



SRUC

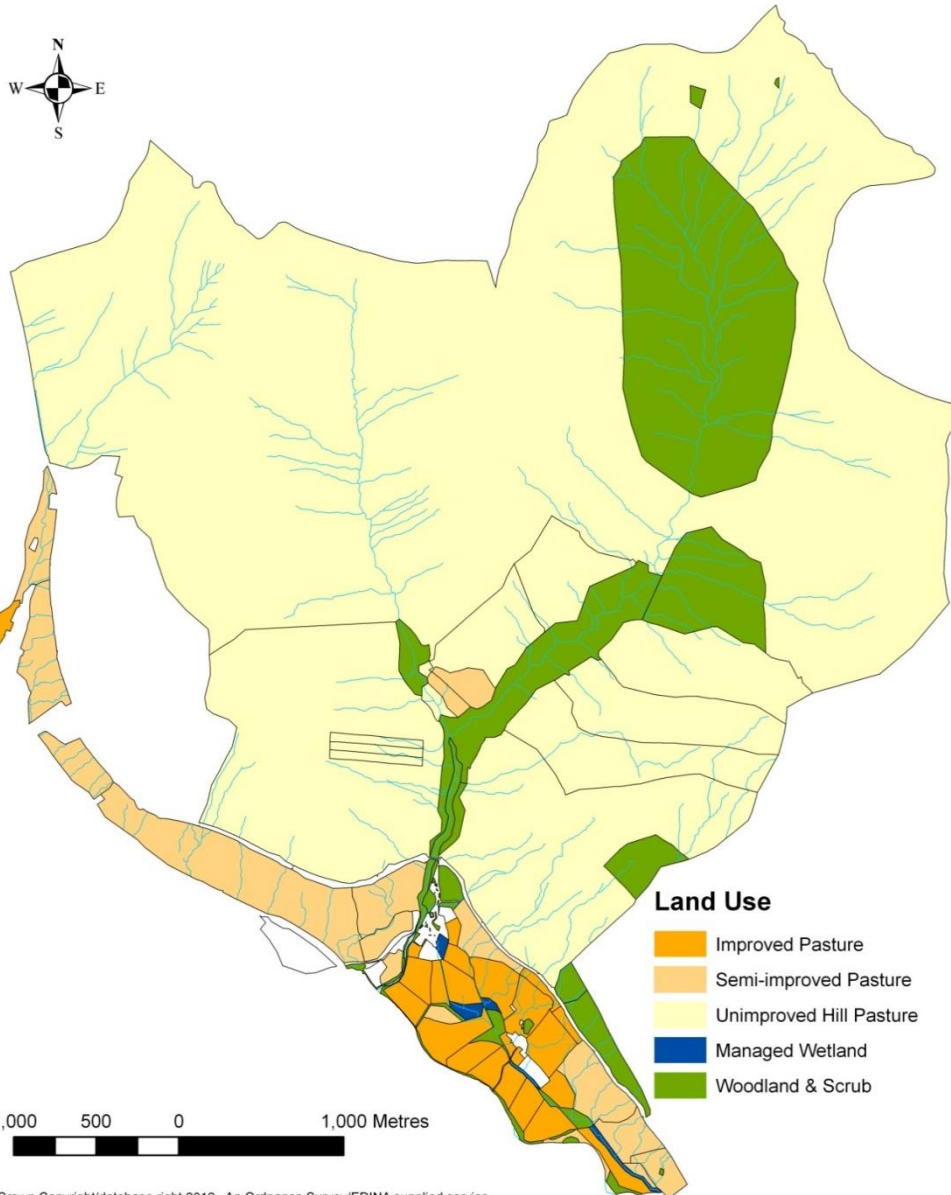
DIGI-Rangeland

A new EU project at
Kirkton

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Kirkton & Auchtertyre

Land use



- Total Area = 2225 ha
- 67 ha improved pasture
- 153 ha semi-improved pasture
- 1,677 ha unimproved hill pasture (predominantly grassland)
- 307 ha woodland & scrub
- 1,050 breeding ewes (Scottish BF, BFxLley, Lley) + 350 hogs
- 30 Aberdeen Angus cattle
- Agri-environment schemes: water margins, wetlands, shelter belts, moorland management
- Many sensors on farm (animals & envt)

Kirkton EU projects

Horizon 2020 projects + 1 new HorizonEurope project



Integrating innovative **T**echnologies along the value **C**hain to improve small ruminant welfare **A**RE management

Sept 2020– August 2025

www.techcare-project.eu

<https://zenodo.org/communities/techcare/records>



Sm@ll Ruminant Technologies – Precision Livestock Farming & Digital Technologies for Small Ruminants

January 2021 – Sept 2024

www.smartplatform.network

https://zenodo.org/communities/small_ruminant_technologies/records

Digi-Rangeland

Digital innovation & data technology network for Rangeland livestock farming systems

February 2025– January 2029

Website TBC

<https://cordis.europa.eu/project/id/101183132>

DigiRangeland– The project



Aim:

How can digital innovations and data technologies help maintain extensive rangeland livestock farming systems with ruminants and support rural activities?

Specific objectives

- 1) create a **network** to encourage knowledge exchange, uptake and cross-fertilisation among a wide range of **farmers** and **rural stakeholders**, as well as to value input and knowledge of farmers for farmers, and for other rural stakeholders and vice versa;
- 2) identify **needs** from **farmers** and other **land-users**, and prioritize them;
- 3) identify and evaluate **Digital Technologies & Innovations solutions** that match the needs;
- 4) **scale-up the solutions** to encourage uptake and increase the flow of information between stakeholders with training and demonstrations;
- 5) widely **disseminate** practical digital solutions and innovative practices between the rural sectors from different countries.

DigiRangeland– Who is involved?



11 countries, 13 partners, led by French Livestock Institute

Extensive livestock grazing areas
High nature value areas



Partner Category	Sectors				
	Cattle	Buffalo	Reinder	Sheep	Goat
Technical Institute & Engineering School			Meat	Dairy	Dairy
Rural Development NGO	Meat	Meat	Meat	Dairy	Dairy
University	Meat			Dairy	Dairy
Foundation & University	Meat	Dairy	Meat	Dairy	Dairy
Advisory Service Organisations	Meat	Dairy	Meat	Dairy	Dairy
Rural Development NGO	Meat	Dairy	Meat	Dairy	Dairy
University	Meat	Dairy	Meat		Dairy
Research Institute	Meat	Dairy	Meat	Meat	
University	Meat		Meat		
Advisory Service Organisation	Meat	Dairy		Dairy	Dairy

● Meat ● Dairy

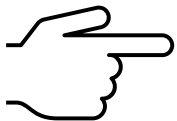
3 Thematic areas



Improving farm management of extensive livestock systems and practices

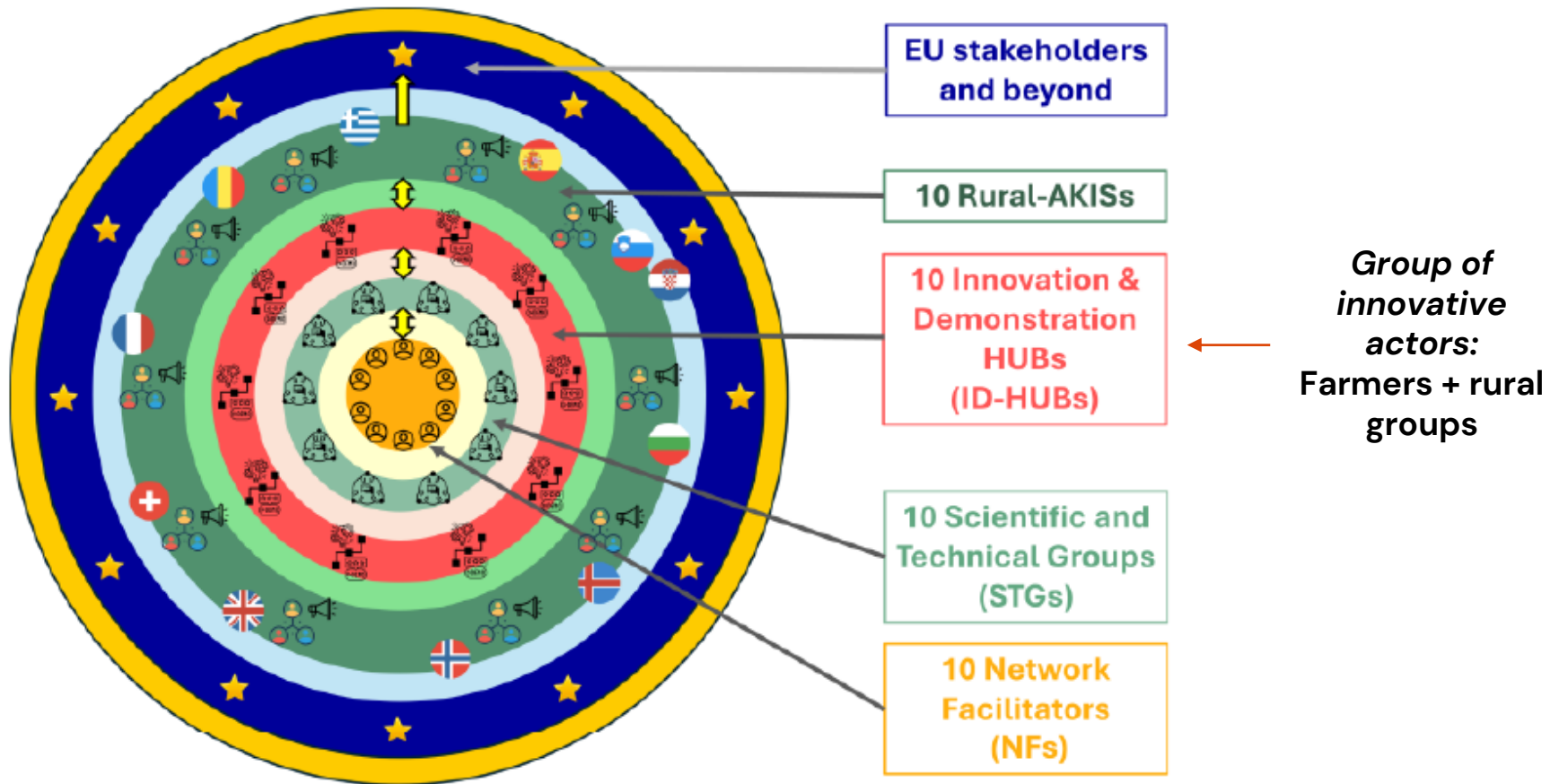
Facilitating **land use** and **land sharing**

Developing and promoting **rangeland quality products**, and awareness of the **(ecosystem) services** provided by rangeland livestock farming systems

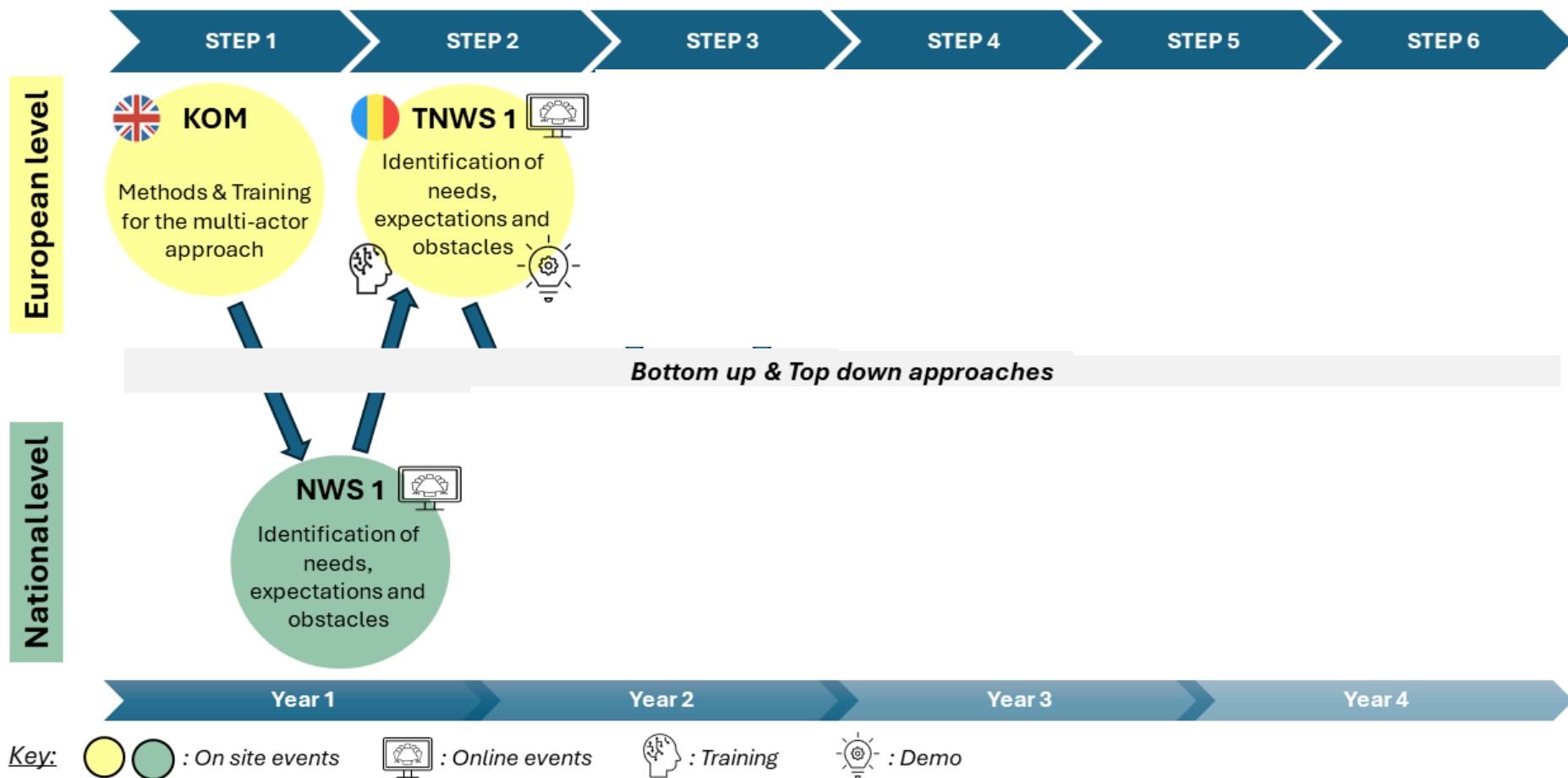


serve as an initial guide for actions to collect needs and identify solutions.

Network structure



Workshops – central tool



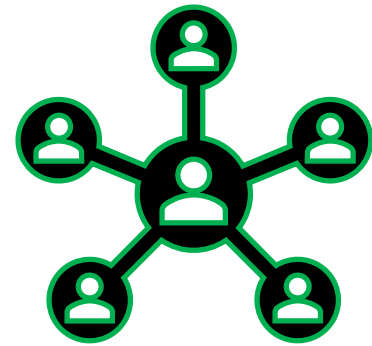
SRUC involvement



- 4 years project
- Start February 2025
- Kick-off meeting in Scotland

SRUC:

- Kirkton team
- Rural Policy Centre team (Jane A.)



SRUC leads on the evaluation of solutions



Interested?



- Many workshops → *if you want to take part, let us know*
- Survey of needs → *next year* → *you can help with dissemination*
- Scaling up → *demonstration events*



Kirkton EU projects – update

Horizon 2020 projects



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- Ended Sept 2024
- Final seminar July 2024
- 52 National Workshops
- 5 Transnational Workshops
- 1 international visit
- 12 training days on Digifarms
- 18 demo days on innovative farms
- >25 adoption sessions
- 4 policy briefs
- 166 needs → 60 solutions
- 30 guidelines on technologies
- 85 videos [H2020SmaRT – YouTube](#)



Need: Time saving for fence monitoring,

Aim: Simplify the organization of work and improve safety with real-time diagnosis of the status of the installation of electric fences,

Description: In case of malfunction (power failure of the electrical substation, interruption of the fence, drop in voltage, weak substation battery, earth fault, etc.) and therefore of the risk of the animals escaping, the breeder receives an alert on his mobile phone via SMS and on his email.

The device communicates via the Sigfox internet of Things network to the Vigifence servers. The use of Sigfox technology is justified by its very good coverage of the territory with more than 94% efficiency.

When a power failure is detected, the battery is low or the device itself is broken, the service automatically sends a sms alert on the breeder's phone. The user receives a proof of life every day to assure him of the proper functioning of the device.



How to implement: Step 1 : Registration of the device box on the website
Step 2 : the user inserts the battery and connects the wires to the fence and to the ground, as for a tester
Data transmission via Sigfox is then effective. In case of malfunction of the fence, alert sms will be sent.

Expected Benefits:

- Real-time monitoring of the operating status of electric fences.

Country:



Production System (dairy or/and meat sheep/goat):

All

Category of Animal (ewe, goat, replacement, lamb, kid):

All

Source of Information:

<https://www.thingonair.com/boutique/produits/22-vigifence-pack.html>



Prerequisites and/or limits:

- To equip an area, the user buys the box for €207,50 excl VAT and chooses his alert service package depending on his use, 6 month (€35 excl VAT) or 12 months (€50 excl. VAT). There is also an all-inclusive pack, including a 2-year packages (€290 excl VAT).
- Although the tool is efficient for incident detection, it lacks a GPS system that would allow the malfunction point to be located remotely.

- Set up costs: 500 € - 1 000 €
- Subscription required: Yes, monthly ~ 1 € - 50 €
- Ease of use? Scale 1 (Complicated) – 10 (Simple)



- Value for money (for this type of benchmark farm)? Yes
- Recommend this tool/technology for use on other types of farm? Yes



This technology works for me because I can check remotely whether my fences are working properly, and if there's a problem, I get a text message on my phone.

FARMER FROM FRANCE



It would take 12 years for 16% adoption in Ireland.



www.smartplatform.network



Kirkton EU projects - update

Horizon 2020 projects



Integrating innovative TECHNOLOGIES along the value Chain to improve small ruminant welfare management

Integrating innovative
Technologies along the value
Chain to improve small
ruminant welfare
management

Sept 2020 – August 2025

www.techcare-project.eu

5 key steps

1. Prioritise welfare challenges and issues
2. Identify potential innovative technologies solutions
3. Validate the solutions in different and real conditions (pilots and commercial farms)
4. Define appropriate business models
5. Communicate widely the results to the small ruminant sectors and beyond

Kirkton & Auchtertyre farms



Kirkton EU projects - update

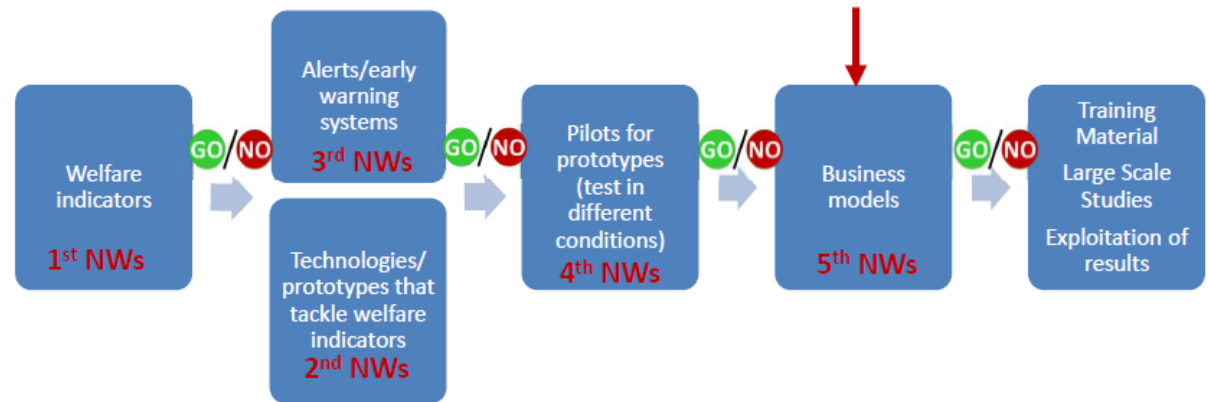
Horizon 2020 projects



Integrating innovative
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3 workshops for next year

Guidelines on technologies tested

Final conference **17–18 June 2025**

(Brussels/hybrid)

Acknowledgments



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