Old Pipes and New Customers: Water As a Growth Industry

Between aging pipes and growing populations, there is a growing need for cost-effective, modern infrastructure to deliver the most precious of resources—water.

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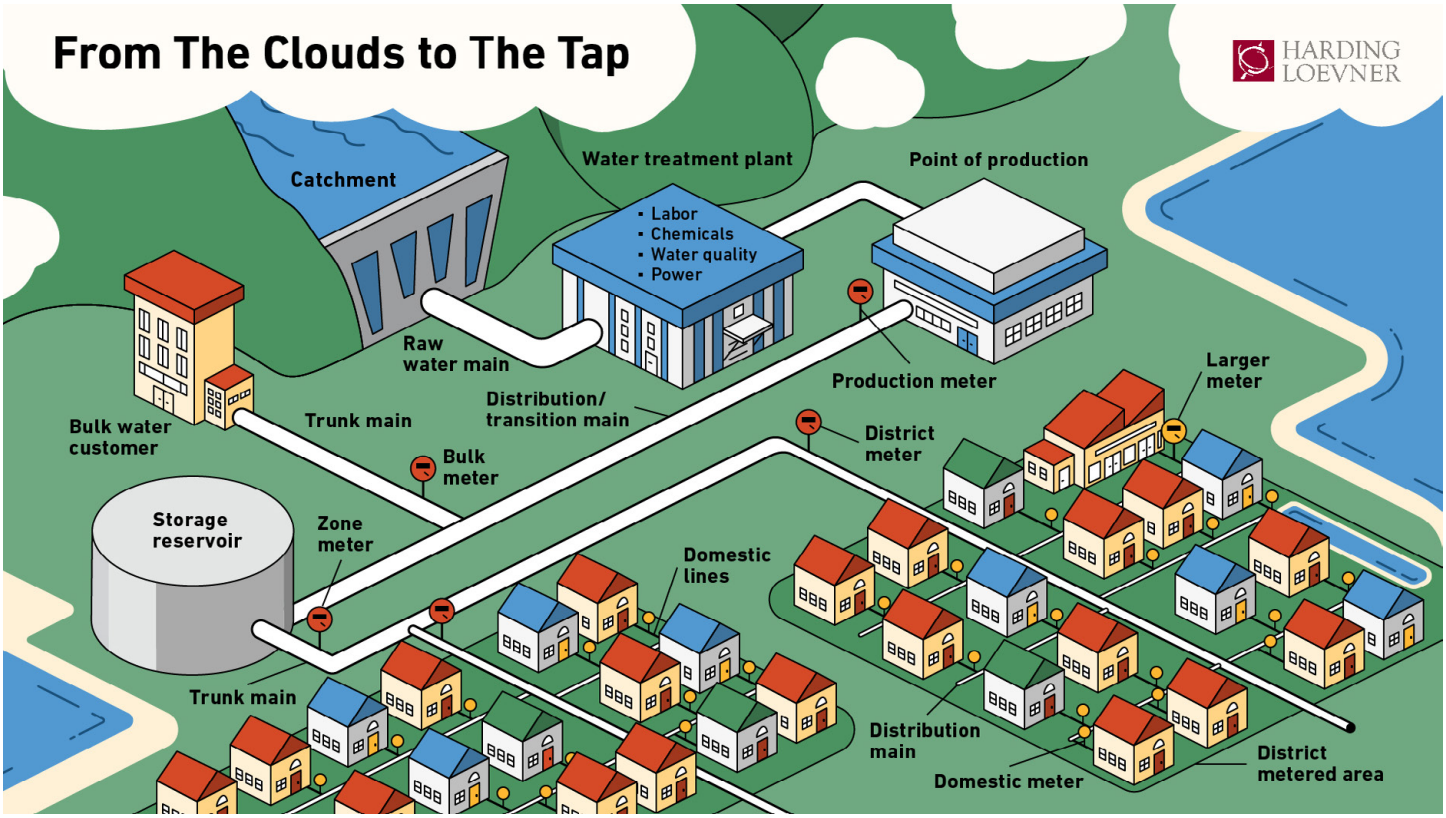
Key Takeaways

- Richmond's recent water crisis showed that water infrastructure is more fragile than people realize.
- Water is an US$800 billion industry that is bolstered by population growth, the need to replace old equipment, and the need for innovative systems that both bring efficiency and cost savings to cash-strapped governments.
- The water industry is dominated by large, established companies but also has shifting dynamics that open the door for smaller companies with new products.

As the people of the city of Richmond, Va., started to wake up on Monday morning, January 6, 2025, and were getting ready to start another week, they ran into a problem. A big one.

A snowstorm on Sunday caused a power outage that led to a malfunction in the city's reservoir system on that Monday morning. The malfunction started a chain reaction that worked its way through the city's water infrastructure and crippled the entire system. As morning stretched into afternoon, the 230,000 residents of the state capital confronted a situation that is rare in the developed world: they had no running water. For six days, an entire American city wasn't able to use the water coming out of the taps, if any was coming out at all. The residents of Richmond had to use bottled water for brushing teeth, cooking, drinking, and cleaning. They could take only short showers and were told to avoid "unnecessary" flushing, as well as washing their clothes.



There is a complex infrastructure stretching from capturing, treating, and transporting to managing the usage of water that ensures it will be there when people turn on their faucets.

Most investors probably stop thinking about water as soon as they turn off the faucet but there is a massive infrastructure on the other side of the tap. Richmond is a typical example. This system serves residents, businesses, and agricultural users, as well as residents of surrounding Hanover, Chesterfield, and Henrico counties. To move around the 60 million gallons used each day, there are 14 pumping stations with 47 pumps, 11 storage facilities that can hold 73 million gallons of water, and nearly 1,000 miles of piping. But the system is old—it actually dates back to 1829; its water treatment plant was completed in 1924 and expanded in 1950. As the system's water needs increase to nearly 100 million gallons a day by 2070, it will have to be expanded, maintained, and upgraded.

That's just the water system of one mid-sized American city. Multiply that by the nearly 20,000 incorporated municipalities in the US. Then multiply that by the nearly 200 countries in the world. You start to see just how big water infrastructure really is. And what makes delivering all of that water possible is an US$800 billion equipment-and-services industry that includes a diverse and complex range of products and technologies for the treatment, transportation, management, and usage of water resources.

The UN expects the global population to increase from about 8 billion today to nearly 10 billion by 2050. This will put significant pressure on water-infrastructure demands, especially in urban areas, where the population is expected to increase from 55% to 68%. That's just one of the factors that will create growth for the industry. There is also aging infrastructure in developed markets that needs to be replaced, industrialization in western countries, the need for new systems that can handle new types of contaminants, and more efficient systems that can lower costs. For all these reasons, the water equipment and services industry is expected to grow about 4% over the long term (possibly going up to 6% if there is some crisis or catalyst that boosts public spending).

As an industry with a centuries-long history, it is in many ways a mature one, and large players such as Massachusetts-based Veralto (US$24 billion market cap) and Washington, D.C.-based Xylem (US$32 billion market cap) have an established competitive advantage. Some companies, such as Massachusetts-based Watts Water Technologies (US$7.3 billion market cap), boast longevity: Watts has been selling its products for 150 years. On another level, though, it's a changing and expanding industry that provides areas for new firms such as Spain's Acciona (US$6.1 billion market cap) to innovate and provide differentiated products that meet the increasing demands of growing populations.

A Different Kind of Liquidity

One key constraint that prevents spending on water projects is funding. Water utilities are not very profitable and rely heavily on public funding, which is why maintaining water systems is

difficult. The World Bank estimates governments around the world (excluding China and India) provide US$320 billion a year in subsidies for water and sanitation. Utilities face growing capital needs globally so they look to supplement this public funding with rate increases and operational costs savings.

No matter the funding constraints, aging pipes and equipment must be replaced. The Environmental Protection Agency and American Water Works Association project the need to invest between US$744 billion to US$1 trillion over the coming decades to expand and upgrade aging water and wastewater infrastructure in the US to meet federal water quality, safety requirements, and public-health objectives. The problem is even larger across Europe where there are 7 million kilometers of water pipes compared with 3.5 million kilometers (2.2 million miles) in the US. The Organization for Economic Co-operation and Development estimated the EU will need to spend US$150 billion annually between 2020 and 2030 on its water systems. That dynamic leads to an opportunity for companies to develop new systems that lower costs and increase efficiencies of existing water systems.

Creating the products to affordably replace and improve pipes and plants drives a lot of capital spending in the industry. Most of the incumbents have centered their growth and competitive strategies around innovation, application knowhow, and aftermarket services to further solidify their market position, combined with ongoing mergers and acquisitions in their respective and adjacent categories. The cumulative research and development spending in the industry has been growing at a 7.5% compound annual growth rate (CAGR) in recent years. And players such as Xylem are complementing this R&D by providing VC funding in key technology areas. Innovations such as advanced treatment processes, smart-metering solutions, embedded smart-control technologies, leak detection, and water-efficient products are becoming key competitive factors, with digital systems and data analytics growing in importance.

Xylem illustrates how large players are growing their businesses across the spectrum. It operates across the various segments of the industry and in myriad regions around the world. Its strength rests on its global scale, technical expertise, and well-established brands. The company began by making products such as pumps, more recently moving into services including software for data analytics and equipment management. It has acquired several smaller rivals over the years, such as Evoqua in 2023, a US$7 billion purchase aimed at expanding Xylem's aftermarket sales and services business. This is a core component of many incumbents' growth and competitive strategies.

The Value Chain

The water industry's value chain can be complex and involves a wide range of activities from sourcing and purification to the delivery of clean water, not to mention the treatment of wastewater before it's released back into the environment or reused. Its customers range from the biggest cities in the world down to your plumber. Considering the breadth of customers and the breadth of needs, there is a lot of business to go around.

At one end of the chain are the large companies such as Xylem and Aubervilliers, France-based Veolia, which supply municipal water-infrastructure equipment and services. After that are smaller companies that meet more targeted needs. Watts Water Technologies is an example of a mid-sized company taking advantage of the need for better water systems. Watts is a leader in what is called "applied water," meaning products for commercial and residential use such as valves and controls that facilitate efficient water use. It makes a wide range of products for flow control and protection, heating and cooling, drainage, water-filtration, and leak-detection systems. And product innovation is a core component of its strategy, targeting 25% of sales generated from smart/connected devices each year. Those are the kinds of products that makes existing municipal systems more efficient and therefore less expensive to run.

Other companies specialize in specific parts of the value chain. Badger Meter (US$6.4 billion market cap), based in Milwaukee, makes water meters and monitoring systems. Franklin Electric (US$4.6 billion market cap), based in Fort Wayne, Indiana, makes pumps, motors, and drives. The company has a strong reputation in submersible pumps used to move fresh and wastewater for residential, agricultural, and industrial markets. And once water makes it to a house, there are still lots of pipes and fixtures needed. Plumbers and other local buyers are the market for a company such as Virginia-based Ferguson Waterworks. Ferguson is a leading plumbing, HVAC, waterworks, and MRO (maintenance, repair, and operations) distributor in the US. The company has about 9% market share of the US$340 billion North American construction market in which it operates (three times the share of the next largest competitor) and 75% of its revenues are from markets where it is either the first- or second-largest.

The industry operates very closely with government at all levels, which means it is subject to extensive and increasing regulations. But the need for reliable services is also growing, which is leading to technological breakthroughs and opening new opportunities for companies to provide innovative products and systems that help water utilities solve their problems.

And, as the residents of Richmond discovered, sometimes those problems can appear suddenly. City leaders are going to spend a long time trying to figure out exactly what went wrong and how they can prevent it from happening again. Some of the solutions are immediate. The mayor, who took office the week of the crisis, canceled his inauguration and pledged the money earmarked for it to a relief fund. Some of the fixes will take up to a year. Others, the mayor said, may take multiple years and cost hundreds of millions. Which illustrates just the kind of long-term opportunity that exists for the companies that can help provide those fixes.

Contributors

Analyst Christopher Nealand, CFA, contributed research and viewpoints to this piece.

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