



**The Catalyst for
Sustainable Health and
Economic Development**

Illinois Institute of Technology

EnPRO 355

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THE PROBLEM

5 million people die annually due to water-born, water-based, and water-related diseases

3.5 billion treatable episodes each year

A child dies every 8 seconds from consuming contaminated water

1/4 of the human population is without access to potable water



POTENTIAL MARKET





AVAILABLE ALTERNATIVES

Large-Scale Infrastructures

- High initial and maintenance cost
- Difficult to sustain

Bottled Water

- High cost
- Inconsistent availability in rural areas

Sand/Bio-filters or Chlorination

- High tech
- High initial and maintenance costs



OUR SOLUTION

An innovative water purification system



- Durable
- Flexible
- Decentralized
- Sustainable
- Relevant
- User-Friendly
- Self-Contained
- Affordable

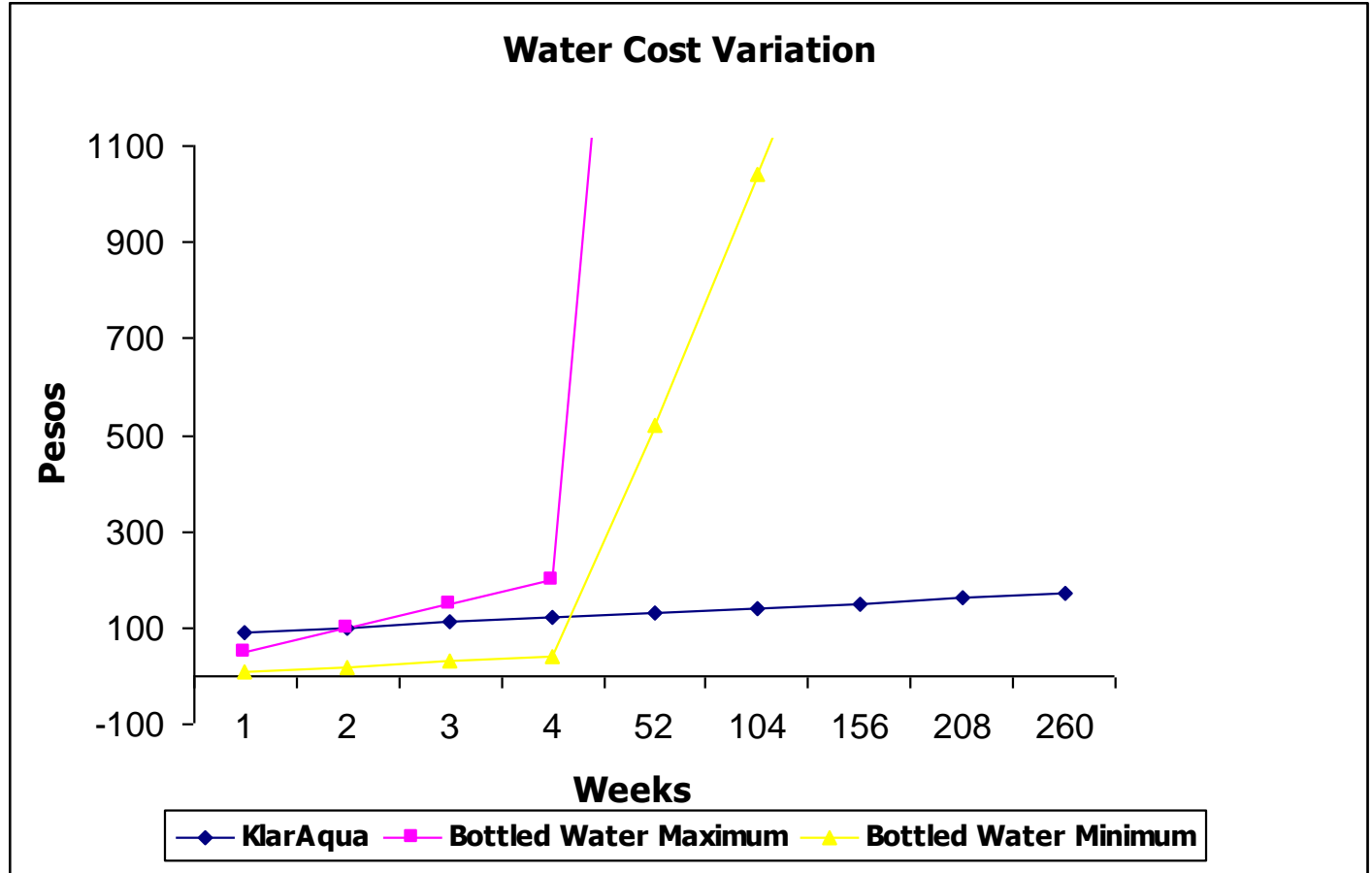


COST ANALYSIS

| ESTIMATED UNIT COSTS | | |
|-----------------------------|----------------|-------------------|
| FILTER ELEMENTS | US (\$) | MEX(pesos) |
| Ceramic bowl and discs | 1.72 | 19 |
| Colloidal Silver | 1.18 | 13 |
| Plastic casing and cones | 1.90 | 21 |
| 5-gallon bucket | 3.45 | 38 |
| TOTAL | \$8.25 | 91 pesos |

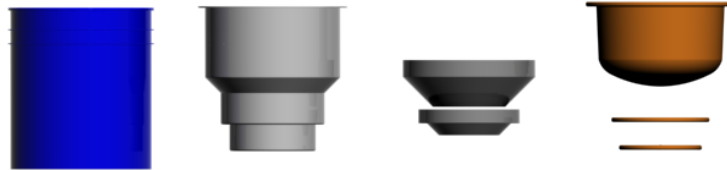


COST ANALYSIS

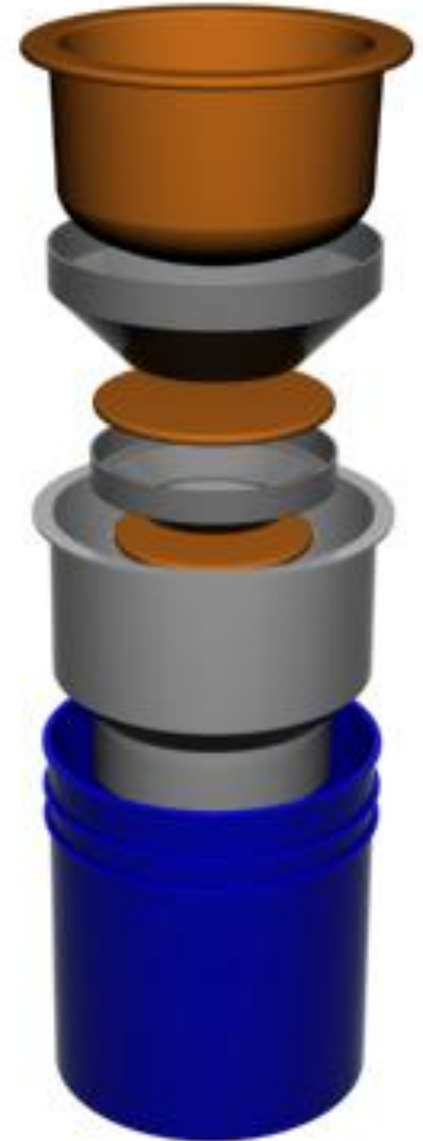




SYSTEM DESIGN

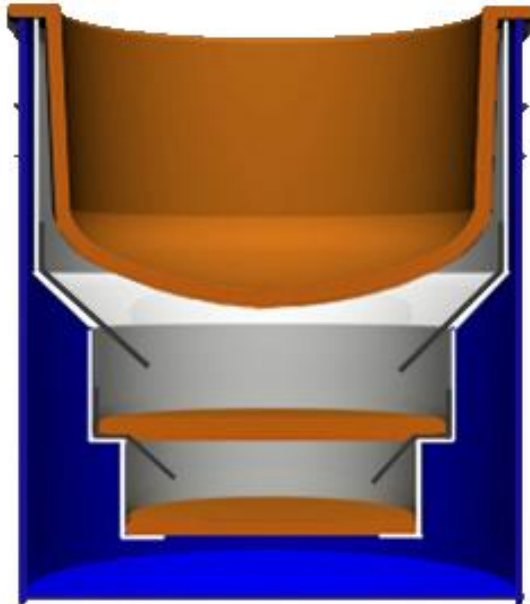


- 5-gallon bucket
- Plastic filter housing
- 2 plastic cones
- 3 ceramic filters
- Spigot
- Cloth cover



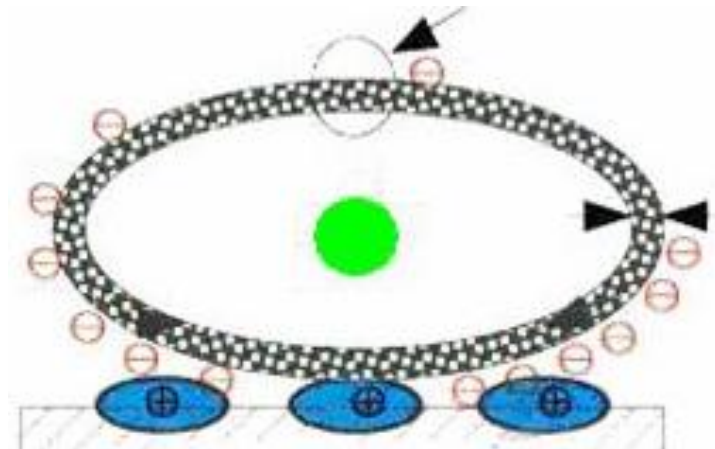
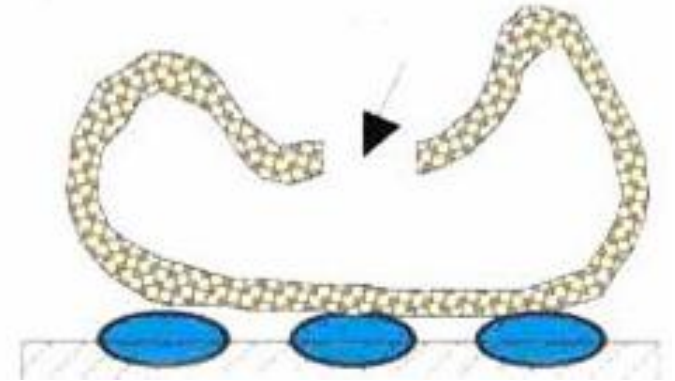


HOW IT WORKS



Average flow rate: 1L/ hour

Bacterial removal: High,
further testing required

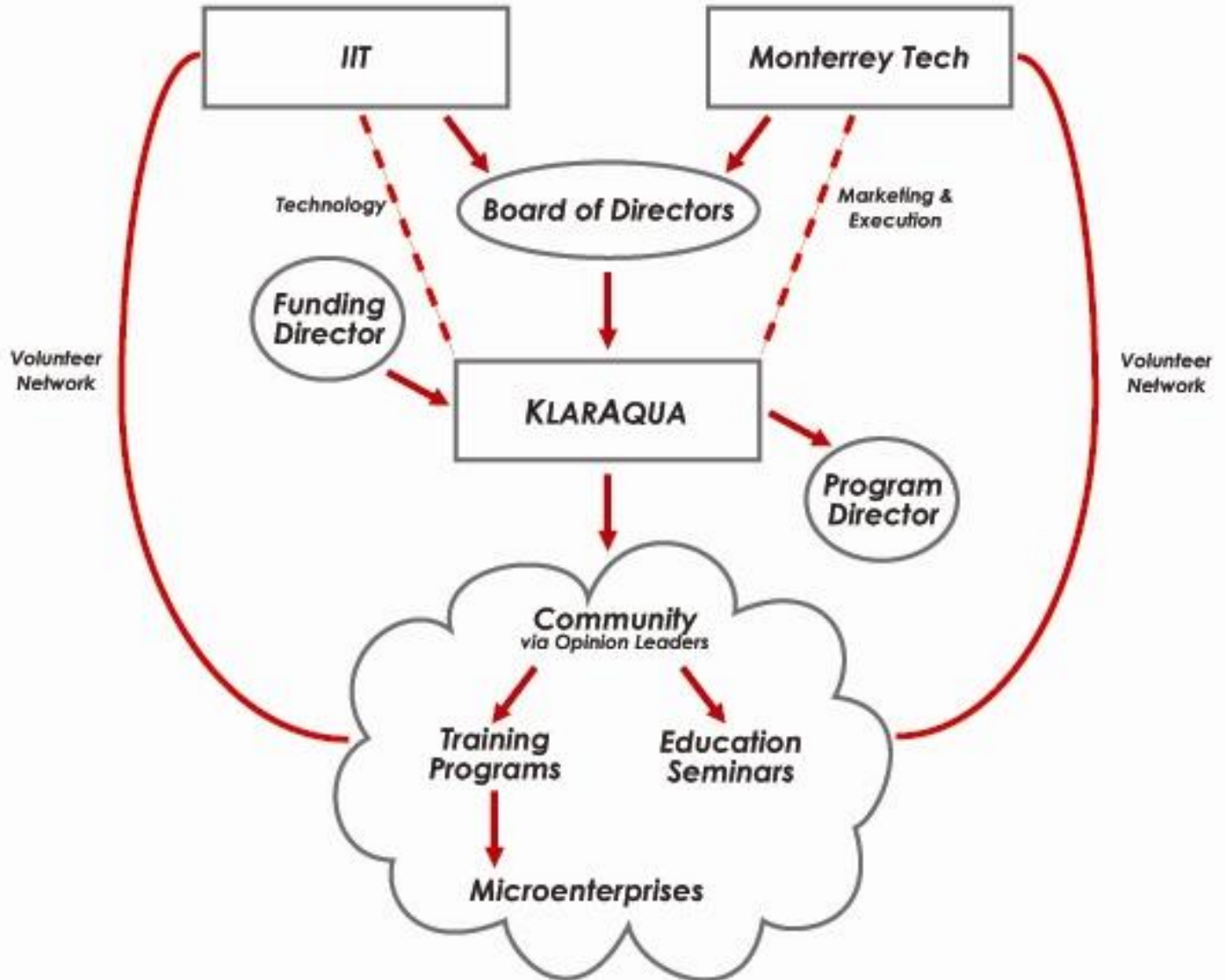


 : colloidal silver

 : nucleus



BUSINESS MODEL





MARKETING STRATEGY

Low-cost, Low-tech, Cultural Relevance, Educational

Written

- Brochures
- Billboards

Entertainment

- Engaging presentations
- Use novelty to attract customers

Word of Mouth

- Local success stories
- Local opinion leaders



FUNDING STRATEGY

Grants

- Received
 - National Collegiate Inventors and Innovators Alliance (NCIIA): \$16,000
 - Idea To Product Competition: \$15,000
- Pending
 - P3 (People, Prosperity and Planet) Award: \$10,000
 - Tech Museum Award: \$50,000

Partnerships

- Conferences and networking
 - Website development
 - Partnerships with governments and NGO's



CUSTOMER BENEFITS

- **Improved health**
 - Higher quality of life
 - Increased work efficiency
 - Reduced health care expenses
- **Local economic development**
 - Income generating potential for artisans
 - Profits stay in the community
- **Empowering agent**
 - Provides educational resources
 - Gives consumers a choice



Education

- Resistance to new ideas
- Logistics

Relevancy

- Cultural sensitivity

Trust

- Foreign ideas, practices and information
- Local leaders, local success stories



FUTURE PROGRESSION

- **More bacterial testing**
- **Removal of multiple contaminants**
- **Educational programs**
- **Training seminars**
- **Full scale working prototype**
- **Subsidization possibility**
- **Pilot studies**



***NOT JUST A PRODUCT,
IT'S A SERVICE.***

WATER PURIFICATION...ONE DROP AT A TIME