**BENEFITS**

PASSUR Surface Management improves the efficiency and safety of operations through alerts, predictions, and decision support to mitigate the impact of disruptive and expensive surface constraints such as winter ops, convective weather, traffic congestion, and runway closures. It includes collaborative automation and business processes to help coordinate the multi-player environment of the surface operation.

PASSUR Surface Management is a comprehensive solution suite that allows airports, airlines, and other service providers to manage the surface operation holistically as part of the entire flight lifecycle, including modules for diversion management, traffic management initiatives, and arrival management.

It is completely web-hosted, allowing for broad access and portability within and between organizations—creating a common operating platform of shared information, decision support, and performance analysis within airlines (mainline/regional, AOC/hubs) and between airports, airlines, and other service providers.

- Brings visibility to the “last unlit phase” of the flight cycle: The surface remains a “mystery space” at many airports, with little or no understanding of where inefficiencies are occurring.
- Total flight tracking: One source, one platform—gate-to-gate; enables management and optimization of constraints across the entire flight.
- Addresses some of the most complex, expensive, and disruptive operations: tarmac delays, gate holds, taxi queues, turn times, return-to-gate, diversions, and deicing.
- Provides analysis and reporting of gate, parking, and other airport usage.
- Extends “surface management” best practices and solutions to areas of the airport where existing surface surveillance doesn’t penetrate or at airports where there is no surface tracking at all.

**LATEST DEVELOPMENTS**

- Affordable, high-reliability surface surveillance tailored for commercial requirements of airlines and airports—not the safety requirements of Air Navigation Service Providers.
- Fuses data and information about the airport surface with the rest of the PASSUR airport, airspace, and flight data—creating a complete, unique, and independent resource for optimizing key business objectives and operational metrics.
- Introduced low-cost surface vehicle tracking, to cover non-aircraft movements.
- Adapted PASSUR departure metering and sequencing to both arrival and departure sequencing, to prioritize flights in congested gate complexes.

**WHAT MAKES IT UNIQUE**

PASSUR Surface Management is seamlessly integrated with terminal and en-route flight tracking for a true gate-to-gate flight and airspace visualization platform. Beyond flight tracks, it includes dashboards of key performance metrics, information tables, alerts, and predictive analytics to enable true “management by exception.”

**HOW IT WORKS**

PASSUR Surface Management is powered by the PASSUR radar surveillance network both in the terminal area and on the surface, integrating multiple surface and airborne tracking signals, providing the fastest and most precise positional updates available.

- Enables the precision flight, airport surface, and airspace monitoring required for predictive analytics, real-time decision support, and performance analysis.

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"We’re doing everything we can to enhance the customer experience while reducing costs, and PASSUR’s (Surface Management Program) falls right in line with that strategy."

– Dave Wotton, Director of Automation and Support, Southwest Airlines’ Operations Coordination Center
The PASSUR surface surveillance network is 100% ADS-B capable—ready for NextGen.

At airports without ASDE-X or ASSC systems deployed (government surface tracking), the system can be deployed in a stand-alone configuration, providing tracking for all movement and non-movement areas including gates.

For airports with ASDE-X, ASSC, or other surface surveillance technology already deployed, the PASSUR system can be added to provide supplemental coverage to “fill-in” areas without tracking coverage.

Feeds and optimizes other PASSUR solutions—like Tarmac Delay Management, Diversion Management, Surface Metering and Sequencing, Airport Performance, System Metrics, and Visual Flight Tracking.

### Key Decisions and Metrics Impacted

**Gate Availability & Gate Management**
- Fewer gate holds
  - Fuel burn/carbon emissions
  - Bag/passenger connections
  - Fewer obstructed pushbacks
  - Improved DO and A14

**Departure Sequencing/Metering**
- Schedule integrity for high-value flights
- Fewer minutes of delay
- Fewer minutes of taxi-out fuel burn
- Fuel costs and emissions
- Reduced risk of DOT tarmac delay fines

**Deice Dwell Time**
- Fewer minutes spent in deice queue (into deice pad and after deicing)
- Less secondary deicing
- Fewer delay minutes on departure
- Reduced fuel burn related to deice queue (pre and post)

**Return to Gate**
- Fewer long-onboard delays (tarmac delays)
- Reduced risk of DOT three-hour and four-hour fines

### PRODUCT OVERVIEW

PASSUR Surface Management monitors, predicts, and analyzes the movement of aircraft and vehicles in the movement and non-movement areas. It encompasses surface flight track visualization on a moving map, “key performance indicator” KPI dashboards, and information tables and alerts for customized information and management by exception. PASSUR Surface Management is part of an integrated approach to traffic management optimization that addresses costly constraints and disruptions throughout the entire flight cycle.

**Single Integrated Display**

Surface flight tracking on PASSUR Web Tracker is part of a single, integrated display that enables seamless tracking of the surface, terminal airspace, and en-route environments on a single screen for gate-to-gate tracking and management of flights.

**Sophisticated Prediction Engine**

PASSUR Surface Management includes a sophisticated prediction engine that forecasts IN times, OFF times, taxi queue times, and delays/dwell times to create actionable predictions designed to mitigate surface delays, fuel burn, and extended passenger on-board delays.

**Departure Metering/Sequencing Solutions**

PASSUR Surface Management includes departure-metering tools that enable a “virtual queue” which creates the shortest taxi-out time without the need for aircraft to physically queue on the taxiway to preserve their place in line. It also provides alerts and trend metrics that enable prioritization of higher-value flights through departure fix-load balancing.

### Collaborative Airfield Management

PASSUR Surface Management includes modules for instant updates on airport conditions—NOTAMs and non-NOTAMs, diversions, and tarmac delays—on the only national platform for industry-wide live coordination and communication, the Airport Information Network (AIN).

**Dashboard Tools**

Includes dashboards of key performance indicator alerts, predictors, and trends, enabling effective workload management by freeing users from the need to monitor individual flight tracks and surface maps.

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**ABOUT PASSUR**

PASSUR is a business intelligence, predictive analytics, and big data company. Our mission is to improve global air traffic efficiencies by connecting the world’s aviation professionals onto a single platform, making PASSUR the common element tackling the $30 billion of system-wide inefficiencies.

PASSUR has a broad and global customer network. PASSUR’s products are used by all of the top North American airlines, over 125 airlines worldwide, over 60 airports including 80% of the top 30 airports, approximately 200 business aviation organizations, and the US government.

Our core business addresses some of aviation’s most intractable and costly operational and financial challenges, including underutilization of airspace and airport capacity, delays, cancellations, and diversions.

Our cloud-based local, national, and international collaborative communication network and ecosystem allow us to solve problems collaboratively that can’t be solved by individual organizations.