# WG2

- **Aim: Overview of antimicrobial use (AMU) surveillance and control systems & Introduction to Systems Thinking**

  - Countries: Greece & Spain
  - Selected livestock species: pigs
  - 15 questions to address
  - Q1-12: country-specific questions
  - Q13-15 of particular interest for discussion
  - Information retrieved mainly from the 11th ESVAC (European Surveillance of Veterinary Antimicrobial Consumption) report



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**Sales of veterinary antimicrobial agents in 31 European countries in 2019 and 2020**

Trends from 2010 to 2020
Eleventh ESVAC report

# WG2   Q1-12

- Where is your country located (mg antimicrobials/PCU) on the ESVAC comparison figure?

- Has there been a change in the location on the figure during the last 6 years?

- Is monitoring for AMU in place in your country? If yes, since which year?

- Is it a monitoring programme or a surveillance programme?

- Is the use in the species subdivided into age groups? If so, how many groups are there?

- Are certain legal veterinary antimicrobials prohibited or limited in use?

- Are veterinarians earning parts of their income on selling antimicrobials? AMU by prescription only?

- Which actions have been taken at the producer, sectorial and national levels?

# WG2

- **Greece**: not much changed during the last 5-years
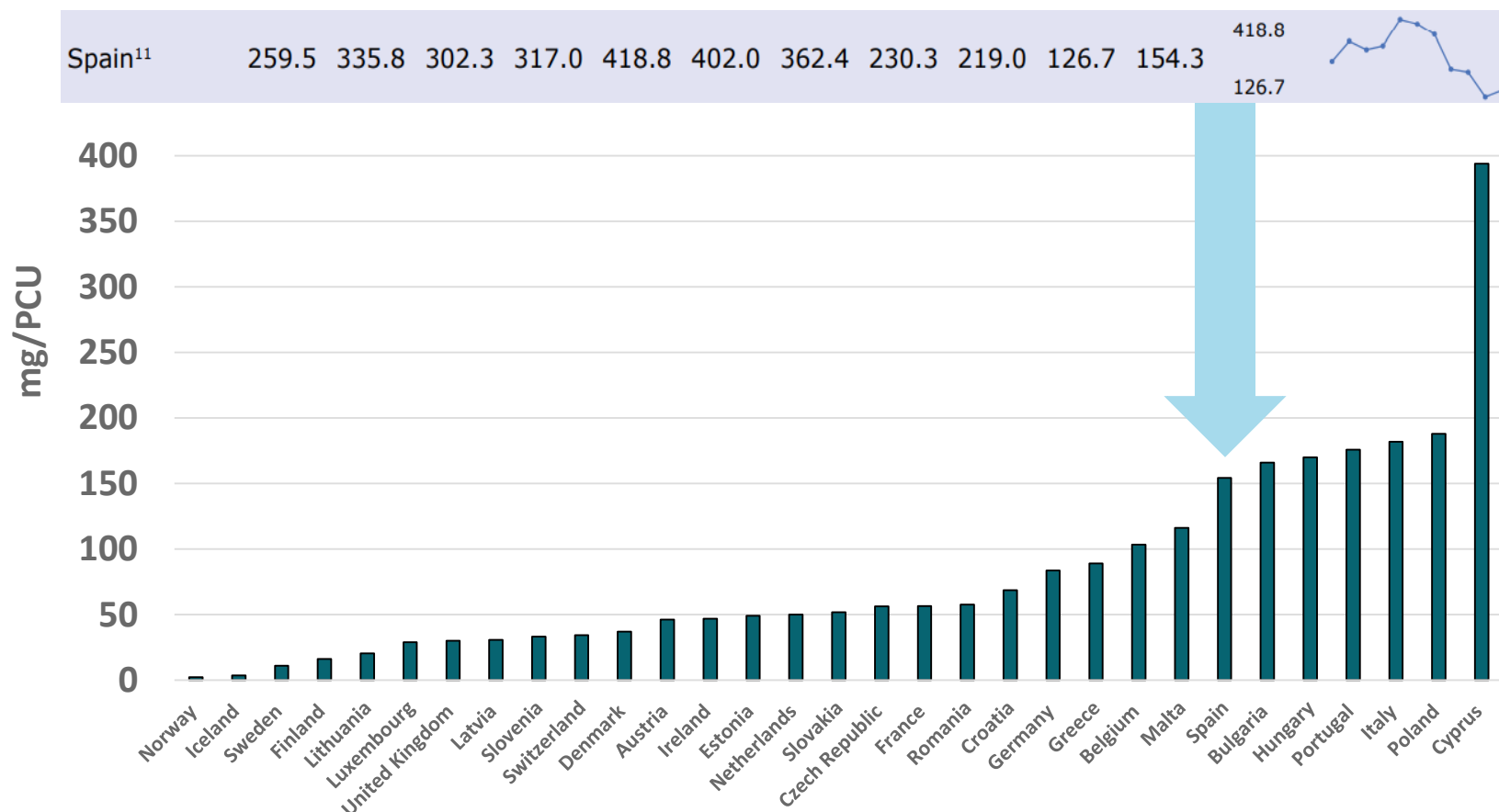  - 2015: 57.4 mg/PCU
  - 2020: 89.1 mg/PCU

*PCU: population correction unit

# WG2
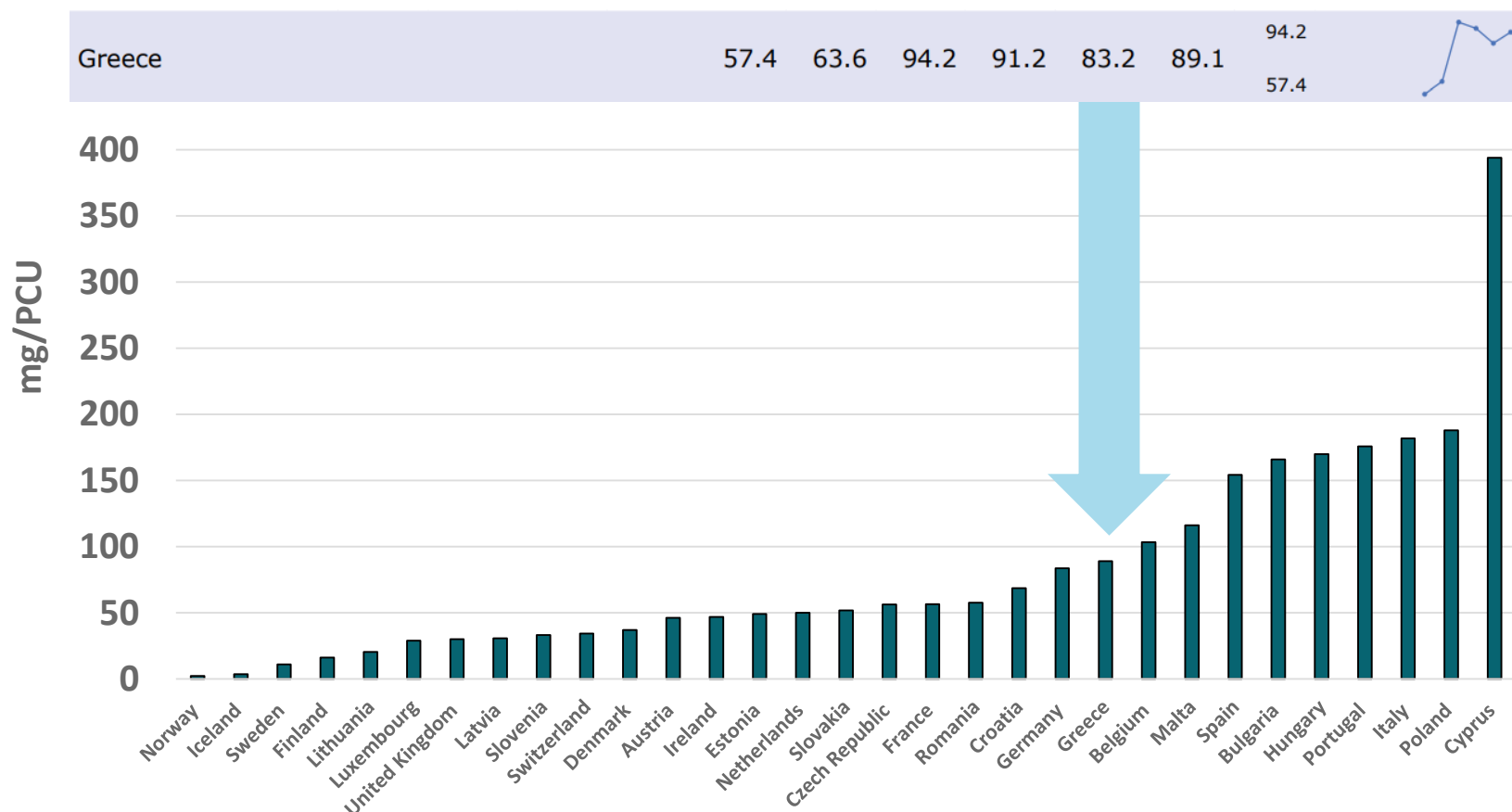
**Spain**: great reduction observed during the last 5-years

- 2015: 420.0 mg/PCU
- 2020: 154.3 mg/PCU

*PCU: population correction unit

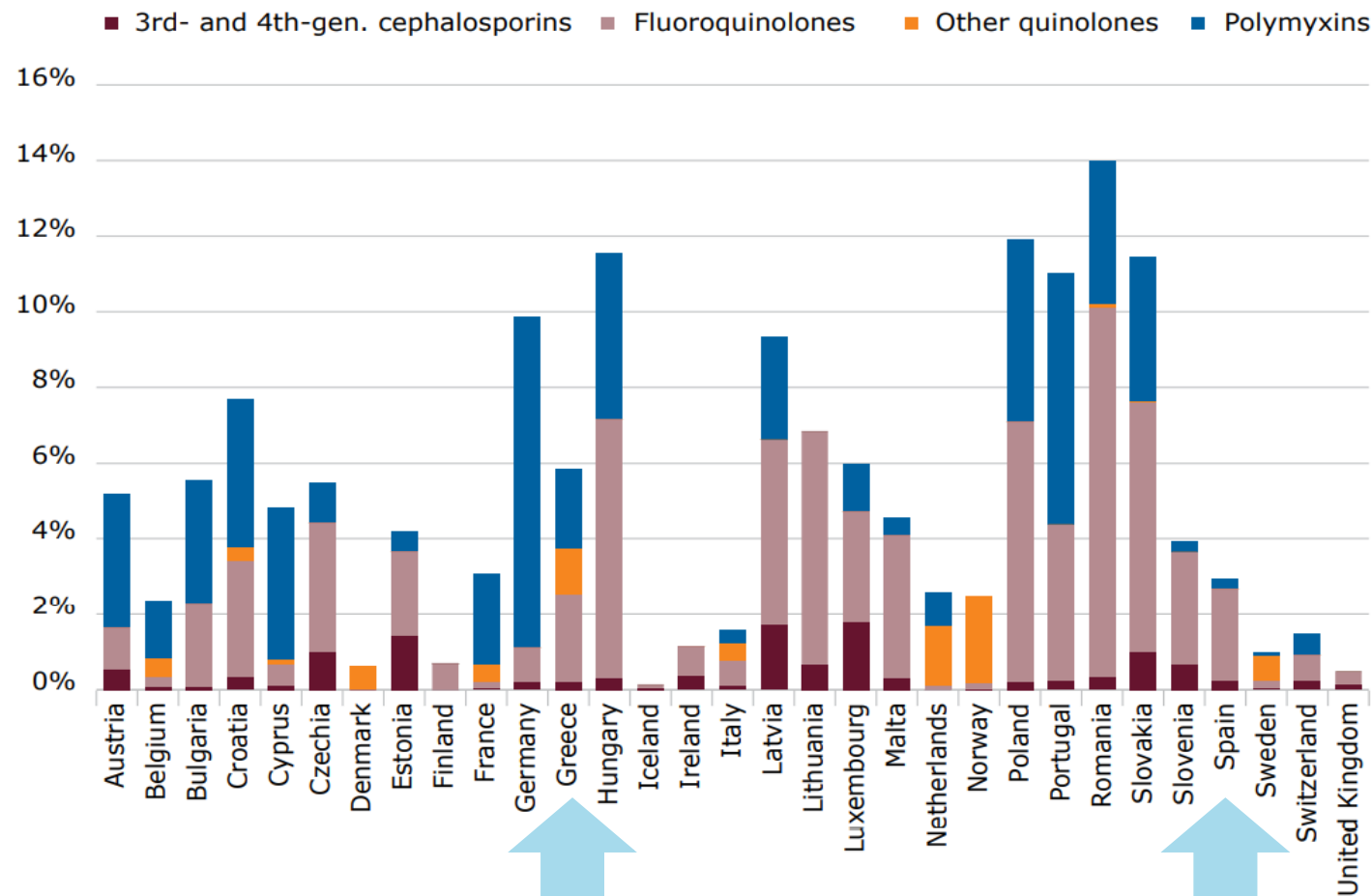| Spain[11] | 259.5 | 335.8 | 302.3 | 317.0 | 418.8 | 402.0 | 362.4 | 230.3 | 219.0 | 126.7 | 154.3 | 418.8 / 126.7 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|

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# WG2

- Report is about the **sales of antimicrobials** per country → Limited information on:

  - Collection of species-specific AMU data - division into age groups (N)
  - Whether monitoring programmes are in place (N)
  - Actions taken at the livestock producer/sectorial/national levels (Greece: Y/Spain: ?)
  - Vets earn parts of their income on selling antimicrobials? (Greece: Y/Spain: ?)
  - AMU prescription-only? (Y)

# WG2

- Vet. antimicrobials prohibited or limited in use?
  - 3rd/4th gen. cephalosp.
  - Quinolones/fluoroq.
  - Polymyxins
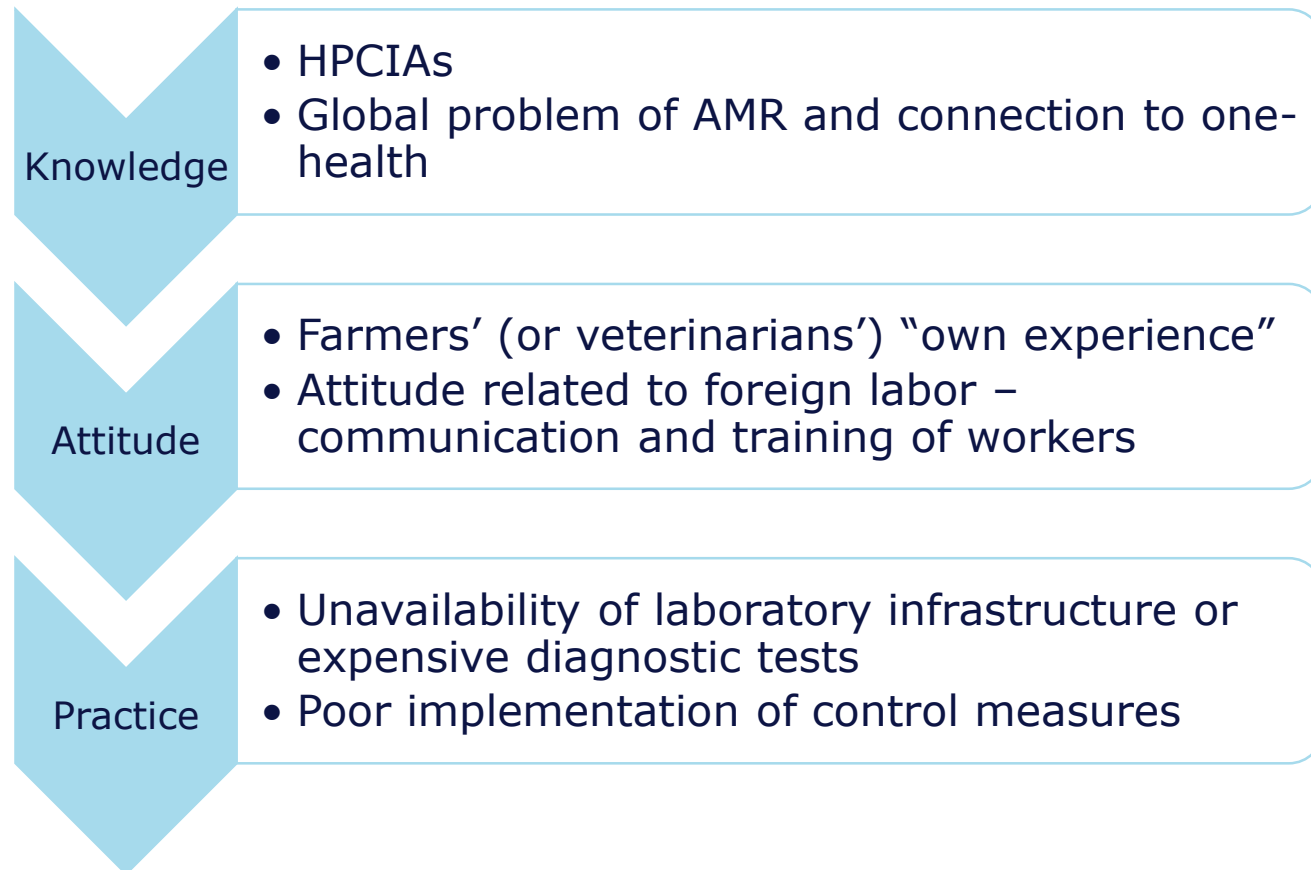
  HPCIAs (WHO)
      &
  Category B
  "Restrict" (EMA)



Legend: ■ 3rd- and 4th-gen. cephalosporins  ■ Fluoroquinolones  ■ Other quinolones  ■ Polymyxins

# WG2    Q13

- **What are three most important barriers against reduction in AMU in your country?**
  - Divide into underlying structures and mental models

- **KAP model**

- **Importance of:**
  - Economics
  - Culture

**Knowledge**
- HPCIAs
- Global problem of AMR and connection to one-health

**Attitude**
- Farmers' (or veterinarians') "own experience"
- Attitude related to foreign labor – communication and training of workers

**Practice**
- Unavailability of laboratory infrastructure or expensive diagnostic tests
- Poor implementation of control measures

# WG2    Q14

- Which 6 actions do you think should be put in place at individual, sectorial and national level, respectively, to effectively reduce the AMU in the species of interest?
  - Divide into underlying structures and mental models

## Individual

- Biosecurity
- Probiotics (and other alternatives)
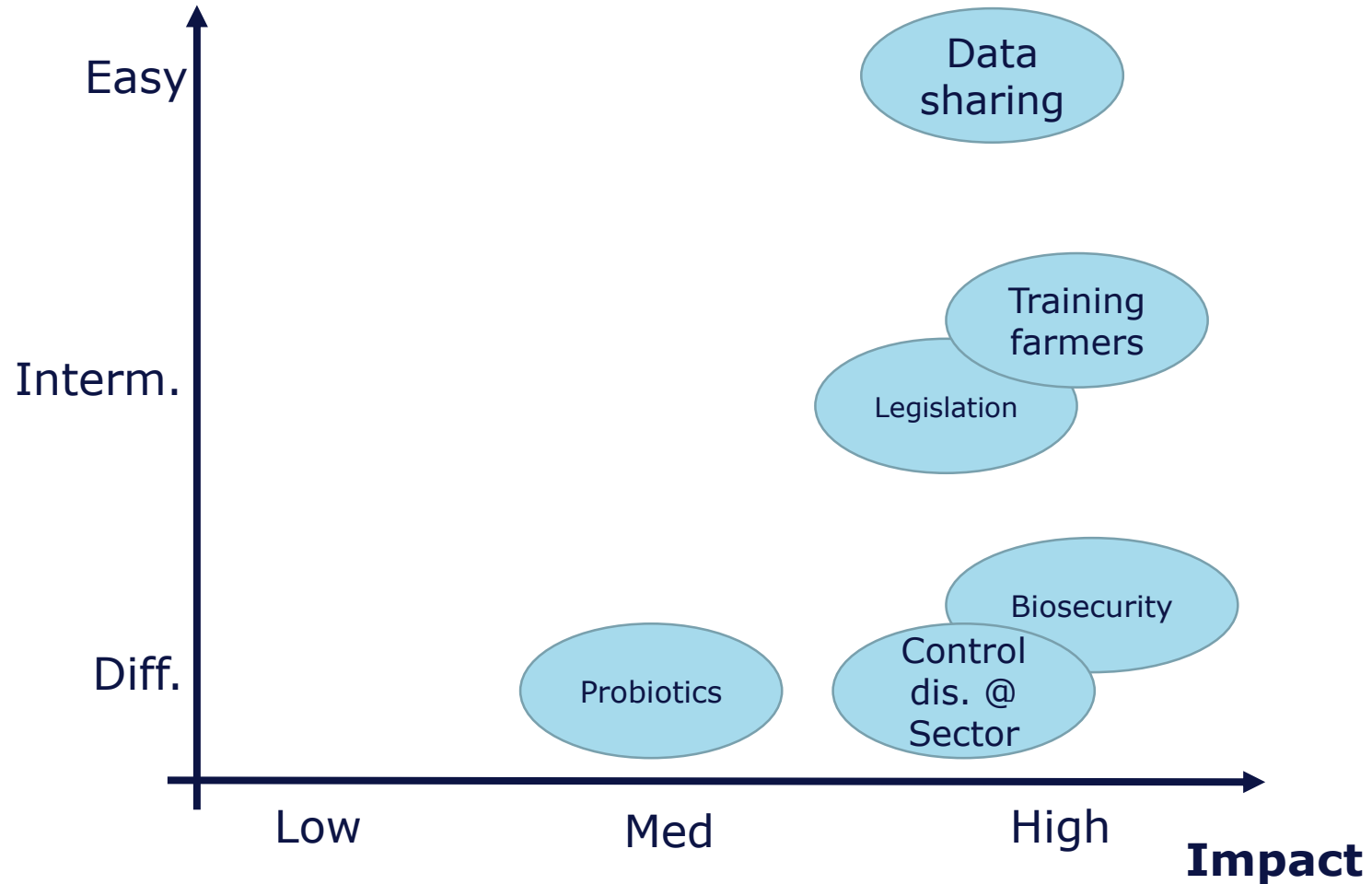- AMR data collection & sharing among farmers

## Sectorial

- Cooperation of local farmers for disease control (e.g., SPF, diagnostics, feed/water microbiological testing, etc.)

## National

- Training of farmers
- Legislation framework (e.g., to prohibit/reduce the use of HPCIAs)

- For each of the 6 actions, please insert them in an x-y coordinate system, where x is impact and y is feasibility including costs.

**Feasibility**

Easy — Data sharing

Interm. — Training farmers · Legislation

Diff. — Probiotics · Control dis. @ Sector · Biosecurity

Low    Med    High

**Impact**

- Design and implementation of actions towards prudent AMU is challenging and efforts should be focused on different levels.

  - National level: measures to "force" implementation of critical actions, equally for all farmers, associated training programmes

  - Sectorial level: initiatives based on farms' common characteristics

  - Individual level: common practices & veterinarians' advisory work

- Discrepancies can be observed among countries/organisations involved.

- Establishment of monitoring programmes and continuous feedback on AMU in European countries for corrective measures.

Thank you for the attention.

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