



SEBASTIEN

## D5.1 - Dissemination and Communication Plan

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# 1 INTRODUCTION

The 'Dissemination and Communication Plan' (DCP) document is drafted in month 6 of the project to effectively communicate and report on all relevant activities and results. Although envisaged in the initial phase of the project, DCP is a constantly evolving document that will be refined and updated throughout the project to indicate progress and possible new opportunities. Here we present the second version of the DCP. The Leader is UNITUS but the entire consortium is involved in this task.

The DPC is divided into five sections. The first section describes the SEBASTIEN project, its objectives, and the services it offers; then the related projects are described. Another section is dedicated to engagement with the target audience. The core section covers communication and dissemination, and is divided into two dedicated subsections covering 'external' and 'internal' users' needs. The most conspicuous part concerns external communication via online and offline tools (later described). Finally, the 'visual guidelines and conclusions' section completes the document.

SEBASTIEN project results will be disseminated for different purposes, namely: i) providing innovative approaches and tools to counteract the effects of climate change on livestock management, ii) helping facilitate effective practice for different stakeholders, iii) making stakeholders, social system authorities, and policymakers aware of the existence and opportunity of applying the new approaches, iv) presenting the project to a large audience, not only scientific but also public, to involve other stakeholders.

The dissemination activity can help to enhance the collaboration between members of the consortium in order to improve the quality of the shared work and promote synergies that could result in new projects. Regarding collaboration, the project has identified synergies with previous projects and has connections between some consortium partners. Participation in relevant events will support and reinforce these synergies and create new ones.

The communication objectives aim to i) share SEBASTIEN results as widely as possible and raise awareness of the project, ii) produce a simple, immediate, cost-effective, and credible communication, iii) create communication models that can be used in different contexts, iv) identify the target audiences and create suitable communication tools, v) engage additional stakeholders interested in the services offered.

The dissemination and communication objectives are evolving during the project according to current priorities. Therefore, they have to be flexible enough to adapt to a changing scenario.

## 2 SEBASTIEN PROJECT

### 2.1 BACKGROUND

Livestock production in the European Union (EU) is a large economic sector and animal products make up 45% (168 billion euros annually) of the EU agricultural production value, generating jobs for almost 30 million people. The sector based on animal production supports potential in labour generation and also enables livelihoods in rural areas having the potential to bring about a better functioning circular bio-economy.

In Italy, the livestock sector is mostly concentrated in the Northern regions in terms of number of farms and animals. Region-wise, Sardinia hosts the largest number of farms, whereas southern and central Italian regions (Toscana, Lazio, Campania, Calabria, and Sicilia) rank within the top ten. The value of the sector with respect to the total agricultural production is about 36% for the Country, with meat and milk products covering more than 60% and 30% respectively of this value. In terms of species, cattle alone cover 45% of the production value, which reaches 48% when sheep and goats are included.

Agriculture is responsible for >10% of EU greenhouse gas (GHG) emissions, of which 60% to 70% are non-CO<sub>2</sub> GHGs (methane and nitrous oxide) sourcing from the livestock sector. In Italy, the direct and indirect livestock emissions components cover 73% of the total release of CO<sub>2</sub>eq of agriculture - this was estimated at ≈29.5 Mton in 2017 - and around 6% of the amount from the EU.

In the last decades, the livestock sector focused on improving both productivity and nutritional management rather than stress resistance. Hence, animal sensitivity to anomalous conditions increased along with their productivity. The processes leading domestic animals to respond to changes in their environment are crucial for survival but may negatively affect the productivity and profitability of livestock systems.

Climate change affects both extensive and intensive systems, in particular by increasing extreme temperatures and altered radiation regimes, which in turn can lead to extraordinary windy conditions. The impact of environmental change on animal production can be categorised as 1) health, growth, and reproduction; 2) diseases and the spread thereof; 3) feed availability.

There is an increasing need to formulate management options meeting the challenges of both climate mitigation and adaptation, starting from the integration of the latest and consolidated scientific evidence, the growing availability of high-quality data, and the capabilities of digital infrastructures, components, and tools to produce more comprehensive and consistent information. Further, the communication approaches towards those people and entities responsible for its effective mainstreaming into decision-making should also be improved.

### 2.2 GOALS

SEBASTIEN will implement large-scale ICT-based services to support smart livestock farming and management while reducing risks and taking opportunities posed by climate change and its variability, by other concurrent environmental stressors, and anthropogenic pressures.

The main goal of the project SEBASTIEN is to deliver a Decision Support System (DSS) for a more efficient and (economically and environmentally) sustainable management, and consequent valuing, of the livestock sector in Italy focusing on cattle, sheep, and goat breeding.

The DSS will address extensive and intensive cattle, sheep, and goat farming systems to meet the needs and priorities of different actors, i.e.: breeders, assisting practitioners, researchers in the field, governments, market operators, entrepreneurs, and SMEs.

The DSS will alert about the expected occurrence of uncomfortable conditions for animals affecting their general behaviour, productivity, reproduction, mortality, as well as feed availability.

The project will mainly build on environmental, sectoral, and other geospatial datasets:

- *In situ* sensors will allow measuring parameters related to animal body conditions.
- Historical and future climate simulations at unprecedented spatial details over Italy will be combined into environmental comfort/wellbeing conditions indicators.
- Satellite images will be integrated for multi-dimensional analyses of feed availability.

Data will be translated into user-tailored information through different techniques, from empirical/statistical indicators to Machine Learning algorithms. Produced information will be accessed and exploited through a Platform of customised tools and services.

This goal will be reached through six different specific objectives:

SO1 - Maximising the synergistic exploitation and integration of multi-thematic, multi-source, last generation, continuously updated, highly detailed, and harmonised datasets.

SO2 - Condensing and synthesising the newly produced information into science-driven but user-tailored, and thus more communicative, either quantitative indicators or qualitative indices.

SO3 - Fully exploiting the existing and available Cloud/HPC capabilities.

SO4 - Balancing needs and priorities of different sectoral stakeholders maximising benefits for all.

SO5 - Ensuring the long-term functionality and sustainability of the generated services.

SO6 - Complementing and extending the outcomes and tools from the HIGHLANDER project (Co-financed by the Connecting European Facility Programme of the European Union under Grant agreement n° INEA/CEF/ICT/A2018/1815462).

## 2.3 SERVICES

Sebastien will provide an Open Data and Services Exploitation Web Portal that will function as a single access point to data, services, and informative content. The Web Portal will deliver four main services:

Service 1: Coping with environmental stressors for breeds to support livestock farming towards breed adaptation to environmental conditions and production needs.

- *Species/Breeds*: cattle (Italian Simmental)
  - *Areas*: various, across Italy
- The aim of this Service is to support livestock farming by identifying breed improvements for different breeds, to enhance adaptation to changing and challenging environmental stressors while ensuring production needs. It will leverage climate data (from monitoring and modelling) for characterising the farms' environment in the recent and future periods, plus -omics and phenotypic data (generated by sensors and archived within other projects, e.g., LEO), and other farms/associations' owned datasets. This huge amount of data will be combined using both simple analytical/statistical to complex AI/ML approaches and the outcome will consist of used-tailored information that will be accessed and exploited through a platform of customised tools and services. Stakeholders will test both information and web tools. Service 1 will facilitate the identification of the most resilient genotypes.

Service 2: Intensive farming risk management under climate extremes to alert about approaching or projected dangerous environmental circumstances for cattle.

- *Breed*: cattle (Italian Simmental)
- *Areas*: various, across Italy

The aim of this Service is to alert about the approaching (in the short-term) or projections (in the long-term) of dangerous environmental circumstances for cattle in the farms causing discomfort and loss of reproduction and/or production (milk yield and milk quality) performances and change in behaviour. This objective will be achieved by integrating phenotypic and -omics data already archived and/or newly collected thanks to the synergy with projects where SEBASTIEN partners are involved (e.g., HIGHLANDER, LEO). Several indicators/indices combining different parameters will be considered, with classification and thresholding systems fine-tuned by liaising with the stakeholders. The expected product will be a web tool, also in the form of a mobile app to serve daily operations, providing short-term warnings on extreme environmental conditions. The "Tester" stakeholder will be from the Simmental association involved (ANAPRI).

Service 3: Extensive farming management and feed availability based on indicators/indices about the phenological stage and greening of the naturally vegetated or managed areas used to feed livestock heads when conducted outdoors.

- *Species/Breeds*: sheep, cattle
- *Areas*: Central Italy

To monitor the surrounding environment of extensive farms, Service 3 will combine *in situ* sensor-based with large datasets extracted from satellite data elaboration (Sentinel 1, Sentinel 2, PRISMA). Satellite data acquisitions will allow to detect and combine different features of the vegetation structure, status, and nutrient/water contents with an unprecedented spatiotemporal resolution, while climate and topographic data can be combined to extract the effect of shading/radiation regime. The expected product will be a web tool, also in the form of a mobile App for daily operations, based on indicators/indices about the phenological stage and greening of the naturally vegetated or managed areas used to feed livestock heads when conducted outdoor, guiding in scheduling daily grazing and, more indirectly, to detect possible overgrazing effects on lands.

Service 4: Livestock farming under risks from combined abiotic and biotic factors to provide updated risk maps of parasites and diseases spread.

- *Species*: sheep
- *Areas*: Sardinia and other potential sites across Italy.

In Service 4, a further dataset related to those sheep phenotypes associated with the presence of parasites and outbreaks and the spread of related diseases will be added, jointly with literature information about the environmental conditions that can potentially favour or trigger them. Moreover, animal disease bulletins will be accessed and information on environmental conditions assessed from meteorological and satellite monitoring together with sensor-based monitoring to detect those ranges in measured animals' parameters potentially associated with different levels of parasites presence or illness spread. Climate projections will give support in projecting possible future shifts of favourable conditions for parasites and diseases. The expected product will be a web tool providing updated risk maps for parasites and diseases' spreads and will be tested by IZS (*Istituto Zooprofilattico Sperimentale*).

The released Services' Platform will contribute to making the livestock sector more environmentally (esp. climate) and socio-economically sustainable and valuable, balancing the needs and priorities of different stakeholders.

### 3 RELATED PROJECTS

One of the objectives of the SEBASTIEN project is to identify existing data sources relevant to the Action and find an efficient way to access and extract relevant data.

SEBASTIEN will reuse several High-Value Datasets coming from multi-sources and multi-thematic portals. We will use data sourcing from the European and Italian Open Data Portal, in particular:



the datasets under the categories “Agriculture, Fisheries, Forestry & Food” and “Environment”. Moreover, data extracted from National and International Data Portals/Archives: SIAN (*Sistema Informativo Agricolo Nazionale*); SINANET (*Rete del Sistema Informativo Nazionale Ambientale*); SCIA (*Sistema nazionale per la raccolta, elaborazione e diffusione di dati Climatologici di Interesse Ambientale*); ISTAT (*Istituto Nazionale di Statistica*); EEA (European Environment Agency); Copernicus Land Monitoring Service, Copernicus Climate Change Service and Copernicus-linked observatories could be included. Many other input (existing/ancillary) data used in SEBASTIEN will come from geospatial and non-geospatial datasets, with high spatial and/or temporal detail, that are produced and made available by different data owners/providers participating in the Action as either partners or supporters (e.g. national agencies, stakeholders associations; or research centres/university).

SEBASTIEN will also rely on climate simulation data from CEF-funded Action HIGHLANDER (2018-IT-IA-0084), with unprecedented combined temporal and spatial resolution over Italy.

Thanks to the time step of these simulations, suitable indicators for night vs. daytime conditions will also be considered, while the high spatial details will be suitable to be combined with remote sensing data on vegetation characteristics and topography, as those from Copernicus Services.

*In situ* monitoring by joint UNITUS and UCSC initiatives will be exploited (e.g., 2019-2023 PSRN strategic project “Livestock Environment Opendata (LEO)” with AIA linking with activity 4). Moreover, historical production, reproduction, and welfare data will be collected and used in combination with the other data.

The Action will leverage the experience and results achieved through HIGHLANDER and other ongoing projects among partners (e.g., LEO - Livestock Environment Opendata, SCALA-MEDI - Improving sustainability and quality of Sheep and Chicken production by leveraging the Adaptation potential of Local breeds in the Mediterranean area, NEMESI - Nanotechnology for green per la protezione Sostenibile delle piante, OFIDIA2 - Operational Fire Danger Prevention platform 2, MISTRAL - Meteorological Italian Supercomputing platform, IMAGE - Innovative Management of Animal Genetic Resources, etc.) to perform more efficient analysis of the input data sources (e.g., formats, structure, and content), also evaluating related automatic data extraction, cleansing, and updating procedures. This will establish the basis for the data lake development.

## 4 TARGET AUDIENCE

In accordance with Sebastien's aims and purposes, different categories of stakeholders have been identified, such as cattle, sheep, and goat farmers and their associations and assisting practitioners, researchers, educators/teachers, actors of the food/feed industrial processing,

market operators in the sector downstream chain, entrepreneurs and private investors, policy makers at different levels, ICT companies, in particular SMEs. All these categories compose the final target audience and all SEBASTIEN participants contributed to compiling a longlist of potential stakeholders, starting with those within their professional networks. Stakeholders already involved in SEBASTIEN associated projects, such as Highlander (*High performance computing supporting smart land services*, founded by CEF), LEO (*Livestock Environmental Opendata*, a project led by AIA), and Scala-Medi (*Improving sustainability and quality of Sheep and Chicken production by leveraging the Adaptation of Local breeds in the MEDiterranean*, funded by PRIMA EU program), were also included. The longlist includes every stakeholder type and allows the identification of the best candidate for the next project steps.

For each item suggested, specifics of the stakeholder type, person to contact within the stakeholder organisation and proponent were required, i.e. the “champions”.

When the champions are selected, the document will be updated with the relevant list.

## 5 DISSEMINATION AND COMMUNICATION

The goal of this plan for the first months of the project was to announce the start of the project and raise awareness of its aims, objectives, and scope.

This objective first relied on strong internal dissemination of the information to provide all partners with a clear vision of the project both as a whole and of the respective tasks.

To this end, a strategy for internal information flow was developed so that all consortium members have a common understanding and have what is needed to present the project and raise stakeholder awareness.

### 5.1 INTERNAL COMMUNICATION

Internal communication between partners is facilitated through emails, phone calls, and online meetings. Specific mailing lists were created to better direct communication within groups.

Each partner notified the coordination of one or two contact persons to be included in the Outreach Team. These people are in charge of quickly disseminating communications pertaining to project outreach to their colleagues who are part of the same institution.

Topics needing further study or discussion are addressed during outreach team meetings.

### 5.2 EXTERNAL COMMUNICATION AND DISSEMINATION

External communication is essential to present the project, raise awareness among national and regional stakeholders and reach new ones. Various tools were used to achieve these objectives: online such as the website and social media, and offline such as flyers, posters, and roll-ups. Future scientific publications generated within the project will further promote SEBASTIEN among a more specific audience.

#### 5.2.1. ONLINE TOOLS

##### 5.2.1.1 WEBSITE

The project website was developed at the beginning of the project (M3) to disseminate information on the project activities, objectives, services, and also correlated events (URL: <https://www.sebastien-project.eu/>).

The website includes the following sections:

- **Homepage:** which includes an overview of the main contents and the video teaser;
- **About:** which lists the project objectives and Linked Projects;
- **Services:** where an overview of four main services delivered by the web Portal is provided;
- **Partners:** that provides a description of all partners involved in the project;
- **News and events:** where all relevant news relative to the project are provided, with the contribution of all partners;
- **Contacts:** provides the e-mail address of the outreach team for requesting additional information;

Moreover, according to the rules for EU fund beneficiaries, the website footer includes, on the left, the EU emblem along with the acknowledgment Co-financed by the Connecting Europe Facility of the European Union. In the centre of the footers, there is the project ID card with the following information:

SEBASTIEN Project

Coordinator: Fondazione Centro Euro-Mediterraneo sui Cambiamenti Climatici (CMCC)

Topic: Public Open Data (POD) – Type of action: CEF-TC-2020-2

Duration: 30 months - Starting date: Jan 2022

Total budget: €1,338,553.18

Total CEF Contribution: €1,003,914.89

On the left of the footer there are the project logo and social media logos with a link to the related pages.

The website was updated regularly with news (also shared in social media channels) and two sections were added: a page dedicated to [in situ sensors](#) and a page in [Italian](#) (mainly addressed to stakeholders) collecting information about the project and the services and the Italian version of the project video teaser.

### 5.2.1.2 PARTNER WEBSITE

Each partner will create a web page on its organisation's website where SEBASTIEN and its services will be presented and a link to the project website. It is desirable that each one adds its own role within the project itself.

### 5.2.1.3 SOCIAL MEDIA

In parallel with the creation of the website, the project's social channels were created to reach a wider audience: contents are exclusively provided in English;

Twitter is the main social network for reaching as many interlocutors as possible and allows for informal interaction and communication, as well as facilitating the creation of networks and connections. A Twitter account has been created under the name [@SEBASTIENproje1](#).

The hashtag #sebastienproject will be used to give evidence to the news published and will allow all partners to use it autonomously, twitting on their institutional or personal feeds.

It was determined to open a corporate page on [LinkedIn](#) to give maximum visibility to the project, reach other stakeholders, and create a network of effectively useful links.

It was decided to also create a Facebook page ([Sebastien project](#)) and an Instagram account ([sebastien\\_project.eu](#)) in order to expand the audience and reach more stakeholders and also engage the general public.

In order to collect and disseminate the project video teasers a [YouTube channel](#) was created.

Updates in the website contents are mirrored in the social networks pages with news, announcements of events such as congresses or seminars, information on the progress of objectives, and updates on activities where the project is involved in raising awareness and communicating about SEBASTIEN. The Outreach Team is involved in this task and in promoting the project hashtag and sharing its contents with their network.

The social network and partners accounts should interact with reference to the project topics. Relevant hashtags will be used or created, according to specific topics, in combination with project one.

### 5.2.1.4 VIDEO TEASER

A project video teaser was foreseen by Month 12 and delivered to disseminate the project. The video presents the objectives and the services of SEBASTIEN.

The video has a general perspective and its goal is to stress the negative impact of climate change on livestock management and the importance to anticipate and mitigate these effects through a Decision Support System (DSS). The language uses the present tense - instead of the future tense - to enable a long lasting exploitability of the video, even after the conclusion of the project.

The aesthetics are colourful, inspired by pop-up books and paper collages, with stylized animation. Its duration is <3 minutes, in order to comply with the standards of EU projects video trailers.

An Italian version was also created to allow stakeholders who do not know English to take advantage of the video teaser, as was done for the main information page in Italian on the project website.

## 5.2.2 OFFLINE TOOLS

### 5.2.2.1 PRINTED PROMOTIONAL MATERIAL (FLYERS, ROLLUPS, POSTERS)

The flyer covers the most important aspects of the SEBASTIEN project: the objective, the partners, the services, and the potential.

Two versions of the leaflet were produced: a more detailed one for stakeholders and a smaller one for a wider audience to be distributed during communication and dissemination events.

In the design of the flyers, consistency with the colour scheme was maintained to help the audience to associate the material with the project. For this reason, the same colours, images, and symbols were used both on the website and social channels.

Within the flyer, the information is structured to allow readers to easily find the information sought, thanks to the division into sections and differently coloured parts of the text.

## 5.3 CONGRESS, WORKSHOP, FAIRS, PUBLICATIONS

An initial Gantt of relevant events has been developed (see Annex 1) because partners' participation in related events will be a dynamic process. In fact, new events will be added in the future. This also applies to publications in both scientific and general journals.

A new version of the initial Gantt (see Annex 2) has been created with more information. The new version has drop-down menus and different colours associated with the types of dissemination (article, face to face event, presentation during a congress, etc) and with the partner involved. There are also columns for the date, the link (if applicable), the number of people reached and any notes.

With regard to the improvement of internal communication, an online kick-off meeting has been organised on January 14, 2022.

Further, a mid-term General Assembly was held at the CMCC headquarters in Lecce on April 13-14, 2023 to discuss the progress of the project, with the virtual attendance also of the P.O. Fani Tsirantonaki.

A final meeting is also planned, where the results achieved will be analysed and the sustainability of SEBASTIEN will be discussed.

A wide array of events will be proposed: public/private, internal/external, including scientific conferences, congresses, fairs, workshops, open days, and exhibitions. For each event, consideration must also be given to arranging relevant promotion activities, the follow-up actions

of high relevance, and maintaining relations with the interested persons who participated, once the event is over.

There are different levels of participation in an event: as a speaker, you must indicate in your agenda that you are part of the SEBASTIEN project and use the official template with the logo, and bring promotional material such as a poster or rollup and flyers if possible. It is useful, both if you participate as a speaker and as an auditor, to take photos to be accompanied by the creation of news to be published on the website and social channels for dissemination using the hashtag #sebastienproject.

## 5.4 SCIENTIFIC PUBLICATIONS

SEBASTIEN results will be disseminated also through peer-reviewed journals and other scientific publications. The targeted journals will cover all the project's topics: livestock farming systems, Climate change, Artificial Intelligence, IoT, HPC, Big Data, etc.

All papers published by partners in the framework of the SEBASTIEN project will include the following sentence within the ACKNOWLEDGMENT section:

'This research was partly (or fully) supported by the CEF SEBASTIEN project Co-financed by the Connecting European Facility Program of the European Union, Grant agreement n° INEA/CEF/ICT/A2020/2373580.'

The last plan update will include the list of papers submitted and accepted for publication. Moreover, any dissemination of results must indicate that it reflects the author's view only and that the European Commission is not responsible for any use that may be made of the information it contains.

Since the start of the project to date, the following research articles on animal wellbeing have been published:

- Mecocci, S.; Ottaviani, A.; Razzuoli, E.; Fiorani, P.; Pietrucci, D.; De Ciucis, C.G.; Dei Giudici, S.; Franzoni, G.; Chillemi, G.; Cappelli, K. Cow Milk Extracellular Vesicle Effects on an In Vitro Model of Intestinal Inflammation. *Biomedicines* 2022, 10, 570. <https://doi.org/10.3390/biomedicines10030570>
- Mecocci, S.; De Paolis, L.; Fruscione, L.; Pietrucci, D.; De Ciucis, C.G.; Dei Giudici, S.; Franzoni, G.; Chillemi, G.; Cappelli, K.; Razzuoli, E. In vitro evaluation of immunomodulatory activities of goat milk Extracellular Vesicles (mEVs) in a model of gut inflammation. *Research in Veterinary Science* 2022, 152, 546-556. <https://doi.org/10.1016/j.rvsc.2022.09.021>

Moreover, three articles were published in Proceedings of [MEAVEAS 2023](#):

- Milanesi, M.; Pietrucci, D.; Serva, L.; Renzi, F.; Vignali, G.; Evangelista, C.; Marhcesini G.; Andrighetto, I.; Bernabucci, U.; Valentini, R.; Chillemi, G. Machine Learning NIR wavelength selection: application for a low-cost portable instrument for livestock feed management
- Renzi, F.; Milanesi, M.; Pietrucci, D.; Vignali, G.; Carta, A.; Ajomine-Marsan, P.; Chillemi, G.; Valentini, R. Design of a flexible, expandable, and customizable sensor network for monitoring livestock behaviour and welfare
- Porzio, E.; Milanesi, M.; Chiaradia, E.; Mecocci, S.; Vignali, G.; Trabalza-Marinucci, M.; Renzi, F.; Valentini, R.; Cappelli, K.; Chillemi, G.; Beccati, F.; Pepe, M. Innovative sensors for the assessment of exercise stress in athlete horse

## 6 DISSEMINATION AND COMMUNICATION KIT

A communication and dissemination kit including templates for presentations, deliverables, and milestones including the logo, was created.

The main font used is 'Calibri', while titles use 'Quattrocento Sans'.

The colour palette includes 'gold colour 4' to 'orange' gradient to recall the colour of the logo. In addition, 'green colour 6' is used for the headings of the pages following the first. The names of the colours refer to those available on PowerPoint. This kit is intended to standardise the graphic part of the project and is in line with the website and social media. The kit is made available to each project partner.

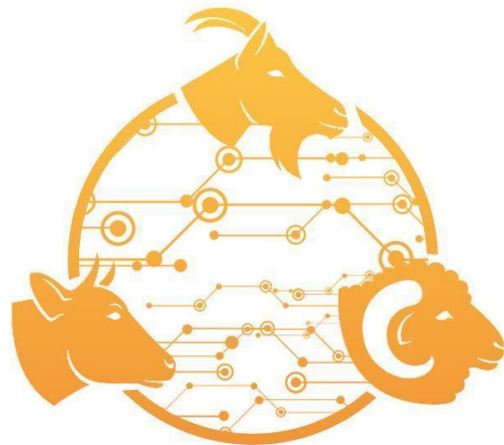
### 6.1 LOGO

The SEBASTIEN logo synthesises the slogan “Smarter livEstock Breeding through Advanced Services Tailoring Innovative and multi-sourcE data to users’ Needs”.

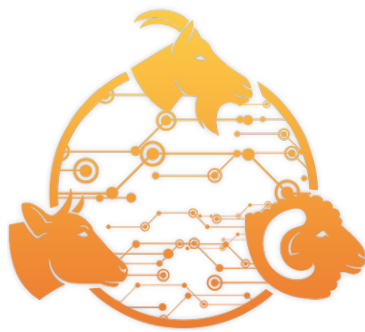
The three species involved in the project: cows, sheep, and goats, are represented as parts of an outer circle and connected within it by a network to exemplify the project's main topics clearly at first glance. A colour scheme ranging from yellow to orange was chosen for the symbol and a shaded green for the lettering.

There are two versions of the logo, classic and horizontal.





SEBASTIEN

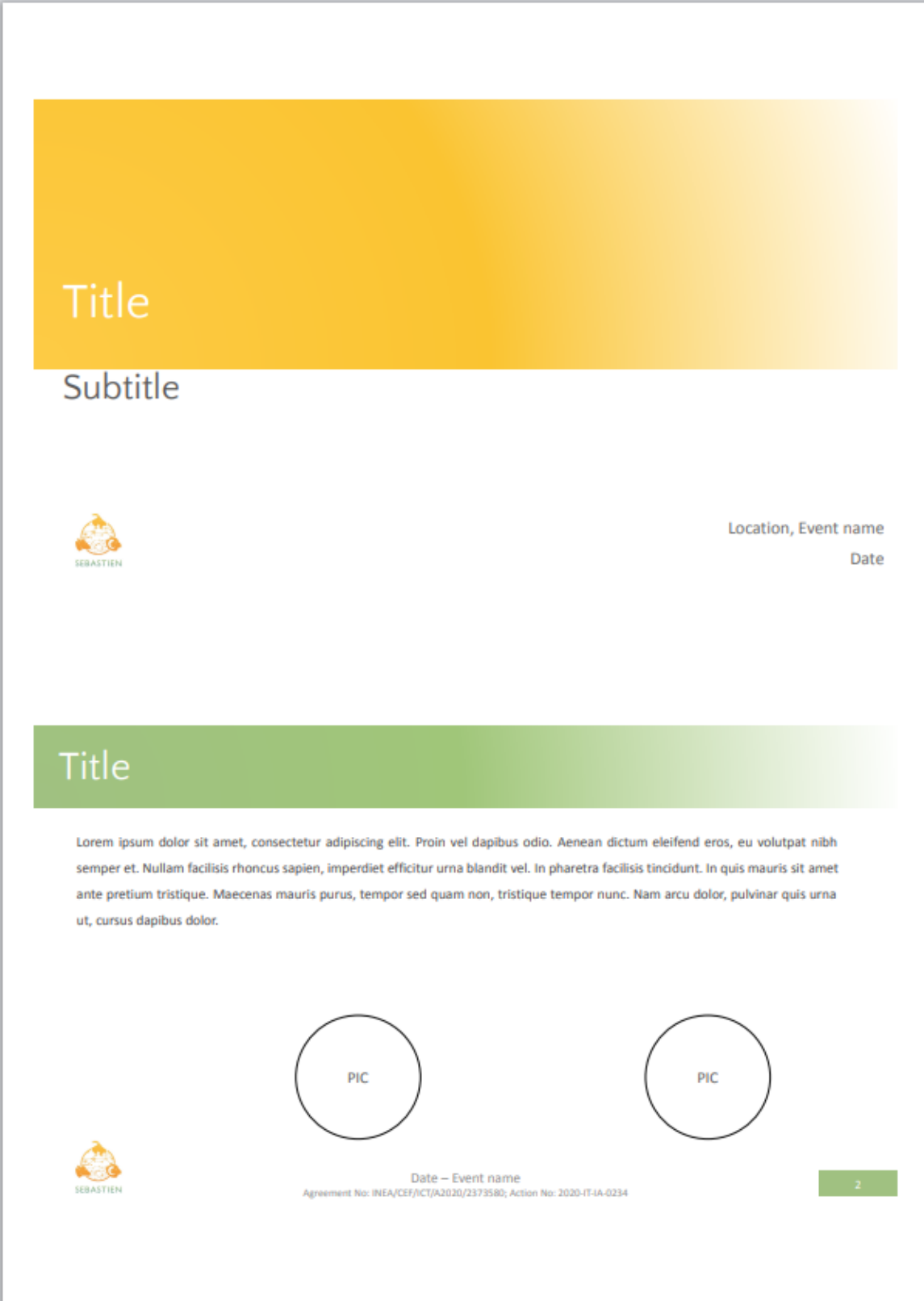


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## 6.2 TEMPLATES AND IMAGES OF TOOLS

Below are the various templates created and images for flyers, web and social pages.

## 6.2.1 PRESENTATIONS TEMPLATE



The image shows a presentation template layout within a grey border. It features two main sections: a yellow gradient header and a green gradient header.

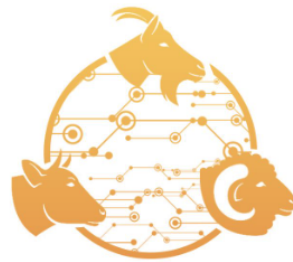
**Yellow Header Section:**

- Title:** Large white text on a yellow gradient background.
- Subtitle:** Smaller white text below the title.
- SEBASTIEN logo:** Located in the bottom left of this section.
- Location, Event name:** Text on the right side.
- Date:** Text on the right side, below the location.

**Green Header Section:**

- Title:** Large white text on a green gradient background.
- Text:** A paragraph of Lorem ipsum text below the title.
- PIC:** Two large circles, each containing the text "PIC", positioned below the text.
- SEBASTIEN logo:** Located in the bottom left of this section.
- Date – Event name:** Text centered below the PIC circles.
- Agreement No: INEA/CEF/ICT/A2020/2373580; Action No: 2020-IT-IA-0234:** Small text centered below the date.
- Page Number:** A small green box containing the number "2" in the bottom right corner.

## 6.2.2 DELIVERABLES TEMPLATE



SEBASTIEN

Del. X.X - Title

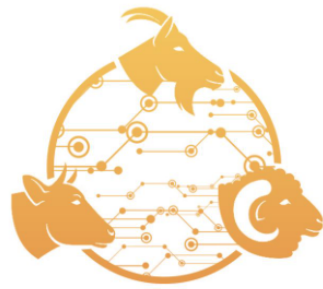
Deliverable Lead	xxx
Deliverable due date	y/m/d
Status	DRAFT / FINAL
Version	Vx.x
Project	SEBASTIEN

## DOCUMENT INFORMATION

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Title	Milestone xxx
Agreement	INEA/CEF/ICT/A2020/2373580
Action	2020-IT-IA-0234
Creator	xxx
Deliverable Description	xxx
Contributors	Name (Institution) ...
Requested deadline	Mxx
Reviewer	Name (Institution) ...

## 6.2.3 MILESTONES TEMPLATE



SEBASTIEN

### MX – Title

Milestone Lead	xxx
Milestone due date	y/m/d
Status	DRAFT / FINAL
Version	Vx.x
Project	SEBASTIEN



## DOCUMENT INFORMATION

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Title	Milestone xxx
Agreement	INEA/CEF/ICT/A2020/2373580
Action	2020-IT-IA-0234
Creator	xxx
Milestone Description	xxx
Means of verification	xxx
Contributors	Name (Institution) ...
Requested deadline	Mxxx
Reviewer	Name (Institution) ...

## 6.2.4 FLYER



### IL PROGETTO

Le produzioni animali producono oltre il 33% delle proteine alimentari del pianeta. Nel nostro Paese le produzioni zootecniche si traducono in una ampia gamma di prodotti DOP e IGP di riconosciuta qualità a livello internazionale. I cambiamenti climatici hanno avuto ed avranno un impatto sempre più importante sugli allevamenti zootecnici influenzando produzioni, salute e fertilità degli animali. Allo stesso tempo gli allevamenti sono fonti di gas serra, alla base del riscaldamento globale. È pertanto necessario sviluppare strategie che aiutino l'intero settore zootecnico a prendere le decisioni migliori per adattarsi a tali cambiamenti e mitigarne gli effetti. Ad esempio: quali decisioni devono essere prese per evitare il calo di produzione e problemi riproduttivi causati da temperature troppo elevate? Oppure, quali strategie devono essere adottate per evitare il pascolamento in aree dove potrebbero emergere nuovi patogeni?

Il progetto SEBASTIEN (Smarter livestock Breeding through Advanced Services Tailoring Innovative and multi-source E data to users' Needs) risponderà a queste domande implementando nuovi sistemi e servizi.

### I partner



SEBASTIEN Project  
Coordinator: Fondazione Centro Dati-Modellistica sui Cambiamenti Climatici (CMCC)  
Topic: Public Open Data (POD) - Type of action: CO-TC-2023-7  
Duration: 30 months - Starting date: Jan 2023  
Total budget: € 1.08.000,00 - Total EU Contribution: € 1.000.000,00  
Agreement number: INEA/2023/0000012338  
Action No: 2023-9-04-025



CO-FINANZIATO DAL QUINQUENNIO 2021-2023 DEL PROGRAMMA NAZIONALE DI RICERCA E INNOVAZIONE

[www.sebastien-project.eu](http://www.sebastien-project.eu)




### SEBASTIEN

Smarter liveStock Breeding through Advanced Services Tailoring Innovative and multi-source E data to users' Needs

### A cosa serve

SEBASTIEN svilupperà un Sistema di Supporto alle Decisioni (DSS, Decision Support System) per aumentare l'efficienza e la sostenibilità del sistema zootecnico italiano e supportare allevatori ed operatori della filiera delle produzioni animali con strumenti che li aiutino ad effettuare scelte mirate e consapevoli, evitare perdite economiche e che forniscano supporto tecnico alle aziende. Verranno sviluppate quattro applicazioni gratuite, utilizzabili come app o su browser web, che consentiranno di:

1. Stimare l'adattamento delle diverse specie e razze zootecniche al cambiamento delle condizioni ambientali ed identificare le più adatte alle condizioni climatiche estreme che si verificheranno nei prossimi anni nelle diverse zone d'Italia. Questa applicazione supporterà la pianificazione a lungo termine della composizione di mandrie e greggi.
2. Fornire un sistema di previsione/allarme che consenta agli allevatori di mettere in campo azioni per contrastare condizioni ambientali pericolose (come l'aumento della temperatura) che possano influire sulla produttività, la riproduzione e il comportamento degli animali, in particolare per gli allevamenti al pascolo, mitigando perdite nel breve e nel lungo periodo.
3. Guidare gli allevatori nella scelta dei pascoli migliori. Questa applicazione eviterà il sovra-pascolamento e i conseguenti problemi sul territorio.



4. Monitorare la presenza e lo sviluppo di parassiti e patogeni. L'applicazione fornirà mappe di incidenza, sia correnti che previste in funzione dei cambiamenti climatici, di parassiti e patogeni di interesse zootecnico e dei loro vettori. L'applicazione consentirà agli allevatori e agli enti governativi di mettere in atto azioni tempestive per preservare la salute degli animali e dell'uomo [zoonosi].



### Le sue applicazioni

Le applicazioni prodotte da SEBASTIEN utilizzeranno grandi moli di dati pubblici, di diversa natura, armonizzati ed analizzati usando le più moderne tecniche di analisi quali i metodi di intelligenza artificiale. Il progetto SEBASTIEN svilupperà indicatori sentinella integrando dati ambientali, meteorologici, riproduttivi e di produzione, ottenuti anche tramite l'utilizzo di sensori a basso costo. La novità principale è che gli indicatori saranno creati su misura per diverse categorie di utenti finali, in modo da consentire agli allevatori, alle aziende, agli enti governativi e altri operatori del settore agro-alimentare-zootecnico di poter fronteggiare le loro necessità e problemi lavorativi quotidiani in modo rapido e efficiente.


### Le opportunità

SEBASTIEN vi offre l'opportunità di partecipare allo sviluppo di questi indicatori. Il vostro vantaggio sarà nello sviluppo da parte del progetto di strumenti di cui avete veramente bisogno. D'altro canto, Sebastian avrà il vantaggio di utilizzare la vostra competenza, professionalità e soprattutto esperienza per generare strumenti di cui potranno beneficiare tutte le entità collegate al settore zootecnico italiano nei prossimi anni. Sulla base delle vostre esigenze e indicazioni potrete guidare la selezione degli indicatori e lo sviluppo degli strumenti. Questi ultimi verranno testati da voi in anteprima, in modo da usarli fin da subito dai loro benefici. Le proposte e le esigenze verranno valutate tramite questionari e incontri. In particolare, verranno organizzati quattro incontri con voi ogni 6 mesi per:

- presentare il progetto e gli indicatori selezionati sulla base delle conoscenze scientifiche e fare una prima discussione con gli utenti finali per la selezione degli indicatori da testare;
- identificare gli indicatori da testare, sulla base dei suggerimenti degli utenti finali;
- presentare e discutere i risultati di un primo test, su scala ridotta, degli indicatori selezionati;
- presentare e discutere i risultati del test su larga scala degli indicatori selezionati.


Gli utenti che vorranno collaborare al successo di SEBASTIEN appariranno con nomi, acronimi e loghi sul sito web del progetto ([www.sebastien-project.eu](http://www.sebastien-project.eu)) oltre che venir menzionati nella sezione dei ringraziamenti delle pubblicazioni scientifiche collegate al progetto.

## 6.2.5 WEBSITE



SEBASTIEN

HOME ABOUT SERVICES PARTNERS NEWS & EVENTS CONTACTS




Smarter livestock  
Breeding through  
Advanced Services  
Tailoring Innovative  
and multi-sourced  
data to users' Needs

### The Project


SEBASTIEN wishes to implement large-scale ICT-based services to support smart livestock farming and management, while reducing risks and taking opportunities posed by climate change and its variability, as well as by other concurrent environmental stressors and anthropogenic pressures.

[READ MORE](#)




## Services


Sebastien will provide an Open Data and Services Exploitation Web Portal that will be a single access point to data, services and informative content. The web Portal will deliver four main services:

- 


**Service 1: Coping with environmental stressors for breeds to support livestock farming towards breed adaptation to environmental conditions and production needs.**

  - Species: cattle (Italian Holstein and Rendena), sheep, goats
  - Areas: various, across Italy
- 

**Service 2: Intensive farming risk management under climate extremes to alert about approaching or projected dangerous environmental circumstances for cattle.**


  - Breed: cattle (Italian Holstein, specialized in milk production)
  - Areas: various, across Italy
- 

**Service 3: Extensive farming management and feed availability based on indicators/indices about the phenological stage and greening of the naturally vegetated or managed areas used to feed livestock's breeds within conductor's outposts.**

  - Species: sheep, goats, cattle (Rendena, adapted double purpose to Alpine valleys conditions)
  - Areas: Sardinia, Northern Italy (Alpine valleys), other potential sites across Italy
- 

**Service 4: Livestock farming under risks from combined abiotic and biotic factors to provide updated risk maps of parasites and diseases spread.**

  - Species: sheep, goats
  - Areas: Sardinia, Tuscany, other potential sites across Italy




SEBASTIEN


HOME ABOUT SERVICES PARTNERS NEWS & EVENTS CONTACTS

## Contacts

For more information about the SEBASTIEN project, please write to Sebastien Outreach team.



sebastien\_outreach@msc.it



SEBASTIEN

Facebook Instagram LinkedIn

**SEBASTIEN Project**


Coordinator: Fondazione Centro Euro-Mediterraneo sui Cambiamenti Climatici (IPCC)

Topic: Public Open Data (POD) - Type of action: CSF-TC 2020 2


Duration: 30 months - Starting date: Jan 2022

Total budget: € 1.338.553,18

Total CSF Contribution: € 1.003.914,89

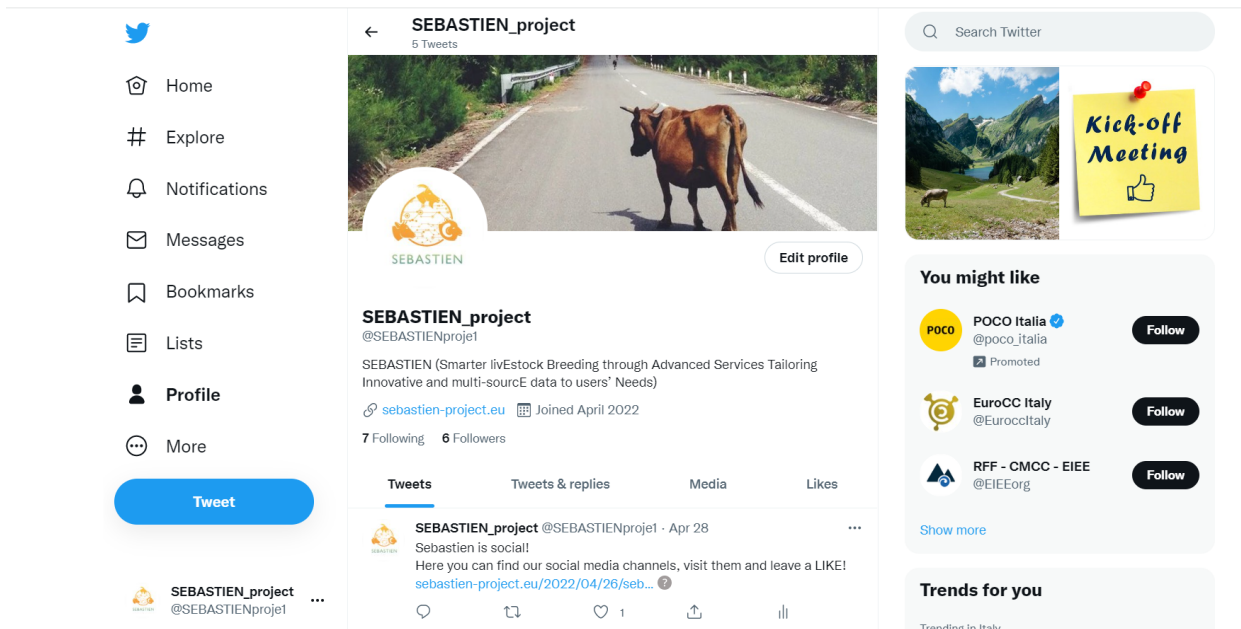


Co-financed by the Connecting Europe Facility of the European Union

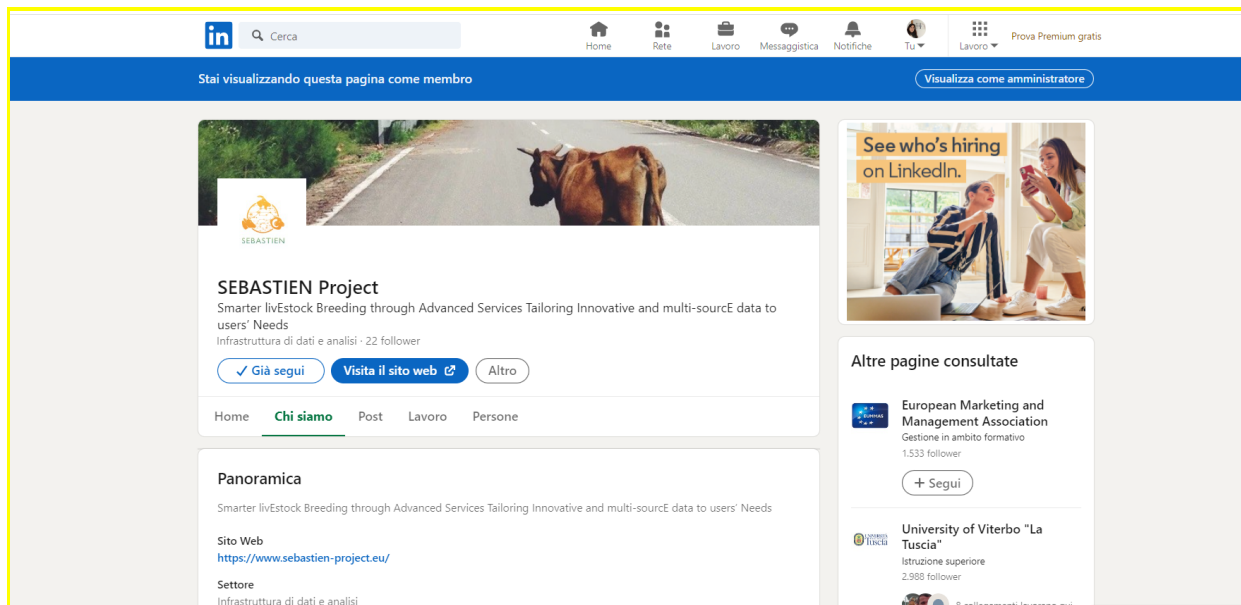
Privacy & Cookie Policy      Terms & Conditions      Design by 



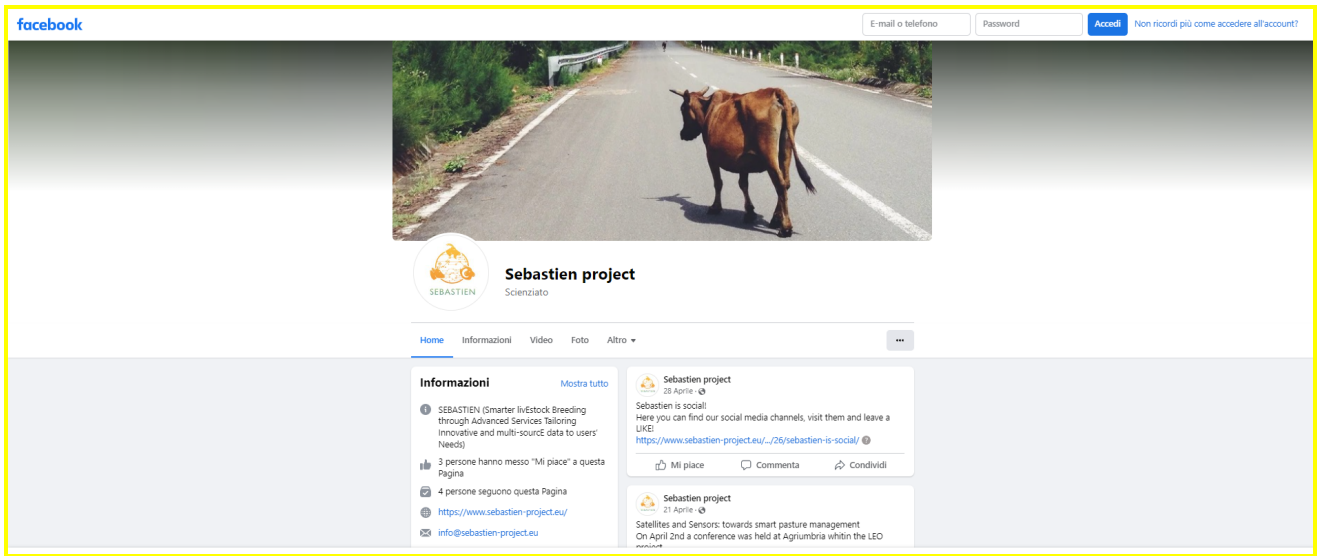
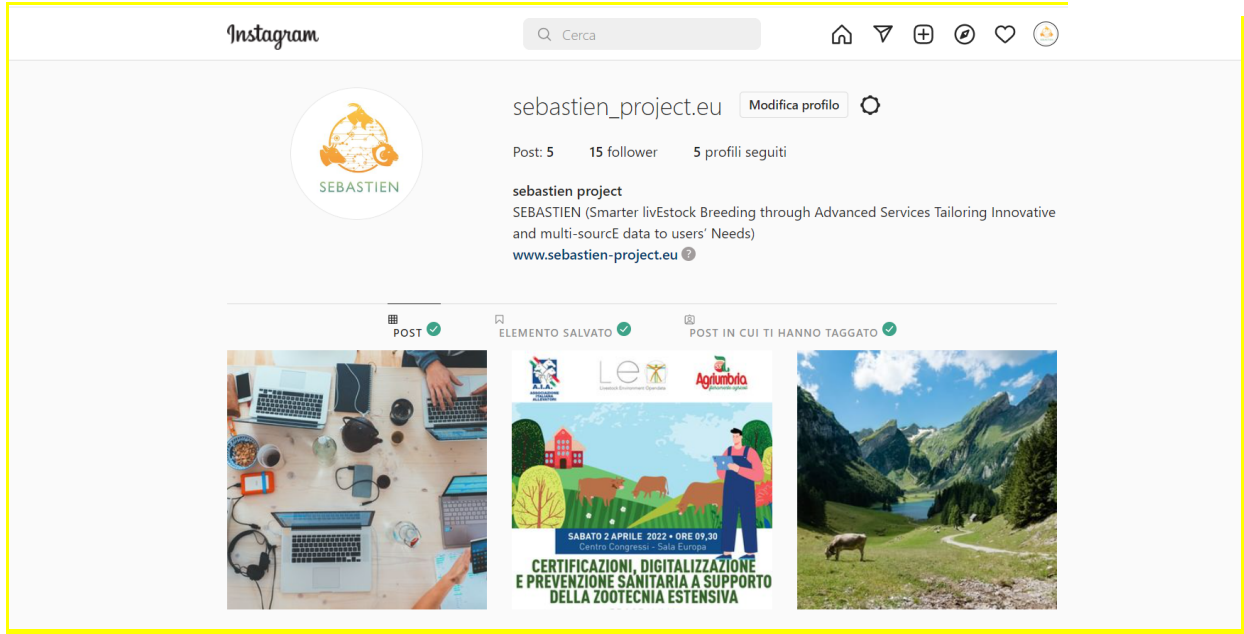
## 6.2.6 SOCIAL MEDIA

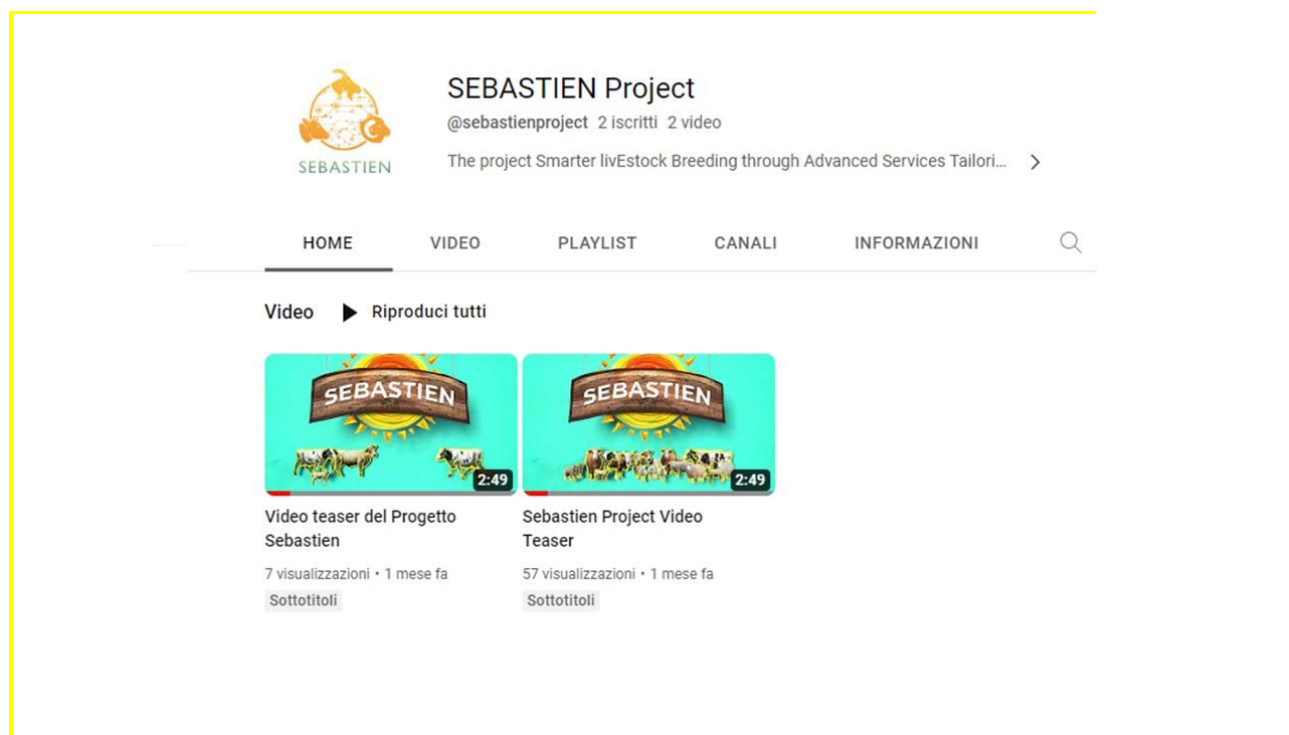


The screenshot shows the Twitter profile for SEBASTIEN\_project (@SEBASTIENproj1). The profile bio states: "SEBASTIEN (Smarter livEstock Breeding through Advanced Services Tailoring Innovative and multi-sourcE data to users' Needs)" and includes the website "sebastien-project.eu" and the date "Joined April 2022". The profile has 7 following and 6 followers. A recent tweet from April 28 says: "Sebastien is social! Here you can find our social media channels, visit them and leave a LIKE! sebastien-project.eu/2022/04/26/seb...". The right sidebar features a "You might like" section with accounts like POCO Italia, EuroCC Italy, and RFF - CMCC - EIEE, and a "Trends for you" section showing "Trending in Italy".



The screenshot shows the LinkedIn profile for SEBASTIEN Project. The bio reads: "Smarter livEstock Breeding through Advanced Services Tailoring Innovative and multi-sourcE data to users' Needs" and "Infrastruttura di dati e analisi - 22 follower". The profile includes a "Già segui" button and a "Visita il sito web" button linking to "https://www.sebastien-project.eu/". The "Panoramica" section lists the website and sector. The right sidebar shows "Altre pagine consultate" with "European Marketing and Management Association" and "University of Viterbo 'La Tuscia'".





## 7 CONCLUSION

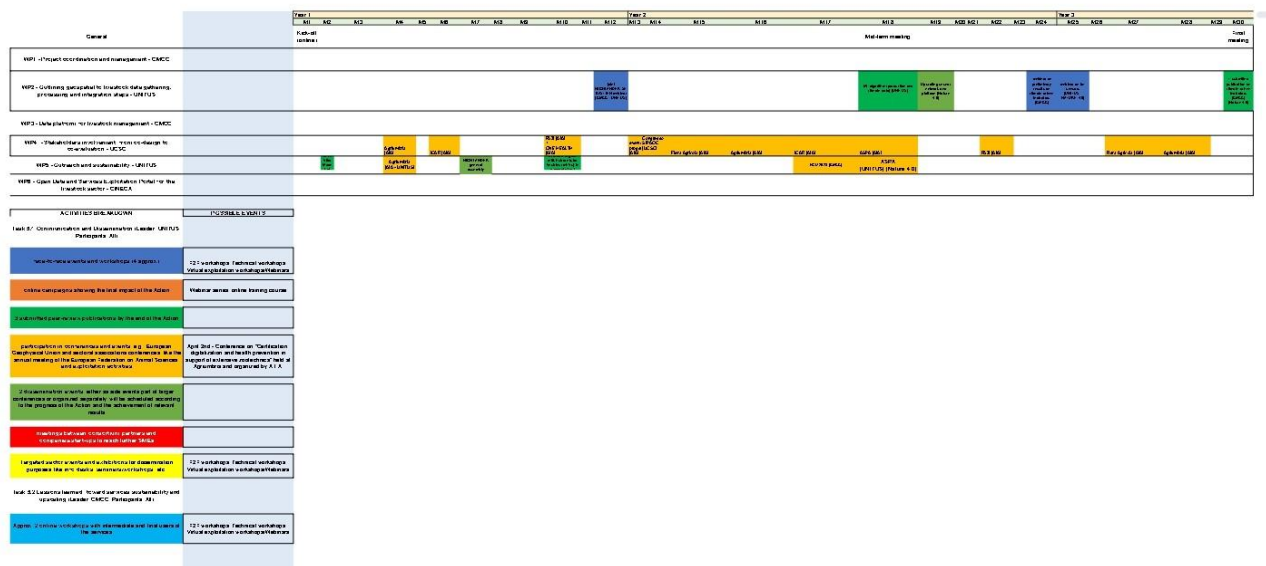
The dissemination and communication plan provides the project with guidelines and a practical toolkit that will help disseminate the project activities and results.

This document represents the second update after the initial strategy and will be further updated as dissemination materials and specific strategies are developed taking into account stakeholder needs and project objectives.

After having selected champions from the long list of stakeholders, dissemination and communication activities have been aimed to further increase their interest in the project and to further promote the results of SEBASTIEN.

# ANNEX

Annex 1 and 2 are available as separate files, below are two images of them



Annex 1: Event Gantt initial version

Partner	Typology	Title/Name of the event/article/etc.	Date (if applicable)	Link (if applicable)	Impact (number of people reached)	Notes
UNIFUS	Article/Paper	Cow Milk Extracellular Vesicle Effects on an In Vitro Model of Intestinal Inflammation	28/2/2022	<a href="https://www.mdpi.com/2227-9059/10/9/570">https://www.mdpi.com/2227-9059/10/9/570</a>		
UNIFUS	Presentation (event/conference/...)	AGRIUMBRIA 2022	2/4/2022	<a href="https://www.youtube.com/watch?v=DQ84orZFY8k">https://www.youtube.com/watch?v=DQ84orZFY8k</a>		
AIA	Presentation (event/conference/...)	ICAR 2022	27/05-02/06/2022	<a href="https://www.icar2022.it/">https://www.icar2022.it/</a>		
ALL	Other (specify)	OUTREACH TEAM MEETING (during Highlander GA) - dissemination event	5/7/2022			
AIA	Presentation (event/conference/...)	One Health Award	15/10/2022	<a href="https://onehealthaward.it/">https://onehealthaward.it/</a>		
UNIFUS	Article/Paper	In vitro evaluation of immunomodulatory activities of goat milk Extracellular Vesicles (mEVs) in a model	20/12/2022	<a href="https://pubmed.ncbi.nlm.nih.gov/36179548/">https://pubmed.ncbi.nlm.nih.gov/36179548/</a>		
AIA	Presentation (event/conference/...)	FAZI 2022	21-22/10/2022	<a href="https://www.fieragen.it/">https://www.fieragen.it/</a>		
UNIFUS	face to face event	joint HIGHLANDER-SEBASTIEN webinar	22/12/2022	<a href="https://www.youtube.com/watch?v=U6b29p0vM8t5g">https://www.youtube.com/watch?v=U6b29p0vM8t5g</a>	100	
AIA	Presentation (event/conference/...)	final event GALA project	19/1/2023			
UCSC	Presentation (event/conference/...)	XXIV CONGRESSO NAZIONALE S.I.P.A.O.C.	22-23/02/2023	<a href="http://www.sipaso.it/">http://www.sipaso.it/</a>	100	
AIA	Presentation (event/conference/...)	Fiera Agricola 2023	28/04-01/05/2023	<a href="https://fieraagricola.treviglia.com/fiera-agricola-2023/">https://fieraagricola.treviglia.com/fiera-agricola-2023/</a>		
AIA	Presentation (event/conference/...)	Agriumbria 2023	31/03-02/04/2023	<a href="https://www.agriumbria.eu/">https://www.agriumbria.eu/</a>		
AIA	Presentation (event/conference/...)	ICAR 2023	14-16/06/2023	<a href="https://www.icar2023.it/">https://www.icar2023.it/</a>		
CMCC	Presentation (event/conference/...)	EGU 2023	23-28/04/2023	<a href="https://www.egu23.eu/">https://www.egu23.eu/</a>		
NATURE4.0	Presentation (event/conference/...)	ASPA 2023	13-16/06/2023	<a href="https://aspacongress2023.com/">https://aspacongress2023.com/</a>		AIA - UNIFUS - UCSC
AIA	Presentation (event/conference/...)	FAZI 2023	27-29/10/2023	<a href="https://www.fieragen.it/">https://www.fieragen.it/</a>		
CMCC	face to face event	webinar on preliminary results on climate-driven indicators	dic-23			
UNIFUS	face to face event	webinar on IoT sensors	gen-24			NATURE4.0
AIA	Presentation (event/conference/...)	Fiera Agricola 2024	31/01-03/02/2024			
AIA	Presentation (event/conference/...)	Agriumbria 2024	apr-24			
CMCC	Article/Paper	1 submitted publication on climate-driven indicators	giu-24			NATURE4.0
ALL	Other (specify)	SEBASTIEN FINAL EVENT	giu-24			

Annex 2: Event Gantt new version