

## 7,6 BN. HUMANS

POPULATION 2050 9,7 BN. HUMANS

INCREASE IN PROTEIN DEMAND UNTIL 2050
AT LEAST 70 %





#### **PROBLEMS**



- ( INNEFFICIENT GAS (CO<sub>2</sub>) EXCHANGE
- HIGH PRODUCTION COSTS
- **WATER & NUTRIENTS CONSUMPTION**

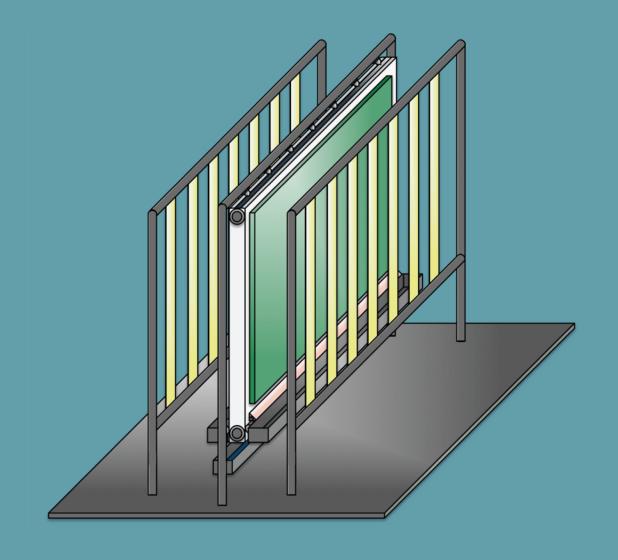


LIMITED GROWTH OF MANY HIGH VALUE SPECIES

## **PHYTOFENCE**

# MEMBRAN BASED CULTIVATION

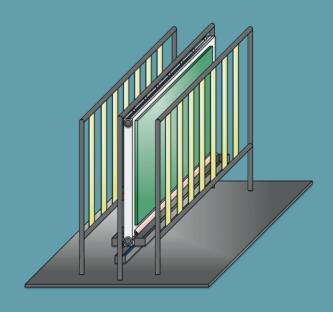
ALGAE GROW
SEPARATELY FROM WATER



#### **PHYTOFENCE**

## MEMBRAN BASED CULTIVATION

ALGAE GROW
SEPARATELY FROM WATER





OPTIMIZED LIGHTING



EFFICIENT GAS EXCHANGE



MODULAR DESIGNED



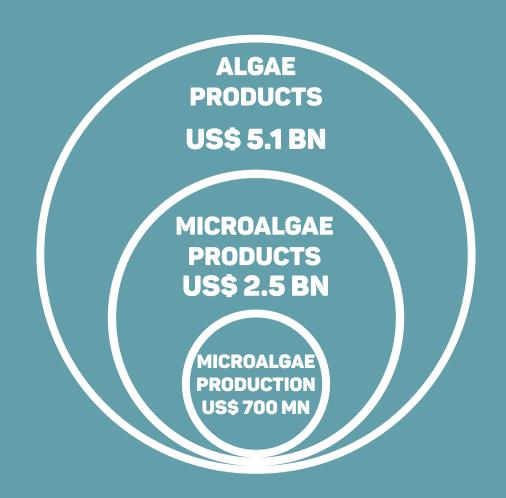
JP TO 90 % LESS WATER



CULTIVATION OF NEW HIGH VALUE ALGAE SPECIES

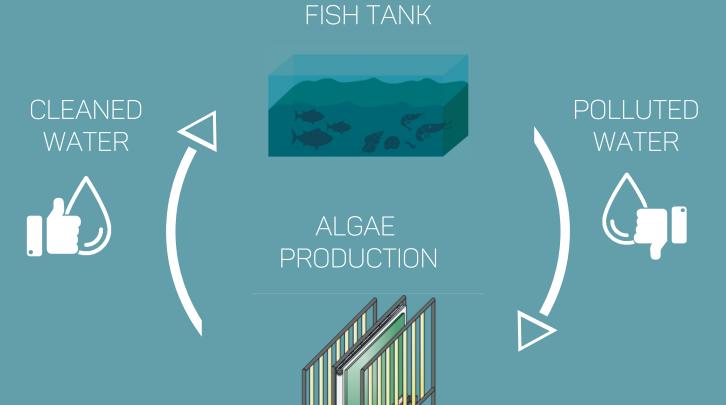
### "THE MARKET IS READY FOR NEW ALGAE PRODUCTS"

2018 JÖRG ULLMANN, CEO ROQUETTE KLÖTZE GMBH

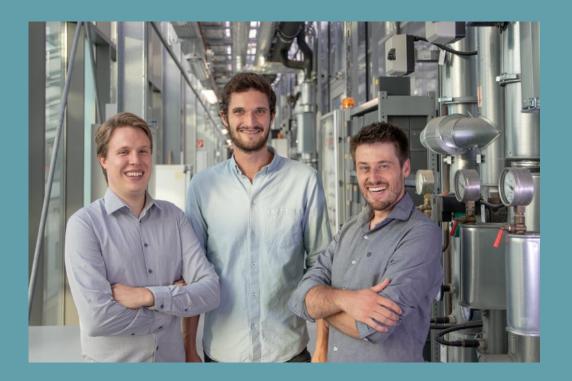




## MICROALGAE AQUAPONICS



## **TEAM**



JAN ZAABE, SCIENCE M.SC. BIOLOGY

ARNE MAERCKER, BUSINESS M.SC. BUISINESS ECONOMICS

**DENNIS PRAUSSE, HEAD OF TEAM**M.SC. BIOLOGY

#### **NETWORK**

**MENTORING** 

**PARTNERS** 

**ROQUETTE KLÖTZE GMBH**MICROALGAE PRODUCER

**ALFRED-WEGENER-INSTITUT**RESEARCH FACILITY

**FUTURE FISH GMBH**RAS FACILITY PLANNER

COLOGNE-CULTURE-COLLECTION OF ALGAE

**HERZBERG CONSULTING**PROCESS TECHNICAN

SUBMARINER-NETWORK

**CRUSTA NOVA**SHRIMP RAS FACILITY



