



Take Air Traffic Control to the Next Level

Remote Tower



Cost-efficient novel technology

Customised solutions and services

Fully modular and scalable



Cybernetica

OUR STORY

Founded in 1997, Cybernetica grew from the Estonian Institute of Cybernetics (est. 1960); our focus and history making us the founders of the Estonian cyber industry.

BUSINESS

Cybernetica is an ICT company focusing on **secure digital solutions**. We develop and provide **mission-critical** software systems for the public and private sector in more than 35 countries.

We develop advanced **maritime surveillance technologies**, deployed at the external borders of the EU and NATO, as well as to observe and protect the waters of the Black Sea, and the Adriatic Sea. Our **radio communication solutions** are, among others, implemented at the busiest waterways like the Strait of Malacca and in major ports like Jebel Ali in the United Arab Emirates. For the aviation domain, we offer the Remote Tower solution to **remotely control air traffic**, and **Voice Communication Systems**.

Our innovative technologies are the foundation of critical e-Government systems, such as the Estonian X-Road, i-Voting, e-Customs, and more. With successful implementations from the US to Japan, we offer the Unified eXchange Platform for **secure data exchange**, SplitKey for **mobile authentication and qualified signing**, and Sharemind for **confidential data analysis**.

CUSTOMERS

We have a wide range of customers, both from public and private sector, such as governmental authorities (border guard, ICT infrastructure agencies, maritime authorities, police administrations, security agencies, tax & customs authorities, etc.), financial institutions, telecom operators, port authorities, medical institutions and research labs, critical infrastructure operators, etc.

Contact us

Email us to see how our technology could improve your service, or simply visit our website to learn more.

SC-SALES@CYBER.EE
CYBER.EE

CYBERNETICA AS
Mäealuse 2/1, 12618 Tallinn, Estonia
Phone: +372 639 7991
info@cyber.ee



Air transportation continues its global growth. More flights and more passengers in the air pose new requirements to Air Traffic Management (ATM). The pressure is on Air Navigation Service Providers (ANSPs) to apply modern ATM services at lower costs, while maintaining all the safety requirements. The new reality calls for a new concept – Remote Tower.

Cybernetica Remote Tower

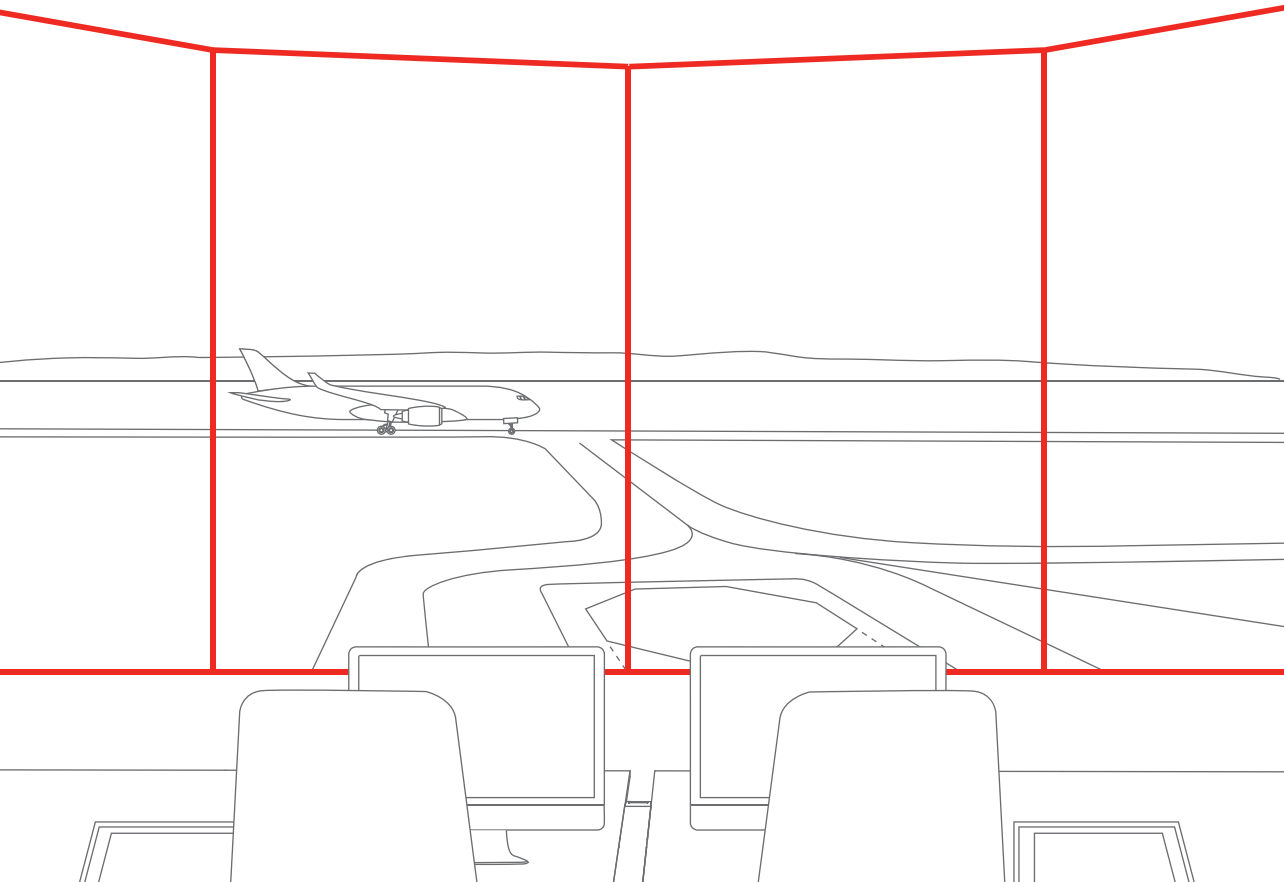
- a solution designed for ANSPs to provide Air Navigation Management services remotely.

BENEFITS

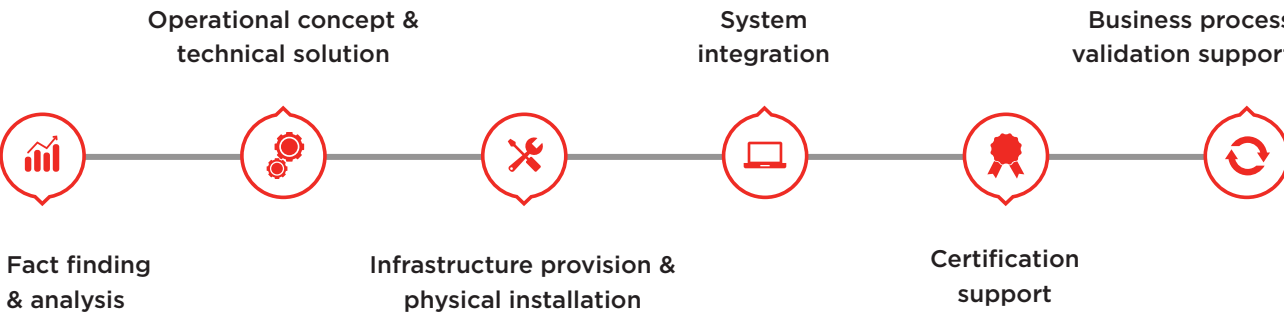
- ✓ **Cost efficiency** – apply modern ATM services and maintain safety at lower total cost of ownership
- ✓ **Affordability** – avoid excessive costs of building a new Air Traffic Control (ATC) tower or upgrading the existing
- ✓ **Resource optimisation** – flexible staff rostering, avoiding over- and underload of Air Traffic Control Officers (ATCOs)
- ✓ **Availability** – providing and remaining 24/7 ATM services to regional airports with low air traffic intensity
- ✓ **Safety** – on-demand capacity and availability for non-scheduled flights, i.e. medical & SAR flights

USE OF REMOTE TOWER

- **Single Remote Tower** – a solution dedicated to remotely control a single airport
- **Multiple Remote Tower** – a solution dedicated to remotely control multiple airports
- **Contingency Remote Tower** – a redundancy solution to a conventional ATC tower



The Process



CYBERNETICA REMOTE TOWER SYSTEM CORE ELEMENTS

- Sensor cluster at the local airport
- Data transmission network
- Data processing cluster at a Remote Tower Centre
- Remote Tower Centre with ATCO's working positions

MAIN FEATURES

- Out-of-The Window view using high-resolution cameras and displays
- Automated binocular tracking function using pan-tilt-zoom device
- 360° seamless panoramic view on displays with adjustable setup (e.g. 240°)
- Augmentation support – overlaid weather, flight data, radar track information
- Automatic detection of objects, advanced video analysis
- Increased air traffic situational awareness by integration of detailed surveillance data
- Integrated Cybernetica Voice Communication System
- Continuous recording and archiving, with a playback functionality
- System monitoring and alert scenarios

DISTINGUISHING FEATURES

- Turnkey delivery – in a strategic alliance with Estonian Air Navigation Services, we provide a full set of customised solutions and services from initial analysis, technology provision, and transition management to validation and certification consultations
- Low threshold investment – as a fully modular solution, the entry level investment remains highly affordable and the system scalable upon request
- Reliability – safety is paramount; the system features secure by design software, robust system architecture, no single point of failure, redundancy, and hot failover solutions
- Easy to use – compact and integrated working positions, enhancing ATCOs capabilities with technology engineered to improve the air traffic situational awareness of the Air Traffic Controller
- Easy transition – full resemblance of a conventional ATC tower, carefully designed procedures, business case verification
- Weather resistant – advance mechanical and software solutions to provide high-quality imagery in rain, fog, direct sun, snow and ice; and in dusk and darkness