Tionól Reigiúnach Oirthir agus Lár-Tíre
Eastern and Midland Regional Assembly

Next2Met
Interreg Europe

European Union
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Development Fund

Next2Met Stakeholder meeting- Smart Agriculture in the Midlands

23rd November 2020

Contents

1. Attendance

This Smart Agriculture stakeholder meeting brought together twenty-three Irish and Finnish stakeholders from the agricultural sector, including contractor representative groups, academics and the manufacturing and software industry.

Stakeholder	Organisation	Role
Antti Juntunen	HAMK Tech	Software Developer
Antti Suokannas	Luke	Investigator
Barbara Favaro	CMPR	Project Officer
Bríd Greenan	EMRA	EU Project Officer
Dr. Conor Shanahan	Mc Hale	R&D Engineer
Clare Bannon	EMRA	Senior Executive Planner
David Colbourne	Teagasc	Regional Manager – Advisory services
David Cummins	Department of Agriculture	Assistant Agricultural Inspector
Dr. Deirdre Hennessy	Teagasc	Research Officer, Grassland
Duong Truong	HAMK	Project Engineer
Elias Helke	HAMK Bio	Research Assistant Digbale
Ger Kenny	EMRA	Staff Officer
Dr. Enda Fallon	Athlone Institute of Technology	Department of Computing & Software Engineering
Dr. Ilpo Pölönen	University of Haime	Lead on Digibale
Dr. John Hyland	Teagasc	Project Manager- Fair Share
Jussi Kortelainen	Piippo	Technical Manager
John Mee	Sidero, Athlone	CEO
Katariina Penttila	HAMK Tech	Research scientist
Michael Moroney	Farm & Forestry Contractors in Ireland	CEO
Dr. Michael O' Donavan	Teagasc	Head of Grassland Science
Micheal O' Leary	Teagasc	Pasture Base Ireland
Dr. Peter Mooney	Maynooth University	Computer Science Lecturer
Tom Murphy	Professional Agricultural Contractors	Director of PAC

2. Introduction

The aim of this meeting was to build on the previous Digibale focused stakeholder meeting by looking at the technology behind this project and also to look more broadly at the area of

Smart Agriculture or Smart Farming which is the application of ICT into agriculture. Practically, Smart Farming should provide the farmer with added value in the form of better decision making, new knowledge about their farm or more efficient operations and management of the farm itself (SFDAI, 2019)[1] .

Introductions to the Eastern & Midland Regional Assembly and Next 2 Met were provided by Bríd Greenan (EMRA).

3. Digital Solutions within the Agri-sector (Ireland & Finland)

Presentations followed by Q&A were provided by a number of key experts:

1. Digibale Video : Ilpo Pölönen, Häme University of Applied Science.
2. Sensor technology and methods for determining bale weight: Conor Shanahan, Mc Hale- manufacturers of agricultural farm machinery.
3. Pasture Base Ireland - grassland management tool: Micheál O'Leary, PastureBase Ireland.

4. Smart Agriculture in the Midlands

Mentimeter interactive presentation software was used to explore a number of areas in relation to Smart Agriculture in the Midlands. The following points show stakeholders' perceptions on the current state of play of Smart Agriculture in the Midlands. Stakeholder responses:

- Unsure if farmers/the Agri-sector were prepared for a digital transition in the Midlands.
  The majority of stakeholders (7/12) stated that they didn't know if farmers/Agri-sector were prepared, (4/12) stated yes, they are prepared and (1/12) stated that farmers/agriculture sector were not prepared.
- Broadband will impact Smart Agriculture to a great extent.
  The majority of stakeholders (9/12) stated that broadband will impact to a great extent, (3/12) stated that broadband will impact to some extent.
- A skills gap/learning and cost scalability was the greatest concern for Midland farmers in relation to Smart Agriculture.
  The majority of stakeholders (7/12) stated that that a Skills gap/learning and Cost scalability (5/12) was the greatest concern for Midland farmers in relation to Smart Agriculture
- Farmers are willing to pay for digital solutions.
  The majority of stakeholders (9/12) stated that farmers would be willing to pay for digital solutions (2/12) stated no, and (1/12) don't know.

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[1] Report on the 2019 Workshop on Smart Farming and Data Analytics (SFDAI)

5. Assisting a Digital Transition in the Agri-sector in the Midlands

Stakeholders highlighted a number of measures that could assist a digital transition in the Agri-sector.

1. Provide **education and training;** utilise existing groups/networks and Agri-training colleges to provide training and information on the benefits of digital solutions for farmers.
2. Engage and **consult with farmer groups and contractors**, including focus groups to include farmers in the development of digital solutions.
3. Promote the use of digital solutions using **peers, leaders and young farmers** within the farming community, highlighting success stories of the application of digital solutions.
4. Provide **free digital solutions** by offering grants/subsidies to encourage farmer's transition.

6. Enhancing the competitiveness of the Agri-sector

Stakeholders highlighted three key areas of focus to enhance the competitiveness of the Agri-sector.

- Assist farmers to **identify and manage the costs** involved in relation to machinery and new smart Agri-developments in order to keep costs down.
- Build on current work in terms of Agri-tech and digitalisation while providing **training, opportunities for consultation and promotion of new tech and ideas.**
- Ensure the **sustainable production** from grassland and consider **environmental metrics** on all aspects of farming
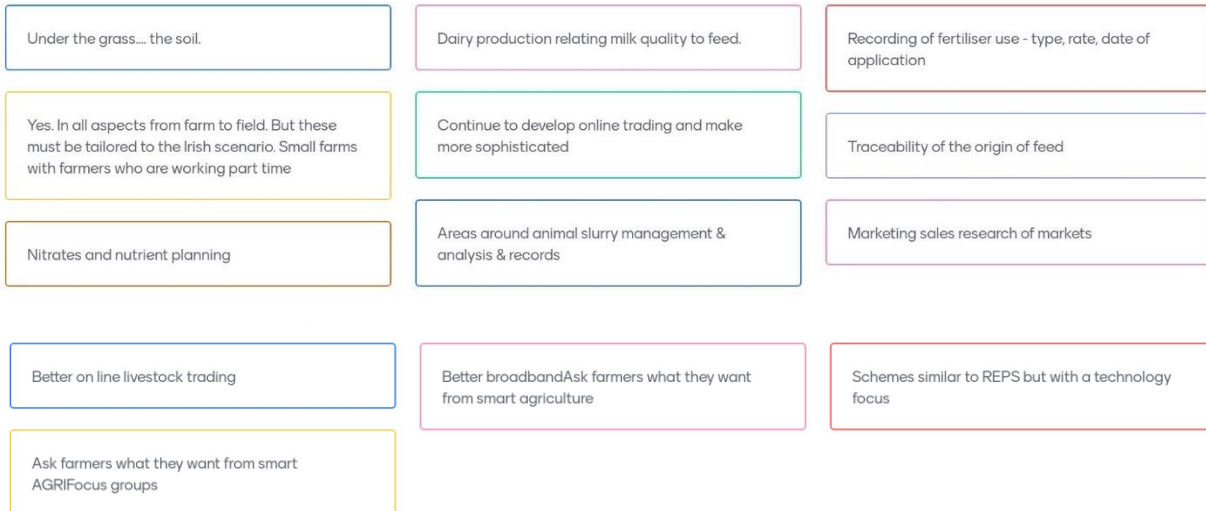
7. Supporting the collaboration of industry and research

In order to support collaboration of industry and research, stakeholders suggested creating opportunities for:

- **Collaboration/ sharing ideas:** Organise events that bring together researchers, scientists, farmers, contractors and machinery manufacturers offering introductions between interested stakeholders. Invite research groups to present their research at these events and reach out to diverse groups in the universities/ colleges and the broader tech community.
- **Consultation:** Consult with groups to identify challenges in terms of environmental sustainability of systems as well as economic viability.
- **Research:** provide opportunities for research which are financially supported i.e., require a funded research, technology transfer project to start or develop on a pilot scale and build.

8. Agri-sector areas that could benefit from the application of digital solutions

Stakeholders highlighted the following new areas across the supply chain that could benefit from the application of digital solutions.

Under the grass.... the soil.	Dairy production relating milk quality to feed.	Recording of fertiliser use - type, rate, date of application
Yes. In all aspects from farm to field. But these must be tailored to the Irish scenario. Small farms with farmers who are working part time	Continue to develop online trading and make more sophisticated	Traceability of the origin of feed
Nitrates and nutrient planning	Areas around animal slurry management & analysis & records	Marketing sales research of markets
Better on line livestock trading	Better broadbandAsk farmers what they want from smart agriculture	Schemes similar to REPS but with a technology focus
Ask farmers what they want from smart AGRIFocus groups		

9. Conclusion

The findings of this meeting show that it's unclear whether farmers are fully prepared for a digital transition in the Midlands. Aside from the necessity of broadband which is the backbone to a successful transition there is a need to address the skills gap and cost scalability within the farming community. This could be addressed by providing education and training, consulting with farmer groups/contractors, promoting digital solutions and offering grants/subsidies to encourage farmers to a digital transition. In order to enhance the competitiveness of the sector there is a need to assist farmers in identifying and managing costs, building on current Agri-tech and digitalisation work while ensuring the sustainable production and environmental impacts of farming. Finally, with a view to a successful digital transition further collaboration/ sharing ideas, consultation and opportunities for research are required to support collaboration and new areas of research, development and innovation.

10. Next Steps

Next2Met aims to increase the attractiveness of the Midlands Region using soft digitalisation measures. Smart Agriculture is one area of focus for this project. This report and the previous stakeholder meeting report (*Digibale Project 9th September 2020*) will inform the EMRAs work and our key role in the implementation of our Regional Economic and Spatial Strategy. Furthermore, Ilpo Pölönen, Häme University of Applied Science would like to continue the work on Digibale internationally, including Ireland in a future project or work. This work may involve:

- A business orientated project, e.g., Eureka project, 2-3 countries,3 companies/country.
- A research project- less business orientated with funding from different sources (Irish funding is needed).
- An international demonstration of Digibale aiming to create collaboration between Finland and Ireland.

The following stakeholders stated that they were interested/considering becoming a partner in a future project in relation to Digibale.

1. Association of Farm & Forestry Contractors in Ireland
2. Athlone Institute of Technology
3. Maynooth University
4. McHale
5. Piippo – Finland
6. Professional Agricultural Contractors of Ireland
7. Sidero - Will consider
8. Teagasc, Moorepark