Surveillance prioritisation and cost-effective delivery – the Swedish perspective

Ann Lindberg

Swedish Zoonosis Centre

Dept. of Epidemiology and Disease Control

National Veterinary Institute

Outline

- Background
- How is surveillance paid for in Sweden, and on what grounds?
  - How money is allocated
  - The prioritisation process
- How do we ensure surveillance is carried out in a cost-effective manner?
  - Surveillance ’toolbox’ mapping
  - Prioritisation of components, and their development
- Influence on how decisions are made
- Conclusions

SE - strengths and weaknesses

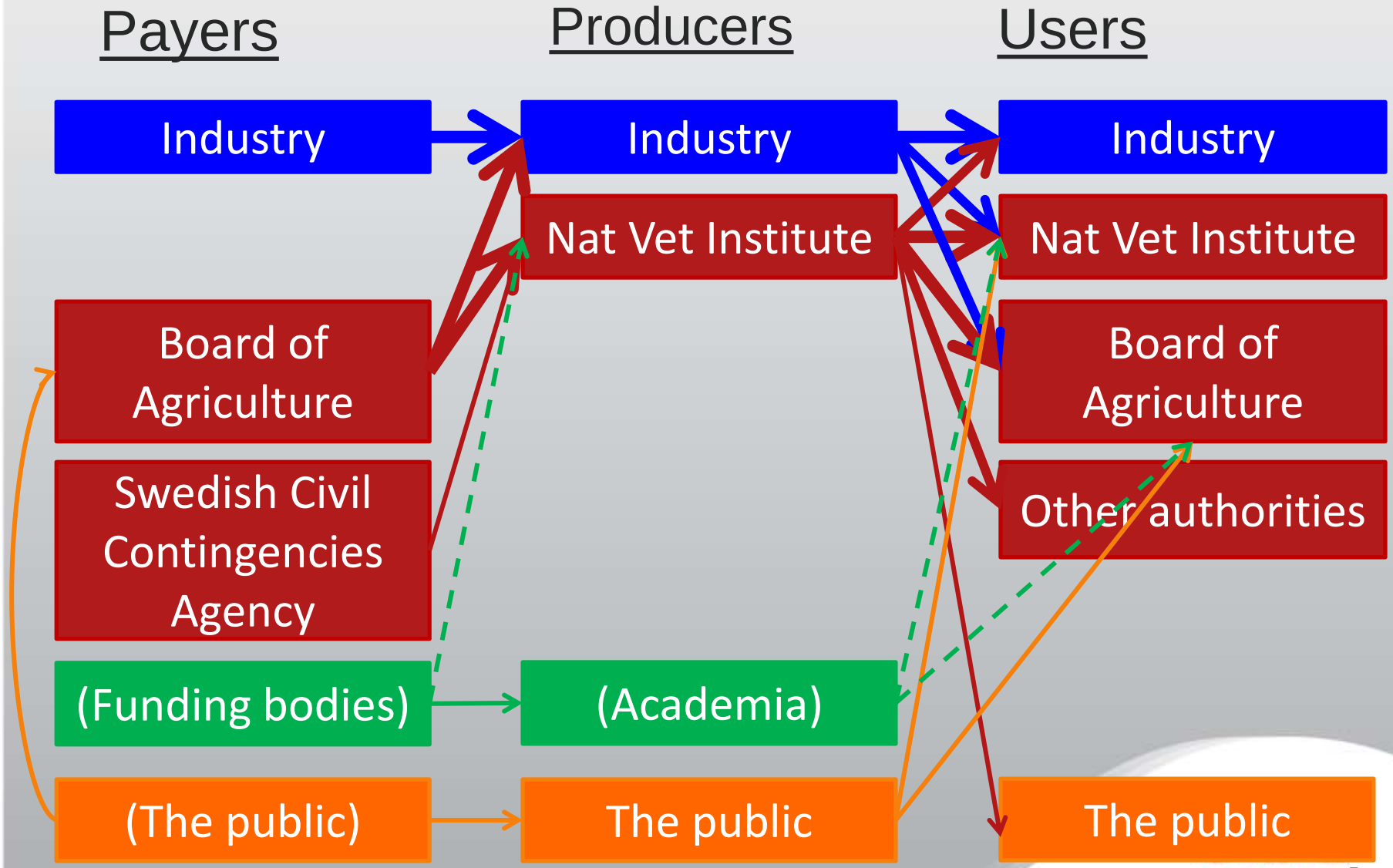
National Surveillance Plan

- **Favourable animal health status**
- **Longstanding collaborative tradition [illegible] n a high degree of trust**
- **Centralised systems in place fo [illegible] tion of samples from livestock**
- **Ability to co-ride exotic d [illegible] surveillance on endemic disease control activiti [illegible]**

- **Cooperative str [illegible] are breaking up, the relationship between auth [illegible] and the industry is changing**
- **Access to [illegible] icient surveillance tools rests upon inform [illegible] ents**
- **Nati [illegible] dication schemes concluded => downscaled**
- **Priorit [illegible] ation pragmatic, but not very transparent**
- **More scrutiny of how governmental funds for animal health (in general) are used (O)**
- **Short financial planning horizon => difficult with developmental activities**
- **Evaluation not consistently a part of surveillance planning cycles**

Three strategic areas

Surveillance stakeholders



What is the process for allocating resources to surveillance in Sweden?

Is animal diseases a societal priority?

Ministry of Rural Affairs

1.4 Mio €
Biosecurity, prevention

5.4 Mio €
Zoonoses, outbreak manage-ment

3.6 Mio €
Endemic disease control

0.8 Mio €
Post-mortems

3.7 Mio €
FFD, Additional guarantees

Board of Agriculture

What hazards and which development are our priorities?

”Surveillance producers”

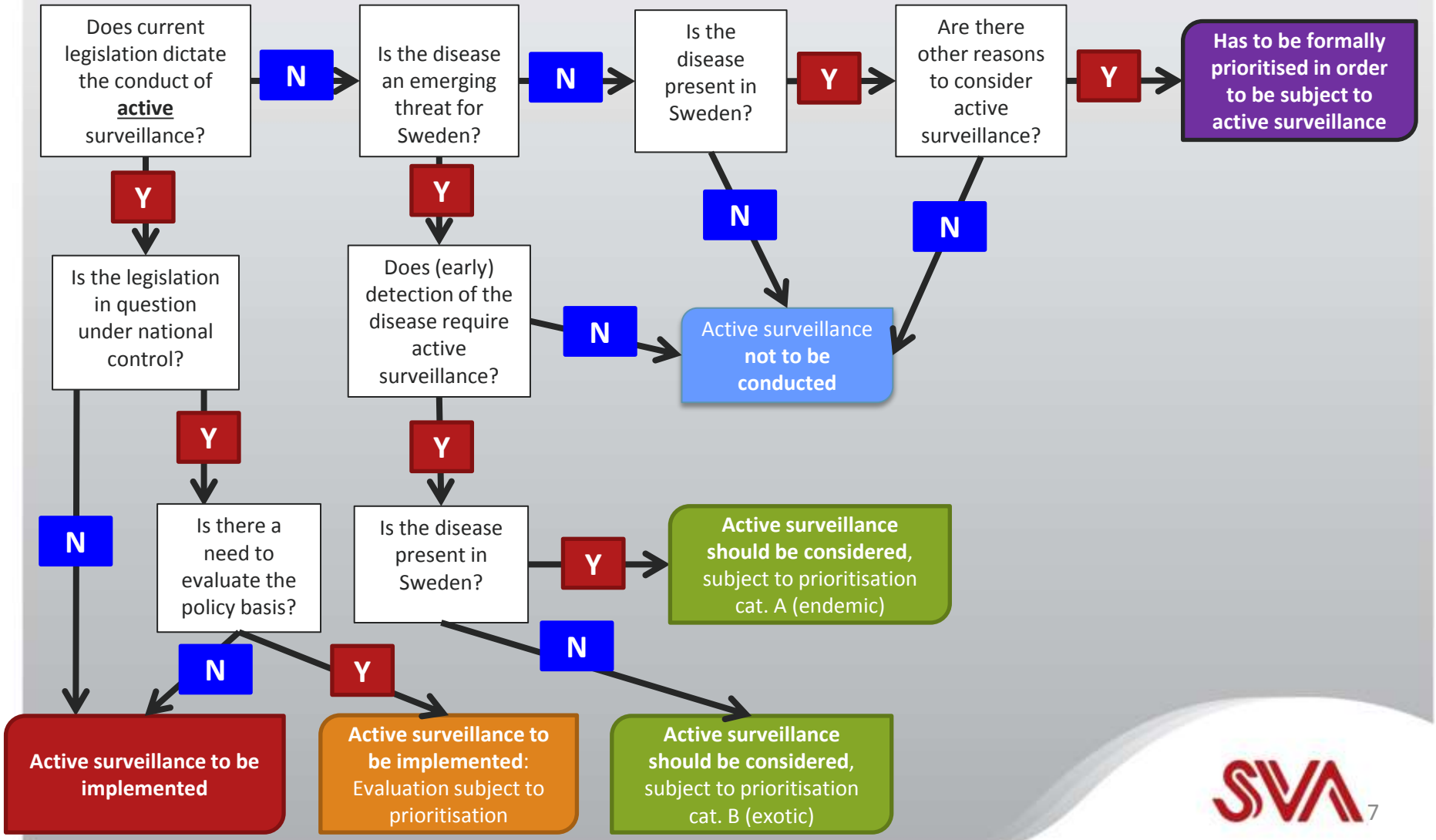
How should prioritised hazards be investigated / controlled?

Low

Speed of policy change

High

Pre-prioritisation decision tree for active surveillance efforts



Consequence of categorisation

SUBJECT TO PRIORITISATION

CATEGORY 1	CATEGORY 2	CATEGORY 3A	CATEGORY 3B	CATEGORY 4
Design and needs reassessed according to international requirements	Design and needs reassessed with 3 yr intervals	Assess needs annually (unless self-prioritised)		Needs assessed ad hoc

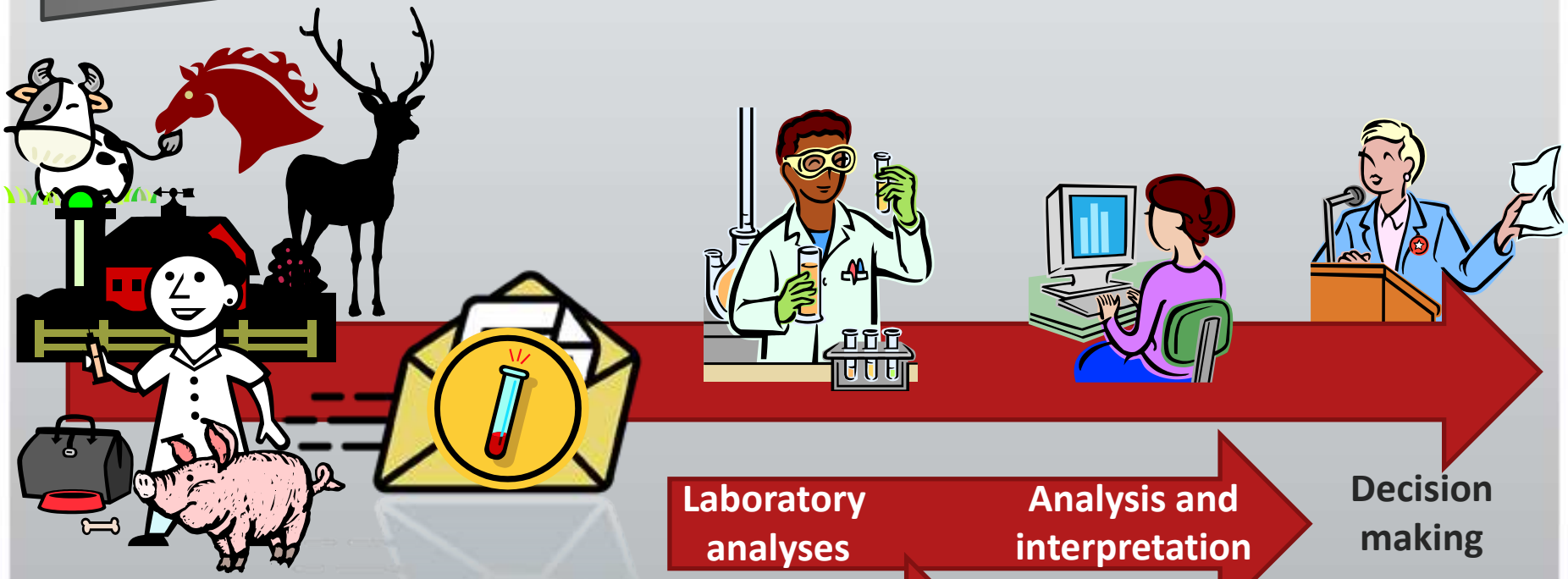
Categories and criteria for prioritisation

- **Risk and epidemiology** *(trend, in[illegible]ctious pressure, ability to prevent introduction, ris[illegible]ilent spread, wildlife reservoir, prospects [illegible]ential for transmission)*
- **Public health** *(Incide[illegible]abs[illegible]ealthcare needs, chronic se[illegible], cas[illegible] preventive measures, tren[illegible]ic conce[illegible]e needs, therapeutic n[illegible]*
- **Animal h[illegible]and welfare** *([illegible]ase fatality rate, m[illegible]ty, severity of welfare hazard, duration of welfare h[illegible]zard)*
- **Societal aspects incl. environmental** *(economic consequences: industry, economic consequences of control: government, other consequences for the animal holder, effect on trade, effect on environment and biodiversity, driver of antimicrobial resistance)*

Definition of surveillance

Number of actors involved

- …the systematic ongoing collection, collation, and analysis of data related to animal health…



“How’s” that cost

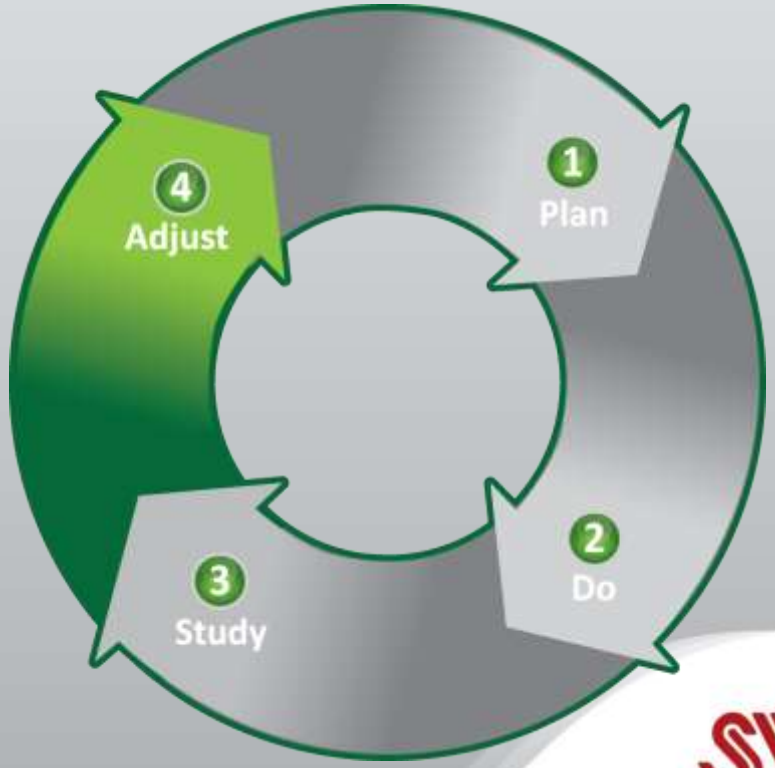
- Sampling – organising the data collection, sample material, visits to farms (labour + transportation), postal fees…
- Laboratory analyses – processing the samples, reporting, billing
- Information management – access to data, compilation of results, analysis, interpretation, dissemination and communication

- Reduce number of samples
- Smarter ways => centralisation
- Utilise surveillance synergies
- Reproducible analysis and reporting

”Lean” surveillance philosophy

- “Expenditure of resources in any aspect other than the direct creation of value for the end customer is wasteful”

- Focus on smoothness of work processes
- ‘Need' driven learning to improve
- Plan – Do – Study – Adjust
- Improvements identified and tested at the lowest possible level



Surveillance component mapping

Stakeholder groups

Actors

- Roles
- Existing agreements
- Financing

Sampling

- Sampling frame, species, coverage, accessability
- Sample selection, representativity
- Type of samples, quality, traceability

Information management

- Data collection, how, what
- Communication
- Reporting, what, how and to whom

Analysis

- Strengths
- Weaknesses
- ”Wish list”
- Recommen-dations

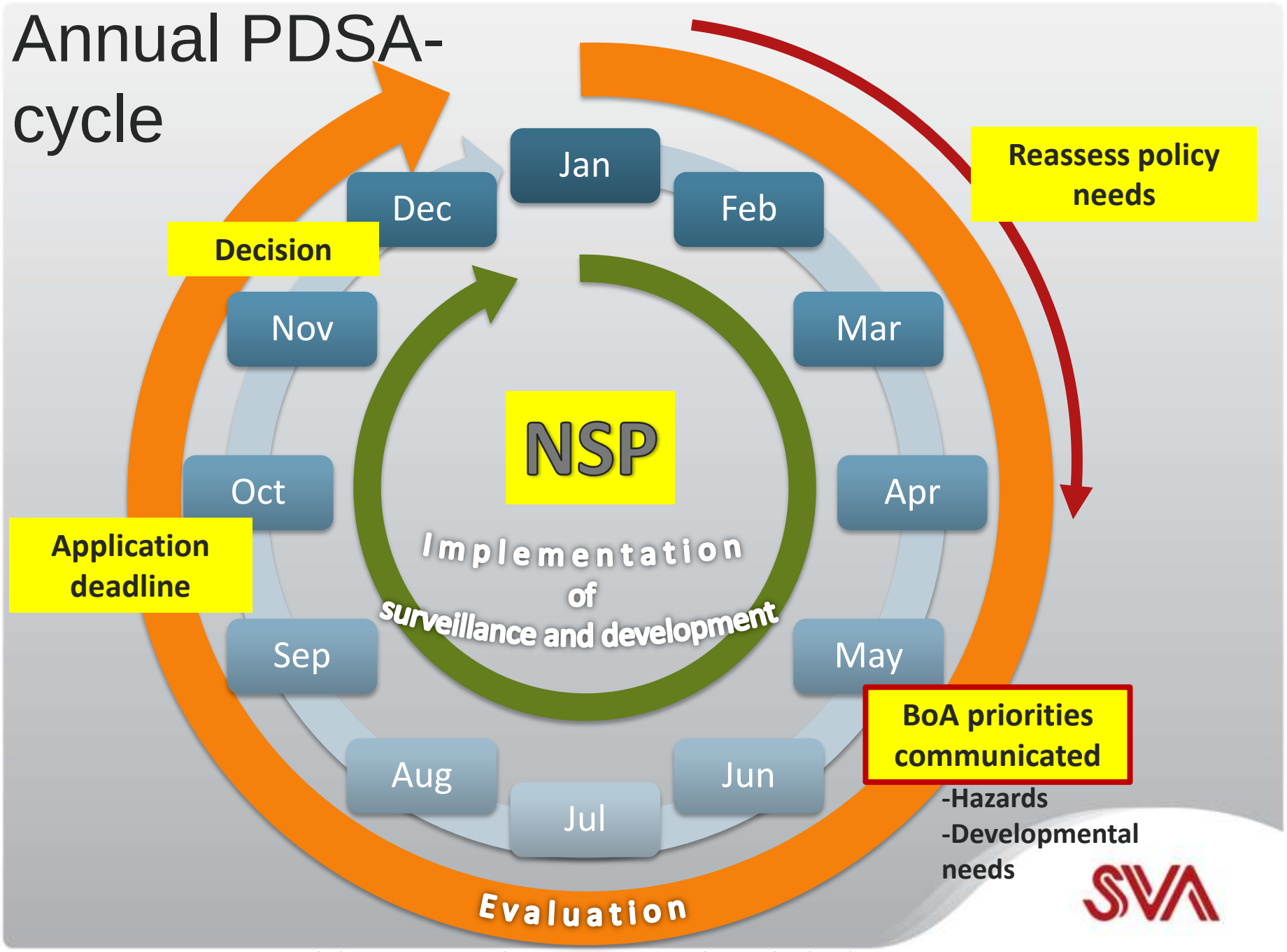
✓ Organisation and management
✓ Training needs
✓ Data quality and coverage
✓ Costs (per unit information)
✓ Representativeness

Prioritisation of development

- **Prioritised development (depending on current performance)**
  - Components that covers more than one species and/or contribute information on more than one disease
  - Components covering farmed animals (incl aquaculture)
  - Components that contribute to internationally compulsory surveillance
  - Components that contribute to early detection of exotic diseases
  - Components that are lacking – populations not covered

- **Prioritised actions**
  - Inefficiencies that are repeated in several processes
    - Register issues (development, quality)
    - Needs for changes / updates in legislation
    - Clarification of data ownership
    - Formalisation of agreements and responsibilities
  - Components with a high cost/unit information

Annual PDSA-cycle



Some reflections

- Clarifying priorities helps in long-term planning and preparedness; should be applied both to hazards and to development and maintenance of surveillance
- Analysing surveillance components from a lean perspective can help identifying inefficiencies such as work waste, overload and untimeliness, and subsequently help to reduce costs / quality loss
- Applying a system's perspective to the analysis of surveillance activities can help identifying reoccurring anomalies in the system, sometimes with the same source to solutions
- Surveillance resource allocation occurs at several levels and is usually more flexible at the lower levels. Reassessment of allocation policies should be integrated into planning cycles in order to improve quality, preparedness and work satisfaction

Thank you for your attention!