A Holistic Approach to Sustainable, Digital EU Agriculture, Forestry, Livestock and Rural Development based on Reconfigurable Aerial Enablers and Edge Artificial Intelligence-on-Demand Systems

CHAMELEON D7.3 Market Shaping, Scale-up Business Models and Socio-Economic Impact v1

Work package	WP7: Market shaping, scale-up business models and socio-economic impact & chameleon outreach and awareness generation
Task	Task 7.1 Market analysis and strategy definition Task 7.2 CHAMELEON Ecosystem business models and uptake roadmap
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Revision and history chart

Version	Date	Main author	Summary of changes
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0.2	12/ 10/ 2023	UNP	First version of the Exploitable assets
0.3	25/ 10/ 2023	UNP	Draft of the IPR management section
0.4	30/ 10/ 2023	UNP	Draft of the Exploitation Pathways
0.5	30/ 01/ 2024	UNP	Contribution from UNP
0.6	02/ 01/ 2024	ACCELI	Contribution from ACCELI
0.7	07/ 01/ 2024	USAL	Contribution from USAL
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0.9	10/ 01/ 2024	LAMMC	Contribution from LAMMC
0.10	15/ 01/ 2024	AVILA	Contribution from AVILA
0.11	15/ 01/ 2024	DELAIR	Contribution from DELAIR
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0.17	26/ 01/ 2024	UNP	Version ready for internal review
0.18	29/ 01/ 2024	LAMMC; SQD	Internal review
1.0	30/ 01/ 2024	UNP	Final submitted version

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1   Executive Summary

Task 7.1 referred to "Market analysis and strategy definition" and task 7.2 referred to "CHAMELEON Ecosystem business models and uptake roadmap" are activities led by Unparallel both spanning from Month 10 to Month 36 within the Project CHAMELEON.

The primary objective of Task 7.1 is to place a thorough state of art market analysis and a regulatory landscape investigation. Task 7.2, in close liaison with all technical WPs (WP2-WP5) as well as careful worldwide market analysis, will aim at evaluating that the exploitation potential of CHAMELEON technologies remains the highest.

The main outcome of these tasks is the delivery of D7.3, titled "Market Shaping, Scale-up Business Models and Socio-Economic Impact v1". This deliverable introduces the first periodic report on Market Shaping, Scale-up Business Models and Socio-Economic Impact. These deliverables will present the outcomes of T7.1 and T7.2 on Month 18.

2   Introduction

This document serves as a deliverable outlining the analysis of definitions and taxonomy of exploitable assets/results, the Intellectual Property Rights (IPR) management – contributions, foreground & background claims and the partners' exploitation pathways and intentions to address the specific requirements outlined in D7.3 – Market Shaping, Scale-up Business Models and Socio-Economic Impact v1 based on partners contributions.

2.1   Methodology

To carry out Task 7.1 referred to "Market analysis and strategy definition" and Task 7.2 referred to "CHAMELEON Ecosystem business models and uptake roadmap" and, consequently, complete deliverable 7.3, titled "Market Shaping, Scale-up Business Models and Socio-Economic Impact v1", we begin by identifying which partners are responsible for each previously defined asset and their respective contribution, in definitions and taxonomy of exploitable assets/results' matrix. After knowing which partner is responsible for each asset, we collected information about the contribution of each partner to the assets, more specifically, if the partner provided (or will provide) substantial assistance, if brought background knowledge on the asset, that existed before the project and/or if developed new foreground knowledge while working on the asset, that they can/will exploit, which is in the matrix of IPR management – contributions, foreground & background claims. To carry out the market study, we applied the partners' exploitation pathways and intentions matrix, where it is possible to understand what intentions, non-mandatory, and hypothetical paths that partners intend to follow in terms of exploitation, more precisely, if it is through the market, through technical creation, assembly, production, by license, internally, through further research, publish, dataset, training, services, network and community or by Government. To sustain the market analysis and impact assesment, we applied a "Market Analysis Survey" to the partners, which is in Annex 1 – Market Analysis Survey, and show the vision of the partners' exploitation ideas and, thus, understand the practical applications that the project may have after its end.

2.2   Purpose and Scope

The objective of this deliverable is to provide a comprehensive overview of the definitions and taxonomy of exploitable assets/results, the IPR management – contributions, foreground & background claims and the partners' exploitation pathways and intentions based on input gathered from surveys conducted with partners.

This document presents the contributions from the project partners, the conclusion from these contributions and the next steps to follow.

3   Definitions and taxonomy of exploitable assets/ results

3.1   Explanation

In this section, entitled "Definitions and taxonomy of exploitable assets/results", the objective is to identify which partners are responsible for each asset and their respective contributions. Using the categories identified below to fill the matrix by the partners, it is easy to extract the information and know which partners are responsible for each asset, which Work Package are associated, the linked Pilot and the category or categories which partners do in the asset.

3.2   Matrix of exploitable assets

3.2.1   Categories

- **F** – Framework/Architecture/Blueprint/Guideline
- **B** – Bundle
- **M** – Module/Platform element/Side Product
- **D** – Dataset/ Knowledgebase
- **P** – Pilot/Use case/Application
- **I** – Intangible/Patent/Publication

Table 1: List of CHAMELEON Exploitable Assets

ID	Asset Title	Source of Asset - Link to DoA	Intro by Partner	Link to Pilot	Type
01	CHAMELEON Architecture	WP2/ T2.4	ADR		F
02	CHAMELEON UAV Core Platform	WP3/ T3.1	ACCELI		M
03	CHAMELEON Drone Innovation Platform (DIP)	WP5/ T5.1	UNP		F
04	CHAMELEON Store	WP5/ T5.3	ADR		M
05	CHAMELEON Broker	WP5/ T5.3	ADR		M
06	DIP Integration with CHAMELEON Drone Ecosystem	WP5/ T5.4	ACCELI		M
07	CHAMELEON Open payload toolset – DELAIR	WP3/ T3.2	DELAIR		M
08	CHAMELEON Open payload toolset – ACCELI	WP3/ T3.3	ACCELI		M
09	Intelligent Human Machine Interfaces	WP3/ T3.4	DELAIR		M

ID	Asset Title	Source of Asset - Link to DoA	Intro by Partner	Link to Pilot	Type
10	Communication Protocols	WP3/ T3.4	DELAIR		F
11	CHAMELEON Plug-n-play platform	WP4/ T4.1	ADR		M
12	CHAMELEON On-boarding tool	WP4/ T4.2	LAMMC		F
13	Bundle - Vegetation monitoring and census: tree census, species, treetop colour	WP4/ T4.5	USAL	Austria	B
14	Bundle - Large woody debris on rivers	WP4/ T4.5	USAL	Austria	B
15	Bundle - Health status of vegetation (mainly bark beetle), ground and fungal growth	WP4/ T4.5	LAMMC	Austria	B
16	Bundle - Crop growth and development monitoring	WP4/ T4.3	UCLM	Austria	B
17	Bundle -Vineyard water stress due to drought	WP4/ T4.3	UCLM	Austria	B
18	Bundle - Livestock management (herd) and monitoring (individual animal)	WP4/ T4.4	AiDEAS	Greece	B
19	Bundle - Animals health	WP4/ T4.4	AiDEAS	Greece	B
20	Bundle - Monitoring flora at high-altitude grazing areas for seasonal animal feeding	WP4/ T4.3	UCLM	Greece	B
21	Bundle - Continuity of vegetation	WP4/ T4.5	USAL	Spain	B
22	Bundle - Characterization of wildland-urban interface. Access for firefighters, evacuation, and biomass	WP4/ T4.5	USAL	Spain	B
23	Bundle - Hot spot identification at the beginning of wildfire	WP4/ T4.5	USAL	Spain	B
24	Bundle - Collecting parameters related to the health and stress of livestock	WP4/ T4.4	USAL	Spain	B
25	Bundle - Monitoring livestock/ individual animal/ virtual fences	WP4/ T4.4	AiDEAS	Spain	B
26	Bundle - Crop growth and development monitoring	WP4/ T4.3	UCLM	Spain	B

ID	Asset Title	Source of Asset - Link to DoA	Intro by Partner	Link to Pilot	Type
27	Bundle - Vineyard water stress due to drought	WP4/ T4.3	UCLM	Spain	B
28	Bundle - Soil zonification	WP4/ T4.3	UCLM	Spain	B
29	CHAMELEON ADSS development	WP4/ T4.6	SQD	All	M
30	Knowledge & Datasets from CHAMELEON DEMO campaign	WP6/ T6.2	JOAFG	All	D
31	Knowledge & Datasets from CHAMELEON Societal acceptance, inclusion and impact assessment	WP6/ T6.4	JOAFG	All	D
32	Knowledge & Datasets of Pilot 1 - Spain Agriculture/ Forest	WP4/ T4.3,T4.4,T4.5	USAL/ AiDEAS/ UCLM	Spain	P
33	Knowledge & Datasets of Pilot 2 - Greece Agriculture	WP4/ T4.3,T4.4	AiDEAS/ UCLM	Greece	P
34	Knowledge & Datasets of Pilot 3 - Austria Forest/ Agriculture	WP4/ T4.3,T4.5	USAL/ LAMMC/ UCLM	Austria	P

4 IPR Management – Contributions, Foreground & Background claims

4.1 Explanation

In this section, entitled "IPR Management – Contributions, Foreground & Background claims", the objective is to collect information about the contribution of each partner to the assets. All partners filled the matrix with the letter codes below which allowed us to conclude about its contribution for substantial assistance, if they brought background knowledge on the asset, that existed before the project and/or if developed new foreground knowledge while working on the asset, that they can/will exploit.

4.2 Matrix of IPR Management

4.2.1 Letter codes from contribution letters

- **C – Contribution:** Partner claiming to have provided (or will provide) substantial assistive **Contribution on the Asset development**. Of course, partner must be participating in the task of that asset with non-zero person hours.
- **B – Background:** Partner claiming to have **brought Background knowledge** on the Asset, that **existed before the project**. It may have also been mentioned in the Consortium Agreement Appendix 1 (CA) as background knowledge.
- **F – Foreground:** Partner claiming to have **developed new Foreground knowledge** while working on the asset, that they **can/will exploit.**

NOTE: These are "claims" i.e. how your organization views its own contribution.

- These are irrespective of who actually owns each asset.
- You may have developed new foreground knowledge while working on an asset owned by some other partner (partially or fully).
- You may have **C – Contributed** in an asset but do not see potential for exploitation **F – Foreground**, or the opposite (you can insert, C, or F, or CF accordingly).

Table 2: IPR Management

ID	Asset Title	ACCELI	USAL	ADR	AiDEAS	AVILA	DELAIR	UNP	MAICh	LAMMC	UCLM	JOAFG	SQD
1	CHAMELEON Architecture		CBF	C				C		C	C		CB
2	CHAMELEON UAV Core Platform	BCF					C						
3	CHAMELEON Drone Innovation Platform (DIP)	C	CBF	C				BCF		C	B		CB
4	CHAMELEON Store	C		C				C					
5	CHAMELEON Broker			C				C					
6	DIP Integration with CHAMELEON Drone Ecosystem	C					C	C		C	B		
7	CHAMELEON Open payload toolset	BCF											
8	CHAMELEON Open payload toolset						BCF						

ID	Asset Title	ACCELI	USAL	ADR	AiDEAS	AVILA	DELAIR	UNP	MAICh	LAMMC	UCLM	JOAFG	SQD
9	Intelligent Human Machine Interfaces	C					BCF						
10	Communication Protocols	C					BCF						
11	CHAMELEON Plug-n-play platform							C		C			
12	CHAMELEON On-boarding tool	C					C			CF	C		
13	Bundle - Vegetation monitoring and census: tree census, species, treetop colour		CBF									C	
14	Bundle - Large woody debris on rivers		CBF									C	
15	Bundle - Health status of vegetation (mainly bark beetle), ground and fungal growth									CBF		C	

ID	Asset Title	ACCELI	USAL	ADR	AiDEAS	AVILA	DELAIR	UNP	MAICh	LAMMC	UCLM	JOAFG	SQD
16	Bundle - Crop growth and development monitoring										CBF	C	
17	Bundle -Vineyard water stress due to drought										CBF	C	
18	Bundle - Livestock management (herd) and monitoring (individual animal)				CBF				CBF				
19	Bundle - Animals health				CF				CBF				
20	Bundle - Monitoring flora at high-altitude grazing areas for seasonal animal feeding								CBF		CBF		
21	Bundle - Continuity of vegetation		CB			C							
22	Bundle - Characterization of wildland-urban interface. Access for		CBF			C							

ID	Asset Title	ACCELI	USAL	ADR	AiDEAS	AVILA	DELAIR	UNP	MAICh	LAMMC	UCLM	JOAFG	SQD
	firefighters, evacuation, and biomass												
23	Bundle - Hot spot identification at the beginning of wildfire		CBF			C							
24	Bundle - Collecting parameters related to the health and stress of livestock		CBF		CF	C							
25	Bundle - Monitoring livestock/ individual animal/ virtual fences					C							
26	Bundle - Crop growth and development monitoring				CF	C					CBF	C	
27	Bundle - Vineyard water stress due to drought					C					CBF	C	
28	Bundle - Soil zonification					C					CBF		
29	CHAMELEON ADSS development									C			CBF

| ID	Asset Title	ACCELI	USAL	ADR	AiDEAS	AVILA	DELAIR	UNP	MAICh	LAMMC	UCLM	JOAFG	SQD
30	Knowledge & Datasets from CHAMELEON DEMO campaign	C					C		C			CBF	
31	Knowledge & Datasets from CHAMELEON Societal acceptance, inclusion and impact assessment	C										CBF	
32	Knowledge & Datasets of Pilot 1 - Spain Agriculture/ Forest	C	CBF			CB	C				CBF		
33	Knowledge & Datasets of Pilot 2 - Greece Agriculture	C		C			C		CBF		CBF		
34	Knowledge & Datasets of Pilot 3 - Austria Forest/ Agriculture	C	CBF				C			C	CBF	CBF	
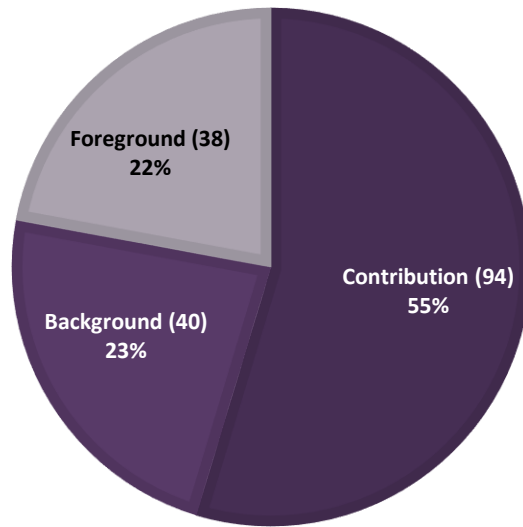
Figure 1: IPR Management Chart

According to the partners' contributions to the "IPR Management – Contributions, Foreground & Background claims" matrix, it is possible to conclude that all assets have some type of contribution of the partners. In terms of exploitation idea, despite presenting the lowest occurrences, it was possible to notice that the majority of assets were considered as potential exploitation ideas for the future.

5 Partner Exploitation Pathways and Intentions

5.1 Explanation

In this section, entitled "Partner Exploitation Pathways and Intentions", the objective is to carry out the market study. With the letters codes of potential exploitation paths below, the partners filled in their intentions, non-mandatory, and hypothetical paths that intend to follow in terms of exploitation, more precisely, whether it is through the market, technical creation, assembly, production, license, internally, through further research, publish, dataset, training, services, network and community or by Government.

5.2 Matrix of Partner Exploitation Pathways and Intentions

5.2.1 Letter codes of potential exploitation paths

For each Asset, we distinguish the following potential exploitation paths (not mutually exclusive):

- **M – Market (i.e. Sell):** Partner wishes/offers opportunity to Sell by using their pre-existing sales channels to promote to potential client networks the asset (Ownership of asset not necessary, partner may request permission to sell through license agreement from another partner who owns the asset). This is Selling intention. This also includes sale or publishing for free (example opensource-freeware).
- **C – Technical Creation, Assembly, Production:** Partner wishes to be producing the asset (irrespective if they will be selling it alone or through 3rd parties channels). This is technical development intention.
- **L – License:** Partner wishes to consider opportunities to License/Assign their asset or knowledge on the asset, to 3rd parties that wish to exploit it, for an agreed fee (Typical for Universities without Sales Force).
- **I – Internal:** Partner foresees opportunities for Internal use and expansion or replication in the future (Typical for Pilots, Demonstrators, Factories etc.), also adoption in company product lines.
- **R – Research Further**: Journal/Conference Publications/other research initiatives
- **P – Publish:** (other non-scientific Publications) Handbooks, Best-Practices, Presentations, Multimedia/Videos, Books, Charts etc.
- **D – Dataset:** Partner can exploit datasets of the particular asset through online marketplaces, for experiments, for further research, for consulting services etc.
- **T – Training:** Partner wishes to produce Training Material and/or offer Training Services/ Methods (online test, webinar, printed, other) related to the asset.
- **S – Services:** Partner willing to provide Services (complementing the asset) such as Consulting, Lectures, Technical Integration, Support, Maintenance, other Added Value Services around the main asset.
- **N – Network and Community:** Partner wishes to expand the "network and community" around the asset. Example: attract more users in the project Marketplace/Store, or

promote it in similar networks, platforms, marketplaces and/or even assist its sales/adoption through these parallel channels. This also includes promotion of software in marketplaces (for free/open source, or for a price/fee).

- **G – Governmental:** Partner has links and can promote Asset to Governmental/EC Policy Recommendations, or make contributions to Standardization Bodies and Associations.

Table 3: Exploitation Pathways and Intentions

ID	Asset Title	ACCELI	USAL	ADR	AiDEAS	AVILA	DELAIR	UNP	MAICh	LAMMC	UCLM	JOAFG	SQD
1	CHAMELEON Architecture	P	PTS	L			P	P					
2	CHAMELEON UAV Core Platform	MCIRP SNG						MN					
3	CHAMELEON Drone Innovation Platform (DIP)	P	MLSN					MCTN					
4	CHAMELEON Store							M					
5	CHAMELEON Broker							R					
6	DIP Integration with CHAMELEON Drone Ecosystem	C					P	M					
7	CHAMELEON Open payload toolset	MCIRP SNG											
8	CHAMELEON Open payload toolset						CPST						
9	Intelligent Human Machine Interfaces						CPST						

ID	Asset Title	ACCELI	USAL	ADR	AiDEAS	AVILA	DELAIR	UNP	MAICh	LAMMC	UCLM	JOAFG	SQD
10	Communication Protocols						CPST						
11	CHAMELEON Plug-n-play platform			M									
12	CHAMELEON On-boarding tool						CPST			LIP			
13	Bundle - Vegetation monitoring and census: tree census, species, treetop colour		LTSRP										
14	Bundle - Large woody debris on rivers		LTSRP										
15	Bundle - Health status of vegetation (mainly bark beetle), ground and fungal growth									LIRDS			
16	Bundle - Crop growth and development monitoring										LRDP		

ID	Asset Title	ACCELI	USAL	ADR	AiDEAS	AVILA	DELAIR	UNP	MAICh	LAMMC	UCLM	JOAFG	SQD
17	Bundle -Vineyard water stress due to drought					ING					LRDP		
18	Bundle - Livestock management (herd) and monitoring (individual animal)				MLIRP	NG			MIRPD TN				
19	Bundle - Animals health				MLIRP				MIRPD TN				
20	Bundle - Monitoring flora at high-altitude grazing areas for seasonal animal feeding								MIRPD TN		LRDP		
21	Bundle - Continuity of vegetation		LTSRP			ING							

ID	Asset Title	ACCELI	USAL	ADR	AiDEAS	AVILA	DELAIR	UNP	MAICh	LAMMC	UCLM	JOAFG	SQD
22	Bundle - Characterization of wildland-urban interface. Access for firefighters, evacuation, and biomass		LTSRP			ING							
23	Bundle - Hot spot identification at the beginning of wildfire		LTSRP			ING							
24	Bundle - Collecting parameters related to the health and stress of livestock		LTSRP		MLIRP	ING							
25	Bundle - Monitoring livestock/ individual animal/ virtual fences					ING							
26	Bundle - Crop growth and development monitoring				MLIRP	NG					LRDP		

ID	Asset Title	ACCELI	USAL	ADR	AiDEAS	AVILA	DELAIR	UNP	MAICh	LAMMC	UCLM	JOAFG	SQD
27	Bundle - Vineyard water stress due to drought					NG					LRDP		
28	Bundle - Soil zonification					NG					LRDP		
29	CHAMELEON ADSS development												MCLIS NG
30	Knowledge & Datasets from CHAMELEON DEMO campaign	RP					P					I	
31	Knowledge & Datasets from CHAMELEON Societal acceptance, inclusion and impact assessment	RP										IRP	
32	Knowledge & Datasets of Pilot 1 - Spain Agriculture/ Forest	RP	LTSRP DN			ING	P				LRDP		

ID	Asset Title	ACCELI	USAL	ADR	AiDEAS	AVILA	DELAIR	UNP	MAICh	LAMMC	UCLM	JOAFG	SQD
33	Knowledge & Datasets of Pilot 2 - Greece Agriculture	RP					P		MIRPD TN		LRDP		
34	Knowledge & Datasets of Pilot 3 - Austria Forest/ Agriculture	RP	LTSRP DN				P			LRD	LRDP		
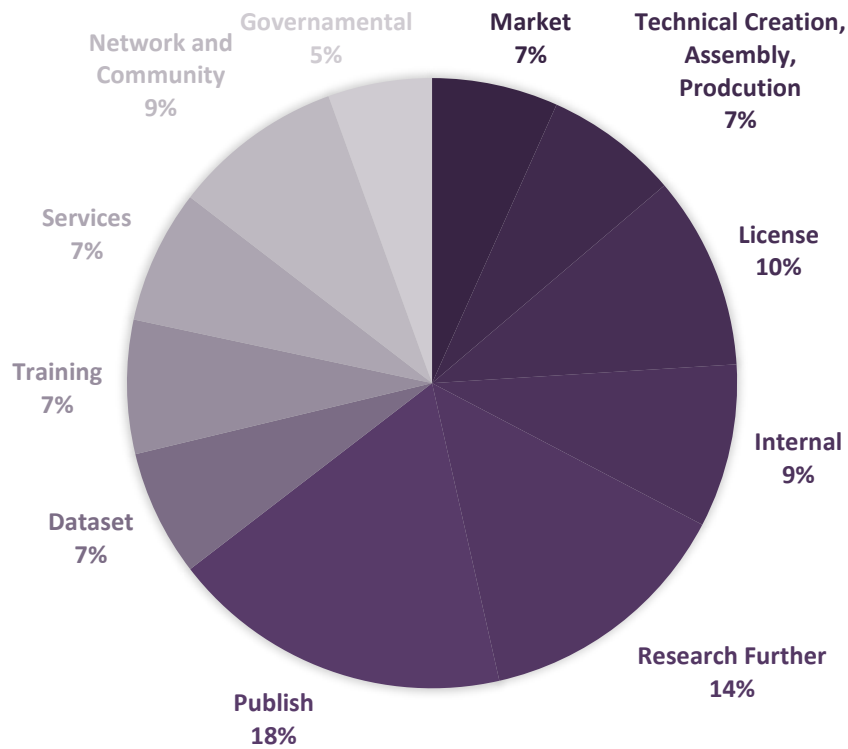
Figure 2: Partner Exploitation Pathways and Intentions

According to the partners' contributions to the "Partner Exploitation Pathways and Intentions" matrix, it is possible to conclude that the main intentions of exploitation ideas are for Publish, for Research Further and Licence.

6   Market Analysis and Impact Assessment

To perform the market analysis and impact assesment, we applied a survey entitled "Market Analysis Survey" to the partners, which is in Annex 1 – Market Analysis Survey. The main objective of the survey was to identify the vision of the partners' exploitation ideas and, thus, understand the practical applications that the project may have after its end. In this sense, we asked the partners to answer: Which Consortium partner do they work for; To provide the wider sector, for example, if it is manufacturing, cloud computing, academic institutes, sports, etc.; To provide the narrow segment, for example, automotive, dev-ops engineers, big data researchers, sportscasters, etc. and some example names; The type of wider costumer/adopter that they are envisioning; To describe the market that the exploitation idea is addressing; The size of exploitation idea; The "wider" competition – how common and mature they are; and finally, a free box of comment.

With the partners' answers, we arrived at some conclusions about the exploitation market. For example, as shown in the two charters below, for the partners the wider sector can be the Livestock, the Vineyard, the Agricultural, the Forestry, the Environmental Conservation, Governmental and Research, highlighting the Agricultural, Livestock and Forestry sectors. Through the same question was possible to identify some relevant technology domains for the partners, too, such as Technology, Sharing Software Components, Drones and Technical Support.
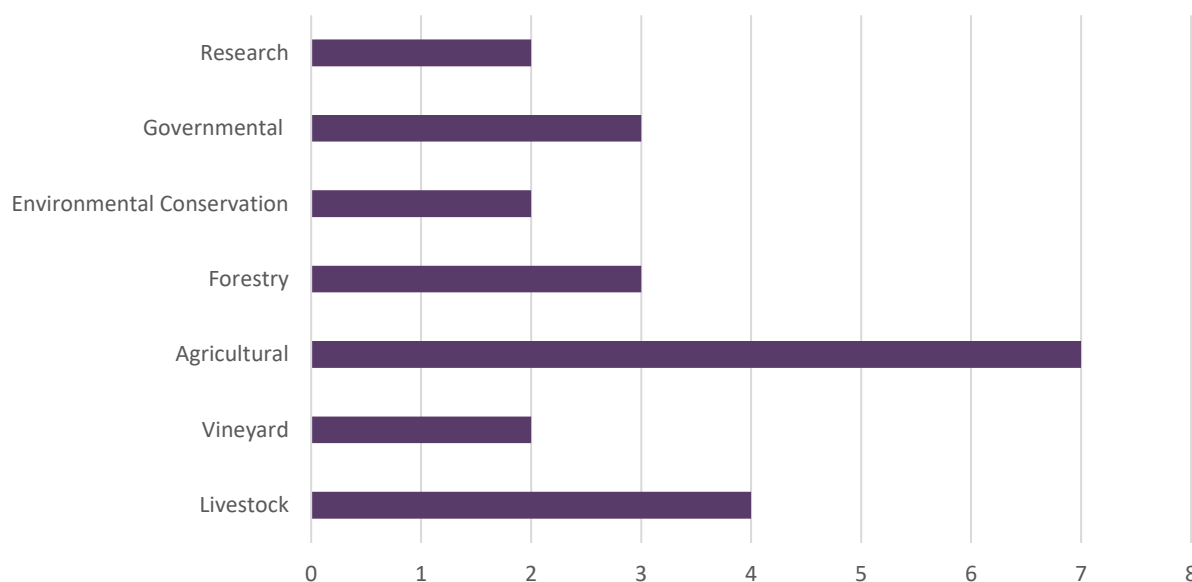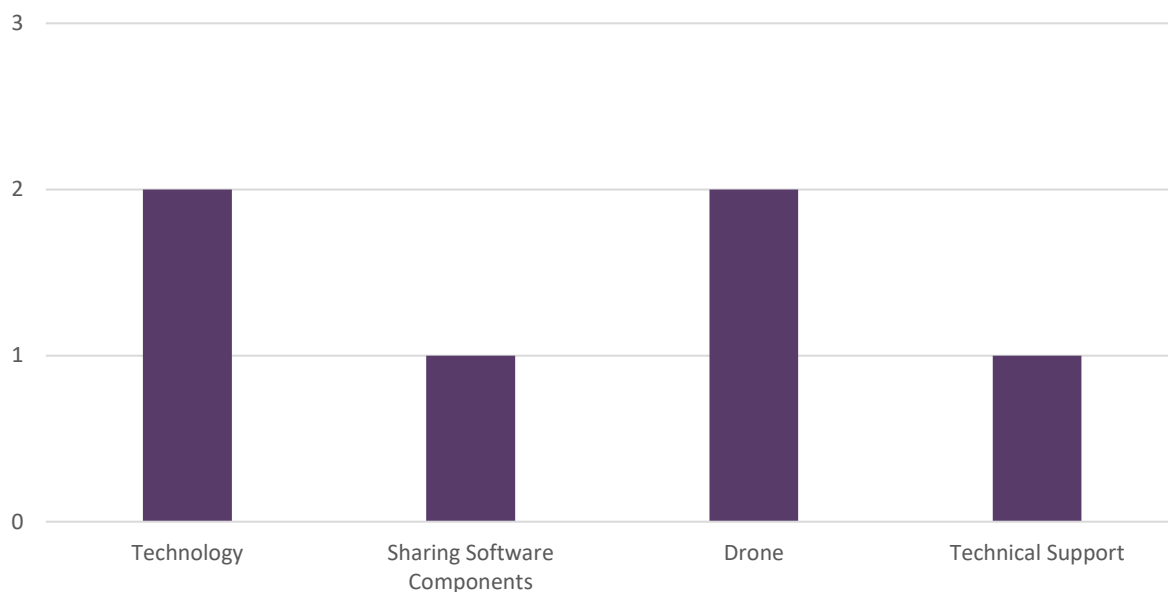

Figure 3: Wider Sector

Figure 4: Technical Domains

Following the division made on the previous question regarding the narrow segment, partners identify the Livestock Owners, the Livestock Health Monitoring, the Vineyard Owners, the Forests Owners, the Farmers, the Rural Areas Management, the Fire Fighters, the Civil Aviation, the Governmental Organizations and the Infrastructure Providers, standing out the Governmental Organizations. On another hand, concerning the Technical Segment, the partners identified Drones, System Integrators, Agricultural Engineering, and Researchers, standing out, the last two.
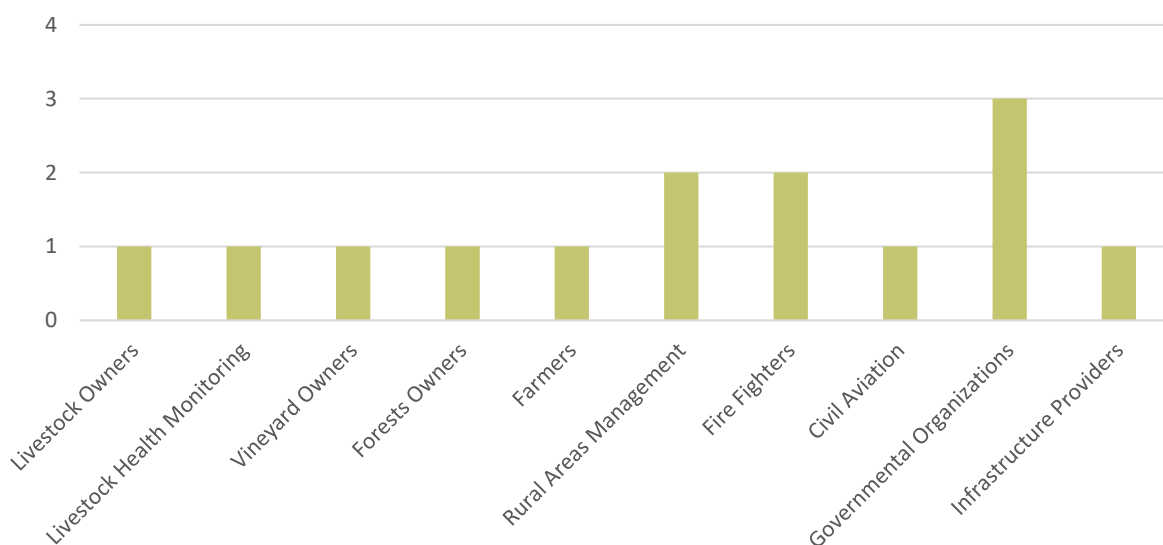
Figure 5: Narrow Segment
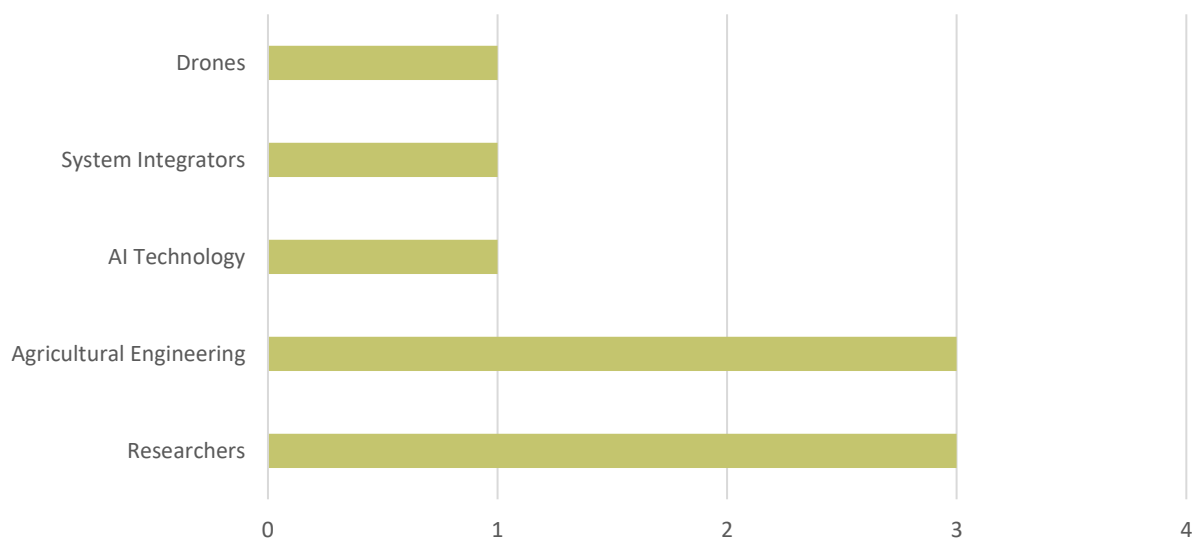
Figure 6: Technical Segment

As Figure 5 shows, the example names of the narrow segment provided for the partners were Livestock Owners, Vineyard Owners, Agriculture Advisor, System Integrator, Forest management agencies, Cattle ranching enterprises and organisations, SMEs, Big Companies, Commercial Companies, Government Organisations, The State Forest Service, ART21, Future Intelligence, HMU, Austrian Federal Forests, CERTH – The Centre for Research & Technology, Hellas – Agricultural University of Athens.SDIS 40 – and Cerema
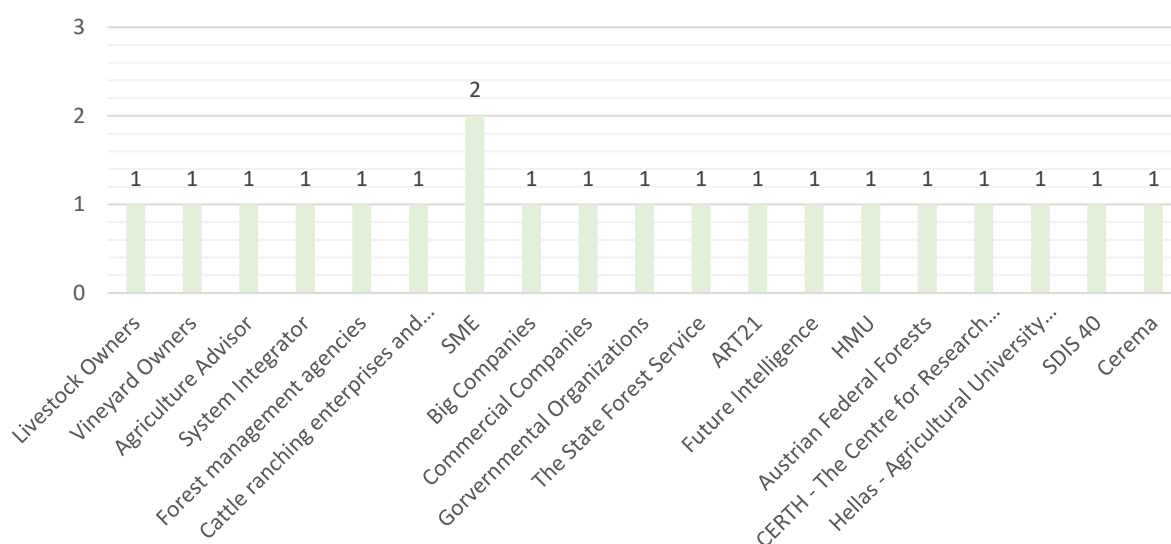
Figure 7: Example Names of the Narrow Segment

The type of wider Costumer/Adopter envisioned for most of the partners are "Customer who would potentially pay", "Governmental adopter – policy maker or standardisation body", "Adopter of our Usecase/Pilot who would replicate the pilot in their premises" and "Adopter of Research idea".
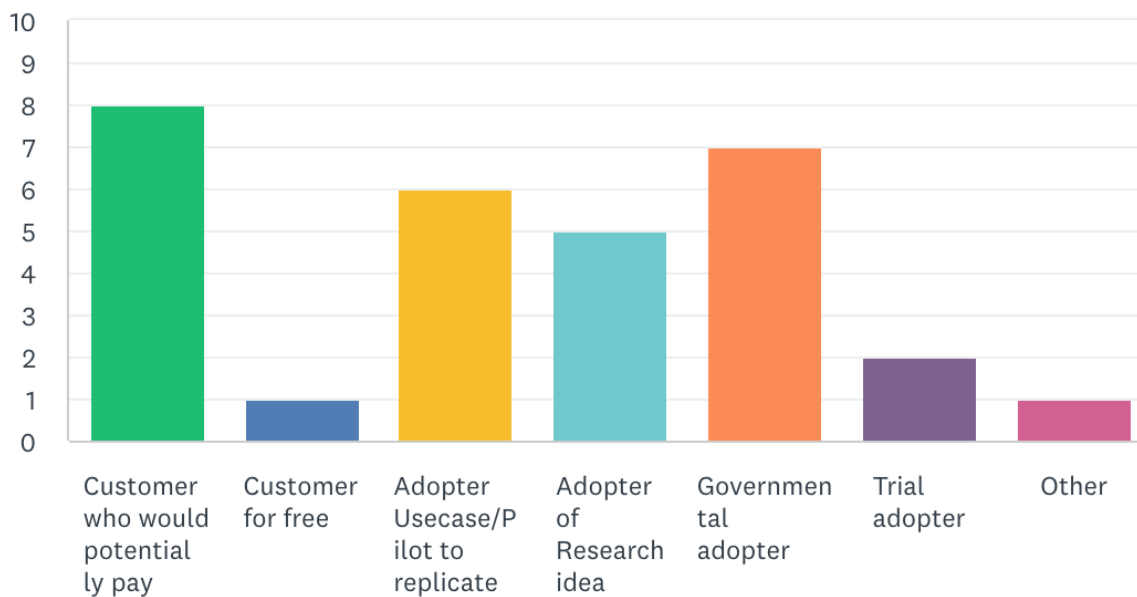

Figure 8: Type of wider Customer/Adopter

The majority of the partners describe the market which their exploitation idea is addressing as "Emerging: There is a gradually growing demand for solutions like this and only few offerings are available".
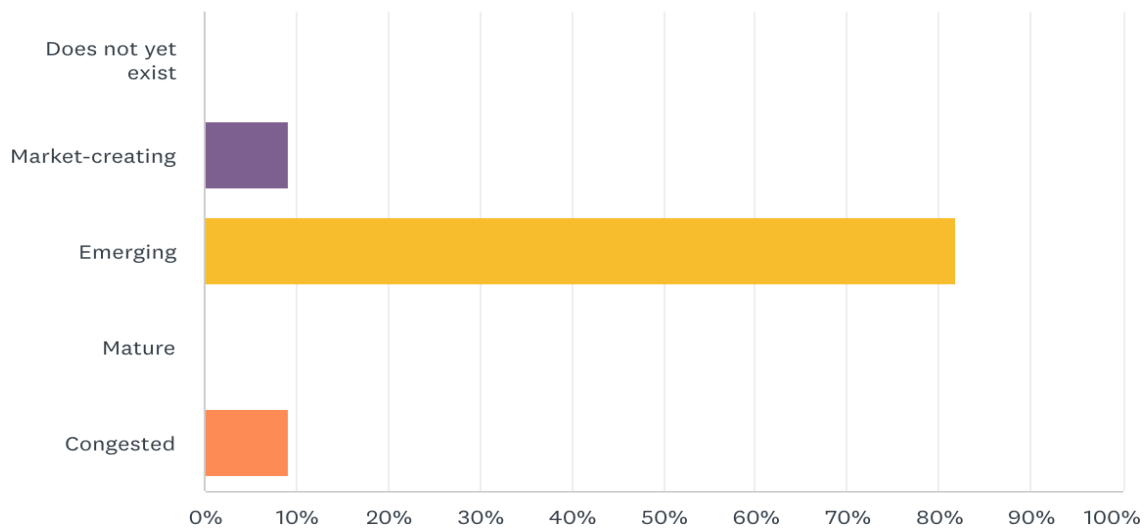
Figure 9: Description of the market

Rapidly Growing – they considered the size of the market to be mostly "Growing" or "Rapidly Growing".
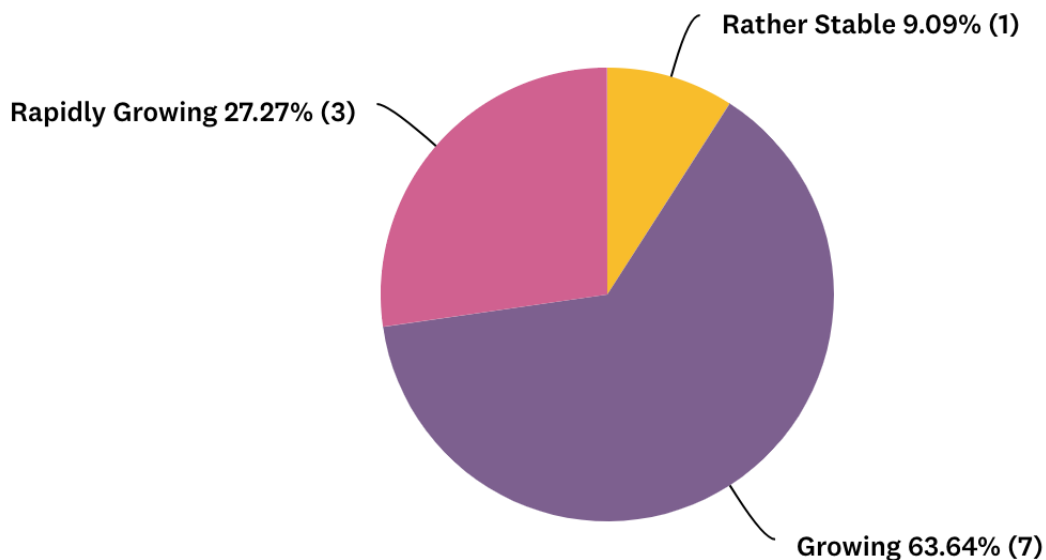

Figure 10: Market Size

The partners find that the wider competition of their exploitation idea is mostly "Similar Research Initiatives/Projects/Clusters" or **"**Alternatives. They don't have our solutions, and use other technologies/ideas instead".
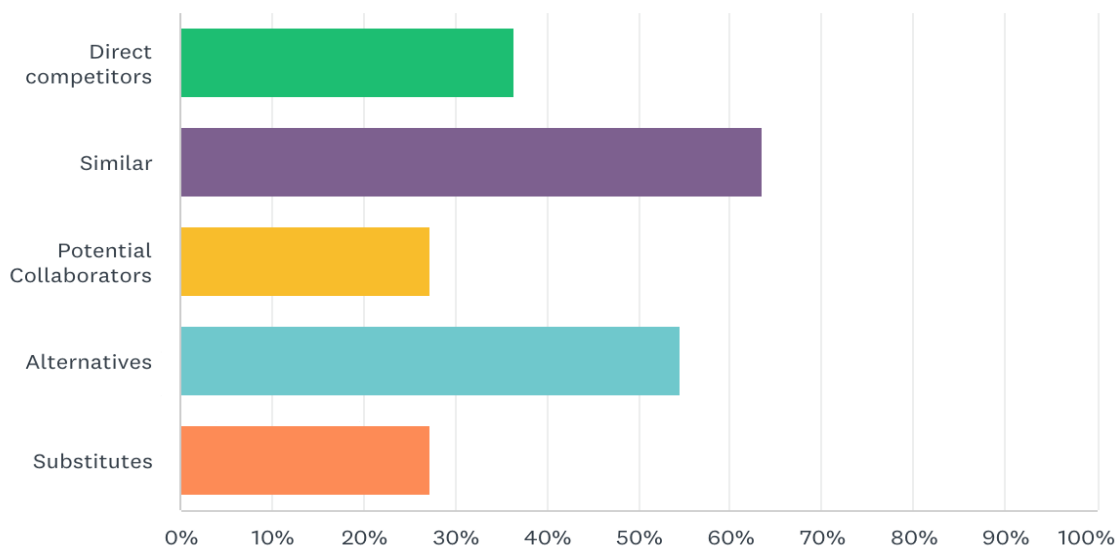

Figure 11: Wider Competition

And, from all options – Almost None, Isolated Few, Some Exist, Quite Common, Many Alternatives and I don't know **–** rate the existing competition/alternatives to their exploitation idea as "Some Exist".
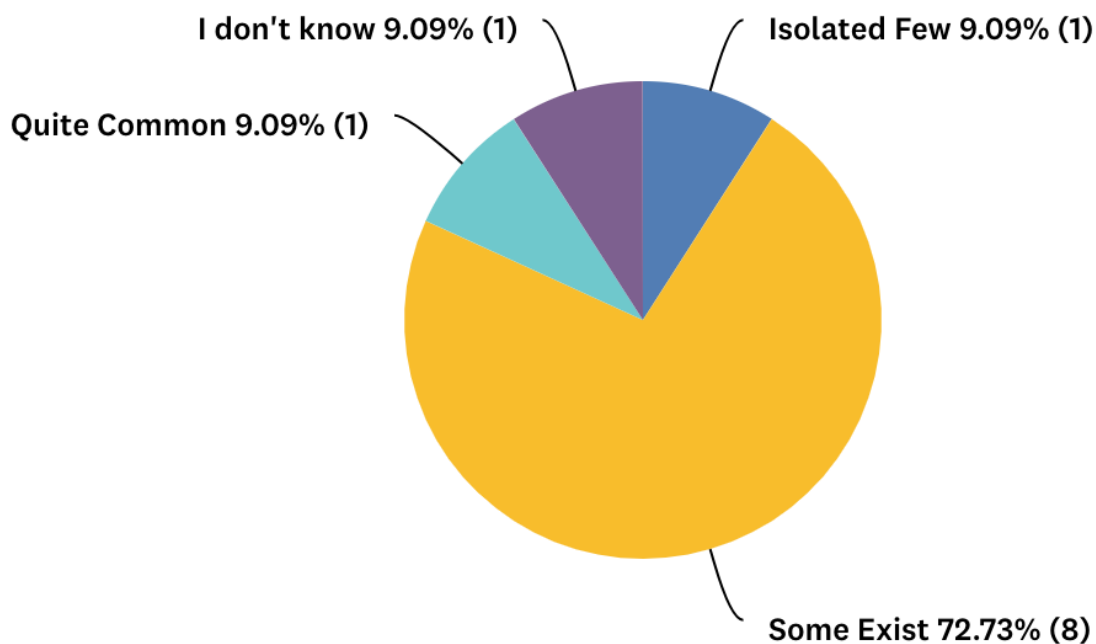
Figure 12: Eisting Competition

According to the partners' answers, the maturity of the existing competition/alternatives to their exploitation idea, from all options – Very Weak (concepts only), Somewhat Weak (research level with lab trials), Average (several Pilots/Use-Cases like ours), Somewhat Strong (many pilots and some real-word deployments), Very Strong (many real world deployments. Real product) and I don't know – are mostly "Average (several Pilots/Use-Cases like ours)".
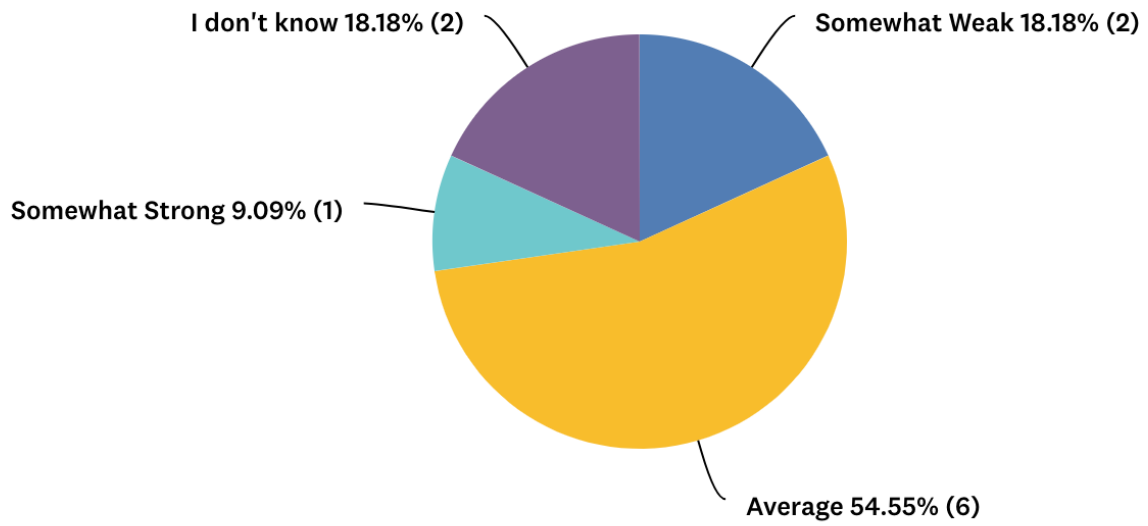
Figure 13: Maturity of the competition/alternatives

7   Socio-economic Indicators

Through the responses given by partners to the "Market Analysis" survey, we collected relevant information that identified some possible socio-economic indicators to be monitored over the next months of the project. In other words, the survey gave us an idea of possible socio-economic indicators that should be monitored over the next 18 months to draw future conclusions about the socio-economic impact of the project. Some of these indicators are:

- **Employment in the Agricultural and Technological Sector**: Number of jobs created in the agricultural, forestry and technological sectors due to the implementation of the project.
- **Agricultural and Forestry Productivity**: Increased productivity of agricultural, forestry and livestock activities.
- **Animal mortality rate**: Reduction in the mortality rate of agricultural animals.
- **Water level of agricultural soils**: Increased water availability in agricultural soils.
- **Energy efficiency**: Reduction in energy consumption in the agricultural sector due to the implementation of more efficient technologies.
- **Reducing Greenhouse Gas Emissions**: Impact on reducing greenhouse gas emissions associated with agricultural and forestry practices.
- **Access to technologies and digital connectivity**: Improve farmers' and rural communities' access to digital technologies, including internet connectivity.
- **Adoption of Sustainable Practices**: Number of farmers adopting sustainable and environmentally friendly practices.
- **Innovation and Research**: Investment and participation in research and innovation activities in the agricultural and technological sectors.
- **Resilience to climate change**: Assessment of the resilience of the agricultural and rural sectors to climate change, considering the adaptation measures implemented.
- Production costs: Changes in production costs associated with more efficient and sustainable agricultural practices.
- **Farmer/Participant Satisfaction**: Satisfaction surveys of farmers and project participants to assess the perceived impact.

However, over the next few months, and as the project progresses, these same indicators may change, to be more adjusted to the reality of the project and the objectives that are intended to be achieved.

8 Conclusion

Deliverable 7.3 through the contribution of the project partners will let to the first periodic report of Market Shaping, Scale-up Business Models and Socio-Economic Impact. Throughout T7.1 and T7.2 and within the scope of this report's timeline, we have accomplished the analysis of definitions and taxonomy of exploitable assets/results, the IPR management – contributions, foreground & background claims and the partners' exploitation pathways and intentions. With this information, it will be possible to conclude the main ideas of the partners' exploitations and the possible paths that the project can lead after its ends, which validates the importance of the practical application of the project in "real life". Joining this information with the data that will be collected from deliverable 7.5 titled "Market Shaping, Scale-up Business Models and Socio-Economic Impact v2" with the specific socio-economic indicators it will be possible to conclude the socio-economic impact of the project in the pilot areas.

Annex 1 – Market Analysis Survey

In this annex, Annex 1, you can see the survey that was applied to partners to complete the market analysis through their responses about their exploitations ideas.

Market Analysis Survey

Welcome

This survey is addressed to the project partners only.
Thank you for participating. Your feedback is important.

1. Which Consortium partner do you work for

☐ ACCELI	☐ UNP
☐ USAL	☐ MAICH
☐ ADR	☐ LAMMC
☐ AIDEAS	☐ UCLM
☐ AVILA	☐ JOAFG
☐ DELAIR	☐ SQD

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Market Analysis Survey

Clarification

Let's clarify a few things to help you answer this survey:

1. Exploitation is **AFTER** the end of the project, and it is your **VISION** for the **FUTURE**.

2. These are exploitation **INTENTIONS** and **NOT OBLIGATIONS**. So answer in a "rich" and "full" way, as if all funds, resources, and needs are "available" for your organisation.
(for example, if you envision 10 things but only manage to implement 5 after the end of the project, it's ok to identify them all)

3. You can always re-visit or correct your answers at your own pace.

4. Some questions require a little text (2 sentences - 100 characters max.). If not applicable, just type "none" / "na" etc. to continue.

5. If you have more than one exploitation plans / ideas, feel free to fill the survey more than once.

NOTE: There are no wrong answers here. We want your "business feeling".

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Market Analysis Survey

Identification of the Target Customer of CHAMELEON

Please describe who is the "**Target Customer**" for your idea, or in more general terms who would like to **adopt / fund / buy** it.

* 2.
Please provide the **wider SECTOR** in 2 sentences - 100 characters.
(examples: manufacturing, cloud computing, academic institutes, sports, etc.)

[   ]

* 3.
Please provide the **narrow SEGMENT** in 2 sentences - 100 characters.
(examples: automotive, dev-ops engineers, big data researchers, sportscasters, etc.)

[   ]

* 4.
Please provide **example NAMES** of the **narrow SEGMENT** provided above in 2 sentences - 100 characters.
(this can be SMEs, organisations, research institutes, etc, from your network of friends, collaborators or clients)

[   ]

* 5.
In terms of "**wider" CUSTOMER / ADOPTER**, what is the type(s) that you are envisioning ?
(select **all** that apply)

☐ Customer who would potentially pay   ☐ Adopter of Research idea

☐ Customer for free (example: OpenSource)   ☐ Governmental adopter - policy maker or
                                                       standardisation body
☐ Adopter of our Usecase/Pilot who would replicate
   the pilot in their premises   ☐ Trial adopter

☐ Other (please specify)

[   ]

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Market Analysis Survey

Initial Market Analysis

Estimate the exploitation ideia

* 6.
How would you describe the market that your **EXPLOITATION IDEA** is addressing?
(this might be different from the market that the whole project is addressing)

○ The market does not yet exist, and it's not clear if our innovations have potential to create a new market

○ Market-creating: The market does not yet exist but it has clear potential to create a new market

○ Emerging: There is a gradually growing demand for solutions like this and only few offerings are available

○ Mature: The market is already supplied with many alternative products

○ Congested: The market already has a lot of offerings from many established players

* 7. The **market SIZE** for your **EXPLOITATION IDEA** is:

In Recession	Contracting	Rather Stable	Growing	Rapidly Growing
☆	☆	☆	☆	☆

8.
About the "**wider" COMPETITION,** others might have similar offerings with you. These are mainly:

☐ Direct competitors in the Market

☐ Similar Research Initiatives/Projects/Clusters

☐ Potential Collaborators. We could reach them and join forces with them

☐ Alternatives. They don't have our solutions, and use other technologies/ideas instead

☐ Substitutes. They don't have similar solutions at all. But they solve their problems in other "primitive" ways

Can you provide a few **Examples**?

* 9.
Please Rate existing competition/alternatives to your exploitation idea (even at research project level with similar or lower TRL than ours).

How "**common**" are they ?

Almost None	Isolated Few	Some Exist	Quite Common	Many Alternatives	I don't know
☆	☆	☆	☆	☆	○
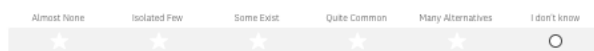
* 10.
Please Rate existing competition/alternatives to your exploitation idea (even at research project level with similar or lower TRL than ours).

How "**mature**" are they ?

Very Weak (concepts only)	Somewhat Weak (research level with lab trials)	Average (several Pilots/Use-Cases like ours)	Somewhat Strong (many pilots and some real-word deployments)	Very Strong (many real world deployments. Real product)	I don't know
☆	☆	☆	☆	☆	○

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Market Analysis Survey

Closing Comments

11.
Do you feel we have missed something? Free comment box

Prev   Done

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A Holistic Approach to Sustainable, Digital EU Agriculture, Forestry, Livestock and Rural Development based on Reconfigurable Aerial Enablers and Edge Artificial Intelligence-on-Demand Systems

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