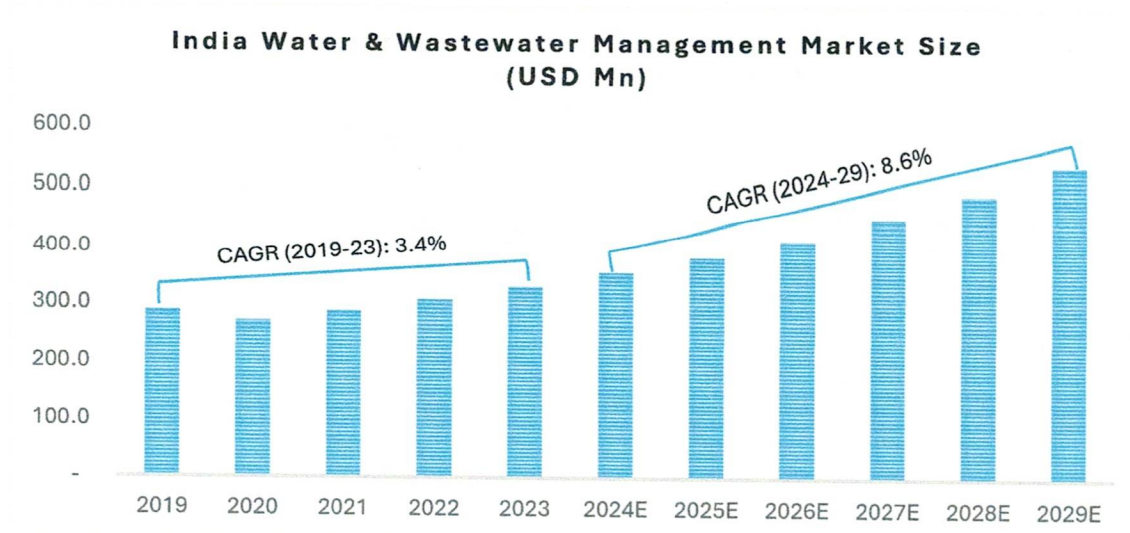


Trailer-Mounted Water Tanker:

- High-capacity water tank mounted on a trailer, suitable for transporting and distributing water across construction sites, industrial areas, rural locations and other large or remote areas

Note: List is not exhaustive. It is as per company

The India water and wastewater management market is expected to see stimulate growth, increasing from USD 288 million in 2019 to an estimated USD 538 million by 2029. After growing at a modest 3.4% CAGR during 2019-23, the market is expected to grow faster at 8.6% CAGR during 2024-29.



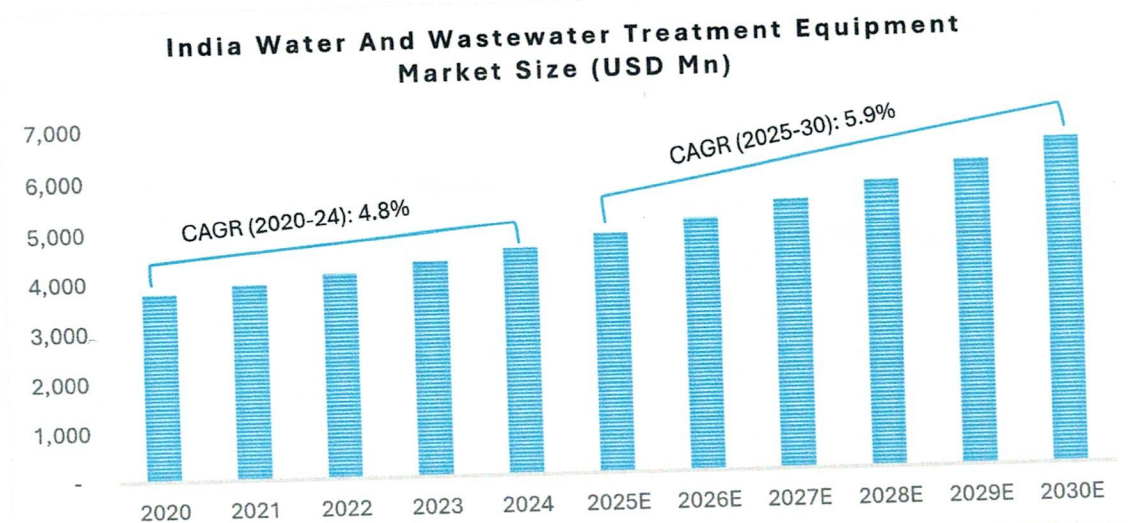
Source: EMIS, Technavio, B2K Analytics

The growth outlook seems positive as reflected rising water demand, urbanisation, industrial growth and increasing need for wastewater treatment. Greater focus on water conservation, recycling and reuse is also expected to support market demand. The market is therefore moving from relatively slow growth in the earlier period to a higher-growth phase, creating opportunities across water treatment, wastewater treatment, recycling and related infrastructure.

India Water & Wastewater Treatment Equipment Market: The market is growing steadily from USD 3.8 billion in 2020 to an estimated USD 6.4 billion by 2030. The market grew at 4.8% CAGR during 2020-24 and is expected to grow faster at 5.9% CAGR during 2025-30. The higher growth expected in the coming years is likely to be driven by rising water demand, urbanisation, industrial growth and stricter requirements for wastewater treatment. Growing focus on water recycling and reuse is also expected to increase demand for treatment equipment.

The market offers a stable growth opportunity, with demand likely to come from both municipal and industrial users. The shift towards better treatment, recycling and reuse should support continued investment in treatment equipment.





Source: EMIS, Technavio, B2K Analytics

D. Solid Waste Management Equipment

Solid Waste Management refers to the collection, handling, processing, treatment and disposal of solid waste, including municipal and industrial waste, with the objective of reducing waste sent for final disposal and enabling recovery of useful materials or resources. For QEEL, this is a core area of its environmental engineering business, as the company provides solid waste management equipment and customised solutions for waste collection, processing and treatment, supporting customers in managing solid waste efficiently and sustainably.

Products provided by the company in this area includes refuse compactors, dumper placers & hopper tipper dumpers, tippers, portable compactors, road sweepers, waste segregation equipment, etc.





Garbage Tipper

- Vehicle-mounted equipment used for collecting and transporting municipal solid waste



Dumper Placer

- Equipment used to lift, place and transport waste containers



Hook Loader

- Hydraulic loading system used for handling and transporting detachable waste containers



Refuse Compactor

- Equipment used to compress waste, reducing its volume and improving transportation efficiency



Underground Bins with Compactor

- Waste collection systems installed below ground, with compaction capability to increase storage capacity



Minidor Garbage Lifter

- Compact equipment designed for lifting and handling garbage containers in confined or narrow areas



Hopper Tippers

- Tipping units used for collecting and transferring waste from hoppers to collection or transport vehicles



Portable Compactors

- Mobile waste-compaction units used to compress and consolidate solid waste before transportation or further processing

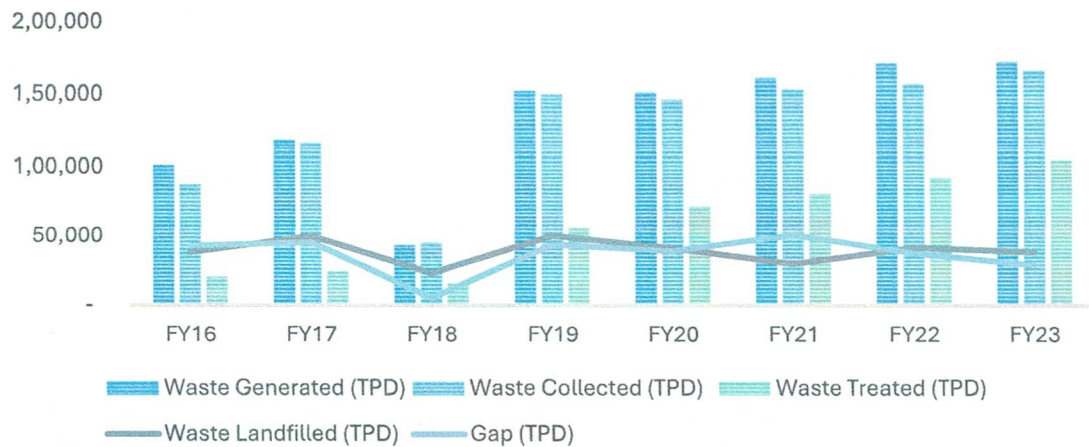
Note: List is not exhaustive. It is as per company

Solid Waste Management

Waste generation increased from 1,01,066 TPD in FY16 to 1,70,939 TPD in FY23, an increase of about 69%. Waste collection improved from 86,532 TPD to 1,64,621 TPD, with collection coverage rising from 86% to 96%. Waste treatment increased from 20,289 TPD to 1,04,216 TPD, raising the treatment share from 20% to 61% of waste generated. Landfilling remained broadly stable at around 38,000 TPD, despite the substantial rise in waste generation. The waste management gap declined from 42,824 TPD in FY16 to 28,576 TPD in FY23, indicating improved management capacity.

The data reflects decent progress in waste collection and treatment, but the remaining gap and continued dependence on landfills indicate a need for further expansion of recycling, processing, and scientific waste management infrastructure.

Solid Waste Management (TPD)



Note: TPD stands for Tonnes Per Day

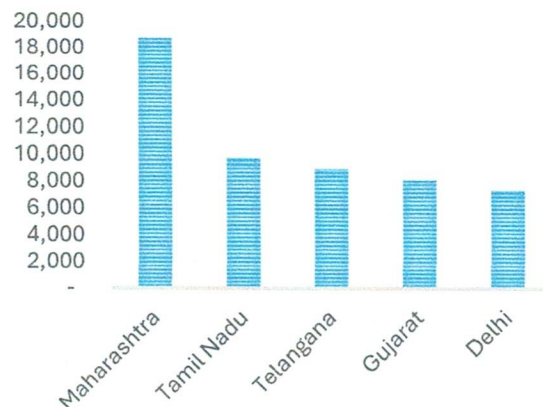
Source: CPCB, B2K Analytics

State Wise Analysis

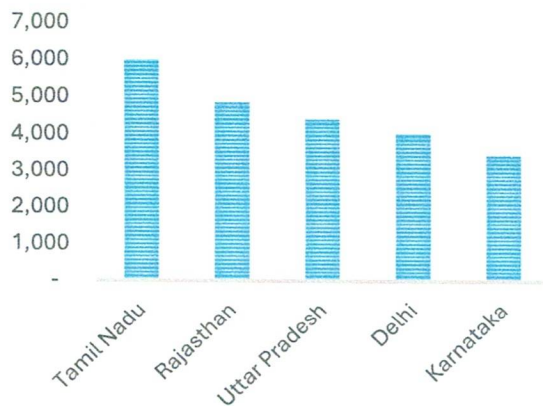
Top States: Waste Generated & Waste Collected (TPD)



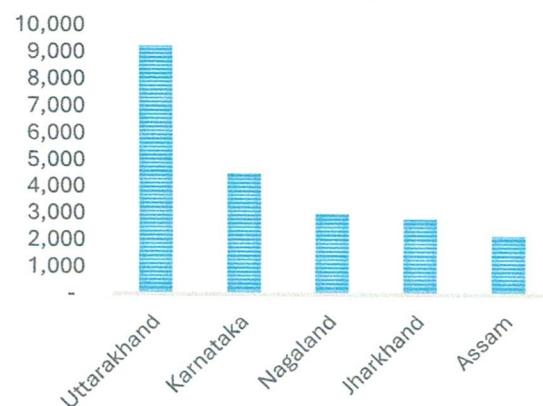
Top States Waste Treated (TPD)



Top States Waste Landfilled (TPD)



Top States With Gap In SWM (TPD)



Note: TPD stands for Tonnes Per Day.

Source: CPCB, B2K Analytics

- Maharashtra has the highest waste generation and treatment capacity, indicating relatively sufficient waste-processing infrastructure.
- Tamil Nadu combines high collection and treatment levels but has the highest landfill volume, indicating scope for greater waste diversion. Uttar Pradesh achieves 100% collection, but its high landfill volume showing the need to strengthen treatment and recovery.
- West Bengal and Karnataka have near-complete collection, suggesting that their key challenge lies in downstream processing rather than collection.
- Telangana and Gujarat show strong treatment capacity, reflecting comparatively better processing infrastructure. Delhi, has treatment capacity but still sends 4,000 TPD to landfill, indicating potential to improve segregation and recovery.
- Uttarakhand records the largest waste management gap (9,229 TPD), followed by Karnataka and Nagaland, highlighting infrastructure deficiencies.

Bins & Waste Storage: This segment is relevant to QEEL as an entry point into municipal and institutional waste-management projects. QEEL can participate through supply and integration of wheeled bins, collection containers, bulk storage units and customised waste-storage solutions. Demand is supported by source-segregation initiatives, municipal fleet expansion and replacement of ageing collection infrastructure, with opportunities to bundle bins with broader waste-handling and processing systems.

Further Bins & Waste Storage comprises a range of equipment provide by QEEL which are used for the collection, temporary storage and handling of solid waste such as industrial dustbins, underground bins, moulded (Sintex-type) bins, free-standing litter bins, foot-pedal dustbins and wheelbarrows. For QEEL, this segment forms part of its solid waste management business, enabling the company to provide customers with waste-storage and collection solutions that complement its broader portfolio of solid-waste collection, handling and processing equipment.

Waste Segregation Equipment: It is strategically relevant to QEEL because it connects waste collection with downstream processing and resource recovery. Equipment such as conveyors, trommel screens, magnetic separators and sorting systems can be integrated into material recovery and waste-processing plants. As municipalities increasingly focus on source segregation, recovery of recyclables and reducing landfill disposal, this segment provides QEEL opportunities to supply equipment as part of larger turnkey waste-management projects.





Industrial Dustbins

- Heavy-duty bins designed for the collection and temporary storage of industrial and commercial waste



Underground Bins

- Waste storage containers installed below ground level to provide higher-capacity and space-efficient waste collection



Moulded (Sintex-type) Bins

- Durable moulded plastic bins used for general waste collection and storage



Free-Stand Litter Bins

- Standalone bins designed for the collection of litter in public and commercial areas



Foot-Pedal Dustbins

- Hands-free bins operated using a foot pedal, suitable for hygienic waste disposal



Wheel Barrows

- Wheeled containers used for the manual collection and movement of waste over short distances

Note: List is not exhaustive. It is as per company

E. Urban Cleaning & Sanitation 🗑️

Urban Cleaning & Sanitation encompasses equipment and solutions used for maintaining cleanliness and hygiene in urban areas, including road and street sweeping equipment, sanitation equipment and mobile toilets.

For QEEL, this segment is relevant to its municipal and environmental solutions business, as the company provides products such as truck-mounted, ride-on and tractor-mounted/attached sweepers, along with mobile toilets and other sanitation solutions. These offerings enable QEEL to address the cleaning, sanitation and public-infrastructure requirements of municipalities and other customers.

Road / street sweeping:

Road and street sweeping equipment is used for the mechanised cleaning and maintenance of roads, streets, pavements and other public areas by removing dust, debris and accumulated waste. These solutions support efficient urban cleaning operations and are available in different configurations depending on the scale and operating requirements of the application. QEEL's road and street sweeping offerings

include:



Truck-Mounted Road Sweeper

- Vehicle-mounted sweeping equipment used for mechanised cleaning of roads and streets



Ride-On Sweeper

- Compact, self-propelled equipment operated by a driver for cleaning roads, pavements and other public areas



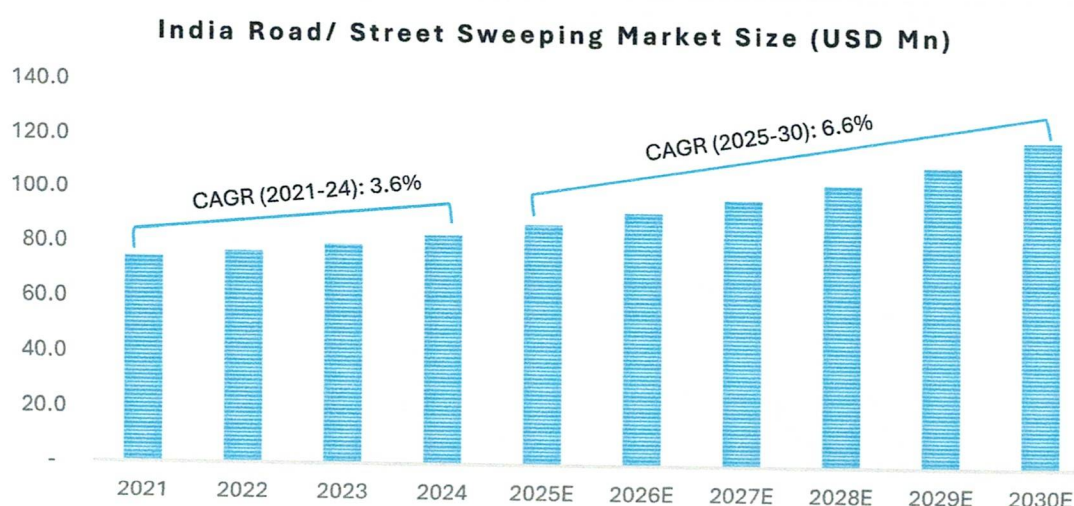
Tractor-Mounted / Tractor-Attached Sweeper

- Sweeping equipment mounted or attached to tractors for cleaning roads, streets and other large outdoor areas

Note: List is not exhaustive. It is as per company

The India road and street sweeping market is expected to grow steadily, increasing from USD 74.7 million in 2021 to an estimated USD 119.7 million by 2030. Growth is expected to speed up from 3.6% CAGR during 2021-24 to 6.6% CAGR during 2025-30. The higher growth expected in the coming years reflects greater focus on urban cleanliness, better road maintenance and increasing use of mechanised sweeping.

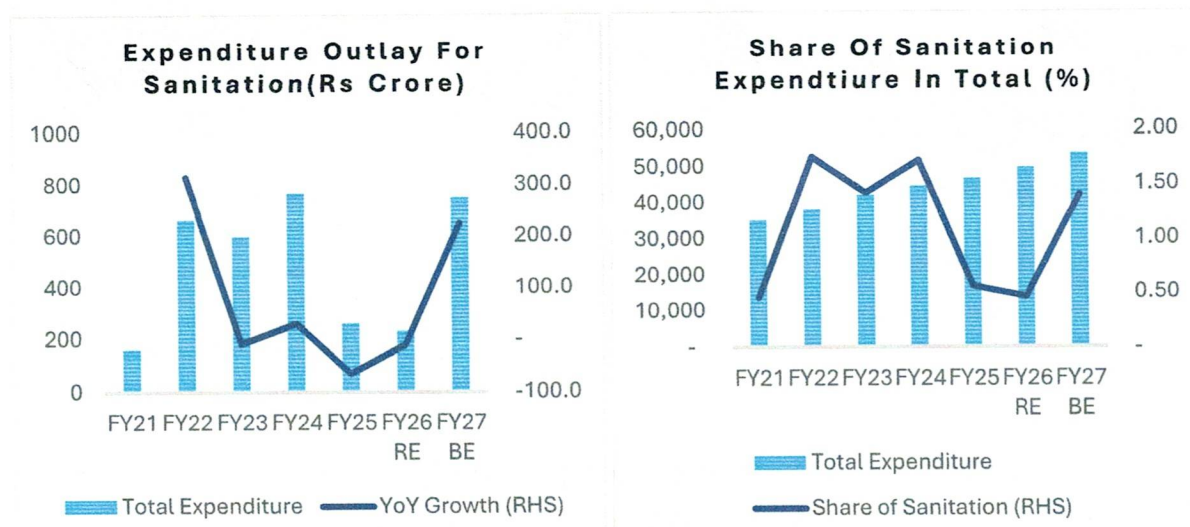
As cities expand, municipal bodies are likely to increase spending on regular road and street cleaning. The market has scope to move from manual cleaning towards mechanised and organised sweeping services, which can improve cleaning efficiency and reduce dependence on manual labour. Still, the market presents a moderate but improving growth opportunity, supported mainly by urbanisation, municipal spending and rising adoption of mechanised street-cleaning equipment and services.



Source: EMIS, Artizon, B2K Analytics



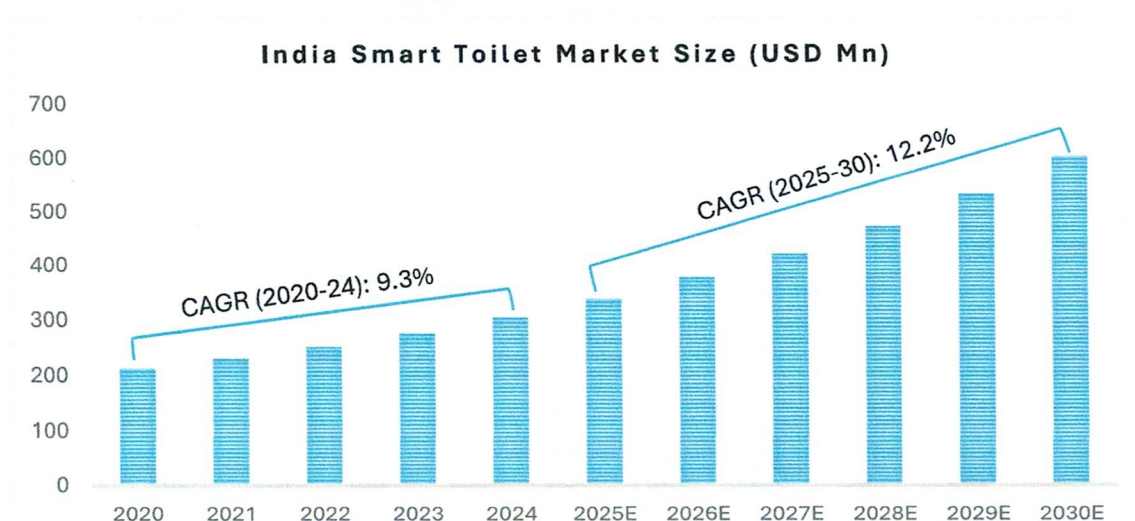
Sanitation Sector: Union Budget allocation to the Department of Drinking Water and Sanitation, the nodal department for sanitation spend, rose from about Rs 160 Bn in FY21 to a budgeted Rs 749 Bn in FY27, though it remains a small slice of overall government expenditure, at roughly 0.5% to 1.7% of total Union Budget outlay across these years.



Source: India Budget, B2K Analytics

By 2036, the urban population is projected to reach 600 million, contributing nearly 70% of GDP as per economic survey. While India's cities are expected to need over USD 2.4 trillion in investment by 2050 for resilient and low-carbon infrastructure (A July 2025 World Bank report prepared jointly with the Ministry of Housing and Urban Affairs). This growing gap between urban needs and current funding is expected to drive higher investment in infrastructure and equipment.

Mobile Toilets



Source: EMIS, Technavio, B2K Analytics

The India smart toilet market is expected increase from USD 213 million in 2020 to an estimated USD 602 million by 2030. The faster growth expected in the coming years

indicates rising adoption of smart and automated toilet solutions. Demand is likely to be supported by higher disposable incomes, premium housing, hotels, commercial buildings and greater focus on hygiene and convenience.

The market is also likely to benefit from technological improvements and wider availability of smart toilet products, making features such as automated flushing, self-cleaning and touch-free operation more common.

F. Municipal Utility Vehicles, Access & Material Handling 🏗️

Municipal Utility, Access & Material Handling comprises specialised vehicles and equipment used for municipal operations, infrastructure maintenance, access and material handling. For QEEL, this segment is relevant to its business as the company manufactures and supplies customised utility and access equipment such as sky lifts/hydraulic aerial access platforms, hydraulic ladders, recovery vans, knuckle boom cranes, cattle catchers, tree ambulances, funeral vehicles, and fire rescue vehicles which cater to municipal, industrial and infrastructure-related applications.



Sky Lift / Hydraulic Aerial Access Platform:

Hydraulic lifting equipment designed to safely access elevated locations for maintenance, inspection, repair and installation activities.



Knuckle Boom Crane:

Articulated hydraulic crane designed for efficient lifting, loading and unloading of materials in confined or difficult-to-access locations.



Recovery Van:

Special-purpose vehicle equipped for towing, lifting and recovery of disabled, damaged or stranded vehicles and equipment.



Cattle Catcher:

Vehicle-mounted protective structure designed to safely push or clear stray cattle and other large obstructions from roads and facilitate safer vehicle movement.



Hydraulic Ladder:

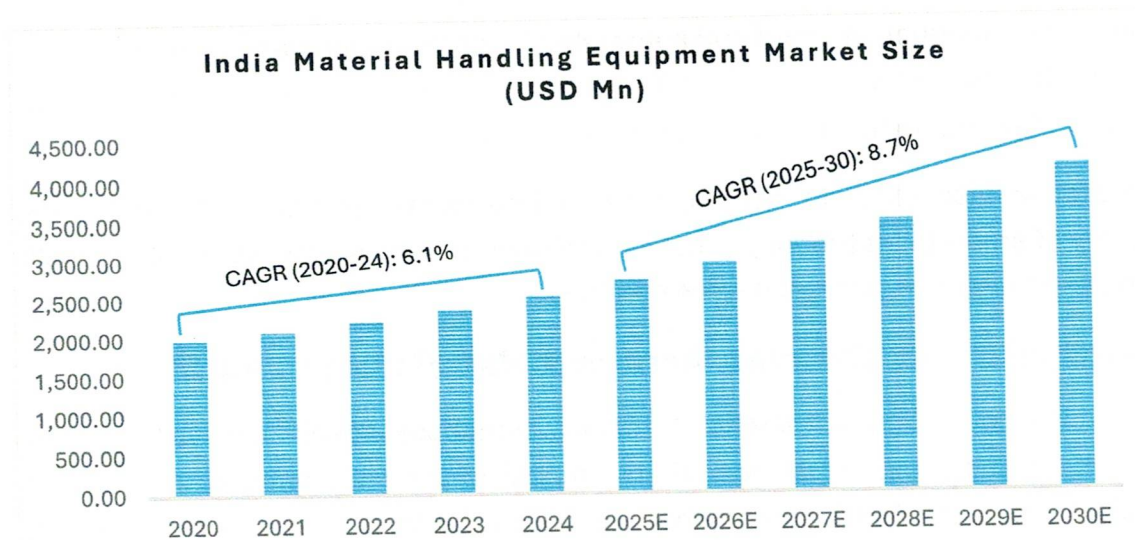
Mechanically operated ladder system providing safe and flexible access to elevated areas for maintenance, inspection and emergency operations.

Note: List is not exhaustive. It is as per company

Access & material handling

The India material handling equipment market is growing strongly, increasing from USD 2.0 billion in 2020 to an estimated USD 4.1 billion by 2030. Growth is expected to accelerate from 6.1% CAGR during 2020-24 to 8.7% CAGR during 2025-30. The faster growth outlook is supported by industrial expansion, growth in warehousing and logistics, e-commerce and increasing automation. As businesses handle larger volumes of goods, demand for equipment that can move and store materials more efficiently is expected to increase.





Source: EMIS, Technavio, B2K Analytics

The shift towards automated and modern material handling systems is also likely to support market growth, particularly in warehouses, manufacturing facilities and distribution centres. The market seems to enter a higher-growth phase, with sufficient opportunities linked to industrial growth, organised warehousing, logistics expansion and automation.

G. Allied Services ✂️➦

Allied services refer to supporting services provided alongside equipment and system solutions, including waste-management services, streetlight repair and maintenance, installation and commissioning, and maintenance and after-sales support. For QEEL, these services complement its core equipment and engineering business by enabling the installation, operation, upkeep and continued performance of its environmental and municipal solutions, thereby providing customers with an integrated end-to-end service offering.

Installation & Commissioning:	Operation and Maintenance & After-Sales Support:	Waste-Management Services:	Streetlight Repairing / Maintenance Services:
Professional installation, testing and commissioning of equipment and systems for safe and reliable operation.	Comprehensive preventive and corrective maintenance, troubleshooting, spare parts and technical support to ensure equipment performance and uptime.	End-to-end collection, transportation, handling and disposal of municipal, industrial and liquid waste.	Inspection, repair and preventive maintenance of streetlights, electrical components and associated infrastructure.

Note: List is not exhaustive. It is as per company

Maintenance & repair: Provides recurring revenue through servicing, breakdown repairs, refurbishment and replacement of components for waste-management equipment. For

QEEL, this can strengthen customer relationships and create aftermarket opportunities beyond the initial equipment sale.

AMC / O&M: Annual Maintenance Contracts and Operations & Maintenance services provide a more predictable, recurring revenue stream. For QEEL, O&M capabilities can support long-term municipal and institutional contracts while improving equipment uptime and customer retention.

Equipment rental / other allied services: Rental and allied services can address customers seeking waste-management equipment without upfront capital expenditure. For QEEL, this could provide an additional revenue stream through short-term equipment deployment, project-based services, commissioning, operator support and other value-added solutions.

H. Trading

QEEL also undertakes trading activities as part of its broader business, supplying products and components that complement its environmental and municipal solutions. These include mobile toilets, dustbins and waste collection bins, batteries, solar power generation systems, and various spares and components. Such trading activities enable QEEL to address a wider range of customer requirements and supplement its core engineering, equipment manufacturing and service offerings.



Mobile Toilets

Portable sanitation units designed for temporary or mobile sanitation requirements



Dustbins & Waste Collection Bins

Containers used for the collection, segregation and temporary storage of municipal and other waste



Batteries

Power storage units used across various equipment and utility applications



Solar Power Generation Systems

Systems designed to generate electricity from solar energy for applicable applications



Spares & Components

Replacement parts and components used for the maintenance, repair and operation of equipment and systems

Note: List is not exhaustive. It is as per company

Demand & Supply Dynamics

Demand Drivers

Demand for QEEL's products is primarily driven by urbanisation, increasing municipal mechanisation and infrastructure requirements of ULBs and government organisations. This supports demand across its key segments, including solid-waste collection, road and street cleaning, sewer and drain cleaning, air pollution and dust control, sanitation and mobile toilets, as municipalities increasingly adopt mechanised solutions for efficient urban service delivery. The report has already covered some of the demand drivers in most of the detail section above.

Additionally, some of the other demand drivers related are as follows:

Urbanisation & Infrastructure Development	Expansion of cities and development of industrial and commercial infrastructure are creating greater requirements for organised waste collection, treatment and disposal facilities
Rising Waste Generation	Urbanisation, population growth, industrial activity and changing consumption patterns are increasing the volume of municipal and industrial waste, creating greater demand for collection, treatment and processing equipment
Government Regulations & Initiatives	Stricter waste-management rules, source segregation requirements, EPR frameworks and programmes such as Swachh Bharat Mission are encouraging investment in waste-processing and recycling equipment
Shift Towards Recycling & Resource Recovery	Greater emphasis on segregation, recycling, composting and recovery of materials is increasing the need for shredders, screens, conveyors, sorting systems and other processing machinery
Automation & Smart Equipment	Increasing use of automated sorting, sensors, digital monitoring and connected equipment is creating opportunities for manufacturers offering more efficient and technology-enabled solutions
Growing Demand for Waste-Processing Equipment	Increasing focus on mechanisation and efficient waste treatment is supporting demand for shredders, compactors, conveyors, sorting systems, treatment equipment and other specialised machinery
Circular Economy Adoption	Greater emphasis on reducing waste and recovering valuable materials such as plastics, metals, organic matter and energy is creating new opportunities across the waste-management value chain
Industrial Waste Management	Growth in manufacturing, construction and other industrial activities is increasing the need for specialised solutions for industrial, hazardous and other types of waste
Private Sector Participation	Increasing participation of private companies through EPC contracts, outsourcing and public-private partnerships is supporting investment in waste collection, processing and treatment infrastructure.
Legacy Waste Remediation	Government efforts to clear old dumpsites through biomining, screening and material recovery are creating demand for specialised waste-processing equipment.

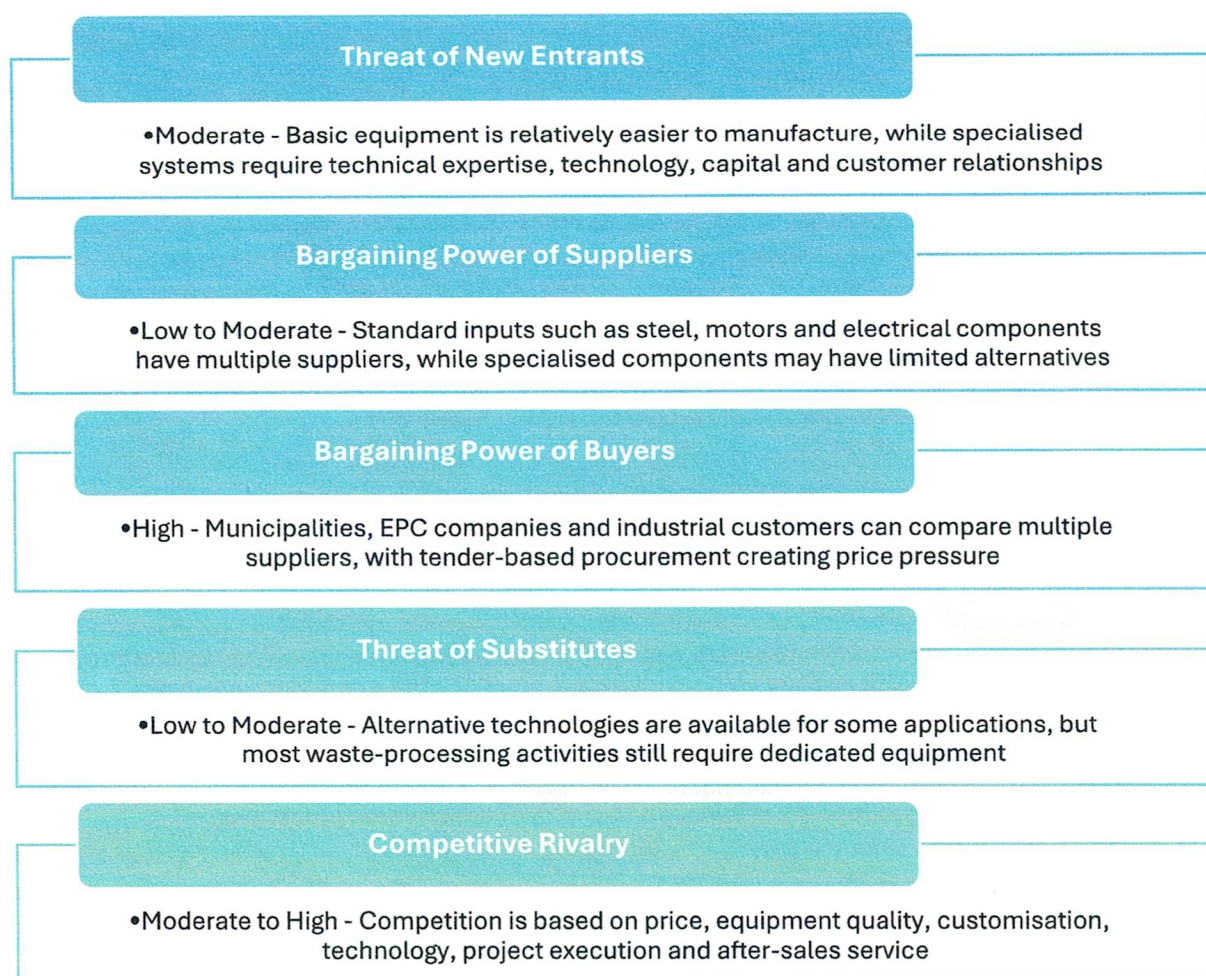
Restraints & Challenges

The sector's key challenges can be grouped into four broad areas: infrastructure, economics, technology and implementation. These factors influence both the growth of

waste-management services and the demand for waste-processing equipment. For QEEL, the key challenge is not only selling the equipment but ensuring that the customer has adequate waste quality, infrastructure, funding and technical capability to operate it effectively. Therefore, companies with capabilities in engineering, customisation, installation, after-sales service and system integration can have an advantage over companies competing only on equipment price.

High Initial Equipment Cost	Advanced waste-processing and automated systems upfront investment, in equipment, land and infrastructure, labour and maintenance costs which can limit adoption among smaller operators and financially constrained municipalities.
Financing & Project Delays	Dependence on municipal budgets, government tenders and approvals can result in long project cycles and delayed payments
Land & Logistics Constraints	Finding suitable land and managing transportation over long distances can increase project costs and complicate facility development
Limited Supporting Infrastructure	Inadequate collection, segregation, transportation and processing infrastructure in some regions particularly across smaller cities and regions can restrict effective utilisation of waste-processing equipment
Poor Waste Segregation	Mixed and contaminated waste makes equipment operation more difficult and can reduce the efficiency and quality of downstream processing
Technology & Skill Gaps	Different types of waste require different treatment technologies, while limited availability of skilled operators can affect plant performance
Customisation Requirements	Waste composition differs by location and customer, meaning equipment often needs to be customised rather than supplied as a standard product
Regulatory & Implementation Challenges	While regulations are becoming more comprehensive, differences in enforcement and implementation across regions can create uncertainty for industry participants
Price Competition	Equipment manufacturers can face pressure on pricing, particularly in tender-based projects, which can affect margins and encourage customers to prioritise upfront cost over lifecycle performance
After-Sales & Maintenance Requirements	Waste-processing equipment operates in demanding environments and requires regular maintenance, spare parts and technical support. Building an effective service network can therefore add to operating costs.

Porter's Five Forces Analysis



Government Initiatives, Policies & Regulation

Government policy is gradually moving the sector from “collect and dispose” towards “segregate, process, recover and recycle.” This creates a favourable environment for waste-management equipment and engineering companies because regulatory requirements and government programmes are increasing the need for collection systems, sorting equipment, processing machinery, treatment plants, recycling systems and resource-recovery solutions.

Government initiatives play important for QEEL and its various product segments. The National Clean Air Programme (NCAP) supports requirements related to air-pollution and dust-control solutions, while Swachh Bharat Mission–Urban 2.0 (SBM-U 2.0) is aligned with urban solid-waste management, cleanliness and sanitation requirements. AMRUT 2.0, which targets universal coverage of sewerage/septage management in its cities, is relevant to QEEL’s sewer and drainage cleaning and wastewater-related equipment. Together, these initiatives support demand for QEEL’s air-pollution control, solid-waste

collection, road-cleaning, sanitation, sewerage and drainage equipment, particularly from ULBs and government organisations. amrut.mohua.gov.in

National Clean Air Programme (NCAP): NCAP is India's first time-bound, city-level national strategy to tackle ambient air pollution, launched by the Ministry of Environment, Forest and Climate Change in January 2019.

Administered by the Central Pollution Control Board under the Air (Prevention and Control of Pollution) Act, 1981, it targets 131 "non-attainment" cities across 24 states/UTs that failed to meet National Ambient Air Quality Standards during 2011-15.

Each covered city prepares a Clean Air Action Plan addressing vehicular and industrial emissions, road dust, waste burning and public awareness, tracked centrally through CPCB's PRANA portal. NCAP's original target of a 20-30% cut in PM10 by 2024 against a 2017 baseline was revised to a more ambitious 40% reduction (or meeting the 60 $\mu\text{g}/\text{m}^3$ national standard) by 2025-26.

NCAP itself remains a non-statutory scheme, but its enforcement architecture has been strengthened by an adjacent, legally binding framework.

In August 2021 Parliament enacted the Commission for Air Quality Management in NCR and Adjoining Areas Act, replacing the earlier ad hoc EPCA mechanism with a permanent statutory body empowered to issue binding directions to state governments and impose fines of up to Rs 1 crore or imprisonment of up to five years for non-compliance, giving India's flagship air-quality regime real regulatory teeth for the first time in its most polluted airshed.

Government Schemes and Budget Allocations

Centrally sponsored schemes under ministries such as the Ministry of Housing & Urban Affairs (MoHUA), Ministry of Jal shakti provide a dedicated pool of funding for urban infrastructure and municipal equipment.

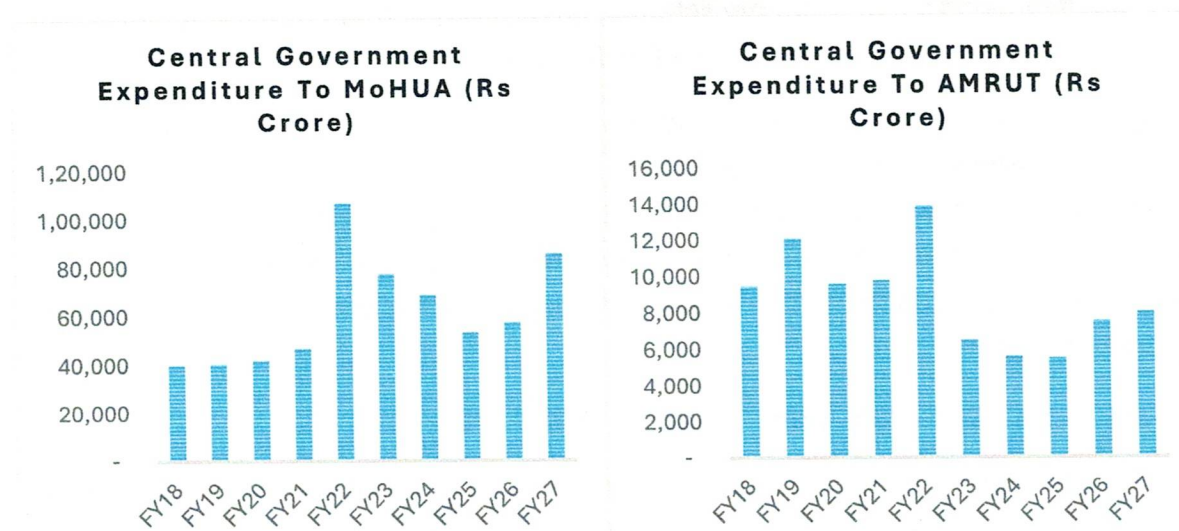
The Ministry of Housing and Urban Affairs (MoHUA) is the apex federal body of the Government of India responsible for formulating policies, administering regulations, and implementing national programs related to housing, urban development, and urban infrastructure. In that, out of various schemes such as PMAY-U 2.0, Smart cities, etc the two schemes that is AMRUT and SBM, and their relevance to QEE's product range, are set out below.

AMRUT (Atal Mission for Rejuvenation and Urban Transformation): Launched in June 2015 for 500 cities and renewed as AMRUT 2.0 from October 2021, AMRUT funds five focus areas: water supply, sewerage and septage management, storm water drainage, green spaces and parks, and non-motorised urban transport. AMRUT 2.0 carries a total outlay of about Rs 2.99 lakh cr. For QEE, AMRUT funded works directly drive demand for

sewer suction and jetting machines, amphibious excavators and dewatering and recycling units, and water distribution vehicles for interim tanker-based supply.

AMRUT funding climbed from Rs 9,463 crore in FY18 to a high of Rs 13,868 crore in FY22, then dropped sharply to around Rs 5,500 crore across FY24 and FY25 as the original mission cycle concluded, before recovering to a budgeted Rs 8,000 crore in FY27 as AMRUT 2.0 implementation gathers pace, a pattern that suggests fresh municipal orders for water supply and sewerage related equipment should follow as this renewed budget growth is converted into tenders.

AMRUT relates to QEEL because of company's focus on improving urban water supply, sewerage, drainage, and wastewater management. QEEL supports these objectives through water and wastewater quality testing, pollution monitoring, treatment-efficiency assessment, and compliance with environmental standards. Thus, QEEL provides the technical and analytical support required for effective implementation and monitoring of AMRUT projects.

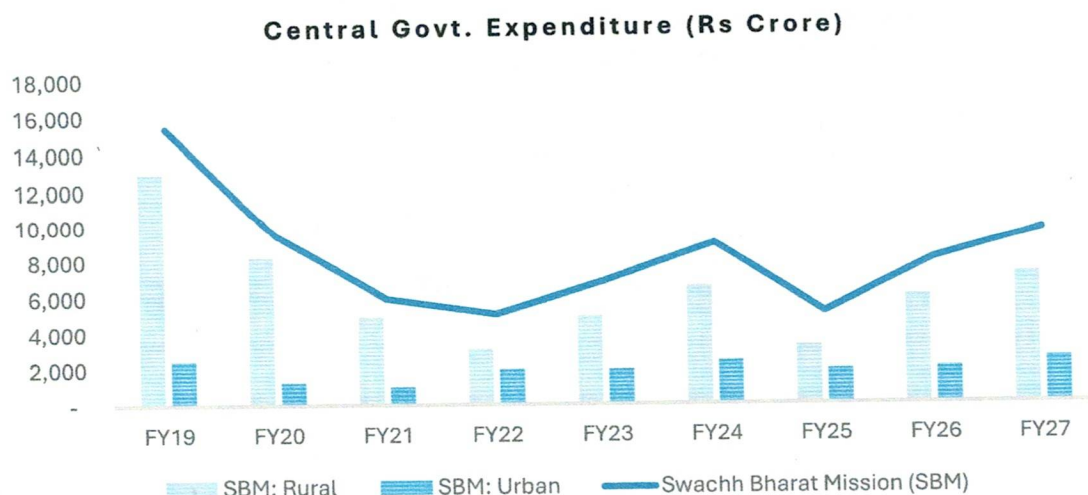


Note: MoHUA (Ministry of Housing and Urban Affairs), AMRUT (Atal Mission for Rejuvenation and Urban Transformation). FY26 are revised estimates, while FY27 are budget estimates.

Source: Union Budget Documents, B2K Analytics

Swachh Bharat Mission, Urban (SBM-U): Launched in October 2014 to eliminate open defecation and enable scientific processing of municipal solid waste, and renewed as SBM-U 2.0 from October 2021, SBM-U funds toilet construction, solid waste management infrastructure (waste to compost, waste to energy, bio methanation, material recovery facilities), legacy dumpsite remediation and used water management for smaller towns, under the vision of Garbage Free Cities. SBM U 2.0 carries a total outlay of about Rs 1.42 lakh Cr. This is the scheme most directly aligned with QEEL's product range and MoHUA has approved action plans under SBM U 2.0 cover 580 mechanical road sweepers (about Rs 323 Cr project cost) across 113 NCAP cities.





Source: Union Budget Documents, B2K Analytics

Combined Swachh Bharat Mission funding fell from an early peak of Rs 15,374 crore in FY19 to a low of about Rs 5,050 crore in FY22 as the mission's first phase wound down, before turning upward again to a budgeted Rs 9,692 crore in FY27, a rise of roughly 92% from the FY22 trough that reflects the ramp up of Swachh Bharat Mission Urban 2.0 and points to renewed municipal tendering for collection, segregation and processing equipment.

SBM-U is pertinent to QEEL as it focuses on urban sanitation, solid waste management, wastewater management, and reducing pollution. QEEL supports these objectives through testing and monitoring of wastewater, treated effluent, solid waste management equipment, and environmental quality, helping ensure proper treatment, safe disposal, resource recovery, and compliance with environmental standard. On the other hand, budget allocations for the ministry of Jal shakti , which oversees both water resource management and the Jal Jeevan Mission's drinking water and sanitation programmes, jumped from Rs 23,199 crore in FY21 to a record Rs 95,109 crore in FY24 as the tap water connection drive intensified, eased to around Rs 41,437 crore in FY26, and are budgeted to rebound to Rs 94,808 crore in FY27, underlining both the scale and the year on year volatility of this funding pool for water and wastewater handling equipment.

Jal Jeevan Mission's drinking water and sanitation programmes are relevant to QEEL as they focus on safe drinking water supply, water quality, sanitation, and wastewater management. QEEL supports these objectives through testing and monitoring drinking water and wastewater quality, detecting contamination, assessing treatment effectiveness, and ensuring compliance with prescribed water-quality standards, thereby helping provide safe and sustainable water and sanitation services.

Central Government Expenditure: By Ministry/Departments (Rs Crore)



Source: Union Budget Documents, B2K Analytics

Government Policies/Schemes

Swachh Bharat Mission (Urban) 2.0	Launched 1 October 2021, running to FY 2025-26, it aims to make every city "Garbage-Free" and funds urban local bodies for door-to-door waste collection, scientific processing and legacy-dumpsite remediation
Smart Cities Mission	Launched 25 June 2015 and extended to March 2025, it aims to give 100 cities core infrastructure and "smart solutions", funding area-based redevelopment and pan-city technology such as smart water/waste systems through city-level Special Purpose Vehicles
AMRUT 2.0	Launched 1 October 2021, running to FY 2025-26, it aims to make all statutory towns "water-secure" and funds tap and sewer connections, wastewater reuse and water-body rejuvenation across roughly 4,800 towns
Solid Waste Management Rules	Notified in 2016 and superseded by new Rules effective 1 April 2026, they mandate scientific segregation and disposal of municipal solid waste, requiring source segregation and on-site processing, with the 2026 update adding formal EPR integration
CPCB Norms (Hazardous & Other Waste Rules)	In force since 2016 and periodically updated (most recently via 2025 Waste-to-Energy guidelines), they ensure sound handling of industrial and hazardous waste through authorisation, storage and disposal standards enforced by the CPCB and State Boards
Extended Producer Responsibility (Plastic Waste Rules)	Introduced under the 2016 Plastic Waste Rules, with an EPR framework added in 2022 and tightened in 2025-26, it shifts plastic-packaging waste liability onto producers and brand owners, who must meet recycling targets that reached 100% by FY 2023-24
Circular Economy & Resource Recovery	Government policy is increasingly shifting from a disposal-based approach towards reuse, recycling and recovery of materials and energy. This creates opportunities for equipment used in material recovery, recycling, waste-to-energy and other resource-recovery applications
Construction & Demolition Waste Management Rules, 2025	The new framework, effective from April 2026, promotes recycling and reuse of construction and demolition waste and introduces EPR-related provisions and targets for recycled material use. This supports demand for crushers, screens, sorting systems and C&D waste-recycling equipment
Fleet Modernisation: EV/CNG, ELV & BS-VI Norms	Built through the 2021 Scrappage Policy, PM E-DRIVE (Oct 2024 to Mar 2026), the 2025 End-of-Life Vehicle Rules and BS-VI norms enforced since 2020, it aims to retire high-emission vehicles and accelerate clean-fuel fleets by subsidising e-buses/trucks and mandating scrapping of unfit vehicles
GeM & Make in India Procurement Preference	Established via the Government e-Marketplace (launched Aug 2016) and the Preference to Make in India Order of 2017, it aims to digitise and localise procurement, making GeM the mandatory buyer platform while favouring local (≥50% content) suppliers



Company's Planned entry into Broader Waste-Management Industry

QEEL's Expansion Strategy

- QEEL intends to expand its business by broadening its product portfolio and customer base across air pollution management, liquid waste management, solid waste management, sanitation, sewer and drain management, and utility vehicles.
- QEEL further plans to leverage its self-owned manufacturing facility at Faridnagar, Ghaziabad to support engineering, design, fabrication, assembly, integration, testing and quality inspection across its product range. This manufacturing capability is expected to support efficient execution of customer orders and facilitate expansion of its product offerings.
- QEEL also intends to enhance its product customisation capabilities by developing equipment in different capacities and configurations, including truck-mounted, vehicle-mounted and trolley-mounted solutions, based on customer, project and tender requirements.
- Alongside, the company plans to strengthen its presence across different States and Union Territories in India by increasing its business with existing customers and pursuing opportunities with government-controlled and private-sector entities.
- In addition, QEEL intends to strengthen its post-supply service capabilities, including installation, commissioning, operator training, operation and maintenance, and annual maintenance contracts.

By combining a wider product range, broader geographical reach, customised solutions, in-house manufacturing and stronger after-sales support, QEEL aims to deepen customer relationships and expand its presence in India's environmental and municipal equipment market.

Competitive landscape

Peer Comparison

Environmental Equipment Manufacturers Sector Comparison:

TPS Infrastructure Limited

Quality Enviro Engineers Limited and TPS Infrastructure Limited are both environmental equipment manufacturers, but at very different scales. QEEL is a smaller Ghaziabad-based trader/manufacturer offering an assortment of municipal and industrial cleaning equipment including sky lifts, sewer suction machines, road sweepers, water tankers, mobile toilet vans, garbage lifters, open drain cleaning machines and other products. TPS Infrastructure Limited, established in 1985, with multiple manufacturing plants and offices across India, offers a more diverse range of products including refuse compactor vehicles (RCVs), portable compactors, skip loaders, sewer suction machines, sewer jetting machines, sprinkler dust suppression system, truck mounted industrial vacuum-cleaning machine, anode transport vehicles, metal transport vehicles and other products.

Quality Enviro Engineers Limited

The company was integrated in the year 2014, at Ghaziabad and is a trader and manufacturer of municipal sanitation and pollution-control equipment, backed by waste management and after-sales services such as operational training, onsite support, and maintenance. In FY2025, the company saw an improvement in both its sales and net profit, with sales increasing by 28.1% to Rs 51.52 crore from Rs 40.23 crore in FY2024. Net profit grew by 67.77% to Rs 4.30 crore in FY2025 from Rs 2.56 crore in FY2024. Debt to equity ratio increased to 0.38x in FY2025 from 0.26x in FY2024. Current ratio also improved to 1.43x in FY2025 from 1.39x in FY2024. Working capital turnover fell to 3.53x in FY2025 from 4.63x in FY2024.

TPS Infrastructure Limited

In FY2025, TPS Infrastructure Limited's sales grew by 29.28% to Rs 335.87 crore from Rs 259.81 crore in FY2024, while net profit rose by 19.38% to Rs 23.90 crore from Rs 20.02 crore. Debt to equity ratio ticked up marginally to 0.23x from 0.21x, current ratio improved to 1.98x from 1.87x and working capital turnover rose to 2.42x from 2.24x.

Nature Green Tools & Machine Private Limited

In FY2025, Nature Green Tools & Machine Private Limited's sales fell by 5.71% to Rs 203.63 crore from Rs 215.95 crore in FY2024, while net profit rose by 79.02% to Rs 12.46 crore from Rs 6.96 crore. Debt to equity ratio fell to 1.36x from 1.65x, though it remains the highest among the peer set, current ratio held roughly flat at 1.12x (FY2025) versus

1.11x (FY2024) and working capital turnover climbed to 22.28x from 20.37x, the highest in the group, reflecting very high sales generated per unit of working capital.

Kam-Avida Enviro Engineers Pvt Ltd

In FY2025, Kam-Avida Enviro Engineers Pvt Ltd's sales declined by 8.63% to Rs 99.01 crore from Rs 108.36 crore in FY2024, but net profit still grew strongly, up 68.51% to Rs 8.24 crore from Rs 4.89 crore. Debt to equity ratio doubled to 0.20x from 0.10x, current ratio held broadly steady, falling slightly to 1.45x from 1.48x, and working capital turnover fell to 5.27x from 5.45x.

Ensol Multiclean Equipment Private Limited

In FY2024, sales fell by 14.35% to Rs 76.01 crore from Rs 88.75 crore in FY2023, while net profit grew by 4.95% to Rs 5.30 crore from Rs 5.05 crore. Debt to equity ratio fell to 1.34x in FY2024 from 1.53x in FY2023, current ratio jumped sharply to 5.06x from 1.62x and working capital turnover declined to 1.50x from 4.03x.

Cloud Tech Private limited

In FY2025, Cloud Tech Private Limited's sales increased by 22.86% to Rs 20.36 crore from Rs 16.57 crore in FY2024, and net profit grew faster, up 24.80% to Rs 1.56 crore from Rs 1.25 crore. Debt to equity ratio rose sharply to 0.71x from 0.27x, while current ratio fell to 1.22x from 1.71x and working capital turnover jumped to 9.19x from 5.86x.

Financial Details of Quality Enviro Engineers Limited Peer Players: Environmental Equipment Manufacturers											
Particulars	Sales (Rs crore)	Total Income (Rs crore)	Net Profit (Rs crore)	Net Profit	Sales Growth (YoY)	Return on Assets	Employee Cost to Sales	EBITDA Margin	Debt Equity Ratio	Current Ratio	Working Capital Turnover Ratio
FY2026											
Quality Enviro Engineers Limited	63.01	64.76	5.04	7.99%	22.30%	7.31%	6.28%	10.29%	0.39x	1.46x	3.33x
FY2025											
Quality Enviro Engineers Limited	51.52	52.29	4.30	8.34%	28.06%	8.96%	3.80%	11.48%	0.38x	1.43x	3.53x
TPS Infrastructure Limited	335.87	338.34	23.90	7.12%	29.28%	5.84%	8.25%	14.11%	0.23x	1.98x	2.42x
Nature Green Tools & Machine Private Limited	203.63	204.07	12.46	6.12%	-5.71%	9.78%	16.77%	13.42%	1.36x	1.11x	22.28x
Kam-Avida Enviro Engineers Pvt Ltd	99.01	102.17	8.24	8.32%	-8.63%	10.25%	8.37%	9.08%	0.20x	1.45x	5.27x
Cloud Tech Private Limited	20.36	20.57	1.56	7.66%	22.86%	8.15%	10.33%	12.14%	0.71x	1.22x	9.19x
FY2024											
Quality Enviro Engineers Limited	40.23	40.55	2.56	6.36%	-19.35%	7.52%	5.24%	11.22%	0.26x	1.39x	4.63x
TPS Infrastructure Limited	259.81	261.23	20.02	7.71%	7.29%	5.76%	9.57%	15.87%	0.21x	1.87x	2.24x
Nature Green Tools & Machine Private Limited	215.95	216.31	6.96	3.22%	65.52%	5.27%	8.58%	9.73%	1.65x	1.12x	20.37x
Kam-Avida Enviro Engineers Pvt Ltd	108.36	111.11	4.89	4.51%	75.60%	6.70%	6.64%	6.29%	0.10x	1.48x	5.45x
Ensol Multiclean Equipments Private Limited	76.01	76.30	5.30	6.97%	-14.35%	8.16%	2.67%	13.10%	1.34x	5.06x	1.50x
Cloud Tech Private Limited	16.57	17.33	1.25	7.54%	-17.82%	11.74%	8.86%	12.01%	0.27x	1.71x	5.86x

Waste Management Service Providers Sector Comparison:

Antony Waste Handling Cell Ltd.

While Quality Enviro Engineers Limited is primarily an equipment manufacturer, it offers some waste management services as part of its portfolio. Antony Waste Handling Cell Ltd., on the other hand, is focused entirely on waste management services. Antony Waste handling Cell Ltd., established in 2000 and headquartered in Thane, Maharashtra, is one of India's leading municipal solid waste (MSW) management service providers, offering waste collection & transportation, mechanised & non-mechanised sweeping, waste

processing & treatment, waste to energy and construction & demolition waste management services.

Quality Enviro Engineers Limited as an equipment manufacturer primarily earns revenue through one-off or intermittent equipment sales, so its revenue is tied to the number of units it can manufacture and sell in a given period. Antony Waste Handling Cell Ltd., on the other hand, operates on a recurring contract services model allowing it to earn revenue from many long-duration contracts that stretch over years.

Antony Waste Handling Cell Ltd.

In FY2026, Antony Waste Handling Cell Ltd.'s sales surged by 1,720.81% to Rs 640.45 crore from Rs 35.17 crore in FY2025, while net profit fell by 52.91% to Rs 11.39 crore from Rs 24.19 crore. Debt to equity ratio rose to 0.76x from 0.12x, current ratio fell to 1.09x from 2.85x and working capital turnover rose to 24.38x from 0.50x.

Urban Enviro Waste Management

In FY2026, Urban Enviro Waste Management's sales rose by 29.13% to Rs 182.14 crore from Rs 141.05 crore in FY2025, and net profit grew 45.03% to Rs 14.88 crore from Rs 10.26 crore. Debt to equity ratio fell to 0.72x from 0.85x, current ratio held roughly steady at 1.80x (FY2026) versus 1.77x (FY2025) and working capital turnover eased to 4.17x from 4.85x. The company also carries the highest employee cost to sales ratio among its peers for the third-year running, a pattern consistent with waste management peers generally running higher employee costs than their equipment-focused counterparts.

Financial Details of Quality Enviro Engineers Limited Peer Players: Waste Management Service Providers											
Particulars	Sales (Rs crore)	Total Income (Rs crore)	Net Profit (Rs crore)	Net Profit	Sales Growth (YoY)	Return on Assets	Employee Cost to Sales	EBITDA Margin	Debt Equity Ratio	Current Ratio	Working Capital Turnover Ratio
FY2026											
Quality Enviro Engineers Limited	63.01	64.76	5.04	7.99%	22.30%	7.31%	6.28%	10.29%	0.39x	1.46x	3.33x
Antony Waste Handling Cell Ltd.	640.45	652.93	11.39	1.78%	1721.01%	1.38%	44.35%	13.73%	0.76x	1.09x	24.38x
Urban Enviro Waste Management	182.14	183.15	14.88	8.17%	29.13%	11.08%	48.70%	17.96%	0.72x	1.77x	4.17x
FY2025											
Quality Enviro Engineers Limited	51.52	52.29	4.30	8.34%	28.06%	8.96%	3.80%	11.48%	0.38x	1.43x	3.53x
Antony Waste Handling Cell Ltd.	35.17	41.07	24.19	68.78%	-35.60%	8.57%	32.92%	21.40%	0.12x	2.85x	0.50x
Urban Enviro Waste Management	141.05	141.52	10.26	7.27%	37.65%	10.95%	40.83%	18.09%	0.85x	1.80x	4.85x
FY2024											
Quality Enviro Engineers Limited	40.23	40.55	2.56	6.36%	-19.35%	7.52%	5.24%	11.22%	0.26x	1.39x	4.63x
Antony Waste Handling Cell Ltd.	54.62	57.27	6.30	11.53%	-3.50%	2.28%	42.81%	20.76%	0.22x	2.07x	0.93x
Urban Enviro Waste Management	102.47	102.63	7.05	6.88%	161.70%	11.27%	43.18%	18.11%	1.00x	2.01x	5.48x

1. Sales: Net sales of the company.

2. Total income: Total of net sales of the company and other income of the company.

3. Net profit: Net profit divided by net sales revenue of the company.

4. Sales growth: Net sales of current financial year divided by net sales of previous financial year of the company.

5. ROA: Net profit divided by average assets of the company.

6. Employee cost to sales: Salaries and employee benefits divided by net sales of the company.

7. EBITDA margin: EBITDA divided by net sales of the company. EBITDA is earning of the company before interest, taxes, depreciation and amortisation.

8. Debt equity ratio: Debt divide by equity of the company.

9. Current ratio: Current assets divided by current liabilities of the company.

10. Working capital turnover: Net sales divided by net of current assets and current liability of the company.

Source: EMIS, B2K Analytics



Overall Analysis

Sales: Quality Enviro Engineers Limited's sales of Rs.63.01 crore are lower than most peers, but the company has shown 22.30% growth, showing steady business growth. Urban Enviro and TPS Infrastructure have higher sales growth, while Antony Waste has much larger scale.

Profitability: Quality Enviro Engineers Limited's 7.99% net profit margin is better than Antony Waste 1.78%, TPS Infrastructure 7.12% and Nature Green 6.12%, but slightly lower than Urban Enviro 8.17%. The company has also improved its margin from 6.36% in 2024 to 7.99%.

EBITDA Margin: Quality Enviro Engineers Limited's has EBITDA Margin 10.29% which is lower than Urban Enviro 17.96%, Antony Waste 13.73% and Nature Green 13.42%, but better than Kam-Avida 9.08%. This indicates scope for improvement in operating profitability.

Return on Assets: Quality Enviro Engineers Limited's 7.31% ROA is lower than Urban Enviro 11.08%, Cloud Tech 8.15% and Kam-Avida 10.25%, but higher than Antony Waste 1.38% and TPS Infrastructure 5.84%. Overall, the company is generating a reasonable return from its asset base.

Employee Cost: Quality Enviro Engineers Limited has a very low employee cost-to-sales ratio of 6.28%, compared with Urban Enviro 48.70% and Antony Waste 44.35%. This indicates that the company operates with a relatively lower employee-cost burden.

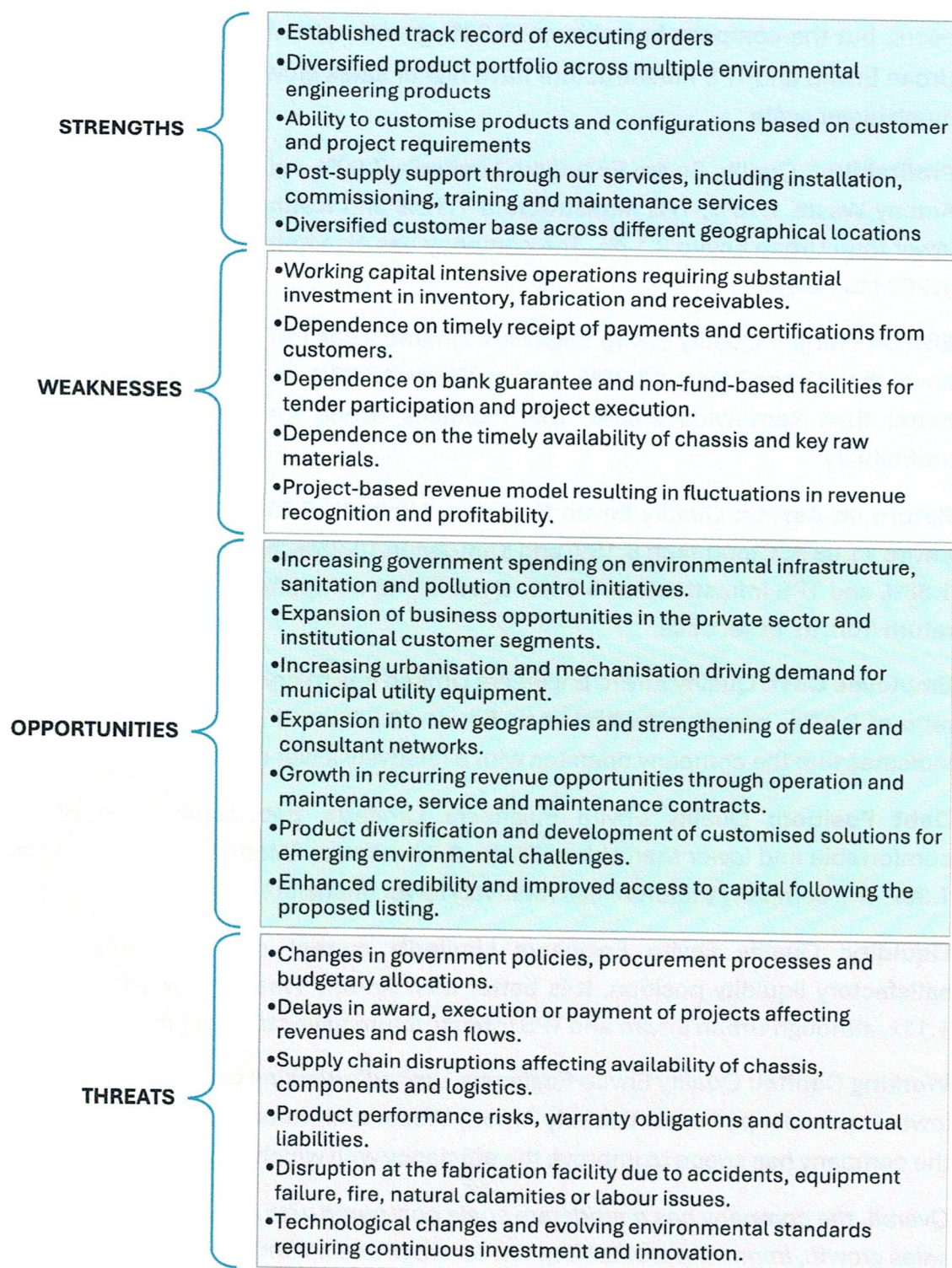
Debt Position: Quality Enviro Engineers Limited's debt-equity ratio of 0.39x is comfortable and lower than Urban Enviro 0.72x, Antony Waste 0.76x and Nature Green 1.36x. The company therefore has relatively lower financial leverage.

Liquidity: Quality Enviro Engineers Limited's current ratio of 1.46x indicates a satisfactory liquidity position. It is better than Antony Waste 1.09x and Nature Green 1.11x, although Urban Enviro and TPS Infrastructure have stronger liquidity.

Working Capital: Quality Enviro Engineers Limited's working capital turnover of 3.33x is lower than most peers, particularly Antony Waste and Nature Green. This suggests that the company has scope to improve the efficiency with which it uses working capital.

Overall, the company has a moderate scale compared with its peers, but shows healthy sales growth, improving profitability, low leverage and a comfortable liquidity position.

SWOT Analysis



Note: The above SWOT Analysis highlights the Company's key operational strengths, business dependencies, growth opportunities and industry challenges but shall not be in any way considered as conclusive as the same are subjective in nature and may change at any given time.



Industry Outlook

The near-to-medium-term outlook for QEEL is supported by increasing urbanisation, expansion of municipal sanitation infrastructure, stricter environmental requirements, and rising demand for efficient sewage, wastewater and solid-waste management solutions. Government initiatives such as AMRUT, Swachh Bharat Mission–Urban and Jal Jeevan Mission, along with investments by urban local bodies and other public agencies, are expected to create continued demand for sewer cleaning, suction, jetting, waste collection and related environmental equipment. Growing emphasis on mechanised sanitation and reduction of manual intervention is also likely to support demand for specialised municipal machinery.

Additionally, the industry is expected to move toward more integrated, customised and technology-enabled environmental equipment. Demand is likely to increase for multi-purpose sewer cleaning machines, compact and high-capacity waste-management equipment, automated systems, sensor-based monitoring and equipment with improved fuel efficiency and operating productivity.

For QEEL, opportunities are likely to arise from its ability to provide customised equipment, fabrication capabilities, hydraulic and mechanical systems, and integrated municipal solutions suited to different operating conditions and customer requirements.

Yet, the industry is likely to remain fragmented and competitive, with participation from established environmental-equipment manufacturers, specialised engineering companies, regional manufacturers and equipment suppliers. At the same time, competition is expected to remain driven by product reliability, cost competitiveness, customisation, delivery capability, after-sales support and compliance with technical specifications.

There is also likely to be increasing demand for multi-functional equipment, such as combined suction and jetting vehicles, equipment capable of handling multiple municipal applications, and customised machinery for specific site conditions. QEEL already offers products across several of these categories, including truck- and tractor-mounted sewer suction/jetting equipment, compactors and other municipal machinery.

Dated : 28 Sept 2026

About B2K Analytics

B2K Analytics is a boutique research firm providing solutions in risk management, MSME grading, bespoke market research & consulting services. The core mission of the company is to deliver independent research insights and empowering financial success. B2K Analytics offers an extensive line of products & services covering MSMEs, SMEs, NBFCs, Corporates, Banks, Financial institutions, as well as Government agencies.

P: +918040409950/ 9742770001

E: info@b2kanalytics.com

W: www.b2kanalytics.com

Disclaimer

This report has been prepared by **B2K Analytics Private Limited** ("B2K Analytics") using information from sources believed to be reliable and with due care. However, B2K Analytics does not warrant or guarantee the accuracy, completeness, or adequacy of such information and shall not be responsible for any errors, omissions, or outcomes arising from its use.

This report is for informational purposes only and does not constitute investment advice, a recommendation, an offer, or a solicitation to buy or sell any securities or to deal in any entity, nor does it constitute an expert opinion under any law. Users should rely on their own judgment and seek independent professional advice. B2K Analytics does not assume any fiduciary responsibility.

To the maximum extent permitted by law, B2K Analytics disclaims all liability for any direct or indirect loss or damage arising from the use of or reliance on this report by any person or entity.

This report is not intended for distribution or use in any jurisdiction where such use would be contrary to applicable laws. Users outside India are responsible for compliance with local regulations.

The views expressed are those of B2K Analytics as on the date of publication and may change without notice. No part of this report may be reproduced or distributed without prior written consent.

Copyright © 2026 B2K Analytics Private Limited. All rights reserved.

More information on B2K Analytics and its services is available at www.b2kanalytics.com

Corporate Office

3rd floor, Raj Alkaa Park, Kalena Agrahara, Bannerghatta Road, Bengaluru – 560 076

Contact: +91 97427 70001

Email: info@b2kanalytics.com | Email: msme@msme1.in

www.b2kanalytics.com | www.msme1.in