



Cost and value of AIT along the agrifood chain

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Content

- Why ?
- Elements for a framework for cost benefit analysis.
- Conclusions.



Why ?

- Key issue for a multi purpose system.
- Decide between different variants.
- Analyze the impact of technical changes.
- Decide how to finance the system.
- Asses the acceptability.
- ...



ELEMENTS FOR A FRAMEWORK



Identification and traceability

- **Animal identification:** provides a standardized, shared, lifetime, unique and readable number on a mark applied to the animal.
- **Animal traceability:** aptitude to find the history, the use and the localization of an animal by the mean of a number (animal number, number of the holding of origin...)



Main steps

1. Context analysis.
2. System modeling and analysis.
3. Stakeholders analysis.
4. Cost evaluation.
5. Cost benefit evaluation.

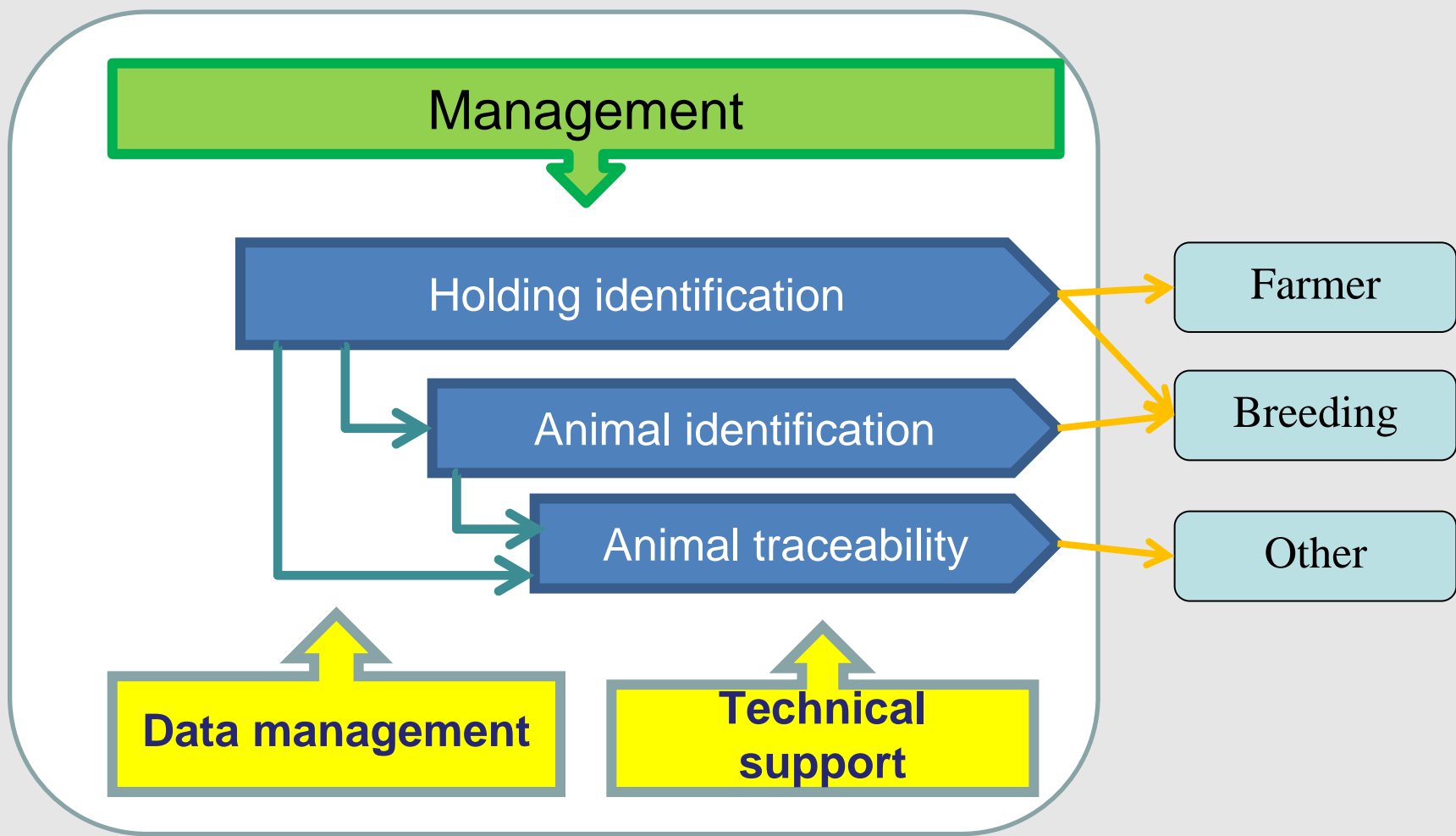


Context analysis

- Animal movements pattern.
- Animals, renewal, animal movements...
- Holdings and keepers per type.
- Service providers.
- Marketing system.
- ...



System modeling





STAKEHOLDERS IDENTIFICATION



Introduction

In a multipurpose system, cost and benefit should be evaluated at stakeholder level.

Persons or organizations with an interest in the system:

- Actors
- Users / service.
- Country or industry



Actors

- Farmers.
- Trade.
- Abattoirs.
- ...



Users

- Farmers.
- Abattoirs.
- Vet authorities.
- Performance recording.
- ...



Other stakeholders

- Country.
- Industry.
- ...



COST EVALUATION

Costs components

- Direct costs per main business process:
 - Holding and keeper identification.
 - Animal identification
 -
- Indirect costs.
 - Technical support.
 - Data management.
- Total cost = Indirect cost + direct cost



Holding identification

Register and update

Depends of the number of holding.

Major components:

- labor cost of the keepers
- administrative labor cost.

Independent of species and from the size of the holding.

Animal identification

Depends on number of identified animals and keepers.

Main components:

- labor cost of keeper,
- cost of the mark,
- cost of retagging,
- administrative cost,
- ...

Major variations:

- technology
- rate of retagging



Animal traceability

- Depends on number of movements.
- Major components:
 - Registration: keeper's labor.
 - Notification:
 - keeper's labor cost
 - cost of communication
 - administrative cost.
 - Invalid data correction
 - Additional cost for paper passport .



Technical support

- Permanent improvement of the procedures,
- Follow up the actors,
- Information, training and support
- Data administration (fix the errors...)
- Advice
- ...



Data management

- Amortization of software investments.
- Equipment investments
- Software licenses,
- Software maintenance,
- Hosting
- Communication
- ...



COST / BENEFIT



Different types

- Country and / or industry.
- Users.

Country and or industry

Country's or industry ability to :

- quickly and successfully contain
 - food safety incident
 - disease outbreak
- access to key export markets.
- ..

Lack of methodology to quantify...

For farmers depends on:

- Farm management system
- Number of automatic devices
- Importance of service providers
- ...

For service provider level, share animal identification avoids:

- from implementing specific systems for each type of activity
- allows to operate shared databases

For trade and abattoirs the benefits depends on the marketing system.

...

Animal traceability

This issue is not well documented !...

An efficient database would allow:

- a better react in case of problems
- better control of animal
- quality product program along the supply chain
- solve legal problems dealing with the liability about the food safety.

But benefits are often potential :

- Data reliability.
- Delay for updating the databases.
- Technical and legal availability of the data
- Ability to deliver traceability other types of data
- ...

Conclusions

- Key issue for a multipurpose system.
- Should be undertaken
 - for each system.
 - at stakeholder level
- No need to be very sophisticated to get key issue.
- System modeling.
- Indirect and direct cost.
- Labor cost.
- Cost / benefit much more complicated:
 - For country or industry => specific methodology
 - For users => possible.



Thank you for your attention....