

Report of the first transnational workshop (TNWS 1)



Agris

Agence pour le développement agricole
Agence régionale pour le développement agricole

AGENCE REGIONALE POUR LE DEVELOPPEMENT AGRICOLE



INSTITUT DE L'ELEVAGE **idele**

INRAE

In Extenso

Innovation Croissance



Moredun



UNIVERSITY OF DEBRECEN



SRUC



Eesti Maaülikool

Estonian University of Life Sciences



teagasc

AGRICULTURE AND FOOD DEVELOPMENT AUTHORITY



NIBIO

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



12th of October
Zoom conference
10h30 – 12h30 GMT+1

TNWS1

OBJECTIVES

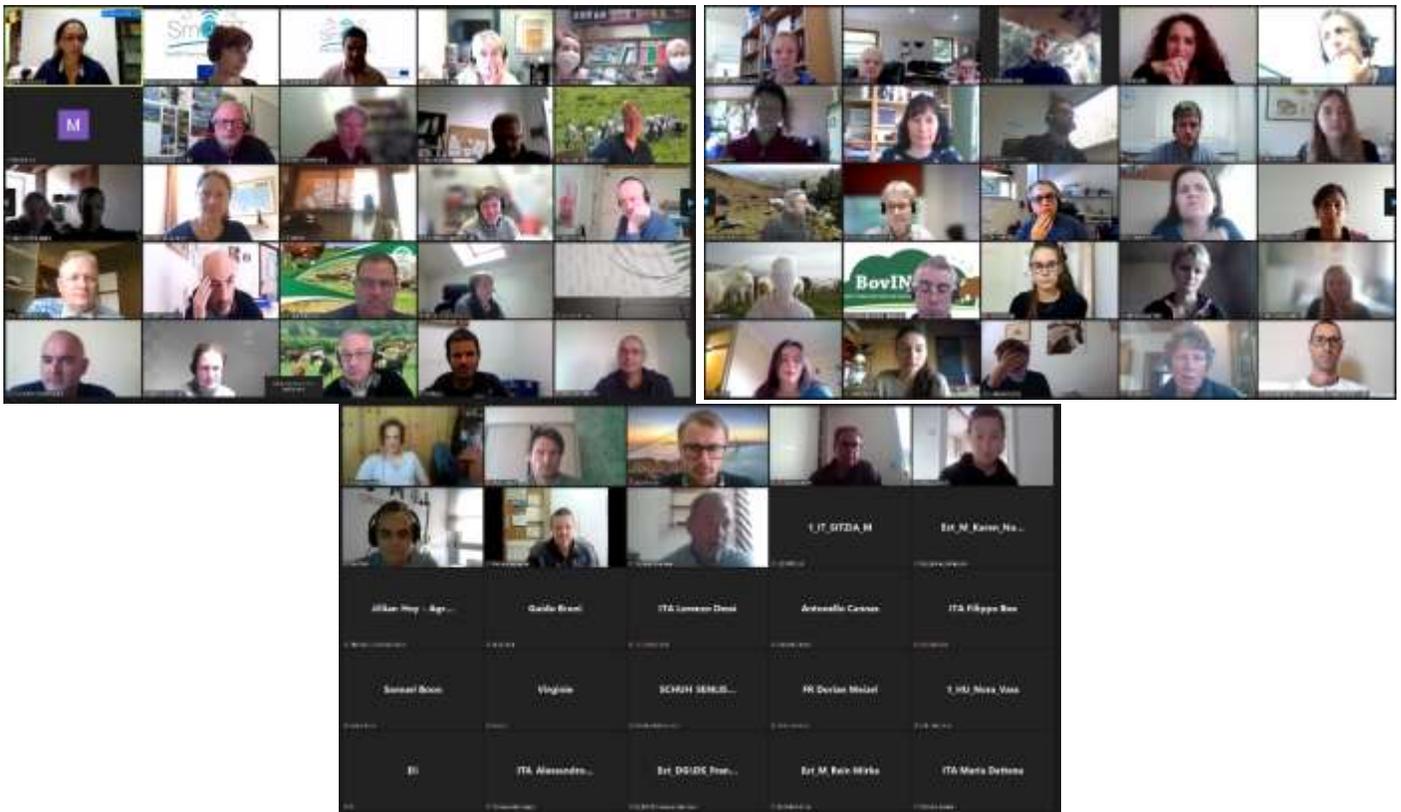
Three main objectives were identified for the first transnational workshop (TNWS 1):

1. Present Sm@RT project and the needs identified during all national workshops (NWS)
2. Create a first link between partners countries
3. Identify some solutions to the needs

ORGANISATION AND ATTENDEES

Due to the Covid, the original organisation which was a face-to-face meeting in Norway was replaced by a Zoom conference. The TNWS 1 took place virtually the 12th of October 2021 at 10:30 am GMT + 1 for 2 hours with a multi-lingual plenary session and a series of breakout sessions by language and production type. In total, there were 12 breakout rooms. The agenda of the meeting is detailed in annex 1.

A total of 104 people participated in this first TNWS, 16 from France, 14 from the UK, 5 from Ireland, 6 from Hungary, 7 from Norway, 20 from Estonia, 11 from Israel and 25 from Italy. More than a third of participants were farmers.



The slides used during the meeting are presented in annex 2.

NEEDS AND SOLUTIONS IDENTIFIED BY COUNTRY

During the plenary session, the project was presented to the participants, as well as the preliminary global results on the farmers' needs in terms of technology and digital innovations, based on the NWS results and global survey

The main cross-activity was then to start proposing solutions to the needs identified during the NWSs. In each breakout room (one per country and per production type), participants worked on the needs of two others countries/production.

Meat sheep		Dairy sheep		Dairy Goats	
Room	Needs	Room	Needs	Room	Needs
France	UK + HU	France	IT + EST	France	IT + NO
UK	IRE + NO	Italy	FR + EST	Italy	FR + EST
Ireland	FR + HU			Norway	IT + EST
Hungary	IRE + EST			Estonia	FR + IT
Norway	UK + IL				
Estonia	HU + FR				
Israel	IRE + FR				

NB: The French delegation had one breakout room for dairy sheep and goats.

The needs were subdivided in 5 main sections: 1) feeding/grazing, 2) health/welfare , 3) reproduction, 4) flock/herd management and 5) fattening and milking.

The synthesis of the reflections is presented below by topic:

Feeding / Grazing

Country	Production	Need	Solutions
Ireland		Fencing	<p><u>UK</u>: Virtual fencing</p> <p><u>Hungary</u>: Virtual fencing</p> <p><u>France</u>: mobile electrified fences (50m) with mobile stakes that fold and unfold, virtual fences (collars with GPS)</p>
		Deciding on feeding groups	
UK		Moving electric fences/lack of fence on hill	<p><u>France</u>: mobile electrified fences (50m) with mobile stakes that fold and unfold, virtual fences (collars with GPS)</p> <p><u>Norway</u>: Proposed the use of NoFence technology</p>
		Measuring grass height	<p><u>France</u>: Proposed the use of drone and modern camera technology</p> <p><u>Norway</u>: manual grassmeter or connected grassmeter</p>
France		Link between the state of the animals, feeding and distribution	<u>Ireland</u> : Having a good stockperson that can regularly monitor animal performance /BCS and is trained to do so
		Grazing monitoring (pasture optimisation, virtual fences, connected fences, grass growth...)	<u>Ireland</u> : Grazing monitoring can use software for grass growth monitoring, platometer/sward stick for measuring grass covers, sheep netting/smart fence for splitting paddocks and solar powered fences for remote grazing
		Link between different tools (interoperability)	
		Feeding transition between pasture and barn	
		Recording of feed intake times on pasture	
		Interoperability of grazing tools and with over tools (herd monitoring software)	
Hungary		Identification of sick animal, move animals in big lots	<p><u>France</u>: Remote-controlled gate, herding dog</p> <p><u>Ireland</u>: Using dogs and quads, having a good stockperson and having employees trained to identify sick animals.</p>

		Link between the state of the animals, feeding and distribution	<p><u>Estonia</u>: Feeding/BCS of ewes at weaning and at lambing and according grouping of ewes</p> <p><u>Ireland</u>: Having a good stockperson that can regularly monitor animal performance /BCS and is trained to do so</p>
Italy		Herbage availability and composition	<p><u>France</u>: satellite and drone to monitor grass growth</p> <p><u>Estonia</u>: use cultural pastures</p> <p><u>Norway</u>: Technology to decide best time of cutting grass for Optimizing feed quality</p>
		Pasture improvement and pasture management	<u>France</u> : virtual fences, GPS collars, accelerometers, app with grazing calendar
		Improvement of forage quality	<p><u>Estonia</u>: Use cultural pastures</p> <p><u>Norway</u>: Technology to decide best time of cutting grass for optimizing feed quality. New and quick analysis methods+ program that gives result to farmer. Can be sent with car when collecting milk</p>
		Establishment of homogeneous groups	
		Making fences, especially wolf free fences	<u>Italy</u> : electric fences
Estonia		Mowing grass under wireline	
		Availability of specialist feed	
		Predator problems	
		Availability of special feeds (concentrates) for milking goats	<u>France</u> : Small mobile factories on farm
		Grazing: fly control (organic needed)	<u>France</u> : Fly trap / Hoover
Norway		Lamb surveillance on pasture	
		Get information on behaviour on pasture (accelerometer information)	
Israel		Moving the animals in big lots	<u>Norway</u> : proposed solution: use of drones. Sheepdogs.



Identification of sick animal

Health / Welfare

	Production	Need	Solutions
Ireland		Identifying diseases issues	<p><u>Hungary</u>: video camera to record the behaviour of the animals</p> <p><u>Norway</u>: Early warning based on weather stations that detect higher probability for increased parasite load</p>
		Foot bathing/treating lameness	
UK		Early identification of sick animal	<p><u>Norway</u>: Early warning based on weather stations that detect higher probability for increased parasite load</p> <p><u>Hungary</u>: video camera to record the behaviour of the animals</p>
		Wrong dose of wormer/over-worming	<p><u>France</u>: Automatic drenching gun</p> <p><u>Norway</u>: Based on IR temperature and weight of the animal in a weighing crate the dosage is automatically calculated and administered. In the concentrate feeder.</p> <p><u>Hungary</u>: Forget to treat the whole flock with the same dose, take a representative faecal sample from approx 20% of the flock to get a picture about the infective parasite species and their resistance to wormers, establish a treatment plan</p>
France		Detection common parasites	<p><u>Norway</u>: Early warning based on weather stations that detect higher probability for increased parasite load</p> <p><u>Hungary</u>: video camera to record the behaviour of the animals</p>
		Individualization of the treatments / analysis on the farm	<u>Norway</u> : Based on IR temperature and weight of the animal in a weighing crate the dosage is automatically calculated and administered. In the concentrate feeder.
		Early detection of troubles in animal welfare	<u>Italy</u> : Webcam
		Monitor the distribution of the concentrates for each step of growth / each animal	
		Software to share information (on the farm and with technicians, veterinarians...)	
		Observation of changing behaviour	<u>Italy</u> : Webcam

Hungary		Training on existing tools	
		Early detection of health issues	<p><u>Norway</u>: Early warning based on weather stations that detect higher probability for increased parasite load</p> <p><u>Ireland</u>: Animal temperature detection devices or collars. New technology used in cattle for lung scoring that might be useful for sheep</p> <p>Having shelterbelt/runback when grazing, especially for catch crops.</p>
Italy		Prevention and early diagnosis of mastitis	
		Environmental conditions monitoring	
		Better knowledge of animal eco-environmental needs	
		Health checks of purchased animals	
Estonia		Large predators and birds of prey- ravens	
		Parasite treatment	<p><u>France</u>: Automatic drenching gun</p> <p><u>Norway</u>: Based on IR temperature and weight of the animal in a weighing crate the dosage is automatically calculated and administered. In the concentrate feeder.</p> <p><u>Hungary</u>: Forget to treat the whole flock with the same dose , take a representative faecal sample from approx 20% of the flock to get a picture about the infective parasite species and their resistance to wormers, establish a treatment plan</p>
		Ticks control	<u>Italy</u> : weather prevision to predict treatments
		Flies control	
		Tick control for goats	<u>Italy</u> : Weather prevision to predict treatments
		Foot trimming	
		Parasite warning system (from climate data?)	<u>UK</u> : ID disease - use of Bluetooth

		Udder health/mastitis	
Israel		(early) Identification of sick animal for a better follow (mastitis, worm, etc.)	<u>Norway</u> : use of sensors like temperature, heartrate, motion sensor. Indoors: sensors that can detect changes in bodyweight (Walk-over weight). May also utilize RFID antenna readers that give signal to farmer if one animal has not been detected at feeder, drinker etc over a certain amount of time
		How to separate the animals who are lame/ill/ need individual care?	

Reproduction

	Production	Need	Solutions
Ireland		Selecting/drafting ewes for rams/replacements	
		Birth records/ewe performance	<u>UK</u> : Bluetooth sensors to assign parentage
UK		How to integrate all data from different device in one device?	<u>Norway</u> : Software and data experts, big data technology. Get knowledge from other professions. The technology is already there
		Difficult to read tag/identify ewe from distance (when outside)	<u>Norway</u> : long range readers, antennae readers in tunnel that the animals run through <u>Hungary</u> : use drone and GPS tracking
France		Deseasoning monitoring (light treatment)	<u>Ireland</u> : investigate breeds that will come into heat out of season, also can use hormone treatment to manipulate cycle.
		Coordinate reproduction with sales	<u>Ireland</u> : Using coloured tags/discs for identifying replacement easily
		Develop ultrasound scanning to know how many lambs the ewe is carrying	<u>Italy</u> : Ecograph bracelet simple to use
		Dynamic Electronic Identification (UHF ?)	
		Deseasoning (light treatment)	<u>Italy</u> : Light treatments
		Knowing the availability of artificial insemination doses	
Hungary		Monitoring de-seasoning (light treatment)	<u>Ireland</u> : investigate breeds that will come into heat out of season, also can use hormone treatment to manipulate cycle.
		Coordinate reproduction with sales	<u>France</u> : rotating calendar <u>Ireland</u> : Using coloured tags/discs for identifying replacement easily
Italy		Early pregnancy diagnosis	
		Cycle and heat identification	
		Concentration of deliveries/kidding	<u>Estonia</u> : use two rams + Animal management during peripartum period – ewes have to be fed well enough and should receive concentrates before kidding.

		Animal management during peripartum period	
Estonia		Managing different mating groups	
		Getting new breeding material/animals	
		Target feeding of pregnant ewes	
		Lack of pregnancy scanning technicians	
		Lack of specialist knowledge for AI	
		How to synchronise (ovulation) without use of drugs?	
Norway		Detection of ewes in 'high heat' for timing of insemination (AI)	
Israel		Adapt feeding in intensive farming (no-grazing) and prolificity	<u>Norway</u> : automated concentrate feeder with RFID system. Roughage feed analysis and weighing the feed going into the system.

Flock/herd management

	Production	Need	Solutions
Ireland		Using complicated technology	
		Simple technology	
UK		Lack of support once you have bought all the kits	<u>Norway</u> : digifarms, farmers organisations can help run courses and share knowledge. Projects like this <u>Estonia</u> : Livestock Works both with Apple and Android + EID ear tags , readers+ weighing crate Prattley
		Recognising and/or weighing your sheep automatically	<u>Norway</u> : WOW, smart gates, RFID readers for identification, sorting gates. Electronic ID marking a prerequisite
France		Flock management software which integrate all data from devices	<u>Estonia</u> : Livestock Works both with Apple and Android + EID ear tags , readers+ weighing crate Prattley
		Robust tool	
		Identification of ewes for breeding (camera)	<u>Ireland</u> : Using EID LF readers to record animal weights and treatments, using software to create flock/animal profile.
		Monitoring of grazing (parasitism)	
		Valorisation of electronic identification	
Hungary		Flock management software which integrates all data from devices	<u>Ireland</u> : Using EID LF readers to record animal weights and treatments, using software to create flock/animal profile
		Easy transfer from one device to another	
Italy		Group formation	
		Target rationing	<u>Estonia</u> : Lactation curve prediction -> hard to predict. Should compare individual animals result from few last years. Individual milking supplement administration based on animal's needs – needs milk control system/program to know how much concentrates are needed
		Management of homogeneous groups by age and physiological stage of animals	

		Automatic data recording	
Estonia		Better use of EID tags	
		Foot-trimming	
		Shed environment (humidity) control is difficult	
		Each animal data is required to be recorded one by one	
		How to monitor kidding?	<u>Italy</u> : Regular ultrasound scanning + webcam
		Lack of performance testing	
	Norway		Knowhow related to use of data from Sheep recording system
Israel		Recognizing and/or weighing your sheep automatically	<u>Norway</u> : long range RFID or similar electronic ID readers. GPS positions on rangeland grazing. Walk-over-weights. May also utilize RFID antenna readers that give signal to farmer if one animal has not been detected at feeder, drinker etc over a certain amount of time.

Fattening

	Production	Need	Solutions
Ireland		Weighing lambs	<u>Norway</u> : RFID identification, smart sorting gates on electronic weight system <u>France</u> : automatic weighing or Walk over Weighing (WoW) and autosorter
		Ration formulation	
UK		Drafting fat lamb	<u>France</u> : Table with references <u>Norway</u> : RFID identification, smart sorting gates on electronic weight system
		Setting-up weighing scales	<u>Norway</u> : Walk-over-weights implemented in floors or in permanent holding pens.
France		Outdoor condition / barn condition to monitor / adapt	
		Lamb sorting, manipulations, moving	<u>Estonia</u> : EID ear tags+ readers + weighing crate, Prattley
Hungary		Lamb weighing (in barn and also in pasture)	<u>France</u> : automatic weighing or Walk over Weighing (WoW) and autosorter <u>Ireland</u> : Using an EID autosorter weigh crate to draft fat lambs. Can tag a subsample of lambs for monitoring growth rates.
		Lamb sorting, manipulations, moving	<u>France</u> : table with references <u>Estonia</u> : EID ear tags+ readers + weighing crate, Prattley
Estonia		Parasite treatment	
		Weaning time rations	
Norway		Parasite detection	UK: In terms of parasite forecasting does Norway have the equivalent of UK SCOPS Nematodirus forecast?
Israel		Lamb sorting, manipulation and moving	<u>Norway</u> : smart gates, RFID readers for identification, sorting gates. Electronic ID marking a prerequisite
		Lamb weighing (in barn and also in pasture)	<u>Norway</u> : WoW, RFID electronic weights, portable weights

Milking

	Production	Need	Solutions
France		Need of a software intuitive to have all information of the milking	
		Need progress on automatic release	
		Early detection of transformation troubles / References	
		Time organisation	<u>Italy</u> : Automatic release at milking
Italy		Individual milk production	France: Milk counter with app, milk control
		Ease and milking times	
		Lactation curve prediction	Estonia: hard to predict. Should compare individual animals result from few last years. Individual milking supplement administration based on animal's needs – needs milk control system/program to know how much concentrates are needed
		Individual milking supplement administration based on animal's needs	
Estonia		Lack of spare part for milking machine	<u>Italy</u> : buy in internet
		Lack of labour force	<u>Italy</u> : sequential animal's capture+ automatic release of machine milking
		Repair and maintenance is complicated	
		Lack of labour force	Italy: Sequential animal's capture + automatic release of machine milking

ANNEXES

Annex 1 - agenda

Timing	Activity	Who/How
5'	Welcome of participants. Have a map on a slide to show who is where.	Each NF will welcome their delegation in their own language <i>(take a screenshot of participants)</i>
10'	Ice breaker using poll function in Zoom Question: Do you have sheep or goats?	Using poll function in Zoom.
15'	Project presentation – multi-language version	CMD to prepare slides in English and to read them during the TNWS All to add their translation on the slides prior to the TNWS
10'	Multi-language version: present the needs identified by each country by category and production	Laurence to start the excel file All to complete with their needs CMD to prepare the slides All to translate
40'	Workshop – breakout rooms by country in their own language NF to reiterate the aims to the TNWS: 1) Getting to know/understand the needs of the other farmers compared to your own country's needs 2) Sharing your knowledge to help other farmers Activity: 1) consider a series of needs (from other countries and other productions) and propose solution from your own country/experience 2) NF to write down main solutions proposed and send to CMD (for the next part)	Each NF (plus colleagues) and their stakeholders NFs to discuss prior and establish a list to work from at the TNWS. Lists will be a mixture of needs category, countries and production –
10'	Back in plenary session – presentation of 1-2 videos of tools used in some countries by farmers. Ideas: Drone in Norway?	NF to suggest ideas. Videos without any words. CMD + NF to prepare next activity during these videos
20'	Feedback session in plenary: Use a white board and show all solutions identified by breakout rooms. By country. Each NF picks one solution to their own need proposed by another country and read it in their own language.	CMD to find a suitable whiteboard system -> used Miro. Mixture of English and other languages

	Opportunity for farmers to see how their needs can be answered by other countries.	
10'	<p>End meeting – in English but with translations on slides</p> <ul style="list-style-type: none"> - Explain that more work will be done to refine the solutions to the needs at the next NWS - Thank again the farmers and insist on the importance of their views and knowledge - Mention the next TNWS in France in January - Present visually the Digifarms (1 slide per type of Digifarms) – if time 	CMD to start the slides with the English – all to translate.
5'	<p>Exit poll to rate the event:</p> <p>Use zoom poll and ask:</p> <ul style="list-style-type: none"> - Did you enjoy the event? 	Put comments in the chat

Annex 2 - slides



The project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement 10101971

Sm@RT - Small Ruminant Technology

First Transnational Workshop – 12th October 2021






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



	We regret not being able to organise a face to face meeting! We know that online meetings are not ideal to encourage exchanges
	Nous regrettons de ne pouvoir nous réunir en physique et nous savons qu'une réunion en ligne n'est pas le plus favorable pour le partage
	Sajnáljuk, hogy nem tudtuk ezt a találkozót személyesen megrendezni! Tudjuk, hogy az online találkozók nem helyettesíthetik a személyes találkozókat
	Ci dispiace non poter organizzare un incontro in presenza! Sappiamo che gli incontri online non sono l'ideale per incoraggiare gli scambi
	Meil on kahju, et me ei saa organiseerida seda kokkusaamist näost näkki kohtumisenä! Me teame, et online koosolek ei ole ideaalne julgustamaks kogemuste vahetust
	אנו מצטערים על כך שלא הצלחנו לארגן מפגש פנים אל פנים! אנו יודעים שפגישות מקוונות אינן אידיאליות לעידוד חילופי דברים
	Vi skulle helst arrangert et fysisk møte! Vi er klar over at et virtuelt møte ikke er det beste når vi skal utveksle erfaringer



	But we hope you'll have a good time and you'll have interesting take-home messages after this meeting
	Mais nous espérons que vous passerez un bon moment et que vous en tirerez quelque de bénéfique de cet atelier
	De reméljük jól fogja érezni magát és hasznosnak találja majd
	Ci auguriamo che apprezzerai comunque e che trovi interessanti spunti in questo incontro
	Me loodame, et Teile meeldib meie kohtumine ja Te saate koju viia huvitavaid sõnumeid sellelt kohtumiselt
	אבל אנו מקווים שיהיה מוצלח ותצאו עם תובנות ומידע מעניינים מהפגישה
	Men vi håper du får en god opplevelse og at det blir intereante diskusjoner etter dette møtet.





	Hopefully, the next transnational workshop will be face to face!
	Nous espérons que le prochain atelier international se fera en présentiel!
	Reméljük a következő transznacionális workshop-ot már személyes formában sikerül megrendezni!
	Ci auguriamo che il prossimo workshop transnazionale sia in presenza
	Loodetavasti järgmine rahvusvaheline workshop saab toimuma näost näkku kohtumisena
	בתקווה, הסדנה הבין-לאומית הבאה תהיה פנים אל פנים
	Vi håper at neste internasjonale arbeidsmøte blir fysisk!



	The meeting will be structured in 6 sections
	Notre réunion sera structurée en 6 temps
	A találkozó 6 részből fog állni
	Il meeting sarà strutturato in 6 sezioni
	Töökoosolek on jagatud 6 sektsiooni
	המפגש יהיה בנוי מ-6 חלקים
	Møtet organiseres i 6 ulike deler





	1. Quick presentation of the project and 2. Presentation of the needs and challenges identified during the national workshops
	1. Présentation rapide du project et 2. Présentation des besoins et attentes identifiés pendant les ateliers nationaux
	1. A projekt gyors bemutatása és & 2. A hazai workshop-ok során azonosított igények és kihívások bemutatása
	1. Veloce presentazione del progetto e 2. Presentazione dei fabbisogni identificati durante il workshop nazionale
	1. Lühike projekti tutvustus; Sektori vajaduste ja väljakutsete tutvustamine, mis selgusid Teie poolt eelneval rahvuslikul töökoosolekul
	1. הצגה מהירה של הפרויקט ו 2. הצגת הצרכים והאתגרים שזוהו במהלך הסדנאות בכל מדינה ומדינה
	1. Kort presentasjon av prosjektet og 2. Presentasjon av behov og utfordringer som ble diskutert på nasjonale arbeidsmøter



	3. Workshop in breakout rooms sessions
	3. Ateliers en groupes dans les différentes 'salles'
	3. 'Breakout room' rész
	3. Gruppi di lavoro nelle stanze
	3. Töökoosolek „breakout rooms“ sessioonidel
	3. סדנאות בחדרים נפרדים
	3. Arbeidsmøte i 'breakout rooms'



	4. Short interlude with example of technologies (videos)
	4. Petite pause avec des exemples de technologies (vidéos)
	4. Videók
	4. Breve intermezzo con esempi di tecnologia (video)
	4. Lühike vahepala uutest tehnoloogiast (videod)
	4. הדגמות קצרות של טכנולוגיות (סרטונים)
	4. Kort presentasjon av teknologi (video)

	5. Feedback session from the breakout rooms and 6. Conclusions
	5. Retours sur les discussions des 'salles' et 6. Conclusions
	5. Visszajelzések a breakout room-ból & 6. Összegzés
	5. Sessione di feedback dai gruppi di lavoro
	5. Tagasiside sessioon, mis tehti „breakout rooms „ sessioonil
	5. מפגש משוב מהסדנאות בחדרים הנפרדים 6. מסקנות
	5. Tilbakemelding /oppsummering fra 'breakout room' og 6. Konklusjon



Sm@RT - Small Ruminant Technology



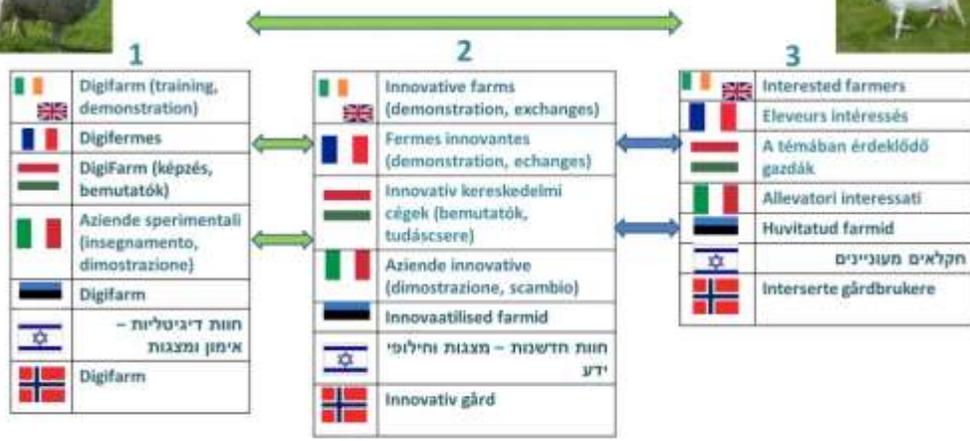
	Sm@RT is a thematic network financed by the European Union
	Sm@RT est un réseau thématique financé par l'Union Européenne
	A Sm@RT projekt az Európai Unió által finanszírozott tematikus hálózat
	Sm@RT è una rete tematica finanziata dall'Unione Europea
	Sm@Rton teemaatliline võrgustik, mida finantseeritakse EÜ poolt
	Sm@RT היא רשת נושאית הממומנת על ידי האיחוד האירופי
	Sm@RT er et tematisk nettverk finansiert av EU



	Objective 1: To create a European network around the use of PLF and digital technologies in small ruminants
	Objectif 1. Créer un réseau européen autour des nouvelles technologies pour les petits ruminants.
	1. célkitűzés: Egy európai hálózat létrehozása a PLF (Precision Livestock Farming) és a digitális technológiák kiskérődzőkben történő alkalmazása köré
	Obiettivo 1: Creare un Network Europeo riguardo l'uso della Zootecnia di precisione (PLF) e delle tecnologie digitali (DT) nei piccoli ruminanti
	Eesmärk 1: Luua üleuroopaline võrgustik uute tehnoloogiate kasutajate vahel väikemäletsejate sektoris
	מטרה 1: יצירת רשת אירופאית סביב השימוש בטכנולוגיות PLF וטכנולוגיות דיגיטליות במעלי גירה קטנים
	Mål 1: Å etablere et europeisk nettverk om bruk av teknologi hos småfe



	Objective 2: To encourage knowledge exchange, new technologies adoption and communication between farmers and stakeholders of the sheep/goats sectors.
	Objectif 2: encourager le partage, l'adoption de nouvelles technologies et les échanges entre les différents acteurs des filières de petits ruminants.
	2. célkitűzés: A tudáscsere, az új technológiák bevezetésének valamint a gazdálkodók és a juh-/kecskéagazat érdekelt felei közötti kommunikáció ösztönzése.
	Obiettivo 2: Incoraggiare lo scambio di conoscenze, l'adozione di nuove tecnologie e la comunicazione tra allevatori e portatori d'interesse nel settore dei piccoli ruminanti
	Eesmärk 2: Julgustada teadmiste vahetust, uute tehnoloogiate ülevõtmist ja lamba/kitsekasvatuse tegevate farmerite/loomaaomanike vahelist kommunikatsiooni
	מטרה 2: עידוד חילופי ידע, אימוץ טכנולוגיות חדשות ותקשורת בין חקלאים ובעלי עיין במגזר הכבשים/עזים.
	Mål 2: Å oppmuntre til kunnskapsutveksling, bruk av ny teknologi og kommunikasjon mellom gårdbrukere og andre aktører i småfesektoren.



January 2021



Dec 2023

	Sm@RT is built on 5 steps and will run until December 2023
	Sm@RT est construit en 5 étapes et s'achèvera en décembre 2023
	A Sm@RT 5 lépésre épül, és 2023 decemberében ér véget
	Sm@rt è composto da 5 passaggi e durerà fino a dicembre 2023
	Sm@RT on üles ehitatud 5 astmeliselt ja kestab kuni detsembrini 2023
	2023 בנוי מ-5 שלבים ויימשך עד דצמבר 2023
	Sm@RT bygger på 5 steg og vil vare til desember 2023

January 2021



Dec 2023

	1a: Identification of farmers needs 1b: Inventory of corresponding PLF/digital technologies
	1a: Identification des besoins des éleveurs 1b: Inventaires des technologies existantes
	1a: A gazdálkodók igényeinek azonosítása 1b: A megfelelő PLF/digitális technológiák ismertetése
	1a: identificare i fabbisogni degli allevatori 1b: Redigere un inventario di tecnologie adatte a soddisfare i fabbisogni
	1a: farmerite vajaduste identifitseerimine 1b: Uute täppispidamise ja digitehnoloogia te inventuur
	1a: זהו צרכי החקלאים 1b: מלאי של טכנולוגיות דיגיטליות מקבילות
	1a: Identifisere ønsker og behov fra gårdbrukere 1b: Liste over aktuell/egnet teknologi

January 2021



Dec 2023

	Step 2: Selection of PLF/digital technologies suitable to the different contexts and countries
	Etape 2: sélection des nouvelles technologies adaptées aux différents contextes et pays.
	2. lépés: Az eltérő környezeteknek és országoknak megfelelő PLF/digitális technológiák kiválasztása
	Step 2: Selezionare le tecnologie adatte a differenti contesti e nazioni
	2 etapp: Sobivate täppispidamise/digitehnoloogia valik mis sobiks teatud kontekstis ja riigis
	שלב 2: בחירת טכנולוגיות דיגיטליות המתאימות להקשרים ולמדינת השוטת
	Steg 2: Valg av teknologi egnet i ulike sammenhenger og land



	Step 3: Farmers and practitioners' barriers, testimonies
	Etape 3: Témoignages et avis des éleveurs sur les solutions proposées
	3. lépés: Gazdálkodók és a szektorban részt vevők nehézségei
	Step 3: Identificare le barriere all'utilizzo delle tecnologie da parte degli allevatori, raccogliere testimonianze
	Etapp 3: Farmerite, praktikute tökked ja testimonies?
	שלב 3: חסמים של חקלאים ומגדלים, עדויות
	Steg 3: Flaskehalsar for å ta i bruk teknologi, fra gardbrukeren sin side



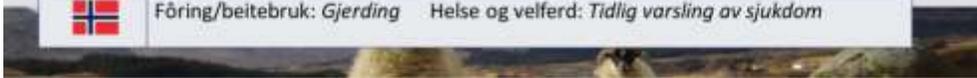
	Farmers' needs regarding technologies: we did a global survey and a national workshop
	Sur les besoins et attentes des éleveurs, nous avons fait une enquête globale et des ateliers nationaux
	A gazdák igénye technológiai szempontból: erre egy globális felmérés és egy hazai workshop keretein belül kerestük a választ
	Fabbisogni degli allevatori riguardo le tecnologie: abbiamo fatto un sondaggio globale e un Workshop Nazionale
	Talunike vajadused tehnoloogiate osas: oleme teinud globaalse uurimuse ja rahvusliku töökoosoleku
	צרכי החקלאים בנוגע לטכנולוגיות: עשינו סקר גלובלי וסדנה לאומית
	Gårdbrukerne sine behov for teknologi: Vi har gjennomført en spørreundersøkelse i de ulike landene og et nasjonalt arbeidsmøte

	In national workshop, we asked: <i>In my job, what is difficult/time-consuming, and could be done in a more efficient way?</i>
	Lors des ateliers nationaux, nous avons demandé aux éleveurs: <i>dans votre métier, qu'est-ce qui est difficile et chronophage?</i>
	A hazai workshop-on a következő kérdésre kerestük a választ: <i>A munkában mi a bonyolult/iddőigényes feladat és az egy hatékonyabb módon végrehajtható lenne?</i>
	Nel Workshop Nazionale abbiamo chiesto: <i>Nel mio lavoro, cosa è difficile/noioso/richiede tempo e potrebbe essere fatto in modo più efficiente, meno faticoso o veloce?</i>
	Rahvuslikul töökoosolekul küsisime: <i>Mis on raske, töömahukas ja mis võiks teha palju efektiivsemal viisil?</i>
	בסדנה המקומית שאלנו: בעבודה שלי, מה קשה/גוזל זמן, וניתן לעשות זאת בצורה יעילה יותר?
	På det nasjonale arbeidsmøtet spurte vi: <i>I min jobb, hva er vanskelig/tar lang tid, og kunne bli gjort raskere?</i>

	For a) feeding/grazing; b) health & welfare; c) flock/herd management; d) reproduction; e) fattening; f) milking
	Pour a) l'alimentation; b) la santé et bien-être; c) la gestion du troupeau; d) la reproduction; e) l'engraissement; et f) la traite
	A következő témakörökhöz kapcsolódóan: a) etetéshez/legeltetéshez; b) egészség és jólét; c) állomány/állomány kezelése; d) szaporodás; e) hizlalás; f) fejés
	Per a) Alimentazione/Pascolamento; b) Salute & Benessere; c) Gestione del gregge; d) Riproduzione e) Mungitura
	a) söötmine/karjatamine; b) tervis/heaolu; c) karja management; d)taastootmine; e) tallekasvatus; f) lüpsmine
	עבור א) האכלה/מרעה; ב) בריאות ורווחה; ג) ניהול צאן/עדר; ד) רבייה; ה) פיטום; ו) חליבה
	For a) føring/beitebruk, b) helse og velferd, c) besetningsstyring, d) avl, 3) slutføring/oppføring, f) melking



	Feeding/grazing: <i>Fencing</i>	Health & welfare: <i>Early detection of diseases</i>
	Alimentation: <i>Clôtures</i>	Santé et bien-être: <i>Détection précoces des maladies</i>
	Etetés/legeltetés: <i>Bekerítés</i>	Állategészségügy és -jólét: <i>A betegségek korai felismerése</i>
	Alimentazione/Pascolamento: <i>Recinzioni</i>	Salute e Benessere: <i>Diagnosi precoce delle malattie</i>
	Söötmine/karjatamine: <i>Tarastamine</i>	Tervis ja heaolu: <i>varane haiguste avastamine</i>
	גילוי מוקדם של מחלות	בריאות ורווחה: גידור
	Føring/beitebruk: <i>Gjerding</i>	Helse og velferd: <i>Tidlig varsling av sjukdom</i>



	Flock management: <i>lack of support for using the tools</i>
	Gestion du troupeau: <i>manque de support pour utiliser les outils numériques</i>
	Telepírányítás: <i>eszközök használatának az ösztönzésének a hiánya</i>
	Gestione del gregge: <i>mananza di assistenza per l'utilizzazione delle tecnologie</i>
	Karja management: <i>toetuste puudumine uute täppispidamise/digitehnoloogiliste seadmete kasutamiseks</i>
	ניהול צאן: <i>חסר תמיכה בשימוש בכלים</i>
	Besetningsstyring: <i>Manglende veiledning i bruk av informasjon</i>





	Reproduction: <i>Animal selection</i> Fattening: <i>Lamb weighing</i>
	Reproduction: <i>sélection des animaux</i> Engraissement: <i>Pesée des agneaux</i>
	Szaporodás: az állatok szelekciója Hízalás: Bárányok mérlegelése
	Riproduzione: <i>selezione degli animali</i> Ingrasso: <i>peso degli agnelli</i>
	Taastootmine: <i>Loomade selektsioon</i> Tallekasvatus: <i>Tallede kaalumine</i>
	רבייה: בחירת בעלי חיים השמנה: שקילת בבשים
	Avl (reproduksjon): <i>Seleksjon av dyr</i> Oppföring (slutfööring): <i>Veiling av lam</i>



	Feeding/grazing: <i>Pasture monitoring</i> Health & welfare: <i>Early diagnosis of mastitis</i>
	Alimentation: <i>gestion du pâturage</i> Santé et bien-être: <i>détection précoce des mammites</i>
	Eetés/legeltetés: <i>Legelő monitorozás</i> Állategészségügy és -jólét: <i>A tőgygyulladás korai diagnosztizálása</i>
	Alimentazione/Pascolamento: <i>Monitoraggio del pascolo</i> Salute e benessere: <i>diagnosi precase delle mastiti</i>
	Söötmine/karjatamine: <i>karjamaade monitooring</i> Tervis & heaolu: <i>varane mastiidi diagnoosimine</i>
	האכלה/מרעה: ניטור מרעה בריאות ורווחה: אבחון מוקדם של מסטיטיס
	Föring/beitebruk: <i>Kunnskap om beite</i> Helse og velferd: <i>Tidlig varslng mastitt</i>



	Flock management: <i>Group/batch formation</i>
	Gestion des troupeaux: <i>Création des lots</i>
	Telepírányítás: <i>Csoportok létrehozása</i>
	Gestione del gregge: <i>formazione dei gruppi</i>
	Karja management: <i>gruppide/rühmade moodustamine</i>
	ניהול צאן: יצירת קבוצות
	Besetningsstyring: <i>Gruppering/sortering av dyr</i>



	Reproduction: <i>Early pregnancy diagnosis</i> Milking: <i>milking machine maintenance</i>
	Reproduction: <i>échographie précoce</i> Traite: <i>entretien des machines à traire</i>
	Szaporodás: <i>Korai vemhesség diagnosztizálása</i> Fejés: <i>fejőgép karbantartása</i>
	Riproduzione: <i>diagnosi precoce di gravidanza</i> Mungitura: <i>macchina mungitrice</i>
	Taastootmine: <i>varane tiinuse diagnoosimine</i> Lüpsmine: <i>piimaseadmete hooldamine</i>
	רבייה: <i>אבחון הריון מוקדם</i> חליבה: <i>תחזוקת מכונת החליבה</i>
	Avl (reproduksjon): <i>Drektighetskontroll</i> Melking: <i>Vedlikehold melkemasin</i>



	Feeding/grazing: <i>Forage quality</i> Health & welfare: <i>Early detection of health issues</i>
	Alimentation: <i>Qualité des fourrages</i> Santé et bien-être: <i>détection précoce des troubles sanitaires</i>
	Etetés/legeltetés: <i>takarmány minőségi problémái</i> Állategyógyászat és -jólét: <i>betegségek korai diagnosztizálása</i>
	Alimentazione/Pascolamento: <i>Qualità del foraggio</i> Salute e benessere: <i>diagnosi precoce dei problemi sanitari</i>
	Söötmine/karjatamine: <i>Rohusööda kvaliteedi küsimused</i> Tervis ja heaolu: <i>varane haiguste tõrje</i>
	האכלה/מרעה: <i>איכות מזונת</i> בריאות ורווחה: <i>גילוי מוקדם של בעיות בריאות</i>
	Fôring/beitebruk: <i>Fôrkalitet</i> Helse og velferd: <i>Tidlig varsling sjukdom/helse</i>



	Reproduction: <i>Optimisation of AI</i> Milking: <i>Lack of references on milking tools</i>
	Reproduction: <i>Utilisation de l'IA</i> Traite: <i>Manque de références sur les outils</i>
	Szaporodás: <i>AI optimalizálás</i> Fejés: <i>fejőeszköz referencia hiány</i>
	Riproduzione: <i>ottimizzazione dell'inseminazione artificiale</i> Mungitura: <i>Mancanza di riferimenti sulle macchine mungitrici</i>
	Taastootmine: <i>Kunstliku seemenduse optimeerimine</i> ; Lüpsmine: <i>Piimaseadmete alase kirjanduse vähesus</i>
	חוסר ברפרנסים על כלי החליבה: <i>חליבה רבייה: אופטימיזציה של</i>
	Avl (reproduksjon): <i>Optimalisere semin</i> Melking: <i>Manglende info om melkeutstyr</i>



	Now, a bit of work.... in breakout rooms. We will allocate you automatically. Please be patient.
	Maintenant, travaillons un peu... en groupes. Nous allons vous y mettre automatiquement. Merci de votre patience.
	Most egy kis munka.... a „breakout room”-ban. Automatikusán áthelyezzük Önt. Kérjük várjon.
	Adesso, un pò di lavoro..... nelle stanze. Vi assegneremo automaticamente. Abbiate pazienza.
	Nüüd, siis veidi tööd...breakout ruumis. Me jagame Teid automaatselt. Olge kannatlikud.
	עכשיו, קצת עבודה ... בחדרים נפרדים. אנו נמנה אותך באופן אוטומטי. אנא התאזר בסבלנות.
	Nå – litt arbeid... i 'breakout rooms'. Vi sender dere automatisk til ulike rom. Det tar litt tid...



- | | |
|---------------------------------|-----------|
| 1. France – ovin viande | Laurence |
| 2. France – ovin lait et caprin | Jean-Marc |
| 3. UK – meat sheep | Laura |
| 4. Ireland – meat sheep | Tim |
| 5. Hungary – juh | Orsi |
| 6. Norway – sau | Lise |
| 7. Norway – geit | Grete |
| 8. Estonia – lambad /lambaliha | Peep |
| 9. Estonia – kitsed + lambapiim | Maria? |
| 10. Israel – כבשים | Alon |
| 11. Italia – pecore | Valeria |
| 12. Italia – capre | Giovanni? |

Breakout rooms



Meat sheep		Dairy sheep		Dairy Goats	
Room	Needs	Room	Needs	Room	Needs
France	UK + HU	France	IT + EST	France	IT + NO
UK	IRE + NO	Italy	FR + EST	Italy	FR + EST
Ireland	FR + HU			Norway	IT + EST
Hungary	IRE + EST			Estonia	FR + IT
Norway	UK + IL				
Estonia	HU + FR				
Israel	IRE + FR				



	Welcome back! 😊 - please have a look at these videos while we prepare the next steps (link in the chat)
	Re-bienvenue! 😊 - Vous pouvez regarder ces vidéos pendant que nous préparons l'étape suivante (lien dans le chat)
	Üdv újra! 😊 - kérjük, nézze meg ezeket a videókat, amíg előkészítjük a következő lépéseket (link a chatben)
	Bentornati! 😊 - siete pregati di guardare questi video mentre prepariamo il prossimo passo (link nella chat)
	Tere tulemast tagasi! 😊- vaadake palun neid videoid kuniks me oleme valmis järgmiseks sammuks (link in the chat-jututoas)
	ברוך שובך! 😊 - אנא הביטו בסרטונים אלה בזמן שנכין את השלבים הבאים (קישור בצ'אט)
	Velkommen tilbake! 😊 - dere kan gjerne se på disse videoen mens vi forbereder neste steg (linker i chaten)



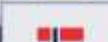
Sheep drone link: <https://www.youtube.com/watch?v=b-oWadKWGwk>

GPS: <https://www.facebook.com/Sauebonden/videos/922481018340294>

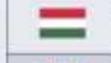
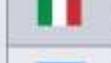


	Let's see what solutions have been identified for our country's needs
	Découvrons maintenant les solutions qui ont été identifiées par les autres pays
	Lássuk, milyen megoldásokat találtak hazánk igényeihez
	Guardate quali soluzioni sono state identificate per i fabbisogni della nostra nazione
	Vaadake, mis lahendusi toodi välja Teie riigi vajadustes
	בואו לראות אילו פתרונות זוהו לצרכי המדינה שלנו
	La oss se hvilke løsninger som kollegaer foreslår til behov i de ulike land

White board presentation

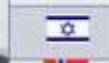
	That's it! Thank you again for your participation!
	Et voilà! Merci encore de votre participation!
	Még egyszer köszönjük a részvételét!
	Questo è tutto! Grazie di nuovo per la vostra partecipazione!
	Täname uuesti osalemise eest!
	זהו זה! שוב תודה על השתתפותך!
	Det var det! Takk for at du deltok!



	Next, we will refine the solutions to the farmers' needs, and discuss them during a national workshop.
	La prochaine étape sera de détailler les solutions et d'en discuter lors des prochains ateliers nationaux.
	Ezután pontosítjuk a gazdák igényeinek megfelelő megoldásokat, és megvitátjuk azokat egy hazai workshopon.
	Prossimamente rifiniremo le soluzioni ai fabbisogni degli allevatori e ne discuteremo al prossimo Workshop Nazionale.
	Järgmiseks me täpsustame lahendusi farmerite vajadustes ja diskuteerime rahvuslikul töökoosolekul
	לאחר מכן, נדייק את הפתרונות לצרכי החקלאים ונדון בהם במהלך סדנה לאומית.
	Vi vil se nærmere på løsninger som er foreslått og diskutere dem på nasjonale arbeidsmøter.



	We hope to have the next Transnational Workshop in the South of France (if we can)
	Nous espérons faire le prochain atelier international dans le Sud de la France
	Reméljük, hogy a következő transznacionális workshop Dél - Franciaországban kerül majd megrendezésre (ha tehetjük)
	Speriamo di poter fare il prossimo Workshop Transnazionale nel Sud della Francia
	Me loodame, et järgmine rahvusvaheline töökoosolek toimub Lõuna-Prantsusmaal (kui see on võimalik)
	אנו מקווים לקיים את הסדנה הבין-לאומית הבאה בדרום צרפת (אם נוכל)
	Vi håper å arrangere det neste internasjonale arbeidsmøte i Sør-Frankrike

	We hope you enjoyed the discussions and learnt some new facts
	Nous espérons que vous avez apprécié les discussions et découvert de nouvelles informations.
	Reméljük élvezték az értekezést és hasznosnak találták
	Speriamo abbiate gradito la discussione e imparato qualcosa di nuovo
	Me loodame, et Te nautisite diskussiooni ja õppisite midagi!
	אנו מקווים שנהניתם מהדיונים ולמדתם כמה עובדות חדשות
	Vi håper du har hatt glede og nytte av diskusjonene og noe ny informasjon



	We really appreciate your feedback – it is important YOUR views are expressed. Use the chat box for any comments
	Merci de votre avis – c'est important que VOS idées soient exprimées. Utilisez la fonction 'chat' pour vos commentaires
	Nagyra értékeljük visszajelzését - fontos, hogy véleményét kifejezze. Bármilyen megjegyzéshez használja a komment szekciót /chat-et
	Abbiamo apprezzato molto il vostro contributo – è importante che il VOSTRO punto di vista venga espresso. Potete usare la chat per qualsiasi commento.
	Me tõesti hindame Teie tagasisidet- see on oluline, et Teie arvamus väljendataks. Kasuta Chat akent kommenteerimiseks
	אנו מעריכים מאוד את המשוב שלך - חשוב שדעותייך באות לידי ביטוי. השתמשו בתיבת הצ'אט לכל הערה
	Vi setter stor pris på din tilbakemelding – det er viktig at DINE betraktninger blir meddelt. Bruk 'chatten' for kommentarer.



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement 101017717

	Thank you very much! Good bye!
	Merci beaucoup! A bientôt!
	Nagyon szépen köszönjük! Viszontlátásra!
	Grazie mille! Arrivederci
	Täname väga! Head aega!
	תודה רבה לך! שלום!
	Tusen takk! Ha det bra!

- @H2020Smart
- H2020-smart
- h2020smart
- H2020-Sm@RT

www.h2020-smart.eu

