

Data revolution is upon us!

Agrifood application examples and concerns

High-level Panel Debate

“The digital transformation and global water, food, energy and environmental challenges“

Perugia, 22/11/2018

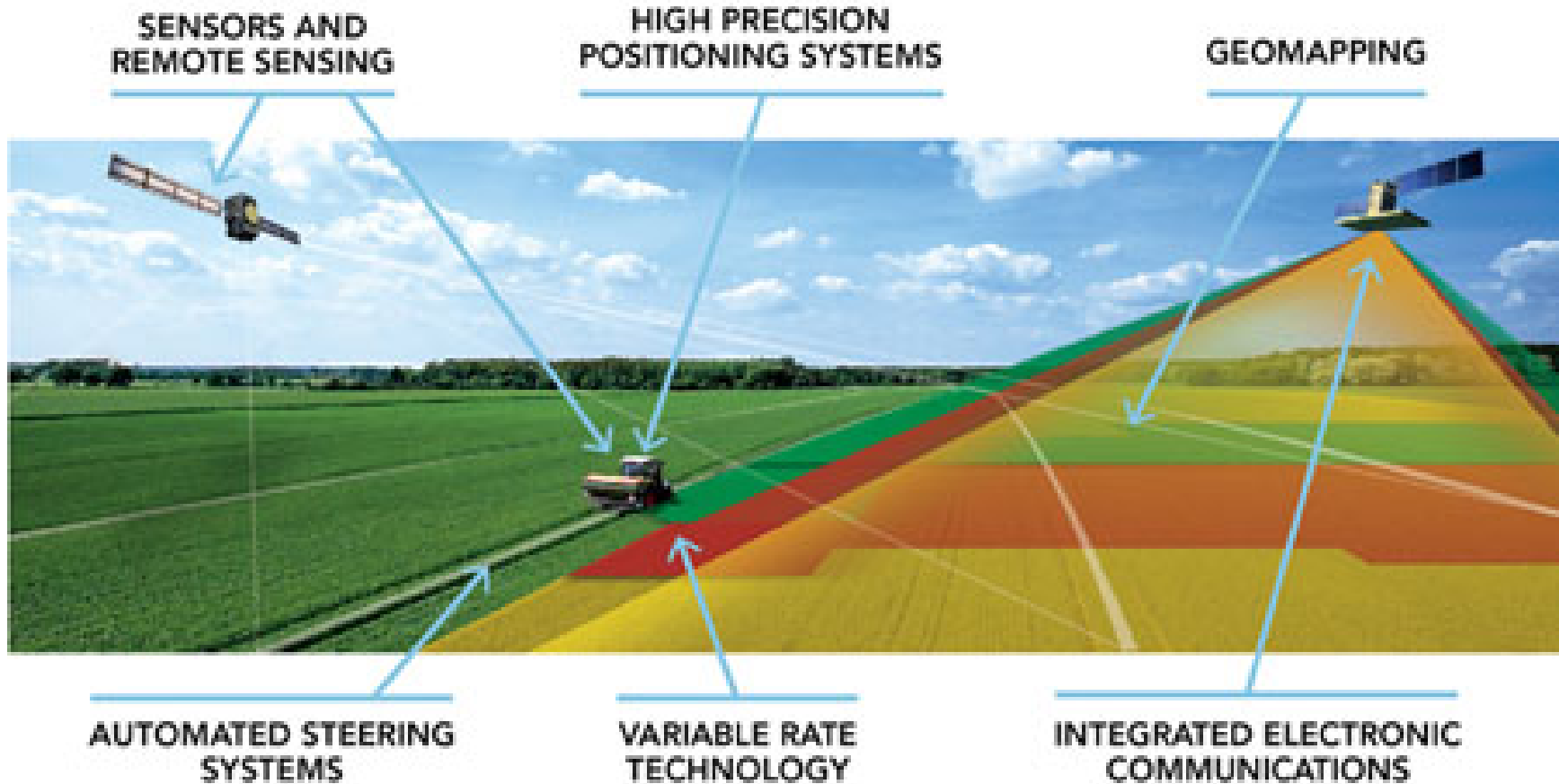
Nicola COLONNA PhD



ENEA



Precision Farming on stage!



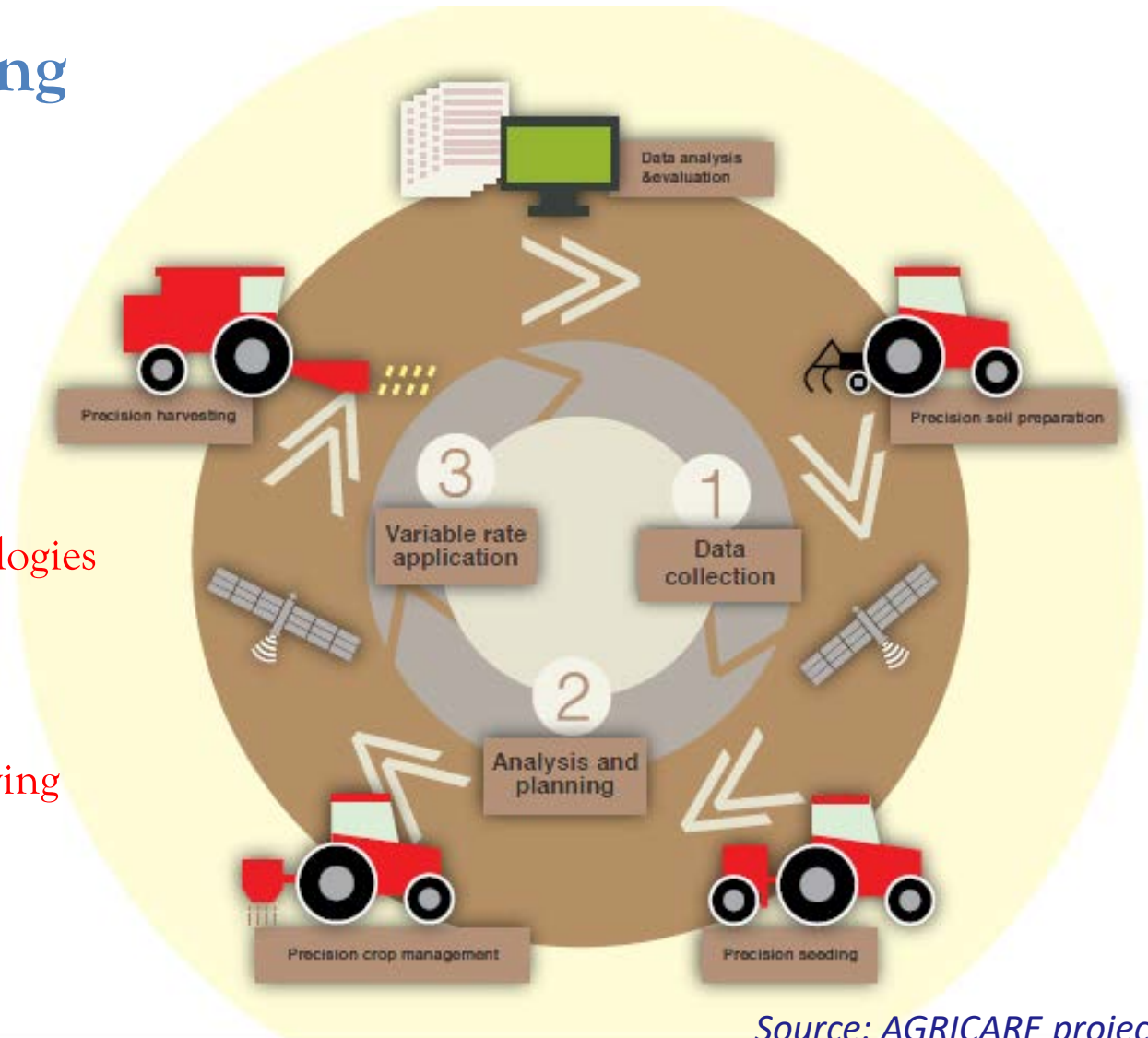
Source: CEMA Website

Precision Farming

for a

Climate Smart Agriculture

The application of technologies and principles to manage spatial and temporal variability at field level
For the purpose of improving crop performance and environmental quality
(Pierce & Nowak, 1999)



Source: AGRICARE project

Precision Farming and benefits for W.E.F.

What we know and what we are able to do:

Improving irrigation schemes and timing: water saving, increased WUE

Tractor assisted guide: Fuelsaving, increased efficiency of nutrient and pesticides with no overlapping and no gaps along the field

Precise seeds distribution and depth: less seeds, uniform growth, increased production

Optimization of fertilizers distribution: timing and doses: nutrient savings, water table protection, less acidification emissions

And much more to come.....if we strength research cooperative efforts

METROFOOD-RI

*Infrastructure for promoting
metrology in food and nutrition*

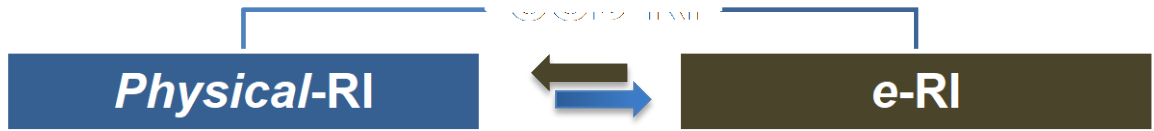
A **new** distributed research infrastructure for the agrifood sector at EU level
Cover the **whole food chain** from primary production up to final consumption
It aims at providing high quality metrology services in food and nutrition
including **data collection** and **measurements reliability**



FAIR OPEN SCIENCE

48 Partners from
18 Countries

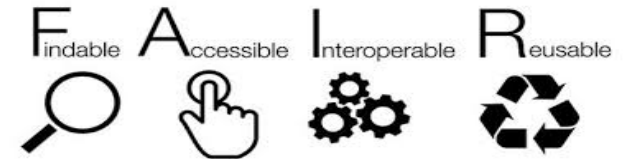
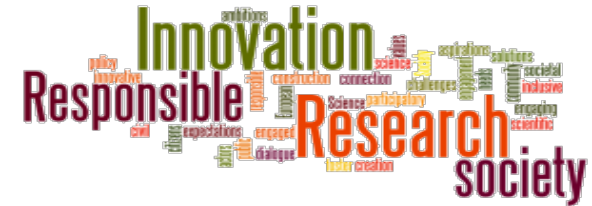
- Research Institutes
- Universities
- Institutes for Food Safety and Health Protection
- National Metrology Institutes
- Private Companies
- Laboratories for Food Analysis



Metrofood-RI and data

METROFOOD-RI, follow the principles of Responsible Research and Innovation (RRI)

Provide distributed services, follow plan of measurement reliability and procedure harmonization and adopts the FAIR approach (Findable, Accessible, Interoperable, Re-usable) on data management.



- RESEARCH/ACADEMIC
- FOOD BUSINESS OPERATORS
- CONSUMERS / CITIZENS
- FOOD INSPECTIONS & CONTROL

Users and e-Services

Tools for measurement standardisation and harmonisation; Access to food data, data related to food production&processing, data on environmental and health impact; Tools for Food Traceability and Authenticity

Some open issues

The innovation potential of data availability, elaboration and use seems to be huge but.....

- ✓ What are the real cost of information? Who is going to pay?
- ✓ Who really is going to get the benefits? What about small farmers?
- ✓ Nowadays are we really aware of potential pros and cons ?
- ✓ The benefits of a wide availability of data for agrifood productions are counteracted someway? *E. g. Are we transferring a part of the energy cost from farming operations to the data center energy industries ?*

Is quite sure that we have large amount of data but maybe we do not have enough skills and ability to elaborate and use it for the decision making process

Conclusions

- ✓ **Partnering** across sectors and actors to harness the explosion of available data, technologies, skills, and opportunities to connect multiple data sources **is essential** to unlocking data potential for improved agrifood production systems.
- ✓ This event could help to build a **better understanding** of the interdependent nature of many seemingly discrete sustainability challenges, and **the value of data** in informing decision-making to address complex challenges.

Please go on, together!

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