



TEAM 20 - SMART LOO

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Client: Andrea L. Vullo, Current powered by GE

Technology is helping commercial buildings achieve increasing levels of efficiency through advances in internet-connecting services such as smart lighting, HVAC control, and intelligent monitoring solutions. As the industry continues to produce compelling advances in energy saving solutions for commercial properties, restrooms are currently an underrepresented area in the marketplace with great opportunities for improvement. Commercial restrooms are often maintained and monitored through scheduled maintenance checks where custodial engineers perform routine maintenance and cleaning. Employees perform best when they have a schedule; however, this doesn't mean these schedules are efficient. Modern day restroom maintenance is a great example of how inefficient schedules can lead to supply waste and facility downtime.

Depending on usage of a restroom, supplies may run out before being serviced, or are replaced before they are fully utilized, leading to unnecessary waste, harming the environment, and costing the company money. Since these maintenance schedules are based on time rather than service demands, hours may pass before a maintenance worker makes it to a restroom that is in need of immediate servicing. To solve these inefficiencies, we propose a system of wireless sensors to monitor real-time supply levels of restroom supplies to produce data-driven optimized schedules, leading to reduced waste from premature replacement and improved customer experiences.

Restrooms equipped with a network of Loo powered sensors continually monitor supply levels and predict when maintenance will be required for a particular area of the restroom. Because Loo is continually analyzing usage patterns, Loo will always be learning and adapting. An optimized maintenance schedule produced by Loo will let facilities know when a utility must be replaced, ensuring restrooms that need attention are serviced first and reducing the amount of time a product sits without replacement. Additionally, issues requiring emergency maintenance, such as flooding, trigger a push notification to facilities staff via text message to let the staff know exactly where an issue is occurring the moment it happens. A Loo powered restroom provides a cost-effective, long-term solution to the current inefficiencies associated with restroom maintenance, improving customer experiences while reducing costs and environmental impacts derived from supply waste.