ATLAS for a data-driven agriculture

ATLAS project to define the next generation standards for data-driven agriculture

The ATLAS project aims to develop a sustainable ecosystem for a modern and innovative data-driven agriculture. Its goal is to achieve a new level of interoperability of agricultural machines, sensors and data services and enable end-users to have full control over their data, as well as decide which data is shared with whom in which place. This will be achieved through an open, distributed, and extensible data platform offering a high level of scalability from a single farm to a global community.

The technology developed in ATLAS will be tested and evaluated across Europe. Its test sites include 13 agricultural operations of which 5 are pure research farms, 6 are commercial and 2 are combined research - commercial farms. The focus is on four cases: i) precision agriculture tasks, ii) sensor-driven irrigation management, iii) data-based soil management, and iv) behavioral analysis of livestock.

Regarding the works so far, one major effort is the definition of the high-level interoperability reference architecture that guarantees safe and secure communication channels and that brings a new level of processing capabilities to the field. A core-architect team designed the foundation to seamlessly exchange data between machines, sensors and data platforms.

The tasks with regard to the integrated sensor system and the on-board processing unit are progressing, while the electro-mechanic setup as well as the sensor and processing equipment have already been defined to a major part. The next generation ISOBUS standards capable to transport more data at high-speed play a significant role in this task.

For the Pilots, the team responsible has contacted several stakeholders and has had a series of meetings to clarify requirements and to further define use-cases.

Moreover, the tasks related to machine and sensor manufacturers’ requirements are well on track, the relevant questionnaires to assess both machine and sensor/platform manufacturers’ requirements are finalised and online surveys have been set up.

ATLAS will run for 36 months until September 2022, with 30 partners from 7 different European countries and with the support of innovative start-ups, SMEs and farmers, will enable new business models for and with the farmers. ATLAS will involve several actors along the food chain, simplifying and improving the processes “from farm to fork”, and with the digitalization of the whole process, it will simplify communication.

For further information, contact Dr. Stefan Rilling, Stefan.Rilling@iais.fraunhofer.de
Contributor

Contributed by:
ETAM SA

5 G PAPANDREOU
71306 HERAKLIO
Greece

Website

Contact

MANOLIS TSANTAKIS (Mr)
Email

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