



# SPACE APPLICATIONS TECHNOLOGIES



SCIENCE CORE:

# COMPANY

Company Experience in different technologies

PHOTO-CATALYSIS

ELECTROSTATIC  
FILTRATION

OZONATION

NANO-SILVERING

UV PULSE RADIATION

AIR TECHNOLOGIES  
AIR TECHNOLOGIES

PHOTO-CATALYSIS

REVERSE OSMOSIS

NANO MEMBRANE

ULTRA FILTRATION

ATMOSPHERIC  
WATER ABSORBING

WATER TECHNOLOGIES  
WATER TECHNOLOGIES

BIOMASS  
DEHYDRATION

BIO-REACTORS

SPECIAL FOOD  
PACKING

METALL ORGANIC  
FORMATIONS

FOOD  
CONSERVATION

OTHER TECHNOLOGIES





TECHNOLOGY 1

# LIFECYCLE SYSTEM FOR SPACESHIP & MARS/LUNAR BASE



Concept of advanced closed ecosystem for  
space applications



# MARS MISSION. BUILDINGS AND EQUIPMENT WITH CLOSED & SEMI-CLOSED ECOSYSTEM

## MAIN PROBLEMS:

- Oxygen
- Water
- Food
- Recycling ( $\text{CO}_2$ , waste products)

STARSHIP

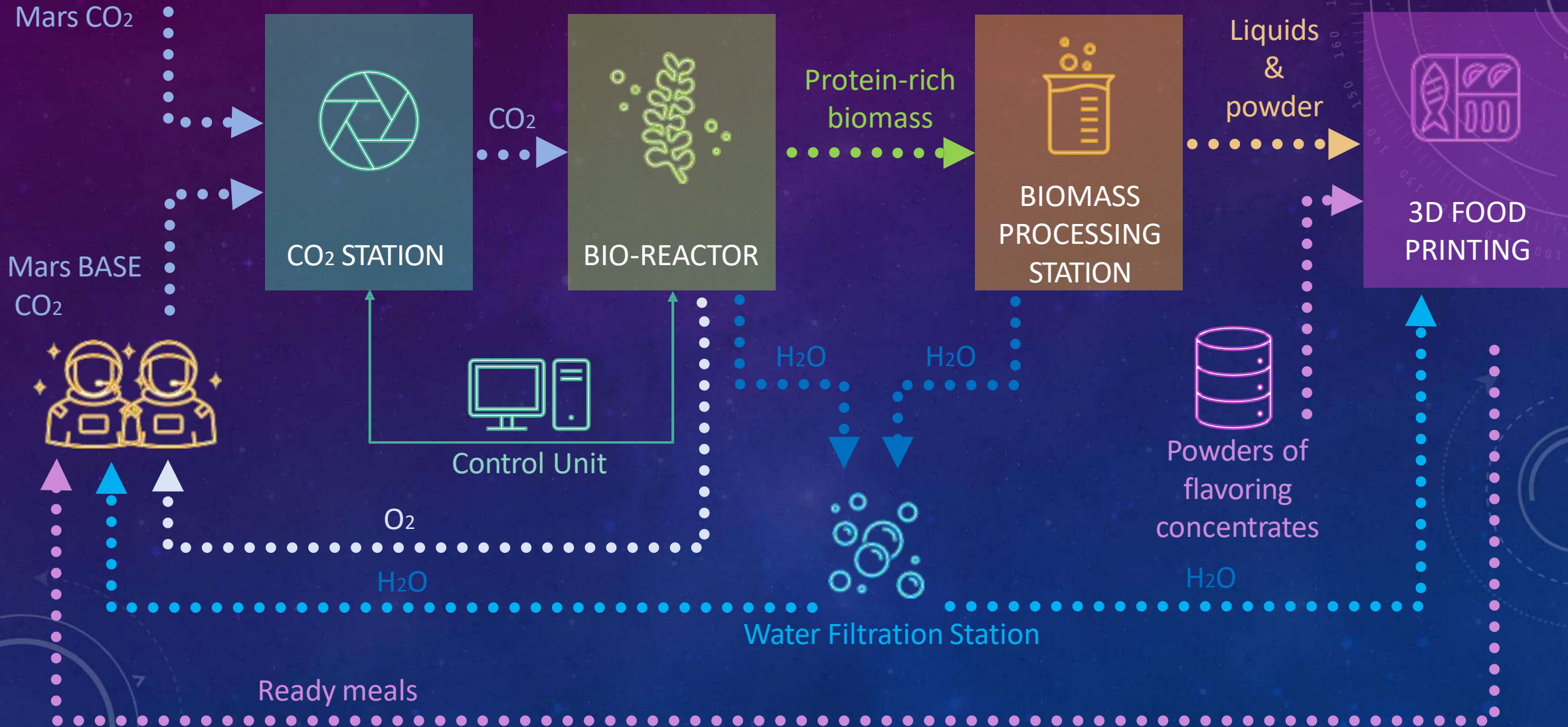
MARSBASE



TECH4.SPACE



# CYCLE Scheme for Spaceship and Mars Base





TECHNOLOGY 1+2

# AIR PURIFICATION & DISINFECTION

## ADDITIONAL AIR EQUIPMENT STARSHIP + MARSBASE

- Improve air quality inside base & starship
- Reduce viruses & bacteria
- Reduce human & food impact
- Reduce odor
- Reduce chemical emissions (plastic, formaldehydes, electronic etc.)
- Air & spacesuit disinfection inside base gateway

PHOTO-CATALYSIS Filtration  
Module

ELECTRO-STATIC Filtration  
Module

Removing possible  
biological hazard

NANO-SILVER Generator  
UV Pulse Radiation

- Disinfection of air
- Disinfection of spacesuit surface







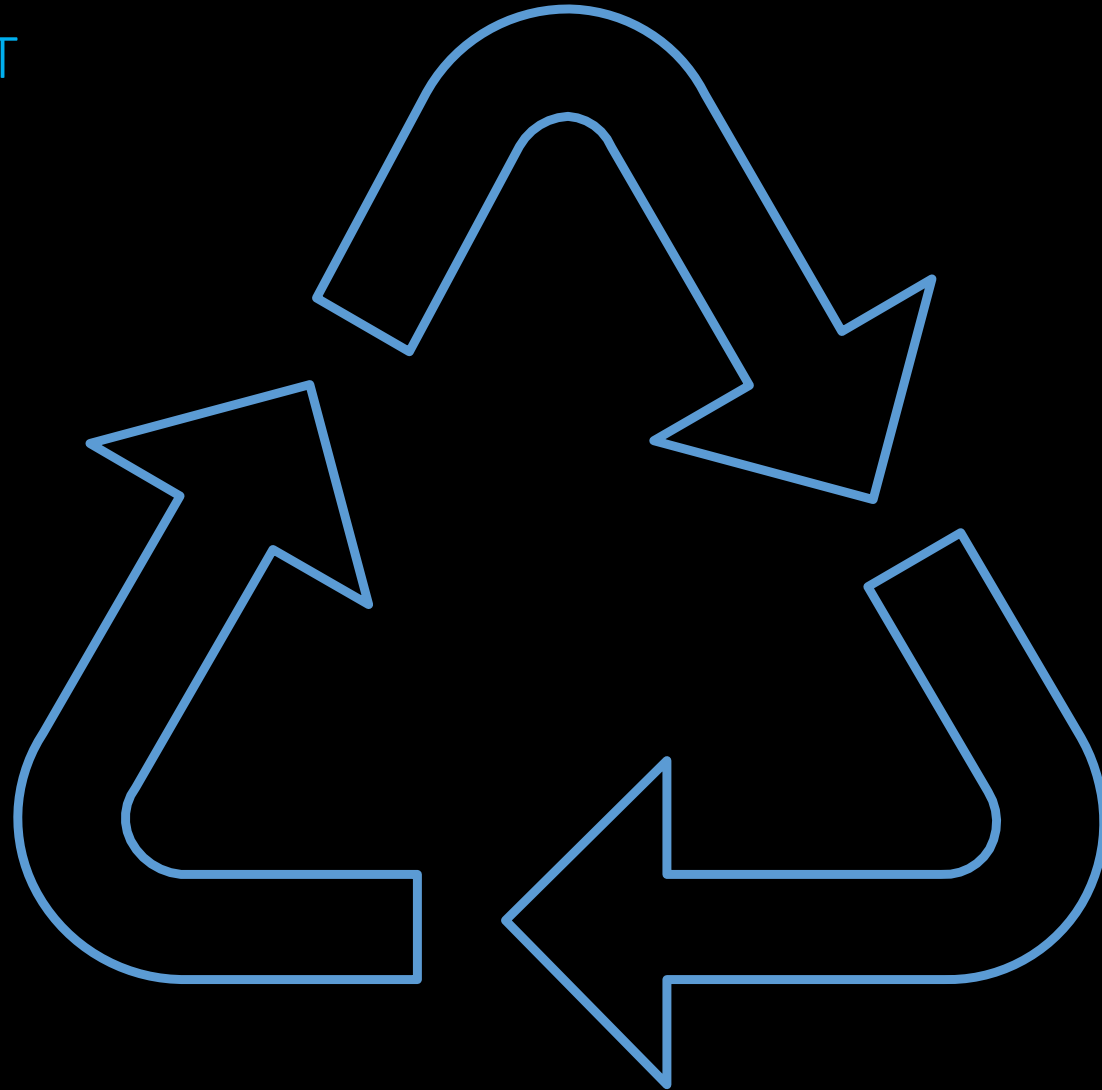
TECHNOLOGY 1+3

# WATER RECYCLING & PURIFICATION

## ADDITIONAL WATER EQUIPMENT STARSHIP + MARSBASE

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- Atmospheric Water Generator
- Urine recycling Water Generator
- Planetary Ice Water Collection
- Reverse Osmosis System
- Water Filtration System





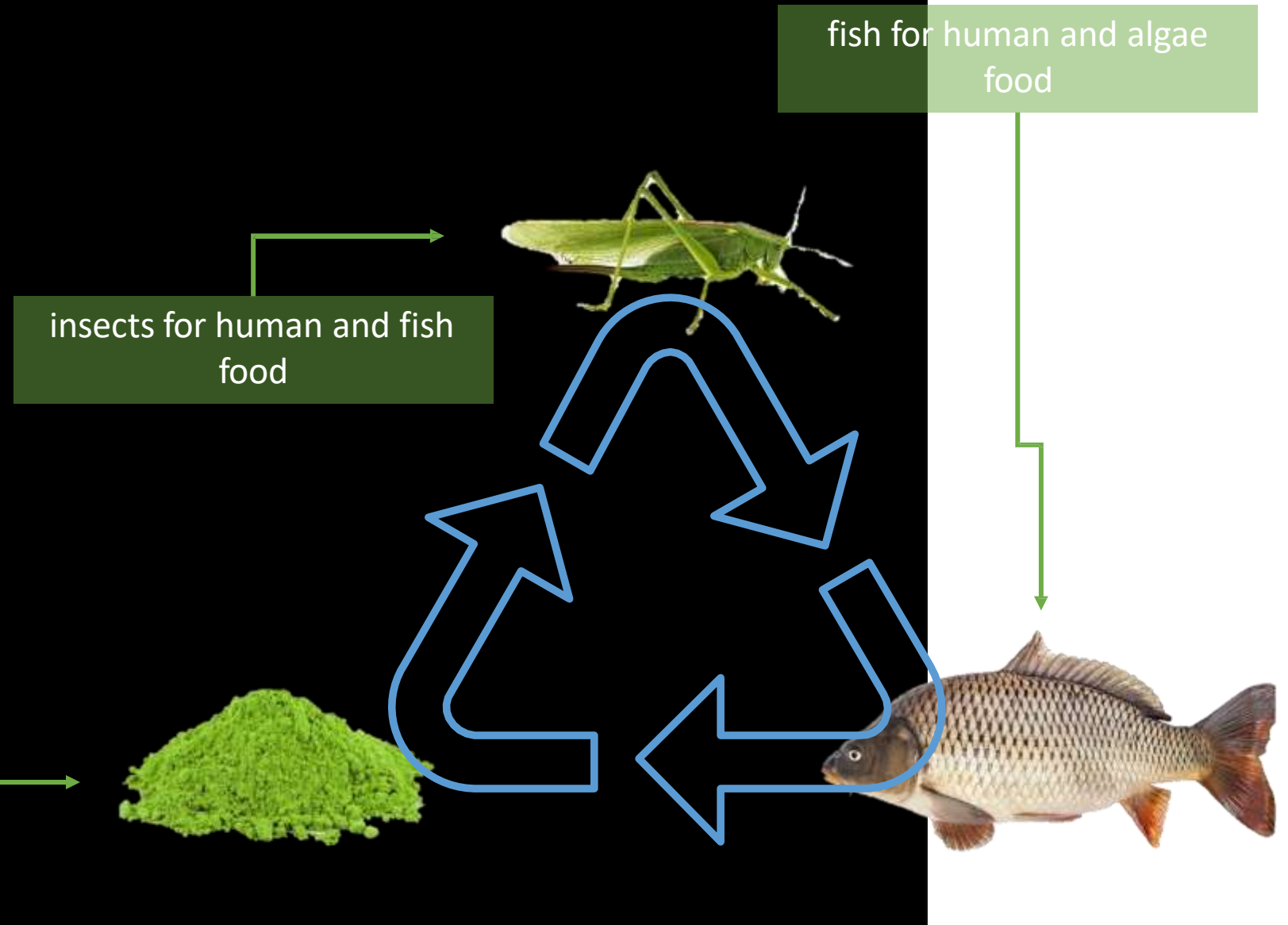
TECHNOLOGY 1+4

# SPACE NUTRITION



# SPACE NUTRITION TECHNOLOGIES

- Food Biomass Dehydration (1t = 80kg)
- Food 3D Printing
- Food service-life prolongation
- Food cycle system





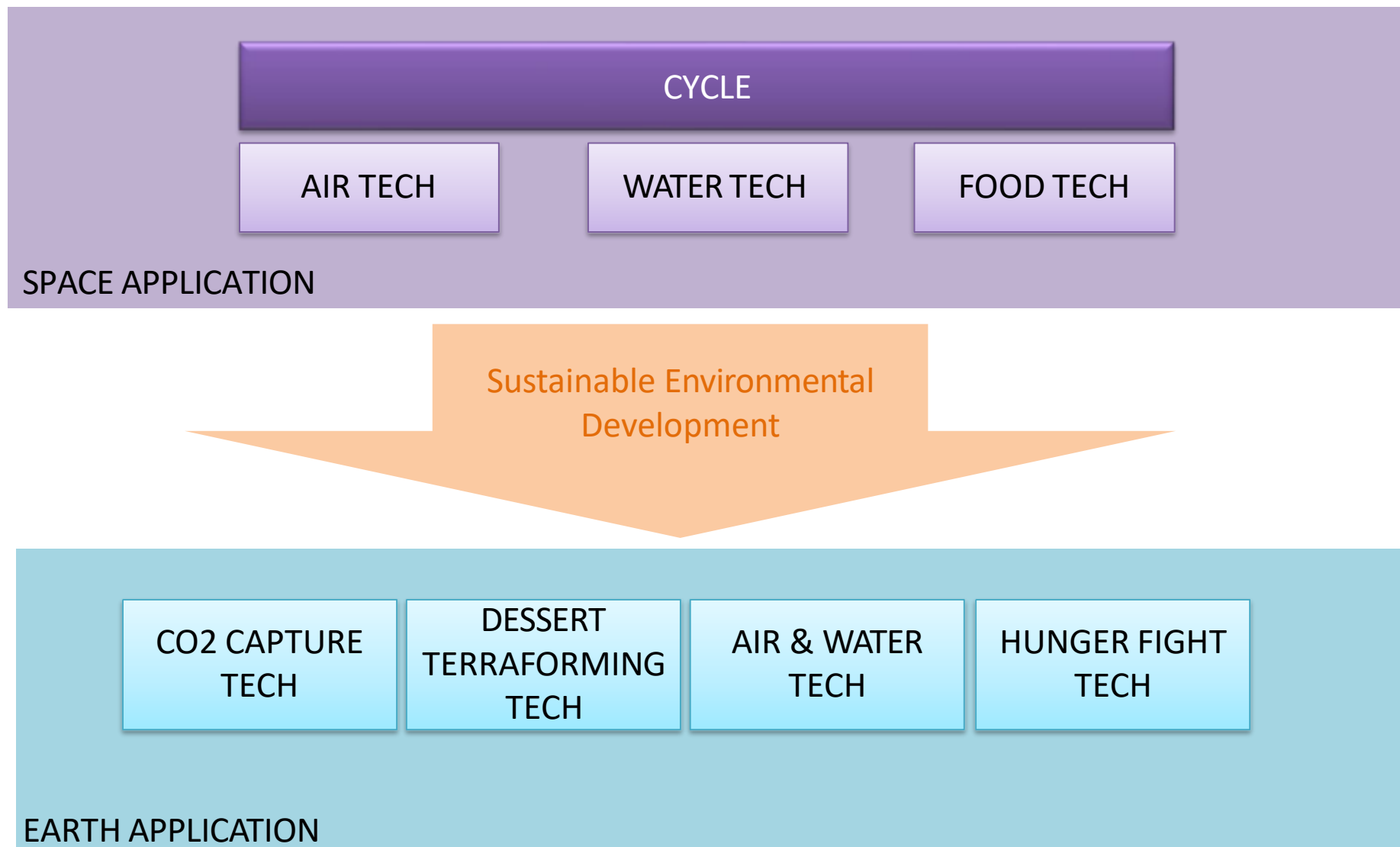
TECHNOLOGY FOR EARTH



# Technology applications for the Earth



# TECHNOLOGY FOR EARTH







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**THANK YOU FOR YOUR ATTENTION!**