

Digital Innovation Hubs for Agriculture and Rural Farm Advisors – From Research to Practice

Tom Kelly, Teagasc – Kilkenny, June 2017

Digital innovation presents a huge opportunity to create and use technology and information to improve knowledge generation and improved decision making on farms. Larger and more technology capable farmers are better able to adopt digital innovations, however most of the 12m European farmers need supports from farm advisors, veterinary professionals and others to benefit from digital innovation. The 40,000 rural farm advisors and consultants who interact and have relationships with diverse populations of farmers are an important resource in bridging the gap between knowledge and practice in farm related digital innovation.

Digital Innovation Hubs (DIH's) should enable people to interact and address the challenges of how digital solutions and innovations can influence how farm data is digitally gathered, processed, stored and converted into useful information and decision support products.

The contribution of farm advisors and their organisations to a DIH should be proactive rather than passive or reactive in the roles performed. Such roles include knowledge and technology transfer, advisory, consultancy and backstopping interventions, marketing and demand articulation, networking facilitation and brokerage, capacity building (e.g. training), access to resources and institutional support.

These roles should combine in a DIH

- to create the space for real interaction between digital technologies and users (awareness, idea generation, inspiration)
- to stimulate the development of new digital tools for improved decision making (idea generation)
- to facilitate and broker an open interactive exchange of ideas and challenges (awareness, inspiration, problem solving)
- to help identify the scale and impact potential of new and proposed products (scoping)
- to assist in the format, language and level of technical detail of digital products (development)
- to promote the use of successful digital tools in routine decision support at farm level (marketing and demand articulation)
- to facilitate a feedback loops to developers (embedding and improvement)

Examples

Drawing on the substantial analysis of 57 innovation cases within the H2020 Agrispin project www.agrispin.eu there were four that had a digital theme. EBI (Ireland), Geopos (Basque Region, Spain) and Chemical Control App (Denmark) had significant input from advisors, while in Precision Agriculture (Holland) the role of farm advisors was more in the background. The use of the spiral of innovation (Wielinga 2016)¹ provides a framework to look at where the input of advisors in an innovation process took place; it can also be used to indicate where an innovation support input from farm advisors may be most needed.

¹ http://agrispin.eu/wordpress/wp-content/uploads/2016/11/Cross-Visits_Improved-Methodology-1.pdf



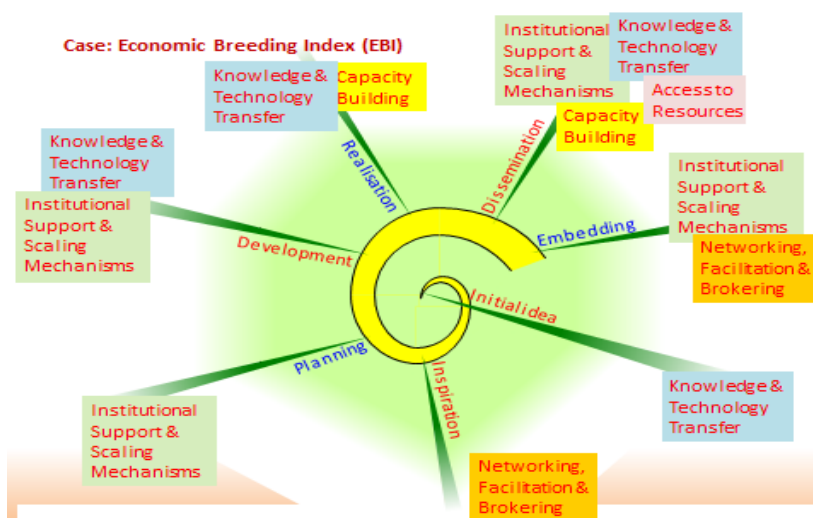
Example: Economic breeding index for cattle (EBI)

The Agrispin project looked from a farmer’s perspective at the work of Irish Cattle Breeding Federation (ICBF) and Teagasc who along with other actors exploited the potential of Big Data in cattle breeding. Twenty years ago the need for a better breeding index was apparent with declining herd fertility and longevity in Holstein Friesian dairy herds. Today, in addition to a better Economic Breeding index, the solution provides farmers and farm advisers with online management information from dairy and beef farms on production, quality, fertility, health etc.; this allows them spend more time working on the solutions to problems or on strategic decisions. While the product was developed with substantial input from research and other stakeholders, many of the outputs were tailored to the needs of farmers with inputs from specialist advisors. The advisers who were granted access to individual and grouped farmer data became the sales force for increased use and ownership of the system by farmers. In the ongoing roll out of EBI, dissemination and engaging farmers in the use of the data (embedding) are important in the success of this innovation and benefited from the involvement of advisers throughout the process.

Multi Actor relationships with ICBF: interfaces EBI database

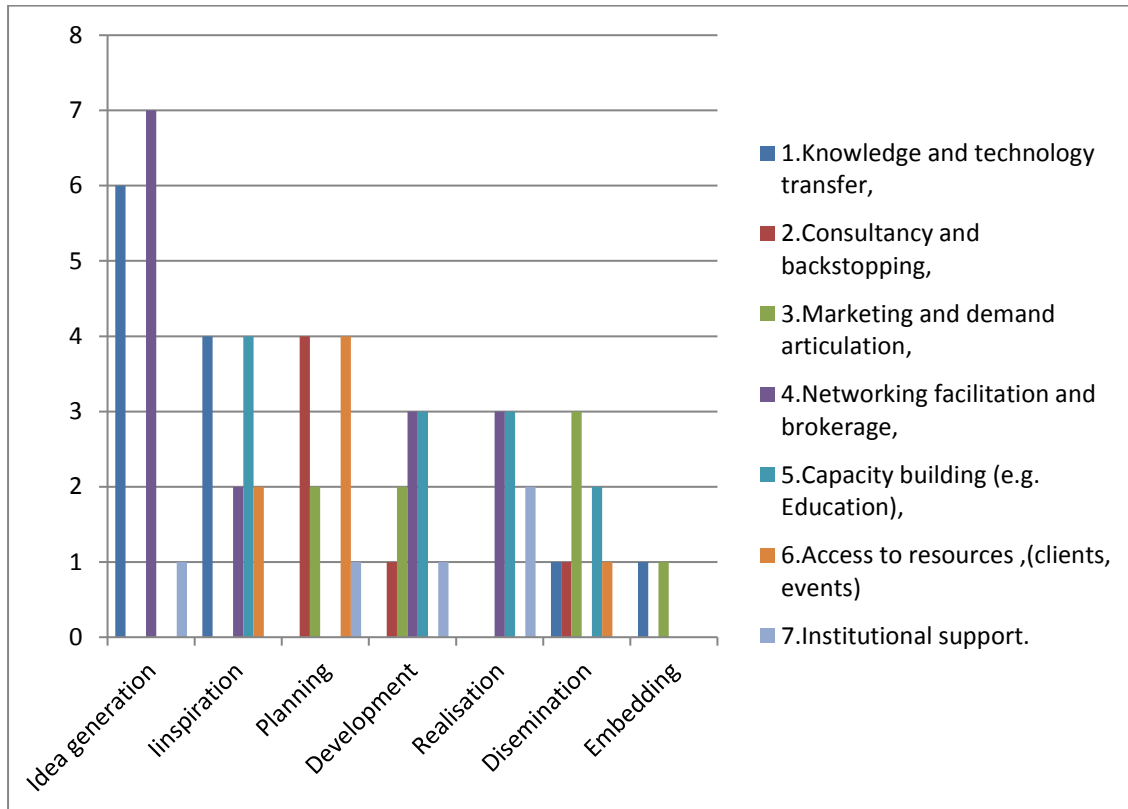


Innovation Spiral showing Teagasc inputs to the EBI development



Following the presentations the participants were asked to identify where in the innovation spiral (from idea generation to embedding innovation) they felt that farm advisers should be active and what roles they should play. Each participant voted by placing a sticker on a poster of the Agrispin spiral with a number (1 to 7) to depict the most important role and what stage in the innovation spiral it was needed.

These votes are represented in the graphic below.



The most important roles were Networking, Facilitation and Brokerage followed by Knowledge and Technology Transfer followed by Capacity Building. There was a strong result showing that Networking facilitation and brokering and Knowledge transfer were important at the idea generation stage.

Comments from participants were strongly supportive of having good research support for advisors with institution and network connections. Bridging the research to practice gap.

