NEWSLETTER

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ISSUE 2

BORDER UAS

EDITORIAL

BorderUAS has successfully completed its first year, and now the focus is on the development and integration of the technical components of the project. Following the limitations and restrictions derived from **COVID-19** era, the consortium was forced to adapt project implementation framework, as the cancellation of all physical meetings and the difficulties even to access the workspace, caused some delays.

Even though project meetings have shifted to virtual platforms and the potential of face-to-face operations is still limited, the **BorderUAS** consortium remains committed to achieving the project's milestones and overall goal. Consequently, the project made huge progress towards the objectives set during its first year.

The architecture and the technical specifications of **BorderUAS** platform and components are released achieving one of the critical milestones set by the consortium for the first one year of project's implementation.

By concluding with the final specifications, with the assistance of all the partners, the consortium made an important step towards the forthcoming development of the first prototypes, being confident that the **BorderUAS** project will succeed and accomplish all its objectives on time.

OUR PROGRESS SO FAR:

- Technical specifications are ready (MS1)
- The first period of the project is closed, by finalising the BorderUAS solution's specification and design phase.
- Collaboration with relevant projects further progressed and enhanced.
- Two workshops organised by the consortium
- Participated in plenty of events promoting the project.

Wish to find out more about the project? Go through this newsletter and enjoy your reading! Interested to get more insights and read some blogposts? Have a look at project's website!

EVENTS

MAR 21 - P2PKOS KICK-OFF SEMINAR

READ MORE

On 22 and 23 March 2021, BorderUAS joined 42 other H2020 projects working on security domain to attend the second "Project to policy kick off seminar" (P2PKOS) for security research organized virtually by the European Commission Research Executive Agency (REA).

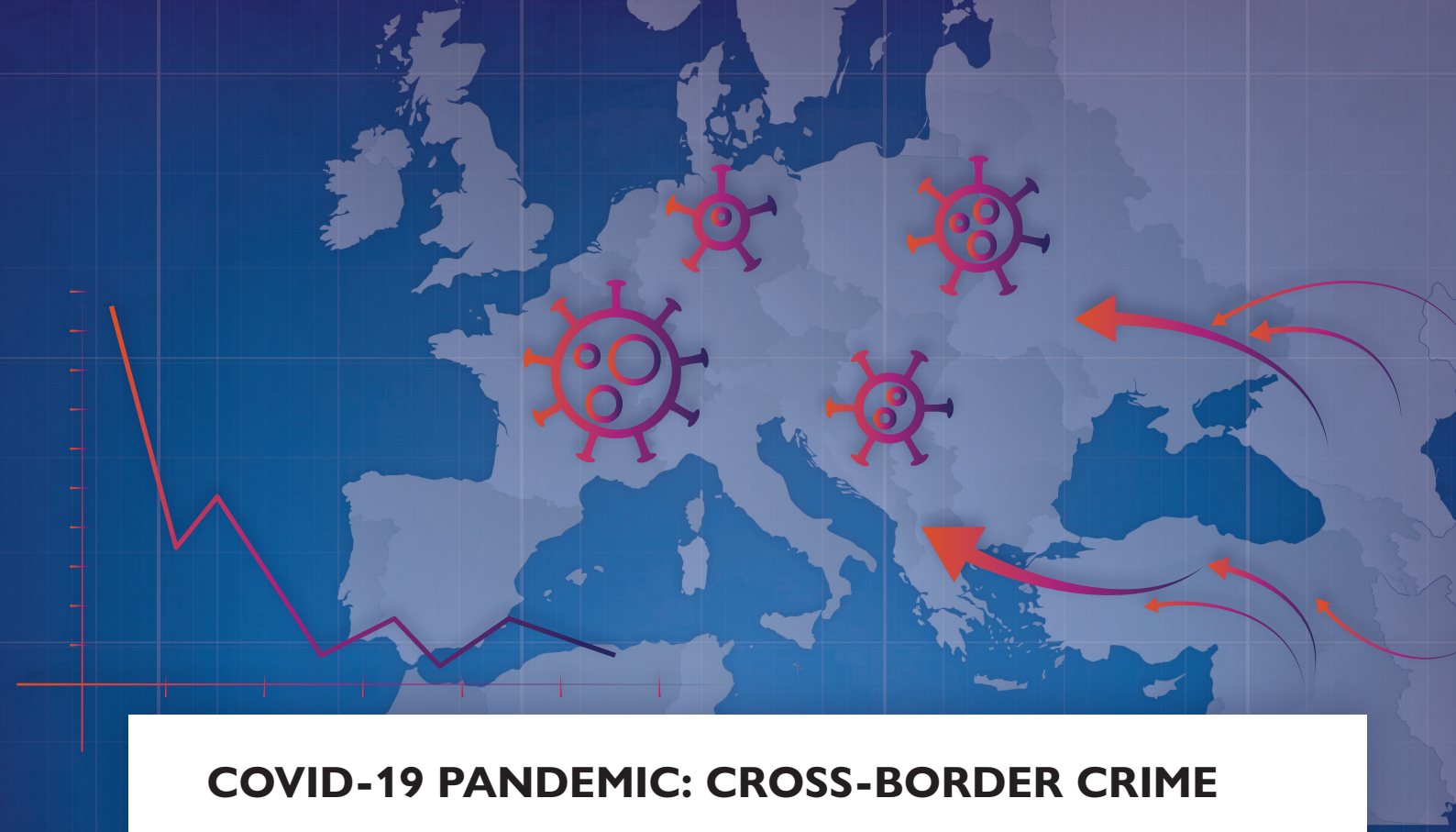
BorderUAS project was presented to European Commission's policy departments (DG HOME, CNECT) and executive agencies (such as FRONTEX and eu-LISA) as an initiative of operational relevance to the current EU needs and priorities that could specifically support, impact and extend the European Border Surveillance system (**EUROSUR**) handbook.

MAR 21 - ONLINE EBCC WORKSHOP

READ MORE

BorderUAS project featured in a two-day virtual workshop about selected Horizon 2020 border security projects organised by the European Border and Coast Guard (EBCG) on May 20 & 21, 2021.

During this workshop the participants were able to discuss how related technologies and innovations, could be applied, tested and validated by European Borders and Coast Guard community by taking a closer look at various EU funded projects. BorderUAS was presented as a solution that could complement and impact the surveillance of the European Borders on both technical and operational level through its innovative system. The number and the context of the questions revealed a high interest by the audience in the airship, its functionality and benefits, the components and the operational status of the promised outcomes.



COVID-19 PANDEMIC: CROSS-BORDER CRIME

An interesting observation is that despite severe travel and movement restrictions due to the COVID-19 pandemic through 2020 and 2021, the illegal flows still occurred during the last year and half.

According to **FRONTEX latest report** on irregular migration, the illegal border crossings along EU's external borders fell 13% during 2020; the actual number of illegal border crossings was the lowest number since 2013. Given the fact that Eastern Mediterranean is one of the most frequently used route to access Europe, it should be highlighted that the arrivals decreased by 76% compared to last year's numbers. On contrary the Western Balkans route has experienced a notable increase by almost 78% compared to the last year.

Considering COVID-19 pandemic and the changes on the patterns and the use of specific routes, illegal crossing and border crime should be moderated as soon as possible in order to avoid any further illegal cross border actions.

Under the above-mentioned need, BorderUAS has kicked off the work for employing the ground infrastructure of the control & command centres, new data model systems for the identification of illegal patterns of crossing, preferred routes, and enhanced audio and visual analytical and storage capabilities.

Read here the full article

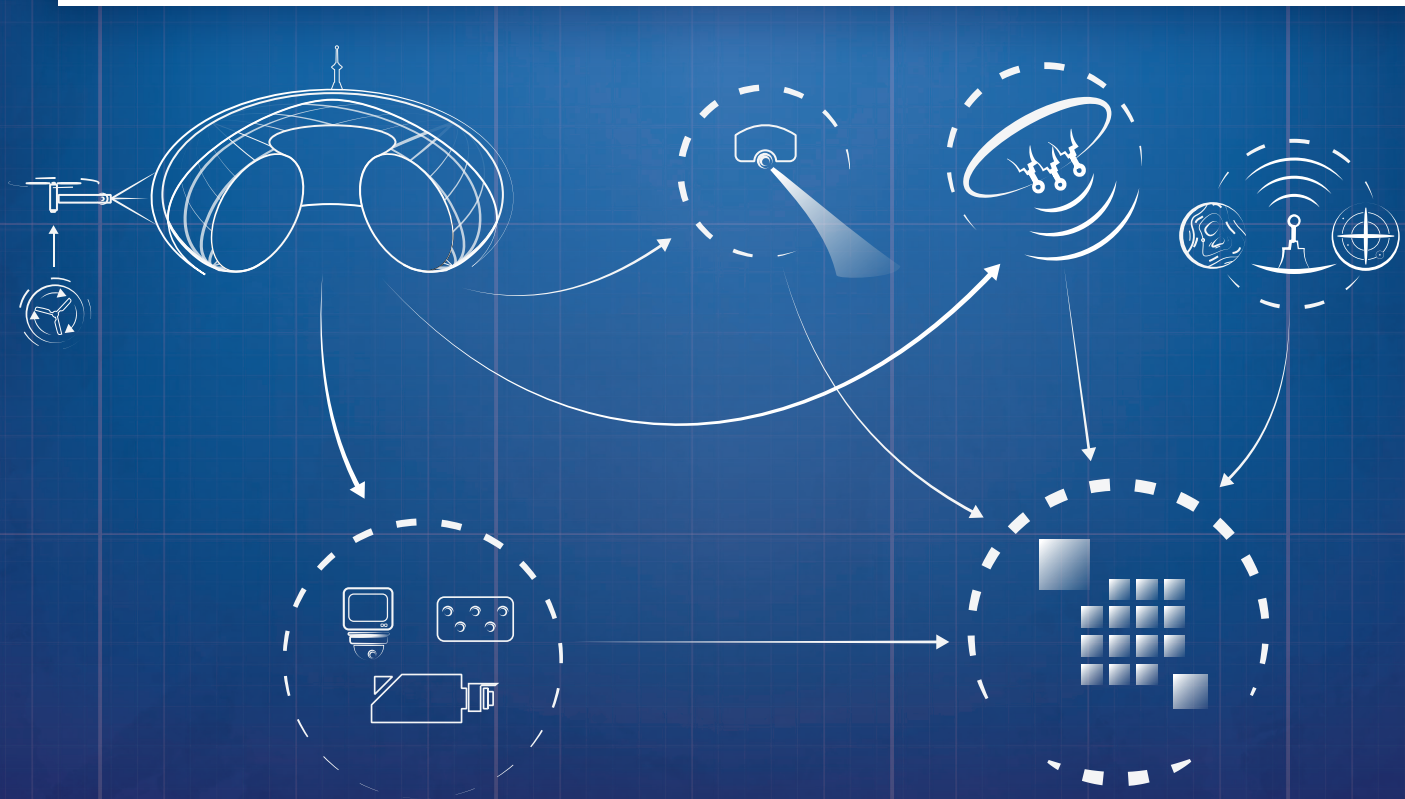
HOW SENSORICS TRANSFORM A UAV INTO A CONNECTED SURVEILLANCE VEHICLE

How to improve the effectiveness of surveillance along all remote and nearby border sections?

To accomplish this, the dominant role of ICT, sensorics, machine learning systems and unmanned aviation technology will assist to overcome challenges such as the deluge of uncertain sensor data and a high resource-consumption cost. The modern border surveillance platforms will have to improve the sensor range as well as the coverage capabilities and expand the mission time.

Towards this goal within BorderUAS project we are fusing and analysing multi-stream data sources, as to produce knowledgeable insight into hidden data patterns for rapid decision-making that would respond to the strict border security requirements. BorderUAS sensorics will include optical and hyperspectral camera arrays, LTA-UAV-specific synthetic aperture radar (SAR), laser detection and ranging (LADAR), shortwave/longwave infrared (SWIR/LWIR) and acoustic cameras for both, direct as well as indirect target detection, e.g. via vegetation disturbance.

For a more detailed technical overview of the BorderUAS solution, **read the blogpost** by our consortium partner, Technical University of Crete.



CLUSTERING ACTIVITIES

ROBORDER

BorderUAS is happy to announce two new synergies with the EU Funded H2020 projects, **ROBORDER** and **METICOS**.

Within the context of clustering activities, BorderUAS and ROBORDER have already joined forces.

ROBORDER aims to implement a heterogenous robot system with detection skills for early recognition of criminal activity at the border and along the coast, as well as marine pollution occurrences.

METICOS aims to create an up-to-date acceptance classification scheme as well as a societal and ethical impact dashboard of border control technologies, to empower three major sub-divisions of the wider border control sector: travelers, border control authorities and service providers.

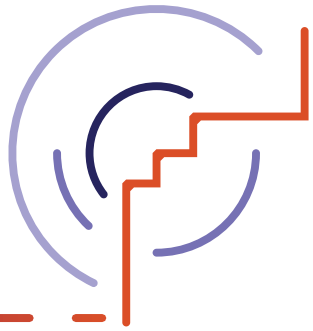
As a result of the new collaboration with METICOS, BorderUAS is now a member of the **H2020 Border External Security Cluster**.

These consortia share common interests with BorderUAS (Border surveillance, security and ethics) and are actively in discussions to investigate ways of collaboration between BorderUAS and the abovementioned projects in areas of dissemination, information exchange, transfer of knowledge, ontologies, ethics and social acceptance.

METICOS

Anyone interested in the BorderUAS project for clustering activities, is encouraged to contact us at info@borderuas.eu for a potential new synergy.

NEXT STEPS



The consortium having released all the **specifications** of the UAV, the **components** and the **sensorics**, will now focus on the technical development of the prototypes.

Busy time is expected for the technical team of **BorderUAS** consortium that will result to the **achievement** of our next crucial milestone: the first **prototype** of the UAV.

The upcoming steps do not include only the **hardware** but also the development of the **ontologies** and **algorithms** that will process the raw data, fusing it and finally assisting in this way the decision-making process of the potential end-user.

If you are interested in our progress and developments, stay tuned through our various dissemination channels and the frequent blogposts that are available through our website.

CONTACT

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