

in-ovo sexing

NVTL Year Congress
18-3-2025

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Pluriton
BRIGHT NEW LIFE

Vencomatic Group

Poultry experts since 1983

Facts & Figures

Our team

>700 employees

>47 Internships p/y

22 Nationalities

9 Years of employment

43 Average age

Turnover >160 million

24/7 service

Worldwide



10 locations
100+ dealers



The market



Carbon footprint of food products

35%

Increase in demand for animal protein in the coming 20 years

Our products



>100 million layer hens on our systems



Per year >200 million chicks hatch on-farm



19.6 million trees saved (16K tons of CO₂) with our heat exchangers



Per day >332 million eggs packed on Prinzen packers



Orbem

A fast-growing AI company from Munich funded by the European Union

Award-winning technology funded by the European Union

Scanning of >95 million hatching eggs since January 2023



Pluriton



- family company
- owned by Erich Wesjohann (EW Visbek) + current management
- distributor in layer- and broilerindustry of HE, DOC and pullets of EW brands
- headoffice in Lunteren in Netherlands



Pluriton
BRIGHT NEW LIFE

Dutch Layer Distribution



PLN

Pluriton Netherlands



PLB

Pluriton Belgium



PLH

Pluriton Hungary



PLP

Pluriton Poland



PLT

Pluriton Turkey



POP

Pluriton Opfokintegratie



PPB

Premium Poeljen Belgium



PPL

Pluimveepraktijk Lunteren

DLD

Product Distribution by Region



Pluriton

BRIGHT NEW LIFE



Country / Region	H&N	Lohmann	Hy-Line	Novogen	Ross308 ¹
Netherlands	✓				✓
Poland	✓	✓			
Belgium	✓	✓	✓	✓	✓
Germany	✓				✓
Hungary & surroundings	✓	✓	✓		
Turkey					✓
Global Export	✓	✓	✓	✓	✓

¹ Ross308 sales are managed from the Netherlands, Belgium, and Turkey.

ELD

European Layer Distribution of EW



DLD

Dutch Layer Distribution of EW / management



DLD Hatcheries



● OKT

- Bladel = Genus Focus
- Veenendaal = Cheggy Zoom + hatch GF

● MKT

- Afferden in Netherlands
- Arendonk in Belgium
- Babolna in Hungary

HATCHERY

EGG PACKING

OKT

Pluriton in figures



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345M

hatching eggs



185.000.000 layers
160.000.000 broiler
HE produced

48M

hatched doc layers



48.000.000 DOC
layers hatched

13M

pullets reared



13.000.000 pullets
reared in NL, B, P

4M

scanned eggs

4.200.000 scanned
hatching eggs layers
for Genus Focus

401K

packed boxes



> 400.000 packed
boxes of hatching
eggs

144

employees



144 employees

Ban on killing of male doc start Germany

2019 – legal ban start 1-1-2022



Technical
University
of Munich



2023

Abschlussbericht
Schmerzempfinden bei
Hühnerembryonen

(HES 7-14)

Förderkennzeichen: 2821HS005
Geschäftszeichen: 323-06.01-2821HS005
Laufzeit: 15. Juni 2021 - 31. März 2023
Berichtszeitraum: 15. Juni 2021 - 31. März 2023

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Alternatives to male chick culling

1

Rearing the hatched males

2

Using dual-breed birds

3

Detecting the sex before chicks are born



Drawbacks of other alternatives to male chick culling

1

Rearing the hatched males

- Male layers have **limited meat production** and a **poor feed conversion rate**
- Difficulties with animal welfare
- Not fitted for regular slaughter lines and limited market for the product (size and price)
- Costs of 4.00 €–4.50 € per chick hatched

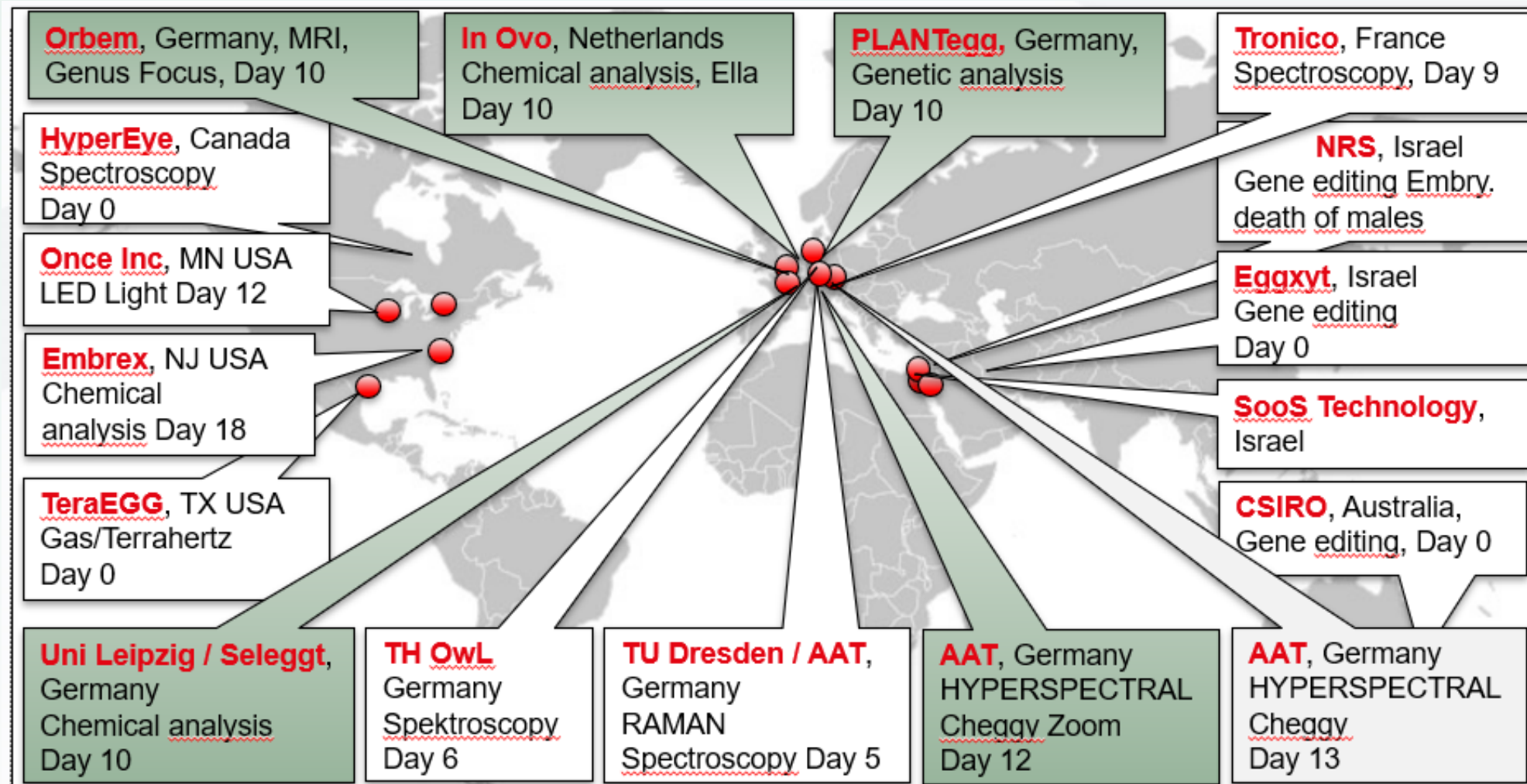
2

Using dual-breed birds

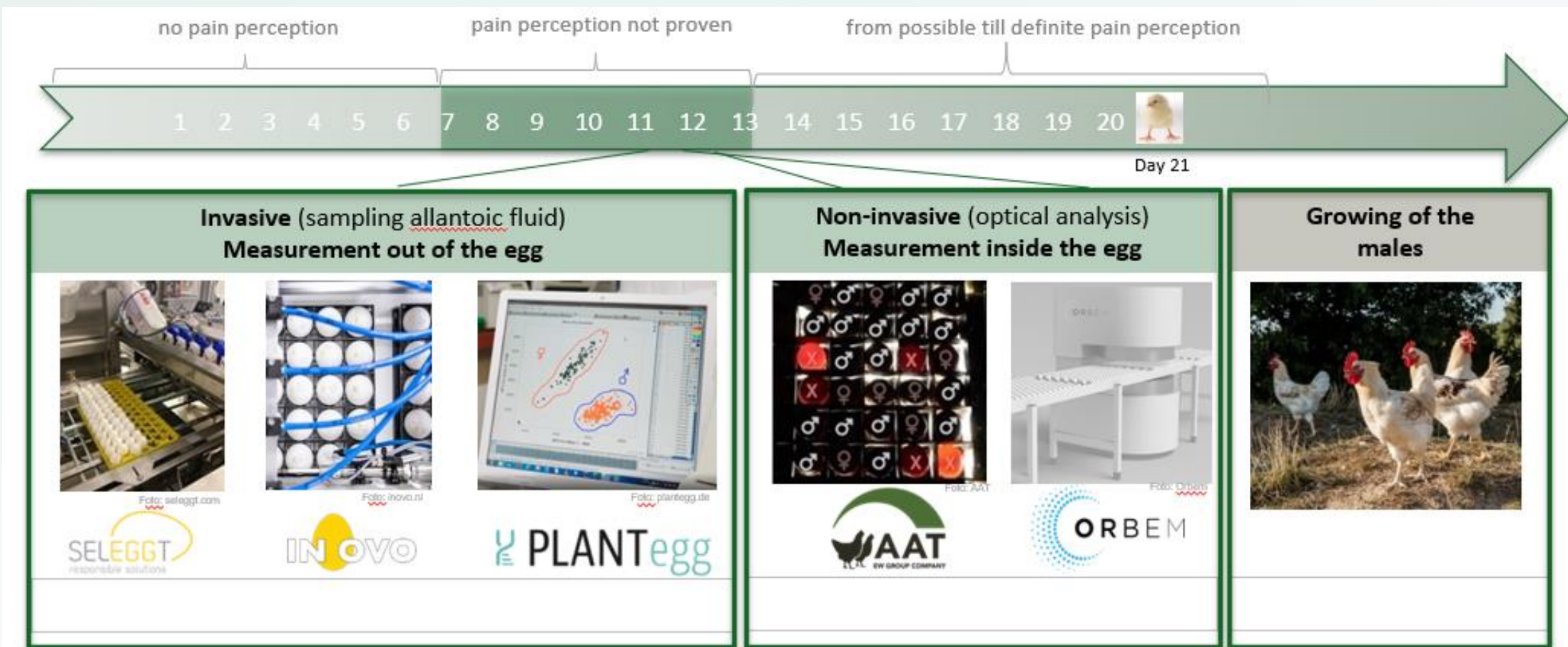
- Roosters perform significantly better than regular layer-rooster, worse than meat-broilers
- Hens perform significantly worse than regular layers
- **Compromise of both worlds**



Global technology sex determination in hatching eggs



Workable options to the market



costprice increase DOC from about € 0,80 to € 4,00



Join us and reach
the maximum potential

our poultry, every bird, every farm
with the best possible product
while respecting the environment
and the well-being of our people



The start of our journey

Together, we combine expertise to bring the benefits of MRI to the poultry sector



1

May 2022

Begin of strategic partnership for the Genus Focus

2

January 2023

Start of production in France at two layer hatcheries

3

November 2023

Pluriton as partner
(signed 11-2023, operational 05-2024)





The technology



The solution



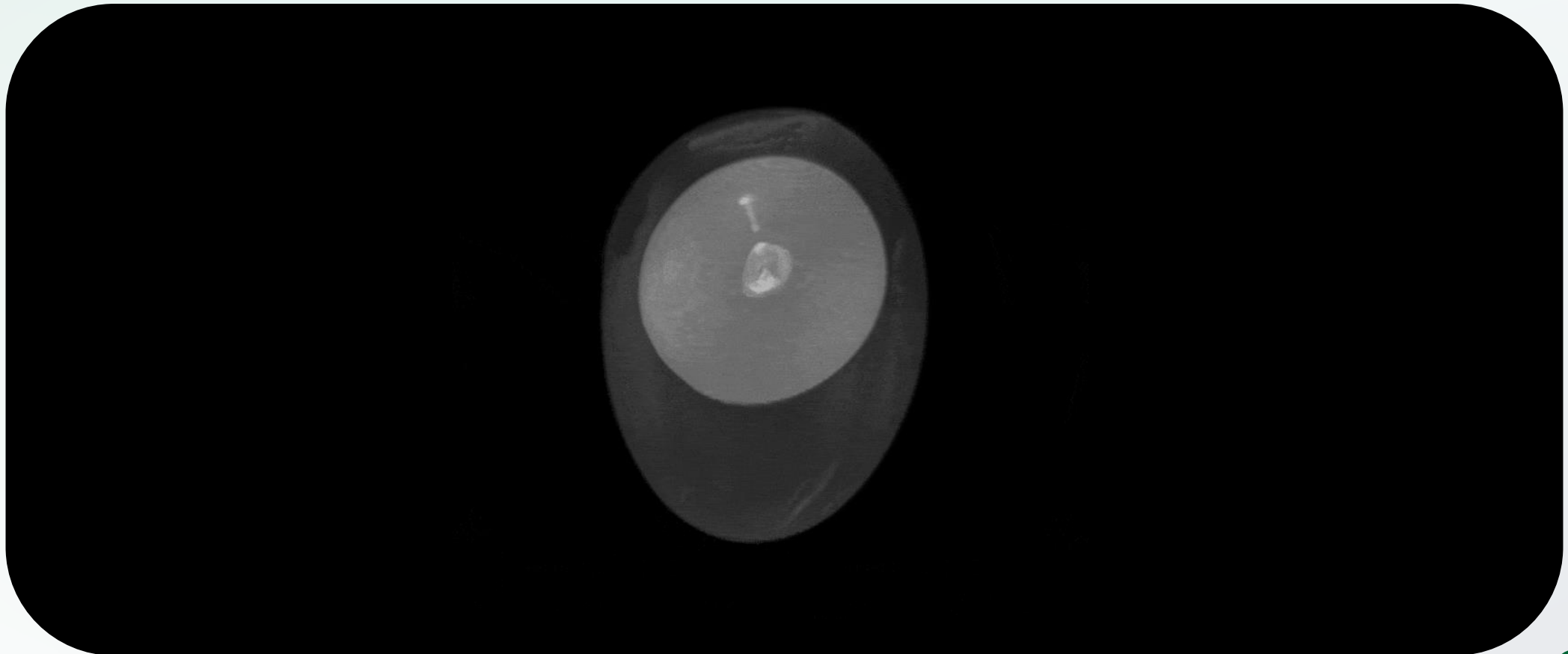
Technical specifications





Magnetic Resonance Imaging (MRI)

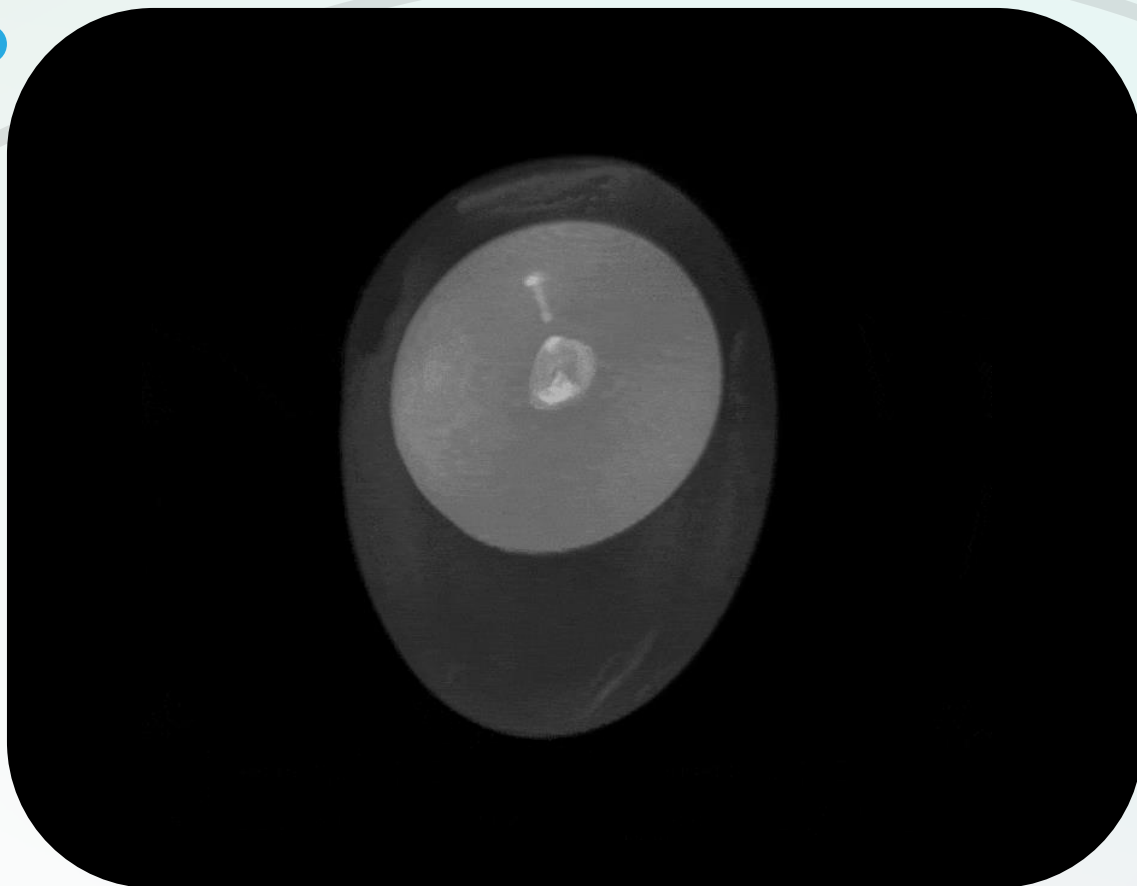
MRI is a non-invasive technology to visualize and characterize biological structures.





AI-powered MRI for the industry

We combine accelerated MRI (magnetic resonance imaging) with AI and state-of-the-art industrial automation to scan, classify and sort eggs before they hatch.



Free of contamination risks

Completely contactless and non-invasive

Scan time of one second per egg enable industrial applications

Analysis of the anatomical differences in the reproductive organs





Contactless

- Scanning of the eggs without intrusion or sample extraction
- No effect on hatchability
- MRI does not emit radiation

Versatile

- Data acquisition limited to necessary features for sexing
- Full automation of the process
- Up to 24.000 eggs per hour

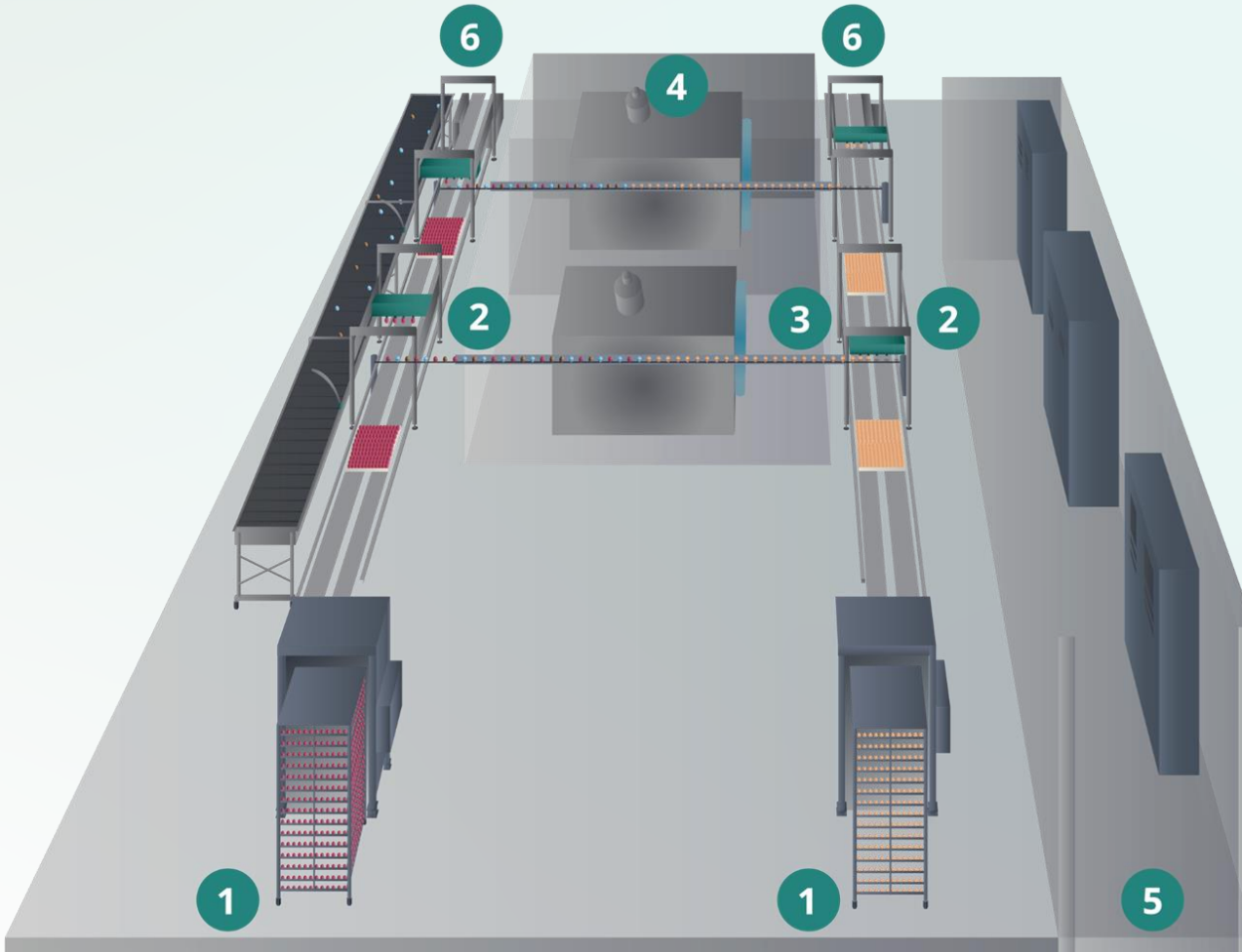
Accurate

- Independent of aviary bird breed or cleanliness of the shell
- More than 98% accuracy
- Stable performance



Full automation

Every step from trolley-to-trolley is automated.



- 1 Trolley loader & unloader
- 2 Egg transfer system
- 3 Single-line egg chain
- 4 Magnet room
- 5 Technical room
- 6 Empty tray stacker & destacker

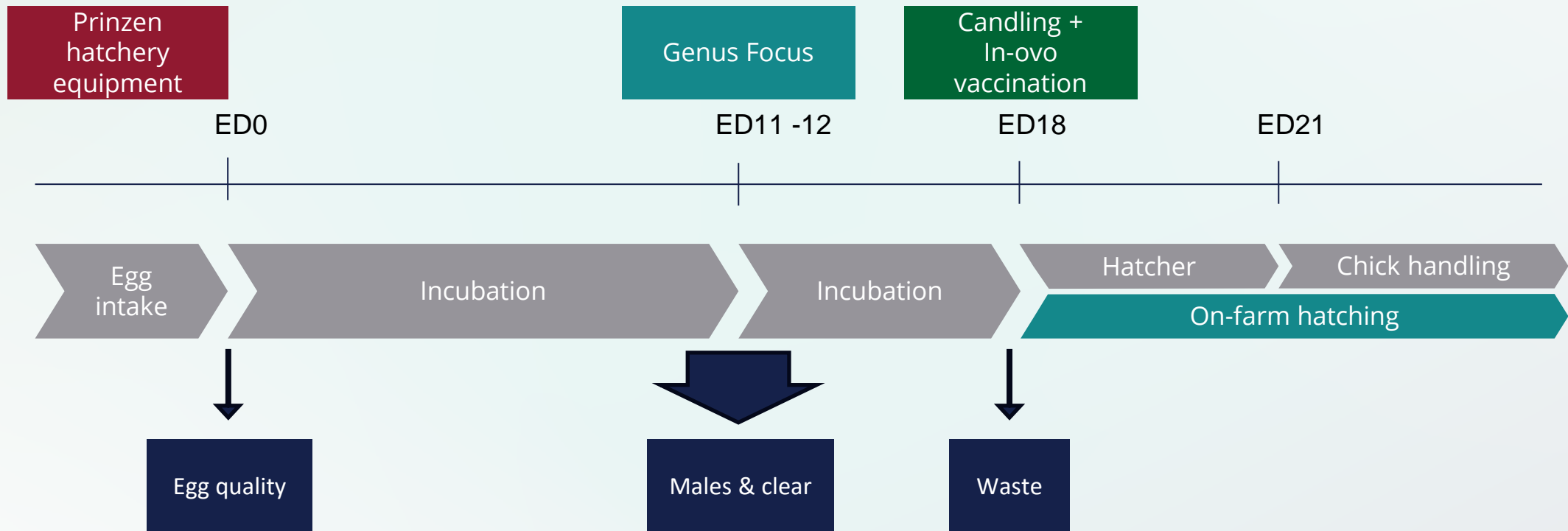




Female eggs are placed back in setter trays, seamlessly returning to the incubation process.

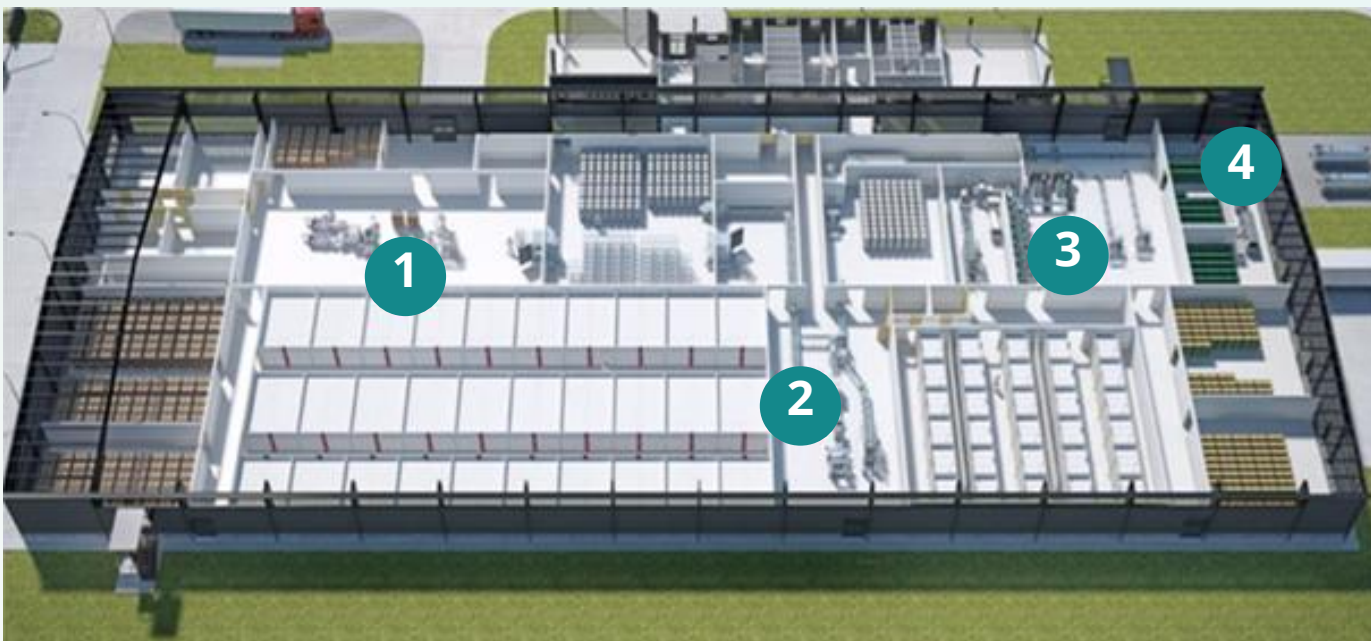
Possibility of On Farm Hatching

Main processes and categories in the hatchery



Possibility of On Farm Hatching

Main processes and categories in the hatchery



- 1 Egg intake
- 2 Candling & transfer
- 3 Chick handling
- 4 Washing and waste handling





Genus Focus

Contactless in-ovo sexing for Germany (KAT conform), France and the rest of Europe



In-ovo sexing before day 13

3.000 eggs/hour per module

Up to 8 modules in parallel

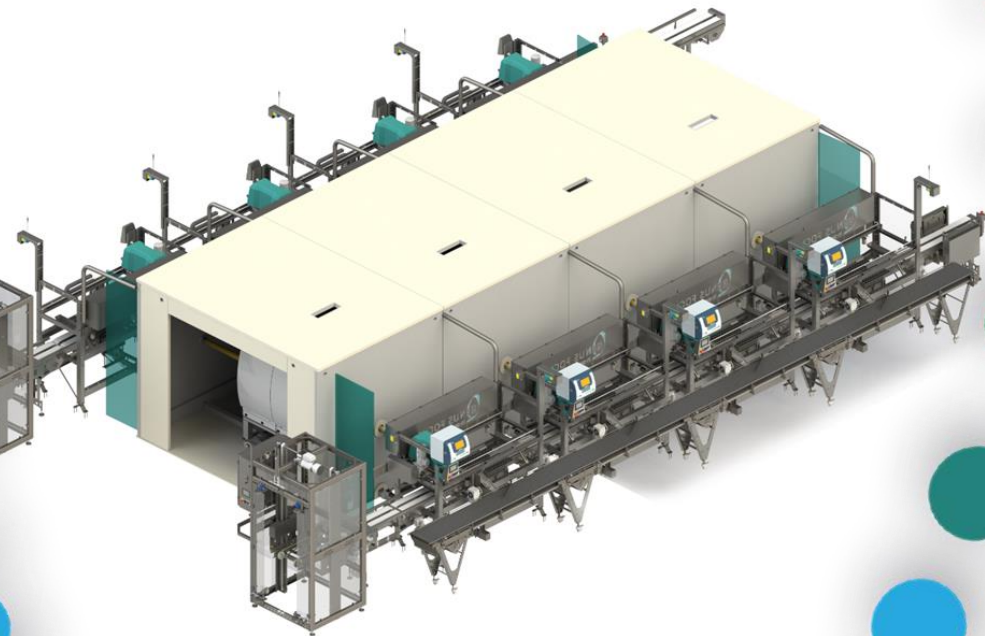
Works for all breeds and flock ages





Modular design

Multiple modules in parallel will match your production capacity and allow for scaling



1

Installation of the MRIs inside an **acoustic cage** for acoustic damping and safety purposes

2

Separate **technical room** for electronics and cooling equipment

3

Seamless **integration** to hatchery with trolley-to-trolley automation.



Operations

One operator manages the whole system

Operations and cleaning

- Operation of in-ovo sexing by one hatchery operator
- Operable through standard automation system touchpads
- Cleaning at the end of a shift by one operator (1-2 hours) with standard cleaning procedures

Maintenance

- The hatchery's maintenance personnel will be trained on common repairs of the automation equipment
- Regular system servicing by Orbem and the Vencomatic Group included

Consumables

- Helium: approx 500 € per module per year
- Printer Ink: approx 150 € per module per year

Choice Pluriton for Genus Focus

1

No hole in the hatching egg
(non-invasive)

2

Work cleanly

3

Relatively low labor
requirements

4

Easy to automate



Choice Pluriton for Genus Focus

5

Scalable

6

No additives required

7

Using hatching eggs from
beginning to end of life cycle
Parent Stock

8

Enables on-farm hatching



Choice Pluriton for Genus Focus

9

Very predictable technical results (n HE/DOC and n sex errors)

10

Good value for money – competitive compared to alternative

11

Delivery of large volume
75.000 doc / day
250.000 doc / week

12

Rearing farms can be set up (again) in 1 week



Pluriton in Bladel – separate location

- Installation in existing hatchery where space becomes available is not ideal (walking lines) – rearrangement of hatchery takes time
- Construction / adjustment of hatchery – permit process 1-2 years
- Separate location Bladel advantage
 - make decisions quickly and operationally
 - OKT and MKT separate locations
 - MKT locations are not negatively affected in terms of costprice





Our existing customers



**Hendrix Genetics
Mûr-de-Bretagne**
6 modules operational



**Hendrix Genetics
Germany**
2 modules operational



Lanckriet
2 modules operational



LOHMANN
DEUTSCHLAND

Lohmann DE
3 modules operational



**Ter Heerd
Verbeek**
2 modules operational



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Pluriton
5 modules operational



Sirevåg Rugeri
1 module operational



ANIMALCO

Animalco
1 module operational



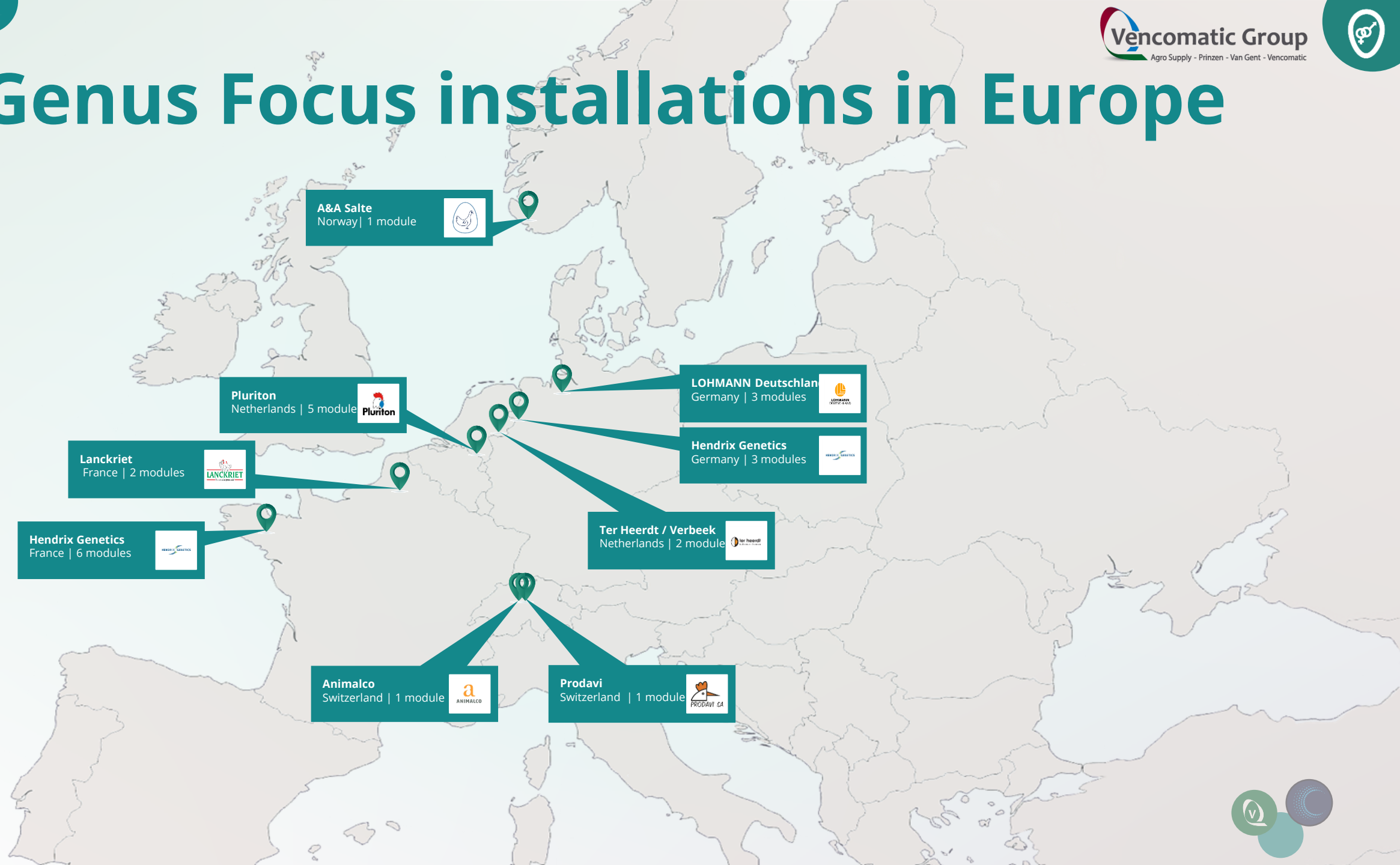
PRODAVI SA

Prodavi
1 module operational





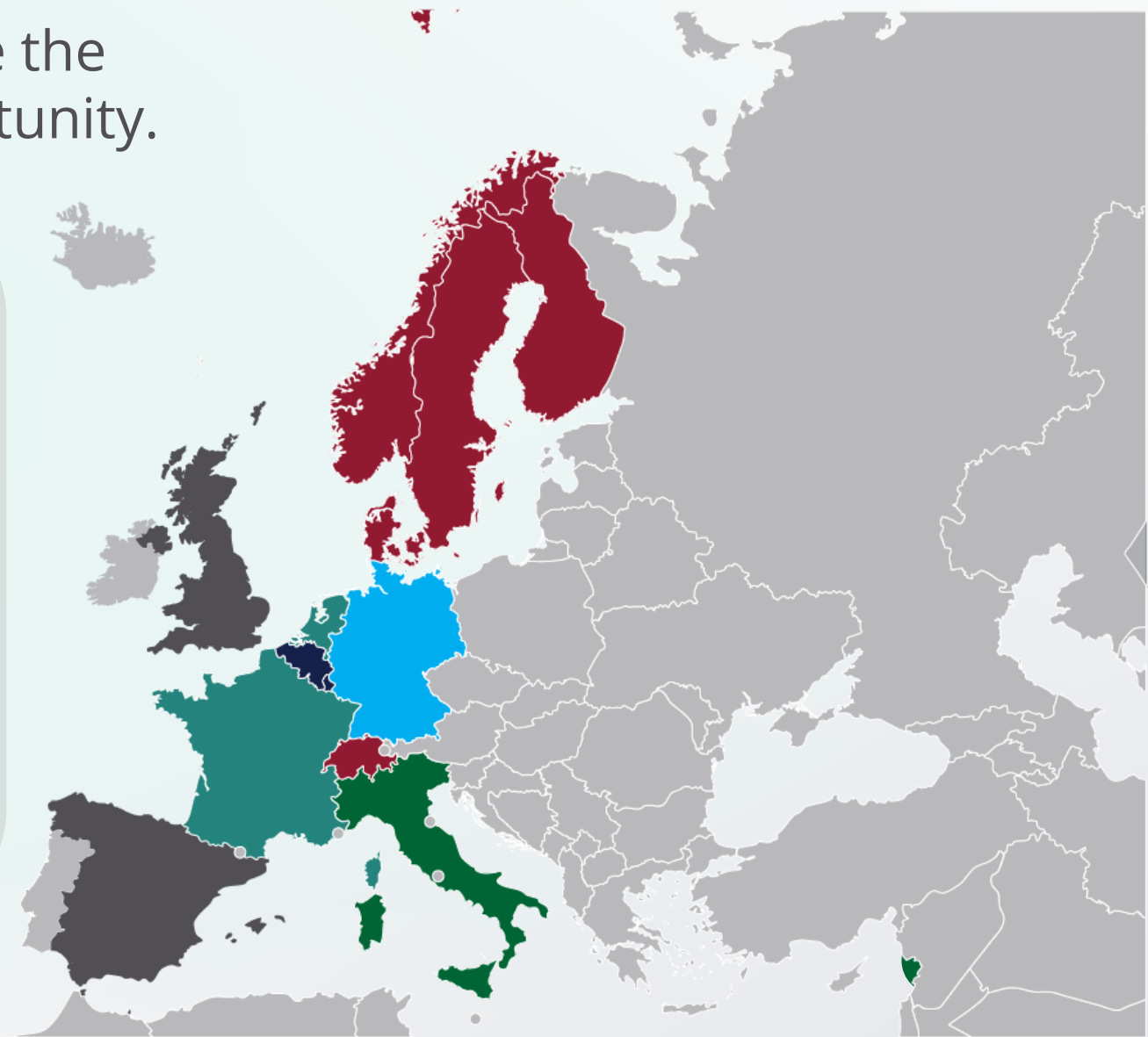
Genus Focus installations in Europe



In-ovo Sexing in Europe

Hatcheries across Europe recognize the business and animal welfare opportunity.

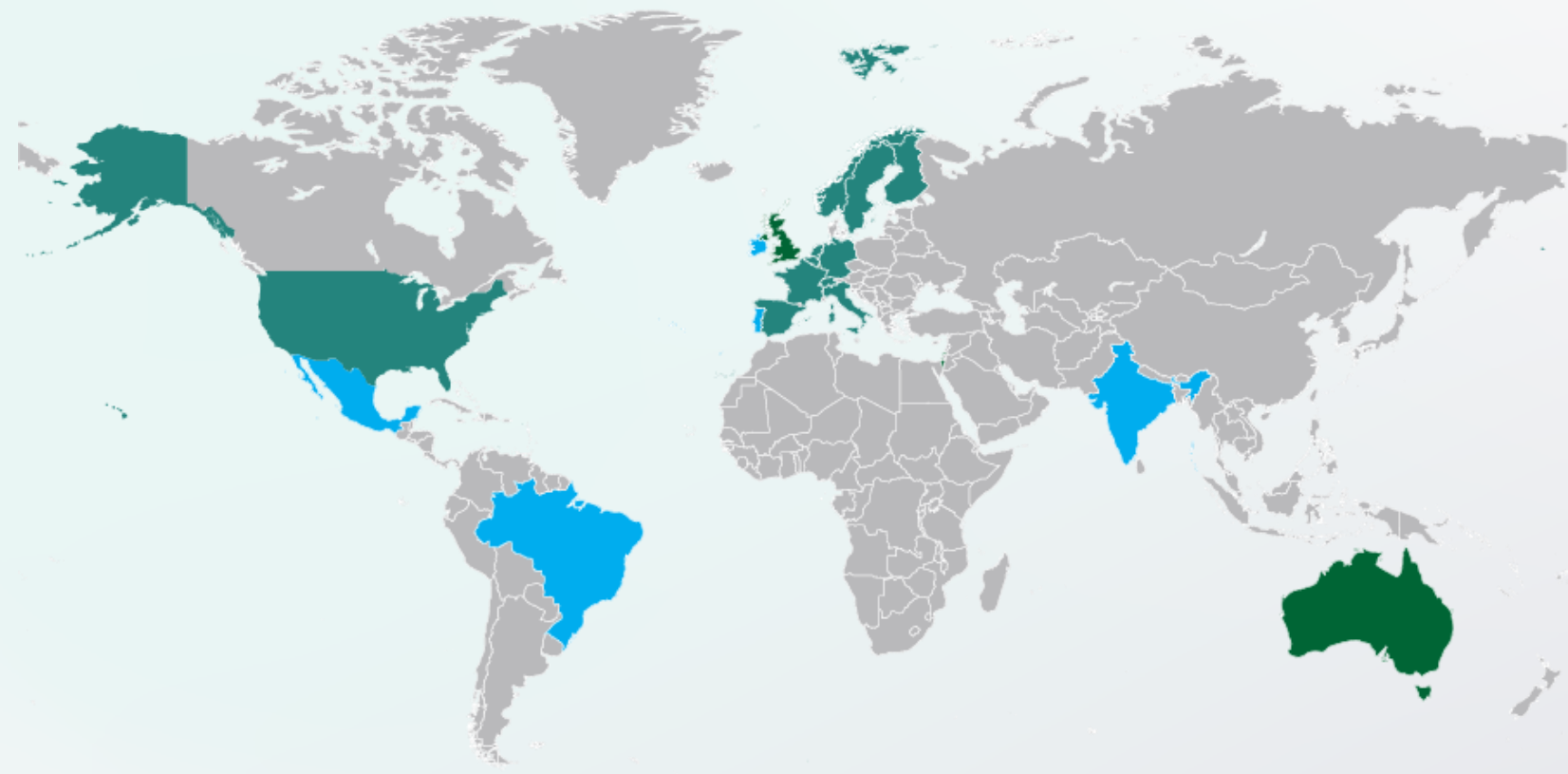
Germany	Legal ban since 01-01-2022. Stricter regulation from 2024 before day 13, rear sex mistakes of male
France	Legal ban since 01-01-2023, white layers exemption, before day 15, no obligation to rear sex mistakes of males
Netherlands	Netherlands introduce Roadmap in february 2025, Approach from market (layer industry) instead of law !! Cooperation of LTO-NOP / NVP, COBK, Ministry LVVN, Anevei and Dierenbescherming
Switzerland	Start in-ovo sexing in 2025 (no regulation)
Austria	Agreement with industry, before day 14
Scandinavia	Norway starts in-ovo sexing in 2024, other countries undecided
Italy	Legal ban from 01-01-2027, T&C defined in 2023, before day 14, no obligation to rear sex mistakes of males
Spain/UK	Progress towards industry-driven adoption
EU-wide ban?	Under discussion, when ?





In-ovo Sexing Worldwide

The market for the Genus Focus for in-ovo sexing is regulation driven.



- In the market
- Active research
- Commitments & Statements of interest



European Retailers

Marketing campaigns in Europe have caught consumers' attention.

European retailers launched the campaign "Ohne Kükentöten" (translates to: without culling of chicks) due to pressure from the society, accelerated by regulatory changes.

There are several consumer facing labels that hatcheries and egg producers can apply if they follow certain requirements and pay a small fee.

The most common labels are from [Aldi](#), [Lidl](#) and the [Respeggt](#) Group.



For in-ovo sexing and beyond...

Transforming the poultry industry into a more efficient, sustainable and animal-friendly industry.



Fertilization Status Detection

Detecting the fertilization status of eggs **prior to incubation**.
Increasing production capacities and generating additional revenue by selling unfertilized eggs.



Phenotyping

Identifying relevant phenotypes **on every day** of incubation.
Enabling decision-making based on large data sets.



We are here to help



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in our newsletter!

