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Open Time Solver

From open time management to smarter crew assignments, efficiency takes flight

Executive summary

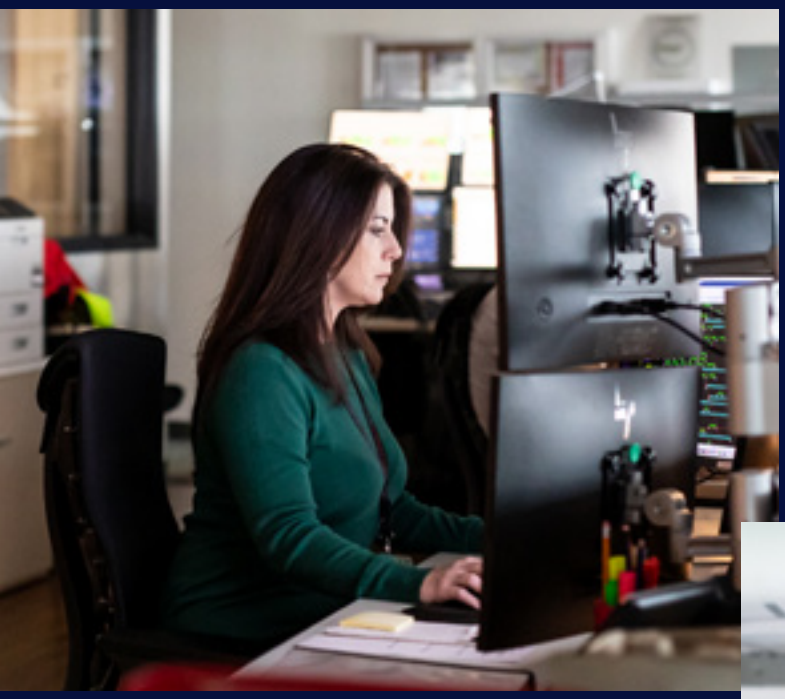
Automation takes flight: revolutionizing crew scheduling

Airline operations face constant disruptions—weather, regulatory changes, and crew absences—creating "open time," or unassigned flight segments that jeopardize schedules. Traditionally, managing open time requires manual processes and multiple schedulers, making it slow, error-prone, and unsustainable for growing airlines.

Top three business benefits:

1. Efficiency and scalability: automates high-volume scheduling, reducing manual workload and enabling rapid response to disruptions.
2. Regulatory compliance: applies complex rules consistently, minimizing errors and legal risks.
3. Resource optimization: frees schedulers for strategic planning while improving crew work-life balance through timely notifications.

Delivered as a Software as a Service (SaaS) solution, automation scales effortlessly with airline growth, supporting proactive scenario planning and long-term resilience. In a disruption-driven industry, automation is not optional—it's essential for resilience and competitive advantage.









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Advanced automation as redefining airline crew scheduling

From open time management to smarter crew assignments, efficiency takes flight

Airline operations are inherently complex, with last-minute changes, regulatory demands, weather disruptions, and seasonal crew absences frequently resulting in “open time”—unassigned flight segments that threaten operational continuity. Traditionally, managing open time has been a labor-intensive process, relying on manual oversight and crew-tracking systems. This approach, while functional, is increasingly unsustainable in today’s dynamic operational environment. Advanced automation offers a transformative solution, delivering unprecedented efficiency, accuracy, and scalability to crew scheduling.

Automation: the game changer for open time scheduling

The emergence of advanced automation tools is reshaping how airlines address Open Time. By leveraging cutting-edge technology and intelligent algorithms, solutions like Open Time Solver from Flightscape replace manual scheduling processes with automated workflows that evaluate, assign, and communicate crew assignments in real time. This shift not only streamlines operations but also ensures compliance with regulatory and contractual requirements.

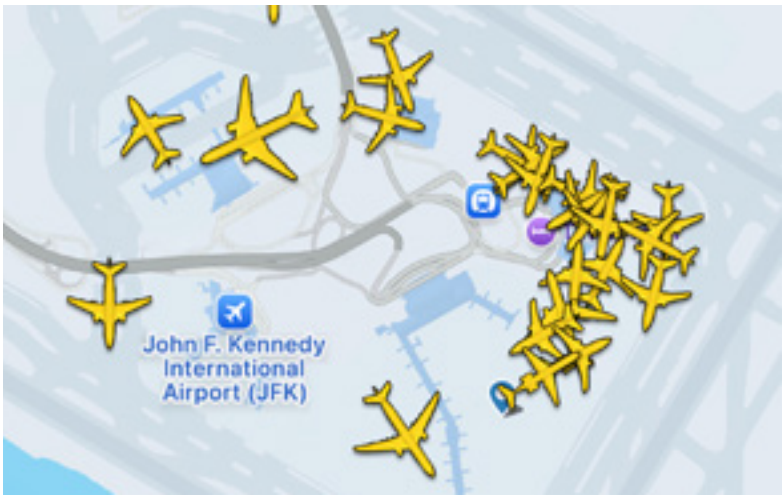


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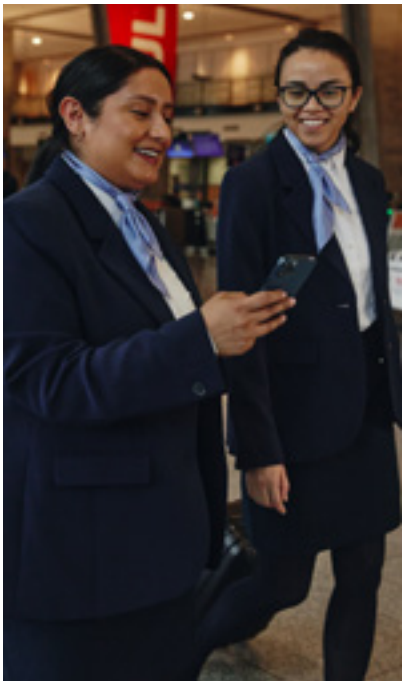
Case study: automated response in action

Consider a high-traffic afternoon at JFK, where widespread delays and cascading disruptions have left over 300 flights without full crew complements within a 72-hour period. Traditionally, schedulers would manually review crew availability, reassign resources, and communicate changes—a process requiring hours of meticulous work. With advanced automation, Open Time Solver instantly evaluates all coverage options, considers standby and available crew, dynamically assigns open pairings, and automatically sends notifications to crew members. The result: rapid, accurate assignments that restore operational stability in minutes rather than hours.



Breaking free from manual processes

Manual crew-tracking systems demand significant human resources and leave room for error. A typical airline may employ five to seven schedulers to manage 500–700 daily open-time positions for a workforce of 10,000 crew members. These processes, while familiar, lack the automation necessary to handle open time efficiently. Automation eliminates repetitive tasks, enhances accuracy, and frees staff to focus on strategic decision-making. Building on this foundation, advanced automation tools take efficiency to the next level.







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The mechanics of automated crew assignment

Automation tools like Open Time Solver integrate data from flight schedules, crew availability, duty/rest regulations, and aircraft types. Using advanced algorithms, these systems evaluate feasible pairings and generate optimized rosters that minimize disruption and maximize compliance. In addition, Open Time Solver automatically identifies and de-assigns any illegal pairings on existing rosters, adds them to the pool of open pairings, and then holistically covers these open pairings during optimization. Schedulers can review automated solutions, adjust scenario parameters, and deploy or refine assignments—all within an intuitive interface.

Scenario analysis and strategic planning

A key advantage of automation is its support for "what-if" scenario planning. Schedulers can modify variables—such as operation type, pairing length, or assignment order—and immediately observe the impact on crew rosters. This proactive capability enables airlines to anticipate disruptions, optimize future schedules, and enhance workforce stability over the long term.

Reality check – in broad terms, the current lack of automation results in airlines committing 2 to 3 resources to work around the clock at covering open pairings.

Core benefits of automation in Open Time management

- Efficiency and scalability: automated assignment significantly reduces time and effort, enabling high-volume scheduling with minimal manual intervention.
- Regulatory and contractual compliance: automation consistently applies complex rules, minimizing errors and ensuring legal integrity.
- Transparency and consistency: predefined, auditable rules remove human bias, fostering trust and reliability in crew assignments.
- Resource optimization: schedulers are freed from repetitive tasks and redeployed to higher-value tasks, improving overall operational efficiency.
- Strategic planning: scenario analysis supports proactive responses to disruptions and optimizes long-term crew utilization.



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Enhancing crew experience through automation

Automated solutions do more than streamline operations, they improve work-life balance for crew members. Immediate, proactive notifications reduce last-minute surprises and frequent roster changes, enabling crew to plan personal time with greater certainty. By prioritizing both operational needs and employee morale, automation safeguards contractual compliance and reduces legal risks, delivering a win-win for airlines and their workforce.

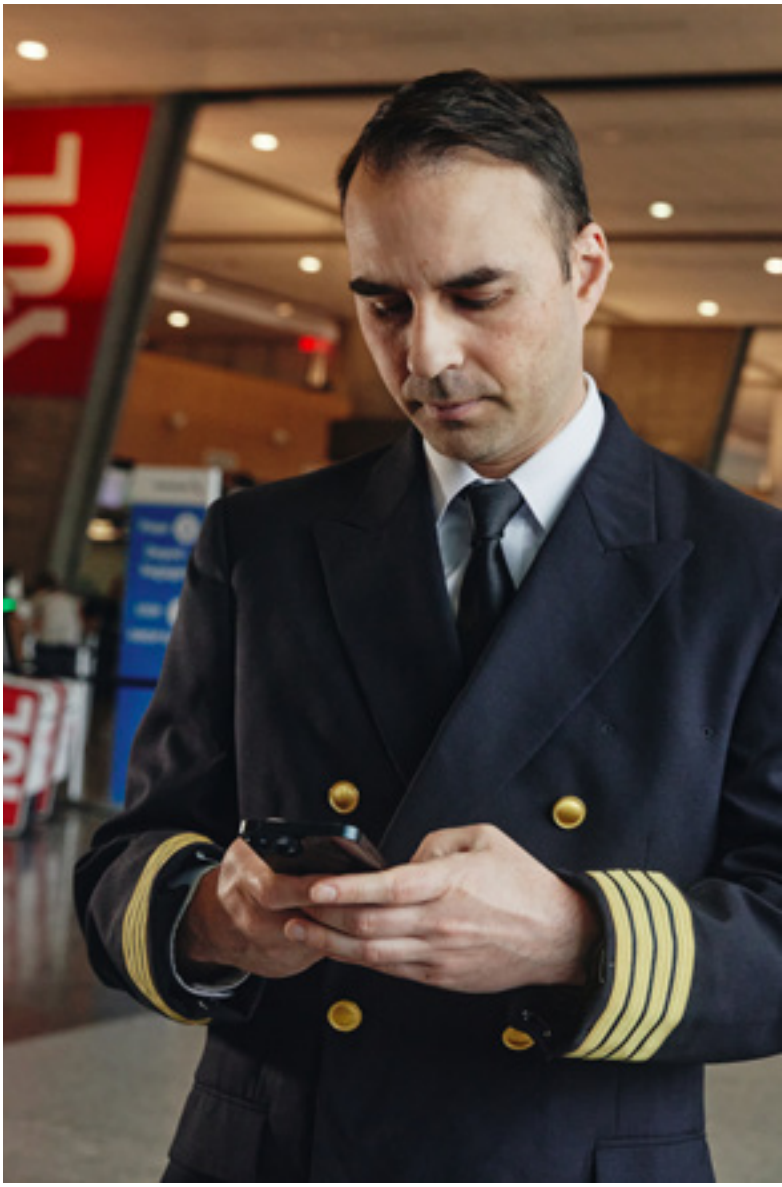
Scalability for growing airlines

Delivered as a Software-as-a-Service (SaaS) solution, automation platforms like Open Time Solver scale effortlessly with airline expansion. Supporting diverse operation types—from regional to international flights—these solutions adapt to increasing workloads, ensuring reliable, cost-effective planning as fleets and operations grow.

The future of airline crew scheduling

In an industry where disruptions are constant, the ability to rapidly generate compliant, optimized open-time solutions is not just advantageous—it is imperative. Automation represents a turning point in crew management, reducing manual workload, optimizing resource utilization, and enhancing operational resilience. As airlines embrace digital transformation, automated solutions will be the cornerstone of competitive advantage and sustainable growth.

Flightscape Open Time Solver— the most complete and forward-thinking solution of its kind.



Learn more at www.flightscape.com

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