



A new way to disinfect wastewater.

# >\$2B per year on Wastewater Disinfection



环美图片网  
PHOTOCHINA.COM

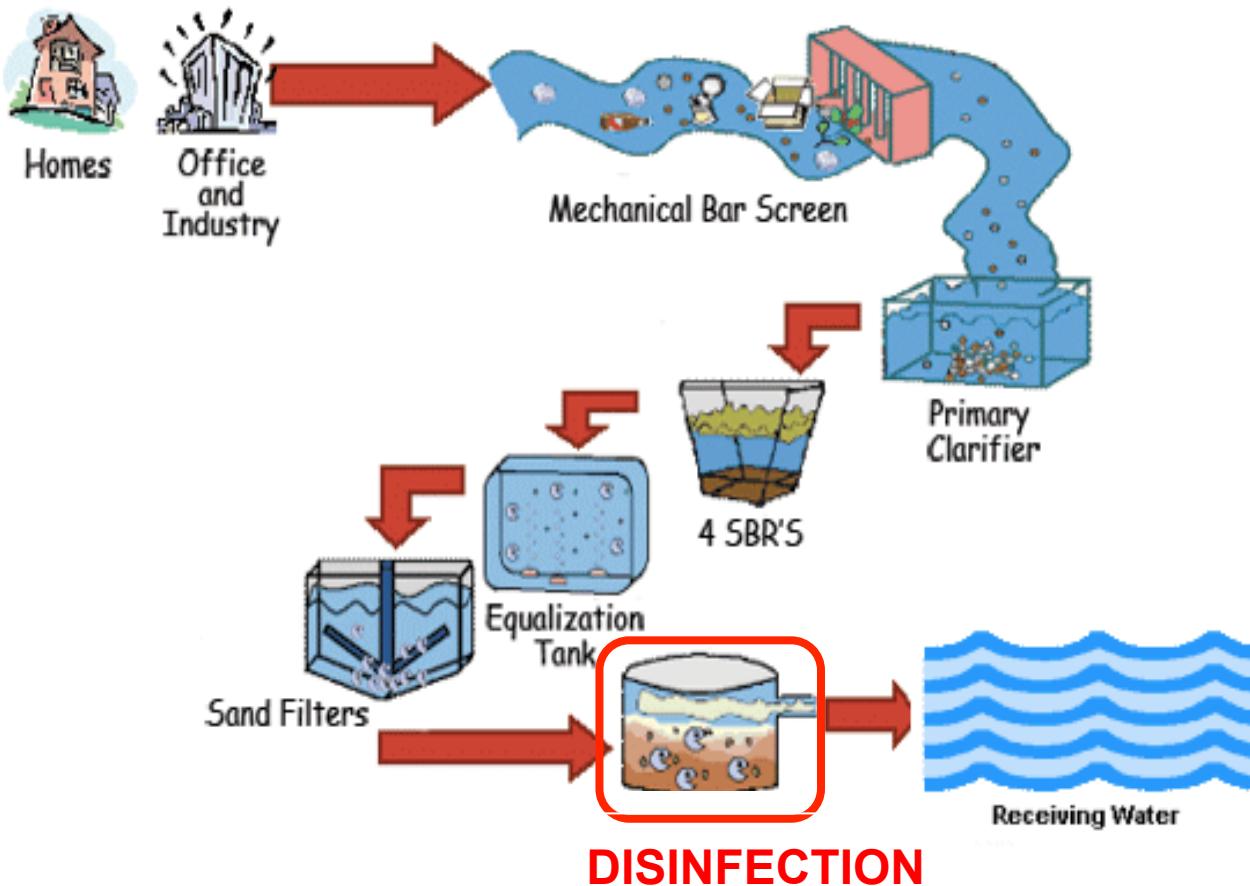


UN WATER



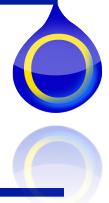
European Environment Agency

# Wastewater Treatment Plant

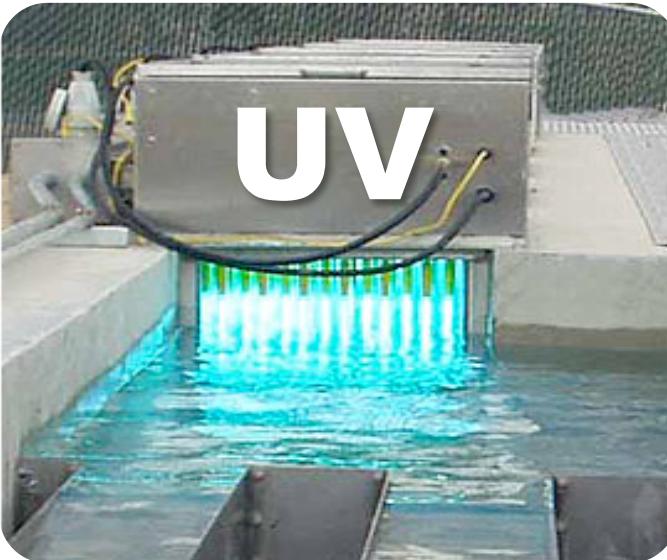


CA Wastewater Plant

# Existing Solutions

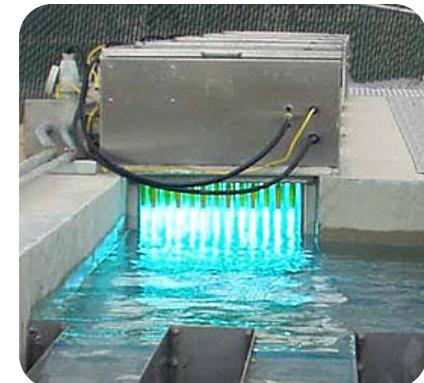
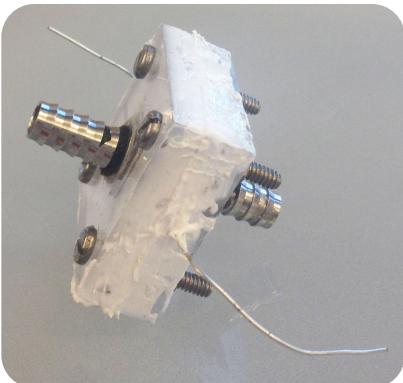
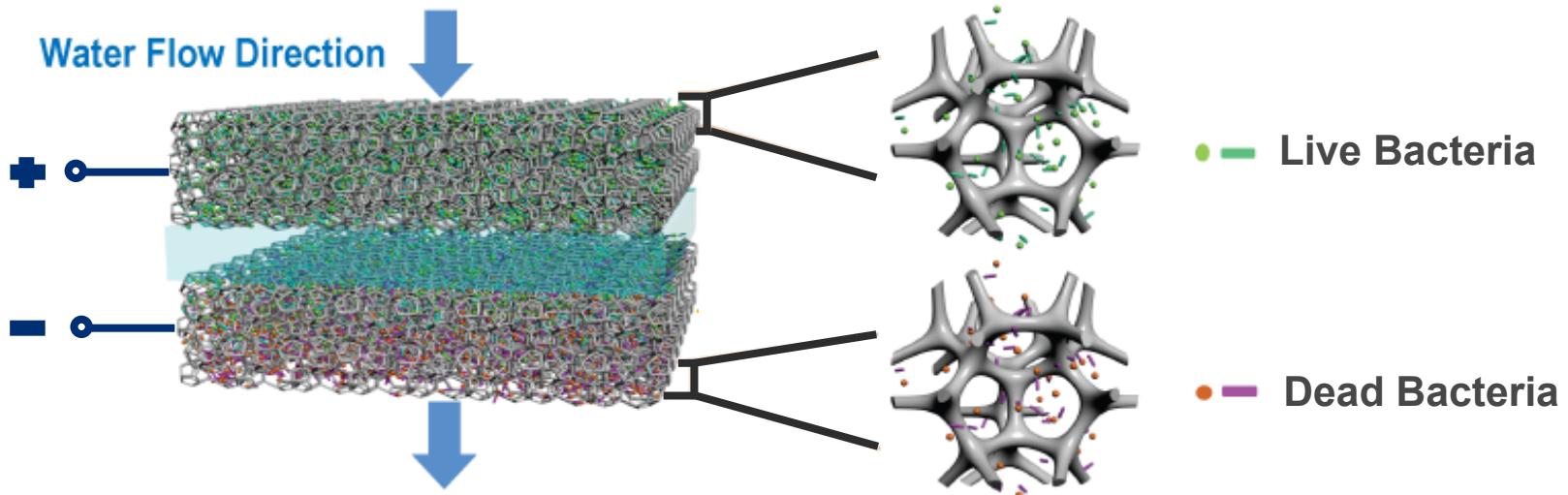


- toxic by-products
- safety risks
- extra dechlorination step → 50% extra cost



- capital intensive
- high energy consumption
- high maintenance
- additional pre-treatment steps

# Our Solution: NanoSponge



# Current Solutions vs. PoroSys

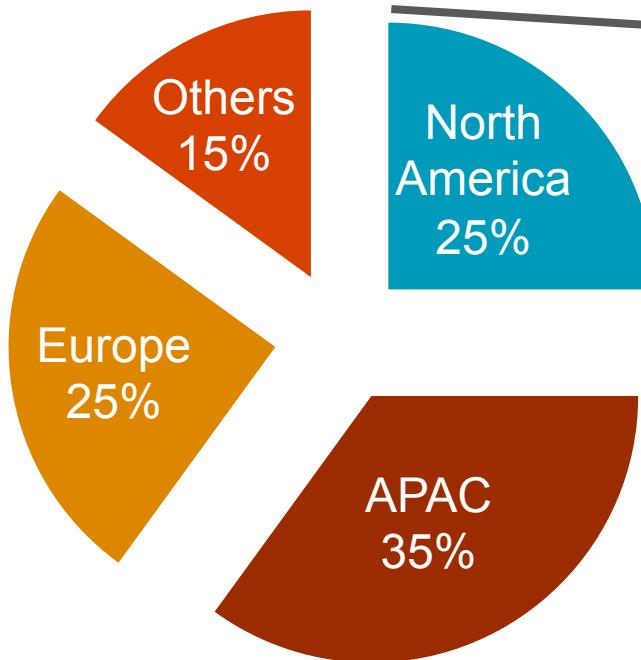


| Consideration                | Chlorine | UV rays | PoroSys |
|------------------------------|----------|---------|---------|
| Disinfection Efficacy        | ✓        | ✓✓      | ✓✓✓     |
| High Speed                   | ✓        | ✓✓      | ✓✓✓     |
| Safety                       | ✓        | ✓✓      | ✓✓✓     |
| Sensitivity to Water Quality | ✓✓✓      | ✓       | ✓✓      |
| Hazardous byproducts         | ✗        | ✓✓✓     | ✓✓✓     |
| Low Power                    | ✗        | ✓       | ✓✓✓     |
| Low Cost                     | ✗        | ✓       | ✓✓✓     |

# Market Breakdown

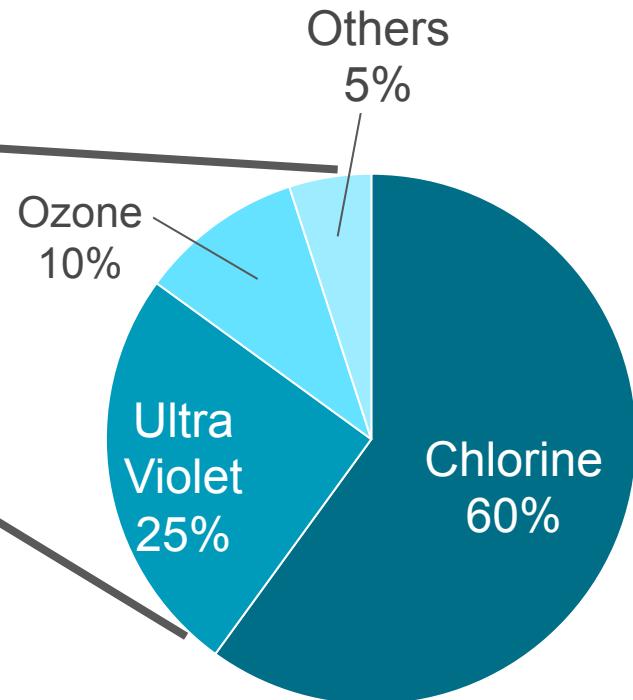


## Global



\$1.94 Billion<sup>1</sup> (2012)

## United States



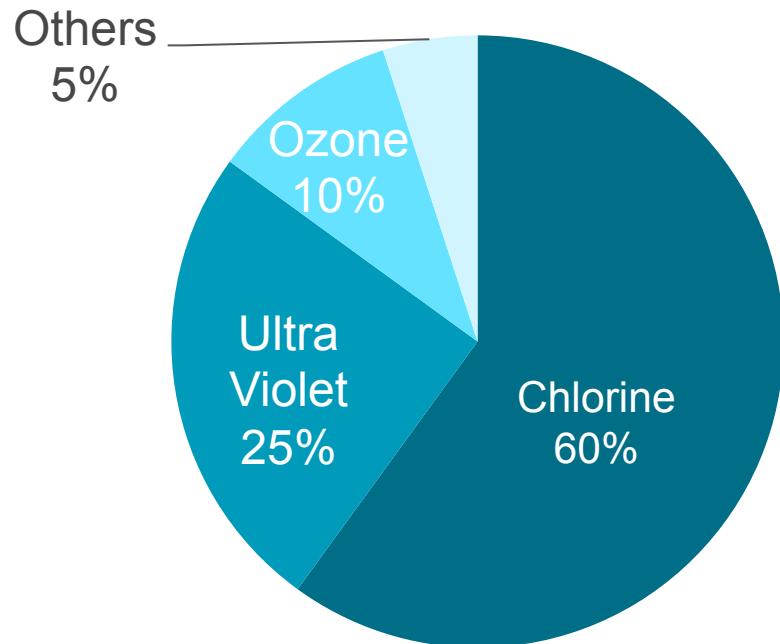
~\$500 Million (2013)

<sup>1</sup>Frost and Sullivan

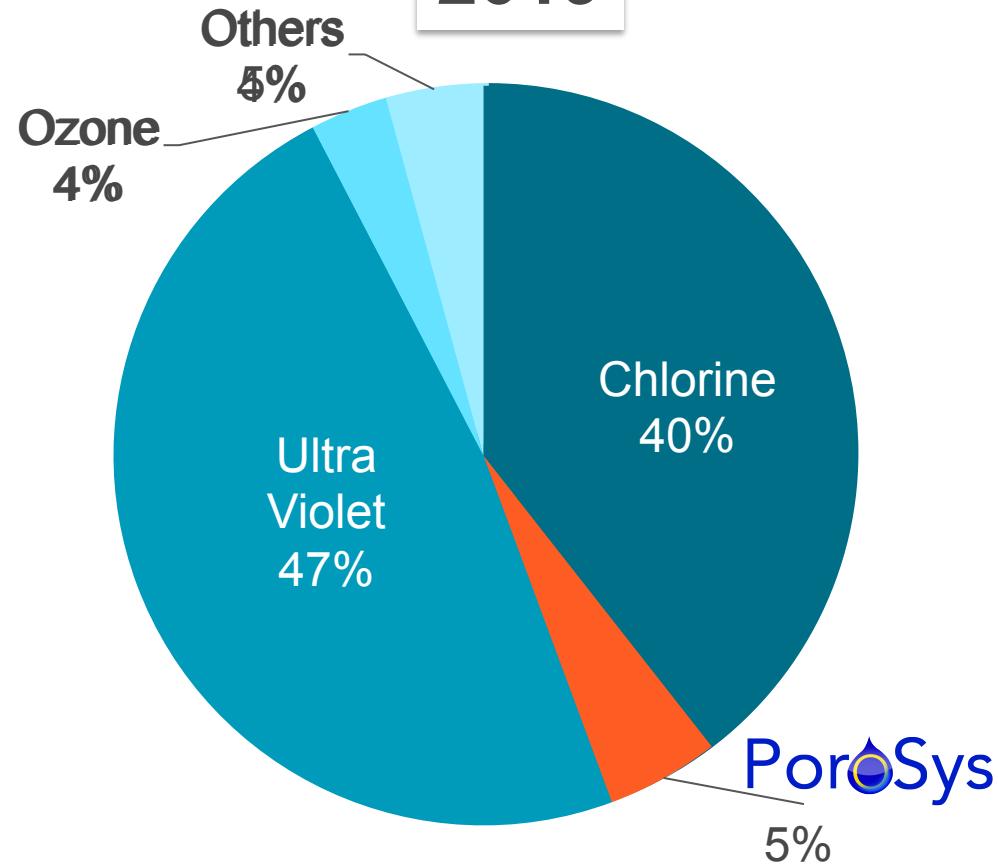
# US Market Growth Analysis



2013



2019



PoroSys  
5%

~\$500M

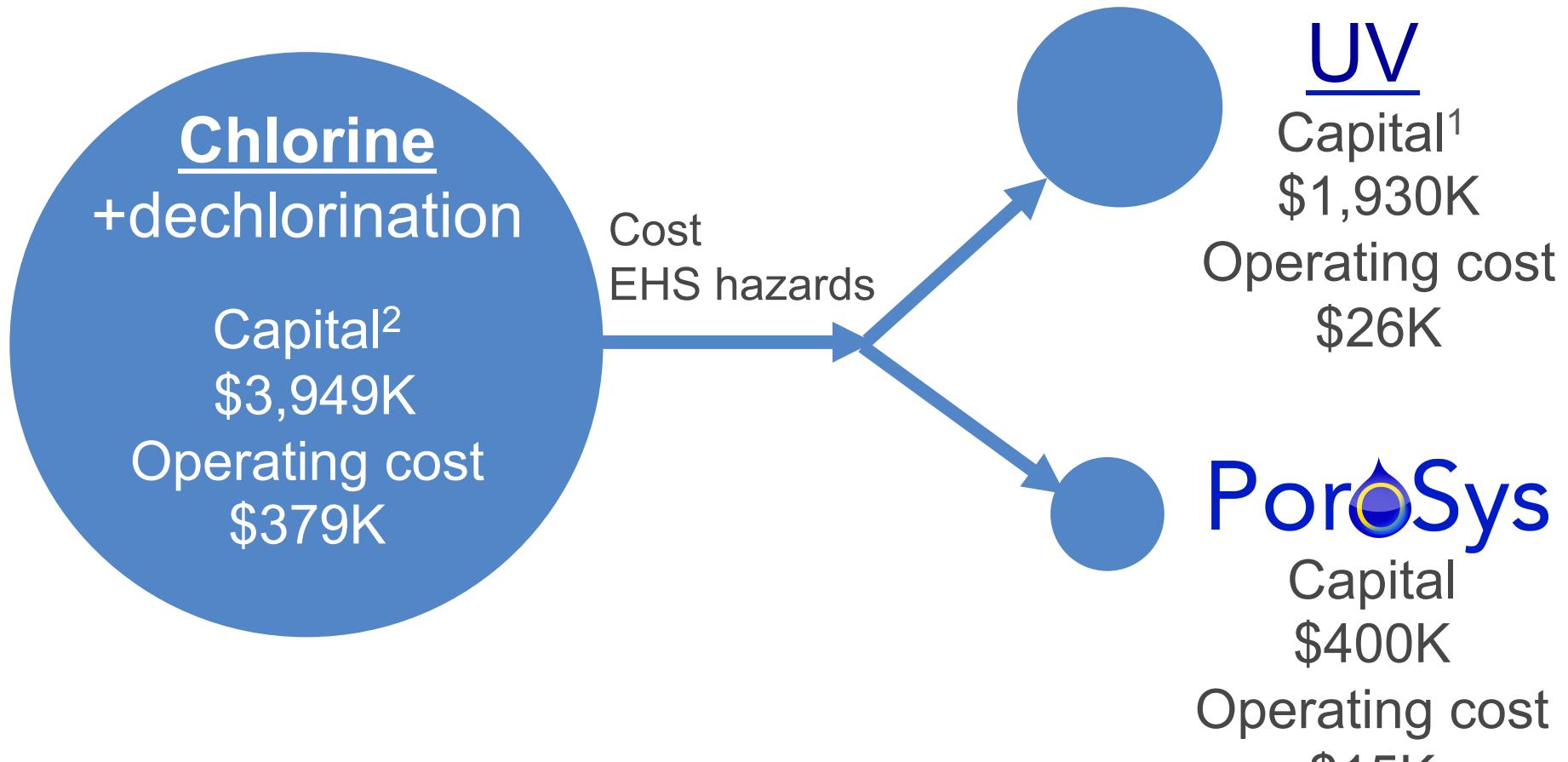
**CAGR = +6.0%**

~\$709M

# Business Model



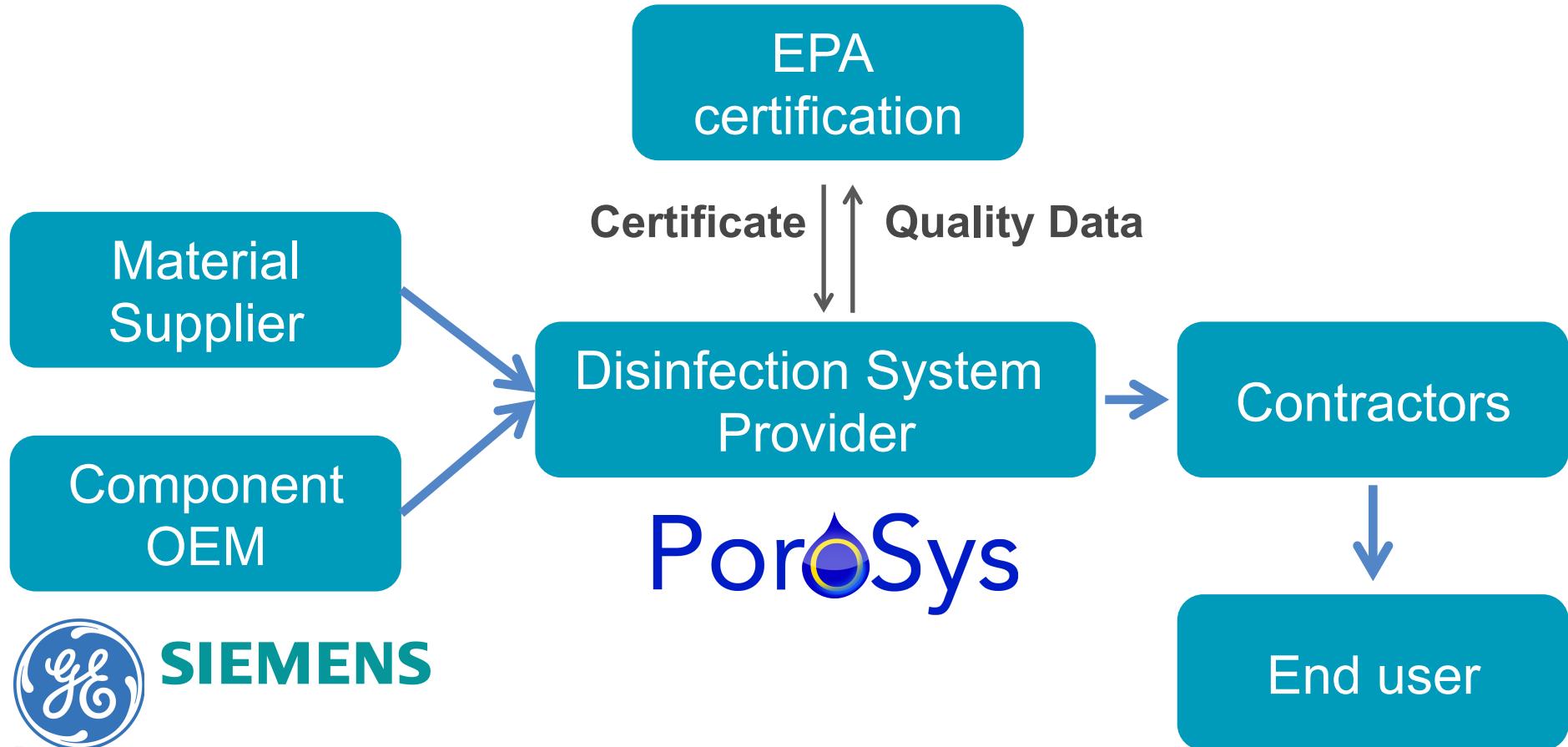
For a plant treating **20 million gallons a day**



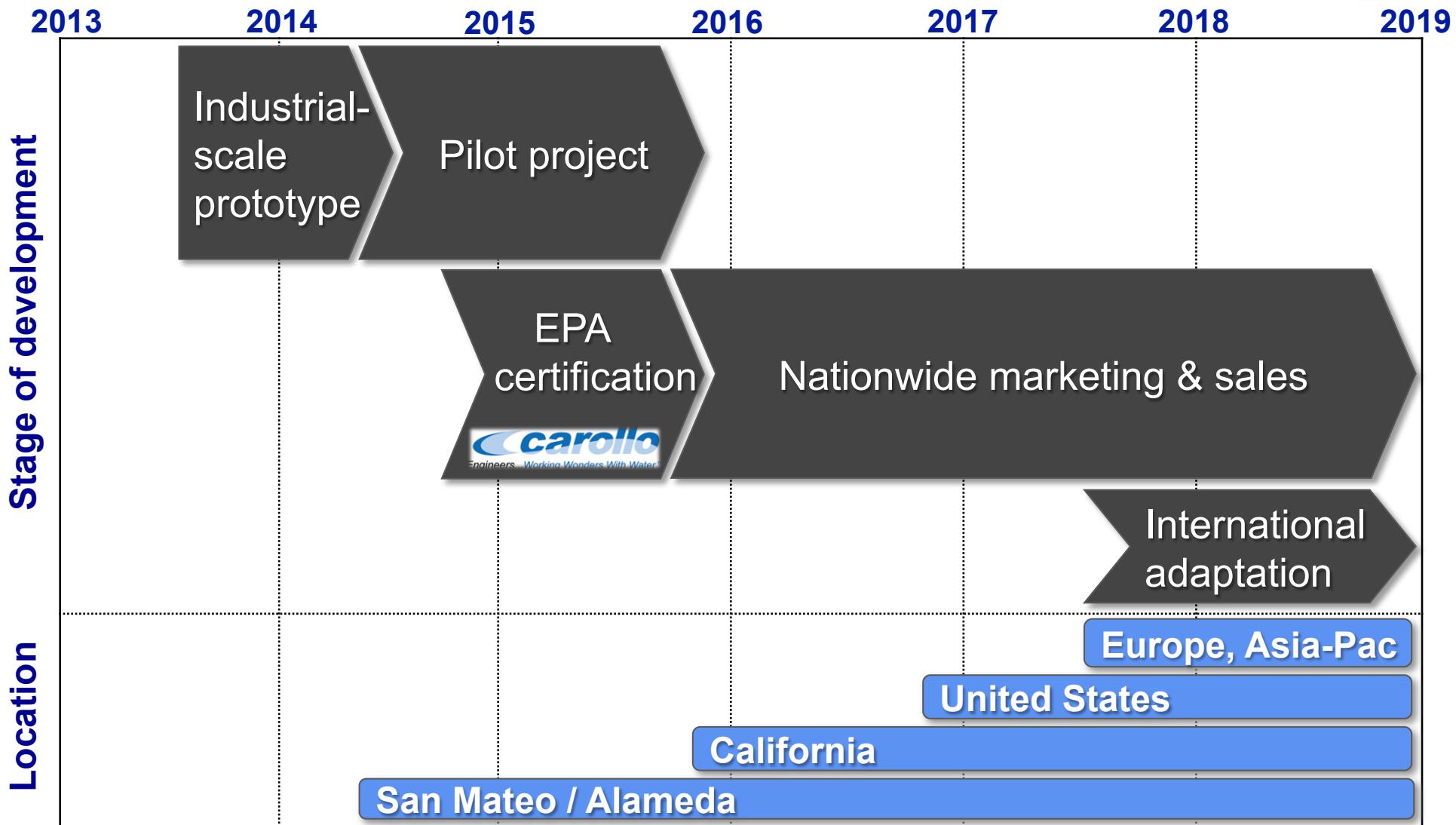
<sup>1</sup>Wastewater Disinfection Technologies Studies December 2009 by City of Ames, Iowa.

<sup>2</sup>EPA Wastewater Technology Fact Sheet: Chlorine Disinfection.

# Value Chain



# Go-to-market Strategy



# Finance Summary and Financing



|               | Seed  | Series A  | Series B   |
|---------------|---|---|--|
| Amount / Date | \$500K / Aug 2013   | \$2M / Aug 2014   | \$15M / Aug 2016   |
| Achievements  | <ul style="list-style-type: none"><li>Large Scale Prototype</li></ul> | <ul style="list-style-type: none"><li>Pilot Wastewater Plants</li><li>Complete System</li><li>Pre-Valuation: \$4.5M</li></ul> | <ul style="list-style-type: none"><li>Large Wastewater Plants</li><li>Pre-Valuation: \$28.5M</li></ul> |

(\$ in thousands)

\$30,000

\$25,000

\$20,000

\$15,000

\$10,000

\$5,000

\$0

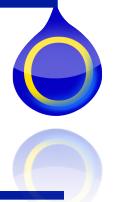
Revenue End Cash

| Year | Revenue (\$ in thousands) | End Cash (\$ in thousands) |
|------|---------------------------|----------------------------|
| 2013 | 0                         | 0                          |
| 2014 | 0                         | 1000                       |
| 2015 | 0                         | 0                          |
| 2016 | 0                         | 12000                      |
| 2017 | 3500                      | 7500                       |
| 2018 | 7000                      | 4500                       |
| 2019 | 28500                     | 10000                      |

2013 2014 2015 2016 2017 2018 2019

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# Founding Team Members



Juanri, MS

Materials  
Engineering



Lorenzo  
Mangubat, MS

Materials  
Engineering



Charles  
de Bourcy,  
PhD candidate  
Applied  
Physics



Vivian  
Wang, PhD  
candidate  
Electrical  
Engineering



Maryam  
Ziae, PhD

Electrical  
Engineering



Jae Hyung  
Lee, PhD

Electrical  
Engineering



Dr. Yi Cui  
Assoc. Prof. at  
Stanford  
University



The Analog and Digital Company™



THE BOSTON CONSULTING GROUP



Sandia  
National  
Laboratories



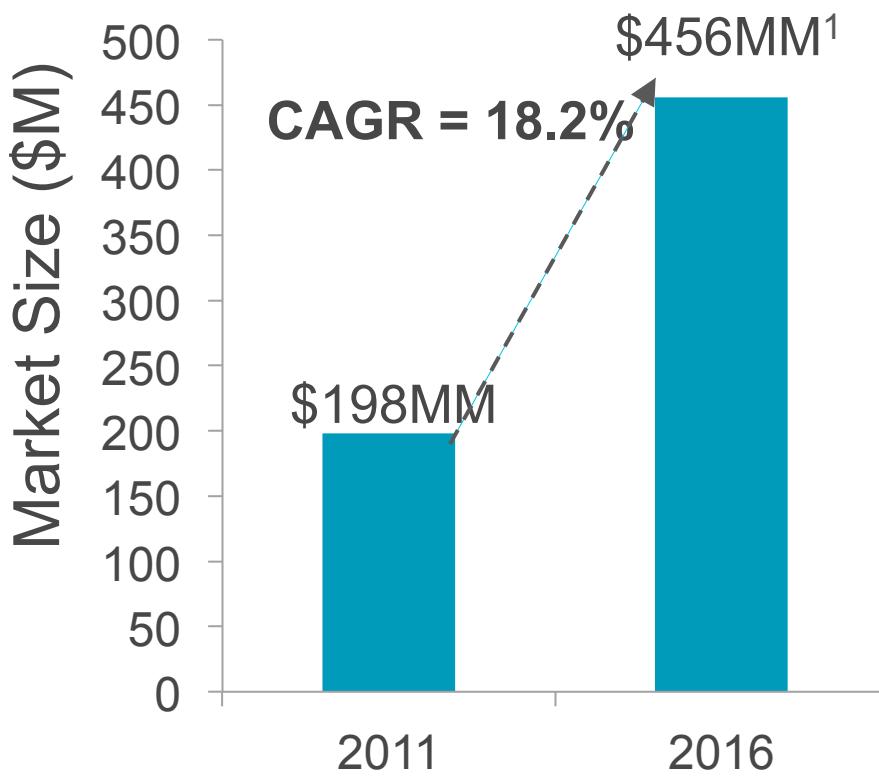


A new way to disinfect wastewater.

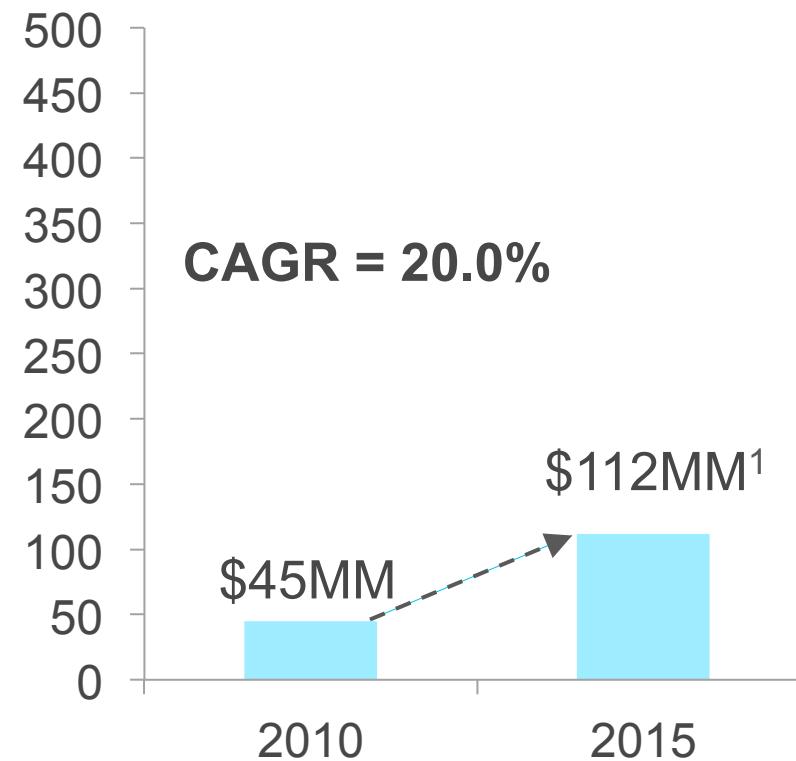
# Market Growth Trend



UV wastewater disinfection equipment

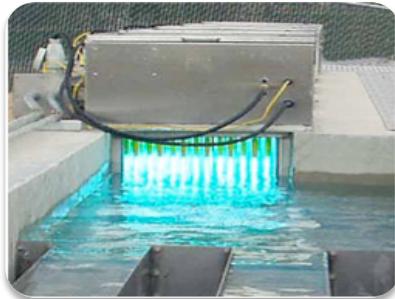
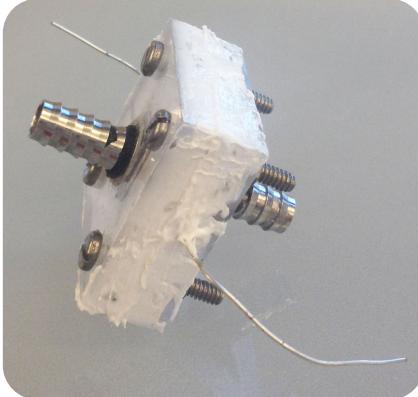


Nanotech water disinfection equipment



<sup>1</sup>BCC Research

# Risks



## Technology

- Prove pilot scale, large scale
- May not be low-cost

## Adoption

- Race against UV systems

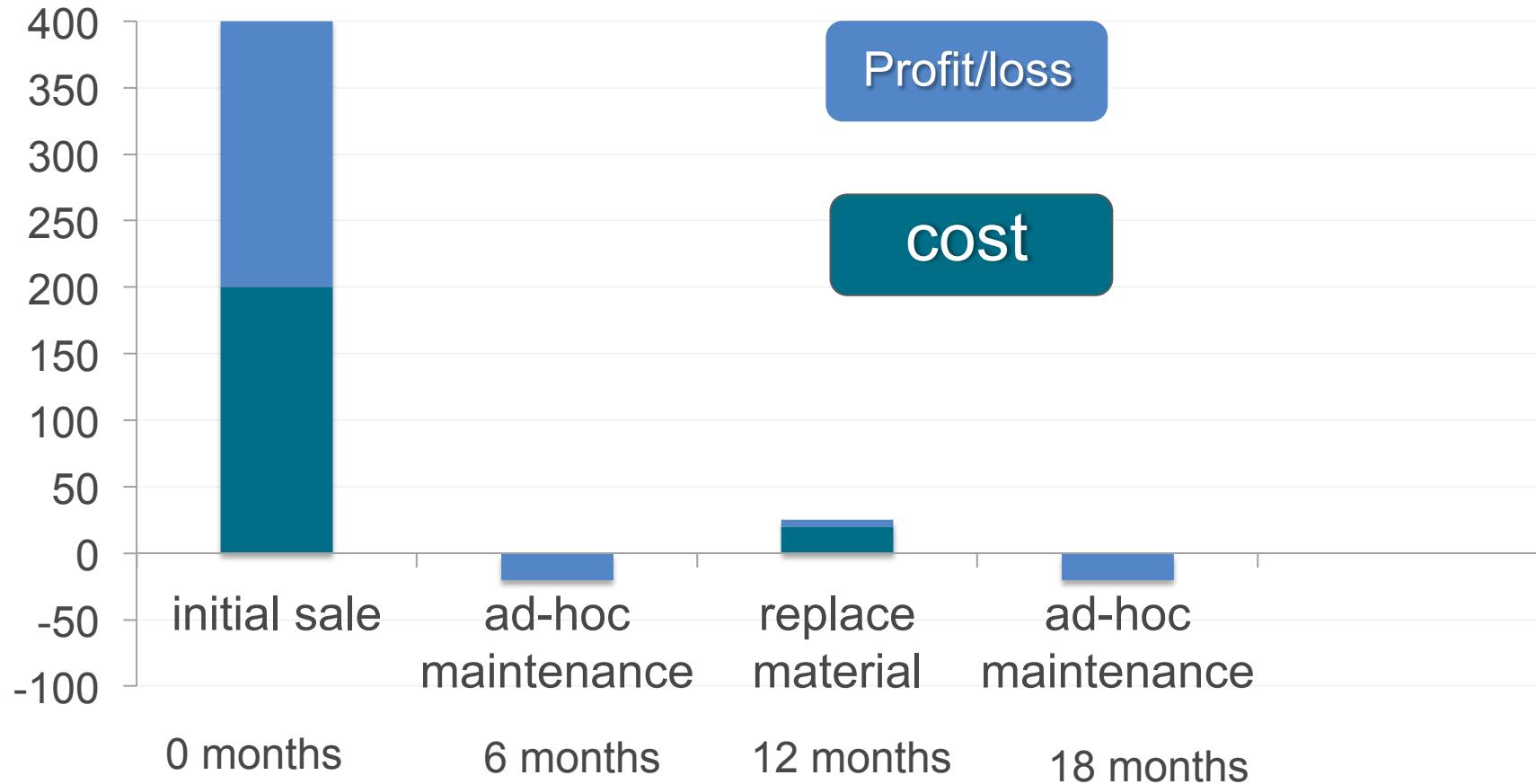
## Regulation

- May be slow
- May not certify



# Cash Flow per Solution

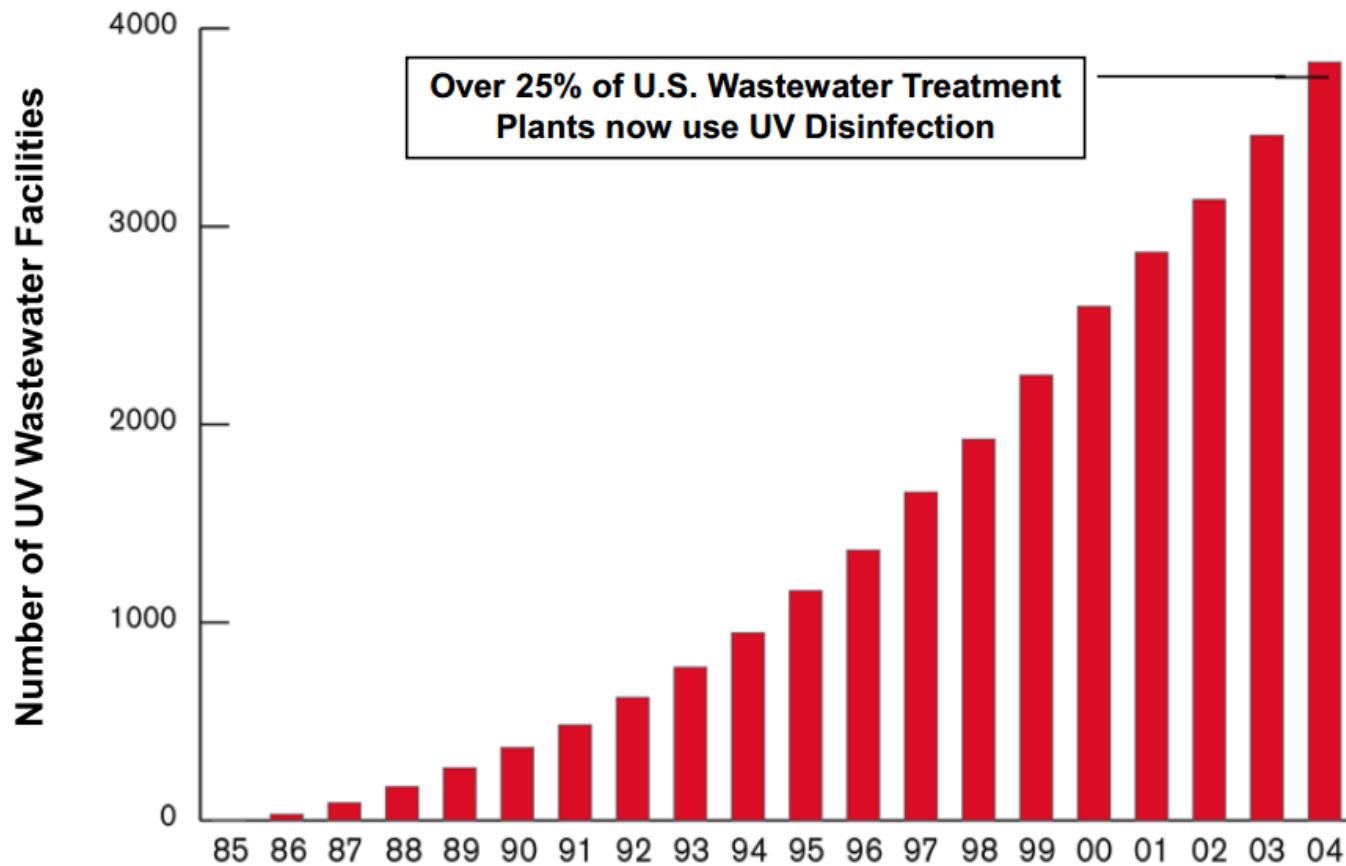
\$ in thousands



# Growth of UV installations in US



## GROWTH OF UV

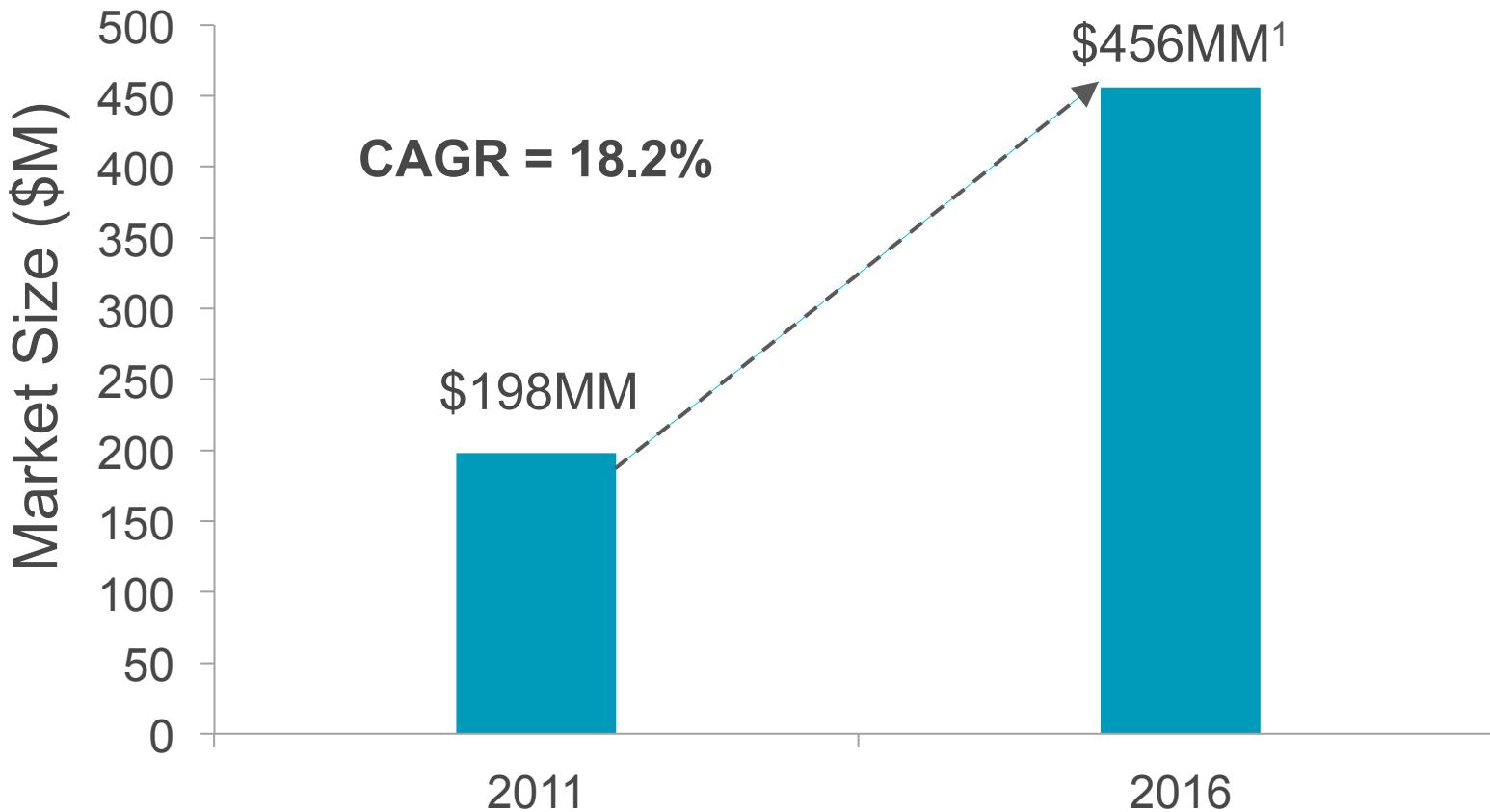


Source: ohiowater.org

# Global Market Growth Trend



## UV wastewater disinfection equipment

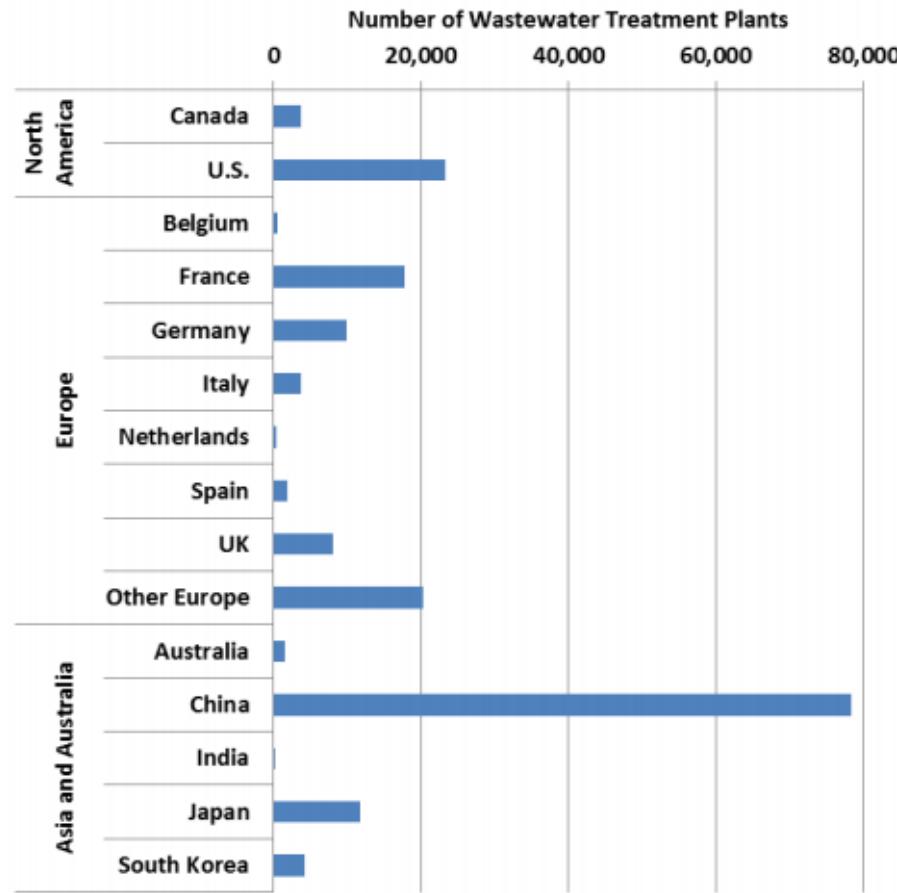


<sup>1</sup>BCC Research

# Global distribution of wastewater plants



**Figure 1-1**  
**Installed Base for Existing Wastewater Treatment Plants**



Source: China Statistical Press (2011); Eurostat (2012); SBI Energy.