

# Closure Navisp Project

AGCbox, Navigation and  
Geofencing projects

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CTO

NAVISP EL2-088

Contract number : AO/1-8927/17/NL/MM

06/07/2023



**AGREENCULTURE**





# **AGREENCULTURE**

**NAVISP**  
**03 JULY 2023**



- **AGREENCULTURE context and products**
- **NAVISP Scope**
- **NAVISP Activities**
  - **Safencing**
  - **AGCbox**
- **NAVISP Outcome**







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- NAVISP Outcome







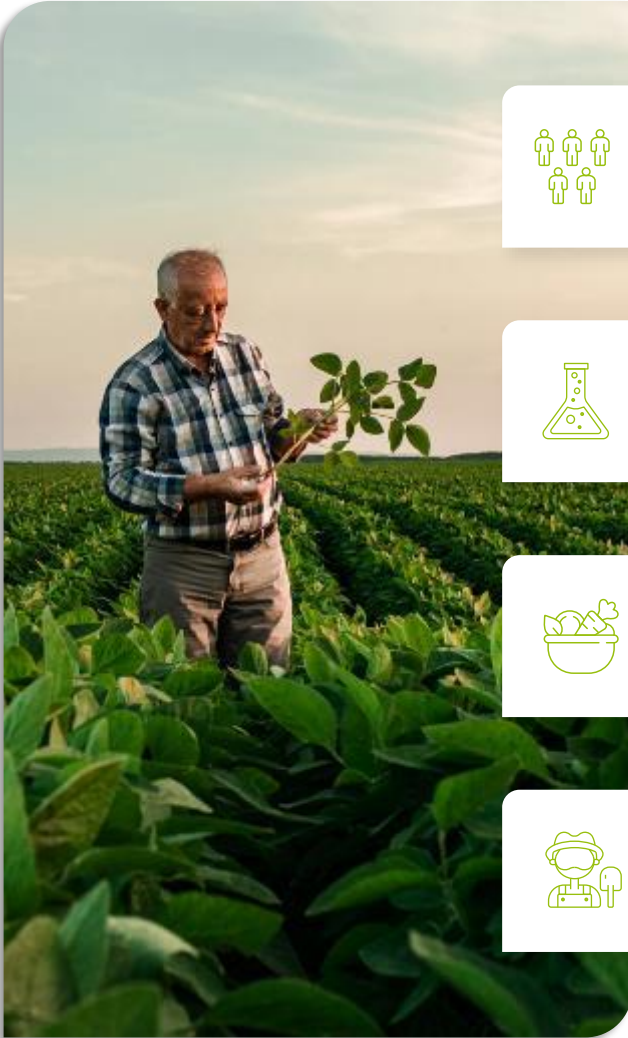
## IMPROVING FARMERS' WORKING EXPERIENCE BY INCREASING PARTNERS' EXPERTISE







## CONTEXT



**From 7 to 10 B**  
people



Less  
**chemicals**



More  
**sustainable food**



Less  
**farm workers**



**16 years**  
of expertise  
in precise  
positioning



**Partnerships**  
with industrials  
and start-ups



**Offroad  
machine**  
automation



How can robots and autonomous tractors help farmers move toward more sustainable production ?



# CONFIGURE & CONNECT SOLUTION FOR AUTONOMOUS MACHINES



Thanks to



AGCBOX



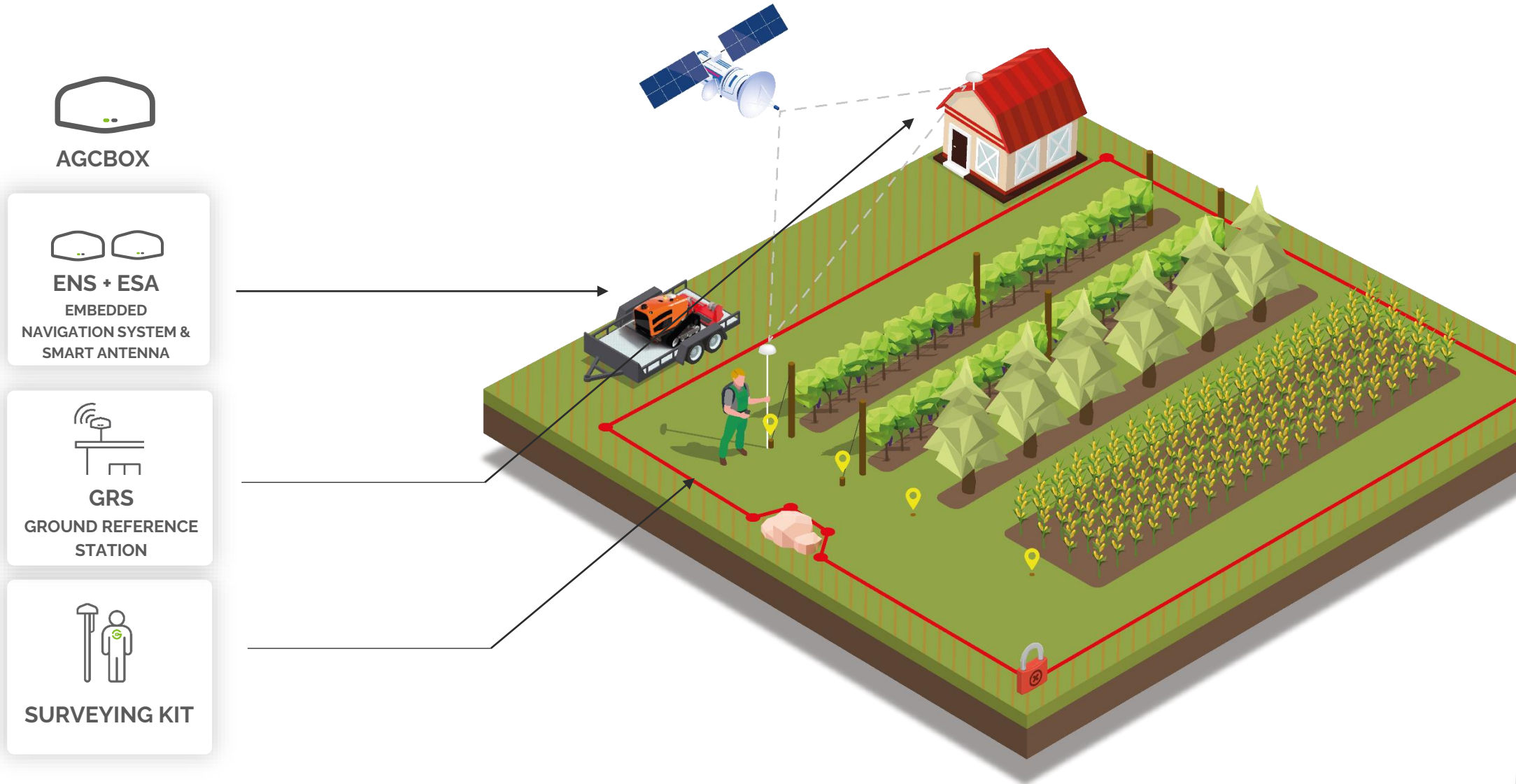
EMBEDDED



CLOUD PLATFORM



# AGCBOX TO MAKE MACHINES AUTONOMOUS, CONNECTED & SAFE

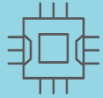




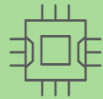
# EMBEDDED COMPUTERS AND SENSORS



EMBEDDED



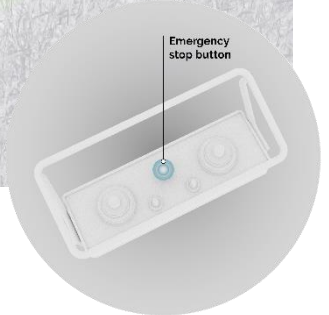
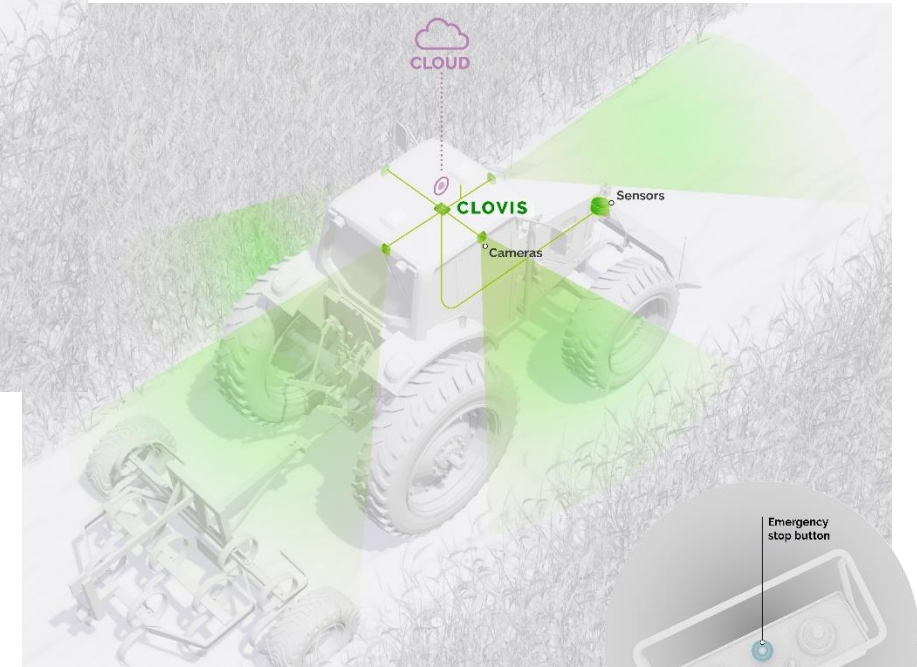
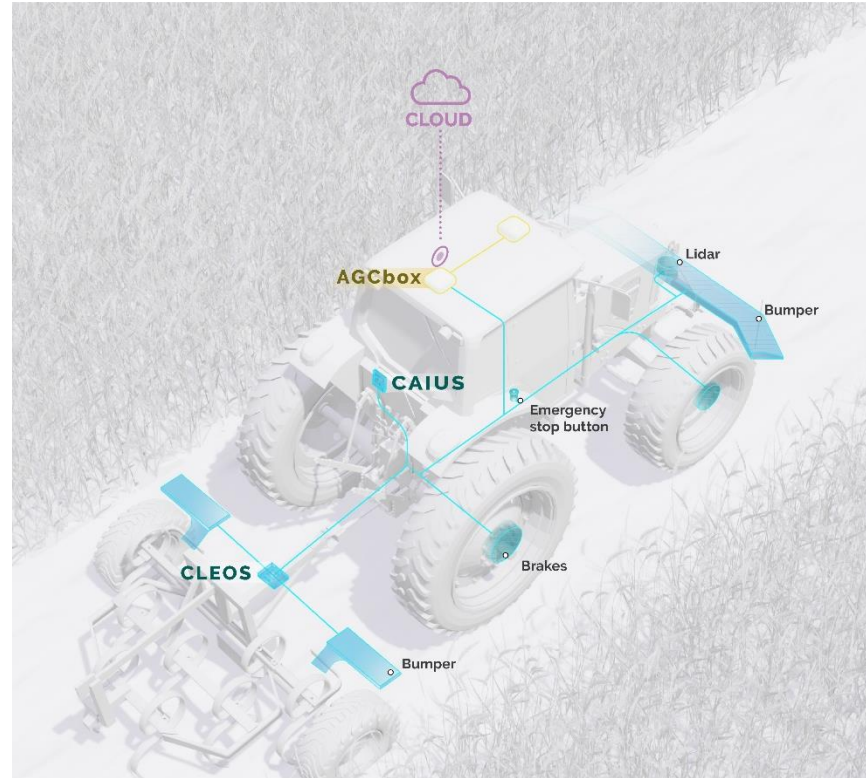
## SAFETY ECU CAIUS & CLEOS



## PERCEPTION ECU CLOVIS



## SENSORS







# CLOUD PLATFORM



## CLOUD PLATFORM



PRE-WORK



LIVE DATA



DATA ANALYSIS



→ A **modular** and **scalable** platform





# CONFIGURE & CONNECT SOLUTION FOR AUTONOMOUS MACHINES







## Partners :

Financé  
par



Founded in  
**2016**



Based in  
**Toulouse**



**60**  
Collaborators



**3**  
Patents



**8**  
Nationalities



Revenue

2020	2021	2022
665K€	1.3M€	2.4M€





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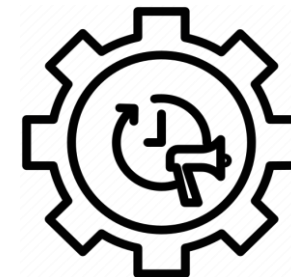


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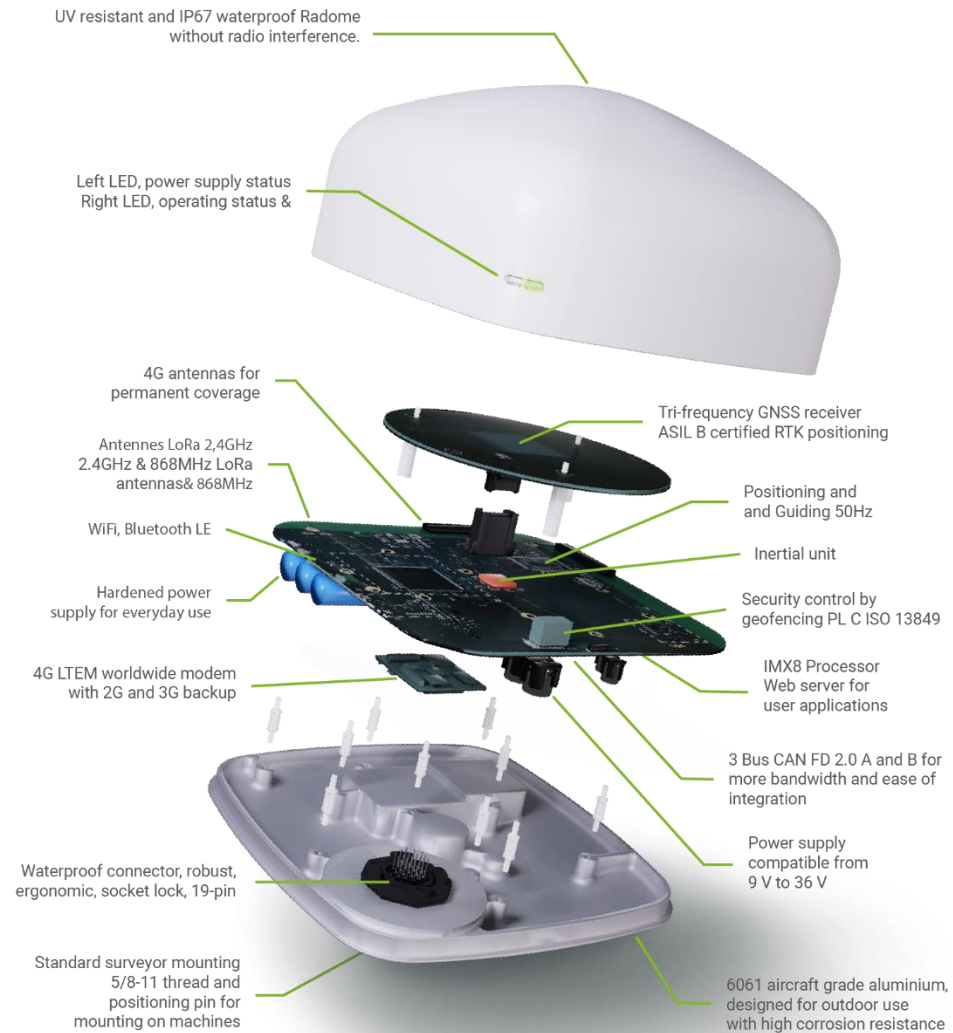
- Pre certify AGCbox
- Increase maturity and TRL  
(*Electronic, Positioning, Navigation, Safencing*)
- Reduce time to market







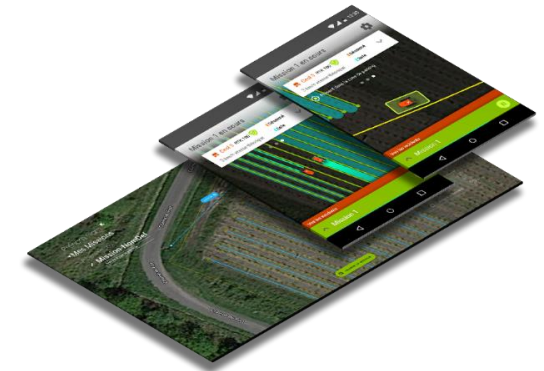
# NAVISP SCOPE : AGCBOX



## 1 SURVEYING



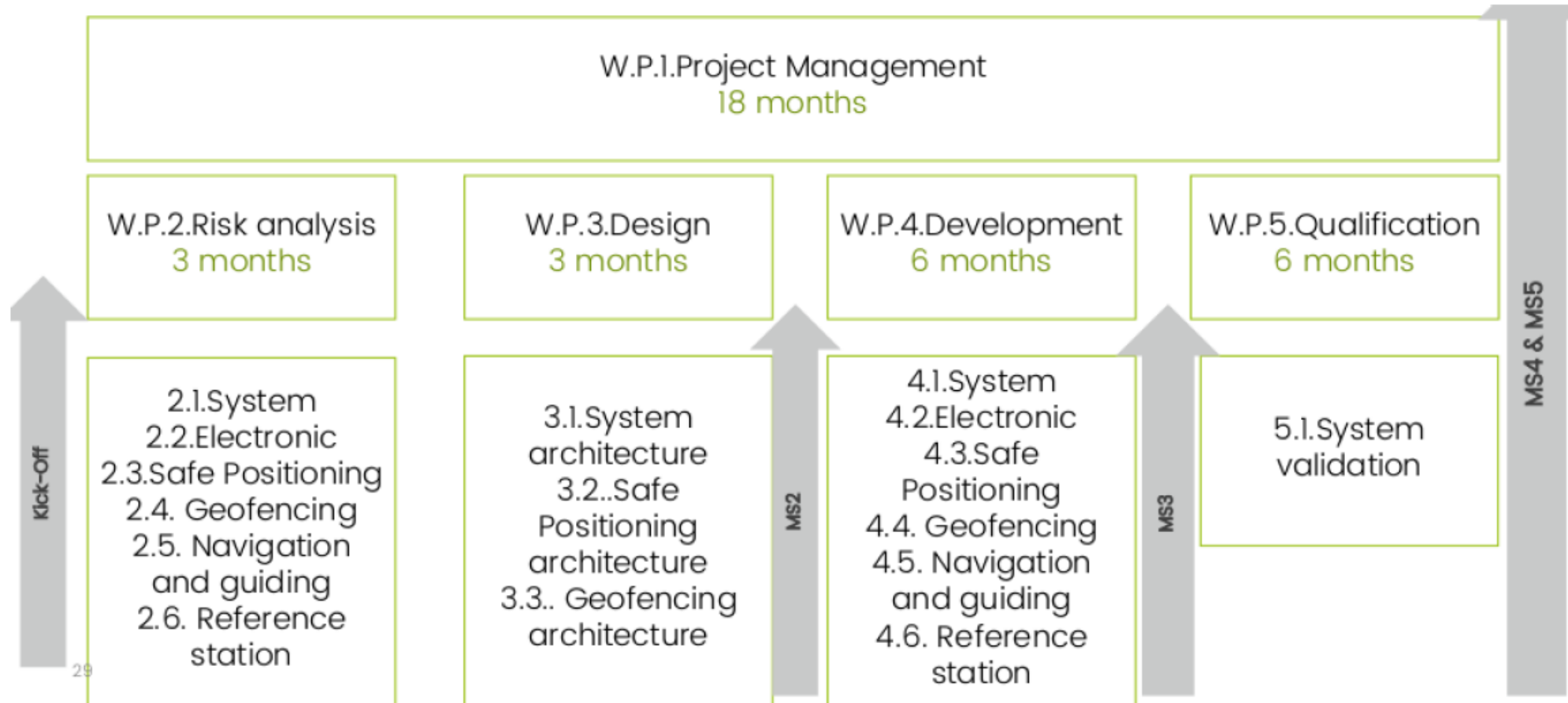
## 2 MISSION GENERATION



## 3 MISSION PROGRESS











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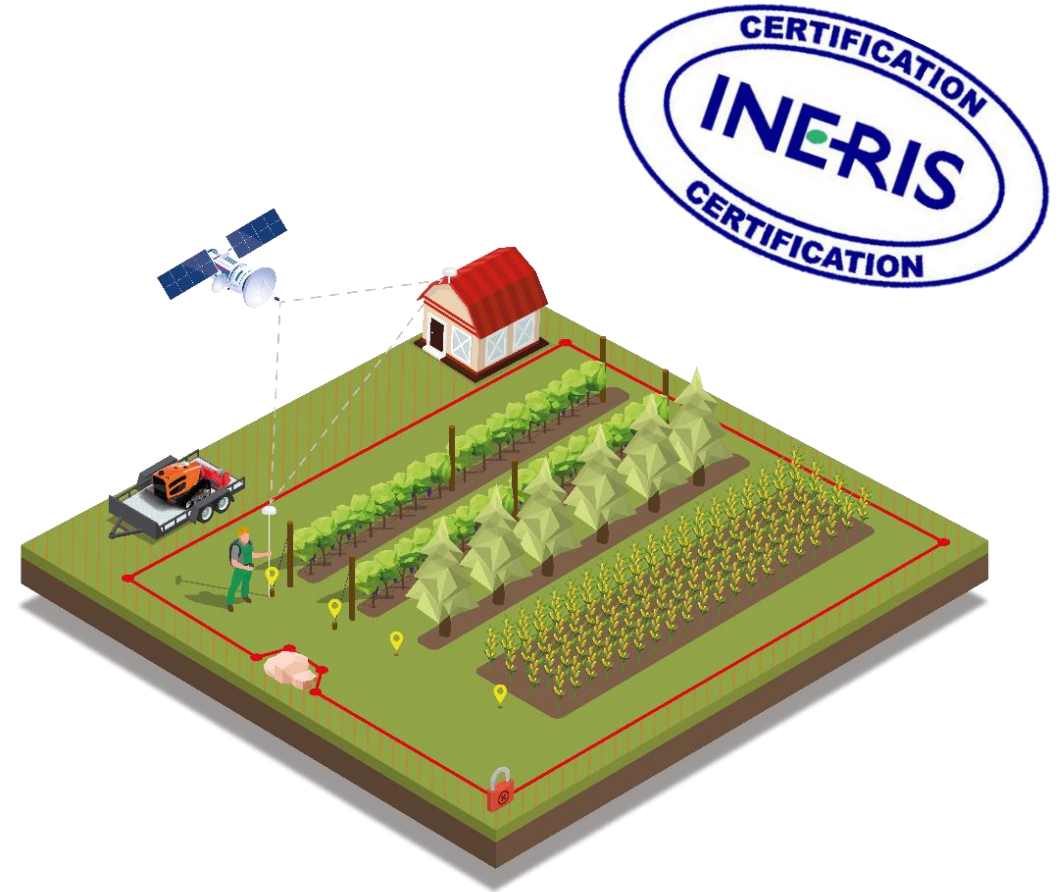




# NAVISP ACTIVITIES: SAFENCING©



**Safencing©** is a safety component within the scope of the Machinery Directive for autonomous machines, such as **agricultural robots**, whose safety function is to inform the machine if it is, or is not, in its defined working area, or if it is about to leave it. It is currently being certified to **PLd** level according to iso **13849**.







# NAVISP ACTIVITIES: SAFENCING®



## ARCHISYSTEM-AGC-SAFENCING

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16 juin 2023 16:37  
Référence document : /index.md  
Version : 0.2.1

1 Version Control

Date de génération : 16 juin 2023 16:37

### 1 Version Control

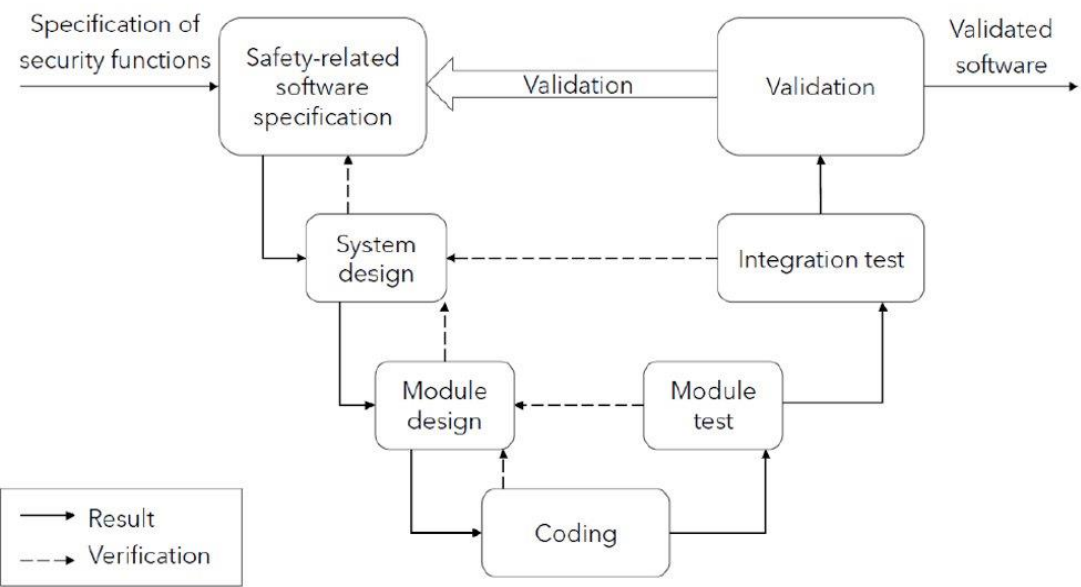
Project	Branch	Version	Commit Hash
archisystem-agc-safencing	develop	0.2.1	76b4d128ab0d8cb68dd95e5ab23e574e3c77103
GenerationPythonFromModel	develop	1.3.3	aa702d115759e8ace5f0ebc5364f970f5fcd8e0
agc-doc-toolbox	-	1.9.0-124	-

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[Analyse Système](#)  
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[Résultat de tests](#)  
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AGREENCULTURE  
Smart robots for smart farming







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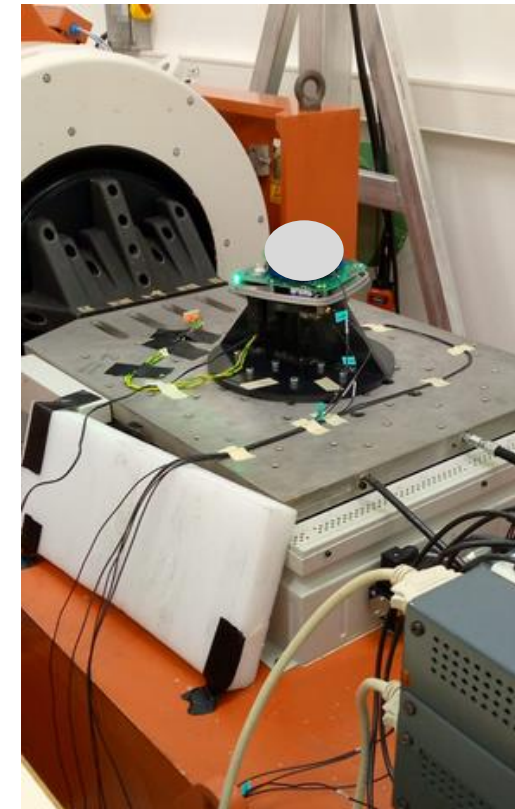
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# NAVISP ACTIVITIES: AGCBOX







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# NAVISP OUTCOME: PRODUCT MATURITY



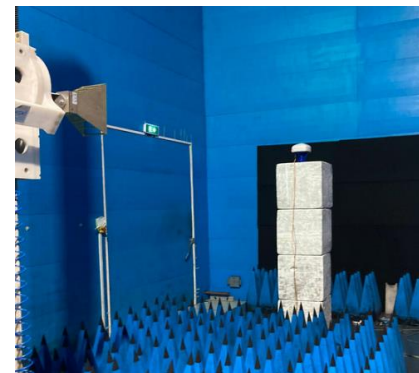




# NAVISP OUTCOME: AGCBOX CE CERTIFICATION



- **Vibrations** Tests
- **RED** (Radio Emission Directive)
- **EMC** (Electro Magnetical Compatibility)
- **Electrical Safety**
- **Waterproof** and **Dust** tests







# THANK YOU

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**bpi**france



**PELLENC**

