



SAAB INTEGRATED TOWER

PROVEN, FLEXIBLE AUTOMATION TOOLS FOR A MORE EFFICIENT TOWER

A Need for Improved Safety and Efficiency

Air traffic control (ATC) towers are often cluttered with a large number of independent systems and displays. Due to the variety of interfaces and lack of information sharing between these disparate systems, air traffic controllers spend a lot of time 'heads down' and are forced to rely on constant, inefficient verbal communication. Many systems do not share information with other systems or stakeholders, resulting in a more limited view of the operational situation. The disparity and proliferation of systems in the tower also leads to reduced efficiency and increased operating costs.

Air Navigation Service Providers (ANSPs) and airport operators (large and small) need tools to help them manage airport traffic flow in an efficient and safe way to ensure predictability, punctuality, and the best use of airport capacity under any visibility and weather conditions.

The **Saab Integrated Tower** is a flexible, scalable approach to providing ANSPs and airport operators with a streamlined set of automation tools to manage traffic flow in a safe and efficient manner. Saab offers an Advanced-Surface Movement Guidance and Control System (A-SMGCS), Electronic Flight Progress Strips, airfield and weather data handling, voice communications, traffic flow management and Collaborative Decision Making (CDM) tools that can be integrated together or deployed independently to improve controller efficiency and reduce operating costs. The Integrated Tower easily supports the integration of third party components and existing airport systems. Saab's Integrated Tower is a proven and low risk approach to tower automation that can be customized to any tower.

A Complete Solution from the Tower Experts

Saab's Integrated Tower is based on our expertise in all aspects of the air traffic control tower, with

years of experience developing and delivering reliable, proven airport surface safety, traffic flow management and CDM solutions. Our tower experience includes towers of all sizes and operating conditions; meaning in our experience, one size solutions do not fit everyone. The result is a flexible, scalable approach to Integrated Towers that brings together the right tools in the right configuration to meet the specific needs of a tower.

Enhanced Situational Awareness

The Integrated Tower combines a number of tower functions into a single operating position, providing controllers with a common view in all traffic and weather conditions. Heads-up time is maximized, enabling controllers to focus on what is important for optimal safety and efficiency. The usage of electronic flight data and the support of a large number of system interfaces further improves the ability to share information within the tower and with external ATC and commercial stakeholders.

Standardized Working Position

Each working position is based on the same general physical layout and hardware configuration. However, the functionality included in each working position can be configured to comply with the specific demands of the individual controller role as defined by the needs of each operator.

Flexibility and Scalability

The Integrated Tower can be deployed as a complete suite or as individual tools, enabling a phased implementation to suit customers'

needs. The Integrated Tower can integrate third party systems and accommodates a wide range of interfaces to airport, weather and flight plan data systems. This flexibility and modularity enables the Integrated Tower to be adapted to any airport operation. It also means that regardless of the configuration that is deployed, it will be ready to grow and adapt to future operations.

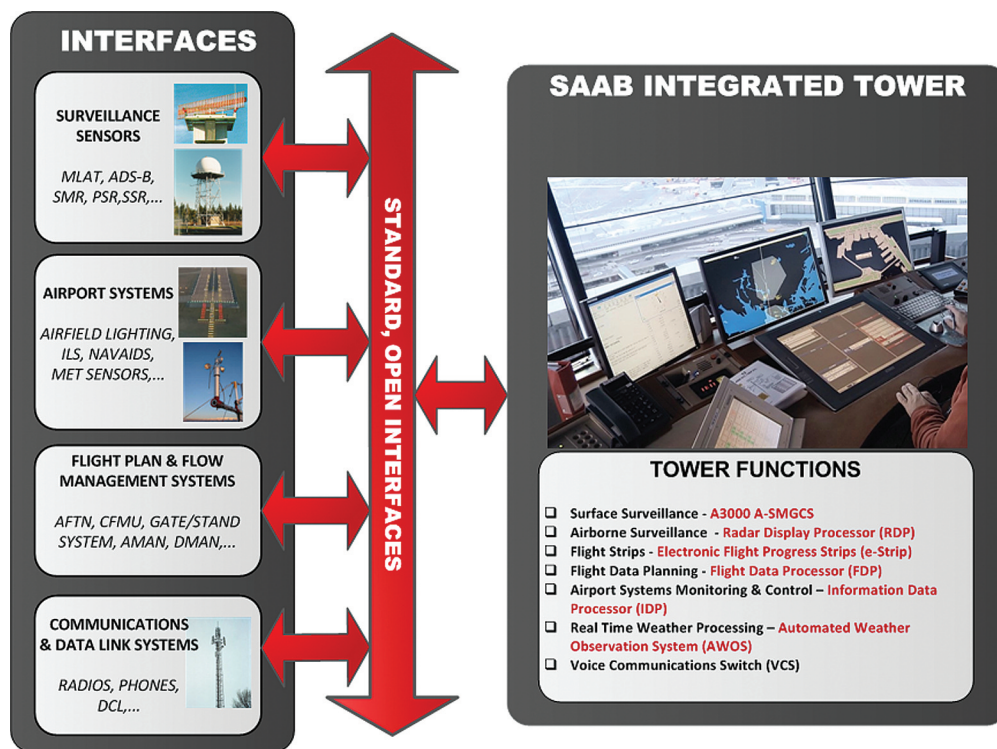
Open standards and COTS hardware

The Integrated Tower design relies on Commercial-Off-the-Shelf (COTS) hardware and standardized interfaces for communications

with external equipment. This facilitates integration with existing systems and eases addition of systems in the future.

Cost Reduction

The utilization of a standard, automated controller working position, COTS hardware and standardized interfaces significantly reduce and consolidate the systems in an ATC tower. Saab's Integrated Tower provides a low acquisition cost with low reoccurring maintenance costs through the usage of fewer, but better designed operational and maintenance tools.



The core Saab Integrated Tower applications consist of a number of proven, loosely coupled products, including A3000 A-SMGCS, Radar Display Processor (RDP), Electronic Flight Progress Strips (e-Strip), Flight Data Processor (FDP), Information Data Processor (IDP) and Automated Weather Observation System (AWOS). The Integrated Tower interfaces to a wide range of sensors, airport systems and external systems and can accommodate Voice Communication Switch (VCS) systems from a number of providers. The Integrated Tower shares a common architecture and a common look and feel with **Saab's Remote Tower**, enabling consistent solutions for customers seeking towered and non-towered solutions. It can be extended to full airport CDM through the inclusion of **Saab's Aerobahn Suite**.

The ability to monitor traffic on the airport surface under all visibility conditions is a key component of any tower. This is provided by the **Saab A3000**, a proven, industry leading A-SMGCS Level 2 solution for airports of all sizes. The A3000 features advanced multi-sensor tracking, a comprehensive set of surface safety nets and a fully featured, intuitive surface traffic display. *See the A3000 brochure for more details.*



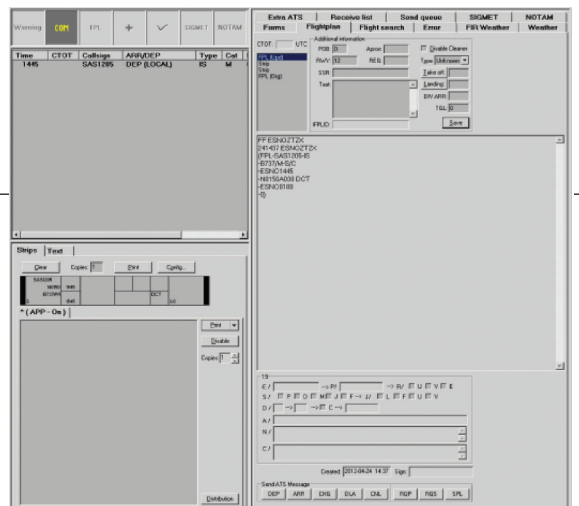
The **Saab e-Strip** is a highly configurable, role-based electronic flight progress strip system that automates controller workflows for any tower, large or small. Interoperability with the A3000 A-SMGCS results in an integrated surveillance and flight data picture, greatly enhancing the controller's situational awareness. e-Strip easily connects to external users for precise information sharing. e-Strip also provides automatic or semi-automatic departure clearances through standard interfaces with data link systems. *See the e-Strip brochure for more details.*



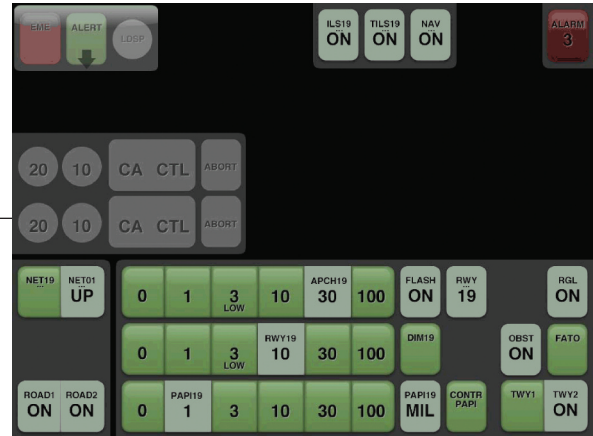
The **Saab RDP** is a reliable air situation display that can be used for providing air traffic control services for the approach and terminal volumes from the ATCT. The RDP features an intuitive and user friendly HMI that seamlessly integrates with other tower tools such as e-Strip. It supports a variety of single sensor or multi-sensor inputs and displays airborne safety nets.



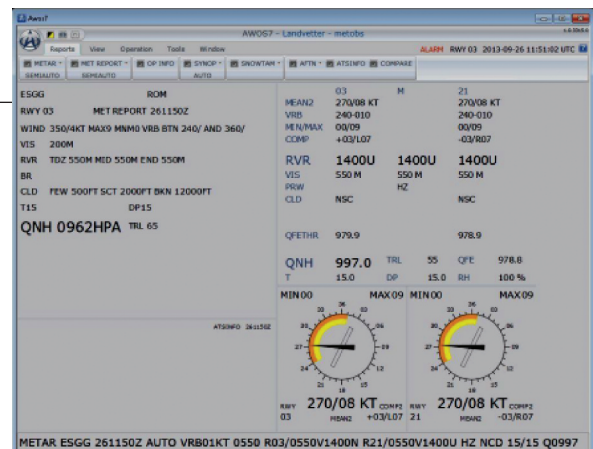
The **Saab FDP** is a safe and cost effective flight planning tool, enabling all types of flight plans to be generated, received, updated, processed and distributed in real time. Information is also communicated to external networks such as AFTN. The FDP checks the format of incoming and outgoing messages, speeding up communications and reducing the risk of human error.



The **Saab IDP** is an open, real-time information system that provides tower controllers with an easy way to monitor and control a large number of airfield and external systems. Disparate information sources such as weather sensors, Airfield Ground Lighting (AGL), NAVAIDS, flight information, documents, and maps can all be accommodated. The various systems are integrated on a control panel that can be adapted to any airport.



The **Saab AWOS** provides real time weather information through automatic acquisition and dissemination of data collected from various meteorological sensors. *See the AWOS brochure for more details.*



Specifications subject to change without notice