

Anna Luísa Beserra Santos

Infrastructure - LATAM Region

Congratulations!

The Frost & Sullivan Institute is proud to honor Anna Luísa Beserra Santos with this prestigious recognition for her exceptional foresight and innovative solutions to global Infrastructure challenges. Her visionary leadership continues to inspire transformative change and advance a more sustainable future for all.

David Frigstad

Chairman, Frost & Sullivan
Executive Director, Frost & Sullivan Institute

Why Us?

Frost & Sullivan Institute recognizes leaders who not only achieve commercial success but also drive meaningful change across environmental, social, and technological domains. Our evaluation is backed by decades of industry expertise, global research, and a commitment to fostering leadership that creates inclusive and sustainable futures.

Why Now?

Access to safe drinking water remains one of the most urgent development and public health challenges globally. According to the World Health Organization and UNICEF, billions of people still lack safely managed drinking water services, with rural and climate-vulnerable communities disproportionately affected. In regions experiencing water scarcity, drought, and weak infrastructure, households often rely on unsafe rainwater storage or contaminated surface water, increasing risks of waterborne diseases, malnutrition, and long-term socio-economic vulnerability. The challenge is particularly severe in semi-arid regions across Latin America, Africa, and parts of Asia, where climate change is intensifying drought cycles and reducing reliable access to potable water. Conventional water infrastructure systems are frequently expensive, centralized, and inaccessible to remote communities, creating an urgent need for decentralized, affordable, and sustainable solutions. In this context, the work of Anna Luísa Beserra Santos is especially significant. By developing low-cost solar water purification technologies tailored for underserved rural populations, she demonstrates how innovation can bridge critical gaps in water security. Her work aligns with growing global priorities around climate resilience, public health, and equitable access to essential resources, offering a scalable model for sustainable water access in emerging economies.

About Frost & Sullivan Institute

The Frost & Sullivan Institute is a non-profit organization dedicated to leveraging business practices to address global priorities. Our mission "Innovating to Zero" focuses on driving innovations that eliminate critical challenges such as carbon emissions, food and water scarcity, poor healthcare access, and digital exclusion.

Visionary Leadership

Anna Luísa Beserra Santos has demonstrated transformative leadership in advancing sustainable water access solutions for underserved and climate-vulnerable communities. As Founder and CEO of Sustainable Development & Water for All (SDW for All), she has pioneered community-centered approaches that combine accessible technology, environmental sustainability, and localized implementation strategies. Her leadership is particularly relevant in regions where water scarcity intersects with poverty, infrastructure gaps, and climate stress. Through the development of Aqualuz, a low-cost solar water disinfection device designed for rainwater cisterns, she addresses one of the most pressing global challenges: ensuring access to safe drinking water in low-resource environments. What distinguishes her leadership is the integration of technological innovation with community empowerment. Rather than deploying technology in isolation, her model emphasizes training, local participation, and decentralized implementation, enabling communities themselves to become active agents in expanding water access. This approach aligns strongly with Frost & Sullivan Institute's focus on inclusive, scalable innovations that enhance societal resilience and environmental sustainability.

Recognition Criteria

- Innovation:** Anna Luísa Beserra Santos developed Aqualuz, an affordable solar-powered water purification device based on Solar Water Disinfection (SODIS) principles. Designed specifically for rainwater cistern systems, the technology enables rural and semi-arid communities to convert stored rainwater into potable drinking water using accessible and environmentally sustainable methods. Her innovation addresses critical barriers associated with conventional water purification systems, including cost, infrastructure dependency, and energy consumption. By leveraging solar energy and low-cost materials, she has created a decentralized water treatment model that is both economically viable and environmentally sustainable. Importantly, her approach combines technology with social participation. Communities are trained not only to use the device but also to become local replicators of the solution, strengthening long-term sustainability and adoption. This integration of clean technology with community capacity-building reflects a forward-looking model for resilient water systems in emerging economies.
- Implementation:** Through SDW for All, Beserra Santos has operationalized her model in rural and semi-arid regions of Brazil, working closely with NGOs, local communities, and government stakeholders. Her implementation strategy emphasizes distributed deployment networks that enable localized ownership and scalability. Training and education are central to her approach. Communities receiving the technology are equipped with the knowledge and skills required to maintain, replicate, and advocate for the solution within their own regions. This participatory framework strengthens long-term adoption and reduces dependency on external systems. Her implementation model also demonstrates significant expansion potential across other water-stressed regions in Latin America, Africa, and Asia, where rainwater harvesting systems are commonly used but safe treatment infrastructure remains limited.
- Impact:** Beserra Santos's work has improved access to safe drinking water for vulnerable rural populations, particularly in Brazil's semi-arid regions where millions rely on rainwater cistern systems. Through Aqualuz, communities are able to reduce exposure to contaminated water and waterborne illnesses while improving household health and resilience. Beyond direct water access, her work contributes to broader development outcomes including public health improvement, gender equity, educational continuity, and climate adaptation. Women and children, who are often disproportionately burdened by water insecurity, particularly benefit from safer and more reliable household water systems. Her impact has gained international recognition, including being named a Young Champion of the Earth by the United Nations Environment Programme for advancing sustainable water access solutions.

Key Accomplishments

Development of Aqualuz:

Created a low-cost solar water disinfection device that converts rainwater stored in cisterns into safe drinking water for underserved communities.

Advancement of Sustainable WASH Solutions:

Pioneered environmentally sustainable water purification approaches based on Solar Water Disinfection (SODIS) principles.

Community-Centered Implementation:

Developed participatory deployment models that train local users to operate, maintain, and replicate water purification technologies.

Expansion of Rural Water Access:

Improved potable water access for communities in Brazil's semi-arid regions where infrastructure limitations and water scarcity are severe.

Climate-Resilient Innovation:

Designed decentralized water treatment systems that strengthen resilience in drought-prone and climate-vulnerable regions.

Partnership and Ecosystem Building:

Collaborated with NGOs, governments, and local communities to scale implementation and strengthen sustainable water access ecosystems.

Scalable Global Potential:

Positioned the Aqualuz model for expansion across Latin America, Africa, and Asia, where rainwater harvesting systems are widely used.

Conclusion

Research by the Frost & Sullivan Institute demonstrates that sustainable access to clean water is fundamental to public health, economic resilience, and inclusive development. The Institute's analysis highlights decentralized and climate-adaptive infrastructure as increasingly essential in addressing global water insecurity, particularly in underserved and environmentally vulnerable regions. Anna Luísa Beserra Santos's work exemplifies this vision by integrating clean technology, community empowerment, and environmental sustainability into a scalable water access model. Through Aqualuz and SDW for All, she has demonstrated how localized innovation can address systemic infrastructure gaps while strengthening resilience at the community level. Her leadership reflects the type of high-impact, human-centered innovation that Frost & Sullivan Institute recognizes as essential for advancing sustainable development and long-term societal security. In recognizing Beserra Santos, we affirm her contributions toward building inclusive, climate-resilient systems that expand access to one of humanity's most essential resources: safe water.

Innovation Focus

- Advancing Decentralized Water Security:** Beserra Santos's work addresses critical infrastructure gaps by creating decentralized, low-cost purification systems that improve water access in underserved communities. Frost & Sullivan Institute recognizes this as an important advancement in resilient and sustainable infrastructure development.
- Integrating Climate Adaptation with Public Health:** Her solar-based purification model strengthens climate resilience while reducing exposure to unsafe drinking water and waterborne diseases. This aligns with the Institute's focus on sustainable innovations that simultaneously address environmental and human security challenges.
- Empowering Communities Through Participatory Innovation:** By training users to deploy and replicate solutions locally, she transforms communities from passive recipients into active participants in sustainable development. Frost & Sullivan Institute recognizes this inclusive implementation model as critical for achieving long-term scalability and societal impact.



"Anna Luísa Beserra Santos demonstrates that sustainable innovation can transform affordable clean technology into a scalable model that strengthens public health, climate resilience, and inclusive development."

- Shreya Ghimire, Research Analyst, Frost & Sullivan Institute