

PRESTIGIOUS

euroPean stRatEgic cluSter parTnershlp to Go InternatiOnal for Uav Smes



Co-funded by the COSME programme
of the European Union

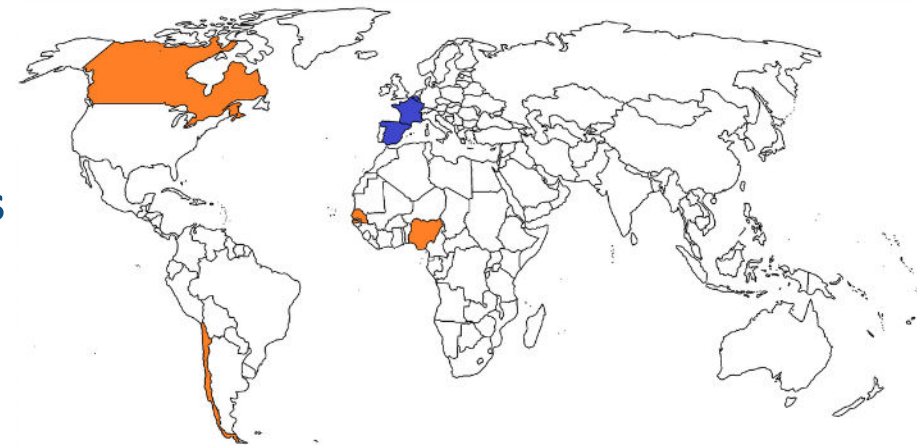
Agenda

- **16.00 Results of the PRESTIGIOUS project on the European drone value chain**
- **16.15 How to develop in Nigeria and Senegal with Business France**
 - Loïc Tchuenkam, Director of the Business France office in Senegal,
 - Igor Chlapak, Director of the Business France office in Nigeria
- **16.25 Special guest from Senegal**
 - Senegal Flying Labs - Mr TIAMIYOU RADJIS
 - ANACIM - National Agency for Civil Aviation and Meteorology
 - Association des Professionnels et Amateurs de Drone (APAD) - Malick Diagne – President
- 16.55 Question and answer session
- **17.10 Pitch session**
 - Adrien LAFFON – Electronic Bird Control
 - Paul CLAIS – ROAV7
 - Solange TARDI – ELISTAIR
 - Julie GUEVILLE – ABOT
 - Khalid CHRAIBI – SOGECLAIR
 - Olivier JOURNET - EVA
- 17.30 Exchanges and discussions
- 17.45 End

European Drones value chain and Internationalization assistance for SMEs

4 main actions

- ✓ **Assessment of the value chain for drones in Europe**
 - *Identify the strengths of European SMEs*
- ✓ **Organization of 3 missions to non-European countries**
 - *Identify potential end users outside Europe*
 - North America (**Canada**)
 - West Africa (**Nigeria, Senegal**)
 - South America (**Chile**)
- ✓ **Supply of individual support for European SMEs**
 - *Organization of training seminars for the transfer of information*
- ✓ **Preparation of a joint internationalization strategy**
 - *Roadmap to establish a European strategy for drones*



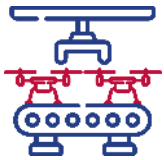


Main actions

✓ Assessment of the value chain for drones in Europe

- *Identify the strengths of European SMEs*

STRUCTURE OF THE VALUE CHAIN



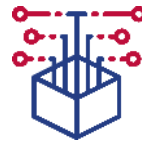
OEM manufacturer



OEM supplier



Software editor



Data analysis



Maintenance center



Training



Pilot / operating company



Certification company



Testing Center

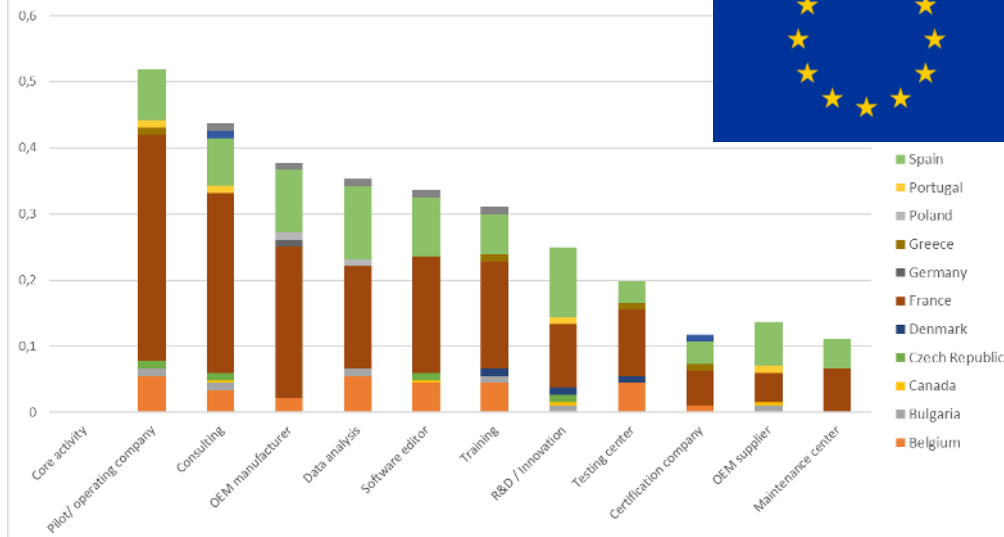


Consulting



R&D / Innovation

Value Chain for european drone actors



- The main areas covered by short of 50% of the responding European companies are : **“Consulting”** and **“Pilot/operating Company”**.
- **This distribution is in accordance with identified market needs and expectations.**



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COMPLETE THE SURVEY - HERE**



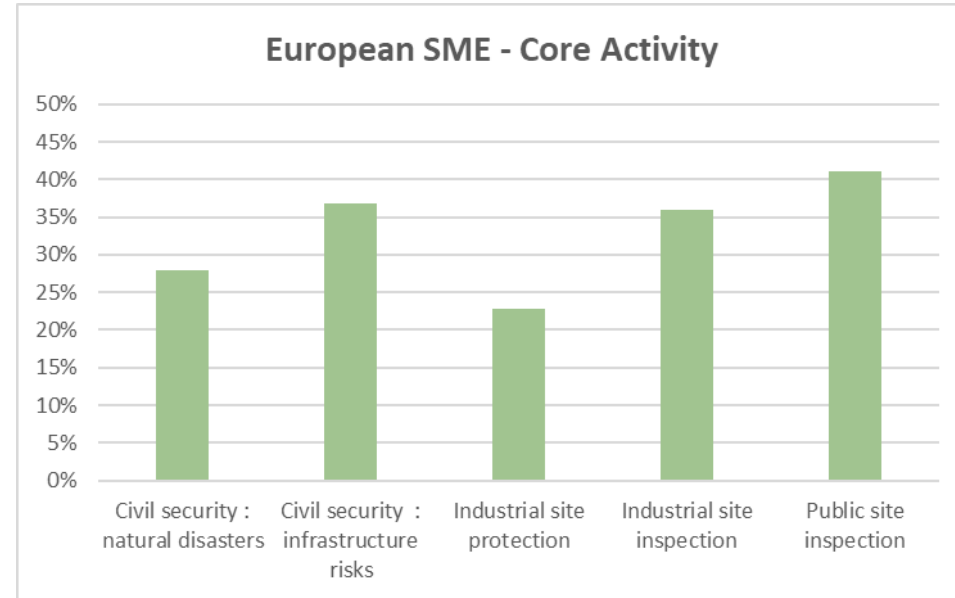


Main actions

- ✓ Assessment of the value chain for drones in Europe
 - Identify the strengths of European SMEs

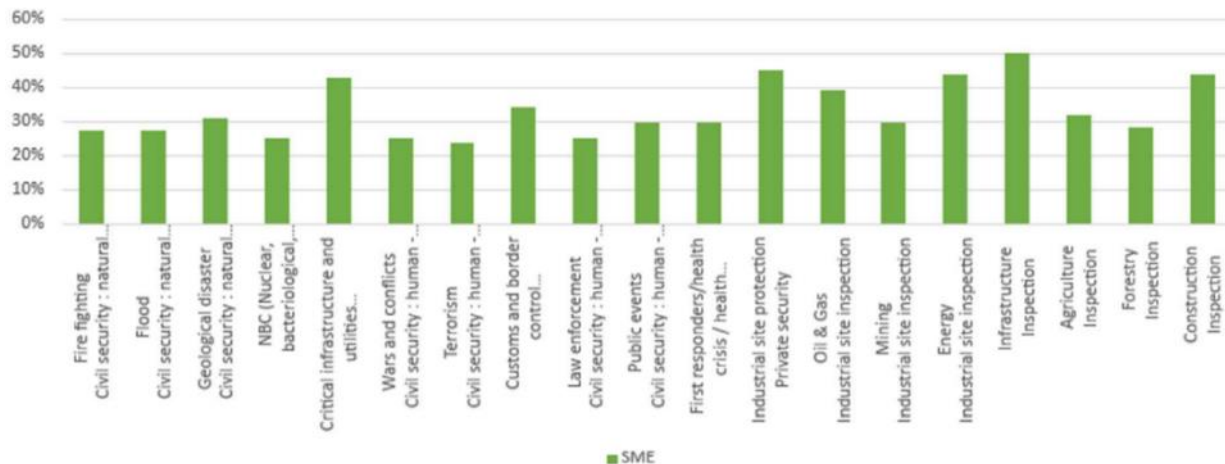
A quite homogeneous distribution of the activities of European actors among the segmentation of the drone inspection and security markets.

However, we can note a **diversification of actors** that goes beyond these two sectors.



- No major markets due to regulatory constraints and maturing market.
- Market still in the maturation phase

Priority Market - detail



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Main actions

✓ Assessment of the value chain for drones in Europe

- *Identify the strengths of European SMEs*



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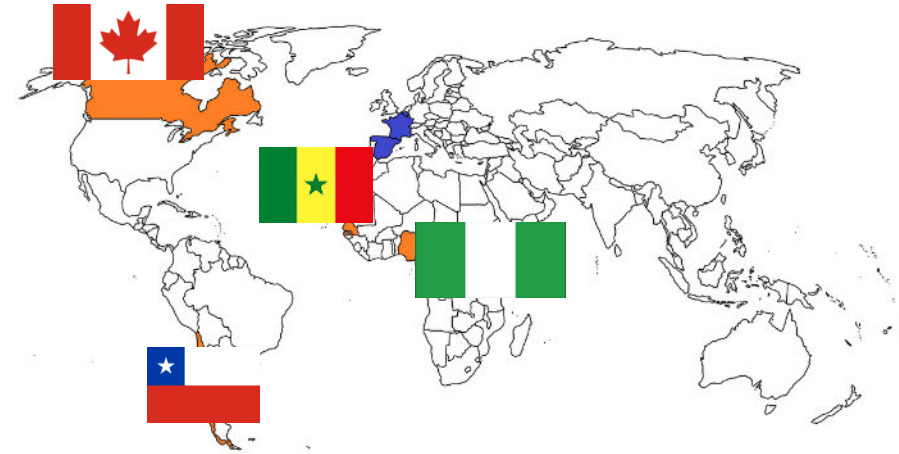
✓ Main conclusion:

- ⇒ Business is **mainly national**
- ⇒ Access to other countries (EU or non-EU) **remains difficult**
- ⇒ Market size is still **limited**
- ⇒ China and the USA are a major part of the **current drone hardware value-chain** (*OEMs and part suppliers*) for the European actors
- ⇒ European companies are open to EU-based solutions if
 - ⇒ **price is the same for the same quality**
 - ⇒ **quality is higher**
- ⇒ There is an opportunity for **drone (spare)** parts production in the EU
- ⇒ Drones and satellites are considered as complementary regarding Earth Observation (*inspection in agriculture, forestry, sea, as well as security*)
- ⇒ Certification is a strategic issue. EU is late compare to the USA.



Main actions

- ✓ Organization of 3 missions to non-European countries
 - Identify potential end users outside Europe
 - North America (**Canada** – Montreal, Québec – 09/22)
 - West Africa (**Nigeria, Senegal** in remote – 06 to 09/22)
 - South America (**Chile** – Santiago de Chile – 10/22)



Key facts

✓ Economic environment data

	Canada	Chile	Nigeria	Senegal
Population (Millions)	39	19,8	206,1	17
GDP (bn USD)	1991	353	432	25
GDP by inhabitant (USD)	51051	17828	2096	1471
Balance of trade (% GDP)	0,16	2,16	0,39	-15,5
Employment (%)	60,3	54,9	66,7	56,1
Unemployment rate (%)	5,2	8	33	22
Life expectancy	81,7	80.3	68.2	55.0

✓ Contribution to GDP of following sectors (in billion USD)

	Canada	Chile	Nigeria	Senegal
Services	1150	165	223	12
Mining	122	46	31	0,6
Manufacturing	170	25	51	3,5
Agriculture, forest, fish	47	10,4	103	4,2

GDP values by sector are indicators of business potential for drones in that industry

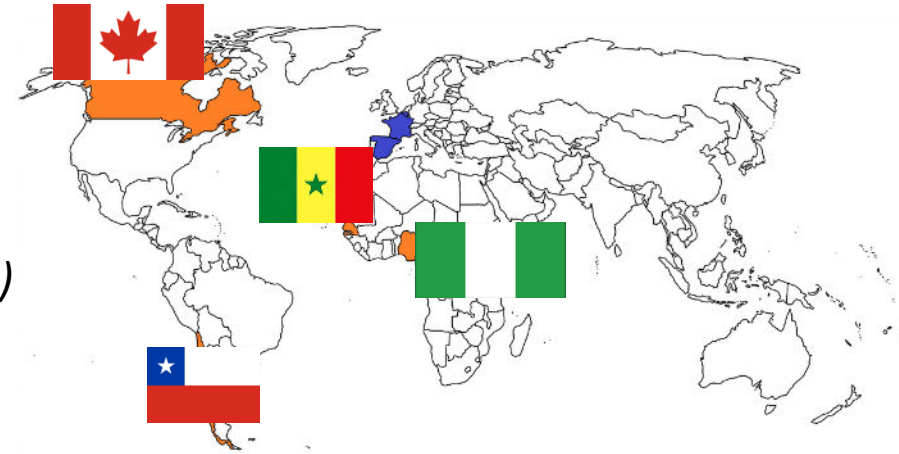




Main actions

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✓ Potential of specific market

	Canada	Chile	Senegal	Nigeria
Long range Inspection (<i>power- & pipe-lines</i>)	X	X	X	X
Inspection of towers (telecom)	X			
Security (borders, infrastructures)		X	X	X
Agriculture, vegetation monitoring	X	X	X	X
Environmental monitoring	X	X	X	
Mining	X	X		X
Arctic and cold weather operations	X			
Photogrammetry & mapping	X	X	X	
Training			X	X
Material (aircrafts, payloads)			X	X
Drone detection	X		X	
R&D (any topic)	X			

These elements allow us to identify **two important facts** :

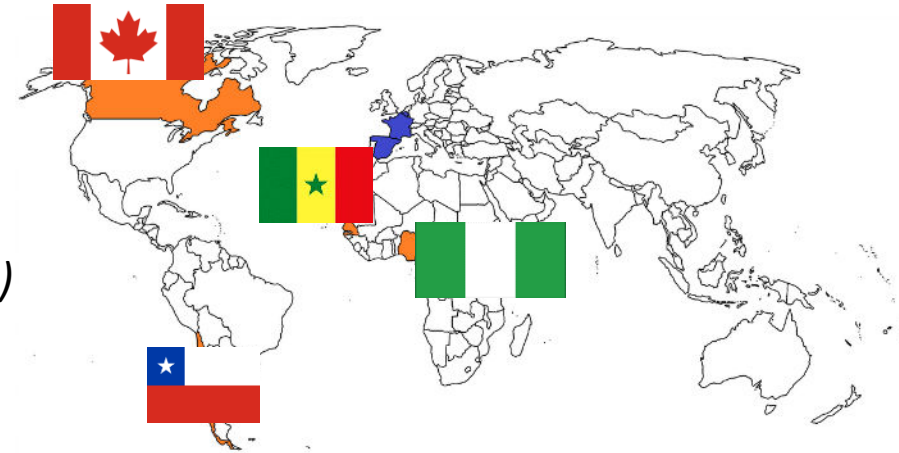
- The first is that the **needs of each country are different** and thus an **individual and customised approach is needed** to ensure the success of the development of drone actors in Europe.
- The second indicates that **all the needs identified can be met** by European drone operators. However, a **targeted approach will be necessary** in order to guarantee the optimal success of the collaborations.



Main actions

✓ Organization of 3 missions to non-European countries

- *Identify potential end users outside Europe*
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✓ High-level recommendations regarding a first approach on these specific markets :

➤ Canada

- Seek **R&D partners** in any high-tech area
- **BVLOS, U-Space** and '**cold condition flight**' development
- For existing solutions: use test ranges to **benchmark EU** vs existing local solutions (incl BVLOS)

➤ Chile

- Favor operations outside of the populated areas, where **regulation is less strict**
- **Agro-forestry** monitoring (growth, counting and intrusion detection) is in demand
- The needs is the **mining industry is wide**: site monitoring (safety and production volume), equipment maintenance (fixed and moving), exploration for new resources.

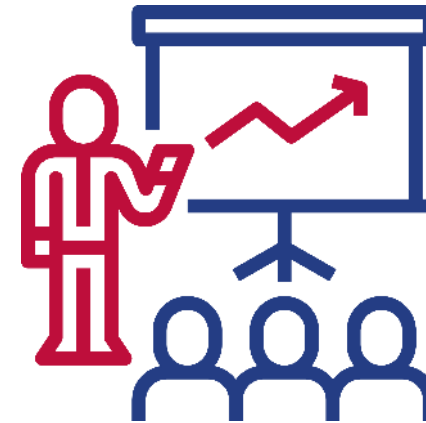
➤ Senegal and Nigeria

- As the markets and access to business and drone-operation authorizations are still sometimes unguaranteed, explore these markets if **strong local contact exists and business case (including regulatory) is demonstrated**.
- **Economically robust EU organizations** may find an opportunity to sow the seeds and help the local institutions define a favorable UAV roadmap. Advice and support from your country's/regions's local economic/business agency is highly recommended.



Webinar Prestigious European Drones value chain and Internationalization assistance for SMEs

✓ **Be referenced** in the European value chain of “drones”



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<https://forms.gle/mnQ7XNjj7BUK4P547>



How to develop in Nigeria and Senegal with Business France

Loïc Tchuenkam, Director of the Business France office in Senegal,
Igor Chlapak, Director of the Business France office in Nigeria





Senegal Flying Labs

Mr TIAMIYOU RADJIS



ANACIM - National Agency for Civil Aviation and Meteorology



REGLEMENTATION DES RPAS AU SENEGAL



REPUBLIQUE DU SENEGAL

CODE DE L'AVIATION CIVILE (loi 2015-10 du 04/05/2015)

**ANACIM - AGENCE NATIONALE DE L'AVIATION CIVILE ET
DE LA MÉTÉOROLOGIE**



COMMENT L'ANACIM REGLEMENTE LES DRONES



**ANNEXE 5 AU RAS 06 - SYSTEMES D'AERONEFS
TELEPILOTES (RPAS)** édition 02 du 20/04/2021

<https://www.anacim.sn/spip.php?article52>



Guide d'autorisation d'exploitation de RPAS



CONDITIONS D'ÉLIGIBILITÉ POUR EXPLOITER UN RPAS AU SENEGAL (extrait §2.2 Annexe 5 au RAS 06)

2.2 CONDITIONS D'ÉLIGIBILITÉ POUR EXPLOITER UN RPAS

- a) Est éligible pour l'obtention d'une autorisation d'exploiter un RPAS :
 - 1) toute personne âgée de 15 ans au moins pour la catégorie A;
 - 2) toute personne âgée de 12 ans au moins pour la Catégorie B ;
 - 3) toute personne âgée de 18 ans au moins pour la catégorie C ;
 - 4) toutes les personnes morales régulièrement établies au Sénégal pouvant justifier l'usage d'un tel équipement ;
 - 5) toute personne morale non résident au Sénégal, dotée d'un mandat ou d'un contrat légal de prestation de services avec une société immatriculée au registre de commerce du pays (Sénégal) ou d'un Etat de l'UEMOA ou un ordre de mission délivré par une entité de l'Etat du Sénégal ;
 - 6) toute personne morale non résident au Sénégal et mandatée par une personne morale de nationalité Sénégalaise et résident en permanence au Sénégal.

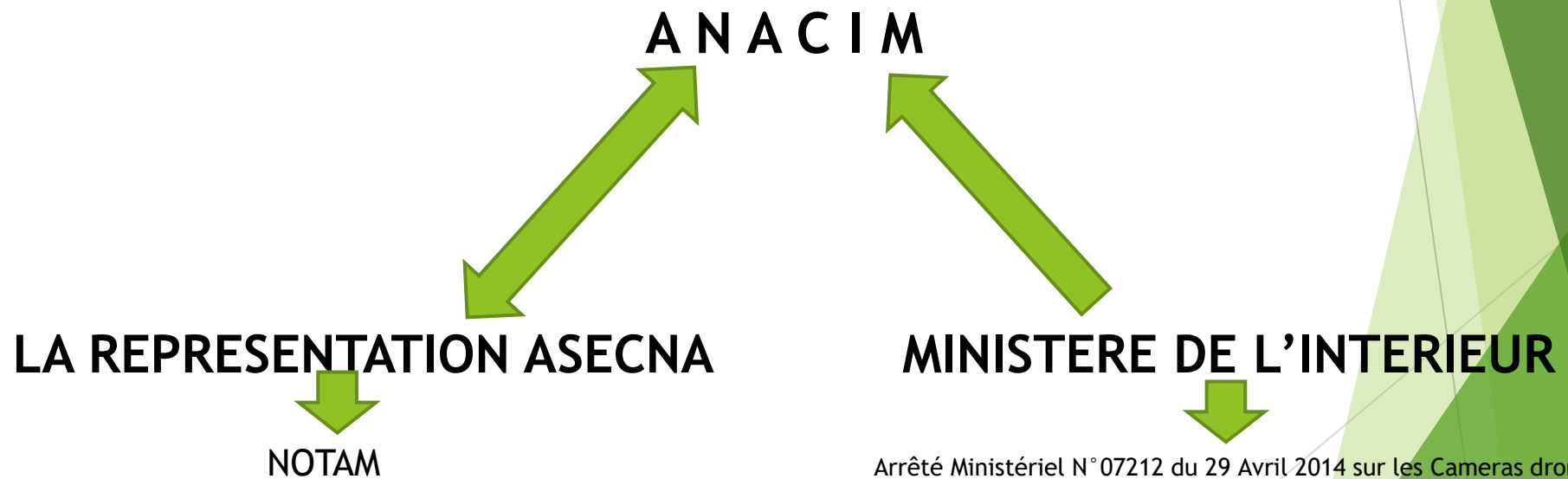


TYPES D'EXPLOITATIONS DE DRONES AU SENEGAL

	Catégorie A Loisirs et/ou privés	Catégorie B Aéromodélisme sport	Catégorie C Professionnel : organismes privés et publics	Type de document délivré par l'Autorité
Classe 1 : Masse ≤ 5 kg	1A	1B	1C	Autorisation d'exploiter de durée limitée
Classe 2 : 5 < Masse ≤ 25 kg	Non Autorisé	2B	2C*	
Classe 3 : Masse > 25 kg	Non Autorisé	Non Autorisé	3C**	Permis d'Exploitation de RPAS (PER)



PARTIES INTERVENANTES DURANT LE PROCESSUS D'AUTORISATION





TYPES D'AUTORISATIONS RPAS DELIVREES PAR L'ANACIM

- ➔ PONCTUELLES ET SPECIALES : 03 MOIS Renouvelable**
 - ➔ PERMANENTES : 01 AN Renouvelable**
- ➔ PERMIS D'EXPLOITATION DE RPAS : 01 AN Renouvelable**



MERCI
pour votre attention
Avez-vous
des questions ?



Association des Professionnels et Amateurs de Drone (APAD)

Malick Diagne – President



Question and answer session



Main actions

✓ Supply of individual support for European SMEs

- Organization of training seminars for the transfer of information



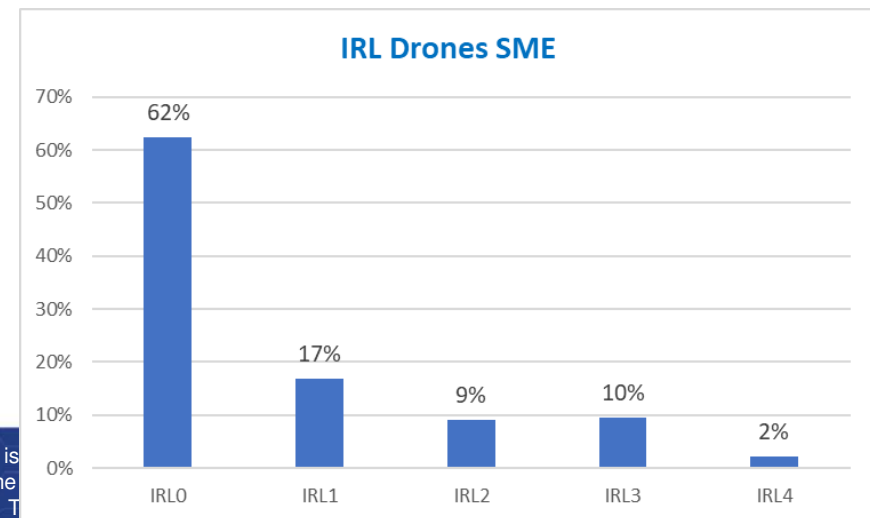
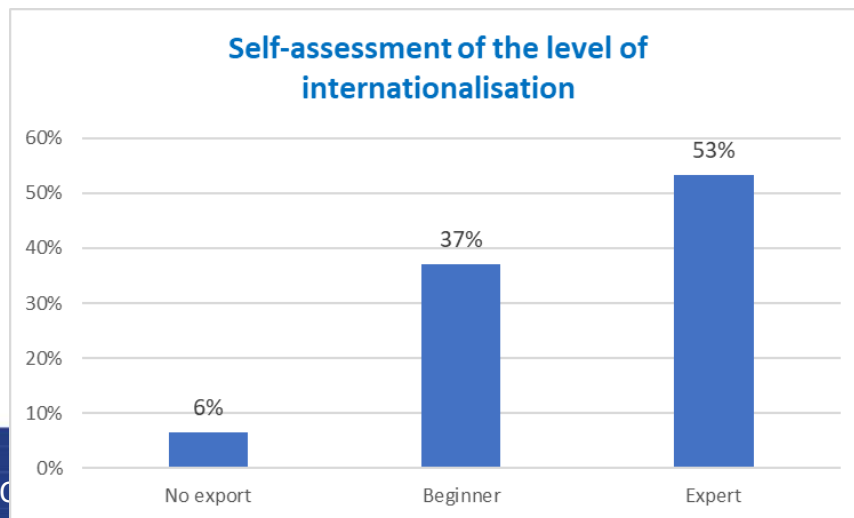
✓ IRL maturity results

Based on the analysis of different criteria, the SMEs has been classified according to 5 levels:

- IRL0: Neither international activity;
- IRL1: Wish to go international but without a roadmap;
- IRL2: Beginning international activity with a roadmap;
- IRL3: International activity;
- IRL4: Structured organization and activity for international

Objective : Check the capability of SMEs to address the global UAV market.

An analysis of the maturity of international development differing between the **perception** of industrialists (*self-assessment*) and their **internal capacity** (*International Readiness Level*) :





Main actions

✓ Supply of individual support for European SMEs

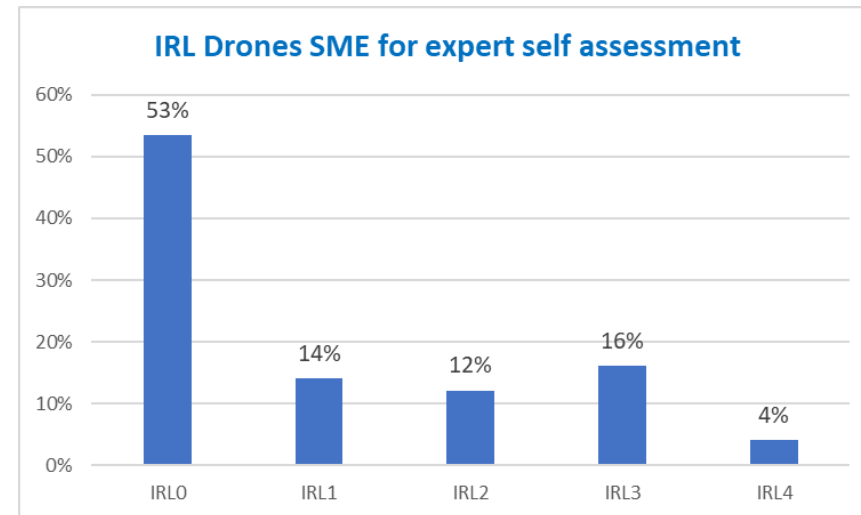
- *Organization of training seminars for the transfer of information*



For companies considering themselves as "experts" in international development, 53% are not sufficiently structured to develop internationally.

The risks identified are :

- consuming their cash flow,
- not succeeding in transforming opportunities due to lack of resources,
- putting themselves at risk in carrying out potential missions.



By analyzing the differentiating elements between the IRL of companies, we can identify **the following key factors for international development**

- have a dedicated **international budget** (*Trade Shows, Hotels, Travel, Booklets*),
- have dedicated **international staff**,
- have a **bilingual website**,
- have a level of **"English" language practice** in the company.

Pitch session



Adrien LAFFON – Electronic Bird Control



Paul CLAIS – ROAV7



Solange TARDI – ELISTAIR



Julie GUEVILLE – ABOT



Khalid CHRAIBI – SOGECLAIR

[PHOBOS, the latest unmanned ground vehicle developed by SERA Ingénierie - YouTube](#)



Olivier JOURNET - EVA

European Drones value chain and Internationalization assistance for SMEs

Draft roadmap to facilitate the international development of European drone actors

✓ **Situation** : UAVs are an emerging market. It is led mainly by SMEs which are not structured well enough and lack the appropriate support to fully benefit from international opportunities.

✓ **Issues** :

**Increase the "international" maturity of European drone actors
to facilitate their international development**

✓ **Objectives**

1. **Increasing the maturity of drone companies to go international**

✓ *Action training and support tools: English - strategy - communication support*

2. **Communication and visibility of European drone actors**

✓ *Mapping of skills*

✓ *Dedicated websites and promotion on social networks*

3. **Organisation of targeted sectoral missions**

✓ *Partnership with key stakeholders in the target countries and sectors*

✓ *Presentation of the international market sector and associated market and technology monitoring*

✓ *Targeting and making of international meetings and Presence at trade and non-drone fairs*

Partners



✓ NAE

- ✓ Created in 1998 (more than 160 members)
- ✓ Network for air, space, defense and security businesses in Normandy
- ✓ Cover all aspects of the drone industry (training, R&D, drone fleets, Artificial Intelligence, test and pilot centers)



✓ Andalusia Aerospace

- ✓ Created in 2018 (60 members – 40 SMEs)
- ✓ Cover several sectors for the use of drones (indoor inspection, inspection of coastal areas, agriculture, safety, etc.)



✓ SKYWIN

- ✓ Created in 2007 (158 members – 111 SMEs)
- ✓ Focus on development of applications, sensors, control systems, ...

Next steps

- ✓ 01/03/23 – Webinar with focus Chile by Andalusia Aerospace
- ✓ March – Webinar with focus Canada by Skywin
- ✓ 30/03/23 – European Drone BtoB meetings online

PRESTIGIOUS



ANDALUCÍA
AEROSPACE
CLUSTER EMPRESARIAL



AEROSPACE • INNOVATION • SECURITY



Aerospace cluster of Wallonia



Co-funded by the COSME programme
of the European Union

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*More information
scan here*

