

A PASSENGER RETAILING SYSTEM (PRS) DESIGNED FOR FAST
GROWING SMALL AND MEDIUM SIZED AIRLINES

 QUICK PASSENGER
RETAILLING SYSTEM

捷克预订系统

 QUICK PASSENGER RETAILLING SYSTEM

 Floor 6, Tower A, Fusheng Mansion, No.4, Huixin East Street, Chaoyang District, Beijing, China (100029)

 (8610) 57651000

 (8610) 57651629

 www.TravelSky.net

 intl@travelsky.com



INTRODUCTION

TravelSkyTechnology Limited, China's leading aviation information technology service provider, is pleased to introduce the QUICK system, designed as a combination of a complete Passenger Service System (PSS) and best business practices in e-commerce to become the new future-oriented Passenger Retailing System. QUICK is ideal for fast-growing, small and medium-sized airlines worldwide.

The core of the Passenger Retailing System (PRS) is an IATA NDC-compliant e-commerce retail engine and One Order unified order service, enabling your airline to customize business offerings and implement a differentiated sales strategy. Unlike the traditional airline Passenger Service Solutions (PSS), the PRS allows airlines to define product prices and sales strategies in a retail and commercial mind-set, which can be executed and made available in all sales channels immediately. We recognize the growing importance of adopting new merchandising and e-commerce strategies for airlines, but also understand the necessity to comply with legacy airline distribution processes centred around e-Tickets, so that at the very beginning of the design phase, we were able to combine both approaches and integrated them into a single consistent process. QUICK is therefore a new system which adapts to the legacy world of distribution compared to other systems which try to adapt to modern e-commerce distribution capabilities. This is why a new system design from a "clean sheet of paper" was necessary.

We are aware that the value of passenger data is crucial for your business, which is why QUICK provides you with comprehensive and transparent passenger profiling options, to optimize your airline's service offerings for a customized passenger experience. We continually improve and increase the customer tags that are managed individually by the airline and have integrated the passenger profile/type into the sales engine for personalized offers, based on customer value or past orders. Operating Data Storage (ODS) services, that perform real-time backups with transaction databases, ensure that you have access to all transaction and audit information of your system in real-time, anytime.

Being able to respond to market opportunities instantly is of essence, the QUICK team will respond fast to your development requests, and therefore provide a more flexible service to small and medium-sized airlines, including scalable support and operational services. Let us work together, to create a bright future for your airline.

TECHNOLOGY PLATFORM

QUICK is a new Passenger Retailing System based on open source technology and e-commerce tools. We are providing QUICK on SaaS based principles through hosting in a secure private cloud, or in cooperation with leading external public cloud service partners worldwide.

The overall technical architecture follows the principles of modular, connected, Service Orientated Architecture (SOA), and enables flexible configuration, rapid change and dynamic expansion of our applications through distributed, standardized service invocation. In our core database, we maintain all services, orders and user transaction data homogeneous and consistent (One Order principle), to eliminate "data silos" in various systems as well as data mismatches.

We analysed China's e-commerce industry best practices and trends and built them into our system, based on business rules technology, to create flight related and ancillary (non-flight) services, allowing flexible configuration and fast go-to-market times. In this way, QUICK allows airlines to adopt strategies utilized by successful e-commerce companies outside the aviation industry and also enforce customer personalized marketing, helping the airlines to differentiate from each other.

Based on the Internet cloud service technology, the Passenger Retailing System eliminates the traditional host / terminal or C/S requirements and uses a browser-based B/S architecture. Users do not need to install any client software, instead just by accessing a browser they can easily access the system. QUICK features a full graphical user interface (GUI) in line with the latest HTML5 specification, supporting PC, Smart Phones, Tablets and other Multi-Screen adaptive devices. Users can self-administer the system to complete all necessary configurations or updates on users, service prices, sales rules, settings and others. Users do not have to learn and memorise any codes or abbreviations to work the system. The system can be translated into virtually all languages including (Chinese, English, Korean, Japanese, Russian and Western languages).

In order to support the connection and external cooperation with other IT systems used by the airlines, QUICK provides a complete and comprehensive XML API interface based on the IATA NDC standards, and supports the airline to carry out detailed security management of external access by third parties.

TravelSky has a record of 40 years of excellence and stability in operation and maintenance of management tools, booking and reservation systems (CRS/GDS), infrastructure provision, application services and external partner management, all with the goal to achieve high availability and business continuity.

It is through constant streaming replication, that we achieve core transaction data synchronization and real-time backup to the Operational Data Storage (ODS) and library. The ODS provides a rich dashboard, analysis, reporting and audit services. The data in the history library is saved without time limits. Finally the system supports local independent deployment, to ensure business and data privacy as well as security.

QUICK MODULES

This section describes the main modules of the QUICK Passenger Retailing System:

QUICK Customer (CUS)

We offer comprehensive definition and management of passenger types. Management of passenger's profiles, automatic customer classifications dependent on set rules, execution of personalized marketing campaigns based on type of travel, products bought, frequency of flying etc. We also offer a value and frequency based light weight Frequent Flyer Program (FFP) to increase customer satisfaction and loyalty.

QUICK Product (PRD)

The real time possibility of controlling availability of flights, seating options and ancillary service offerings, allows your airline to adjust inventory based on market conditions and real-time revenue management data analysis.

QUICK Reservation (RES)

Sales administration to create fares, seat and ancillary service definition, based on multi-dimensional rules to implement fast and flexible sales rules (a la carte services or branded fares, etc.). An intuitive smart booking process, connected with TravelSky's EasyPay payment platform or a third party provider, offers a variety of online payment forms. Consistent orders, with IATA One Order concept in mind, include complete itinerary, passenger data, payment, e-Tickets and delivery information to support various follow-up services with the customers. Automatic calculation of rebooking or refund fees is supported and a dedicated process and tool for group bookings is provided. Airlines can also offer Travel Agents (TA) to settle payments as well as commission claims via an inbuilt Debit-/Credit Account function.

QUICK Operating Data Storage (ODS)

Based on the ODS services, we are able to provide real-time dashboards, revenue management analysis tools and reports (download service).

QUICK Departure (DEP)

QUICK offers both a seamless connection to the existing Departure Control Systems of TravelSky or other 3rd Parties and its own Departure Control System featuring check-in, boarding and ancillary service sales at the airport. We also support an integrated approach in case of irregularity operations (IROP).

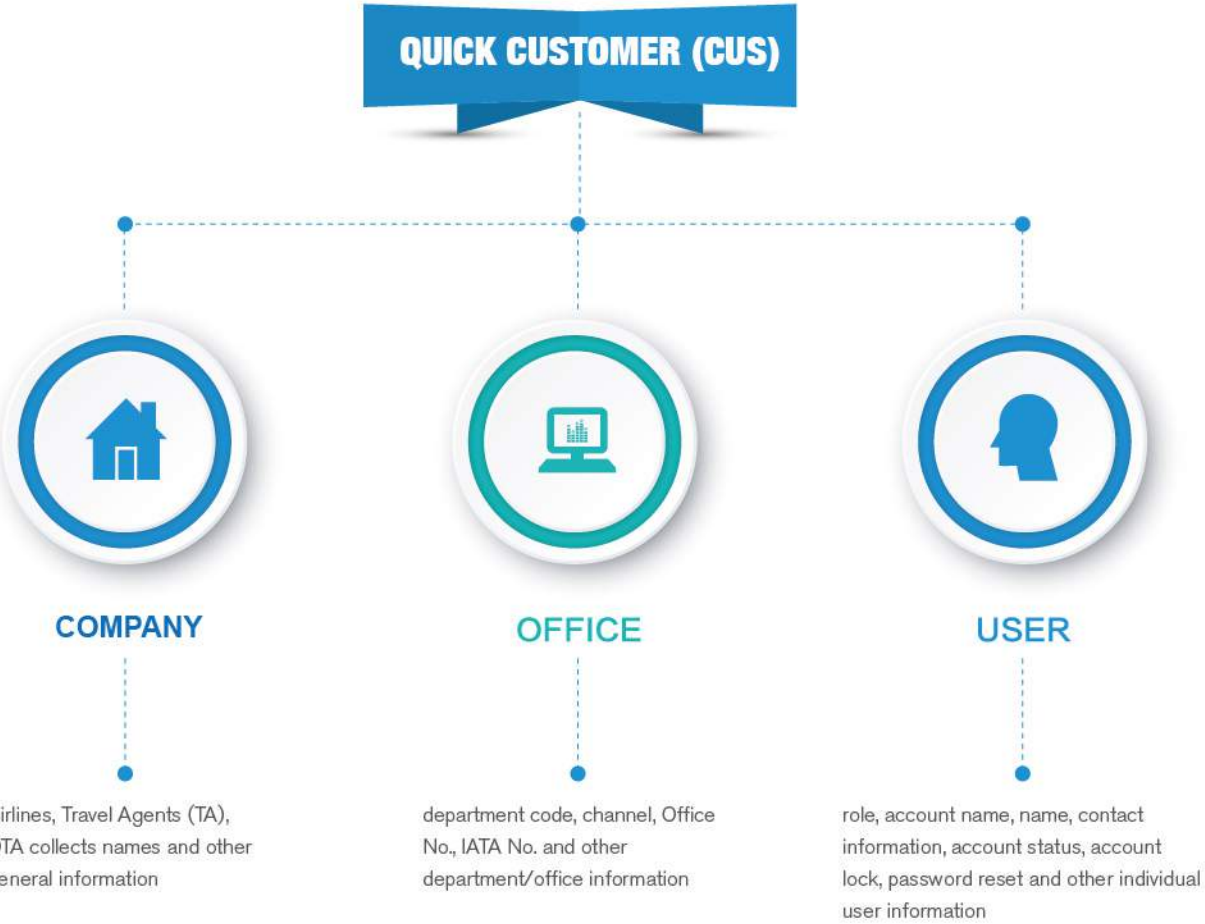
QUICK Distribution Channels and APIs (API)

The Passenger Retailing System provides integrated distribution channels like standard B2C, B2B, Mobile and microsite services (Apps), and is further connected to the GDS system. For airlines wishing to customize and expand their direct sales and distribution channels, we also offer an open XML API interface that conforms to the IATA NDC standard.



QUICK CUSTOMER (CUS)

QUICK supports centralized definition and management of airline internal and external customers. QUICK is user-managed in accordance with a three-tier tree structure consisting of "company", "office" and "user". The administrator user can independently define and modify user information and set levels of authorization through assignments of specific roles.



Different products and sales rules can be applied by sales channel. Within a particular sales channel, different types of agents can be set to receive different agency fees and commissions.

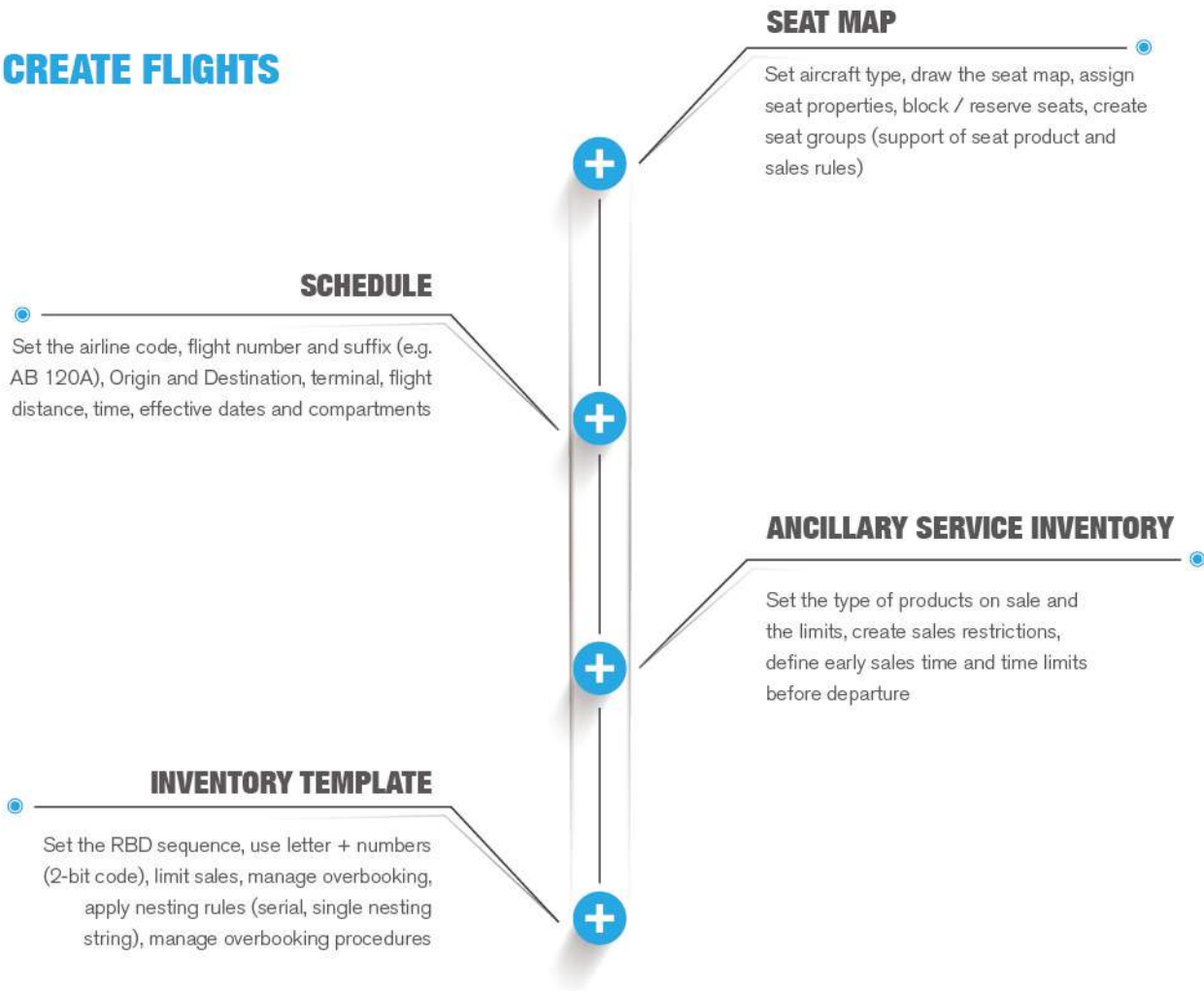
Through the user role management, QUICK supports advanced security authorization management with flexible assignment of operational rights and data permissions. Possible user roles typically include: administrator, sales staff, finance staff, ground handling staff, revenue management staff, external airlines, agents, API interface calls, and self-service sales channels. Personal information such as passenger identification information, contact information, etc. are only visible to authorized users and an audit track is recorded on its access by users.

To support flexible sales strategies, QUICK includes a fully integrated passenger database. As soon as a passenger departs, a profile is automatically created. The system tracks the travel and shopping behaviour of the passenger and calculates the contribution value of the passenger towards the airline Frequent Flyer Program (FFP). The passenger can further be mapped according to contribution level to a passenger type. The passenger types will be integrated into the sales rules engine as an important dimension of QUICK Reservation to support the marketing of airline products.

QUICK retains the complete travel records and contact information of the users and passengers, further it supports sending of booking and service information to the users and passengers by eMail and SMS. Message layouts can be customized according to requirements. For SMS a gateway provider needs to be selected by the airline.

QUICKPRODUCT (PRD)

The Product module provides airlines with a fast and flexible tool for the establishment, maintenance and management of flight and non-flight related services. Simply set up the flight schedule, draw the seat map, create the inventory template for the flight and an ancillary service inventory, and start selling immediately.



All flights, seats, and ancillary services are directly used by other modules of QUICK to avoid inconsistent data errors.

MANAGE INVENTORY

Thanks to the homogeneous and consistent database structure, QUICK Inventory instantly obtains all historical and current sales information, real-time flight yield (RASK), load factor (LF) and average fares to assist flight revenue control team's decision making process. By accessing the flight control panel, a user can suspend or resume sales with one click, view the actual loads of flights and corresponding ancillary services sold, compare historical and market fares (the average fare, the lowest market price). All this enables the airline to maximize revenue across its network of flights. By request the airline can connect QUICK with a 3rd party Revenue Management Provider to automate process.

QUICK RESERVATION (RES)

QUICK Reservation is enabling airlines to truly define all sellable services, develop unique and personalized offers, and take immediate action in designated channels by applying rules.

SERVICE

Define anything that you want to sell: there is no distinction between flights, seats, bags or any other ancillaries in the system. All services are unified into the three-tier architecture (define, price, retail) of the service catalogue, which is based on the powerful business rules engine to enable definition and implementation of product and sales strategies. This also means that there is no need to take the traditional legacy minded EMD approach into consideration, as you can easily achieve a unified order and accounting process.

OFFER

Attach a price to your services to become offers up for sale. Attributes supported include:



With QUICK, airlines are able to set up an offer as a commercially available service, including a la carte services individually offered or as a Branded Fare (Fare Group) with multiple or individual services included. The offer is the result of a product search (Shop), which returns the complete list of offers of the airline.

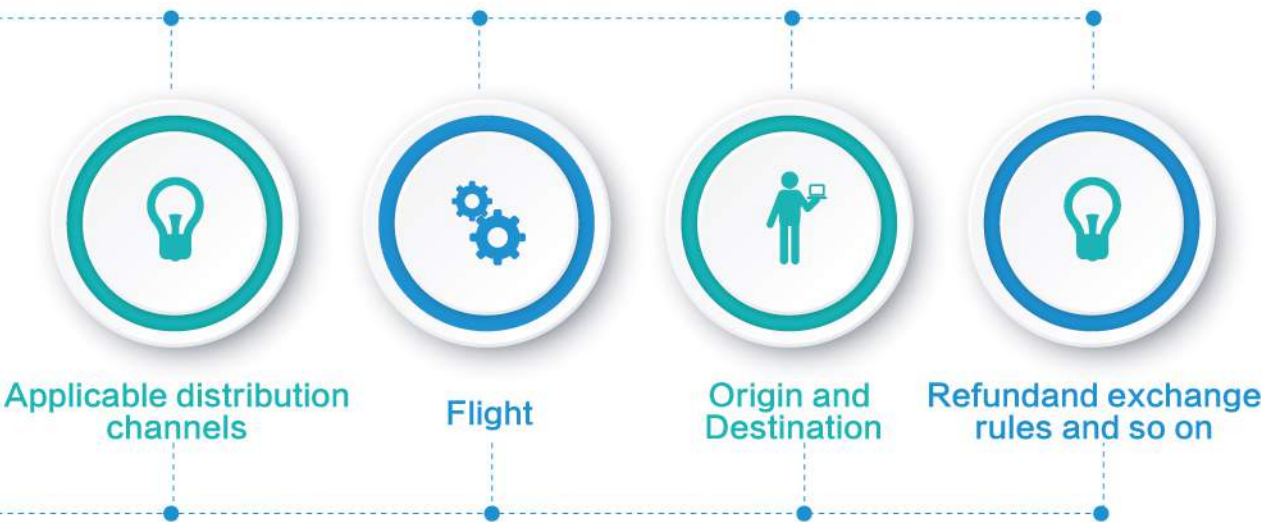
QUICK supports Branded Fares (Fare Groups) to be created and administered in the following way:

- Brand Offer Name
- Description
- Included individual services and attributes
- Applicable Distribution Channels
- Refund and exchange rules
- Price adjustment (individual purchase vs. bundle purchase)

SALES RULE ENGINE

Start retailing your offers using QUICK's powerful Sales Rule Engine: users are free to further promote airline service/product catalogue by setting up rules to the Sales Rule Engine. QUICK Sales Rule Engine can adjust and modify all services including branded fare, ancillary service, taxes and fees. The Sales Rule Engine comes with a standard set of attributes to control distribution, but can be enhanced easily because of the code structure applied. The standard set of attributes includes:

- RBD
- Origin and Departure
- Flight Number
- Order Date
- Flight Date
- Early purchase time limit
- Day of Week
- Distribution Channels
- Passenger Type
- Payment Method
- Price adjustment: discount, percentage or specific price



RESERVATION PROCESS / ORDER CREATION

The booking system supports a simple and fast service reservation process. Standard shopping request supports oneway, return and multi-segment routes, passenger types of adult, child and infant, as well as individual or group booking searches. When shopping is done using the NDC API, attributes can be added to the request to limit the number of potential offers and personalize according to requirements (e.g. Personalized shopping, Attribute shopping.) The results include the search conditions of the flight, branded fare list, refund and change rules and available offer prices.

The booking process uses the shopping cart, a model which lists all products each passenger has selected, unit prices, taxes, fees and total order price. QUICK also supports calling up on previously used passenger information, to speed up the booking process for recurrent passengers. (e.g. by mobile number, ID or eMail)

ONE ORDER CONCEPT

Legacy Passenger Service Solutions (PSS) centre on a PNR and e-Ticket data in their core; this however makes it difficult to achieve a unified order management of air and non-air products, due to inflexibility of such structure. As part of e-commerce selling approach, the amount and combination of products and offers should not matter and be up to the customer. QUICK is built on One Order concepts, which include all passengers, purchase, payment and change information, allowing for seamless delivery and accounting of all air and non-air related product information:



The Passenger Retailing System (PRS) supports the use of IATA standard e-Tickets, through a seamless connection to the TravelSky e-Ticket server, which records and reflects the overall interaction status of e-tickets. At the same time, for low-cost or independent airlines, the PRS also supports the ticketless business model, to achieve order-based full-process services. Once the order payment is complete, an itinerary can be printed, mailed or sent by e-Mail and SMS.

Based on security settings, access to existing orders can be managed on a user base (all orders, orders created by the user, orders for the department). Existing orders can be modified, by adding ancillary services, extending of payment time limit, and refund or change of services. Cost of rebooking' s or changes are automatically calculated. A multi-level review of refund requests is supported for maximum security and internal fraud prevention.

As a benefit of the flexible order data structure, QUICK supports different passengers with different itineraries (unbalanced order) to avoid order split and retain a complete record.

The PRS supports a variety of flexible online payment methods by connecting to TravelSkyEasypay payment gateway or any third party payment gateways to support major online banking, credit cards, app scanning payments, and mobile payments.

DEBIT AND CREDIT ACCOUNT FUNCTIONALITY

For directly connected Travel Agents as well as OTA' s, QUICK offers the possibility to create Debit and Credit Accounts on an Office Level, with the possibility to map multiple accounts per Office. This allows the airline and its partner to carry out transactions in real time and save on payment costs levied by third parties. Every financial transaction is logged and reporting and auditing is carried out in real time.



GROUP BOOKINGS AND BATCH UPLOAD OF PASSENGER DATA

QUICK supports airlines to carry out flexible group sales. A designated agent may be authorized to apply for and issue group orders. By configuring the minimum number of passengers for a group, the minimum ratio of travel vs. non-travel the group department airline staff can reduce the risk of agent abuse or yield leakage of a flight by accepting groups.

The group passenger list can be entered manually, or uploaded by an Excel template for bulk import.



QUICK OPERATIONAL DATA STORAGE (ODS)

QUICK uses constant streaming replication to realize real-time data backups to the Operational Data Storage (ODS), which allows QUICK to provide the airline with immediate, complete and flexible data service for reporting. Various standard data exports can be run out of the ODS, without any compromise in speed of the core transaction system. Each airline's ODS is deployed independently to ensure the safety and privacy of airline business data.

DASHBOARDCAPABILITY

Centred on core business KPI's, the Dashboard provides a visual overview of Revenue, KPI's and Passenger Capacity taking the following data into consideration:

Revenue: sales revenue, ancillary service revenue, brand revenue, revenue by channel, sub-line revenue, and year-on-year data comparison

KPI: Yield (average fare of the segment), seat kilometres income (RASK), sub-route revenue, and year-on-year data comparison

Passenger Capacity: passenger volume, load factor, number of flights and year on year data comparison

REVENUE MANAGEMENT

In close integration with QUICK Inventory, QUICK ODS provides immediate detailed analysis support, including booking behaviour, average fares and historical comparisons, which help Revenue Managers to make fast decisions. At the same time through external data, QUICK supports the market surveillance of competitor's fares and displays it in a single screen. Standard Integration to external Revenue Management Systems are also supported.

REPORTS

Through the QUICK ODS, we can provide airlines with all data in the PRS for a multi-dimensional data reporting service. In addition to the various standard reports, we can also provide customized reports, tailored to the unique needs of the airline. Reports can be downloaded in Excel format or send by eMail.

REVENUE ACCOUNTING

QUICK ODS supports international standard airline settlement data (TCN) export, including correct settlement of ancillary service revenue. In addition customization to the unique needs of airlines, e.g. export of complete transaction records for 3rd party systems, is possible.

QUICKDEPARTURE (DEP)

The user friendly QUICK RES and PRD has a high-level of integration with TravelSky's Departure Control System (DCS), to support airlines using the infrastructure in China and Asia, at approximately 200 Chinese airports and major Asian airports for a seamless passenger service experience. The status of each passenger handled by the TravelSky DCS will be updated in real time in the Passenger Retailing System.

In addition, QUICK also provides its own integrated Internet-based Departure Control System (DCS).

The DCS has the following capabilities:

- Flight Management
- Flight Information Modification
- Flight Status Changes
- Seat Control
- Space Limit Control
- Passenger Order Inquiries
- Check-in Passengers, Print Boarding Pass
- Check-in Luggage and Print Luggage Tags
- Passengers Boarding
- Special Passenger Handling
- Passenger Manifest Printing
- Message Service
- Statistics and Reports

QUICK's own DCS will also support the sales, payment and delivery of ancillary services such as seats and bags on the basis of QUICK RES, to support the airline to further expand its sales channels and increase its revenue.

The graphical, multilingual, front-end system can be certified by major airport platform vendors such as SITA CUTE, ARINC MUSE, RESA CREWS. It will connect to the main government custom systems, to provide safe and stable APIS, APP, Secure Flight passenger information collection and transmission services.

Web Check-In is supported via B2C, Mobile and WeChat channels to complete online check-in, select seats, buy other ancillary services, print boarding pass and other self-services.

Passengers can also check-in at the airport via the self-service front-end Kiosk machines.

QUICK is also able to connect to other Third Party Departure Control Systems, by standard messaging such as PNL, ADL, PFS etc.

IRREGULAR OPERATIONS (IROP)

QUICK DCS provides an efficient and straightforward IROP flight handling module that allows airlines to handle multiple scenarios and situations. Including the handling of the following IROPS reasons:

- Flight Cancellation
- Time Changes (including changes to next day operation)
- Aircraft Type Change
- Other Changes (ancillary service products, terminal etc.)

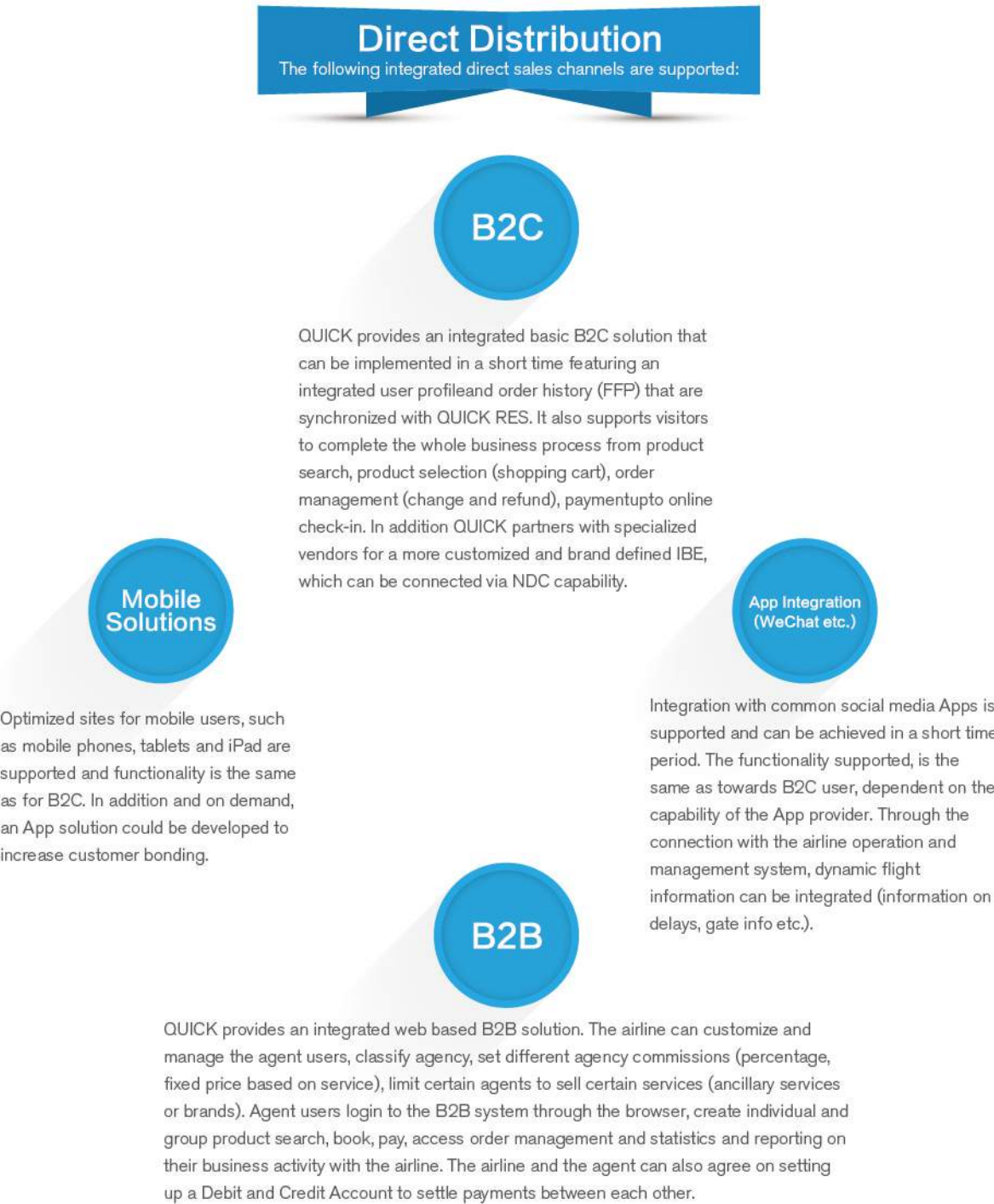
Airline staff can re-accommodate passengers to alternative flights following automatic system re-accommodation. In the passenger re-accommodation interface, different measures can be taken on a per passenger level or as a batch job. Assignments of different RBD's or Compartment is possible in order to resolve the IROP case and differences in fares as well as fees will not be triggered. Passengers can be informed by batch or individually, through SMS notification gateway and eMail, about the changes necessary to their itinerary.

QUICK DISTRIBUTION CHANNELS AND API (API)

The Passenger Retailing System (PRS) supports airlines to sell through a variety of direct sales channels and third-party distribution channels. The browser-based HTML5-based airline sales GUI allows airline staff to access the system via the Internet PC's or Laptops, Mobile or Tablets to sell and provide passenger services anytime, anywhere.

DIRECT DISTRIBUTION

The following integrated direct sales channels are supported:



INDIRECT / EXTERNAL DISTRIBUTION

The following external sales channels are supported:

1E GDS

QUICK is connected to 1E GDS via seamless availability, Direct Access, Direct Sell, PNR modification, Fare calculation, Ticketing and automatic refund and change process. Further GDS can be connected upon carrier request and the gateway used for the 1E connection will allow other standard integrations in a short period of time. QUICK is committed to achieve connection to GDS via NDC technology wherever this is possible.

CARRIER DIRECT PLATFORM (CDP)

TravelSky's CDP (Carrier Direct Platform) conforms to IATA NDC standard and by integrating China's major airlines B2B websites has become China's leading domestic distribution channels for agents. The Passenger Retailing System is closely integrated with the CDP to support authorized agents through the CDP front end to conduct action such as search, book, payment, order management and reporting.

XML API

For those airlines that wish to build and expand their sales and distribution channels, the Passenger Retailing System also provides an open XML API interface that conforms to the IATA NDC standard supporting connections, such as QUICK independent B2C for the airline, or towards OTA, GDS and Meta Search Engines. The API interface has incorporated strict security management measures, including IP verification, security role, whitelist and blacklist of IP, the number of concurrent users, flow of restrictions and monitoring. The main API interface includes:

- Users Profiles
- Product search
- Order management
- Departure service

SUPPORT SERVICE

The QUICK system is robust and designed to support growth of small and medium-sized airlines and is also supported by an experienced and responsive support team. The QUICK team has a lean management structure to encourage direct communication and collaboration between development and support department, to ensure that we communicate about problems and find QUICK solutions.

We designate a customer representative for each airline customer, and the airline will receive 365 X 7 X 24 phone and e-mail support. All customer questions are recorded according to the severity level defined and entered into the appropriate process. The customer receives immediate feedback on problems and has the ability to escalate the severity level when necessary to contact the management directly to solve the problem.

We offer free system training services onsite and every can download all product manuals, technical documentation and system upgrade information on the QUICK Extranet website for internal training sessions.