

Home thoughts from a broad perspective

Dr Sam Hoste
Quantech Solutions



OR
EADGENE “Data comp”
&
Red Meat Industry Forum
Global Compete
Regional Disease Eradication

My recent background

- Genetics with NPD, PIC, ACMC, Rattlerow, Smithfield, Maple Leaf
- Organisation of local food chains with ASDA
- EADGENE – EU Animal health recording
- RMIF Global Competitiveness
 - This project
 - Costings workshops
 - Climate change

EADGENE

- European Animal Disease Genomics Network of Excellence for Animal Health and Food Safety

Partners - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address <http://www.eadgene.info/AboutEADGENE/Partners/tabid/56/Default.aspx>

Google G Go Bookmarks 370 blocked Check AutoLink Settings Convert Select

Industry Links FAQs Knowledge Database

Search

organisations, from 10 European


research partners include a European "virtual laboratory" in genomics of animals and their pathogens, and the sharing of data, knowledge, equipment and materials. Partners also benefit from EADGENE's training and educational programmes, encouraging staff mobility and international exchange of information.

[Institute National de la Recherche Agronomique \(INRA\), France](#)
[Wageningen University \(WUR\), NL](#)
[Animal Science Group Lelystad \(ASG-Lelystad\), NL](#)
[Institute for Animal Health \(IAH\), UK](#)
[Roslin Institute, UK](#)
[University of Aarhus Faculty of Agricultural Sciences \(formerly DIAS\), Denmark](#)
[Liege University, Belgium](#)
[Ljubljana University, Slovenia](#)
[Cordoba University, Spain](#)
[Norwegian School of Veterinary Science \(NSVS\), Norway](#)
[Research Institute for the Biology of Farm Animals \(RIBFA\), Germany](#)
[Parco Tecnologico Padano \(PTP\), Italy](#)
[European Forum of Farm Animal Breeders \(EFFAB\), NL](#)

Latest Updates
[Post-analyses Workshop](#)
[EADGENE Oligo sets annotation files](#)
[EADGENE Conference 2008](#)
[Newsletter August 2008](#)
[Career Opportunities](#)
[Immunogenetics Courses June](#)
[Data Analysis WS Papers](#)

Available resources:

- [Chicken Microarrays](#)
- [Bovine Microarrays](#)
- [Pig Microarrays](#)



> + 87 companies etc involved

UK companies & Organisations

- ACMC Ltd
- Aviagen
- British Poultry Council
- Cherry Valley Ducks
- Cobb Breeding Ltd
- Genesis Faraday
- JSR Genetics
- AHDBMS
- Merial
- Quantech Solutions
- PIC
- Pfizer
- Rattlerow Farms Ltd
- Stonebridge Breeding

EADGENE “Data comp” project

- Aim: Map animal recording, establish data trail, data comparability
- Map recording in cattle, pigs and poultry
 - UK, Dk, NI, Fr
- At a practical level: Muddy Boots!

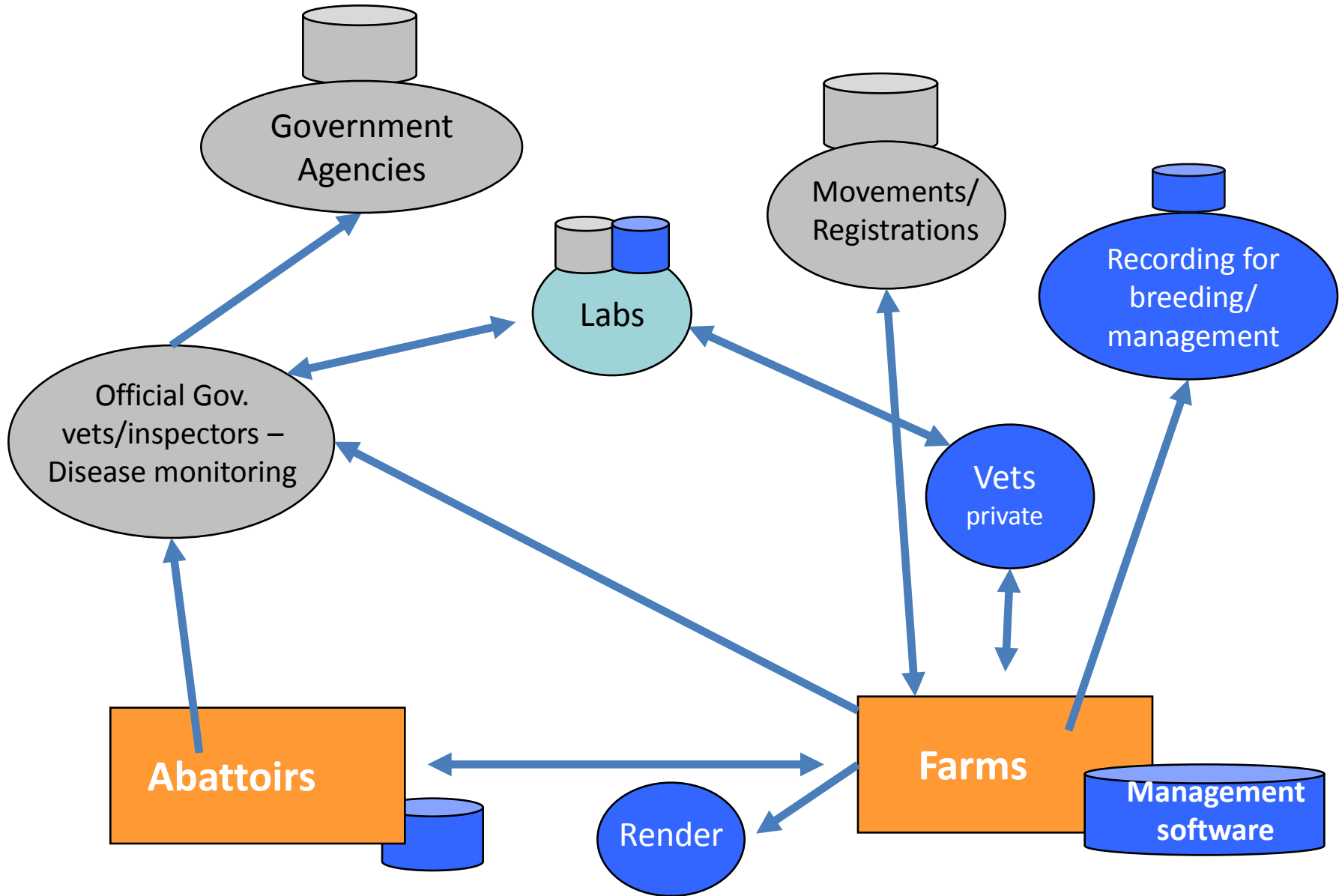
Why?

- Improve understanding of information, own data and how fits across EU
- Help establish links & understanding in basic recording
- Enable better utilisation of data by many stakeholders
- Between species and country differences
- Learning – knowledge sharing

How?

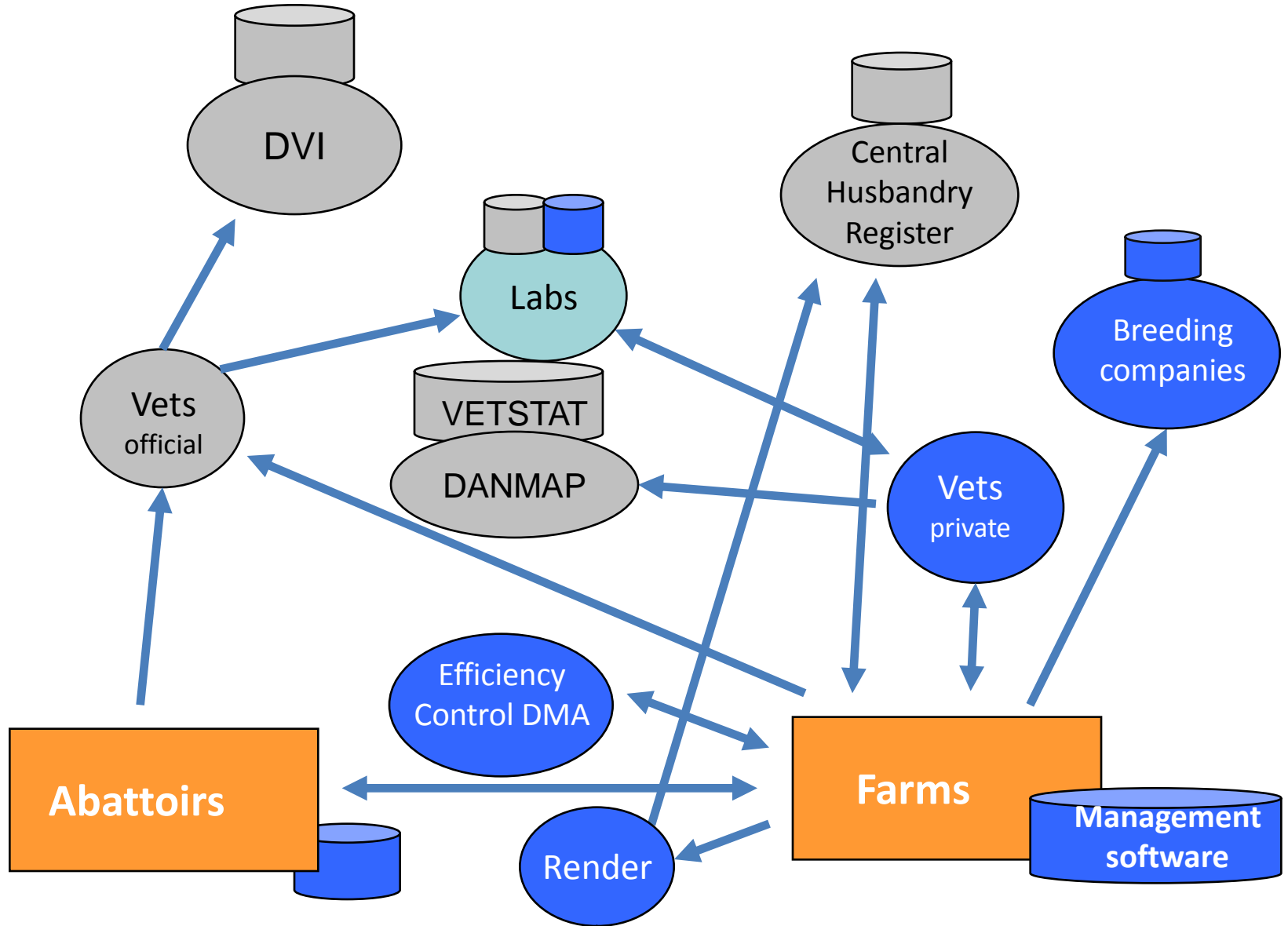
- Interviewed people in
 - Govt., Levy boards, Vet institutes, Animal Science Unis., abattoirs, farms, movement bodies, meat hygiene.
- Diagram of data flow
- Description of data

General diagram



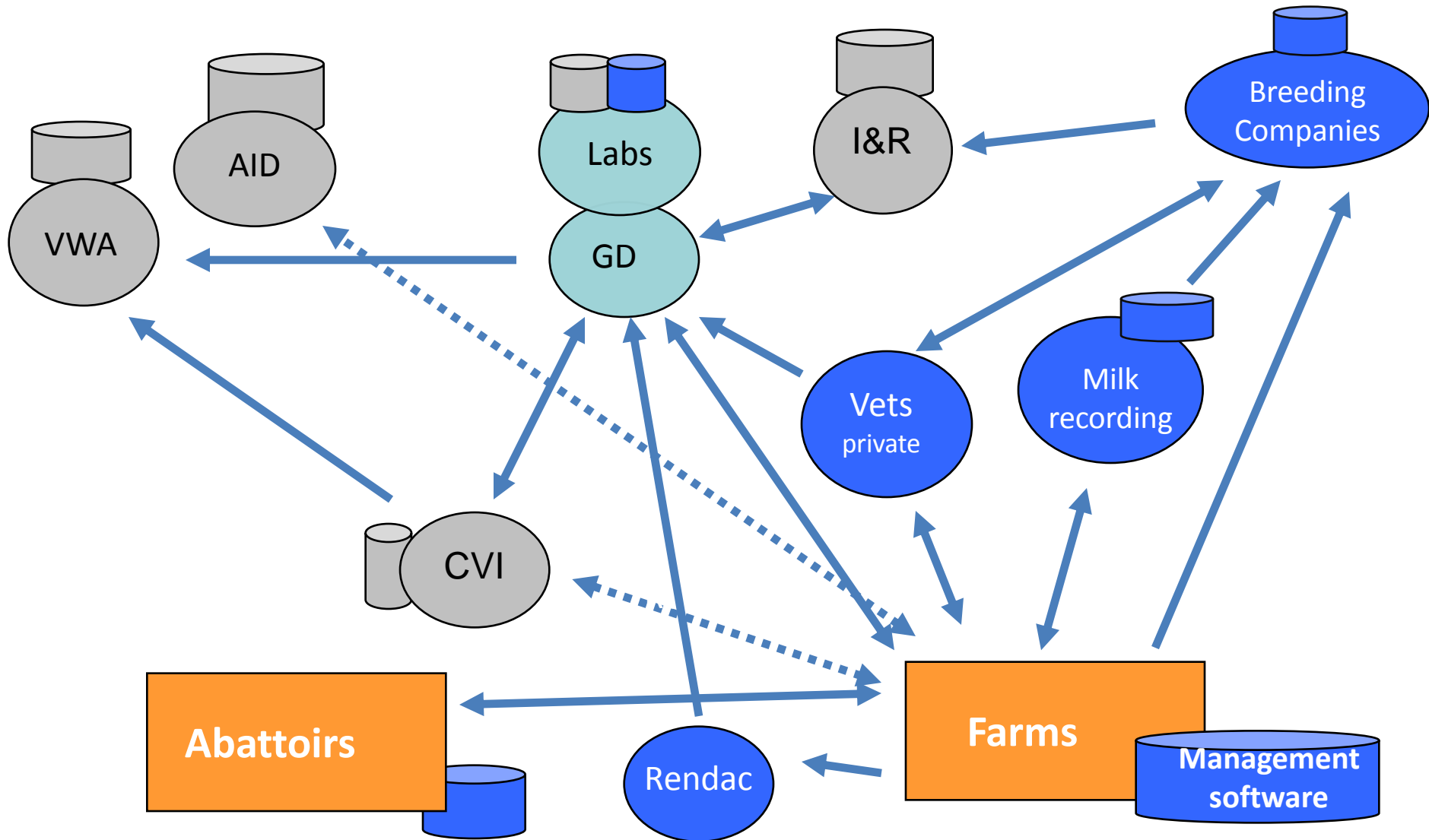
Denmark

Pigs



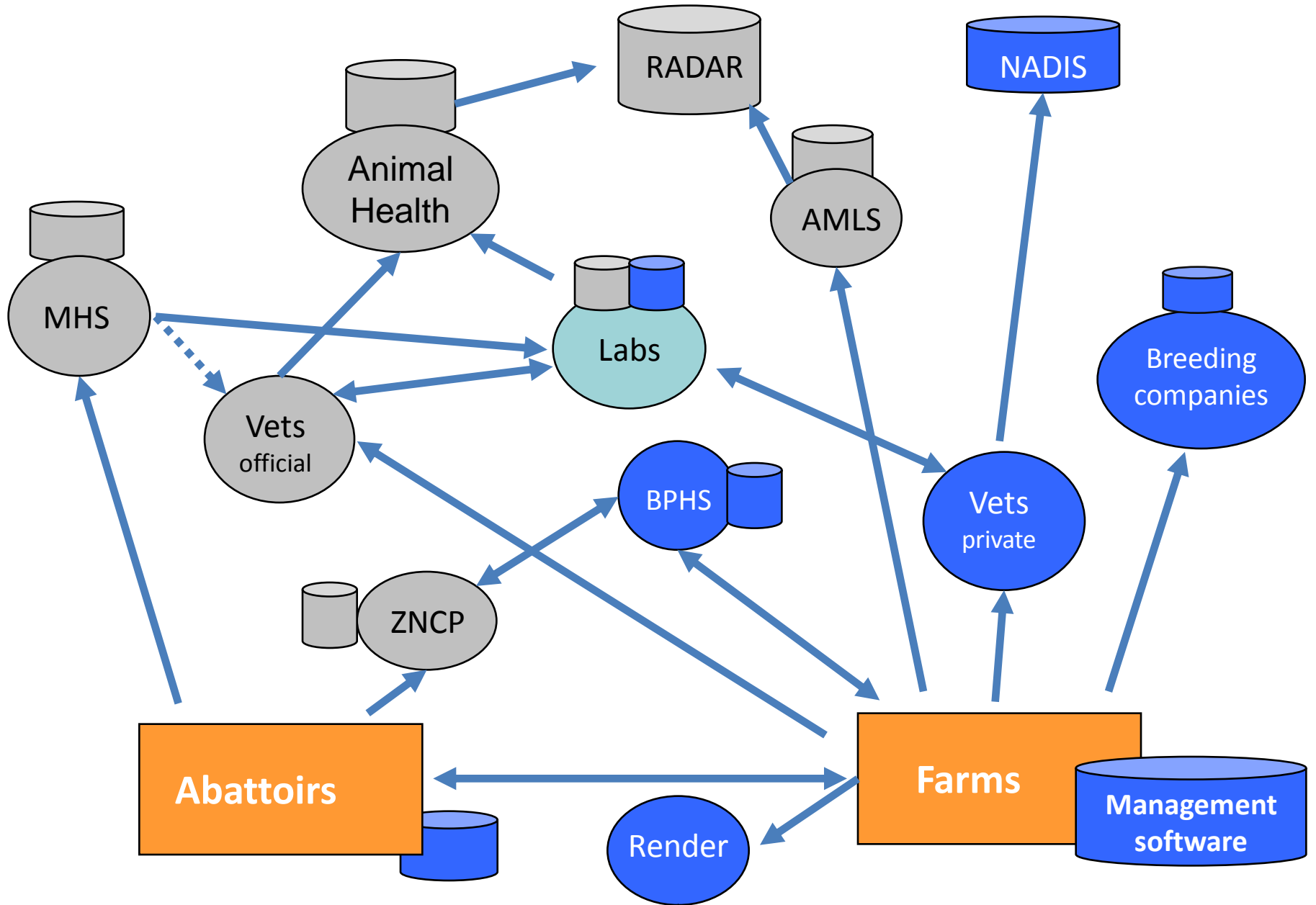
Netherlands

Cattle



UK

Pigs



Brief outputs

- Many similarities (expected ~ legislation)
- But also differences
 - GD in NL (equiv. Of Animal Health but private)
 - Ind. Ident. In cattle substantial benefits c.f. other spp.
 - Use of rendering information
 - GDS in France, BPHS in UK
- In design consider multiple use & links
- Importance of Levy / Product boards in animal health data
- Opportunities for learning are great

Change
Tack!



Red Meat Industry Forum

“Global Compete”

- Agricultural Development Scheme grant (DEFRA)
- Across pigs, beef and sheep
- International
 - Costings
 - Benchmarking
 - Best practices
- To date slaughter & sheep costing workshops, brainstorming, visit to North America & NZ

Red Meat Industry Forum
ADS Programme
“Global Compete”

Step 1
Brainstorm with
International
industry experts

Step 2
Gather evidence
from UK, France,
Switzerland,
Denmark

1. Health

Step 3
Producers

Step 3
Veterinarians

Step 3
Chair of UK's
AHWS

Step 4
Visit overseas
examples with
leading stakeholders

Step 5
Disseminate

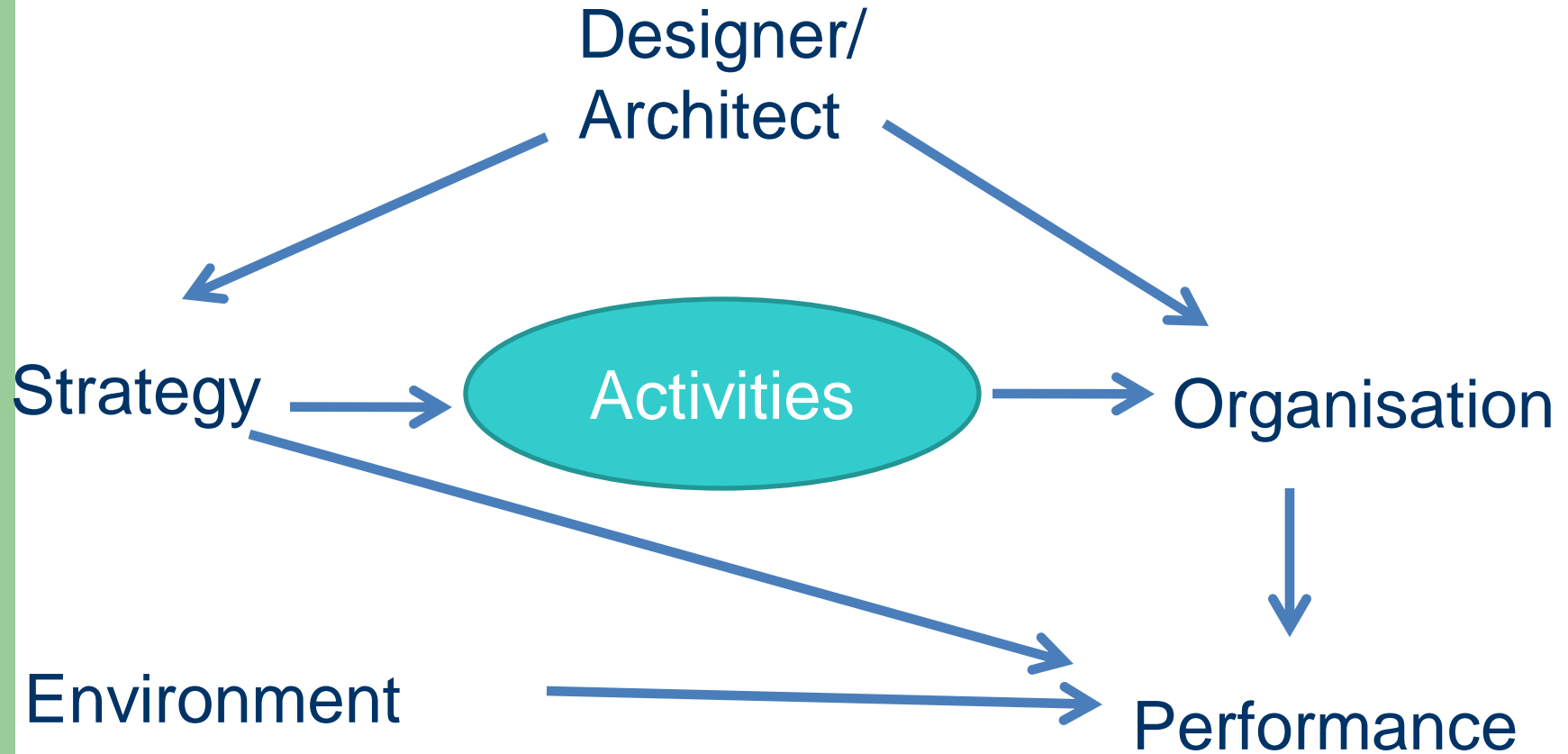
“Whole Chain” visit to France

- Get buy in & different perspectives from participants
- Representatives from
 - Producers: NPA & BPEX, individual & corporate
 - Farm Assurance scheme
 - Breeding Co’s (Allied Industries committee)
 - Pharmaceutical Co’s
 - Processing Co’s (BPMA)
 - Vets: PVS, commercial, Defra, AHDB

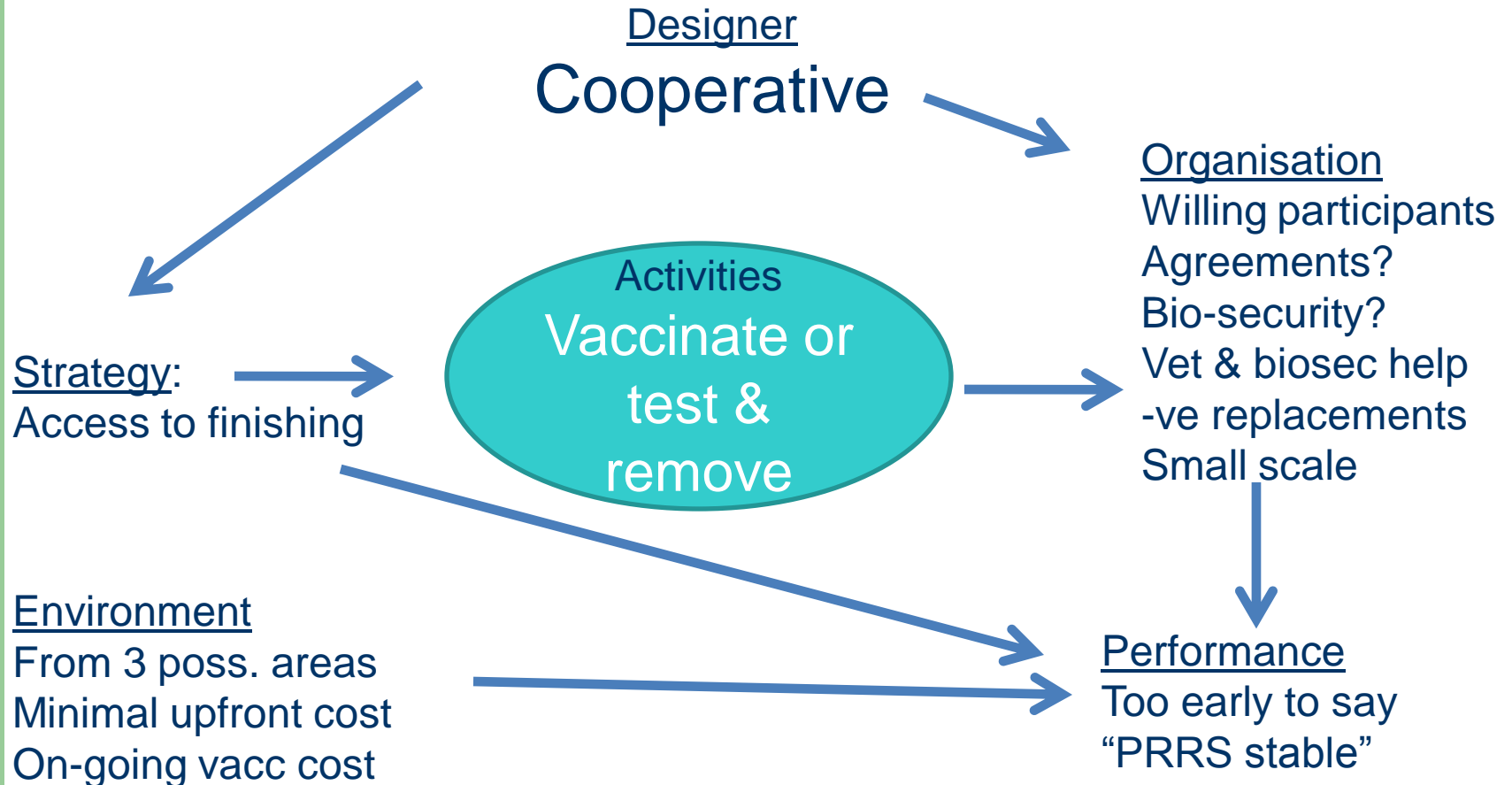
Why France?

- Two contrasting areas:
 - Pays de la Loire: PRRS in **early 90's** –still largely free (10% sows of French sow population)
 - Brittany: **new** pilot scheme in **pig dense** area of 13 producers (7500 farms, 57% output, 62% sow pop., 497pigs/km²)
- Historical and current
- More representative of UK situation, c.f. Switzerland

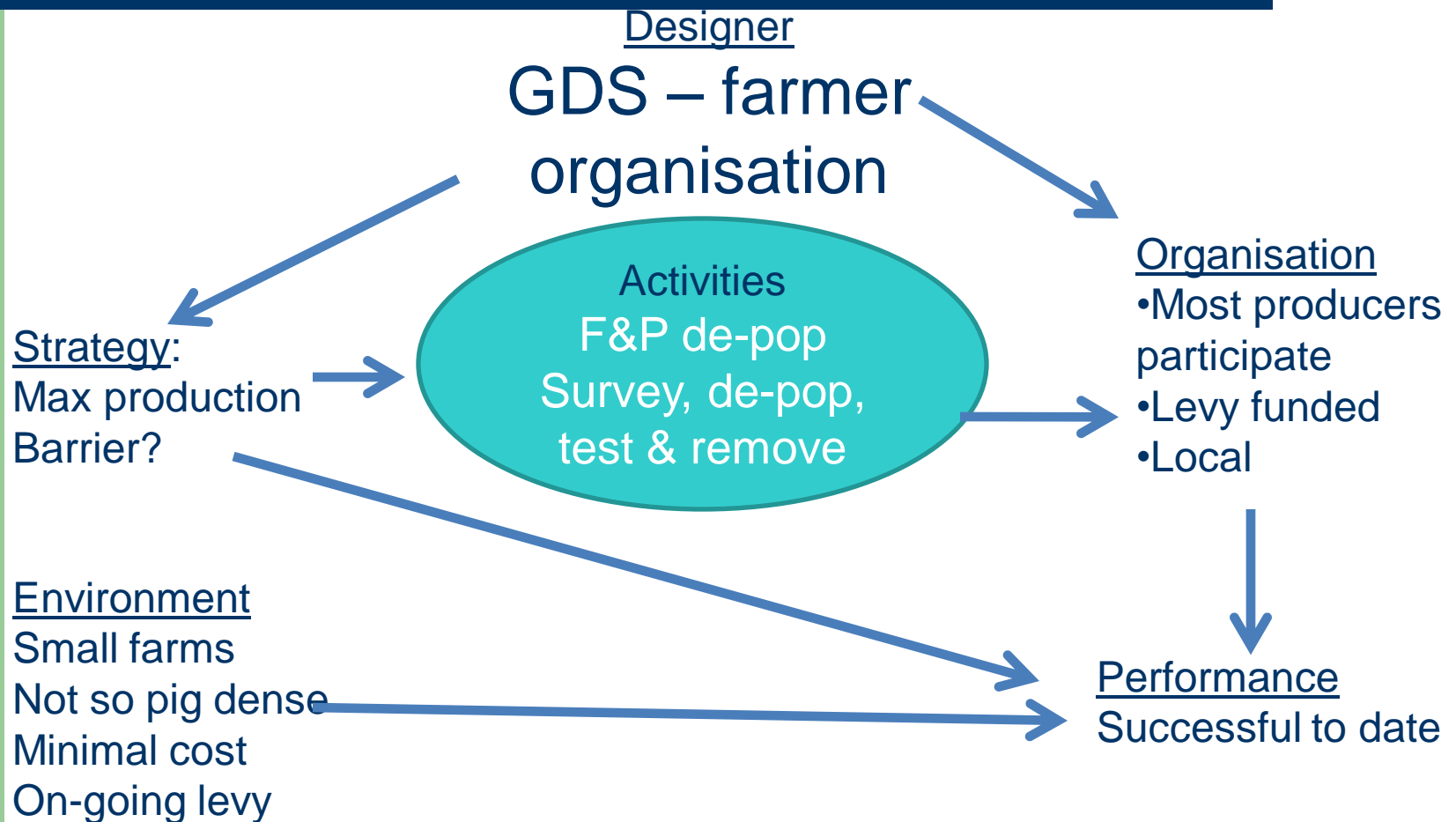
General Organisation



Organisation-Brittany



Organisation–Pays de la Loire



Brittany - 1

- Survey for PRRS – prevalence
 - Isolate virus PCR
 - Strains close together ('91 strains not changed much)
- Student looking at cost impact
 - Cost of PRRS:70€/sow
 - Cost of eradication 80,000€/farm

Brittany - 2

- 3 areas (sea, relief & strong motivation)
 - Not largest density
 - Survey int and ext biosecurity
 - Vets suggested areas
- Visited farms
- Presentation to stakeholders

Brittany – 3

- Inquiry into farm- biosec, PRRS, percep, photo
- Listed biosecurity measures
- Mapped slurry usage & method (but varies)
- Links between farms
- Transport
 - # farms passed getting to farm
 - Transport (dead and food)?
- Eval. Risks (coherence & geog. isolation)
- Think **ZONES**
- Choose 1 area

Brittany - 2

- Pig dense, 13 producers who *wanted* to do it
- Organised by UGPVB (structure, vets)
- Several years in planning & discussion, selected from several possible areas for eradication
- Protocols
- Farmers have on-going access to advice & funding to improve biosecurity, & finance
- +ve herd with active circulation then vacc.
- If not active test and remove

Thoughts from Brittany

- Contracts not 'tight' but had a charter
- Transport of pigs within area poss re-infection
- High prevalence – 60%
- PRRS stable and vaccinated
- BUT 13 producers collaborating



Pays de la Loire

- Successful since 1990's
- Groupe de Defense Sanitaire (GDS) 90% of farmers are members
- 5 out of 2100 farms remain infected. Extra precautions taken and extra surveillance
- Levy of £3/sow/year –enables serology and 2 de-pops/year

Thoughts from Pays de la Loire

- Less pig dense
- Serology was easier (no vaccination @ start)
- Importance of on-going regional / local health structure: GDS
- Put funding in place



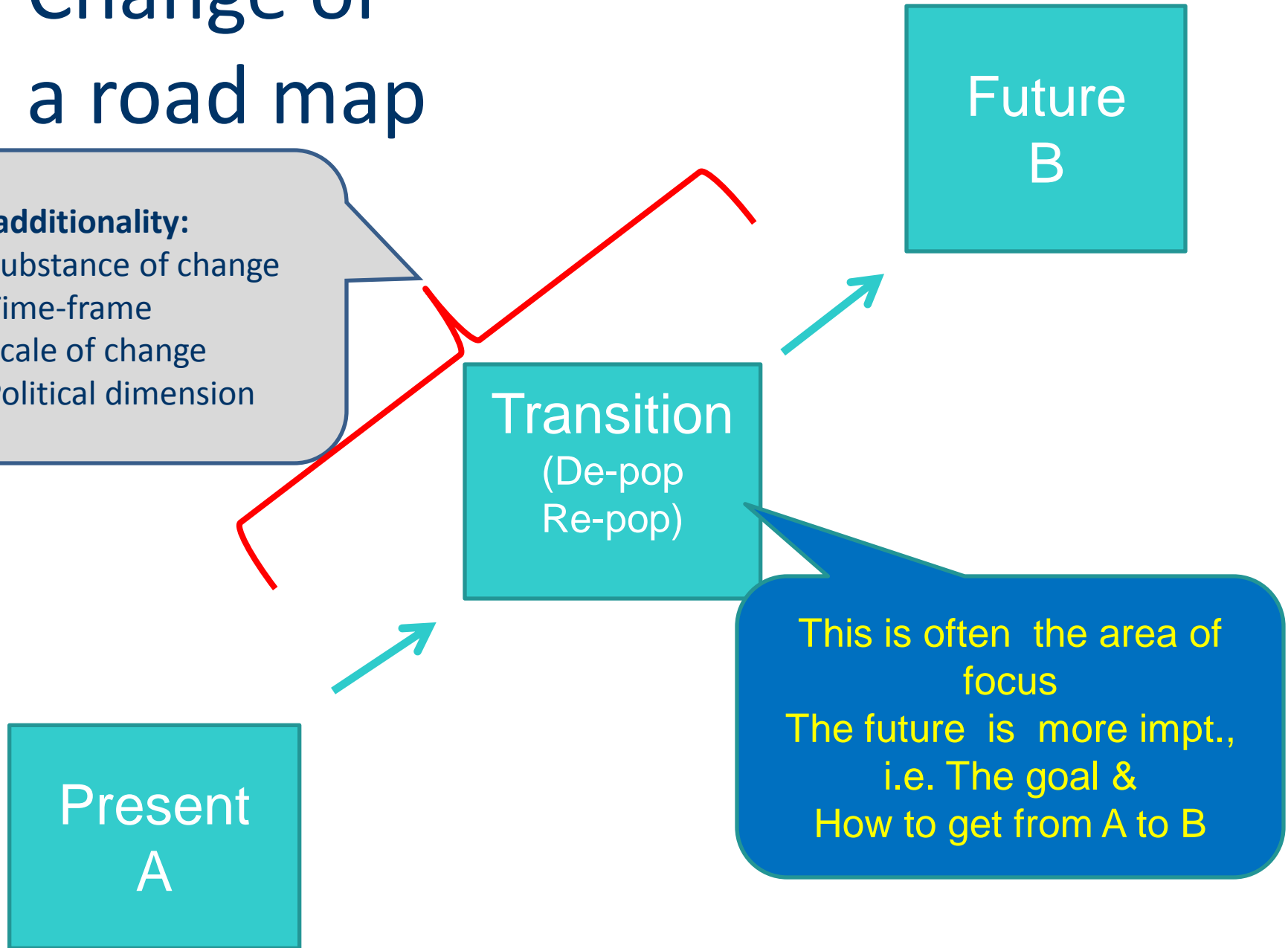
Implications for the UK



Change or a road map

The additionality:

1. Substance of change
2. Time-frame
3. Scale of change
4. Political dimension



Transition
(De-pop
Re-pop)

Future
B

Present
A

This is often the area of focus
The future is more imp.,
i.e. The goal &
How to get from A to B

Benefits for individual producers

- Improved pig health (improved robustness)
- Improved reproductive & growing performance
- Better feed utilisation
- Less variation in weight & backfat @ slaughter
- Reduced condemnations
- Stock easier to work with
- Reduced risk of disease breakdown

What are the whole chain benefits beyond producers (Consumer, retailer, breeding, processor & feed Cos?)

- Reduced risk of disease breakdown
 - i.e. stay healthier longer
- Whole chain benefits (Synergistic)
 - Health premium (reduced Zoonoses)
 - Premium priced products
 - Welfare, environment & health improved
- Potential regionalisation of health (movements & exports)

Implications

- Need for improved bio-security (quarantine)
- Source of stock from Breeding Co's
- Transport of animals
- Vehicle movements
- Increased training in bio-security

Recommendations: 1

- Capitalise on current projects
 - Quick wins (i.e. with people who want to do it)
 - Collate cost, physical (& handling) performance before and after
 - Potential involvement of BPEX KT team

Recommendations: 2

- Map where pigs are
- Model probability of remaining disease free
- Cost benefit
- Review recent USA work

Expression Of Interest (EOI) to Yorkshire Forward (A Regional Development Authority)

**Establish the structure to design,
organise and manage a regional
disease eradication**

Yorkshire Forward

Expression of Interest

- 1.8m tender
- Stage 1
 - Address concerns
 - Involve stakeholders
- Stage 2
 - Implementation

Design

Goals, strategy
Manager, steering
group, strategy,
stakeholders, reporting,
monitoring, PR, finance,
biosecurity

Organise

Vet & local producer involvement, map pigs,
surveillance, legal contracts, rules & SOP's,
inspection & technical support, milestones

Manage

Implementation group, (+vet, processors, lab, feed, breeding co,
animal health, farm assurance, advisors) logistics, roll out,
breeding stock source, biosecurity

Substantial Common Goods - 1

- Establishment high health farming
- Pilot for other regions & sectors
- Improved animal welfare
- Reduced mortality and morbidity
- Potential reduction in zoonoses
- Improved robustness of stock

Substantial Common Goods - 2

- Reduced risk of animal disease spread through improved bio-security
- Potential regionalisation of health status
- Improved job satisfaction of employees
- Reduced medicine usage
- Reduction in Global Warming Potential



Thanks

- To UGPVB & GDS Pays de la Loire
- French farmers
- Participants on visit: R. Lister, S. Meakin, D. Armstrong, P. Richardson, N. Clappison, S. Williamson, N. Woolfenden, G. Dams & M. Wijnberg
- PVS for invitation
- You for coming along