

Data uitwisseling in de varkenshouderij

Topigs Norsvin

AgroConnect | Winter Seminar
| 21 november 2024

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Agenda

Introductie

Datastromen

**ICT
Architectuur**

**Gebruik van
CT & Camera**

**ePIGS
project**

**Feed
pipeline**

Uitdagingen

**Blik op de
toekomst**

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1.

Introductie



Introductie



Iris van den Broek

Breeding Program Manager

Sinds 2020 werkzaam bij Topigs Norsvin

- Implementatie & monitoring fokprogramma Europa & Zuid-Afrika
- ePIGS – API implementatie met SMS



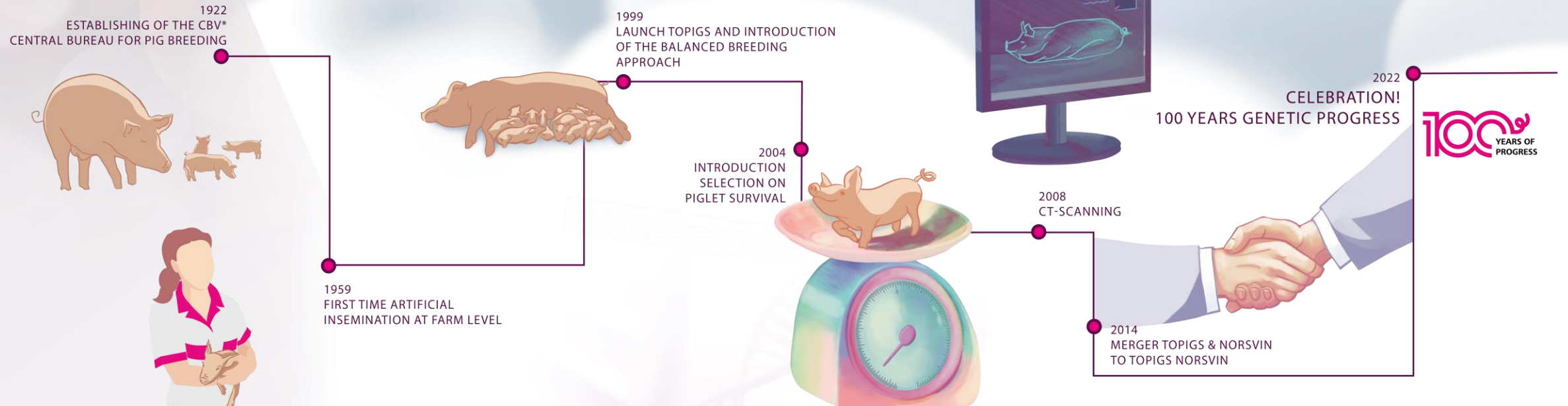
Ton van Erp

Senior Business analyst

Sinds februari 2003 werkzaam bij Topigs Norsvin

- Genetisist, IT-developer, IT-specialist, B&G IT-manager
- Business analyst (Breeding&Genetics)

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2.

Datastromen



De basis van fokkerij

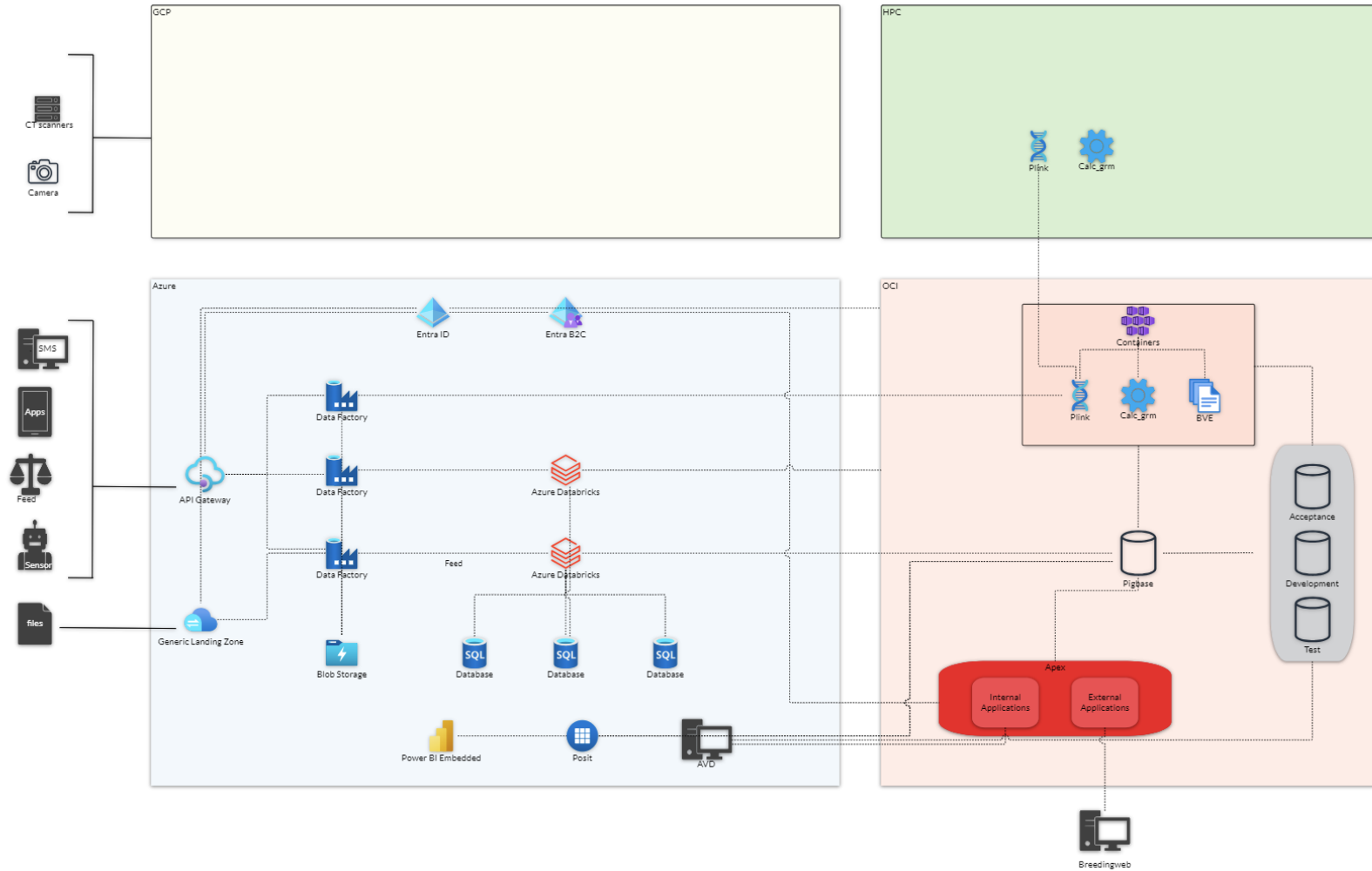
Genetische vooruitgang

- Verlagen generatie interval “**L**”
 - Vervangingspercentage in zeugen
 - Import van beren en sperma
 - Zuivere dekkingen in gelten
- Verhogen selectie intensiteit “**i**”
 - Selectie van beste gelten voor vervanging
 - Selectie van zeugen met hoogste index voor zuivere dekkingen
 - Afvoeren van zeugen met laagste index
- Verhogen nauwkeurigheid “**r**” van fokwaarden
 - Betrouwbare data collectie
 - Regelmatig uitwisselen van data

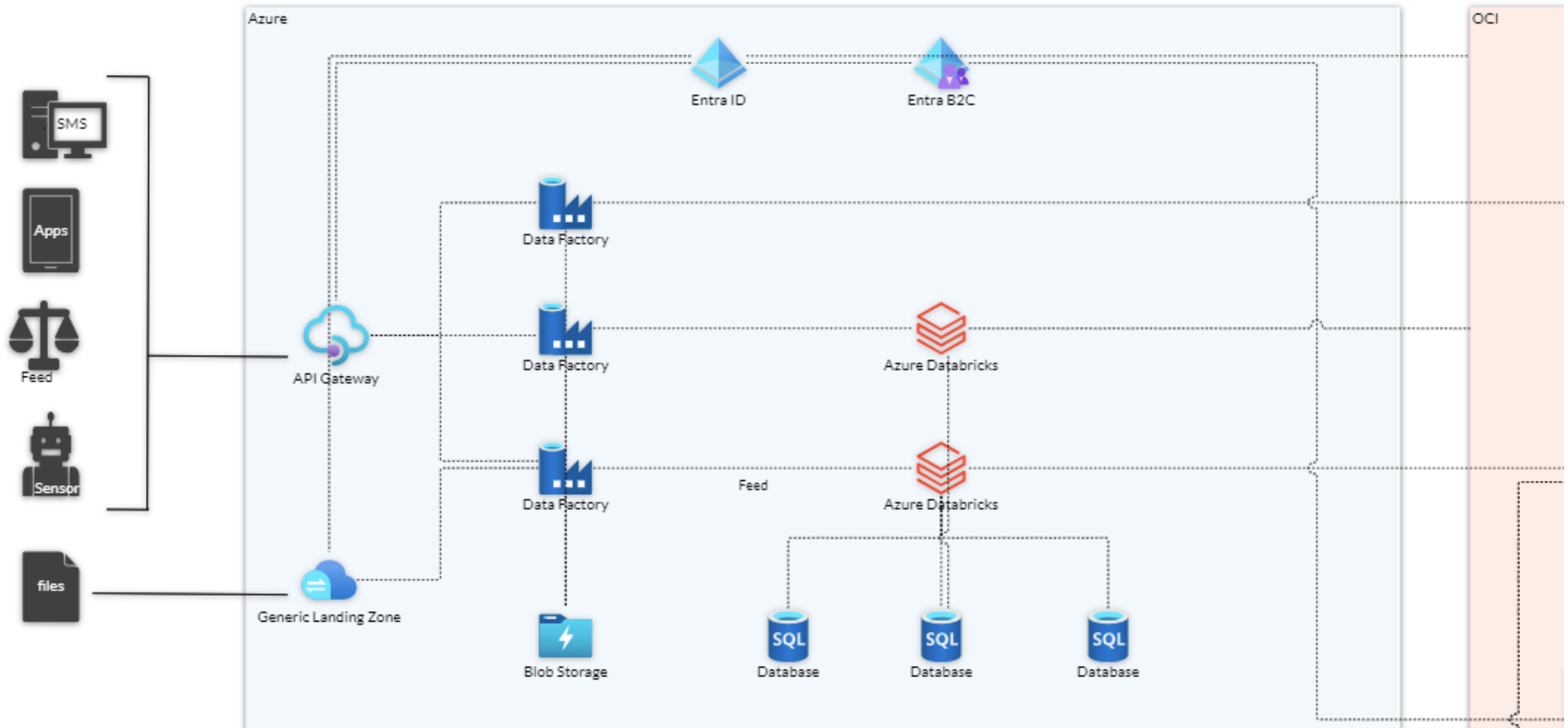
$$\Delta G = \frac{r_{IH} \times i \times \sigma_A}{L}$$

3. ICT architectuur

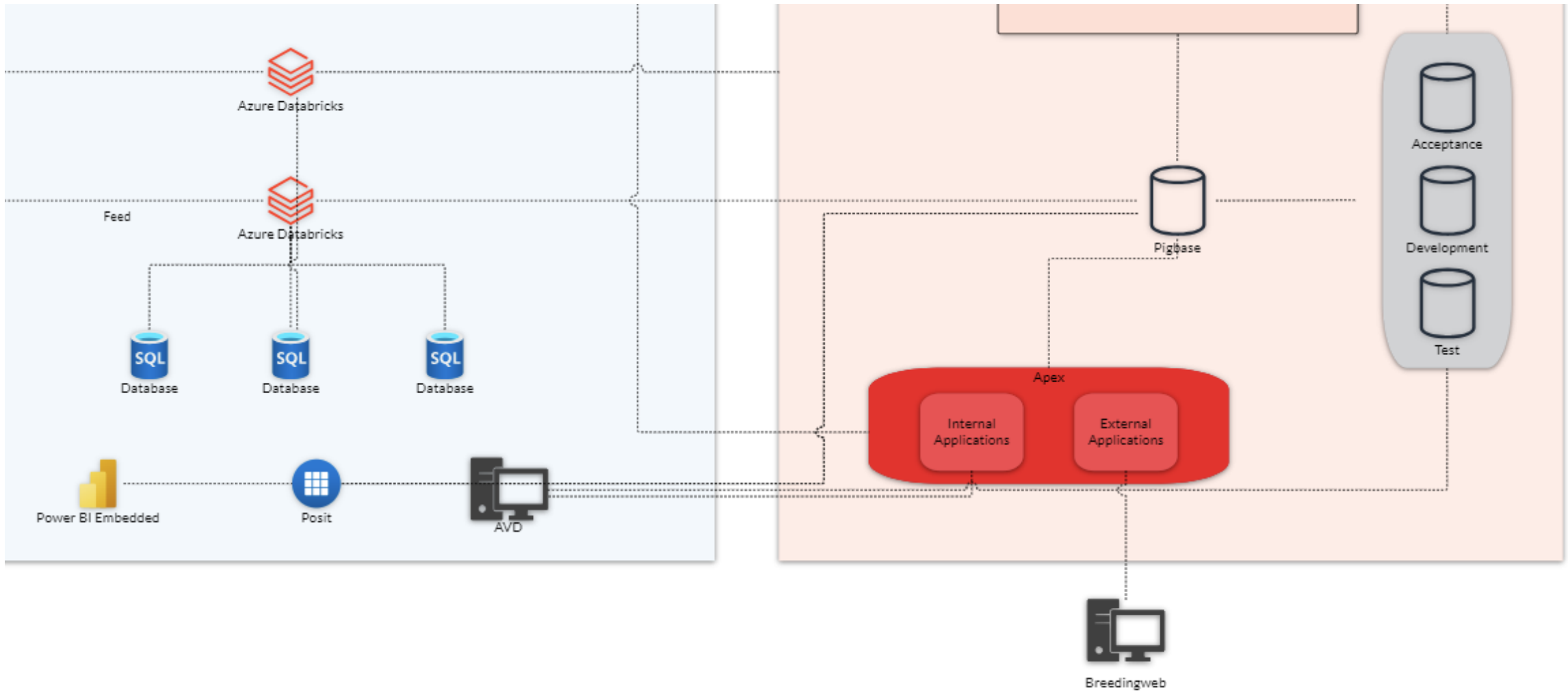




ICT architectuur

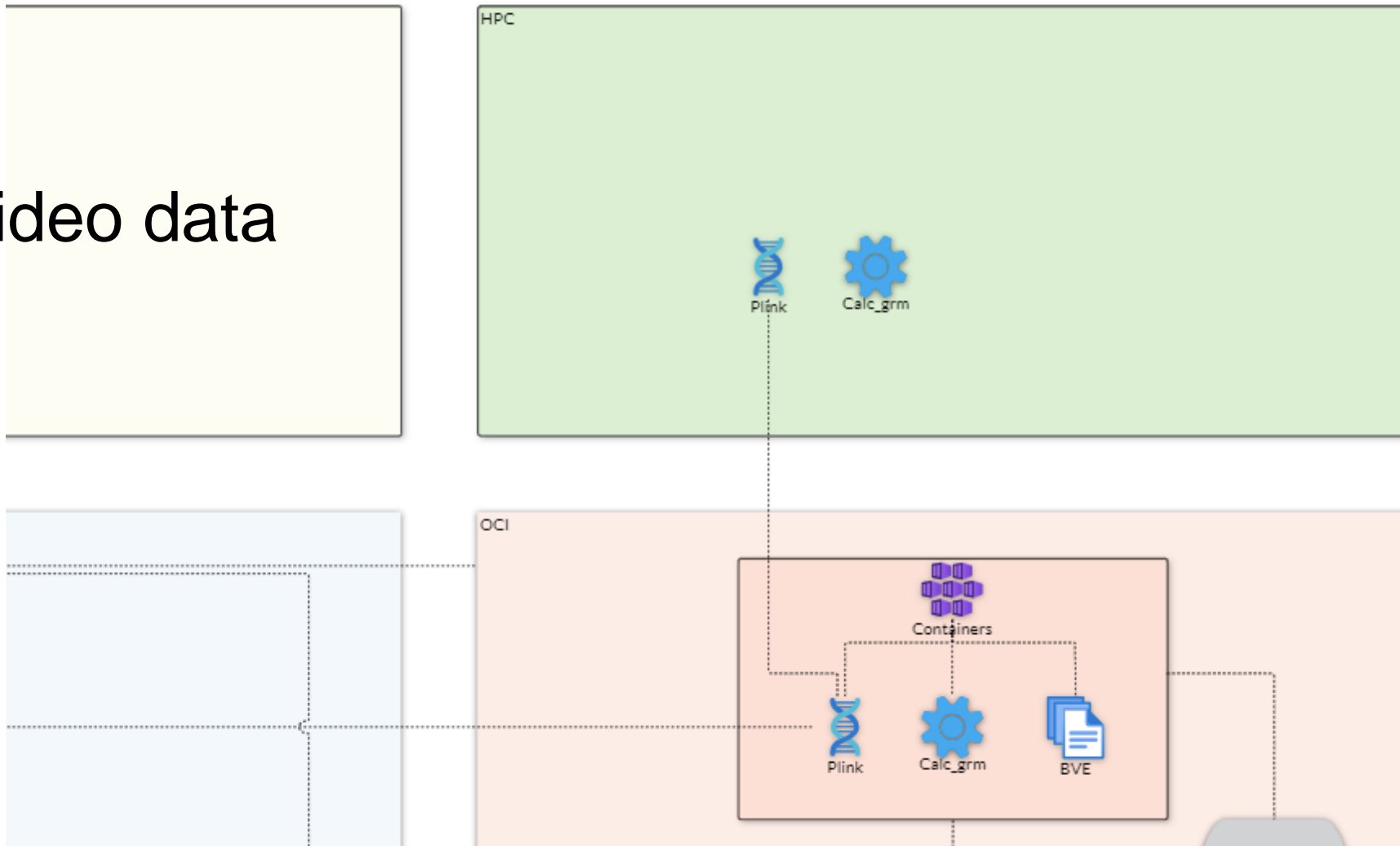


Data Ingest

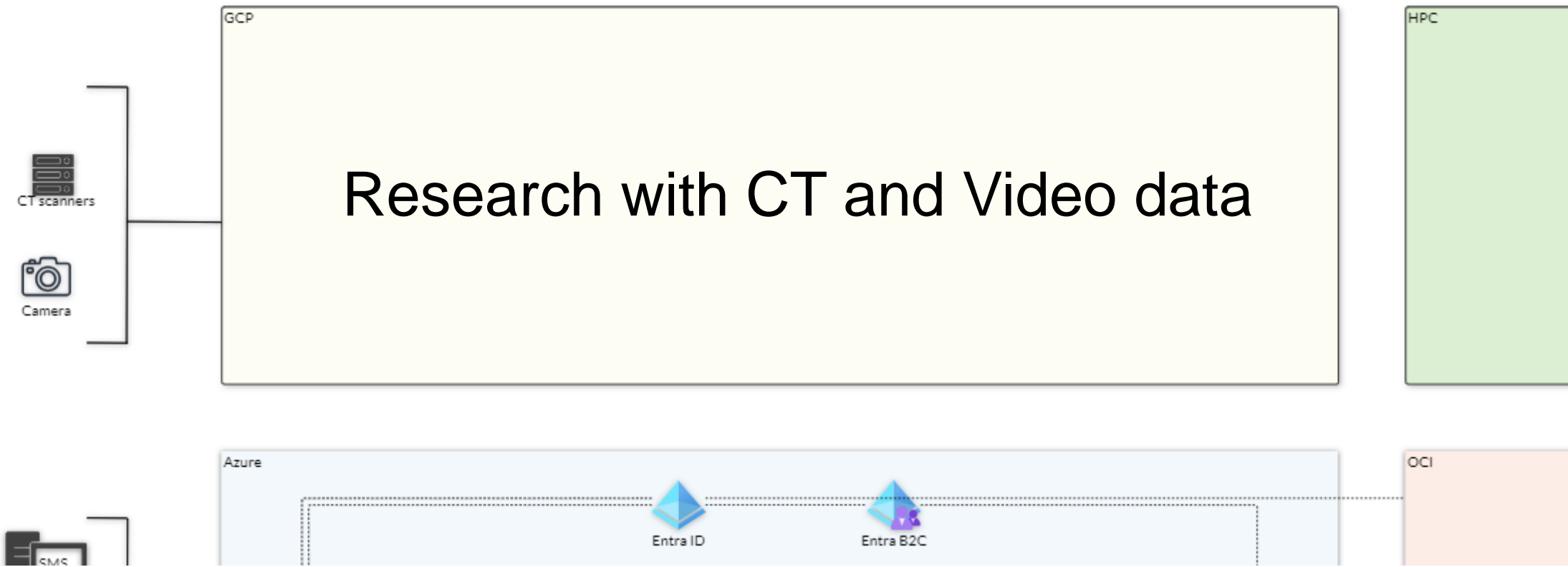


Data visualisation

d Video data



Breeding Value Estimation



Research projects

Q3

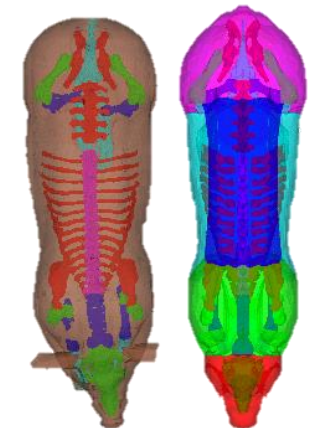
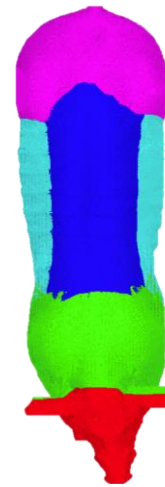
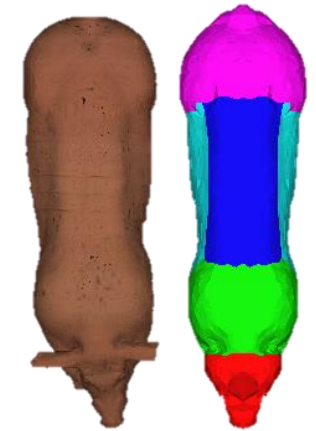
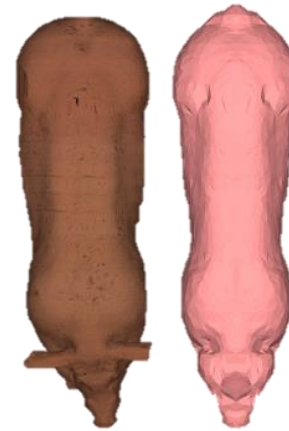
Q4

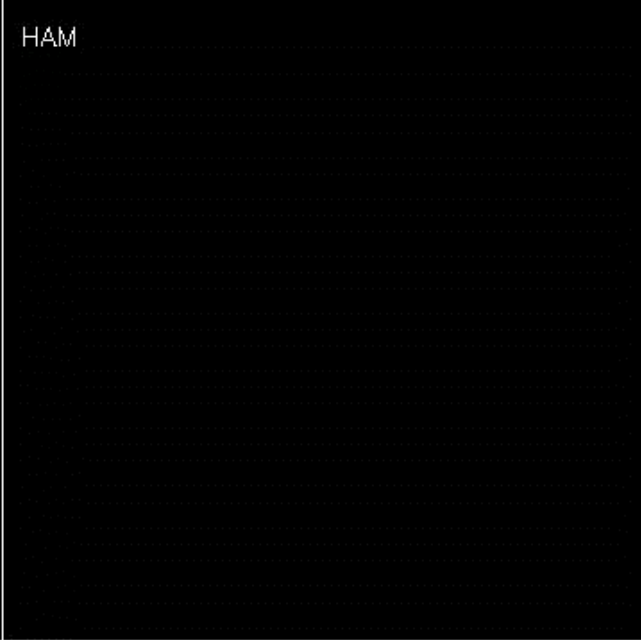
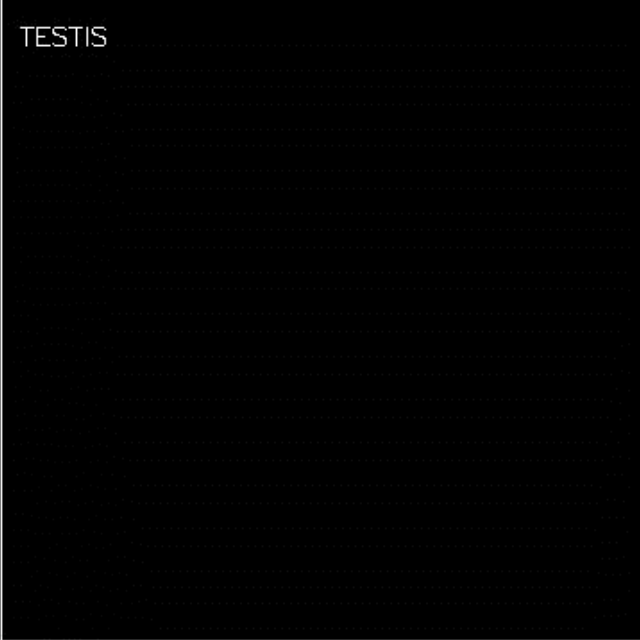
4. Gebruik van CT & Camera



CT scanning

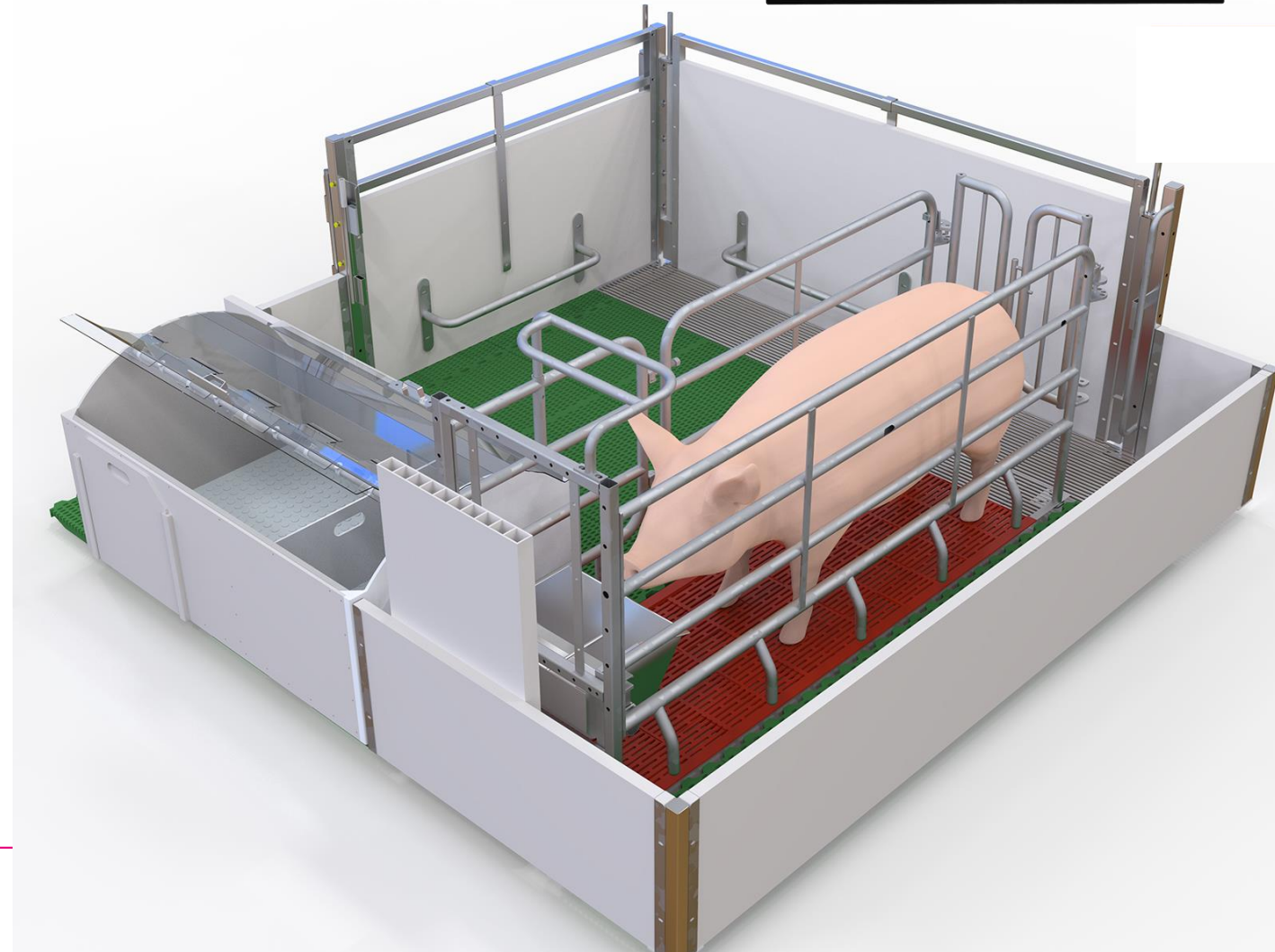
Delta Norway & Canada



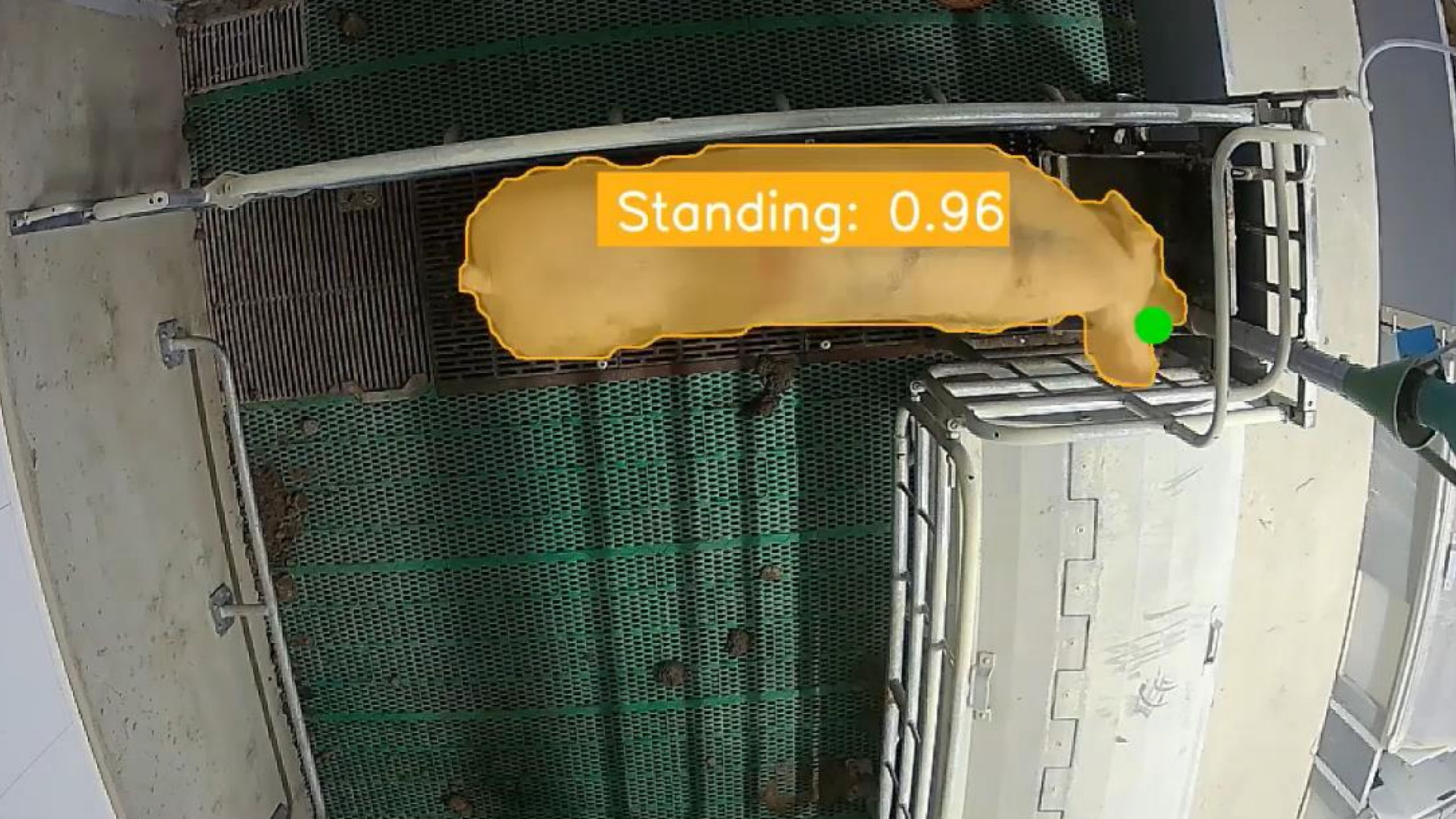


Camera technologie

- Camera observaties
 - Vleesvarkens
 - Zeugen en biggen



Standing: 0.96



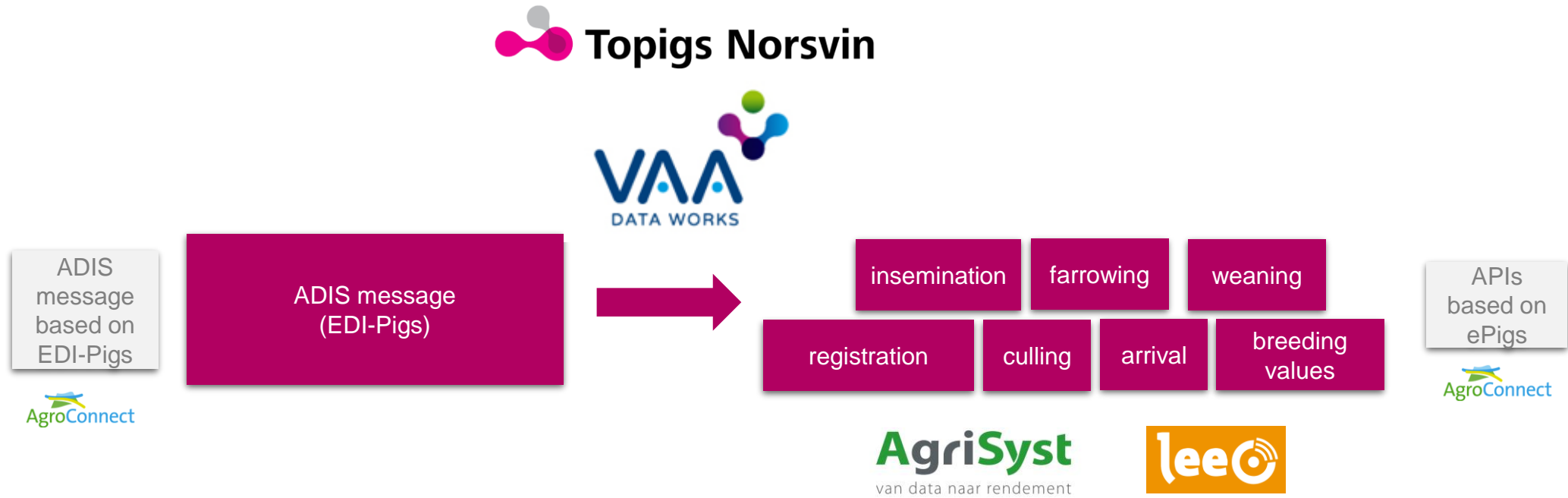
5.

ePIGS project



ePIGS implementatie

Start in 2021



ePIGS data uitwisseling

- Meer real time uitwisselen van data
- Van de klant
 - ZMS data
- Naar de klant
 - Beschikbare beren + geleverde doses
 - Fokwaardes
 - Paringsadvies

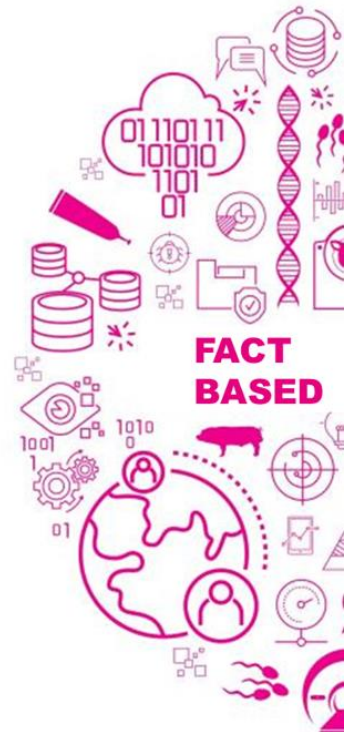
zeugen data
dekken, werpen, spenen

biggen data
geboortegewichten, aantal spenen

opfok data
start & eind gewicht

slacht data
gewicht, spekdikte, spierdikte

protocollen
overleggen, hormoongebruik, sterfte



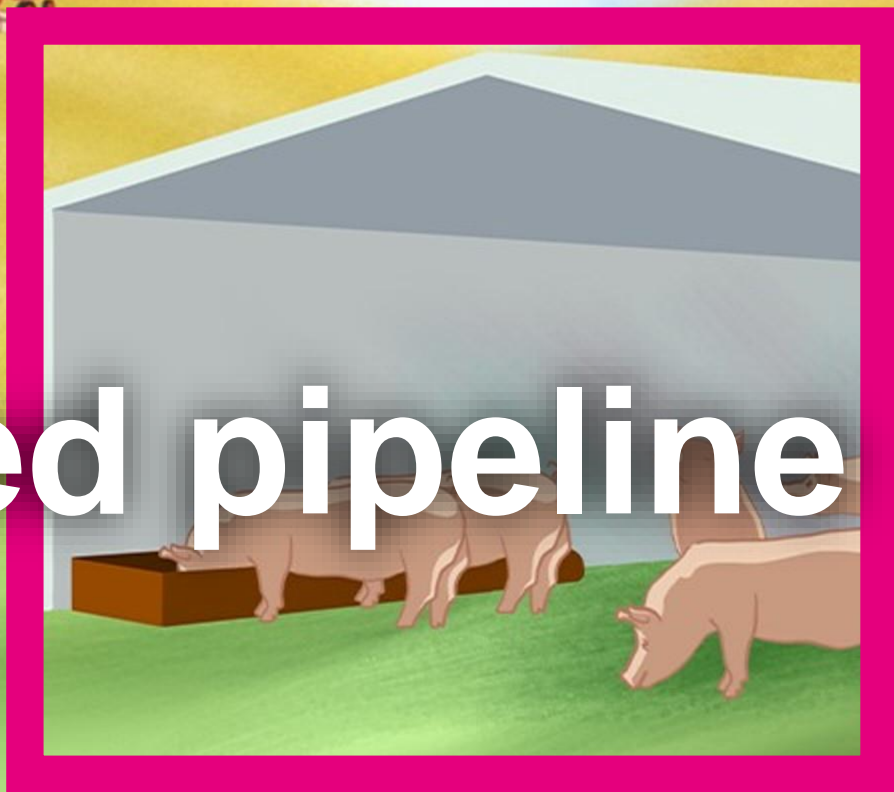
Voortgang

- Uitwisseling met 20 ZMS
 - 8 via API
- Nieuwe mogelijkheden
 - 4 nieuwe ZMS
- Inmiddels 25% van onze klanten op ePIGS



6.

Feed pipeline



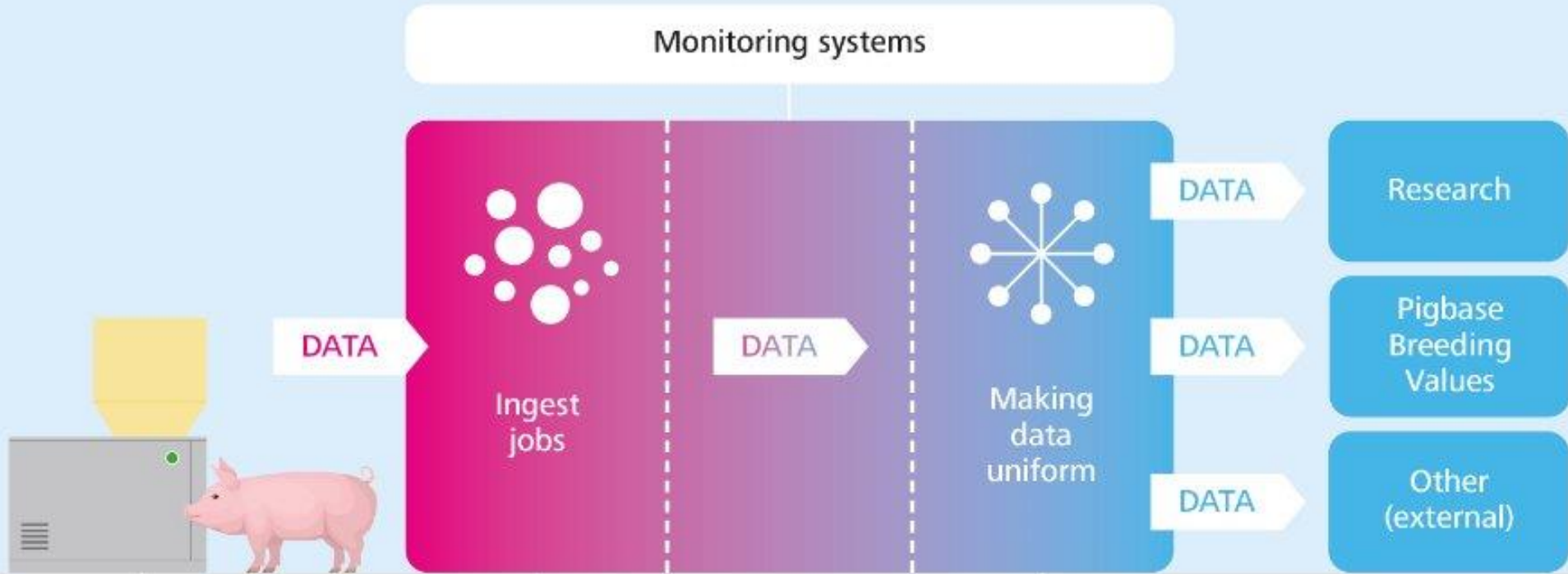
Feed Data Pipeline project

Moderniseren van sensor data ingestie

- Fenotype -> fokwaarde
- Gemeten door voerstation:
 - ID van dier
 - Gewicht van dier
 - Start voer inname (sec)
 - Eind voer inname (sec)
 - Gewicht voer inname (gram)
- Voorwaardelijk voor genetische vooruitgang:
 - Accuraatheid data
 - Compleetheid data
 - Snelle doorloop van dieren in het fokprogramma



Feed Pipeline



Data Feed Intake

The pig is identified at the feed station. The time and duration of the visit is recorded. The amount of feed is measured. In a number of cases the pig is also weighed.

Ingest jobs

The registered data is retrieved and collected in a secure manner.

Making Data uniform

The raw data is stored and checked in several steps. It is made available to researchers, Pigbase for use in breeding value estimation and service specialists to help customers to improve their production.

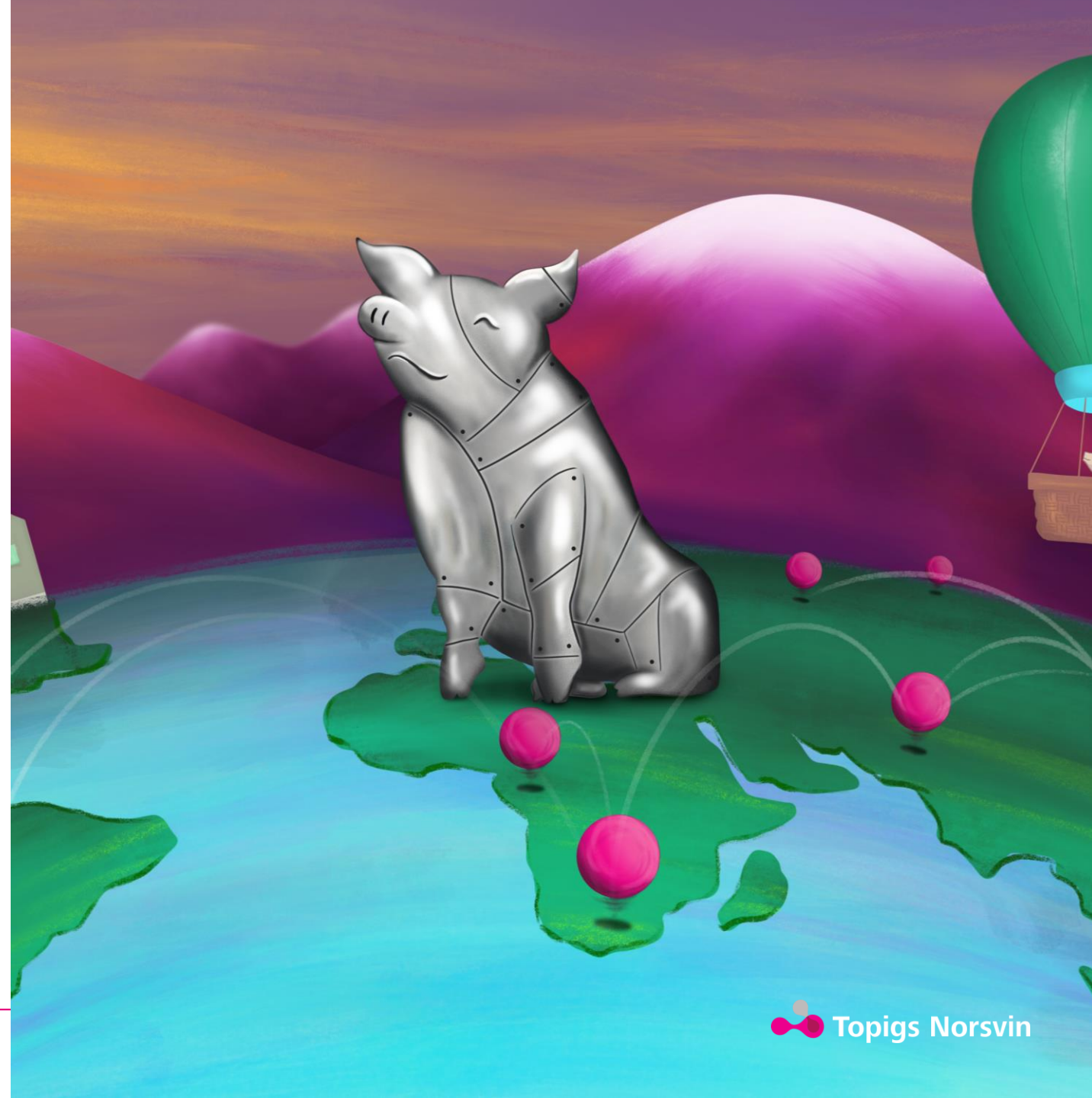
7.

Uitdagingen



Uitdagingen

- ePIGS
 - Tijdrovend proces: testen per ZMS & omzetten per bedrijf
 - Verschil in terminologie wereldwijd
 - Betrouwbaarheid van data
- Feed pipeline
 - Maatwerk integratie per voerstation leverancier erg tijdrovend
 - Kennisoverdracht van research naar operatie is lastig





8.

Blik op de toekomst

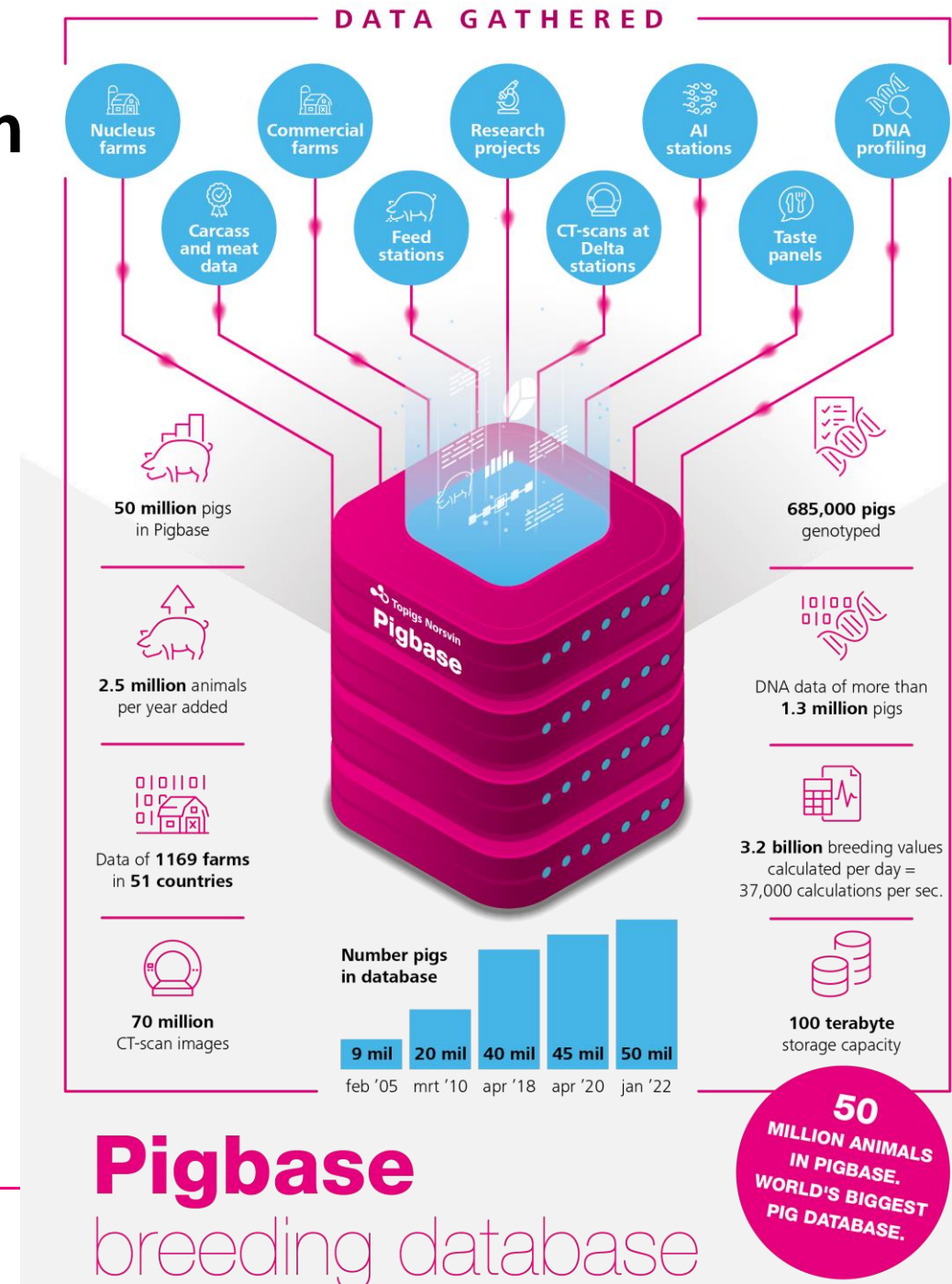
Data management en analyse platform

Inzetten op snelle integratie en ontwikkeling

- Breed inzetbare standaard oplossingen
- Flexibiliteit aan de voorkant
- Snel en effectief ontwikkelen aan de achterkant

Nieuwe samenwerking in de keten

- Beer groep tracersing voor vlees
- Barcode gebruik in KI stations
- Registreren van medicijn gebruik



Thank you!

