

## Integrated demand forecasting and resource planning system.

Positive forecasts for continued growth in passenger volumes at airports and transport terminals create unique financial and operational pressures. Airports and transport terminals need to become smarter with the deployment of their resources as they seek to continually improve passenger experience, attract and retain customers and manage their business successfully.

Mach-SmartPredict<sup>®</sup> is a modular software suite able to deliver three core components; accurate forecasting, effective resource planning and operational scenario modelling. Each can be used separately or combined as a fully integrated suite.

Mach-SmartPredict<sup>®</sup> automatically distributes critical operation- al information to the right people at the right time.

Mach-SmartPredict<sup>®</sup> provides tools for the modelling of expected passenger and baggage volumes, planning outbound security loads. As part of the Mach-Secure<sup>®</sup> innovative suite of products, it can enhance operational capability by providing critical information over the active operational time of each flight or other transport mode departure.

A scalable modular solution, Mach-SmartPredict<sup>®</sup> is designed to be easily updated and can adapt to local conditions. While the typical scenario of outgoing passengers moving through outbound security at an airport is common, it can also be configured for use with operations such as passenger transport, meet and greet parking and cargo space planning.



### DEMAND FORECASTING AND RESOURCE PLANNING SYSTEM

- Comprehensive set of tools to manage activities linked to the resource planning of airport security facilities
- Provides security resource planners with the capability to automate the allocation of staff and equipment dynamically
- Automatically uses passenger travel profiles to forecast operational capacity requirements to service demand variations
- Seamless integration into Mach-Secure<sup>®</sup> portfolio of products



**Mach-Secure® Advantage.** Mach-SmartPredict® assigns equipment based on required throughput to keep queuing time within a pre-configured service level and allocates human resources to the equipment accordingly.



### Application Suite - Overview Window

Mach-SmartPredict® provides a comprehensive set of tools to manage the activities associated with accurate forecasting, effective resource planning and scenario modelling of airport facilities. The overview window provides resource planners with tools for staff and equipment allocation, flight schedule maintenance, flight profiling (load factors), asset capacity utilisation monitoring and management reporting.

### Flight Schedule Analyzer

Mach-SmartPredict® provides a simple tool for the creation and maintenance of the operating flight schedule and provides interfaces to live flight information sources to ensure that the current operational schedule accurately reflects the real operating situation.



### Passenger Profiles

Mach-SmartPredict® provides tools for the modelling of expected passenger flows, baggage flows and outbound security loads based on the operational flight schedule, operating aircraft and historical carrier load factors. It is able to model the passenger profile over the active operational time of each flight taking into account the passenger mix and characteristics based on the leveraging of real, accurate passenger data per flight or carrier.

### Passenger Flow Forecast

Mach-SmartPredict® utilizes the passenger profiles to forecast outbound security loads, check-in desk loadings and make-up capacity. The historical data gathered by Mach-SmartPredict® is leveraged into the forecast algorithms so that it can learn from previous experience and provide more accurate forecasts of future resource demands. Simple tools allow exceptional situations such as public holidays, school holiday patterns etc., to be taken into account when generating current forecasts.



# Mach-Secure® Integrated Airport Security Solutions

The Mach-Secure® suite of innovative products and systems is designed specifically for airport security applications. The Mach-Secure® suite of products and systems will dramatically increase the overall efficiency of an airport's security systems while enhancing the passenger experience and lowering the operational costs.

- Mach-SEMS® Security Efficiency Management System
- Mach-SmartLane® Automated screening of PAX carry-on bags
- Mach-SmartARCS® Airport Regulatory Compliance System
- Mach-SmartView® Checkpoint directive search facility
- Mach-SmartViewMatrix® Centralized X-ray security screening
- Mach-SmartAccess® Intelligent access control
- Mach-SmartSense® Personnel tracker
- Mach-SmartGate® PAX validation to proceed through gate
- Mach-SmartRoster® Integrated workforce management system
- Mach-SmartBRS® Baggage Reconciliation System
- Mach-SmartSAC® Security audit and sortation system
- Mach-SmartRegister® PAX/airline spend profile and PAX locator
- Mach-SmartTutorial® In-situ security training in X-ray image analysis
- Mach-SmartPredict® Forecasting and planning solution for airport assets
- Mach-SmartPupil® Security vigilance monitoring system
- Mach-SmartDrop® Automated passenger bag drop
- Mach-SmartFlow® Queue analysis management system
- Mach-SmartCargo® Cargo streamlining and security compliance
- Mach-SmartCore® Security scanner performance data
- Mach-SmartMotion™ Intelligent software simulation of PAX flow



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