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## Ascent WorkZone<sup>®</sup> workforce manager

### **The best workforce-optimization and management solution for mission-critical and labor-intensive environments**

The Ascent WorkZone workforce manager forecasts your workload, creates the best plans to meet your forecasted workload, turns plans into schedules, assigns workers to schedules, adjusts schedules and assignments as workload changes, and assigns tasks to workers in real time in accordance with your organization's pay rules.

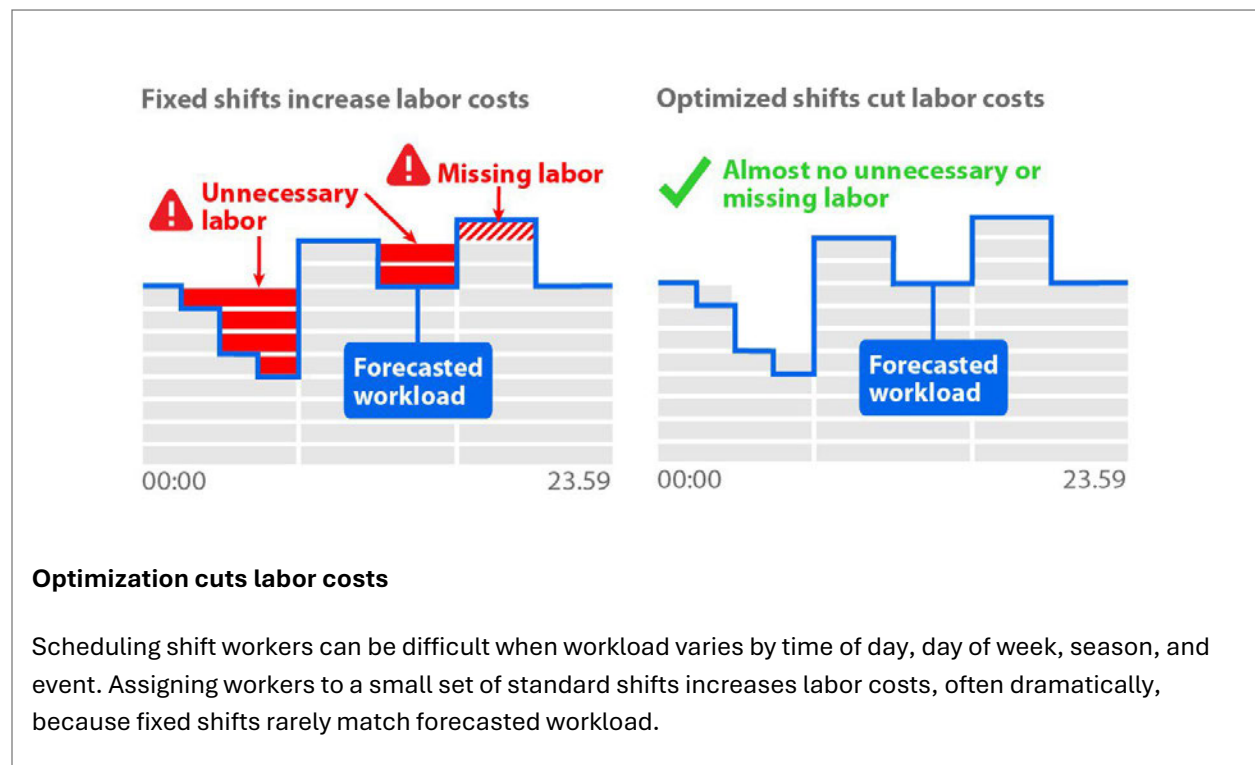
The Ascent WorkZone workforce manager enables you to increase workplace efficiency, lower your labor costs, and enhance your operating margins in many ways:

- Decreases your costs by ensuring that the size, timing, and composition of your workforce matches the work to be done
- Decreases your costs by reducing the time planners, managers, administrators, and supervisors spend creating plans, managing schedules, and handling many routine administrative tasks
- Adjusts and readjusts work schedules dynamically in response to actual conditions, by automatically identifying worker shortfalls, worker overages, and uncovered tasks as they emerge and suggesting worker reassignments, early outs, and minimal-cost extra hours
- Provides worker-centric, web-enabled, self-service tools that enable workers to choose work and vacation schedules based on their preferences, to view work schedules and assignments, to trade work periods with co-workers, and to make work, leave, and vacation requests
- Collects and communicates task, task-completion, and time and attendance information

- Provides powerful analyses, comprehensive reports, and past-performance information that enable you to improve future performance

Ascent Technology's From Touchdown to Takeoff® cloud-hosted service delivers the power of the Ascent WorkZone workforce manager in a secure, scalable, high-availability cloud-hosted infrastructure. You use a standard browser to access the Ascent WorkZone workforce manager directly from your network without having to purchase, install, maintain, and support on-premise hardware and software. We can rapidly adjust available computing power to meet your organization's changing needs and expand the solution to accommodate additional users and to manage additional resources, facilities, and locations.

Mission-critical and labor-intensive organizations of all sizes rely on the Ascent WorkZone workforce manager to optimize, plan, schedule, and deploy human and physical resources around the clock, day in and day out.



## **It's really hard to create the best work schedules—schedules that align costs, work rules, customer satisfaction, and worker satisfaction—without using the right tools**

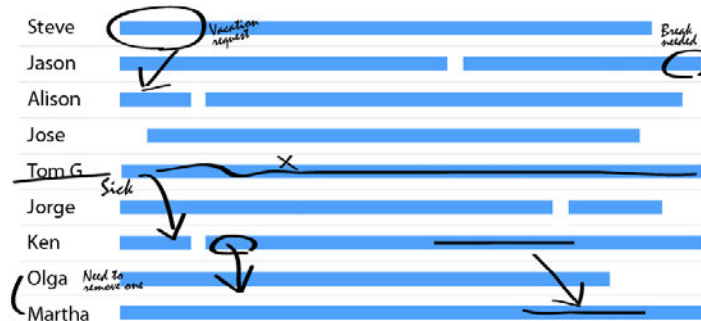
All labor-intensive organizations face the challenge of knowing which workers to deploy when, where, and for how long. Always staffing at peak levels wastes money and leaves workers idle during slower periods, while always staffing at normal levels leads to worker shortages, poor service during busy periods, and unhappy customers. Different departments have peak, normal, and slow periods at different times. Other issues to consider include seniority; vacation and leave schedules; work preferences; mandatory work rotations and rest periods; balancing the ratio of full-time and part-time workers; and workload variations by day, week, season, and year; and planned and unplanned schedule disruptions.

Because solving workforce-management problems is hard to do manually, organizations often look for a software solution that can, among other things:

- Determine how many workers are needed on each day and at each time of day
- Identify the best start and end times for each work period
- Create the best work schedules to handle anticipated workload
- Produce work schedules that can be managed by workers and by administrators
- Create real-time work assignments based on current conditions
- Find the right balance between low costs and high customer and worker satisfaction

But most workforce-management systems deliver incomplete results, which means you pretty much have to redo the work manually to identify gaps the system missed and then fix them. That same duplication of effort applies every time—whether you are planning work periods, creating work schedules, making real-time task assignments, or doing long-range scenario planning. In fact, what organizations quickly discover when they use a less-than-complete solution is that there is no such thing as a fixable automated schedule. Either the system produces a schedule you can trust right from the start, or the system produces a schedule that is worthless because of all the extra manual work needed to make the schedule useful. There is no middle ground. Getting a trusted schedule on the back end means capturing absolutely everything on the front end that goes into the scheduling process. Even the slightest omission of some key elements can ripple through the entire schedule. Take something as seemingly trivial as, “Joe can’t work after 12:00pm on Fridays.” Not capturing that rule correctly will, in all likelihood, randomly and occasionally schedule Joe to work on a Friday afternoon. Not only will that assignment not work; fixing the problem means moving other workers around to cover for Joe, which, in turn, affects those workers’ schedules (not to mention the tasks that need to be covered), all of which must be managed in the context of mandatory work rotations, preferences, seniority, and so forth. And, it also means finding a different spot in the schedule for Joe to work his hours—causing yet more ripples, again in the context of all the work rules that apply. Not only must you make all these adjustments manually, which is a nightmare by itself, but you also have to spot the mistake in the first place. That means that you must remember all those rules in your head, and there may be hundreds, or thousands, or tens of thousands, of rules. Not remembering can lead to a vicious cycle of more time-consuming and costly errors on top of other errors leading to still more errors.

### Manual tweaking increases administration costs



### Optimization cuts administration costs

Schedules that must be modified manually are worthless.

The Ascent WorkZone workforce manager uses powerful algorithms to compute millions of possible combinations of shifts. It determines the best shift start times, end times, and durations to match your forecasted workload at the lowest possible cost each and every day. The Ascent WorkZone workforce manager lowers your labor costs and ensures the right workers are in the right places at the right times to handle your workload.

### Worker's work preferences

Worker A	3	1	2
Worker B	2	1	3
Worker C	3	2	1
	00:00		23:59

### Work assignments for workers

Day 1	B	A	C
Day 2	B	C	A
Day 3	C	B	A
	00:00		23:59

### Optimization increases worker satisfaction

The Ascent WorkZone workforce manager provides worker-centric, web-based, self-service tools that enable workers to choose work and vacation schedules they prefer; to view work schedules and assignments; to trade work periods with co-workers; and to make work, leave, and vacation requests. Enabling your workers to gain more control over their work lives increases their satisfaction and productivity.

## Why waste your time with an incomplete system when you can manage your mission-critical workforce with the right tool—the Ascent WorkZone workforce manager?

The Ascent WorkZone workforce manager contains six powerful products that ensure the right workers are in the right places at the right times to handle your workload efficiently and cost-effectively.

- **The ARIS/WorkModel® workload generator** forecasts your workload by combining projections of expected demand, based on your normal operations and special events, with embedded knowledge about how your organization prefers to operate. The product determines the optimal number of workers you need and when you need them to cover your workload most efficiently and at the lowest cost.
- **The ARIS/WorkOptimize® work-period generator** determines how many work periods are required for each workday, how many workers should be assigned to each work period, and when each work period should start and end.
- **The ARIS/WorkPlan® work-schedule generator** produces work lines that make the best use of available full-time and part-time workers.
- **The ARIS/WorkNet® bid and trade manager** provides a worker self-service tool that enables workers to manage their work schedules, and express preferences for future work days, days off, and work period start times and end times. It enables workers to preview available work schedules and vacations, and then request the work schedules and vacations that best suit their needs, using a convenient web-browser interface. The product enables administrators and managers to view and modify worker schedules, broadcast messages to workers, view worker preferences and qualifications, identify workers available to work additional hours or overtime, and approve or deny work-trade requests and leave requests.
- **The ARIS/WorkTime® workday manager** assigns work, breaks, meals, and locations to workers dynamically in real time, taking into account how many workers are required, where each worker should be stationed, and how much time is needed to travel between assignments.
- **The ARIS/WorkRelay® task and attendance monitor** provides task-assignment information to workers, such as where they should be, what they should do, and when they should take breaks and meals.

The six products are modular, scalable, and web-enabled, so you can install the Ascent WorkZone workforce manager in steps, mixing and matching modules and components that best fit your organization's needs, budget, timing, and growth plans.

The Ascent WorkZone workforce manager contains an automated work-rule modeler with an easy-to-use interface that enables you to express your organization's work rules in in English-language-like entries that senior management, union management, and schedulers understand. It also contains an automatic translator that converts the entries into a program that interprets them and then executes them efficiently for fast computation and optimum workplace operation. The program code is invisible to the user, and so, too, are the optimization and allocation algorithms the system uses to find the lowest cost and highest satisfaction solution within the prevailing rules and preferences.

The Ascent WorkZone workforce manager also contains an automated scenario modeler that facilitates rapid and error-free schedule creation under the current rules and also enables you to build multiple scenarios that reflect variations of rules through time, enabling you to see how different rule sets affect each schedule. Long work-schedule bid lines, for example, that cover months or an entire year may span different labor contracts. When the system generates those schedules, it must consider those changes, as it works to generate a single schedule. Scenarios also let you evaluate different hypothetical work rule sets so you can decide which ones make the most sense for your bottom line, your customers, and your workers. Building these scenarios would be impractical without a complete end-to-end solution like the Ascent WorkZone workforce manager—one that generates complete finished schedules directly from user-understandable input without tweaking schedules manually and without custom coding.

That's the key measure of any automated workforce-management system, whether for testing possible future scenarios or for generating the optimum schedule with which to allocate workers now. The optimum schedule perfectly balances costs, service levels, customer satisfaction, and worker satisfaction, given all work rules and worker preferences, regardless of how many workers, worker types, or work rules there are. The sooner you get that schedule, the sooner you can focus on what really matters—the work.

## **Step up to the Ascent WorkZone workforce manager and optimize your workforce to greatest advantage**

The Ascent WorkZone workforce manager is the best workforce optimization and management solution for mission-critical and labor-intensive environments. It is easy to use, fast, flexible, and cost-efficient. When you see it in action, you'll wonder how you ever managed without it.

## 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.

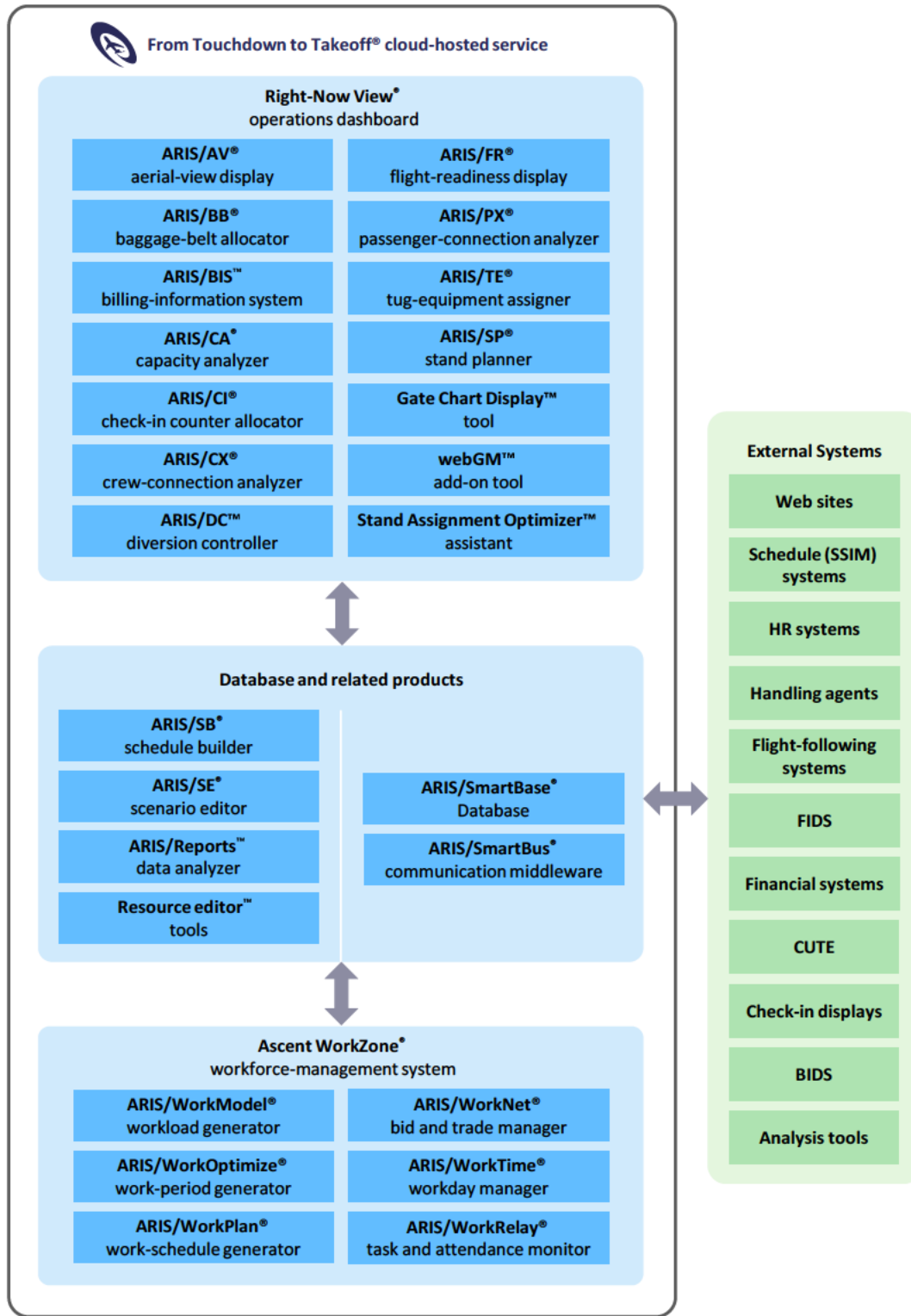
**Maintenance and support services.** Ascent offers maintenance and support services for Ascent's solutions around the clock. Ascent provides comprehensive remote user support services via telephone, email, web conference, and Internet; software maintenance, such as product updates, patches, and releases; 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







## From 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
• Location Editor™ tool	Manages the location hierarchy and records used to plan, schedule, and manage workload, workers, and tasks
• Planning Control™ tool	Manages work-schedule planning
• Profile Editor™ tool	Manages passenger-arrival profiles for departure flights
• Reference Editor™ tool	Manages reference-information records that determine how the Ascent Technology products, applications, and tools behave
• Rule Editor™ tool	Manages scenarios, rule groups, and rules for workforce management
• Template Worker Editor™ tool	Manages template worker records used to plan workload
• Update Control™ tool	Manages settings that block external systems from updating information in specified database fields
• User Editor™ tool	Manages user access to the products, applications, and tools
• User Group Editor™ tool	Manages user-group access to pre-set configurations and automated distribution of email and messages
• Worker Editor™ tool	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.

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