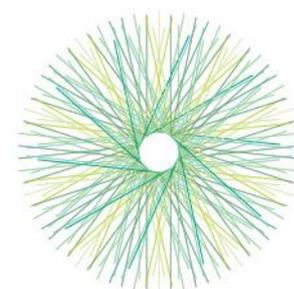


EIP-AGRI SEMINAR 'DATA REVOLUTION'

Speed date market

WEDNESDAY 22 JUNE 2016



eip-agri
AGRICULTURE & INNOVATION

There will be 15 conversation-spots available and three rounds for the speeddate market. Column 'Spot' informs about the round (first number) and the location in the room (second number) when the business case will be presented.

Name and Surname	Spot	Keywords	Summary of the data driven business model/case	Question/Issue to be discussed
Pedro Carrillo	1.1	Artificial Intelligence, Machine-learning, Modeling, Smart-agro, Pest-prediction	ec2ce is a technological company who applies artificial intelligence to create model optimization and predictive output scenarios in smart-agro and decision farming applications, combining Big Data squeezing and market knowledge to produce predictive tools for pest/disease control and productivity forecast in decision farming.	Application of predictive modelling in pest management to enhance productivity and sustainability.
Alberto Menghi	1.2	Profitability, costs of production, dairy, benchmarking, RDP	MILK MONEY is the first on-line internet based system to benchmark milk production costs in Italy. The tool was developed by CRPA with the financial support of Emilia Romagna Region. Any technical advisor or dairy farmer, paying an annual fee, can easily get access to the system, calculate his milk production costs, revenues and profitability and then compare the result with a range of farms selected according to specific criteria. The possibility to benchmark the own results with group of farms located in the same area gives the opportunity to the farmer to understand which cost or revenue items is out of range and needs to be investigated to understand the reasoning behind it. This knowledge has been in most of the cases an important input to adapt their strategy and improve their profitability.	Why this kind of tools have not been prioritized in the RDP support by EU?
Aleksandar Prelevic	1.3	food traceability	Honey traceability program in Montenegro as a part of wider project of food traceability implements value addition services in agro-food sector through food safety and quality assurance. Our goal is to create online database of all natural honey producers in Montenegro. Data used will be: all details about beekeeper, bee hive, queen bee, GPS position of bee hives, weather conditions on bee hive position, honey variety produced. Collected data will allow creation of central web site with all data for all beekeepers in Montenegro as well as QR codes for each beekeeper which should be printed out on honey jars. QR code, scanned with smart phone will allow users (customers, consumers - but also beekeepers, importers and exporters) to access respective web site with all data, bringing transparency and clearly demonstrate the value of honey been provided - beginning at the hive. According to the users, low quality honey from unknown sources is a significant concern for the growing industry fairly based on quality. This creates food safety issues, undercuts fair market prices and damages the industry's reputation for quality and safety. This web site will be helpful tool for users to be linked and discuss, ensuring better market and popularization of well known quality of domestic honey. Customers and consumers feedback will	Demands/needs of local markets

			<p>be encouraged, open and displayed for the first time, ensuring healthy business competition. Beekeepers will pay monthly subscription fees for website data update. Update of data will be conducted by independent third party auditor, enhancing customer and consumer confidence and demonstrating the value which they have been providing. This service provided to beekeepers will be a step forward to successful sale and clearly a motivation for more frequent use of IT technologies in agro-food sector.</p>	
Marcello Petitta	1.4	Soil Moisture, productivity, satellite, mobile-app, climate.	<p>The CINCINNATUS project is about Science, Agriculture and Collaboration. It aims to develop a smartphone application and web-service to transform satellite-based soil moisture data into information that farmers can understand and use to increase their productivity. With the CINCINNATUS project, AMIGO will produce a web-based interface and a smartphone with essentially two functions:</p> <ol style="list-style-type: none"> 1. it delivers information to the farmers based on remote sensing observations. In particular, it will tell the farmers how the humidity of the soil is changing over time at his/her location during the day, in the past week, and in the past few months. 2. it collects, from the farmers, information on how the land-surface changes over time due to routine agriculture activities (irrigation, plowing, harvesting). Such ground-based, qualitative knowledge can be combined with satellite data in order to provide even more accurate information on soil moisture. 	What available satellite information farmers and producers needs and how they want to receive them?
Veronika Platzer	1.5	Traceability, Certification, User-friendliness, Non-GM, Regionality	<p>The Danube Soya Organisation is an international non-profit organisation based in Vienna with the overall mission to develop sustainable protein supply chains for the European market based on non-GM soya grown in the Danube Region and whole Europe. The initiative therefore helps to decrease Europe's dependency on soya imports from South America mainly for animal feed. DS brings together a broad range of actors from whole Europe including companies operating along the entire supply chain. I am part of the QM team working with our certification program. We certify partners along the whole value chain (farmers, collectors, processors, animal keepers and marketers of „Danube Soya“ and "fed with Danube Soya" products). To guarantee traceability, we implemented our new IT database in spring 2014. Our certification bodies log in via an online portal with an optimized user surface, managing certification and tracing of the Danube Soya lots online.</p>	How can we motivate our partners and certification bodies to keep their data up-to-date?
Gábor Meggyesi	1.6	dairy cow rumen pH monitor	<p>Moonsyst targets dairy farmers and the milk production industry. We aim to create an open knowledge base on the findings our dairy cow rumen pH monitoring system can provide. We target to have an international database to be able to establish at which rumen pH levels milk production, quality and herd health can be optimized. We are looking for international partners with different management and herd types, who would be willing to share their use cases with us and with the farming community in general.</p>	Would you cooperate with us in creating an international database for dairy cow rumen pH monitoring?

Jérémie Wainstain	1.7	agribusiness, decision tools, post-production, post-harvest, Saas, food industry	<p>TheGreenData is a start-up company based in France. We are developing a B to B platform of Saas decision tools for the agribusiness industry. We mainly focus on the post-production product life cycle, where value is added to the raw product.</p> <p>Our first on-air solution is dedicated to sugar beets logistic optimisation, now live in several factories.</p> <p>We are now working on developing wheat and milk industries solutions.</p> <p>Our main clients are cooperatives, food industry, agri consulting services and insurance companies. We bring to them a better control or evaluation of their risks, leading to better decisions and margin optimisation.</p>	Main causes of underperformance / waste / risks in the post-production product cycle
Thomas Snellman	1.8		<p>REKO, our directselling system from producers to consumers is based on use of social media as marketchannel. Three years ago we started with two project in the western part of Finland. It went well and now we have more than 130 projects (REKO-cercles) running with a total number of more than 180 000 members involved. Estimated turnover for 2016 is 30 million euros. It's carateristics are, totally free for all (both for producers and consumers), very little administration and no middlemen. Closed FaceBook groups with volunteer-administrators make this possible and they are extremely easy to establish.</p>	"Using social media as platform for bringing producers and consumers together without costs"
Ángel Martín	1.9	Smart Watering and watering as a service, IoT, Cloud orchestration Software, Service Oriented Architecture, Big Data.	<p>Soil moisture observations has been traditionally taken by ground sensors. These sensors (including the connectors, cables and collector device) increase the cost of the high-resolution soil moisture map determination. A first action to reduce costs is the development of a Wireless Smart Sensor Network and active RFID to both reduce power consumption regarding to the network communication effort and to tag geo-location points and data. A second action is to reduce the number of sensors by the use of GNSS reflectometry, where the upcoming GALILEO full operation constellation will increase the horizontal and vertical resolution.</p> <p>Finally, both actions can be used in a combined solution, where the physical system is complemented with an Internet connection to a cloud orchestration software. GNSS antennas and wireless sensors are deployed as context-aware services in a Service Oriented Architecture (SOA).</p> <p>This monitoring system can be considered a pilot project for data integration services.</p>	Feedback with the audience about the potential of such data integration services
Ilma Rimkevicie ne	1.10	Big data, analyze, decision, add value.	<p>We have created a Farm Management Information System "e-GEBA". It is placed in a private cloud. A farmer can use it as an electronic service. Now the data to this system comes from public institutions (from external databases) it is also possible to import Shape files from the equipment with geographic data and data exchanges between modules four "e-GEBA" modules (internal databases).</p> <p>Now we are analyzing how we could use the data from a farmer's machinery and satellite data. Agricultural specialists and researchers are thinking how to make all those data to "work" for farmers and advisers.</p>	Is it more data better? Which data could be useful for farmers to make decisions and solve problems?

Peadar Casey	1.11	Commercial – Climate-Friendly- Family-Farming	<p>The Agriculture Industry is gaining significant interest from consumers and policy makers as a mission driven industry. The mission is based on balancing the need for producing more food in a sustainable manner to satisfy the needs of a growing population, while not depleting the earth's resources in the process.</p> <p>The advances in technology across sensors, communications and mobile data management, has created the ingredients to build innovative business models across all industry sectors. Within the AgriFood sector these developments have given access to data and information which was not previously accessible and in some cases not previously imagined. The increased level of commitment to managing climate change at a global level has illuminated the level and significance of agriculture to managing greenhouse gas emissions and associated consequences, both inside and outside the farmgate.</p> <p>The coordination and orchestration of advances in technology together with an increase in global demand for food, requires and will lead to new business models. The availability of "data for decision making" to the farmer can also be transmitted as "data for decision making" to the equally conscious climate friendly consumer.</p> <p>Data driven business models will provide platforms and "dashboards" for commercially sustainable climate friendly family farming into the future, a model which will deliver value and value, to a climate conscious market place where "carbon is the new currency".</p>	Can we convince farmers, "climate friendly is the new currency in commercially sustainable business models?"
Zivile Raudone	1.12	local food, short supply chain, two-sided network, farmers, consumers	<p>Website www.kaimasinamus.lt is a new product (platform) for farmers and consumers based on the idea of short supply chain created by Lithuanian Institute of Agrarian Economics. This platform was created as a two-sided network for farmers and consumers with the aim to provide services reflecting farmers and consumers demand on farmers' product selling/purchase. One of the key innovative areas includes important transitions in the consumers' perceptions of food and farming. Recent years showed an increasing demand for locally grown fresh food coupled with concern about food safety and the environment. Many farmers have been able to thrive by meeting the growing demand for local food among households, restaurants, schools, etc. However, it is essential to be realistic about the farmers' capability to alter the industrial food system by their own efforts. This platform is a tool that can be used by farmers to have direct contact with communities of consumers that need fresh locally produced food without intermediaries. Communities of consumers use this platform for various purchases of local fresh food directly from farmers creating food basket according to their needs and frequency.</p>	: if there is a need and possibilities to spread this local food model in other countries? What impact it can make for the local economies of the EU countries?

Eero Kananen	1.13	E-commerce, local food, farmers market, digitalization, direct selling	<p>Local food is a fast growing trend in all around Europe. However the producers have huge difficulties to find right methods to market and sell their products directly to consumers. In Finland we noticed this problem in 2013 and after three years of hard work we have developed a new multivendor Ecommerce platform, which brings all the local food producers and consumers to one community. Producers can join to our platform by themselves and start selling their products immediately. We offer everything they need, including the payment methods and marketing. Consumers can find all the producers and products from one website and buy products from several producers at the same time.</p> <p>Our system collects a vast amount of information about the producers and consumers. With that information we can increase the sales by recommending products to consumers, help the producers to make the right marketing decisions and optimize the logistics.</p>	Are there similar solutions or could this solution work in the other countries too?
Edoardo Costantini	1.14	Terroir, sensors, wine, big data, data warehouse	<p>Linking a quality crop, such as grapevine, to the territory of production is a marketable issue, but the future trend will be valorizing and marketing the linkage that every wine bottle has with the specific vineyard and even plot where grapes come from. On the other hand, precision viticulture is also on increase, aimed at fine-tuning vine husbandry according to intra-vineyard variability. Precision viticulture implies collecting large amount of terrestrial data at detailed scales by means of different tools, namely satellite, UAV, proximal and in-situ soil and climate sensors. In the cellar, precision oenology is as well developing digital sensors to assist wine-making techniques. The data collection from different sensors, coupled with existing and available terrestrial datasets (terrain, climate, soil, land use, agriculture statistics), as well as with information provided by farms, may create big data and an array of new marketable issues and opportunities for farmers, decision makers, researchers, and lay-people.</p>	Data selection, harmonization, and assimilation; storage and maintenance; query and transfer; data interoperability; stakeholders; information privacy and copyright.
Raphaël Hoogvliets	1.15	big data, cooperative, sustainability, benchmarking, datascience	<p>The agricultural data cooperative (the datacoop) allows farmers to share their data with each other and with analysts. In doing so their sustainability performance can be examined and improved. An important part of this is benchmarking. Where does a farmer stand compared to her or his peers? In addition, datacoop offers opportunities for new forms of data analysis. There are different types of data in farming: soil data, weather data, yield data, management data, satellite data, etc. The relationships between variables within these types of datasets could be examined using advanced analysis (datascience). Once the datacoop has enough members, this could lead to the first serious big data initiative within the Dutch and European arable and crop farming. Because the initiative is organized as a cooperative, it provides datascience for farmers by farmers. Thus the datacoop provides democratic information use in the agricultural sector.</p>	How to get farmers to join the data cooperative?

Blanca Lucena	2.1	olive oil, harvest estimation, BI.	<p>As Andalusia is the first world olive oil producing region, our data-driven idea aims at developing a model based on Business Intelligence to estimate, in advance (even more in advance than the it is done nowadays), olives production in Andalusia. The model will take into account different variables that affect production according to literature. The value of the variables, so as to create the model, would be calculated by using historical, production data, meteorological, phenological, and concentrations of pollen records. A priori, the preparation of the data needed for the model can be carried out through several options and has an important GIS component as sources are referenced in different areas. The model aims to estimate the production of each campaign by June and July, after flowering, so as to foresee different rainfall scenarios after that period. Having this estimation a bit earlier than usual will help to promote transparency in this market and will enable to plan the campaign from the public and private points of view. The model is expected to improve as historical series of data from different years are gathered. Additionally, the BI model would serve to quantify the degree of influence of the variables identified in production.</p>	<p>GIS operations for variables calculating, territorial model or proximity model, how to involve oil mills</p>
Hadis Mahdavi	2.2	Precision livestock farming, distributed data-driven business model, livestock production, transparency, animal welfare	<p>In order to mainstream Precision Livestock Farming (PLF), it has to rest on a viable business model, in which all the stakeholders experience an added value. Previous studies show that PLF systems are too expensive to be paid by the farmer only in a traditional business model. Moreover, PLF holds the potential to be expanded into a distributed (multi-sided) business model with multiple users, allowing the users to create, deliver, capture and consume value. Through this model, the interaction between stakeholders will be facilitated which is promising for improving the productivity and cost-efficiency of animal production, health, and welfare. In addition, such a model will pave the way for a better transparency and traceability. In this model, service providers will be in charge of technology, installation, maintenance and active consultancy and reporting, and stakeholders would subscribe to "PLF as a service" to get access to the data (and its analysis).</p>	<p>Feasibility of implementing a distributed business model for precision livestock farming</p>
Jose Luis Miguel	2.3	App, Big Data, Failure, Public open data, Demand of farmers	<p>Since 2013 farmers must fulfill a field record with the plant protection products used. To facilitate this and to provide tools for improving the technical and economic management of the farm, COAG (representative entity of the farming sector in Spain) developed "iNMA". iNMA is a free app (phone, tablet or computer) which provides not only the mandatory field record, but other useful information for farmers: prices, weather information, plant and animal health warnings, and indicators for irrigation based on big data technology. The tool combines the data from all the factors affecting the plant, correlates and transforms them into useful information for the farmer. The results of the project were not as good as expected. The app is not longer updated. Some problems appeared: adjustment difficulties to the demand of farmers, no open data in public prices, bureaucracy problems with the different field record models of the Spanish autonomous regions.</p>	<p>Which are the main success factors to involve farmers in data revolution?</p>

Senka Gajnov	2.4	Rational irrigation	IrrigNET is a novel service for rational irrigation. The service gives "recipe" for irrigation, exact time and amount of water to be used. The irrigation "recipe" is created according to several data sources: water constants related with soil type, plant requirements for water during the growing period, soil moisture measured by sensors on different depth in real time, air temperature and forecasted rainfall. It is estimated that rational irrigation (which is the service for) increases the yields up to 30% and decrease costs which both have affect in profit increase.	What are the real savings? For which crops recipes should be created? Are the producers willing to use such service? Which amount they want to pay for it?
Valerio Caroselli	2.5	Precision Farming, GIS, Earth Observation, Precision Farming, NDVI, LAI, Sentinel, Copernicus	EOFARMING will be a unique Precision Agriculture service that can represent a disruptive innovation in the usage of space technologies in the agriculture industry with an affordable and easy-to-use solution. By opening up PF to small farmers, EOFARMING has the potential to become a game-changer in an agriculture sector which is still characterized by the lack of use of new space and IT technologies. The EOFARMING solution will be based on: The combined usage of GIS and remote sensing DATA (Sentinel 2 and Landsat 8) the use of an innovative set of algorithm to make PA index A system for indexing and search of historical data, also based on Open Source technology; A Mobile app to allow direct access to the EOFARMING services by workers when operating in the field;	Standard definition in output and integration data in Agricultural fields
Ioannis Varvarellis	2.6	traceability cloud application olive oil	TRACEOIL is a cloud application that addresses the collection of data related to the traceability of olive oil spanning its entire production line, starting from the farm and expanding to bottling and retail distribution. The system is based on a hierarchic chain of interconnected user roles which are: Olive producer Olive oil mill Merchant Bottling Company Each role participates in the traceability of the processed product by filing information relative to the part which concerns them. The monitoring of the process provides the end user valuable information about the quality of the product (e.g. olive oil acidity) but also grants the roles of the system the ability to overview their transaction with their associated entities. The application is already in use by a number of Greek olive producers, oil presses and merchants with more than 1215 tons of olive oil processed and registered.	Extending our traceability system to other bulk products. What are the opportunities and business models?

Sofia Araujo	2.7	Entrepreneurship; open innovation; Web Summit; Agtech; acceleration	<p>1) INOVISA is a non-profit association that focus its work on the agriculture, food and forestry sectors. It has two main pillars: Entrepreneurship and Business Development and Knowledge and Technology Transfer. Within the first pillar, INOVISA is developing three international initiatives that will promote at a large scale the agrifood and forestry sectors.</p> <p>These three initiatives are:</p> <p>Green House @ Web Summit – with this initiative INOVISA, in partnership with other entities, aims to put together a greenhouse inside the Web Summit in order to promote Agtech and Foodtech among the biggest tech companies;</p> <p>LEANNET4AGRIFOOD – an Interreg Sudoe project between Portugal, Spain and France that will trigger entrepreneurship in the agrifood sector. A pre-acceleration program that will cover several themes;</p> <p>Corporate Acceleration Programs – along with other two entities, INOVISA is building a corporate acceleration program with the main objective of developing innovation in big companies with the help of established startups (Google has a similar program).</p>	Are the LEAN methodologies useful to the agrifood and forestry sectors?
David de la Iglesia	2.8	Drone, Point Clouds, Deep Learning	<p>We use point clouds obtained from drone imagery in order to build predictive models about the phytosanitary status of vineyards. Most of our work is focused on developing new kinds of indicators for precision agriculture derived from point clouds. The use of drone imagery makes possible to try this new indicators and test them against some classical indicators such the vegetation indexes. We believe that the direct use of point clouds rather than some sub-product like index maps or digital elevation models brings more precision to the predictions. Other important part of our work is about transform the information derived from point clouds in order to use it as features in deep learning models.</p>	How are you using the point clouds obtained from drone imagery?
Frank Pisters	2.9	Ownership data, Authorisation, Datahub, app	<p>In the Netherlands we use a huge datahub (EDI-Circle) for exchanging invoices and several messages from feed suppliers, dairysuppliers, retail and government to accountingfirms, ANCA (annual nutrient cycling assesment), and also to the suppliers (i.e. Royal FrieslandCampina delivers but also gets information). The delivering of messages is based on a authorisation register AgriTrust. Farmers are considered tot be owner of the data. The login in AgriTrust is done via the Dutch principles of e-Herkenning.</p> <p>Suppliers ask us whether these principles and keys are also useable in the EU. In the EU, eIDAS controls the acceptance of national eID (access) services, but there is no focus on authorisation. On the hub EDI-Circle several apps are build, i.e. Agrinota, a billings service provider, or Opticow, a managementtool.</p> <p>Our customers are doing business in the EU, not only in the Netherlands. Farmers (owner of the data) and suppliers need one platform with one view of all their authorisations granted.</p>	it is necessary to have more focus on identification and authorisation in the EU (and not only national).

Wieslawa Kasperska-Wolowicz	2.10	Crop varieties, yield, frost tolerance	<p>The idea is to create the regional and farm scale internet service of real time crop growth monitoring and yield forecasting with special attention to the non-growing season (from winter crops sowing till the beginning of the growing season in spring). In Poland last years, due to extreme weather events in winter, greater than usual area of winter crops did not survive.</p> <p>The service will be based on the databases including: daily meteorological dataset (since 1945), soils water properties, crops phenological phases and varieties, and in the recent years remote sensing images.</p> <p>It will be connected to the operating in the growing season service on irrigation needs for crops.</p> <p>The main goal of the service is: real time information, early warning and overwintering risk assessment.</p>	Do farmers and authorities are interested in such service?
Johann Zahrl	2.11	Holistic Nutrient Balance App	<p>(Inter-)National nutrition reports and many large-scale epidemiological studies show widespread nutrient deficiencies in many people. Insufficient intake of mineral nutrients, vitamins and other bioactive compounds contribute to reduced immune defense and increased incidence of NCDs including cancer.</p> <p>Solution:</p> <p>Health-conscious consumers should be able to feed a „holistic nutrient balance app“ with their daily consumption of food and drink stuffs. The app calculates the ongoing balance of nutrients consumed versus the RDA levels. Any nutrient gap or deficiency made visible should be accompanied by a proposal of food items which are suitable to close/narrow the existing gap(s).</p> <p>Anyone in the food supply chain could use the information provided by the app to advertise a high bioactive nutrient content of their food products and their functionality for a healthy lifestyle.</p>	Who knows an experienced app programmer for a cooperation on this project?
Asen Petrov	2.12	precision agriculture, weather forecasting, climate services for agriculture, farmbrella	<p>Farmbrella is a software product providing climate service for the agricultural sector with focus on the cereal farming. Our main goal is to deliver to farmers a complete set of services, supporting and providing maximum precision to all the agricultural decisions dependent on the current and the expected weather conditions.</p>	Influence and importance of the weather forecasting on the process of decision-making in agriculture.
Frank Berkers	2.13	Precision Dairy; Business Model; Data Sharing Platform	<p>We have developed a platform that allows for sharing data (the so-called 'InfoBroker'). It serves as a registry, so it doesn't copy or store data. To accommodate farmers' requirements not to spread data, data is kept decentralized, but is transferred only when rightfully requested. Currently a closed group of companies is sharing data to develop precision dairy models. The ambition is to improve farmers' profitability (by increased cow productivity) and decrease pressure on the environment, by means of such data driven services. In order to achieve that several business model innovations will have to be coordinated: those who share data, those who develop and exploit models, the party who exploits the data sharing platform.</p>	What business models are available to convince data providers to participate in both value creation and capture?

Pedro Chambel	2.14	modeling, forecasts, apps, soil, plant	<p>Our application name is AQUAFARM and it has been tested across Europe. The added value of AQUAFARM is to integrate different sources of data automatically and to generate forecasts based on soil-plant-atmosphere models. This type of service gives more autonomy for the farmer to take decisions. It also values all the costly measuring equipment's. Overall these services result in savings on water, fertilizers and pesticides. The system uses many weather forecasts, which allows to know uncertainty of prediction.</p> <p>What makes the system viable is that it can also be used by farmers' associations and consulting companies. Each can have its own AQUAFARM server managing their own data and models using AQUAFARM client. This makes it easier to have bulk sales, rather than setting up a sales network for a big universe of farmers. Also, it is easier to invoice farmers' associations and consulting companies than individual farmers.</p>	Can we develop a business model where we feed forecast modeling to agribusiness apps across the world?
Sebastian Fritsch	2.15	precision farming, web and mobile applications, data analytics, digitization, remote sensing	<p>Our web-based digital farming tool mofato (www.mofato.com) streamlines information & applications based on open, multi-annual satellite, weather & other geo data, empowering farmers to get access to cutting edge technology. We have automated all background processes of mofato regarding the download, processing and analyses of all relevant geo data so that mofato is ready to use within a few minutes after the farmer's field boundaries were submitted. The technology behind mofato can also be utilized for other actors in the agricultural industry. The clear benefit for farmers is that they get access to a precision farming tool at the fraction of the cost of traditional hardware-based systems. The automated system saves them time in their daily routine. mofato is free for farmers at the moment, but in the future there may be a paid version of the system. Revenues could be generated by annual subscriptions.</p>	Which is the easiest and fastest way to market-entry for our technology (besides individual farmers)?
Fotis Chatzipapa dopoulos	3.1	Smart farming, Digital farming, Internet of Things (IoT), Big Data, Cloud Computing	<p>Precision Agriculture (aka smart farming) is a farming management concept which exploits digital technology means to monitor farming resources and optimize the application of agricultural inputs and practices in the farming process. A significant part of the technology necessary to perform the monitoring includes electronic and computational equipment along with other information technology artifacts. Most smart farming business models seen so far require from the farmer to invest in this kind of technology equipment and artifacts while leaving their operation and maintenance also to him. These models raise significantly the barrier to entry for the farmer because they impose risks and windows of failure for the whole process. We explore a Smart Farming as a Service (SFaaS) model, where a larger specialized organization invests in building and operating a large scale smart farming technology infrastructure and offers low cost, investment free smart farming services to farmers and farmer groups.</p>	Which are the necessary underlying market conditions for the SFaaS model to be viable?

Valentín Rivas	3.2	AgTech, digital farming, traceability, optimization	Cropti is an agtech SaaS that helps farmers manager their business more efficiently while complying with food safety regulations and industry quality standards. Cropti leverages on mandatory EU food safety regulation (field notebook) to centralize the process of gathering and analyze farmers actions. This enables Cropti to provide with personalized recommendations and offers while complying unprecedented amount of data about its users. On the other hand, farmers are provided an user-friendly mobile platform to plan & keep track on their actions while complying with the most exhaustive and demanding food safety regulation in the world	Individual farmer digitalization Benefits for distributors/retailers of digital traceability from the farmer
Amir Smajevic	3.3	IoT, analysis, watering, bigdata, automation	The Zoblak platform aims to amplify the use of agriculture potential by gathering, processing and analyzing vital data from various locations and applying it as a feedback input combined with rules from a knowledge database to maximize the farming results. The basic idea is to create an affordable Internet of Things based platform which enables near real-time monitoring of farms. Important parameters such as air humidity and temperature, soil humidity and pH values will be gathered and saved. The correlation of geographical data and the given measurements will allow us to use big data analysis and provide important advices to reach sustainable growth. long with the monitoring the platform allows distant farm management and the provides the farmer with automatic handling of basic repetitive actions, e.g. automatic watering, nutrition and even basic video surveillance.	Is this concept interesting in the EU agri-food sector? Is there need for this platform / does it already exist with an affordable price? Partners for international market?
Paavo Ränk	3.4	local food, logistics, marketplace, producer to consumer	Naaber is a food industry smart supply chain solution for farmers, producers, manufacturers, warehouses and transportation carriers. Consumers and institutional buyers enjoy access to an online grocery marketplace for local and (mostly) organic produce, with fair prices and local pick-up and delivery options. SMEs enjoy a Software as a Service (SaaS) based logistics and business management platform (including logistics, manufacturing, warehousing and bookkeeping functionality). Business partners can exchange stock and route information, and use one another's warehousing and transportation infrastructure. Farmers and producers enjoy access to larger local markets, higher margins and simple, flexible logistical options on demand. It's a perfect platform that local food movement organizers can use to increase local food consumption, solve logistics issues, finance and manage their operations. We use data to find the most efficient logistical solutions in short supply chains.	What would be the best approach to introduce and deliver this solution to all local food movements?
Henna Paakinaho	3.5	IoT, visualization, mobile, documentation	We are developing platform called Ponniste to solve multiple problems mainly in production. Many organizations collects large amounts of data, but they don't know how to really take advantage of it. Ponniste platform allows organisations in several industries to visualize data in real time. We use mobile phones to collect the data, but it could be collected another way too. Ponniste also makes it more efficient to manage and create different kinds of documentations like instructions or marketing	How much you use mobile solutions? What kind of data you collect that could be visualized?

materials. With Ponniste you to do less unnecessary work and you can focus on your real and valuable work.

Juan Sagarna	3.6	Multi-actor approach, Multi-sectorial approach, Market oriented results, Transference, Comm&Dissemination	We are a business association made of around 3.000 farmer cooperatives (1 million farming partners). We are present in overall agricultural and overall sectors in Spain. Concerning the Data Revolution we have the mission to involve to our cooperatives in project to develop useful tools to facilitate their role. It means, the operations with their farmers/providers and the relationship with the rest of food chain, for instance trough traceability or market insights.	Participation in wide range projects focusing on the transference of ICT technologies on agrofood business
Nikos Manouselis	3.7	Food safety, open data, food alerts, rapid notification	Our proposed business idea is called Foodakai: Food safety information and analytics at your fingertips". A food safety issue related to a product that a company is producing may damage the reputation, cause economical loss and even can lead to closing an food-related enterprise. Food producing, processing, packaging and serving businesses face the problem of accessing early enough and in an easy way food safety information related to their products (including ingredients from multiple suppliers as well as points through which they distribute and sell their products). Foodakai is an application that aims at addressing this problem by combining open food safety information, big data technologies and data science. Foodakai will deliver food safety information and analytics customized to the specific needs of a food business. It will allow supplier check and will deliver food standards and regulations for their food products. It will automatically notify the food company for food safety alerts and recalls related to its products. The targeted market segment in Europe is the 250.000 micro and small food manufacturing companies in Europe that cannot afford expensive ICT solutions and in-house experts. This is why the envisaged pricing model for Foodakai will be based on a subscription model with a monthly fee starting from 20 euros.	We believe that this is a killer application for micro and small SMEs in the food business. Do you agree?-
Xavier Faure	3.8	Agribusiness, big data, Saas, uncertainty, decision-making tools	<p>We, a french start-up, have created the first Agricultural Fintech called "Steer you Farm" (Pilote sa Ferme) whose objectif is to help farmers make the right decisions for themselves and be able to anticipate, face and coop with the uncertainties of the agricultural market place</p> <p>The tools we have developped for that will provide them:</p> <ul style="list-style-type: none"> - direct access to easy and user-friendly platform - customized guidance models reflecting the reality of the agricultural markets and its variations - quick and pertinent understanding of given situations permetting a greater responsiveness in the decision making process (no more than 5 minutes) 	<p>Do you think this type of tools can be of interest to farmers in your country ?</p> <p>How farmers manage the volatility of the market commodities ?</p> <p>What will be the appropriate business model that we can develop to offer our tools to famers in your country ?</p>

Santiago Alvarez	3.9		<p>A world Fresh Fruit Market out the real time information with specialized description is an inefficient market and lost million Tens products all the days .</p> <ol style="list-style-type: none"> 1.Wy a real time information service ? 2.How can we get the information ? 3.How are our core business ? 4..Business model ? 5.Next steps for the fruit Bloomberg ? 	
Raf Wawer	3.10	Smart irrigation, meteorological measurement, shared data, public participation, decision support tools	<p>CaseLogics Ltd. is a young company aimed at creating user-oriented ICT tools based upon real-life demand. We mainly focus on wider application of ICT in agriculture. Our first product is Aquastatus, a WSN-based tool supporting farmers' decisions when and how much to irrigate. The system is operational since 2015 and is on the market since March 2016. We plan to extend the functionality of the Aquastatus Android application with wider decision support at the farm level, however we found an obstacle in the availability of spatially enabled monitoring data. For the sake of providing optimal decision support we look for reliable measurements of climatic conditions, especially precipitation. There is an official network and data are available, however the precipitation tends to be extremely variable locally and state data are not dense enough. There are many private automated and manual meteo-stations, however their measurements are not published. The owners of those stations tend to keep the data for themselves, which is understandable, considering the high cost of the equipment. We are looking for a business model motivating the owners of meteo-stations to share data with others.</p>	Examples of business model solutions for sharing measured data in other countries
Pierre-Antonie Foreau	3.11	Confront, Tonnefunding, Adapt, Local, Start'up	<p>With our Team, we decided to gather all agricultural deals on a single platform and create the first farming comparator (CompareurAgricole.com) visible from PC , Tablets and Smartphones. It's the link between the farmer and collector of crops (wheat, barley, maize, canola, ...) by complet truck of 30 Tonnes.</p> <p>The goal for the farmer is to have a comprehensive view of the market directly at the farm where competition is not lacking while meeting the requirements and habits. We want to open farms to the best price and opportunities !</p> <p>The interest for buyers is to exploit new collection channels , to expand the geographical area, to increase the company's visibility and finally adjust the supply and positioning. The buyer decides its strategy without being confronted with other market players due to its anonymity behind a profile. After each transaction the farmer give a note and evaluation.</p> <p>Tomorrow we want to guide buyers directly to farmers through the data collected.</p>	
Tarek Soliman	3.12	foodcomputer, foodtech, BigData, UrbanFarming, Food Innovation	<p>Ortocucina is an urban farming space, a restaurant and a knowledge sharing community built around the concept of "Food computer" boxes where vegetables are grown under sensor controlled conditions that manage light, temperature, humidity, CO2 and PH, using aeroponic and LED technologies. The data used to modify these conditions are stored and shared on a cloud, allowing</p>	What would be the best way for this system to respond to people's needs?

endless opportunities to produce vegetables in any part of the world, and also accelerating growth of vegetable seedlings.

Miroslav Zahradnik	3.13	dairy management, decision support, BI, visual analytics	<p>EkonMOD milk tool assists dairy farm managers to better understand the dynamics of the herd structure and to improve economically sensible decision-making abilities. Monitoring the KPI routinely is important so critical areas can be revised sooner and minimize the negative effect to cash flow. The idea arises from long run cooperation with dairy farms in Slovakia. The introductory modules are distributed via web page for free. The first responses are positive, so we are willing to widen our services in the terms of online data uploads and comparison with peer operations. The further incorporation of BI tools and visual analytics combining the research results with latest market data developments could be vital for making more informed tactical and cost-effective choices at the unique dairy farm-level, with respect to the volatile global milk price.</p>	Bringing the tailored BI tools to dairy farm managements
Janez Jeretina	3.14	subclinical mastitis, mastitis control program, web application tools	<p>The falling down price of milk forces farmers to find reserves for more economical milk production. Somatic cell count (SCC) is an indicator of udder health which affects on production and quality of milk. So we upgrade our cattle information system (www.cattle.si) with gathering additional data from lab of dairy industry and merging them with the test day records in milk recorded herds. We designed additional tool for breeders to get information on SC status in their farms (herd and animal status on SCC, bulk SCC) and possible reason of their increase. The information system is also accessible to the dairy, veterinary and advisory services for more efficient communication and solving problems of subclinical mastitis. In case of exceeding of normal values on SCC, urea, bad fat to protein ratio breeders got phone message immediately after lab analyses. At the moment we also try to upgrade the system with PCR analyses.</p>	Possibility to merge milk recording data with dairy lab analyses in mastitis control program

