Innovation in Tradition

The Use of Artificial Intelligence in Sheep Farming

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Sheep farming

Longstanding tradition based on ***extensive-pasture system***

advanced average ***age*** of farmers (around 60 years)

Complex management and lifestyle

maintenance of ***marginal territories***

limited familiarity with ***digital tools***

Lack of ***generational turnover***

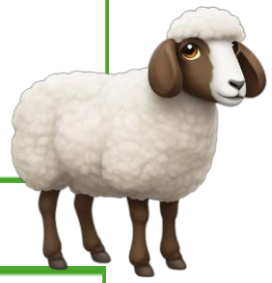
Reduced competitiveness and efficiency, greater challenges and lack of objective data: **decline in the number** of farms and livestock population and **abandonment of marginal areas**

Precision Livestock Farming: Opportunities and Application in Sheep Farming

Automated system

Data collection and creation of farm-level dataset

Individual data



Decision-making support for the farmer

Assistance in selecting animals for culling and farm replacement stock

Improved Animal Welfare
Early interventions on sentinel animals to prevent the spread of issue within the flock

Greater market competitiveness and increased farm efficiency.
Better quality of life for Shepherds

Precision Livestock Farming: Opportunities and Application in Sheep Farming

PLF in dairy sheep

GPS system	*Virtual fences*	*Automatic weighing system*	*Facial recognition*	*Automatic milking system*	*Sensors*
➢ Monitoring ➢ Behavior control	➢ Control ➢ Position tracking ➢ Informed pasture management ➢ Reduction in physical fencing cost	➢ Weight ➢ Health ➢ Less handling ➢ Improved animal welfare	➢ Importance of individual animals ➢ Larger farm dataset ➢ Recognition of alla animals ➢ Remote identifications	➢ Significant increase in farm dataset ➢ Informed selection of replacement and culling ➢ Fewer udder health problems ➢ Improved animal welfare ➢ Increase production ➢ Improved farm efficiency ➢ More informed decisions	➢ Prevention ➢ Early detection ➢ Reduced use of antibiotics ➢ Increase productivity

Advantaged of Using AI Technologies in Dairy Sheep Farming

Tradition

Advantages:

- Creation of emotional bonds with animals
- Mutual recognition between humans and animals

Disadvantages:

- Lack of objective data
- Late detection of diseases
- Inefficient genetic selection
- Economic losses

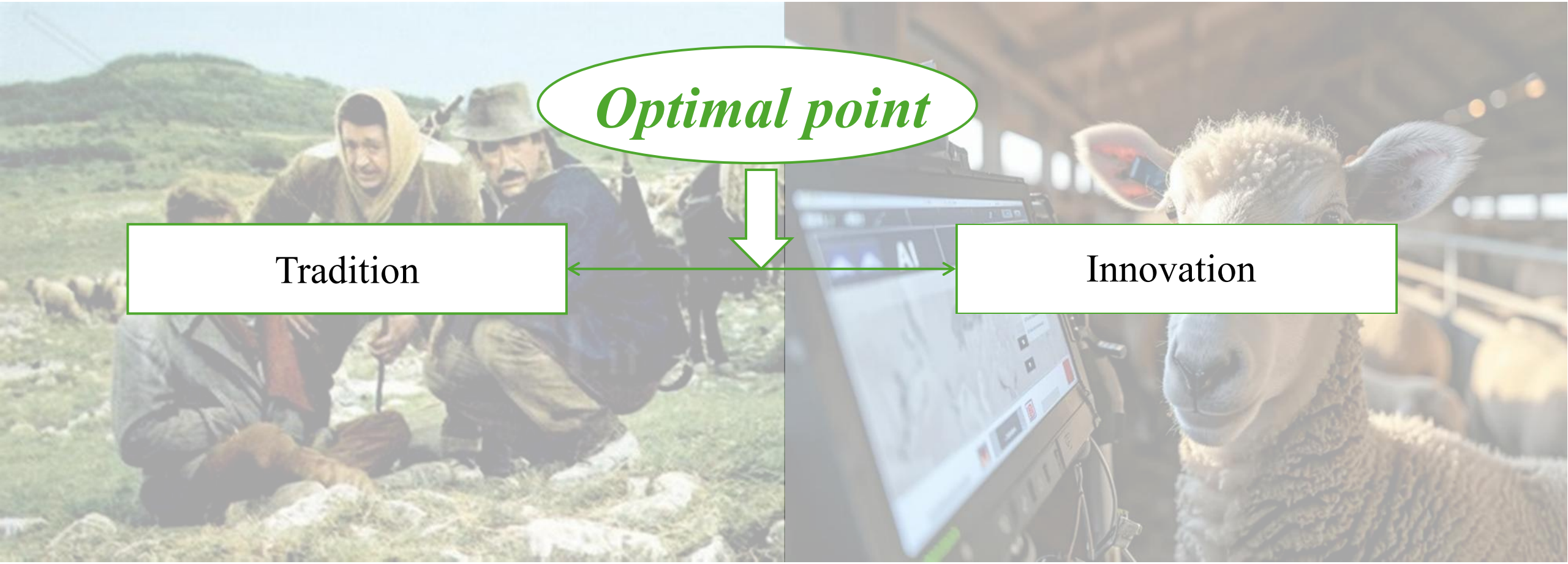
Innovation

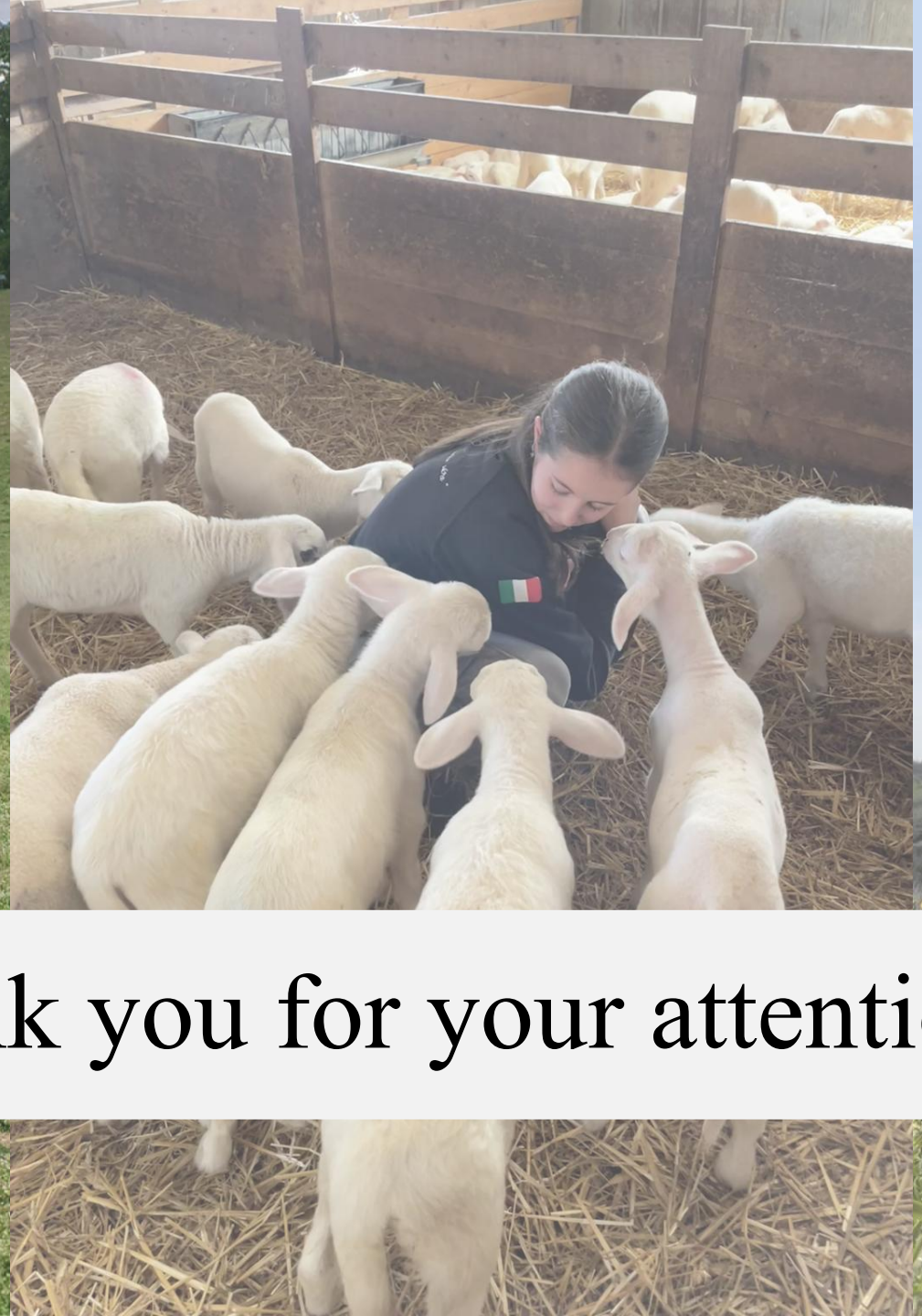
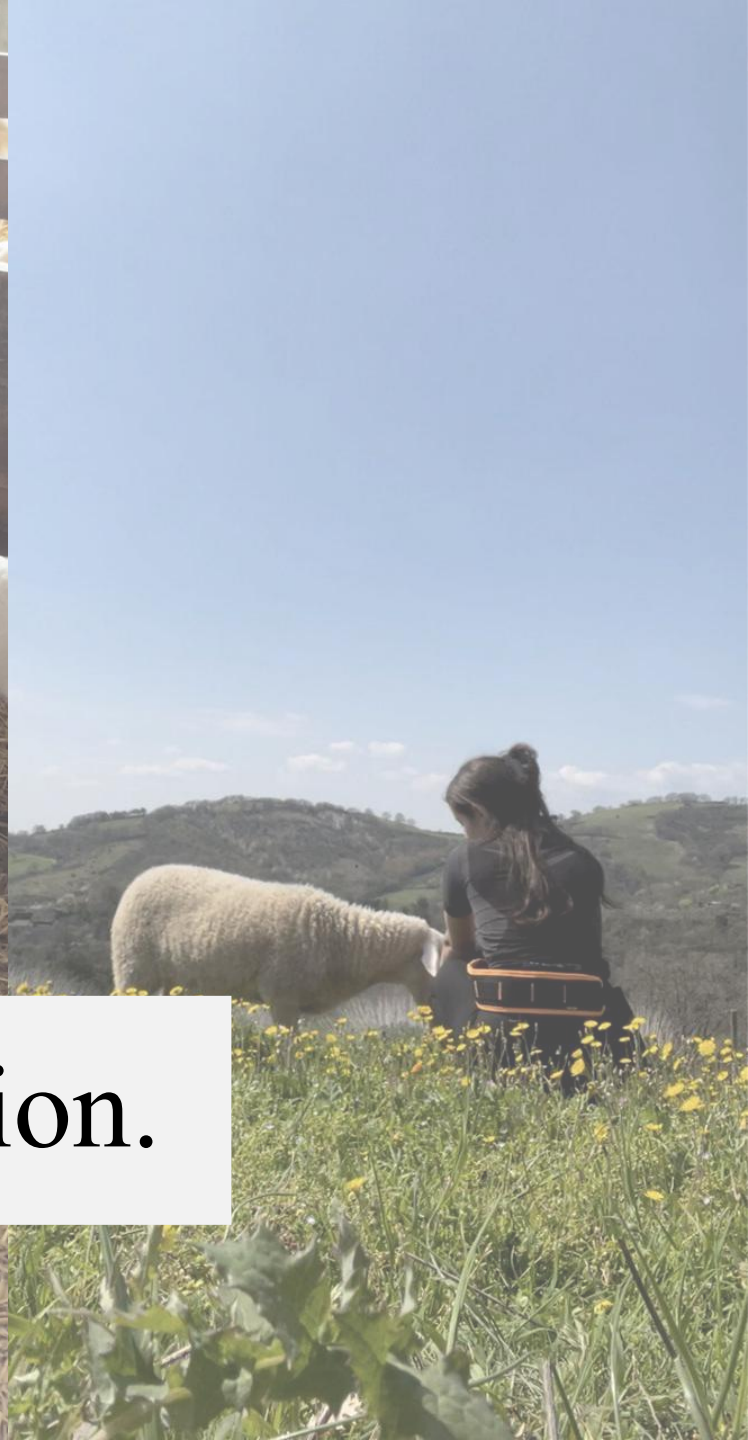
Advantages:

- Improved animal welfare
- Higher income foir the farmer
- Greater market efficiency
- Better quality of life for the farmer
- Availability of large volumes of data
- Efficient and informed genetic selection
- Creation of diversified job opportunities
- Attraction of younger generation to sheep farming (more sustainable lifestyle

Disadvantages:

- Need for significant initial investments
- Requirement for skills in understanding and analyzing data flows
- Need for strong digital knowledge


Optimal point
Tradition
Innovation

Thank you for your attention.