ADVANCED, FORWARD-THINKING, AGILE AIR TRAFFIC CONTROL TOWER SYSTEM.

Adacel's REVAL virtual Air Traffic Control (ATC) tower system delivers a wide spectrum of digital tower operational solutions, from consulting services to system design, development, deployment, and support, for a successful transition to virtual tower operations.

REVAL
VIRTUAL AIR TRAFFIC CONTROL SOLUTION

REMOTE/ONSITE, SINGLE/MULTIPLE AERODROME OPERATIONS

REVAL is part of the Single European Sky ATM Research (SESAR) solution pack for single remote tower operations in medium sized airports. The tower was built on modular, open architecture principles suitable for a variety of aerodrome operational needs, including integration with existing or new air traffic management, communication, navigation, and surveillance systems. REVAL was created to provide all the benefits of a remote tower with a more cost-effective approach.

The tower can be used remote or onsite, for single or multiple aerodrome operations. When used remote, this virtual ATC tower can operate independently in a one-to-one aerodrome control setting or as part of a multiple virtual tower center.

REVAL'S COMPETITIVE ADVANTAGES

- **Turnkey delivery:** we provide a full set of customized 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 air traffic controllers' capabilities with technology engineered to improve air traffic control situational awareness.

- **Seamless transition:** full resemblance of a conventional ATC tower, carefully designed procedures, business case verification.

- **Weather resistant:** advanced mechanical and software solutions to provide high-quality imagery in rain, fog, direct sun, snow and ice; and in dusk and darkness.

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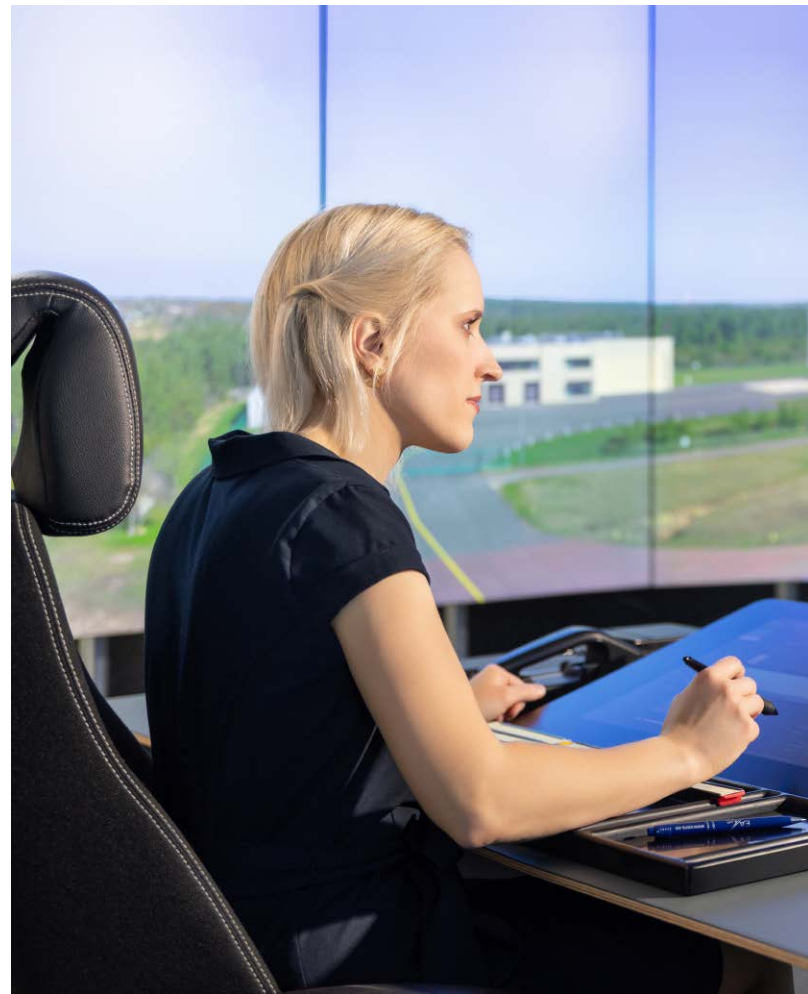
REVAL'S APPLICATIONS

- **Single Digital Tower:**
  A solution dedicated to control a single airport
- **Multiple Digital Tower:**
  A solution dedicated to control multiple airports
- **Contingency Digital Tower:**
  A redundancy solution to a conventional ATC tower

REVAL'S 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
- Data processing servers at the local airports
- Module control and voice communication servers at the Remote Tower Center

BASED ON CUSTOMER'S SPECIFIC NEEDS, REVAL FEATURES MAY INCLUDE:

- Out-of-the-window view using high-resolution cameras and displays
- Automated binocular tracking function using military-grade pan-tilt-zoom device
- 360° seamless panoramic view on displays with adjustable setup (e.g. 240°)
- Custom-made signal light gun
- Augmentation support: overlaid weather, flight data, radar track information
- Automatic detection of objects, advanced video analysis
- Fiberoptic datalink to remote tower center
- Increased air traffic situational awareness by integration of detailed surveillance data
- Integrated Voice Communication System
- Ambient stereo audio system

- Continuous recording and archiving, with a playback functionality
- Modular camera mast
- System monitoring and alert scenarios

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WHY CHOOSE REVAL?

- **Cost efficiency:** built on low-cost architecture, perfect for low traffic volume areas; yet delivers advanced ATM services and maintains safety at lower total cost of ownership. This is an outstanding cost-efficient ATS solution for low-volume flights aerodromes and heliports, including multiple remote tower solution where the personnel and infrastructure are used in a more effective way.
- **Affordability:** helps avoid excessive costs of building a new Air Traffic Control (ATC) tower or upgrading the existing one.
- **Resource optimization:** enables flexible staff scheduling, avoiding over- and underload of Air Traffic Control Officers (ATCOs) Improved flight safety with the application of new, cutting-edge technology.
- **Resolving unexpected events** in a more flexible and cost-efficient manner.
- **Reliable availability:** provides 24/7 ATM services to regional airports with low air traffic intensity.
- **Safety and agility:** on-demand capacity and availability for non-scheduled flights, i.e. medical & SAR flights; tried and tested in harsh Nordic conditions.
- **Highly focused:** developed based on direct input from ATCOs and in strong collaboration with an ANSP.
- **Integrated Voice Communication System:** a single-user interface for both ATM service operations and voice communication.
- **Peace of mind:** implementation and consulting services included with the system.

REVAL IMPLEMENTATION PROCESS AND AVAILABLE SUPPORT SERVICES

- Fact finding and analysis
- Operational concept and technical solution
- Infrastructure provision & physical installation

- System integration
- Certification support
- Business process validation support

We are here to help. Contact us: info@adacel.com

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