



## **INVESTMENT DECK 2025**

Regulatory precision, revolutionary  
phytointelligence - CAPSERO as your  
partner in the regulated industry

# DISCLAIMER



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**WHY NOW?**

# FIRST THINGS FIRST



⊗ **We do not grow plants and do not operate vertical farms!**

- ✓ CAPSERO is the first company in the world to offer a modular, fully automated, sterile and legally compliant technology platform for the production of raw materials for phytopharmaceuticals, cosmetics and plant-based foods.
- ✓ Consistent quality and quantity, with full traceability and compliance with GMP/GACP/GAMP5
- ✓ Scalable, patented technology enables market penetration

**Regulatory upheaval requires safe production methods.**



# LEGAL CHANGES & MARKET UPHEAVAL



The EU, Switzerland and the USA tightened the regulations for plant-based medicine, cosmetics and food in 2023 and 2024.

Historically, regulatory changes have regularly consolidated markets and created new market leaders. The market upheaval is imminent.

- ✓ Thalidomide scandal (1960s): Stricter approval controls created a new regulatory environment for pharmaceutical companies.
- ✓ PIP scandal (2010): Following the discovery of industrial silicone in breast implants, the EU introduced strict material controls - only companies with complete traceability benefited.
- ✓ Sterility incidents in drug production: Tightening of FDA and EMA regulations made strictly regulated production mandatory.
- ✓ EFSA screening (food safety): New regulations for contaminants and heavy metals forced producers to make changes.

**CAPSERO offers the first fully compliant, scalable and automated solution and is therefore the answer to the current regulatory challenges**

# LEGAL CHANGES & MARKET UPHEAVAL



Incident	Problem	Regulation	Duration until settlement
Thalidomide scandal	Mutagen for unborn children, October 1957	01.08.1961	4 years
Chernobyl	Explosion at the nuclear power plant in April 1986 with radioactive contamination of salads	Ban on the provision of salads from May 1986 - July 1988	Immediately
PIP scandal	Renewal of the Medical Device Directive (MDD) due to the breast implant scandal in April 2010	25.05.2017	7 years
AI development	AI Act to protect the population from strong AI and data protection issues following incidents in 2019	21.05.2024	5 years
Sterility incidents with sterile medicinal products	Advances in the manufacture of sterile medicinal products and implementation of ICH Q9 and Q10 in EU GMP in 2017 led to the update of GMP Annex I	25.08.2023	5 years
EFSA screening	Elevated levels of pyrrolizidine alkaloids found in tea and herbs in 2011	Setting lower limits for pyrrolizidine alkaloids in tea and herbs as of 2016	5 years
EFSA screening	Evaluation of toxicity information on fluroxypyr in chives, celery leaves, parsley, thyme, basil and edible flowers in 2017	Setting lower limits for fluroxypyr by 2020	3 years

# LEGAL CHANGES & MARKET UPHEAVAL



# ADAPTED LEGAL SITUATION

In 2020, the EFSA (European Food Safety Authority) defined or lowered the maximum levels of various substances in plant raw materials. These substances mostly occur due to contamination in outdoor cultivation.


Find out more at: <https://www.efsa.europa.eu/de/efsajournal/pub/6273>

The European Union has implemented a harmonization of medicinal plants at EU level by updating the law. This has massively tightened the quality requirements and now requires GACP/GMP.

Read more: <https://eurlex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2004:136:0085:0090:en:PDF>

The lists of plants to which the directives apply can be found in the annexes to the EU law below:

<https://eur-lex.europa.eu/legal-content/DE/ALL/?uri=celex%3A32005R0396>

 In outdoor cultivation, for example, aloe vera absorbs nutrients via its roots and thyme via its roots. The leaves contain harmful substances, which means that further processing of the plants is prohibited.



# AFFECTED REGIONS / AUTHORITIES



**EFSA**

European food safety

**2001/83/EC  
(EU GMP)**

European regulation for  
pharmaceuticals

**1223/2009/EC  
(ISO 22716, GMP)**

European regulation for  
cosmetics

**FDA  
(FSMA)**

USA Food safety

**FDA 21 CFR 210/211  
(US GMP)**

USA regulation for  
pharma

**FD&C Act (MoCRA)  
(ISO 22716, GMP)**

US regulation for  
cosmetics

# THE PRESSURE ON PRODUCERS IS INCREASING

Current production methods are unreliable, inefficient and no longer future-proof.

## **Strict regulations:**

- New EU regulations on limiting pesticides and heavy metals.
- FDA/EMA requirements for sterility and traceability.
- GMP/GACP conformity becomes mandatory for market access.

## **Contamination problems:**

- 25% of the world's arable land is unusable due to heavy metals, pesticides and environmental toxins.
- 14% of the harvested raw materials are lost during transportation.

## **Cost explosion for quality assurance:**

- Cleaning, testing and traceability account for up to 30 % of production costs.

**Conclusion:** Producers urgently need to switch to standardized, clean, traceable production methods - otherwise they will lose market share or approvals.

We provide a safe haven for customers, manufacturers and distributors of plant raw materials in the highly regulated industry following the recent legislative changes.

**Welcome to CAPSERO!**

# OVERVIEW



Task	Company
Series A	CAPSERO AG, Switzerland
CEO	Fabio Cirillo
Rating	PWC, Switzerland
Market data	Statista, Germany
Feasibility study	Innosuisse - Swiss Agency for Innovation Promotion
University partner	Zurich University of Applied Sciences, University of Basel, University of Montpellier
Legal advice	BBP, Switzerland; CMS, Switzerland
Corporate business	Valiant Bank, Switzerland

# MANAGEMENT SUMMARY



1

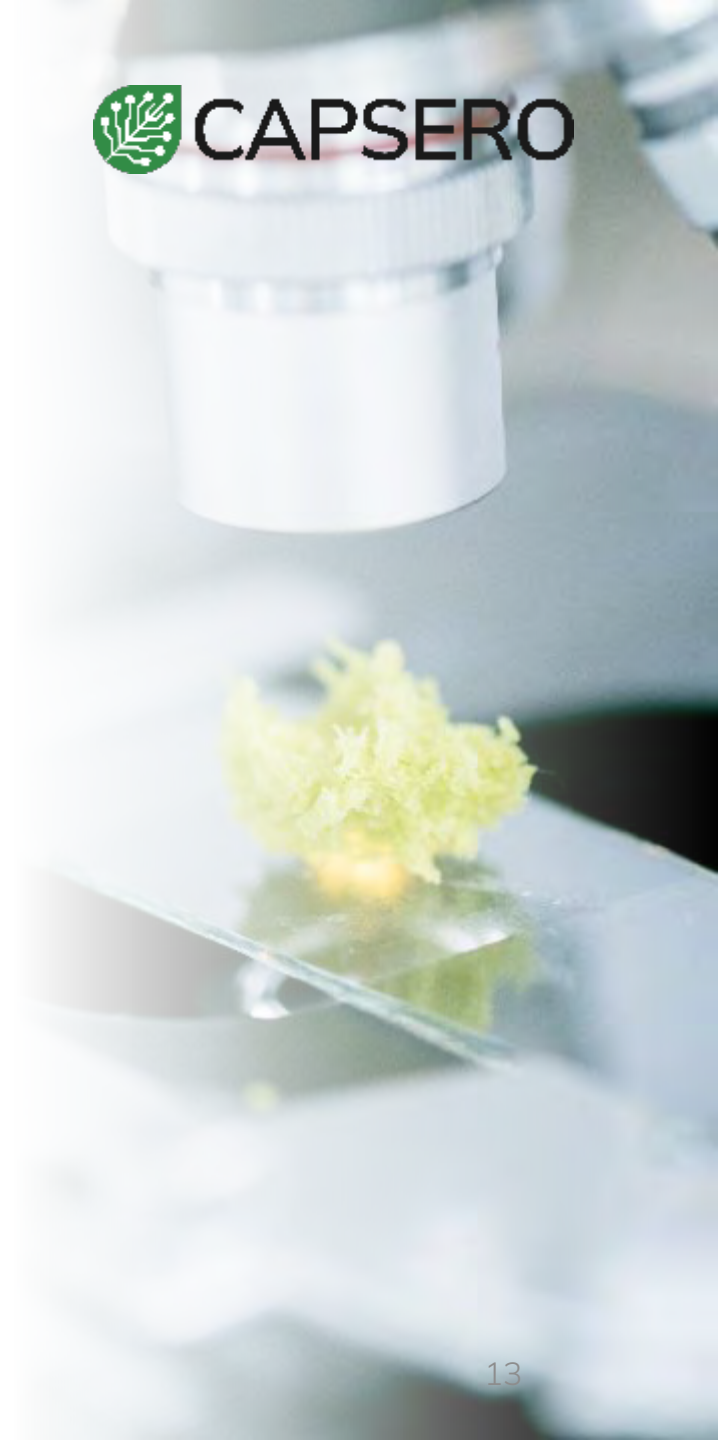
CAPSERO is the only company in the world that **guarantees** technology and service for sterile, **contamination-free, certifiable and traceable cultivation of plant material right through to the end product.**

2

Starting with controlled plants, CAPSERO offers industrial quantities of identical, sterile seedlings for fully automated cultivation and harvesting using patented processes and technologies.

3

Using big data, machine learning and AI, CAPSERO can **optimize plant growth live according to desired criteria** and even predict results.



# VISION

Our goal is to provide humanity with clean, safe and optimized plant-based solutions that improve health, sustainability and the future of regulated industries





# FOUNDER STORY



**FABIO CIRILLO**  
CEO AND CTO  
CO-FOUNDER

**"I worked with green tea, star anise and dyer's weed for a long time, and since the environmental influences during cultivation cannot be 100% controlled, a plant always develops slightly differently."**

I am Fabio Cirillo, founder and CEO of CAPSERO. I am a chemist and process engineer by training, an amateur astronomer and always enthusiastic about technology, curious and willing to explore new ways to solve old problems. I grew up in the various Big Pharmas of the world and worked in international project management in Europe, the USA and Asia, particularly in the construction of large-volume pharmaceutical and natural product production plants. With blood, sweat and tears, we literally built huge production facilities for several hundred thousand tons of product per year. In this context, I have of course also been intensively involved in natural product chemistry and am the inventor of many patents and have played a key role in drug approval.

**"The recurring problem with natural product extraction was the procurement and quality control of plant source material. In my case, this meant that production facilities had to be stopped, the plant material analyzed and the process readjusted. You can imagine the costs associated with such an interruption in production."**

# FABIO CIRILLO, CEO



**FABIO CIRILLO**  
CEO AND CTO  
CO-FOUNDER

- ✓ Chemist, Chemical Process Engineering (ZHAW)
- ✓ Certificate in User-Centered Product and Service Design (Cornell University)
- ✓ Certificate in Business Strategy (Cornell University)

Leading positions in large pharma and medtech companies in research and development with a focus on global product development and technical engineering. Founder of a renowned, award-winning consulting company in Europe. Chairman and guest speaker at various congresses and training providers.

Over 30 products  
launched on the global  
market

Over 10 patents for  
large-scale industry and  
pharmaceuticals

pharmaceutical and  
industrial process plants  
and managed the  
construction

Keynote speaker and  
chairman at  
international life science  
congresses

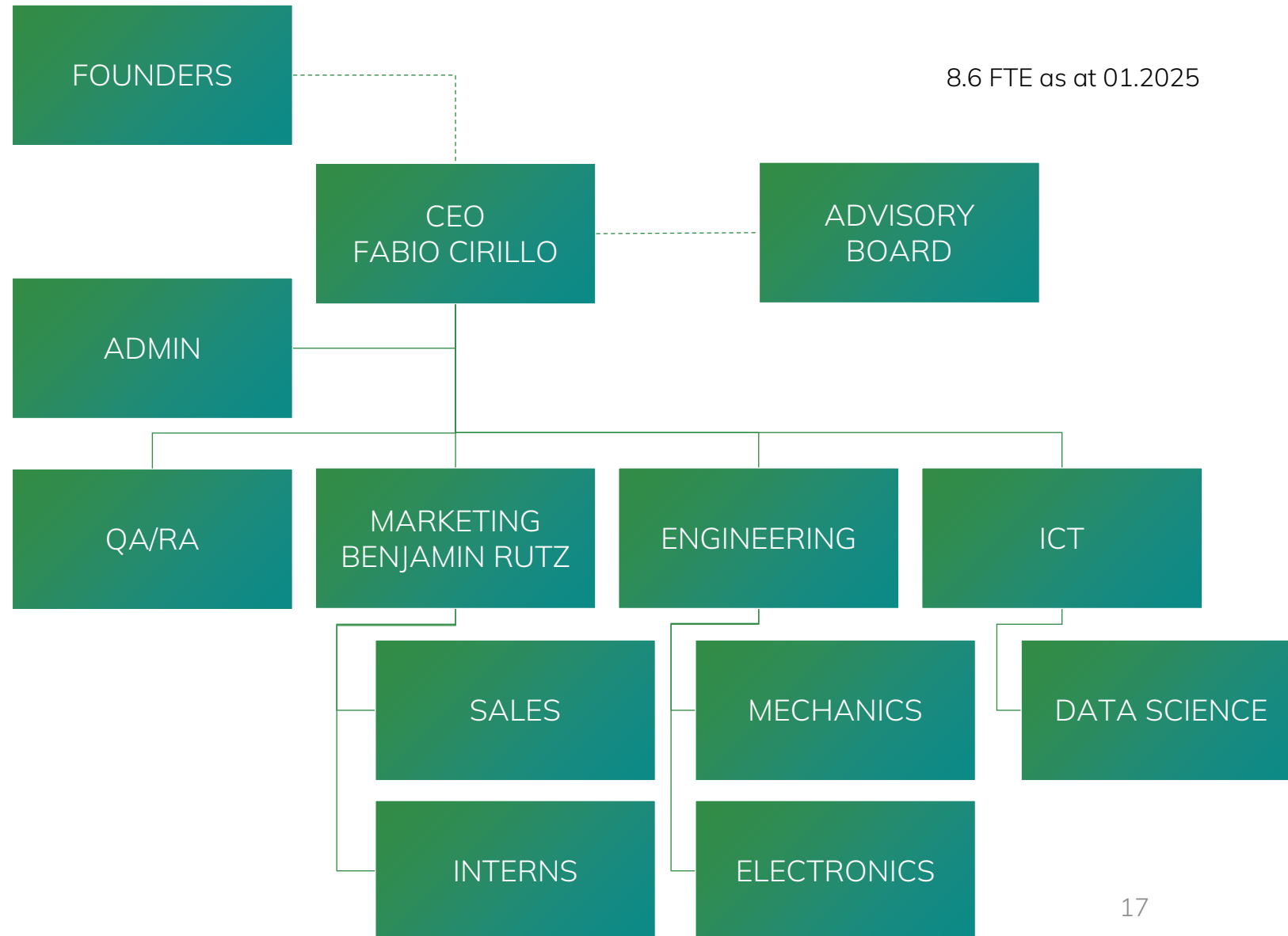
# OUR TEAM



BENJAMIN  
RUTZ  
CMO AND  
CO-FOUNDER

With a background in international Management (FHNW), extensive experience in the start-up industry and has been involved in marketing and growth strategies for both own projects and small companies, focusing on the automation of marketing, sales and customer retention processes. Involved in marketing projects in the medicinal plant, active ingredient and chemical industries.

## PART 3: TEAM



# TEAM AND PARTNERS



CAPSERO manages and coordinates > 50 engineers, technicians, researchers, agronomists, data and AI specialists who all contribute to the success of the technology.

Our corporate team consists of experts and consultants who are highly experienced, educated and extensively trained in their respective fields. These areas are critical to the value and growth of CAPSERO and its proprietary methodologies and are as follows:

## Engineering sciences



## ICT

## Research



## Biology/biotechnology





# THE PROBLEMS IN NUMBERS



1

## Contamination

25% of the world's farmland is contaminated

2

## Purification

Purification accounts for 20%-30% of production costs

3

## Transportation

Loss of 14% caused by transportation worldwide

4

## Diseases

Worldwide 20%-40% loss due to disease

5

## Quality system

Insufficient standardization and traceability

6

## Inconsistency

Differences in quality and quantity slow down processing

7

## Plannability

Dependence on environmental influences reduces planning reliability

8

## Optimization

Plant protocols are not optimized using modern methods

# THE PROBLEMS

What has been recognized so far:

- Food shortage
- Population growth
- Crop failures
- Environmental influences

## Quality and traceability

Quality checks only show pests and contamination at random, without tracing the production chain

## Efficiency and optimization

Manual interventions on a system that has been created once without the possibility of simply introducing optimizations.

## Decentralized and local producers

Produced locally on large farms and distributed by truck over a large catchment area.

## Consistency and planning security

Planning reliability and consistency of quality, quantity of ingredients or quantity make planning reliability in the value chain more difficult

But we go one step further!



# THE SOLUTION



We strive to build a sustainable, fail-safe, efficient and decentralized network of automated, locally installed cultivation facilities to ensure a 100% supply of humanity with all the plant raw materials it needs.

- ✓ Fully automated cultivation technology in containers
- ✓ Re-supply with DNA-pure plant capsules
- ✓ Ideal breeding programs, tailored to the plant genome
- ✓ 100% contamination-free, aseptic production
- ✓ Stackable, modular and scalable container farms



# THE SOLUTION VISUALIZED

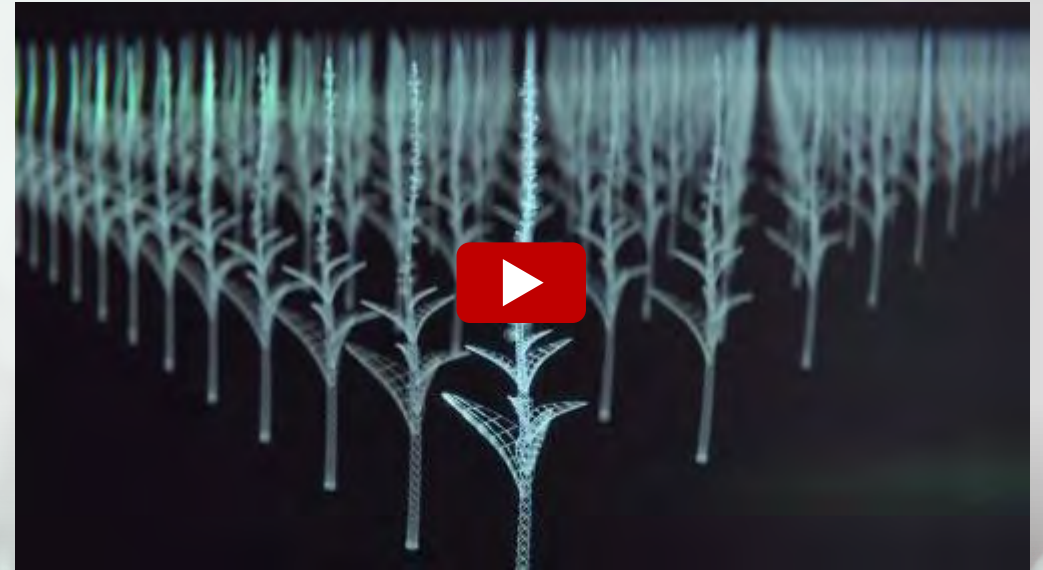


## TECHNOLOGY



Watch the video

## OPTIMIZATION



Watch the video



## INDUSTRIAL DAYS (HANDHELD VIDEO)



Watch the video

<https://youtu.be/fUOWXmm2DaA>

# **BUSINESS MODEL & MONETIZATION**

# OUR BUSINESS MODEL



## CAPSERO range

Customers can currently choose from over 80 plants from our plant vault.



## Proprietary plant

We can clone customer-specific plants in vitro and propagate and maintain them proprietarily for the customer.

## Additional services

- ✓ Plant optimization
- ✓ Digital Twin Simulations
- ✓ CAPSERO DNS Vault
- ✓ Quality system
- ✓ Service Level Agreement
- ✓ Consumables



## Propagation

In our laboratories, we propagate plants from our range in large numbers under sterile conditions and fully documented.



## Cultivation protocol

Using state-of-the-art technologies, we can not only create fast, but also optimized cultivation protocols.



## GROW Container

The GROW Container is the heart of every farm and is supplied as a plug-n-play, modular system that can be expanded at any time.



## HARVEST Container

The HARVEST container serves up to 10 GROW containers, works completely automatically and takes on both cleaning and planting tasks.



## PROCESSING Container

The PROCESSING container is individually tailored to the process, equipped and, if required, fully qualified on site.



## Marketplace

A virtual place to organize the global demand for plants and raw materials. If desired, the marketplace communicates with the farm and/or external laboratories.

# REVENUE SOURCES



Revenue Stream	Kind	Explanation	Margin	Share of sales (2029)
Sale of grow containers	One-off Revenue	Sale of modular, patented production containers to customers	100%	38%
Sale of plant capsules	Recurring	Regular supply of sterile plant capsules for cultivation in the CAPSERO system	500%	38%
Software and quality system licenses	Recurring	SaaS model for AI-supported growth protocols and regulatory compliance documentation	100%	9%
Marketplace fees	Recurring	Commission on the trading of regulated plant commodities via the CAPSERO marketplace	5-10 %	10%
SLA service contracts	Recurring	Premium support for customers with guaranteed availability & regulatory compliance	70-90 %	5%



# CUSTOMER EXAMPLE | LIFE CYCLE



Product	Quantity	Price	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	Total	Share
GROW module	6	250'000	1'500'000										1'500'000	30.1%
HARVEST module	1	500'000	500'000										500'000	10.0%
Non-recurring revenue													2'000'000	40.1%
Capsules	23'328	8.50	198'288	198'288	198'288	198'288	198'288	198'288	198'288	198'288	198'288	198'288	1'982'880	39.8%
Consumables	6	1'200	7'200	7'200	7'200	7'200	7'200	7'200	7'200	7'200	7'200	7'200	72'000	1.4%
Software	6	7'500	45'000	45'000	45'000	45'000	45'000	45'000	45'000	45'000	45'000	45'000	450'000	9.0%
GMP/GACP	1	12'000	12'000	12'000	12'000	12'000	12'000	12'000	12'000	12'000	12'000	12'000	120'000	2.4%
Service and SLA	6	6'000	36'000	36'000	36'000	36'000	36'000	36'000	36'000	36'000	36'000	36'000	360'000	7.2%
Recurring revenue													2'984'880	59.9%
Total sales			2'298'488	298'488	298'488	298'488	298'488	298'488	298'488	298'488	298'488	298'488	4'984'880	100%

40%

One-time turnover:  
CHF 2'000'000

60%

Recurring revenue:  
CHF 2'984'880

# TECHNOLOGY

# OUR TECHNOLOGY



**A**

## PLANT

> **100** protocols  
from catalog  
available

**B**

## CONTAINER

Production capacity of  
52 containers per  
year, rising

**C**

## CAPSULE

Ready for  
industrial  
Manufacturing

**D**

## MARKETPLACE

First contracts under  
negotiation;  
Marketplace ready  
for roll-out

**E**

## CLOUD

CLOUD is ready for  
data acquisition and  
data analysis

**F**

## DIGITAL TWIN

Hardware under  
construction;  
algorithms verified in  
silico



# A) PLANT

- Technology Readiness Level (TRL) 8
- Over 100 plant protocols and associated storage culture
- Automation of cloning
- AI solution for the rapid creation of plant protocols



## B) CONTAINER

- Technology Readiness Level (TRL) 7
- Production capacity of 50 containers per year, expansion to 50 containers per month
- 1 manufacturer qualified in Europe, 4 more in qualification
- Production time per container 3 months, reduction to 1 month





## C) CAPSULE

- Technology Readiness Level (TRL) 7
- Safe to transport, even in an airplane
- Plant shelf life > 14 days
- Sterilizable
- Automatically openable
- For all plants



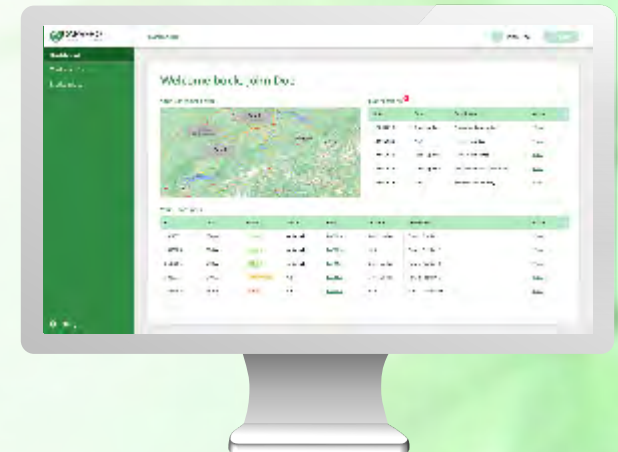


## D) MARKETPLACE

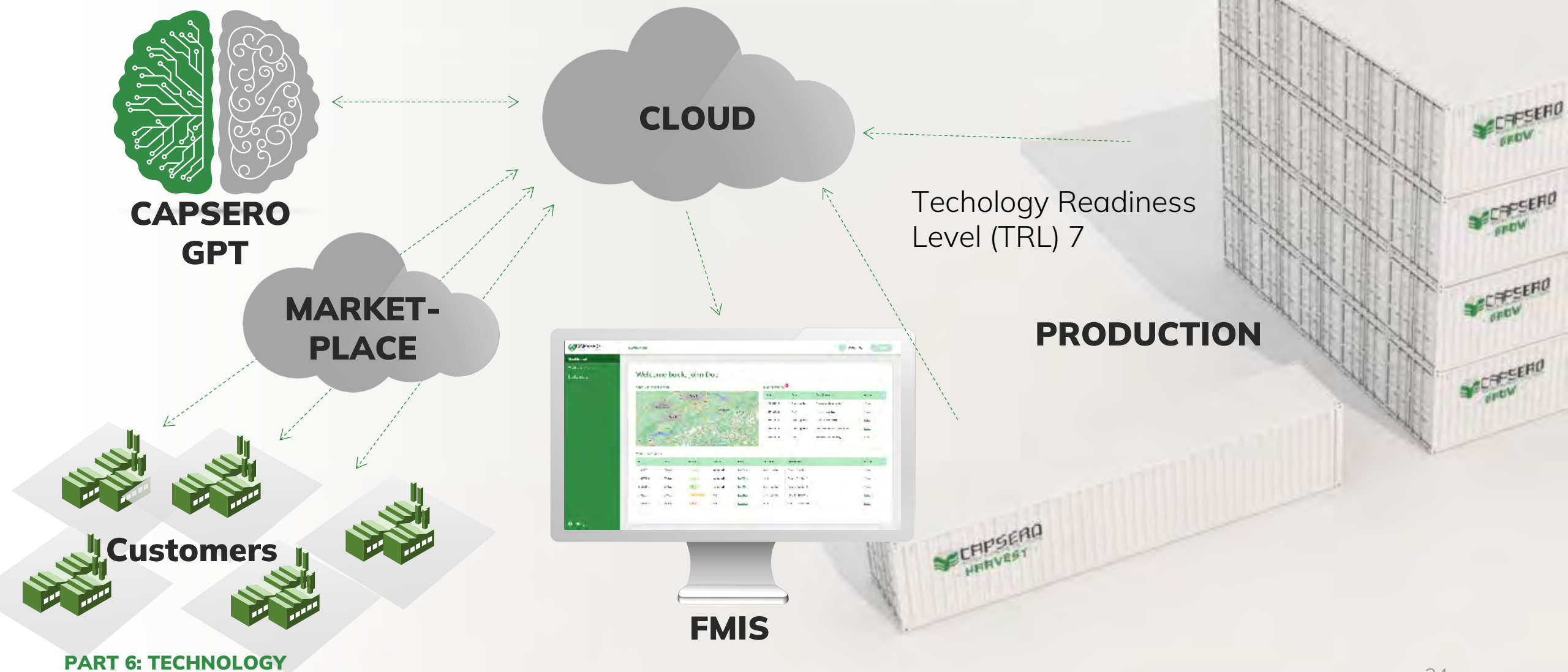
- Technology Readiness Level (TRL) 5
- eShop for all products and services
- Connects buyers with sellers
- Ensures certification and quality

 Search plant materials

Buy



## E) CLOUD








# OUR PROMISE



## CAPSERO COMPARED TO CONVENTIONAL INDOOR FARMS

REGULATORY	ECOLOGICAL			FINANCIAL	ECONOMIC
complete GMP compliant	30% Less water			60% less operating costs/m <sup>2</sup>	50% Time saving until the harvest
100% free from pesticides	50% Less energy			9 months until amortization of the investment	80% more yield per m <sup>2</sup>
100% Traceable	25% less CO <sub>2</sub>			50% less investment costs/m <sup>2</sup>	90% less Personnel costs
compliant on the QbD approach (Quality by Design)	100% contamination free			100% Covering the Earnings risk (insurance)	>25% more harvests per year
100% Automated and AI-controlled	100% modular, scalable and flexible				

# **MILESTONES**



# MILESTONES

2018	2019	2020	2021	2022
<ul style="list-style-type: none"><li>✓ Origin of the idea</li><li>✓ First solution approaches</li></ul>	<ul style="list-style-type: none"><li>✓ Development of the technical solution to the problem</li><li>✓ Market analysis</li><li>✓ Concepts for monetization</li><li>✓ Evaluation of the core team</li></ul>	<ul style="list-style-type: none"><li>✓ Company foundation</li><li>✓ Organization of the company structure</li><li>✓ Development of the partner network and advisory</li><li>✓ Development and implementation of the QMS</li><li>✓ Development and POC construction</li><li>✓ Filing the patent</li></ul>	<p><i>Corona crisis</i></p> <ul style="list-style-type: none"><li>✓ Conclusion POC</li><li>✓ Conclusion Development of the technology</li><li>✓ Tender manufacturer</li><li>✓ Software and AI algorithms</li></ul>	<ul style="list-style-type: none"><li>✓ Scaling of production</li><li>✓ Industrialization</li><li>✓ Automation solutions</li><li>✓ Innosuisse</li></ul>

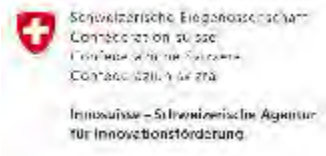


# MILESTONES

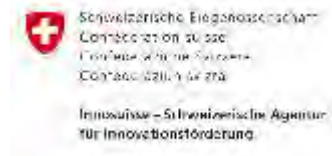
Q1 2024		Q2 2024	Q3 2024	Q4 2024	FUTURE
	<ul style="list-style-type: none"><li>✓ Conclusion of contracts with distribution and production partners</li><li>✓ Staffing</li><li>✓ Nationalization of patents</li></ul>	<ul style="list-style-type: none"><li>✓ Product launch</li><li>✓ Implementation of the LOIs</li><li>✓ Nationalization of patents</li></ul>	<ul style="list-style-type: none"><li>✓ Market entry in the DACH region</li><li>✓ Automation concept</li><li>✓ Concept of protocol generation</li></ul>	<ul style="list-style-type: none"><li>✓ CAPSERO-GPT</li><li>✓ Manufacturer qualification</li><li>✓ Move into production areas</li><li>✓ Staffing</li></ul>	<ul style="list-style-type: none"><li>✓ Vertical integration of the core businesses</li><li>✓ Market expansion EU</li><li>✓ Further market entries</li><li>✓ EXIT strategy</li></ul>

# HIGHLIGHTS

Startup coaching  
Business Check  
INNOSUISSE



INNOSUISSE  
Subsidies  
receive



Patent on  
World Patent Office  
published



Google Startup Award  
EURO 100'000.-

AVEVA Lighthouse  
Project

First sales:  
Sales target 2023/24 by  
60% exceeded

Letters of intent for more  
than 1300 containers

Positive discussions with  
more than 80 customers  
from the pharmaceutical  
and cosmetics industries

Rollout of the 0 series  
in 2023  
Onboarding of large-scale  
producers completed



# TRACTION

## Course of business

- Product development under GMP completed
- CMO for production
- Over 80 in-vitro protocols developed
- Patent published at WIPO, Nationalization
- Key positions covered and candidates identified for other positions

## Awards

- INNOSUISSE Business Check successfully completed
- INNOSUISSE receives funding
- Google Startup Award received
- Member of Piccard's Solar Impulse Foundation
- Selected by Startus Insights as top 10 companies in the AgTech sector

## Known from



**Zefyron**

**StartUs**  
insights

Google for Startups

**AVEVA**



**urban | vine**

# **SUSTAINABILITY**



# SUSTAINABLE | SOLAR IMPULSE



Betrand Piccard's Solar Impulse Foundation has invited us as CAPSERO to have our solution for the sustainable and controlled cultivation of active ingredient plants evaluated under the "efficient solution" label. The rigorous assessment covers various aspects such as resource consumption, the impact on education and employment conditions and the ecosystem.

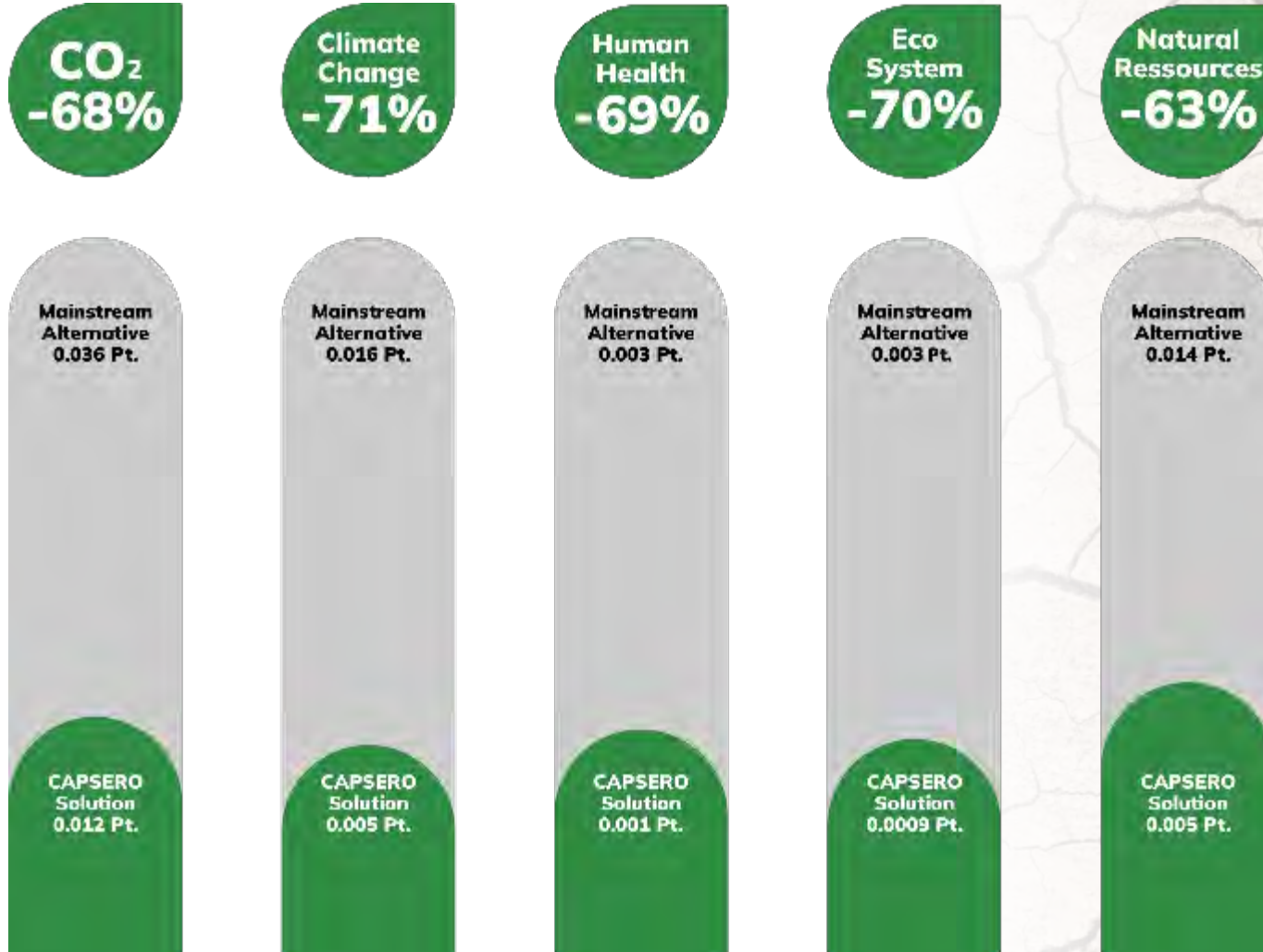
## Sustainability study by Solar Impulse

This study shows that the ecological footprint of basil is reduced by 67% through the use of the CAPSERO solution. This is mainly due to the fact that less water and electricity are required during the use phase.





# SOLAR IMPULSE STUDY



**SOLARIMPULSE**  
FOUNDATION

<https://solarimpulse.com/companies/capsero>

# WHAT THE FUTURE HOLDS

Sustainability is not just a word for us.

We are already planning ahead for the new present of sustainable agriculture!

- ✓ Waste biomass is used to produce biogas
- ✓ Biogas is used to supply the company with energy
- ✓ Waste from biogas is CO<sub>2</sub> and fertilizer
- ✓ Fertilizer is used to prepare the seedlings
- ✓ CO<sub>2</sub> is used to grow the seedlings on the farm
- ✓ Decentralized food production with physical blockchain
- ✓ Use of solar and water energy
- ✓ Using direct seawater replenishment for the cultivation of crops
- ✓ Rapid reforestation with healthy trees that are resistant to pests



# OUR CUSTOMERS

# CASE STUDY



## **ARGENT. HARDWARE**

Verbena bonariensis

Number of plants: 3'150  
Yield/harvest: 630 kg  
Turnover/harvest: CHF 693,000

**At least 4 harvests  
per year possible**

\*Imputed sales prices



## **BAIKAL FEVERFEW**

Scutellaria baicalensis

Number of plants: 3'150  
Yield/harvest: 315 kg  
Turnover/harvest: CHF 78'750

**At least 4 harvests  
per year possible**

\*Imputed sales prices



## **MED. CANNABIS**

Cannabis sativa

Number of plants: 1'052  
Yield/harvest: 63 kg  
Turnover/harvest: CHF 283,500

**At least 4 harvests  
per year possible**

\*Imputed sales prices

By the way:

- ✓ 1680 containers fit on a football pitch.
- ✓ This corresponds to 1.76 - 5.29 million plants.





# COSMECEUTICAL MARKET

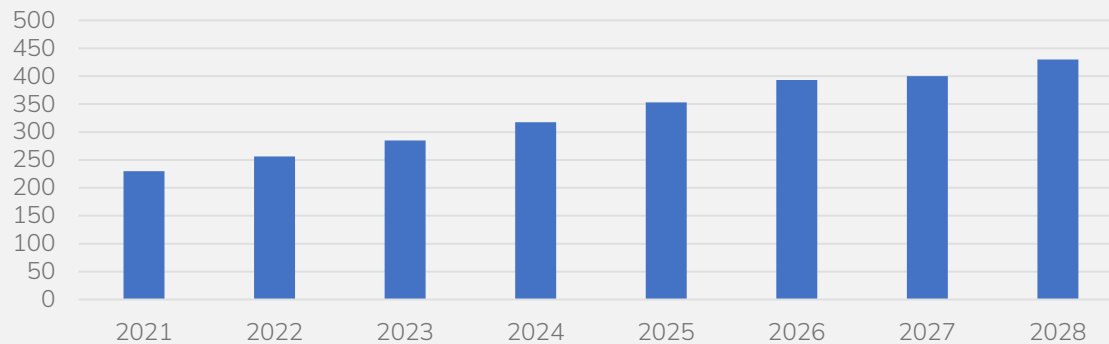
**Cosmeceuticals** are cosmetic products with bioactive ingredients that are said to have a medicinal effect. Extracts and substances that are identical to the skin, ideally matched to each other and can be optimally absorbed by the skin are the secret of the cosmeceutical effect.



The global market for cosmeceuticals

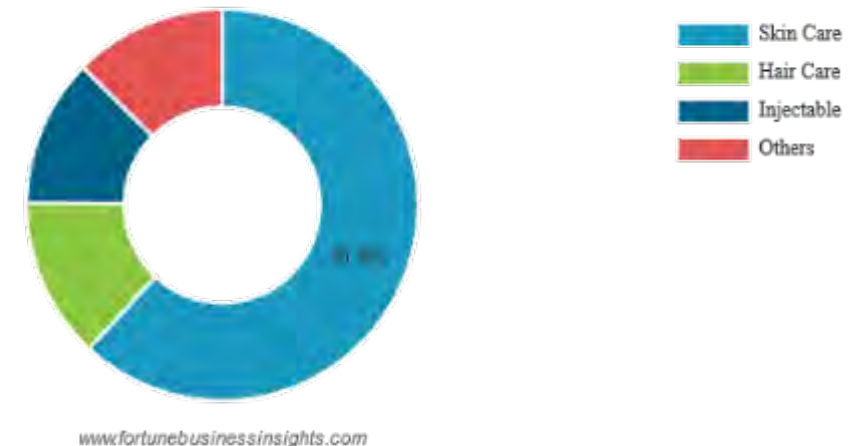
is expected to grow from USD 54.57 billion in 2022 to USD 96.23 billion in 2029, at a CAGR of 8.4% during the forecast period 2022-2029.

Market size in USD billion



<https://www.fortunebusinessinsights.com/cosmeceuticals-market-102521>

Global Cosmeceuticals Market Share, By Product Type, 2021



# WELL-KNOWN COMPANIES



L'Oréal  
Annual sales: 32.28 billion USD  
Number of employees: 85,400



Estée Lauder  
Annual sales: 14.29 billion USD  
Number of employees: 22,000



Kao Corporation  
Annual sales: 11.12 billion USD  
Number of employees: 33,500



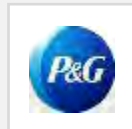
Unilever  
Annual turnover: 52.44 billion USD  
Number of employees: 149,000



Coty  
Annual sales: 9.4 billion USD  
Number of employees: 10,600



Beiersdorf  
Annual sales: 7.65 billion USD  
Number of employees: 20,000



Procter and Gamble  
Annual turnover: 67.7 billion USD  
Number of employees: 97,000



Shiseido  
Annual sales: 6.47 billion USD  
Number of employees: 33,000



Johnson & Johnson  
Annual sales: 71.9 billion USD  
Number of employees: 127,000

# WELL-KNOWN PLANTS



Aloe vera extract  
Annual sales: 2.3 billion USD

<https://www.statista.com/statistics/688799/global-sales-of-aloe-vera-extract/>



Lavender extract  
Annual sales: 3.53 billion USD

<https://www.tridge.com/intelligences/lavender-oil>



Rosemary extract  
Annual sales: 3.3 billion USD

<https://www.tridge.com/intelligences/rosemary1/production>



Safflower extract  
Annual sales: 9.14 billion USD

<https://www.tridge.com/intelligences/safflower-oil>



Hibiscus extract  
Annual sales: 3.3 billion USD

<https://www.tridge.com/intelligences/hibiscus>



Sea buckthorn extract  
Annual sales: 3.55 billion USD

<https://www.tridge.com/intelligences/sea-buckthron>

The TRIDGE logo consists of a white icon of three connected nodes forming a triangle, followed by the word "TRIDGE" in a bold, white, sans-serif font, all set against a black rectangular background.



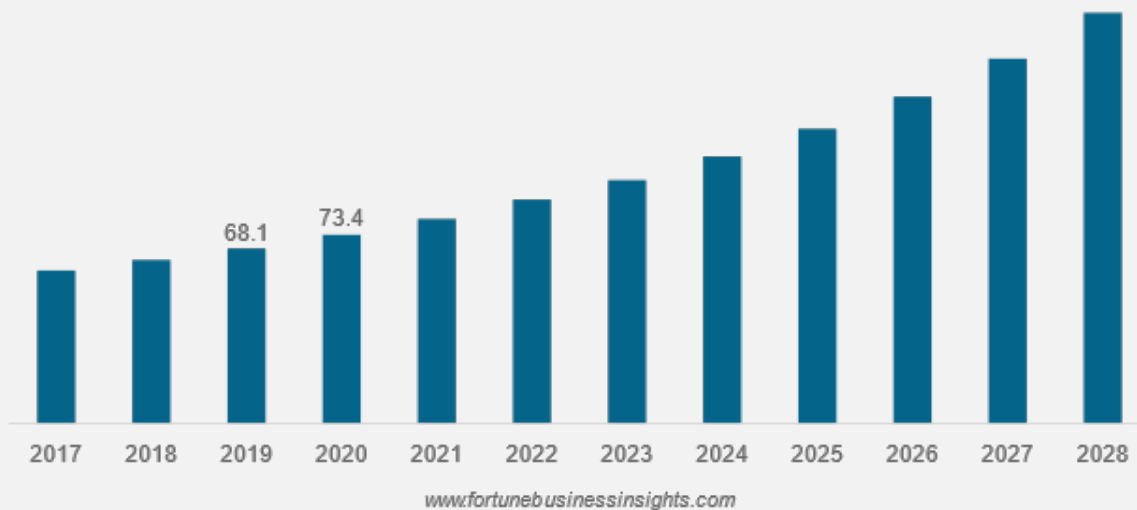
<https://www.tridge.com>  
Global Sourcing Hub of  
Food & Agriculture

# PHYTOPHARMA MARKET



The global **herbal medicines** market is expected to grow from USD 230.03 billion in 2021 to USD 430.05 billion by 2028, at a CAGR of 11.32%.

Europe Herbal Medicine Market Size, 2017-2028 (USD Billion)



<https://www.fortunebusinessinsights.com/herbal-medicine-market-106320>



A full 40 percent of the drugs that cross pharmacists' counters in the Western world are derived from plants that people have used for centuries, including the top 20 best-selling prescription drugs in the United States.

<https://www.fs.fed.us/wildflowers/ethnobotany/medicinal/index.shtml>



# WELL-KNOWN PLANTS



## Echinacea (Echinacea)

annual turnover:  
2.88 billion USD in 2028

<https://www.verifiedmarketresearch.com/product/echinacea-extract-market/>



## Elderberry

annual turnover:  
6.87 billion USD in 2027

<https://www.maximizemarketresearch.com/market-report/global-elderflower-market/94093/>



## Camomile

annual turnover:  
412 billion USD in 2025

<https://www.globenewswire.com/news-release/2020/06/15/2047865/0/en/Chamomile-Market-to-hit-US-412-billion-by-2025-Global-Insights-on-Key-Trends-Size-Value-Chain-Analysis-Leading-Players-Growth-Drivers-Recent-Initiatives-and-Business-Opportunities.html>



## Ginseng

annual turnover:  
11.7 billion USD in 2026

<https://www.researchandmarkets.com/reports/5029877/ginseng-global-market-trajectory-and-analytics>



## Turmeric

annual turnover:  
4.3 billion USD in 2020

<https://www.industryarc.com/Report/19635/turmeric-market.html>



## Ginkgo

annual turnover:  
2.38 billion USD in 2028

[https://www.einnews.com/pr\\_news/575015047/ginkgo-biloba-extract-market-size-worth-usd-2-379-2-million-by-2028-stellar-cagr-of-4-1](https://www.einnews.com/pr_news/575015047/ginkgo-biloba-extract-market-size-worth-usd-2-379-2-million-by-2028-stellar-cagr-of-4-1)



## Ginger

annual turnover:  
4.3 billion USD in 2027

<https://www.imarcgroup.com/ginger-market>



According to CITES, around 60,000 MAP (Medicinal and Aromatic Plants) are harvested worldwide.

# OUR MARKET

# THE RELEVANT MARKETS

Market	Size in CHF	CAGR	Market research institutes
Cosmetics with active plant ingredients	78 bn.	7.20%	Cognitive Market Research Mordor Intelligence, Fortune Business Insights, Globe News Wire
Plant-based medicine	21 bn.	14.70%	Cognitive Market Research, Business Research Insights, Grand View Research, Technavio
Natural cosmetics	37 bn.	5.70%	Grand View Research, The Business Research Company
Plant-based food supplement	4.5 bn.	7.32%	Grand View Research, Fortune Business Insights
Indoor farming	43 bn.	10.00%	Statista
Vertical Farming	6.8 bn.	10.00%	Statista
AgTech / AgriTech	24 bn.	16.50%	Zion Market Research
CEA (Controlled Environment Agriculture)	32 bn.	19.20%	Dimension Market Research
Agriculture	13'100 bn.	6.55%	Research and Markets

# WEIGHTING OF MARKETS BY RELEVANCE

Market	Weighting
Phytopharmaceutical	16%
CEA	16%
Natural Cosmetics	14%
Cosmeceutical Market	14%
Plant-Based Supplements	12%
AgTech	12%
Vertical Farming	9%
Indoor farming	7%

2025

CHF 31.3 billion



**CAPSERO MARKET  
IN THE YEAR 2032**

CHF 53.4 billion



# TAM, SAM, SOM: INDOOR FARMING MARKET

## YEAR 2025

TAM: 31.3 bn. USD

*Sum of all relevant markets with weighting.*

SAM: 16.5 bn. USD

*Only phytopharmacy and cosmetics*

SOM: USD 5.9 million

1) Pessimistic: 0.01% of the SAM  
2) Realistic: 0.02% of the SAM  
3) Optimistic: 0.05% of the SAM

## YEAR 2032

TAM: 53.4 bn. USD

*Only 74.5% of the TAM work with suitable breeding systems. Global market entry in relevant regions has been successful at this time.*

SAM: 20.13 bn. USD

*All relevant markets*

SOM: 5.2 bn. USD

1) Pessimistic: 0.50% SAM  
2) Realistic: 5.0% SAM  
3) Optimistic: 9.7% of the SAM

TAM | Total available market

Global indoor farming market

SAM | Servable Available Market

Successful market entry, consideration of the comparable indoor breeding systems

SOM | Serviceable accessible market

## CALCULATION OF THE SOM

	2025	2026	2027	2028	2029	2030	2031	2032
PESSIMISTIC: Share of SAM	0.01%	0.02%	0.04%	0.08%	0.16%	0.24%	0.36%	0.42%
REALISTIC: Share of SAM	0.02%	0.15%	0.35%	0.40%	0.65%	1.00%	1.50%	3.00%
OPTIMISTIC: Share of SAM	0.07%	0.35%	0.68%	1.28%	2.13%	2.92%	5.29%	9.65%

# MARKET LEADER VERTICAL FARMING



Competitors in vertical farming/smart farming stand out due to the following features:

- ✓ High deployment of people required
- ✓ No complete traceability
- ✓ Operated as an "indoor" solution
- ✓ Focused on food only
- ✓ Cross-contamination cannot be ruled out



	PlantLab	Plenty	BOWERY
Seat	Amsterdam, NL	California, USA	New York, USA
Industry	Food	Food	Food
Financing status/capital raised	Pre-IPO/57 million USD	Pre-IPO/941 million USD	Pre-IPO/750 million USD
Automation <sup>1</sup>	Deep	Medium	Medium
Sterile conditions	No	No	No
Complete traceability	No	No	No
Energy-efficient <sup>2</sup>	Medium	High	Medium
Mutation monitoring	No	No	No
Irrigation technology	Aeroponics	Aeroponics	Hydroponics
Modular and decentralized use	No	No	No

1: Automation high = no people; medium = people and robots; low = only people | 2: Energy consumption high = hall with sufficient open spaces; medium = deep rooms; low = minimum space requirement

# DIRECT COMPETITORS



Property / Company	CAPSERO	MABEWO	CULTIVATD	FREIGHT FARMS
Individual industry Independent	✓	---	---	---
Mutation-free in-vitro plant	✓	---	---	---
Automated optimization	✓	---	---	---
Digital Twin Simulation	✓	---	---	---
GACP/GMP Compliant	✓	✓	---	---
Sterile production	✓	---	---	---
Fully automated	✓	✓	✓	✓
AI integration	✓	---	---	✓
Marketplace	✓	---	---	---
Scalable	✓	✓	✓	✓

1: Automation high = no people; medium = people and robots, low = only people | 2: Energy consumption high = hall with sufficient open spaces medium = deep rooms; low = minimum space requirement

# **SCALING & EXPANSION**



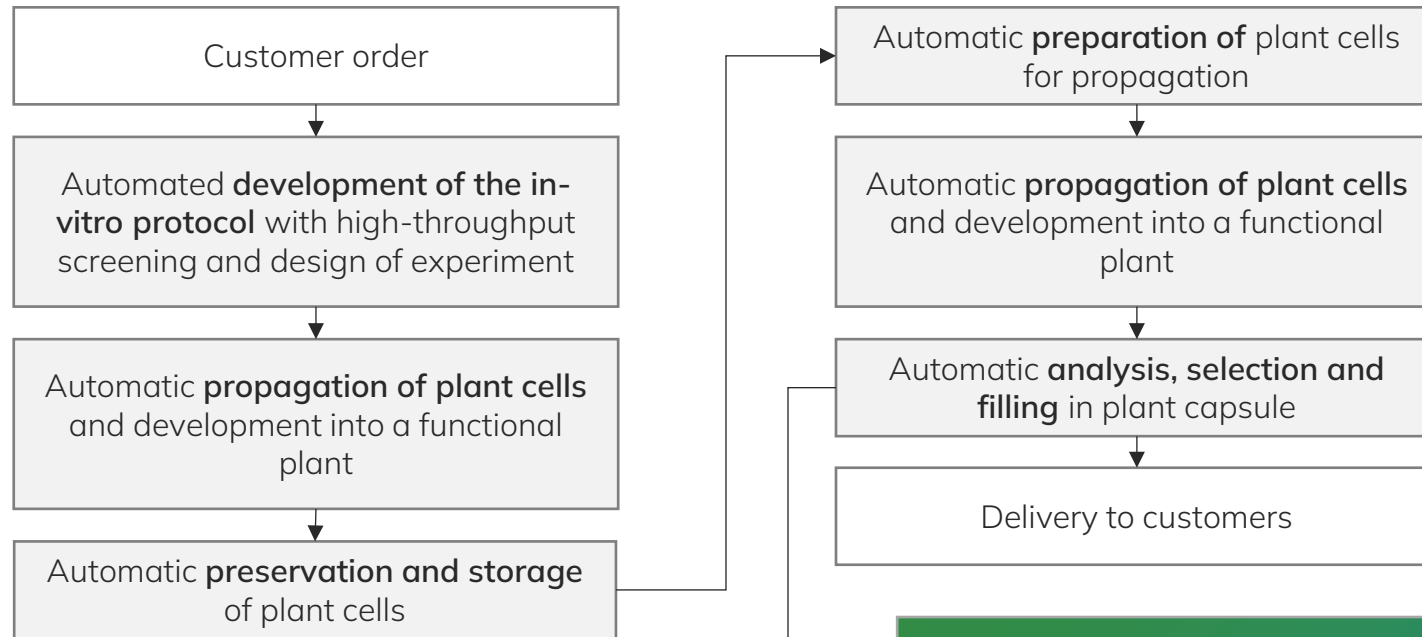
# SCALING THROUGH AUTOMATION



## Automation of in-vitro cultivation and plant propagation

### Part 1: In vitro cultivation

### Part 2: Propagation



#### Challenge:

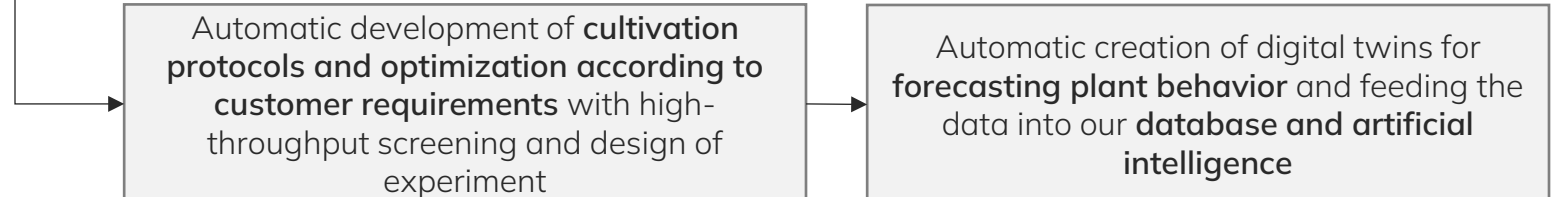
Customer requests for proprietary in-vitro protocols and varieties, production and filling of plant capsules and production of container modules to scale

#### Solution:

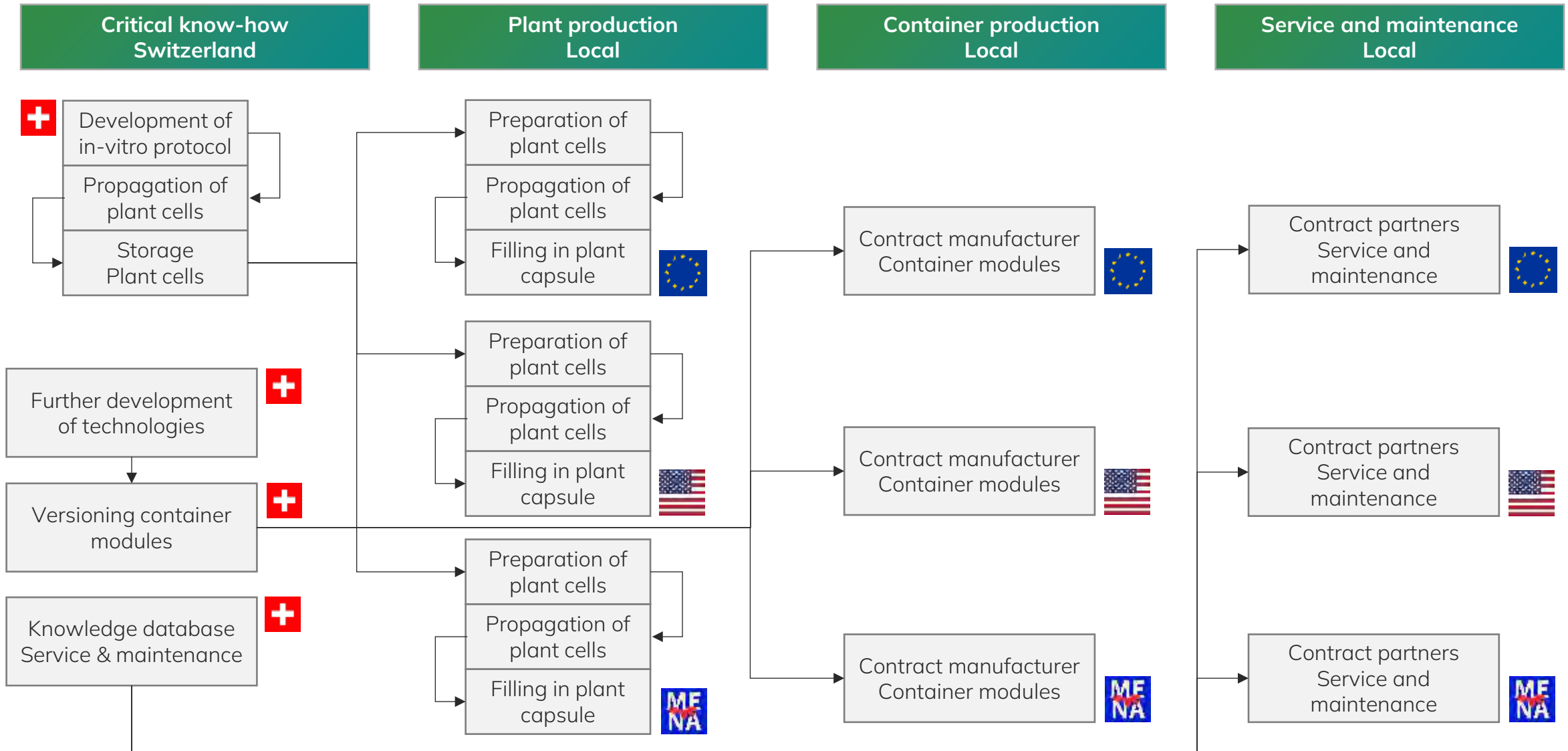
Automate in-vitro protocols and plant capsule production and scale container module production through contract manufacturers.

## PART 12: THE MARKET

## R&D Cultivation and Digital Twin



# EXPANSION STRATEGY



# **FINANCES & KEY FIGURES**

# CAPACITY DECLARATIONS OF INTENT



	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Container demand	50 (n=7)	135 (n=6)	181 (n=3)	128 (n=1)	250 (n=1)	312 (n=1)
Capacity	50 <sup>1</sup>	150 <sup>3</sup>	200 <sup>5</sup>	250	300 <sup>7</sup>	400
Utilization	100%	90%	90.5%	51.2%	83.3%	78%
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Capsule demand	129'024	513'024	1'035'264	1'403'904	2'141'184	3'062'784
Capacity	144'000 <sup>2</sup>	1'152'000 <sup>4</sup>	1'152'000	2'304'000 <sup>6</sup>	2'304'000	3'456'000 <sup>8</sup>
Utilization	89.6%	44.5%	89.9%	60.9%	92.9%	88.6%

1: manual assembly, two-layer  
2: Rapid Tool, single cavity

3: Semi-automatic assembly, single-shift operation  
4: Industrial mold, 8 cavities

5: Semi-automatic assembly, single-shift operation  
6: 2nd industrial mold, 8 cavities

7: Semi-automatic assembly, 2 locations  
8: 2 industrial molds, 16 cavities

## PART 13: FINANCES



# FINANCIAL STATEMENTS



	2021	2022	2023
Turnover	CHF 0	CHF 185'701	CHF 564'299.00
Gross result	CHF -300'862	CHF 97'543	CHF 75'335.00
EBITDA	CHF -341'046	CHF 61'637	CHF 44'030.00
Profit/loss for the year	CHF -321'167	CHF 59'141	CHF 43'891.00

CAPSERO is ideally positioned to close the gap between increasing regulatory requirements and the limited availability of legally compliant production methods.

# ASSUMPTIONS & EXPLANATIONS



CAPSERO's sales figures are based on a comprehensive market analysis and reflect the dynamic development of demand and scalable production capacities. The forecasts are not purely theoretical, but are based on specific market indicators:

- Securitized demand
- Regulation-driven market dynamics
- Production expansion & scaling
- Sustainable sources of revenue

Unit	Revenue per unit (CHF)	FY1 (2024)	FY2 (2025)	FY3 (2026)	FY4 (2027)	FY5 (2028)	FY6 (2029)	FY7 (2030)
R&D Container	500000	0	0	1	2	5	10	15
Grow Container	250000	2	20	42	96	192	420	720
Harvest Container	500000	0	1	2	5	10	21	36
Processing Container	500000	0	0	0	0	10	21	36
Capsules	5	0	81'920	174'080	397'312	796'672	1'740'800	2'979'840
Capsules recurring	5	0	8'192	81'920	174'080	397'312	796'672	1'740'800
GACP Workbench (40%)	15000	0	1	16.8	38.4	76.8	168	288
Protocols	2500	0	8	88	256	640	1408	3088
Marketplace	10000	0	8	88	256	640	1408	3088
Audit, QP, Annual Reporting	7250	0	1	16.8	38.4	76.8	168	288

# FINANCIAL FIGURES OPTIMISTIC



Optimistic scenario in CHF							
Key figures	2024	2025	2026	2027	2028	2029	2030
Grow containers sold (indication)	2	20	60	125	300	650	1300
Total sales	500'000	5'822'810	19'183'840	40'235'620	104'054'080	228'213'800	457'502'800
EBITDA	-617'200	-629'573	3'169'544	13'027'568	54'640'358	138'078'669	306'726'573
EBITDA margin	0%	0%	17%	34%	55%	64%	71%
PAT margin	0%	0%	40%	48%	61%	66%	72%
Sales growth (YoY)	0%	0%	229%	110%	159%	119%	100%

# FINANCIAL FIGURES REALISTIC



Realistic scenario in CHF							
Key figures	2024	2025	2026	2027	2028	2029	2030
Grow containers sold (indication)	2	20	42	96	192	420	720
Total sales	500'000	6'112'810	15'193'800	35'691'360	79'378'720	172'065'360	307'551'200
EBITDA	-394'379	1'007'794	2'370'486	10'824'405	39'484'624	104'481'094	208'130'612
EBITDA margin	0%	0%	0%	16%	46%	59%	68%
PAT margin	0%	0%	40%	47%	60%	65%	72%
Sales growth (YoY)	0%	0%	214%	151%	129%	115%	71%



# FINANCIAL FIGURES PESSIMISTIC



Pessimistic scenario in CHF							
Key figures	2024	2025	2026	2027	2028	2029	2030
Grow containers sold (indication)	2	10	30	60	120	240	480
Total sales	500'000	3'408'010	11'436'440	23'847'920	49'466'080	100'202'400	199'113'600
EBITDA	394'379	38'696	604'529	4'667'914	21'215'980	57'358'645	131'357'930
EBITDA margin	0%	0%	0%	24%	53%	72%	83%
PAT margin	0%	0%	49%	61%	77%	83%	90%
Sales growth (YoY)	0%	0%	236%	109%	107%	103%	99%

# **INVESTMENT SERIES A**

# PAST FINANCING ROUNDS

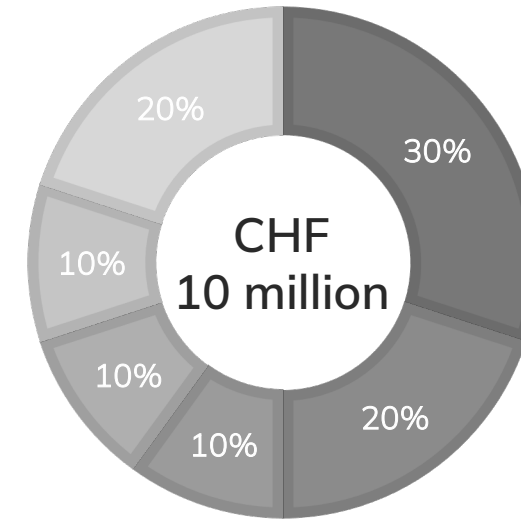


Round	Year	Capital [CHF]	Rating [CHF]	Investors	Intended use	Milestones	External cap. (FK) Equity (EK)	Shareholdings thereafter
Foundation	2020	100k	100k	Founder	Company foundation	Presence, research partnerships, development partnerships	100% EK	Founders: 100%, Private/HNWI: 0%, Angels: 0%, Institution: 0%, VCs: 0%
Pre-seed	2021	250k	695k	Industrialist or institution	Development of the first prototype, first patent applications, establishment of infrastructure, quality system	Infrastructure for research and development created, patent applied for, proof of concepts launched	100% EK	Founders: 66%, Private/HNWI: 0%, Angels: 0%, Institution: 34%, VCs: 0%
Seed	2022	4'000k	100'000k	Retail, HNWI, business angels, institutional investors	Development team, production, patent, quality system	Production of the first modules, sale of the first modules, market development and preparation of letters of intent, capsule development	100% EK	Founders: 90%, Private/HNWI: 5%, Angels: 0%, Institution: 5%, VCs: 0%
Series A (ongoing)	2024	10'000k	125'000k	HNWI, Business angels, institutional investors, Fund, VC	Development team, production, patent, quality system	n.a.	100% EK	n.a.

# FINANCING ROUND SERIES A



Name of the round	Series-A-2
Capital requirements	CHF 10 million
Capital already secured	CHF 1 million
Non-binding commitments	CHF 5 million
Pre-money valuation	CHF 125 million
Post-money valuation	CHF 135 million
Structure of the investment	100 % equity
Minimum ticket size for private investors	CHF 500,000
Maximum allocation per investor	CHF 10 million





# USE OF FUNDS

## Scaling

- Automation of in-vitro propagation
- Scaling of capsule production
- Increase in container production capacity
- Onboarding of manufacturers and distributors
- Development of further in-vitro protocols
- Establishment of industrial R&D

## Market development

- Implementation of the LOIs
- Market entry in the EU
- Preparation and market entry USA and U.A.E.
- Manufacturers, distributors and service providers
- Structuring the sales organization

## Innovation

- Expansion of the patent family
- Industrialization of optimization systems and automation of in-vitro cloning and capsule filling.
- Scaling the plant database
- Expansion of digitalization to the entire value chain

# INVESTMENT EXAMPLE

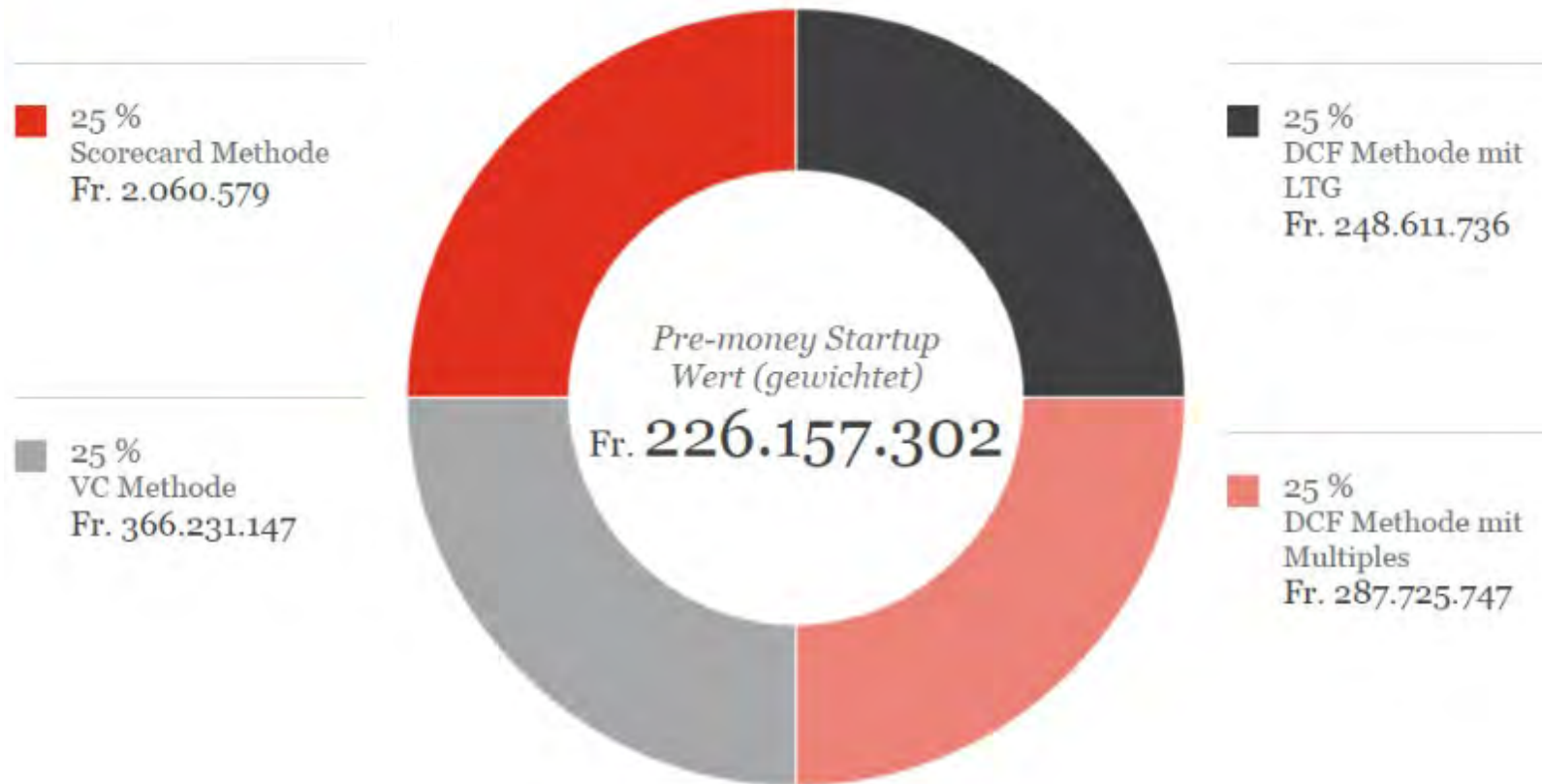


Price per share	CHF 125.00
Number of shares	4'000
Investment total	CHF 500,000.00

Income in a realistic scenario [CHF]							
	2024	2025	2026	2027	2028	2029	2030
Share of dividends				7'380.62	61'824.15	165'911.30	331'843.33
Share of imputed enterprise value 2030							3'266'571.94
Total income				7'380.62	61'824.15	165'911.30	3'598'415.27
Total dividends 2030	566'959.40						
Total income 2030	3'833'531.34						
Total ROI realistic scenario	767%						

Income in an optimistic scenario [CHF]							
	2024	2025	2026	2027	2028	2029	2030
Share of dividends			699.01	17'204.11	83'983.75	217'805.05	487'961.69
Share of imputed enterprise value 2030							4'815'011.63
Total income			699.01	17'204.11	CHF 83'983.75	217'805.05	5'302'973.33
Total dividends 2030	807'653.62						
Total income 2030	5'622'665.25						
Total ROI optimistic scenario	1125%						

# PRE-MARKET VALUATION



**pwc**

This valuation was prepared as part of the "Startup Valuation Program" of Pricewaterhouse Coopers Switzerland. The detailed report is available on request.

# EXIT STRATEGIES



## STRATEGY A: M&A

We are developing a strategy and products for a major manufacturer of nutritional supplements and cosmetics and are working with this company to the point where we can prepare an exit scenario through a takeover.

The exit scenario could become relevant for the first time after FY5.



## STRATEGY B: IPO

CAPSERO grows over time and an IPO is used to raise additional funds.

This is a long-term scenario and could become relevant for the first time after FY7.



Head office: CAPSERO AG, Dammstrasse 36, 4142 Münchenstein, Switzerland  
Operations: CAPSERO AG, Schaffhauserstrasse 101, 4332 Stein, Switzerland

**[info@capsero.com](mailto:info@capsero.com) | [www.CAPSERO.com](http://www.CAPSERO.com)**