Commercialising Space for Economic Growth

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FINLOMBARDA- Webinar Space Economy

The Booming Global Use of Space

Climate

Monitoring terrestrial hazards from space, for understanding and coordinated actions

In-orbit servicing

Boosting sustainability in space, incl. life extension (refuelling, refurbishment), or de-orbit

Space connectivity

Connecting from everywhere, including communications and navigation

Exploration

Growing group of space powers with new/improved human exploration capabilities

➔ Booming demand for space transportation services

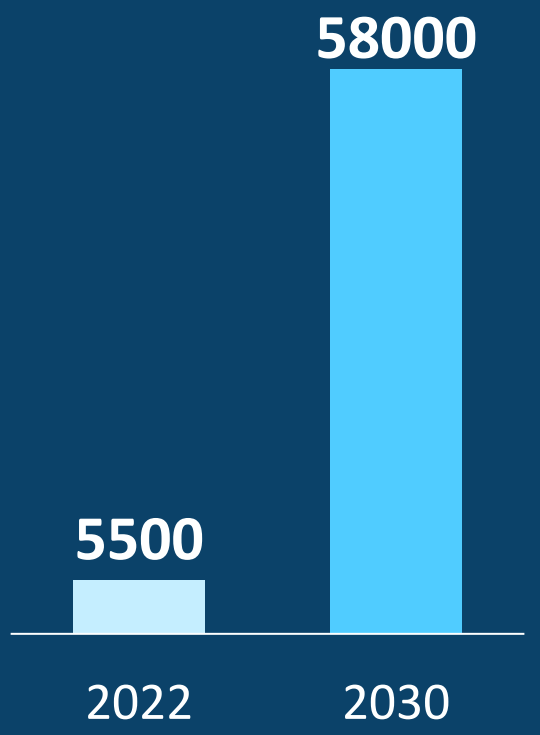
The New Space Economy

Average number of satellites in orbit per year

x 10.5
demand increase

80%
to come from constellations

75%
revenues will come from governments



Space Investment

~ 6bn €
Global private investment raised in 2023

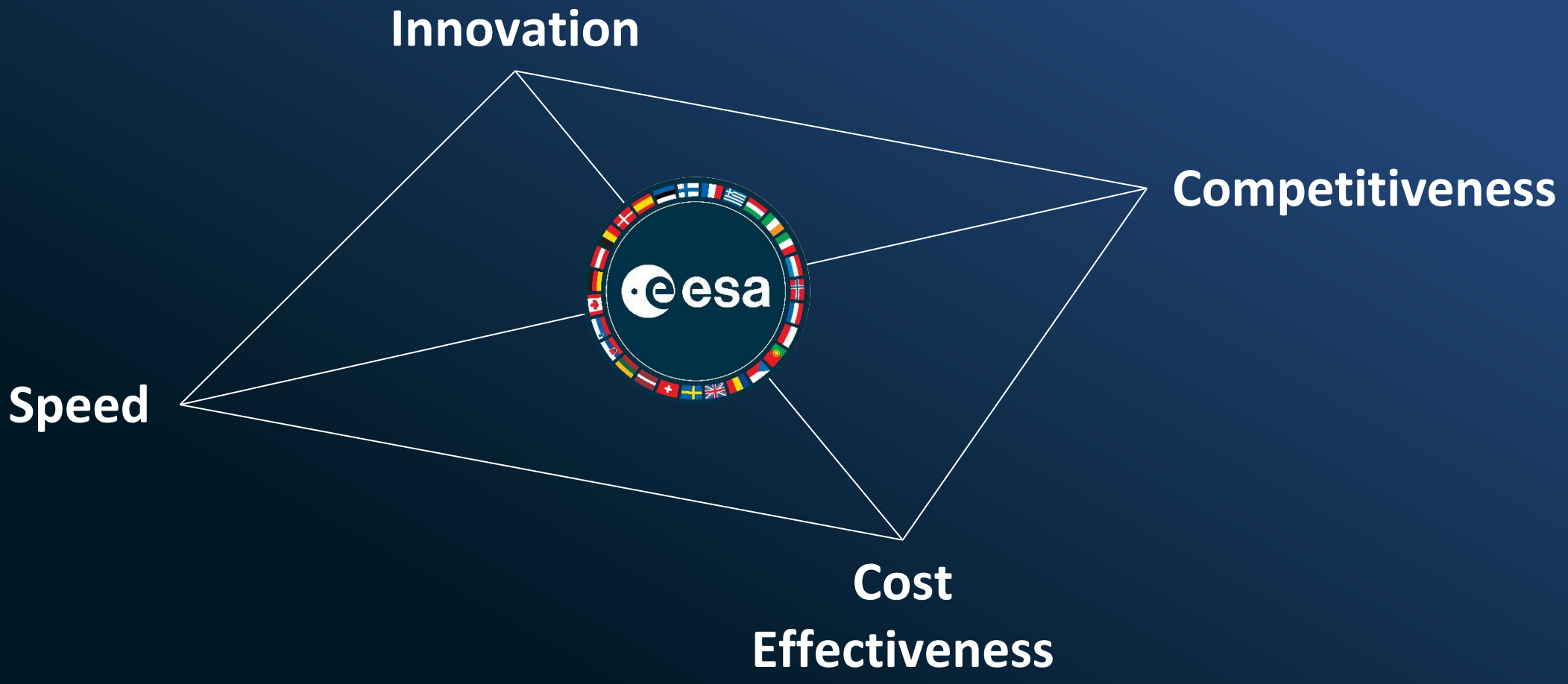
11.4 bn €
European public investment raised in 2023

Commercial Space Economy

358 bn€
Global Commercial Downstream revenue 2023

89%
Satellites launched from commercial operators 2023

New Opportunities For



Competitiveness and Commercialisation

Competitiveness

Ensure the Competitiveness of the European Industry

Commercialisation

Ensure a safe and thriving environment for new companies and applications in Europe, including in non-space markets

ESA Tailors New Programmes For The Commercial World

Reducing time-to-contract

High level service requirements

Increase transparency and communication

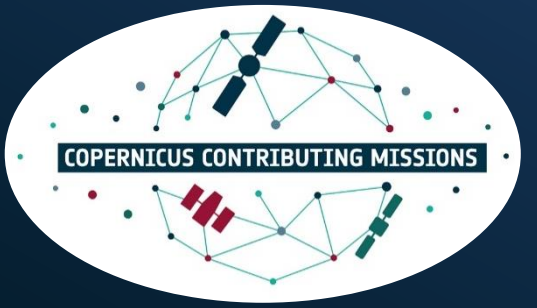
LEO Cargo return service

FutureEO

SCOUT “low-cost” missions

1.3bn€ at CM22

Supporting private endeavors by design



Buying data from EO startups

ESA Provides Commercialisation Services

30 Business Incubation Centres

Investor Network

12 Phi-Lab NET

Market Intelligence

9 technology brokers

Marketplace

Patent landscaping

NewSpace Helpdesk

IP Protection

COMMERCIALISATION.ESA.INT
SPACE-ECONOMY.ESA.INT

ScaleUp: Commercialisation offer mapped to business life-cycle

CASH FLOW

SCALEUP COMPLEMENTS EXISTING PROGRAMMES

ESA Business Incubation Centres

Phi-Lab NET

Intellectual Property

Technology Transfer

Prepare for Space

ScaleUp INNOVATE

ScaleUp INVEST

INCUBATOR

10 k – 1 M

BUSINESS ANGEL

VENTURE CAPITAL

UP TO 10 M

GROWTH CAPITAL

> 10 M

PRIVATE EQUITY/LEVERAGED BUYOUT

TURN AROUNDS

> 10 M

INSTITUTIONAL INVESTORS

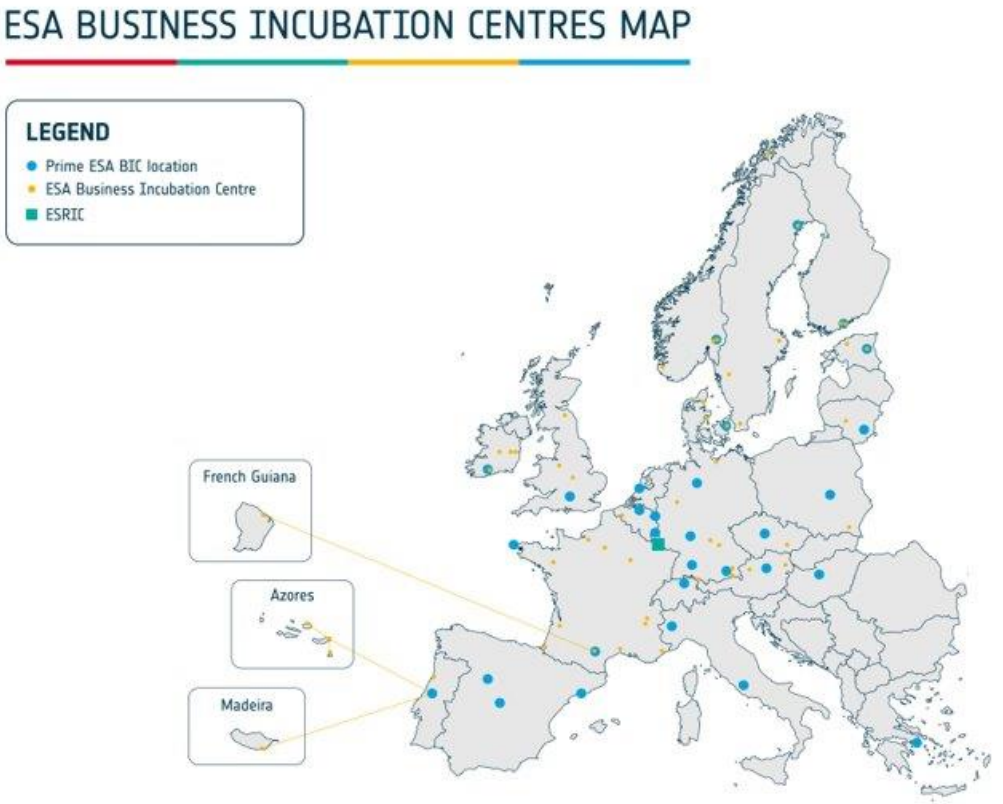
Business maturity

ESA TECHNOLOGY BROKERS, AMBASSADORS AND INVESTOR NETWORK

BICs and Phi-LabNET

30 ESA BICs in 21 Participating States

- 200+ start-ups selected annually
- 1800+ start-ups selected in 20 years
- > 177.5 M€ of revenue
- > 395 M€ of investment raised



A Network of Phi-Labs

- including Corporates and Startups, Universities and Research Centers
- Bringing together commercial and technical expertise
- Financial support to research activities
- Bridging the gap between research and commercial world for strategic market needs towards concrete applications, products and solutions

Timeline: 11+ Phi-labs by the end of 2024, with more to come in 2025 and beyond.

Domain-specific ESA Commercialisation Programmes

Boost!	Space Transportation
NAVISP	Navigation, PNT
InCubed	Earth Observation
ARTES Core Competitiveness	Telecom
Cosmic Competitiveness	Space debris Operations Space Weather
BSGN for Exploration	Microgravity Human space flight Exploration
CASE	Access to microgravity
BASS	Integrated Applications

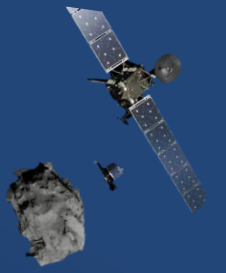
Proposals sent by companies

Zero-equity co-funding from

Guidance from ESA as a

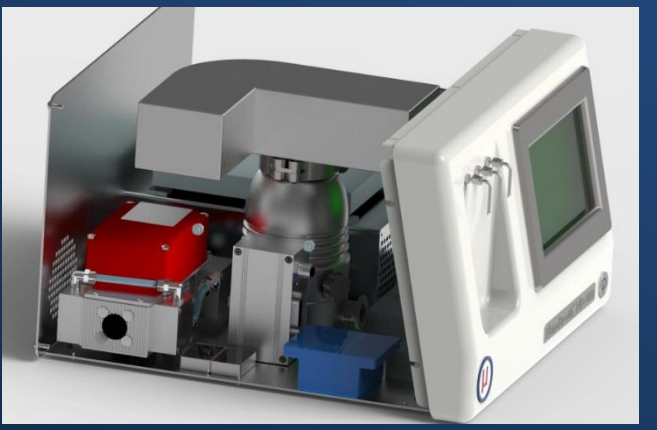
Example of a Technology Transfer

Rosetta mission : mass spectrometry instruments for Ptolemy



BAE systems: Long term air quality monitoring

Givaudan (world leader in flavourings): range of sniffing technologies, removing microplastics from household products



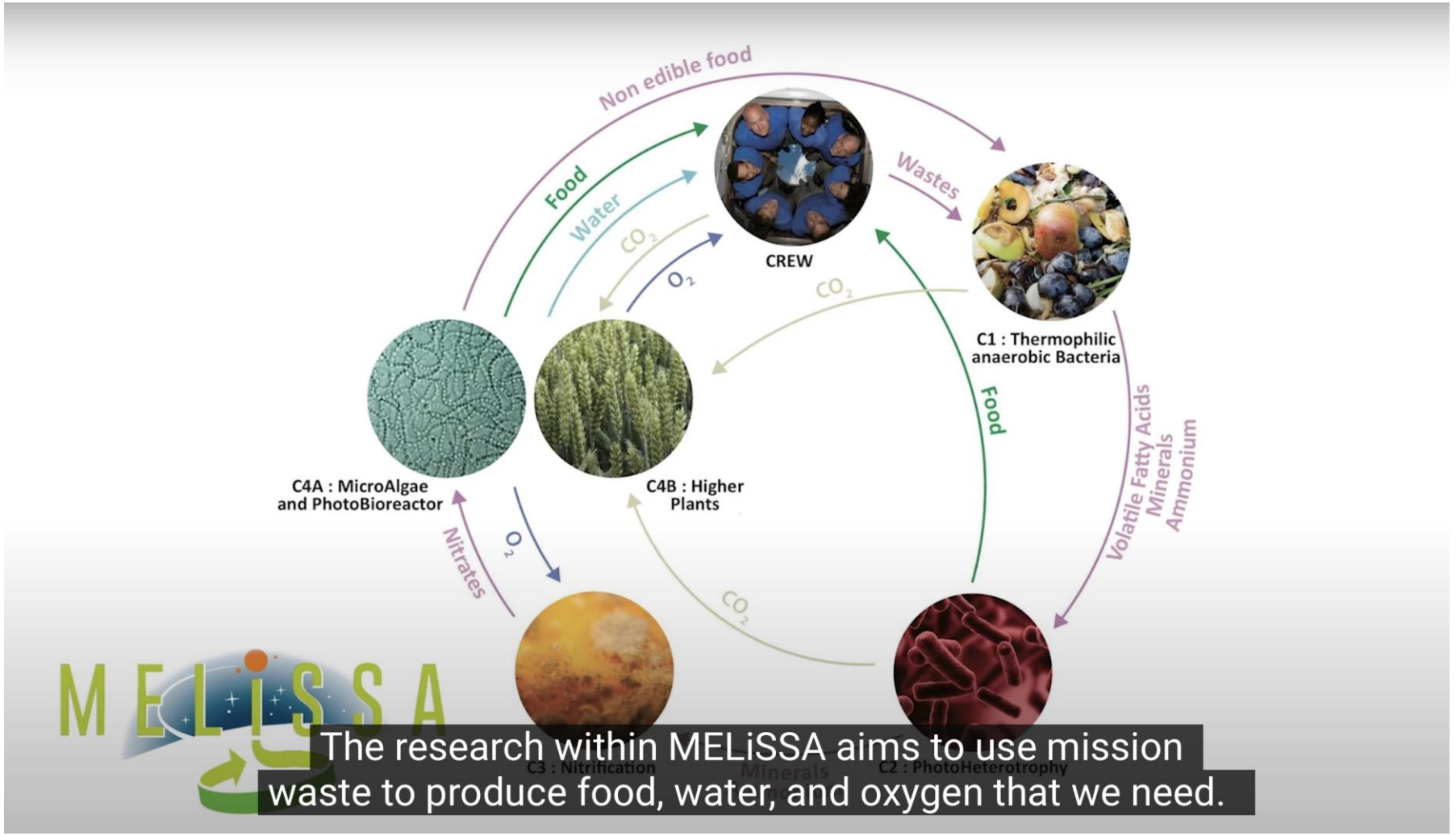
MicroMedical: medical breath testing system to detect Heliobacter pylori

TOMORROW

Circular Economy

On Mars, astronauts will need produce food, oxygen and water from their waste

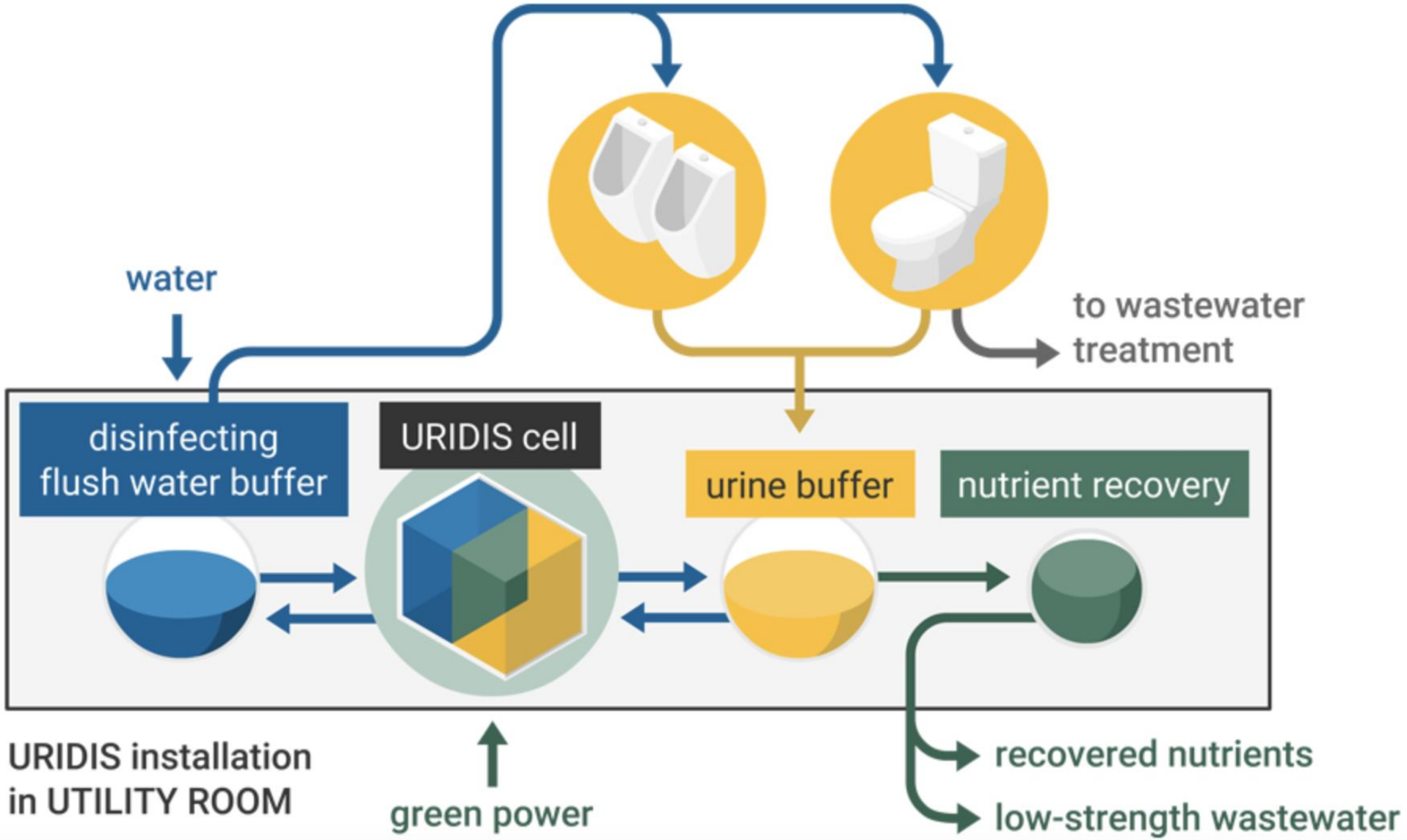
The Melissa project



FIRMUS- Grey water

The technology developed by our consortium is widely approved since more than 1,000 people in Concordia Station have used recycled grey water so far, while its hygienic quality has been constantly checked since 2005.

FIRMUS® FRANCE

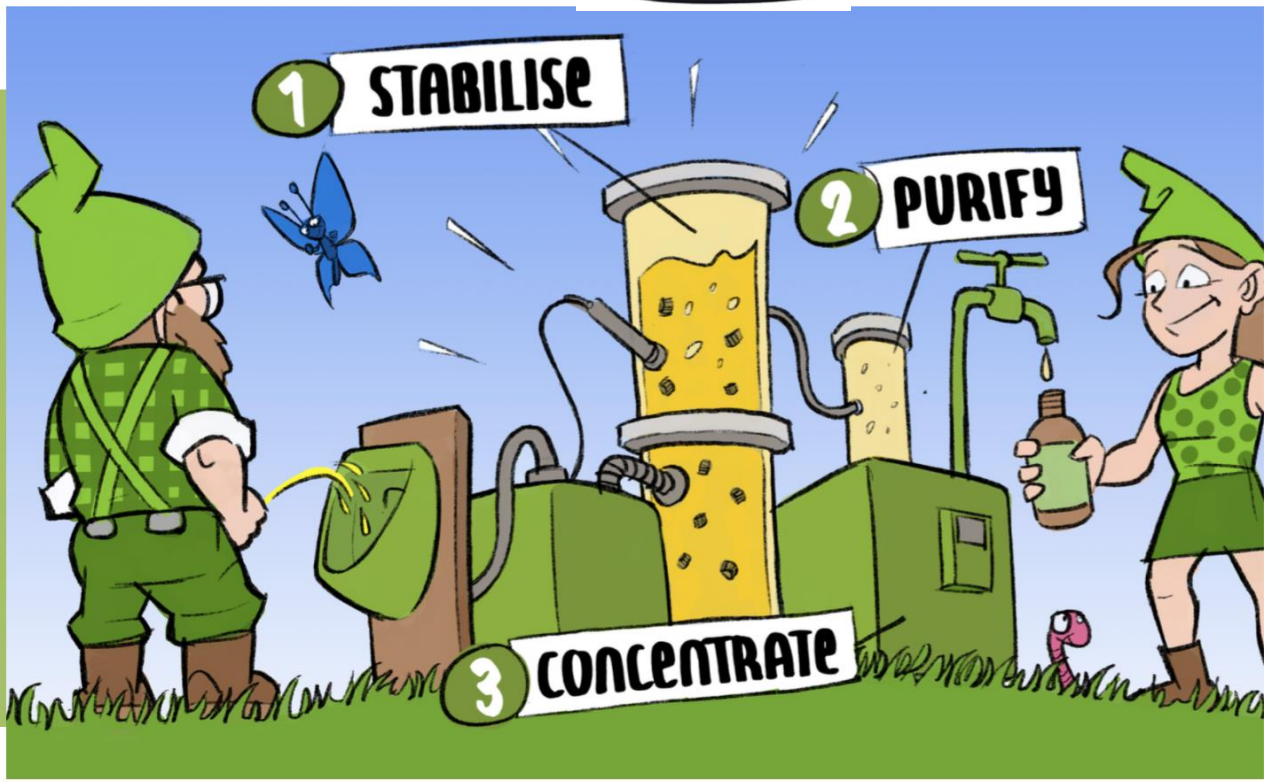

water
to wastewater treatment
disinfecting flush water buffer
URIDIS cell
urine buffer
nutrient recovery
URIDIS installation in UTILITY ROOM
green power
recovered nutrients
low-strength wastewater

From urine to fertalizer

We offer Portfolio Vuna Shop ENG

Urine recycling technology

Urine recycling, really? With the Vuna process, the world's first urine fertilizer is made from your urine. With official approval for all plants, from vegetables to houseplants.



Business Applications And Space Solutions

Partnerships with non-space stakeholders enable large-scale adoption and impact

Green

Societal

Economic

Space Weather

Earth Observation

Satellite Navigation

Satellite Communication

Human Spaceflight Technologies

Maritime

Healthcare

Transport

Environment

Agriculture

Media

Energy

Education

Aviation

Financial

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