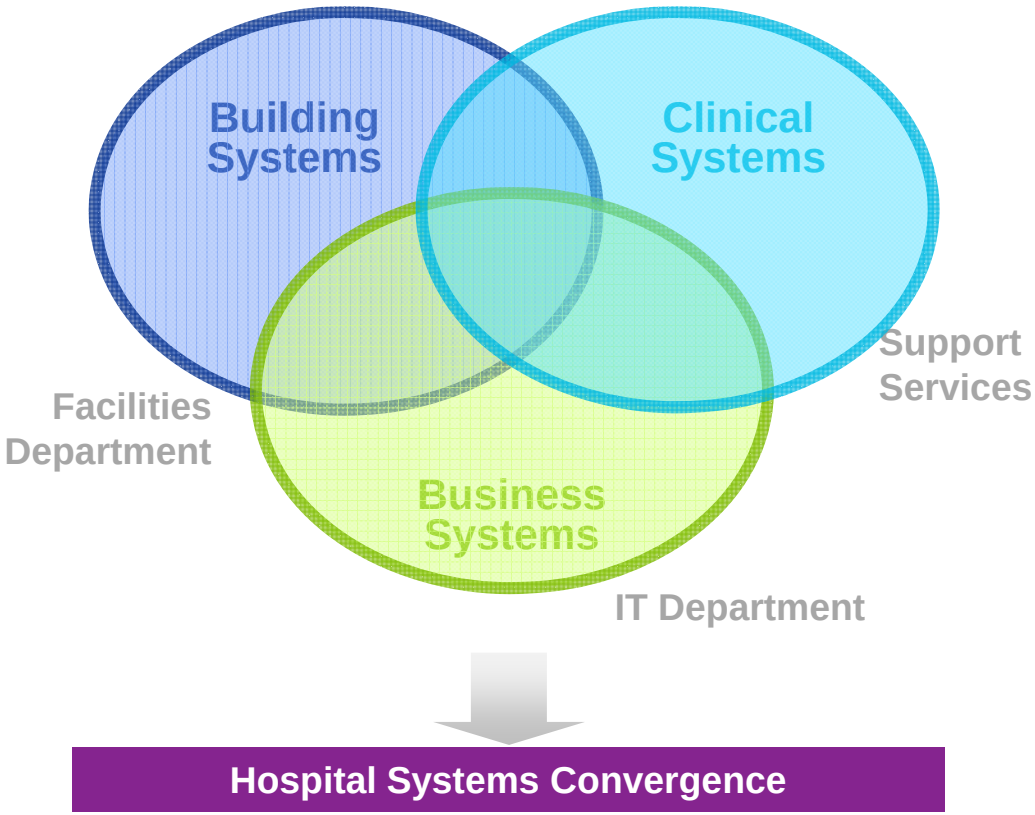


Leveraging Clinical and Facility Systems Integration

16 September 2015
Marina Bay Sands
The Sands Expo and Convention Centre

Johnson Controls

Technology Convergence

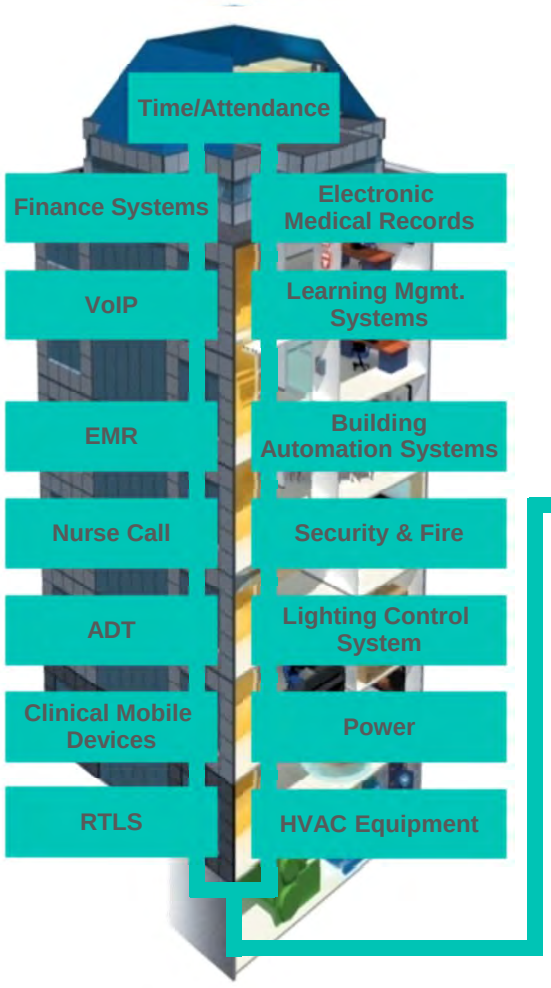


Drivers to change:

- IP convergence
- Systems capable of operating on standard platforms, applications, and infrastructures.
- Pressure to get more out of expensive technology investments!

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Converging separate systems into one infrastructure



So now what?

What is a Smart Hospital?



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Let’s Define Smart

A building that is aware… and responds.

- Energy aware
- Location aware
- Clinically aware
- Business aware



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The importance of HL7

- HL7 – Health Level Seven
- Application layer protocol used for integration
- Started being used in 1987 and is global
- Connects everything clinical including EMR, Radiology, Lab, Bio-Med devices and modalities
- **Think BACnet for Clinical Systems**

So what happens when you teach a BMS to speak HL7?

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Leverage the Whole Hospital with Integration



Clinician
Mobile Devices



Building
Systems



RTLS



Security
Systems



Nurse
Call

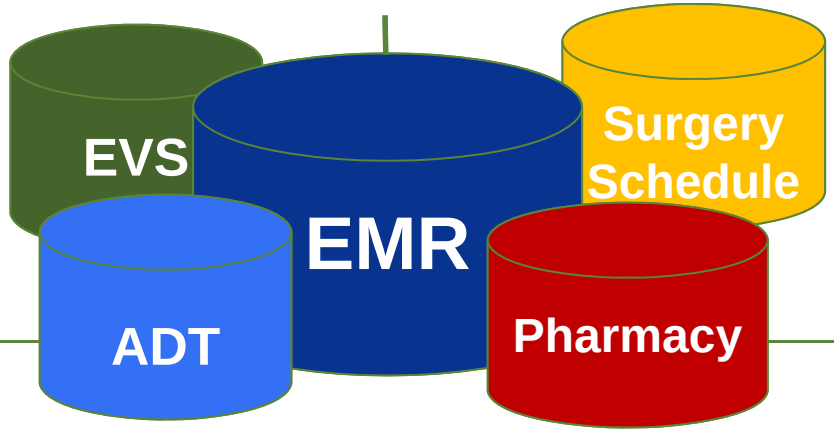


Patient
Experience

METASYS
BY JOHNSON CONTROLS



Patient Monitoring



Johnson
Controls

Integration Examples

Improve patient outcomes, increase satisfaction and control costs



Intelligent Patient Environment Control

- Integrate Infotainment Controls and Building Management Systems
- Meet Patient Preferences
- Control Lights, Temperature, Music
- HVAC/Power Set-Backs



Healthcare Environment Optimization™

- Integrate Building Management System with Surgery Scheduling
- Optimize Air Exchange Rates
- Reduce Energy Use



Intelligent Code Blue

- Integrate Nurse Call and Building Management Systems
- Cold Air pumped into room
- Turn Off TV and lights

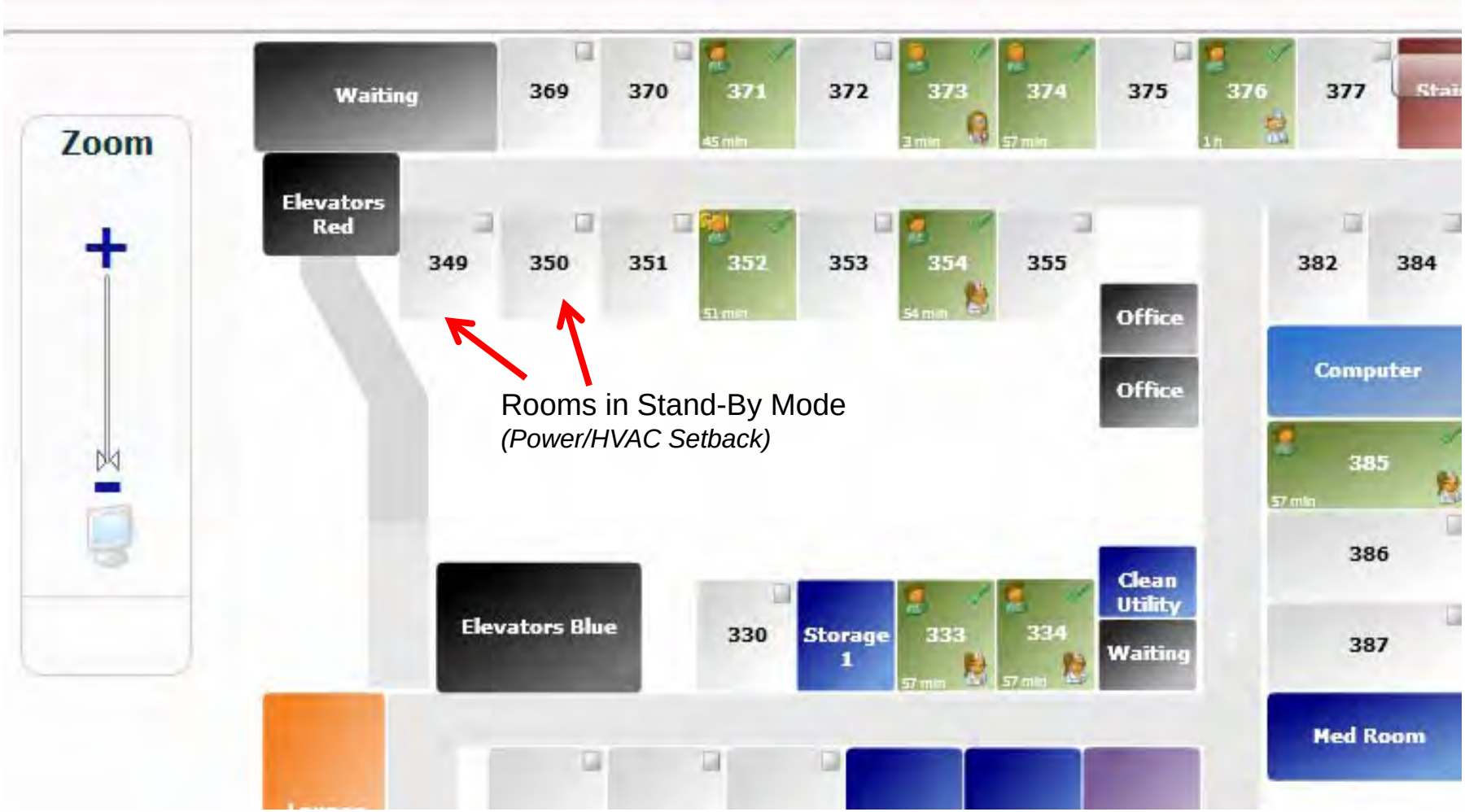


Location Aware Staff Duress

- Integrate Security Management System, Building Mgmt System, Nurse Call, RTLS and UC
- If nurse is attacked, RTLS button pushed and closest staff located to help

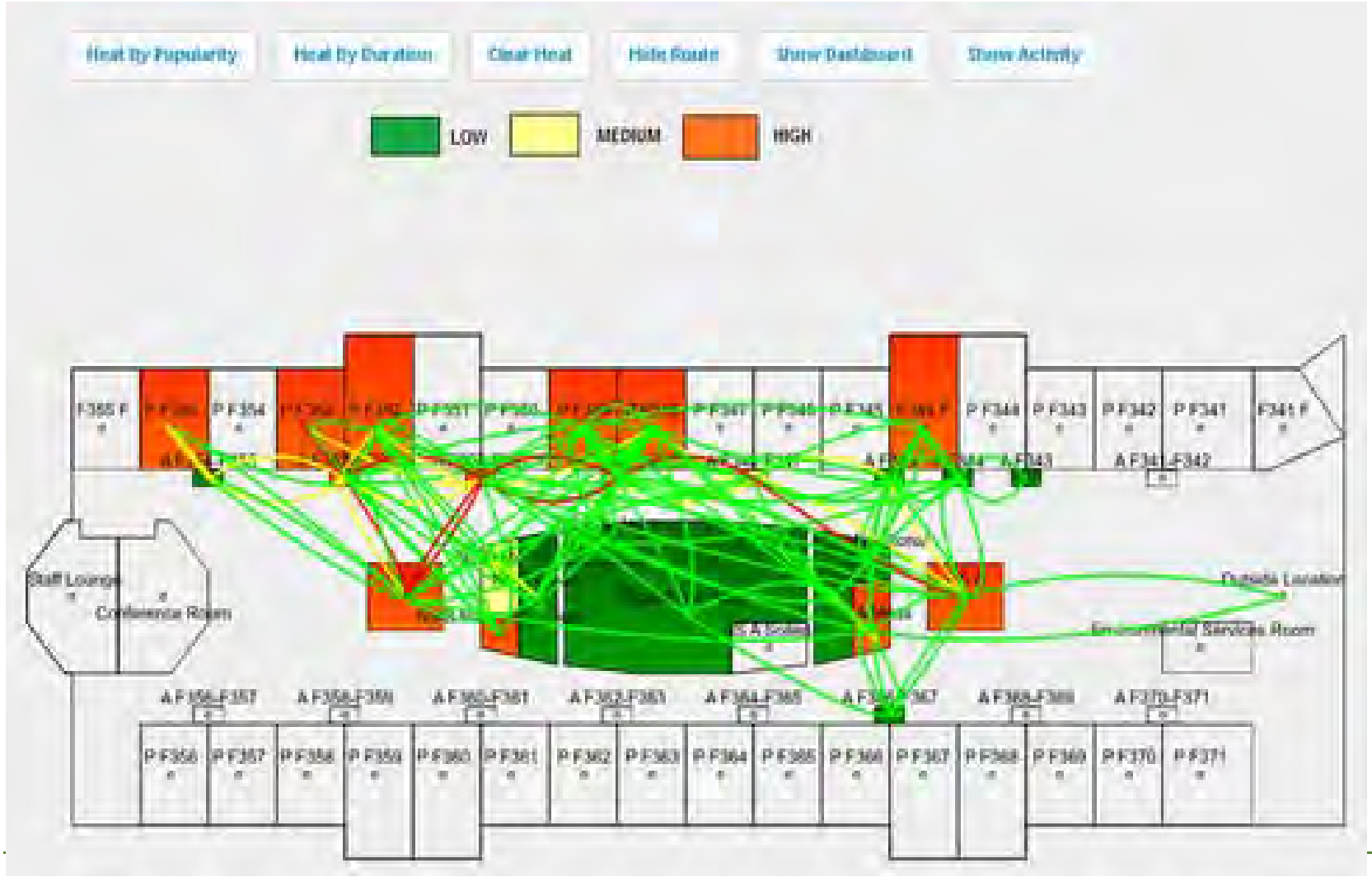
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Location Aware BMS



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BMS that can learn from actual space utilization



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Automated Patient Satisfaction Management

Notify care team of possible patient satisfaction issues due to excessive wait time. (Real Time)

Notify patient satisfaction team/call center to manage issue (Post Visit)



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The hospital building as an instrument of care



- The building helps to take care of the patient, family and staff
- It is aware and “responds”
- Way beyond keeping a room at 22° Celsius
- Highly integrated… Smart
- It saves money.

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Thank You

Brendon Buckley
Building Wide Systems Integration Director, North America
Johnson Controls, Inc.