

# « Agriculture-Innovation 2025 »

## 30 projects for a competitive and environmentally friendly agriculture

A study for the French

- **Minister of Agriculture**
- **Secretary of states in charge of Higher Education and Research**
- **Secretary of states in charge of Digital Technology**





# A study written by

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- Pierre Pringuet, former Managing Director of Pernod Ricard Co. and Chairman of the Board of AgroParisTech, Paris Institute of technology for life, food and environmental sciences
- Jean-Marc Bournigal, President of Irstea, the Public National Research Institute of Science and Technology for Environment and Agriculture, former director at the Ministry of Agriculture



#AgricultureInnovation2025

Propositions de  
Jean-Marc BOURNIGAL  
François HOULLIER  
Philippe LECOUEY  
Pierre PRINGUET





# 3 Priorities 9 Axes 30 Projects

**System thinking : agriculture as a key player against global climate change**

2 axes-9 projects-31 actions

**For a full development of new technologies in agriculture**

4 axes-12 projects-45 actions

**Support competitiveness through Open innovation**

3 axes-9 projects-22 actions

**Agroecology**

**Bioeconomy**

**Digital agriculture**

**Genetics and Biotechnologies**

**Robotics**

**Biocontrol**

**Open innovation**

**Agricultural Economics**

**Training**

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# Fostering the agroecological transition



Agricultural services portal  
for global climate change  
forecasting and adaptation



Integrated  
water  
management



1 Improving farm productivity

2 Reducing inputs

3 Facilitating field tasks

4 Fighting global climate change



Tools for  
early detection  
and diagnosis on the  
field

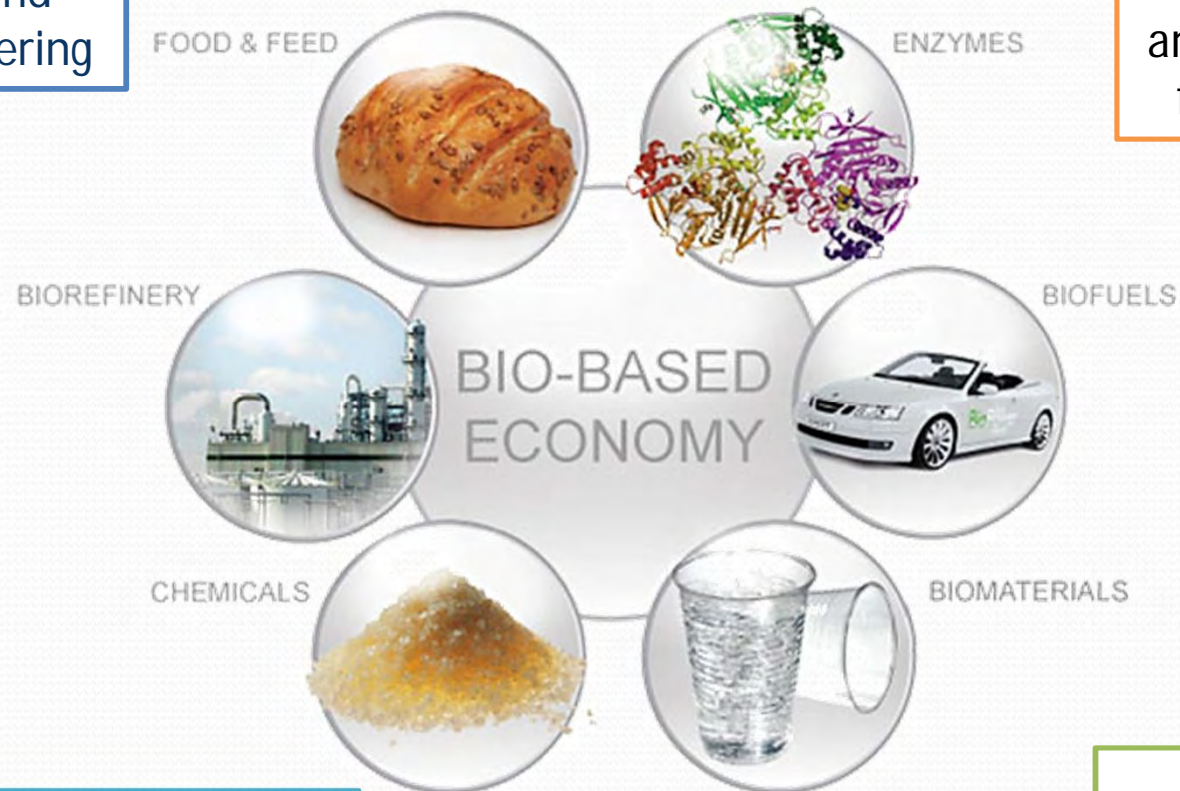


Research on soils  
biology and fertility



# Developing research and innovation for Bioeconomy

Technology and  
Process Engineering



Synthetic biology  
and systems biology  
for Bio-industries

Protein autonomy

Biomass  
management

## Digital Agriculture

*Data for new services and new knowledge*



**Agricultural robotics :**  
*Fast, accurate and safe agroequipments*

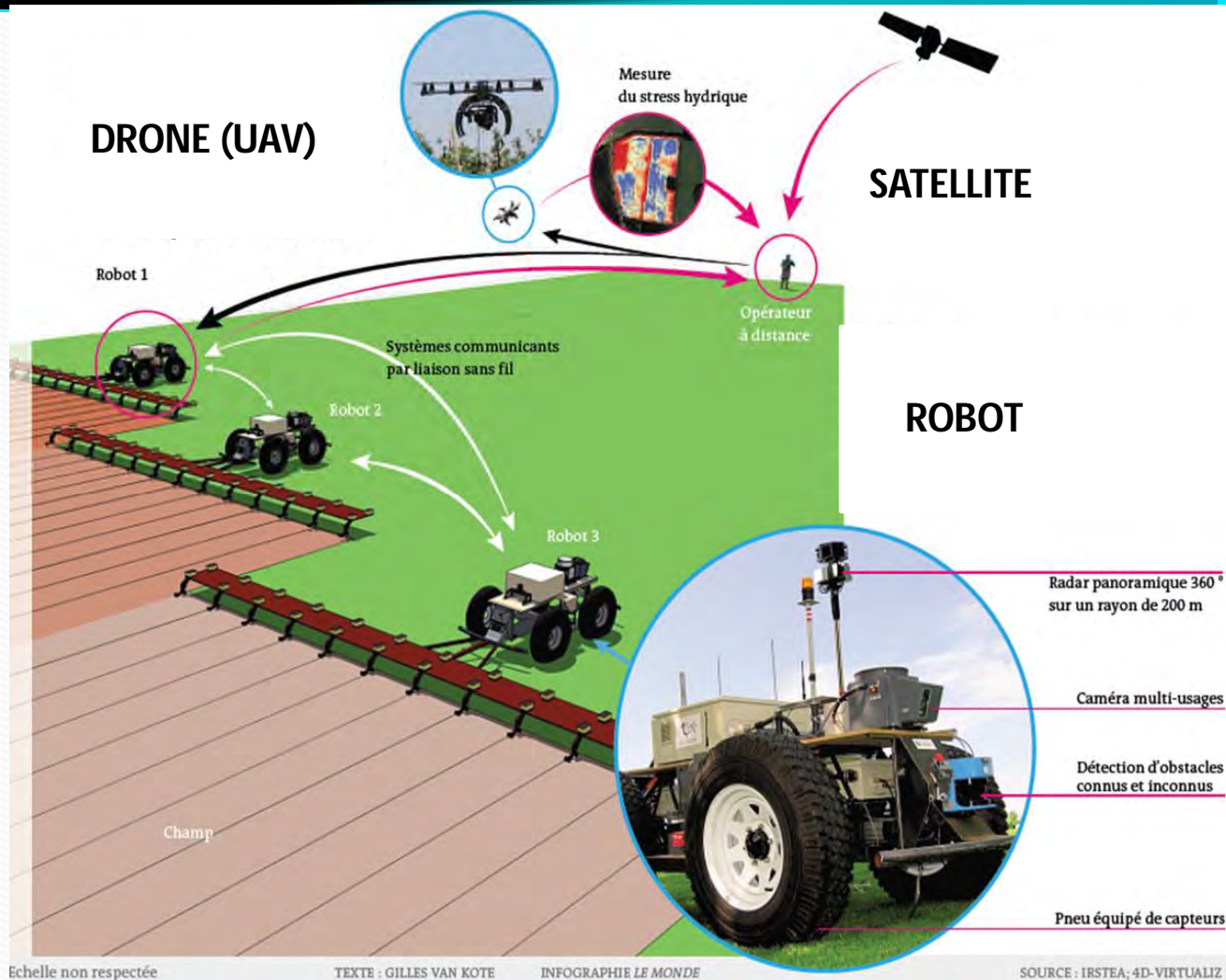
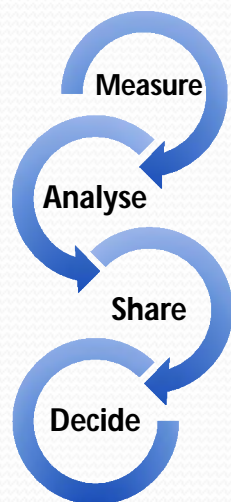


**Mobilizing genetics and biotechnology for animal and crop production**



**Vegetal and animal Biocontrol**  
**Structuring the research and encouraging the innovation**





Echelle non respectée

TEXTE : GILLES VAN KOTE

INFOGRAPHIE LE MONDE

SOURCE : IRSTEA; 4D-VIRTUALIZ

# Encouraging open innovation

Integrating farmers' experiences

Pushing forward  
experimentation and  
observation networks



Creating living-labs

## Multiperformance and Innovation in agricultural economics

Multi-criteria assessment tools  
for farm and food systems

International Observatory on  
Agriculture and Agri-Food  
competitiveness



New financing sources

Training



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# Digital Agriculture Convergence Lab

- **Duration** : 7years **Project start date**: 1 January 2017
- **Budget** : €147 M (total costs) of which €9.9 M in grants
- **Location** : MONTPELLIER (85%) + 2 subsidiary sites (Toulouse, Rennes)

- #DigitAg aims to become a **world leader in digital agriculture.**

- **Goal:**

Promote the **development of digital agriculture** (from data acquisition to practical implementation) and associated businesses in this sector through **research, training** and **industrial partnerships** in France and southern countries further south.

A **convergence** of disciplines (agronomy, engineering sciences, economics, social sciences and management studies)



# 17 partners – 25 research laboratories



4 national research centres

3 regional higher education institutions



2 organisations for knowledge transfer

8 professional partners



## RESEARCH

- + 150 Master grants
- **56 funded PhD theses**
- + 50 theses labelled PhD
- 18 years of post-doctoral work
- 72 months of high-level scientific work
- Data Challenges

## TRAINING

- 20 Masters courses including 4 new courses
- The Digital Agriculture Observatory

## TRANSFER

- The Mediterranean connected farm
- AgroTIC company Chair
- 10 years of computer developers
- Support of maturation and incubation



A photograph of a vast lavender field with rows of green plants stretching towards the horizon. The sky is filled with dramatic, streaky clouds, and light rays emanate from behind the clouds, creating a sense of depth and grandeur.

# Thank you for your attention