

Tools for participatory application on the farm level

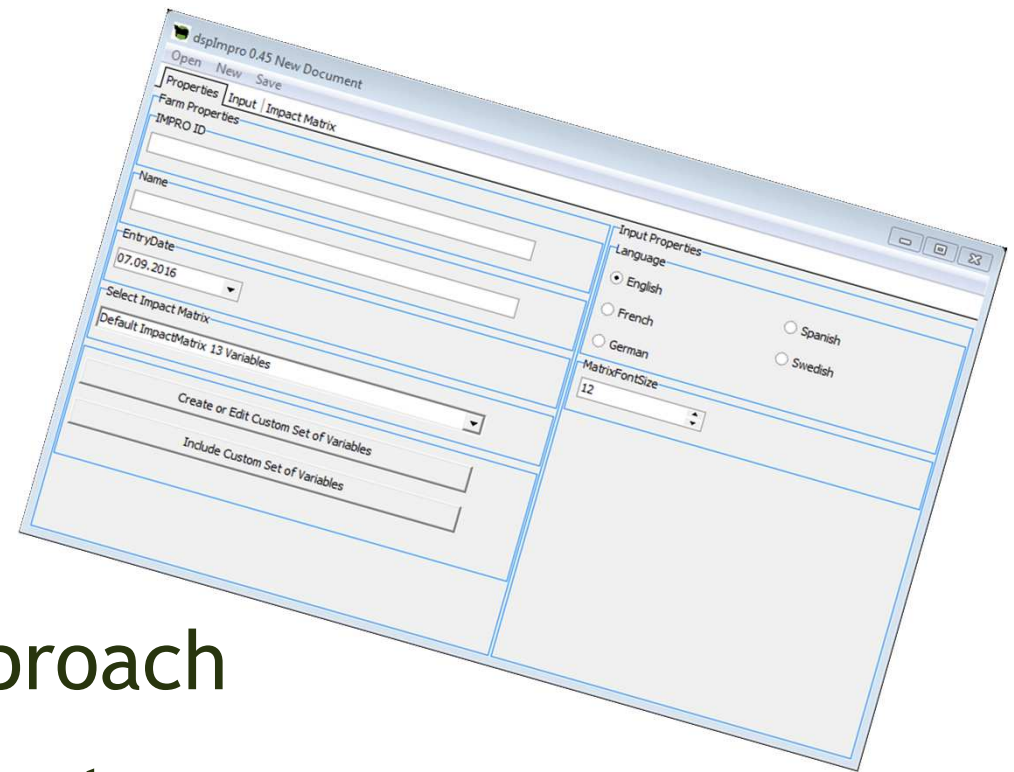
The Impact Matrix Tool

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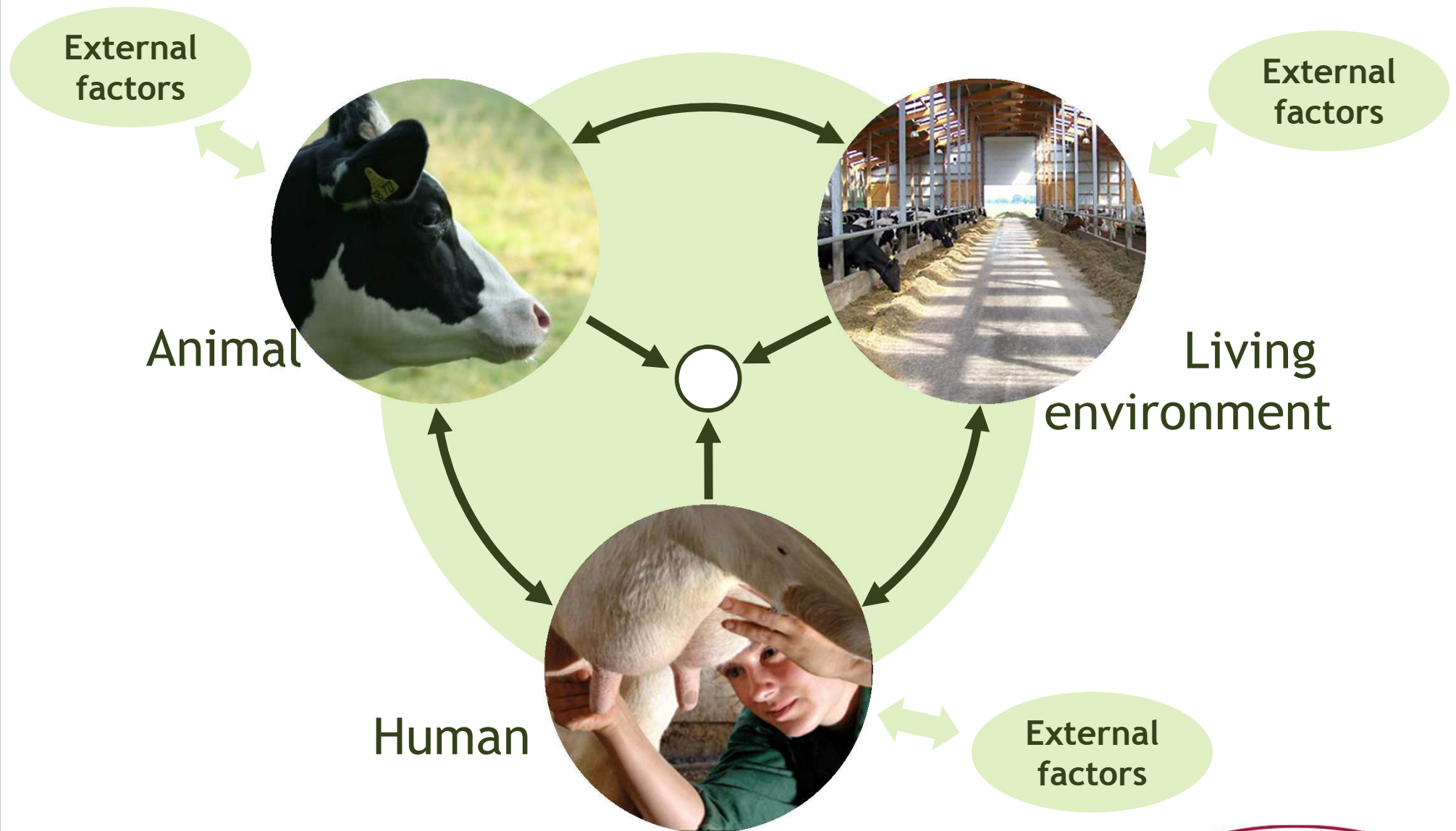


Outline

- Starting point
- Components of the approach
- Impact Matrix assessments
- Results and experiences



Systemic approach on animal health



IMPROving animal health

- Identification of measures to manage certain problems in a farm

Challenge:

- Efficacy depends on context
- Current approaches often fail to adress complexity
- Integrate different perspectives and levels
- Open up possibilities for adaptation and change



System analysis with an Impact Matrix

- Approach based on ‚Papiercomputer‘ used by Vester & Hesler (1980) (regional planning, environmental problems etc.)
- Three steps:

Identificaton
of factors

Scoring
interaction

Identification
of systemic
roles



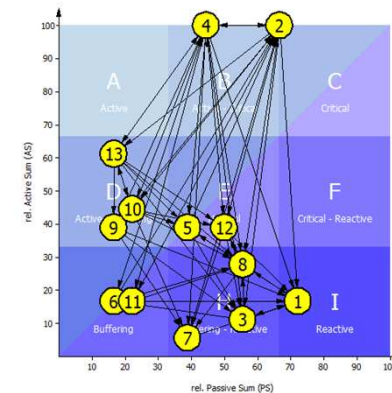
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dspImpro 0.45 Z:\IMPRO\WP2\impro_D57.xml

Open | New | Save

Properties | Input | Impact Matrix

	01	02	03	04	05	06	07	08	09	10	11	12	13
	MilkPerf	ProdDis	Finance	Labour	Feed	Keep	Repro	DryCow	Cald-tief	Monitor	Hyg	Treat	KrSkill
01: Milk performance	X	0	2	0	0	0	0	1	0	0	0	0	0
02: Production diseases	3	X	2	2	0	0	1	2	0	2	2	3	1
03: Financial resources	0	0	X	0	0	1	0	1	0	0	0	0	0
04: Labour capacity	1	2	1	X	2	2	2	1	2	1	2	1	1
05: Feeding	3	3	1	0	X	0	0	0	0	0	0	0	0
06: Keeping conditions	1	1	0	0	0	X	0	1	0	0	0	0	0
07: Reproduction management	1	0	0	0	0	0	X	0	0	0	0	0	0
08: Dry cow management	0	2	0	0	1	0	1	X	0	0	0	1	0
09: Calf and heifer management	3	1	1	1	0	0	1	0	X	0	0	0	0
10: Herd health monitoring	0	0	0	1	2	0	1	1	0	X	0	2	1
11: Hygiene	0	1	0	1	0	0	0	1	0	0	X	0	0
12: Treatment	1	2	1	1	0	0	1	1	0	0	0	X	0
13: Knowledge and skills on the farm	0	0	2	2	2	0	0	1	1	1	0	2	X



Scoring interaction, sharing perspectives

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Properties **Input** Impact Matrix

	01	02	03	04	05	06	07	08	09	10	11	12	13
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01: Milk performance	X	0	2	0	0	0	0	1	0	0	0	0	0
02: Production diseases	3	X	2	2	0	0	1	2	0	2	2	3	1
03: Financial resources	0	0	X	0	0	1	0	1	0	0	0	0	0
04: Labour capacity	1	2	1	X	2	2	2	1	2	1	2	1	1
05: Feeding	3	3	1	0	X	0	0	0	0	0	0	0	0
06: Keeping conditions	1	1	0	0	0	X	0	1	0	0	0	0	0
07: Reproduction management	1	0	0	0	0	0							
08: Dry cow management	0	2	0	0	1	0							
09: Calf and heifer management	3	1	1	1	0	0							
10: Herd health monitoring	0	0	0	1	2	0							
11: Hygiene	0	1	0	1	0	0							
12: Treatment	1	2	1	1	0	0							
13: Knowledge and skills on the farm	0	0	2	2	2	0							

0 ⇒ Negligible influence

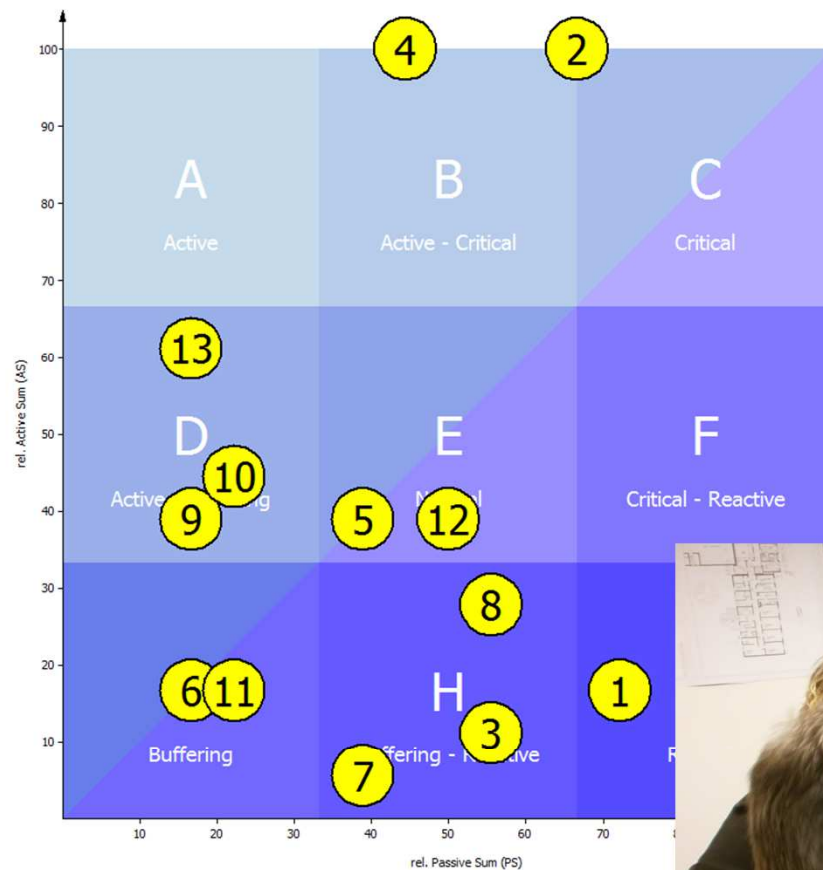
1 ⇒ Low influence

2 ⇒ Medium influence

3 ⇒ High influence



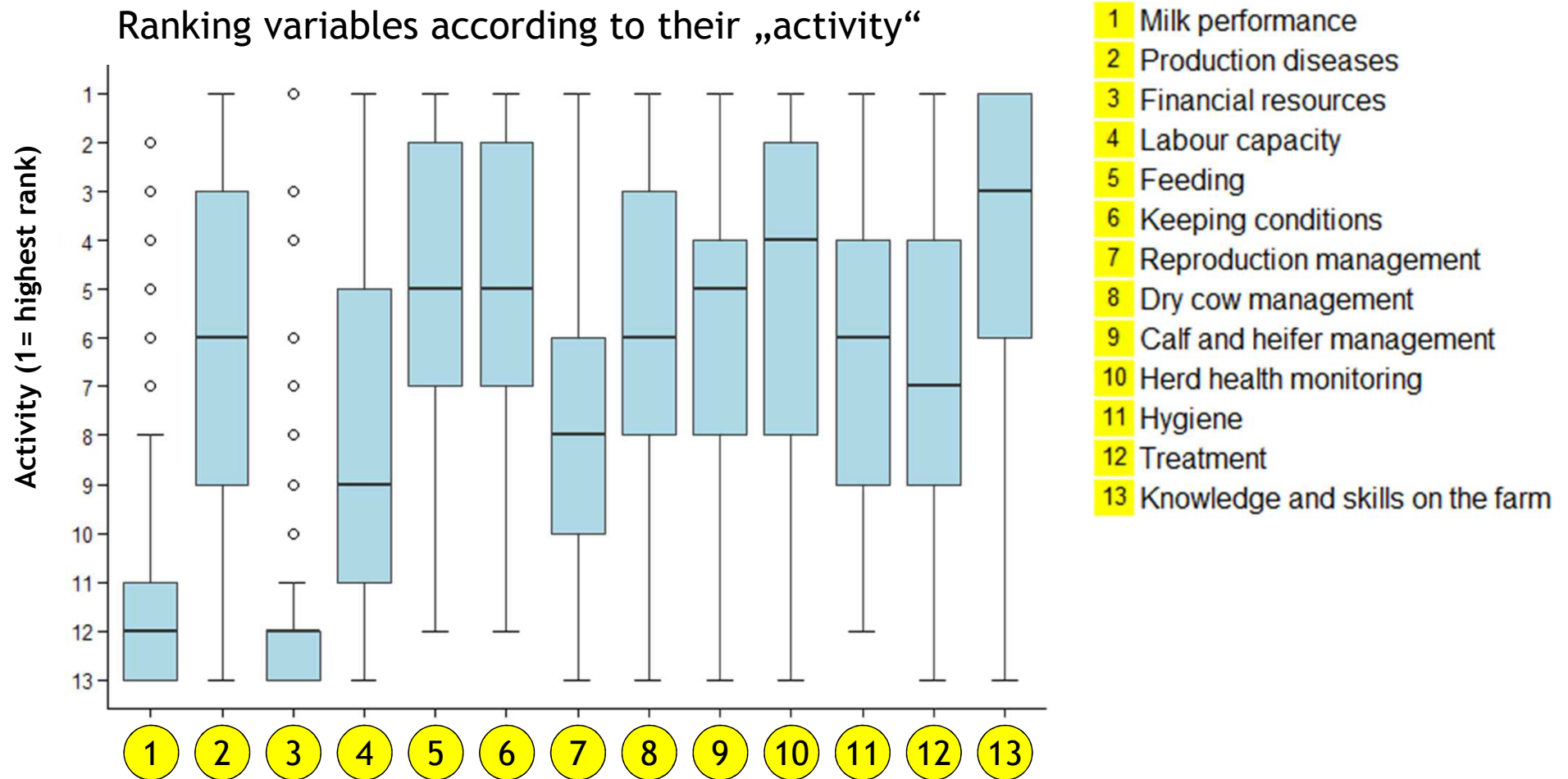
Identification of systemic roles



- 1 Milk performance
- 2 Production diseases
- 3 Financial resources
- 4 Labour capacity
- 5 Feeding
- 6 Keeping conditions
- 7 Reproduction management
- 8 Dry cow management
- 9 Calf and heifer management
- 10 Herd health monitoring
- 11 Hygiene
- 12 Treatment
- 13 Knowledge and skills on the farm



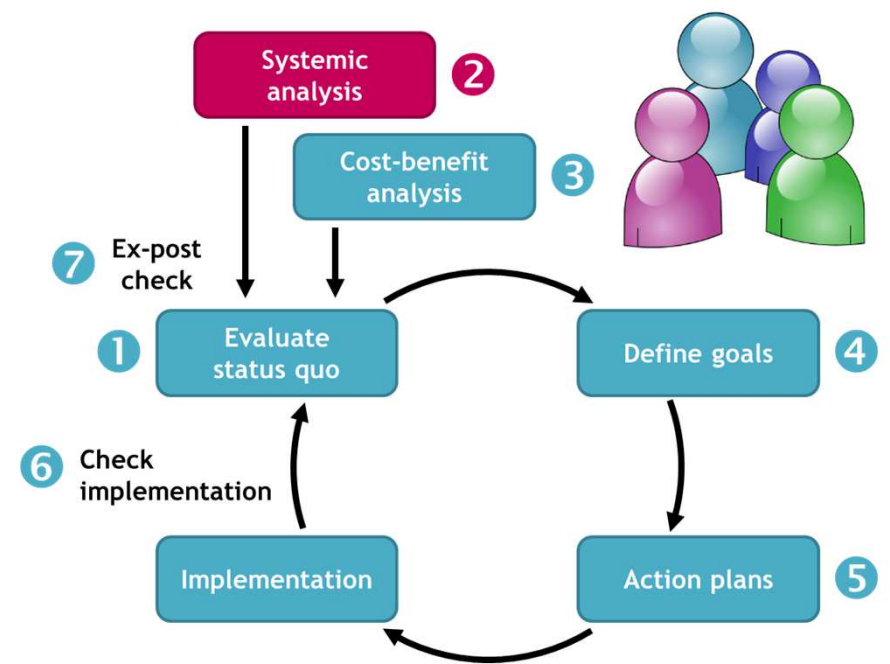
Variation in systemic roles of variables



Action plans

- Action plans
 - in 92% of the farms
 - 1 - 22 measures per farm ($M^*=8$)
- Implemented
 - 0 - 17 measures per farm ($M=4$)
 - 94% of farms implemented at least one measure

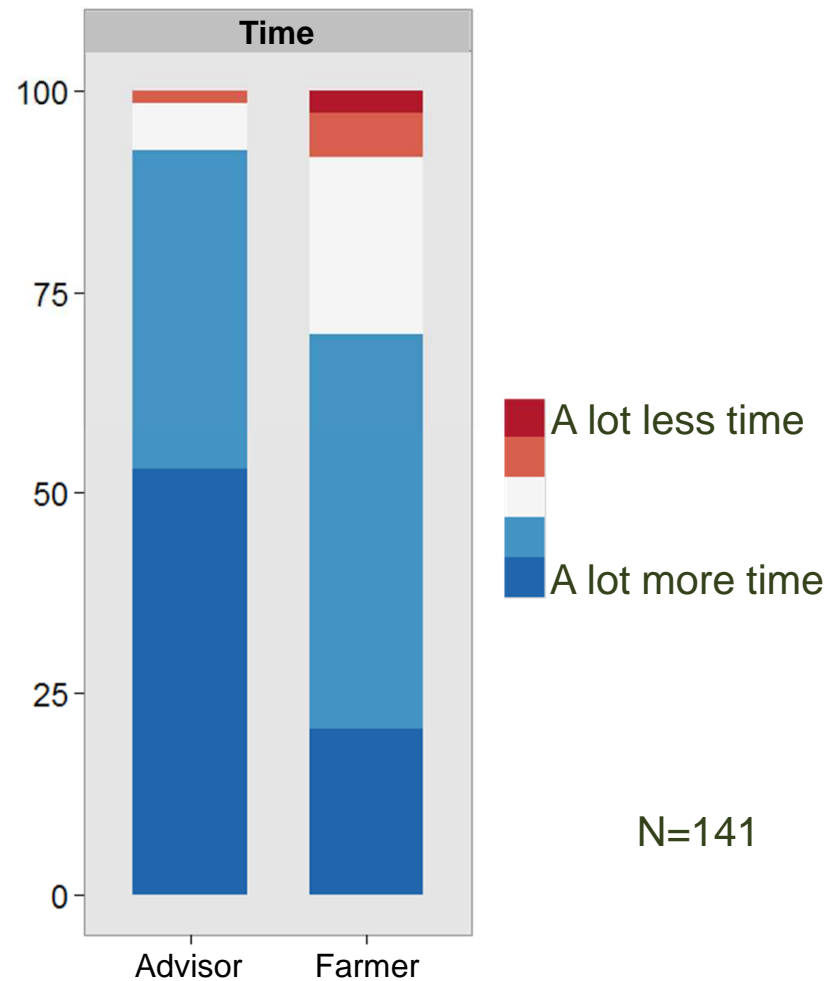
* Median



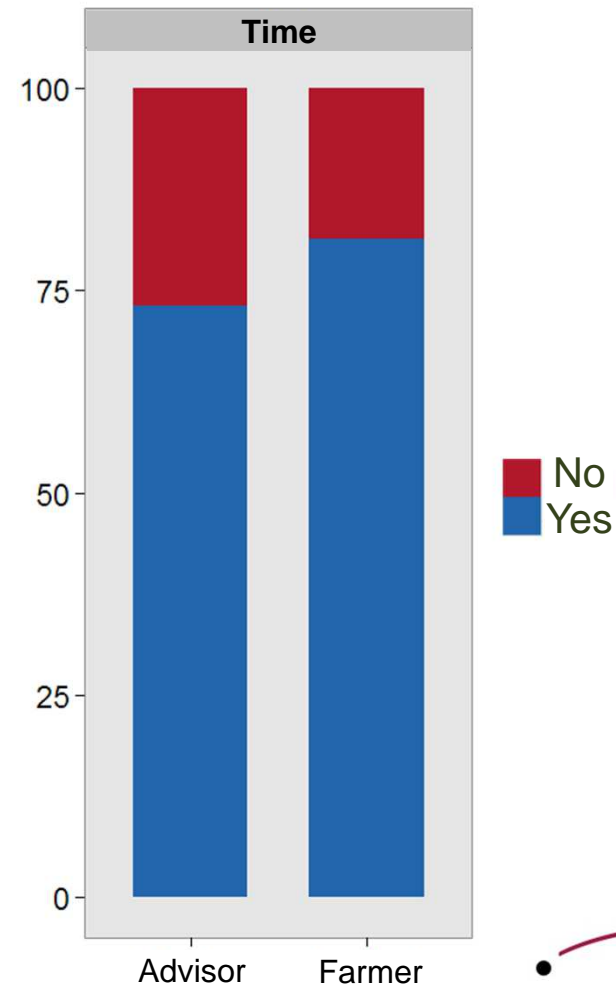
- **Implementation rates**
 - France: 82%
 - Germany: 67%
 - Sweden: 65%
 - Spain: 18%

Evaluation participatory approach

How much time did the participatory approach take?



Was it worthwhile?



take home message

- The role of variables in the farm system varied widely between farms → Systemic approach
- Structured assessment fosters unbiased analysis of the farm system and shared perspectives.
- Less aggregated variables might ease the assessment and interpretation.
- No evidence of effect on animal health status → approach was valued by participants

