



SIRENA-TRAVEL AIRLINE SOLUTIONS

China Airline Revenue & Pricing management Conference

Commercially released on April 15, 2001 as per Decree of Russia's Ministry of Transport

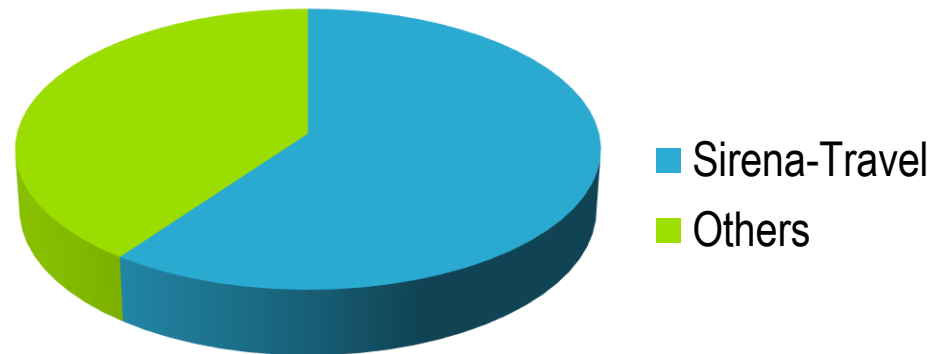
Sirena-Travel GDS meets all industry standards and protocols, IATA resolutions and recommended practices

There are some **17,000** Sirena-Travel terminals installed in over **7,000** PCCs

Some **200 carriers** are available for sale in Sirena-Travel GDS totalling **95% of flights** operated in Russia and CIS member states.

In 2013, about **35 mln. flight segments** were sold through Sirena-Travel.

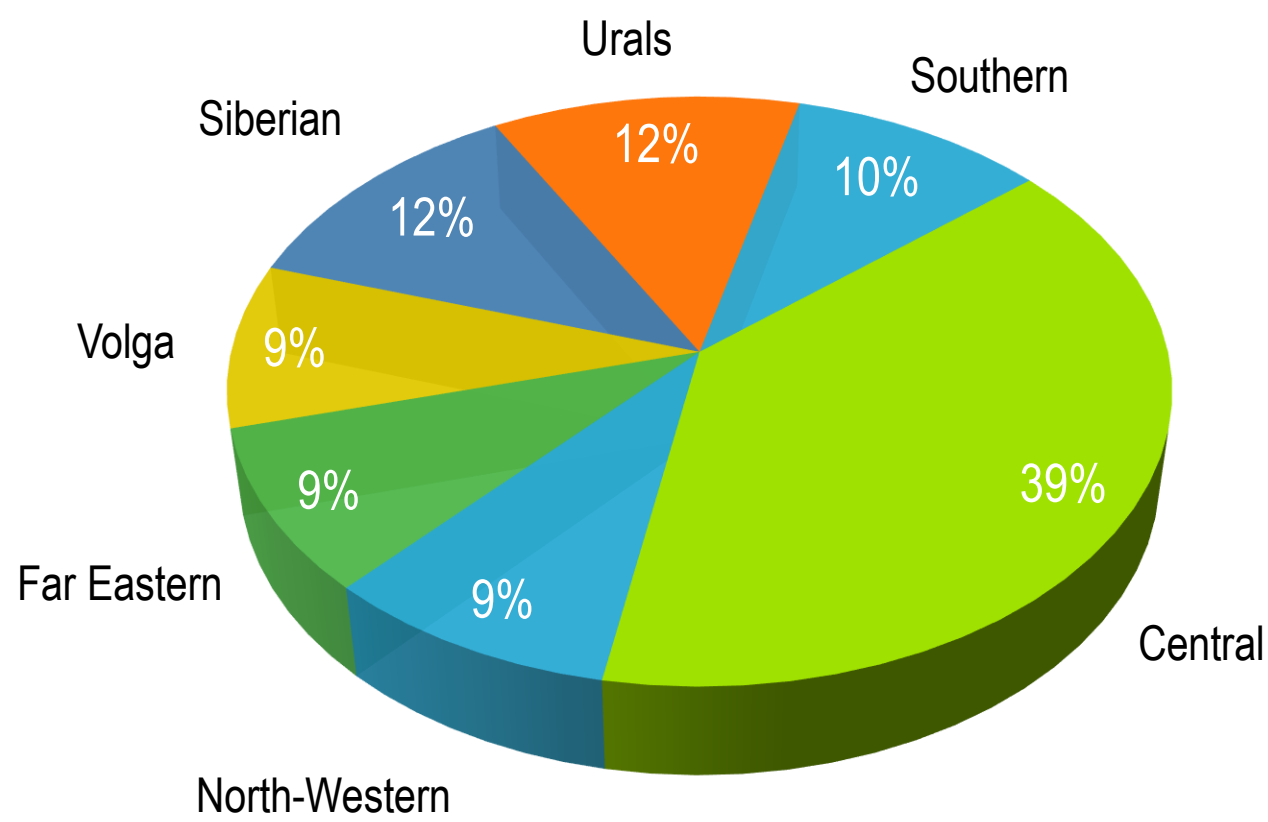
Sirena-Travel GDS covers over **60% of domestic airline** sales (est. 2013) and the market share is continuously growing.



MAP OF RUSSIAN REGIONS



SIRENA TRAVEL TERMINALS



FOREIGN COUNTRIES

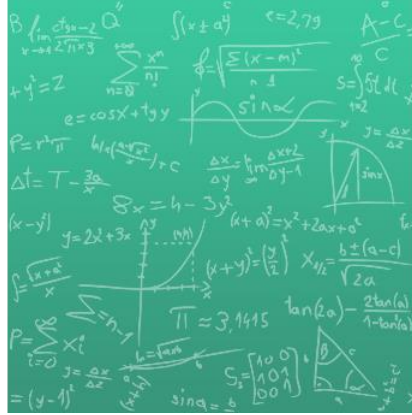
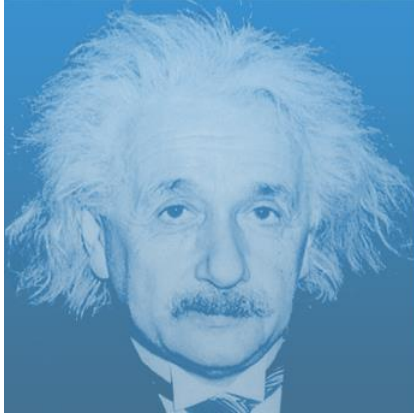
Canada	Japan
China	Latvia
Cyprus	Lithuania
Czech Republic	Montenegro
Estonia	Norway
Georgia	Poland
Germany	Switzerland
Hungary	Turkey
Israel	United Arab Emirates
Italy	Greece

CIS COUNTRIES

Azerbaijan
Armenia
Belarus
Uzbekistan
Kazakhstan
Kyrgyzstan
Moldova
Tajikistan
Ukraine

SIRENA-TRAVEL PRODUCTS

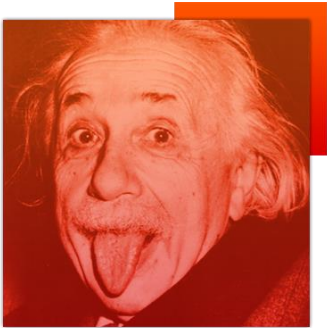
GDS Sirena-Travel Distribution system	PAYMENTS Credit card processing	ETS E-tickets and EMD	DCS Departure control system
INVENTORY Inventory management system	CHARTERS Charter Sales	AGENCY Sales management system	LOYALTY Frequent flyer redemption
OXYGEN Internet booking engine	WS GATE XML Gateway	SECURITY User access control	MESSAGING Email and SMS messaging
RMS Revenue management	GUI Graphic terminal	STATISTICS Reports & statistics	CRM Customer relationship management



Airline Revenue Management System: IT Investment as Business Value



Revenue Management System Evolution

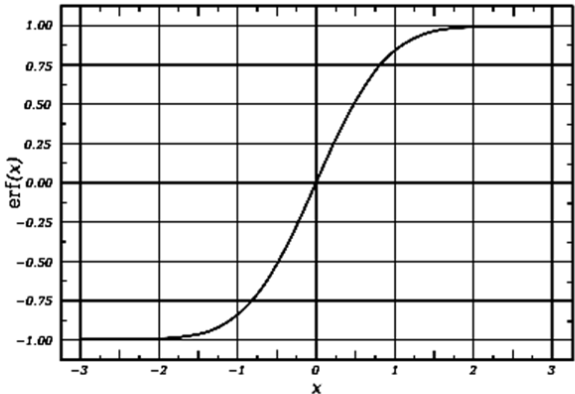


Sirena.Revenue is a modern segment-oriented Revenue Management System (RMS) offering up-to-date and flexible management techniques

Sirena.Revenue maximizes airline sales and resulting revenue applying optimized booking class protection levels in terms of seat counts available for sale, thus enabling an airline to make the right offer to the right passenger, right time, right place.

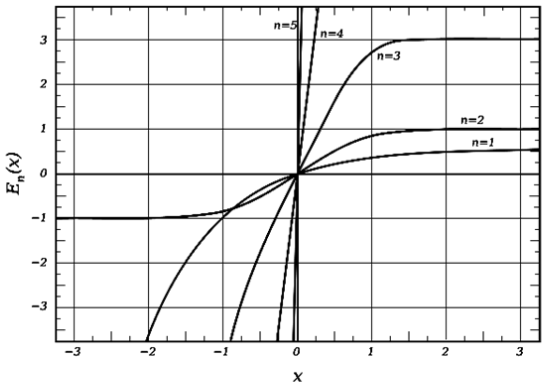
$$E_{AB}^D = \frac{\Delta Q_A/Q_A}{\Delta p_B/p_B}, E_I^D = \frac{\Delta Q/Q}{\Delta I/I}, E_p^D = \frac{\Delta Q/Q}{\Delta p/p},$$

$$f(x) = \frac{1}{\sigma\sqrt{2\pi}} e^{-\frac{(x-\mu)^2}{2\sigma^2}},$$



$$\operatorname{erf} x = \frac{2}{\sqrt{\pi}} \sum_{n=0}^{\infty} \left(x \prod_{i=1}^n \frac{-(2i-1)x^2}{i(2i+1)} \right) = \frac{2}{\sqrt{\pi}} \sum_{n=0}^{\infty} \frac{x}{2n+1} \prod_{i=1}^n \frac{-x^2}{i}$$

$$E_n(x) = \frac{n!}{\sqrt{\pi}} \int_0^x e^{-t^n} dt = \frac{n!}{\sqrt{\pi}} \sum_{p=0}^{\infty} (-1)^p \frac{x^{np+1}}{(np+1)p!}.$$



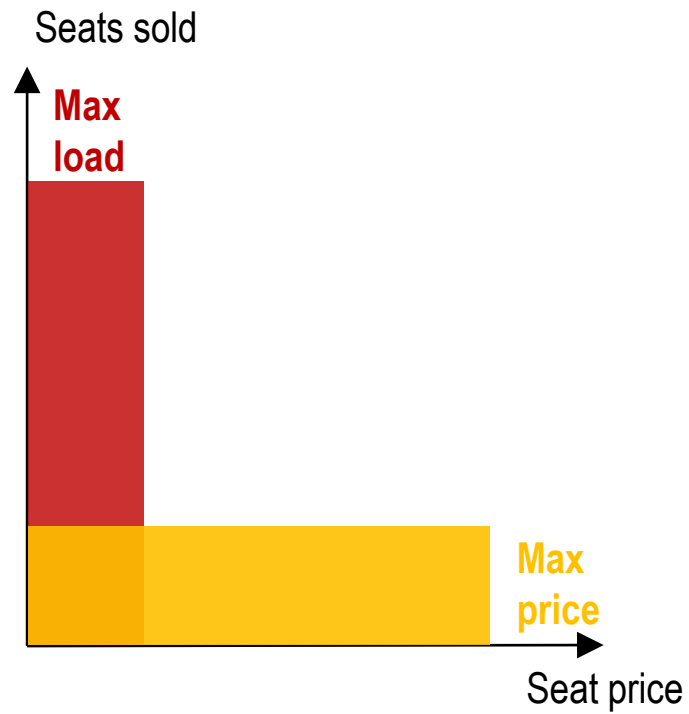
$$M[X] = \int_{-\infty}^{\infty} x dF_X(x); x \in \mathbb{R}$$

$$D[X] = M\left[|X - M[X]|^2\right]$$

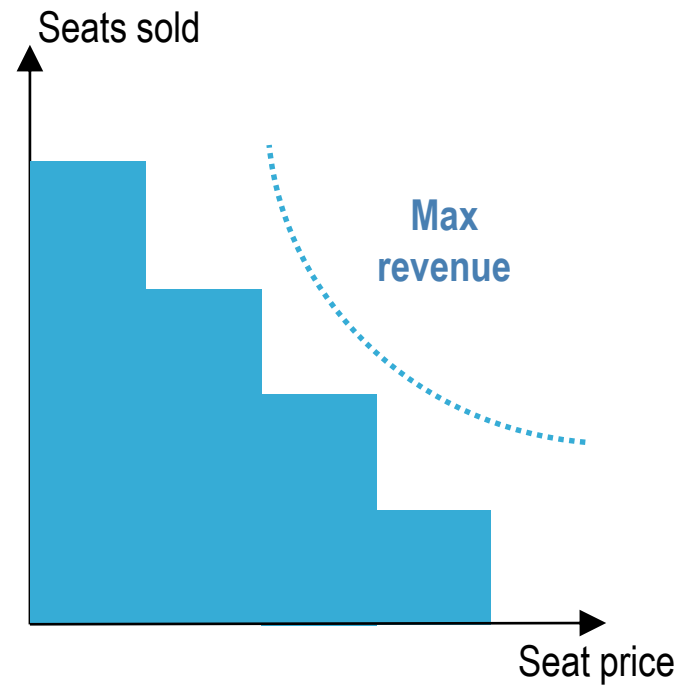
$$F_Y(y) \equiv \mathbb{P}(Y \leq y) = \sum_{k=0}^{\lfloor y \rfloor} \binom{n}{k} p^k q^{n-k}, \quad y \in \mathbb{R}$$

$$F_X(x) = \mathbb{P}^X((-\infty, x]) = \mathbb{P}(X \leq x)$$

$$\mathbb{P}^X(B) \equiv \mathbb{P}(X \in B) = \int_B f_X(x) dx$$



WITHOUT RMS



WITH RMS

Raise in revenue
after RMS implementation

6-8% 

Decline in revenue
without RMS if competing
carriers use RMS

15-20% 



Pontiac Firebird Capacity
232 horsepower

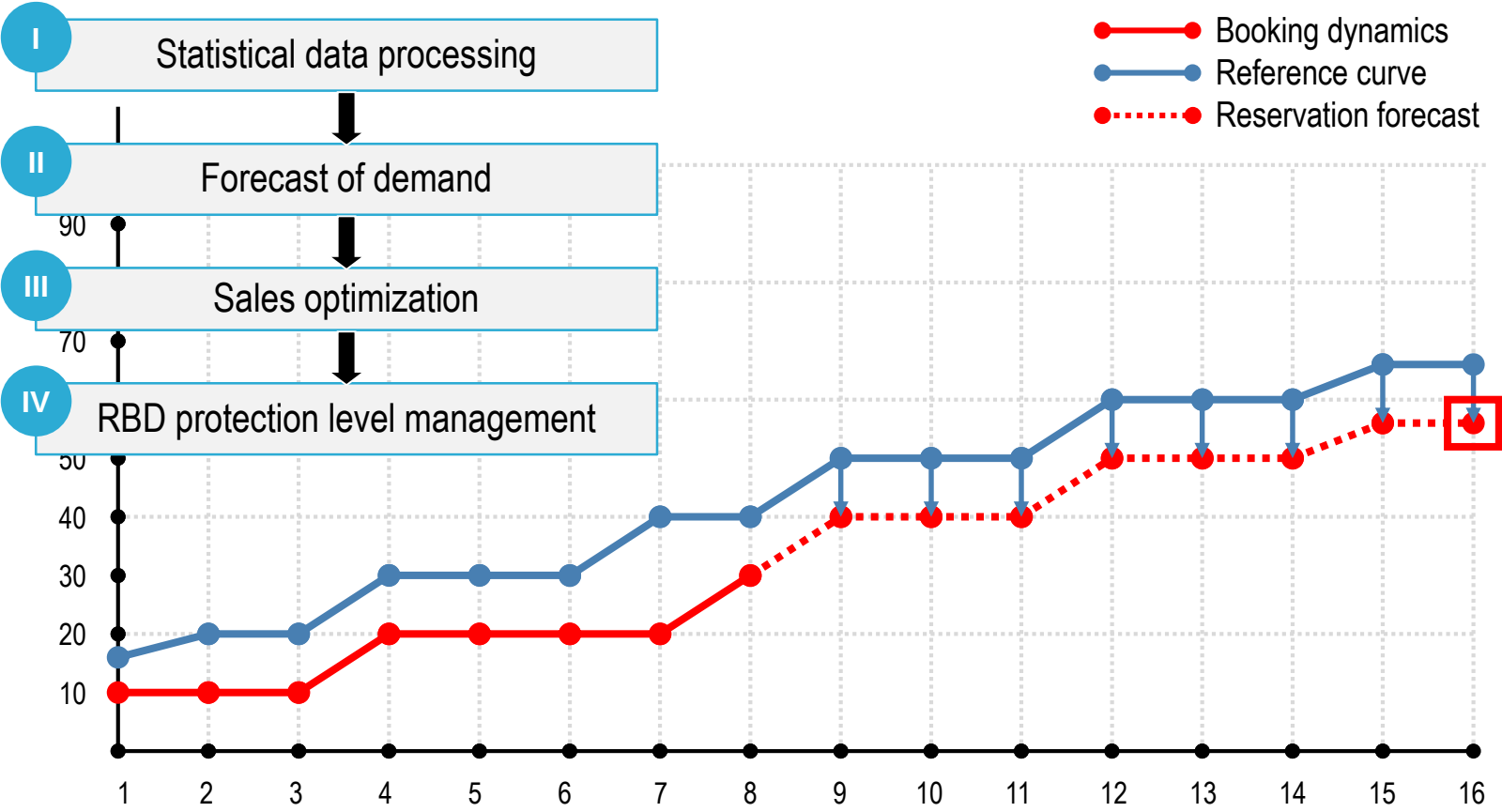


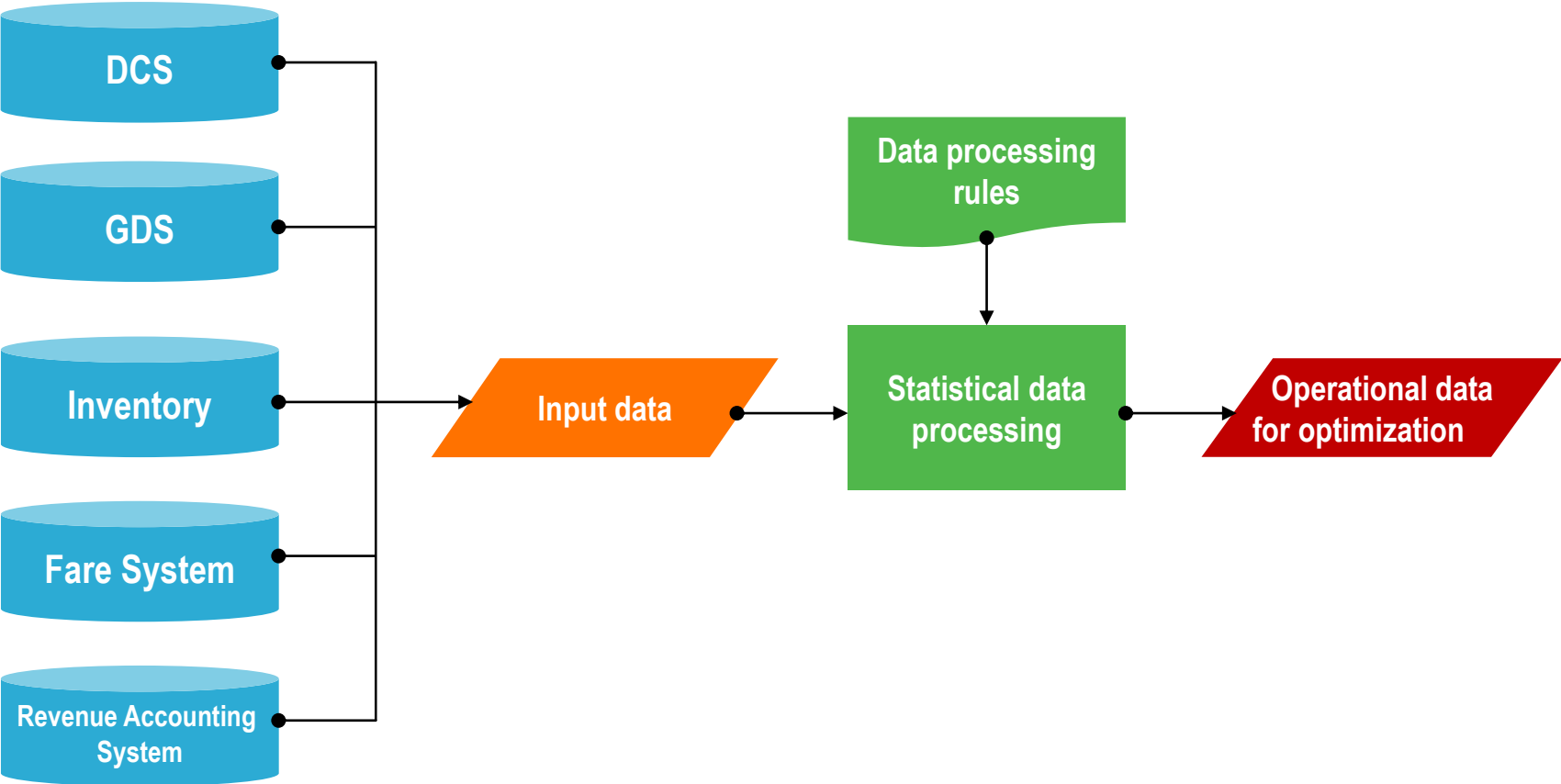
RMS Capacity
232 human brainpower

Without **RMS**,
airline's top management
can be held "hostage" by
experienced staff



SIRENA.REVENUE WORKFLOW





Forecast of demand based on booking statistics from inventory system

by destination

by flight segment - by analogy with similar flights

on the same route

on the same day

in the same time frame

by booking class

current booking trend considerations

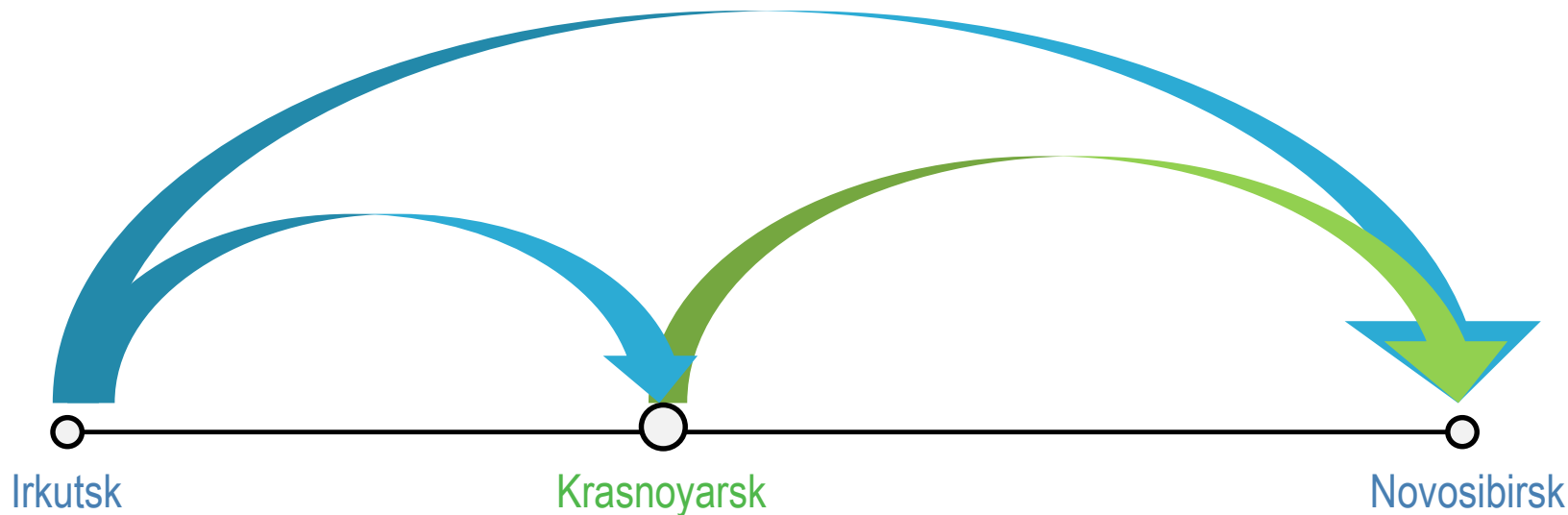
seasonality considerations

No-show forecast on the basis of DCS statistics

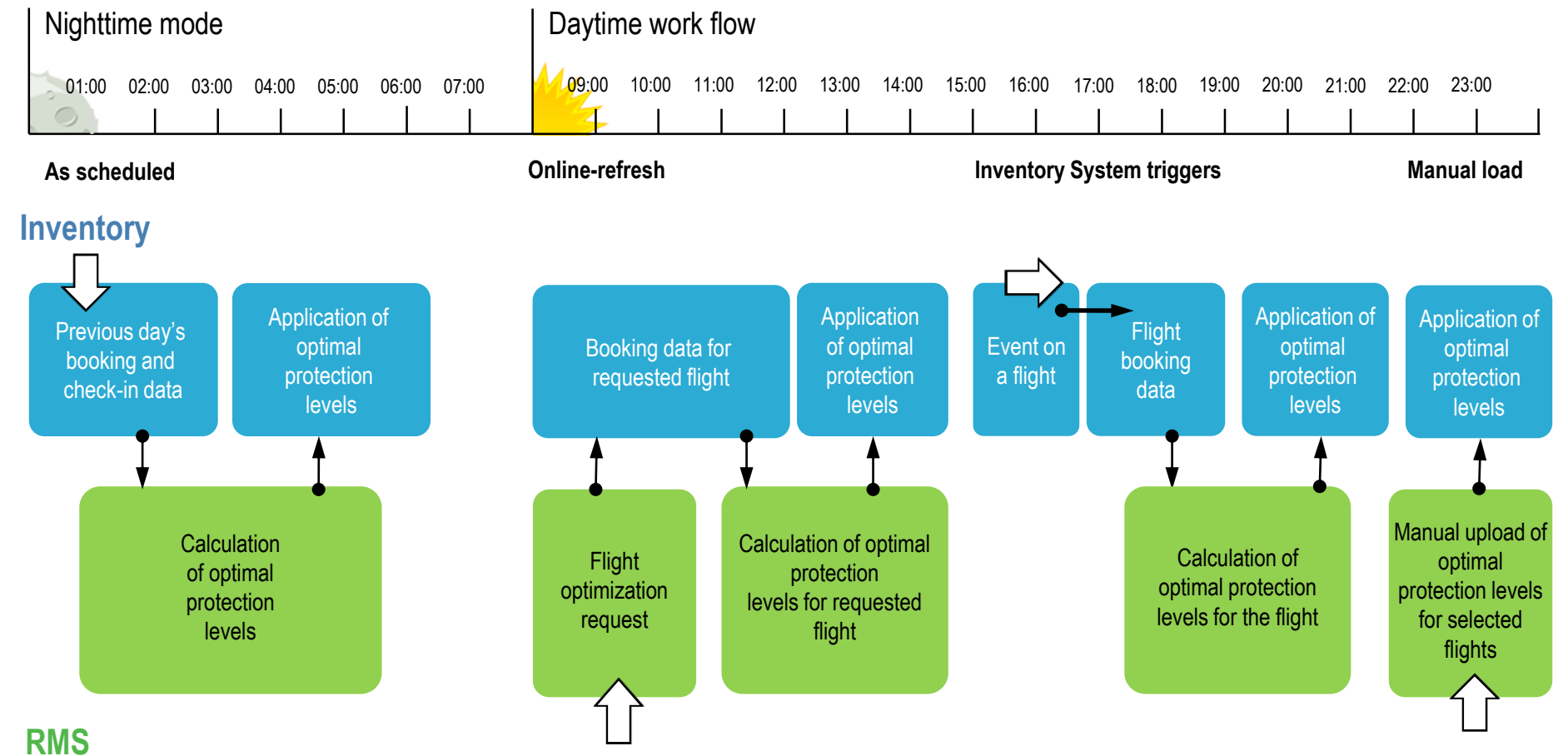
Calculation of optimal protection levels

Possibility to set your own sales scenarios

Optimal segment capacity allocation on multi-segment flights



SIRENA.REVENUE WORKFLOW: Flight Protection Level Management



I

Overbooking value calculation

II

Calculation of minimal fares for groups

III

Flight financial performance calculation

IV

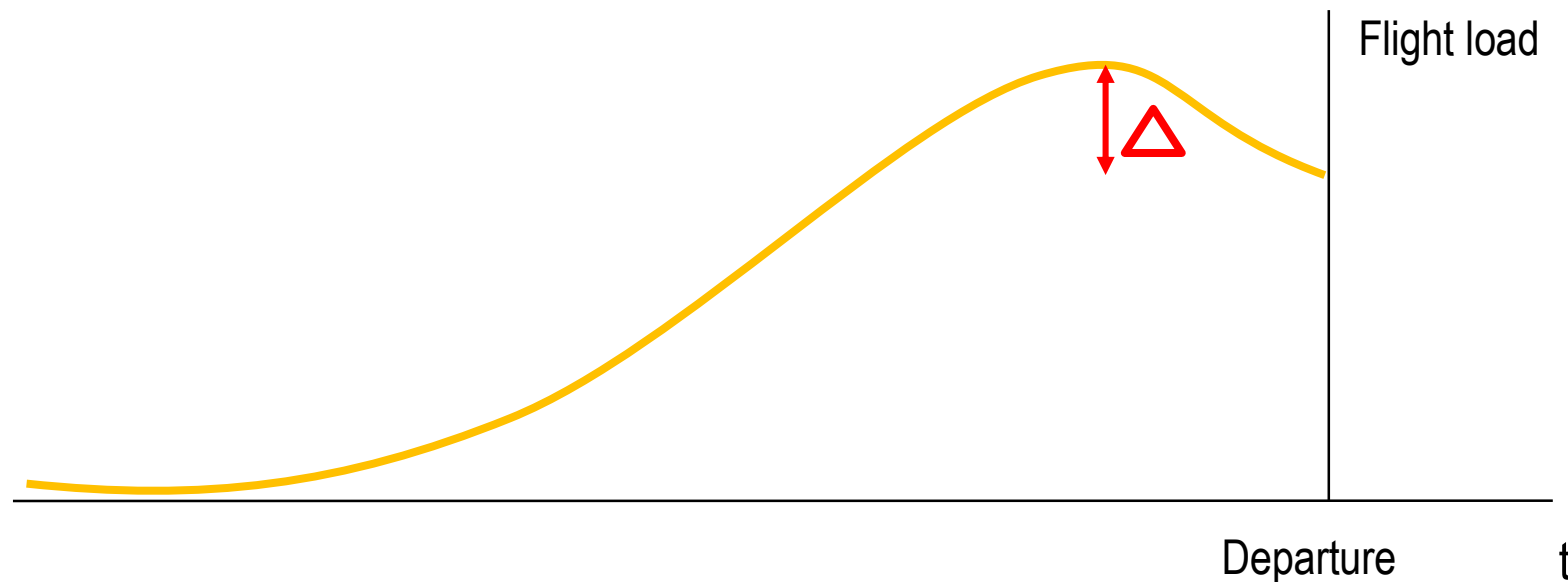
Competitors fare data analysis

V

Reports

Flight with free seats is a profit loss

We need to forecast pre-departure cancellations and no-shows for subsequent overbooking rate calculations



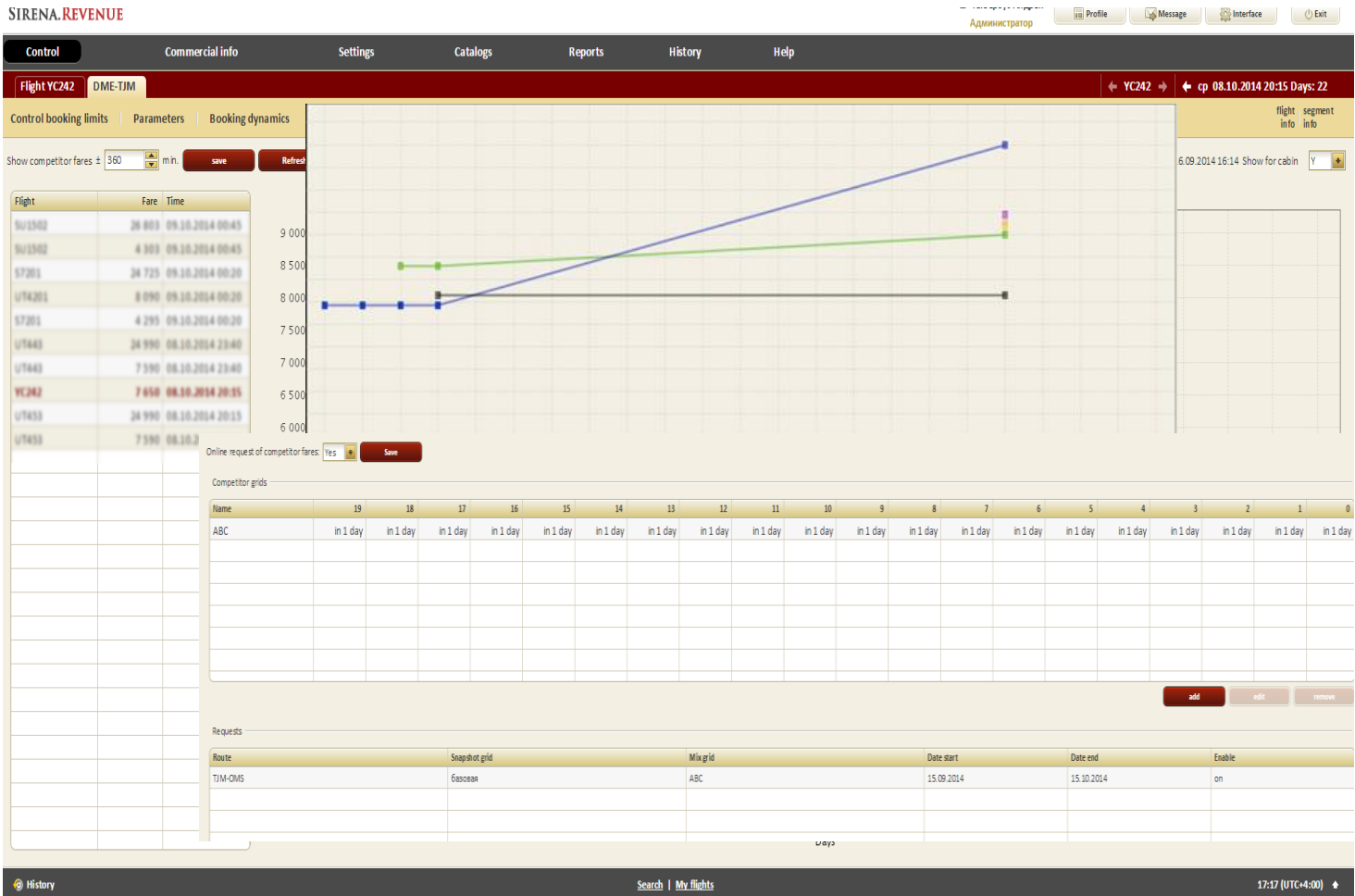


**It's important to monitor
competitors fares**

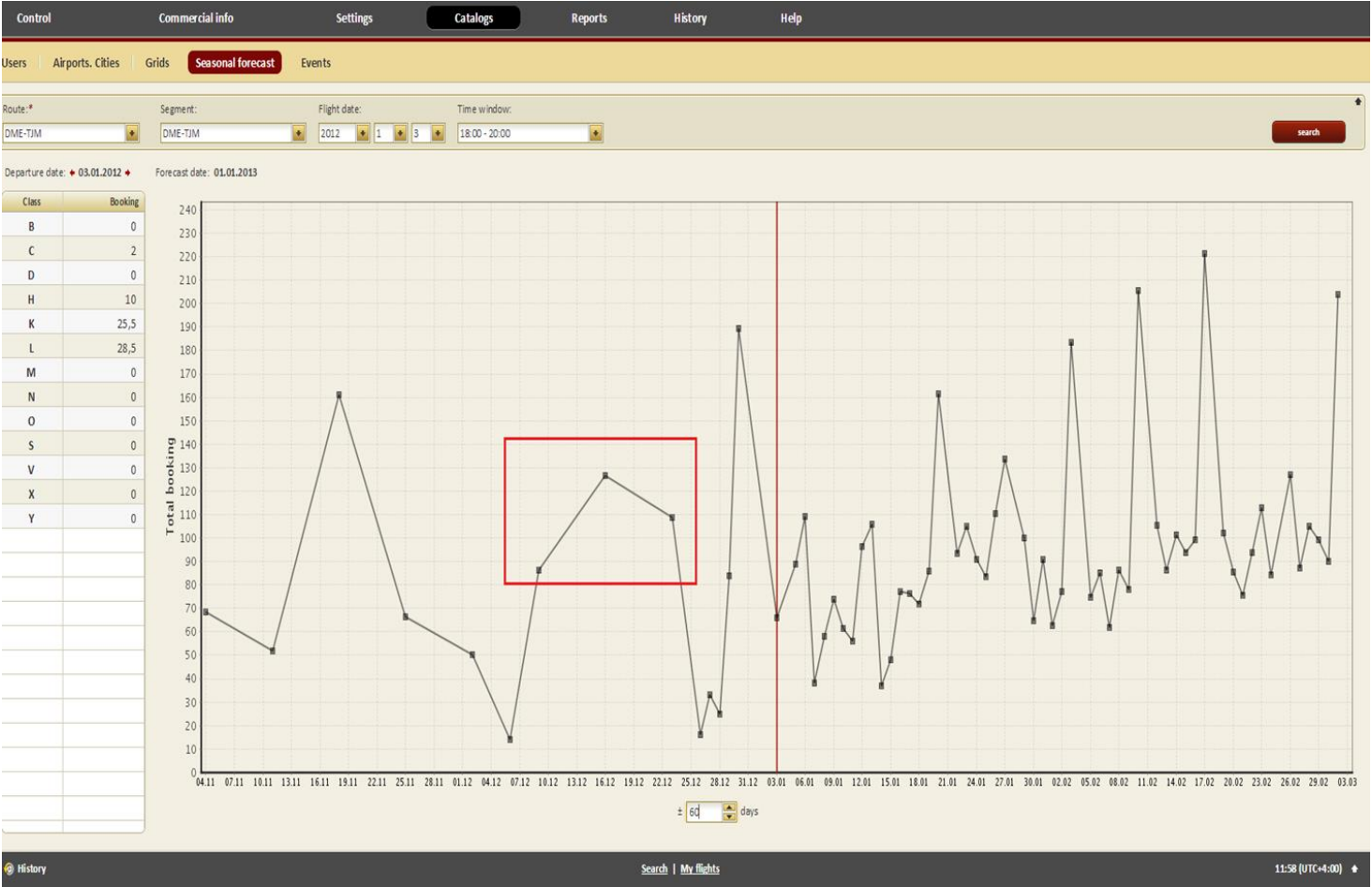
Comparison of your own fares with competing fares
to apply correct sales policy

SIRENA.REVENUE WORKFLOW: Competitive Analysis

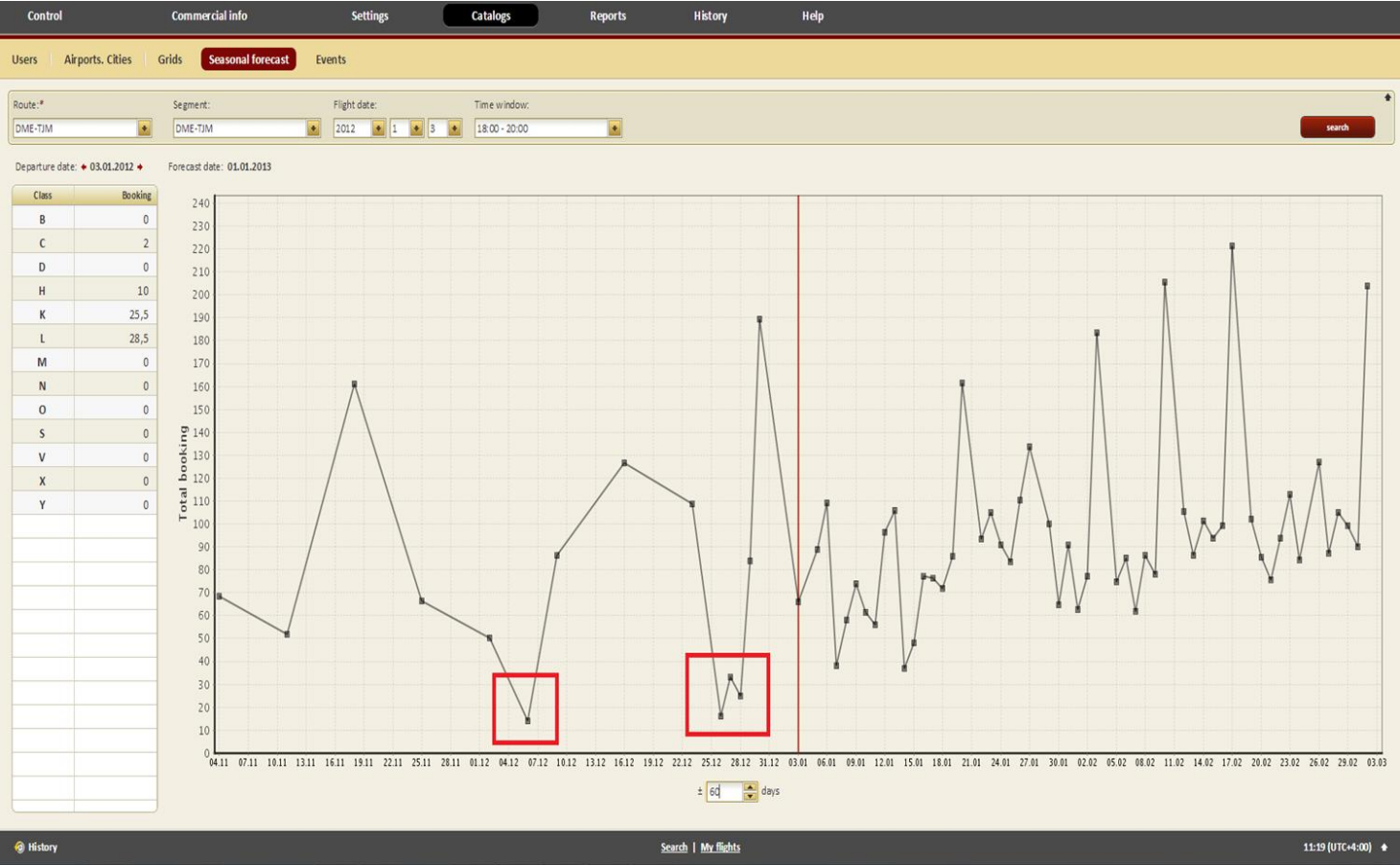
Define competing fares



Define **high**
demand
timeframe



Define low demand timeframe



Control

Commercial info

Settings

Catalogs

Reports

History

Help

Access

System settings

Reoptimization

Automatic upload

Scenario

Parameters

Demand profiles

Virtual flight

Competitors settings

Name

Author

Scenario:*

Author: vsergeyov

Class

Condition

Action

Create rule

Class: y

Condition: always

Action: booking limit

OK

Cancel

all

my

copy

add

remove

save

add

edit

remove

History

Search | My flights

11:46 [UTC+4:00]

Define critical flights requiring user attention

Control

Commercial info

Settings

Catalogs

Reports

History

Help

SEARCH

Route

YC

AAQ-AER-SLY

AAQ-ARH

AAQ-CEK

AAQ-DME

AAQ-GOI

AAQ-HMA

AAQ-KUF

AAQ-KZN

AAQ-LED

AAQ-NBC

AAQ-NIC

AAQ-NOZ

AAQ-NUX

AAQ-PEE

AAQ-SVX

AAQ-TJM

AAQ-UFA

ADB-DME

ADB-SGC

ADB-TJM

AER-BEG

Date

Departure date

09 / 23 / 2014

Days to departure

0

Period

Date from

09 / 23 / 2014

till

10 / 23 / 2014

Day of week

mo

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Conditions

Booking

>

0

Mix. forecast

>

0

Load factor

>

0

Fcst load factor

>

0

Snapshot

19

18

17

16

15

14

13

12

11

10

9

8

7

Users

YULGA / Администрация Оперативного

и обслуживания / Служба Эксплуатации Службы

пол / Управление Службы Эксплуатации

и пол / Управление Службы Эксплуатации

Управление / Управление Полетами Эксплуатации

и пол / Управление Полетами Эксплуатации

и пол / Управление Полетами Эксплуатации

Login

Initials

Flight status

Uploaded manually

Uploaded automatically

OK

Refresh

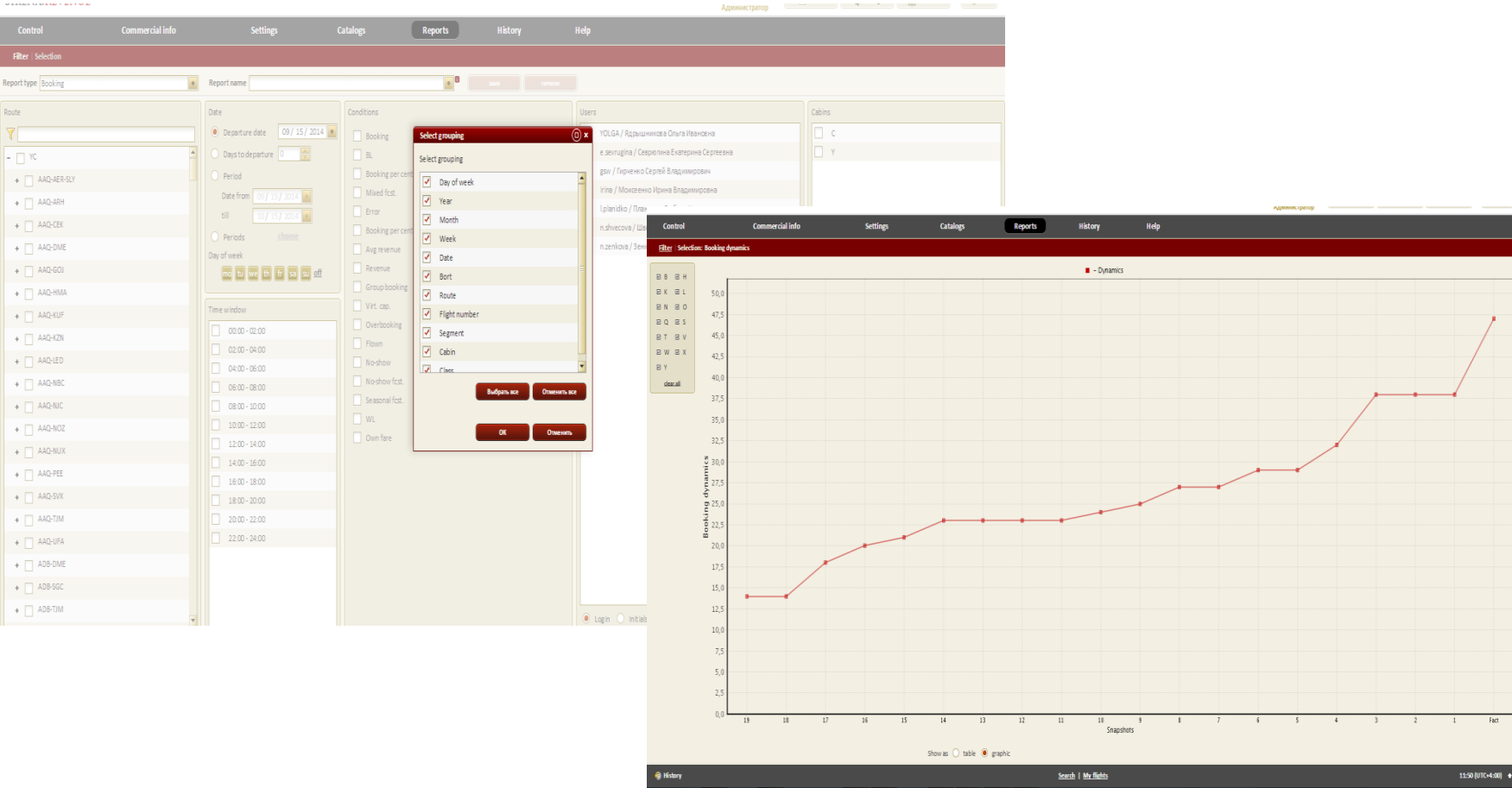
Scenario

1-10, 11-12, 13-14, 15-16, 17-18, 19-20, 21-22, 23-24, 25-26, 27-28, 29-30, 31-32, 33-34, 35-36, 37-38, 39-40, 41-42, 43-44, 45-46, 47-48, 49-50, 51-52, 53-54, 55-56, 57-58, 59-60, 61-62, 63-64, 65-66, 67-68, 69-70, 71-72, 73-74, 75-76, 77-78, 79-80, 81-82, 83-84, 85-86, 87-88, 89-90, 91-92, 93-94, 95-96, 97-98, 99-100, 101-102, 103-104, 105-106, 107-108, 109-110, 111-112, 113-114, 115-116, 117-118, 119-120, 121-122, 123-124, 125-126, 127-128, 129-130, 131-132, 133-134, 135-136, 137-138, 139-140, 141-142, 143-144, 145-146, 147-148, 149-150, 151-152, 153-154, 155-156, 157-158, 159-160, 161-162, 163-164, 165-166, 167-168, 169-170, 171-172, 173-174, 175-176, 177-178, 179-180, 181-182, 183-184, 185-186, 187-188, 189-190, 191-192, 193-194, 195-196, 197-198, 199-200, 201-202, 203-204, 205-206, 207-208, 209-210, 211-212, 213-214, 215-216, 217-218, 219-220, 221-222, 223-224, 225-226, 227-228, 229-230, 231-232, 233-234, 235-236, 237-238, 239-240, 241-242, 243-244, 245-246, 247-248, 249-250, 251-252, 253-254, 255-256, 257-258, 259-260, 261-262, 263-264, 265-266, 267-268, 269-270, 271-272, 273-274, 275-276, 277-278, 279-280, 281-282, 283-284, 285-286, 287-288, 289-290, 291-292, 293-294, 295-296, 297-298, 299-300, 301-302, 303-304, 305-306, 307-308, 309-310, 311-312, 313-314, 315-316, 317-318, 319-320, 321-322, 323-324, 325-326, 327-328, 329-330, 331-332, 333-334, 335-336, 337-338, 339-340, 341-342, 343-344, 345-346, 347-348, 349-350, 351-352, 353-354, 355-356, 357-358, 359-360, 361-362, 363-364, 365-366, 367-368, 369-370, 371-372, 373-374, 375-376, 377-378, 379-380, 381-382, 383-384, 385-386, 387-388, 389-390, 391-392, 393-394, 395-396, 397-398, 399-400, 401-402, 403-404, 405-406, 407-408, 409-410, 411-412, 413-414, 415-416, 417-418, 419-420, 421-422, 423-424, 425-426, 427-428, 429-430, 431-432, 433-434, 435-436, 437-438, 439-440, 441-442, 443-444, 445-446, 447-448, 449-450, 451-452, 453-454, 455-456, 457-458, 459-460, 461-462, 463-464, 465-466, 467-468, 469-470, 471-472, 473-474, 475-476, 477-478, 479-480, 481-482, 483-484, 485-486, 487-488, 489-490, 491-492, 493-494, 495-496, 497-498, 499-500, 501-502, 503-504, 505-506, 507-508, 509-510, 511-512, 513-514, 515-516, 517-518, 519-520, 521-522, 523-524, 525-526, 527-528, 529-530, 531-532, 533-534, 535-536, 537-538, 539-540, 541-542, 543-544, 545-546, 547-548, 549-550, 551-552, 553-554, 555-556, 557-558, 559-560, 561-562, 563-564, 565-566, 567-568, 569-570, 571-572, 573-574, 575-576, 577-578, 579-580, 581-582, 583-584, 585-586, 587-588, 589-590, 591-592, 593-594, 595-596, 597-598, 599-600, 601-602, 603-604, 605-606, 607-608, 609-610, 611-612, 613-614, 615-616, 617-618, 619-620, 621-622, 623-624, 625-626, 627-628, 629-630, 631-632, 633-634, 635-636, 637-638, 639-640, 641-642, 643-644, 645-646, 647-648, 649-650, 651-652, 653-654, 655-656, 657-658, 659-660, 661-662, 663-664, 665-666, 667-668, 669-670, 671-672, 673-674, 675-676, 677-678, 679-680, 681-682, 683-684, 685-686, 687-688, 689-690, 691-692, 693-694, 695-696, 697-698, 699-700, 701-702,

Critical flights that need special attention

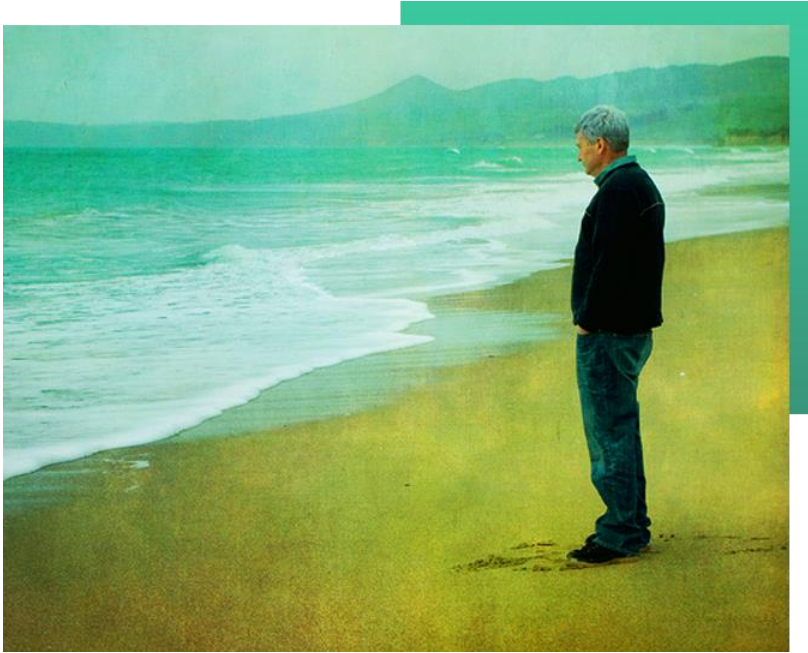
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SIRENA.REVENUE WORKFLOW: Booking dynamics report

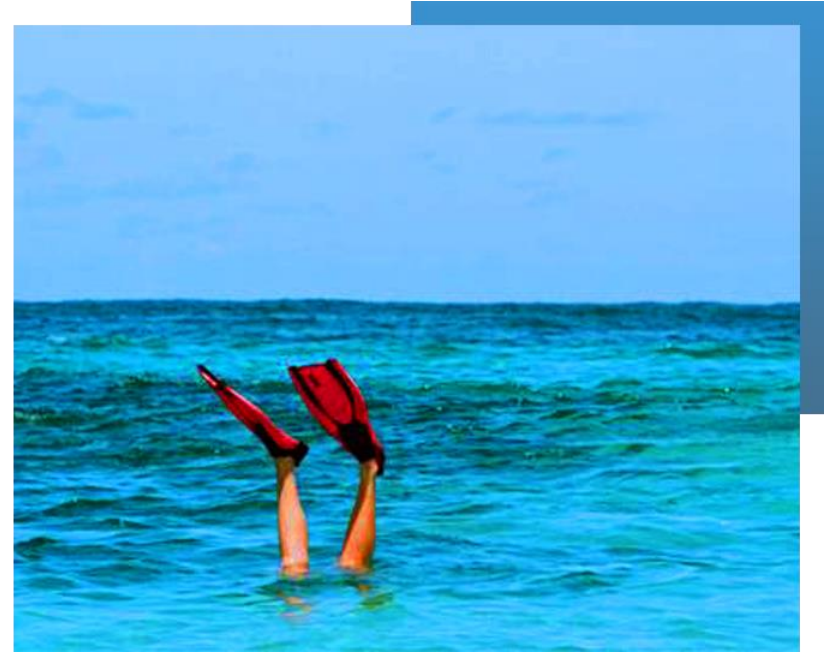




Deep integration with inventory and other systems



We do not just stand aside
and **give advice**



We get completely immersed into airline's
peculiarities to offer **optimal solutions**

Segment level inventory optimization

Integration with revenue accounting systems

Notices of events and flights that require user attention

User access management by destinations and flights

Protection level calculation algorithm focused on maximum load factor

User friendly web-interface for an easy online access

Fully user customizable system

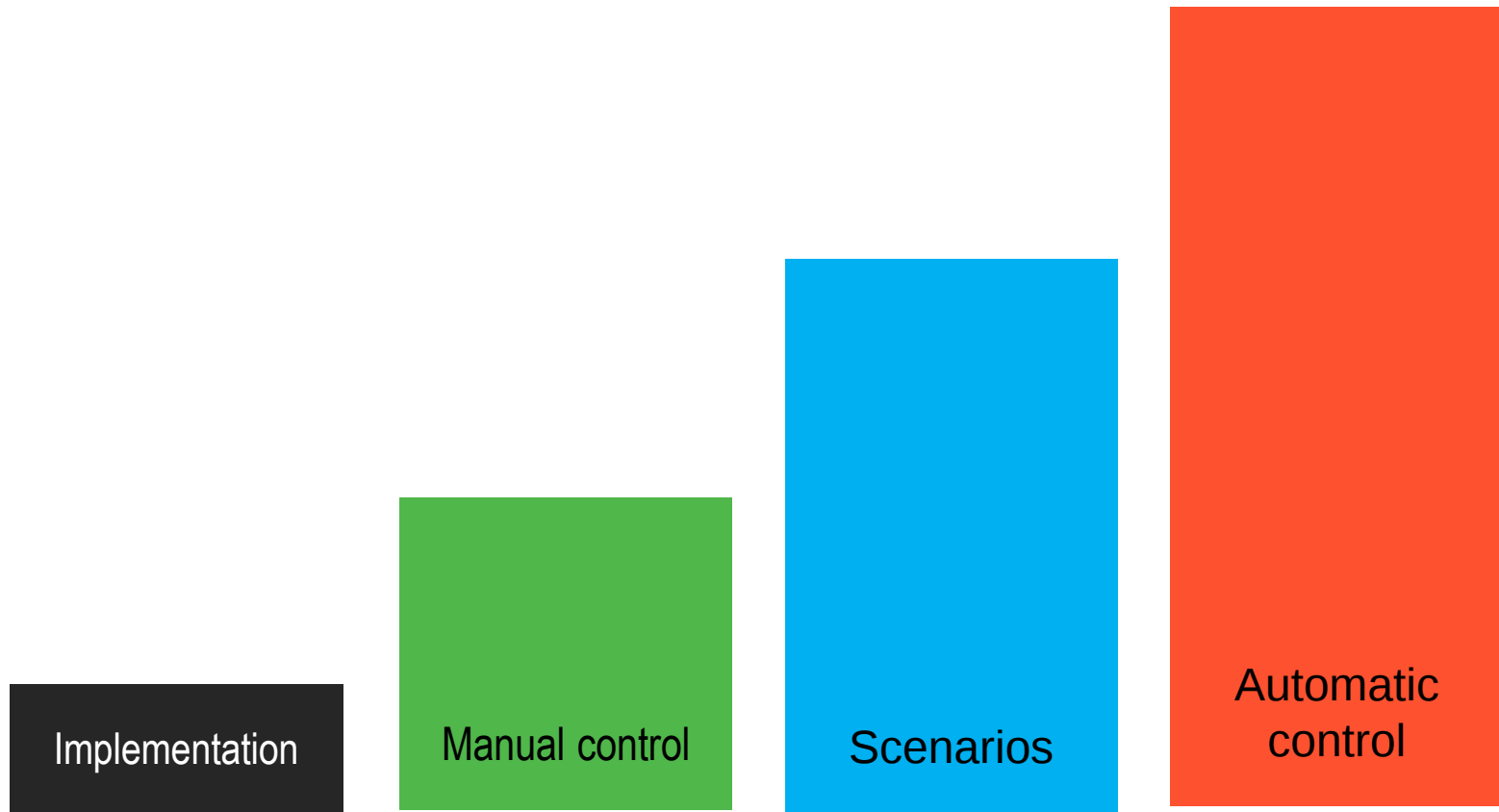
Flexible user defined nesting schemes

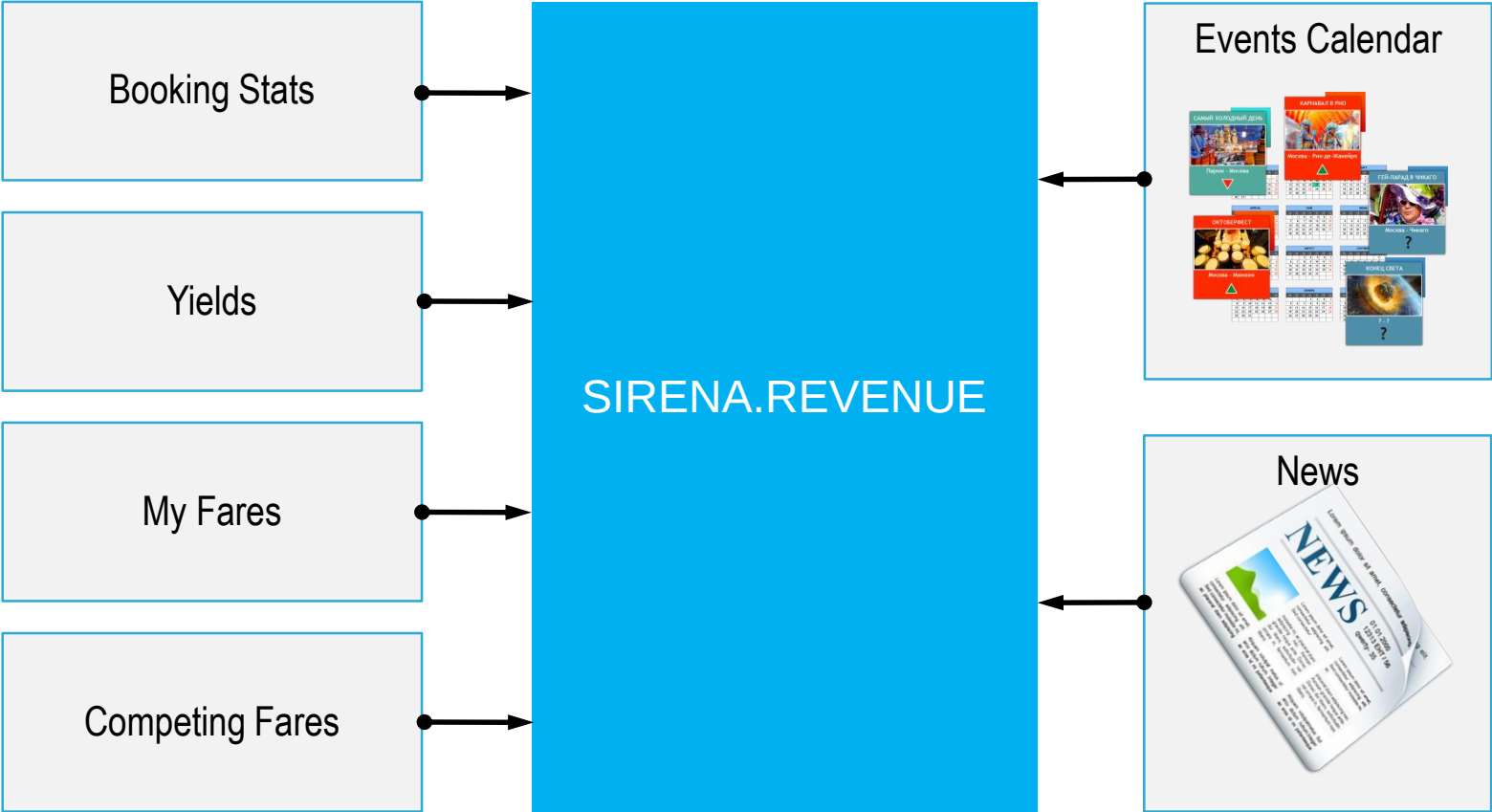
Minimum hardware requirements

Interactive GDS data interchange instantly reacting to market fluctuations

Cross - reference system based on the RMS processing logics

Calculation of minimum group fares by flight and group size





SIRENA TRAVEL CLIENTS



EFFECTIVE IT-DECISIONS FOR THE INDUSTRY OF AIR TRANSPORTATION



THANK YOU!
