

Senator

Smart network operator platform enabling shared, integrated and more sustainable urban freight logistic

[D7.11] Training plan for logistics
supervisors' new skills



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List of abbreviations

ABBREVIATION	DESCRIPTION
AESA	Agencia Española de Seguridad Aérea (Spanish Aviation Safety and Security Agency)
CEFR	Common European Framework of Reference for Languages
EASA	European Union Aviation Safety Agency)
e.g.	Exempli gratia
ERP	Enterprise Resource Planning
EU	European Union
ICT	Information and Communication Technology
LUC	Light Operator Certificate
MCC	Mission Control Centre
OKR	Objectives and Key Results
ORP	Occupational Risk Prevention
PPE	Personal Protective Equipment
SO	Specific Objectives
STS	European Standard Scenario
SULP&MP	Sustainable Urban Logistics Plan and Mobility Plan
TEN-T	Trans-European Transport Network
UAS	Unmanned Aircraft System
UAV	Unmanned Aerial Vehicle
UCC	Union Customs Code
ULL	Urban Living Lab

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1 Executive Summary

The SENATOR project —Smart Network Operator Platform enabling Shared, Integrated and more Sustainable Urban Freight Logistics— is funded by the European Commission under the H2020-EU programme, focusing on smart, green and integrated transport. It aims to create a new urban logistics model focusing on four essential components: end use, transport, logistics and infrastructure.

Deliverable *D7.11 Training Plan for Logistics Supervisors' New Skills*, is an integral component of Work Package 7 within the SENATOR Project. This work package emphasizes social awareness, stakeholder engagement, dissemination, and communication. This deliverable aims to address the training needs and requirements of operators adapting to new technologies in urban logistics management.

To respond to new market demands, enhance urban delivery services, leverage unmanned transport technologies like drones, and improve last-mile logistics, the SENATOR project has created an Intelligent and Neutral Network Operator supported by an ICT platform. This initiative required a review of the functions, responsibilities, and competencies of various professionals managing the distribution network, both from logistics operators and municipal authorities in public operations.

The goal was to identify the existing gaps and define a training plan that aligns with new operational requirements and demands. The result of this review aims at guaranteeing the effectiveness and efficiency in the implementation of the new model. Additionally, the need to define new professional roles for maximizing the efficiency of modern transport models, particularly in challenging rural last-mile services, was identified.

The main **purpose** of this deliverable is to present the analysis carried out to define the new skills needed by the professionals in the logistics distribution network. This has resulted in three key outcomes:

- An updated version of job descriptions for main profiles that are directly impacted by the intelligent network operator.
- A description of new profiles necessary for future processes in the sector.
- A training plan detailing the knowledge and competencies required for these roles.

This document is intended as a practical guideline for operations managers at logistic companies and their counterparts in city administrations. It is **organized** as follows: following and introductory chapter, the methodology for developing the training plan is detailed, providing a foundation for addressing specific training needs. Subsequent sections outline the training plan's scope, target audience, objectives, content, tools for webinars and workshops, evaluation methods, and privacy guidelines. The document concludes with a discussion on the

role of drones in logistics within the SENATOR project, highlighting their application and relevance to the project's goals.

The **methodology** for developing the SENATOR training plan focuses on analysing current positions in the logistics distribution network, identifying roles, responsibilities, and competencies, as well as the specific characteristics of the SENATOR smart grid operator. This approach allows for the detection of training gaps and define new professional roles. Key steps include gathering information on the roles involved in managing the SENATOR platform, comparing current and required roles, and outlining a technical professional profile to manage new transport systems. New roles and responsibilities are identified, necessary competencies defined, and job descriptions created as a basis for the training plan.

Key findings of the deliverable include the need to emphasize the development of digital competencies, personal skills, process knowledge, and adhere to regulations such as Implementing Regulation (EU) 2019/947 and Delegated Regulation (EU) 2019/945, which establish the framework for the civil use of Unmanned Aircraft Systems (UAS). In terms of staff, this will encompass distribution managers and drone users and specialists, promoting continuous learning and performance improvement. The training content will address risk prevention, information security, operational management, leadership, and technical skills for new technologies.

Training will utilize tools such as PowerPoint presentations and online platforms, with assessments to ensure trainees demonstrate a high performance in various contexts, such as the safe handling of drones in standard European parcel delivery and collection scenarios. A specialised exam for drone pilot certification, aligned with European standards set by EASA, will also be included.

The document concludes by emphasizing the need for logistics professionals to adapt and evolve their roles and responsibilities to meet new market demands and maximize the integration of digital platforms like SENATOR. It highlights the importance of flexible, agile staff in decision-making and the need for collaboration among logistics operators to minimize environmental impacts. This evolution calls for updated training plans for both managers and operational staff, focusing on new management tools and the optimisation of last-mile services.

Lastly, if barriers to drone use in integrated transport are overcome, a new technical professional profile specializing in drone technology will be necessary, equipped with distinct skills from traditional ground delivery personnel, to fully leverage the advantages that drones offer in a smart, sustainable, and integrated transport model.

2 Introduction

2.1 Project Summary

The SENATOR project ("Smart Network Operator Platform enabling Shared, Integrated, and more Sustainable Urban Freight Logistics") is an initiative funded by the European Commission under the H2020-EU programme. Its primary focus is to create a more efficient and sustainable urban logistics model. The project aims to optimize the delivery of goods in urban areas by integrating various components of the logistics network, including end users, transport systems, logistics operations, and infrastructure. By leveraging digital tools and innovative technologies such as drones, SENATOR seeks to improve last-mile delivery services while reducing the environmental impact of urban freight.

A central element of the project is the development of an Intelligent and Neutral Network Operator supported by an ICT platform, that facilitates coordinated and data-driven logistics operations. This platform will enable seamless communication and collaboration among stakeholders in the logistics chain, including private operators and public entities Such as city governments.

The deliverable D7.11, titled "Training Plan for Logistics Supervisors' New Skills," is a key component of Work Package 7 (WP7), focusing on "Social Awareness, Stakeholder Engagement, Dissemination, and Communication." This document aims to develop and implement training plans that address the evolving needs of logistics professionals engaged with the SENATOR platform. As part of WP7, which considers the diverse stakeholders involved, the goal is to equip professionals with the skills, knowledge, and competencies necessary to manage new logistics systems effectively. This includes both the technological aspects of the ICT platform and the operational requirements of innovative solutions like unmanned aerial systems (drones). Through this deliverable, SENATOR seeks to ensure that the workforce is well-prepared to navigate challenges and seize opportunities presented by an integrated urban logistics model.

2.2 Deliverable Objectives and Overview

Due to the new market opportunities derived from on-demand and shared-connected trends, the use of new delivery vehicles, SENATOR project's innovations and new business models (both product and services), new profiles and skills will be required from traditional postman or other delivery staff profiles.

Therefore, this deliverable develops a new training strategy needed, based on the results and implementation of the SENATOR platform tested at the Urban Living Labs (ULLs) in the cities

of Dublin and Zaragoza. It includes the profile definition and training adaptation by defining the new skills and capabilities that need to be developed as a result of this new approach of the urban logistics.

This deliverable is aligned with the following specific objectives included in the project:

- **S03** To foster a common logistics operation framework under European legislation in terms of transport policies, Labour rights and Logistics municipal licenses focused on ensure equal labour conditions for last-mile delivery services such as crowdsourcing services, temporarily employees, delivery staff and inclusion of people in vulnerable situations.
- **S05** To ensure project replicability for future EU actions on other TEN-T network's urban nodes as a result of Guidelines for SUL&MP and lessons learned obtained from 2 urban living labs in urban areas.
- **S09** To increase urban provisions and reliability of logistic plans derived from the new strategies provided by a multi-collaborative framework supported on a robust digitalisation tool capable to provide accurate forecasts for allowing dynamic re-scheduling and the integration of new delivery vehicles (e.g. UAVs – drones).

2.3 Relation to other Tasks and Deliverables

This deliverable is closely related to the following:

- **D 3.7** SENATOR ICT Platform and Service Integration, in the functionalities section and in the APP User and Installation Manual.
- **D 3.5** Dashboard delivery and user manual, in different sections.

Additionally, the operation of unmanned vehicles (drones) within the logistics sector has been analyzed, drawing on the experiences of the logistics companies involved in the project.

2.4 Deliverable Structure

The content structure of the deliverable includes a work methodology, an assessment of the needs identified for the new profiles that will be needed in urban logistics, a training plan defined to accompany the current profiles in this evolution of the sector, and finally an analysis of the impact of drones on this new paradigm of urban logistics.

3 Methodology for the Development of the Training Plan

This section offers a detailed explanation of the process and/or methodology used to ensure that the training plan is properly grounded and aligned with the project's needs and requirements. It may include the following information:

General Description of the Methodology: An outline of the methodology employed to develop the training plan for SENATOR.

Analysis of current positions within the logistics distribution network, their functions, responsibilities and skills (knowledge and competences) together with the characteristics of the smart grid operator (SENATOR) with the aim of identifying the main characteristics and existing gaps to define the needs of the training plan, as well as the definition of new necessary roles.

Key Steps of the Methodology: A description of the main steps and their characteristics:

- Extract information from the main roles involved in the management of the SENATOR (ICT) platform, through the analysis of the deliverable [D 3.5] Dashboard delivery and user manual, identifying those that are key in some phase of the logistics distribution, in this case the role of Manager and the User (Viewer).
- Perform a comparative analysis between the roles involved in the management of the SENATOR (ICT) platform and those currently existing in the distribution networks of logistics companies, identifying the following as the main roles: Head of Distribution Area, Distribution Unit Manager and User/Delivery personnel.
- Define a new professional profile, with a technical component and differential specialization of the User/Delivery personnel, necessary to manage the new transport systems that become part of the distribution process.
- Identify the new functions and responsibilities related to the implementation of the intelligent network operator (SENATOR) in each of the roles.
- Define the training, knowledge and skills required, including those where there is a gap, mainly in everything related to the knowledge of the new tool (platform and APP), its management and/or use by delivery personnel based on the information available in the deliverable [D 3.7] SENATOR ICT Platform and Service Integration, in the functionalities section and in the APP User and Installation Manual.
- Develop the necessary Job Descriptions for each role, as a starting point for defining the Training Plan, which are included below:

3.1 Job Description: Head of Distribution Area

3.1.1 Roles and Responsibilities

- Supervise and coordinate the activity of the units under their responsibility, ensuring compliance with the established processes, in accordance with best practices and safety standards.
- Ensure that the required levels of productivity, compliance and performance are achieved and maintained to achieve all objectives, as well as the adequate provision of services with the required quality and level of service.
- Analyse and supervise compliance with the objectives of the units under their responsibility (financial analysis, risk, quality, complaints, effective delivery, etc.), proposing the necessary improvement actions in the processes.
- Ensure optimal and efficient use of the assigned resources (both human and material) in order to improve the profitability of each of the units, proposing and supervising, where appropriate, the actions necessary to adapt the equipment to the needs, and guarantee the achievement of the operational and economic objectives.
- Search for and propose sustainability initiatives and innovative logistics solutions, as they are central components of modern urban logistics.
- Be the Company's representative to customers, responding to their demands and solving problems that arise in the relationship with them, taking the measures and implementing the changes that are necessary to improve customer service.
- Manage the SENATOR digital (ICT) platform (Smart Network Operator) to streamline the provision of services with a more sustainable urban distribution, within its scope of action (sector). This includes analysing the available information regarding demand, resources, planning and monitoring the service, analysing the status of routes and fleets in real time, extracting valuable information for decision-making and analysing corresponding KPIs.
- Manage transport management platform/s, including fleets of drones, trucks, or any other means of distribution used on each route, based on their needs and/or characteristics.
- Establish the necessary coordination mechanisms with the different dependent units to achieve homogeneous operation in accordance with the policies, plans and processes established by the Company at all times, as well as with other centres/units with which the activity of the units under its responsibility is directly related, either in the same locality or in other geographical areas, when necessary to achieve the established quality and environmental protection objectives.

3.1.2 Required Training

- Minimum required qualification of Baccalaureate or Vocational Training II or equivalent.
- Advanced training in logistics and digital platforms, including an Administrator level of an Integral Shipping System.
- Comprehensive training on the use of the SENATOR ICT platform and app, with a focus on data analytics and operational optimization.
- Specific training in drone fleet management platforms and related technologies.
- Knowledge about:
 - Products and services.
 - Quality systems.
 - Distribution network.
 - Data protection regulations.
 - Current regulations and legislation relating to drone operations.
- **Advanced computer skills**, particularly in office software (Excel), data visualization, and corporate applications.
- **Languages**: English proficiency at level B1 or higher (increasing from A2) in Common European Framework of Reference (CEFR), to ensure better communication in an international context.
- Driving License.

3.1.3 Skills

- Ability to foster teamwork and a collaborative environment.
- Strong problem-solving skills.
- Proven leadership in setting clear objectives, deadlines, and driving team performance.
- Capacity to inspire and motivate the team, encouraging skill development and career growth.
- Strategic and analytical thinking, with an emphasis on agile and data-driven decision-making.
- Flexibility and openness to digital innovation, continuously seeking to improve processes.
- Strong capability in agile decision-making and strategic planning to adapt to dynamic logistics environments.
- Continuous learning and adaptability to new tools and trends.

3.1.4 Required Experience

- Minimum of 5 years of experience in a similar role, with a proven track record in logistics and distribution management.
- Demonstrated experience in managing teams, fostering motivation, and achieving high-performance levels.
- Hands-on experience with digital logistics platforms or ICT tools, focusing on route optimization, data analytics, and fleet management.
- Experience in implementing innovative solutions and sustainability practices within a logistics or distribution environment.

3.2 Job Description: Distribution Unit Manager

3.2.1 Roles and Responsibilities:

- Lead, organize, and supervise the work of the distribution team, ensuring high levels of efficiency and team cohesion.
- Manage and optimize all material resources and equipment (e.g., delivery vehicles, drones, IT infrastructure) to meet operational needs.
- Utilize the Digital SENATOR (Smart Grid Operator) platform to analyse data on demand, resources, and operational metrics to enhance decision-making.
- Plan and optimize delivery routes using the SENATOR platform, prioritizing sustainability through data-driven criteria such as route distance, stop frequency, and transport type.
- Monitor service performance in real-time using the SENATOR platform, proactively addressing incidents, and adjusting routes to minimize disruptions.
- Conduct thorough analysis of key performance indicators (KPIs) to identify areas for operational improvements and implement data-driven strategies.
- Foster a collaborative, motivated work environment that supports innovation, growth, and continuous improvement.
- Engage directly with customer feedback, developing solutions to address complaints and elevate service standards.
- Champion sustainable logistics practices by integrating green initiatives into everyday operations.

3.2.2 Required Training

- Minimum required qualification of Baccalaureate or Vocational Training II or equivalent

- Advanced training in logistics and digital platforms, including an Administrator level of an Integral Shipping System.
- Comprehensive training on the use of the SENATOR ICT platform and app, with a focus on data analytics and operational optimization.
- Specific training in drone fleet management platforms and related technologies.
- Knowledge about:
 - Products and services
 - Quality systems
 - Distribution network
 - Data protection regulations
 - Current regulations and legislation relating to drone operations.
- **Advanced computer skills**, particularly in office software (Excel), data visualization, and corporate applications.
- **Languages**: English proficiency at level B1 or higher (increasing from A2) in Common European Framework of Reference (CEFR), to ensure better communication in an international context.

3.2.3 Skills

- Ability to foster teamwork and a collaborative environment.
- Strong problem-solving skills with a focus on achieving operational objectives.
- Proactive approach in anticipating customer needs and offering tailored solutions.
- Proven leadership in setting clear objectives, deadlines, and driving team performance.
- Capacity to inspire and motivate the team, encouraging skill development and career growth.
- Strategic and analytical thinking, with an emphasis on agile and data-driven decision-making.
- Flexibility and openness to digital innovation, continuously seeking to improve processes.
- Strong capability in agile decision-making and strategic planning to adapt to dynamic logistics environments.
- Continuous learning and adaptability to new tools and trends.

3.2.4 Required Experience

- Minimum of 3 years of experience in a similar role, with a proven track record in logistics and distribution management.

- Demonstrated experience in managing teams, fostering motivation, and achieving high-performance levels.
- Hands-on experience with digital logistics platforms or ICT tools, focusing on route optimization, data analytics, and fleet management.
- Experience in implementing innovative solutions and sustainability practices within a logistics or distribution environment.

3.3 Job Description: User/Delivery Person

3.3.1 Roles and Responsibilities

- Distribute and deliver the different postal and telegraph products, or, if not possible, their substitute notices, to the recipients at the addresses that appear in the shipments.
- Serve customers and respond to their requests for information.
- Perform the automatic classification of packages to the different routes (delivery personnel on foot and/or vehicles) through the SENATOR digital APP (ICT).
- Select the distribution route from those proposed by the SENATOR digital APP (ICT).
- Perform real-time monitoring of the route in progress, reporting through the APP the corresponding status of each delivery.
- Notify the platform of incidents that prevent continuing with the established route.
- Manage notifications received through the APP that imply a modification to the established route.
- Perform the reception and settlement, in addition to the payment and collection at the addresses, of the corresponding products.
- Perform the basic conservation of the technical and material means necessary for their work.

3.3.2 Required Training

- Minimum qualification required: Compulsory Secondary Education or equivalent.
- Training in the APP (ICT) SENATOR.
- Knowledge of:
 - Products.
 - Customs management for operational staff.
 - Data protection regulations
- **Computer knowledge:** user-level office automation and corporate computer applications.

- **Languages:** English level A2 or higher of the Common European Framework of Reference (CEFR).

3.3.3 Skills

- Goal-oriented.
- Excellence-oriented.
- Resoluteness.
- Digital openness.

Development of the Training Plan: Details the creation of objectives, requirements, goals, and expected outcomes for the modules, based on the needs assessment and the project's Grant Agreement.

4 Training Needs Assessment

Define a training and assessment model based on technical knowledge and key competencies to provide targeted training. To do this, once the knowledge and competencies at the appropriate level have been identified in the job descriptions, a training itinerary is then defined, with learning tools adapted to the organizational resources made available to students and establishing reliable assessment instruments.

5 Training Plan Definition

5.1 Scope of this Training

To cover the training of each of the profiles involved directly or indirectly in the distribution and delivery process in which SENATOR will be developed from a global perspective, taking into account digital competencies, personal skills, processes knowledge and the applicable regulatory framework.

5.2 Target Groups

- Head of Distribution Area
- Distribution Unit Manager
- Delivery User
- Logistics Technician Specializing in Drones

5.3 Objectives of the Training

Train those involved in the process of handling and using SENATOR in an approach that encourages and enables staff to reach their highest level of capability, while ensuring a basic level of competence as a minimum standard, addressing specific training needs by position, supporting continuous learning and performance improvement.

5.4 Training Content

Table 1: Training Program Managers (Head of Distribution/Distribution Unit Manager)

Scope	Qualification	Duration	Goals	Contents
Regulation	Occupational Risk Prevention	30	Teach professionals the occupational risks and preventive measures inherent to the performance of their tasks.	Basic concepts of health and safety. General risks and their prevention. Specific risks in the sector and their prevention. Basic elements of prevention. Integration of prevention. Work accidents (management and measures to avoid them). Health and safety sheets. Training. Management of Personal Protective Equipment (PPE). Safety from the outset. Prevention plan protocols. Risks. First aid. Road safety.
	Prevention of criminal risks	1	Provide professionals with the main cross-cutting messages on the most relevant principles and content in terms of criminal compliance and the Code of Ethics.	Introduction. Objectives. Frequently asked questions. Internal communication channel. Types of behaviour. Possible consequences. Practical cases.
	Information Security	2	Present tools to identify a security incident. Identify the procedure to follow to communicate and prevent an information security incident.	Introduction. What is a security incident? Guidelines for action in the event of a security incident. Good practices. Security in remote and cloud work. Security policies in Correos. Registration, maintenance and management of processes. Tools.
	General protection regime	2	Knowledge and updating of the Data Protection Regulation and its	Introduction. Pillars of data protection. Rights of data subjects in relation to data protection. Information for the data subject regarding data protection. Obligations

Table 1: Training Program Managers (Head of Distribution/Distribution Unit Manager)

Scope	Qualification	Duration	Goals	Contents
			implementation in the development of the functions of each position.	of companies regarding data protection. Sanctions regime.
	Prevention of money laundering	2	Ensure advanced knowledge of legal requirements and internal regulations regarding the prevention of money laundering affecting "Distribution".	Welcome. Introduction to the Prevention of Money Laundering. Legal framework for the Prevention of Money Laundering. Prevention structure in the Post Office. Our obligations in the area of prevention of money laundering. Key ideas.
	*NEW - European UAS (Civil use of unmanned aircraft) regulations	5	Get an overview of the standard that affects all drones regardless of their size.	Implementing Regulation (EU) 2019/947. Delegated Regulation (EU) 2019/945. Royal Decree 517/2024, of June 4, developing the legal regime for the civil use of unmanned aircraft systems (UAS)
Tools and Systems	Operational management	15	To know the application of technological tools (Enterprise Resource Planning) for operational management. To train in the management and use of all menus. To know the products and services that are handled with the applications. To improve the quality of the processes through the correct use of the applications.	Introduction. Presentation of Enterprise Resource Planning (ERPs) and access to the system. Entry menu, management, incidents, control/queries and configuration. Products and services provided.

Table 1: Training Program Managers (Head of Distribution/Distribution Unit Manager)

Scope	Qualification	Duration	Goals	Contents
	People management	10	Know the operation of using the tool for optimal management of a team of people.	Management module. Occupational risk prevention module. Training module.
	*NEW - Fleet management	10	Learn how the SENATOR platform and other platforms for fleet management work.	Introduction. Menu. Management, Queries
Products	Products and services	5	Know the company's products and services	Postal and communication services. Telegraph services.
*NEW Skills	Leadership and communication	20	Acquire the basic skills associated with the role of team leader.	Introduction. Keys to leadership. Influential communication. Leading the team. Leading team development.
	Digital openness and innovation	10	Boosting creative capacity in thinking and problem-solving processes. Promoting a proactive mindset towards technology.	Creativity as a catalyst for innovation. Driving development with new technologies. Digitalisation and consolidation of digital identity.
	Resoluteness	10	Develop initiative, proactivity and personal productivity to face challenges and achieve goals effectively.	Initiative and proactivity. Time management. Multitasking and versatility. Personal organization. Self-confidence and stress management.
	Strategic planning	10	Establish the foundations for the development of fundamental skills in planning and work organization that	Versatility and multitasking. Effective problem solving. Organize your time effectively. How to set goals according to the OKR methodology.

Table 1: Training Program Managers (Head of Distribution/Distribution Unit Manager)

Scope	Qualification	Duration	Goals	Contents
			allow progressive growth towards strategic planning.	
	Flexibility	10	Develop and enhance positive attitudes towards change and the skills needed to manage and adapt to the transformation.	Boost your attitude to face change, overcome your fear and increase your resilience. The optimistic attitude. Management and adaptation to change and digital transformation.
	Teamwork	10	Develop the skills necessary to work effectively as a team, fostering communication and collaboration.	High-performance team development. Work environment and cooperation. Interpersonal skills.
Technological Adoption	Office 365	15	Knowing the intermediate functions of Office 365	Introduction. Manage. Share and sync. Excel spreadsheet operations. Teams. One drive
Processes	Customs management	5	To gain a deeper understanding of the current operation of customs in general. To discover the phases and steps that goods must take from the moment they leave the origin until they reach their destination (Spain/UE).	Introduction: the EU, the Union Customs Code (UCC) and the role of customs. Special territories: the Canary Islands, Ceuta and Melilla. Tariff classification of goods. Customs tariff. Customs value of goods. Customs figures and regimes 1, 2 and 3. Clearance of goods.
	*NEW - Fleet management process	5	Acquire basic knowledge related to the management of land and air transport fleets (drones), analysing	Fleet and transport. Land and air routes. Costs and support system. SENATOR process with "control tower" administrator. Intra-operator process.

Table 1: Training Program Managers (Head of Distribution/Distribution Unit Manager)

Scope	Qualification	Duration	Goals	Contents
			each of the areas that contribute to effective management of own fleets and those shared with other operators (SENTATOR)	

Table 2: Training Program Users (Land/ Air)

Scope	Qualification	Duration	Goals	Contents	Users
Regulations	Occupational risk prevention	2	Teach professionals about occupational hazards and preventive measures inherent to the performance of their tasks. Identify safety measures to be carried out during delivery.	Identify safety measures to be implemented during delivery. Reception in occupational risk prevention (ORP). Manual handling of loads. Road safety.	Land
	Prevention of criminal risks	1	Provide professionals with the main cross-cutting messages on the most relevant principles and content in terms of criminal compliance and the code of ethics.	Introduction. Objectives. Frequently asked questions. Internal communication channel. Types of behaviour. Possible consequences. Practical cases.	Both
	Information Security	1	Knowledge and updating of the Data Protection Regulation and its implementation in the development of the functions of each position.	Introduction. Pillars of data protection. Rights of data subjects in relation to data protection. Information for the data subject regarding data protection. Obligations of companies regarding data protection. Sanctions regime.	Both
	General protection regime	1	Present tools to identify a security incident. Identify the procedure to follow to communicate and prevent an information security incident.	Introduction. What is Information Security? Main cybersecurity threats. What is a security incident? How to act in the event of a security incident? Good practices and routines in the workplace. Security Decalogue.	Both
	Prevention of money laundering	1	Know the basic regulations on money laundering prevention that affect "distribution".	Anti-money laundering regulations. Documentation. Suspicious transactions.	Both

Table 2: Training Program Users (Land/ Air)

Scope	Qualification	Duration	Goals	Contents	Users
	Risk prevention for motorcycle delivery	1	Know the risks associated with the workplace. Know how to prevent risks. Know how to act and prevent motorcycle accidents.	Basic preventive concepts for motorcycle driving. Video for learning preventive measures. Correct execution of manoeuvres and postures to avoid. Putting into practice what you have learned.	Land
	*NEW - Training of UAS/drone pilots in European Standard Scenarios (STS)	50	Obtain the theoretical knowledge that must be passed to obtain the certificate of theoretical knowledge for drone pilots.	Aviation regulations. Limitations of human performance. Operational procedures. Technical and operational risk mitigation in the air. General knowledge of UAS. Meteorology. UAS flight performance.	Air
Tools and Systems	Delivery Apps	5	Know the operation of the application and delivery system.	Introduction. Access. Assign delivery area. Delivery. End of route. Rural. Deliveries	Both
	Record of workday	1	Familiarize yourself with the time recording tool. Know how to access the program. Learn how to navigate the tool.	Access to the program Use of the application Make a check-in Check check-in Evaluation	Both
	App SENATOR	5	Learn how to manage the application and distribution system with SENATOR.	Introduction. Access. Assign delivery area. Delivery. Deliveries.	Both
*NEW - Skills	Goal Orientation	5	Develop a strong achievement orientation by focusing on specific results and goals and applying practical strategies.	Achievement orientation. Persistence and tenacity. Strategies to achieve goals: Pomodoro, OKR.	Both
	Digital opening	5	Promote a proactive mindset towards technology.	Promoting development with new technologies. Digitalisation and consolidation of digital identity.	Both

Table 2: Training Program Users (Land/ Air)

Scope	Qualification	Duration	Goals	Contents	Users
Processes	Resoluteness	5	Develop initiative, proactivity and personal productivity to face challenges and achieve goals effectively.	Initiative and proactivity. Time management. Multitasking and versatility. Personal organization. Self-confidence and stress management.	Both
	Orientation to excellence	5	Improve efficiency and productivity to achieve outstanding results and develop organizational skills.	Daily efficiency and productivity to achieve better results. Time and work organization. Effective meetings.	Both
	Basic distribution operations	10	Facilitate the incorporation of staff into delivery units.	Delivery Staff Duties. Applications in Delivery.	Both
	Delivery processes	5	Training for optimal delivery.	Introduction. Customer care. Characteristics and general aspects of delivery. Delivery process. Delivery in the App.	Land
	Admission processes	5	Identify intake processes and tasks. Facilitate intake work.	Introduction. Services. Classification. Settlement. Office delivery. Products.	Land
	*NEW SENATOR land delivery processes	10	Acquire basic knowledge related to own deliveries and those shared with other operators (SENATOR)	Delivery and collection processes. Hubs and spaces. Delivery and collection with other operators. Delivery and collection processes with SENATOR.	Land
	*NEW - SENATOR air delivery processes	10	Acquire basic knowledge related to drone delivery, both own and shared with other operators (SENATOR)	Delivery and collection processes with drones. Delivery and collection hubs and spaces. Delivery and collection with other operators. Delivery and collection processes with SENATOR.	Air

5.5 Training Tools to be used

Table 3: Training Tools

Training Tool	Platform/Preferred Tool	Purpose
Slides	Power Point	Most of the material that will be created will be in slides to facilitate the presentations during the workshops and webinars.
Online Platform	PC platform	SCORM contents / online test
	Smartphone platform	SCORM contents / online test

5.6 Evaluation Methods

An assessment model is defined that allows the evaluation of learning by integrating knowledge, skills and attitudes necessary to perform effectively in the professional environment, in two tests:

- Knowledge test
- Competence assessment test in the workplace
- STS Ed.07 exam.

In order for tests 1 and 2 to allow an effective assessment, the following points are guaranteed:

- The relevant competencies are clearly defined for a given function.
- There is an explicit link between the competencies and the training, the performance required in the workplace and the assessment, adapted to that performance analyzed in the final test.
- The competencies are formulated in a way that ensures that they can be trained, observed and evaluated in a consistent manner in a wide variety of work contexts for a given position.
- The apprentices successfully demonstrate the competency by meeting the associated standard.
- Each interested party in the process, including the employer, has a common understanding of the competency standards.
- Clear performance criteria are established to assess the competency.
- Evidence of competent performance is valid and reliable.
- Instructors' and evaluators' judgments are calibrated to achieve a high degree of interrater reliability.

- Assessment is based on multiple observations in multiple contexts; and to be considered competent, an employee must demonstrate comprehensive performance across all required competencies to a specific standard.

The STS Ed.07 drone handling exam will be in accordance with the standards set by AESA (Spanish Aviation Safety and Security Agency) to obtain the UAS/drone Pilot title in standard European scenarios (STS).

6 SENATOR and the Use of Drones in Logistics

As mentioned earlier, we must take advantage of the opportunities offered by new forms of unmanned vehicle (UAV) transport and carry out an integrated logistics operation to complement last mile services. However, today it is an aspiration in which regulations have a lot to say to become a reality.

To this end, logistics companies are defining a new concept of urban transport, which can reduce delivery times, while improving the coverage of their logistics in terms of fluidity and precision. In this new scenario, shipments are distributed to large hubs (distribution centres) located near the large concentration of customers (small centres or intermediate loading points) and are delivered with a multimodal urban mobility service, which involves the transfer of goods through different combined modes of transport, land transport and drones, in the last mile.

To do this, the first thing to do is to manage the service request with the logistics operator's systems (through the Configuration and Planner modules of the SENATOR digital (ICT) platform) that will accept and evaluate the specific transport needs. For example, if a drone service is required, the request must go through the mission control centre (MCC), which will generate a route that must be coordinated with the urban air services platform to supervise the execution of the completed flight.

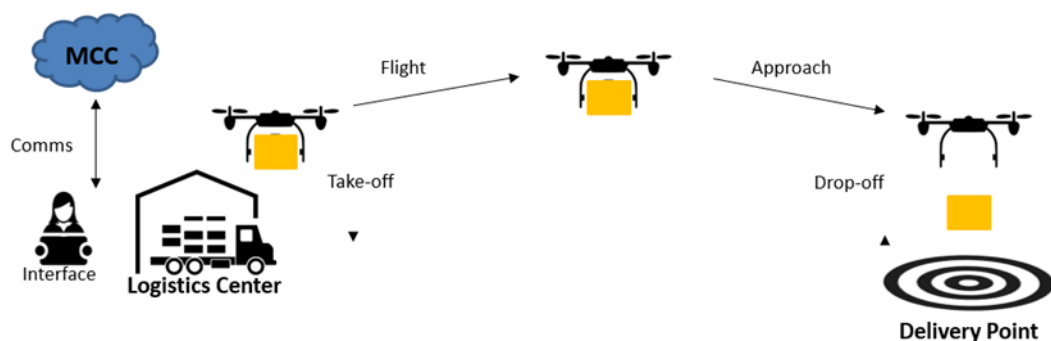


Figure 1: Drone Delivery Flight Phases

Depending on the type of city and its characteristics, the operations or types of routes to be carried out with drones will be totally different since they will be selected taking into account the orography, streets, urban infrastructure and the most representative urban elements based on their use, whether residential or not.



Figure 2: Key Considerations for Urban Drone logistics

On the other hand, one of the main objectives of existing transport services is intermodal connections and seamless travel, so efficient multimodal integration of all platforms is essential to complement last mile services, or a feeder for other modes of transport by integrating urban air mobility with existing transport services.

Within these land infrastructures, it is necessary to define and develop aspects such as take-off and landing areas (vertiports), access to the loading/unloading area and the movement of these, the definition of security controls, as well as the installation of docking and/or loading stations. Although infrastructure requirements will be limited at the beginning, they can increase the load in the medium term and make the development of the land, tracking, control and communication infrastructure staggered and allow the necessary adjustments to be made for the correct functioning of the ecosystem.

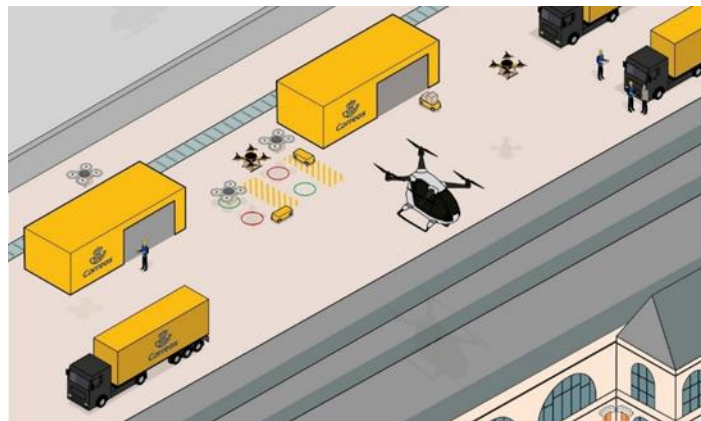


Figure 3: Integrated Logistics Ecosystem

In this new scenario, clear advantages have been identified in the use of unmanned vehicles (UAV) to facilitate last mile delivery, aligned with the main objectives of the H2020-EU programme.3.4. -SOCIAL CHALLENGES – Smart, green and integrated transport, in which SENATOR is part of ("Smart Network Operator Platform enabling Shared, Integrated and more Sustainable Urban Freight Logistics"):

- The reduction in the land fleet required for the transport of goods contributes to the **reduction of environmental pollution** since, by reducing the fleet of combustion vehicles in favour of drones (UAV), the associated polluting emissions are also reduced.
- The **possibility of accessing remote or hard-to-reach areas** that drones (UAV) have, helping with the last mile in rural areas, since they have the ability to overcome obstacles faced by traditional land transport.
- Opportunity to **improve efficiency by reducing delivery times**. Compared to traditional land transport, drones (UAV) are faster and have the advantage of not being affected by traffic jams, traffic lights, blocked streets, etc.

On the other hand, there are a number of challenges that need to be addressed in order for the use of unmanned aerial vehicles (UAV) to become a reality:

- The first of these challenges is **regulation**. Public administrations are taking solid steps to ensure that existing regulations, both at international and national level, continue to advance and are aligned with the real needs of urban area mobility for distribution purposes. On the one hand, there are initiatives such as that of the Madrid City Council, which advocates the creation of Commissions for the management of air traffic, and on the other hand, AESA (State Agency for Air Safety) is beginning to issue LUC (Light Operator Certificate) authorizations, which allow for streamlining the procedures for carrying out flights in situations of low or moderate risk.
- Another key point is the **safety** of both the drone and the goods it transports. It must be proven that these devices do not pose any danger to the population or to urban elements (trees, power lines, buildings, etc.). For example, through traffic regulations that specify routes, times or areas through which drones can circulate.
- It requires a **high investment**, so it is not considered affordable for all companies.
- **Limitations** in the characteristics of the packages (weight and volume) that drones (UAV) are capable of transporting, compared to the flexibility of traditional land transport.
- Possible **inefficiencies in the delivery process** if the customer is not home to receive the package. If the customer is not at home, the package has to return to the warehouse, whereas with traditional transport the delivery person would continue the route without having to return to the warehouse until the end of the route.

For all these reasons, it is necessary to define a new professional profile within the distribution process, with greater specialization and a technical component to operate the drone fleet, based on the indications of AESA (State Agency for Air Safety) for the category of operations planned in the last mile with drones of less than 25 kg, including the load, and which we have called **Logistics Technician Specialist in Drones**, whose job description we include below::

6.1 Roles and Responsibilities

- Manage the request for services to distribute different postal products to delivery points or urban hubs.
- Identify the suitability of the urban area mobility route based on the characteristics of the last mile service.
- Coordinate the selected route with the urban air services platform and supervise the execution of the completed flight.
- Coordinate the different ground transport fleets with the drone fleet.
- Pilot the drone fleet for the delivery of those packages assigned to the corresponding route.
- Carry out real-time monitoring of the route in progress, reporting through the APP the corresponding status of each delivery.
- Notify the platform of incidents that prevent continuing with the established route.
- Manage notifications received through the APP that involve a modification to the established route.
- Carry out the basic maintenance of the technical and material means necessary for their work, and for which they are previously prepared.

6.2 Required Training

- Minimum qualification required: Intermediate Degree specializing in electronics, or equivalent.
- Official qualification for UAS (drones) pilots
- Training in the APP (ICT) SENATOR.
- Knowledge of:
 - Products.
 - Data protection regulations.
 - Current regulations and legislation relating to drone operations.
 - Safety and management of emergencies arising from the use of drones.
 - Maintenance (calibration and adjustment) and basic repair of drones.
- **Computer knowledge:** advanced user level office automation and corporate computer applications.
- **Languages:** English level A2 or higher of the Common European Framework of Reference (CEFR).

6.3 Skills

- Organization
- Goal-oriented.
- Problem-solving
- Teamwork.
- Excellence-oriented.
- Resoluteness
- Digital openness

7 Conclusion

The new demands of the logistics market together with the need to optimize goods delivery services in urban areas, together with the incorporation of digital platforms for more agile management and decision-making and which incorporate new variables such as integrated logistics operations to complement last mile services, with the ultimate goal of ensuring sustainability in distribution, has led us to identify the need to complement the functions and responsibilities of the different professionals involved in the distribution process (managers and operational staff), due to the evolution towards more global management models in which, beyond the operator's own objectives at an individual level, the joint vision with other operators must be taken into account to respond to the needs of reducing the environmental impact.

The need to have professionals who are change-oriented, flexible and with greater agility in decision-making, in addition to the use of new digital management tools such as SENATOR and a more collaborative scenario between operators and other agents involved in the logistics operation, requires updating the training plan for the different levels of both management and traditional distribution in the field of distribution, with the impact being less in the latter where the focus should be on the new SENATOR management tool but which, beyond managing shared or integrated routes with the rest of the logistics operators that are part of the operation, we consider it is not far from the specific training of other tools in common use.

On the other hand, if the drawbacks of using drones in the integrated transport model are overcome, it will be necessary to have a new professional profile that is more technical and specialized in the use of drones that requires specific knowledge, with respect to land delivery personnel, and thus be able to incorporate all the advantages and benefits of this new transport system into our intelligent, green and integrated transport model.

8 References

Legal References for UAV:

Commission Implementing Regulation (EU) 2019/947 of 24 May 2019 on the rules and procedures for the operation of unmanned aircraft (Text with EEA relevance.): http://data.europa.eu/eli/reg_impl/2019/947/oj

Commission Delegated Regulation (EU) 2019/945 of 12 March 2019 on unmanned aircraft systems and on third-country operators of unmanned aircraft systems: https://eur-lex.europa.eu/eli/reg_del/2019/945/oj

Royal Decree 517/2024, of June 4, developing the legal regime for the civil use of unmanned aircraft systems (UAS): <https://www.boe.es/eli/es/rd/2024/06/04/517/con> (only in Spanish)

European Union Aviation Safety Agency: <https://www.easa.europa.eu/en>

Agencia Estatal de Seguridad Aérea (AESA): <https://www.seguridadaerea.gob.es/en>

Legal References for Money Laundering:

Law 10/2010 of 28 April 2010 on the prevention of money laundering and terrorist financing: <https://www.boe.es/eli/es/l/2010/04/28/10/con> (only in Spanish)

European Policy regarding Money Laundering: <https://eur-lex.europa.eu/EN/legal-content/glossary/money-laundering.html>

Legal References for Customs Clearance:

European Customs Legislation: https://taxation-customs.ec.europa.eu/customs-legislation-3_en

Council Regulation (EEC) No 2913/92 of 12 October 1992 establishing the Community Customs Code: <http://data.europa.eu/eli/reg/2013/952/oj>

Union Custom Code: https://taxation-customs.ec.europa.eu/customs-4/union-customs-code_en