

Digital Technologies for Irish Farmers

*Developing and governing digital technologies with
the end user in mind*

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Digital Technologies in Farming



Sensors and 'Smart Machinery'

Apps and Farm Management Platforms



Drones and Satellites

Robotics and Automated Systems



For the farmer: data-driven decision making

Irish Farmers' and Digital Technology



- 2019 survey of 710 farmers
- 46% of farmers using some form of technology on their farm
- A further 40% indicated they were positive about using technology in the future

Adoption rates	Beef	Dairy	Sheep	Tillage
Smartphone	82%	89%	84%	94%
Calf registration system	56%	86%	26%	13%
Camera monitoring in barn	30%	53%	18%	15%
Herd management system	24%	46%	17%	17%
Remedy recording system	27%	53%	16%	17%
GPS used for machine guidance/steering	7%	15%	7%	77%
Weather stations	12%	11%	12%	17%
Milking robot	1%	4%	1%	0%
Parcel boundary mapping with GPS	5%	5%	11%	55%
Health monitoring	6%	13%	7%	4%
Satellite imagery	6%	2%	9%	28%

Smartphones mainly used for checking weather, news and livestock prices, and for farm records management

Factors Influencing Digital Behaviour

Don't know how to use this technology
Don't have the skills to use this technology

Never heard of the technology before
Don't believe in the benefits of the technology
Don't trust the technology provider
Don't feel confident enough to use the technology

The technology is too dear
Internet coverage is not good enough
There's nobody to turn to if there's a problem
Haven't heard good things from other farmers
The technology is not user friendly



Source: Michie et al (2011) The Behaviour Change Wheel: a new method for characterising and designing behaviour change interventions. *Implementation Science*

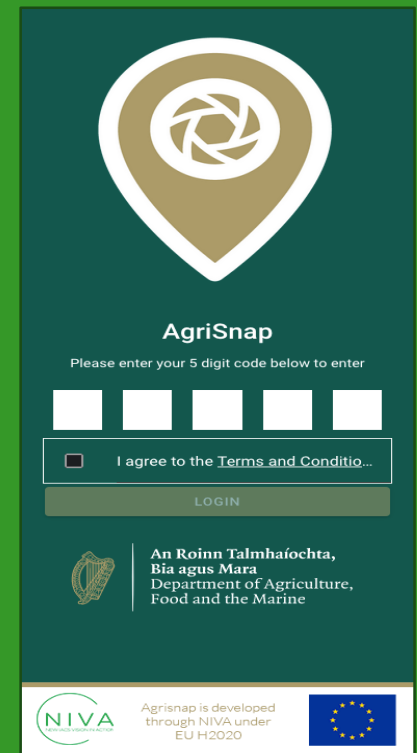
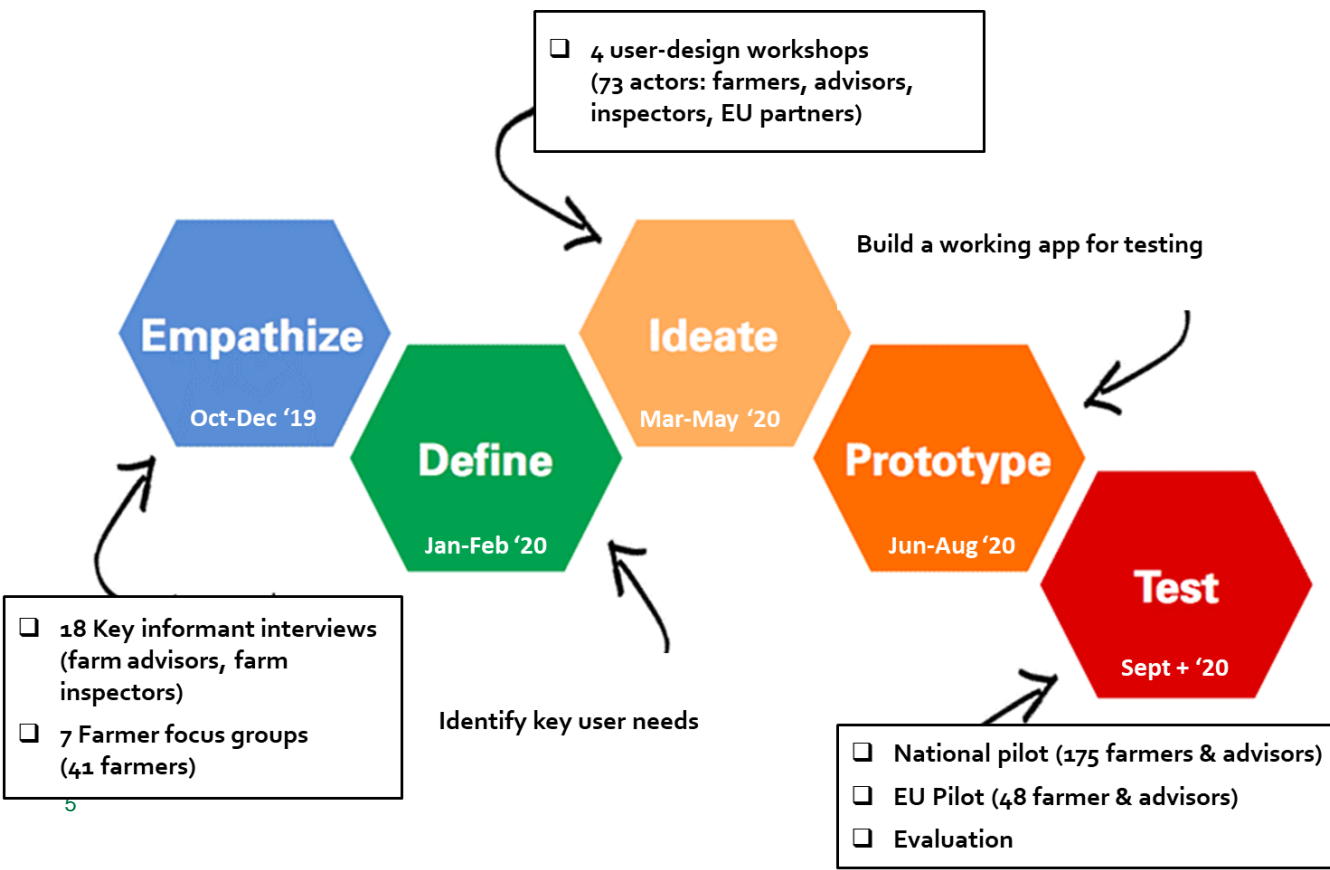
Good technology **design** comes from diverse and inclusive thinking



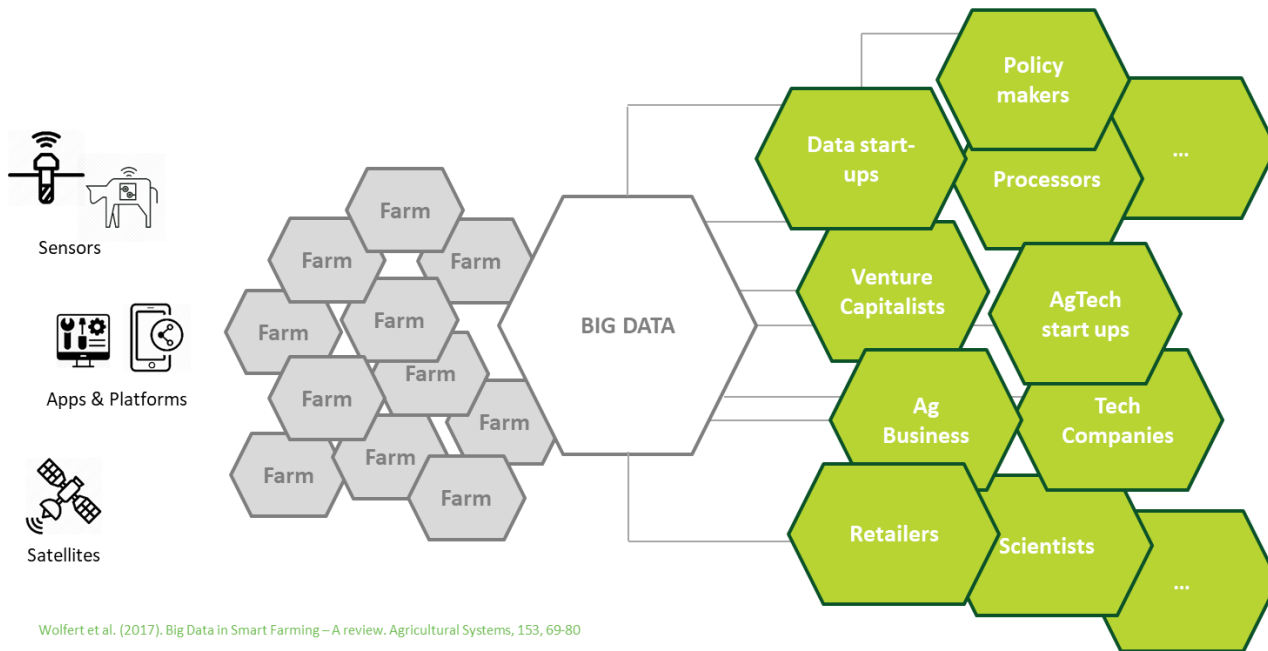
H2020 NIVA Project: Geo-tagged photo app & system for monitoring of CAP payments

We want to hear from *you*

If you are a scheme applicant and interested in taking part in the next test of the AgriSnap App, e-mail: agrisnap@agriculture.gov.ie



Good technology **governance** comes from diverse and inclusive thinking



Wolfert et al. (2017). Big Data in Smart Farming – A review. *Agricultural Systems*, 153, 69-80



- Who owns the data?
- Is farm data the same as personal data?
- What if 3rd parties want access to the data?
- Who should decide who gets access to data?

AgriDISCRETE Project

- Exploring good data governance in agriculture and forestry
- Running workshops to hear from different actors on the topic of data ownership and sharing

We want to hear from *you*

- In the next series of workshops, we will be testing the concept of a multi-sided data governance platform
- If you would like to take part, send us an e-mail: aiane.regan@teagasc.ie

Gateway Technologies



Coronavirus
COVID-19

Has Covid-19 prompted farmers into an online and digital environment?

- Online marts
- Online newspapers
- Online advisory services
- Changed business models

Positive experiences have the ability to improve confidence and realising the potential of increased digitalisation on one's farm

Post-Covid, post-restrictions: Building back or building forward?

How do we ensure that nobody is left behind?

Thank You!



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