



Boosting innovative Digitech Value chains  
for Agrofood, forestry and environment

**GRANT AGREEMENT N. 777890**

**DELIVERABLE D5.3**

## DIVA impact assessment report

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## 1. CONTEXT

The DIVA project has run for 3 years. In this framework, two open-calls devoted to support new emerging ideas of digital solutions for the Agri-food, Forestry and Environment sectors have been launched. As a result, close to 400 applications have been submitted, 134 projects gathering 180 SMEs from 9 EU countries have been selected and supported with vouchers.

Beyond this operational success, it is important to assess the impact achieved by the project. This deliverable aims at providing information and figures of impact assessment.

The first section "DIVA objectives" focuses on the DIVA objectives as set in the initial description of work of the project. The achievement of the 6 objectives defined is considered through the different performance indicators set.

The Second section "DIVA Key Performance Indicators" focuses on the DIVA KPIs described in the DIVA DOW. The achievement of the 14 KPI is discussed based on various sources of information.

- A dashboard has been created to monitor the projects supported and the beneficiary companies (see DL 5.1). This dashboard consists of 2 key files. The first one gathers the characteristics of the 180 beneficiary companies over the DIVA period, the second one gathers the characteristics of the projects and the monitoring indicators gathered through the roadmaps. This dashboard feeds 10 of the 14 DIVA KPIs.

- In parallel, a voucher management table was kept up to date in order to ensure the effective allocation of the amounts to the beneficiary companies and to ensure compliance with the maximum amount of €60k/ company imposed by the EC. This table is used to feed a KPI associated with vouchers.

- The other KPIs are linked to communication (2) and demonstration sites (1).

The 3d section "Satisfaction survey" corresponds to the results of a survey conducted in 2020 to collect more specifically information from DIVA voucher beneficiaries. It gives an overview on the beneficiary profile and a feedback on the different actions carried-out in DIVA.

## 2. DIVA OBJECTIVES

### 2.1 Objective 1: foster cross-sectoral and cross-border innovation

*Through a network of open-spaces at EU level, to foster cross-sectoral and cross-border innovation between the agrifood and ICT sectors, and to build the “digttech value chain inspiration framework”, basis for the identification of new innovative challenges.*

The DIVA project planned to create a network of open innovation spaces to encourage the cross-fertilisation of skills and ideas. A two-level approach (national and European) was favoured to encourage participation by companies and particularly SMEs that do not have time or means to travel. However, the need to work in an open way with other countries and the COVID situation, which prevented the organisation of face-to-face events, changed this conception of innovation and led to the adoption of new approaches using digital tools. DIVA has been a forerunner in the organisation of online B2B meetings (2 events in 2019 before Covid) backed by webinars. In 2021, the online format adopted for the final DIVA event (4-5 March 2021), represents the culmination of these experiments: a morning dedicated to conferences and an afternoon reserved for workshops and B2B meetings. It is a format that is now widely adopted across Europe. While it does not allow for face-to-face meetings, it has the advantage of being relatively inexpensive for the organisers while ensuring a very high international impact as anyone can register and participate free of charge. As a whole, more than 60 events have been organised, at national and European level in a dedicated place or under a 100% on-line format in order accelerate cross-fertilization and networking approach of all the partners. These events have gathered more than 4000 SMEs.

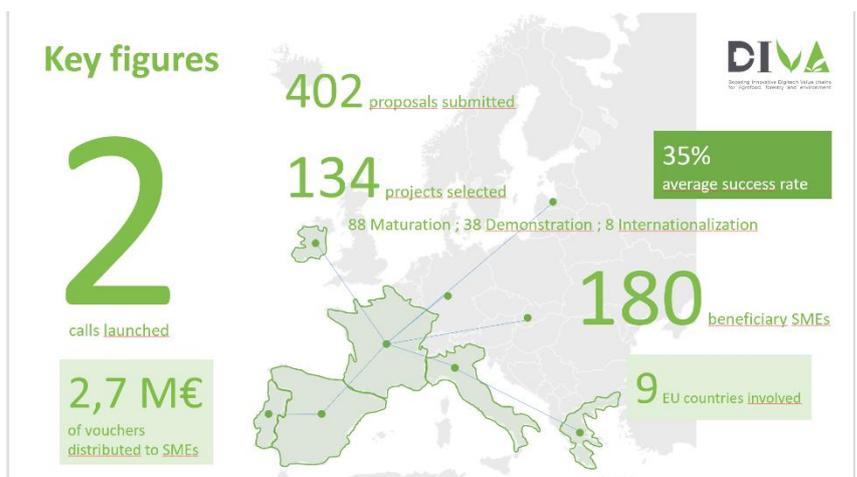
Besides, a strong Digital Value Chain Inspiration Framework has been produced <https://www.projectdiva.eu/diva-trends-map/>. It describes 5 drivers of change affecting business, 6 business trends influencing digital innovation. It describes as well the digitech value-chain of the agri-food sector and 7 groups of digital technologies of interest. Market demand and expected projects are defined for each group of technologies and each step of the value-chain.

This framework was furthermore completed with 26 challenges gathered following the “Call for challenges” <https://www.projectdiva.eu/challenges-list/>

## 2.2 Objective 2: support 100 solutions

*To select 100 solutions proposed by SMEs in coherence and complementarity along new value chains and to support their feasibility and/or maturation towards new digitech value chain building. Cross-fertilization maturation for technical enhancement of the solutions (from TRL 4-5 to 5-6) will be supported but also market assessment, strategic partnership building and business modelling with benchmark work (either via the networking activities, or via specific expertise). Specific collaborations with IPR experts, certification and normalization experts will also be proposed.*

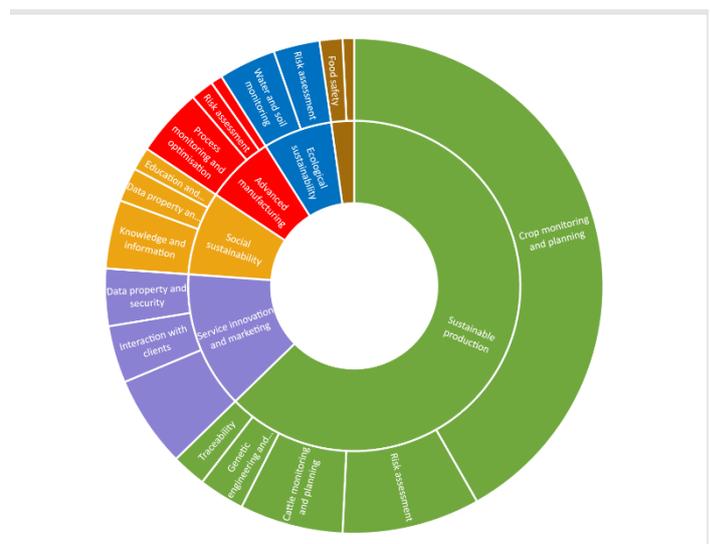
Two Open Calls were launched in November 2018 and in November 2019 at the European level. Trans-national cooperation was encouraged for Demonstration and Internationalisation projects where at least 2 SMEs were required. Although this trans-national configuration was not made compulsory in the guidelines, 28 % of these projects turned-out to be trans-national.



Following the two DIVA Open calls, 134 vouchers worth 2.7 M€ have been distributed for innovative projects. They gather 180 SMEs that benefited from a direct financial support. For each project, a roadmap was also set-up with the referent DIVA partner in order to define clearly the objectives, the results to be achieved and performance indicators. In the end, a final assessment was done to appraise the results and performance achieved and collect data to feed a global dashboard used for DIVA projects monitoring.

The thematic analysis of the projects supported shows that a majority (63%) concern the development of solutions for agriculture: decision support tools for irrigation management, the application of phytosanitary products or fertilisers, the detection of diseases or anomalies at the farm level and weed detection. While crop production remains the main focus, several projects concern precision livestock farming.

The other segments of the value chain - agri-food processing, transport, distribution and consumer services - were covered by projects in smaller proportions.



**Figure: Distribution of the 134 selected projects according to the DIVA challenges**

Some innovation trends are confirmed:

- projects relating to the valorisation of data: data sharing, consent to exchange and security throughout the value the value-chain;
- organisational innovation projects based for example on experience or knowledge sharing between farmers through social networks dedicated social networks or online training modules online training modules,
- livestock projects (flock management, poultry supervision),
- beehive management projects (remote management),
- robotisation and automation projects,

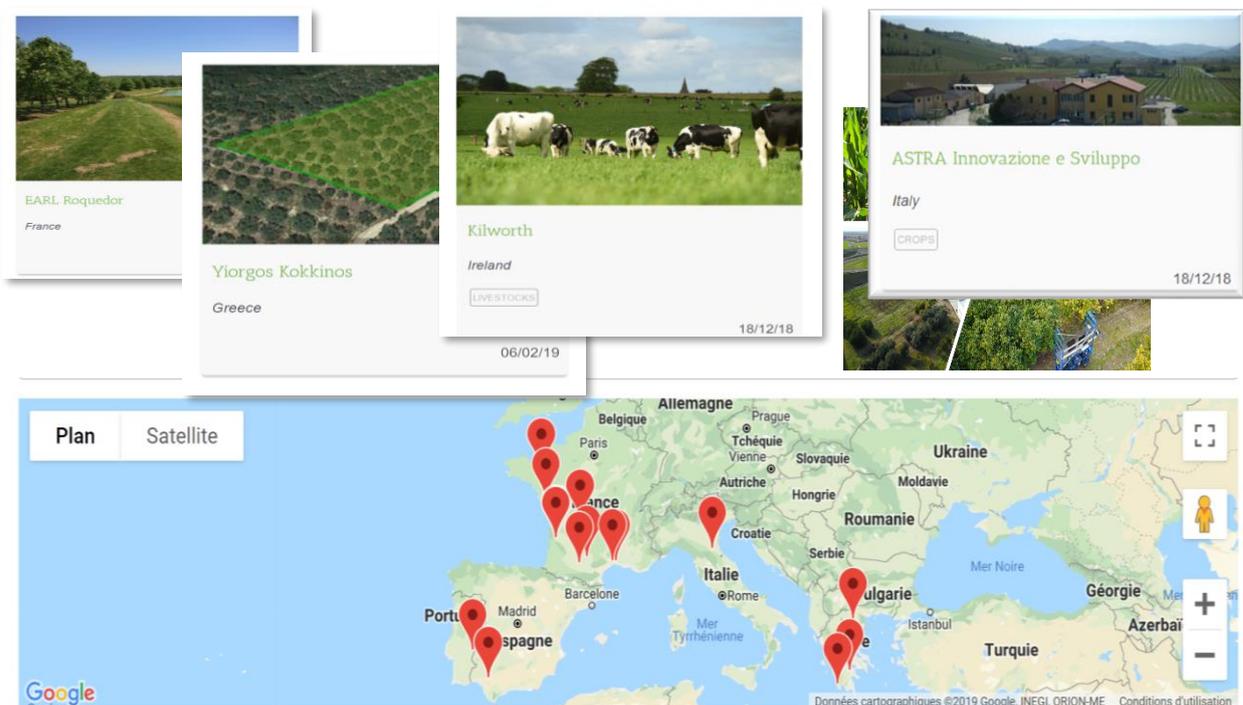
Among the most innovative topics are: the use of modelling tools to establish digital twins of the genome and to assist in varietal selection, the development of stress sensors based on plant electrophysiology, and the use of the "genetic" method to identify the causes of disease, plant electrophysiology, or the use of robots to monitor animal welfare in poultry farms.

In terms of technology, most projects implement data management and analysis tools, be they based on statistical modelling or artificial intelligence. The acquisition of data through sensors is an important step in digital solution projects. The sensors can be in place, pedestrian or embedded, connected (IoT) or their data made available via specific infrastructures (DIAS for satellite images). The blockchain technology has been used for traceability and data security applications. Technologies associated with robotics (such as optics, mechatronics or artificial intelligence) are complementary technologies. Drones used as an acquisition vector have been at the heart of many projects.

## 2.3 Objective 3: support large-scale demonstrators

*To support the development of a network of large-scale demonstrators as beta-tests of a minimum of 15 innovative digitech value-added chains for the agrifood, forestry and environment sectors in real conditions. To make such solutions operative in real environment, particular attention will be paid to all requirements (performance assessment as regards users' requirements/needs, user acceptance, strategic partnership building-up along the value chain, revenue sharing among partners in the so-called 'network-based' business models, market replicability assessment, certificability...). Such demonstration phase will enhance the SME solutions maturity from 5-6 to 6-7 if not 8 Technology Readiness Levels (TRL).*

A network of 26 demonstration facilities has been set-up following the launch of a call for Demonstration facilities <https://www.projectdiva.eu/demonstration-facilities/>. The objective was to facilitate the demonstration of the new value-chains. In parallel, 37 demonstration projects involving 79 SMEs have been selected for support by DIVA.



**Figure: Demo-sites facilities proposed in DIVA for demonstration projects**

38 demonstration projects have been supported in DIVA (see table hereafter). 20 are so-called small-scale demonstration as they represent part of a full value-chain and 18 are large-scale demonstrations where the full value-chain was expected to be represented up to the final user. Among these projects, 4 concern the Forestry sector and 4 concern the Environment sector.

**Table: DIVA Demonstration projects**

Call	Acronym	Title	Lead SME	Country
<b>Large Scale Demonstration projects</b>				
DIVA1	OliveSense	Forest Owners Empowerment Platform	BRIO AGRO TECH	Spain
DIVA1	ICTREES	ICT tools adding value to forestry on small plots of land	SEISTAG INNOVACIÓN	Spain
DIVA2	PolliSmart	Digitized Value Chain of Pollination Services	IRIDEON	Spain
DIVA1	C clair	Decision support tool for intra-plot modulation of apple's thinning process, using imaging and data analysis in real-time	AGRICONNECT	France
DIVA2	HYGODEM	Large scale demonstration of HYGO	ALVIE	France
DIVA1	FruitIOT	Integration of IOT devices and irrigation DSS for sustainable fruit production	AGRONICA GROUP	Italy
DIVA2	droneONtrap	Drone on Trap	MAVTECH	Italy
DIVA1	OLIVETRACE	OLIVE oil TRACEability system supported by blockchain technology	GALVEZ	Spain
DIVA1	OMD	Olive Tree Management Digitalization	SANTA CRUZ ING.	Spain
DIVA2	IFarmToFork	IoT based Sustainable Livestock production from Farm to Fork	DIGITANIMAL. SL	Spain
DIVA2	FOPRO-digital	Forest Products digital management	WUUDIS SOLUTIONS	Spain
DIVA2	CROP	Crop Rotation Optimization Performer	OKP4	France
DIVA2	miBeez	Integrated Precision Apiculture System - Large Scale Demonstration	TERRA SPATIUM	Greece
DIVA1	Biowave 2.0	Microwave technology to valorise to agri-food waste streams	ASHLEIGH	Ireland
DIVA2	SmartCIP	Next generation smart Cleaning -in-Place (CIP) system	2e TECHNICAL DEVELOPMENT	Ireland
DIVA2	SRPF	Smart Robotic Poultry Farming	IAMUS TECHNOLOGIES	Ireland
DIVA1	AgroPlus	Using Copernicus Earth Observation and onboard vehicle connectivity system to disrupt Precision Agriculture	AGROINSIDER	Portugal
DIVA1	WINEGRID 2.0	Remote and real-time vinification monitoring solution and management software	WATGRID	Portugal
<b>Small Scale Demonstration projects</b>				
DIVA2	HEIFERSCAN	Automatic monitoring of group-housed dairy heifers for an improved rearing efficiency	RUSAMA	Spain
DIVA1	APODE	Aerial Potato Disease Evaluation	DELAIR TECH	France
DIVA1	WINUTPRO DSS	Grape Wine NUTrient consideration to optimize vineyard PROtection Decision Support System	PROMETE	France
DIVA1	GENOVIEW FERTI	A new product based on satellite imagery to better manage nitrogen in the vineyard	TERRANIS	France
DIVA1	ESTA Pheno	Environmental Stress Tolerance Assessment & Phenotyping	VEGETAL SIGNALS	France
DIVA2	FATOD	Facilitating new agricultural technics ownership and deployment	NEAYI	France
DIVA2	XP 2.0	Demonstration and improvement of a digital tool for Participatory Trials	AMICULTEURS	France
DIVA2	ADW	Anomaly detection on wheat	NEW DRONE	France
DIVA2	AGMA	Automated Grapeworm Monitoring and Advice	CAP2020 Consult	France
DIVA1	ComPlat	Agri-food value chain Communication Platform	HERFEVARO	Spain
DIVA1	WATSAT	Estimating WATER efficiency in soil using SATellite images and modeling approach	TEPRO	Spain
DIVA2	Honey.AI	Assisting Beekeeping market with artificial vision and deep learning tools	SONICAT SYSTEMS	Spain
DIVA2	FINEST	FarmING dEcision Support Tool - Demonstration - Demonstration Small Scale	XILBI	Spain
DIVA2	VIDIS	The VIDIS Project	AGRIOT	France
DIVA1	AgroInnoSense	Exploitation and upgrade of a 3-day, frost and heatwave forecast system	GRIDNET	Greece
DIVA2	MilkSense	Intelligent data-driven Milk production and quality monitoring platform	G. Efthymiou - A. Loutraris G.P.	Greece
DIVA1	WOWnature	WOWnature: a web-based platform for innovative forest Green Infrastructures finance	ETIFOR	Italy
DIVA1	Stoock V2 validation	Validation of new stoock version in operational field	eAGROOP	Portugal
DIVA2	IFFRIT	Inhibit Forest Fires with Robots and Innovative Technologies	INGENIARIUS	Portugal
DIVA1	RTCV	Real Time Remote Sensing through Computer Vision	RIGGER	Portugal

## 2.4 Objective 4: Internationalisation

***To offer to the most successful demonstrated value chains projects, the opportunity to raise international visibility and to extend their markets worldwide.***

The objective of DIVA was to support innovative solutions across the full spectrum of innovation from idea maturation (Maturation voucher), Demonstration (Demonstration voucher) up to internationalisation (Internationalisation voucher).

Following the 2 DIVA calls for projects, 8 internationalisation projects gathering 19 SMEs were supported, 3 of which had previously benefited from a demonstration voucher in the first call. The target destinations were the US, the Baltic States, Brazil, Egypt and New Zealand.

These projects were impacted by the COVID crisis due to the impossibility to travel in 2020. Nevertheless, alternative solutions have been found to prospect remotely and demonstrate the services envisaged in European countries that were easier to access.

Digital services for agriculture developed in Europe have a real relevance on international markets, including in countries like the US with a reputation for AgTech.

## 2.5 Objective 5: Impact assessment

***To make a final impact assessment of the supported projects (both at the value-chain scale and at the level of each contributing SME) and to evaluate the more macroeconomic outputs of the DIVA project based on the key performance indicators and others (regional anchorage, innovation instigator...). To prepare policy recommendations to the EC and DIVA exploitation plan after the end of the project.***

The strategy of the Innovation and Exploitation Management plan has been defined at the beginning of the project. The objective set was to build a dashboard for a continuous monitoring of all the supported projects. It is composed of 2 files gathering data on the projects and confidential data on the beneficiaries.

All DIVA projects were submitted to an initial roadmap meant to define the orientations, result indicators (to qualify the project realisation) and performance indicators (to qualify the success and the perspectives opened by the project). These indicators, together with information on Intellectual property and valorisation were completed after a final assessment with the SMEs. In parallel, key indicators of the companies (Staff number, Turnover and Ebitda) were collected on the DIVA period (2018-2020) in order to characterize their evolution.

All this information was meant to feed the DIVA KPIs. Maintaining the DIVA dashboard during 3 years after the end of the project is part of the sustainability measures proposed by the consortium in order to ensure a long-term follow-up of the projects.

## 2.6 Objective 6: Dissemination and communication

*To facilitate the breakthrough of digital technologies in and outside Europe in relation with the agrifood market opportunities and through active dissemination and communication activities, to have enhanced the DIVA Inspiration Framework and DIVA supported SME innovativeness to a wider audience.*

Communication was ensured throughout the project through the DIVA website, social networks and a newsletter.

Connections were established with other ongoing projects (Innosup VIDA or S3Food, Cosme projects Track and Consensys, H2020 project Nefertiti) as well as with other international initiatives (World Agripreneur summit, International robotic Fair FIRA). Connections have been set-up with other clusters in each partner countries (ex. Plant Inter Cluster) and outside The DIVA Advisory Board has also enabled the expansion of connections with the ERAnet ICT-Agri network. Finally, the Europe Enterprise Networks and its Agri sectoral group were mobilised to relay information from DIVA. The two European events Boost-up DIVA and Up2DIVA initiated these connections. They were made concrete during the final DIVA event where more than 500 participants registered.

As sustainable measures, the links with S3 partnerships such as “Smart Sensors for Agrifood” and “Traceability and big data” and with the forthcoming Public Private Partnerships such “Agriculture of data” is planned.

### 3. DIVA KEY PERFORMANCE INDICATORS

#### 3.1 Expected impact n°1:

*Strengthen industrial leadership in the EU Members States by reinforcing value chains that integrate innovative solutions in SMEs*

# KPI	KPI	Planned	Results
KPI 1	Increase of added-value for at least 30 SMEs supported	10% of increased value-added	38
KPI 2	Enhanced capacity of ICT SMEs to play a major role in the new agrifood-digitech value chain	A min of 30 SMEs	36
KPI 3	Design and development of new specific products/solutions aimed at meeting the needs of the agrifood sector	150	124
KPI 4	Awareness raised about the potential of ICT for reinforcing industrial leadership	100 000 contacts	781 646

#### KPI N°1: Increase of added-value for at least 30 SMEs supported

This first indicator is intended to identify which of the supported companies are experiencing significant growth in the field of innovative digital services in agriculture and forestry. For this indicator, it is the evolution of turnover that has been taken into account rather than EBITDA. The data collected proved to be unreliable as it was poorly filled in by the companies and often confused with the balance sheet total.

As a result, 48 SMEs displayed an evolution in turnover of more than 10 % on the 2018-2019 period and 38 on the period 2018-2020. A significant number of companies faced a reduction on their turnover in 2020 due to the COVID situation.

#### KPI N°2: Enhanced capacity of ICT SMEs to play a major role in the new agrifood-digitech value chain

The objective of DIVA was to bring companies from the digital sector to develop solutions in response to the needs of the application sectors: agri-food, forestry or environment.

Among the 180 beneficiaries, 76 are IT companies, which can be further detailed into 34 agro-digital companies (specialised in digital services to agriculture or forestry) and 42 pure digitech companies (providing IT services or IT equipment such as IOT, sensors, etc.). More particularly, 36 of these Agro-digital or Digitech companies were involved in the demonstration projects.

#### KPI N°3: Design and development of new specific products/solutions aimed at meeting the needs of the agri-food sector

Over the whole project, 124 new products or services were reported by SMEs. These are innovative products or services that are not necessarily on the market yet but that are at least sufficiently mature in concept for the enterprises to formalise them as such. The target of 150 products or solutions was set originally on the assumption that DIVA would support

150 projects and that each project was designed to formalise a new product or service. In reality DIVA supported 134 projects instead of 150. Indeed, fewer maturation projects were supported (88 instead of 100) in favour of 3 additional demonstration projects. Similarly, 8 internationalisation projects were supported instead of 10. Additionally, some maturation projects did not declare a formalised product/service because they were still at a low TRL level (e.g. when a technology such as blockchain was tested but without leading to the formalisation of a new product at this stage, or when a simple market study was conducted).

#### **KPI N°4: “Awareness raised about the potential of ICT for reinforcing industrial leadership”**

Dissemination and communication activities are a core part of the project. Information have been sent to raise awareness about the project and its different objectives: Call for Challenges, Call for Demonstration sites network, DIVA Open Calls, DIVA events...

The Consortium has adopted a multi-strand approach to ensure that dissemination was effective. Among the dissemination channels, the consortium used:

- DIVA website and social media (around 500 subscribers)
- DIVA partners' website and social media (around 4000 contacts for each clusters)
- Associated partners like local authorities, regional agencies etc... (5000 contacts each)
- Other website such as: EEN network, ECCP website (around thirty clusters specialized in agrifood or digital with around 4000 contacts each), sectoral associations' website
- Organisation or attendance to conference and other events: FIRA (25000 contacts), Smart Agrifood Summit (10000 contacts), DatAgri (3000 contacts), PIC meeting (20000 contacts)

In total, the consortium has fulfilled its objective, with 781 646 contacts reached.

### 3.2 Expected impact n°2:

#### *The creation of new globally competitive industrial value chains across the EU Member States*

# KPI	KPI	Planned	Results
KPI 5	N° of new value chains created at the end of the project with a global competitiveness demonstrated	Min. 10 involving min 30 SME	35
KPI 6	Number of contracts signed - for instance technology transfer or strategic innovation partnerships among SMEs - presenting revenue sharing in the value chain business model.	50	58
KPI 7	Total number of new value-chains ideas collected all over the project duration	Min. 30	38

#### **KPI N°5: "N° of new value chains created at the end of the project with a global competitiveness demonstrated"**

38 demonstration projects were supported in DIVA, of which 35 were deemed successful. Each of them has demonstrated a new value-chain in real environment. 25 of these projects received the maximum qualitative score of 2 (interest and follow-up) and 10 of these received also the maximum quantitative score of 3 (IP generated, services created, private investment made).

#### **KPI N°6: Number of contracts signed**

The number of contracts that have been recorded in the IEP file correspond to a value sharing between the partners of the value-chain created. Among the demonstration projects meant to build new value chains and long-term collaboration between SMEs, 58 such contracts have been set-up. They typically gather a digital company (pure digital player) with an agro-digital company (providing digital services to the application sectors) and/or a company that provides sensors/equipment for data acquisition. Internationalisation projects displayed 9 contracts set-up between SMEs.

#### **KPI N°7: Total number of new value-chains ideas collected all over the project duration**

Near to 400 proposals have been submitted in response to the DIVA open call. Among them, 215 were proposals of demonstration projects intended to feature innovative value-chains. 38 demonstration projects were eventually selected for support by DIVA, either representing a part of a value-chain (small scale demonstration) or a full value-chain (large scale demonstration).

### 3.3 Expected impact n°3:

*Further leverage and complement support for innovation in SMEs and other funding, at national or regional authority level.*

# KPI	KPI	Planned	Results
KPI 8	Amount of vouchers delivered to SME	2,7 M€	2.7 M€
KPI 9	DIVA financial leverage effect: 1€ invested with DIVA will leverage a minimum of 3€ of private investment fund during the project	Min. 3€ leveraged for 1€ of EC subvention	3.1

#### KPI N°8: “Amount of vouchers delivered to SME”

Through the two DIVA Open Calls, the consortium DIVA has funded 134 projects which represented 2,7 M€ of vouchers given to SMEs. Vouchers have been paid to SMEs in 2 halves: First half was paid after completion of the initial roadmap and second half was paid provided that the result indicators were reached, which was assessed during the final assessment.

#### KPI N°9: “DIVA financial leverage effect”

In the final assessment of each of the 134 DIVA-supported projects, different information was asked to the SMEs. Among others, the private investment made on the projects, either in equity by external investors or non-equity for operating costs of R&D by the SMEs themselves. Among the 180 beneficiaries, 34 SMEs benefited from an equity investment starting from 10 k€ up to 605 k€ among which 10 SMEs raised more than 100 k€ in funding. Total equity investment represented 3,9 M€ and budget investment by the SMEs represented 4,8 M€. As a whole, 8,4 M€ of private investment have been made on the DIVA supported projects, which represents a leverage effect of 3,1 for the investment of the European Commission (2,7 M€ of vouchers).

Some examples worth mentioning:

- The company **Terranis** (FR) obtained a regional funding from the Occitanie region to develop the R&D project whose idea was developed within the framework of DIVA (Coversat project: Technological maturation to verify the feasibility of evaluating the biomass produced in the fields and the restitution of nitrogen using sentinel images).
- The **Agriconnect** joint venture created by Raison'Alpes and Technivue (FR) within the framework of the C-Clair project is in the process of raising €1.2M to deploy the service demonstrated through this project.
- The **SCIO** company (GR) managed to find additional applications to their AI platform developed in the Land-Ho project and has received an award from the United Nations <https://www.unccd.int/news-events/geo-ldn-competition-winner-announced>
- The company **SONICAT** (SP) obtained an additional funding from the Agrobofood project to automatize the honey pollen analysis demonstrated in DIVA <https://agrobofood.eu/oc1-experiments/honey-ai/>
- Once the DIVA IFarmtoFork project (large scale demonstration) finished, the company **Digitanimal** (SP) strengthened its relationship with one of the partners of the consortium (Ganadería Cumbres de Guadarrama) signing a collaborative agreement. Digital reached to sign a commercial contract as service provider, with an international feed supplier.

### 3.4 Expected impact n°4:

*Contribution to regional smart specialisation strategies by capitalising on complementary competences for the development of value chains with EU added-value*

# KPI	KPI	Planned	Results
KPI 10	N° of regional SME with increased industrial leadership in the 7 regions represented in the DIVA consortium in line with RIS3 strategies	Min. 100	144
KPI 11	Number of high value-adding demonstration facilities set up in each Region in line with its RIS3	Min. 3	24

#### KPI N°10: “N° of regional SME with increased industrial leadership”

In the final assessment of each of the 134 DIVA-supported projects, 105 projects have been considered successful, with post-DIVA perspectives; In total 144 SMEs are involved in these successful projects.

On these 105 projects, the consortium DIVA has identified 20 of them (see table hereafter) which are the most successful projects selected by the DIVA Open Calls and ranked them according to criteria such as innovativeness, market prospects or leverage effect of DIVA.

During the final event, the three best projects (**Land-Ho**, **C Clair** and **AgroplusMkt**) have received an award of the best projects selected by the consortium and the other projects have been given the possibility to pitch their project. The audience have then selected three best project: **Digital Seed**, **Honey.AI** and **HSR-Go!**.

#### KPI N°11: “Number of demonstration facilities”

A network of demonstration facilities have been set-up in DIVA in order to give to SMEs the possibility to use them for implementation and validation purposes in real environment. In the end, 26 demo sites have been registered with their characteristics and service offer described. <https://www.projectdiva.eu/demonstration-facilities/>. 11 demonstration projects have been implemented in one of these facilities. Conversely, 9 demo-sites out of the 26 have actually been used for demonstration purpose.

The most exemplary Demo sites were those represented by the 2 DIVA partners CRPV (Astra demo-site) and Teagasc (Moorpark).

**Table: 33 SMEs of the 20 selected DIVA projects**

Call	Acronym	SMEs	Status	Country	voucher type
CALL 1 / CALL2	AGROPLUS / AGROPLUSMkt	AGROINSIDER	Coordinator	Portugal	Large scale Demonstration / Internationalization
		AMBIENTA	Partner	Spain	
CALL 2	AMUSE-FOOD	Hospitality and AgriFood Made Easy Social Cooperative Enterprise	Leader	Greece	Maturation
CALL 1	C-CLAIR	RAISON'ALPES	Coordinator	France	Demonstration - Large scale
		TECHNIVUE	Partner	France	
CALL 2	CROP	FARMLEAP	Partner	France	Demonstration - large scale
CALL 2	DIGITALSEED	iMEAN	Leader	France	Maturation
CALL 2	DIONYSOS	THETAMETRISIS	Leader	Greece	Maturation
CALL 1 / CALL2	ECOFARM / EUPHYTO	ECOCLIMASOL	Coordinator	France	Maturation
CALL 1	FRUITIOT	AGRONICA GROUP	Coordinator	Italy	Demonstration - Large scale
		MARCONI STEFANO AA	Partner	Italy	
CALL 2	GREELON	EBLOCK ENERGY TRADE	Leader	Spain	Maturation
CALL 2	HONEY.AI	SONICAT SYSTEMS	Leader	Spain	Demonstration - Small scale
		UNTAMED WORLD	Partner	Spain	
CALL 2	HSR-GO!	ECOFILAE	Leader	France	Internationalization
		YOOP	Partner	France	
CALL 2	LAND-HO	SCiO	Leader	Greece	Maturation
CALL 2	LOCALFARM	LOCALGREEN	Leader	Italy	Maturation
CALL 1	MGTB	LENO CONSULTING	Coordinator	France	Maturation
CALL 1	MGTB	AKINAO	Partner	France	Maturation
CALL 2	MILKSENSE	G. Efthymiou - A. Loutraris G.P.,	Leader	Greece	Demonstration - Small scale
		Karagiannis Theofilos Tyrokomika	Partner	Greece	
		Petros Androulakis	Partner	Greece	
CALL 2	OPUSAGRI	JAMJO	Partner	Ireland	Maturation / Internationalization
CALL 2	POLLISMART	IRIDEON	Leader	Spain	Demonstration - Large scale
		CANETIS	Partner	Italy	
CALL 2	S-EAGER	SLOW PHILOSOPHY	Leader	Spain	Maturation
CALL 1	STOOCK VALIDATION V2	EAGROOP	Coordinator	Portugal	Demonstration - Small scale
		LUMIT	Partner	Portugal	
CALL 1	WOWNATURE	NETECH	Partner	Italy	Demonstration - Small scale
		OPENFORESTS UG	Partner	Germany	
		ETIFOR	Coordinator	Italy	

### 3.5 Expected impact n°5:

*Provide clear and measurable contribution for the innovation performance of supported SMEs at short and long terms.*

# KPI	KPI	Planned	Results
KPI 12	N° of SME having developed – or being currently involved in the development of new offers / services / processes in DIVA new value adding chains	Min. 50	118
KPI 13	Number of new ideas protected through an appropriate IPR strategy.	Min. 100	59
KPI 14	Number of SME informed about opportunities & challenges ahead in the ICT / agrifood sectors and/or educated about good innovation management practices	4 000	5 055

**KPI N°12: N° of SME having developed or being currently involved in the development of new offers / services / processes**

KPI 3 relates to the number of new services/products developed or being developed. When filtering the projects that were considered not successful and where no follow-up was identified by the assessor (qualitative evaluation criteria), there are 89 projects (29 demonstration + 60 maturation) leading to an effective products/service. They gather 118 different SMEs. In addition, 15 additional SMEs are involved if considering the internationalisation projects intended to promote existing products/services.

**KPI N°13: “Number of new ideas protected through an appropriate IPR strategy”**

Information on IP was required in the final roadmap assessment. 59 projects declared the creation of tangible Intellectual property, most of the time with several aspects (design, algorithm, database, concept or tool). The IP protection strategy relied on different aspects such as patents, envelope Soleau (Fr), Trademarks deposit and copyrights. Secrecy was most of the time chosen for software and algorithm. In certain cases, softwares have been developed with an open-access approach and are therefore shared with the community.

**KPI N°14: “Number of SMEs informed about opportunities & challenges ahead in the ICT / agrifood sectors and/or educated about good innovation management practices”**

69 events have been organised at national and European level in dedicated place or under a 100% on-line format in order accelerate cross-fertilization and networking approach of all the partners. These events have gathered more than 5000 SMEs since the beginning of DIVA.

### 3.6 Expected impact n°6:

***Improve the business environment of the supported SMEs by establishing open collaboration spaces.***

The DIVA network is operative after the end of the project as a network of regional Hubs which are one-stop-shops for SMEs and allow visionary and strategy development by instigating cross fertilization among the agri-food and ICT sectors.

DIVA was an opportunity to build a network of partners united by a common interest in pursuing the actions undertaken.

Several partners are registered as Digital Innovation Hubs (DIH) on the S3 platform (ASOI, H-Farm). Their action programme was enriched by the DIVA mechanism but continues after the end of DIVA. In addition, most of the partners are currently involved in the construction of European DIHs (e-DIHs) in the regions where they are located. Most of the time, DIVA's achievements have fed into the reflections on the scope of actions of these future structures.

In addition, DIVA was able to inspire joint actions between partners. In France, Digital 113 and ASOI joined forces to respond to a Smart Agri Hub call for proposals to organise a specific event dedicated to the problems of short-distance supply. The project named FoodLog Proximity was selected and gave rise to a Hackathon on 24/10/2020 gathering about fifty actors from the Occitanie region in France. Digital 113 then launched an innovative initiative called "Digital Is Future" to promote exchange between digital players and players in the application sectors. The first edition, organised between December 2020 and February 2021, was conducted in partnership with ASOI for the agro sector.

These experiences have reinforced the need to continue the cross-fertilisation process in order to achieve a better mutual understanding of the needs and operating methods of the agri-sector on the one hand and the solutions and operating methods of the digital players on the other. On the basis of this experience, the DIVA Next project was set up with the DIVA consortium and several other European clusters in response to the COS-STRAT-2020-3-05 call for projects: Strategic alliances for the uptake of advanced technologies by SMEs on the economic recovery.

Demonstration sites remain a key point for the maturation, experimentation and demonstration of new solutions. In Italy, CRPV organised a first Demoday in October 2020 at the Italian demofarm Astra where IT companies and actors from agrofood sector were involved, with about 64 persons participating. Considering the success of this event, CRPV made the decision to reconduct this event every year from now on. In Ireland, the MoorPark and Killworth sites led by TEAGASC are now well-known sites for experimentation in dairy management and livestock farming where events take place regularly.

## 4. DIVA SURVEY

As part of the project, a survey was sent to DIVA beneficiaries to collect information about their level of satisfaction. The questionnaire was sent in June 2020 to DIVA Open Call #1 beneficiaries that had already finished their projects. The received answers enabled us to define possible relevant actions to be carried-out by the end of DIVA and afterwards to better meet SMEs expectations. The answers helped to enrich the recommendations produced by the consortium, for policy makers at regional, national and EU level.

### 4.1 Profile of the selected SMEs

DIVA beneficiaries have different areas of expertise, classified mainly into four sectors: agrifood, digital, environment and forestry. It is important to note that beneficiaries sometimes have more than one area of expertise, which facilitates the success of their projects. However, the analysis shows that the majority of beneficiaries (47%) are specialists in the agrifood sector, followed by 38% beneficiaries in the digital sector and a minority in the environment and forestry sector.

Another interesting aspect is the number of companies that participated for the first time in a European project. According to the analysis of the survey, 60% of the beneficiaries had already participated in other calls for projects than DIVA. Nevertheless, DIVA was able to allow 40% of the beneficiaries to benefit from European funding for the first time.

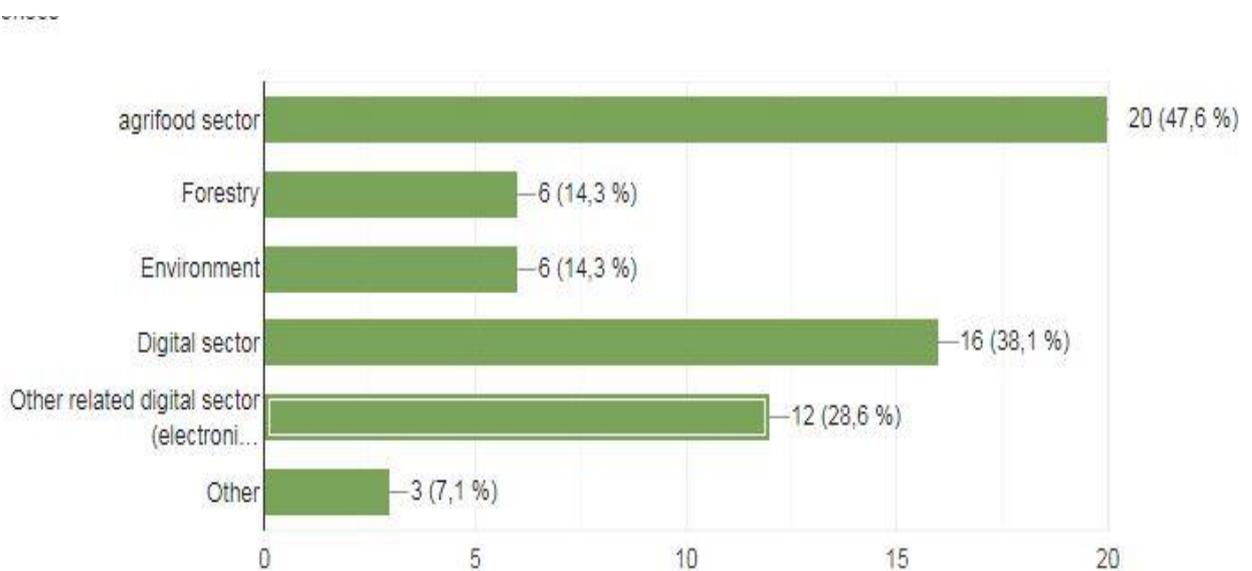
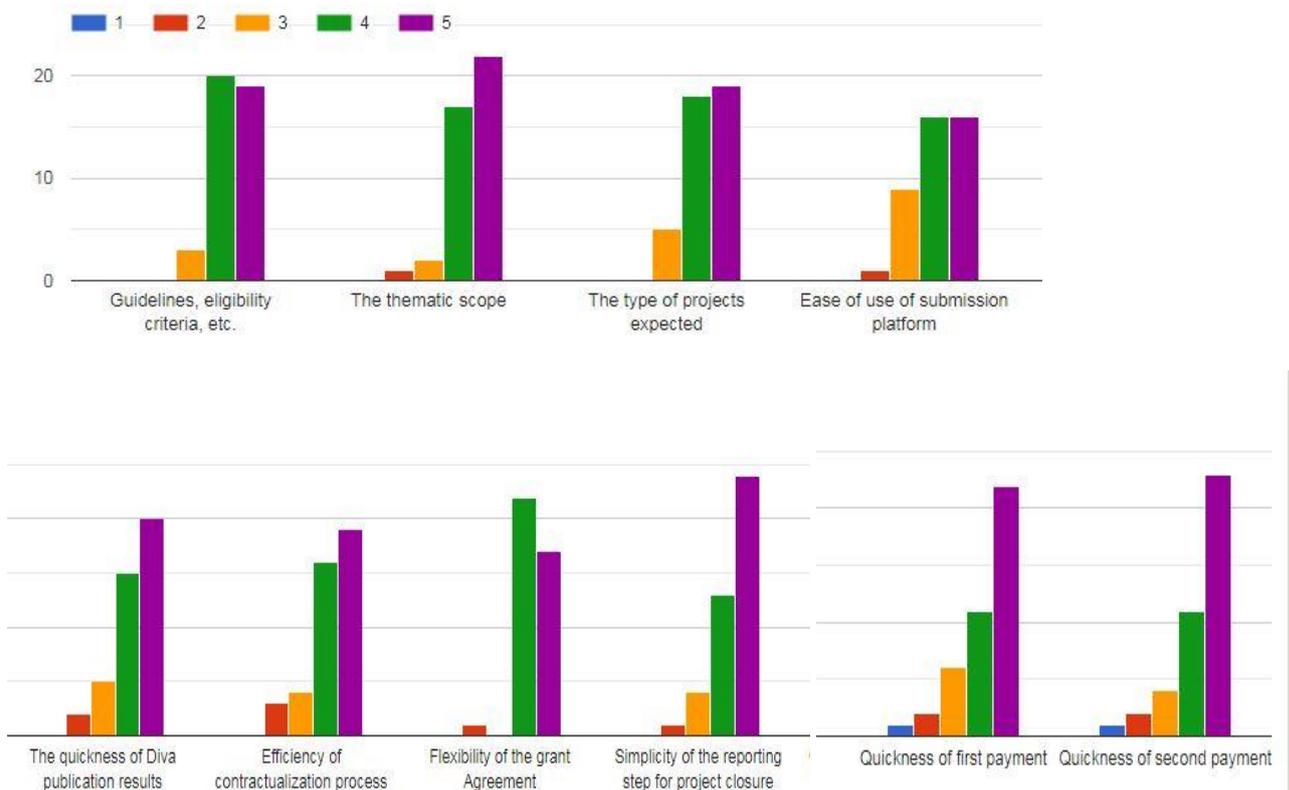


figure 1: Profile of SMEs

## 4.2 Level of satisfaction on the application process to DIVA open calls

For the launch of the two calls for projects, the consortium set up a specific application procedure for these calls. A part of the survey focused on the degree of satisfaction of the beneficiaries with this procedure.

**Figure: Level of satisfaction regarding the application process to DIVA open calls (1 : poor – 5 : very good)**



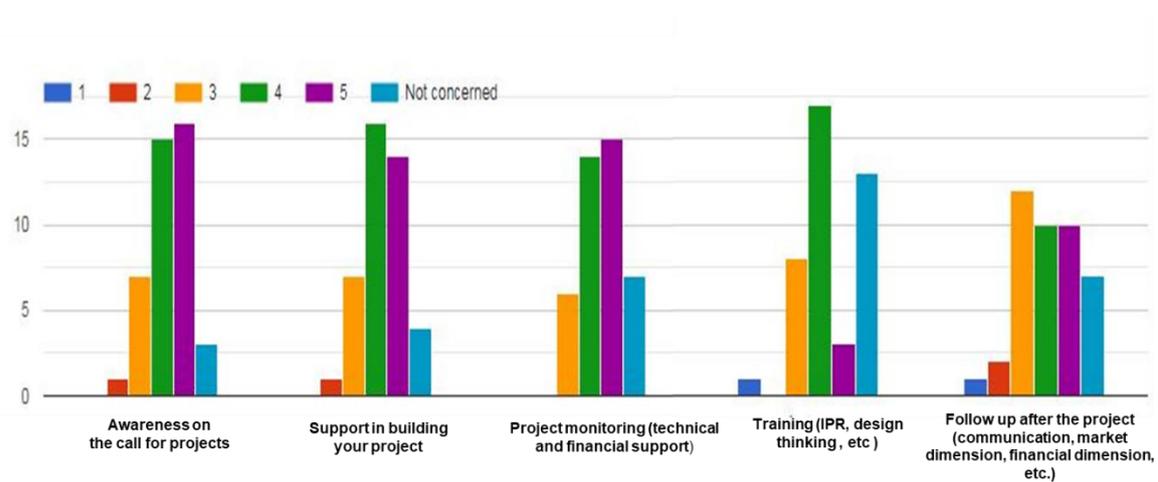
Among the main results that emerged from the survey:

- ✓ More than 85% were satisfied or very satisfied about DIVA guidelines and eligibility criteria, the thematic scope and the type of projects expected.
- ✓ 24% were less satisfied about the ease of use of submission platform.
- ✓ More than 80% of beneficiaries were satisfied or very satisfied about the different items: quickness of publication result, flexibility of the grant agreement, simplicity of the reporting step and the quickness of first and second payment.

### 4.3 Level of satisfaction regarding DIVA support

A part of the questionnaire focused on the degree of satisfaction of the beneficiaries with the support provided by the DIVA consortium partners before the launch of the calls and during the follow-up of the projects.

**Figure: Level of satisfaction regarding support provided (1 : poor – 5 : very good)**

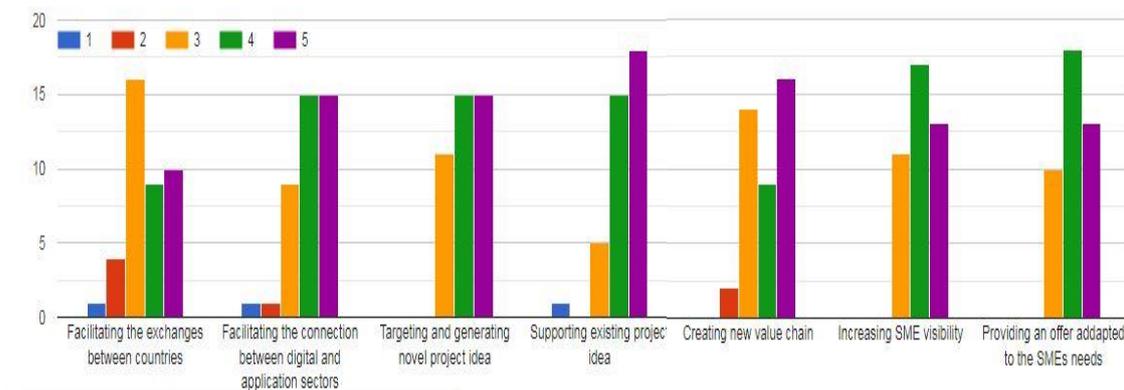


Among the main results that emerged from the survey:

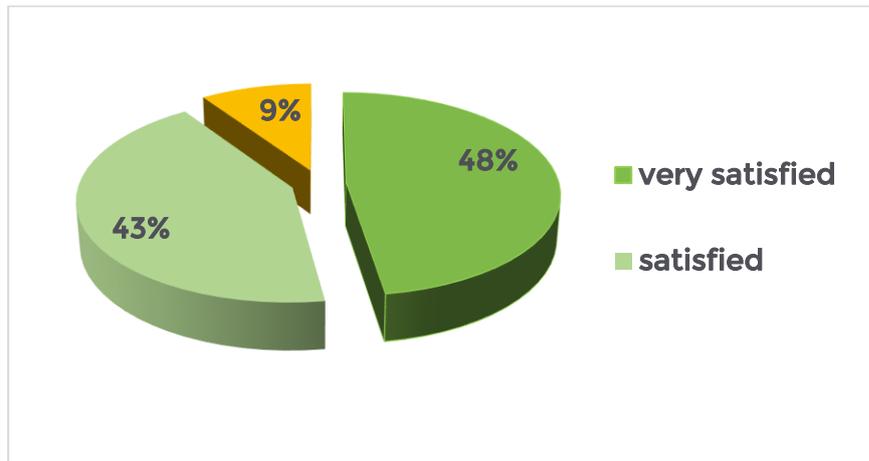
- ✓ More than 70% of the beneficiaries were satisfied or very satisfied with DIVA's action in raising awareness of the call for projects, support during the creation of their projects and technical and financial follow-up.
- ✓ Expectations were expressed regarding the follow-up after funding.

### 4.4 Overall satisfaction with DIVA program

**Figure: Level of satisfaction regarding different DIVA aspects (1 : poor – 5 : very good)**



- ✓ Promoting exchanges between countries was not perfectly achieved, 12% stated that they were not satisfied, however 40% were moderately satisfied and the rest were more satisfied.
- ✓ As a whole, 91 % of beneficiaries claimed to be satisfied or very satisfied by DIVA.



## 5. CONCLUSION

The objectives that were initially set for DIVA were achieved and the KPIs were mostly exceeded. DIVA succeeded in creating a real international dynamic on a particularly crucial subject, namely digital technologies.

The agribusiness sector is a good place to develop innovative solutions at all stages of the value chain. We have seen that the related application sectors of Forestry and Environment have also benefited from this dynamic. These three sectors have in common the valorisation of space and rural areas. Although the aims and issues are different, they often need knowledge and management tools that respond to the same logic. The digital solutions developed for one of these sectors can easily find applications in the other two.

DIVA has been able to bring out and accelerate innovative solutions. Now, the insertion of the project in the European networks and partnerships must allow to go further in the support of the selected SMEs.