

The digitalisation of agriculture – Challenges for advisory services.

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Sustainable digital transformation of the agricultural value chain

Future trends: Part 1 EUR2020.de Conference

BMEL

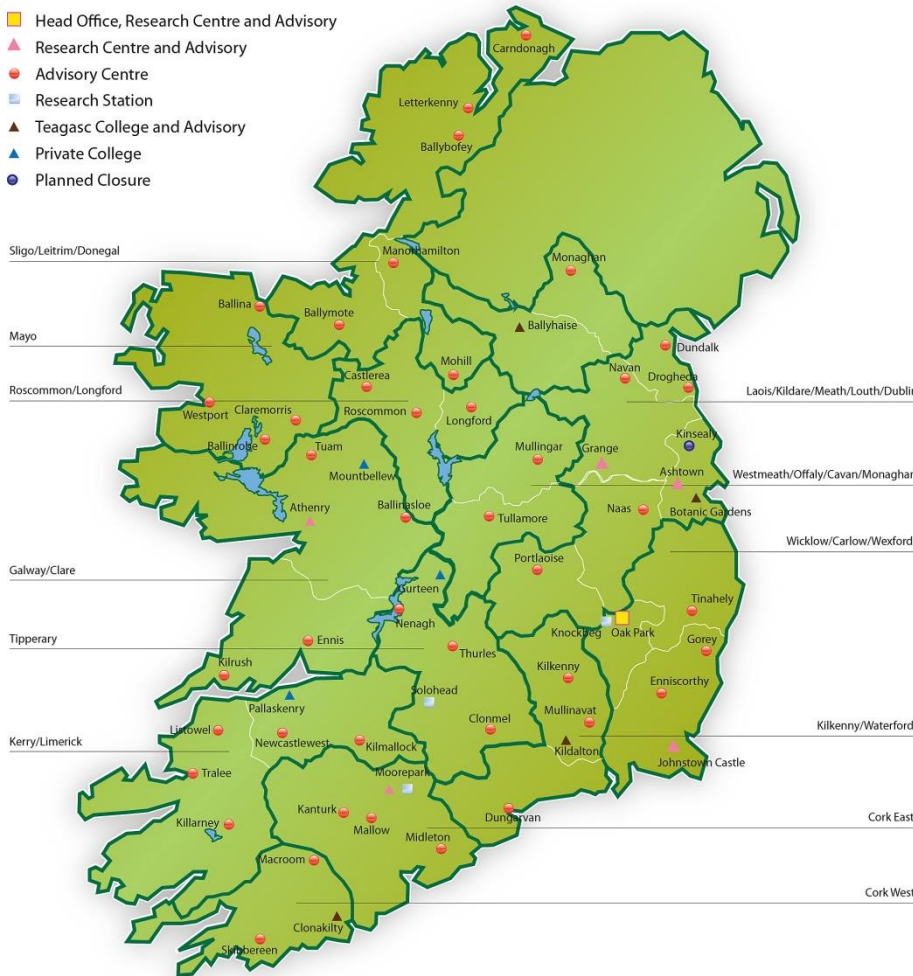
EURAGRI

I am going to

- Briefly explain who I am and what I do.
- Explain the context of digitalisation of advisory services and Teagasc.
- How international cooperation in the FAIRshare project is helping advisory services
- What have we learned about advisors and farmers and the challenges they face in this digital world.
- Some take home messages

Location & Staff

- Head Office, Research Centre and Advisory
- ▲ Research Centre and Advisory
- Advisory Centre
- Research Station
- ▲ Teagasc College and Advisory
- ▲ Private College
- Planned Closure



52 Advisory offices
 4 Teagasc colleges
 3 Private colleges
 7 Research Centres

(1,228)	Perm.	Con.	Total
Researchers	115	115	227
Advisors	240	37	277
Education	53	32	85
Specialists	65	0	65



760 Professional staff who interact with the Irish AKIS daily.



Global Advisory Digitalisation Drivers

- Increased acceptance of digital tools and services by farmers as part of all services including Ag. extension.
- Demand from farmers for better more specific advice and decision support. (pull factors)
- Demand from advisors for new ways to support farmer decision making. (pull factors)
- Demand from policy makers and society for more information relating to agricultural production and quality of products. (push factor)
- Demand more efficient process administration from government and industry. (e-government etc.) (push)
- The advance of low cost digital technology (pull)

2020 Covid19 – A giant leap in digital extension

Question ?

Digitalisation of advisory/extension work a substitute or an aid?

Digital technologies are substitutes for farm extension activities and will replace on farm advisors in future

or

Digital technologies will improve the efficacy and quality of extension services and strengthen farm advisors



Findable, Available, Interoperable, Reusable and Shareable

H2020 Rural Renaissance – Taking Advantage of the Digital Revolution

Topics: **RUR-13-2018**: Enabling the farm advisor community to prepare farmers for the digital age

Coordination and Support Action (CSA)



FAIRshare Introduction: Ambition and Challenge

■ Why = Digital Divide?

- » - Farmer - the non user to the best user
- » - Advisor
- » - Other supply chain actors

■ What to achieve?

- More farmers participating in Digital Age

■ How?

Sharing – adapting - learning from each other

- » Digital Advisory Tools & Services (DATS)
- » Expertise of those that develop and use
- » Motivation/attitudes of advisors and farmers



Source: <https://www.yara.com/crop-nutrition/digital-farming/>

Digital Advisory Tools and Services (DATS)



Development of Permanent Networking Facility, design, operation, and maintenance (AUA)

The screenshot shows the FAIRshare 'Inventory of DATS' website. The top navigation bar includes links for 'ABOUT DATS', 'DATS INVENTORY', 'Contact us', 'ADD NEW DATS', 'MY DATS', and a 'Logout' button. The main heading is 'Inventory of DATS' with a sub-heading 'Browse through the collection of Digital Advisory Tools and Services and Signup to register your DATS in the Inventory'. A search bar is visible on the left. Several callout boxes are overlaid on the image:

- Top right:** 'The user can interact directly the communication officer and database administrator to provide some feedback' (pointing to 'Contact us').
- Top right:** 'The user can create an account and login in order to register new DATS' (pointing to 'ADD NEW DATS' and 'MY DATS').
- Left side:** 'The user can search through the database' (pointing to the search bar).
- Left side:** 'An additional filter was created and added during the COVID-19 crisis, to indicate which DATS were more used this period' (pointing to the 'COVID-19 Pandemic' filter).
- Bottom left:** 'The user can use multiple filters to narrow down the results' (pointing to the 'Benefits' and 'Challenges addressed' filters).
- Right side:** 'The user can see the list of DATS retrieved from the database' (pointing to the grid of DATS cards).

The grid of DATS cards includes:

- Mapping paddocks using Google My Maps:** A digital mapping service for advisors to help farmers in the design and management of controlled grazing of livestock at pasture.
- Teagasc Profit Monitor:** Teagasc Profit Monitor Benchmarking Analysis System.
- IFA Soil Decision Support Tool:** IFA Soil Decision Support Tool.
- AGRO BI:** AGRO BI Business Intelligence Digital Decision Tool.
- Teagasc Household Budget Calculator:** Teagasc web based farm household budgeting tool for farmers and advisors.
- Teagasc Bord Bia Carbon Navigator:** This tool is a web service which allows farmers carbon impact to be measured relative to other farms based on practices and breeding merit of the herd.
- FAIRshare Multi-Actor Toolbox:** The FAIRshare Multi-actor toolbox presents the wide range of stakeholder/actor engagement methods and tools available, each with their own (scenario-dependent) advantages.
- MILEOS:** Decision Support Tools to control midworm on potatoes.
- STEP-water:** STEP-water: Healthy Crops, Clean Water.
- INNOSETA Platform:** Open platform for innovative spraying equipment, training and advising.
- The Beef Edge:** Dairy, Sheep and Beef Podcast.
- InFlowweb:** Inflowweb gathers and synthesizes scientific and technical knowledge on more than 40 major field crop weeds in an educational way.

Outcomes:

- A fully functional Permanent Networking Facility, with multiple functionalities, accessible to all

Good Practice in Digital Tools and Services

Focus on
WHAT, HOW,
WHERE,
WHO and
WHY



Focus on
WHAT

Understanding advisors and farmers needs

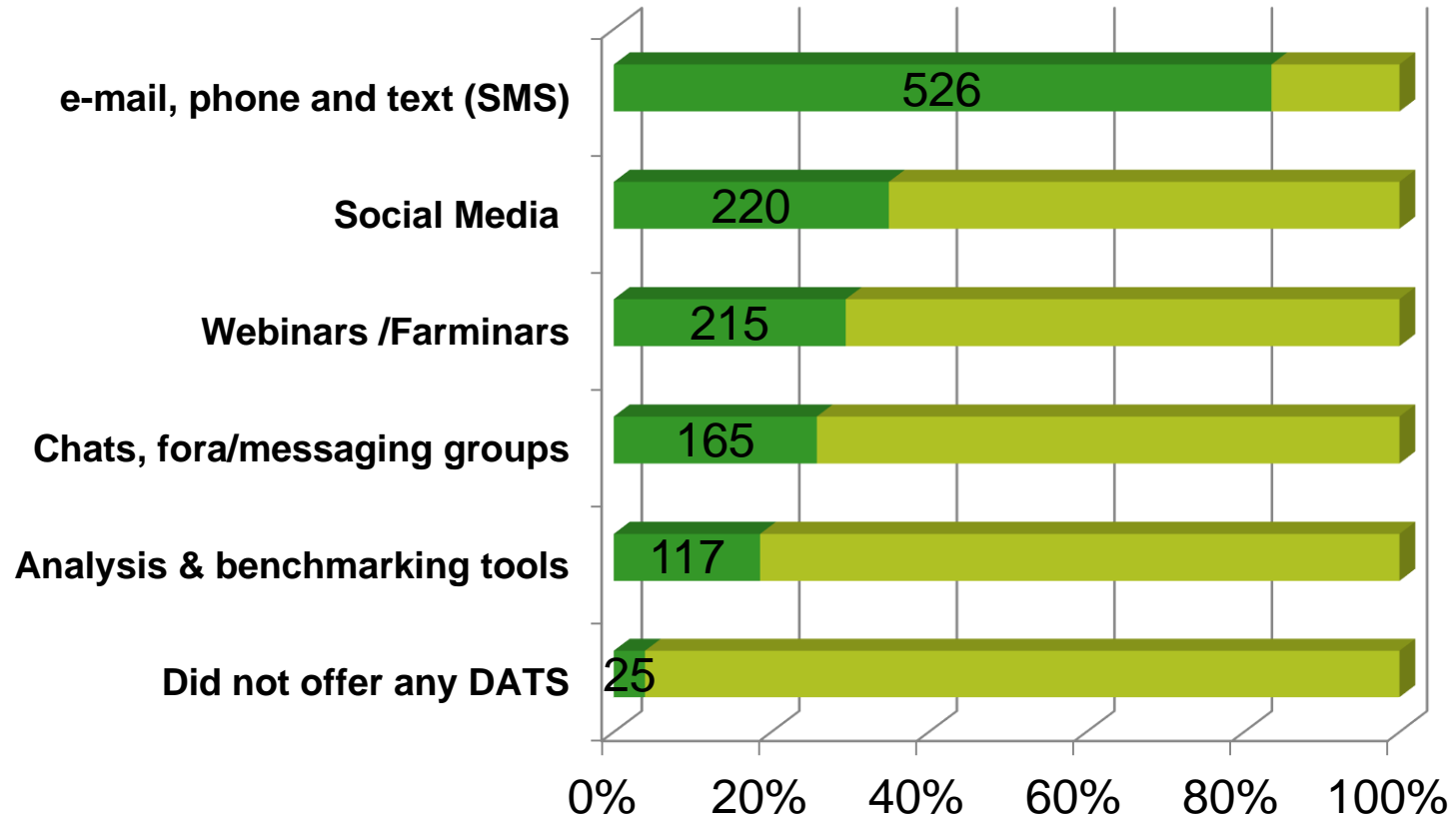
Includes digital solutions to every day problems and characteristics of user attractive interfaces with Digital Agriculture applications

Results of surveys, focus group and workshops



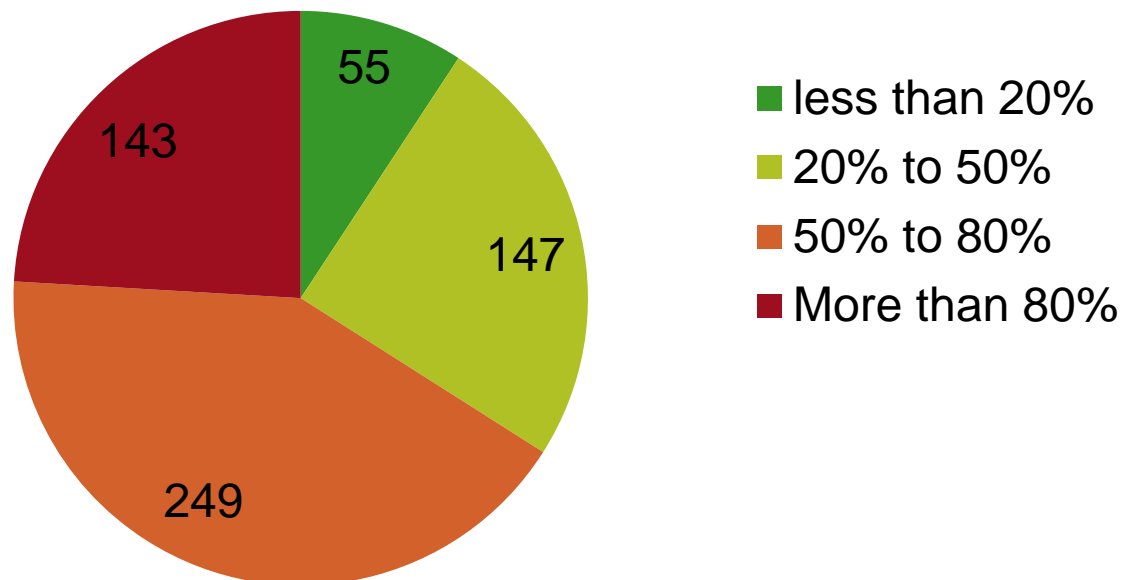
FAIRshare 2020 advisors survey

What Type of DATS do advisors use? n=630
(FAIRshare D3.2 Miron (2020))



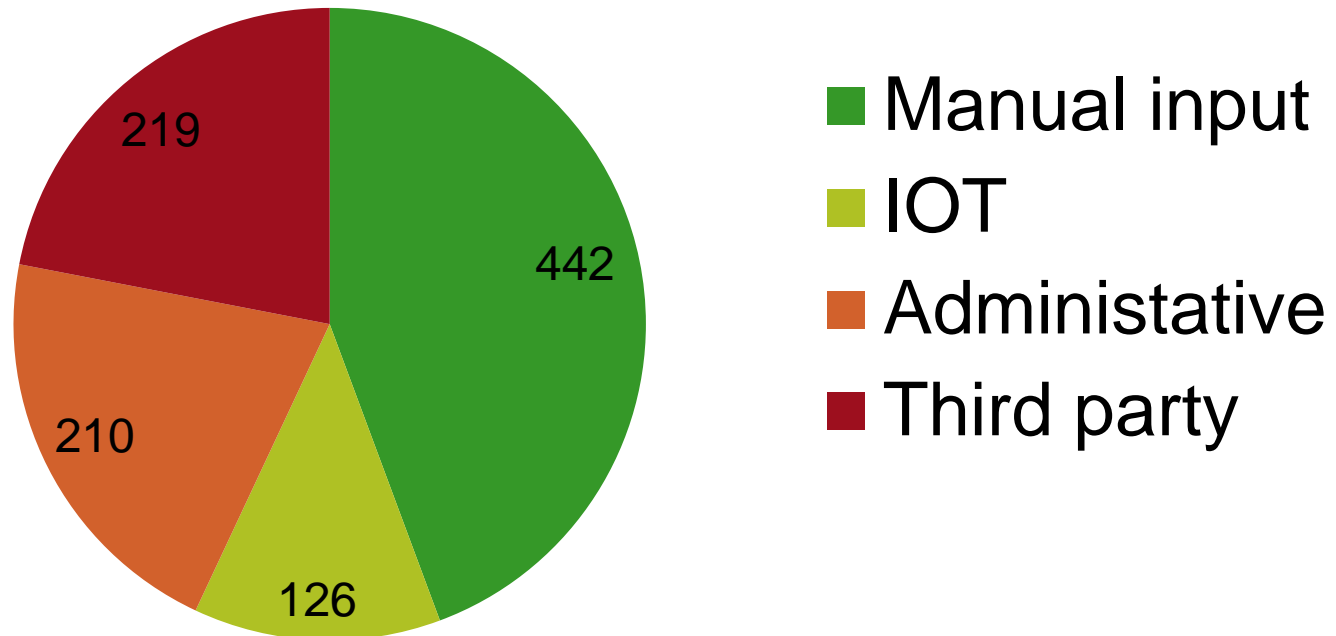
2020 FAIRshare advisors survey n=583 (FAIRshare D3.2 Miron (2020))

The degree to which advisors personalise their services



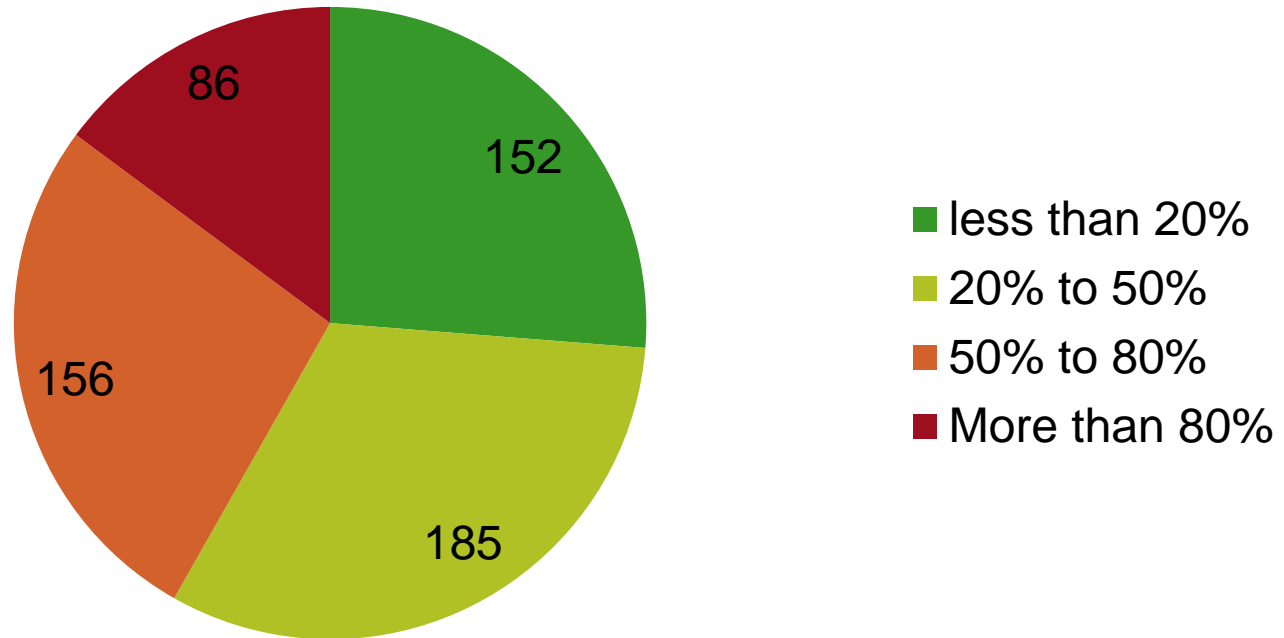
2020 FAIRshare Advisors survey n = 583 (FAIRshare D3.2 Miron (2020))

Source of Data used in digital services



2020 FAIRshare advisors survey n=571 (FAIRshare D3.2 Miron (2020))

% of Farmer clients who use of DATS



Key conclusions from farmer and advisor surveys (FAIRshare D3.2 Miron (2020))

- Farmers and advisors have preference for digital tools the support personalised advisory services
- They have similar expectations in term of benefits
- Both groups are challenged by the investment needed (time, cost and learning effort)
- Advisors lack a reliable reference or source for their DATS
- Farmers are influenced to use DATS by advisors and other farmers
- Advisors recognise that they need training, they prefer in person training i.e. offline
- Interoperability is an issue for both groups

THANK YOU