ASSISTANCE

Adapted situation awareneSS tools and tallored training curricula for increaSing capabiliTies and enhANcing the proteCtion of first respondErs

European Commission

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Deliverable D1.6

First Management Report

30/04/2020

[1] PU: Public; PP: Restricted to other programme participants (including the EC services); RE: Restricted to a group specified by the Consortium (including the EC services); CO: Confidential, only for members of the Consortium (including the EC services).

ASSISTANCE

Nowadays different first responder (FR) organizations cooperate together to face large and complex disasters that in some cases can be amplified due to new threats such as climate change in case of natural disasters (e.g. larger and more frequent floods and wild fires, etc) or the increase of radicalization in case of man-made disasters (e.g. arsonists that burn European forests, terrorist attacks coordinated across multiple European cities).

The impact of large disasters like these could have disastrous consequences for the European Member States and affect social well-being on a global level. Each type of FR organization (e.g. medical emergency services, fire and rescue services, law enforcement teams, civil protection professionals, etc.) that mitigate these kinds of events are exposed to unexpected dangers and new threats that can severely affect their personal safety.

ASSISTANCE proposes a holistic solution that will adapt a well-tested situation awareness (SA) application as the core of a wider SA platform. The new ASSISTANCE platform is capable of offering different configuration modes for providing the tailored information needed by each FR organization while they work together to mitigate the disaster (e.g. real time video and resources location for firefighters, evacuation route status for emergency health services and so on).

With this solution ASSISTANCE will enhance the SA of the responding organisations during their mitigation activities through the integration of new paradigms, tools and technologies (e.g. drones/robots equipped with a range of sensors, robust communications capabilities, etc.) with the main objective of increasing both their protection and their efficiency.

ASSISTANCE will also improve the skills and capabilities of the FRs through the establishment of a European advanced training network that will provide tailored training based on new learning approaches (e.g. virtual, mixed and/or augmented reality) adapted to each type of FR organizational need and the possibility of sharing virtual training environments, exchanging experiences and actuation procedures.

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Disclaimer

1 Executive Summary

This deliverable encompasses a summary of all the activities performed during the project first year. This document is based on the official template for the periodic reports in order to give a clear idea on what has been done and what activities have been performed by each partner.

The first section is related the objectives of the project and what of the activities performed have contributing to accomplish each of these objectives.

The document has also an individual chapter of each WP which is divided in the following sections:

- A brief description of the WP including the partners involved
- The objectives of the WP
- A description of all tasks active during the reporting period, where all activities performed in each task are summarized. In addition, at the end of each task description, a short summary of the activities performed by individual partners is also stated.
- Finally, a table including the deliverables submitted under each WP during the reporting period is stated along with other table showing the milestones accomplished under each WP.

After the WPs description sections the document have additional chapters showing different potential updates if they are applicable to this reporting period (e.g. Update of the plan for exploitation and dissemination of result (if applicable), Update of the Data Management Plan (if applicable) and Follow-up of recommendations and comments from previous review(s) (if applicable))

The next charter shows potential Deviations from DoA (if applicable) in terms of manpower and budget and finally a table with all the meetings performed during the reporting period is shown

List of Authors

Organisation	Authors
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Change control datasheet

Version	Changes	Chapters	Pages	Date
0.1	First draft	All	11	22/03/20
0.2	Internal version updated	All	15	28/03/20
0.3	Internal version updated	All	43	09/04/20
0.4	First Consolidated version	All	46	22/04/20

Content

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Acronyms

ASSISTANCE	Adapted situation awareneSS tools and taIlored training curricula for increaSing capabiliTie and enhANcing the proteCtion of first respondErs
PC	Project Coordinator
D#.#	Deliverable number #.# (D1.1 deliverable 1 of work package 1)
DoA	Description of Action of the project
EC	European Commission
EU	European Union
GA	Grant Agreement
H2020	Horizon 2020 Programme for Research and Innovation
M#	#th month of the project (M1=May 2018)
WP	Work Package
IPR	Intellectual Property Rights
PSC	Project Steering Committee
PIC	Project Implementation Committee
PSB	Project Security Board
AB	Advisory Board
TL	Task Leader
WPL	Work Package Leader

2 Explanation of the work carried out by the beneficiaries and overview of the progress

2.1 Objectives and progress achieved during the reporting period

The main ASSISTANCE objective is twofold, on the one hand the project will **protect and help the different FRs organizations that work together during the mitigation of large disasters (Natural or Man-made)** and on the other hand ASSISTANCE will **improve the FRs capabilities and skills for facing these kind of events.** This will be achieved by accomplishing the following operational objectives:

O1. To pay attention to the FRs expressed needs and preference during the proposal preparation phase in terms of useful information for increasing their capabilities and new sensors being mounted on unmanned platforms or integrated in their wearable equipment.

O2. To develop a novel SA platform, including the integration of UAV, Robots and drones' swarms and innovative modules that will enhance the FRs SA. These novel SA tools will be integrated in a complete SA platform that will be able to be adapted to the specific information needs of the different types of FRs organizations that cooperates during the mitigations of a big disaster (natural or man-made)

O3. To establish the core of an advanced training network based on virtual reality and/or augmented reality, which includes recognized FRs training institutions that form part of ASSISTANCE consortium along with a set of training curricula tailored to the needs of the different types of first responders (e.g. firefighters, sanitary staff, police, etc.) in order to improve their current capabilities.

O4. To provide robust network infrastructure for ensuring FRs and unmanned platforms connectivity during the mitigation operations. When it is not possible to have correct connectivity, the consortium will provide ad-hoc network performance capabilities based on drones' swarm for ensuring the basic sensors and modules connection.

O5. To validate the project results in a cost-effective way under real conditions in a controlled environment through 3 pilots demonstrations which will involve FRs from different organizations

O6. To measure the societal impact of the project and assure compliance with legal, gender and ethical EU principles and requirements, identify lacunae and hurdles and develop concrete recommendations to policy makers and FRs with the aim to improve the current level of protection for the FRs and increase their capabilities in a legal and ethical manner.

During the first year of the project the consortium has worked actively in all project objectives except objective 5.

With respect WP2, all its tasks have been accomplished successfully and on time. During this WP the unique two milestones included in this reporting period has been achieved (M1 User requirements gathered and M2 System architecture released), which cover almost completely objective 1.

In WP3, its first task has been accomplished successfully and on time and the rest of the WP3 developments are under schedule. This WP will contribute to accomplishing objective 4.

In WP4, T4.1 is almost finished according to the workplan and its deliverable will be submitted on time. This WP will contribute to accomplishing objective 2.

In WP5, the two first tasks started in month 8 and they include a big part of the main technical developments to be performed in the project. This WP will contribute to accomplish objective 2 and objective 4

In WP6, tasks T6.1 and T6.2 have been accomplished successfully and on time and the project training methodology and the training curricula have been developed and the corresponding deliverables submitted. This WP will contribute exclusively for accomplishing objective 3.

In WP8, all tasks are active from the very beginning of the project and all the scheduled deliverables have been submitted on time. Different activities on data protection, gender, societal impact and so on are currently on going. This WP will contribute exclusively to accomplish objective 6.

In WP9, the consortium has performed several dissemination and communication activities, since only T9.2 Dissemination and communication of the project results has been active during the first year of the project.

In WP10 the consortium has produced the deliverables introduced by the EC for facing the potential ethical issues of the project. The result of this deliverable is related to objective 6 of the project.

2.2 Explanation of the work carried out per WP

2.2.1 WP1: Project management

This WP is in charge of the project management activities, which includes project coordination and representation, administrative project management, and coordination among work packages through the implementation of the project management structure and procedures, described in the DoA section

2.2.1.1 *Involved Beneficiaries*

This WP is led by UPVLC (project coordinator) and the whole consortium is involved in this WP

2.2.1.2 *Objectives of this WP for the first year (01/05/2019 – 30/04/2020)*

The WP1 objectives are the following:

- To establish efficient operation of all project bodies, including proper decision making and conflict resolution at all levels. This objective is related with T1.1
- To organise overall project administration and supervision of financial flows as well as communication with EC and project reporting. This objective is related with T1.2
- To ensure required quality of project work and its results as well as to perform self-assessment and corresponding project monitoring, including risk and opportunities management. This objective is related with T1.3
- To provide necessary environment for collaboration within the consortium. This objective is related with T1.4

2.2.1.3 *Summary of progress towards objectives and details for each task for the first year (01/05/2019 – 30/04/2020)*

Task 1.1: Project Management (M1–M36) - Leader: UPVLC

Contributors: The task is led by UPVLC, but the whole consortium is involved in some way in this task.

Overall Work progress for the task: this task is a horizontal task and therefore the 33% of the task has been performed at the end of year 1. The main activities performed under this task are the following:

Work performed: The coordinator has organized a plenary telco at least evary three weeks from the very beginning of the project for having a control on the activities performed in each active task. In addition, bilateral or sectorial telcos (e.g. WPx Members) have been organized in order to ensure the proper accomplishment of the project results in concrete activities.

The coordinator has established a quality control procedure for deliverables in order to ensure the maximum quality of the submitted reports. From the very beginning of the project two partners were assigned randomly as per reviewers of each project deliverable. This way each deliverable is reviewed at least by two additional partners and also by the coordinator before submitting the document. This procedure has been performed with all deliverables submitted so far.

The coordinator has organized several plenary meetings every six months. In addition, technical or sectorial (e.g. Integration involved partners) meetings have been organized in order to ensure the proper accomplishment of the project objectives.

The Kick off Meeting was held in Valencia in May 2019 and the first plenary meeting was held in Rome in October 2019. Nevertheless, due to COVID19 crisis the second plenary meeting scheduled for March 2020 has been postponed and held through skype during the 2 days scheduled for the meeting. Other bilateral meetings have been also organized for working on specific parts of the project. (e.g. Meeting among MIR-PN, -ETRA and UPVLC in Valencia)

In order to provide a secure documents exchange platform for exchanging and storing documents among partners, the coordinator has set up a GIT platform for exchanging and storing the project documents in a secure manner. This platform allows to avoid the attachment of documents in the e-mails and increase this way the security. In this way a correct version control of the documents and continuous access is provided.

The coordinator has also distributed the required forms and templates for performing the project deliverables, Quarterly reports and project official presentations through the GIT platform as part of the activities of this task.

Partners contribution:

All partners have participated in the project meetings and teleconferences organized by the coordinator. All partners also have used GIT platform properly and the project deliverables have been submitted on time by the responsible partners. In addition, the partners selected for the per review of the deliverables have performed their reviews properly and in due time.

Task 1.2: Administrative and Financial Management (M1–M36) - Leader: UPVLC Contributors: The task is led by UPVLC, but the whole consortium is involved in some way in this task.

Overall Work progress for the task: this task is a horizontal task and therefore the 33% of the task has been performed at the end of year 1. The main activities performed under this task are the following:

Work performed: The coordinator has managed the administration and supervision of the project financial flows. This includes the allocation of funds among beneficiaries and activities according to the Grant Agreement (GA) and the provisions of the Consortium Agreement (CA).

In this period the coordinator has also performed the pre-financing amounts distribution among partners.

The coordinator also has asked all partners financial quarterly reports in order to have an updated knowledge of the resources spent by each partner and detect whatever potential deviation in terms of effort spent. In addition, under this task, the coordinator has produced D1.9 First Cumulative report with the estimation of the costs per partner from 01/05/19 to 31/12/19.

Partners contribution:

All partners have sent their quarterly reports information on time and have provided the necessary contributions for completing D1.9.

Overall Work progress for the task: this task has three dimensions; communicating with previously formed Advisory Board, coordinating the project end users and formation of external End Users Group. Task 1.3 is related to other tasks explained below. Therefore; the work is not evenly distributed for every project year, 40% of the task has been performed at the end of year 1.

Work performed: 4 Members of AB contacted through email. They confirmed their participation to ASSISTANCE Project. Although, some of them confirmed their participation to the second Plenary Meeting; due to COVID-19 Pandemic face to face meeting was cancelled, so they couldn't participate.

The ASSISTANCE Project Letter of Intent (LoI) hace been prepared for inviting external End Users (institutional or individual level). Distribution of LoI was dependant of the design of Project logo, the web page and the preparation of "Privacy Policy" document. Finally, "Privacy Policy" document added to the Project web page and this information was also added to the LoI. After that LoI was distributed among external End Users to form supporting End Users Group. So far 10 LoI has been collected.

Partners contribution:

- E-LEX prepared the "Privacy Policy" document.
- RISE collected LoIs.
- Project End user were informed on task 1.3 activities and some of them provide feedback and questions for improving the task results.

Task 1.4 – Risk and opportunities management and quality assurance (M1 – M36) - Leader: RISE

Contributors: UPVLC, ETRA, TNO, PIAP, IFV, UC, AAHD and VAS

Overall Work progress for the task: This is a horizontal task and therefore approximately 33% of the task has been performed at the end of year 1. The main activities performed under this task are the following:

Work performed: The task leader prepared a Risk and Opportunities Management Plan (ROMP) that describes the system by which risks and opportunities are handled during the project. This document was distributed to the entire consortium for feedback, with a special request for the partners involved in the task to give their input. It was also discussed during the Kick-off meeting and the plenary meeting in Rome.

In addition to the ROMP, a register for tracking the risks and opportunities identified during the project was created. This register is used regularly to encourage the partners to be vigilant for new risks and opportunities and to understand the status of existing risks and opportunities.

The ROMP and the risks and opportunities register together form D1.3, which was submitted before its deadline.

Partners contribution: All partners were given the opportunity to provide input and feedback for the ROMP and the risks and opportunities register. D1.3 was reviewed and the comments received were helpful.

2.2.1.4 *Deliverables and milestones planned for the period in this WP*

Deliverable number/name	**S2R TD/WA addressed**	**Link to Exploitation Plan**
D1.1 Project management handbook	T1.1	NA
D1.2 Data Management Plan	T1.1	NA
D1.3 Risk & Opportunities Register 1	T1.4	NA
D1.9 First Cumulative Expenditure Report	T1.2	NA
D1.6 First Annual Management Report	T1.1	NA

Table 1 Deliverables submitted in WP during the first year of the project

2.2.2 WP2: User requirements, scenarios & system architecture

WP2 elicited and analysed requirements associated with the needs of the FRs in term of protection and training for an effective response and mitigation of a large disaster. It also has considered these requirements in order to produce the technical specifications of the ASSISTANCE system. The ASSISTANCE overall architecture has been also developed during this WP.

2.2.2.1 *Involved Beneficiaries*

PIAP, UPVLC, ETRA, AVSRE, FADA-CATEC, TNO, RISE, IFV, UC, GB, AAHD, MIR-PN, VIASAT CH, E-LEX, SBFF, OSPOM, CNBOP-PIB, CEL

2.2.2.2 *Objectives of this WP for the first year (01/05/2019 – 30/04/2020)*

- Objective 1: To perform a desk research assessment on the available training platforms, SA tools and new technologies applied to the FRs environments.
- Objective 2: To elicit, collect and analyze requirements associated with FRs' security and training needs from all stakeholders.
- Objective 3: To provide the specifications of the ASSISTANCE system and network architecture and delineate the implementation process to be undertaken within the project

2.2.2.3 *Summary of progress towards objectives and details for each task for the first year (01/05/2019 – 30/04/2020)*

Task 2.1: *First Responders Situation awareness tools State of the Art* (M1-M4)

Contributors: PIAP, UPVLC, ETRA, TNO, RISE, IFV, UC, All end users

Overall Work progress for the task: 100%, the task is completed. In this task a wide report describing the current state of the art in applications for managing emergencies and training was performed. The deliverable with expected content has been submitted.

Specific contribution from PIAP: Leading and coordination of the task and the deliverable D2.1

Specific contribution from other Beneficiaries: contributions to the deliverable D2.1, with technical users providing contribution to specific sections corresponding to their involvement in project and end users contributing mainly by answering questionnaire on technologies they use and want to use.

Task 2.2: *User Requirement Gathering, Analysis and Tracking* (M1-M6)

Contributors: ETRA, UPVLC, TNO, PIAP, RISE, IFV, UC, VAS, All end users

Overall Work progress for the task: 100%, the task is completed. In this task the overall set of user requirements for ASSISTANCE system has been performed. The requirements were

stated and validated by the project end users and also external end users through questionnaires. As a result of this validation, the priority of all requirements was stated for prioritizing its final accomplishment. The deliverable with expected content has been submitted.

Specific contribution from ETRA: Leading and coordination of the task and the deliverable D2.2 production.

Specific contribution from other Beneficiaries: All partners contributed to generation and analysis of requirements based on process designed by ETRA. This was done using special tools with steps involving both end users and technical partners. Results are described in the deliverable D2.2, which collects generated requirements and describes the process.

Task 2.3: Reference Scenarios, Pilot Operations Specifications and KPIs (M1-M6)

Contributors: CATEC, UPLVC, ETRA, TNO, PIAP, RISE, IFV, UC, VAS, All end users

Overall Work progress for the task: This task has been 100% completed. Pilot demonstrations scenarios have already been defined, with their corresponding use cases properly identified and specified. It will be the guide for the ASSISTANCE pilot demonstrations performance. The deliverable with expected content has been submitted

Specific contribution from CATEC: Leading and coordination of the task and the deliverable D2.3 production.

Specific contribution from UC: Contribution to the definition of UC2 and definition of UC6 and UC8 and 8 within SC3, taking in consideration specifications for the rerouting module for evacuation routes testing and crowd evacuation strategies.

Specific contribution from other Beneficiaries: Three main scenarios were designed, and its specification was led by end users (earthquake scenario led by AAHD, chemical plant explosion scenario led by GB and terrorist attack scenario led by MIR-PN). For all scenarios scripts and key performance indicators were described with collaboration between end users leading the effort and technical partners. All contributions were collected in the deliverable D2.3

Task 2.4: *System and Network Architecture Design (M4-M9)*

Contributors: UPVLC, ETRA, TNO, PIAP, CATEC, VAS, E-LEX, CEL

Overall Work progress for the task: 100%, the task is completed. The deliverable with expected content has been submitted.

Specific contribution from UPVLC: Leading and coordination of the task and the deliverable D2.4 production

Specific contribution from other Beneficiaries: In this task design activities that are basis for future development work were performed. This task has been led by UPVLC with other technical partners contributing to their relevant parts. Results are collected in the deliverable D2.4

2.2.2.4 *Deliverables and milestones planned for the period in this WP*

Deliverable number/name	**S2R TD/WA addressed**	**Link to Exploitation Plan**
D2.1: Desk-Research Analysis and Identification of SA and Training Tools	T2.1	This deliverable includes the outcomes of the state-of-the-art review and desk research and reflect the outcomes of task T2.1. It is a baseline for further technological design decisions.
D2.2: User Requirements Specification	T2.2	A traceability matrix was initiated in order to match the User Requirements gathered with the different systems modules developed and ensuring the accomplishment of the user requirements.
D2.3: ASSISTANCE Reference Scenarios and Pilot Experiments specifications	T2.3	This deliverable describes the considered reference scenarios and also the proposed pilot demonstrations to be performed in WP7.
D2.4: ASSISTANCE System and Network Architecture Design	T2.4	This deliverable utilizes input from T2.2 and T2.3 and provides the system and network architecture specification and the ASSISTANCE functional system design. It also provides a set of use cases and their mapping to gathered end user requirements.

Milestone number/name	**Submission date vs planned**	**2 lines Milestone description / and reasons for delay (if applicable)**
MS1 User requirements gathered	Submitted M6 Planned M6	All project user requirements have been gathered and prioritized in a comprehensive set.

MS2 System architecture released	Submitted M6 Planned M6	The system architecture has been designed according to the system requirements gathered in WP2.

2.2.3 WP3: Sensor abstraction service (SAS)

The main objective of this WP3 is to design and develop a Sensor Abstraction Service (SAS) whose main function is to meet the communication and data integration needs of ASSISTANCE project. SAS will provide the means to interface each one of the modules and the information exchange technologies specifications to achieve full interoperability among all ASSISTANCE modules.

2.2.3.1 *Involved Beneficiaries*

ETRA, UPVLC, THALES, PIAP, FADA-CATEC, TNO, VIASAT CH

2.2.3.2 *Objectives of this WP for the first year (01/05/2019 – 30/04/2020)*

- Objective 1: Definition of the information and data models and the specification of the system interfaces (Task3.1).
- Objective 2: Implement the interfaces defined in task 3.1 (Task 3.2).
- Objective 3: Designing a telecommunication architecture (Task 3.3).

2.2.3.3 *Summary of progress towards objectives and details for each task for the first year (01/05/2019 – 30/04/2020)*

Task 3.1 Sensor Abstraction Service Adapted Interfaces Definition. (M7-M11) Leader: ETRA.

Contributors: UPVLC, THALES, TNO, PIAP, CATEC.

Overall Work progress for the task: This task is finished and submitted at due time. The purpose was to define the data model/information exchange among all modules and devices of the overall ASSISTANCE system. The software interfaces described in this deliverable have been agreed with all technical partners involved in each of the modules that composed ASSISTANCE.

The results have been compiled in the deliverable D3.1, already provided.

- **Specific contribution from Beneficiary 1**: ETRA- Leadership of task 3.1, editing of deliverable D3.1 and major contribution describing all data connections.
- **Specific contribution from Beneficiary 2**: UPVLC, THALES, TNO, PIAP, CATEC- Support to task leader.
- **Specific contribution from Beneficiary 3:** OSPOM, E-LEX- Reviewers of the deliverable

Task 3.2 Sensor Abstraction Service Adapted Interfaces Implementation. (M10-M17) Leader: ETRA.

Contributors: UPVLC, TNO, PIAP, CATEC

Overall Work progress for the task: This task has started on M10 and is still ongoing. This task will implement the interfaces defined in task 3.1 that will allow the different

components of ASSISTANCE architecture to communicate and share a common data model. The main development descriptions and functional tests will be part of the deliverable D3.2.

Task 3.3 Robust Mobile Communications. (M10-M17) Leader: VAS.

Contributors: UPVLC

Overall Work progress for the task: This task has started on M10 and is still ongoing. This task is consisting in designing a telecommunication architecture based primarily on information security, data privacy and cybercrime risk reduction, identifying proper telecommunication equipment that respond to the security needs identified in the project, defining the procurement plan for network equipment and implementing the solution as identified by the project.

2.2.3.4 *Deliverables and milestones planned for the period in this WP*

Deliverable number/name	**S2R TD/WA addressed**	**Link to Exploitation Plan**
D3.1 Sensor Abstraction Service Adapted Interfaces Definition	Task 3.1	This deliverable is based on D2.4 architecture in order to give access to each module to the necessary data according to the information exchanges described in D2.4. This document is linked with the *D3.2-Sensor Abstraction Service Implementation* where it will be explained the development and implementation of all the interfaces described in the D3.1

2.2.4 WP4: Unmanned platforms & wearable sensors

WP4 focuses on unmanned platforms management and adaptation. These innovative platforms will replace humans for accessing the dangerous zones and will provide valuable information through the sensors integrated for increasing the SA and further planning.

2.2.4.1 *Involved Beneficiaries*

PIAP, UPVLC, THALES, AVSRE, FADA-CATEC, TNO, VIASAT CH, CNBOP-PIB

2.2.4.2 *Objectives of this WP for the first year (01/05/2019 – 30/04/2020)*

- Objective 1: to select and adapt the most suitable platforms to meet the requirements and be ready to host additional devices, e.g. chosen sensors.
- Objective 2: to design means for platforms' control devices to provide the pass-through for the information necessary for the SA.
- Objective 3: to propose solution considering a modular approach and interoperability of payload

2.2.4.3 *Summary of progress towards objectives and details for each task for the first year (01/05/2019 – 30/04/2020)*

Task 4.1 Unmanned Platforms Selection & Adaptation (M7-M13)

Contributors: *CATEC, PIAP, VAS, CNBOP*

Overall Work progress for the task: 80% completed, during this task the selection and adaptation of aerial unmanned platform (CATEC) and the ground unmanned platforms (PIAP) according to the selected sensors that will be integrated has been performed. Description of adaptations and modifications in the unmanned platforms to fulfil the requirements, the selected sensors characteristics (e.g. size, weight, etc) and the operational scenarios defined in WP2.

- **Specific contribution from CATEC**: Selection and adaptation of aerial unmanned platform. Leading and coordination of the task and the deliverable D4.1
- **Specific contribution from PIAP**: Selection and adaptation of ground unmanned platform.
- **Specific contribution from CNBOP:** Selection of own sensors (Atmosphere quality sensors) for being installed in the unmanned platforms.
- **Specific contribution from VAS:** Discussing the network characteristics for transmitting the information from sensors integrated in unmanned platforms

Task 4.4: Wearable Sensors Integration. (M10-M21)

Contributors: UPVLC, TNO, VAS

Overall Work progress for the task: This task has been active for the last two months and therefore only the 15% of the task has been executed so far. UPVLC has started to select the wearable sensors more suitable for being integrated in the SAP and provide information from the FRs deployed on field such as; vital signs, temperature and video flows. The next steps will be to acquire some of these sensors and integrate them for providing the information to the FRs in the formats they have selected.

Specific contribution from UPVLC: Leading, coordination and development of the solution of the task.

Specific contribution from TNO: no contributions at this stage of the task

Specific contribution from VAS: no contributions at this stage of the task

Task 4.5: Drones' advanced capabilities (M10-M21)

Contributors: *CATEC*

Overall Work progress for the task: This task has been active for the last 2 months. Therefore the 20% of the task has been completed so far. Preliminary designs for both the captor drone and the swarm application. Some work is being done regarding:

- Efficient trajectory generation for aerial interception
- Optimization of network coverage with a swarm of drones

Specific contribution from CATEC: Leading, coordination and development of the solution of the task.

2.2.4.4 *Deliverables and milestones planned for the period in this WP*

Deliverable number/name	S2R TD/WA addressed	Link to Exploitation Plan
N/A		

2.2.5 WP5: Adapted Situation awareness & communications

2.2.5.1 *Involved Beneficiaries*

UPVLC, ETRA, THALES, PIAP, TNO, UC, VAS

2.2.5.2 *Objectives of this WP for the first year (01/05/2019 – 30/04/2020)*

The main objectives of this work package will be the following:

- To develop innovative SA capabilities/modules that could be integrated in the selected SA platform in order to provide FRs new tools for performing their work in a more secure and efficient manner according to their needs expressed during the proposal preparation.
- To integrate all the new capabilities/modules developed in a complete SA platform adjusted to the information needs of each type of FRs' organization.
- To integrate and visualize, according to the profile of each FRs organization, the information provided by all sensors deployed on field (mounted on unmanned platforms or on the FR personal equipment) through the SAS.
- To provide robust network infrastructure based on innovative mobile and SAT on the move technologies to all FRs organization that cooperate during the mitigation of a big disaster.

2.2.5.3 *Summary of progress towards objectives and details for each task for the first year (01/05/2019 – 30/04/2020)*

Task 5.1 ASSISTANCE SA platform adaptation. (M8-M16)

Contributors: Leader: UPVLC. Participants: ETRA, PIAP

Overall Work progress for the task: The task is in the middle of its life cycle and all developments are going according to the scheduled. The GESTOP system core and its pre-existing modules are being adapted for providing new services and different information visualization according to the profile of the FR units connected (e.g. Firefighters, health emergency services or police officers). On the other hand, different kind of interfaces are being developed by different partners for finishing the adaptation of the final Situation Awareness Platforms (SAP).

- UPVLC is performing all development tasks for adapting the GESTOP core, the pre-existing modules and providing different visualizations modes.
- ETRA is preparing the necessary interfaces with the SAP in order to integrate correctly all new modules and sensors. This interface preparation is in line with T3.1 and T3.2 where the final interfaces will be designed and developed.
- PIAP is preparing the necessary interfaces for integrating the UGV in the SAP environment.

Task 5.2 SA advanced modules development. (M8-M21)

Contributors: Leader: ETRA. Participants: UPVLC, TNO, PIAP, UC.

Overall Work progress for the task: The task is in the first part of its life cycle and all developments have been started according to the scheduled.

During this task, the new modules to be integrated with the SAP will be developed and/or adapted for forming part of the overall ASSISTANCE system and provide new capabilities for the FRs. Each of these new modules will be developed under a single sub-task. The subtasks that compose T5.2 are the following:

Sub-Task 5.2.1 Augmented Video Fusion. Leader UPVLC

UPVLC has started the development of this module as scheduled. Nevertheless, at the moment of writing this report the initial test with real data from the UAVs needed for continuing with the developments cannot be performed due to the COVID-19 situation in Spain. CATEC cannot perform flight tests with its UAVs, since the company facilities are closed and therefore the necessary data for testing the module capabilities cannot be obtained until the situation was normalized. UPVLC and CATEC will try to speed up the testing process in order to avoid a delay in the whole subtask.

Sub-Task 5.2.2 CBRN Hazard Evolution. Leader TNO

Regarding the hazard module, a stepwise approach has been chosen, with first an initial implementation of a basic dispersion model for hazard prediction, and stepwise refining of the model. In the period M8-M12, TNO has implemented the initial dispersion hazard model and first improvements of the performance have been done. Furthermore, real-time weather (wind) information has been added to the model, refining it further. A REST service to query the model has been added, as has a Kafka interface, including AVRO-based messages. The model has been linked to a new web-based GUI. Furthermore, a literature research has been executed regarding the visualization of uncertainty for cloud prediction. First steps have been done to set up an evaluation of different visualization types to determine which kind of visualization best supports first responders in understanding the implications of the visualization. TNO has further started to integrate the inherent uncertainty of (for example) the source of the hazard, the source location and other information into the model. This is an ongoing effort.

Sub-Task 5.2.3 Damaged Assets Location. Leader ETRA, participant UC

(30%) The work carried out in the period regarding to M8-M12 starts from an extensive bibliographic analysis studding possible evacuation protocols against different types of catastrophes as well as the studies regarding to the pre-existing models related with this topic. Starting from the basis and considering the possible application in any kind of scenario, a pedestrian/vehicular approach is proposed. This approach is analysed

separately being able to work together as a mixed model. For the pedestrian model a flow approach is selected where pedestrians are characterized following distributions of their main variables (speed, pre-movement time and distance) according to previous studies under real conditions. Otherwise vehicular model is implemented as a cellular automata that updates the current traffic status each fixed period of time until the end of the evacuation. In parallel, to validate these evacuation models and to carry out a preliminary implementation of the routing system for FRs avoiding damaged assets, a test routing service is being used to verify the correct operation of these models

Sub-Task 5.2.4 Portable SA platform. Leader UPVLC, participant PIAP

UPVLC has started the adaptation of the main SAP for being run in mobile devices like rugged tablets. This adaptation implies to review some of the interfaces and PIAP is adapting the UGV interfaces to the mobile device. This subtask has not any delay at the moment of writing this report and all its activities are under the schedule.

Specific Contributions:

- UPVLC is performing all necessary developments for implementing both augmented video fusion module and the portable SA platform as described above.
- ETRA is leading the task and developing the damaged assets location and routing module as described previously
- PIAP is preparing the necessary interfaces for integrating the UGV in the mobile SAP environment.
- UC is working along with ETRA in de developments of the damaged assets location and routing module as scheduled in the DoA.
- TNO is developing the CBRN hazard evolution module as described above and under the schedule.

2.2.5.4 *Deliverables and milestones planned for the period in this WP*

Deliverable number/name	**S2R TD/WA addressed**	**Link to Exploitation Plan**
NONE		

2.2.6 WP6: Advanced training network based on virtual and augmented reality

This WP is in charge of establishing a training network between the ASSISTANCE partners based on virtual and mixed reality tools

2.2.6.1 *Involved Beneficiaries*

IFV, UPVLC, RISE,CNBOP,AAHD

2.2.6.2 *Objectives of this WP for the first year (01/05/2019 – 30/04/2020)*

The objective of WP 6 is to establish the core of an advanced training network based on virtual reality and/or mixed reality, which includes recognized FRs training institutions that form part of ASSISTANCE consortium along with a set of training curricula tailored to the needs of the different types of first responders.

In order to achieve this objective WP6 has the following operational objectives:

- To develop training methodologies and defining evaluation criteria (WP 6.1 M1-M7)
- To develop training curricula and scheduling (WP 6.2 M7-M12)
- To develop training scenarios and setup of VR platforms (WP 6.3 M12-M23)
- To establish the training network and pilot's evaluation (M23-M34)

2.2.6.3 *Summary of progress towards objectives and details for each task for the first year (01/05/2019 – 30/04/2020)*

Task 6.1: Training methodology and evaluation criteria definition (M1—M7)

Contributors: IFV, UPLVC, RISE, CNBOP, AAHD.

Overall Work progress for the task:

This task has been completed within schedule. Desk research has been conducted, questionnaires were composed and filled in by over 200 first responders. Based on the research and results of the questionnaires the most suitable training methodology and evaluation criteria have been defined.

All contributors worked closely together and provided the requested contributions to IFV as task leader.

Task 6.2: Training curricula development and scheduling (M7-M12)

Contributors: AAHD, UPVLC, RISE, IFV, CNBOP

Overall Work progress for the task:

Training methodology derived from D6.1 has been applied for T6.2 Training curricula development and scheduling.

Training Curriculum defined and Training Curriculum Step by Step Approach discussed with the partners. The key terms' "subject", "objective", "prerequisite" and "scheduling" has been clearly defined. The content of the curriculum has been divided into 8 subjects. An online training platform (Moodle platform) provided by UPVLC has been set up for

uploading the contents of the first four subjects. The partners entered the content which is in their responsibility to the Moodle platform.

The subjects and their general and specific objectives as well as their preferred evaluation method has been described. The learning objectives have been met for the consequent steps of the curriculum. Additionally, each subjects and objectives prerequisites have been also addressed. Finally, each subject includes a mentor that serves as subject specialist. On the other hand; the evaluation criteria identified.

The ASSISTANCE Training curricula is composed by the following subjects:

- Subject/Course 1 Background Knowledge
- Subject/Course 2 ASSISTANCE Virtual Reality Platforms
- Subject/Course 3 ASSISTANCE Virtual Reality Platforms Usage
- Subject/Course 4 ASSISTANCE Virtual Reality Scenarios
- Subject/Course 5 ASSISTANCE Simple Virtual Reality Scenarios
- Subject/Course 6 ASSISTANCE Turkish Pilot Virtual Reality Scenarios
- Subject/Course 7 ASSISTANCE Dutch Pilot Virtual Reality Scenarios
- Subject/Course 8 ASSISTANCE Spanish Pilot Virtual Reality Scenarios

Specific contribution from AAHD: Preparing the ToC and production of D6.2 and also Subject 1

Specific contribution from UPVLC: Providing Moodle Platform, Subject 2 responsible and also preparing Subject Evaluation Criteria for UPVLC platform. UPVLC as coordinators has supported AAHD in D6.2 preparation.

Specific contribution from RISE: Subject 4 and preparing Subject Evaluation Criteria.

Specific contribution from IFV: All subjects review, subject 4 production and also preparing Subject Evaluation Criteria for IFV platform

Specific contribution from CNBOP: Subject 3 production and advice as end user.

2.2.6.4 *Deliverables and milestones planned for the period in this WP*

Deliverable number/name	**S2R TD/WA addressed**	**Link to Exploitation Plan**
D6.1 Training methodology and evaluation criteria definition	T6.1	D6.1 is the base structure for development of the remaining D6 Deliverables
D6.2 Training curricula development and scheduling	T6.2	D6.2 describe the training path that project end user will follow for using the available VR platforms for testing new virtual scenarios

2.2.7 WP8: Gender, ethical, societal and legal issues

2.2.7.1 *Involved Beneficiaries*

UC, E-Lex, PIAP, RISE, CEL

2.2.7.2 *Objectives of this WP for the first year (01/05/2019 – 30/04/2020)*

- Objective 1: To provide privacy and data protection recommendations for the project outcomes and monitoring ASSISTANCE tasks through a Privacy Impact Assessment (PIA). Related to Tasks 8.1 and 8.2.
- Objective 2: To analyze legal and ethical aspects related to ASSISTANCE tools and development. Related to Task 8.3.
- Objective 3: To demonstrate the important role that human factors (societal aspects and gender dimension) play in innovation for disaster resilient-societies. Related to Tasks 8.4 and 8.5.

2.2.7.3 *Summary of progress towards objectives and details for each task for the first year (01/05/2019 – 30/04/2020)*

Task 8.1: Project Ethical Monitoring (M1–M36)

Contributors: E-LEX, UC, PIAP, CEL

Overall Work progress for the task (percentage estimation 65%):

The main aim of this task is to investigate and illustrate the procedures and protocols necessary for handling legal and ethical issues during the whole project research process. It will also monitor the impacts of the ASSISTANCE project that will develop on ethical, privacy and data protection aspects, in order to support the project management in ensuring the project quality and the project partners in case of procedures as for the EU data protection legal framework.

During this first period the task also has been directed to provide support and fulfilment to WP10 deliverables concerning personal data protection.

Specific contribution from E-LEX: E-Lex drafts, in the ***D8.1 – Report on the Relevant Legal EU Framework and Assessment of the Ethical Impact***, four paragraphs concerning the relevant EU legal framework regarding the General Data Protection Regulation (GDPR) and the EU Regulation on drones, focusing to both the project research process and the project outcomes. E-Lex, whit the collaboration of CEL, has conceived an original method to conduct an impact assessment process involving, at the same time, the ethical and legal aspect of the project (ALTHEIA) that will be used in the final stage of the project.

Specific contribution from E-LEX: E-LEX has redacted the Privacy Policy for the website of the project.

Specific contribution from UC: Contribution within the development of the Information Sheets and the Informed Consent Forms.

Specific contribution from PIAP: Participation in discussions and inputs to ethics related deliverables (including WP10 deliveries).

Specific contribution from CEL: Two sections on ethics in the deliverable ***D8.1 – Report on the Relevant Legal EU Framework and Assessment of the Ethical Impact***. A first paragraph to describe the most significant EU framework acting as value-based backgrounds of the ethical analysis as well as evaluation that will be led during the entire WP8. A second paragraph for outlining the different theoretical kinds of approach for evaluating and assessing ethics concerns in a project like ASSISTANCE. In the final section of the deliverable, CEL has contributed to shape the conceptual background of a unique method of ethics and legal impact assessment (ALETHEIA) to be used later on in the final stages of the project.

Task 8.2: Privacy and Data Protection (M1–M36)

Contributors: E-LEX, UC, CEL

Overall Work progress for the task (percentage estimation 33%):

This task, starting from the legal EU framework pointed out in the D.8.1, has the purpose to indicate the best practices, guidelines and processes relevant to the project related to the Fundamental Rights, Privacy and Data Protection.

The main aim of the task is to issue some recommendations for software and technology developers, enabling the data protection, privacy and adoption of Privacy by Default and Privacy by Design approaches, as well as technical and organisational measures to protect personal data as defined by the new EU GDPR. In the reporting period, the work of the task is to monitor the developing process of the pilot particularly whit regard of the selected technologies and their impact on the personal data process.

- **Specific contribution from E-LEX**: Monitoring the developing process of the pilots to provide and support the partner managing personal data. E-Lex has provided a LOI and a questionnaire regarding the personal data process that will be submitted to each partner with the purpose to monitor the process of personal data during the pilots.
- **Specific contribution from UC:** Participation in the definition of ASSISTANCE approach to the personal data processing procedures and consents to be provided.
- **Specific contribution from CEL:** Discussions and document analysis.

Task 8.3: Ethical issues and Fundamental Rights Accomplishment (M1–M36)

Contributors: CEL, E-LEX, UC, PIAP

Overall Work progress for the task:

The task aims to analyze the most important human rights involved in the DRS operations and assessing the ethics impact of the project technological platform on the affected community in terms of rights.

Since this task has not an own deliverable, the involved research action has been initially focused on the definition and clarification of some open ethical issues in relation to D8.1, specifically, in relation to the outlining of the different theoretical approaches for evaluating and assessing ethical and human rights issues in ASSISTANCE.

Another important support of the task has been directed to provide feedbacks to WP10 deliverables, on all those parts concerning the ethics and fundamental rights accomplishment.

After the submission of the D8.1 and WP10 deliverables, CEL has designed an ethics checklist, a tool that would be adopted with two main functions:

- Self-assessment tool: the checklist will be a sort of *vademecum* for the pilots' responsible partners to make sure that all most important ethics aspects have been appropriately considered during the phases of design and deployment of the pilots.
- Monitoring tool: the answers of the pilots' leaders will constitute a further evidence for the monitoring process that social scientists should perform in WP8.

In a dedicated telco between CEL and UC of March 2020, the two partners have decided to adopt the checklist approach, proposed by CEL, as integrate method to assess any societal aspect of the project (see D8.4).

- **On the basis of the current stage, the percentage estimation of the task is: 33%**
- **Specific contribution from CEL:** Some contributions on D8.1. The definition of a checklist as ethics monitoring tool to be adapted by researchers and pilot leaders to measure the compliance between the deployment of the ASSISTANCE demonstrations and the EU ethics frameworks.
- **Specific contribution from E-LEX**: Collaboration whit the revision of the checklist to be delivered to Partners involved in pilots to provide the compliance to GDPR.
- **Specific contribution from UC**: Collaboration with the revision of the procedures and criteria to identify/recruit participants following ethical and human rights principles. Collaboration within the creation of the checklist to be delivered to pilot leaders.
- **Specific contribution from PIAP:** Discussions and documents analysis.

Task 8.4: Societal Aspects (M1–M36)

Contributors: UC, PIAP

Overall Work progress for the task (percentage estimation 33%). The work carried out in the reporting period has focused on defining a tailored Societal Impact Assessment approach to address the following three main perspectives:

- Project (needs, potential benefits and negative impacts):

A literature review on societal impact approaches (specially related to safety & security and technology) was carried out to gain a good understanding of previous developments for the definition of Societal Impact Assessment methodology.

A Delphi process (2 Rounds) involving a panel of partners (n=26; 77% male and 23% female) was conducted. They were asked through online questionnaires for rating (from 1 to 6) a number of societal indicators/needs potentially covered by the project (n=56) divided into eight categories: “Health and Safety”, “First Responders Organization”, “Training”, “Society”, “Culture”, “Political”, “Research and Innovation” and “Economy”. Median scores, percentages of higher scores and IQR (interquartile range) were used to prioritize the societal indicators/needs.

- First Responders (perspectives when adopting ASSISTANCE technologies):

A Toolkit to integrate, monitor and evaluate societal aspects during the Pilot Demonstrations (PDs) and advance Training Workshops (TWs) was defined. The toolkit is integrated by three tools: 1) Self-assessment tool (to address non-technical issues when planning PDs and TWs), 2) Monitoring tool (methods and techniques to observe participants and acquire data during the PDs and TWs) and 3) Evaluation tool (a tool to assess and report non-technical aspects after PDs and TWs).

- Citizens (perception and attitudes towards safety and security):

A pre-test questionnaire on citizens attitudes towards disasters and First Responders roles/actions (54 participants; female 29; male 25) was conducted and data was processed statistically. A survey company is going to be hired to extend this questionnaire to citizens (>250) to achieve the specific KPI in the DoA.

Specific contribution from UC:

- Literature review on societal impact approaches.
- Conducting the Delphi process.
- Design of the toolkit to analyze societal aspects for First Responders.
- Conducting the pre-test questionnaire on citizens perception.
- Coordination with partners.

Specific contribution from PIAP: Participation in research discussions and the definition of Societal Impact Assessment approaches.

Task 8.5: Gender Dimension (M1–M36)

Contributors: UC, RISE, PIAP

Overall Work progress for the task (percentage estimation 33%): The work carried out in this reporting period has focused on defining the methodology, based on a detailed review of the state of the art, to integrate gender dimension and guide gender research within the ASSISTANCE project.

A literature review (102 references) focused on research methods and gender in First Responders was conducted. This process allowed a comprehensive analysis of 1) the current situation of women as First Responders (e.g. female proportions and current initiatives to reduce the gender gaps), 2) the implications of sex/gender diversity in first responding jobs, 3) the gender issues for protecting female first responders and 4) the relation between gender and new technologies in disaster response.

A general methodology to conduct gender analysis in the ASSISTANCE project was defined. It consists of five steps:

1) Setting objectives,

2) Identifying target groups/participants,

3) Setting methods:

- Method 1.- Research planning,
- Method 2.- Participatory research,
- Method 3.- Engineering innovation process,
- Method 4.- Other factors and
- Method 5.- Gender monitoring

4) Data collection techniques (survey research, interviews/focus groups and computer-based experiments) and 5) Case studies (a case study was carried out to compare women's and men's attitudes towards potential disasters at local, national and European levels).

Specific contribution from UC:

- Literature review on gender research and gender in First Responders.
- Definition of the methodology and research plan.
- Case study on gender in perception and attitudes towards disasters.
- Elaboration of D8.2 Progress Report on Gender Dimension Strategy (GDS).
- Circulation among consortium of instructions and references for inclusive language in the project developments (i.e. Deliverables, graphs, etc.).
- Coordination with partners.

Specific contribution from PIAP: Participation in research discussions and gender research planning. Support and collaboration in research activities and additional review of D8.2. Understanding the aspects limiting the admission and wellbeing of women to the Fire Services in the Nordic Countries. This information has not been included in D8.2 but will be reported in the future.

Specific contribution from RISE:

- Participation in research discussions and gender research planning.
- Support and collaboration in research activities and additional review of D8.2.

- Understanding the aspects limiting the admission and wellbeing of women to the Fire Services in the Nordic Countries. This information has not been included in D8.2 but will be reported in the future.

2.2.7.4 *Deliverables and milestones planned for the period in this WP*

Deliverable number/name	**S2R TD/WA addressed**	**Link to Exploitation Plan**
D8.1 Report on the relevant legal EU framework and assessment of the ethical impact	*TD8.1 – Task 8.1*	*This deliverable consists in a report which frames the most relevant legal EU framework and outlines the most adaptable approaches and methods for assessing the legal and ethical impact of ASSISTANCE. It is the starting point for the further analysis which will be done over all the project research and its outcome, which will be pointed out in the D8.5 (M28)*
D8.2 "Progress Report on Gender Dimension Strategy (GDS)"	*TD8.2 - Task 8.5*	*This document presents an overall methodology to integrate and conduct gender research in the project. It also constitutes a solid starting point to conduct further research and consolidate D8.4 Gender Dimension Strategy Guideline (M24).*

2.2.8 WP9: Exploitation and dissemination

WP9 is dealing with exploitation and IP management activities, dissemination and communication activities, standardization and potential commercialization of the ASSISTANCE.

The overall objective of this WP is to maximise the impact of the project through:

- Formulation of a combined exploitation plan including individual exploitation plans, and road map to take the system concept to the market
- Development and implementation of a business plan to commercialise the results and take the system concept to market with exploitation partners within 2 years of the project end
- Management of IPR including building on background and the protection of foreground IPR
- Provision of inputs to standards & policy development, together with selection and adoption of appropriate standards to enhance exploitation potential
- Dissemination to the scientific and technical community, the media and the public on advances beyond the state of the art
- Targeted dissemination of key results and prototype demonstrations to policy makers, potential exploitation partners and end-user customers, to encourage partnerships to help take the results to global markets and encourage customer demand for this type of system

2.2.8.1 *Involved Beneficiaries*

The whole consortium is involved in this WP

2.2.8.2 *Objectives of this WP for the first year (01/05/2019 – 30/04/2020)*

During the first year of the project only task 9.2 has been active and its main objectives has been as follows.

- Objective 1: To create the project Website: PIAP (D9.1)
- Objective 2: To update Exploitation and dissemination plan D9.2 ETRA
- Objective 3: To promote all dissemination activities as possible for increasing the project impact.
- Objective 4: Continuous market analysis: VAS

2.2.8.3 *Summary of progress towards objectives and details for each task for the first year (01/05/2019 – 30/04/2020)*

Task 9.1 Exploitation and IP Management (M12-M36) Leader: ETRA.

Contributors: UPVLC, THALES, TNO, PIAP, CATEC, RISE, E-LEX, VAS, CEL

Overall Work progress for the task:

Even though this task starts just after the reporting period covered by this deliverable, some work has been advanced and the consortium considers necessary to include this work in this reporting period and therefore in this document.
The role of this task is to:

- Review and protect the project's technical advances and IP to allow potential for exploitation to be explored;
- Create and exploit routes to market for the project outputs through individual partner exploitation plans and an overall system exploitation plan as well as a roadmap to take the project outputs to the market (as presented in Deliverable D9.2 Updated Exploitation and Dissemination Plan submitted in Month 12).
- Undertake targeted dissemination of key results and prototype demonstrations to policy makers, potential exploitation partners and end-user customers, to encourage partnerships to help take the results to market.

A screening process has been developed to protect key technical advances and resulting IP produced by the project partners which have potential commercial value, and to also ensure that security requirements are met. Any reports and presentations that might impact on partner IP and commercialisation are screened by other consortium members. The IP management is being co-ordinated with Task T1.5 (Innovation Management).
Specific contribution from ETRA: To produce D9.2 whose content could be divided into T9.2 and early T9.1 activities.
Specific contribution from the rest of the partners participants: To contribute to D9.2 production and review, since no additional activities have been performed due to the early stage of T9.1

Task 9.2: Dissemination and Communication of Project Results (M1-M36) Leader: PIAP.
Participants: ALL partners

Overall Work progress for the task:

The role of this task is to update and implement the dissemination plan for communicating and promoting the project and its findings.
During the period the task 9.2 progressed with the performance of the following actions:

- creation of the professional visual identity, covering the project logo, templates for presentations other dissemination materials
- launch of the project public website (delivery of D9.1) which includes general information about the project, its objectives and partners as well as other material, which may be generally distributed
- establishment of the project electronic document repository that serves internal communication and information exchange between the partners

- launch of the project social media accounts (Twitter, LinkedIn) that include updates about the most important news and events related to the project
- preparation of the dissemination/advertising materials of a high quality and in a standardised format, i.e.. project leaflet, poster, roll-up (first versions for self-print) to be distributed at meetings and events
- preparation and management of the Communication & dissemination activities collector sheet that serves better coordination and reporting of the various communication and dissemination efforts of different partners
- numerous communication and dissemination activities performed by project partners, such as:
    - delivery of 1 research paper for 17th ISCRAM Conference (paper accepted for publication in the proceedings, the conference is postponed to 2021 due to COVID-19 situation)
    - 2 posters presentation at conferences (ITEC 2019 conference & MSB Seminar, Skadeplats 2019)
    - attendance at 4 trade fairs/industry shows with stand and/or leaflet distribution (Global Robot Expo 2019; DroneTech WorldMeeting 2019; Droniada 2019; S-moving 2019)
    - 10 project presentations at various events and meetings (e.g. Milipol 2019; 12. National Trauma Congress Turkey, 6. International Earthquake Symposium Turkey, Vision Zero Summit 2019, 3. International-21. National Public Health Congress, 6th IPRED International Conference on Preparedness&Response to Emergencies&Disasters)
    - 33 Internet/social media activities – Tweets, posts or news items on project website and partners websites/social media accounts
    - organisation and/or participation in 11 workshops (e.g. International Workshop on Data Protection and Security in Emergency Situations, International Medical Congress; 4th Next Generation Technologies in Emergency Services, workshops with end-users during Droniada 2019; local workshops with firefighters; participation in an exchange of experts meeting for fire fighter's tactic)
    - liaison with other research initiatives (e.g. meeting with other DRS-02 projects during the Mediterranean Security Event 2019, meeting with technical coordinator and project director of Driver+ project, project presentation during the INGENIOUS project KoM)
    - publication of an interview with a team member about the project at the University of Cantabria YouTube Channel

Specific contribution from the partners participants: To contribute to the overall project dissemination and communication activities as described above.

2.2.8.4 *Deliverables and milestones planned for the period in this WP*

Deliverable number/name	**S2R TD/WA addressed**	**Link to Exploitation Plan**
D9.1 Project website	T9.1	NA
D9.2 Updated Exploitation and Dissemination plan	T9.2	This deliverable will put the basis for the exploitation of the project reports at the end of the project life cycle.

2.2.9 WP10: Ethics requirements

This WP was introduced by the EC during the GA preparation phase for dealing with the potential ethical issues that the project should address. This WP was composed by 11 deliverables which should be submitted in month 3 and month 6

2.2.9.1 *Involved Beneficiaries*

UPVLC, E-LEX, CEL, UC, PIAP

2.2.9.2 *Objectives of this WP for the first year (01/05/2019 – 30/04/2020)*

To have into account the potential ethical issues stated in the deliverables
To submit all deliverables established by the EC on time

2.2.9.3 *Summary of progress towards objectives and details for each task for the first year (01/05/2019 – 30/04/2020)*

The partners involved performed all necessary meetings and research in order to complete all deliverables required on time. No tasks were described for WP10 only the deliverables expected content was described in the GA. Thus, the partners involved performing the following activities during the 6 months duration of WP10.

It is important to note that no effort was associated to this WP and that the activities performed were undertaken with the own resources of each partner participant.

Specific contribution from UPV: to produce D10.3, D10.6 and participate in the production of D10.7. UPVLC also coordinate all activities related to D10 and submitted all deliverables on time.

Specific contribution from CEL: to produce D10.1, D10.10 and participate in the production of both D10.7 and D10.11.

Specific contribution from E-LEX: to produce D10.4 and participate in the production of D10.11.

Specific contribution from PIAP: to produce D10.5 and D10.9

Specific contribution from UC: to produce D10.2 and D10.8

2.2.9.4 *Deliverables and milestones planned for the period in this WP*

Deliverable number/name	S2R TD/WA addressed	Link to Exploitation Plan
D10.1	WP10	NA
D10.2	WP10	NA
D10.3	WP10	NA
D10.4	WP10	NA

D10.5	WP10	NA
D10.6	WP10	NA
D10.7	WP10	NA
D10.8	WP10	NA
D10.9	WP10	NA
D10.10	WP10	NA
D10.11	WP10	NA

2.3 Status Collaboration Agreement/s

The ASSISTANCE consortium form part of a collaboration/clustering initiative performed by the 4 selected projects in the DRS02 topic of the 2018 SEC call. The coordinator has participated in several events organized for this purpose where all projects have been presented to different audiences, including other projects end users, in order to give an overall idea on the developments undertaken in each project to the other consortiums.

This way once the different developments of each project were more advanced the different consortiums will check for potential synergies and/or complementarities among them and even potential shared exercises.

2.4 Impact

All the activities performed during the first year have contributed to the accomplishment of the first main impact of the project:

Novel tools, technologies, guidelines and methods aimed at facilitating their operations.

The technologies and developments performed in ASSISTANCE for increasing the FRs Situation Awareness will have a large impact in the future FRs operations, since all of them pay attention to their real needs and preferences in terms of information and sensors integration.

In addition, the consortium counts with several partner experts in FRs training in their own countries that will form the first European training network for FRs. This innovative training network will provide new methodologies for increasing the knowledge acquisition along with different tailored curricula adapted to the training needs of the different FRs organizations participants in the project.

This advanced training approach along with the innovative SA capabilities developed in ASSISTANCE will have a huge impact in the FRs operations due to the fact that all of them will be developed specifically for increasing their protection and efficiency and are based on real needs expressed by the end users of ASSISTANCE.

3 Update of the plan for exploitation and dissemination of result (if applicable)

The update of the exploitation and dissemination plan has been performed at the end of the first year of the project and it is described in D9.2 submitted in month 12.

4 Update of the Data Management Plan (if applicable)

NA

5 Follow-up of recommendations and comments from previous review(s) (if applicable)

NA

6 Deviations from DoA (if applicable)

No deviations have been detected during the reporting period. Nevertheless, if the COVID-19 pandemic confinement situation continues, some of the project developments could have a delay due to the lack of necessary data for testing the modules (e.g. real video files from drones including drone telemetry for testing the video fusion module). This data cannot be obtained due to CATEC facilities for flying drones are currently closed for the pandemic restrictions.

6.1 Tasks

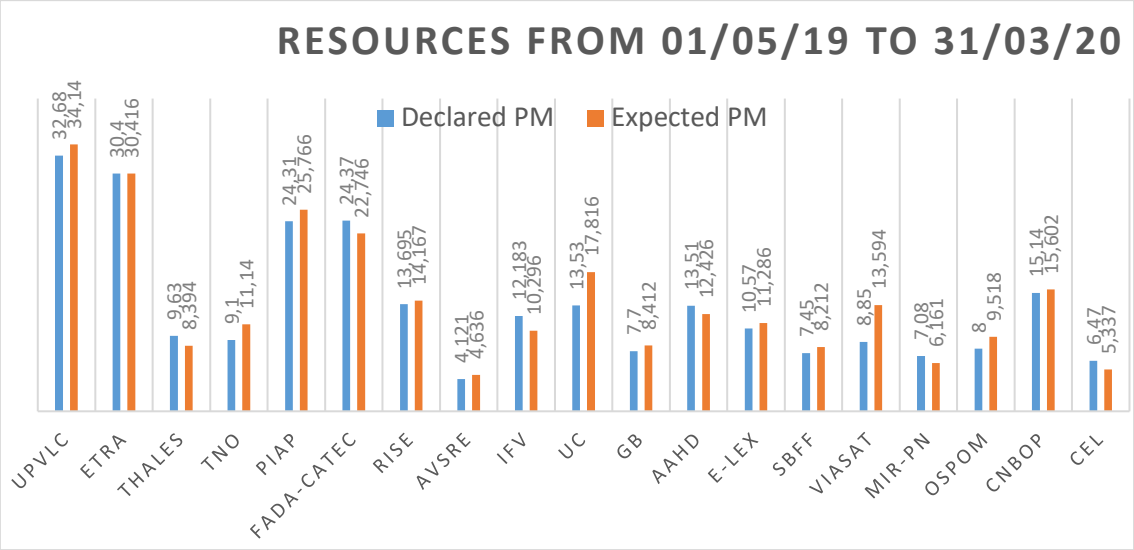
NA during the reporting period.

Deviation ref. number	WP & Task Nb	Description	Reason	Impact on the use of resources, allocation of PM etc.	Impact on the planning	Impact on other tasks	Impact on S2R TD/WA addressed	Mitigation action and deadline
1								
2								
3								
…								

6.2 Use of resources

The use of resources stated in this document covers the period from 01/05/19 to 31/03/20, since the deliverable has to be submitted at the end of April 2020 and therefore there is no time for updating the use of the resources to the whole first year of the project.

In the following graph is described the current resources reported by the partners through four QRs (See blue columns) against the expected manpower for each partner until 31/03/20 (See orange columns).



It is important to note, that the expected manpower calculation is not exact, since the coordinator has tried to estimate this expected manpower according to the time that each WP is active. This fact can introduce some error, since not all partners have manpower in all tasks of a WP and not all tasks in some WPs are active, but this calculation gives a quite acceptable vision of what is the general manpower expected, although as has been stated before, in some cases can introduce short deviations for some partners.

The general use of the resources for all partners is in general according to the expected. The coordinator has contacted the majority of the partners separately in order to check the overall use of the resources and some short deviations in concrete WPs in order to they were aware and can correct them in the next QRs

Nevertheless, some minor deviations (more than 2,5 PM between the expected and the reported) have been identified in some partners e.g. VIASAT and UC. The coordinator has checked with them directly these differences and all of them are under control. In the case of UC one person have not been able to work during the last 2 months for illness and its manpower will be recovered in the next QRs.

In the case of VIASAT, all tasks had been performed, but due to their internal manpower accounting this missing manpower had not been reflected yet in the current QRs.

The rest of the consortium members are in a quite short difference between the expected manpower and the reported one, which is nor relevant at this stage.

6.2.1 Unforeseen subcontracting (if applicable)

NA

6.2.2 Unforeseen use of in kind contribution from third party against payment or free of charges (if applicable)

NA

7 Meetings organised and attendance

Meeting category/Title	Linked WP / Activity	Date	Location	Participants (beneficiaries short name)
Kick off Meeting	All WPs	7-8/05/19	Valencia	The whole consortium
Clustering Meeting	WP1-WP9	17/09/19	Porto Heli	UPVLC
First Plenary meeting	All WPs	23,24/10/19	Rome	The whole consortium
Clustering Meeting	WP1-WP9	30/10/19	Crete	UPVLC
Spanish Pilot dedicated meeting	WP7, WP5, WP4	25/11/19	Valencia	UPVLC, MIR-PN, ETRA
Second Plenary meeting	All WPs	24,25/03/20	Remote	The whole consortium