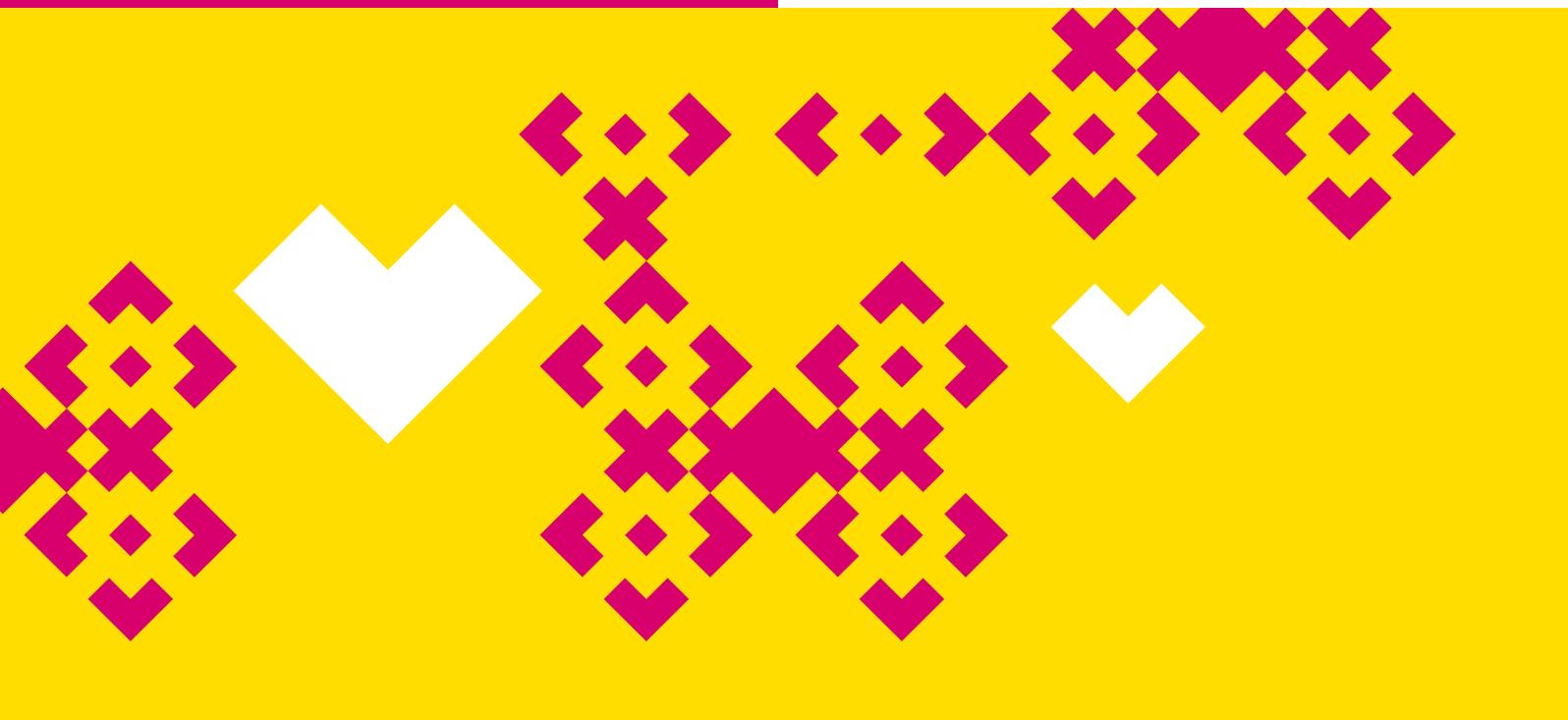


Metropolis^{GZM}

**becoming the
Polish Drone Valley.**



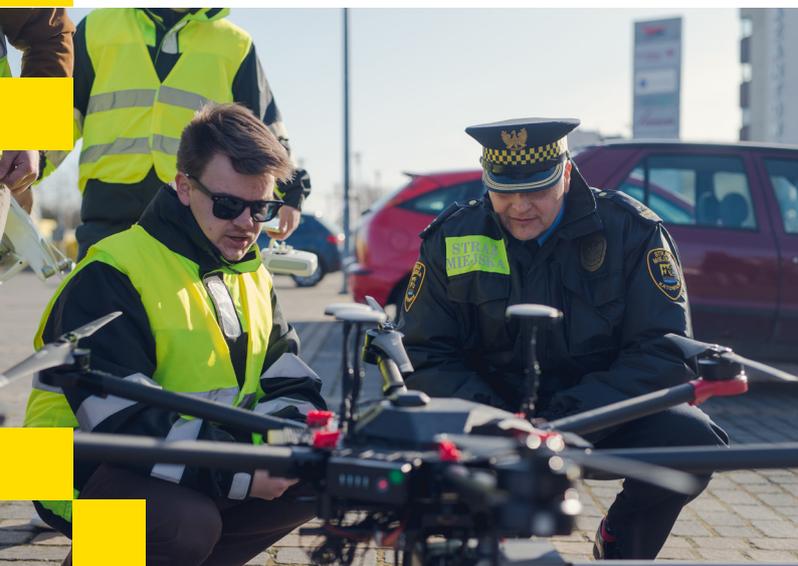


By 2026, the value of Polish UAV market will amount to PLN 3.26 billion (about 740 million euros), while the indirect benefits resulting from integration of drones and economy may rise up to as much as PLN 576 billion (about 131 billion euros). This amount would enable to reduce the Polish public debt by up to 60 percent. These are the conclusions contained in the Whitepaper of Unmanned Aerial Vehicles - a document prepared by the Polish Economic

Institute, presenting the potential of unmanned aviation in Poland.

In order to seize this potential, the Central European Drone Demonstrator (CEDD) was created in September 2018. It is a programme based on the assumption that in the near future drones will provide all kinds of services in air-space, both for public and commercial sectors.

CEDD, in cooperation with city guards from Katowice, has monitored air quality by means of drones. UAVs have been checking the composition of smoke emitted from chimneys in private properties. It is one of the most effective methods of fighting the problem of air pollution.



A single drone performs the work of more than 60 city guard officers working on site. In two hours of drone flight, it is possible to check about 600 chimneys and find out whether the residents burn toxic waste in their furnaces.

CEDD recognizes the potential of drones, e.g. in patrolling roads and highways, coordinating and supporting rescue operations, documenting disaster losses, surveying air quality, and also its potential in shipment.

For this purpose, real-world tests have been conducted in Metropolis GZM (Poland), one of the main CEDD members. It is a territorial unit composed of 41 cities and communes, in the province of Silesia. Metropolis GZM is the area

where the Polish Drone Valley is being created and modern solutions are tested.

At the beginning of 2019, as part of the CEDD activities, some tests with the use of drones

From what distance is a pilot able to see a drone in the air? The answer to this question is sought while performing tests at Gliwice airport. During these manoeuvres, 40 flights were carried out, using two drones, a gyroplane and a Cessna aircraft.



CEDD partnered Droniada 2019 – a competition for academic teams, competing in special missions using drones. The best of them won cash prizes provided by Metropolia GZM: 1st place – PLN 25,000; 2nd place – PLN 15,000 and 3rd place – PLN 10,000.

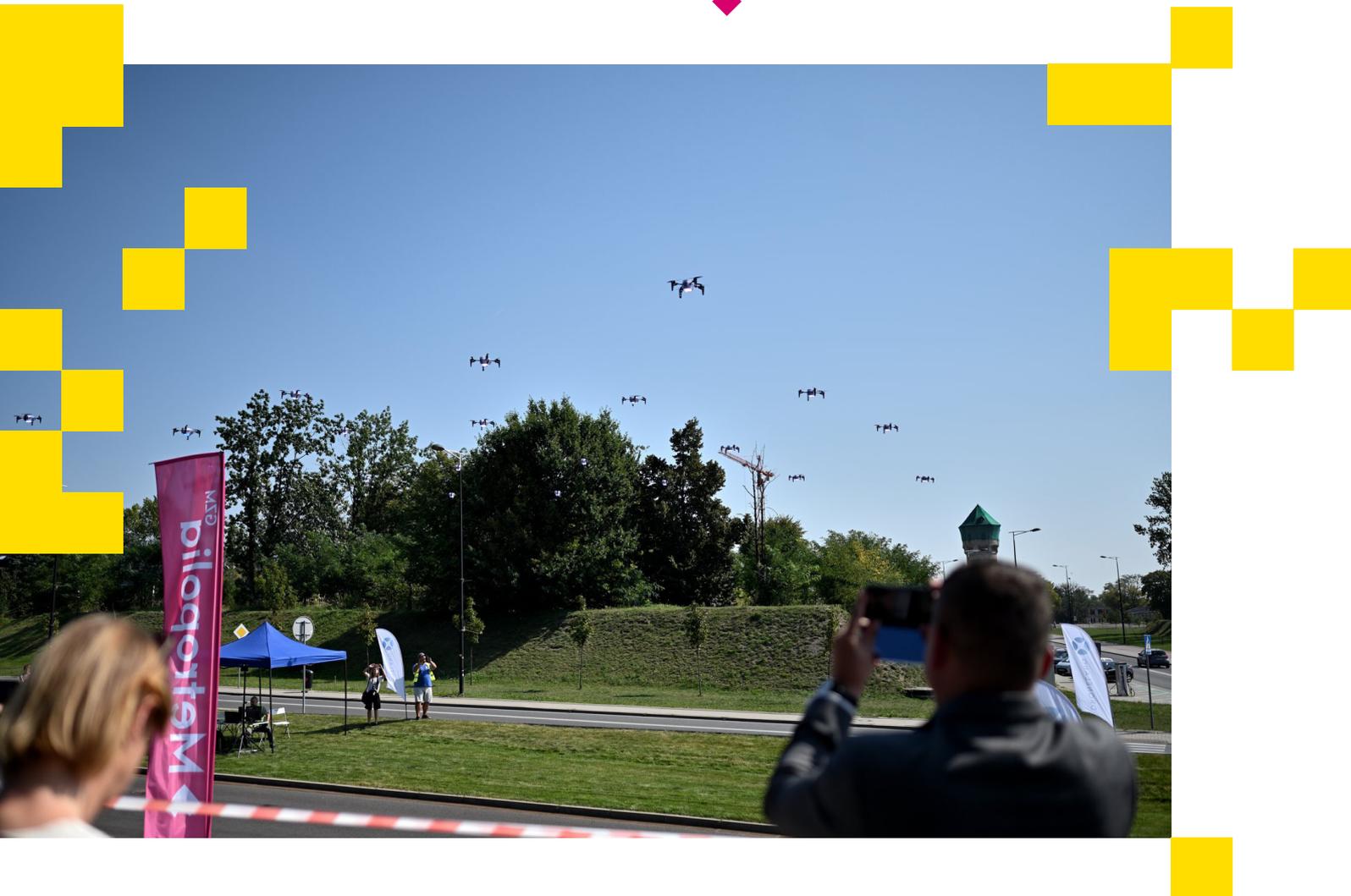
were carried out to measure low emissions. The UAVs checked the composition of smoke emitted from home furnaces - the main source of air pollution in Polish cities. The tests have shown that a single drone can work more efficiently than several city guard officers performing the same tasks. To sum up these tests, CEDD developed recommendations for local self-governments, so that in the future they could individually order this type of services, to their own needs.

CEDD also tested the use of drones in landfills. In this event, the UAVs were used to measure the landfill volume, analyse the risk of fire, as well as to analyse the insolation, with respect to the potential of renewable energy sources development in revitalised areas.

Currently solutions to check the readiness of Polish UAV technologies for air transport use are being tested. As part of the works, an automated UAV flight covering a distance of 8.5 km, was carried out. In the future, drones should be able to transport cargos in city's airspace.

To make the new functions of drones possible, developing technological solutions, carrying out tests in real-world conditions and changes in legislation to open the airspace for UAVs, need to be implemented. That is also the reason

CEDD was established under agreement signed on the 12th of September 2018. At the end of August 2019, CEDD celebrated its first birthday. On this occasion, a large conference on drone industry was organized in Katowice. A drone swarming show was one of attractions.



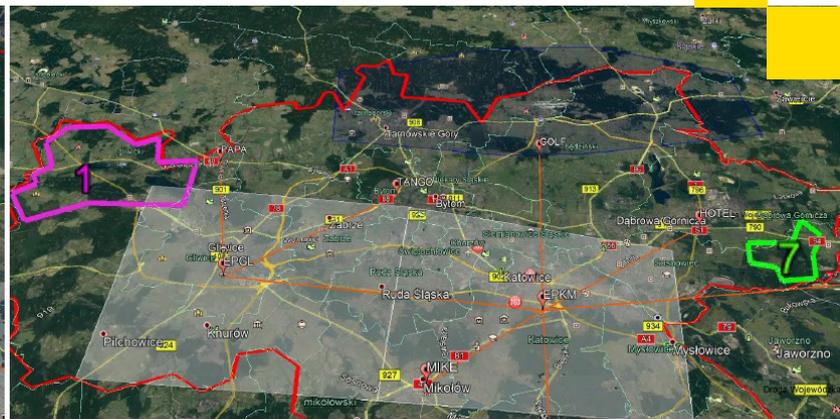
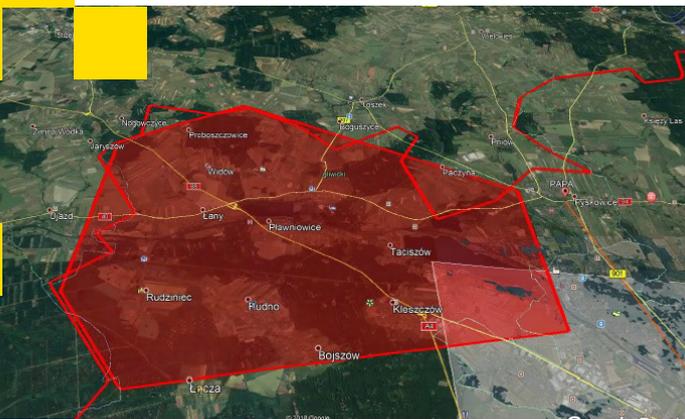
why CEDD was established by strong actors, competent to implement the bravest and the most innovative visions.

The CEDD initiative has been set up by Metropolis GZM, inhabited by over 2 million people and located in the South of Poland, as well as the Civil Aviation Authority of the Republic of Poland (Polish abbreviation: ULC) and the Polish Air Navigation Services Agency (PANSAs). ULC operates towards safety and sustainable development of civil aviation in Poland, while PANSAs ensures safe and smooth air traffic flow in Polish airspace. CEDD is additionally coordi-

nated by the Polish Ministry of Infrastructure.

CEDD also cooperates with local self-governments, scientists, uniformed services, representatives of municipal companies and entrepreneurs operating in the unmanned aerial vehicle industry. CEDD is also an initiative available and open to all users who want to participate and share their knowledge and experience.

Tests with drones in real conditions are being carried out in two specially selected areas in Metropolis GZM.



Detailed information on CEDD can be found at www.cedd.pl

The offices of CEDD are located in the premises of Metropolis GZM in Katowice.

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