



5 services of Drones for increased airports and waterways safety and security

PROJECT DISSEMINATION MATERIALS

Document Summary Information

Grant Agreement No	861635	Acronym	5D-AeroSafe
Full Title	5 services of Drones for increased airports and waterways safety and security		
Start Date	01/06/2020	Duration	36 months
Project URL	www.5d-aerosafe.eu		
Deliverable	D8.2 - Project Dissemination Materials (project factsheet/leaflet, presentation and website)		
Work Package	WP8 - Dissemination and Communication Activities, & Advisory Board Management		
Contractual due date	30/09/2020	Actual submission date	30/09/2020
Nature	Report (R)	Dissemination Level	Confidential (CO) /Public (PU)
Lead Beneficiary	ITWL		
Responsible Author	Anna Nikodym-Bilska		
Contributions from			

Revision history (including peer reviewing & quality control)

Version	Issue Date	Stage	Changes	Contributor(s)	Comments
1	25/09/2020	First draft	Draft of chapters.	Anna Nikodym-Bilska (ITWL)	Each chapter has been partially elaborated.
2	30/09/2020	Final version	Table of content and chapters finished.	Anna Nikodym-Bilska (ITWL)	Each chapter has been elaborated.



This project has received funding from the European Union's Horizon 2020 innovation programme under the Grant Agreement No 861635.

Project Summary

Call identifier: MG-2-8-2019 - Innovative applications of drones for ensuring safety in transport

Type of funding scheme: Research and Innovation Action

Work programme topic: MG-2-8-2019 - Innovative applications of drones for ensuring safety in transport

Grant Agreement n. 861635

Coordinating person: Philippe Chrobocinski, Airbus Defence and Space (ADS)

Duration in months: 36

Estimated project costs: € 3 799 911,25

Requested grant: € 3 497 475

Participant No.	Participant Organisation Name	Short	Type	Country
1(coord.)	Airbus Defence & Space	ADS	IND	FR
2	Future Intelligence Ltd.	FINT	SME	EL
3	Ecole Nationale de l'Aviation Civile	ENAC	RTO	FR
4	Air Force Institute of Technology	ITWL	RTO	PL
5	Vicomtech	VICOM	RTO	ES
6	Hellenic Mediterranean University	HMU	ACAD	EL
7	Ferrovial Corporacion SA	FERRO	USER	ES
8	Greek Water Airports	GWA	SME/USER	EL
9	AirMap Deutschland GmbH	AIRMAP	SME	DE
10	Eurocontrol	EUROC	USER	BE

Executive Summary

The 5D-Aerosafe Project Dissemination Materials has been set up for ensuring that outcomes are widely spread among the appropriate target communities, at appropriate times, via appropriate methods, as well as to identify potential contributors to the development, evaluation, uptake and exploitation of project outcomes, encouraging their participation on a systematic and regular basis.

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1 Introduction

Through the promotion of project outcomes, the WP8 will support the development of a set of drone-based services to increase the safety and security of airport and waterway, while reducing operational costs through the offering of five services.

WP8 deals with targeted multi-actor communication and training. Dissemination will target research community and relevant end-users' stakeholders (airport and water airport operators), authorities (Civil Aviation Authorities), policy makers, industry and the general public to ensure that the project activities and outcomes are widely spread among the appropriate target communities, at appropriate times, via appropriate methods, as well as to identify potential contributors to the development, evaluation, uptake and exploitation of project outcomes, encouraging their participation on a systematic and regular basis.

The WP8 (dissemination) will follow all the R&D and demonstration activities in WP2-WP7 and will be informed of any data produced in those WPs for the best analysis and exploitation of project results, being this for dissemination or for innovation management and IPR purposes.

Activities in general

Activities includes the development of the project website, media campaign (social medias accounts, press releases), leaflets, posters, scientific workshops, technical and scientific publications (self-archiving -“gren” open access), summer schools and the development of a multimedia education toolkit (HabiThreats).

Outcomes

- The project website, containing general information material about the project, will be maintained. The website will be also used to facilitate access to the project results, and will contain a password-protected area including non-public documentation which will be accessed by key parties, that the consortium wish to engage.
- Promotion material such as flyers, brochures and newsletters, public demos or presentations tailored to different audiences will be prepared. The project will also create official accounts and relevant groups on the aforementioned Web 2.0 services (as mentioned above), and YouTube videos.

List of outcomes

- Dissemination and Communication Plan
- Project website
- Social media accounts (Twitter, LinkedIn, YouTube channel)
- 1 project fact sheet
- 1 general project presentation (adapted to relevant audiences)
- 3 project brochures
- 6 project newsletters
- 4 workshops
- 4 YouTube videos
- Press releases/media campaigns

Critical risks for implementation

Overlaps/synergies in dissemination activities. The WP leader will coordinate, monitor and ensure regular internal reporting on dissemination activities in order to prevent duplications.

Protection of data and privacy (together with WP 1. The WP2-7 leaders will develop solutions to handle the potential misuse of research results and the confidentiality of project data.

Expected results

- Creation of a stakeholder database, accessing the website for deliverables and newsfeeds.
- Improved communication within the research community.
- Enhanced effective flows of information during the project.
- Advanced collaboration of networks on a Europe-wide scale.

1.1 Scope of this Document

The Dissemination materials presents materials: 5D-AeroSafe Website, 5D-AeroSafe Leaflet, 5D-AeroSafe Presentation, 5D-AeroSafe Social Media and 5D-AeroSafe brand Guidelines will be used during the **5 services of Drones for increased airports and waterways safety and security** project duration. Additionally, it presents brand guidelines, what is closely connected to the project materials and presents logo mark and principles of brand for all communications originating from the project.

1.2 Audience

The document is intended for project consortium members and stakeholders who are involved and should be involved in the dissemination and communication activities.

2 5D-AeroSafe Website

The project website has been prepared and made available on the Internet on September 2020 (www.5d-aerosafe.eu).


The website is composed on 5 sections, which presents NEWS, ABOUT, PARTNERS, RESOURCES, CONTACT.




It is possible to redirect to social media accounts from the project website (Twitter, LinkedIn and YouTube channel).

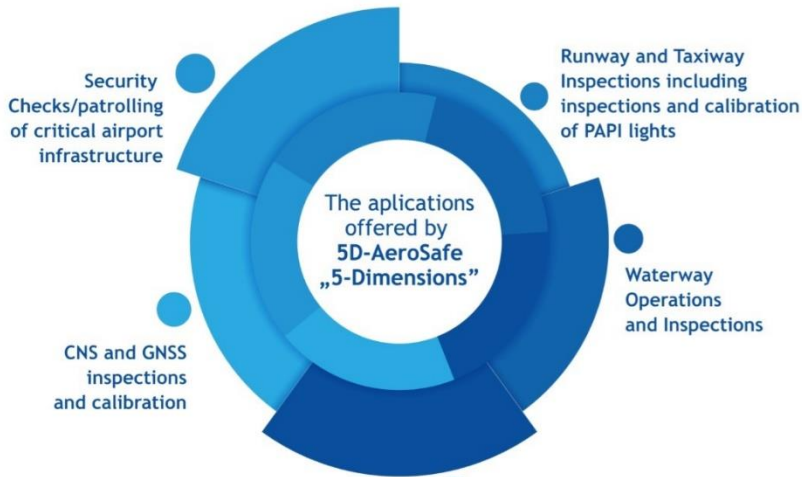
Examples of the website content:



[NEWS](#)
[ABOUT](#)
[PARTNERS](#)



[RESOURCES](#)
[CONTACT](#)






The applications offered by 5D-AeroSafe „5-Dimensions“

- Security Checks/patrolling of critical airport infrastructure
- CNS and GNSS inspections and calibration
- Runway and Taxiway Inspections including inspections and calibration of PAPI lights
- Waterway Operations and Inspections
- Aircraft Inspections


5 DIMENSIONS OF 5D-AeroSafe




Five dimensions equals five effects – applications offered by 5D-AeroSafe project:


- CNS and GNSS inspections and calibration;
- Security Checks/patrolling of critical airport infrastructure;
- Runway and Taxiway Inspections (including inspections and calibration of PAPI lights);
- Aircraft Inspections;
- Waterway Operations and Inspections.

Through appropriately configured RPAS carrying specific payloads, such as miniaturized CNS transceivers and cameras with embedded video analytics algorithms, 5D-AeroSpace will provide to Air Traffic Management the much-needed missing mutual situation awareness, rendering the safe integration of UAS in non-segregated air spaces a reality.

[NEWS](#)
[ABOUT](#)
[PARTNERS](#)



[RESOURCES](#)
[CONTACT](#)






Aircraft Inspections

Management the much-needed missing mutual situation awareness, rendering the safe integration of UAS in non-segregated air spaces a reality.

STAY UP TO DATE!

If you are interested in receiving updates on 5D-AeroSafe, please use the form and subscribe to our newsletter.

3 5D-AeroSafe Social Media

Social media are to be used for the communication to different audiences on a daily basis.

Examples of social media content:

Twitter account

5D-AeroSafe
@5D_Aero_Safe

5D-AeroSafe is aimed to develop a solution for the safe and efficient integration of UAS in airport and waterway daily operations. contact: info@5d-AeroSafe.eu
[Translate bio](#)

🇪🇺 European Union <https://t.co/YDsmHOJgC0> 📅 Joined September 2020

0 Following 0 Followers

Tweets Tweets & replies Media Likes

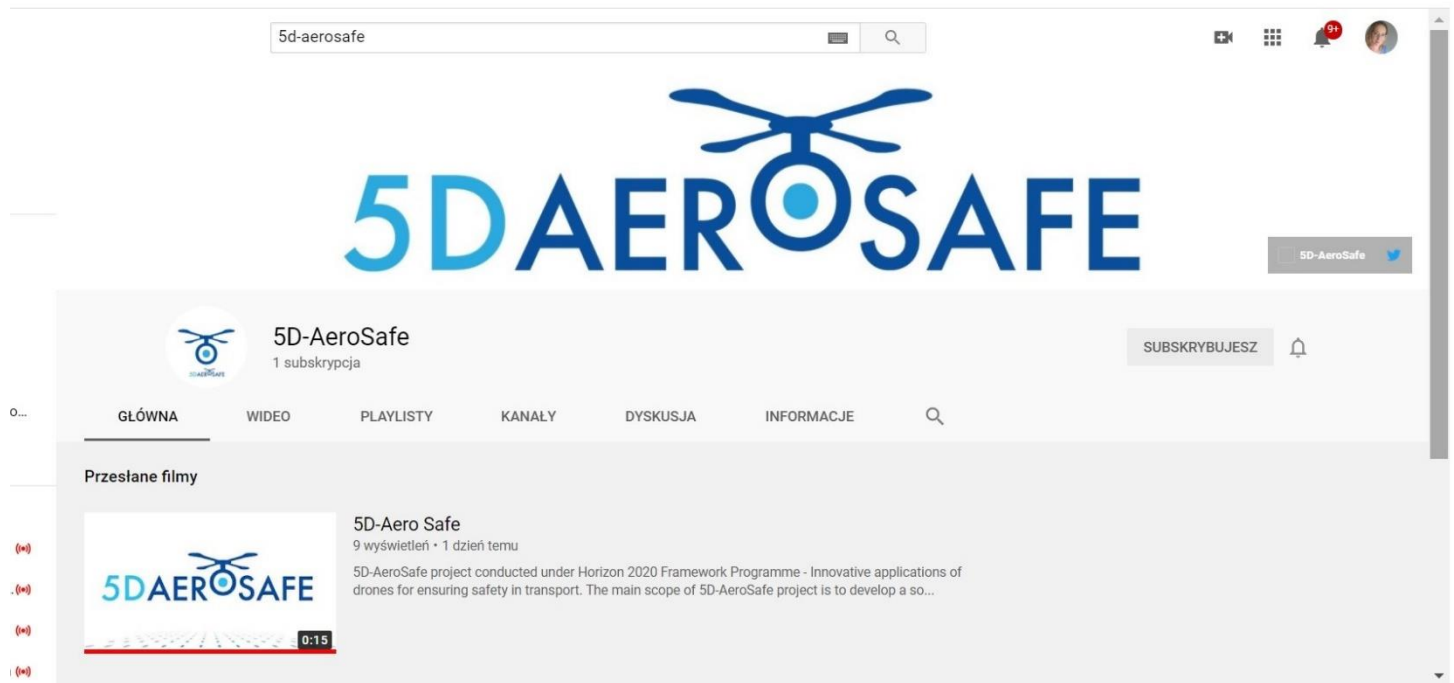
5D-AeroSafe @5D_Aero_Safe · 2h
5D-Aero Safe youtu.be/NbcPt-MWZ4E via @YouTube

Great news! We are pleased to announce that the 5D-Aero Safe project consortium is starting to inform. Feel free to contact us directly: info@5d-AeroSafe.eu and read more on 5d-AeroSafe.eu
More information soon!

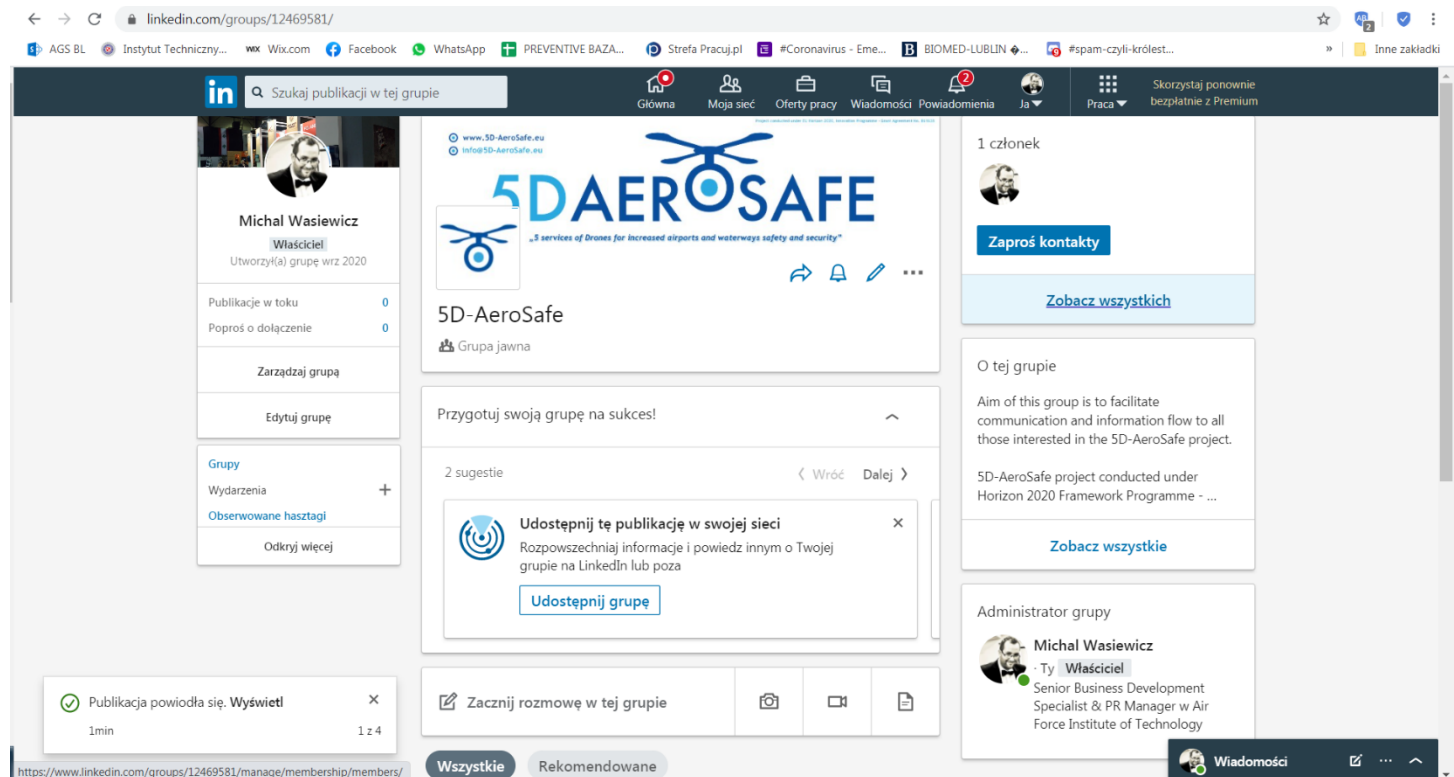
5D-Aero Safe
5D-AeroSafe project conducted under Horizon 2020 Framework Programme - Innovative applications of ...
youtube.com

https://twitter.com/5D_Aero_Safe/header_photo

YouTube channel



Linked In Group



4 5D-AeroSafe Project Leaflet

The project leaflet has been prepared and made available in the PDF file and on the project website (www.5d-aerosafe.eu) to be download on September 2020.

5D-Consortium

The 5D-AeroSafe associates partners from 7 EU member states. Partners represent highest innovation capabilities ensuring fulfillment of the project objectives.

Project incorporates:

3 SME partners, that will contribute significant 'know-how' for the provision of UTM systems, expertise in development of transceivers, and water airport operations.

4 Academic and Research partners, offering their skills in UAV integration and testing, visual analytics and AI algorithms, as well as information and communication technologies.

2 large industrial players offering their expertise in RPAS systems, systems integration and airport/transport infrastructure management.

3 End User partners will offer their valuable expertise in guidance the project to offer a solution close finally the needs of the user.

Partners

-  Airbus Defence and Space – (Coordinator)
-  Future Intelligence Ltd.
-  Ecole Nationale de l'Aviation Civile
-  Air Force Institute of Technology
-  Vicomtech
-  Hellenic Mediterranean University
-  Ferrovial Corporacion SA
-  Greek Water Airports
-  Eurocontrol
-  AirMap Deutschland GmbH



www.5d-AeroSafe.eu
info@5D-AeroSafe

Follow us on:

 @5D_Aero_Safe

 5D-AeroSafe



The 5D-AEROSAFE project has received funding from Horizon 2020, the European Union's Programme for Research and innovation under grant agreement No. 861635.



5D-Background

Air Transport is the safest, most convenient and efficient way of transportation with currently millions of people travelling daily around the world. In the coming period the European sky is expected to become even denser with respect to flying objects, creating stress on air traffic management, while the need for quicker and more timely air transport services will multiply. This will demand an increased capacity of available resources (technical, regulatory, human etc.), in order to fulfill these new challenges, while maintaining safety and security of the involved stakeholders as a first priority. The impact of these challenges is evident specifically on airspace congestion and flight delays, whereby studies reveal that since the late 2000s, these have become an increasingly serious problem spreading across Europe. Airspace congestion and flight delays not only disturb airline and airport operations, resulting in considerable inconveniences to passengers, but also pose significant safety concerns and cause financial.



5D-Facts & Figures

Program: Horizon 2020, EU Programme for Research & Innovation

Duration: 36 months (01.06.2020 – 31.05.2023)

Consortium: 10 partners from 7 EU member States MS

Total Funding: € 3 799 911,25

EC Requested Funding: € 3 497 475

Project motivation

The problem:

Airspace congestion and flight delays

- Disturb airline and airport operations
- Considerable inconvenience to passengers
- Pose significant safety concerns
- Cause financial losses to airlines, airports and aviation authorities

The demand:

- Maintaining safety and security of the involved stakeholders as a first priority
- More efficient airtransport services and available resources

The solution:

- Provide services for the safety and security of air traffic and airport management



5 Dimensions of 5D-AeroSafe

Five dimensions equals five effects - applications offered by 5D-AeroSafe project:

- CNS and GNSS inspections and calibration
- Security Checks/patrolling of critical airport infrastructure
- Runway and Taxiway Inspections (including inspections and calibration of PAPI lights)
- Aircraft Inspections
- Waterway Operations and Inspections

Through appropriately configured RPAS carrying specific payloads, such as miniaturized CNS transceivers and cameras with embedded video analytics algorithms, 5D-AeroSpace will provide to Air Traffic Management the much-needed missing mutual situation awareness, rendering the safe integration of UAV in non-segregated air spaces a reality.



5 5D-AeroSafe Presentation

The project general presentation has been prepared and made available in the PDF file and on the project website (www.5d-aerosafe.eu) to be download on September 2020.



This project has received funding from the European Union's Horizon 2020 Innovation programme under the Grant Agreement No 861635.



5D-AEROSAFE PROJECT



Presentation Content

- ⊙ 5D-AeroSafe Facts & Figures
- ⊙ 5D-AeroSafe Challenges
- ⊙ 5D-AeroSafe Outcomes
- ⊙ 5D-AeroSafe Objectives
- ⊙ 5D-AeroSafe Implementation





5D-AeroSafe Facts & Figures

5D-AeroSafe - „5 services of Drones for increased airports and waterways safety and security”

MG-2-8-2019 - Innovative applications of drones for ensuring safety in transport

Grant Agreement number: 861635

Total Funding: € 3 799 911,25

EC Requested Funding: € 3 497 475

Timeframe: 01.06.2020 - 31.05.2023

Consortium: 10 partners from 6 MS (3 RTO, 1 UNI, 3 SMEs and 3 END-USERS)

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5D-AeroSafe Consortium

-  Airbus Defence and Space (Coordinator)
-  Future Intelligence Ltd.
-  Ecole Nationale de l'Aviation Civile
-  Air Force Institute of Technology
-  Vicomtech
-  Hellenic Mediterranean University
-  Ferrovial Corporacion SA
-  Greek Water Airports
-  AirMap Deutschland GmbH
-  Eurocontrol



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Project motivation



The problem:

Airspace congestion and flight delays

- Disturb airline and airport operations.
- Considerable inconvenience to passengers.
- Pose significant safety concerns.
- Cause financial losses to airlines, airports and aviation authorities.

The demand:

- Maintaining safety and security of the involved stakeholders as a first priority.
- More efficient airtransport services and available resources.

The solution:

- Provide services for the safety and security of air traffic and airport management.

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Project scope

The main scope of 5D-AeroSafe is to develop a **solution for the safe and efficient integration of UAS in airport and waterway daily operations**, that will:

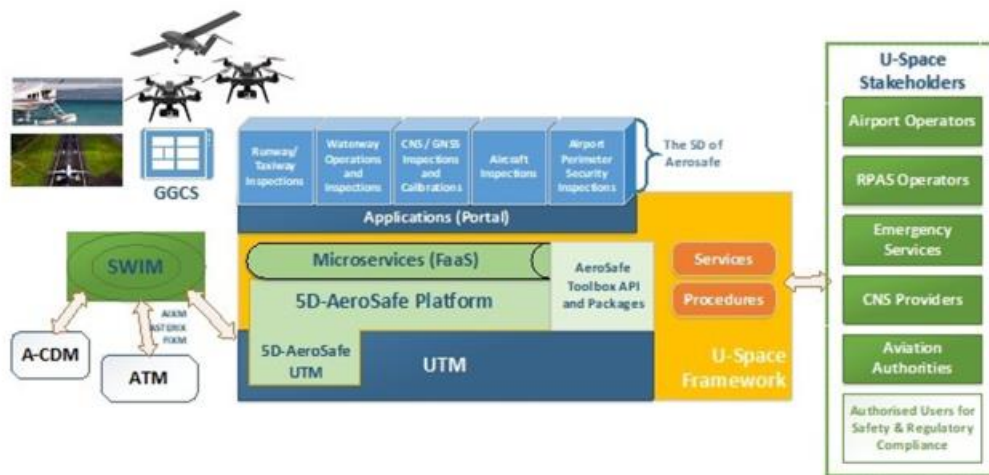
- **Conduct Flight Inspections**, i.e. inspections and calibrations on CNS (Communication, Navigation and Surveillance) systems and landing visual aids,
- **Safeguard airport restricted areas**,
- **Inspect runways and taxiways** (and water runways) to detect Foreign Object debris or any other threat to aircraft movement on the ground (and water surface).

This concept will allow the smooth operation and integration of UAS in Aerodrome ATM (Air Traffic Management) systems via the co-operation with UTM (Unmanned Aircraft System Traffic Management) Systems, enhancing mutual situation awareness.

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Main concept of the 5D-AeroSafe



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Project challenges

5D-AeroSafe will study and implement UAS-based solutions to enhance the airport operations in the domain of:

- Sensors calibration: the project will develop a sensor that will be embedded on a UAV (to replace the calibration with piloted aircraft - more expensive due to aircraft and pilots)
- Platform safety: the UAVs equipped with cameras will inspect the runways and taxiways (resp. waterways) to detect anomalies (FODs or defects) that could raise problems to the aircraft movements (to replace inspections by teams in car, longer and more expensive)
- Platform security: similarly, the system will search for abnormal behaviors of persons or vehicles in the perimeter of the airport and in the vicinity

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Ultimate result



Platform built as part of the established UTM

Conforming to the applicable regulations, and the services and procedures described in the U-Space framework as well requirements of the involved shareholders, 5D-AeroSafe, based on the development of appropriate functions, will provide an application portal as well as a toolbox with APIs and packages ready to supply the “5-Dimensions” of 5D-AeroSafe.

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Project results

The UAVs will operate in an area where potential conflicts are numerous, so the 5D-AeroSafe system needs to take care about the safe integration with ATM and ground movements:

- A Generic Ground Control Station (GGCS) manages all the UAV missions through an integration of the respective specific Ground Control Stations. The missions received from the tower are allocated to the UAVs with a preliminary mission preparation that will be completed at GCS level. In the other way round, the data received from the UAVs are exploited at GCS and GGCS level to send the mission report to the tower.
- The 5D-AeroSafe platform will manage the UAV missions (UTM).
- Seamless UTM/ATM coordination for non-segregated airspace.

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Technical challenges

- Development of a calibration sensor that can be integrated in the project UAVs.
- Adaptation of UAVs to fulfill the project missions.
- Development of a GGCS able to manage the project missions.
- Development of a UTM platform for airport operations.
- Integration of UTM and ATM through the connection with the airport legacy systems.

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CONOPS

To provide the uses cases and scenario definitions for the pilots, forming the concept of operations of the system (CONOPS)

- To determine the list of requirements and associated KPIs for the 5DAeroSafe solution from the users' perspective.
- To investigate adherence to the relevant regulatory frameworks (ICAO Annex 10, ICAO Doc 8071, NPA 2017- 05) and its application to the resulting system and to examine potential ethical/legal aspects for implementing the UTMS at airports.

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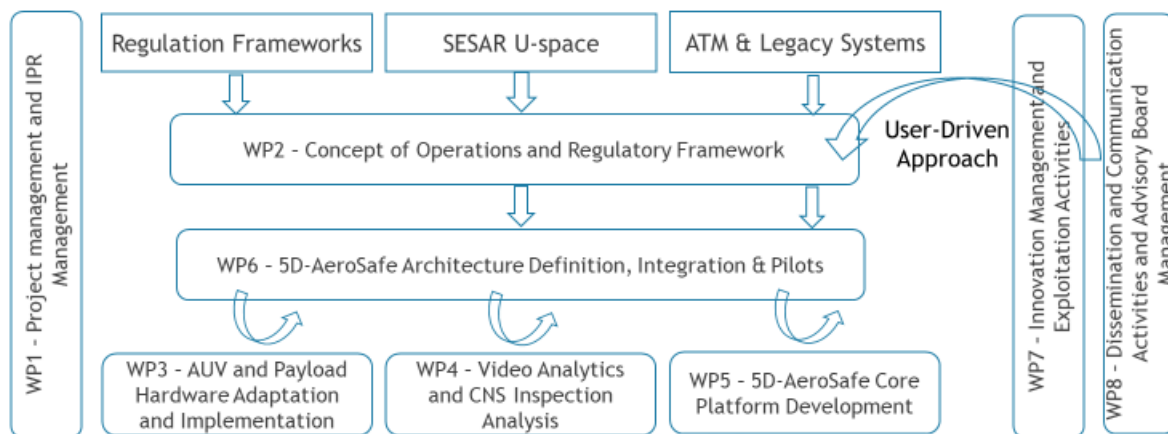
Project schedule

Phase	WP	Est. Due Date
Phase 0 -Planning, Management	WP1- Project Management and IPR Management	31 May 2023
Phase 1- Requirements, Regulations, Concept of Operations:	WP2- Concept of Operations and Regulatory Framework	28 Feb 2021
Phase 2- Development and Testing	WP3 -UAV and Payload Hardware Adaptation and Implementation	30 Nov 2022
	WP4- Video Analytics and CNS inspection Analysis	28 Feb 2022
	WP5- Core 5D-AeroSafe Platform Development	28 Feb 2023
Phase 3- Demonstration and Validation	WP6- 5D-AeroSafe Architecture Definition, Integration and Pilots	31 May 2023
Phase 4- Dissemination and Communication Activities, Innovation Management and Exploitation Activities	WP7- Innovation Management and Exploitation Activities	31 May 2023
	WP8- Dissemination and Communication Activities, and User Advisory Board Management	30 Apr 2023

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5D-AeroSafe Work Plan Structure



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Visit us on: www.5d-aerosafe.eu

Contact: info@5d-aerosafe.eu



6 5D-AeroSafe Brand Guidelines



This project has received funding from the European Union's Horizon 2020 Innovation programme under the Grant Agreement No 861635.



Communicating Our Brand

Anna Nikodym-Bilska
Monika Burek
ITWL



28.09.20201



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The 5D-AeroSafe standard logo mark



The Logo Mark

The standard logo mark is the preferred option for all communications originating from the project.

The mark visually represents the collaborative nature of the project with many different areas (represented by the strong individual colours) coming together (the linking of the ovals) to work on solutions as a whole.

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The 5D-AeroSafe achromatic logo mark



The Logo Mark (Greyscale)

Recognising that a colourful logo is not appropriate for every usage requirement, these monochromatic variations are available for use in circumstances where the colour version may be rendered illegible or clashes with surrounding colours.

The same usage rules apply to these logo variations as they do to the primary logo mark.

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The 5D-AeroSafe achromatic logo mark



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The 5D-AeroSafe white logo mark



The Logo Mark (Pure White)

For dark image backgrounds where the main logo does not stand out enough, or colour might be a distraction, the pure white mark should be used.

It should only be used on image backgrounds that give it contrast and never used on flat dark colour backgrounds.

The same usage rules apply to these logo variations as they do to the primary logo mark.

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Using the logo mark



Clearance Area

The clearance area around the logo should always be a proportional minimum size equal to the "O" from the name. The clearance area should be measured from the outermost tips of the full logo shape on all sides.

No Distortion of Shape

The logo mark must always be constrained proportionately and must never be stretched wider or taller.

No Substitution of Colours

No colour substitution or variation of colour is permitted beyond the appropriate prescribed use of the greyscale logo variations included in this guide.



28.09.2020

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Image use



Image styling

All images being used should be styled as per the examples on the right and not used in their original format unless associated with a news story or an external party.

Styling involves adding a slightly more gritty and surreal feel to images. This is to reflect the project concentrating on preparing for potential events as opposed to current or past ones. The reduction of colours also allows the logo to stand out and not become lost.

Types of images

Image selection is very important to ensure a consistent message from the brand. Images of situations in airports and with should be used in all 5D-AeroSafe materials. Unrelated imagery should be avoided. All images should be styled as shown at this slide.

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Typography

Trebuchet MS

5D-AeroSafe

5 services of Drones for increased airports
and waterways safety and security

Banschrift Light

5D-AeroSafe

5 services of Drones for increased airports
and waterways safety and security

Segoe UI

5D-AeroSafe

5 services of Drones for increased airports
and waterways safety and security

Typography

The choice of fonts for 5D-AeroSafe specifically aim to highlight both the professional/technical expertise behind the project. To that end Trebuchet MS has been chosen as the header font with banschrift Light as the secondary font. Font for Internet usage is Segoe UI. All these fonts are in the MS Office pocket and are a copyright of Microsoft.

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5D-AeroSafe „dot bar and bullets”

„Dot bar and bullets”

Additional graphics have been prepared for special use in official presentations and deliverables.

The bar

Bullets for presentation use



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7 References

The following documents define the contractual requirements that all project partners are required to comply with:

References used in the development of this plan are:

- Grant Agreement 861635-Research and Innovation Action_(which includes DOA, Grant Preparation Forms and annexes)

This is our contract with the European Commission which defines what has to be done, how and the relevant efforts.

Each of the above documents was established at the start of the project, and copies were supplied to each partner. Each document could potentially be updated independently of the others during the course of the project following a prescribed process. In the event of any such update, the latest formal issued version shall apply.

In the event of a conflict between this document and any of the contractual documents referenced above, the contractual document(s) shall take precedence.