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Rebuilding a profitable network

How to optimize network planning and scheduling in the new world?

Jeremy Million

Director of Airline Solutions

Amadeus Sky suite

Amadeus Airline Platform

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Speaker biography

Jeremy Million – Jeremy is Director of Amadeus Sky suite network & schedule planning solution at Amadeus.

He is an experienced airline industry veteran with over twenty years' experience. His subject matter expertise is in the areas of new route forecasting, schedule optimization, schedule feasibility, pricing and inventory strategy, and value measurement. During his airline tenure he has worked in Operations, Scheduling, Network Planning, and Pricing/Revenue Management for airlines such as Continental Airlines, United Airlines, and Delta Air Lines. In addition to his vast airline experience, he also has a worked on the IT/vendor side of the airline industry. He has overseen the implementation of multiple products to airlines around the world in addition to serving as Product Manager where he oversaw the creation and enhancement of solutions in the field of Scheduling, Planning, and Optimization. Jeremy currently serves as a Director of Global Sales for the Sky suite, Amadeus' suite of Network Planning and Scheduling.

Agenda

1) Airlines’ challenges
2) Introducing a new modern approach
3) Addressing airlines’ challenges
4) Key take-aways
5) Q&A session

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1. Airlines’ challenges

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Airlines are facing new challenges with network schedule and planning

- Unreliable data
- Rigid data models
- Evolving customer behavior and expectations
- Lack of resource/staff within airlines

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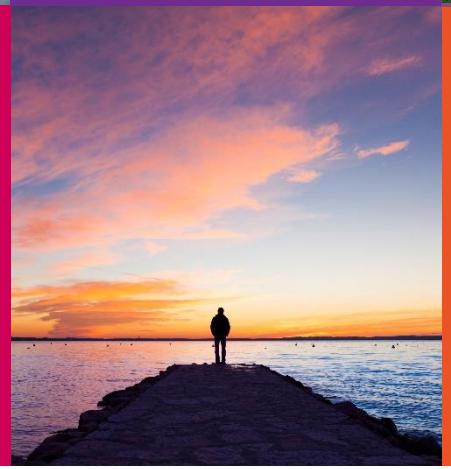
The unprecedented crisis raises many key questions for airlines

How do I resize my network and fleet?

How do I rebuild my schedules from scratch?

How do I adapt my schedules based on new info?

What models and data do I use?



How do I handle integration (i.e. schedule changes) with other areas?

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2. A new modern approach

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Answering a fast-moving business environment with innovation

- Machine learning
- Artificial intelligence
- Streamlined processes
- Technology

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A new approach to scheduling is needed

Traditional approach

Pre-publication

- Create a base schedule, typically using last season's schedule
  Last season's schedules are not relevant
- Create a weekly schedule
  Race against time
- Optimize for revenue and operational constraints separately
  Siloed sub-optimal process
- Iterative updates based on inputs from Ops, crew, etc
  Unreliable data
  Long cycle time

Post-publication

- Revenue Management
  Impact on Passenger experience
  Missed revenue opportunities
- Operations
  Last minute schedule change

Modern approach

Pre-publication

- "Clean Sheet" Optimization
  Faster schedule generation
- Simultaneous Reliable & Profitable schedule
  Robust scheduling & maximize profit
- Operationally Feasible
  Reduce iterations w/ other departments
- Forecast Accuracy

Post-publication

- Adaptive (ADAPT optimization)
- Anticipatory (Close-in re-fleeting (CIRF))

Maximize revenues

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3. Addressing airlines’ challenges

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How to build schedules from scratch?

Clean-sheet scheduling

Technology to build schedules **from scratch**, without the need of a starting base schedule

Obj. function = **maximize profit** + **minimize operational violations**

Re-time, re-route, and re-fleet flights based on market demand subject to **all your operational constraints**

Optimized

- Initialization
- Validation
- Evaluation
- Build network
- Improve operability
- Improve (crew)

Amadeus SkyMAX is an **industry-first** clean-sheet scheduling solution

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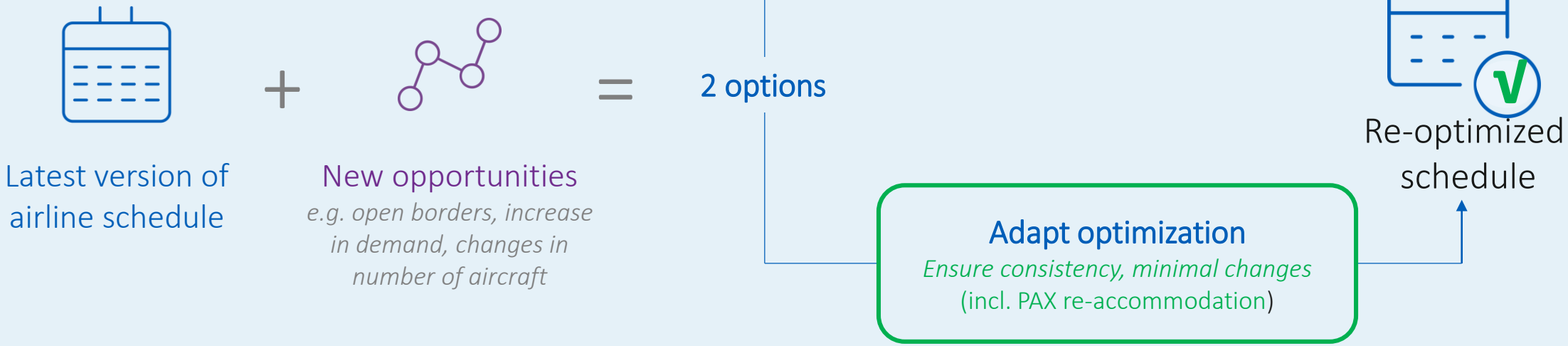
Adapt optimization

Adapting schedules based on new info



- **Multiple objectives** (max. profit, max. revenue, min. cost)
- **New consistency logic** (departure times, fleet, rotations)
- **New reduction mode** (automatically cancel flights)
- **Controls** for managing total number of changes

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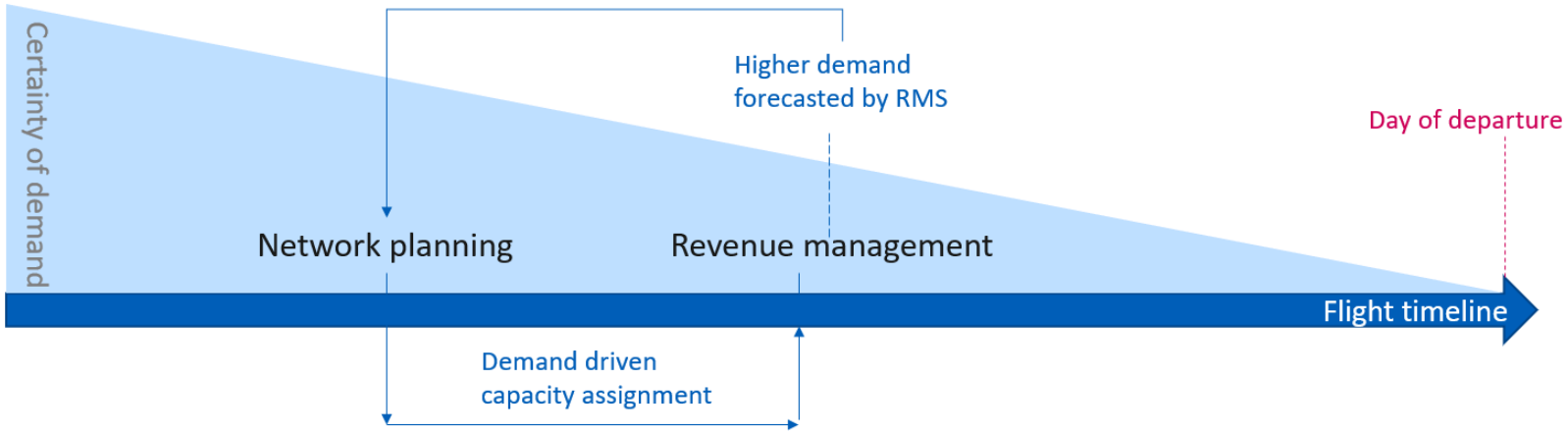
Improve fleet re-optimization thanks to Revenue Management data

CIRF – Close in re-fleeting



Potential Passengers Accommodated

325 + 317 = 642

Optimized routes

Potential Passengers Accommodated

379 + 317 = 696

54 more passengers

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6. Key take-aways

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Amadeus Sky suite brings a new approach to airline scheduling

Key capabilities

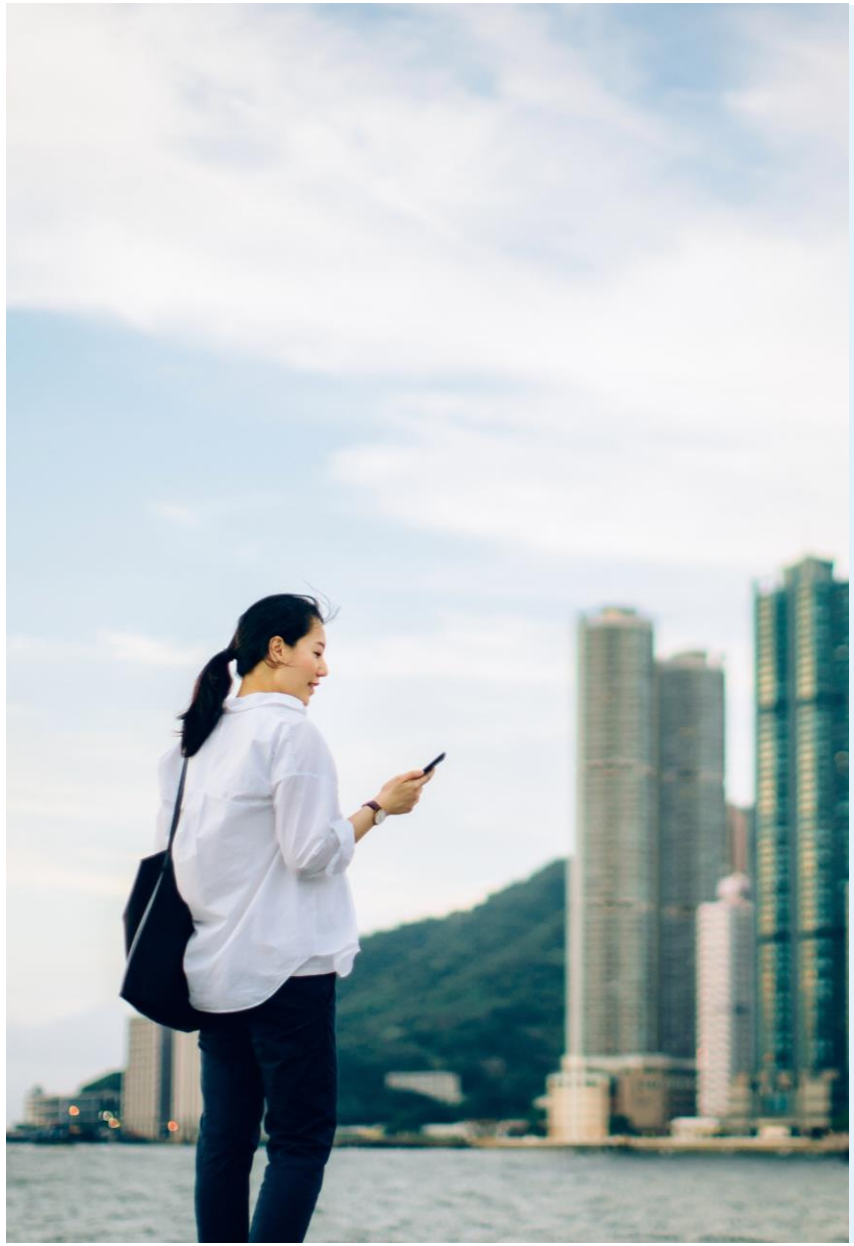
Pre-publication

- "Clean Sheet" Optimization — *Faster schedule generation*
- Simultaneous Reliable & Profitable schedule — *Robust scheduling & maximize profit*
- Operationally Feasible — *Reduce iterations w/ other departments*
- Forecast Accuracy

Post-publication

- Adaptive (ADAPT optimization)
- Anticipatory (Close-in re-fleeting (CIRF))

Maximize revenues



Do you want to optimize your schedules?

Re-design your schedule with Amadeus Sky suite

Do you want to streamline
your network schedule and planning process?

Do you want to unlock greater profits?

Get in touch for more information!

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Thank you!

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