HELIOZ

WADI

HELIOZ | Social Enterprise

What the hell is Social Entrepreneurship?

A definition….

"Innovative approaches will be accepted by people if they believe that you care about them and you genuinely want them to succeed."

© C.K. Prahalad

The Global Burden

Of Contaminated Drinking Water

1.8 Billion

People have reduced access
to clean drinking water

650 Million

have no access to clean water

2000 Children/Day

are dying because of
waterborne diseases

Waterborne Diseases

Caused by the Ingestion of Contaminated Water

Photo sources: Bacteria, viruses, protozoa

Bacteria

Cholera

Legionnaires' disease

Salmonellosis

Typhoid fever

Trachoma

Viruses

SARS

Hepatitis A

Poliomyelitis (Polio)

Protozoa

Cryptosporidiosis

Amoebiasis

Giardiasis

Microsporidiosis

Diarrheal diseases kills **more children** than AIDS, Malaria and Measles **combined**.

Impact on Households

Impact of Contaminated Drinking Water

On expenditures for:

- Health
- Wood (for cooking water)
- Safe Drinking Water

On time for:

- Collecting wood (to boil water)
- Collecting safe drinking water from long distances

On Family Planning:

- Uncertainty / High Child Mortality
- Education vs. work or illness of children

Economic Impact

Healthcare Costs of Contaminated Drinking Water

Expenditures of India treating Diarrhea:

25 billion USD annually

~ 21 USD per capita

Countries spend on average 2% of their total GDP on the treatment of Diarrhea.

Substituting Treatment Methods

Couldn´t solve the problems in the past 50 years

Boiling

- People spend 1-8 h / day collecting wood
- Expenditures of 1-10 US$ / month on Kerosene or Wood
- Unhealthy indoor pollution

Chlorination

- Bad Taste
- Expensive and ongoing purchase
- Difficult to use

Filtration

- High purchase cost
- Ongoing purchase of filters
- Maintenance needed

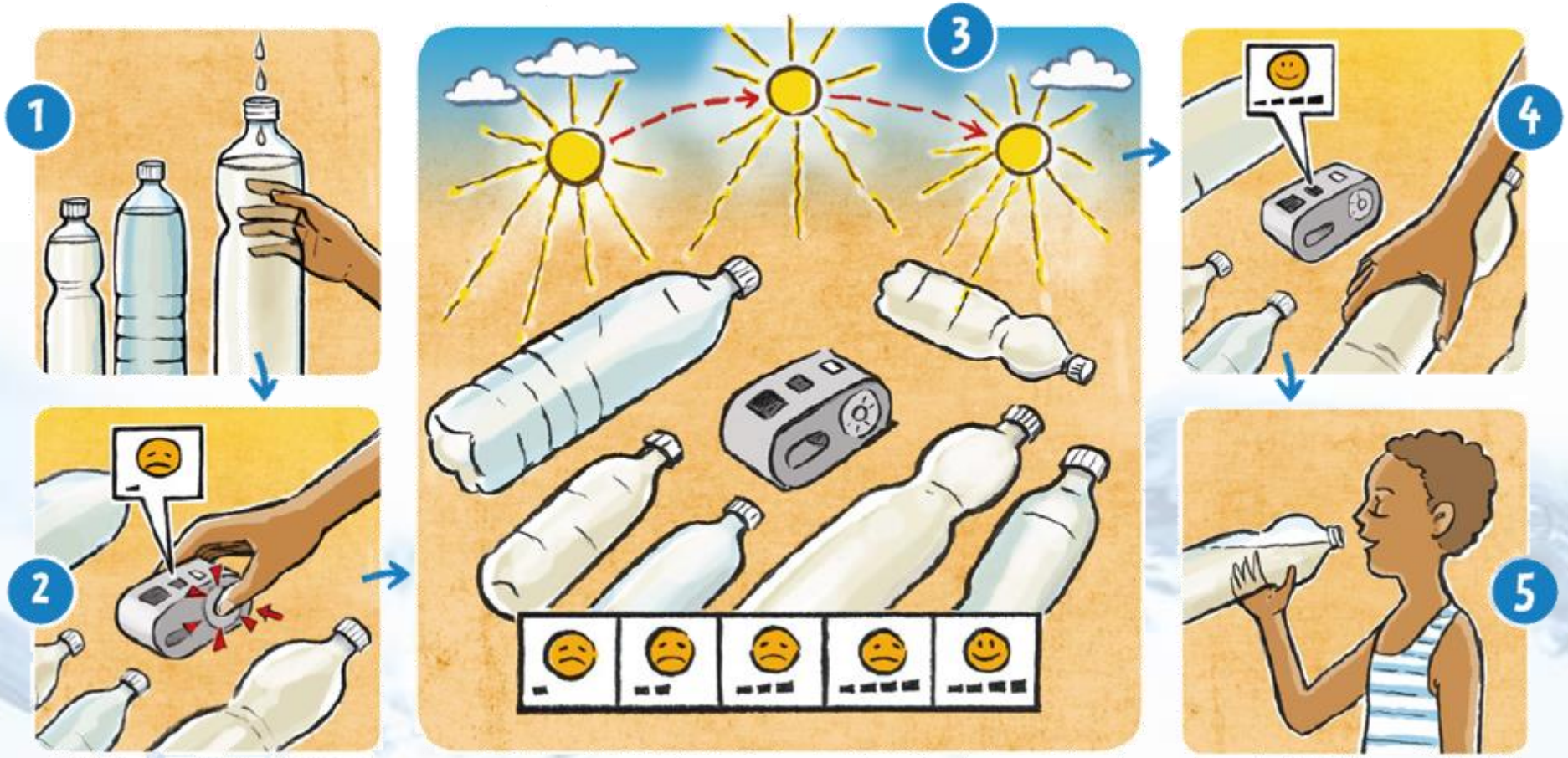
Photo sources: Heat, chemicals, filtration

WADI – a disruptive new technology

vs. Common Water Treatment Methods

Application

WADI



WADI

Main Advantages

Sustainable

- Guaranteed 2 year life time
- Environmentally friendly

Practicable

- No filters
- No chemicals
- No spare parts
- No maintenance
- Shock and water proof

Affordable

- No batteries
- Inexpensive

15 €*

* Ex Works

Challenges

Challenges in Product development

WADI Design

1 **2** **3** **...**

Challenges in Product development

WADI Design

Microbiological Tests with WADI™

Goal: min. 3 $\log_{10}$ (99.9%) Reduction of Coliform Bacteria

El Salvador	02/2015	National Lab El Salvador de San Salvador Result: **4 $\log_{10}$ (99.99%) reduction** of E. coli bacteria.
Thailand	08/2014	King Mongkut's University of Technology Thonburi, Thailand. Result: **4 $\log_{10}$ (99.99%) reduction** of E. coli bacteria.
South Africa	05/2014	Council for Scientific and Industrial Research (CSIR), South Africa. Result: **> 4 $\log_{10}$ reduction** of E. coli bacteria.
Uganda	05/2014	ATC for Water and Sanitation, Ministry of Water and Environment, Uganda. Result: **> 3 $\log_{10}$ reduction** of E. coli bacteria.
Ethiopia	03/2014	Ethiopian Conformity Assessment Enterprise (ECAE) , Ethiopia. Result: **> 4 $\log_{10}$ reduction** of E. coli bacteria.
Austria	05/2013	University of Natural Resources and Life Sciences (BOKU), Austria. Result: **4 $\log_{10}$ reduction** of enterobacteria.

WHO approved

World Health Organization

WADI meets WHO microbiological performance criteria and is classified as providing targeted protection!*

* High protection against Bacteria and Protozoa, reasonable results with viruses. The only effective solution on the market against protozoas like Cryptosporidium

Challenge Business Model

For WADI™

1 B2B – NGOs and Organizations

1st & Primary Revenue Stream

- Governments
- NGOs & NPOs

2 CSR / CO2

2nd Revenue Stream

- CSR donated WADIs
- CDM/C02 certificates

3 Distributors

3rd Revenue Stream

- LOCAL SALES REPRESENTATIVES

X B2C

Upcoming Revenue Stream

- Online Retail
- Outdoor

The Base of the Pyramid

OUTDOOR MARKET

Please find detailed description in Addendum, Slide 28 ff

Solution?

Current Project Partners

Ongoing Projects are being implemented with the following partners

Caritas

JUGEND EINE WELT

WATERSPOUTT

Frugal Innovation in R&D

Reactor

Jerry can

Filter

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 688928

Partner Universities for WATERSPOUTT

Making Frugal Innovation possible

Ethiopia


Kenya

Kenya


CLEAN WATER
FOR LIFE
It's Simple!
1
Fill Clean, Clear bottles
With Water
2
3
Friday 29th July 2016
My Name is
My School is Namayumba
Attendance
Girls 7
Boys 8
Key 10

Indonesia


Uganda

Meet the Team

HELIOZ
Social Enterprise

Ruedigergasse 10
1050 Vienna
Austria/Europe

Phone: +43 1 585 00 04
E-Mail: office@helioz.org
Web: www.helioz.org
Shop: www.helioz.org/shop

Visit Helioz on Facebook | Twitter

Addendum

Smileys Around the World

Photos from the Field

WADI in India

WADI in Kenya

WADI in Vietnam

WADI in Ghana

WADI in Uganda

WADI in Namibia

WADI Competition

TCO* Makes WADI the Most Economic Device

	Product	Application Method	Price in EUR	Durability in Years	Maintenance / add. Costs	Maintenance / Intervall	Disinfection price /Liter**
HINDUSTAN UNILEVER	Pureit	Water Purification	27	2-3	YES / Filter Exchange	3 months	0.016
VESTERGAARD FRANDSEN	LifeStraw	Filter	4,50	5	YES / Filter Exchange	3 months	0.005
TATA	TATA SWACH	Filter	13,50	5	YES / Filter Exchange	4 months	0.009
SOLVATTEN	SOLVATTEN	Solar Disinfection / Filter	72	5	YES / Filter Exchange	1 year	0.012
Chlorine Tablets	many	Chemical disinfection	-	-	YES	monthly	0.005
HELIOZ	**WADI™**	**Solar Disinfection**	**12,50**	**>2**	**NO**	**NO**	**0.002**

* Total Cost of Ownership

** Based on 10 Liters a Day / during 2 year of warranty time (actual life expectancy of the WADI is about 4 years)