

Report of the 5th transnational workshop (TNWS 5)



Agris

Agencia pro sa choviva in agricoltura
Agencia regionale per la ricerca in agricoltura
REGIONE AUTONOMA DE SARDEGNA
REGIONE AUTONOMA DELLA SARDEGNA



INRAE

In Extenso

Innovation Croissance

Moredun



Eesti Maaülikool
EMU Estonian University of Life Sciences



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement N° 101000471.



30th January 2024
Teams online conference
10.00 – 15h00 CET

TNWS5

OBJECTIVES

Four main objectives were identified for the fifth transnational workshop (TNWS 5):

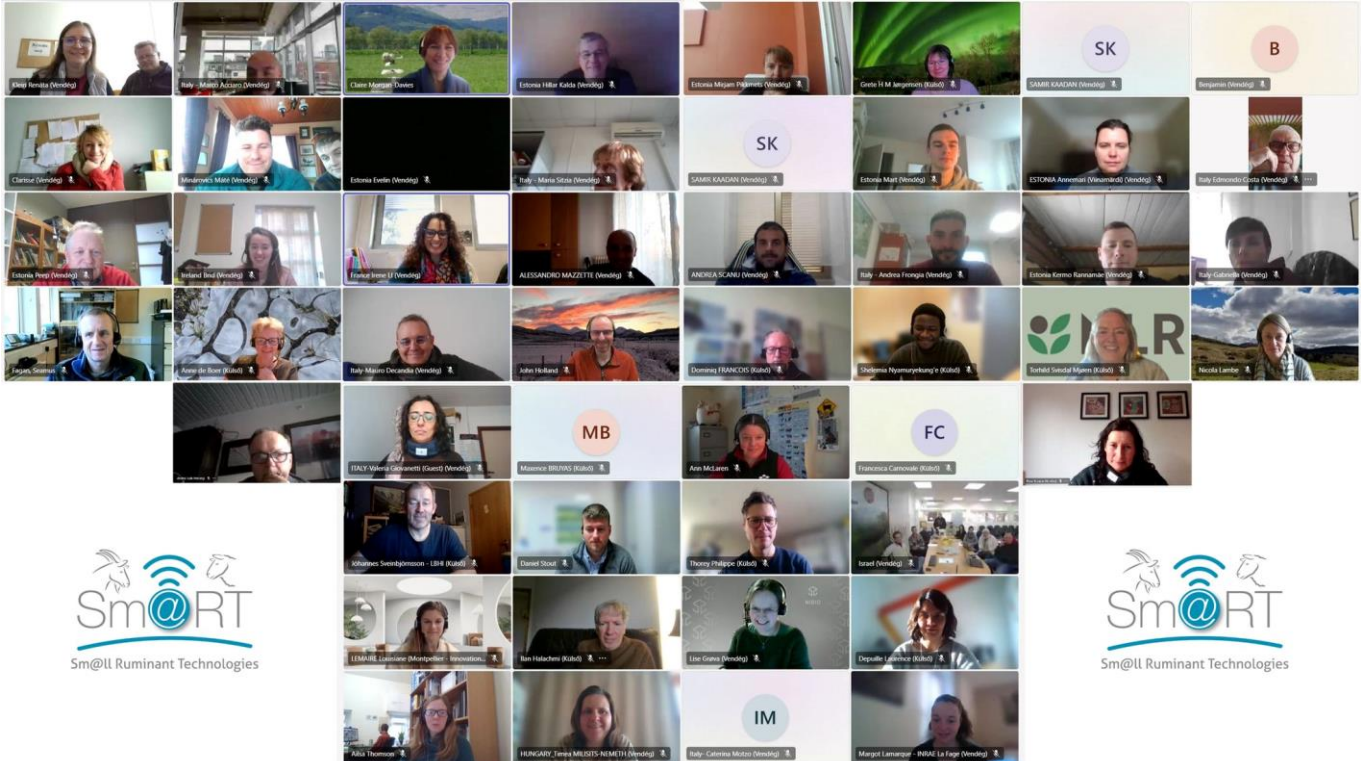
1. Present the Sm@RT project and its progress, in particular with regards to the farm demonstration days and training sessions, as well as the ongoing cost-benefit analysis of the selected innovative technologies.
2. Discussion around innovative technologies/digital tools adoption
3. Present and get some common feedback on the gaps between farmers' needs and identified innovative solutions.
4. Discover the Israeli sheep and goats sectors, and their use of innovative technologies.

ORGANISATION AND ATTENDEES

Due to the tragic events in the Middle East, the original organisation, which was a face-to-face meeting in Israel, was replaced by a Teams conference. Additionally, partners endeavoured to invite farmers and stakeholders/colleagues who could speak English, so most of the discussions were held in that language. The main meeting was hosted by the UK partner.

The TNWS 5 took place on the 30th of January 2024, at 10:00 am CET for 5 hours with 1 hour lunchbreak. The meeting was a plenary session in English and a series of breakout sessions by country (with discussions in their own language). In total, there were 8 breakout rooms for one of the sessions. The agenda of the meeting is detailed in annex 1. The slides used during the meeting are presented in annex 2.

A total of 72 people participated in this fifth TNWS, 9 from France, 7 from the UK, 4 from Ireland, 6 from Hungary, 8 from Norway, 12 from Estonia, 12 from Israel and 13 from Italy. We also had one participant from Iceland, who joined in with the Norwegian group. One of the Hungarian participants was a member of our advisory group.





ADOPTION RATING OF THE REMAINING SOLUTIONS

During the plenary session, the project was presented to the participants, as well as a reminder of the results regarding farmers' needs in terms of technology and digital innovations, the solutions proposed by each country around the 5 main topics considered ((feeding/grazing, health/welfare/reproduction, milking/fattening, and flock management), the guidelines on those solutions being prepared, a report on the farm demonstration days and training sessions organised in each country in the past 2 years, and the cost-benefit analysis being prepared on the solutions.

Next, a participatory exercise to understand adoption of technologies by farmers was carried out in breakout rooms.

Each breakout room considered one technology solution proposed by another country, and, using the ADOPT software, defined the adoption rate and the time to peak adoption. The technologies chosen were the last ones which had not yet been considered during the past activities of the project.

The results from each breakout room was:

Room/Country	Technology	Adoption rate	Years till adoption
Estonia	Water meter (French solution)	77%	22 years
France	Automatic feeder (Italy/Hungary)	17%	5 years
Hungary	Pregnancy scanning (Irish solution)	97%	3 years
Ireland	Connected fence (French solution)	16%	12 years
Israel	Milk feeder for goats (Estonian solution)	7%	15 years
Italy	Milk tank weigher (French solution)	76%	8 years
Norway	Conveyor (Irish solution)	3%	11 years
UK	FEC pack (Irish solution)	58%	8 years








GAPS BETWEEN NEEDS & SOLUTIONS

In a plenary session, an exercise around the gaps between the identified needs and solutions was undertaken. Out of 116 needs identified during the first part of the project, only 18 did not have any solution.

Using a whiteboard function in Teams, participants were asked to brainstorm and write their suggestions regarding potential tools that could answer some of the needs. There were 3 needs regarding reproduction, 4 needs around health/welfare, 3 around herd monitoring, 2 around feeding/grazing, 4 regarding milking and 2 on fattening. The symbols show the species/system affected (yellow sheep = meat; blue sheep=dairy, green goat = dairy).






The results suggested by the participants are shown below:









Topic	Need	Digital/PLF solutions?
Reproduction	Automatized following of the reproduction (warnings at every step) 	<ul style="list-style-type: none"> • Oestrus detector (Alpha detector) • A bolus to record temperature
Reproduction	Identifying/controlling abortion issues 	<ul style="list-style-type: none"> • Trough AI • Cameras • Isolation & recording ewes with abortion • Walk over Weigh to record unexpected liveweight change
Reproduction	Protection from predators of different mating groups at mating 	<ul style="list-style-type: none"> • Activity monitors • High tensile fences with hot wires and dog • FindMy (distress warning under research)
Health/Welfare	Udder health/mastitis 	<ul style="list-style-type: none"> • Portable somatic cell counters (only experimental) • Camera to detect mastitis (IR)? • UHF readers to identify animals at the back when moving
Health/Welfare	Early detection / tools to prevent diarrhoea in lambs 	<ul style="list-style-type: none"> • FEC pack to check worm counts • Daily weight gain recordings
Health/Welfare	Early diagnosis of some infectious diseases (rams) 	<ul style="list-style-type: none"> • Trough AI • Record eye temperature daily (only experimental)
Health/Welfare	Prevention and diagnosis of lameness 	<ul style="list-style-type: none"> • Activity/distance walked may alert lameness





Topic	Need	Digital/PLF solutions?
Herd monitoring	Automatic data recording 	<ul style="list-style-type: none"> • GPS collars with automatic recording/integration of data
Herd monitoring	Sensors (ear, foot) for milk performance recording 	<ul style="list-style-type: none"> • Milk meter with EID readers in parlour (Delaval already does it) • SCR
Herd monitoring	Monitoring of grazing (parasitism) 	<ul style="list-style-type: none"> • FEC pack • Use FECpack to monitor egg counts in the animals. Use the egg count to predict which pastures will have more or less egg contamination, then graze or avoid • Virtual fencing to manage grazing with the aim of low parasitism
Feeding/Grazing	Increase of herbage availability and quality 	<ul style="list-style-type: none"> • Grasshopper • Drone • (Overseeding – with different types of herbage)
Feeding/Grazing	Recording of feed intake times on pasture 	<ul style="list-style-type: none"> • Bite-meter – technology from the Netherlands? (but not very accurate). • AGRIS Sardegna also has a bite-meter prototype (Beharum)



Topic	Need	Digital/PLF solutions?
Milking	Individual milking supplementation based on animal's needs 	<ul style="list-style-type: none"> Individual concentrate distributor
Milking	Link between farmers and suppliers 	<ul style="list-style-type: none"> Supplier in milking parlour? Whatsapp
Fattening	Additional feeding lambs during weaning time 	<ul style="list-style-type: none"> EID enabled weighing crate Automated feed intake recording equipment
Fattening	Identification and management of lame lambs 	<ul style="list-style-type: none"> Activity monitors
Milking	Automatization of the cleaning of milking parlour (with alerts if problems) 	<ul style="list-style-type: none"> No suggestion
Milking	Pre and post dipping/udder cleaning management 	<ul style="list-style-type: none"> No suggestion

Most of the solutions proposed are still prototypes and not necessarily readily available or affordable to farmers.

VIDEOS ON ISRAELI SHEEP & GOATS SECTORS

A series of videos prepared by the Israeli partners were shown to the participants, who were then able to ask questions to the Israeli partners present in the Teams call.

1st video: Presentation of ARO & sheep & goats sectors in Israel



<https://www.youtube.com/watch?v=B7pEA-cte00>



Horizon 2020
Programme

2nd video: Presentation of a semi-extensive goats farm



<https://www.youtube.com/watch?v=Na0NylGmJ8>

3rd video: Presentation of a sheep & goats intensive farm



<https://www.youtube.com/watch?v=4qdQRjyjKy4>

4th video: Presentation of a sheep dairy farm



<https://www.youtube.com/watch?v=da6GxKOHlpl>



5th video: Presentation of technology used on an intensive lamb meat farm

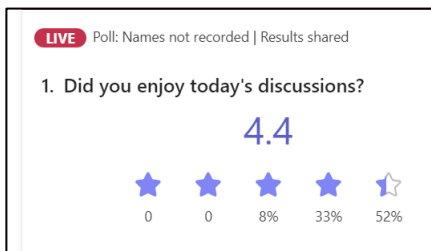


<https://www.youtube.com/watch?v=h0L62dwszJo>

SATISFACTION POLL

A poll was used to gauge participants' satisfaction.

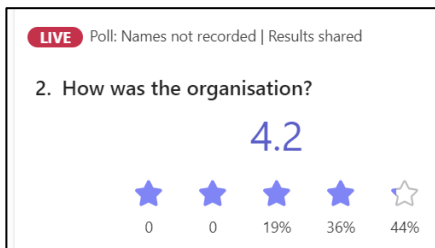
Did you enjoy today's discussions?



Did you learn something new about technology solutions today?



How was the organisation





ANNEXES

Annex 1 - agenda



Sm@RT 5th Transnational Workshop

Latest project's outputs on technologies

Agenda 30th January 2024

9 am -14.00 pm: UK/Ireland
10 am – 15.00 pm: France/Hungary/Italy/Norway
11 am – 16.00 pm: Estonia, Israel

Join us online via Teams [here](#)

Presentations of Israeli sheep and goats farming sectors & farms



What	UK/Ireland time	France/Italy Norway/Hungary	Estonia/Israel
Welcome & Project update	9.00 – 9.15	10.00 – 10.15	11.00 – 11.15
Breakout sessions on technologies adoption	9.15 – 10.15	10.15 – 11.15	11.15 – 12.15
Presentation of Israeli sheep & goats' sectors (videos)	10.15-10.30	11.15-11.30	12.15-12.30
Feedback on technology farm demonstration days	10.30-11.00	11.30-12.00	12.30-13.00
Presentation of 2 Israeli farms and technology used (semi-extensive goats farm & sheep/goats intensive farm)	11.00 – 11.20	12.00 – 12.20	13.00 – 13.20
LUNCH (~1 HOUR)	11.20-12.20	12.20-13.20	13.20-14.20
Presentation of 2 Israeli farms and technology used (sheep dairy farm & intensive meat lambs farm)	12.20 – 12.30	13.20 – 13.30	14.20 – 14.30
Discussion on gaps between farmers' needs and available technologies	12.30 – 13.30	13.30 – 14.30	14.30 – 15.30
Feedback on technologies cost-benefits analyses	13.30 – 13.40	14.30 – 14.40	15.30 – 15.40
Project communication update	13.40-13.50	14.40-14.50	15.40-15.50
Conclusions & feedback	13.50 – 14.00	14.50 – 15.00	15.50 – 16.00





Annex 2 – Participants list (from Teams)

Name	Room Name		
ESTONIA Annemari (Viinamärđi)	Room 1- Estonia	Assaf Godo	Room 5 – Israel
Estonia Evelin	Room 1- Estonia	Benjamin	Room 5 – Israel
Estonia Hillar Kalda	Room 1- Estonia	dorit.kababya.il	Room 5 – Israel
Estonia Kermo Rannamäe	Room 1- Estonia	Edna/il	Room 5 – Israel
Estonia Maria	Room 1- Estonia	elanit dadosh kalfon il	Room 5 – Israel
Estonia Mart	Room 1- Estonia	Ilan Halachmi	Room 5 – Israel
Estonia Mirjam	Room 1- Estonia	Israel	Room 5 – Israel
Estonia Mirjam Pikk mets	Room 1- Estonia	Jonathan IL	Room 5 – Israel
Estonia Peep	Room 1- Estonia	ofir maimon	Room 5 – Israel
Estonia Priit	Room 1- Estonia	SAMIR KAADAN	Room 5 – Israel
Estonia Saltanat	Room 1- Estonia	Tzach Glasser	Room 5 – Israel
Estonia_Marwin Joseph	Room 1- Estonia	אילנות דהלוי	Room 5 – Israel
Clarisse	Room 2 – France	ALESSANDRO MAZZETTE	Room 6 – Italy
Depuille Laurence	Room 2 – France	ANDREA SCANU	Room 6 – Italy
Dominiq FRANCOIS	Room 2 – France	ANTONELLO LEDDA	Room 6 – Italy
France Irene LI	Room 2 – France	Francesca Carnovale	Room 6 – Italy
LEMAIRE Louisiane	Room 2 – France	GIAN SIMONE SECHI	Room 6 – Italy
Margot Lamarque – INRAE La Fage	Room 2 – France	Italy – Andrea Frongia	Room 6 – Italy
Maxence BRUYAS	Room 2 – France	Italy – Marco Acciario	Room 6 – Italy
Tesniere Germain	Room 2 – France	Italy – Maria Sitzia	Room 6 – Italy
Thorey Philippe	Room 2 – France	Italy – Caterina Motzo	Room 6 – Italy
Hungary Dr. Nora Vass	Room 3 – Hungary	Italy Edmondo Costa	Room 6 – Italy
Hungary István Egerszegi	Room 3 – Hungary	Italy–Gabriella	Room 6 – Italy
Hungary Nagy Zsuzsanna	Room 3 – Hungary	Italy–Mauro Decandia	Room 6 – Italy
HUNGARY_Timea MILISITS–NEMETH	Room 3 – Hungary	ITALY–Valeria Giovanetti (Guest)	Room 6 – Italy
Klein Renáta	Room 3 – Hungary	Anne de Boer	Room 7 – Norway
Minárovics Máté	Room 3 – Hungary	eivind	Room 7 – Norway
Fagan, Seamus	Room 4 – Ireland	Grete H M Jørgensen	Room 7 – Norway
Ireland Brid	Room 4 – Ireland	Jóhannes Sveinbjörnsson – LBHI	Room 7 – Norway (Iceland)
tim (Guest)	Room 4 – Ireland	Nyhus, Lars Terje	Room 7 – Norway
Tomas Ireland	Room 4 – Ireland	Øystein Solli	Room 7 – Norway
		Sauebonden	Room 7 – Norway
		Shelemia Nyamuryekung'e	Room 7 – Norway
		Torhild Svisdal Mjøen	Room 7 – Norway
		Ailsa Thomson	Room 8 – UK
		Ann McLaren	Room 8 – UK
		Claire Morgan–Davies	Room 8 – UK
		Daniel Stout	Room 8 – UK
		John Holland	Room 8 – UK
		Nicola Lambe	Room 8 – UK
		Fiona Kenyon	Room 8 – UK



Annex 3 – Slides



Sm@RT - Small Ruminant Technology

5th Transnational Workshop – 30 January 2024 (online)



1



Map of Europe with flags of participating countries: Norway, Denmark, Finland, Sweden, United Kingdom, France, Ireland, Germany, Poland, Czech Republic, Slovakia, Hungary, Austria, Italy, Greece, Israel, and others.

Welcome! Tere tulemast!
Bienvenue!
Benvenuti!
Üdvözöljük!
Velkommen! שלום

2



What	UK/Ireland time	France/Italy Norway/Hungary	Estonia/Israel
Welcome & Project update	9.00 – 9.15	10.00 – 10.15	11.00 – 11.15
Breakout sessions on technologies adoption	9.15 – 10.15	10.15 – 11.15	11.15 – 12.15
Presentation of Israeli sheep & goats' section (online)	10.15-10.30	11.15-11.30	12.15-12.30
Feedback on technology farm demonstration days	10.30-11.00	11.30-12.00	12.30-13.00
Presentation of 2 Israeli farms and technology used (demi-intensive goats farm & sheep/goats intensive farm)	11.00 – 11.20	12.00 – 12.20	13.00 – 13.20
LUNCH*1 HOUR	11.20-12.20	12.20-13.20	13.20-14.20
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Conclusions & feedback	13.50 – 14.00	14.50 – 15.00	15.50 – 16.00

3



First of all...

Let's do a group photo!

Please put your camera on



Thank you...now it is best to :

- mute yourself
- turn your camera off
- any questions – use the Q&A box

4



Sm@RT – a reminder



Sm@RT: Small Ruminant Technology – PLF and Digital technologies for small ruminants

3 years + 9 months
Starting Jan 2021

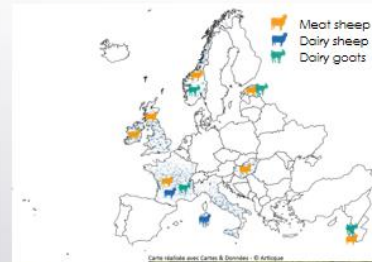
Objectives :

- To create a European network around the use of PLF and digital technologies in small ruminants
- To encourage knowledge exchange, new technologies adoption and communication between farmers and stakeholders of the small ruminant sectors.



5

Partners & Countries:



UK	SRUC	Moredun
Ireland		
Norway	NIBIC	
France	INRAE	In Extense
Italy	Agris	
Hungary		
Estonia		
Israel		



6

Work thematic – 2 axis & 3 productions



PLF innovations and uses
(farmers' needs)

Guidelines/knowledge exchange
on technology use and data
management

Multi-disciplinary/multi-actor approach within the 2 overarching axis



Digifarm
1 per country & production

- Baseline or demonstration farm with PLF
- Partner places for exchange, demonstration and knowledge transfer

3 levels of networking

Innovative farmers
2 per country and production type

- Commercial farms involved in the project with same technologies, for peer-to-peer exchanges

Interested farmers



7

Multi-actor approach



National workshops
Every 6 months

International workshops
Every 6 months

- 2 online in 2021/22
- 1 in France (July 2022)
- 1 in New Zealand (Feb 2023)
- 1 in Norway (June 2023)
- 1 online today - Israel

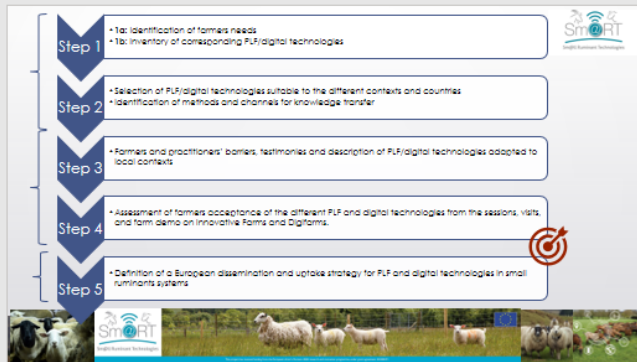


PLF/Digital technologies
demonstration/training
On the Digifarms and
'Innovative Farms' in
2022 / 2023

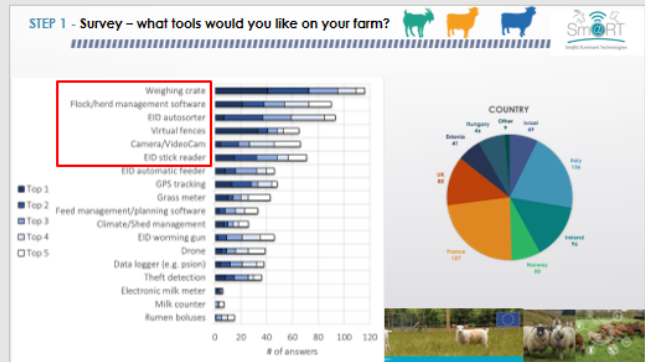


8





9



10



STEP 1 - What technology needs do you have?

Topics			
Feeding/Grazing	Forage quality	Fencing	Pasture monitoring
Health/Welfare	Early detection of health issues	Early detection of diseases	Early diagnosis of mastitis
Reproduction	Optimisation of AI	Animal selection	Early pregnancy diagnosis
Flock/Herd management	Batch management	Lack of support for using the tools	Group/batch formation
Fattening/Milking	Lack of references on milking tools	Lamb weighing	Milking machine maintenance

11

STEP 2 - Solutions that can answer your needs?

- All needs were collated from the 8 countries, by production type
- Needs were ranked by order of importance by farmers, for each of the 5 main themes

- Grazing/feeding
- Health & Welfare
- Reproduction
- Flock management
- Fattening/Milking

Proposed by all → **>70 solutions**

12





Feeding/Grazing

A grid of 16 technology icons for Feeding/Grazing, including SmartFence/Virtual fence, EID weighcrate + autosorter, Grazing management app, Automated grass measurement, Pregnancy scanning, Ration/Feeding Software, Drone, Portable NIR, Milkmeter, Automatic feeder, Connected Fence, GPS collars, Pastured hay technology, HappyGrass, PRAIRIE, Drone with thermal camera, and GPS collars with behaviour.

13

Health/Welfare/Reproduction

A grid of 16 technology icons for Health/Welfare/Reproduction, including EID hand-held wand/data loggers, Data recording system, Ration recording app, EID weigh crate and autosorter, FEC software (fecPak G2), Pregnancy scanning, Parentage test, Warming/vaccinating gun, Sheep conveyor, Happy Factor algorithm, Camera, Somatic Cell counter, Weather/environmental station, Water meter, Automatic feeder, Alpha detector, 3D imaging, Ultra High Frequency, Walk Over Weigh, Environmental enrichment, EID-enabled water trough, GPS & proximity ear-tags, Guard dog & high tensile fence, Milk feeders for kids/lambos, and GPS collar & behaviour information.

14

Rock/Herd monitoring

A grid of 10 technology icons for Roks/Herd monitoring, including EID hand-held wand, Warming/vaccinating guns, EID weigh crate and autosorter, Milking parlour with EID, Aptimiz, Environmental station + cooler, Automatic feeder, Camera, Milk meter, EID-enabled water trough, and Data recording system.

15

Fattening

A grid of 10 technology icons for Fattening, including EID hand-held wand/data loggers, Walk Over Weigh, EID weigh crate and autosorter, FEC software, EID tags, Electronic weather station, Automated grass measures, Happy Factor algorithm, EID-enabled weighing trough, and Ration recording app (SheepIreland).


16






Milking/Transformation

Milk tank weighing	Milk meter + milking management software	Somatic Cell Count






17

STEP 3 - Guidelines on the most preferred tools



PROPOSER SMART for identification of PIJ and ST tools
Walk over Weighing (St-W)

18

STEP 3 - Barriers to uptake? Training days/Demo days

BEFORE - AFTER
- what do you think of this technology?
- would you put it on your farm?





Valeria's presentation






19


★

STEP 3 - Barriers to uptake?

Cost-Benefit analysis of preferred solutions

Ann's presentation



20

★





STEP 4 Assessment/Adoption of innovative tools



Today! -> in breakout rooms



21

Agenda for today:

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Project communication update	13.40-13.50	14.40-14.50	15.40-15.50
Conclusions & feedback	13.50 - 14.00	14.50 - 15.00	15.50 - 16.00



22

Break-out rooms:



8 breakout rooms:

- Room 1 - Estonia
- Room 2 - France
- Room 3 - Hungary
- Room 4 - Ireland
- Room 5 - Israel
- Room 6 - Italy
- Room 7 - Norway
- Room 8 - UK

You should get a message that says 'room open'. You will be assigned to your room.



23

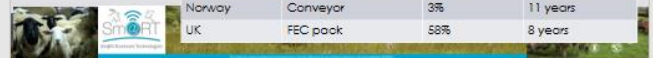
Welcome back!



8 breakout rooms:

- Room 1 - Estonia
- Room 2 - France
- Room 3 - Hungary
- Room 4 - Ireland
- Room 5 - Israel
- Room 6 - Italy
- Room 7 - Norway
- Room 8 - UK

Room/Country	Technology	Adoption rate	Years till adoption
Estonia	Water meter	77%	22 years
France	Automatic feeder	17%	5 years
Hungary	Pregnancy scanning	97%	3 years
Ireland	Connected fence	16%	12 years
Israel	Milk feeder for goats	7%	15 years
Italy	Milk tank weigh	76%	8 years
Norway	Conveyor	3%	11 years
UK	FEC pack	68%	8 years



24

Videos from Israel



1st video: Presentation of ARO & sheep & goats sectors in Israel

- You may have to 'activate the sound' when the video starts
- Any questions during the video, please use the Q&A function



25

Feedback on farm demonstration days



Valeria Giovanetti (Italy - AGRIS)



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5^o Trans National Workshop



WP2 - Task 2.3 AGRIS (ITA)

Evaluation of innovative PLF and DT solutions in each country

Valeria Giovanetti, Marco Acciaro, Andrea Frongia



1

Sm@RT established focus groups in each country to assess the technology/innovative tool needs of sheep and goats producers regarding 6 topics and proposed about **50 solutions** that were subsequently voted by stakeholders during a transnational workshop.

Around 50 relevant digital tools selected

- 3D imaging
- Air ventilation system in milking room
- Auto-weighing drafting/ EID tag and recording database
- Automatic concentrate feeder according with EID ear tag readers
- Automatic feeder
- Automatic lamb milk feeder
- Automatic weighing scale
- Automatic weighing scale and sorting
- BioControl feed intake modules
- Bluetooth printer
- Breeding harness (testid)
- Connected shearing gun
- Connected feed distributor
- Camerap
- Dairy recording
- Digital weight + flow meter + EID
- Drone
- EID 3-way auto-drafter
- EID ear tags and readers in milking parlour
- EID handheld
- EID Stock Reader
- EID weighmate and auto-drafter
- Electronic milk flowmeters
- Embryo transplantation, frozen sperm insemination
- FECPM3 GC
- Feedbar (automatic) concentrate distributor in sheep/veal
- Feeding post/direct hay by electric crane
- Flock management
- Gatekeeper stock reader
- GPS collars
- Grasshopper
- Grassmeter
- Herd management software
- Improved ANDATA
- Lactosensor
- Location Network
- Milk machines for goat kids feeding
- Milk quality control by milk
- Milk quantity and milk quality control for health status of ewe
- Milking parlour 24 x 2
- Ovid (flock management software)
- PAC chambers (methane)
- Panel reader
- Pasture grazing RP
- Position data logger
- RFID LAMF tags (testid)
- Sheep recording system
- Sheep recording system (sheep Ireland)
- SmartPhone
- TOM K - sheep recording system
- Virtual forage (iodine) Software
- Webcams
- Weighhead Affix (XR3000 and XR500)
- Weighing + auto-drafter
- WOVN (Walk-Over-Weighing)

L. Depuille (EAAP, Lione 2023)

The most important for farmers were evaluated in each country

2

The **selected 'solutions to needs'** were evaluated by farmers at 2 different levels (**Digifarms** and **Innovative Farms, IF**) in order to provide tangible knowhow on practice and to allow the farmers to see, experience and understand in practice how the different technologies work on farms.

Digifarms: from researchers to farmers

Innovative farms: from farmer to farmers

Training sessions	Demo Days
2/ production type and country	3/ production type and country
~ 8-10 farmers each time	~ 2-6 farmers each time
Researchers:	Innovative farmer:
<ul style="list-style-type: none"> • present the functioning of technologies of the digifarm 	<ul style="list-style-type: none"> • presents the functioning of technologies of his private farm
Participants were able to:	Participants were able to:
<ul style="list-style-type: none"> • use the technologies in a real life situation • learn how to use them with animals • how to upload or download the collected information 	<ul style="list-style-type: none"> • ask practical questions • use the technology if possible • and discuss any issues

A series of **Training sessions** on each country's digifarm(s) were held to evaluate the innovative PLF and DT solutions in each country in parallel with **Demo days** on innovative farms to collate information on farmers' views.

	Estonia	France	Hungary	Ireland	Israel	Italy	Norway	UK
Training session	1	3	1	1	1	2	1	2
Demo Day	2	6	2	1	1	3	1	2





Digifarms (DF)

Please tick your answer

	1 (Not at all)	2 (No)	3 (Yes)	4 (Yes a lot)
1. Did you have the tool on your farm?				
2. Did you like it?				
3. Was it easy to use?				
4. Would you have the infrastructure needed to implement it?				
5. Could you implement it on your farm easily?				
6. Is it affordable to you?				
7. Could you justify investing in it?				
8. Do you think it would take long to pay it back?				
9. Do you understand better after training?				
10. Would you recommend to somebody else?				
11. Do you think you need more training/guides/YouTube video to use it more often?				

Before- After

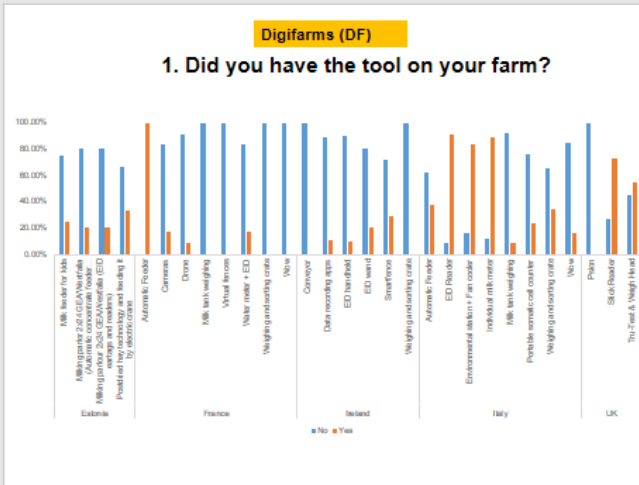
Name of the tool	Smiley - Yes	Neutral - Maybe	Grumpy - No
Number of answers			
Before - Would you put it on your farm?	😊	😐	😞

Innovative farms (IF)

Before- After

	Yes	No
Do you have the tool?		
Do you think it is worth investing in it?		
Would you like to implement on your farm?		
Level of practicality (1=low, 5=high)		

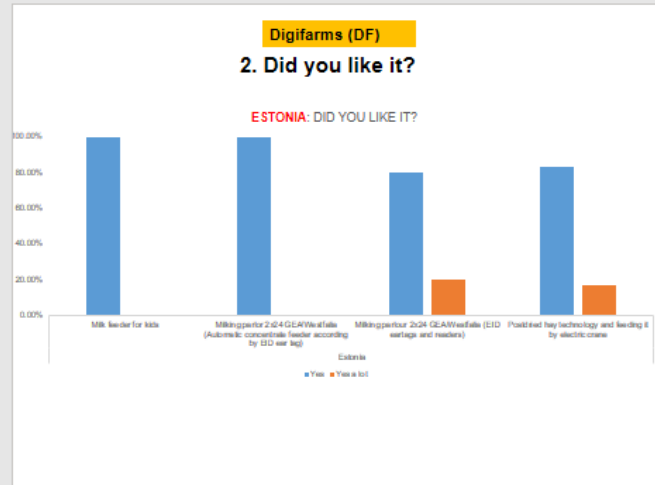
5

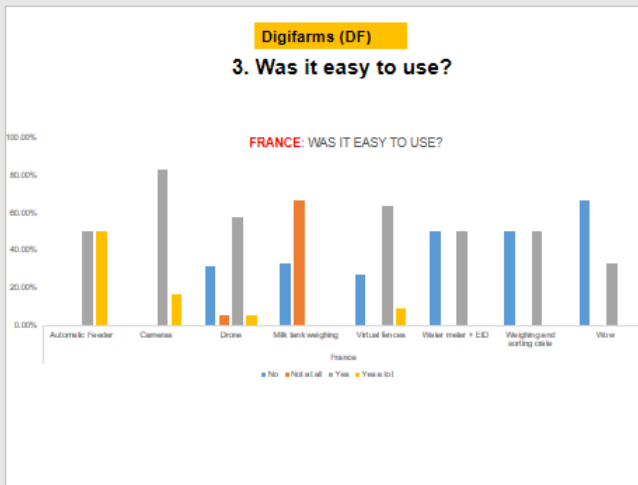


Digifarms (DF)

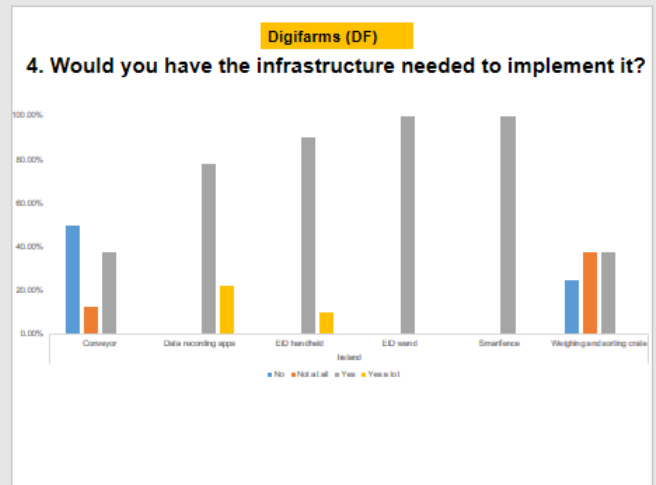
Estonia	France
<ul style="list-style-type: none"> Milk feeder for kids Milking parlor 2x24 GEA/Westfalia (Automatic concentrate feeder by EID ear tag) Milking parlor 2x24 GEA/Westfalia (EID eartags and readers) Postdried hay technology and feeding it by electric crane 	<ul style="list-style-type: none"> Automatic Feeder Cameras Drone Milk tank weighing Virtual fences Water meter + EID Weighing and sorting crate Wow
Ireland	UK
<ul style="list-style-type: none"> Conveyor Data recording apps EID handheld EID wand Smartfence Weighting and sorting crate 	<ul style="list-style-type: none"> Psion Stick Reader Tru-Test & Weigh Head
Italy	
<ul style="list-style-type: none"> Automatic Feeder EID Reader Environmental station + Fan cooler Individual milk meter Milk tank weighing Portable somatic cell counter Weighting and sorting crate Wow 	

6

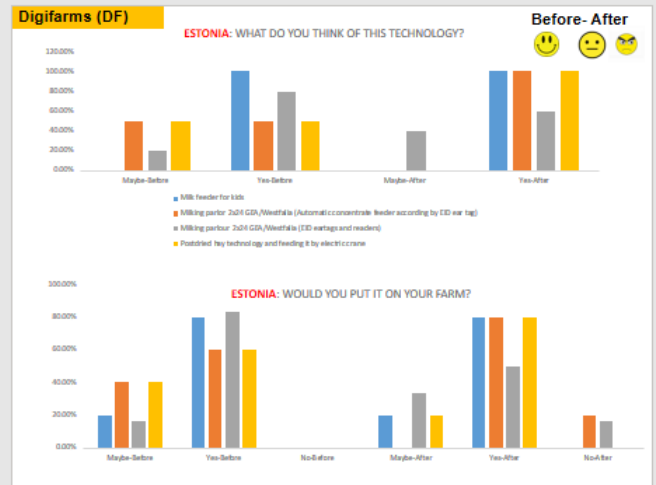
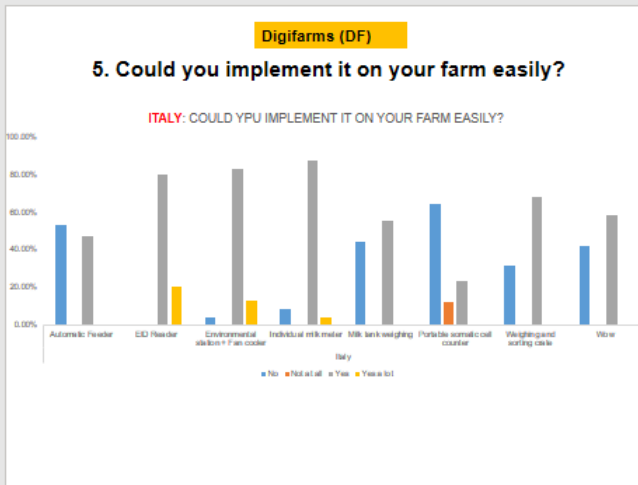




9

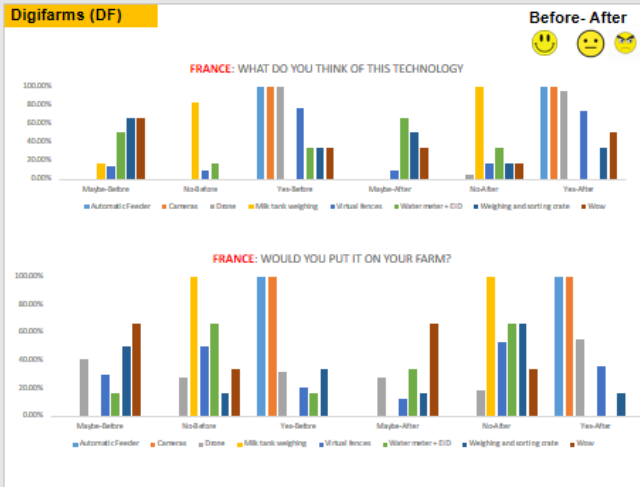


10



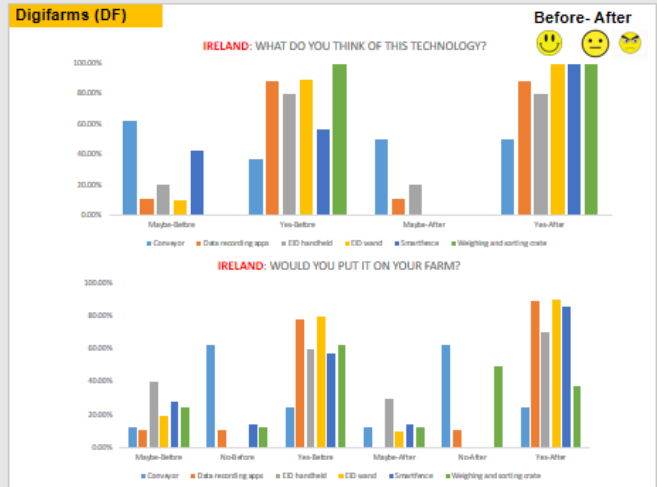


Digifarms (DF)



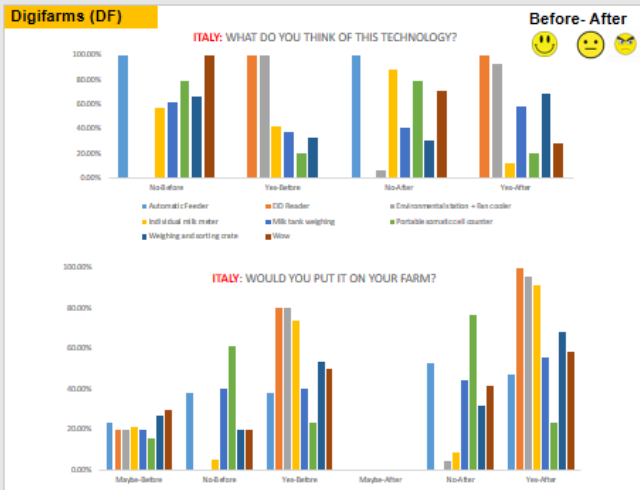
13

Digifarms (DF)

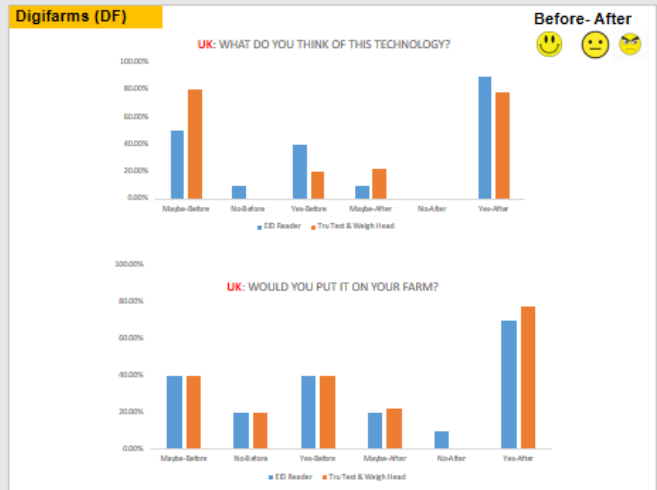


14

Digifarms (DF)



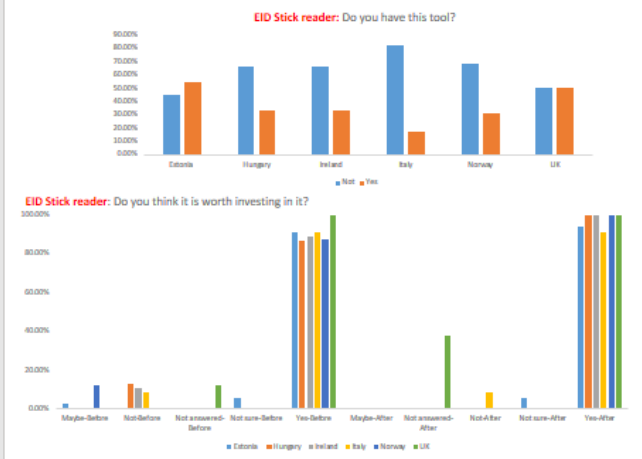
Digifarms (DF)





Innovative farms (DF)

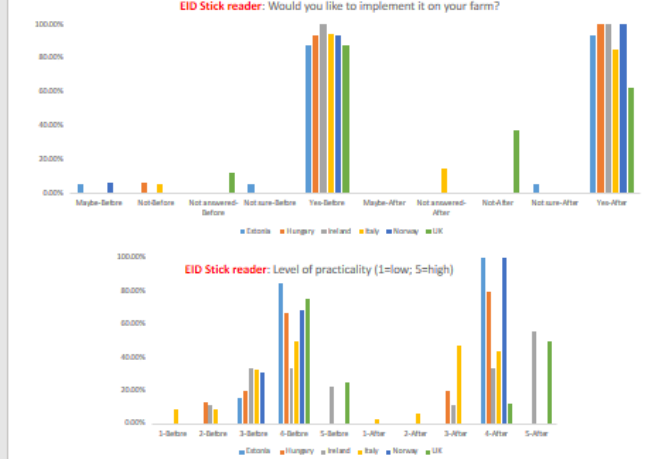
Before- After



17

Innovative farms (DF)

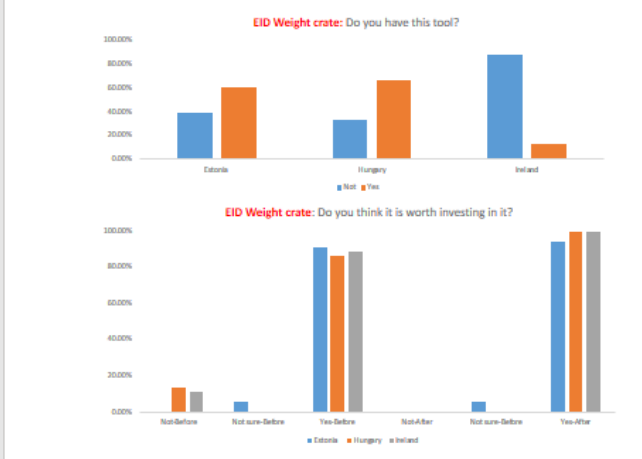
Before- After



18

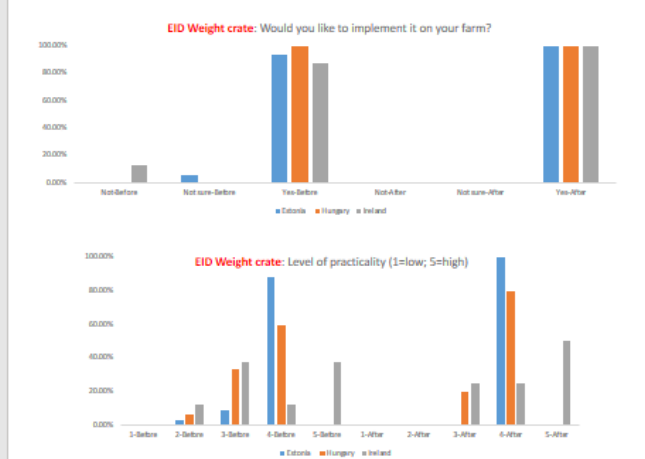
Innovative farms (DF)

Before- After



Innovative farms (DF)

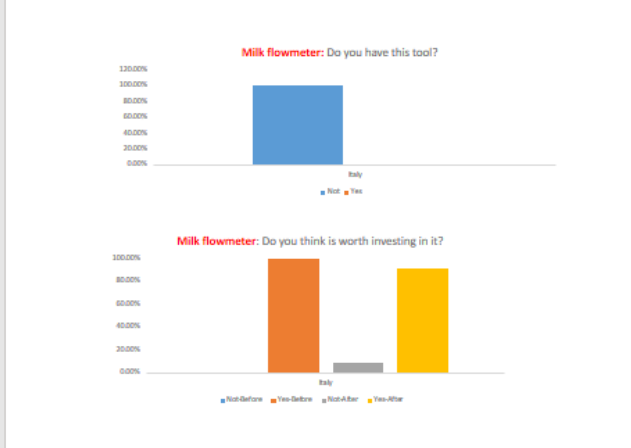
Before- After





Innovative farms (DF)

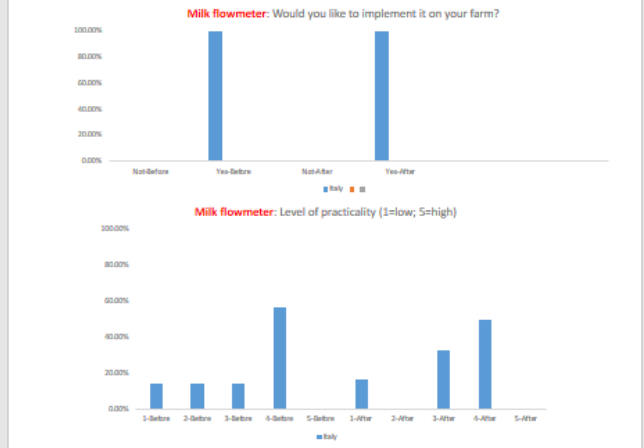
Before- After



21

Innovative farms (DF)

Before- After



22

Conclusions

- **Training sessions** and **Demo days** were a good occasion to build a bridge between researchers and farmers
- **Innovative farmers:** knowledge sharing from farmer to farmers has revealed to be successful
- **Digifarms:** remain a reference for those farmers who need to improve their knowledge on a specific technology





Videos from Israel - 2



2 videos:

- Presentation of a semi-extensive goats farm
- Presentation of a sheep & goats intensive farm



- You may have to 'activate the sound' when the video starts
- Any questions during the video, please use the Q&A function



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LUNCH!!!



Please be back in 1 hour



28



Welcome back!



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Agenda for today:



What	UK/Ireland time	France/Italy Norway/Hungary	Estonia/Israel
Welcome & Project update	9.00 - 9.15	10.00 - 10.15	11.00 - 11.15
Breakout sessions on technologies adoption	9.15 - 10.15	10.15 - 11.15	11.15 - 12.15
Presentation of Israeli sheep & goats' sectors (videos)	10.15-10.30	11.15-11.30	12.15-12.30
Feedback on technology farm demonstration days	10.30-11.00	11.30-12.00	12.30-13.00
Presentation of 2 Israeli farms and technology used (semi-extensive goats farm & sheep/goats intensive farm)	11.00 - 11.20	12.00 - 12.20	13.00 - 13.20
LUNCH ("1 HOUR")	11.20-12.20	12.20-13.20	13.20-14.20
Presentation of 2 Israeli farms and technology used (sheep dairy farm & intensive meat lambs farm)	12.20 - 12.30	13.20 - 13.30	14.20 - 14.30
Discussion on gaps between farmers' needs and available technologies	12.30 - 13.30	13.30 - 14.30	14.30 - 15.30
Feedback on technologies cost-benefits analyses	13.30 - 13.40	14.30 - 14.40	15.30 - 15.40
Project communication update	13.40-13.50	14.40-14.50	15.40-15.50
Conclusions & feedback	13.50 - 14.00	14.50 - 15.00	15.50 - 16.00



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Videos from Israel

2 last videos:

- Presentation of a sheep dairy farm
- Presentation of technology used on an intensive lamb meat farm



- You may have to 'activate the sound' when the video starts
- Any questions during the video, please use the Q&A function



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Gaps between needs & solutions

A bit of work now....

Step 1 – farmers' needs

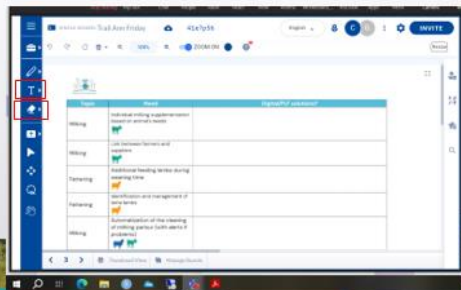
Step 2 – PLF solutions



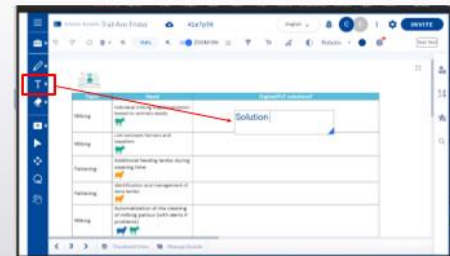
32

Whiteboard function – to add your ideas

Click on the link in the chat

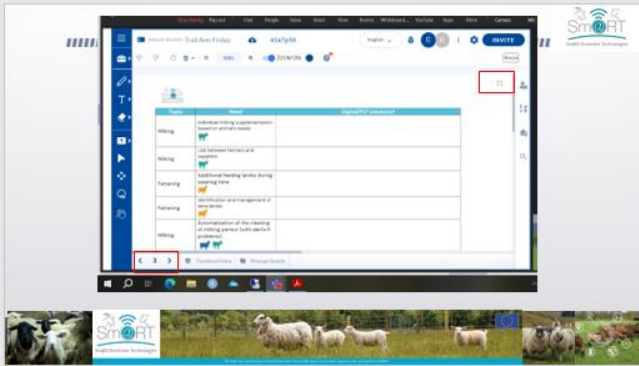


33

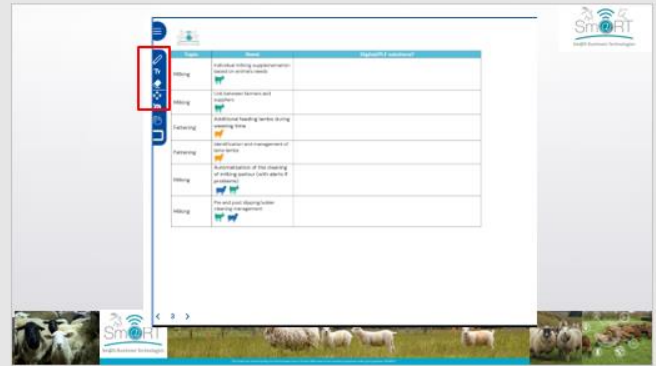


34





35



36

Whiteboard function – to add your ideas

- We will consider 3 whiteboards
- On each one, write your ideas next to the need
- Use 'chat' if you cannot write on the whiteboard

Ready??

37

Agenda for today:

What	UK/Ireland time	France/Italy Norway/Hungary	Estonia/Israel
Welcome & Project update	9.00 – 9.15	10.00 – 10.15	11.00 – 11.15
Breakout sessions on technologies adoption	9.15 – 10.15	10.15 – 11.15	11.15 – 12.15
Presentation of Israeli sheep & goats' sections (video)	10.15-10.30	11.15-11.30	12.15-12.30
Feedback on technology farm demonstration days	10.30-11.00	11.30-12.00	12.30-13.00
Presentation of 2 Israeli farms and technology used (semi-intensive goats farm & sheep/goats intensive farm)	11.00 – 11.30	12.00 – 12.30	13.00 – 13.20
LUNCH (*1 HOUR)	11.30-12.20	12.20-13.20	13.20-14.20
Presentation of 2 Israeli farms and technology used (sheep dairy farm & intensive meat lambs farm)	12.20 – 12.30	13.20 – 13.30	14.20 – 14.30
Discussion on gaps between farmers' needs and available technologies	12.30 – 13.30	13.30 – 14.30	14.30 – 15.30
Feedback on technologies cost-benefit analyses	13.30 – 13.40	14.30 – 14.40	15.30 – 15.40
Project communication update	13.40-13.50	14.40-14.50	15.40-15.50
Conclusions & Feedback	13.50 – 14.00	14.50 – 15.00	15.50 – 16.00

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Cost benefit analysis

Ann McLaren (SRUC)
30th January 2024

T3.2 Cost benefit analysis

- For solutions identified previously in WP3.
- Contain 4 pages of information
- So far – 25 have been completed
 - Those remaining will be finished shortly



T3.2 Cost benefit analysis

- Costs: running costs
 - Additional subscription fees



Technical support provided on farm after purchase?
Yes = 14, No = 10, N/A = 1

T3.2 Cost benefit analysis

- Costs
 - A range of costs involved – from nothing to over €15,000.



T3.2 Cost benefit analysis

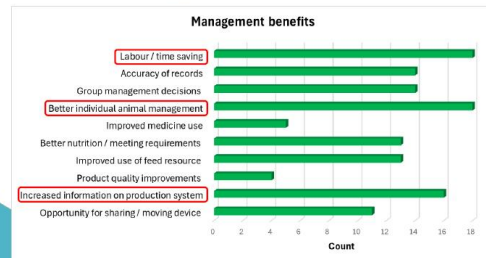
- Costs: Training requirements
 - All solutions (apart from 3) required some level of training



Additional technical advice required?
No = 13
Yes = 12

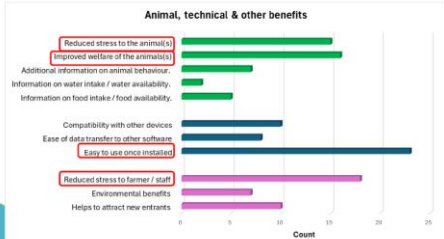
T3.2 Cost benefit analysis

- Benefits: Management



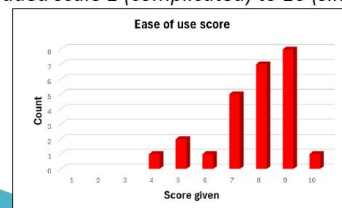
T3.2 Cost benefit analysis

- Benefits: Animal, technical & other



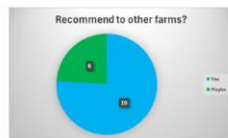
T3.2 Cost benefit analysis

- Overall summaries
 - Ease of use
 - Graded scale 1 (complicated) to 10 (simple)



T3.2 Cost benefit analysis

- Overall summaries
 - Based on the **benchmark farm** used for each analysis
 - May differ slightly depending on system or flock/herd size etc.
 - Value for money
 - Recommend for other types of farm





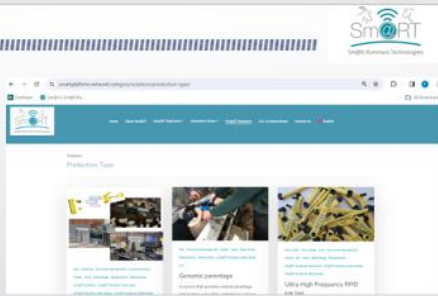
Website

www.smartplatform.network

Website re-organised
- country-specific information added

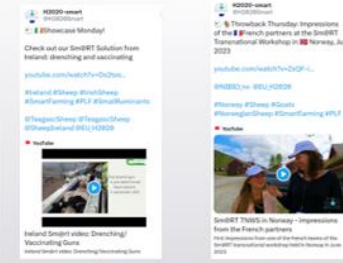
New sections added

- 3m@RT solutions
- 3m@RT outputs



41

Social media campaigns



42

X (Twitter) and Facebook



Instagram – pictures and reels (short videos)





H2020smart

Latest from H2020smart

Sm@RT - Presentation of technology lambs farm in Israel

150 subscribers, ~69 videos, 71,133 views

45

Newsletter

Sm@RT Platform Newsletter

304 subscribers in Dec 2023

linktr.ee/h2020smart

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Merchandise

Logo and templates created

- Caps, woolen hats & merino buffs & pens
- Soft banner for photos
- Pull ups
- Project leaflets

Slide 11 of 50 English (United Kingdom) Accessibility: Investigate

Summary of C&D in RP2 (n= 230)

Activity	Percentage
Validation	17%
Play	8%
Non-scientific and non-peer-reviewed publication (popularised publication)	2%
Organisation of a workshop	14%
Other	10%
Participation in activities organised jointly with other H2020 projects	3%
Participation to a conference	4%
Participation to a workshop	18%
Participation to an event other than a conference or a workshop	9%
Workshop	1%
Press release	3%
Social media	4%
Trade fairs/Trade show	4%
Training	2%

Display Settings

Future work

- Preparation of infographic depiction of each guideline/practice abstract
- Collate and disseminate solutions
- Network sustainability

49

Did you enjoy the day? Please answer the poll ☺

Merci beaucoup! A bientôt!

Thank you very much! Good bye!

Tusen takk! Ha det bra! Nagyon szépen köszönjük! Viszontlátásra!

Grazie mille! Arrivederci! תודה רבה לך! שלום!

Tänne vägal! Head aegal!

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