Newsletter

May 2017 - Issue 1

ALFA

MAIN PROJECT INFORMATION

ALFA will bridge the existing capability gap of current operational surveillance systems for border control with respect to detection, classification and identification of LSS (Low, Small and Slow) manned and unmanned flying vehicles. **ALFA** is future-ready as tools for drone detection will be a part of the system, which will use heterogeneous, easy-to-deploy mobile sensors based on several novel technologies. The **ALFA** system will make a significant contribution to the development of EUROSUR (in particular, cooperating with SIVE and SIVICC) and be suitable for a range of other missions and scenarios, such as homeland and event protection, as well as protection of critical infrastructures. The main objective of the project is introducing the ability for timely detection, classification and understanding of the intentions of suspected air targets and also provide a prediction of potential landing sites or dropping zones. **ALFA** will contribute to the following EU strategic goals:

- **Increasing the EU internal security** by the reduction of cross border crime
- **Interdiction of drug trafficking**
- Assistance in the **prosecution of drug trafficking** criminals
- **Interdiction of weapon and illicit substance trafficking**

The impact of the **ALFA** project will be measured in accordance to its ability to:

- **contribute** further **to the development of EUROSUR**
- **complement** existing **surveillance tools** and strategies
- **be adaptable** (the system itself and the developed technologies) to other areas of interest

MESSAGE FROM THE COORDINATOR

The intention of this newsletter is to open a new communication channel in order to provide news on the project progress and to discuss ongoing topics relevant to **ALFA** for internal and external project partners, stakeholders and all other interested bodies. For more detailed information about and around the project we warmly invite you to have a look on our project website, which is constantly kept up-to-date with the latest project related news: www.alfa-h2020.eu. The project has successfully started with the kick-off meeting in January 2017 and since then the project has been in its initial stages of formation. The overall system architecture and the requirements of **ALFA** and of its management services is being discussed and defined and the first steps in the **ALFA** plan have been taken.

Kick-off Meeting

On 23 and 24 January 2017 the official kick-off meeting for the ALFA project took place in The Hague. The meeting was hosted by TNO (Technical Leader, Rob van Heijster). The first day of the meeting served for getting to know each other. In addition, the work packages were presented with a focus on their goals. On the second day, the discussions focused on the challenges that the individual work packages bring along. Finally, the project was launched with the kick-off of the first work package ("System specifications and operation concept").

Key Data:

Start Date:	1st of January, 2017	*Consortium:*	9 partners (6 countries)
End Date:	31st of December, 2019	*Project Coordinator:*	Dr. Klaus-Michael Koch
Duration:	36 months		coordination@alfa-h2020.eu
Project Reference:	700002	*Technical Leader:*	Rob van Heijster, MSc.
Project Costs:	€ 4.613.831,25		Rob.vanheijster@tno.nl
Project Funding:	€ 4.613.831,25	*Project Website:*	www.alfa-h2020.eu

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TECHNICAL APPROACH

WP1 is a foundation point for **ALFA** execution. It will define the end system specification and operation concept as well as existing technology gaps. The main objective is to detail the operational gap in detection of small smugglers' aircraft entering European borders, identifying operational requirements and potential future menaces. **WP2** will define a maritime border surveillance system architecture optimized for the detection of small, low flying aircraft of different types including small aircraft, helicopters and drones. The overall objective of **WP3** is to achieve the necessary development for detection capabilities beyond state of the art according to findings of WP1. Detection, classification and identification will be brought up to a level needed for successful data fusion and Situational Awareness of WP4. To complement the radar localization capabilities, the feasibility of radiolocation and passive radar will be shown. **WP4** defines and develops functions for threat assessment and the build-up of situational awareness through the use of sensor information, for the calculation of the optimal observation position of **ALFA** assets, for the prediction of landing zones and for the presentation layer of **ALFA**. **WP5** focuses on the integration of the ALFA complete sensor and computing suite and its preliminary testing. The suite contains radar, electro-optical sensors passive RF receivers, etc. from WP3 and WP4. **WP6** will address a demonstration of the fully functional **ALFA** system to EU, end users, relevant industries and other relevant parties. **WP7** obtains input from other WPs focusing on scientific research and ensures the communication and dissemination of results achieved within the single WPs to the outside parties as well as to participating entities. WP7 will further support the partners to exploit the achieved results and impact the European and international market. The ethical and societal impact of the project will be closely monitored and reported on. **WP8** monitors and guides other WPs in order to ensure a successful project execution with respect to risk and innovation management. The management WP shows dependencies to all other WPs as it coordinates and ensures that the tasks are in line with the project work plan in order to reach the common goal of **ALFA**.

ONGOING ACTIVITIES

After the successful project kick-off each partner has enthusiastically looked into their tasks within the particular WPs and started progress towards the objectives. The first deliverables have been submitted and quite some work has been performed during the last 4 months. Thanks to effective discussions and contributions from all of the members of the consortium in WP1 description of user needs, analysis of the existing systems, system specification, concept of operations and operational requirements were introduced. Additionally, determination of the preferred **ALFA** solutions at system and subsystems level took place. A study on target and non-target objects has been performed. Operationally relevant objects were described in detail, as well as their influence on **ALFA** systems and subsystems. Future targets and nuance objects were also introduced in the frame of WP1. Impact of the new threats on the the **ALFA** surveillance system was preliminary estimated too. Within WP7 internal and external communication infrastructure, as well as project website and information platform, has been set up. A project logo, leaflet, announcement letter and press releases were created and published. Moreover, within WP8 a "Project Quality Plan" has been submitted. Also definition of solution directions and risk minimisation strategies took place.