



Revolutionizing approach to
plant protection in agriculture

PLANT PROTECTION SYSTEM IS BROKEN

“Without pesticides, up 50% of our crops would be lost to pests and diseases”

OECD's Agricultural outlook (2012)

“The costs of negative externalities of incorrect use of pesticides can be up to €200 billion globally every year”

EP's PEST Committee (2017)

We need to act fast to improve sustainability while keeping or improving the productivity

AGRICULTURE IN TRANSITION - NOW



1. STRONG REGULATORY PUSH AGAINST PESTICIDES



- CEPP & Sales & advice separation (2021) : oblige cooperatives to **decrease pesticides' use significantly**
- EU pesticides control programme : removing active substance



2. NEW SUBVENTIONS FOR AGRO-ECOLOGY



- Next CAP (2023) : **€ 70 billion** of subventions tied exclusively to eco-certified farms
- Other subventions : Green Deal, EU Farm2Fork...



3. SKY-ROCKETING DEMAND FOR ECO-FOOD



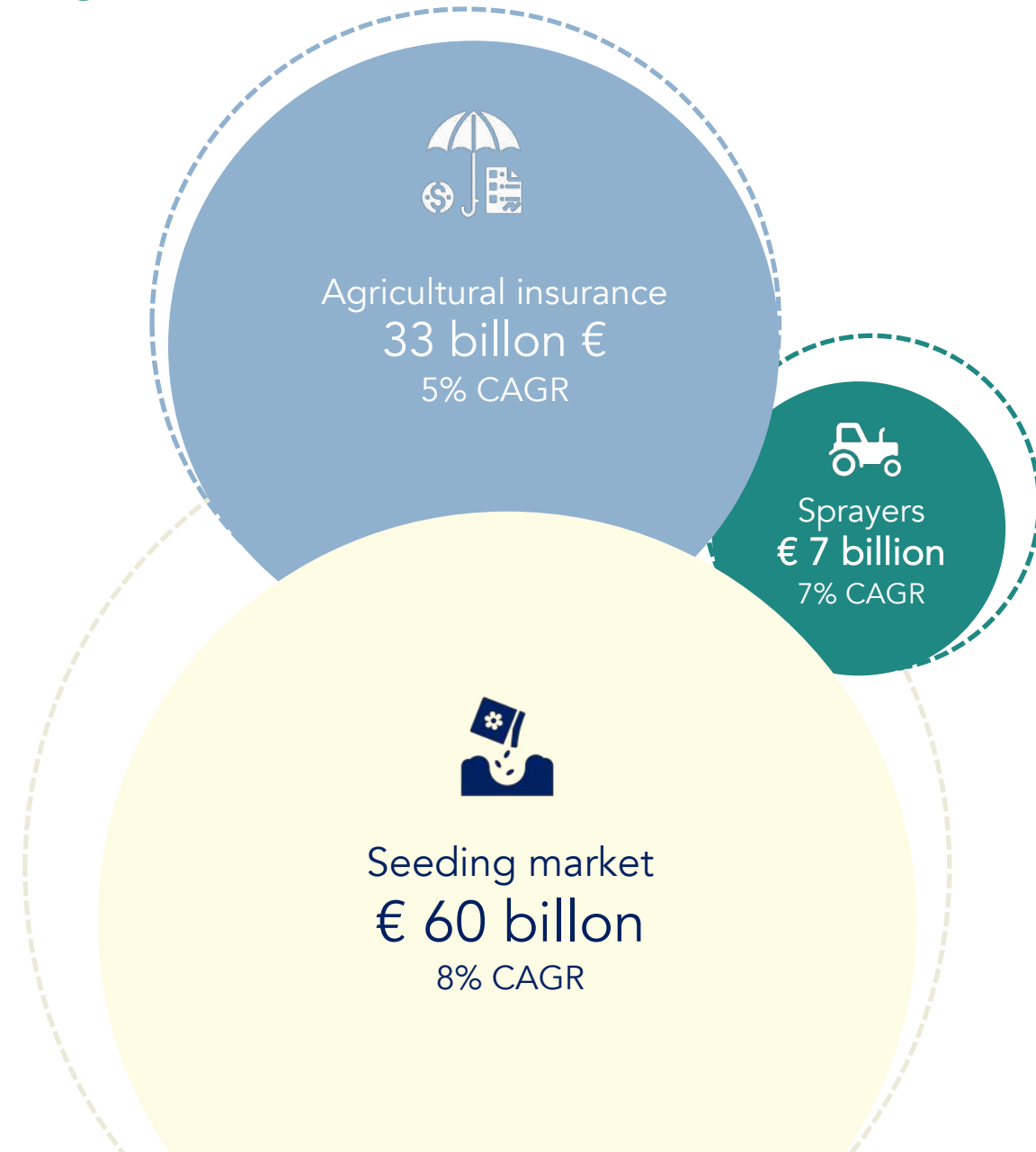
- Bonduelle, D'Aucy, Franprix, Marks & Spencer, ... **require eco-certified food**
- Demand for organic **+15%** a year,
Demand for eco-certified **+50%** a year (and growing)

PLANT PROTECTION MARKET SIZE

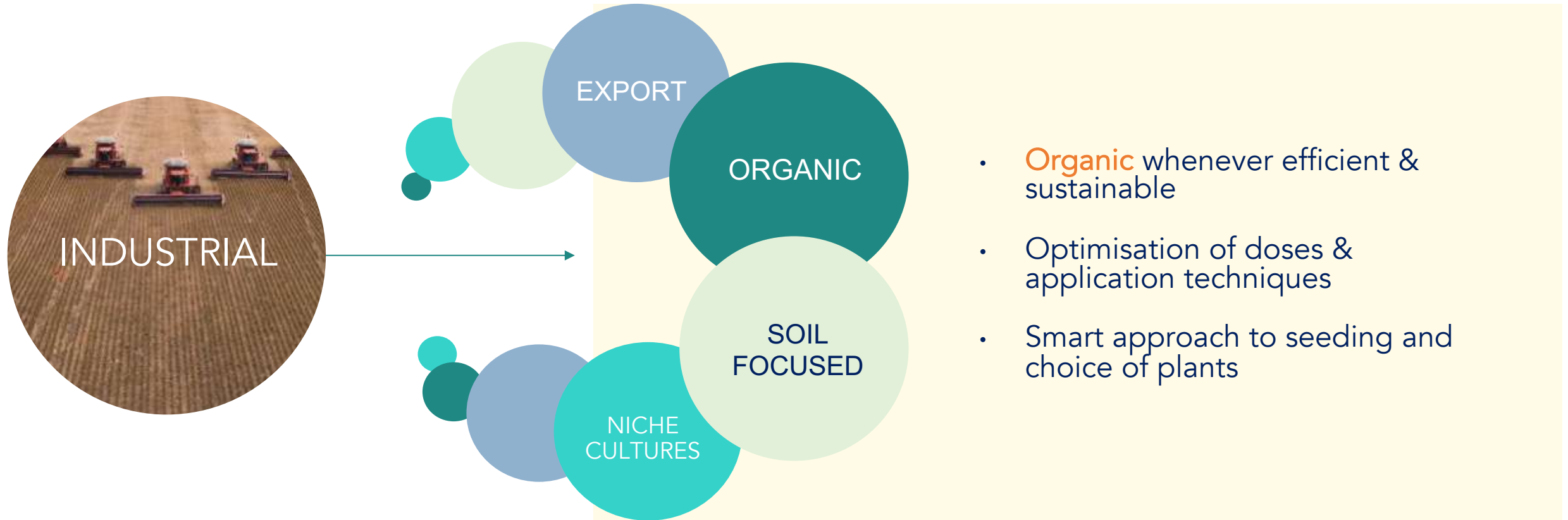


€63 billion

+



VISION : TOWARDS NEW AGRI-MODELS



=> OPTIMAL PLANT PROTECTION STRATEGIES

ACCORDING TO THE ECOLOGICAL, ECONOMICAL AND AGRONOMICAL CONTEXT

PROBLEM : NEED TO ACCELERATE THE ECO-TRANSITION



GENERATE & GATHER NECESSARY DATA

= utilise all available data & complement those that are missing



USE MACHINE INTELLIGENCE

= exploit data in a way which human brain is not capable of



BRING AGRONOMIC SCIENCE TO LIFE

= knowledge from labs to the day-to-day agriculture & vice-versa

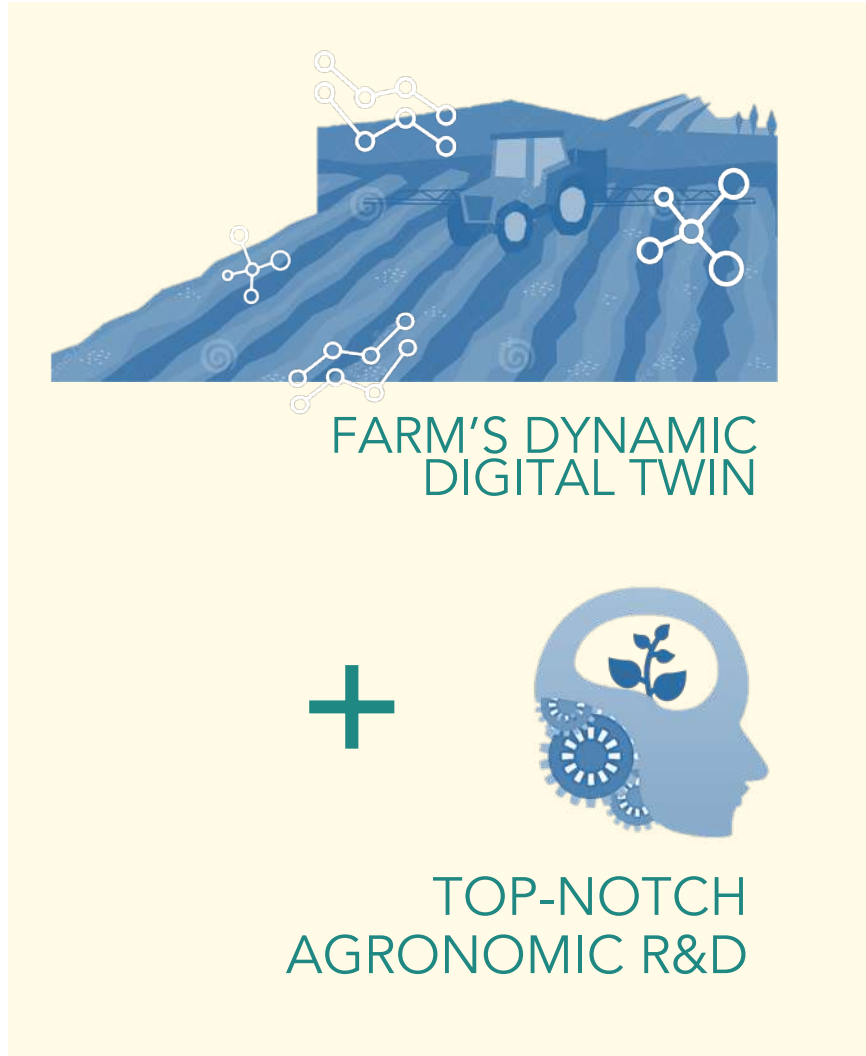


TACKLE THE RESISTANCE TO CHANGE

= easy tools or transformation of the market structure

SOLUTION: AGRONOMIC DIGITAL TWIN

REVOLUTIONIZING PLANT PROTECTION FOR UP TO - 80% PESTICIDES



ACTIONABLE
TOOLS & SERVICES



- Choosing the **most ecological and efficient** plant protection
- Adjusting the plant protection **locally and in time**
- Helping to choose the best cultures to plant
- New **agri-insurance** for ecologic practices / Plant protection as a service

OUR FIRST PRODUCT HYGO



**AUTOMATISED AGRONOMIST
FOR OPTIMAL APPLICATION
OF PESTICIDES & BIO-CONTROL**



FOR FARMERS

- Efficient & sustainable plant protection
- Up to - **40%** (*) of pesticides
- Up to +15% production value
- Traceability of spraying

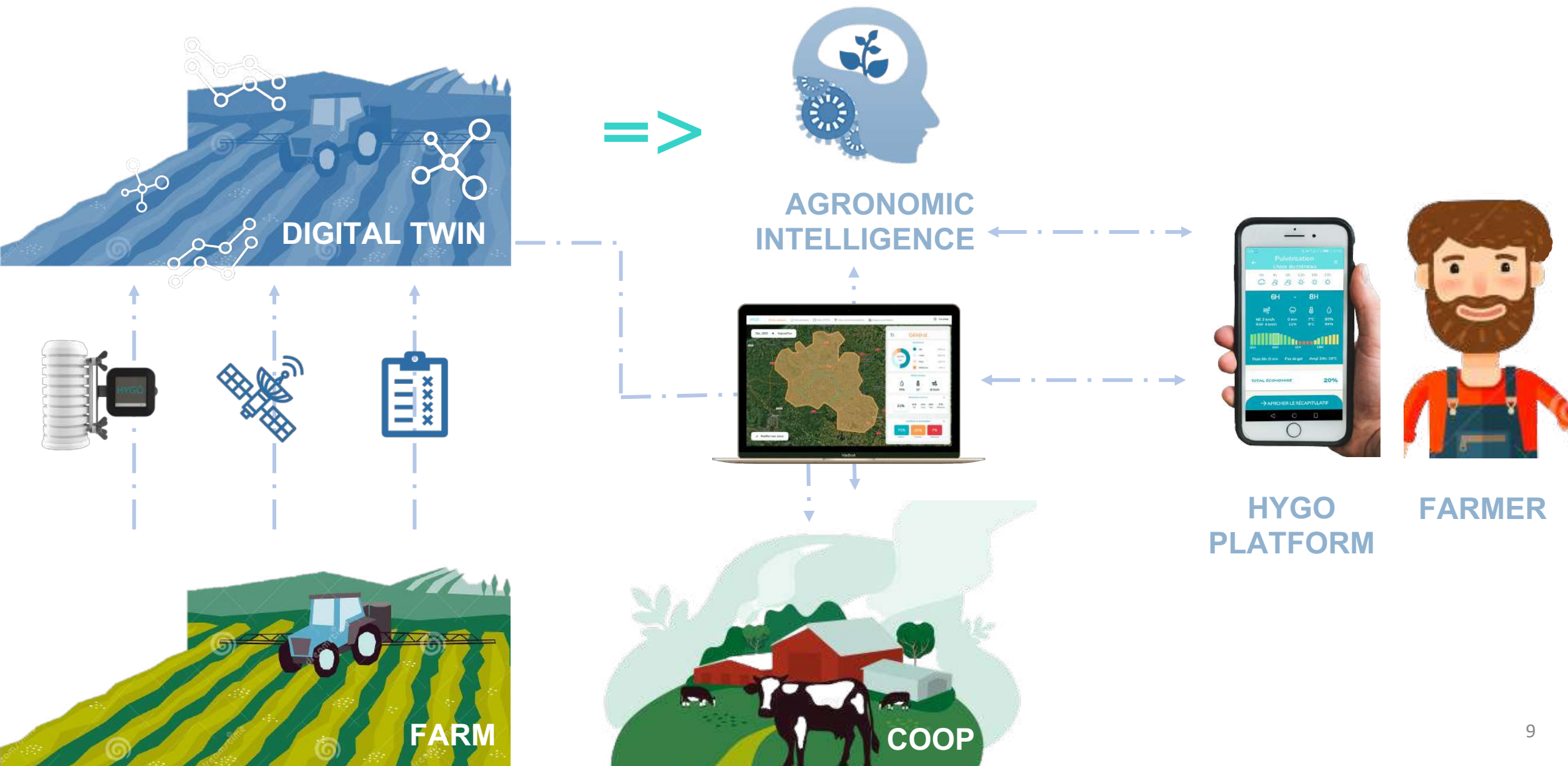
ROI
< 4 months

FOR COOP / FOOD PRODUCER / ADVISOR

- Easy sustainability
- Smarter agronomic advice
- Stronger relations with farmers
- Regulatory & other compliance

(*) 20-25% for all treatments

PATENTED TECHNOLOGY OF HYGO



HYGO PLATFORM – FARMER'S MODE

Basic HYGO functionalities

1. RIGHT TIME

Max efficiency,
Min negative externalities



2. RIGHT DOSE

Up to – 40%
Just as much as necessary



3. IN CONTROL

Analyse conditions in
real time



4. REPORTING

Register important
data automatically



In collaboration with coops

Avoiding resistance

Choice of the plant
protection product

Dose & application
advice for the
geographic zone

HVE reporting

....

OUR INDIRECT COMPETITORS



High-tech precision application



Correct application advice



Decision making tools



	HYGO	Bilberry	Dacom	mileos
Cumulative savings of pesticides .	20%	15%	No direct savings	5%
Usability for biocontrol .	Any sprayable	Some	Some	No
Any sprayer compatibility .	Yes	New sprayer needed	Yes	Yes
Use for any crops .	Yes	Visible weeds	Yes	Potatoes
Phytosanitary product.	Fungicide, herbicide, insecticide	Herbicides	Fungicide, herbicide	Fungicides
Speed of ROI .	3-4 months	Many years	Not provided	Not provided
Market readiness .	Now	Several years	Now	Now

OUR JOURNEY SO FAR



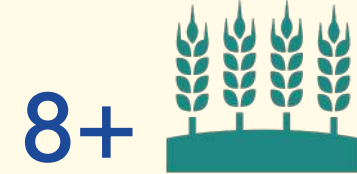
SATISFIED CLIENTS
– FARMERS



DISTRIBUTION
CONTRACTS



PRE-DISTRIBUTION
PAID PILOTS



OTHER STRATEGIC
PARTNERSHIPS



YEARS OF
R&D



PRESENCE IN EU
COUNTRIES



R&D
PROJECTS

THE BEST TEAM FOR THE JOB

Directors with start-up experience

Edita BEZEGOVA
CEO



Nadir GHROUS
COO



Morgan ROUX
CTO



Strategic advisors

Hervé NOUVELLON
Ex-director Tereos



Alexis ANGOT
Co-founder Ynsect



Strong ecosystem support



Top agronomic institutes

Ludvik TVARUZEK
Director of R&D



Benjamin PERRIOT
Spraying expert



Aline DUPONT
Expert Ferme 3.0



Renowned experts

Marie-Pierre PLANCKE
PPPs expert



Thomas PRESSECO
Bio-control expert



THANK YOU FOR HELPING US TO CREATE THE FUTURE
OF AGRICULTURE

WITH **HYGO** 



nadirg@alvie.fr

+33 629 05 60 13



editab@alvie.fr

+33 668 48 38 83



morganr@alvie.fr

+33 676 96 91 25

ANNEX: MARKET TRENDS' DETAILS



1. REGULATORS OBLIGE TO CUT PESTICIDES

France

2021: CEPP- obliges to **cut pesticides**

2021: Separation of sales and advice for cooperatives + strategic advice obligation

Europe / World

Regulation: **lower doses** and **removal of certain active substances**



2. NEW SUBVENTIONS FOR AGRO-ECOLOGY

France

2021: **250M € of subventions** for agroecology equipment for farmers

Europe

EU Farm to Fork (F2F) -50% of pesticides before 2030

Next CAP: **70B €** for eco-systemic practices + **Green Deal**



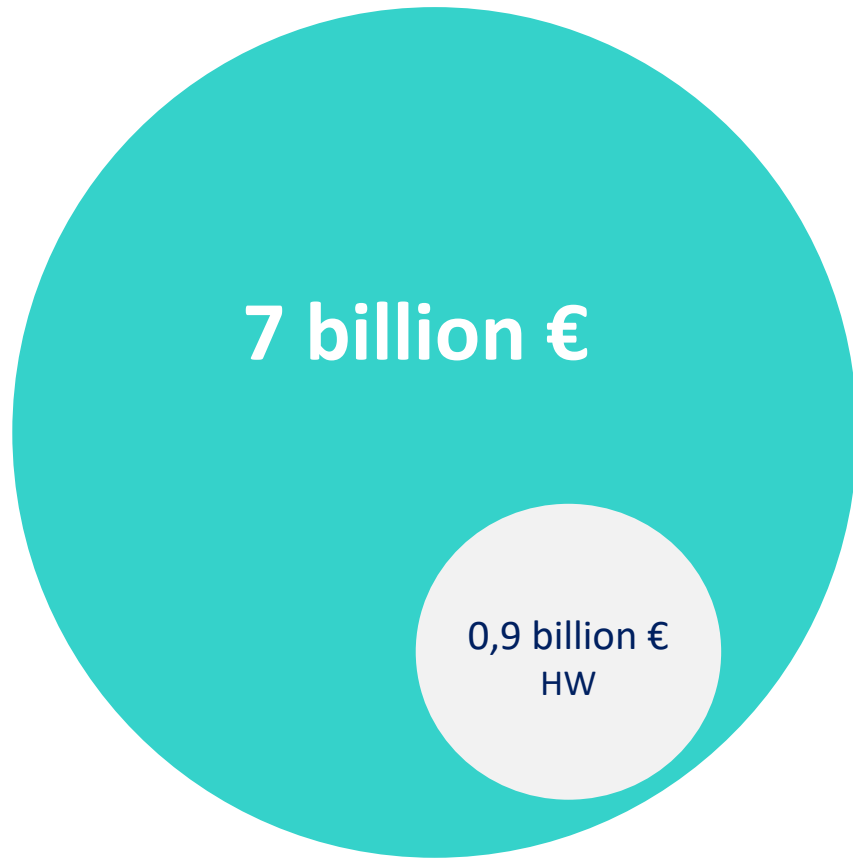
3. ACCELERATED DEMAND FOR ECO-PRODUCTION

Consumers willing to pay more for eco-food

Bonduelle, Franprix, Marks & Spencer... ask eco-certified **agri-food**

HVE-certified farms **double** every year

ANNEX : HYGO MARKET SIZE



- 10,3 million farmers to equip globally
- Target average SaaS per farm 600€ / year : three-modules pricing planned
- 0,9 billion from annual sales of HW and the rest from the SaaS income

ANNEX : PRINCIPE OF SMART SPRAYING

THE RIGHT PRODUCT & DOSE IN THE RIGHT TIME & PLACE



Context of each field



Weather



Farmer's habits and strategies



Specificities of the equipment



Specificities of the active substance



Specificities of the crop



Soil type and conditions



Biomass

ANNEX: SENSOR HYGO IN PRACTICAL USE

SIMPLE & INDEPENDENT



- Sensor HYGO embarked on a tractor or on a sprayer
- Pre-configured & 100% independent – no need for a technician
- Installation and deinstallation in 2 seconds par thanks to a smart system with industrial-grade magnets
- Pairing with the mobile app via a QR code
- Switch on and off with vibrations – all data collected automatically
- Battery life at least one year and rechargeable

ANNEX: OUR CLIENTS

USER EXPERIENCE & TESTIMONIES



Maxime B., Farmer, Nord de France

"HYGO helps me to save pesticides – it is easy and reliable"



Baptiste B., Coop director, Nouvelle-Aquitaine

"We support Alvie because HVE is the priority for our cooperative"



Adrien R., Farmer, Nouvelle-Aquitaine

"The variations of the temperature and hygrometry between two nearby fields are really remarkable"



Gwenael Ch., R&D director Certis, Paris

"I am convinced that HYGO will help to unlock the full potential of bio-control"

ANNEX : HYG0 & FARMERS

BENEFITS FOR ANY FARM

SMALL FARM

Pesticides bill: 10 000€/year



1 farmer
80ha

Thanks to **HYG0**

- - **1000€/year** (83€/month)
- Gets HVE
- HYG0 as the main spraying planning app

MEDIUM FARM

Pesticides bill: 35 000€/year



1 farmer & 2 FTE
370ha

Thanks to **HYG0**

- - **3500€/year** (290€/month)
- Gets HVE
- Better work coordination

LARGE FARM

Pesticides bill: 100 000€/year



1 farmer & 3 FTE
950ha

Thanks to **HYG0**

- - **10 000€/year** (830€/month)
- Gets « Label Rouge »
- Smooth management of employees at the farm