IOT WEEK CONFERENCE

IoF2020 – IoT applied to Precision Farming

EDWIN HECKER

June 5th 2018

CONTENT

The IoF2020 Story

IoF2020 & SDGs

IOF2020 IN BRIEF

70+ PARTNERS ORGANISATIONS

16 COUNTRIES

4 YEARS

Start = January 2017

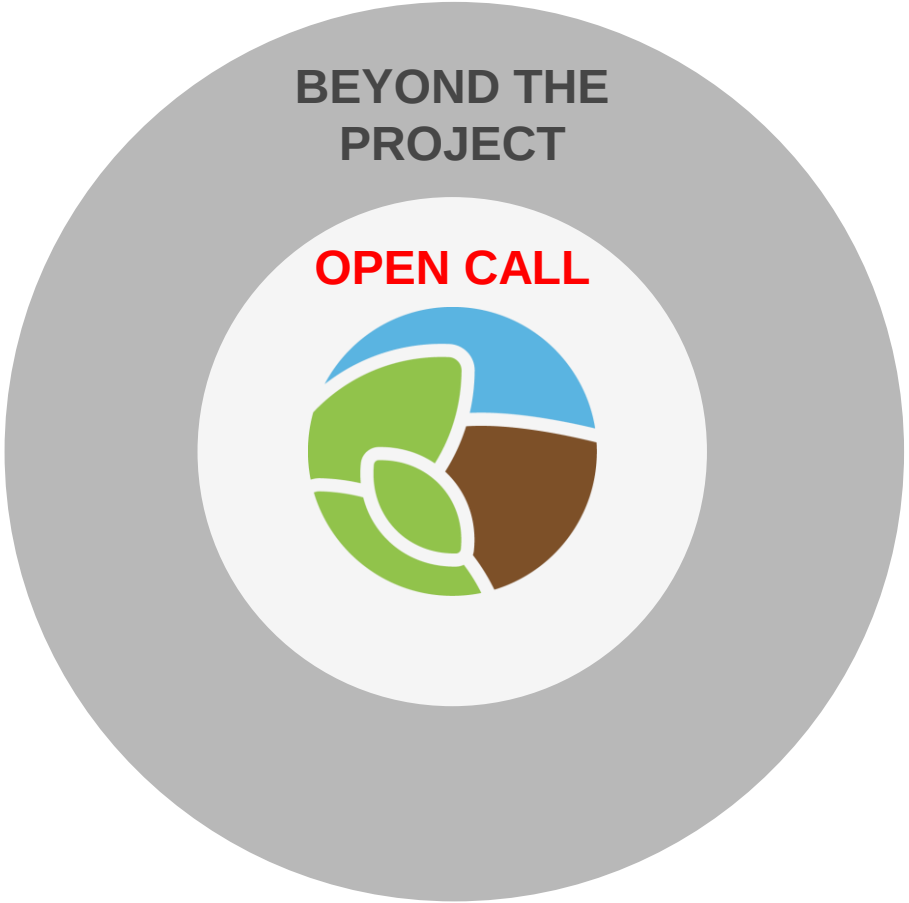
€35 MILLION BUDGET

(€30 million co-funded under EU H2020 programme)

VISION & AMBITION

IoF2020 paves the way for:

- Sustainable, flexible and adaptable farming;
- A data-driven farming;
- Autonomous farm operations;
- Integrated and transparent agri-food chain;
- Virtual food chains;
- Interoperable farm activities;
- A personalized nutrition of the European citizens.



OPEN CALL

- Launch on June 5th 2018 at IoT Week in Bilbao, Budget €6 million
- Objective: Increase scale & impact of IoF2020 initiative with new use case teams and diverse stakeholders
- Major challenges:
  - IoT use cases in new regions (Eastern and Northern Europe)
  - Post-farm use cases and other sectors (e.g. logistics, processing, retail, end consumer)
- Proposals with multi-actor approach, high impact on supply chain, technical feasibility & innovation, strong economic sustainability
- Pre-registering phase **just opened**: iof2020.eu/opencall

5 TRIALS, 19 USE CASES

ARABLE

FRUITS

DAIRY

VEGETABLES

MEAT

STAKEHOLDERS OF THE IOF2020 ECOSYSTEM

SCIENTIFIC COMMUNITY

INVESTORS

EDUCATIONAL INSTITUTIONS

CONSORTIUM PARTNERS

FARMERS & COOPERATIVES

POLICY-MAKERS AND REGULATORS

GENERAL PUBLIC AND MEDIA

END-USERS
- Farm equipment suppliers
- Food processing companies
- Retailers
- Transporters
- Consumer organisations

IOT TECHNOLOGY PROVIDERS

NGOs & INTEREST ORGANISATIONS

BUSINESS SUPPORT ORGANISATIONS
- Accelerators
- Incubators
- Chambers of commerce
- Network(s) of enterprises

AGRICULTURAL (INDEPENDENT) ADVISORY SERVICES

HOW CAN IOF2020 CONTRIBUTE TO SDGs?

1 NO POVERTY
2 NO HUNGER
3 GOOD HEALTH
4 QUALITY EDUCATION
5 GENDER EQUALITY
6 CLEAN WATER AND SANITATION
7 RENEWABLE ENERGY
8 GOOD JOBS AND ECONOMIC GROWTH
9 INNOVATION AND INFRASTRUCTURE
010 011
10 REDUCED INEQUALITIES
11 SUSTAINABLE CITIES AND COMMUNITIES
12 RESPONSIBLE CONSUMPTION
13 CLIMATE ACTION
14 LIFE BELOW WATER
15 LIFE ON LAND
16 PEACE AND JUSTICE
17 PARTNERSHIPS FOR THE GOALS
THE GLOBAL GOALS
For Sustainable Development

THE BIGGER PICTURE AND FIRST RESULTS

Integrating the IoT and agri-food sectors for a competitive and sustainable agriculture that addresses SDGs:

“The future of farming is now.”

Promotes food security and improved nutrition with the help of sustainable agriculture.

IoF2020 will directly optimize farming practices:

- **More food with less inputs** by **increasing agricultural productivity** and **reduction of food waste.**
- Improving **feed efficiency** for breeding animals and **reduction of animal mortality**
- Optimized plant density and crop **yields increase**
- Fruits & vegetables **shelf life; traceability and quality increase**
- **Quality and safety** of dairy products increase

Aims at increasing resource and energy efficiency, sustainable infrastructure and better quality of life.

- Use of DSS to reinforce the **decrease of antibiotics** use and to **reduce soil herbicide** use
- **Site specific best protein/ha** (Soil scanning + site specific irrigation, fertilization and weeding)
- Sensing of soil condition to use less **water and nutrients**
- Farmer **work time reduction** and decrease of **inspection costs**
- **Improve certification** schemes

Addresses the hazardous effects of the climate change by strengthening resilience and adaptive capacity, improving education and raising awareness.

IoF2020 will directly reduce the footprint of agricultural activities through the optimization of farming practices:

- **Preservation of the fertility of the soil** and less environmental impact of the entire agricultural sector
- Monitoring tools and support to **improve land use, reduce GHG emission** and **reduce waste**
- **Increasing the yield per ha**

Promotes sustainable forest management, combats desertification, halts loss of biodiversity and reverses the land degradation.

- **IoF2020** helps maintaining **farms with diversity** as it allows to act differently on specific sites within the farm
- Soil sensor monitoring tool to **reduce nutrients use, inspection time,** and **optimize energy and water use**

IOF2020 SETS AMBITIOUS TARGETS

50
MILLION EURO MARKET POTENTIAL

14
MILLION HA POTENTIAL AREA COVERED

4%
YIELD INCREASE

10%
RESOURCE USE EFFICIENCY

-15%
OIL HERBICIDE USE

> 1,500
FARMERS ACROSS THE EU REACHED

-10%
FARMER LABOR TIME

MITIGATION
OF MILK YIELD LOSSES

DECREASE
OF ANTIBIOTICS USE

BOOST
IN MILK PRODUCTION

PROCESSING EFFICIENCY
IMPROVED

QUALITY & SAFETY
OF DAIRY PRODUCTS INCREASED

ANIMAL WELFARE
IMPROVED

IRRIGATION & LABOR COSTS
REDUCED

SHELF LIFE & QUALITY
INCREASED

-20%
PESTICIDES & FERTILIZERS COSTS

> 10.000
MEASURED RENTAL TRIPS

> 1.000
TRANSPONDERS

IOF2020 SETS AMBITIOUS TARGETS

SHELF LIFE

EXCELLENT SHELF LIFE AT AN ACCEPTABLE COST

+ 5%

PRODUCTION CROP/M^2

- 5%

WORK TIME

QUALITY

TRANSPARANCY IN FOOD QUALITY

COST

& INPUT REDUCED

-90%

HUMAN ERROR

-5%

CERTIFICATION TIME

-50%

USE OF PAPER

> 2.000

PIG RECORDS

- 10%

PIG MORTALITY

+ 10%

FEED EFFICIENCY

>50%

REDUCTION INSPECTION COSTS

SHARE

DATA OF PORK QUALITY WITH SUPPLY CHAIN

SUMMARY IMPACT

- **IoF2020** helps to **do better what we already do**: reduction of inputs, certification, animal welfare monitoring, soil in depth knowledge, adaptation to rapid changes (climate but also market)

Meet us at the IoF2020 Booth 27 & 28 !

STAY-TUNED VIA

- Website: www.iof2020.eu
- Twitter: @IoF2020
- Facebook: IoF2020
- Newsletter subscription & contact: communications@iof2020.eu

Thank you

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INTERNET OF FOOD & FARM

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