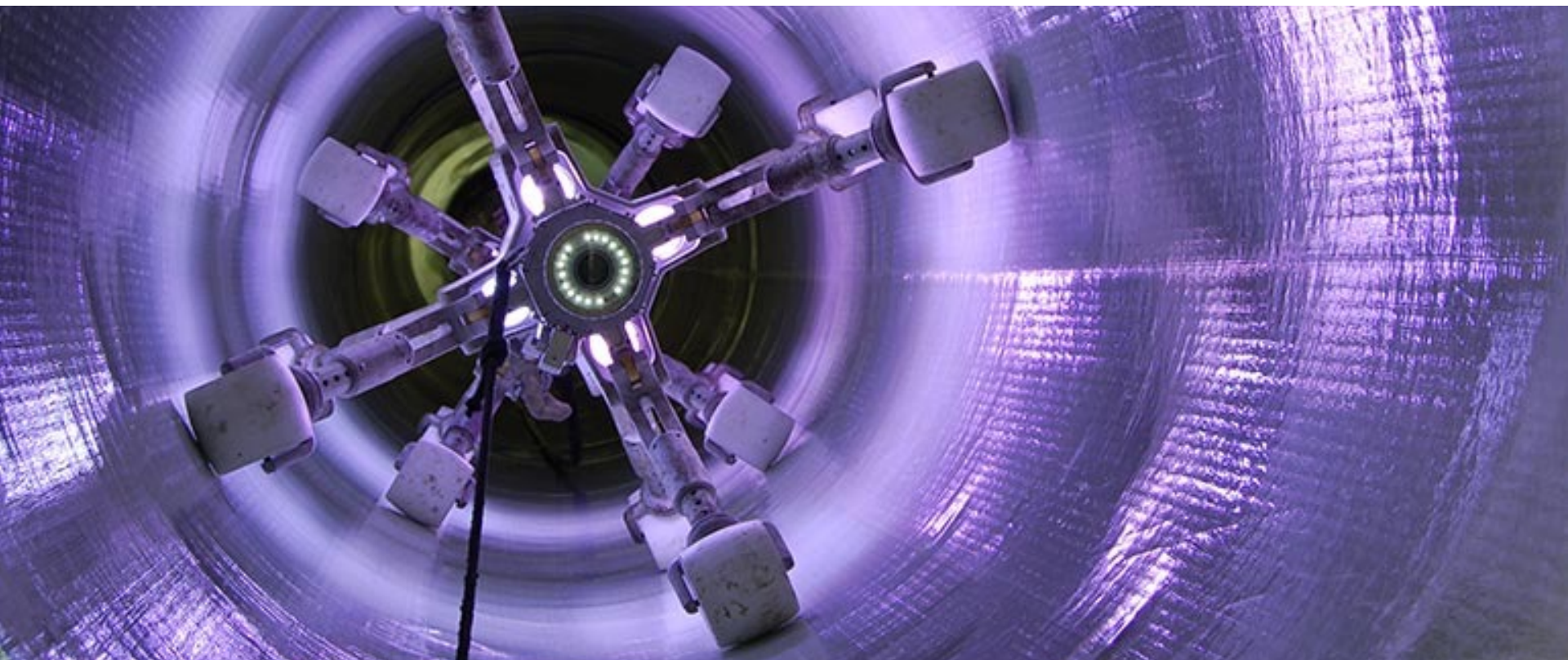




Sewer Rehabilitation

Market Study

March 2025

01 I Market Attractiveness

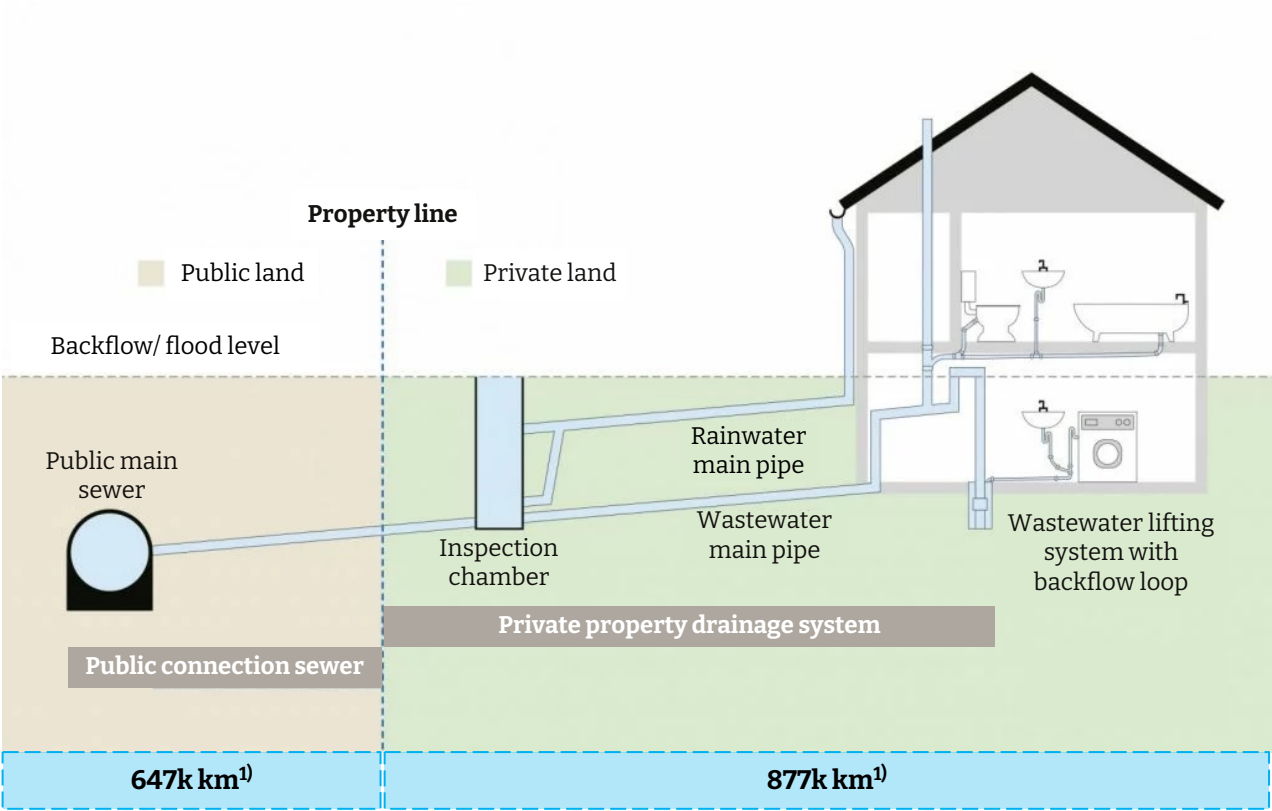
02 I Profitability Assessment & USPs

03 I Regulatory Environment

04 I Competitive Environment & Exit Options

Germany's sewer network is divided into public & private sections with two types, mixing and separate.

Overview – Schematic representation of a mixing sewer system



- The sewer network consists of private and public sections. All pipes within a property belong to the private sewer system
- There are two types of systems. The mixing system carries wastewater and rainwater in the same pipe. The separate system uses distinct pipes for each
- The separate system has two underground pipes. One carries rainwater and the other carries wastewater. Each flows into a separate public sewer pipe
- Newer constructions favour the separate system for efficiency and to ease defecators
- The public sewer network size is smaller compared to the private sewer network but has stronger regulations and thus a higher revenue potential

1) Total network length in Germany
Source: DWA, UFT, Stadtwerke Landshut, CA analysis

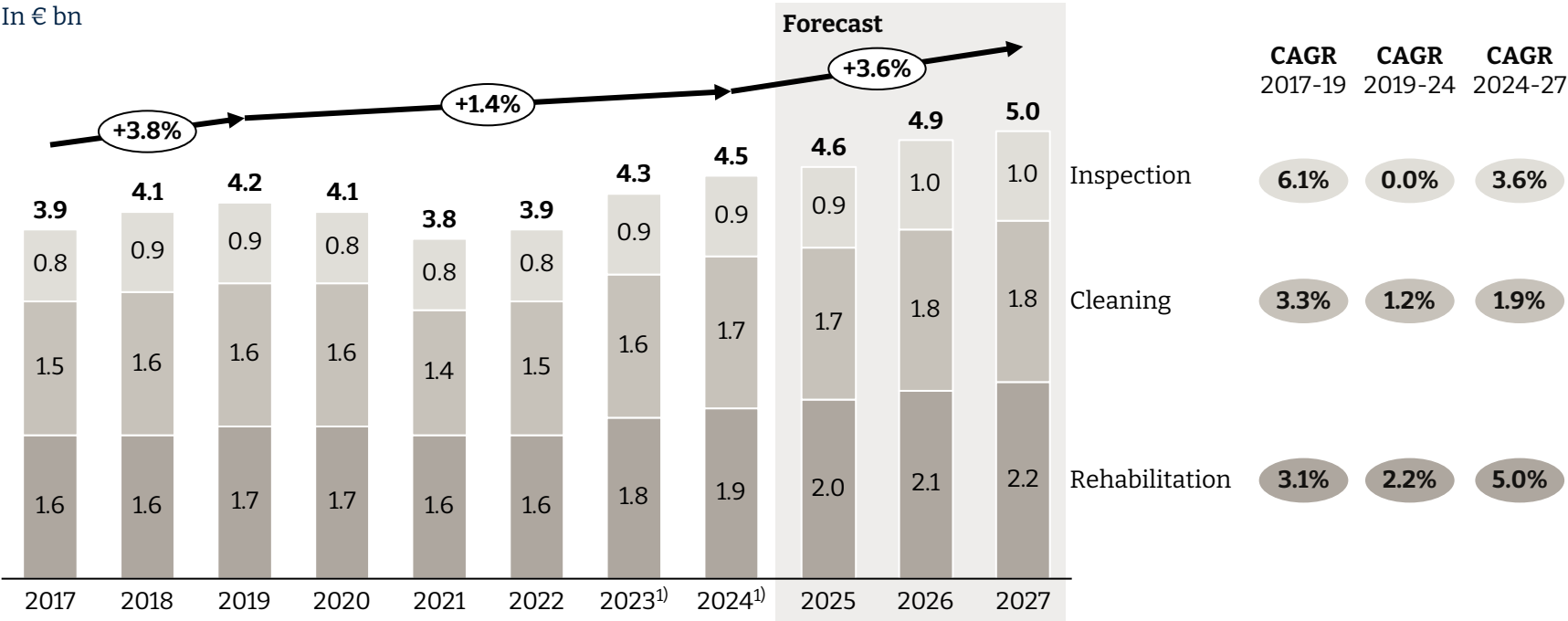
The sewer maintenance market is expected to grow moderately at 3.6% p.a. until 2027, primarily driven by the rehabilitation segment.

Market development – Sewer maintenance in Germany



Market development by segment, 2017 – 2027

In € bn



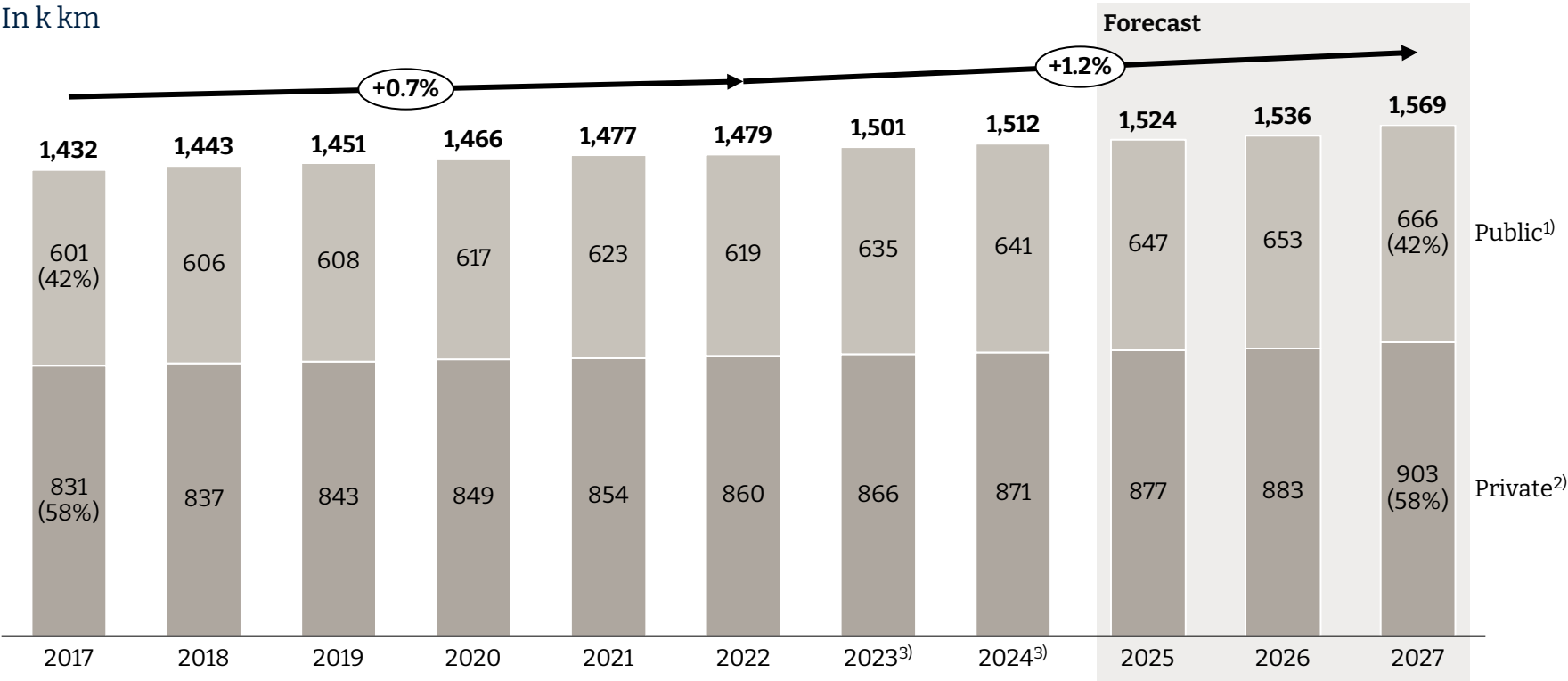
- Supply chain disruptions, staff shortages, and material price spikes led to declining order volumes between 2020 and 2022
- Market recovery began in 2023 and 2024 as macroeconomic conditions improved, with further growth expected
- Germany's deteriorating sewer network is driving service demand, increasing market penetration by approximately 3–4% per year

1) Validated via market expert interview

Source: DWA, CA interviews, CA analysis

Germany’s sewer network shows little growth, whereby the share of the private one remains constant.

Sewer network length in Germany, 2017 – 27
In k km



“The total length should be correct. I have 1.5 million kilometres in my head. About 650,000 kilometres are public sewers. There have been no historical changes in length that are worth mentioning.”
– Managing Director, VDRK

1) Latest available data from 2022 2) No official data available 3) Validated via market expert interview
Source: DWA, CA interviews, CA analysis

The public sewer network size is smaller compared to the private one but has stronger regulations and thus a higher revenue potential.

Deep-dive – Sewer network length & addressable market, 2022



	Public	Private	Total
Estimated total sewer network size	619k km Overall public sewer network in Germany	860k km Divided into private industrial (e.g., industrial parks) with ~160 k km and private residential with ~700 k km	1,479k km
<i>Thereof:</i>			
Cleaned p.a.	310k km Public pipes are cleaned on avg. every 2 years	114k km Private industrial pipes are cleaned on avg. every 2 years, while residential pipes are cleaned every 20 years	424k km
Inspected p.a.	88k km Public pipes are inspected on avg. every 7 years	40k km Private industrial pipes are inspected on avg. every 7 years, while residential pipes are inspected every 40 years	128k km
Rehabilitated p.a.	6k km ~1% of the public network is rehabilitated per year. 75% thereof consists of trenchless repairs and renovations	3k km ~0.5% of the whole private network is rehabilitated per year. 75% thereof consists of trenchless repairs and renovations	9k km
Addressable market p.a. (Cleaned, inspected & rehabilitated)	404k km	157k km	561k km

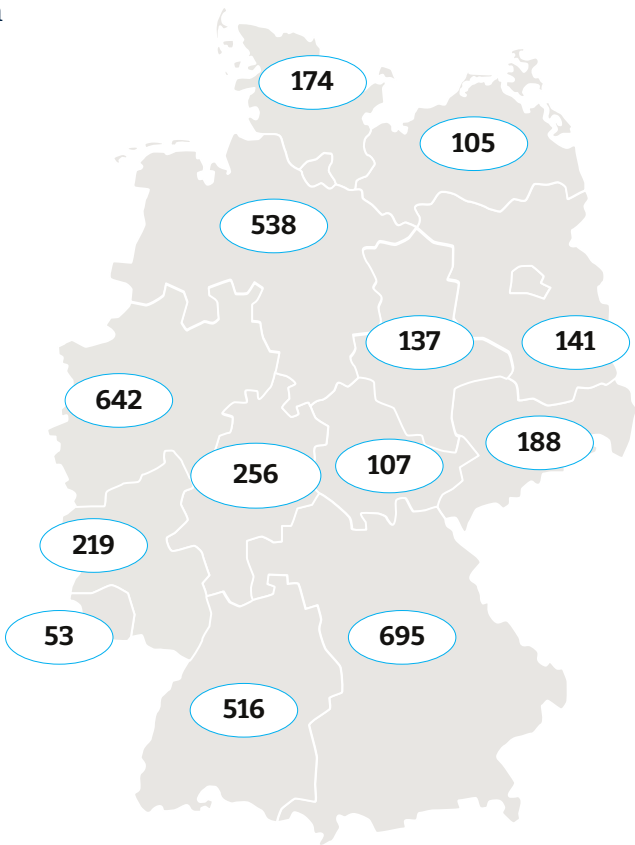
Source: DWA, Destatis, CA analysis

The largest regional markets are in Bavaria, North-Rhine Westphalia and Baden-Wurttemberg.

Deep-dive – Public sewer network market sizes & infrastructure investments

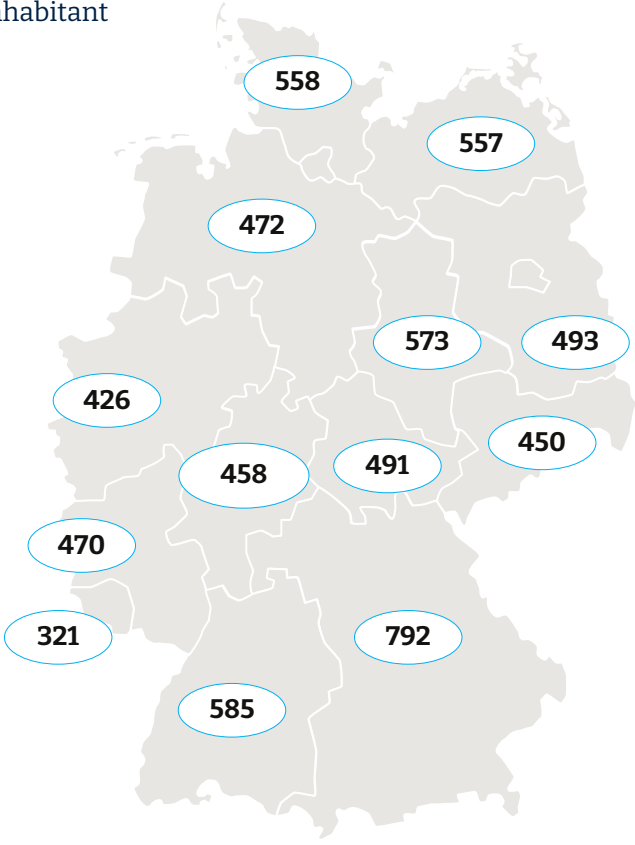
Market size for federal states, 2022

In €m



Municipal infrastructure investments per capita, 2022

In € per inhabitant



Source: Statistische Landesämter, CA analysis

The key market drivers appear positive. The underlying volume growth is mostly driven by extensive infrastructure rehabilitation needs.

Key market drivers and trends



	Market drivers	Description	Impact ¹⁾
Volume	1 Sewer network length	- The sewer network's length is estimated at ~1.5m km in 2022 - It is expected to continue growing slowly at ~1.2% p.a.	
	2 Sewer network age and condition	- Decades of underinvestment in maintenance have led to a high inspection and rehabilitation demand - The average pipe is ~40 years old	
	3 Macroeconomics	Expected increase in population and level of urbanisation will further strain sewer networks and require additional rehabilitation work	
	4 Regulatory environment	Increasing regulatory focus on sustainability and environmental protection expected to further drive investments	
	5 (Public) infrastructure investments	- Municipalities face pressure to limit public spending, hindering short-term growth - However, due to poor conditions, the municipalities need to perform costly repairs	
	6 Technological shift	Further trend towards trenchless maintenance driven by lower costs and faster renewal times	
Price	7 Development of price levels	- After increases in material prices from 2020-22, driven by rising raw material and energy costs, 2023 saw price corrections - Companies employed price adjustment clauses in contracts to mitigate fin. risks	

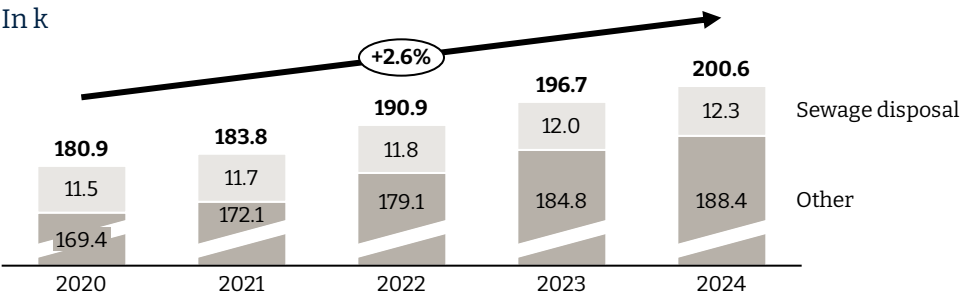
1) On market value
Source: DWA, CA interviews, CA analysis

There is a shortage of personnel in the sector with average vacancy days of 180 in 2024. Salaries have increased by 2.1% p.a. from 2020 – 23.

Overview – Skilled labour shortage



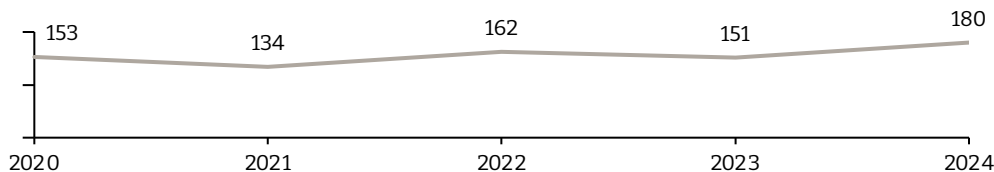
Employees in supply and waste disposal¹⁾, 2020 – 24



Comments

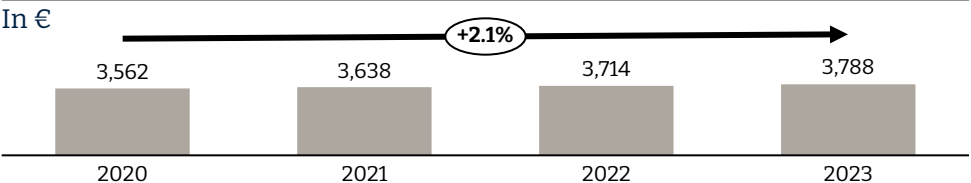
- Overall, jobs in the sector are classified as a bottleneck occupation in Germany
- Employers need to position themselves as attractive to obtain critical employees, especially skilled personnel that is should have certifications
- A good way to get the right staff is to train them yourself and support the certification process but also to acquire the right personnel that already meets all criteria

Average vacancy days in supply and waste disposal¹⁾, 2020 – 24



Increasing average vacancy times indicate missing personnel and increase the competition for talent in the sewage cleaning sector – especially skilled personnel is sought after and rare with even higher average vacancies of 205 days in 2024

Salary development in supply and waste disposal^{1);2)}, 2020 – 23



“There are more than enough projects to be done, but we do not have enough personnel. There is absolutely a shortage of skilled people and also, personnel in general is hard to find. I do not see this getting any better even though many companies pay above tariff salaries. Many clients will only let skilled, certified employees work on their critical infrastructure.” – Managing Director, VDRK

1) Includes water supply, sewage, waste management, pipeline/plant/tank/apparatus construction 2) Median monthly gross salary

Source: Bundesagentur für Arbeit, Eurostat, CA interviews, CA analysis

01 I Market Attractiveness

02 I Profitability Assessment & USPs

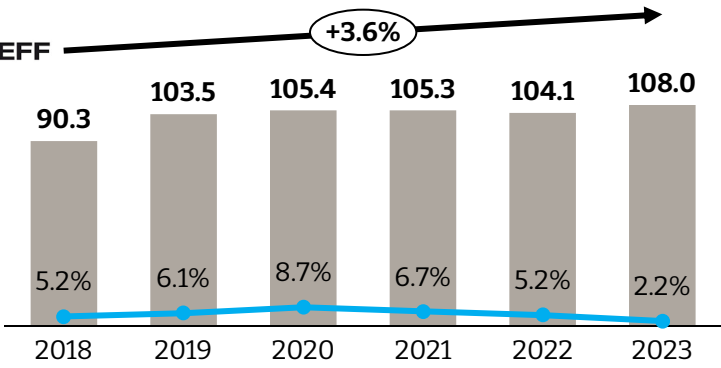
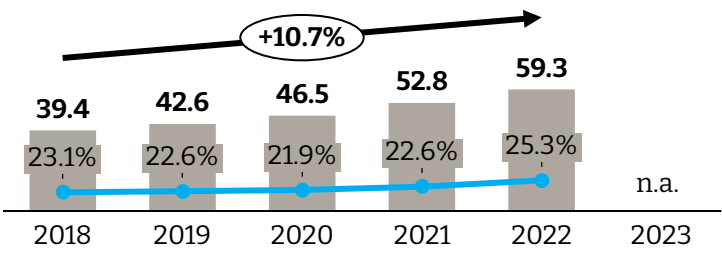
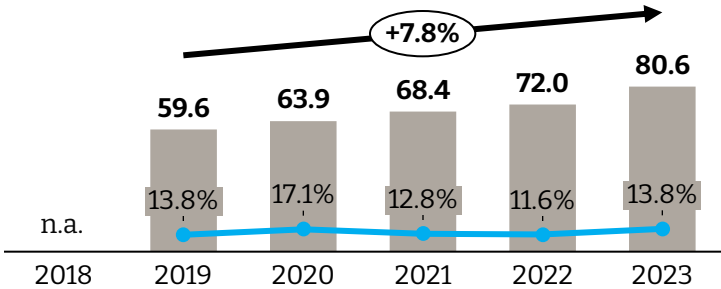
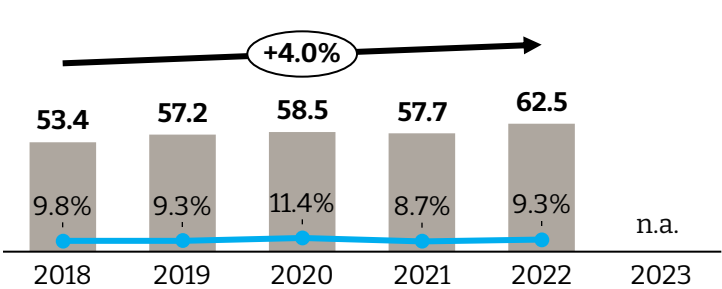
03 I Regulatory Environment

04 I Competitive Environment & Exit Options

Canal-Control and Swietelsky Faber outperformed overall market revenue growth while maintaining or even improving their profitability levels.

Overview – Organic growth cases

In €m



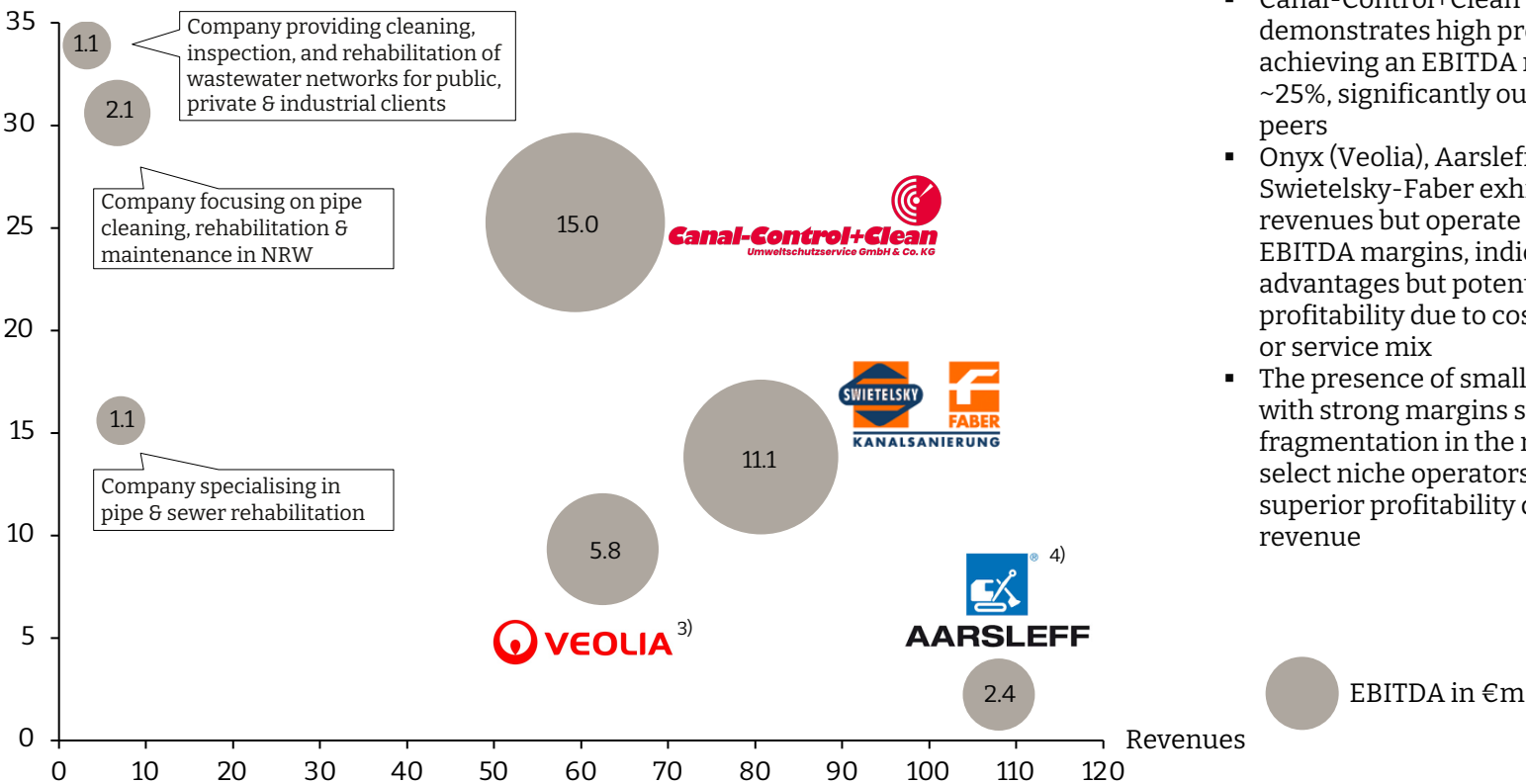
1) Based on total output 2) Only Onyx Rohr- und Kanal-Service GmbH & total revenue/ EBIT margin 3) Only Aarsleff Rohrsanierung GmbH
Source: Valu8, Unternehmensregister, CA analysis

Niche players with margins above 30% demonstrate the potential to outperform larger competitors in operational efficiency.

Overview – Financial performance of selected market participants¹⁾

In €m, in %

EBITDA margin²⁾



- Canal-Control+Clean demonstrates high profitability, achieving an EBITDA margin of ~25%, significantly outperforming peers
- Onyx (Veolia), Aarsleff, and Swietelsky-Faber exhibit higher revenues but operate at lower EBITDA margins, indicating scale advantages but potentially lower profitability due to cost structure or service mix
- The presence of smaller players with strong margins suggests fragmentation in the market, with select niche operators achieving superior profitability despite lower revenue

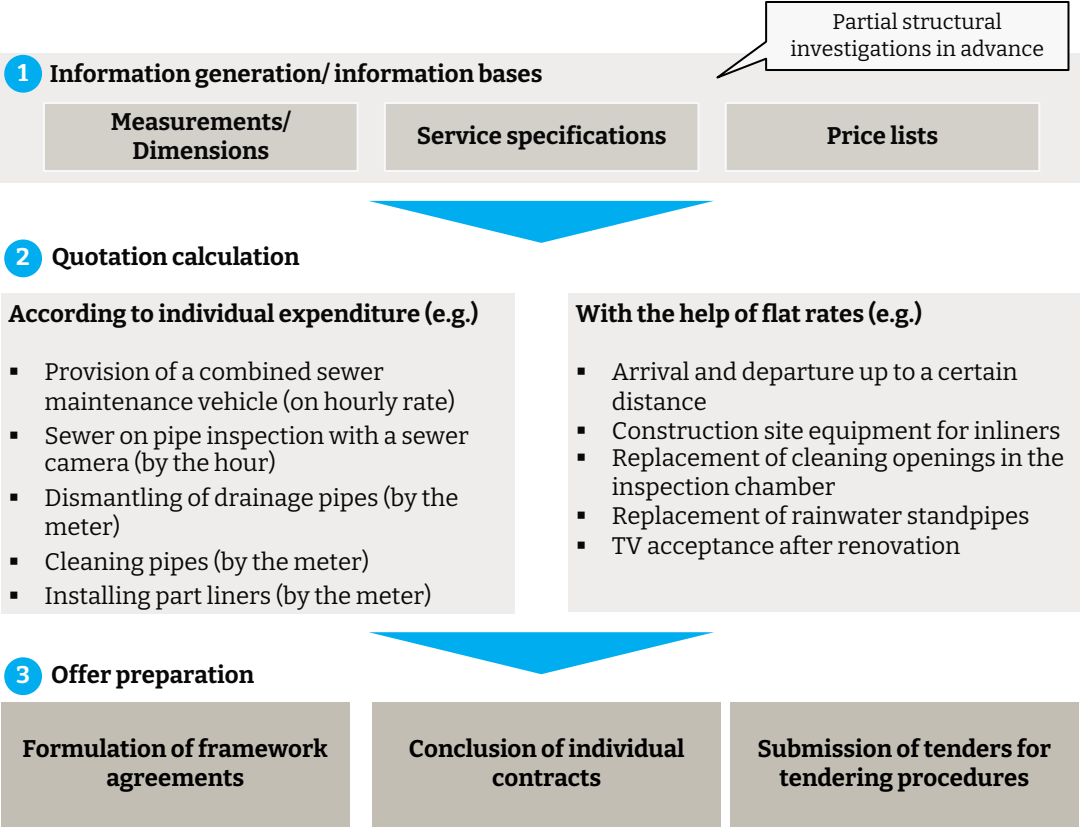
1) Latest available financial year 2) Based on total output 3) Only Onyx Rohr- und Kanal-Service GmbH & total revenue/ EBIT margin 4) Only Aarsleff Rohrsanierung GmbH
Source: CA Database, Value8, Unternehmensregister, CA analysis

Quotations are typically structured either based on individual expenditure or as flat fees. Public sector contracts are generally awarded through tender processes.

Quotation preparation and calculation

Process of offer calculation

Comments



- 1 Information generation / information basis**
 - Calculation often based on bills of quantities (BOS) provided by customers
 - KANALSANIERUNG has price lists differentiated according to end customer groups (allocation of volume discounts)
- 2 Quotation calculation**
 - Addition of the individual order components
 - Combination of individual cost estimation and cash costs
 - Price increases in purchasing are generally passed on to customers (customer-specific regulations)
- 3 Quotation preparation**
 - Frequent calculations within the scope of individual orders ('ad hoc')
 - Existence of framework agreements with individual major customers (e.g. real estate companies)
 - Participation in public tenders

Source: CA analysis

A tailored approach, high-quality equipment, professional expertise, and recognised certifications differentiate providers in the market.

Overview – Industry expert insights

Differentiation of services from competitors

- “The customer market is diverse, with different certifications and technological requirements depending on whether the client operates in the public, municipal, or private sector.”*
- “The municipal and public sectors typically require more up-to-date and technologically advanced equipment, which is consequently more expensive than in the private sector.”*
- “As a small or medium-sized enterprise, I can leverage my specialised skill set, which is in demand in my region, to remain competitive.”*
- “Ensuring quality assurance is particularly important and is best identified through specific quality seals. Depending on the required work, the company should also possess the necessary expertise in this area.”*

- The market is segmented, requiring companies to tailor their strategy to their target groups
- Technological requirements and investments levels are higher in the public sector than in the private one
- Specialisation and quality certifications are crucial to standing out from the competition (see slide 20)

Level of technical expertise required for each application

- “In general, skilled professionals are primarily required, especially in the public sector. Expertise in walkable sectors, fundamental knowledge of chemical processes, and execution capabilities are essential.”*
- “There is currently a severe shortage of skilled professionals. As a result, career changers are increasingly being recruited to manage the high volume of orders.”*
- “Ensuring sufficient expertise and qualifications among employees is crucial, notably in the context of critical infrastructure. Companies are generally responsible for maintaining this.”*
- “Clients place great importance on relevant quality seals and certifications for both personnel and companies, expecting the highest standard of up-to-date expertise.”*

- Specialisation and technical expertise of employees are crucial, specifically in the public sector
- Companies must proactively invest in employee training and qualifications and have a vested interest in doing so
- Clients expect the highest level of professional competence when awarding contracts

Source: CA interviews

01 I Market Attractiveness

02 I Profitability Assessment & USPs

03 I Regulatory Environment

04 I Competitive Environment & Exit Options

The EU sets uniform wastewater treatment standards, implemented through national, state, and municipal laws to ensure proper implementation & compliance.

Overview – Key regulations for wastewater systems across governance levels

Governance levels	Regulations
EU	- European Urban Wastewater Treatment Directive (UWWTD) - Water Framework Directive (WFD) - Directive on the Protection of Groundwater (2006/118/EC) - Industrial Emissions Directive (IED)
Germany	- Water resource Act (WHG § 61) - DIN 1986-30 – Inspection of Wastewater Systems - Wastewater Ordinance (AbwV)
Hesse	- Hessian Water resource Act (WHG) - Self-Monitoring Ordinance (EKVO) Hesse
Municipalities	Local municipalities define their own inspection and maintenance intervals based on system age, environmental concerns, and climate resilience

Local authorities are responsible for the practical application of these laws, including inspections, maintenance, and enforcement of standards to protect water quality and public health

Source: Informationszentrum Entwässerungstechnik Guss, Umweltbundesamt, Kommunalwirtschaft Mittlere Bergstraße, EU, Bundesministerium der Justiz, CA analysis

In Hesse, the “EKVO” regulates inspection & maintenance intervals (6x per year to every 15 years, depending on the type), and which party is responsible for the checkups.

Deep-dive – “Abwasserkontrollverordnung” (“EKVO”) in Hesse



Type of wastewater facility	Checkup type	Frequency	Responsible party	Legal reference (EKVO)	Key Activities
Sewage pipes & lines	Inspection (General use)	Every 15 years	Local or municipal authorities	Section 3, Annex 1	Regulator inspections to ensure compliance with technical standards, including checks for leaks and functionality
	Inspection (Commercial use)	Every 10 years	Company (operator)	Section 3, Annex 1	Inspection and detailed assessment for commercial wastewater systems, including additional technical checks
Wastewater treatment systems (Septic tanks)	Inspection & maintenance (incl. sludge removal)	Twice per year	Local authorities (municipality)	Section 2, Annex 4	Inspection of small wastewater treatment systems (e.g., septic tanks), including sludge removal and functionality checks
	Professional inspection & maintenance	Twice per year (companies) or annually (private use)	Company (operator)/ Private owner	Section 2, Annex 4	Professional inspections to ensure the effective functioning of small treatment systems, including sludge management
Wastewater treatment plants	Regular monitoring & laboratory analysis	Depending on wastewater volume: Twice to six times per year	Company (operator)	Section 5, Annex 5	Measurement and analysis of wastewater parameters, ensuring compliance with environmental standards

Documentation & reporting obligations

The results of condition assessments and maintenance work must be regularly documented and recorded in an operational logbook, which particularly applies to all maintenance and inspection activities

Source: Bürgerservice Hessenrecht, CA analysis

Few providers specialise in rehabilitation systems.

Overview – Key certifications in Germany

	Inspection	Cleaning	Leakage test	Rehabilitation system S15.1 – Short liner	Rehabilitation system S27.1 – CIPP ¹⁾ lining, hot water curing
					
Description	Inspection of wastewater pipes and sewers of all materials and nominal widths with the associated structures	Cleaning of wastewater pipes and sewers across all materials and diameters, including related structures	Leak testing of wastewater pipes and sewers of all materials and diameters, including associated buildings	Professional implementation of trenchless rehabilitation to repair damages and leaks in wastewater pipes without complete pipe replacement	Enables trenchless rehabilitation of damaged wastewater pipes by inserting a resinimpregnated liner into the defective pipe and curing it with hot water; suitable for pipes with nominal diameters from 100 mm to 300 mm
# of companies					
nationwide	321	304	229	124	89

“From the clients’ perspective, companies with a wide range of certifications in relevant fields are of essential importance.”
– Managing Director, VDRK²⁾

“Demonstrating the appropriate procedures and certifications, such as the S15.1 quality seal, clearly identifies a company as a provider of high standards.” – Assistant of the Managing Director, RSV³⁾

1) Cured-in-place pipe (CIPP) 2) Verband der Rohr- und Kanal-Technik-Unternehmen e.V. 3) Rohrleitungssanierungsverband e.V.

Source: Kanalbau, CA interviews

01 I Market Attractiveness

02 I Profitability Assessment & USPs

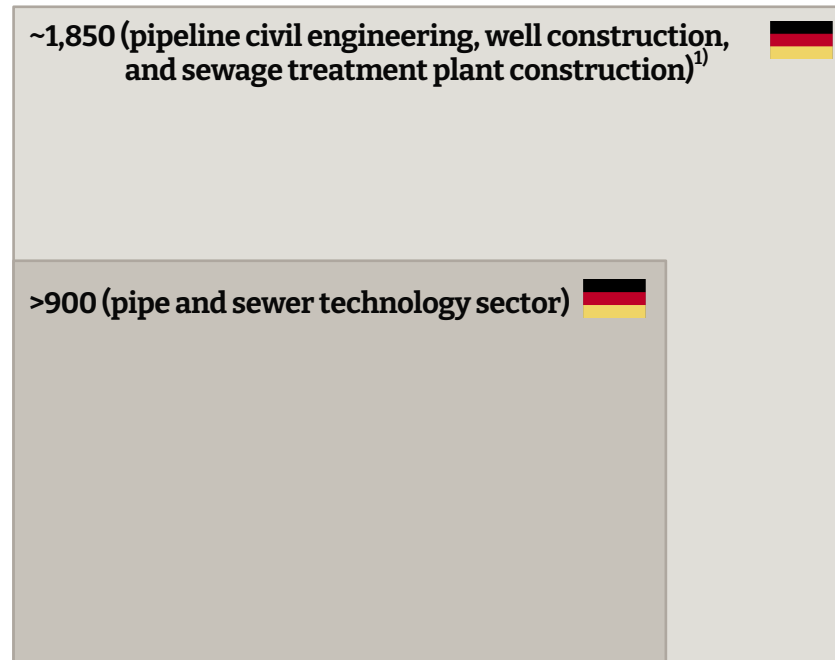
03 I Regulatory Environment

04 I Competitive Environment & Exit Options

Within the fragmented market, there are >900 relevant companies active in the pipe & sewer sector in Germany.

Overview of the market fragmentation in the pipe and drain cleaning and maintenance sector

From a national perspective to regional market segmentation



Comments

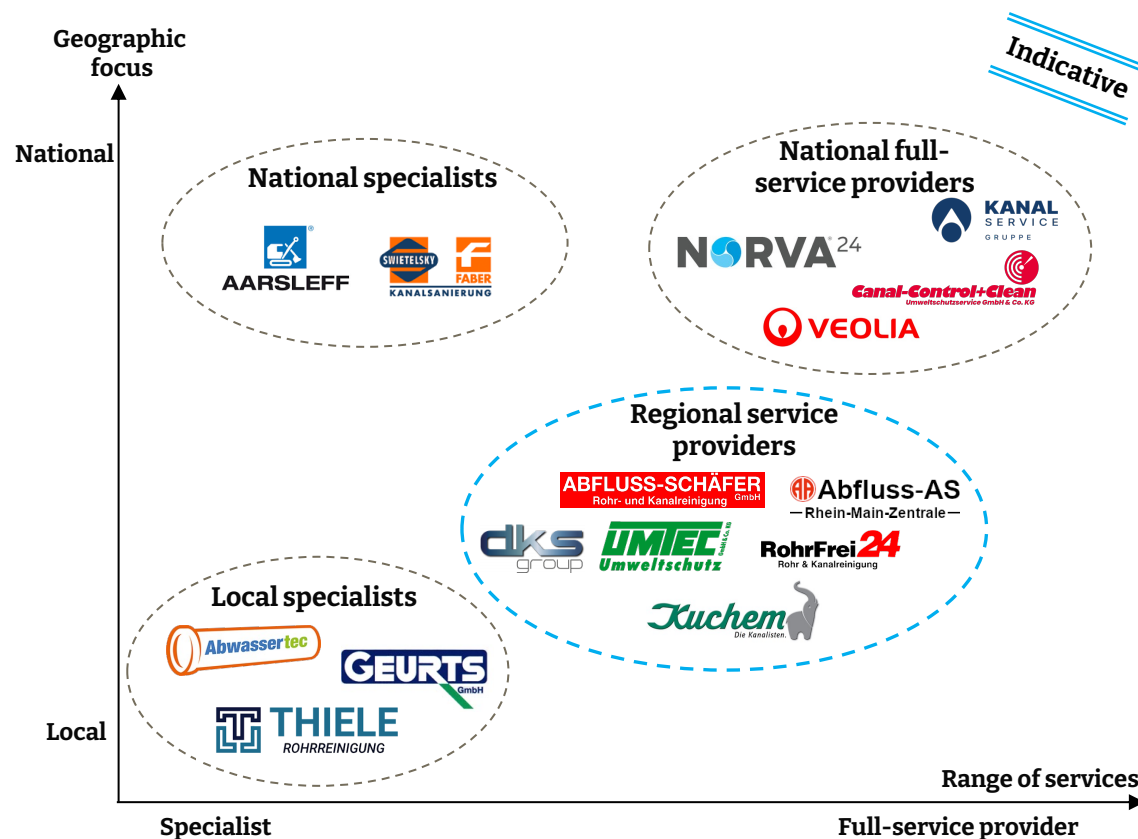
- Germany's market is highly fragmented with ~1,850 companies operating in pipeline civil engineering, well construction, and sewage treatment plant construction (WZ 42.21 classification)
- It is estimated that more than 900 service providers across Germany are part of the more specialised pipe and sewer technology sector
- The competitive landscape is predominantly characterised by small and medium-sized companies – only a few companies operate nationwide and even less across borders
- Larger companies have actively grown inorganically, while smaller ones face pressure and risk being pushed out without a strong niche strategy

¹⁾ According to WZ 42.21 – "Rohrleitungstiefbau, Brunnenbau und Kläranlagenbau"

Source: Statistische Landesämter, Valu8, CA analysis

The market consists of local specialists, regional providers, national specialists, and full-service providers, each differing in scale and service range.

Overview – Strategic groups in the sewer maintenance market



Local specialists

- Focus on local customers and individual processes (e.g. TV inspection, hose lining, cleaning)
- Often active as a subcontractor in cooperation with other specialists

National specialists

- Mostly active in sewer rehabilitation with a nationwide focus
- Broad offering within one segment (including a wide range of technologies in sewer rehabilitation)
- Technology leadership within their segment

Regional service providers

- Complete offer for fewer construction, renovation and cleaning
- Reduced need for subcontractors

National full-service providers

- Broad focus beyond maintenance, cleaning and rehabilitation of sewers, often including environmental services
- Strong market coverage and operational scale

Source: Valu8, company websites, CA analysis

Largest sewer maintenance providers include Kanal Service Gruppe, Aarsleff, Swietelsky-Faber and Norva24.

Overview of relevant sewer maintenance providers



	Headquarters	Key brands	Revenue [€m]	Maintenance servicing type Cleaning Inspection Rehabilitation			Headcount [#]	Geographic coverage	Ownership
	Winterthur (CH)	Turbofix, A.S.T., HS, Unglaube, Böhmer, Braunen	~210 (2024)	☒	☒	☒	~1,200		PE-owned
	Roethenbach (GER)	Aarsleff Rohrsanierung	~100 (2024)	☒	☒	☒	~300		Public
	Schlierschied (GER)	Swietelsky-Faber	~90 (2024)	☒	☒	☒	~350		Private
	Oslo (NOR)	ExRohr, CKS, Jutzy	~280 (2023)	☒	☒	☒	~1,600		Public
	Hamburg (GER)	Onyx Rohr- und Kanal-Service	~60 ¹⁾ (2022)	☒	☒	☒	~475 ¹⁾		Public
	Mannheim (GER)	Düringer & Scheidel Rohrsanierung	n.a.	☒	☒	☒	n.a.		Private
	Munich (GER)	Kuchler	n.a.	☒	☒	☒	~250		Private
	Barsbüttel (GER)	Canal-Control+Clean	~60 (2022)	☒	☒	☒	~400		Private
	Kriens, CH	Geiger Kanaltechnik, Alpe, Restclean	n.a.	☒	☒	☒	~650		PE-owned
	Blankenburg (GER)	Umwelttechnik & Wasserbau	~100 (2021)	☒	☒	☒	~850		Private

☒ Strong coverage ☒ Medium coverage ☒ Limited to no coverage

1) Only Onyx Rohr- und Kanal-Service GmbH
Source: Valu8, company websites, annual reports, CA analysis

The conditions for implementing a buy & build strategy are favourable.

Assessment – Buy & build strategy

Criteria	Description	Evaluation
 Number of available target companies	- There are >900 companies in the pipe and sewer technology sector in Germany - The majority are small and medium-sized companies with a regional or local focus	
 M&A activities in the industry	- M&A activity in the sewer cleaning industry is growing, driven by PE-backed groups like KSG, DKS Group, and ITS Kanal Services - Private equity firms and large companies within the service sector are key drivers of consolidation	
 Owner's willingness to sell	- Both large and small companies are predominantly owner-managed - The willingness to sell is largely influenced by price	
 Attractive purchase price level	- The potential target company belongs to the sewer and pipeline service sector - EBITDA multiples in the mid-range can be expected	
 Synergy effects („economies of scale“) <i>see next slide</i>	- Further cross-selling potential in sales exists with a complementary service offering - Consolidation of administrative tasks can be achieved through integration into the existing group structure	
 Combined effects („economies of scope“) <i>see next slide</i>	- Expansion and shared use of personnel and machinery resources within the group, along with lower material and equipment costs due to bulk purchasing advantages - Improved financing opportunities within the group	

Attractiveness Low    High

Source: CA analysis

The strongest synergies are in IT, HR & finance, and procurement due to high scalability, while personnel and sales are valuable but geographically constrained.

Assessment – Synergy potentials

IT, HR & Finance

- Centralised administrative functions reduce costs, improve process efficiency, and increase standardisation across the organisation
- Minimal limitations, as IT, HR, and finance functions can be optimised independently of regional service execution



Procurement

- Centralised purchasing negotiations for fuel, resins, camera systems, sanitary components, vehicle parts, and workwear enable substantial cost reductions through bulk purchasing
- Synergies mainly arise in standardised materials and equipment. Specific regional requirements or individual preferences may reduce the overall effect



Personnel

- A larger employer brand facilitates recruitment and reduces staff turnover. Employees also benefit from internal mobility, allowing transfers instead of resignations when relocating
- The geographical limitation of technicians reduces flexibility in workforce deployment



Innovation & Digitalisation

- Joint development of software solutions for maintenance and inspection, e.g. AI-driven sewer monitoring
- Investments in new technologies can be implemented across the group, increasing overall efficiency



Sales

- A national group can effectively target large customers with nationwide needs, offering standardised services to real estate corporations, facility management firms, industrial clients, and infrastructure companies like Deutsche Bahn
- Despite the enhanced sales reach, service execution remains largely regional, which limits full scalability



Customer Support & Scheduling

- Centralised appointment and workforce planning can reduce unnecessary travel and optimise resource allocation
- Shared customer hotlines or digital booking systems can improve service quality and responsiveness



Marketing

- A nationwide brand increases visibility among large B2B clients and can also attract B2C customers, for example, in emergency and maintenance services
- Since services are delivered regionally, the direct impact of national marketing is somewhat constrained. However, employer branding remains a strong advantage



Technology

- Sharing best practices and technological expertise can lead to more efficient work processes and improved solutions
- The actual deployment and use of technical teams and equipment remains geographically constrained, limiting potential scale effects



Assessment of potential



Source: CA analysis

Kanal Service Group and ITS Kanal Service are two major PE-backed players in the sewer maintenance market, with DKS Group emerging as a new participant.

Overview – PE-owned groups

			
HQ	Winterhur, CH	Karlstein a.M., DE	Kriens, CH
PE Investor			
# employees	~1,100	n.a.	~650
# entities	31	4	>25
Initial investment	2017	2022	2021
Relevant recent investments	  01/2024   01/2024   12/2023   10/2023   04/2023 Reinigen - Untersuchen - Sanieren	  08/2024   03/2024	  03/2024   01/2024   01/2023 Co-Investors were  

Source: PitchBook, CA analysis

Norva24 is the leading Underground Infrastructure Maintenance (UIM) group in Northern Europe.

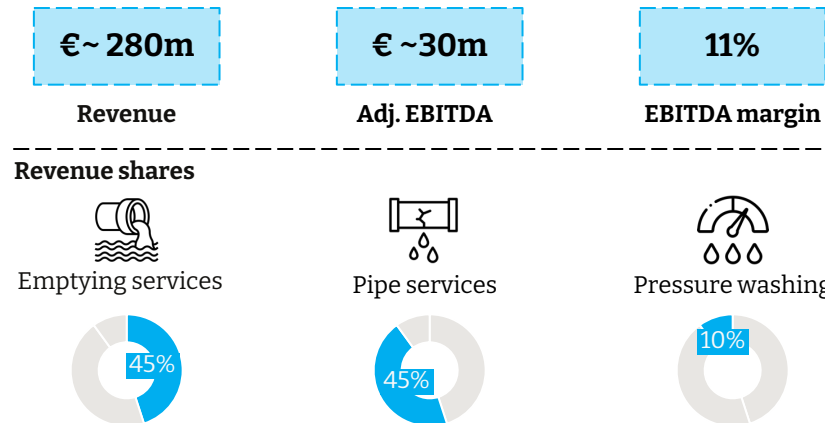
Deep-dive – Norva24

Group overview

Leader in the UIM services market across Northern Europe, with presence in:

				
# branches	23	9	20	24
# employees	~464	~169	~285	~702

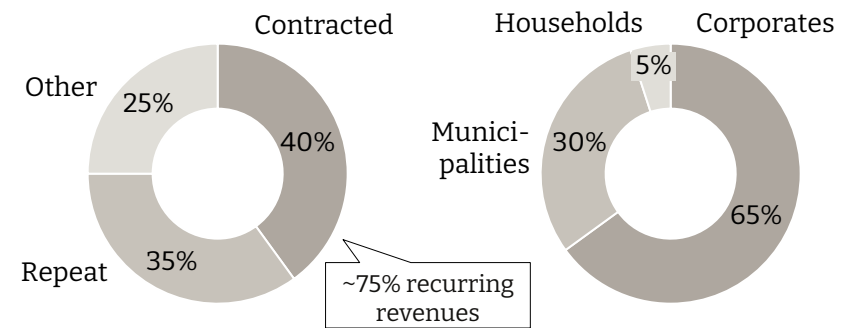
Financial profile, 2023



Source: Offering Memorandum IPO 2021, NORVA24, CA analysis

NORVA²⁴

Revenue composition & customer segmentation, 2021



Strategic initiatives

- Norva24 was formerly PE-owned by VALEDO and completed its successful IPO 2021, with VALEDO remaining the largest shareholder (~30%)
- Focused on organic growth complemented by strategic acquisitions, particularly in the German market
- The Company plans near-term expansion into adjacent markets such as Finland, Austria, Switzerland, Belgium, the Netherlands, the UK, and Ireland, with long-term potential across broader Europe
- Norva24 has a strong M&A track record, successfully integrating acquisitions and unlocking synergies to drive operational efficiency and scale



Strategy
Consultants

CA Strategy Consultants GmbH | Schleißheimer Str. 2 | 80333 München
+49 89 51514812 | info@commercial-advisory.com | www.commercial-advisory.com