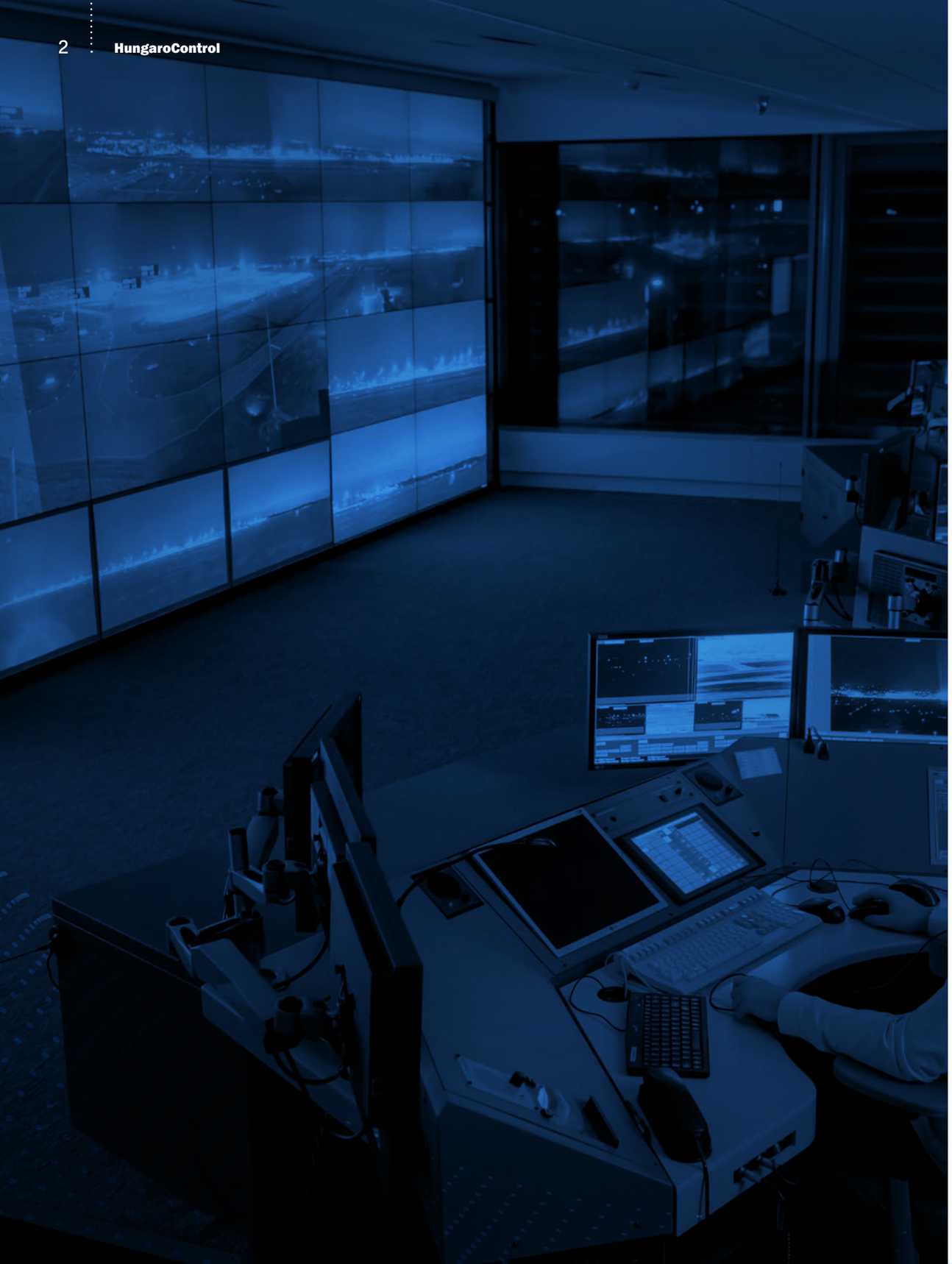
HungaroControl

SKYHUB



STRIVING TO PUSH THE BOUNDARIES OF AVIATION

- Air Navigation Service Provider in Hungary and in the upper airspace of Kosovo
- Tailor-made remote tower services and free route airspace deployment
- Europe’s largest commercial radar simulator for validation activities
- Advanced research and development
- State-of-the-art operational solutions

HungaroControl provides air navigation services in Hungarian airspace and – on a NATO assignment – in the upper airspace over Kosovo.

2019

CONTROLLED FLIGHTS	ANNUAL TURNOVER	PERSONNEL
1M+	110M EUR+	780+ EMPLOYEES

Pioneers in air traffic management and developers of

WORLD-CLASS AVIATION SERVICES

- World's first fully capable **remote tower deployment** for a medium sized airport in 2015
- Europe's first unconditional **Free Route Airspace implementation** in 2015
- **SimulationHub:** Europe's largest commercial radar simulator for validation activities
  simulationhub.hu
- Active engagement in **industry level developments**

OUR MAIN FOCUS:

- IMPROVE SAFETY
- MAXIMISE CAPACITY
- IMPROVE COST-EFFICIENCY
- ENHANCE ENVIRONMENTAL SUSTAINABILITY
- DELIVER TAILOR-MADE SOLUTIONS TO INDUSTRY

ARTIFICIAL INTELLIGENCE (AI) RESEARCH & DEVELOPMENT

- Virtual Pseudo Pilot Platform
- AI based DeFog tool
- AI based conflict resolution advisory tool for UTM
- AI based ETA Prediction

UTM SERVICES

- Unmanned aircraft localisation method
- UTM Application

HungaroControl launched **SkyHub,** the brand behind all our complex products and services, that provide tailored solutions to industry.

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SKYHUB

ATM SOLUTIONS

- Turbulence Display System
- MergeStrip

INTEGRATED REMOTE TOWER SERVICES

- Remote tower services from concept to operation
- 3D Airport visualisation tool

SIMULATION HUB

- Simulation and validation
- Operational Training

THE POWER OF AI

We are already harnessing the power of AI in order to leverage its benefits within simulation and operational environments.

VIRTUAL PSEUDO PILOT

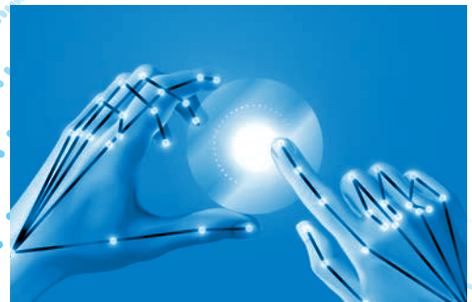
The ultimate software solution for ATC simulators that executes pseudo pilot tasks with the power of advanced voice recognition technology. Built with unique pilot logic the application can recognize ATCOs' voice commands, acknowledges the command on human voice according to the rules of radiotelephony while executing the commands in real time.

AI BASED DEFOG TOOL

See that plane hiding there? With HungaroControl's DeFog tool you will. Being compatible with any video surveillance system, this state-of-the-art software solution enables you to guide aircraft even in dense fog.

AI BASED CONFLICT RESOLUTION ADVISORY TOOL FOR UTM

With the projected increase in airspace conflicts due to drone operations, this tool supports controllers to safely resolve critical conflicts.



AI BASED ETA PREDICTION

Predict arrival time for smoother air traffic management and more comfortable passanger experience.

NEXT GENERATION TOWER OPERATIONS

Our remote tower services provide a cost-effective digital alternative to conventional tower operations, enabling a refocus on delivering valued services to customers, through:

DIGITALISATION

Enable the latest IT capabilities to increase safety, efficiency and situational awareness.

FLEXIBILITY

Improve service quality through strenghtened business resilience and safety enhancement.

SCALABILITY

Reduce investment costs and optimise productivity through service centralisation.

TAILOR-MADE REMOTE TOWER SERVICES FROM CONCEPT TO OPERATION

Successful delivery of next generation tower operations takes more than just innovative technologies, it calls for a holistic approach to deliver digital success from concept to operation.

3D AIRPORT VISUALISATION

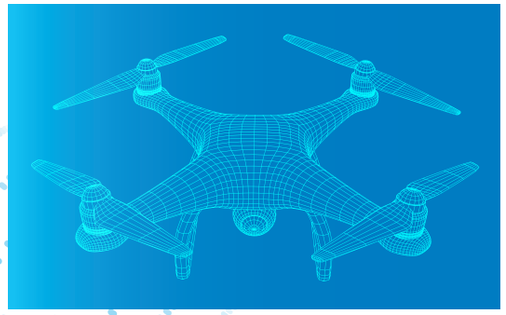
Efficient remote tower planning through the power of 3D animation and visualisation. Plan, visualise and analyse camera positions or plan your tower building in a faster, more convenient and cost-effective way.

THE ULTIMATE CHALLENGE FOR ATM

Drones - unmanned aerial vehicles - are about to revolutionise some of the most critical industries. As much as they can be a threat to ATM operations, they are shaping the way we use technology to deliver our services.

UNMANNED AIRCRAFT LOCALISATION METHOD

You want to know where drones are, especially in aerodrome environment. This tool helps localise even the smallest unmanned aircraft within any airspace.



UTM APPLICATION

Safe, flexible, effective and plannable drone operations require a smooth and stable application. You can monitor, approve or deny drone flights via our mobile app.

PROGRESSIVE OPERATIONAL IMPROVEMENT

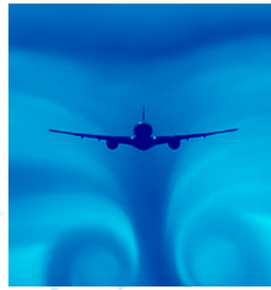
If you think ATM is a conservative industry, think again. While always placing safety first we constantly develop, test and deploy new solutions to ease controller workload and improve operational performance.

MERGESTRIP

Sequence arriving traffic with this flexible air traffic planning tool to reduce fuel burn, CO2 and noise emissions. Holistic benefits for all aviation stakeholders.

TURBULENCE DISPLAY SYSTEM

Minimise unplanned encounters with turbulence. This solution will enable controllers to warn aircraft about potentially adverse weather conditions while reducing radio frequency loads.



SIMULATION HUB

End-to-end simulation solutions in a state-of-the-art technical environment, and in compliance with the highest standards of innovation.

PORTFOLIO

- HMI experimental design and validation
- HMI software ergonomic analysis and design
- Airspace design
- Fast-time simulation
- Real-time simulation
- Simulation impact assessment
- Human factors assessment
- ATCO training

SIMULATION HUB

ELEMENTS OF THE SIMULATION HUB SERVICE PORTFOLIO

simulationhub.hu

CONSTRUCTIVE COLLABORATION

Embedded in the highest level objectives of seamless and interoperable services is a concept of ANSPs working together cooperatively to meet the needs of a common customer. Covering both service and technology domains, these partnerships are built within a strong and established partnership ecosystem.

KFOR – CONTROLLING THE UPPER AIRSPACE OF KOSOVO

HungaroControl is the only company in Europe that controls the airspace of a non-neighboring country. This one-of-a-kind assignment is based on a NATO mandate and has been performed since 2014. It requires close collaborations with local and neighbouring service providers and suppliers.

SESAR – SINGLE EUROPEAN SKY ATM RESEARCH

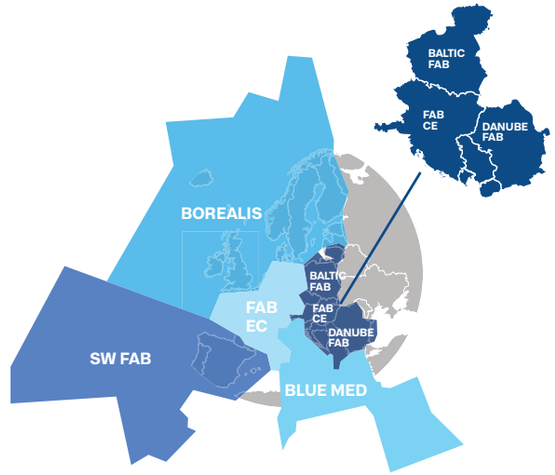
Beyond engagement in SESAR R&D activities, we also actively participate in the deployment phase. From multiple remote towers to drone security, our collaboration within the SESAR framework is furthering industry innovation.

www.sesarju.eu
www.sesardeploymentmanager.eu

GATE ONE

This coordination platform is a bottom-up regional ANSP initiative established in 2013. The purpose is to promote the efficiency of European Air Traffic Management through enhanced cooperation among the participating service providers, as well as to ensure a more powerful and aligned advocacy of the region in the European decision-making processes. Since 2018, HungaroControl CEO Kornél Szepessy has been Chairman of Gate One.

www.gateone.aero



SEE FRA - SOUTH EAST EUROPE FREE ROUTE AIRSPACE

HungaroControl was not only the global first to introduce unconditional free route operations in 2015, but has since worked with neighbouring ANSPs within and without its FAB to extend this beyond Hungary's flight information region. This level of collaboration delivers seamless and interoperable services at local and regional levels, enabling customers to harvest efficiency and cost-effectiveness benefits at a system-level.

SEE FRA facilitates the use of free route airspace across Bulgaria, Hungary and Romania. Following its introduction in November 2019, SEE FRA has the potential to reduce overflight tracks by 20,000 kilometres, saving 70 tonnes of fuel, 2020 tonnes of carbon dioxide and 23 hours in flight time per day.

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www.hungarocontrol.com