

SmartCatch: A Modular Filtration System for Hamilton Harbour



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PROBLEM

"How might we reduce contamination in Hamilton Harbour?"

- Toxic algal blooms lead to oxygen depletion, fish kills, and ecosystem damage.
- 60% of phosphorus in Hamilton Harbour comes from stormwater runoff and CSOs, causing algal blooms and oxygen depletion.
- Existing filtration methods are costly and difficult to scale.



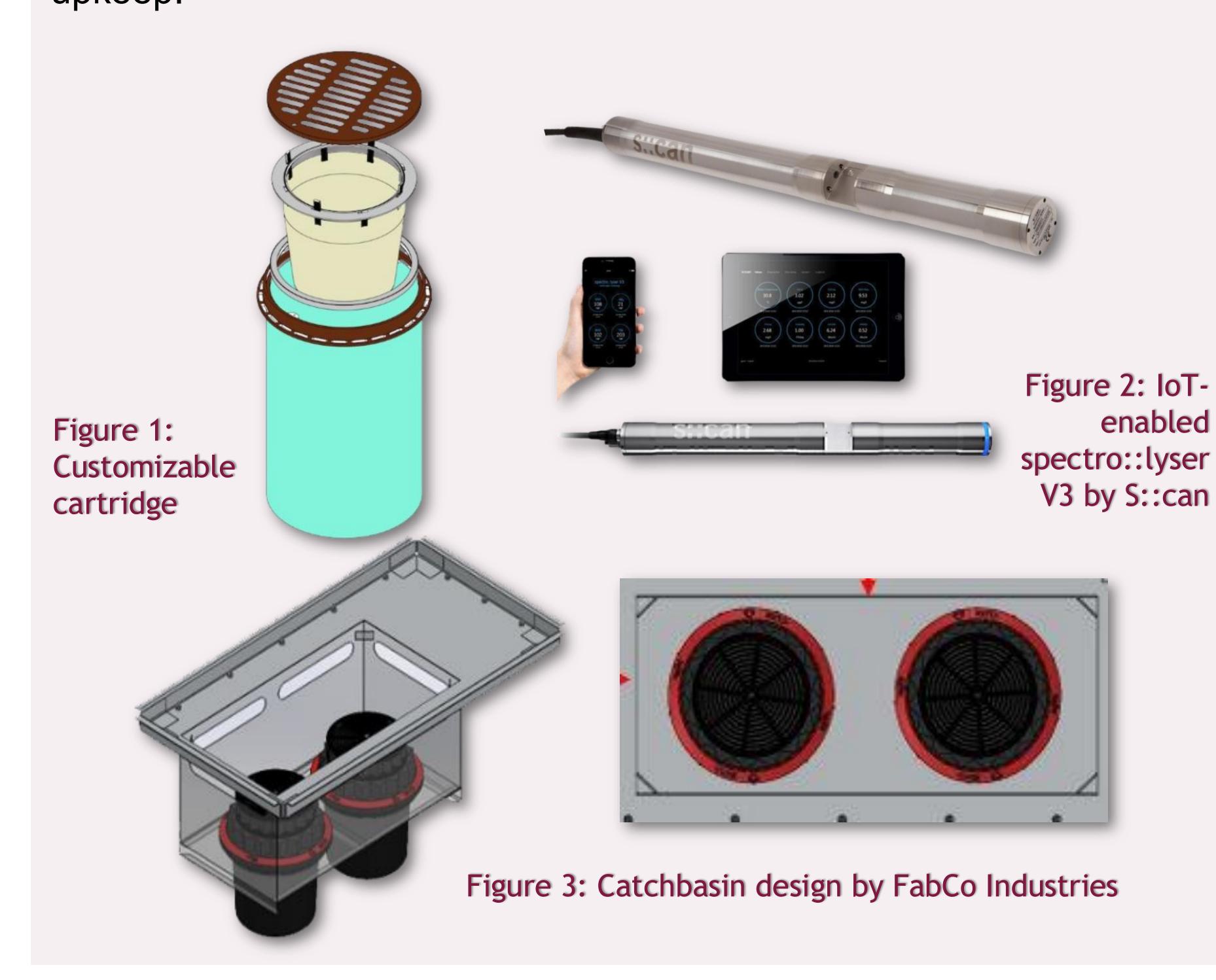




SOLUTION

SmartCatch is a modular, loT-enabled filtration system designed for urban catch basins.

- Customizable Filtration Cartridges: Uses FabPhos for efficient phosphorus capture.
- loT Sensors: Monitors water flow, pollutant levels, and filter saturation in real-time.
- Smart Data Dashboard: Provides real-time monitoring for maintenance optimization.
- Low-Cost & Scalable: Retrofits into existing systems with minimal upkeep.



Phosphorus discharge increased from

26.0 kg/day in 1998

46.4 kg/day in 2013



NEXT STEPS



Lab Testing & Optimization:

 Refine filtration efficiency and sensor accuracy under varying conditions.

Pilot Deployment:

 Install 5-10 units in high-risk areas (i.e Chedoke Creek and Bayfront Park) for real-time monitoring.

Funding & Partnerships:

 Secure grants and collaborate with local government and environmental groups.

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ACKNOWLEDGEMENTS





A Badger Meter* Brand

