Collaborative research program

MAPE

"Reduction of Bird Mortality in Operating Wind Farms"

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Webinar : Wind & Wings

November 2022

MAPE

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"Reduction of Bird Mortality in Operating Wind Farms"

1. **MAPE Program :** Ana Maria Tobon

2. EolPop: a tool to quantify the impact of collisions on bird populations: Thierry Chambert

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MAPE – French context

Wind Energy

Between 2017 – 2028 : France plans to double its wind energy capacity ➔ this transition towards renewable energy, when poorly planned, can have negative consequences on biodiversity

Regulation – impacts on biodiversity

In France, it is mandatory to **avoid**, **mitigate** and/or **offset** for impacts in the environnement

The two main mitigation solutions currently used are :

1. generic curtailment during sensitive periods of the year (i.e., breeding or migration periods, bad weather conditions) or

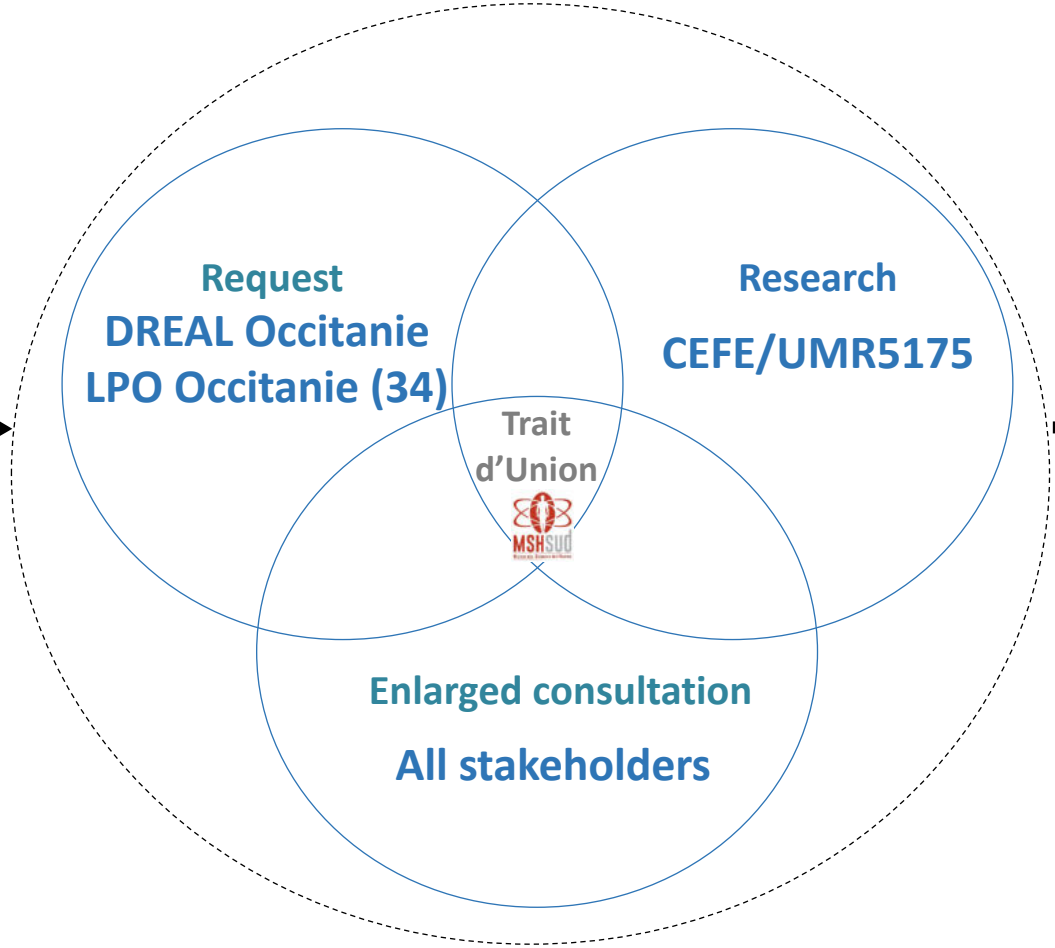
2. the installation of automatic detection systems (ADS) on or near operating turbines that emit acoustic deterrent signals or shutdown the turbine. → Efficiency ?

MAPE - Origin of the Program

Request for research 2018

«How to reduce avian mortality in terrestrial windfarms? »

In connection with bird detection systems



Co-construction of research project

Issues
Deliverables
Governance

Search for funding

Implementation 2020

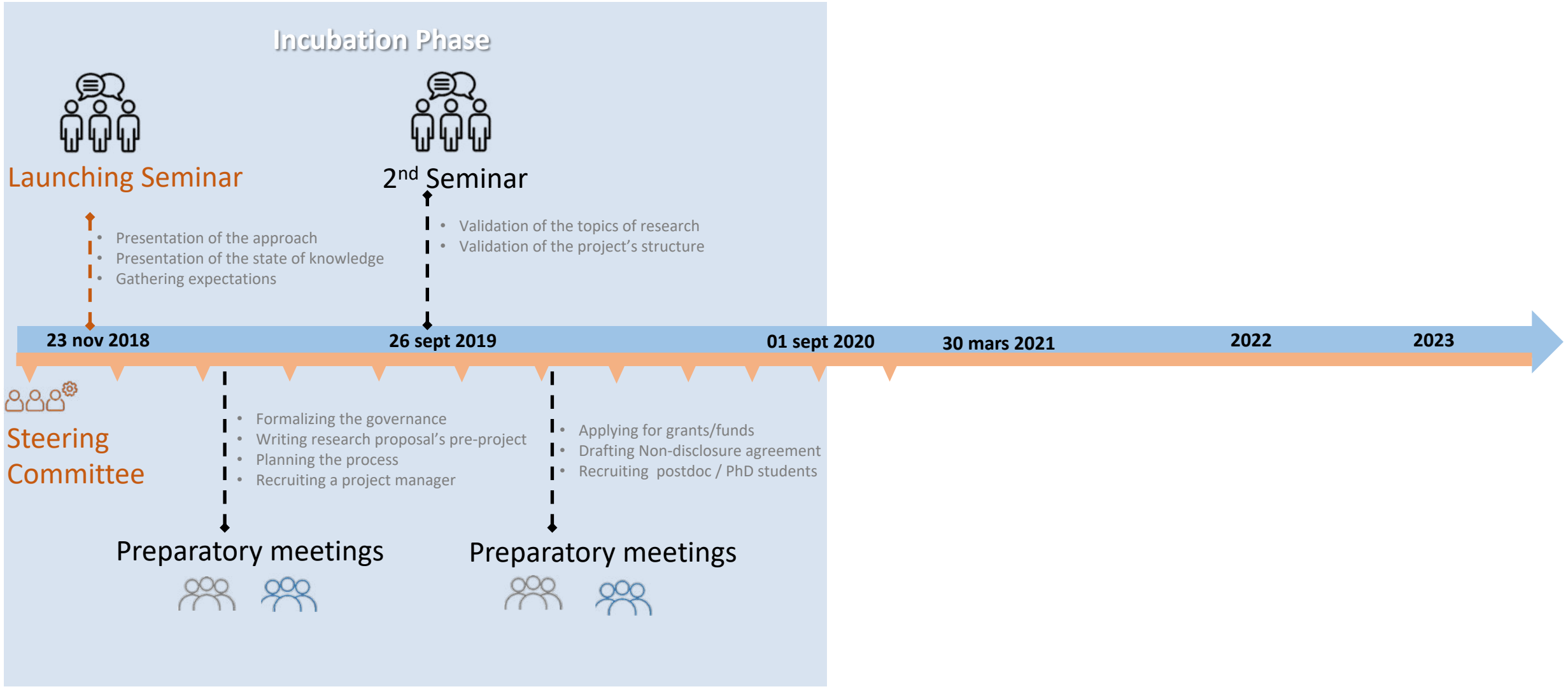
MAPE – Scientific Goals

Understanding the causes and consequences of bird mortality in wind farms

Production of knowledge to improve the efficiency of detection and avoidance systems

Production of knowledge to improve the current regulation

MAPE : Incubation and Implementation phases



MAPE : Program structure

RESEARCH PART	**WP1** **Causes of bird mortality in wind farms**	**R1** Understanding the conditions that lead to bird collisions		1 post-doc / 2 years
	WP2 Consequences of collisions on bird populations	**R2** Determining sustainable mortality thresholds for bird populations		1 post-doc / 1 year, 1 master student / 6 month
	WP3 **Information to improve avian mortality reduction solutions**	**R3** Determining minimum detection distances for birds to avoid mortality		1 post-doc / 1 year, 1 master student / 6 month
		R4 Better understand the perception of rotary motion by birds		Doctoral student / 3 years
		R5 Identifying the best methods of scaring		1 postdoc / 2 years
PROTOCOLE PART	**WP4** **Evaluation of automatic detection tools**	**P1** Writing and validating the collaborative evaluation protocol for detection-reaction systems	**P2** Implementation of the collaborative evaluation protocol in test sites	1 postdoc / 2 years
CONSULTATION PART	**WP5** **Coordination, consultation, communication**	**CC** Coordination, support for the consultation process		1 project manager/ 3 years

MAPE: Governance

96 entities
172 participants

MULTI-ACTORS WORKING GROUP

- ✓ Associations for the protection of environment
- ✓ Association of zoological parks in France
- ✓ Technical consultants
- ✓ Solution providers
- ✓ Wind farm operators and developers
- ✓ Scientific research
- ✓ Turbine manufacturers
- ✓ Local authorities
- ✓ State services

STEERING COMMITTEE

- ✓ ADEME
- ✓ DREAL Occitanie
- ✓ Fédérations: FEE et SER
- ✓ Labex CEMEB
- ✓ LPO Occitanie
- ✓ OFB
- ✓ Région Occitanie
- ✓ MTES / DGEC
- ✓ CEFE
- ✓ NeuroPSI
- ✓ MSH SUD

12 institutions
16 representatives

TECHNICAL COMMITTEES

48 representatives
32 organisations

Animation & coordination of the Project

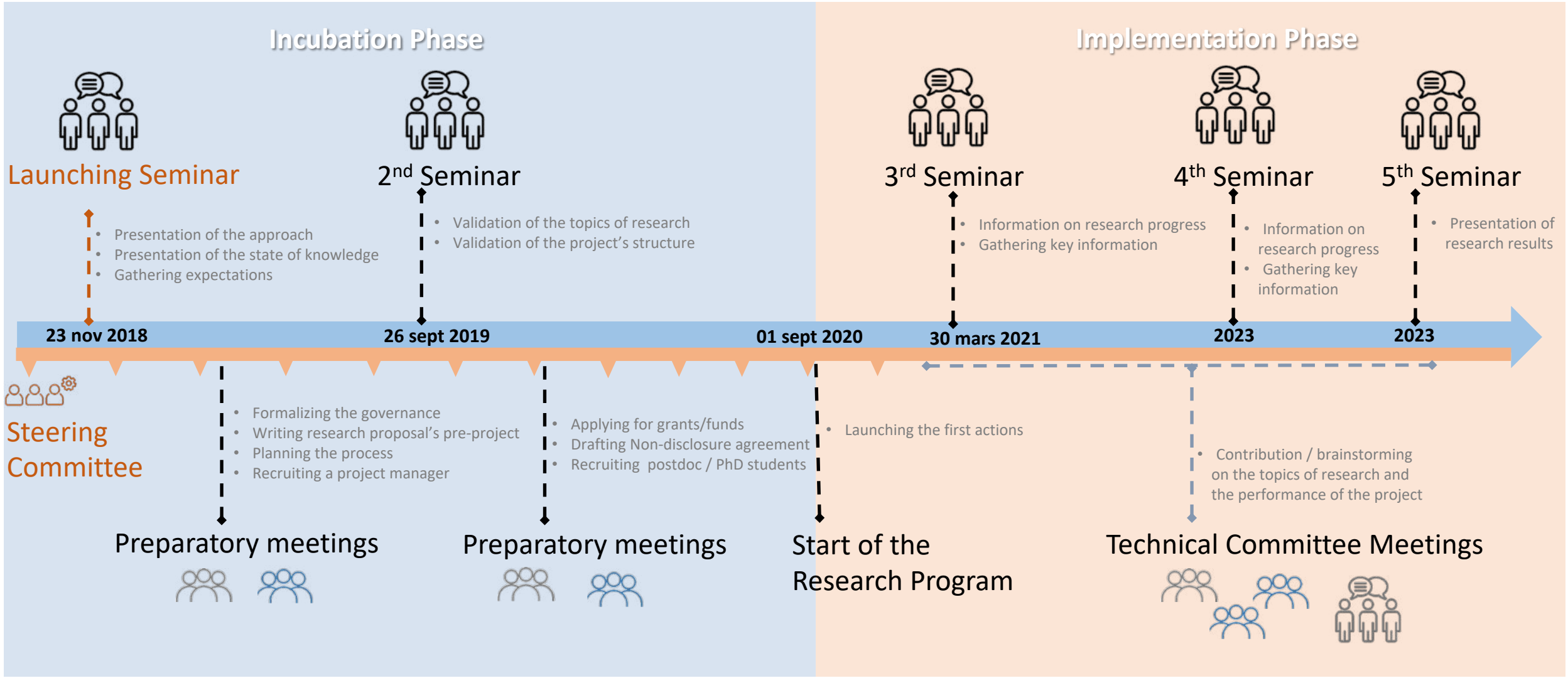
3 Councils :

Contributions to project actions

Strategic management of the project

Operational management to ensure the technical management of the project

MAPE : Incubation and Implementation



MAPE : Research progress

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MAPE: Concluding remarks

By involving stakeholders at all steps of the program MAPE has reached its goal of **developing knowledge and tools that were collectively identified as highly needed to reconcile windfarm industry and biodiversity conservation.**

It is also the **first research program of this kind** in France.

The example of MAPE shows that **building collaborative research programs involving dozens of stakeholders from different perspectives is possible**. They however need time and have to rely on a strong neutral facilitation structure that helps solving problems, maintaining a permanent dialogue…

MAPE Research projet