



DELIVERING MEASURABLE VALUE

## **Intelligent Airport Management**

# Unprecedented growth mirrored by unprecedented challenges: the decisions facing the airports of today – and tomorrow

An unprecedented 8% p.a. growth in airport traffic combined with the realities of increased terrorist threat have demanded a major shift in the approach to airport management. Today, acquiring and sharing the necessary information, at the precise moment it is needed, underpins the competitive advantage of the successful airport.

Rocketing demand mirrored by increased competition – particularly with the rapid growth of low-cost airlines – has put pressure on airports to remain competitive whilst having to maintain, or even improve, their quality of service and security to meet the demands of the air transport sector and the fare-paying public.



## TODAY'S CHALLENGES

Honeywell Building Solutions (HBS) recognises that the main challenges facing airport managers today are safety, security and productive, efficient operations.

### Safety

Faced with unprecedented challenges it is incumbent upon today's airport managers to make decisions that will ensure the safety of staff and passengers.

### Security

With security also high on the agenda, the ability to detect threats faster, respond swiftly and mitigate their impact are key operational drivers. A move towards the deployment of biometrics is inevitable, as is the use of high quality, digital CCTV to protect both the airport, its perimeter and the zones therein.

### Operations (productivity and efficiency)

The effective management and use of information and intelligent technologies to drive safety and extend efficiency while reducing costs is key to the success of today's airport. Likewise the ability of these systems to grow and to flex to meet future changes to airport operations.

## MEETING THE CHALLENGES

As an industry leader and single expert source, Honeywell designs, manufactures and installs integrated airport solutions that meet the demands facing today's airport managers.

### Flexible Solutions

While we have a complete suite of offerings, we offer flexible and unique solutions and because our products are compatible with most existing systems, you can choose to do retrofits and upgrades as needed.

### Addressing your needs

Our philosophy is to focus on your business needs: whatever your requirements we can design a solution to meet them, whether with existing products or through the development of customised solutions, including: project validation, maintenance management, asset tracking and energy management.

### Long term partnership

Capital investment in the systems to operate a facility is only a small part of the life time cost. At Honeywell we offer Service and Maintenance contracts that include upgrading the equipment as time and technology passes, together

with the provision of technical personnel to work with you to drive productivity improvement.

## AN INTEGRATED APPROACH IS KEY

With today's demands on safe, efficient and value-driven air travel, it is simply not possible for the human mind to handle the complexities of the modern airport facility management systems and technologies.

Security and IT masterplans must incorporate ALL parts of airport operations and integration is the mechanism for implementing effective security and productivity strategies.

It is this "Integration by design" – adopting an holistic approach – that is the enabler for technology to reduce and manage the complex airport environment.

**"If an aircraft is consistently one minute longer on stand throughout a year, the additional costs could be up to \$50,000 p.a.\*"**

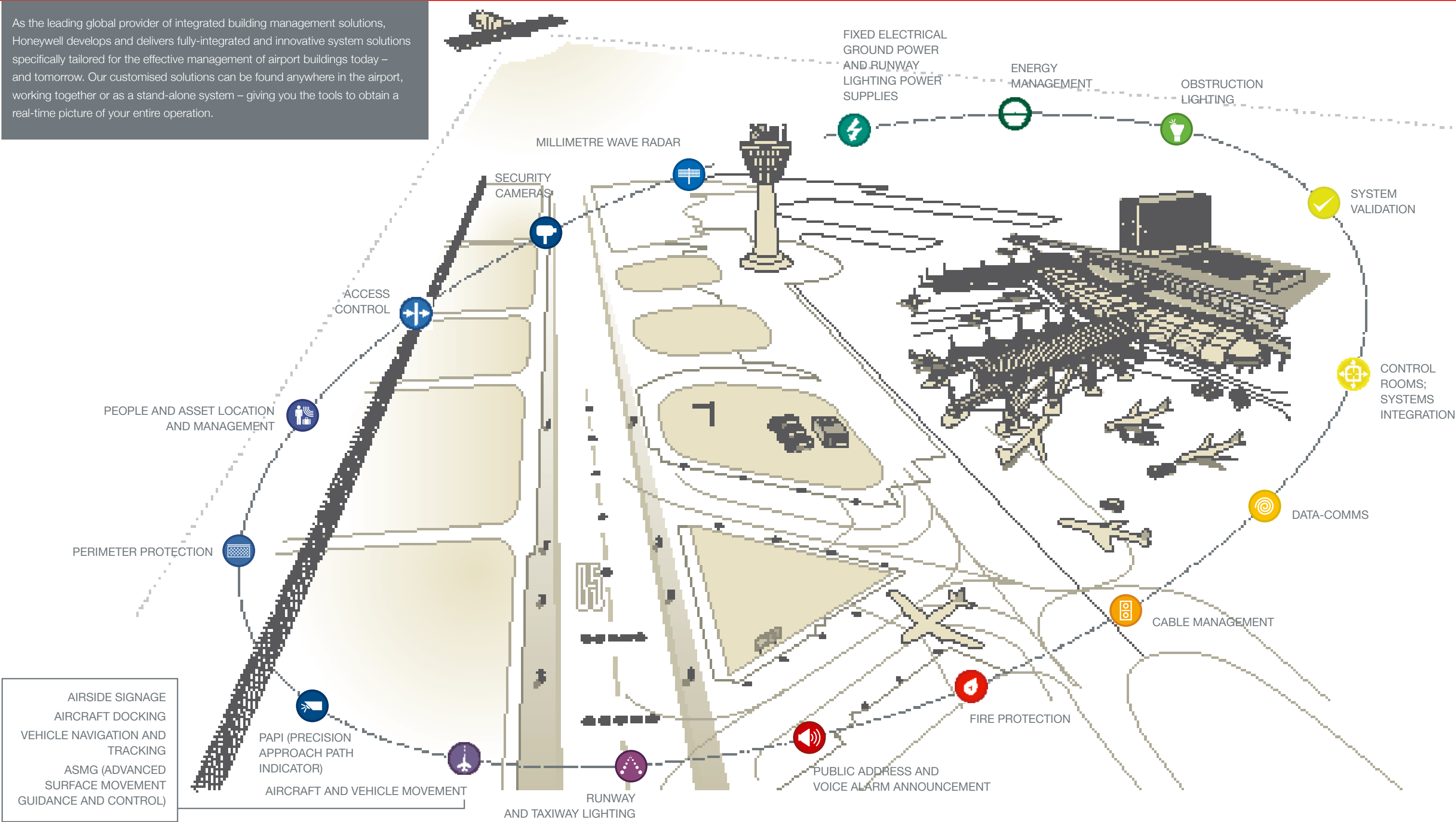
\* Elliot Wishlade, Arup.

So improving the productivity of an airport can result in significant financial benefits, for all parties, operators, airlines and customers alike.




















# Honeywell intelligent solutions – achieving coherent operations between systems to improve airport-wide management

As the leading global provider of integrated building management solutions, Honeywell develops and delivers fully-integrated and innovative system solutions specifically tailored for the effective management of airport buildings today – and tomorrow. Our customised solutions can be found anywhere in the airport, working together or as a stand-alone system – giving you the tools to obtain a real-time picture of your entire operation.



# Honeywell intelligent solutions – achieving efficient operation between systems to minimise cost and reduce risk

	<b>CONTROL ROOMS; SYSTEM INTEGRATION</b> <ul style="list-style-type: none"><li>• Faster, more effective issue management</li><li>• Improved management information</li><li>• Enables inter-operability with other systems</li><li>• Central point of emergency and disaster management</li><li>• Provides a single interface between all systems and allows display of data in logical work groups</li></ul>	 	<b>RUNWAY, TAXIWAY AND OBSTRUCTION LIGHTING</b> <ul style="list-style-type: none"><li>• Comprehensive spectrum according to ICAO and FAA</li><li>• Components for approach lighting, runway lighting, taxiway lighting and obstruction lighting</li><li>• Automatic management of system dependent upon traffic needs</li><li>• Low, medium and high density lighting for buildings, control towers and bridges</li></ul>	  	<b>PAPI (PRECISION APPROACH PATH INDICATOR)</b> <ul style="list-style-type: none"><li>• Gives visual indications of glide slope to pilots approaching a runway</li><li>• Ensures the correct angle of approach is attained and maintained</li></ul> <b>PERIMETER PROTECTION AND MILLIMETRE WAVE RADAR</b> <ul style="list-style-type: none"><li>• Effective first line of defence over any distance</li><li>• Early warning of potential ground-based threat</li><li>• Surface area monitoring and alarming</li><li>• Can position cameras to look at the threat source</li></ul>	 	<b>FIXED ELECTRICAL GROUND POWER AND RUNWAY LIGHTING POWER SUPPLIES</b> <ul style="list-style-type: none"><li>• Improved energy utilisation and automated billing</li><li>• Reduced environmental impact</li></ul> <b>ENERGY MANAGEMENT</b> <ul style="list-style-type: none"><li>• Identify where energy is consumed and apportion costs accordingly</li><li>• Manage usage to targets and improve consumption year-on-year</li><li>• Bespoke energy management solutions</li><li>• Keystone of sustainability program</li><li>• Remote monitoring</li><li>• Automatic billing</li></ul>
 	<b>DATA COMMS AND CABLE MANAGEMENT</b> <ul style="list-style-type: none"><li>• Single structured cabling system for data and voice communication</li><li>• Seamless network connectivity without any issues</li><li>• Internal and external WiFi capabilities facilitate access to data from any position</li><li>• Cables and distribution systems to provide power and information networks</li></ul>		<b>AIRCRAFT AND VEHICLE MOVEMENT</b> <b>Airside signage</b> <ul style="list-style-type: none"><li>• Aids airfield navigation, safety and efficiency</li><li>• Integrates easily with Vehicle Navigation and Tracking and ASMG</li></ul> <b>Aircraft docking</b> <ul style="list-style-type: none"><li>• Provides precise information on an aircraft's location</li><li>• Automated aircraft guidance systems for docking aeroplane onto airbridge gate</li></ul> <b>Vehicle navigation and tracking</b> <ul style="list-style-type: none"><li>• Electronic aircraft map contains the exact position and identification of individual vehicles and a view of the overall traffic situation</li><li>• Powerful information filtering and distribution supports unlimited fleet control stations and a surface movement surveillance system</li><li>• Combine an increase in traffic safety and operational efficiency with the integral support of taxiway guidance systems</li><li>• Prevents delays when vision is restricted and in the deployment of emergency service vehicles</li><li>• Allows sensitive area penetration monitoring and warning</li></ul> <b>ASMG (Advanced Surface Movement Guidance and Control)</b> <ul style="list-style-type: none"><li>• Gives visual indications of glide slope to pilots approaching a runway</li><li>• Ensures the correct angle of approach is attained and maintained</li></ul>	 	<b>PEOPLE AND ASSET LOCATION AND MANAGEMENT</b> <ul style="list-style-type: none"><li>• Instantly locate people and equipment</li><li>• Improve productivity of staff and assets across your enterprise</li><li>• Reduce theft, loss and hoarding</li><li>• Reduce capital outlay</li></ul> <b>ACCESS CONTROL</b> <ul style="list-style-type: none"><li>• Authenticate ID of employees, contractors and visitors alike</li><li>• Timely management of access privileges – places and equipment</li><li>• On-line electronic muster stations improve safety</li><li>• Reception management</li><li>• Streamlines process time</li></ul>		<b>SYSTEM VALIDATION AND CONSTRUCTION</b> <ul style="list-style-type: none"><li>• Validation for regulatory and industry compliance</li><li>• Validation of airport systems during installation, commissioning and operations</li><li>• 'Staging' infrastructure and building systems off-site onto a live working network ensures efficient integration on site</li></ul>
	<b>FIRE DETECTION &amp; ALARM</b> <ul style="list-style-type: none"><li>• State-of-the-art detection technologies with integrated PA/VA ensures a safer facility for visitors and employees</li><li>• Minimise unwanted alarms</li><li>• Regulatory compliance</li><li>• Emergency evacuation management</li><li>• Electronic mustering</li><li>• Faster, more effective safety management</li></ul>				<b>SECURITY CAMERAS</b> <ul style="list-style-type: none"><li>• Identifies security breaches and false alarms</li><li>• Infra red cameras ensure peripheral areas are covered especially during hours of darkness</li><li>• Can be targeted to threat sources detected by the MM Wave Radar System</li><li>• Event-driven video recording and retrieval</li><li>• Completes recordings for evidence and post-incident analysis</li><li>• Powerful search capabilities</li><li>• Empowers security staff</li><li>• Productivity improvement</li><li>• Scalable over time and distance</li></ul>		
	<b>PUBLIC ADDRESS AND VOICE ALARM ANNOUNCEMENT</b> <ul style="list-style-type: none"><li>• Automated passenger announcements linked to data within the FIDs</li><li>• Efficient emergency communication</li><li>• Speeds safe evacuation</li><li>• Uses Voice over IP technologies</li></ul>						



# Delivering airport management systems to increase operational efficiency and improve your ROI

Protecting your investment is vital – whether you are designing a brand new airport facility or simply extending or enhancing an existing one. Integrating airport management systems with airport operations will help you to create a safe, secure, comfortable and energy efficient environment that is not only flexible enough to cope with the constantly

changing requirements of the terminal buildings or apron infrastructure, but which also improves operational efficiency. This will maximise the utilisation of your assets, improve your ROI and reduce the operating cost of your facility, thereby enhancing your ability to scale up to meet new legislative airline and traveller requirements.



### THE INTEGRATED APPROACH

Integration is the mechanism to implement effective security and productivity strategies across all parts of airport operations. It is key to getting the right information to the right people at the right time in order for them to make informed and optimised decisions.

At Honeywell, we develop and deliver fully-integrated system solutions specifically tailored for the effective management of airport buildings. Airport integration:

- Improves real-time emergency response
- Enhances control capabilities, reducing costs and improving efficiency
- Boosts staff effectiveness
- Gains greater operational intelligence for better and faster decision-making
- Generates revenue-enhancing options

The result? An holistic approach to intelligent airport management; a facility that functions as a single system, enabling processes to operate more efficiently.

Information generated and communicated in this way allows for a rapid and defined escalation process so that problems can swiftly be identified and resolved. This supports inter-departmental co-ordination which, in turn, leads to the delivery of a better quality of service to the airport ‘user’ and airport partners.

### THE INTELLIGENT AIRPORT MANAGEMENT SOLUTION

The Honeywell Enterprise Buildings Integrator™ (EBI) is an easy to use, intelligent single system that integrates your existing (and future) building management, life safety, security, business and communication systems to provide a highly efficient and consistent data source for the efficient running of the airport.

### WHAT BENEFITS DOES AN EBI SOLUTION OFFER?

- The ability to integrate and manage HVAC, energy management systems, security, digital video and life safety applications from a single workstation. This allows all data to be reported quickly and consistently, delivering better quality management information and prompt, informed decision making
- Seamless integration with a range of Honeywell Building Solutions and 3rd party systems
- A cost effective open architecture supports leading open industry standards including BACnet™, OPC, LonWorks™ and Modbus™
- Easy-to-use web based user interface for efficient operator control
- Fully scalable solution that has the flexibility to grow with airport requirements

### OPERATIONAL BENEFITS

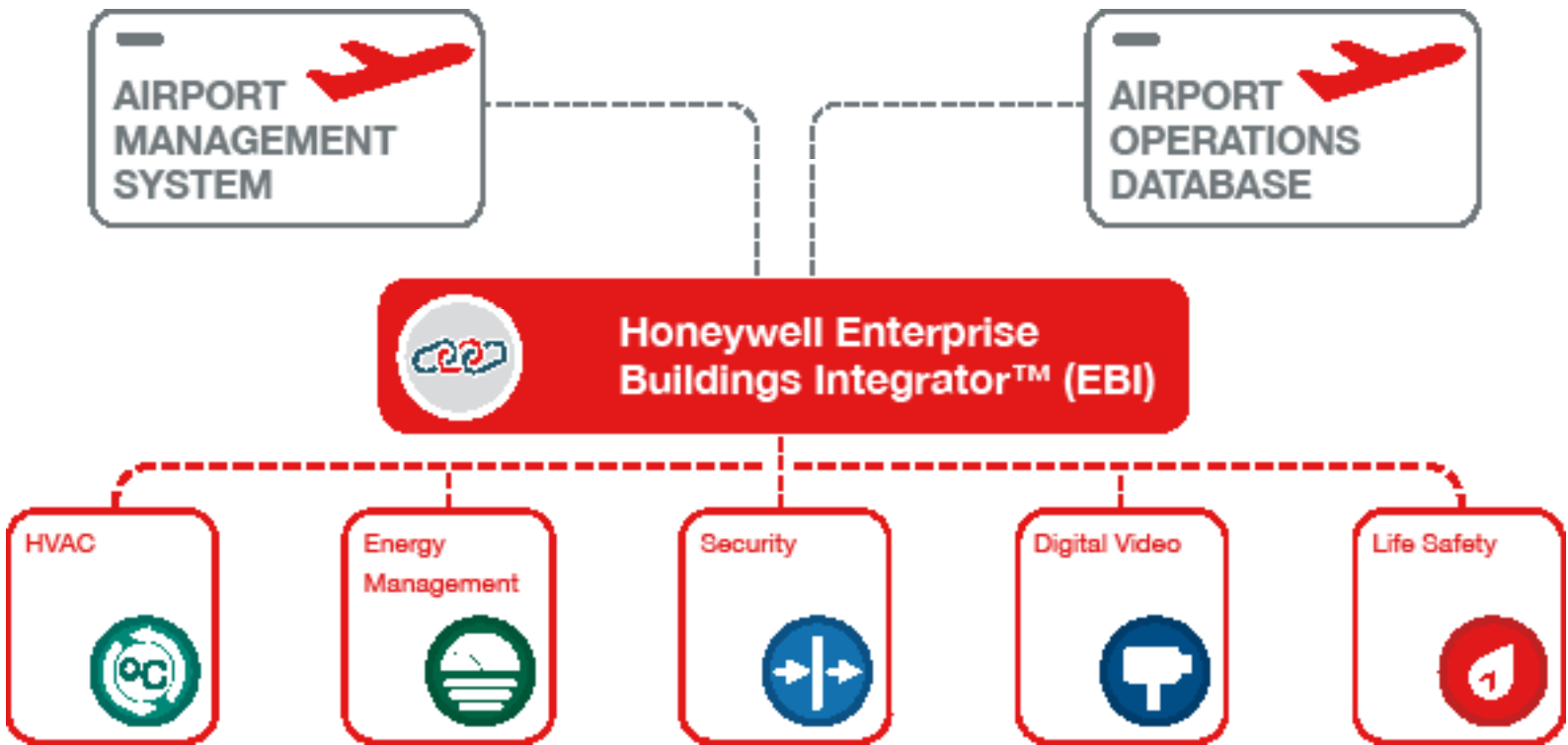
- Improved planning and better resource allocation
- Effective handling of incident management
- Improved monitoring and management of changes to airport procedures and maintenance programmes
- Enhanced service delivery
- Reduced risk

### ECONOMIC BENEFITS

- Improved productivity of resource availability and deployment
- Clear understanding and control over energy consumption
- Implementation of automatic billing system by transaction, based on measured consumption and utilisation of assets
- Cost control and improved cash generation
- Higher return on investment

### TECHNICAL BENEFITS

- Risk reduction with system modification and introduction of new technology
- New measurement and management processes can be easily developed and deployed
- Improved compliance



# Why choose Honeywell?

Honeywell Building Solutions is one of the world's largest providers of technical solutions and service to thousands of organisations across the globe, including airports worldwide. Our comprehensive range of integrated building solutions, encompassing the design, installation, commissioning and service of Fire & Security, Building Management, Energy and Networks systems, keeps these facilities – and the people within them – safe, secure and comfortable.



## MINIMISING RISK

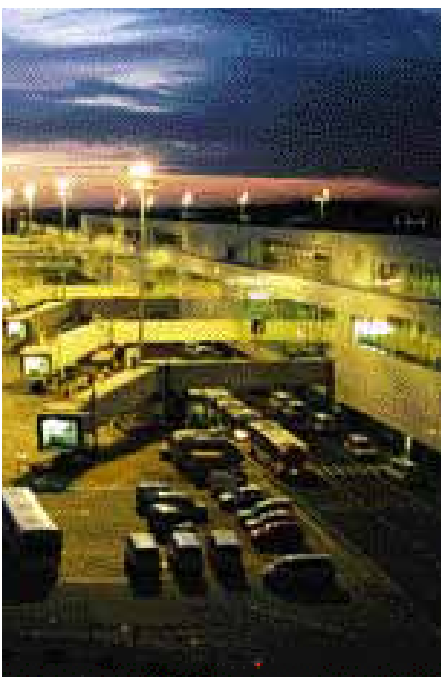
As part of Honeywell International, a \$31 billion diversified technology and manufacturing leader, HBS offers a secure choice to airport customers. From our intelligent and innovative approach to project design and delivery through to technically advanced service capabilities, our aim is to reduce your financial and operational risk at all stages. We are able to apply many years of experience in mission critical environments ensuring that projects are designed, delivered and managed to present a higher return on investment.

## DELIVERY

Honeywell brings proven expertise to project delivery, with unrivalled experience across a wide range of applications. In doing so we can ensure that your airport project runs to time and budget. Being able to 'stage' the infrastructure and building systems off-site onto a live working network ensures that we can minimise integration issues on-site. Our ability to call on our own extensive global engineering resources means that we can accelerate project delivery anywhere in the world, at any stage.

## SERVICE

Remote monitoring capabilities and energy management are amongst many of the technical services that complement our team of service engineers to reduce the possibility of system or plant failure. Repairing equipment promptly and having access to experienced local staff and parts supply is vitally important. They protect the value of your systems, which ensure efficient and uninterrupted performance over the lifecycle of the building – allowing you to focus on your core business.



## PROJECT DESIGN

Our inventive and skilled approach to project design means you can be secure in the knowledge that the airport will operate effectively and efficiently for its lifecycle. Our systems have clearly defined migration paths and are truly open in design, so you are not tied into a single proprietary provider or solution. By integrating our expert network and building solutions we are able to ensure that functionality is improved and cost is reduced.

## **Honeywell Building Solutions**

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The Honeywell logo, consisting of the word "Honeywell" in a bold, red, sans-serif typeface.