

# SKY Airport Solutions

Are you interested in solutions which enable a significant optimization of your business processes?

Do you prefer a cost-effective standard solution to expensive individual developments?

Do you expect perfect services by an experienced partner?

**Then you should consider to make use of our Airport Solutions.**

## Benefits

- \* Established and proved by more than 30 Airports worldwide
- \* Offered by a reliable partner with 20 years of experience in the airport business
- \* Streamlined business processes through integrated solutions for airport IT
- \* Growing with your business
- \* Permanently adapted to constantly changing business requirements
- \* Applicable for major international as well as for smaller regional airports
- \* Attractive cost-effective price structures



## Our Portfolio

With its 20 years of experience in the airport and aviation business ISO offers the complete range of software solutions for airports of any size.

- \* Airport Operations
  - \* Collaborative Decision Making
  - \* AODB
  - \* Resource Management
  - \* FIDS
  - \* Cargo Handling
- \* Airport Billing
- \* Connectivity
  - \* SITA
  - \* Business Partners
  - \* Satellite Systems
  - \* XML 4aero
  - \* Web
- \* Business Intelligence
  - \* Operational
  - \* Strategic
- \* Enterprise Resource Planning
  - \* Cost Accounting
  - \* Profitability Analysis
  - \* Data Quality Management
  - \* Enterprise Content Management
  - \* Customer Relationship Management

Modularised applications support the core business processes and take care of real-time distribution and reception of all relevant information:

- \* **Operational Flight Management** (AODB) allows processing of scheduled as well as general aviation traffic. It also covers **Seasonal Scheduling** facilities for the import of schedules from various sources and may be upgraded by a **Collaborative Decision Making** (CDM) package and **Ramp Aid** for gate and stand management support.



- \* **Aeronautical Billing** comprises invoicing, cash business and management of ground handling contracts. The aviation billing system integrates an airport's operational and commercial business processes. ISO's billing systems help to speed up invoicing, avoid complaints and incomplete bills and serve the airlines with electronic invoices.
- \* **Business Intelligence** includes business performance management as well as business planning and budgeting.
- \* **Statistics and Reporting** open the AODB for evaluations of all operational and commercial data. **FlightReporting** eases the compilation of flight reports including passenger final destinations according to the relevant EU regulations.
- \* **Cargo Handling** supports air freight handling and charging of cargo-related services with an optional integration to custom authorities.
- \* **Connectivity** guarantees the real-time distribution and reception of all relevant information to and from external systems.
- \* **Enterprise Resource planning (ERP)** supports an airport's business processes incl. accounting, purchasing, human resources, non-aviation etc.
- \* **Resource management** includes human resources, apron devices and terminal facilities and is provided by our partner Drück & Pfeiffer (<http://www.airport-manager.com>).
- \* **Flight Information Display System (FIDS)** is provided by our partner airbiz (<http://www.airbiz.com>).

## Operational Flight Management (AODB)

The availability of reliable information anytime and anywhere is one of the major requirements in airport operations today. Numerous parties - internal departments as well as partner companies, humans as well as devices - depend on exact real-time information to perform their tasks in the airport's integrated business processes.

**SKY-Base**, ISO's Airport Operational Data Base (AODB), provides the airport with an ideal platform for information storage, processing and distribution. Based on an ORACLE® database server it guarantees the availability and integrity of operational data and offers controlled access to the right information for all concerned parties.

The application components of **SKY-Base** support all processes of operational flight data management for

- \* Season Planning
- \* Apron Control
- \* Handling Agents and Airline OPS

**SKY-Base** supports both IATA and ICAO standards for data entries and offers reliable data validation features to guarantee a high standard of information quality.

**SKY-Connect** simplifies data acquisition and distribution by its interface and notification services.

## Aeronautical Charging and Billing

With an implementation of one of our billing systems you can accomplish more than just new software. We also have an eye for your business processes and systems integration. This means:

- \* Save administration overhead by streamlining your invoicing processes. Labour consuming processes often call for improvements.
- \* Invoice quicker and more frequently. You may be able to realise your revenues earlier.
- \* Save IT costs by replacing costly customer-tailored systems with standard software.
- \* Send your invoices not just as paper but also electronically. Your airline customers will appreciate this service.

The screenshot shows a software window titled 'Master Data' with a menu bar (File, Edit, View, Extras, Help) and a toolbar (Save, Undo, Delete, Reload, Set Time, Account, Customer, AirportType, Exit). The date is 26.04.2007. The main area contains a table with columns: AD, FN, Reg, ST, EBT, AT, Db, CT, CTT, Pas, Cargo, Ma, Dr, Kof, Rem, Contr, Df, Type, RefM, Text. The table lists various flight records with details like flight number, registration, status, and airport codes.

AD	FN	Reg	ST	EBT	AT	Db	CT	CTT	Pas	Cargo	Ma	Dr	Kof	Rem	Contr	Df	Type	RefM	Text
D	EA 292		08:15						0	0	0	0	11		CGR	D	AT4	EA 291	KOELN-BON
D	AB 4666		08:20				13	22	0	0	0	0	22		FRH	E	738		FRH/DOS
D	AB 6488		08:25				13	22	0	0	0	0	22		BCS	E	738		BRNDIS
D	HE 911		08:25						0	0	0	0	11		DTM	D	026	HE 910	DORTMUND
D	AB 6426		08:30				13	22	0	0	0	0	22		FRG	I	738		HURGHADA
D	AB 6214		08:30				13	22	0	0	0	0	22		CLB	E	738		OLBA
D	AB 8260U		08:35				13	22	0	0	0	0	22		BUC	E	738		BUCAPEST
D	AB 3994		08:40				13	22	0	0	0	0	22		SFC	E	738		LA PALMA
D	AB 7530		08:40				13	22	0	0	0	0	22		FRG	I	738		HURGHADA
D	AB 1052U		08:40				13	22	0	0	0	0	22		LPA	E	738		LAS PALMAS
A	OS 137		08:40						0	0	0	0	11		WIE	E	DH3		WIEN
D	AB 2796		08:40				13	22	0	0	0	0	22		SSH	I	738		SHARMEL
D	AB 3106		08:45				13	22	0	0	0	0	22		LPH	I	738		LUND
D	HF 4787		08:50				60	67	0	0	0	0	21		FUE	E	738		FUERTEVEN
D	AB 3125U		08:50				13	22	0	0	0	0	22		FUE	E	738		FUERTEVEN
D	AB 1794		08:55				13	22	0	0	0	0	22		FFS	E	738		TENERIFFA
D	AB 2014		09:00				13	22	0	0	0	0	22		MAD	E	738		MADRID
A	UA 696		09:00						0	0	0	0	11		EDA	E	145		EDMUND

- \* Make your billing data available for business intelligence. Business intelligence will give you more insights in your airport's potentials.

The billing functions for both, airport charges and ground handling include:

- \* Easy-adaptable rules for calculation of standard charge types, e.g.
  - \* Aircraft (MTOW) based
  - \* Passenger based
  - \* (Parking-) Time based
  - \* Type based
  - \* Consumption based
- \* Unlimited number of charge types per flight
- \* Flexible use of rebates and other special conditions
- \* Both credit (interactive or batch) and cash invoicing
- \* Management of ground handling contracts according to IATA AHM 810.
- \* Transfer of bills to financial accounting systems including SAP
- \* Electronic Invoicing via **XML4aero**

Most airports today have an off-the-shelf ERP (enterprise resource planning) system, as for instance SAP® ERP. ERP integrates business processes and data. On the other hand the airport billing system needs the flight movements data from the AODB (airport operational database). Both systems, AODB and ERP are poles apart.

Some of our competitors regard airport billing to be a third system between AODB and ERP. They need interfaces to both, AODB and ERP, multiplying interface issues. Legacy systems of this kind get caught between two stools.

In an integrated view there are two alternatives for airport billing. Hence ISO's airport billing systems are available on 2 different platforms:

- \* Within SKY-Base a billing module on top of the flight data management is available.
- \* Alternatively SKY-Billing runs on SAP ERP using SAP business functions in order to create invoices.

Both systems, SKY-Base (billing module) and SKY-Billing (for SAP ERP) are to be understood as alternatives but can also complement each other, e.g. at a multi-airport operator.

With more than 30 installations ISO is the European market leader for airport billing systems.

## Connectivity

**SKY-Connect**, the integration suite of the SKY-Base AODB, guarantees the real-time distribution and reception of all relevant information to and from external systems. It covers multiple protocols and data formats and allows the rapid integration of new interfaces and processing rules.

SKY-Base supports virtually a hundred interfaces to 3rd party systems of airport operators, to business partners or public information platforms.

Among the available data exchange procedures there are as well airport-specific standard interfaces as those individually customized to the local requirements.

- \* The **SKY-Connect-SITA-Server** offers sending, receiving and processing of standardized IATA message formats via SITATEX. Supported message types are

The screenshot shows the 'SKY-Billing: Flight Data Display' window. It features a 'Daily Flights' table with columns for ADA, ATA, A-Flites, Origin, Registration, AC Type, METON Name 1, ACD, ATO, FLNO DEP, and Dest. Below the flight table, there is a 'Summary' section with columns for Item, Material, Description, E. Net Value, and Cost. The summary table lists various charges such as Landing Charges, Passenger Loading Device Charges, and Baggage Handling Charges, with a total net value of 30,187.75.

Item	Material	Description	E. Net Value	Cost
10	10001	Landing Charges	24,383.73	THB
20	10002	Passenger Loading Device Charges	1,364.00	
40	10004	100% GPE/PCA	1,889.00	
50	10005	Baggage Handling Charges	2,000.00	
60	10006	Flight Announcement Charges	260.00	
			<b>30,187.75</b>	

MVT, LDM, PTM as well as FFM, FSU, SAM/SRM and many others.

- \* Various Flight Information Display Systems (**FIDS**) may interface with SKY-Base. The online communication facilities of SKY-Connect guarantee up-to-date information for passengers and airport staff.
- \* Multiple other standard interfaces are supported, incl. to air traffic control, airlines, and more.

## Collaborative Decision Making (CDM)

Collaborative Decision Making (CDM) at airports improves the way Aircraft Operators, Ground Handling Agents and other partners in the aviation business work together at an operational level. SKY-Base supports the CDM standards set by IATA, ICAO and Eurocontrol including

- \* Proactive handling process status tracing
- \* Information sharing with airline, handling agents and tower ATC
- \* Estimated time calculation based on submitted events
- \* Flexible event and alarm management
- \* Audit trails assures and document data quality

While the CDM standards regard a flight as a single linear process, SKY-CDM introduces the parallel tracing of several processes as new concept. This mainly covers ground and passenger handling processes like boarding, loading or fuelling, which may be modeled and traced according to the agreed standards and service level agreements.

## Airport Business Intelligence with SKY-BI

SKY-BI is a tool for planning and forecasting of air traffic and aviation charges. Also, flexible and powerful reports can be generated from both, actual and planned data.

SKY BI allows for the flexible planning and reporting of traffic figures (key performance indicators) and charges (revenues) in different scenarios.

SKY-BI simulates prospective traffic using seasonal schedules (summer / winter). By using load factors Sky-BI forecasts the passenger throughput. Aviation charges can be calculated from the traffic data. The complete planning process is capable of supporting multiple scenarios such as best case, worst case, a new airline entering the market, new routes, routes performing well or poor, different charges, etc. Thus Sky-BI provides well-grounded answers on „what-if“ queries for decision-making.

SKY-BI can speed up an airport's planning process significantly such enabling multiple business scenarios to be evaluated in a dependable way.

Graphical queries allow for scenario comparisons and evaluations.

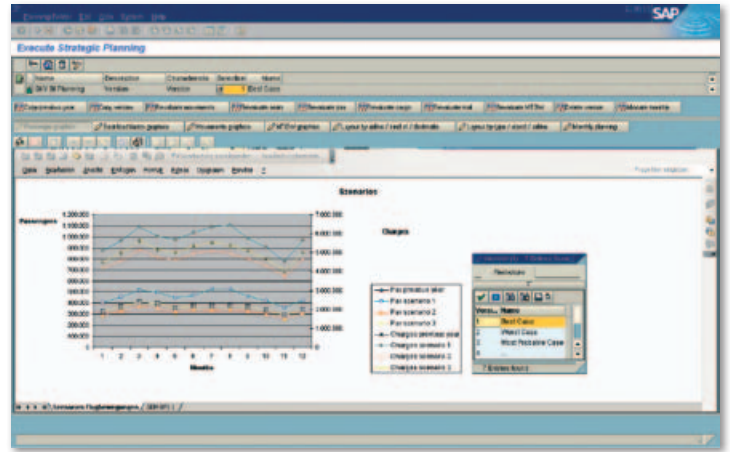
Besides the planning functions SKY-BI comes with a comprehensive reporting about actual figures like key performance indicators, revenues, delays and more. The scope of delivery includes reports which are structured by service type / kind of flight, airline, destination and much more criteria. Ad-hoc reports can be created by the end users with an easy to use drag and drop tool. All evaluations may be processed with a spreadsheet as well. Plan/actual comparison complete the set of available reports.

## Cargo Handling

**SKY-Cargo** supports the activities of air freight handling and includes the maintenance of import and export cargo shipments.

It integrates the calculation and billing of cargo-related service charges.

**SKY-Cargo** interfaces with **customs authorities** and **Sitatex**.



## Air Traffic Management

Since 15 years ISO has been contributing to numerous ATC (Air Traffic Control) projects world wide. Our Experience comprises

- \* Tower Systems
  - \* Electronic flight strip
  - \* Weather Information
  - \* Interfaces & Integration
- \* Aeronautical Information Systems (AIS)
  - \* NOTAM, SNOWTAM, etc.
  - \* Weather Briefing (OPMET, Charts)
  - \* Flight Plan Management
- \* Document Management (AIP Publishing)

## Technology: 2 Alternatives

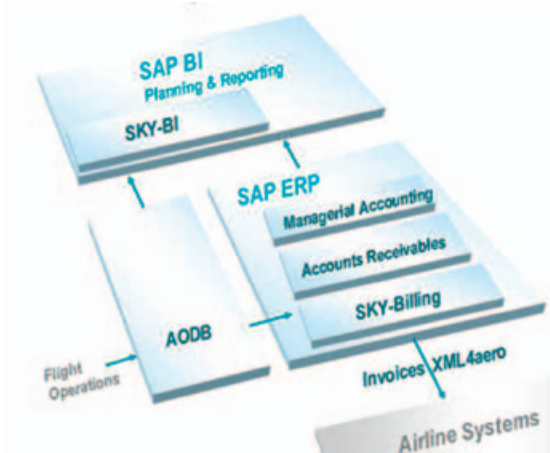
ISO offers their airport software on 2 alternative technologies:

- \* SAP ERP and SAP BI: on top of SAP we offer SKY-Billing and SKY-BI Business Intelligence. We also implement SAP ERP for airports with special focus on billing, controlling, accounting and business intelligence.
- \* SKY-Base is a client / server system independent from certain platforms. Within the SKY-Base framework we offer operational flight management (AODB), billing, statistics and cargo handling.

Aeronautical billing is available on both technologies. For operational airport management requirements SKY-Base is the product line of choice. For commercial business needs we recommend SAP.

## Technology: SAP

SAP® ERP provides a set of cross-industry billing functions which meet most of the business requirements of an international airport.



SAP® ERP in an Airport IT Environment

Additionally, ISO's **SKY-Billing** closes the gap between SAP®'s standard functions and airport-specific requirements in respect of aeronautical billing (all kinds of landing charges and ground handling service fees).

SKY-Billing enables the integration of the SAP®-world with airport operational databases (AODBs).

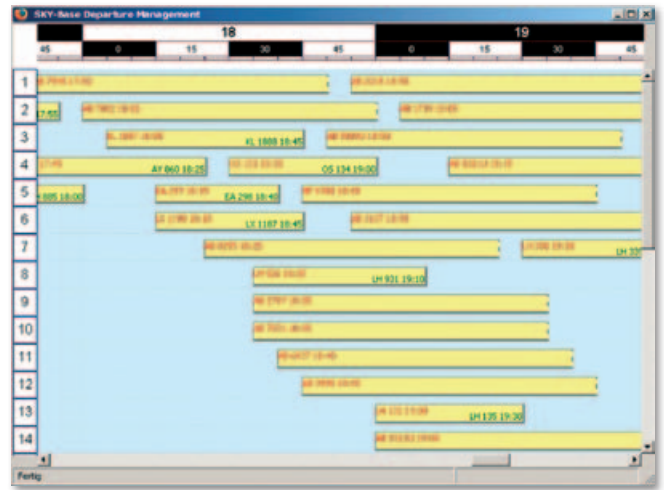
Via an interface SKY-Billing is supplied with the flight data relevant to billing and accounting from the respective traffic system (AODB) outside of SAP®. Both connection of the ISO AODB SKY-Base and with other AODB's are supported. SKY-Billing is seamlessly integrated in SAP®'s enterprise resource planning system. SKY-Billing is certified by SAP AG, Walldorf.

## Technology: SKY-Base

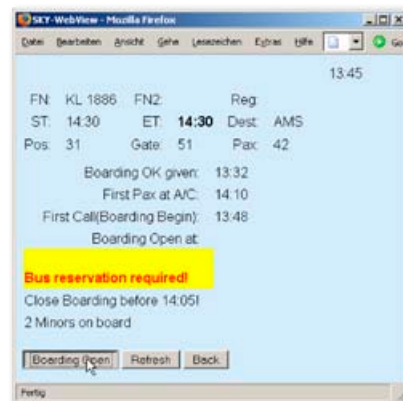
Sky-Base uses Linux and ORACLE® industry standards.

Several web-based add-on components enable the browser access to the AODB.

- \* **SKY-WebView:** The web-based front-end application displays real-time flight data in your browser. Flexible layouts include table representation as well as diagram display.



- \* **SKY-WebBoarding:** Online boarding status tracing not only for CUTE work stations
- \* Handling process data entry through **mobile devices**.



- \* XML-based Electronic Invoicing via **XML4aero**
- \* HTML Flight Information Display

Abflüge/Departures				
Flug	Nach	Sch	Gate	Plan Erw Status
TK 1508	ISTANBUL	72-76	02:20	
FLM1506	ANTALYA		03:20	
AB 3612	LAS PALMAS	13-22	04:00	
AB 9364	PALMA	13-22	04:55	
AB 3456	IBIZA	13-22	05:00	
DE 6830	PALMA	60-67	05:15	
HF 6683	HERAKLION	60-67	06:05	
LH 921	FRANKFURT	51-59	06:15	
AB 8594	LONDON-STANSTED	13-22	06:30	
AF 5529	PARIS-CDG	78-79	06:30	
OS 142	WIEN	51-59	06:45	
LH 947	MUENCHEN	51-59	06:50	
KL 1880	AMSTERDAM	71-72	07:00	
LX 1181	ZUERICH	80-81	07:15	
LH 923	FRANKFURT	51-59	07:25	
LH 879	DUESSELDORF	51-59	08:30	

## Customisation

- \* Adaptable business rules and user interfaces by means of customising
- \* Flexible definition of business rules by
  - \* Application Resources
  - \* Database Tables and Procedures
  - \* User Exits
- \* Standard import and export interfaces with adaptable
  - \* Protocols and
  - \* Data structures
- \* Multi-lingual user interface

## Quality Features

- \* High reliability and performance by using industry standards
- \* Easy-to-use graphical user interfaces
- \* High level of data security and validation
- \* Outstanding integration abilities
- \* Easy adaptation to customer specific requirements by multiple levels of customizing
- \* All necessary implementation and maintenance services offered by ISO Software Systeme.  
We care for your needs.

## The Company

ISO has been a reliable partner for numerous airports for many years in the areas of air traffic management, airport management and SAP® implementations. ISO's scope of services includes requirements analysis, project management, configuration and programming, training, support and software maintenance. ISO maintains a quality management system which is certified according to DIN EN ISO 9001. As a software partner of SAP AG, ISO has a strong consulting team with excellent skills and experiences.

Other of ISO's business areas include solutions for the tourism industry, data quality management and Electronic Content Management.

ZÜRICH AIRPORT

Copenhagen Airports CPH

Stuttgart Airport

Berlin Airports

Salzburg Airport  
W. A. MOZART

Airport Nürnberg

GAR

AOT

BIAL

## References

More than 30 reputable airports and Handling Agents worldwide rely on solutions by ISO Software Systeme, among them

- \* Unique Zürich Airport, Switzerland
- \* Copenhagen Airport, Denmark
- \* New Bangkok International Airport, Thailand
- \* Newcastle International Airport, UK.
- \* SEA Aeroporti Di Milano, Italy
- \* Salzburg Airport, Austria
- \* Berlin International Airports, Germany
- \* Bremen Airport, Germany
- \* Dortmund Airport, Germany
- \* Dresden and Leipzig / Halle Airports, Germany
- \* Munster / Osnabruck International Airport, Germany
- \* Nuremberg Airport, Germany
- \* Stuttgart Airport Germany
- \* GlobeGround Berlin, Germany
- \* Jet Aviation International, U.S.A.



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