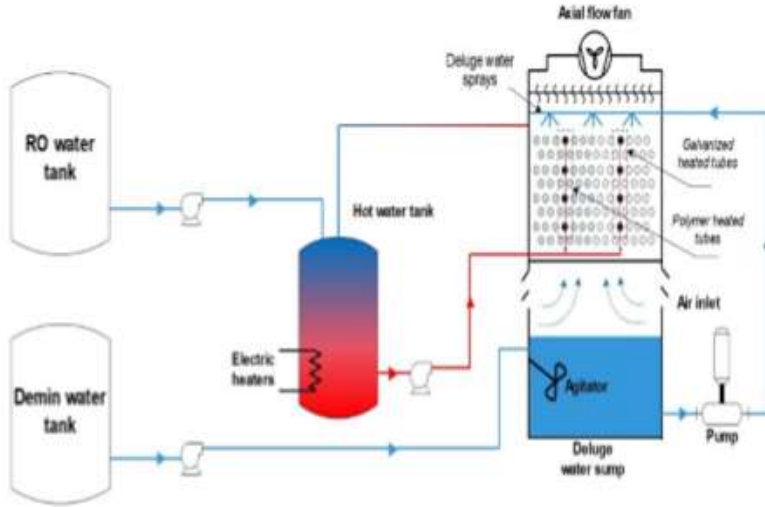




Fouling
Shrimp

Heat Exchanger re-invented

What is a Heat Exchanger



Overview of the test rig facility at the Green Energy Park



Schematic diagram of the hybrid cooling system experimental set-up

The last 4 years



PLUS DE VIDEOS

AFAF ZAZA

PHD STUDENT IN HEAT EXCHANGERS, IRESEN

The problem is real

Heat Exchangers



Fouled

Clean

Multiple agents representing **the biggest consumer of heat exchangers in Morocco (OCP)** have told us this is a *real* problem, and expressed the need for innovative solutions

SOLUTION

Our solution named "Fouling Shrimp" uses a **fused IoT device** with a **3d printed heat exchanger**, to actively prevent fouling.

eliminating **40% of the overall lifetime cost** of the heat exchanger.

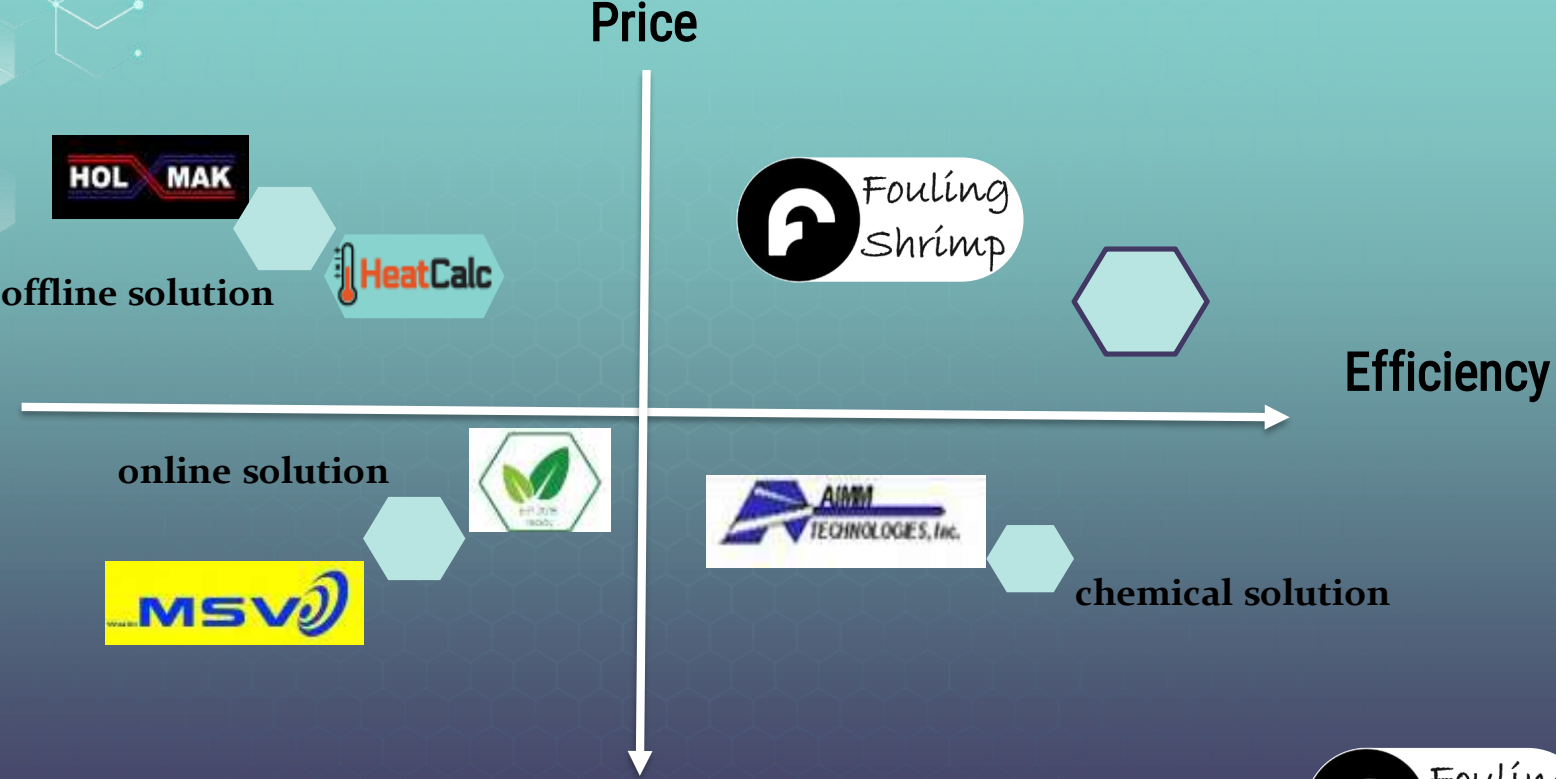
m.v.p

Heat exchangers now on average cost \$1000 and **for every \$3** spent to buy a heat exchanger, the company **spends \$1 extra** yearly for average **15 years due to fouling**

With our design, you spend **40% less** than that's it.

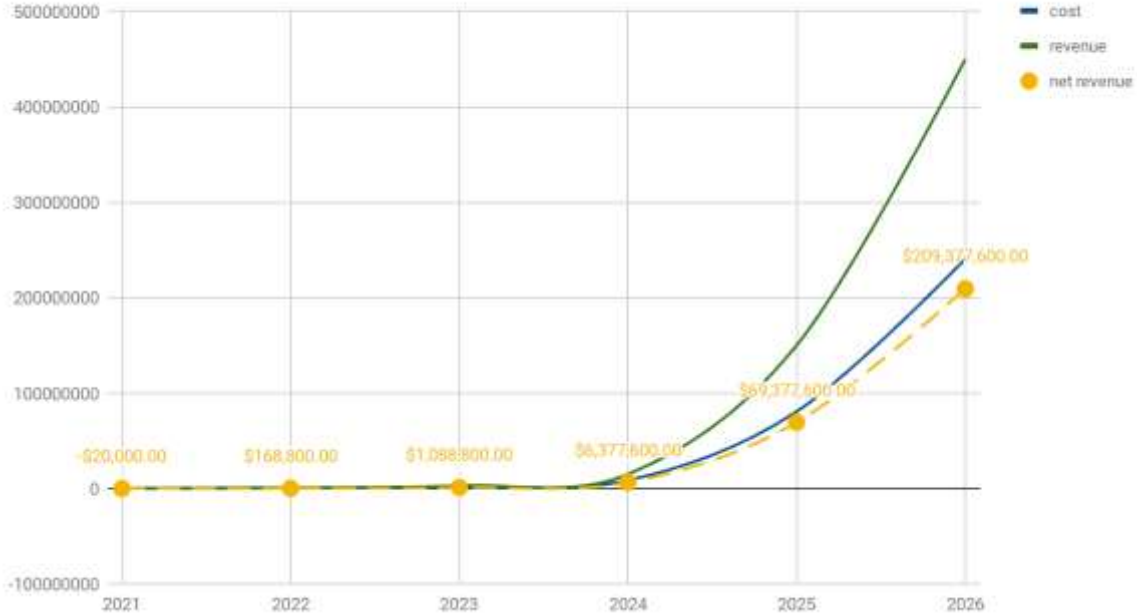


Unique Advantage



Revenue Stream

6 years Scoop



Capture 4% of the European market and specialize in tubes

5B (~\$200M) SAM --- \$200M

SOM --- \$1,3M Capture 5% of Moroccan market, (\$1,3M)

15.3B\$ TAM



OUR TEAM



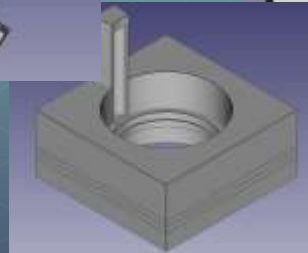
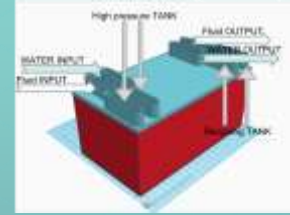
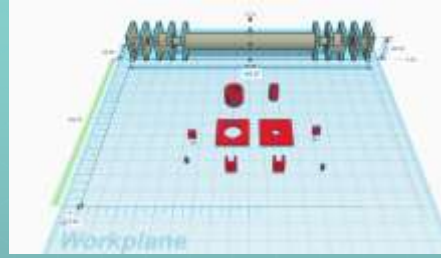
Afaf ZAZA
Phd Student in Heat
Exchangers
4+ years in the field



Zakaria ZAZA
IT engineering student

The Progress

- ✓ Ideation (design thinking)
- ✓ validating the problem
- ✓ Prouve of concept
 - Prototype
 - ❑ Production version
 - ❑ First contract



**Thanks For Your
Attention**

