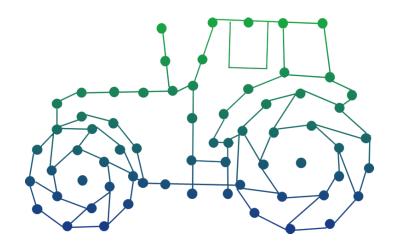
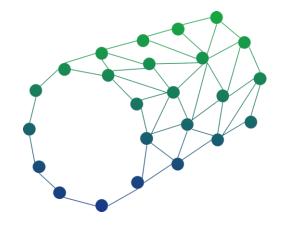


MORE EFFICIENT AGRICULTURE TECHNIQUES



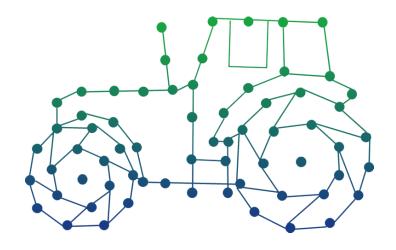


MORE EFFICIENT AGRICULTURE TECHNIQUES

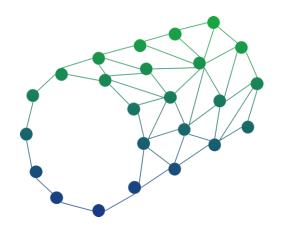


WATER PIPELINE

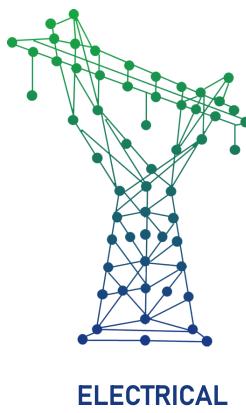




**MORE EFFICIENT AGRICULTURE TECHNIQUES** 

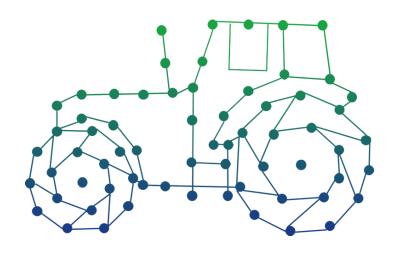


**WATER PIPELINE** 

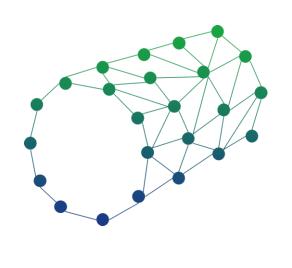


**GRID** 

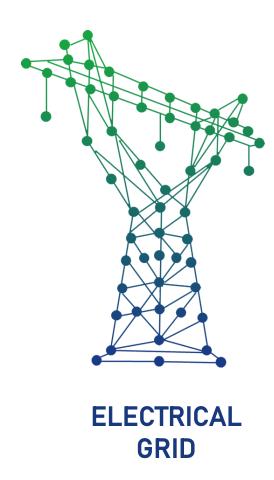




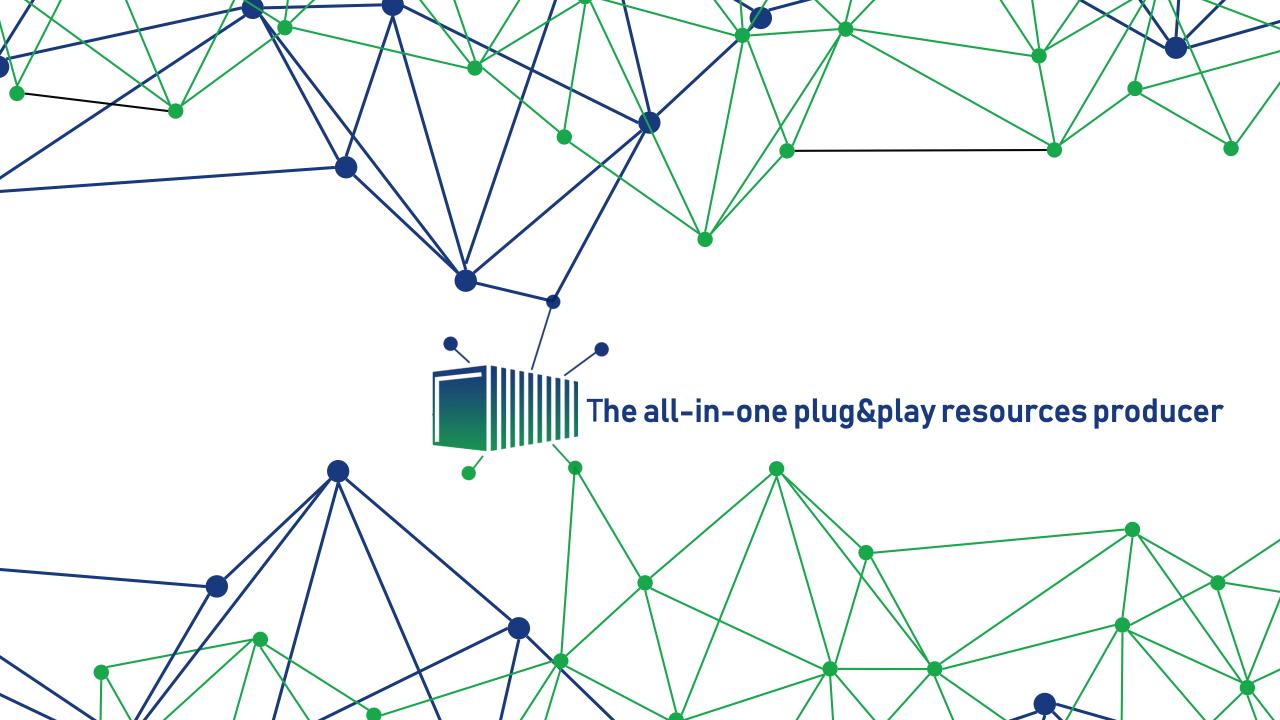
MORE EFFICIENT AGRICULTURE TECHNIQUES

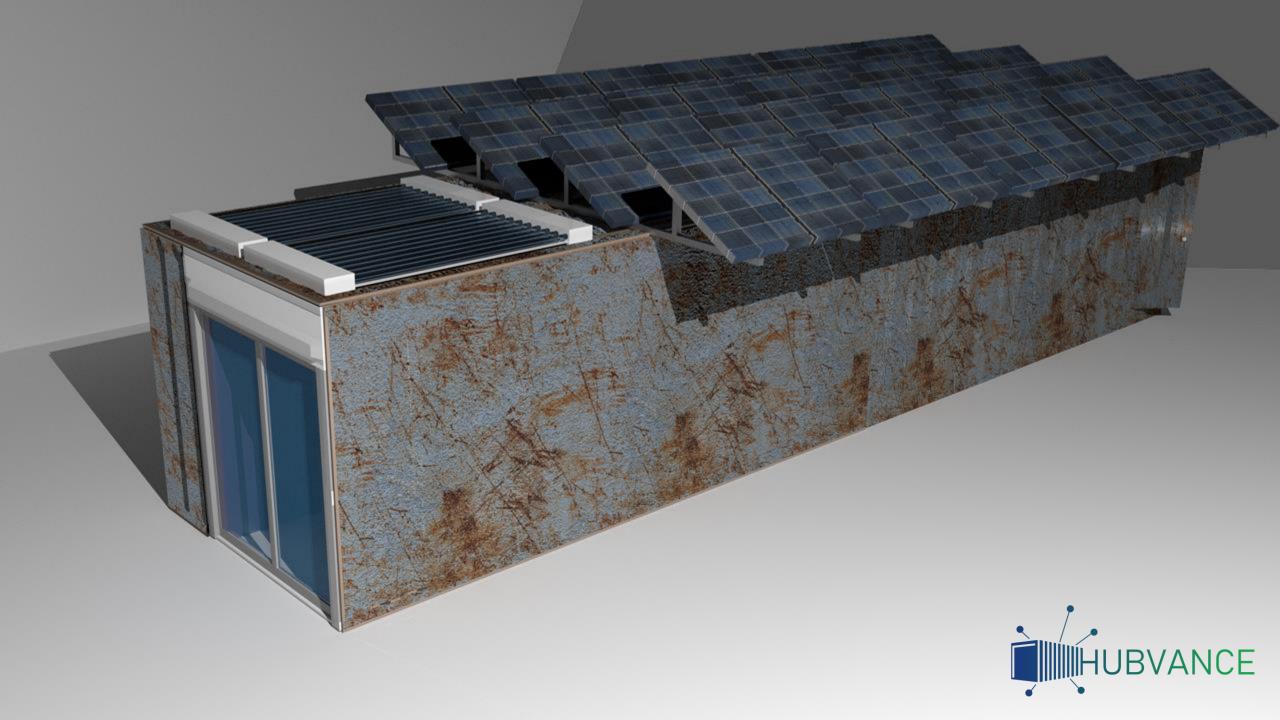


WATER PIPELINE



**AGOWO NEEDS AN ALTERNATIVE SOLUTION** 

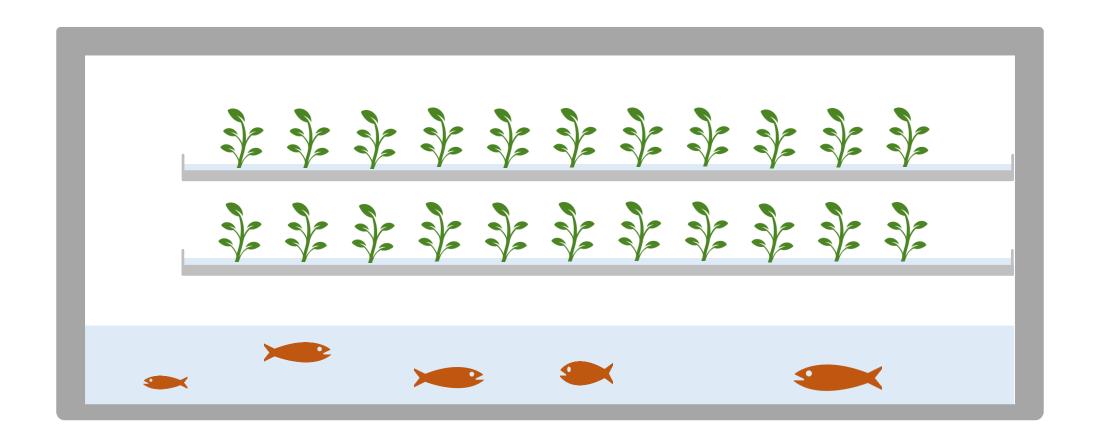




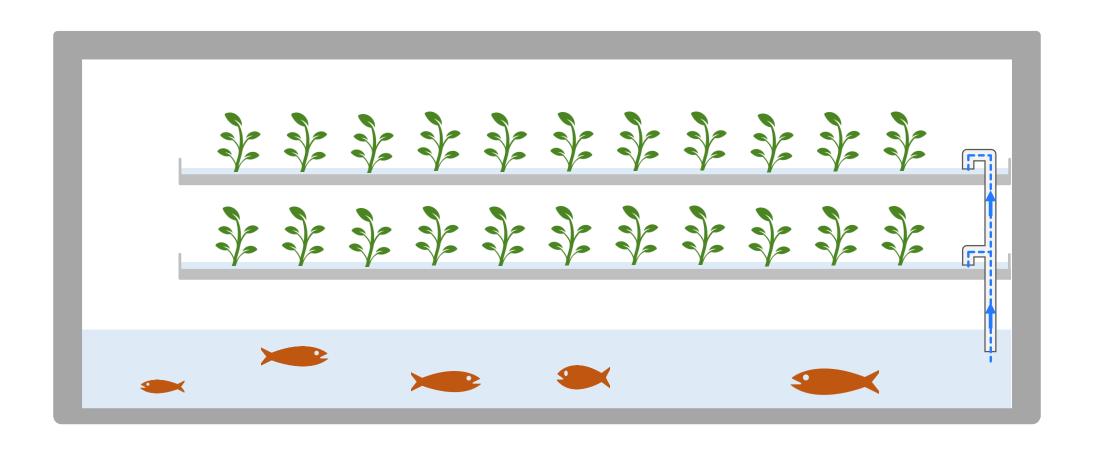




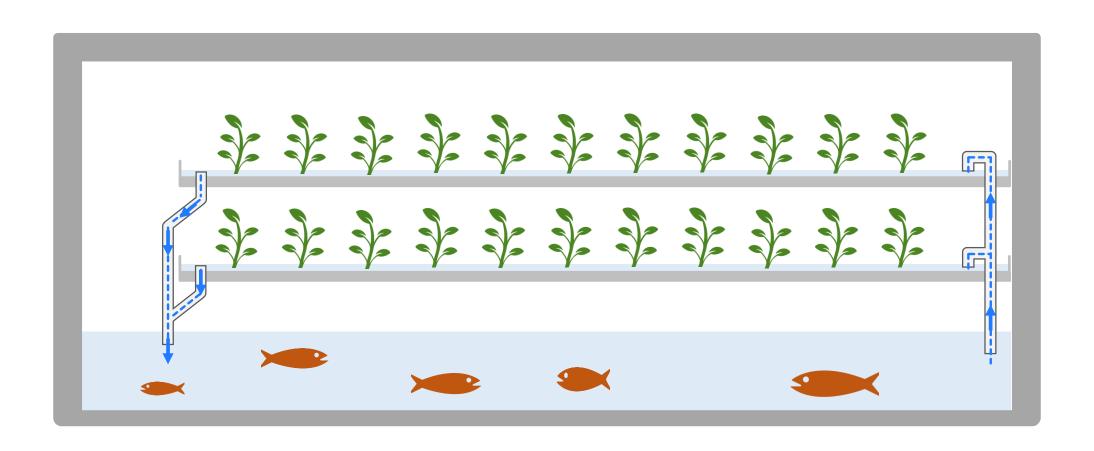








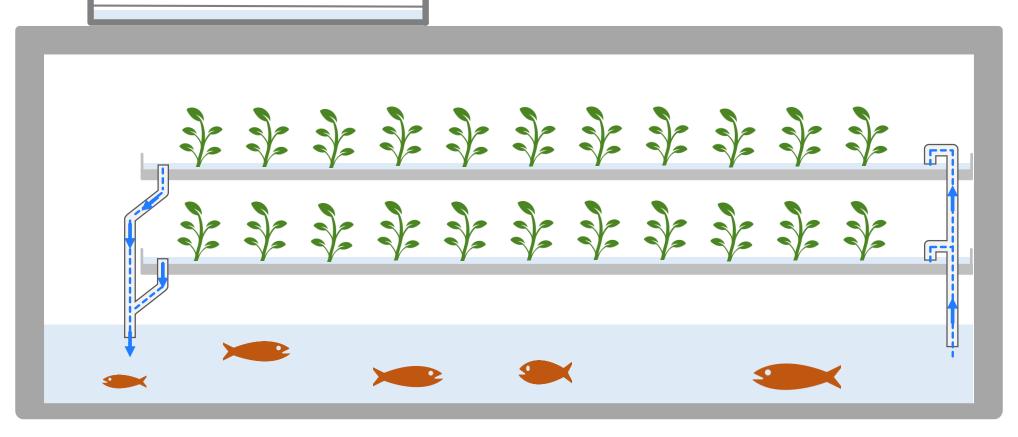






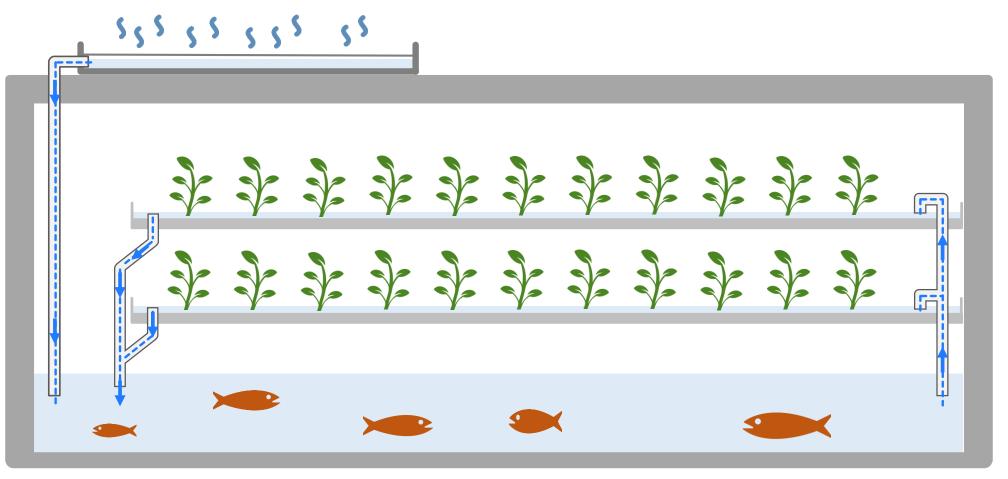


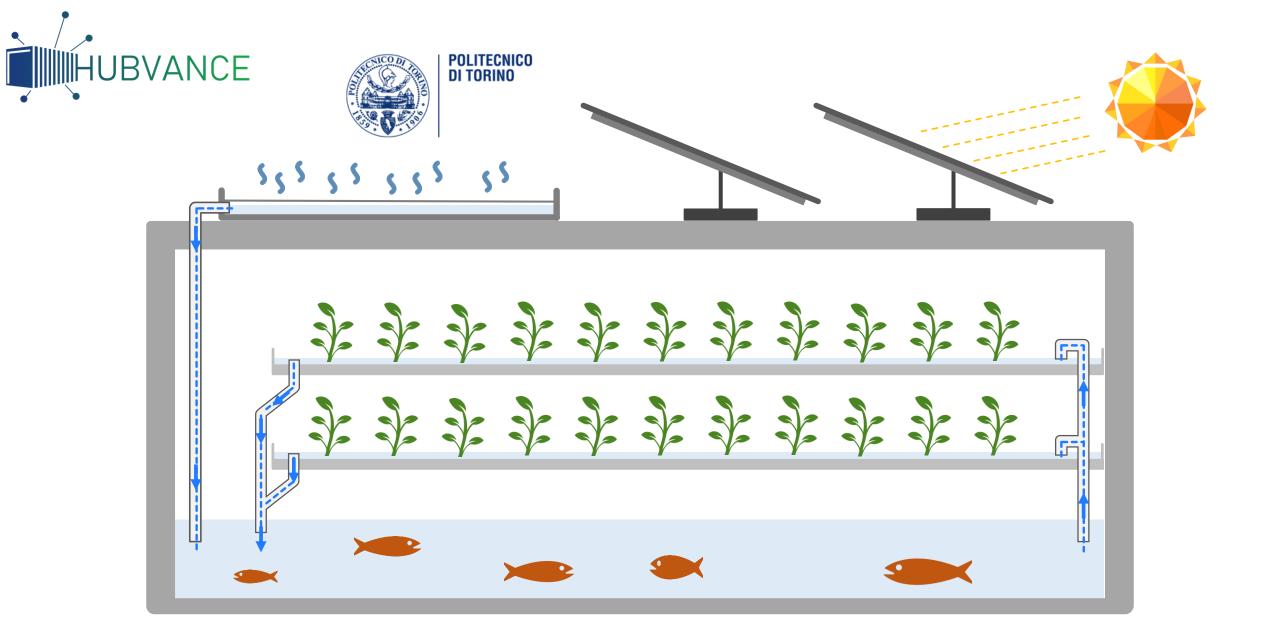
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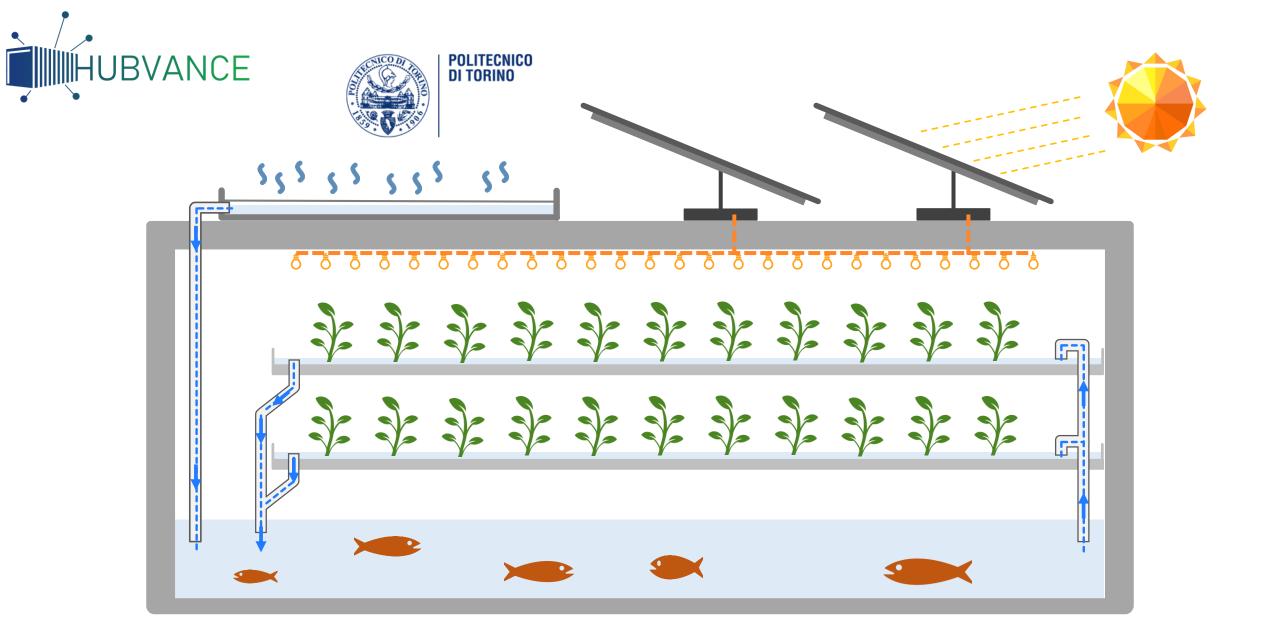


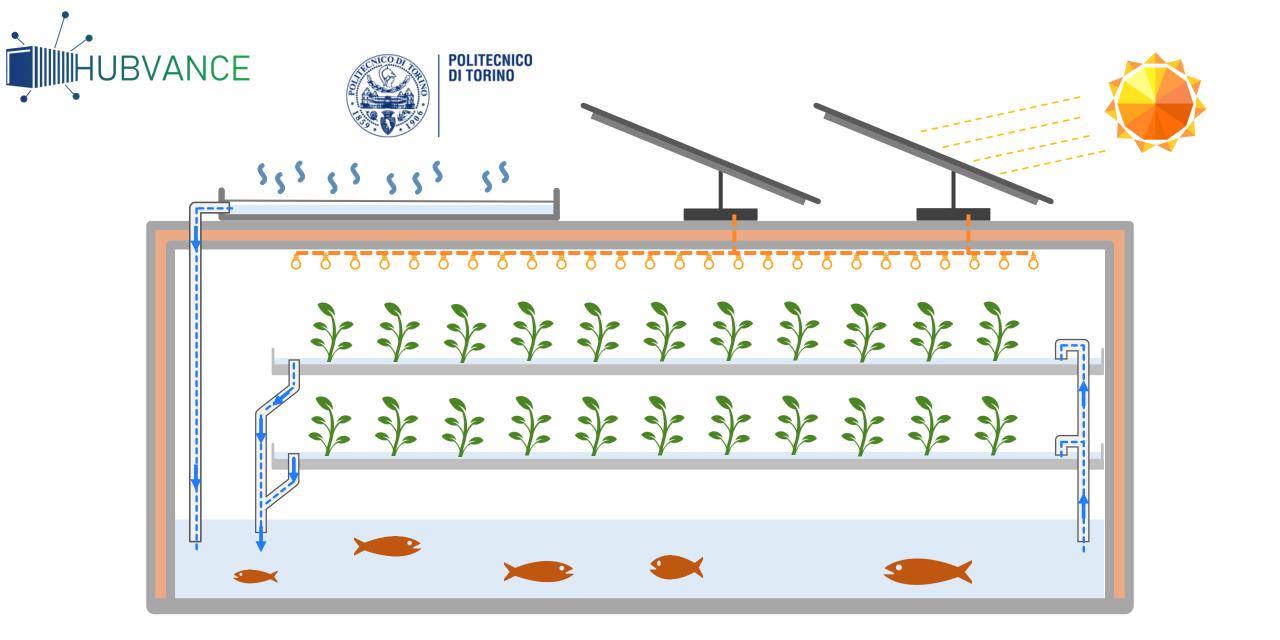


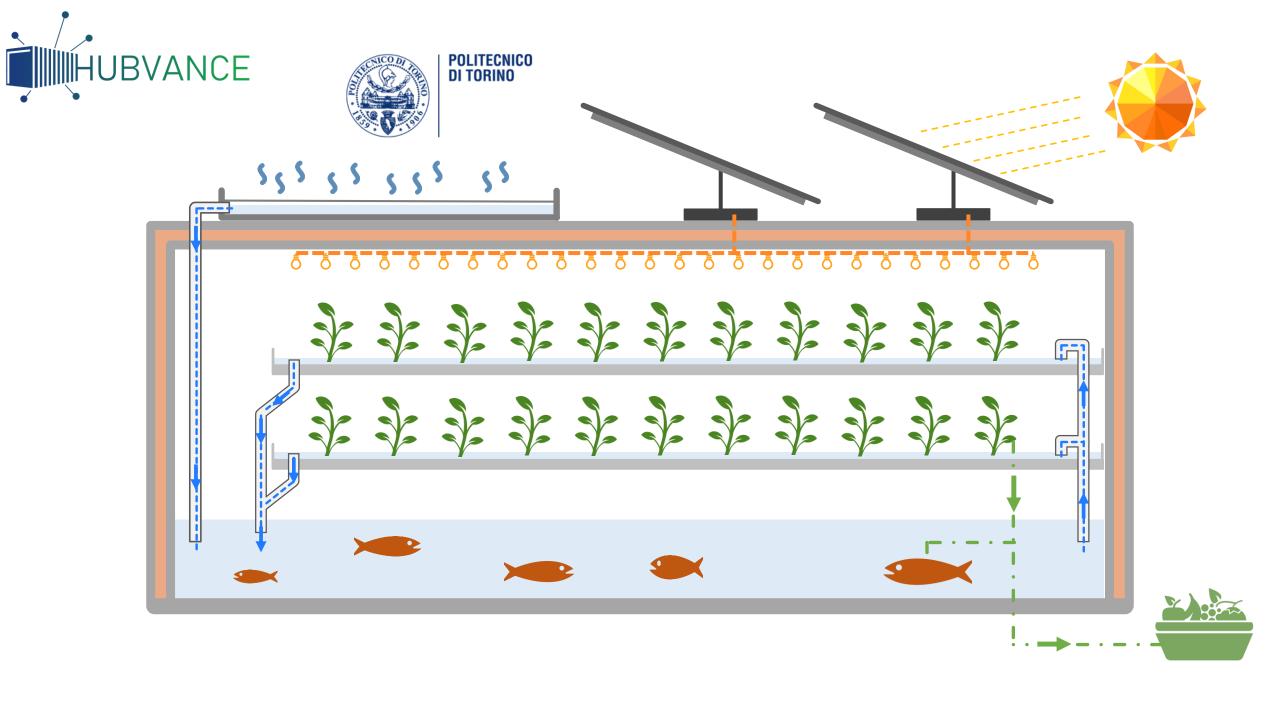


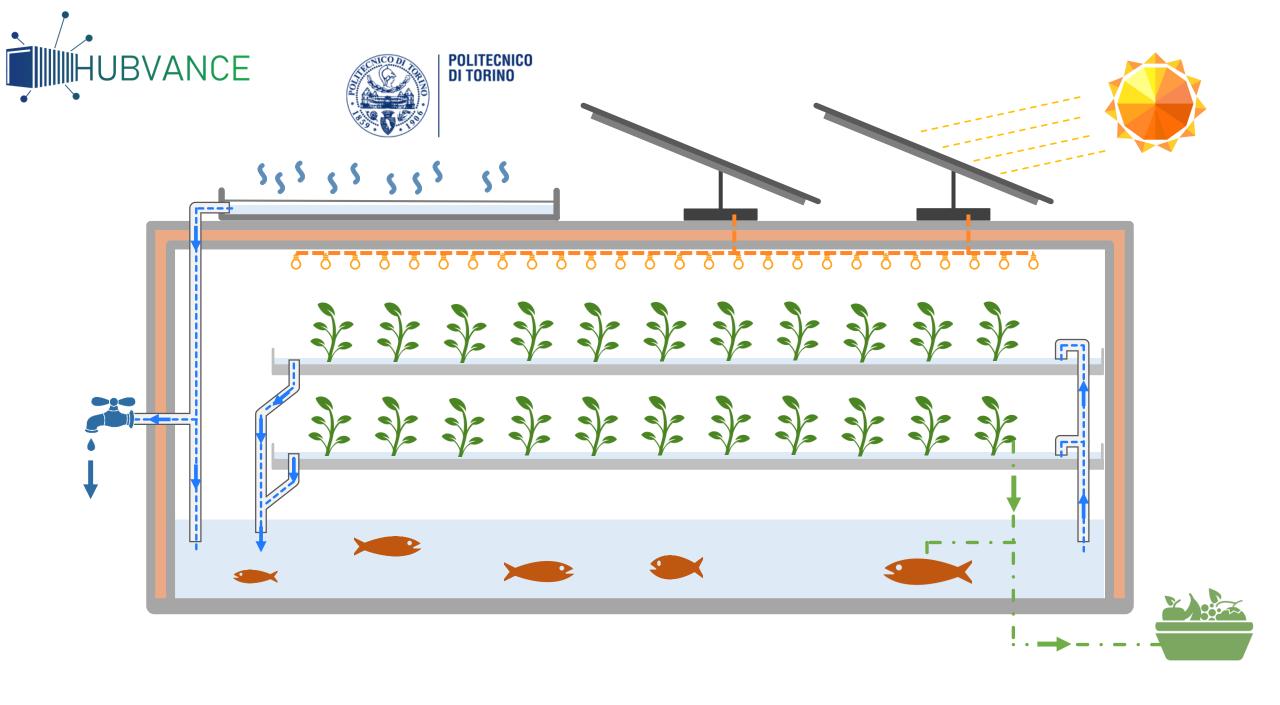


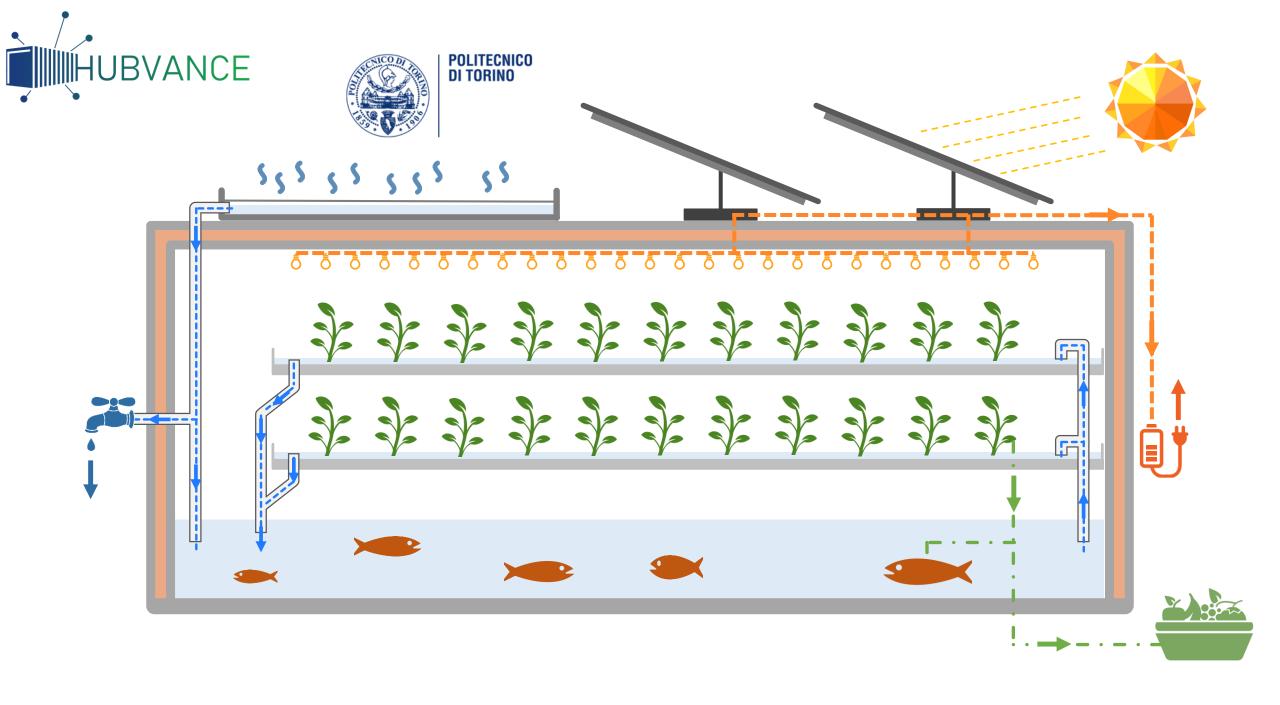














## 250 kg/year of fish 3000 kg/year of vegetables



Fish for 20 people Vegetables for 100 people



## 250 kg/year of fish 3000 kg/year of vegetables



Fish for 20 people Vegetables for 100 people 11.000 L/year



Water for 20 people



250 kg/year of fish 3000 kg/year of vegetables

11.000 L/year

145 kWh/year







Fish for 20 people Vegetables for 100 people

Water for 20 people

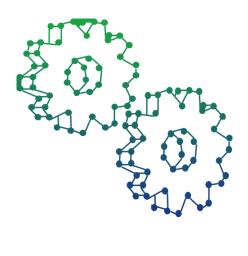
**Electricity for 100 phones** 







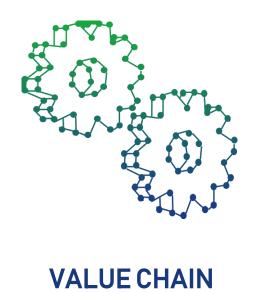


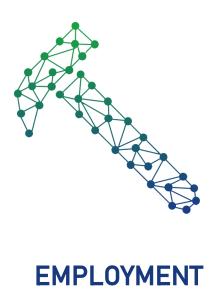


**VALUE CHAIN** 



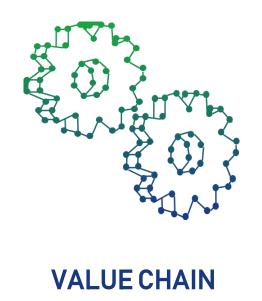


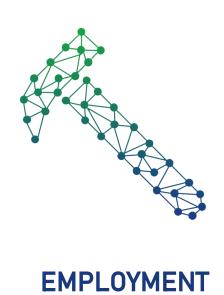


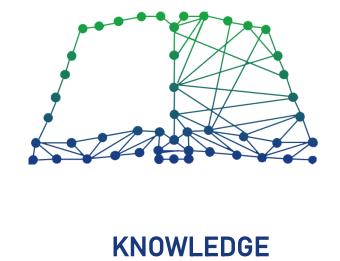




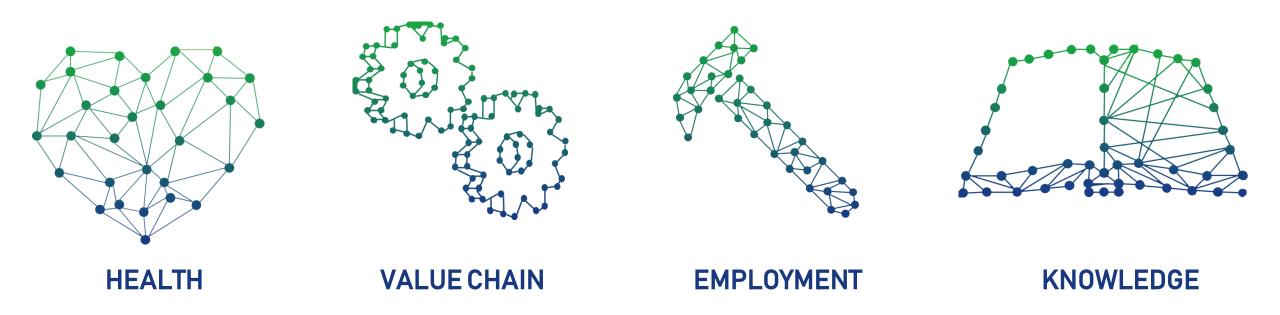






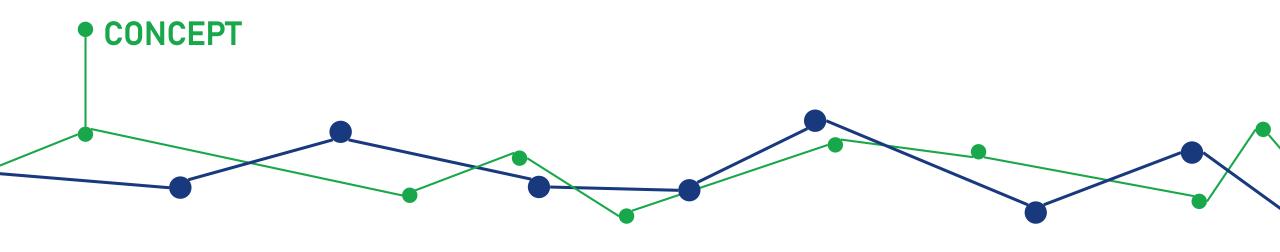






**HUBVANCE CAN BETHE SPARK THAT WILL BOOST DEVELOPMENT** 

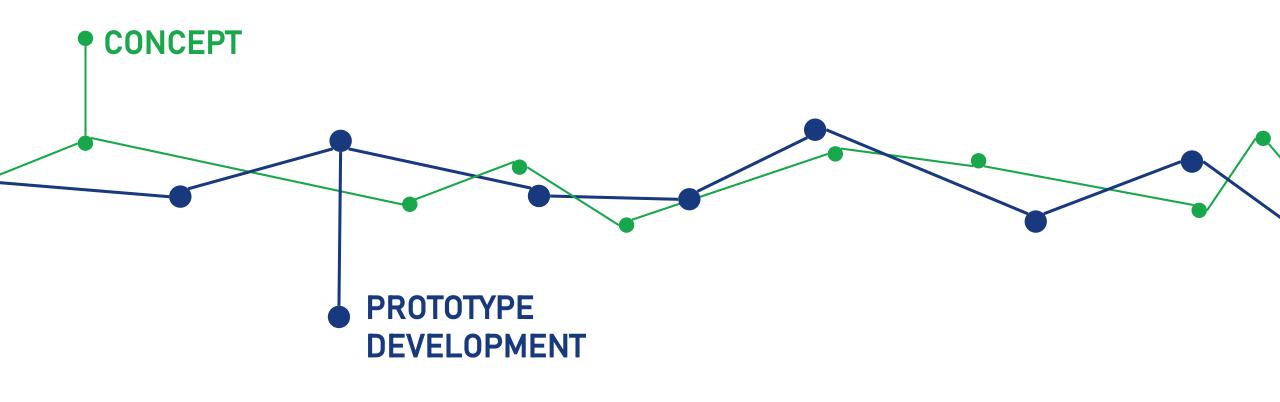






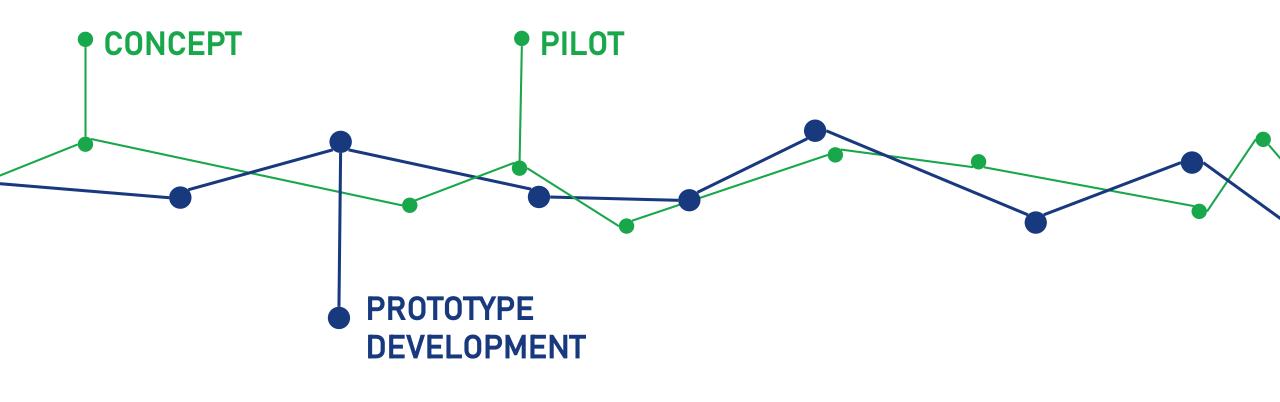
months





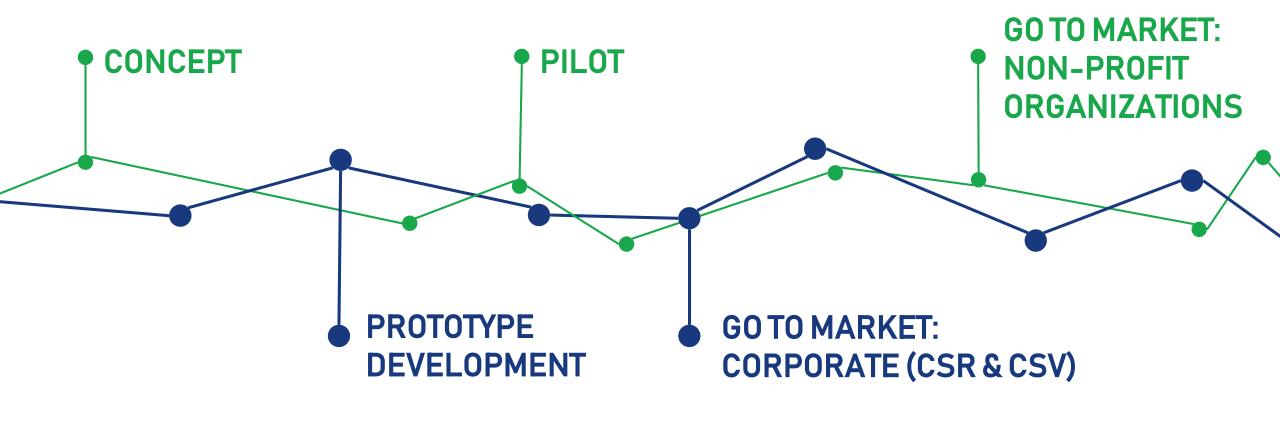














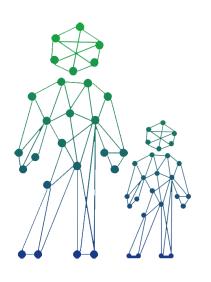




100 billions CSV/CSR/NGO





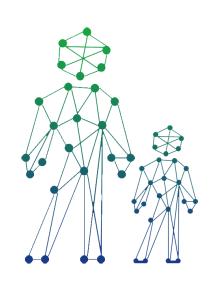


100 billions CSV/CSR/NGO

7.000 communities in 1 year









100 billions CSV/CSR/NGO

7.000 communities in 1 year

100.000 communities











## **Our customer**



## **End users**



20 people (4 households): the 8 adults work in Hubvance

Food, electricity, water

## 2nd level market



Biggest town close to the village

Excess vegetables sold to market

1500\$ (salary for people

working in Hubvance)

The product



**Hubvance** 

Work, periodic maintenance



## **Stakeholders**





Solar panels supplier



Water panels supplier



Aquaponic supplier



**Local** mainteiners

**Our customer** 



**Companies** 



**NGOs** 

**Enablers** 



**Schools** 



**Local** institutions

**End users** 



**Communities** 

Other players



2nd level market

**Carriers** 



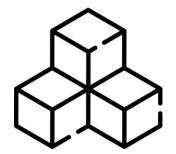
**Local transport** 



Maritime transport







Modular design for easy substitutions





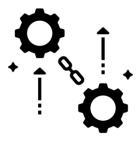
Technical training of local staff

Partnerships with local people

## **Substitutions**



N-1 redundancy



Spare parts supplied by exploiting customer's supply chain



## TRAINING TO USE AQUAPONIC SYSTEM



#### TRAINING FOR REGULAR MAINTENANCE

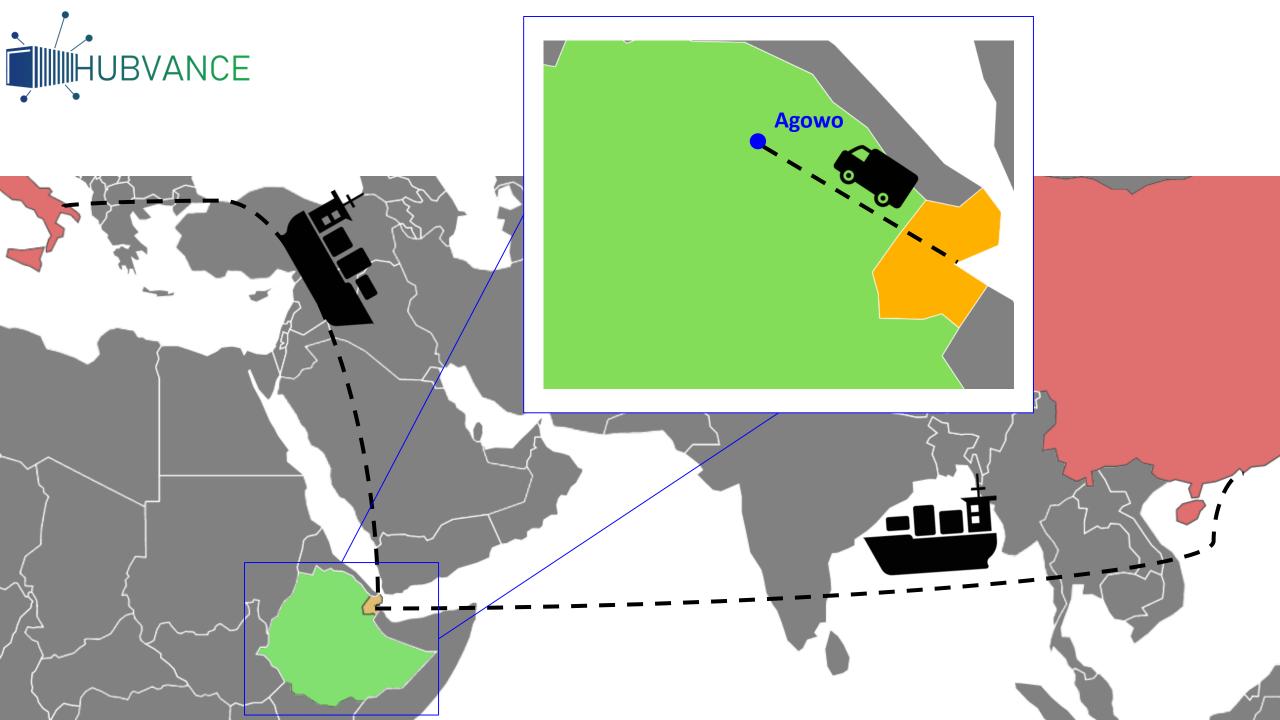


#### TRAINING FOR EXCEPTIONAL MAINTENANCE



## PARTNERSHIP WITH LOCAL SCHOOLS TO TRAIN THE FUTURE GENERATIONS







## **Setup Costs (upper bound values)**

Fish and plants tanks	2,200\$
Electrical equipment (water pump, air pump, ecc)	1,320\$
Media bed	880\$
Biofiltration medium	1,320\$
Miscellaneous (fish net, tape, nails, ecc)	1,100\$
Plumbing	880\$
Container	2,000\$
HVAC	6,000\$
Photovoltaic panels	15,000\$
Water panels	2,000\$
Transport & Assembling	3,000\$
Insulation	4,000\$
Total	39,700\$

## **Operating Costs per year (upper bound values)**

Plants seedlings	70\$
Fish fingerlings	120\$
Fish feed	240\$
Miscellaneous	70\$
Total	500\$







25% less diseases related to food scarcity



3 new supply chain are created



6 jobs opportunities created for each container



education increase of 2.9 %



## TOTAL POTENTIAL MARKET OF 200b € PER YEAR



Government, foundations, NGOs 147b €\*\*



<sup>\*</sup>data from Forbes500, plus estimation on other companies

<sup>\*\*</sup>IATI (International Aid Transparency Initiative) 2016 annual report, "GIIN (Global Impact Investing Network) 2017, Annual Impact Investor Survey"









**TOTAL INITIAL INVESTMENT OF 350k €** 



#### Off-grid energy production







#### Water production







#### **Aquaponic system**





## NO EXISTING INTEGRATED SOLUTIONS









Chicken

Goat

Beef

Lamb



Fish

**Beans** 

peas

lentils

fava beans



**Cabbage** 

**Salad** 

potatoe

carrot

onion



## **Investing in Ethiopia and in Mekelle**



Custom duty exemptions of up to 100% on imports of capital goods in the investment is in agriculture sector



Government of Ethiopia provides lands for enterprises at a very low price



Easily trainable workforce



Safe environment, low crime and no disorders



# **THE GLOBAL GOALS**For Sustainable Development















