



Revenue optimization workshop

Product Management, Revenue Management December 5th 2016, Doha

Strictly

Agenda

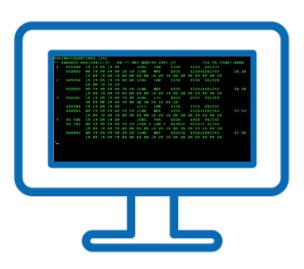
- 1. Why present Revenue Management must change?
- 2. Our Revenue Management roadmap





Distribution channels changed, as well as demand characteristics and purchase behaviors

In the 90's most of sales were done on **cryptic**



Independent demand by booking class

Today **internet** becomes the prime sales channel



Dependent demand across booking classes

Our understanding of market evolution and forward industry trends



In the 90's most of sales were done on **Cryptic**

flight seat-oriented sales

mass offering capacity-oriented

preset prices
ATPCO filing



Today **internet** becomes the prime sales channel

total offer-oriented sales

Fare Families

+ ancillary options

+ cross-sell packages

personalization

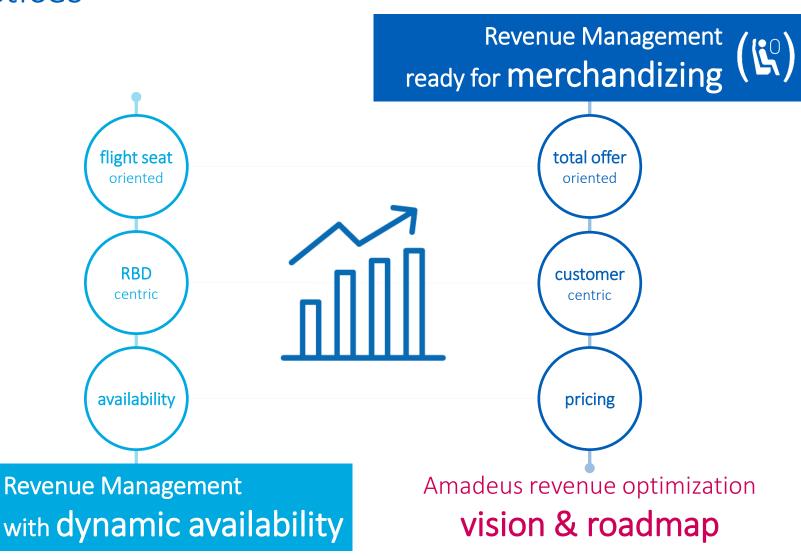
dynamic pricing







This calls for a major shift in RM logics and practices





Our revenue optimization vision & roadmap relies on 2 major drivers

Keep core RM functions & practices at the leading edge

Improve Revenue Management

Innovate & develop new revenue streams through advanced demand modeling, optimization, fare valuation & group management



Increase efficiency of your business operations & enhance your user experience through the GUI

Become the merchandizing brain Support the evolution of Revenue Management in line with the industry shift towards merchandizing



Optimize revenue from your total offer, beyond flight seats, through dynamic assortment & pricing of your products

Maximize your contribution & conversion in every shopping session, through customer segmentation, choice modeling & usage of customer intelligence data in personalization





Deliver incremental benefits to our customers and drive a safe & steady move to future RM practices

Revenue Management ready for merchandizing (🔾)



Total offer management



Big data driven RM



Extended customer behavior modeling



Advanced revenue optimization



Usability & efficiency of business operations





Deliver incremental benefits to our customers and drive a safe & steady move to future RM practices

Revenue Management ready for merchandizing







Ancillary RM

Dynamic Pricing

Dynamic product assortment



Competitive schedules & MIDT

Competitive pricing

Customer intelligence

Shopping



Fare Family forecasting

Customer choice-based RM

Customer no-show & cancel

Product recommender



Dynamic

Customer

Capacity sharing

Schedule/itinerary preference

Adaptive forecasting

Total market forecasting



Forecast & yield quality dashboards

Traffic flow warnings

Replay simulation

Intervention recommender



Revenue Management with dynamic availability



Our progress combines product design & research work with our customers & external organizations

Revenue Management ready for merchandizing





Customer

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Dynamic

Ancillary dashboards

Competitive schedules & MIDT

Fare Family forecasting

Capacity sharing

Forecast & yield quality dashboards

Ancillary RM

Competitive pricing

Customer choice-based RM

Schedule/itinerar preference

Traffic flow warnings

Dynamic Pricing

Customer intelligence

Customer on Customer of Customer

Adaptive forecasting

Replay simulation

Dynamic product assortment

Shopping

Product recommender

Total market forecasting

Intervention recommender

recommender



Revenue Management with dynamic availability



Research work completed or ongoing



Detailed roadmap plan

Revenue Management ready for merchandizing

















Abstract Report on fit bookings: dashboard on fit bookings vs past observation used in the

Report on forecast output quality: dashboard on forecast values vs. actual booking observations on past departures

estimation of model parameters, (weekly calibration outputs)

Report on yield watch: dashboard on dispersion of actual fares around yield values

Report on yield construction: dashboard on data and methodology used to generate vield values (flown revenue coupon and fare data)

Traffic flow

warnings

Replay simulation

Expected timeline

JAN17: production

JAN17: production

JAN17: production

JAN17: production

Intervention recommender

Revenue Management with dynamic availability

Forecast & yield

quality dashboards

Product design completed or ongoing

Research work completed or ongoing





Detailed roadmap plan

Revenue Management ready for merchandizing















Abstract

Trigger warning in case demand forecasting of a traffic flow uses data from another
traffic flow as a sponsor (e.g. new destination)

Trigger warning in case actual prices deviate significantly from yield values

Trigger warning in case adjusted forecast values (i.e. with user interventions) deviate from system forecast values (i.e. with no user interventions)

Trigger warning in case actual bookings deviate from adjusted forecast values (i.e. with user interventions)

Trigger warning in case actual bookings deviate year on year

Forecast & yield quality dashboards

Traffic flow warnings

Replay simulation

Intervention recommender



Revenue Management with dynamic availability Product design completed or ongoing

Expected timeline

JAN17: production

DEC17: production

DEC17: production

DEC17: production

DEC17: production

Research work completed or ongoing



Detailed roadmap plan

Revenue Management ready for merchandizing ()



<u> Ancilia</u>

Abstract

Simulate over past departure periods RM performance should no user interventions have applied and simulate over future departures the effect of a possible user interventions on the expected sales volume and revenue

Expected timeline

SEP17: production first drops (phased delivery till end 2018)





Custome



Dynamic optimisatio



Forecast & yield quality dashboards

cnedule/itine preference

Traffic flow warnings

Replay simulation

Total market

forecasting

Intervention recommender

Product design completed or ongoing

Research work completed or ongoing

Research work scheduled





Revenue Management with dynamic availability



Detailed roadmap plan

Revenue Management ready for merchandizing



Expected timeline Abstract

Recommend user interventions, based on interventions recorded in the past under similar business conditions (machine learning principle, leveraging replay simulation) JUN18: research work start





Customer



Dynamic



Forecast & yield quality dashboards

Revenue Management

with dynamic availability

Traffic flow warnings

Replay simulation

Intervention recommender

Product design completed or ongoing

Research work completed or ongoing



Detailed roadmap plan

Revenue Management ready for merchandizing



Capacity sharing

Expected timeline

Abstract

Manage availability across cabins when adjacent cabin compete for the same space (capture unexpected demand through simultaneous identification of optimal saleable configuration and overbooking level to apply)

Already in production













Schedule/itinerary preference

Adaptive

forecasting

Total market forecasting

Revenue Management with dynamic availability Product design completed or ongoing

Research work completed or ongoing





Detailed roadmap plan

Abstract

Revenue Management ready for merchandizing



Expected timeline

Include flight schedule/itinerary preferences in the choice-based model DEC17: production













Capacity sharing

Schedule/itinerary preference

Adaptive forecasting

Total market forecasting



Revenue Management with dynamic availability Product design completed or ongoing

Research work completed or ongoing







Detailed roadmap plan

Revenue Management ready for merchandizing



Abstract

Expected timeline



Use of live booking observations and velocity to date in the adjustment of estimated final demand amplitude and pick-up curve

JUL18: production







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Dynamic

Capacity sharing

Schedule/itinerar preference

Adaptive forecasting Total market forecasting





Revenue Management with dynamic availability Product design completed or ongoing

Research work completed or ongoing



Detailed roadmap plan

Revenue Management ready for merchandizing



Expected timeline Abstract

Estimate the air transportation market on a given O&D, based on competitive JAN18: research work scheduling and volume data, to estimate expected market shares start













Capacity sharing

Schedule/itinerar preference

Adaptive forecasting

Total market forecasting

Product design completed or ongoing

Research work completed or ongoing

Research work scheduled





Revenue Management with dynamic availability



Detailed roadmap plan

Revenue Management ready for merchandizing



Ancillary dashboards

Ancillary RM

namic Pricing Dynamic

Dynamic productions assortment



Competitive

ompetitive oricing

Shopping



Fare Family forecasting

Customer choice-based RM

Customer no-show & cancel

Product recommender



Dynamic



Empower

Abstract Expected timeline

Model customer willingness to pay and measure the optimal price point of a given product (Fare Family), based on the transformation of dependent demand and yield quantities into independent demand and yield quantities (Marginal Revenue Transformation)

Already in production



Product design completed or ongoing

Research work completed or ongoing





Detailed roadmap plan

Revenue Management ready for merchandizing



Ancillary dashboards

Ancillary RM

namic Pricing Dynamic produ assortment

Competitive

Competitive pricing

Shop



Customer Choice-based RM

Customer one-show & cancel

Product recommender



(*)

Dynamic optimisatio



Abstract

Identify the optimal price points of a product set (Fare Families) maximizing the purchase probability, based on the modeling of the customer choice behavior, willingness to pay and product preferences, depending on the travel purpose, leisure or business (Multi Nomial Logit)

Expected timeline

Already in production



Product design completed or ongoing

Research work completed or ongoing







Detailed roadmap plan

Revenue Management ready for merchandizing







Customer choice-based RM

Improve the accuracy of the estimation of no-show and cancellation, through the

Customer no-show & cancel

Product recommender



Customer

Dynamic



Abstract

usage of customer intelligence data in addition to PNR-based information Forecast & yield

Not prioritized yet in product roadmap

Expected timeline



Product design completed or ongoing Research work completed or ongoing





Detailed roadmap plan

Revenue Management ready for merchandizing



Ancillary dashboards

Ancillary RM

Dynamic Pricing

Dynamic production assortment



Competitive pricing

Customer intelligence

Shopping



Customer choice-based RM

Customer no-show & cancel

Product recommender



Dynamic

Abstract

ct Expected timeline



Predict preferences, needs and wants of individual customers and compute a relevance ranking of products (recommendations), based on customer information (profile, segmentation), customer purchase history and product information

MAR17: research work start

quality dashboards

warnings

recommender



Revenue Management with dynamic availability

Product design completed or ongoing

Research work completed or ongoing





Detailed roadmap plan

Revenue Management ready for merchandizing





Competitive pricing

Customer intelligence

Shopping







Dynamic



Abstract

Access and use competitive scheduling and volume information, with intended application in the following functions and/or solution:

- **Dynamic Pricing**
- Total market forecasting
- Dashboards & traffic flow warnings

Product design completed or ongoing

Expected timeline

JAN18: production (silent

Dynamic Pricing, flight

seats/Fare Families)

Research work completed or ongoing

Research work scheduled





Revenue Management with dynamic availability



Detailed roadmap plan

Revenue Management ready for merchandizing





Competitive pricing

Customer intelligence

Shopping

JAN18: production (silent

Dynamic Pricing, flight seats/Fare Families)







Dynamic



Expected timeline

Access and use competitive pricing information, with intended application in the following functions and/or solution:

Dynamic Pricing

Abstract

- Total market forecasting
- Dashboards & traffic flow warnings

Product design completed or ongoing



Research work completed or ongoing





Detailed roadmap plan

Revenue Management ready for merchandizing





Competitive pricing

Customer intelligence

Shopping







Dynamic



Abstract

Access and use customer profile information (Customer Experience Management),

with intended application in the following functions and/or solution: Customer segmentation (e.g. significant customer segments to be considered in

- addition to business & leisure) Customer no-show & cancel
- **Dynamic Pricing**

Revenue Management with dynamic availability Product design completed or ongoing

Expected timeline

start

JUN18: research work

Research work completed or ongoing





Detailed roadmap plan

Revenue Management ready for merchandizing (L)



Ancillary dashboards

Ancillary RM

Dynamic Pricing

Dynamic production assortment



Competitive pricing

Customer intelligence

Shopping





Custome centric



Dynamic optimisatio



Empower

are Family Customer

Customer

Expected timeline

Access and use customer shopping session information, with intended application of the following functions and/or solution:

Dynamic Pricing

Abstract

- Dashboards & traffic flow warnings
- Extension of adaptive forecast
- Integrated approach to future Revenue Management and Merchandizing practices

JAN18: production (silent Dynamic Pricing, flight seats/Fare Families)



Revenue Management with dynamic availability

Product design completed or ongoing

Research work completed or ongoing





Detailed roadmap plan



Dynamic product

assortment

Revenue Management

dashboards

100110

centric

(#

Dynamic

Expected timeline Abstract

Report on ancillary sales volume and revenue, comparison to flight seat/Fare Family JAN17: production sales volume and revenue

Revenue Management with dynamic availability Product design completed or ongoing

Research work completed or ongoing





Detailed roadmap plan



100110 011001



Custome centric



Dynamic



dashboards

assortment

Expected timeline Abstract

Joint optimization of flight seat Fare Family and ancillary revenue streams Fare Family

DEC17: production

Revenue Management with dynamic availability Product design completed or ongoing

Research work completed or ongoing



Detailed roadmap plan

Revenue Management ready for merchandizing





Ancillary

Abstract

Ancillary RM

Dynamic Pricing

Dynamic product assortment







Dynamic



dashboards

Expected timeline

Maximize contribution and conversions of each shopping session, based on real-time price adjustments, depending on the customer segmentation and willingness to pay, as well as competitive offers

JAN18: production (silent Dynamic Pricing, flight seats/Fare Families)

Revenue Management with dynamic availability Product design completed or ongoing

Research work completed or ongoing





Detailed roadmap plan











Dynamic Pricing

Dynamic product assortment















dashboards

Return optimal assortments of airline offers (as bundle, as "a la carte") maximizing conversion of shopping sessions

MAR17: research work start

Abstract

Revenue Management with dynamic availability Product design completed or ongoing

Research work completed or ongoing





Thank you!











