

LIXIL - From Sanitation Products to Sanitation Economies

The global sanitation crisis is one of the most persistent barriers to human development. As of 2024, 3.4 billion people still lack safely managed sanitation¹, and the human cost is severe: every day, approximately 1,000 children under five die from preventable diseases linked to unsafe water and hygiene.² Beyond the statistics, the consequences also extend to loss of dignity, interrupted education, and economic stagnation. A global manufacturer of water and housing products from Japan, LIXIL has treated sanitation as both a business and impact priority. Drawing on its manufacturing know-how, LIXIL has developed affordable and water-efficient products for underserved markets. It has also refined its impact measurement practices to better reflect the realities of those contexts.³ Through its social business SATO, LIXIL has created a market-based approach that combines access to sanitation and hygiene with local manufacturing, distribution, and job creation. With its diverse partners, the company has supported progress toward adequate and equitable sanitation for all by 2030.

Sanitation as a Persistent Development Gap

Sanitation remains one of the largest unfinished agendas in global health. Although 1.2 billion people gained access to safely managed sanitation services between 2015 and 2024, 3.4 billion people still lacked them in 2024.⁴ The gap is especially severe in lower-income countries, where open defecation remains four times higher than the global average. Sanitation systems are constrained by multiple, interconnected barriers: insufficient infrastructure, fragile last-mile supply chains, limited affordability, weak local markets, and underdeveloped public financing mechanisms.⁵ Maintenance challenges, behavior change constraints, and fragile local markets have often limited the durability of water, sanitation and hygiene (WASH) interventions.

While being a major root cause of communicable diseases, the consequences of inadequate sanitation are not limited to disease burden. Inadequate sanitation continues to undermine dignity, schooling, productivity, and public spending. The absence of safe toilets and handwashing facilities can leave

¹ WHO/UNICEF JMP, Progress on household drinking water, sanitation and hygiene 2000–2024: special focus on inequalities (2025), <https://data.unicef.org/resources/jmp-report-2025/>

² UNICEF, Triple Threat How disease, climate risks, and unsafe water, sanitation and hygiene create a deadly combination for children (2023), <https://www.unicef.org/reports/triple-threat-wash-disease-climate>

³ LIXIL, 2018–2023 Make a Splash!, <https://www.unicef.org/media/156826/file/%E2%80%98Make%20a%20Splash!%E2%80%99%20Partnership%20Five-Year%20Report%202018-2023%20.pdf>

⁴ WHO/UNICEF JMP, Progress report 2004-2024

⁵ LIXIL, Global Sanitation & Hygiene, https://www.lixil.com/en/impact/sanitation/sanitation_detail.html

people, and especially women and girls, exposed to the danger of animal attacks and sexual assault when seeking private places to defecate. In schools, the lack of proper toilets and privacy also exacerbates the educational gender gap, as menstruating girls are often forced to miss classes.

Fostering Sustainable Sanitation Economies

Recognizing the profound societal costs of inadequate sanitation, LIXIL advocates for sustainable, market-based solutions that empower communities. While inadequate sanitation causes hundreds of billions of dollars in annual losses through reduced productivity and higher healthcare costs, every \$1 invested in sanitation yields an estimated fivefold return⁶ for local economies and public health. In this context, LIXIL positions sanitation work within its broader Impact Strategy, which is tied to its corporate purpose: "to make better homes a reality for everyone, everywhere." By prioritizing shared-value creation, LIXIL aims to build self-reliant sanitation ecosystems in underserved regions. This approach also supports job creation through training and local manufacturing & distribution of WASH products, while enabling gradual progression along the "sanitation ladder" as incomes, expectations, and capabilities evolve.

Building SATO, a Social Business

Drawing on five years of dedicated efforts since establishing its SATO social business in 2013, LIXIL launched "[Make A Splash!](#)" in 2018 as a flagship shared-value partnership with UNICEF aimed at expanding access to sanitation and hygiene in underserved communities, particularly in LMICs. As LIXIL's independent contribution to these global goals, SATO operates as a sanitation brand specifically designed for contexts where affordability, simplicity, and adaptability are critical. Offering a comprehensive portfolio of safely managed sanitation solutions and a dedicated handwashing device, the brand's products are engineered to meet local needs, match users' ability to pay, and function in environments with limited infrastructure. As such, SATO toilets use water-efficient designs that flush with less than one liter of water, through the use of a counterweight trapdoor mechanism that opens during flushing to remove waste, then closes to mitigate odors and reduce disease-carrying insects, such as flies. SATO products are also designed for easy transportation and installation for remote and rural communities.

Beyond the product itself, LIXIL works on the wider conditions that shape adoption and scale, including last-mile distribution, capacity building for local WASH businesses, and collaboration with

⁶ WHO, Sanitation Fact Sheet, <https://www.who.int/news-room/fact-sheets/detail/sanitation>

communities, governments, and public institutions. Moreover, SATO is designed as a self-sustaining social business, leveraging a “Make, Sell, Use” cycle in the community to create jobs and allow local manufacturers and stakeholders to continue the business independently, while LIXIL collaborates with diverse partners—including governments, international organizations such as UNICEF, and local businesses to scale this impact



UNICEF plays a central role in that model. UNICEF's first global shared-value partnership for WASH, the initiative brings together complementary strengths: while LIXIL contributes product innovation, design expertise, and supply-chain capabilities, UNICEF brings community trust, on-the-ground access, and public-sector influence.⁷ This collaboration accelerates sanitation market development by helping governments shape enabling policies, mobilizing public investment for underserved communities, and strengthening local entrepreneurs and supply chains. As emphasized by Dave Mateo, LIXIL Head of Impact Strategy, *“collaboration is the new currency of impact.”*

An Impact Measurement Approach Built for Scale

Measuring the impact of WASH initiatives such as providing toilets and handwashing facilities is inherently challenging. Usage varies significantly across contexts, and results that are useful to investors and other key stakeholders depend on transparent assumptions and credible underlying data. To ensure transparency and accountability regarding reported impact numbers, LIXIL has developed and publicly disclosed a Global Sanitation and Hygiene Impact Methodology for estimating the number of people reached.

The company originally estimated impact with a simple household-based calculation that multiplied units shipped by an assumed number of users per household. As SATO expanded beyond a single

⁷ LIXIL, Impact, https://www.lixil.com/en/impact/library/pdf/impact_20241018_en.pdf

household-oriented product into a broader portfolio - including hand-hygiene devices and products used in schools, health facilities, refugee camps, and high-traffic public settings - the methodology evolved. Today, multipliers are tailored to distinct use cases, acknowledging that a school or festival toilet serves far more users than a household setting. The updated methodology adjusts shipment volumes to avoid double counting where several components form one installation, allocates products by use case, gives priority to validated partner-reported data where available, and applies a 5% downward adjustment to remain conservative.

As of April 2025, through its social business, LIXIL has shipped more than 10 million affordable sanitation and hand-hygiene units across 59 countries and territories. Building on its methodology, LIXIL announced in February 2026 that it had achieved their one of Impact Strategy goal of reaching more than 100 million people with improved sanitation and hygiene.

Beyond the Milestone

Progress over the past decade regarding SDG 6 (Ensure access to water and sanitation for all) has been encouraging: between 2015 and 2024, 1.2 billion people gained access to safely managed sanitation services, raising global coverage from 48% to 58%. Nevertheless, the world remains off track to achieve universal access to basic WASH services by 2030. Consequently, LIXIL views its recent milestone of reaching over 100 million people with improved sanitation and hygiene not as a finish line, but as a robust foundation for future action. Underscoring this renewed commitment, the company has announced a new target to improve sanitation and hygiene for an additional 100 million people by the fiscal year ending March 2031. This next phase centers on further strengthening sanitation ecosystems, leveraging the infrastructure, supply chains, and operational frameworks established through its enduring partnerships and market-building endeavors.

Note: This case study was developed based on an interview with Dr. Dave Mateo and Mr. Ryota Chono from LIXIL and information provided by the company.

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