



BENCHMARKING THE IMPACT OF TOSSCUBES ON SIMON FACILITY OPERATIONS



EXECUTIVE SUMMARY

Simon operations leadership is focused on continuously improving the customer and tenant experience for its portfolio of properties. This focus is embodied in Simon's mission statement, which emphasizes premium quality of the asset portfolio: "To create and continually enhance stockholder value through the ownership of a high quality portfolio of premier properties..." Fundamental to this vision is a responsive and impactful custodial and facilities management workforce that is able to execute on a delightful customer experience and effectively deploy and re-allocate resources to meet challenges during both peak and non-peak times. The purpose of this white paper is to benchmark the impact of TossCubes, which are solar-powered sensorized trash compactors, on Simon's strategic imperative to deliver a premium experience to customers and tenants, and to continuously measure, manage and improve that experience.

BACKGROUND

In December 2017, Operations and Procurement leadership at Simon conducted a pilot deployment of TossCubes at the San Francisco Premium Outlets location in Livermore, California to determine their value and suitability for waste management across the Simon asset portfolio. The purpose of the pilot deployment was to track and report the impact of TossCubes on Simon facility operations for the purpose of benchmarking the enterprise value of the new technology. TossCubes are solar-powered trash compactors that can hold more than 8x the contents of a standard can. Furthermore, these cubes are equipped with a smart sensor to notify facilities staff when the compactor chamber needs to be emptied. The result is that TossCubes need to be emptied far less often, and custodial staff do not have to deploy finite custodial resources in order to emptying a can before it is full. TossCubes further allow Simon facilities staff to track patterns in waste stream, identify leading indicators and more effectively staff and deploy custodial resources in a proactive and forward-thinking manner. It is this unique custodial foresight and proactive allocation of resources that has the potential to drive tremendous impact on Simon's core mission: an ever-improving premium customer experience



In analyzing the impact of sustainable facilities innovations on commercial property managers (CPMs) competitive advantage, Waste Management notes a clear trend: “As more CPMs seek a sustainability edge, they often realize measurable successes in terms of market share, revenue growth and cost savings. Comprehensive sustainability programs allow CPMs to reduce energy consumption, waste output and water usage, which in turn can decrease the property’s carbon footprint and result in millions of dollars in cost savings. A comprehensive sustainability agenda and associated monitoring programs can help CPMs meet company goals and provide a platform to measure property performance. With this degree of visibility, CPMs can monitor progress and distinguish their properties from their competitors.”¹ From this standpoint, measuring success in the acquisition and deployment of sustainable facilities technologies fits into a broader strategic thesis around elevating Simon’s value proposition and competitive advantage in the multi-tenant retail property lease marketplace.

The methodology employed in this white paper determines three impact areas that directly effect Simon’s strategic mission of delivering a premium property management experience. Each impact area corresponds to a simple, easily defined quantitative metric. By using data collected before and after the pilot deployment of TossCubes, Bid Ops analysts have quantified the measurable impact of sustainable innovations such as TossCubes on the metrics that impact Simon’s business strategy and goals. By using objective, third party data to assess the impact of new technology such as TossCubes, Simon is able to leverage their innovative approach to hypothesis-testing the value of new technology to their own enterprise. Tracking and reporting against these metrics at scale can offer vital data into how Simon’s portfolio is performing against the mission of providing a premium customer experience.

IMPACT AREAS

#1 – CUSTODIAL AGILITY – EMPTIES PER SHIFT

Following discussions with key stakeholders, Bid Ops determined that waste overflow, litter and inefficient waste removal processes can negatively impact the customer and tenant experience of Simon properties. The agility of facility waste management to respond to waste during peak times directly impacts the brand equity of Simon, as well as customer and tenant perceptions of the value and quality of the location and lease opportunity. Custodial resources, like all human resources, are by definition finite. Imposing burdens that spike during peak times through inefficient waste emptying practices have real and measurable trade-offs with custodial agility overall. To offer the premium property experience that is at the core of Simon’s mission, custodial staff must

¹<https://www.wm.com/sustainability-services/documents/insights/Commercial%20Properties%20Insight.pdf>

be able to execute responses to various sanitation and waste management scenarios with agility that does not substantially decrease during peak times, such as holidays and weekends. If custodians' resources are substantially occupied by an escalated and intensive task during peak times (such as emptying waste cans), then they have less time on their shift to solve for emerging sanitation scenarios and also less time and focus to proactively engage in premium upkeep projects such as maintaining the polished look and feel of flooring, fixtures, lighting or decorative areas. During a case interview email for this white paper, Simon leadership participant Orlando Burch illustrated this trade-off in the allocation of finite custodial resources with the following statement: "After reviewing with the Janitorial Staff, both shifts enjoy having the Solar Trash Receptacles. It allows them to clean the restroom more often, plus clean the tables and mop the surrounding areas two to three times within an hour. The staff have directed their extra time, to keep the common area and food court cleaner on the busy day. It also allows them to do special projects waxing floors, using the walk behind scrubber, clean restroom, clean food court table, etc." This quote also suggests that there is tremendous opportunity in impacting the premium property experience by augmenting custodial resources with sustainable innovative technology that removes an unpleasant and time-consuming task from custodians' daily shift routine. While the impact on each individual load of waste emptied may seem difficult to measure, at scale we can safely say that the fewer number of times the trash needs to be emptied, the more agile Simon's custodial resources will become. Thus, we can link this impact area with a metric that reflects this overall dynamic towards decreasing the necessity and frequency of trash emptying.

METRIC: NUMBER OF TIMES CAN IS DUMPED PER UNIT OF TIME

#2 – LABOR COSTS – DOLLARS PER HOURS

Custodians are paid for their labor and therefore their labor has a cost. While it would be incorrect to state that this money comes back to Simon absent the use of TossCubes, it would also be incorrect to say that Simon does not bear a direct financial cost for custodians who must spend many hours engaged in the act of emptying a waste can. Thus, to accurately benchmark the value we must factor in the decrease in the number of hours custodians spend on emptying a can.

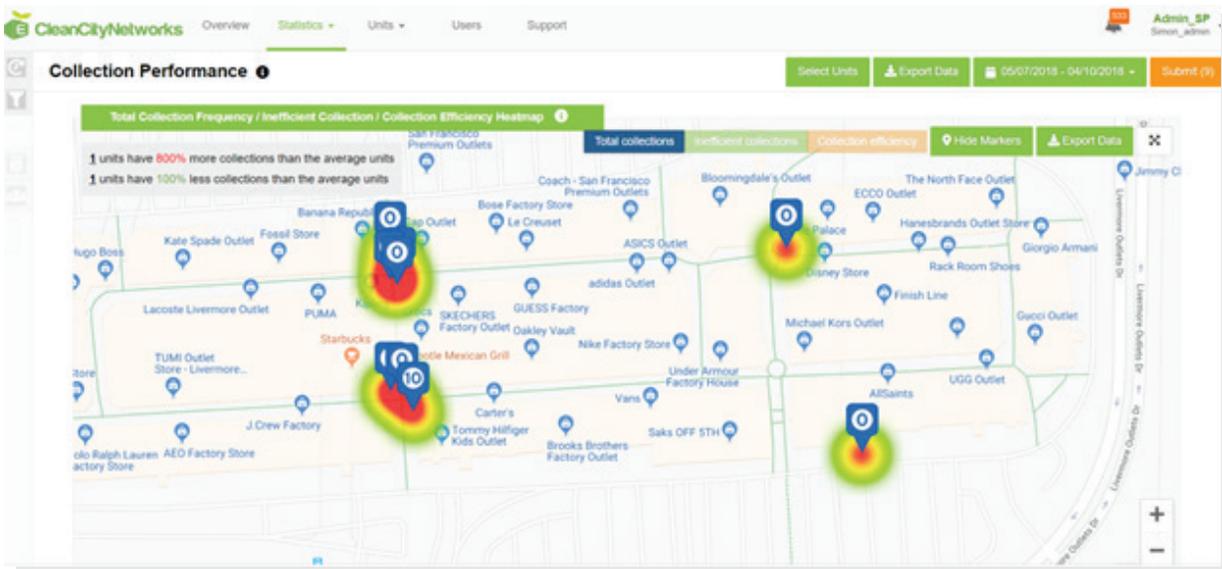
METRIC: NUMBER OF DOLLARS PER HOUR SAVED ON EMPTYING WASTE BINS PER UNIT OF TIME

#3 – MATERIALS COST INPUTS – CAN LINERS

Simon pays for can liners, and the more they are used the more Simon pays. By emptying waste a fewer number of times, Simon can substantially save on the cost of can liners. While TossCubes do not eliminate the use of can liners, they do substantially impact the number of can liners used to dispose of the same amount of waste.

METRIC: NUMBER OF CAN LINERS USED PER UNIT OF TIME

PILOT RESULTS SUMMARY



(TossCube's dynamic dashboard shows the deployment configuration)

AVERAGE PEAK WEEK: SINGLE SAMPLE LOCATION (NORTH SIDE FOOD COURT #1 (36 GALLONS))

	Number of times trash emptied per week	Hours saved per week	Can liners saved per week
Standard Can	37	0	0
TossCube	14	5.75	23

AVERAGE PEAK WEEK: AGGREGATE (9-CAN TOTAL)

	Number of times trash emptied per week	Hours saved per week	Can liners saved
Standard Can	1264	0	0
TossCube	238	256.5	1026

AVERAGE NON-PEAK WEEK (25% PEAK): SINGLE SAMPLE LOCATION (NORTH SIDE FOOD COURT #1 (36 GALLONS))

	Number of times trash emptied per week	Hours saved per week	Can liners saved per week
Standard Can	9	0	0
TossCube	4	1.25	5

AVERAGE NON-PEAK WEEK (25% PEAK): AGGREGATE (9-CAN TOTAL)

	Number of times trash emptied per week	Hours saved per week	Can liners saved
Standard Can	316	0	0
TossCube	60	64	256

Assumptions:

Week: First of Month - October 2016 (1st of month)

Bulk Commercial: 36 Gallons (North Side Food Court #1)

Standard Can: 36 Gallons (100% Full)

Peak Time: 10:00 AM - 11:00 AM

Non-Peak Time: Weekdays 12:00 PM - 2:00 PM

CONCLUSION: TOSSCUBES DRIVE STRONG RESULTS AT SCALE

ANNUALIZED RETURN ON INVESTMENT COMPARISON AGGREGATE OF 9-CAN TOTAL PILOT AT SFPO

	Custodial Agility	Labor Costs	Materials Costs
Standard Can	1	0	0
TossCube Non-peak	5.2x increase in custodial agility	\$38,400.00	\$1,024.00
TossCube Peak	5.3x increase in custodial agility	\$46,170.00	\$1,231.20
TossCube Total ROI	5.25x increase in custodial agility	\$84,570.00	\$2,255.20

This pilot shows that TossCubes deployed at a single Simon location can drive tremendous savings during peak times (12 weeks) and in a way that measurably impacts custodial agility, as well as improved efficiency over non-peak times (20 weeks) in a way that measures, manages and optimizes Simon's waste management efficiency. This data was collected at a single Simon multi-tenant retail location, and the implication here is that at scale, this represents a clear ROI, particularly for multi-year deployments. By benchmarking the savings and positive impact on Simon's operations, this white paper also provides a guide for applying TossCube criteria in a procurement process. A given manager uses a best-of-breed Total Cost of Ownership framework to evaluate the difference in enterprise value versus quality lowest priced bid on a standard standard TossCube, a three-year, 12-can contract awarded for a single Simon location would expect to save \$200,000 over an equivalent duration and volume of standard cans. The results of which would pay for themselves through labor and material costs alone over the life span of the contract, and does not account account for the tremendous strategic benefits accrued for Simon's brand equity as a result of increased custodial agility. Simon's pilot of TossCubes at the San Francisco Premium Outlet site location clearly demonstrate outstanding results, measured with quantitative data, on impact areas that are strategically important for Simon leadership.