**DEI WG2 – already provided answers**

The October 21 workshop addressed the following **questions and had already some inputs from the respective Commission representative** and draft input from CEMA:

* What is the current landscape of activities in Europe (national initiatives, EU funded activities, other)?
	+ Already farmers using a variety of fragmented platforms (also different stakeholders agencies, cooperatives)
	+ Large Scale Pilot in IoT for Agrifood
	+ Commercial systems exist for autonomous tractors, e.g., John Deer (actually ahead of autonomous cars).
	+ Automated milking, cattle monitoring, etc.
	+ Sustainability – efficient use of fertilisers, etc.
	+ State of the art of the Ag Industry:
		- A lot of independent solutions, but very little integration.
		- Real “internet of things” solutions with integration of all sorts of (field) sensors, software, analytics and equipment are of the premature innovative kind, carried by advanced and brave farmers, and patched together by universities and service providers. There are no off-the-shelf solutions which are plug and play.
		- Advanced solutions are mainly found in large farms and with younger farmers.
* Where do we want to go?
	+ What kinds of next-generation platforms are needed (if any)?
		- Need interoperability and standardisation (without vendor lock-in), security and trust
		- The next generation platforms’ is maybe ‘not so well chosen. First generation platforms are in development in agriculture. Some are already more advanced than others and they have their own focus and approach. The interoperability is a main missing element allowing users to let their data flow from one platform to another. Already existing standards for vehicle to vehicle communication and control (ISOBUS) will be further developed.
		- The question is if the platform is the missing element right now. Over the last few years platforms have been popping up like mushrooms but with the current bad economic conditions it has come to a standstill. The missing element is the **implementation** at the farm level, and **people** bringing the **knowledge** to convert the investment in tools and systems into a more productive farming operation.
	+ What kinds of large-scale federating initiatives are needed (if any)?
		- Sharing of data amongst farmers, data ownership, creation of value and services from data
		- Agriculture is the only sector which is largely EU funded. There are plans to couple sustainability targets to subsidies in relation to the greening measures (reshaping the second pillar in the CAP). IoT is the perfect tool to allow farmers and governments to exchange information both on targets to be achieved and proof of achieved results.
		- Establishment of a standard for reporting and information sharing with the government across member states.
	+ What concrete gaps/problems could be addressed through platform development and large-scale initiatives at EU level?
		- Large scale demonstration to persuade farmers (usually family businesses) to adopt/trust platforms
		- Provenance and security of data
		- Platforms already today are erected with the target to allow farmers to create aggregated data about a full cycle of production of a crop or crop rotations and thereby deciding on actions/inputs knowing the impact on the entire cycle. To establish this aggregated knowledge the platform is only a tool. Any large scale initiatives in agriculture should focus more on networking between players (both equipment manufacturers and farmers/contractors) to allow established values and newcomers to meet up and exchange ideas.
		- Secondly large scale initiatives should focus on bridging the gap between new technologies and farmers. So not only on in relation to adopt/trust platforms but also to adopt smart technologies.
		- Utilisation of external data/knowledge providers, similar to the **consultants** in the industry, is limited compared to e.g. the US.
		- Farmers are farmers and not ICT’ers. The level to be reached is where – just as everybody is using e-mail in the industry – data management is used in the farmer’s daily life.
* How do we bridge the gap between what we have and what we want to achieve?
	+ In agriculture there is a need to bridge the gap between the arsenal of IoT and smart technologies available (what we have) and the low uptake with farmers/contractors (higher uptake is what needs to be achieve). It is estimated that he take-up currently is merely 5 %
	+ What concrete platform building initiatives and large-scale pilots can be expected/supported/promoted?
		- Already big pilot initiatives being proposed – more information January 2017
		- Platform that is open to all farmers – that allows data exchange easily
		- Open test regions for smart farming
	+ How to combine large-scale demonstrators across the EU and across Member States, taking into account already ongoing national developments?
		- More common to have regional co-operatives - disparity across regions an issue
	+ Education
	+ Government leading the industry in digitization (e-government)
	+ Stimulation of collaboration amongst small farmers on data management
* Who are the main stakeholders to be involved?
	+ How can PPPs contribute to building platforms?
		- Farmers should be at the centre of system
		- Task forces in BDVA – consensus on cross sectorial platforms - European Innovation Spaces – provide place for data across borders/sectors
	+ How can existing/planned MS initiatives contribute to building platforms?
		- AIOTI mapping national initiatives in sectors
		- Some Spanish initiatives (Galicia) Public Procurement for better management of subsidies
		- University initiatives on precision farming in Netherlands
	+ What are the complementarities/synergies/needs for coordination between EU (PPPs) and MS levels? How to avoid overlaps and strengthen synergies?
		- Collaboration between IoT, Big Data, etc. + need Rural Broadband for connectivity

If you know any additional experts on health or agriculture to be invited for future meetings, please let us know: for agriculture we would like to present Vik vandecaveye from CNHi: vik.vandecaveye@cnhind.com