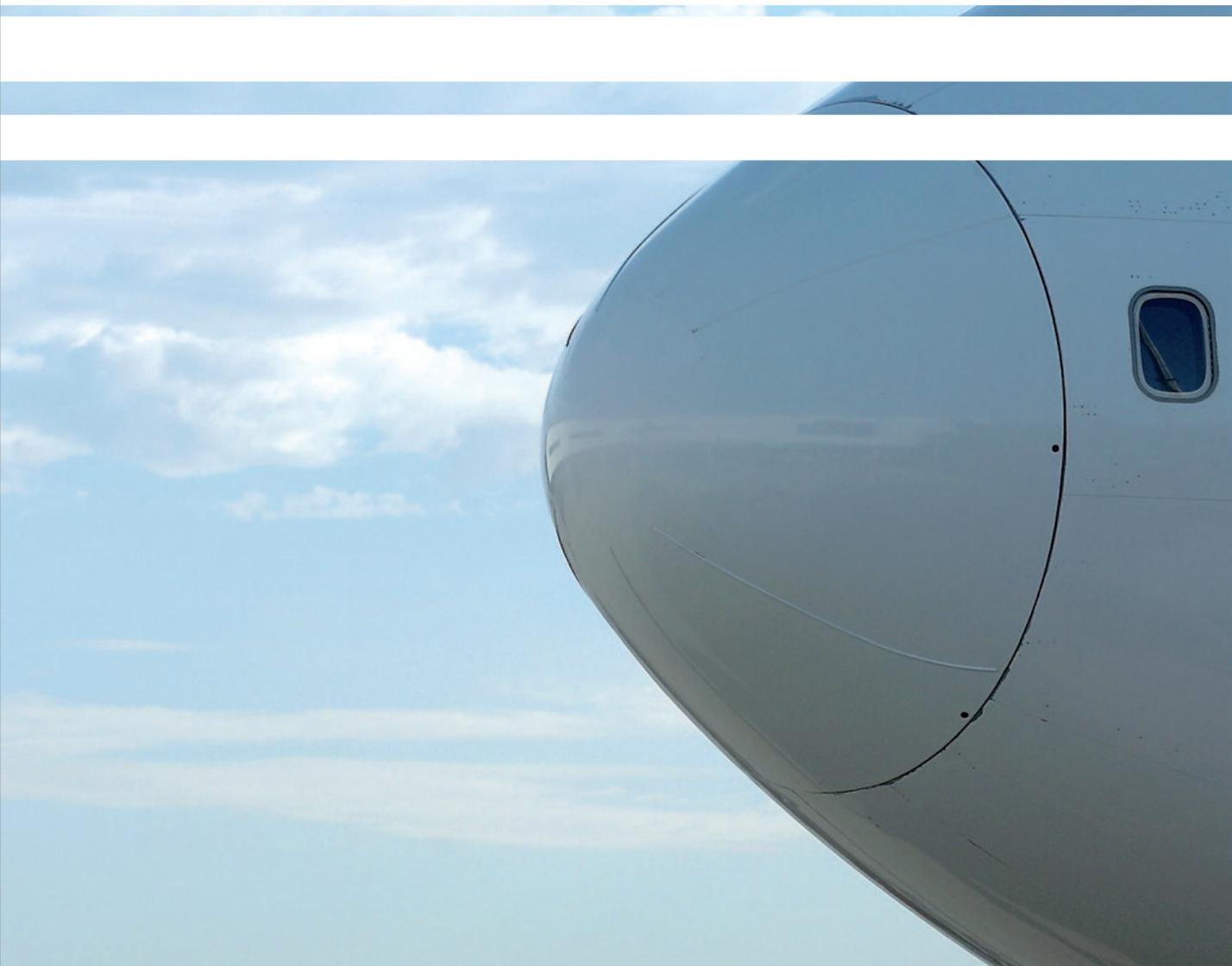DESIGNA

Reference

Sydney Airport
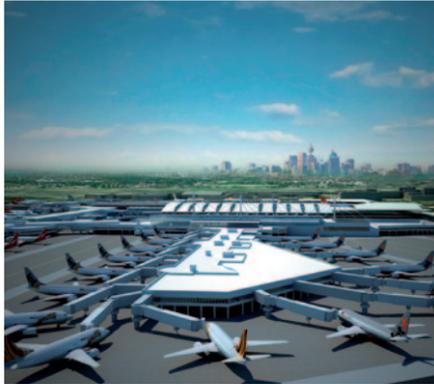
english

Welcome to the future: Sydney is gearing up

With more than 300,000 flight movements and 35 million passengers per year, the Charles Kingsford Smith International Airport – or more simply: Sydney Airport – is the largest airport in Australia. In 2002 the airport was privatised and its majority shareholder today is the Australian MAP Airports. At present the more than 11,000 parking spaces are still operated with a competitor's equipment. The parking facility and the services are now being expanded and the existing system is to be replaced by PM ABACUS without interrupting operation. In a worldwide tender, DESIGNA was able to convince the airport and win the order for the conversion project with a planned GoLive on 28 April 2012 – thanks to innovative technology and comprehensive project management.

For Sydney Airport, DESIGNA is to install a fully integrated valet parking system. Among other things PM ABACUS manages 41 entrances, 31 exits, 18 pay stations and 8 valet PoS terminals for the service tracking. The customers are welcomed to the valet zone with handheld iTouch and can benefit from an integrated single-space monitoring system. Pre-booking via web interface and the completely virtualised server environment complete the high-end features.

The whole undertaking is subject to a clearly structured project plan and time schedule, the "high level programme to completion". It defines the individual milestones, type and scope of the documentation, exact specifications, the acceptance criteria and the exact timetable. As far as the timescale, the scope of supply and the logistics are concerned, the Sydney Airport conversion project is extremely ambitious – but is still on schedule after 2/3 of the project period.

Brief description of the project

Commissioning timetable

28.04.2012 Commissioning with DESIGNA PM ABACUS series parking management system

Installation and conversion without interrupting the day-to-day operation

All the parking facilities at Sydney Airport are currently still operated with a parking management system that is more than 15 years old. This system is now to be replaced by PM ABACUS without interrupting day-to-day operation. The conversion work must be carried out without any inconvenience for the customers or any loss of revenue. The aim of the project is to raise the parking service to a completely new service dimension.

Apart from the extensive implementation planning, this presents a particular challenge for the traffic control and communication strategy. In addition, a complete data migration is to take place to safeguard the continuity of the day-to-day operation.

2011–2016 Initial contract period of 5 years

Integral parts of the contract:

- Continuous system upgrades with the latest PM ABACUS software releases and the expected functions.
- Modernisation of the operating system to 64-bit Microsoft Server 2008 Data Centre, in a virtual environment.
- Modernisation of the databases to SQL Server 2008 R2.

"We have taken plenty of time – now we want to and will do everything right."
(Craig Norton
General Manager – Parking and Ground Transportation))

"The Sydney Airport Master Plan, an ambitious expansion and modernisation project, has been in place since 2009 and is scheduled to run until 2029. It will safeguard the future of the airport as a large international hub. This master plan naturally also includes all the infrastructure facilities, such as the car parks. We are very happy that after a long and intensive tender phase, we have been able to award the contract for this important area to DESIGNA, because here we are really getting the solution with the most sustainable technology and which offers our customers the best service."

Facts & figures

- **Operator:** Sydney Airport Corporation Limited
- **Parking facility management:** S & K Car Park Management Pty Ltd (Secure Parking) Contract with Sydney Airport Corporation Limited
- **Car parks / parking bays:** 5 multi-storey car parks (incl. 5 separate valet parking areas, one drop-off parking area) with currently > 11,000 parking spaces, 1 multi-storey staff car park with more than 2400 parking spaces. A further multi-storey car park is under construction.
- **User groups:**
  - Flight passengers (parking tickets, pre-booking functions, e-commerce solutions)
  - Short-term parkers
  - VIP customers
  - Employees / staff with different access authorisations and invoicing via accounting module
- **Installed equipment:**
  - **41 entrance control terminals (ENT 120)** and **31 exit control terminals (EXT 120)** for processing magnetic cards with centre track technology, chip & PIN for credit card processing as pre-booking identification with an external PCI DSS-compliant scanner, barcode scanner as pre-booking identification of QR barcodes and PD417 barcodes for the integrated valet parking solution, DESFire proximity card scanner for staff parking (compatible with the Sydney Airport security system), integrated digital slave intercom station, double ticket magazine for 10,000 tickets and UPS backup
  - **7 pay stations (120 ECO)** and **11 cashless pay stations (BKS 120)** with 15" or 10.4" TFT display offering a choice of 5 languages, processing of magnetic cards with centre track technology, chip & PIN for credit card processing as pre-booking identification with an external PCI DSS-compliant scanner, bank note recycler and 4 hoppers and security cassette in the standard pay stations, discounting via TCU120 tariff change units; with integrated digital slave intercom station in the standard pay stations, camera with interface to external CCTV system and UPS backup.
  - 1 manual pay station and one encoding station

Counting
- Counting of all vehicles per category

Server
- VMWare virtual server for: Parking management system, valet parking system, parking guidance system, online credit card processing via EMV, pre-booking system and remote access server. Site recovery manager for fail-over and disaster recovery, MS SQL 2008 R2 Data Centre operating system

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Special functions and services

• **Parking products**
  are currently being analysed by the airport and developed together with DESIGNA.

• **Credit card processing**
  Online credit card processing system, fully PCI-DSS and EMV-compliant with SSL encryption standard.

• **Tariffs**
  • Complex tariff structure and accounting application for invoicing to staff parkers. The accounting application provides a data export to the external Oracle database.
  • Fully integrated DataMart for direct access from Sydney Airport and import of the data to the Sydney Airport data warehouse

• **Single-space monitoring**
  Supply, installation and commissioning of single-space monitoring and routing systems for approx. 4400 parking spaces

• **Pre-booking**
  Real-time pre-booking system for reservation of parking spaces.

• **Valet parking**
  • 5 separate valet areas.
  • Fully integrated solution based on barcode ticket technology.
  • Valet parking areas can be found in the car parks.
  • A ticket conversion process ensures that the entrance ticket is linked to the valet ticket.
  • Welcoming to the valet areas via iTouch terminals.
  • Additional services (such as car washing) can also be booked either online via the pre-booking system or on arrival in the valet area.

• **VIP parking**
  • Management using short-range proximity cards.

• **PIP (car park within car park)**
  • Is integrated as a solution for demarcation of the staff parking spaces from the public parking sectors.

Control and monitoring

Central monitoring and control of all system-relevant processes and components in real-time

• Integration of the DESIGNA service module for efficient management of the service and maintenance intervals, and the functions of the DESIGNA parking management system.

• **Management information dashboard (MID)**
  for transparent presentation and analysis of defined performance figures in the form of a dashboard

• **Reporting**
  DESIGNA DataMart:
  • Standardised database that integrates complete ticket data with the transaction level.
  • Transactions are neither condensed nor deleted during the reporting process.
  • Assurance that Sydney Airport has real-time access to all current and historical data for a freely selectable period of time.

• **Automation for safeguarding earnings / revision security**
  • Transactions are part of the reporting process and are neither condensed nor deleted and are therefore available for future evaluations and analyses.
  • All changes to the transaction information are fully recorded by the system.
  • All events, such as control interventions (alarms) by the system are recorded.
  • Assurance of the complete audit capability of the system.
  • Data manipulation is impossible – "one source of the truth".

Service and maintenance

The ongoing service and maintenance work at Sydney Airport is ensured by our Australian partner, SABAR Technologies Pty Ltd ("SABAR") whose employees have been intensively involved in the project from the very beginning.

The contract with Sydney Airport contains key indicators for the service performance which are binding for SABAR and DESIGNA.