




**New technology to effectively manage  
your asset**  
Honeywell Building Solutions

**Honeywell**

27 November 2008



**Honeywell Ltd - Pacific**

Honeywell Employees – 1300+  
Tech/Engineers – 430+  
Offices – 28

**Facilities include**

- Perth Arena
- Wanneroo Cultural Centre
- Performing Arts Centre
- Landgate
- Perth District Courts
- Perth Urban Rail
- Fremantle Courts
- Qantas
- Docklands Stadium
- Stadium Australia
- Wembley Stadium
- Beijing Olympic Stadium

**Local Accreditation/certifications**

NABERS,  
ABGR,  
Green Star (Aus and NZ)

Honeywell International is a \$36 billion diversified technology and manufacturing leader, serving customers worldwide, with over 120,000 employees in more than 100 countries.

**Honeywell Building Solutions is part of the Honeywell Automation and Control Solutions business group, a global leader in providing product and service solutions that improve efficiency and profitability, support regulatory compliance, and maintain safe, comfortable environments in homes, buildings and industry.**

## BMS - Building Management Systems

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The BMS is the visible component of a building's operating system.

Whilst controllers manage the building; The BMS is designed to solve your unique challenges. From communicating commercial thermostats that can be programmed and changed remotely to a full range of advanced HVAC, energy, lighting, security, access, fire and life safety, and industrial process controls.

- Building Management Systems are management tools
- Whilst controllers manage the building; the BMS tells you what's going on
- The BMS is the window to the building control systems
- The BMS collates information from various subsystems and makes decisions as to what gets switch on and when, when to send alarms and what action to take

## What is a BMS?

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BMS Information management tools include;

- HVAC Controls - heating, ventilating, zoning, humidification and air cleaning, and burner/boiler and combustion controls
- Security CCTV and Access Control
- Lighting Control
- Public address
- Asset Tracking and Locating
- Fire Alarm, Life Safety and Smoke Control
- Alarm management
- Monitor and view the current status of the system.
- Allow over-ride control
- Building Historian – monitor performance of a facility over time
- Energy Management and KPI Reporting
- IT and Audio Visual systems integration

## Long term benefits of a building management system

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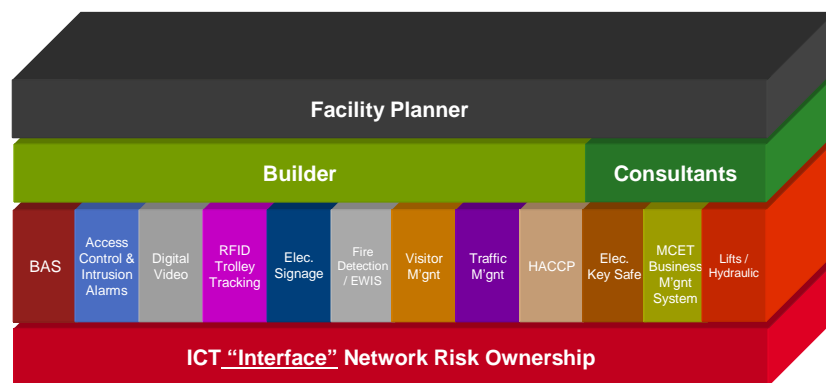
### Benefits of a BMS include;

- Integrated design approach, enables efficient design development for faster implementation
- Common infrastructure resiliency
- Common upgrade path
- Centralised data management systems
- Data collection supports Management Information and cost savings in respect of operating the system/the building. Also revenue generation.
- Optimal energy management/energy savings
- Building management systems linked into business systems eg. Supply chain, EFTPOS, HR database
- Cost savings on installation, including leveraging the use of cabling infrastructure
- Improved ROI over Stadium or recreation facility life cycle.



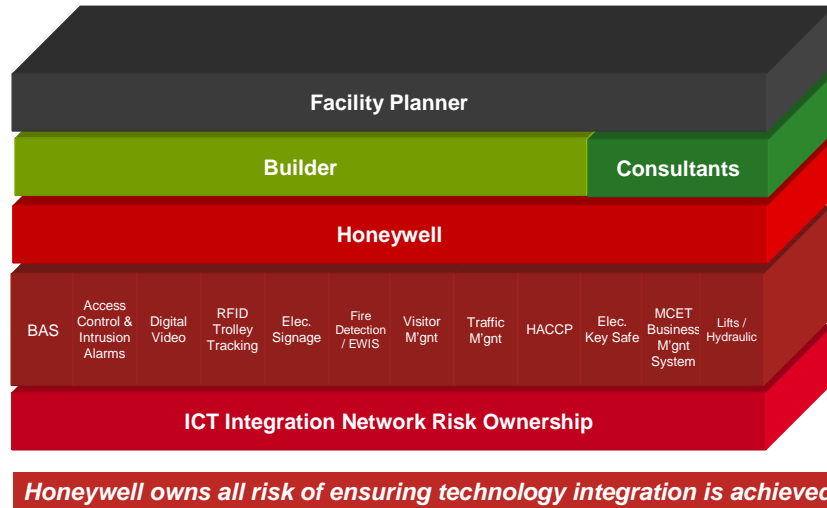
## Traditional Delivery Model - Who Owns The Risk?

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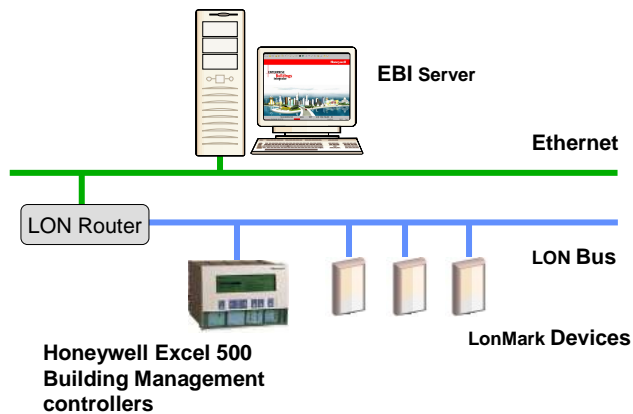
**Facility Planner owns all risk of ensuring technology integration is achieved.**

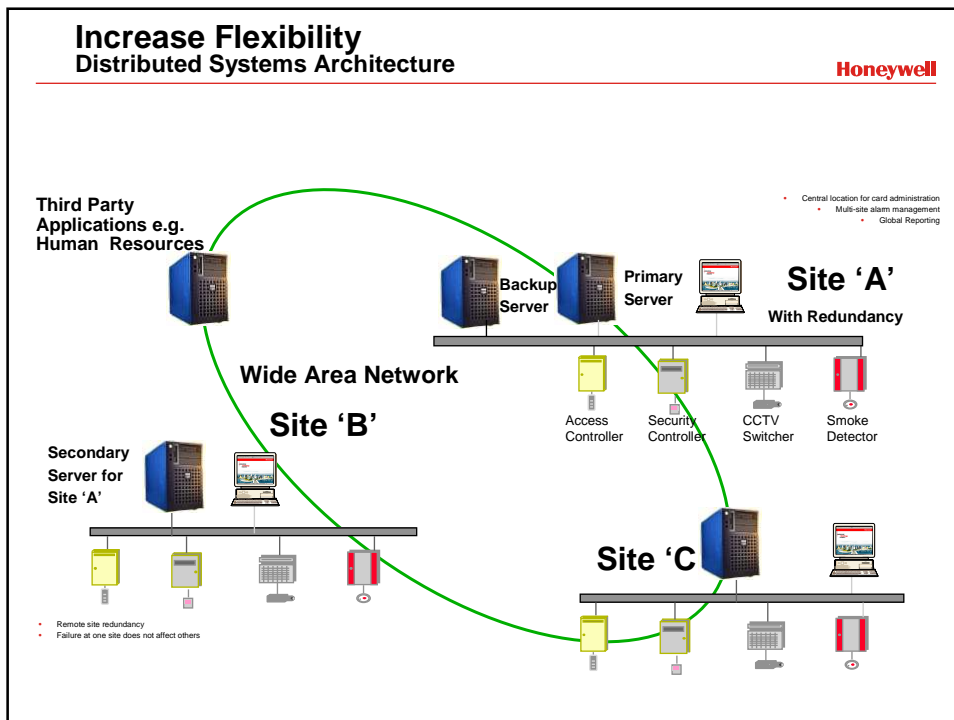
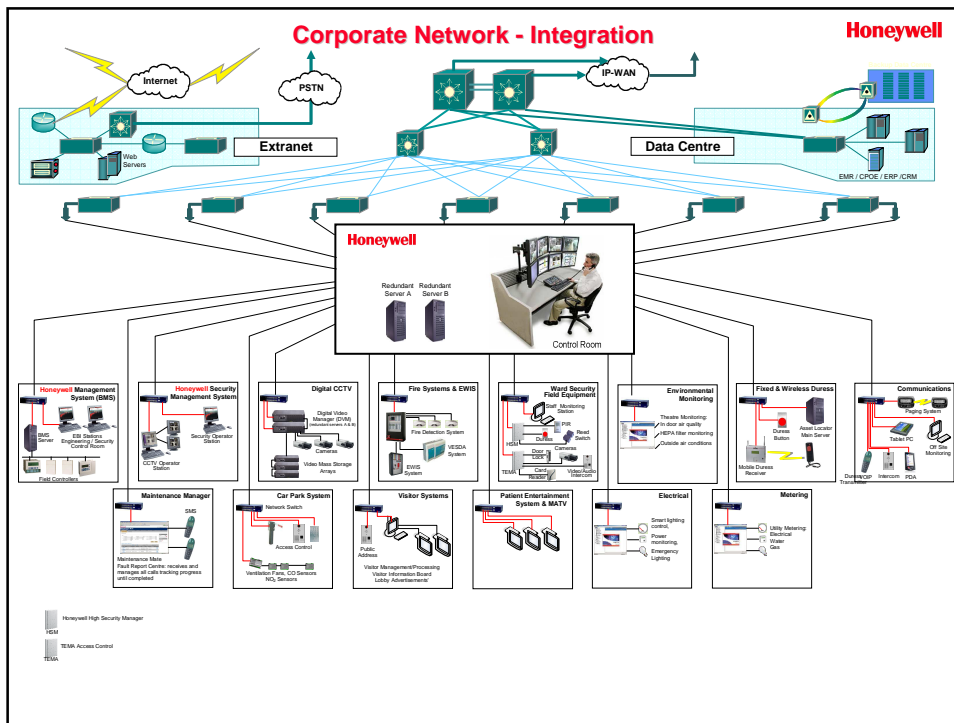
## Integrated Delivery Model - Who Owns The Risk?



## Increase Flexibility

- EBI is scalable from small single server, single application system





## Enterprise Building Integrator (EBI)

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### Standard Features

- Building Management
- Access Control
- Security Manager
- Digital Video surveillance
- Fire detection and monitoring
- EWIS interfaces
- Lift Access Control
- Energy Manager
- Asset Locator
- Visitor Management
- Electronic Signage interface
- Booking system interface
- Open interfaces to Modbus; BACnet, LON, Advance DDE
- Network architecture

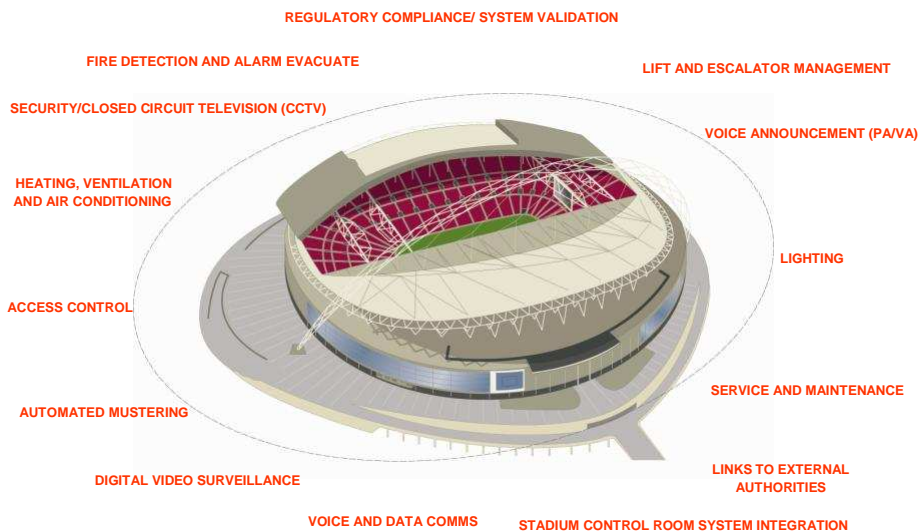
### Benefits for Facility Operators

- ✓ Standard and proven product which meets specifications
- ✓ Integrates multiple subsystems already
- ✓ Single platform - less maintenance, less hardware
- ✓ Proven upgrade path over many years
- ✓ Locally developed by Honeywell
- ✓ Single user Interface: easy to use, less training

EBI is our global facility management software solution suite that is developed and supported by Honeywell in Australia that operates on industry standard IT platforms enabling 3<sup>rd</sup> party systems integration.

## Intelligent solutions for Sports & Recreation facilities

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## Life Safety & Security

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**Integration of Fire & Security systems to not only protect the facility but provide a safe and secure environment for patrons using the facility, by utilising the BMS as an emergency management and disaster recovery tool**

<u>Parking Areas</u>	Watch over cars during their visit, or identify vehicles that enter or leave
<u>Doorways</u>	Identify individuals as they enter and leave a building or facility.
<u>Lobbies</u>	View general activities in a public lobby.
<u>Security Checkpoint</u>	Get a close-up of individuals who enter and exit secure environments.
<u>Stairwells</u>	Manage risks by verifying that the stairwell is clear of injured persons, or intruders.
<u>Emergency Exits</u>	Capture video of those who force their way through emergency exits.
<u>Tunnels</u>	View foot or shuttle traffic through tunnels. Review activity in remote utility tunnels.
<u>Roadways</u>	Watch traffic patterns on roadways. Track vehicles into and out of the facility.
<u>ATM</u>	Watch over ATM and Banking machines. Minimise vandalism and theft.
<u>Cash Counters</u>	Close-up view of cash being handled and counted.
<u>Cash Register</u>	Close-up view of cash being deposited or withdrawn from the cash drawer. Record register transaction information.
<u>Vending Machines</u>	Watch over vending machines. Minimize vandalism and theft

## Energy

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Aquatic centres, recreation centres and sports stadiums tend to have high Usage of energy depending on occupancy levels and seasonality. With Integrated BMS, Your energy expenses can be transformed into a source of newfound savings.

Our Integrated Energy Services Include:

- Energy Demand Management - Energy audits, metering, real-time pricing, automated load shedding/shifting strategies and remote monitoring
- Energy Supply Management - Customised consumption analysis for effective make/buy decisions, energy sourcing, utility rate negotiation, risk management and cost-reduction strategies
- Energy Asset Management - Energy-saving system retrofits and upgrades and self-funding facility improvements
- Power Generation Strategies - Co-generation systems, emergency generator systems, and uninterruptible power sources

## Current Picture: The Perfect Storm

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- Increasing energy prices
- Climate Change
- Environmental concerns from the general population
- Government Action
- Legislation
- Corporations committing to sustainability

## Government Tenancy Requirements

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Government Tenancy Requirements	Base Building NABERS Energy	Tenancy NABERS Energy
Commonwealth	4.5 STAR	4.5 STAR
New South Wales	> or = 3.5 STAR	4 STAR
Victoria	4.5 STAR	5 STAR
South Australia	Preference for 5 STAR	Preference for 5 STAR
Western Australia	4.5 STAR	4 STAR
Queensland	4.5 STAR	4.5 STAR
Tasmania	?	?

**Government requirements driving Commercial Sector**



## Case Studies

**Honeywell**



Honeywell Australia was responsible for the building automation, fire and security controls for **Stadium Australia and SuperDome – Sydney Olympic Park**

**Honeywell's areas of responsibility covered;**

- Lift access control,
- Smart Card Access Control
- Photo Identification Systems
- General access control,
- Security monitoring including door alarms,
- Panic alarms and duress calls
- CCTV cameras

## **Wembley Stadium – Customer testimonial**

“At the end of the day integration delivers a measurable return on investment. It allows us to do more with less – to drive productivity improvement, validate for regulatory compliance, set new benchmarks in respect of customer service and deliver on our financial goals and all against the backdrop of a safe, secure, comfortable and energy efficient stadium. It’s an investment that will serve us very well for many years to come.”

Peter Warren, Wembley Stadium’s IT and Business Process Director

## **Honeywell Wins Major Awards for Innovative Building Integration Work**

“Honeywell has won the Internet Protocol in Security Innovation (IIPSEC) award for best application in recognition of Honeywell Building Solutions’ work at Wembley Stadium. HBS was also selected for the innovation award over two other category winners — best software and best hardware.”

# **Wembley Stadium Honeywell Project scope**

- Building Management System
- Fire System
- Public Address & Voice Alarm System
- Access Control System
- CCTV System
- TV Distribution System
- IT Infrastructure
- Integration
- Commissioning
- 77,000 Speakers
- 9000 Fire Sensors
- 500 Suite TV Systems
- Stadium Video Screens
- 235 steward phones
- 187 cameras
- 80 KM speaker cable
- 87 KM security cable
- 38 KM CCTV cable
- 108 KM IT voice/data
- 14 KM Fibre Optic cable



## Other Global examples

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- Telstra Dome, Australia
- Beijing Olympic Stadium ( Birdsnest)
- Cardiff Millennium Stadium, UK
- Arsenal Stadium, UK
- Meadowlands Sports Complex, USA
- Cardinals Stadium, USA
- Giants Stadium, USA
- Seoul World Cup Stadium, Korea
- Melbourne Convention Centre
- National Museum of Australia
- Queensland Cultural Centre
- National Gallery of Victoria
- National Museum of Korea
- The Sage Gateshead, UK
- Shildon National Railway Museum, UK



Beijing Olympic Stadium



Telstra Dome

## New Facility – BMS design considerations

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### Important points to consider when designing your facility:

- Your BMS should be scalable and utilise industry standard protocols
- The BMS should communicate on your facility corporate network to reduce the need for multiple networks to be installed and maintained
- The BMS should fully integrate with other systems within the facility such as:
  - CCTV and Access control systems
  - Fire systems
  - Event scheduling software
  - Lighting control systems
  - Parking management systems
  - Ticketing systems
  - People counting systems
  - Mechanical plant systems for pools, airconditioning and ventilation
  - Electrical systems
  - Lifts, elevators and escalators

## Honeywell Services

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### Honeywell Building Solutions can offer the following:

- BMS supply, design, installation and 24/7 support
- Integration design and implementation
- Product supply and selection for:
  - HVAC controls
  - Access controls
  - CCTV
  - Fire systems
  - VAV boxes
  - VSD's
- Energy Audits

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Questions ?

## Need to know more.....

**Honeywell**

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# Thank You