

Headquarters  
Ascent Technology, Inc.  
101 Federal Street, 19th Floor  
Boston, MA 02110 USA

Mailing address  
Ascent Technology, Inc.  
PO Box 51435  
Boston, MA 02205-1435 USA

Telephone: +1.617.395.4800  
email: [sales@ascent.com](mailto:sales@ascent.com)  
[www.ascent.com](http://www.ascent.com)

---



## The SmartAirline Operations Center<sup>®</sup> solution

### Deploy your resources to the greatest advantage and control your costs

With Ascent Technology's SmartAirline Operations Center solution, you can forecast, schedule, and manage the use of your resources so you can handle your flights and accommodate your customers efficiently and cost-effectively.

Ascent Technology's SmartAirline Operations Center solution is a coordinated set of intelligent software products that handle your resource-management needs ranging from long-term planning to day-of-operation deployment to historical reporting and analysis. With the SmartAirline Operations Center solution, you can:

- Coordinate your long-term planning, short-term scheduling, and day-of-operation management of runways, gates, stands, baggage belts, check-in counters, ramp equipment, buses and departure lounges, avoiding costly duplication of effort
- Minimize the impact of unavoidable disruptions when unplanned events and irregular operations disrupt previously planned schedules
- Ensure your flight-schedule information and day-of-operation flight information are consistent, correcting errors before they become costly mistakes
- Respond quickly to the changing needs of your customers, while at the same time ensure the most advantageous use of your resources
- Identify and resolve potential resource conflicts and chokepoints before they derail your operations
- Enable you to handle more flights and greater passenger traffic with existing runways, gates, stands, baggage belts, check-in counters, and departure lounges

- Show how introducing different schedules, aircraft types, and airlines affects your future operations, so you can design and build the facilities you actually need
- Manage long-term and short-term planning and day-of-operation resource allocation for unlimited numbers of gates, stands, remote parking positions, check-in counters, baggage belts, ramp equipment, buses, and departure lounges at stations of all sizes
- Maintain all information in a secure repository, readily available for reporting, auditing, and analysis purposes
- Distribute accurate and timely information to planners, operations managers, passenger-service staff, security agents, ramp workers, service partners, and passengers
- Track the use of fee-based ground resources for invoicing purposes
- Coordinate smoothly with the Ascent WorkZone workforce-management system to assign your staff to work assignments and locations
- Interface with external systems, such as flight-information, baggage-information, and check-in counter displays; CUTE systems; and financial systems
- Produce comprehensive management reports

When you use Ascent Technology's SmartAirline Operations Center solution, you can be sure the right resources are available at the right times to operate your station efficiently and economically.

## **Handle your resource-allocation needs—past, present, and future**

Ascent Technology's SmartAirline Operations Center solution optimizes your use of baggage belts, check-in counters, departure lounges, gates, remote parking positions, and stands for maximum efficiency and profitability. The resource-allocation decisions you make on the day of operation follow the same rules and assumptions you use when you develop your long-term plans. The cloud-hosted SmartAirline Operations Center solution contains three product suites: the SmartAirline Information Manager® product suite, the SmartAirline Operations Manager® product suite, and the SmartAirline Capacity Manager® product suite.

With Ascent Technology's From Touchdown to Takeoff® cloud-hosted service for airline and airport operations, and its coordinated management of your operations, you can handle flights, accommodate passengers, and manage your resources efficiently and economically. You can be sure the right resources are available at the right times to ensure smooth operations.

## **You plan with the SmartAirline Capacity Analyzer product suite for strategic planning**

Using the business knowledge you enter into the ARIS/CA® capacity analyzer in the form of simple rules, you can build and compare what-if scenarios that enable you to determine the most advantageous ways to operate in the future. You can analyze different ways to deploy your resources, how changes in flight schedules and aircraft affect your operations, and which factors have the greatest effects on your costs, revenue, and profitability.

## **You deploy with the SmartAirline Operations Manager product suite for day-of-operation business management**

Because the same business rules that guide your long-term plans also guide your day-of-operation decisions, the SmartAirline Operations Center real-time resource allocation products and tools enable you to manage rapidly-evolving situations on the day of operation in the best possible way. When operations do not go according to plan, the SmartAirline Operations Center solution provides schedule-recovery tools to minimize the impact of unavoidable disruptions. They ensure that you deploy your resources to the greatest advantage, even in the face of unavoidable disruptions on your operations.

## **You coordinate and communicate with the SmartAirline Information Manager product suite for business-knowledge management**

Ascent Technology's SmartAirline Operations Center solution embraces the premise that resources are used most effectively when resource-allocation decisions are coordinated, rather than treated as isolated activities. This coordination is made possible by the ARIS/SmartBase® database, which provides a consistent, up-to-the-minute view of flight-schedule, resource, and operations information to the SmartAirline Operations Center solution. Because information about resources, plans, and actual operations is maintained in a central relational database, the SmartAirline Operations Center solution enables collaborative decision-making by communicating timely and accurate business knowledge throughout your organization.

You can distribute long-term plans months in advance, you can communicate operations information in real time, and you can analyze and report about operations as soon as they happen. You can also track the use of fee-based resources and produce billing reports and invoices.

The ARIS/SmartBase database not only simplifies information sharing among the staff using Ascent Technology's SmartAirline Operations Center solution, but, in combination with the ARIS/SmartBus® communication manager, it also simplifies importing data from and exporting data to external systems.

Information processed by the SmartAirline Operations Center solution is readily available to provide coordinated views of schedule, current, and historical information to external systems, and it can be used to drive the Ascent WorkZone workforce-management system, FIDS, BIDS, and check-in counter displays. Information can also be distributed through the Internet to airline and airport web sites, security personnel, and information displays at car rental facilities, hotels, and transit facilities.

## **You can mix and match**

You can implement the SmartAirline Operations Center solution in modular steps, mixing and matching the components that best fit your needs, budget, and growth plans.

Ascent Technology's From Touchdown to Takeoff cloud-hosted service delivers the power of the SmartAirport Operations Center solution in a secure, highly-available, and readily-expandable cloud-hosted infrastructure. When you subscribe to our cloud-hosted service, you can access the SmartAirport Operations Center solution using a standard browser directly from your network without any need to install, maintain, and support on-premise hardware and software. We can readily adjust available computing power to meet your organization's changing needs, and you can easily expand the solution to accommodate additional users and to manage additional resources, facilities, and locations.



## Representative features

- A highly graphical interface enables you to analyze, update, and manipulate seasonal flight schedule, flight-leg, and day-of-operation flight information
- Manual data entries are automatically checked for errors, so common mistakes, like invalid dates, are automatically flagged
- Contextual menus and help wizards train users as they work, so a broad range of users can start using the system immediately
- Users can browse using any one of large number of fields such as schedule, airline, or specific flight, so users do not need to know what they are looking for in order to find it
- Administrators can control which users can access which views and functions, so each department, airline, handling agent, rental car company, or other service provider sees only what is relevant
- The ways in which data are presented can be customized, so one system can accommodate the needs of many different service providers and partners
- Future flight schedules can be created and manipulated for planning purposes
- Up-to-the-minute flight-position data can enhance knowledge about current conditions
- Schedule and flight information can be viewed and edited from any place there is a web-enabled PC
- Turns can be generated automatically when seasonal schedules do not supply turn information
- A real-time chart of gate, stand, and remote parking position utilization is displayed in bar-chart format
- The system scales to accommodate any number of concurrent users, so it will not become obsolete as the station grows or new service providers and partners are added
- Seasonal schedule information can be received from schedule aggregators and integrated automatically
- All flight schedule and day-of-operation flight information, business rules, and other critical data are maintained in a single relational database so users of the SmartAirline Operations Center solution can work with information from all sources at once
- World-class open technology offers a universal hub linking diverse systems and data stores
- Accurate and timely schedule and day-of-operation information can be communicated automatically to planners, operations staff, passenger-service staff, security agents, ramp workers, service partners, and passengers

- Detailed reports based on planning, operations, or historical information stored in the ARIS/SmartBase database can be created

## Take control of the future with the SmartAirline Capacity Analyzer strategic planner

To forecast future operations, you need to know when and what kind of aircraft will arrive and depart and what kinds of gates, stands, parking positions, check-in counters, and baggage belts you will need to accommodate them. If you need to build additional facilities to accommodate increased traffic, you will need to know how you will operate through periods of construction and other disruptions. You will also need to know how you can use those new facilities efficiently and profitably.

With the SmartAirline Capacity Analyzer strategic planner, you can visualize your future operations, so you can ensure you will have the facilities you need and can use to their fullest potential.

The SmartAirline Capacity Analyzer strategic planner contains the ARIS/CA capacity analyzer, which helps you develop and analyze future plans so you can determine your future capacity.

### Create models with the ARIS/CA capacity analyzer

The ARIS/CA capacity analyzer lets you model your station by creating what-if scenarios with various types of resources in various configurations. Then, it lets you visualize how your model would operate using alternative flight schedules.

With the ARIS/CA capacity analyzer, you can:

- Analyze how different flight schedules, aircraft types, and traffic volumes affect your operations now and in the future
- Predict the outcome of running any flight schedule against any configuration of station resources
- Determine which combinations of resources and flight schedules are possible, so you can isolate chokepoints in future operations
- Look across all resources at once—runways, gates, stands, remote parking positions, baggage belts, check-in counters—so you can understand the effect of each resource on all other resources
- Determine the most efficient combination of runways, gates, stands, parking positions, check-in counters, baggage belts, and other facilities
- Identify when and where passenger and cargo traffic peaks and valleys will occur
- Change one variable, or several, and see how operations are affected so you can be creative in the ways you solve problems and generate business opportunities

The ARIS/CA capacity analyzer displays the results of each scenario as bar charts that show when gates, stands, parking positions, check-in counters, and baggage belts are in use and available for use, indicating overlaps and congested periods. It also displays the results as spreadsheets that show how many gates, baggage belts, and other resources are used at specified times, such as in 15-minute intervals or on all Mondays in September 2029.

Each scenario starts with an actual or hypothetical model of an airport, which you enter by specifying the kinds of resources you want to analyze, and you specify the capacity of the resources you create and the rules that need to be followed while the resources are in use. You then enter rules about how resources will be used or you link to rules you already entered in the SmartAirline Operations Manager resource allocator. The system stores the rules in the same ARIS/SmartBase database so that both the planning and the operations tools rely on the same rules.

The other part of capacity analysis is to see how the scenario actually performs when running schedules. You can create future schedules with the ARIS/SB® schedule builder, a tool that is also used to create and update schedules during actual operations. You enter the start and end dates, airlines, days of operation, arrival and departure times, and so forth. You can also test scenarios against actual schedules you are already running. Then, you can conduct what-if analyses to see how changes in a schedule can create an overload on a specific type of resource at a very precise time in the schedule period. You can define success in your own terms—for example, the level of congestion, or profitability, or volume—so you can identify and prioritize changes most likely to produce the desired results.

## **Take control of today with Ascent's SmartAirline Operations Manager resource allocator**

Every day, airport-operations schedulers perform remarkable feats. Using decision-support tools often no more sophisticated than status boards, hand-written notes, photocopied scheduling forms, a supply of pencils and erasers, simple PC programs, and some computer printouts, they plan and manage the day's parking-position, check-in counter, and baggage-belt assignments.

On a good day—which means flights are on time, the weather is reasonable, and there are no equipment problems or unexpected routing changes—it is possible that most resource assignments go according to plan. As a result, ground resources are used effectively and efficiently. No fuel is wasted by aircraft waiting for gates. Passenger queues at check-in counters and security areas move rapidly. And, best of all, passenger satisfaction is high because the scheduled assignments have ensured efficient check-in, convenient connections, rapid baggage claim, and quick exit from the airport.

Unfortunately, in today's highly complicated operations environment, the good days are few and far between. Manual systems or simple PC programs, even in the hands of seasoned and highly knowledgeable schedulers, simply cannot deal with the dynamics of today's scheduling and security requirements. Thus, when unplanned events require immediate changes to planned assignments, schedulers must make decisions immediately with no way of determining exactly what impact these decisions will have on the schedule for the rest of the day and on the cost of operating that schedule. Frequently, what may seem like a logical decision to resolve a near-term gate-assignment problem initiates a chain reaction of expensive bottlenecks and delays that can quickly ripple throughout the airport and the airlines it serves.

Fortunately, help is available. It is called SmartAirline Operations Manager resource allocator. Ascent's SmartAirline Operations Manager resource allocator uses advanced logic techniques to think through each allocation decision's impact in much the same way experienced human schedulers would...if only they had the time. Think of it as a set of quick-thinking and tireless assistants capable of assimilating all the variables

involved in the scheduling process and always being able to recommend the most efficient ways to deal with last-minute changes and with the implications of those last-minute changes.

Ascent Technology's SmartAirline Operations Manager resource allocator manages short-term planning and day-of-operation resource allocation for an unlimited number of gates, stands, remote parking positions, check-in counters, baggage belts, and departure lounges. It also handles long-term planning of gate, stand, and check-in counter allocations for entire schedule periods for one or more airports. On the day of operation, it resolves conflicts and recovers rapidly when unplanned events and irregular operations disrupt previously planned schedules.

Ascent's SmartAirline Operations Manager resource allocator can keep track of an almost unlimited number of resources and resource constraints and automatically factor them in its decisions to ensure the ideal balance between resource-assignment efficiency, passenger convenience, and effect on related schedules. Because it is scenario-enabled, Ascent's SmartAirline Operations Manager resource allocator bases its decisions on the appropriate conditions for specific days of operation. For example, whether a change in operating conditions involves modifying an airline's parking-assignment preferences for a particular day or making gates inoperative for several weeks due to construction, Ascent's SmartAirline Operations Manager resource allocator uses the appropriate rules without asking the user to switch database accounts manually or load separate airport configuration files.

It supports what-if analysis of proposed resource assignments and schedules, which enables the system to share its decision logic with schedule-planning personnel as a means of validating the feasibility of the schedules they create. It features an open-ended design that readily accommodates changes in resource availability as flights are changed, aircraft types are introduced or reconfigured, and airport facilities are constructed or modified.

Ascent's SmartAirline Operations Manager resource allocator contains several tools for managing airport resources for and on the day of operation, such as the ARIS/BB® baggage-belt allocator, the ARIS/CI® check-in counter allocator, and the GateChart Display™ tool the Right-Now View® operations dashboard.

### **Assign your baggage belts**

The ARIS/BB® baggage-belt allocator assigns baggage make-up belts to departing flights and baggage reclaim carousels to arriving flights, taking into account facility layout, belt capacity, flight schedules, gate assignments, and passenger loads—so you get the best allocation decision possible. You can:

- Allocate baggage make-up belts for departing flights and baggage reclaim carousels for arriving flights
- Override automated allocations as necessary
- Reallocate belts dynamically when a belt is inoperative or flights are delayed
- Distinguish automatically between domestic and international baggage-handling constraints
- Distinguish automatically among early, normal, and first-class requirements
- Coordinate baggage-belt allocation decisions with scheduling decisions made by the ARIS/GM gate manager
- Keep belt capacity balanced throughout the day based on knowledge of the maximum passenger load for an aircraft series or the exact passenger count on a given flight

- Handle changes in airport layout
- Manage belts and view belt-assignment information from an unlimited number of areas
- Interface with BIDS through the ARIS/SmartBus® communication middleware

### **Assign your check-in counters**

The ARIS/CI check-in counter allocator automates the creation of long- and short-term check-in counter allocations based on planned flight schedules, actual day-of-operation flights, and availability of check-in agents to staff the counters. Users can match counter allocations to aircraft type, schedules, last minute updates, activity at adjacent counters, and construction-related closures—whatever impacts smooth operation. You can:

- Handle airline alliances
- Tailor views of check-in counter allocations based on need by sharing check-in counter information with over-the-counter displays, public information displays, and other systems
- Increase flight-operation efficiency by matching allocations to aircraft capacity, market sectors, and other criteria
- Reduce check-in counter disruptions and delays by allocating counters based on the most recent flight-schedule data and availability of check-in staff
- Ensure that check-in capacity will meet long-term needs by creating long-range allocation plans based on anticipated schedules
- Accommodate temporary closures and construction projects by generating check-in plans that reflect short-term changes
- Avoid check-in bottlenecks caused by seasonal changes by generating plans that incorporate those changes
- Ensure fair allocation of counters among airlines and flights by enforcing contingency plans when demand exceeds capacity

### **Assign your gates**

The Gate Chat Display tool provides near-term scheduling and real-time day-of-operation management of gates, stands, remote parking positions, cargo positions, maintenance positions, and departure lounges. You can:

- Manage resource allocation automatically for airports of all sizes
- Create and adjust the business rules that govern all gate, stand, remote parking position, and departure lounge allocation decisions
- Receive recommendations in real time to resolve conflicts caused when unplanned events disrupt the schedule
- Link arrivals and departures automatically
- Reduce fuel wasted waiting for parking assignments
- Perform what-if analyses before making changes to planned assignments
- Reduce airline operating expenses and ground-service errors by assigning the same gates more consistently to the same flights when possible

- Provide a consistent view of operations by sharing gate information with airline and airport staff and with FIDS, BIDS, and other systems

## **The ARIS/SmartBase database coordinates, distributes, and maintains plan, schedule, and day-of-operation information**

The ARIS/SmartBase database is the resource, planning, and operations data and knowledge base, flight-schedule server, and communications server for the SmartAirline Operations Center solution.

The ARIS/SmartBase database contains comprehensive, consistent, and accurate information about resources, plans, schedules, and operations. It also contains flexible, user-specified business rules that control the decision-making logic for the creation of resource-allocation plans and scenarios, models of future operations, operational schedules, and real-time responses to irregular operations and other unplanned events. It maintains accurate and secure records of the plans and day-of-operation activities it manages, providing the data needed to produce reports, to generate invoices, and to perform analyses.

The ARIS/SmartBase database ensures that all users have access to the same up-to-the-minute information about scheduled and actual operations at the same time. By accessing and sharing valuable information stored in the ARIS/SmartBase database, users can work collaboratively to make better decisions.

The ARIS/SmartBase database environment is further enriched by its ability to transfer information seamlessly to and from a wide range of data sources, systems, and applications beyond the SmartAirline Operations Center solution, in combination with the ARIS/SmartBus communication middleware.

Communications protocols enable the ARIS/SmartBase database to:

- Receive information from external sources, such as airline flight-following systems, airline passenger and crew systems, ATC, and radar feeds
- Drive systems, such as FIDS, BIDS, web servers, and other systems that provide flight information to airport and airline staff, handling agents, service providers, service partners, and passengers
- Supply real-time information to and retrieve real-time information from other airport systems, ranging from simple forms-based data-entry programs to CUTE to docking systems
- Feed operational information to business and financial systems, such as ERP systems, Oracle Financials, and other SQL-compliant applications
- Retain data archives needed for accurate reporting, year-to-year comparisons, auditing, and analysis

## Services to help you maximize the benefits of Ascent solutions

**Advisory and consulting services.** Ascent provides advice about resource allocation, optimization, planning, scheduling, management, and deployment methodologies; develops cost-benefit analyses; analyzes business processes; and gathers and develops technical requirements and functional specifications.

**Project-management services.** Ascent's project-management team works closely with you, following time-proven delivery methodologies, and uses face-to-face meetings, teleconferences, web conferences, and email exchanges to keep you informed every step of the way. Ascent believes careful collaborative project management is the key to successful on-time and on-budget deliveries of Ascent's solutions.

**Knowledge-engineering services.** Knowledge engineering is the process of identifying your business knowledge—the business rules, policies, procedures, preferences, reference information, and requirements that guide the way your organization operates—and then codifying your business knowledge into rules stored in the knowledge base at the heart of the Ascent solutions. Your business knowledge, stored in the knowledge base, determines how the solutions behave. Ascent's knowledge engineers work with you to ensure the solution behaves just as you want it to.

**Implementation, integration, and installation services.** Ascent's implementation team provides system integration and testing services; develops product extensions, enhancements, and connectivity software for importing data to and exporting data from external systems; and creates reports. Ascent's implementation team is also responsible for setting up environments, customized to meet your organization's needs, and monitoring its performance, in secure AWS hosting centers.

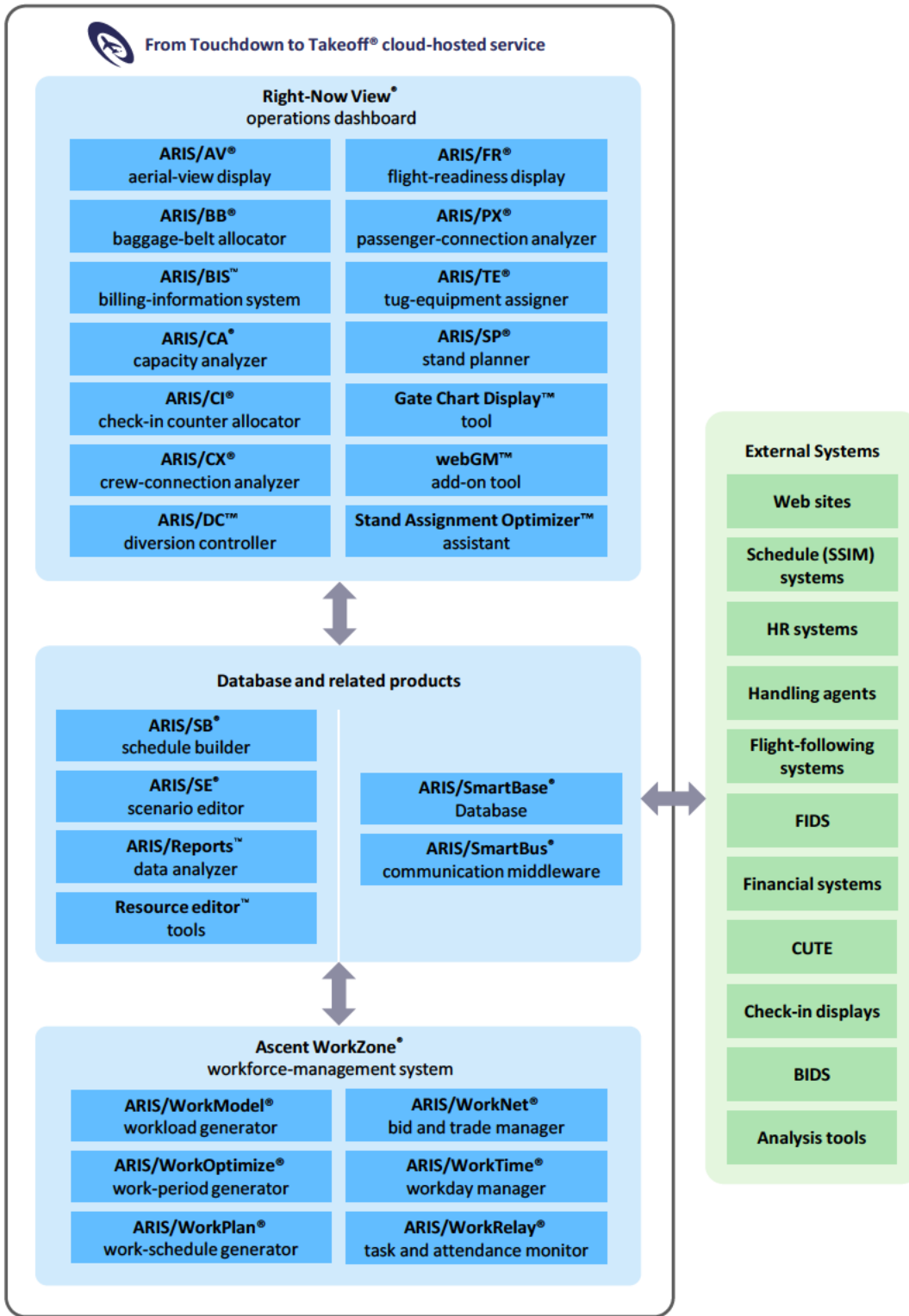
**Training services.** Ascent offers a wide range of user, administrator, trainer, and refresher training classes at your location, at Ascent's Boston, MA, headquarters, and remotely over the web. Ascent also offers operational training services remotely when you begin to use an Ascent solution in production.

**Maintenance and support services.** Ascent offers maintenance and support services for Ascent's solutions around the clock. Ascent provides comprehensive remote user support services via telephone, email, web conference, and Internet; software maintenance, such as product updates, patches, and releases; and cloud-hosted environment monitoring, tuning, and switchover. Ascent's ticket system enables you to request service, report problems, and track issues day and night.

## Who we are

Since our founding nearly 40 years ago by members of the Massachusetts Institute of Technology Artificial Intelligence Laboratory, Ascent has helped organizations deploy costly resources as efficiently, effectively, and economically as possible. Our highly trained and capable team of technologists, problem solvers, and solution designers has broad domain expertise and substantial experience in artificial intelligence, computer science and engineering, system design, mathematical optimization, operations research, and resource optimization, planning, scheduling, and management. To learn more about how Ascent can help you optimize your resources to greatest advantage, send an email to [sales@ascent.com](mailto:sales@ascent.com) or call our Sales and Marketing team at +1.617.395.4800.

## Ascent Resource Information System® solutions





## Touchdown to Takeoff® cloud-hosted service

### Solutions for airline and airport resource optimization, planning, scheduling, and management

A standard web browser, such as the Google Chrome™ browser or the Microsoft Edge™ browser, enables access to Ascent Technology’s cloud-hosted solutions. The From Touchdown to Takeoff service requires a minimum resolution of full HD (FHD).

Airport Operational Database (AODB)	Central database
ARIS/SmartBase® database Includes one or more of the following tools:	Integrates, coordinates, disseminates, and maintains planning, operations, and historical information for resource and workforce management
<ul style="list-style-type: none"> <li>Location Editor™ tool</li> </ul>	Manages the location hierarchy and records used to plan, schedule, and manage workload, workers, and tasks
<ul style="list-style-type: none"> <li>Planning Control™ tool</li> </ul>	Manages work-schedule planning
<ul style="list-style-type: none"> <li>Profile Editor™ tool</li> </ul>	Manages passenger-arrival profiles for departure flights
<ul style="list-style-type: none"> <li>Reference Editor™ tool</li> </ul>	Manages reference-information records that determine how the Ascent Technology products, applications, and tools behave
<ul style="list-style-type: none"> <li>Rule Editor™ tool</li> </ul>	Manages scenarios, rule groups, and rules for workforce management
<ul style="list-style-type: none"> <li>Template Worker Editor™ tool</li> </ul>	Manages template worker records used to plan workload
<ul style="list-style-type: none"> <li>Update Control™ tool</li> </ul>	Manages settings that block external systems from updating information in specified database fields
<ul style="list-style-type: none"> <li>User Editor™ tool</li> </ul>	Manages user access to the products, applications, and tools
<ul style="list-style-type: none"> <li>User Group Editor™ tool</li> </ul>	Manages user-group access to pre-set configurations and automated distribution of email and messages
<ul style="list-style-type: none"> <li>Worker Editor™ tool</li> </ul>	Manages worker-related information and records
ARIS/Reports™ data analyzer	Produces reports based on plan, actual, and historic information
ARIS/SB® schedule builder (with ARIS/LegGen® flight-leg generator and ARIS/SL® schedule loader)	Creates, manages, and distributes flight-schedule and day-of-operation flight information; creates flight legs; and loads and stores SSIM flight data
ARIS/SE® scenario editor	Specifies and manages airport-resource rules and scenarios
ARIS/SmartBus® communication middleware	Enables information exchange between the ARIS/SmartBase database and external systems

Ascent WorkZone® workforce manager	Workforce optimization and management for mission-critical environments
ARIS/WorkModel® workload generator	Forecasts workload based on expected demand
ARIS/WorkNet® bid and trade manager	Worker self-service tool for managing work schedules
ARIS/WorkOptimize® work-period generator	Determines how many workers are needed and when they are needed
ARIS/WorkPlan® work-schedule generator	Creates work lines for full-time and part-time workers
ARIS/WorkRelay® task and attendance monitor	Provides task-assignment information to workers in real time
ARIS/WorkTime® workday manager	Assigns work, breaks, and locations to workers dynamically in real time

Right-Now View® operations dashboard	Dashboard to plan, schedule, and manage airline and airport resources and operations
ARIS/AV® aerial-view display	Displays real-time aircraft parking-assignment information on an airport aerial view
ARIS/BB® baggage-belt allocator	Plans and allocates baggage make-up and reclaim belts
ARIS/BIS™ billing-information system	Tracks usage-based ground fees
ARIS/CA® capacity analyzer	Plans, analyzes, and manages airport capacity and resources
ARIS/CI® check-in counter allocator (with ARIS/IQ® queue manager)	Plans, assigns, and manages ticket counters and kiosks
ARIS/CX® crew-connection analyzer	Shows how flight delays and cancellations affect connecting flight crews
ARIS/DC™ diversion controller	Tracks system-wide flight diversions, providing real-time status of diverted flights to diversion stations
ARIS/FR® flight-readiness display	Provides status of tasks and activities related to arrivals and departures
ARIS/PX® passenger-connection analyzer	Shows how flight delays and cancellations affect connecting passengers
ARIS/TE® tug-equipment assigner	Manages aircraft tows, assigns tugs to tows, and displays tow status
ARIS/SP® stand planner	Plans parking-position assignments for schedule periods
Gate Chart Display™ tool	Manages day-of-operation parking assignments with manual entry using basic scenarios and rules
Gate Chart Display with webGM™ add-on tool	Plans and manages day-of-operation parking assignments with automated assistance using business rules and intelligent scenarios
Gate Chart Display with webGM tool and Stand Assignment Optimizer™ assistant	Plans and manages day-of-operation parking assignments with automated assistance using business rules and intelligent scenarios, and resolves future parking-assignment problems caused by delays, swaps, and cancellations in compliance with business rules

ARIS, ARIS/AR, ARIS/AV, ARIS/BB, ARIS/CA, ARIS/CI, ARIS/CX, ARIS/FR, ARIS/FW, ARIS/GateView, ARIS/GM, ARIS/IQ, ARIS/LegGen, ARIS/PA, ARIS/PX, ARIS/SA, ARIS/SB, ARIS/SE, ARIS/SL, ARIS/SmartBase, ARIS/SmartBus, ARIS/SP, ARIS/TE, ARIS/Tow Panel, ARIS/WorkModel, ARIS/WorkNet, ARIS/WorkOptimize, ARIS/WorkPlan, ARIS/WorkRelay, ARIS/WorkTime, Ascent Resource Information System, Ascent Technology, Inc. (stylized), Ascent WorkZone, Ascent WorkZone (stylized), From Touchdown to Takeoff, GateKeeper, Right-Now View, SmartAirline, SmartAirline Capacity Analyzer, SmartAirline Information Manager, SmartAirline Operations Center, SmartAirline Operations Manager, SmartAirline WorkZone, SmartAirport, SmartAirport Capacity Analyzer, SmartAirport Information Manager, SmartAirport Operations, SmartAirport Operations Center, SmartAirport Operations Manager, SmartAirport WorkZone are registered trademarks of Ascent Technology, Inc., in the United States.

Active Schedules, Advanced Pay Rule System, ARIS/AR Display Board, ARIS/AR Turn Generator, ARIS/BB Audit, ARIS/BIS, ARIS/BX, ARIS/DC, ARIS/DS, ARIS/Reports, ARIS/SCR, Ascent WebConnect, Change History, Extended Flight View Dashboard, Flight Data Dashboard, Flight Filter Manager, Gate Chart Display, Location Editor, Planning Control, Planning Schedules, Profile Editor, Query Editor, Reference Editor, Resource Editors, Rule Editor, Stand Assignment Optimizer, Template Worker Editor, Tow-Data Web Service, Update Control, User Editor, User Group Editor, webGM, webSB, Work Schedule Manager, and Worker Editor are trademarks of Ascent Technology, Inc., in the United States.

This is not a complete list of all registered trademarks, trademarks, and service marks owned by Ascent Technology, Inc. See [www.ascent.com/trademarks.html](http://www.ascent.com/trademarks.html) for information. Other company, product, and service names may be registered trademarks, trademarks, or service marks owned by other parties.

Ascent Technology Software is the Confidential Information of Ascent Technology, Inc., and is available only under the terms of a license or grant of rights provided by Ascent Technology, Inc. Ascent Technology Software may be covered by one or more U.S. patents and/or pending patent applications. See [www.ascent.com/patents.html](http://www.ascent.com/patents.html) for information. Ascent Technology, Inc., solutions may use software components developed by open-source projects. For information, send email to [legal@ascent.com](mailto:legal@ascent.com). Revised 12/2025