



# change:WATER Labs, Inc.

Executive Summary prepared for the Biomimicry Institute, 05/15/2020

change:WATER Labs (cWL) is re-imagining sanitation, with a new way to “flush” away human waste—by SHRINKING it! Emerging from work done for NASA on wastewater recycling on the Space Station, cWL’s “iThrone” is a waste-evaporating toilet that turns sewage into pure water and power.

## PROBLEM & OPPORTUNITY

50% of the world’s population lives without safe, clean toilets, because they live in places with no sewage plumbing. To expand access to safe, clean sanitation, we need a new way to “flush” that doesn’t need plumbing.

## SOLUTION

cWL’s iThrone is a waste-shrinking toilet to provide safe, clean sanitation to places where people can’t flush. It uses 2 patent-pending technologies to get rid of waste onsite: (a) an evaporative material that quickly shrinks human waste by converting ~90-95% of it into pure water vapor; (b) a pee-powered bio-battery that turns urine into electricity.

## BIOMIMICRY IN PRACTICE

cWL’s evaporative approach to “flushing” mimics how plants use evapotranspiration to pull moisture from soil, releasing it as pure molecular water through stomata on their leaves. Inspired by nature’s recycling of waste into energy, cWL’s bio-battery uses symbiotic microbes to collaboratively consume and convert urine into electricity.

## REVENUE MODEL

cWL will target the market for portable toilets (\$18Bn/yr, with aggressive growth projected to \$25Bn/yr by 2027). Selling toilets + recurring replacement membranes, cWL will generate margins of \$70-170/toilet and \$20-300/toilet/yr from the membranes. By year 2 of sales, cWL projects \$6.7MM in revenues, with membrane revenues overtaking new toilets revenues. cWL will sell B2B to contractors and sanitation servicers, via web sales, wholesalers/distributors, and out-licensing of the toilet hardware.

## TRACTION

Funded by the UK and US governments, the first iThrone deployments are currently providing improved sanitation to 500 people in Central Uganda. A new order of iThrones, funded by UNDP, the Turkish Government and Gates Foundation will provide toilets to Syrian refugee communities. Additionally, cWL has LOI’s for 6000 units (\$1.8MM in revenues) from 3 contractors. The iThrone was garnered international recognition, as one of Fast Company’s 2019 World Changing Ideas and featured at the 2019 UN Climate Summit.

## TEAM

cWL’s team combines 30+ yrs experience across cleantech/hardware engineering, venture finance and marketing. Dr. Diana Yousef, PhD, MBA drew from consulting work for NASA to develop the concept of evaporative sanitation. Previously, she worked at McKinsey and the WorldBank, and is a cleantech and Harvard-trained bio-scientist. Huda Elasaad, MS is a serial water-tech entrepreneur and MIT-trained engineer. Paul Martin, MCP is a successful tech sales/marketing executive, and studied City Planning at Harvard and MIT.

## NEXT STEPS

Targeting market launch in 2021, we are developing strategic partnerships for international manufacturing and distribution. We plan to raise \$1.5MM this year to complete product validation and expand our team to prepare for scale manufacturing, sales and distribution.

## UN SDGs

- #6: Clean water & sanitation
- #7: Affordable, clean energy
- #11: Sustainable cities

## INDUSTRY

Sanitation & CleanTech hardware

## FINANCING

- \$0.63MM (non-dilutive)
- Mkt launch in 2021
- LOIs for 6000 units (\$1.8MM)

## NATURE INSPIRATION

- Stomatal transpiration
- Upcycling of waste into energy and nutrients

## FOUNDING TEAM

- Diana Yousef, PhD, MBA - CEO
- Huda Elasaad, MS - CTO
- Paul Martin, MCP - CMO

## CONTACT INFO

change:WATER Labs, Inc  
413 Broadway  
Cambridge, MA, USA  
+1-917-292-5160  
admin@change-water.com

www.change-water.com



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