

**Company Profile** 

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Finapp

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We use cosmic rays to measure water







#### **Mission**

We were born with a very ambitious goal: to preserve Life on Earth by **saving Water**.

We to do this we want to spread a new knowledge of water content, made possible by an innovative technology, the CRNS -Cosmic Ray Neutron Sensing-, but already robust and advocated by international bodies such as the FAO.

We work for precise and digitised water management, with the aim of reducing waste in agriculture, in public water distribution, to improve efficiency in energy hydroelectric production and the safety of citizens in the face of natural disasters.

Finapp, a new way to measure water!



#### **Sustainable Development**

Finapp embraces the United Nations 2030
Agenda for Sustainable Development and the Action Plan for People, Planet and Prosperity. We recognise that the eradication of poverty in all its forms and dimensions, including extreme poverty, is the greatest global challenge and a prerequisite for sustainable development.

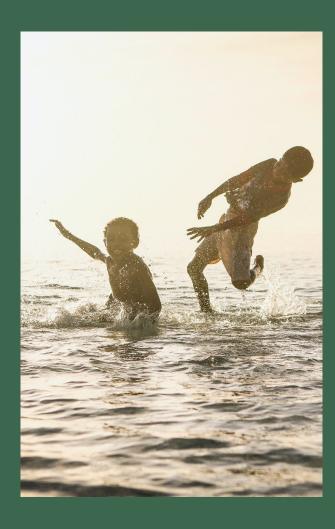
As we embark on this collective journey, we are committed to leaving no one behind.

# **UN Sustainable Development Goals**

At **Finapp**, we address the 17 Sustainable Development Goals and offer responses to some of them, focusing on at least of them.

- **Goal 6.** Ensure the availability and sustainable management of water and sanitation for all.
- **Goal 2.** End hunger, achieve food security and better nutrition, and promote sustainable agriculture.
- **Goal 11.** Make cities and human settlements inclusive, safe, resilient and sustainable.
- Goal 12. Ensure sustainable consumption and production patterns
- Target 15. Protect, restore and promote the sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, halt and reverse land degradation and halt biodiversity loss.





#### Vision

- **Finapp** offer solutions for a world in which the commitment to the human right to **clean water** and sanitation is reaffirmed and hygiene is improved; and in which food is sufficient, safe, accessible and nutritious.
- Finapp help to protect against the negative impacts of environmental degradation, including desertification, drought, land degradation, freshwater scarcity and biodiversity loss, which add to and exacerbate the list of challenges facing humanity.
   Climate change is one of the greatest challenges of our time and its negative impacts undermine the ability of all countries to achieve sustainable development. The survival of many societies and the planet's biological support systems is at risk.
- **Finapp** provide **monitoring solutions** that help significantly reduce the number of people affected and substantially reduce direct economic losses to global gross domestic product caused by disasters, including water-related disasters, with a focus on protecting the poor and those in vulnerable situations.
- Finapp work to ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, help maintain ecosystems, strengthen resilience to climate change, extreme weather, drought, floods and other disasters, and progressively improve soil and land quality.
- Finapp contribute to combating desertification, restoring degraded soils and lands, including those affected by desertification, drought and flooding, and strive for a land degradation-neutral world.

## **Traction**

Our own headquarter, a team of 19 people

#### **Innovation patented**

- 1. Finapp owns 2 patents on the hardware and one patent on the measuring of SWE snow water equivalent.
- 2. Granted in Italy and extended in EU, US, Canada, Brazil, China, Australia, India

#### €1.4M raised in private investment

Credit Agricole Italy, Tech 4 Planet and Progress Tech Transfer invested in Finapp.

#### €2. 97M EIC Accelerator

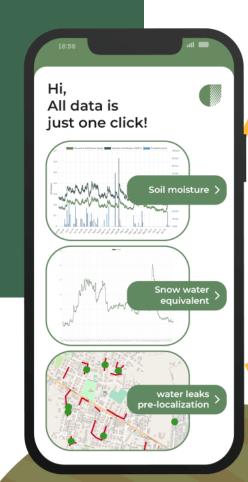
Finapp has won the EIC accelerator grant to reduce production costs and expand services offered

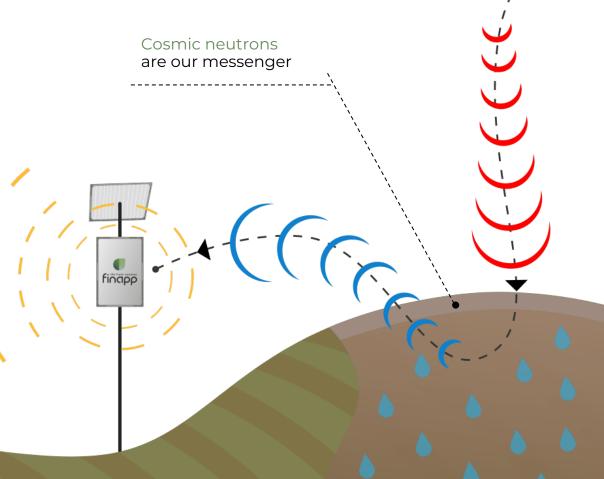
#### **Growing turnover**

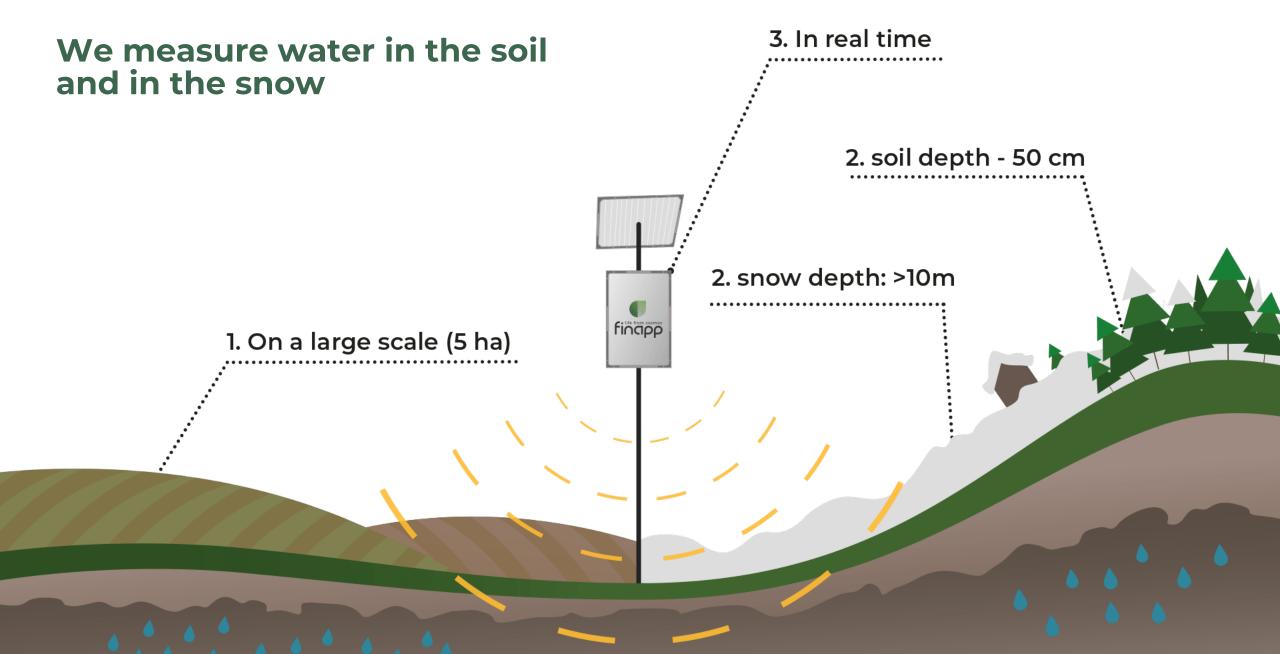
We tripled our turnover for 2 years in a row, from 90K in 2021 to 900K in 2023.



# How does FINAPP work?







# The pros of Finapp

We are the first company able to transfer CRNS technology (Cosmic Rays Neutron Sensing) from the Research to the Industry.



Real-time data validated in situ by our probe

Lightweight and easy to install probe

Off the grid ready

Plug & Play no calibration required Easy to produce on a large scale at competitive prices

## **Markets**









#### Agro market

TAM: €6.5 billions<sup>1</sup>

- Soil moisture on field scale, soil moisture high definition maps
- Irrigation advice based on our probe
- Number of installations: 20

# Water Resource market

TAM: €250 billions<sup>2</sup>

- Forecasting water availability and droughts on large scale
- Optimizing hydropower generation
- Number of installations: 30

# Water leaks market

TAM: €1,9 billions<sup>3</sup>

- Pre-location maps of water leaks
- Up to 30 times quicker and 3 times cheaper than traditional technique
- Pipeline analyzed: 2500 Km

# **Environmental** monitoring market

TAM: €3 billions<sup>4</sup>

- Site specific **early warning system** for debris flow, flood and wildfire
- Research tool for
- University
- Number of installations: 40

<sup>1</sup>Allied market research; <sup>2</sup>Rinnovabili.it; <sup>3</sup>Allied market research; <sup>4</sup>Internal market research

### **Use cases**



#### Agro market Irrigation advice for Philip Morris (Italy)

Goal: to make tobacco production more sustainable.

How: by installing a Finapp probe for soil moisture measurement, we developed an easy-to-use irrigation advice.

Result: Tobacco production up 20% with - 10% of irrigated water.



#### Water resource SWE measurement for EDF (France)

Goal: to modernize the existing CRNS probe network.

**How:** Comparing SWE measurements provided by Finapp with those provided by CRNS probes used by EDF for more than 20 years.

**Result:** Finapp's much lighter, compact, inexpensive probes provide the same data as EDF's probes. Replacement of existing probes is being considered.

## **Use cases**



# Water leaks Pre-location with AcqueVenete (Italy)

Goal: Comparing the Finapp service with traditional techniques.

How: Finapp pre-localized more than 100km of network in one working day, while it took more than twenty days with the traditional technique.

Result: Finapp correctly identified 75% of the actual leaks, found by excavation.



#### Environmental monitoring Early warning with ANAS (Italy)

Goal: Supply site specific early warning in the field.

How: By installing a probe on Italy's first smart road, downstream from Cortina d'Ampezzo, Finapp provided an early warning for debris flow.

Result: The early warning supplied were well correlated with landslides in the area. Anas is extending monitoring along the entire Belluno - Cortina Smart Road.

## Competition

	Finapp	Point scale probes	Satellite
Footprint	1-100 hectares	20 cm	1 hectar – no limits
Depth	30-50 cm	1-100 cm	0-2 cm
Real time data	Yes	Yes	3-7 days of delay
2D Maps	20m res.	No	50m res
Price	6'000€	10 – 2'000€	500€ / season

# Agro Soil Moisture measurement

Soil moisture is the most important parameters in agriculture, the basis of a proper irrigation strategy. Finapp is the only company in the world able to provide in depth, real time soil moisture data at field scale.

	Finapp	Snow pillow	Snow coring
Footprint	0,1- 40 hectares	2 m <sup>2</sup>	20 cm
Saturation limit	>10'000m m	1'000 – 2'000 mm	none
Real time data	Yes	Yes	biweekly - hand made
Accuracy	+-15%	+-20%	+-5%
Price	12'000€	4'000 – 10'000€	500€/each

#### Water resource SWE measurement

Soil moisture is the most important parameters in agriculture, the basis of a proper irrigation strategy. Finapp is the only company in the world able to provide in depth, real time soil moisture data at field scale.

# Competition

	Finapp	Electro- acoustic	Satellite
Footprint	1-100 hectares	20 cm	1 hectar – no limits
Depth	30-50 cm	1-100 cm	0-2 cm
Real time data	Yes	Yes	3-7 days of delay
2D Maps	20m res.	No	50m res
Price	6′000€	10 – 2'000€	500€ / season

# Water leaks Pre-location supply

Finapp is 30x quicker, 3x cheaper, with similar accuracy, compared with traditional electro acoustic methods. Satellite poor performance makes this approach undesirable to a growing number of industry players.

	Finapp	Official bulletin	Traditional sensors
Site specific	Yes	No	Yes
Multi hazard	Yes	Yes	No
Early warning	3 days	2 days	No
Real time	Yes	No	Yes
Price	15'000€ / year	Free	100-500k €

# **Environmental monitoring Early warning**

Finapp supply the first site specific early warning for various hazard like debris flow, floods, wildfire, thanks to the unique knowledge of soil moisture on large scale, in depth, in real time.

**Business model** 

# Scale factor

→ Common hardware for all the markets served with a tailored post processing for each one.

# Hardware provider

One-off transaction for each unit



# Service provider

Subscription business model

Finapp is developing high value-added services based on the data measured by the probes.

#### From Soil Moisture to:



1. Irrigation Advice



2. Early warning



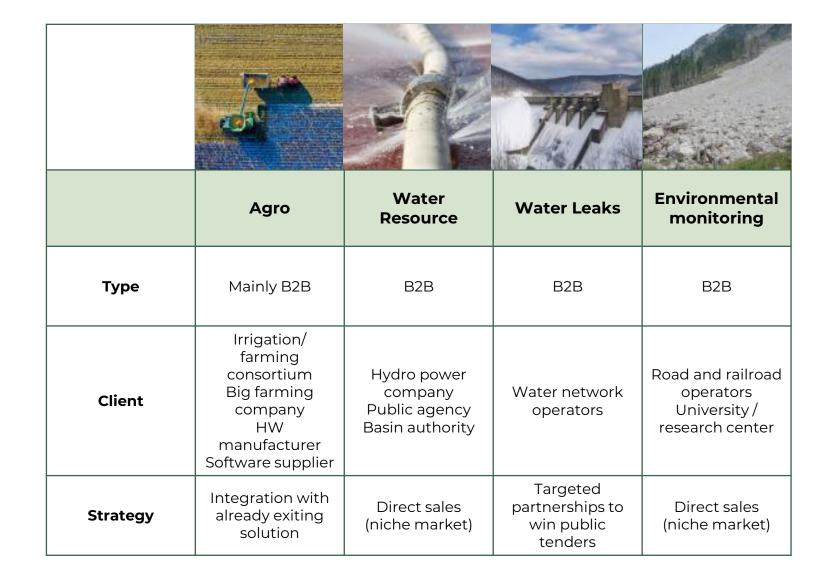
From SWE to:

1. Inflow forecast



**3.** Water leaks pre location

## Go to Market



# **Traction**



Users in **5 continents** and in each of the **4 verticals** 



180 probes installed, 35 paying client



Incubated at **Le Village By Credit Agricole**, one of Italy's most prestigious startup accelerators



Only in 2023, **quoted 229 times** in newspapers and magazines, **8 radio** appearances, **5 TV** appearances



Participation in NYU's (New York University | Stern School of Business) mentorship program "Endless frontier lab"



# 2018 2021 First prototype • TRL9 - Research • TRL 8 - Hydro • TRL 7 - Water Leaks

#### 2023

- Customers in 5 continents
- EIC grant
- Team from 6 to 18 people
- Neutron detector miniaturization
- Irrigation advice
- TRL 8 Water Leaks
- Early warnings

#### 2025

- Opening US Headquarters
- Opening France Headquarters
- Opening Asia Headquarters

2027

# 2020

2017

First spark

- Prototype engineered
- TRL8 Agro

#### 2022

- Al on the field
- Large scale production
- New Headquarters IT

#### 2024

- New version of the HW (COGS reduced by 40%)
- TRL 9 for water leaks application
- Round A
- Technology upgrade
- Cost reduction 50%

#### 2026

- Large scale optimization
- H2 sensing in other molecules
- Reseller contract Worldwide



## We are a team of 19 employees

4 Marketing/Sales
1 Graphic designer
3 R&D
3 Data scientists
1 Web developer
2 Production
2 Product Specialist
1 Administration
1 Management
1 Driver

#### **Founders**







Angelo Amicarelli CMO & entrepreneurs



Marcello Lunardon PM & technology expert

We are planning to add **6 more people** to the team over the next 6 months.

3 Marketing/Sales 1 Production 1 R&D 1 Engineer

