



### Making Our Cities Livable

Visal Leng  
President, Asia Pacific, Johnson Controls





## GLOBAL TRENDS & DRIVERS

**DEMOGRAPHICS**

**URBANIZATION**

**ENERGY**

**SUSTAINABILITY & REGULATION**

**DIGITALIZATION**

What Smart, Livable India Look Likes

“ The Smart City Mission has given a **new dimension to urbanization.** ”

Narendra Modi, Prime Minister India

“ Smart Cities are not just about technology; they're about a **better quality of life.** And a better quality of life should **not be for just a small section of people.** ”

Raj Cherubal, CEO, Chennai Smart City

- Improves quality of life
- Inclusive
- Planned
- Holistic
- Sustainable
- Sustained



Where Are We Now?

- 100+ smart cities, \$27B+ planned spend, 5100+ projects
- ~ 48% work by value in various states of completion
- Primary solutions categories:
  - Integrated command & control
  - Mobility & transport
  - Roads, street lighting & smart lighting
  - Safety & security
  - Smart grid & energy efficiency
  - Solid waste management
  - Water supply & treatment, dredging
  - Land monetization
- A lot needs to be done; can adopt best practices from around the world



Agenda

- What's already possible
  - Smart transportation
  - Smart hospitals
  - Smart buildings
- Digitalization
- Conclusion



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**Smart Transportation: M4 Smart Motorway**  
First real-time predictive decision support system in Australia



- 48km motorway
- Integrated real-time information
- Communication & traffic management tools



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**Smart Hospital: Jiahui International Hospital, Shanghai**  
First IoT hospital in China



- 500 beds, 180,000 m<sup>2</sup> general hospital that aims to be globally recognized for its best practices
- Provide patient-focused, high-quality one-stop medical services
- Building Wide System Integration methodology



**Another Smart Hospital: General Hospital in Southeast Asia**  
How it saves lives, literally



- Integrated nurse call, lighting, HVAC and lift systems improves response time to code blue situation to 2.6 min
- Patients with peri-arrest: survival to home discharge improved 41.6% to 74.2%.
- Patients with Asystole: survival to home discharge improved 6.6% to 20%.



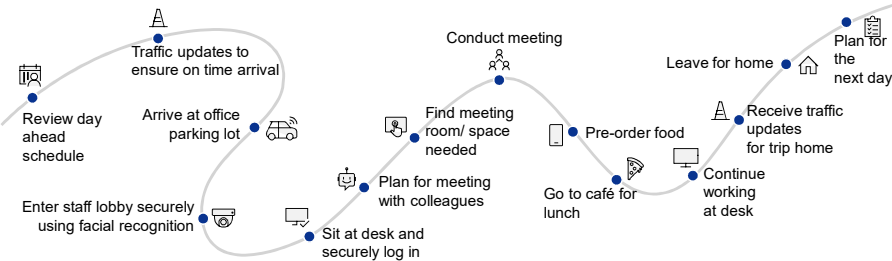
**Smart Buildings: Bee'ah Headquarters (Sharjah, UAE)**  
The challenge




- Work space attractive to new generations
- Experiences that improve productivity
- Leverage new capabilities enabled by IoT, big data, cloud, AI, and NLP
- First fully optimized building through AI



**A Day in the Work Life of Bee'ah Employee**




Outcomes




**More Comfortable & Productive**

- Improve employees' Quality of Life by 20%
- Improve employee health, comfort, productivity
- Improve space utilization
- Improve visitor experience




**Safer**

- Real-time visibility of all assets in building
- Facial recognition for frictionless access




**More Sustainable**

- Net Zero carbon emissions within 2yr
- Reduce energy consumption by 5%
- Reduce water consumption by 20%
- Annual LEED Platinum recertification
- Paper-free environment
- WELLS Certification



**Making Impact On A Larger Scale**


- Thought leadership
- National, international coverage
- Pipeline of opportunities for Bee'ah / Evoteq



**More Scalable**

- Integration based on open-standards to sub-systems
- Better engagement by creating first AI-enabled building

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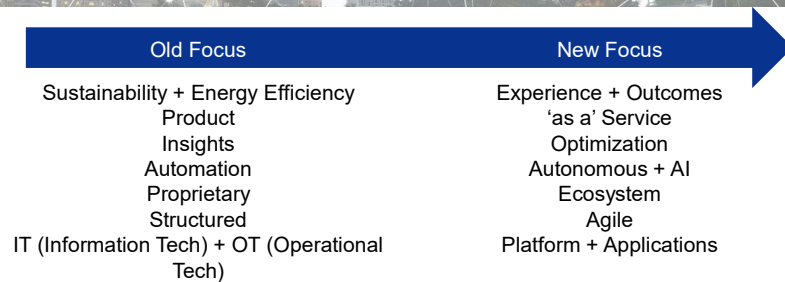


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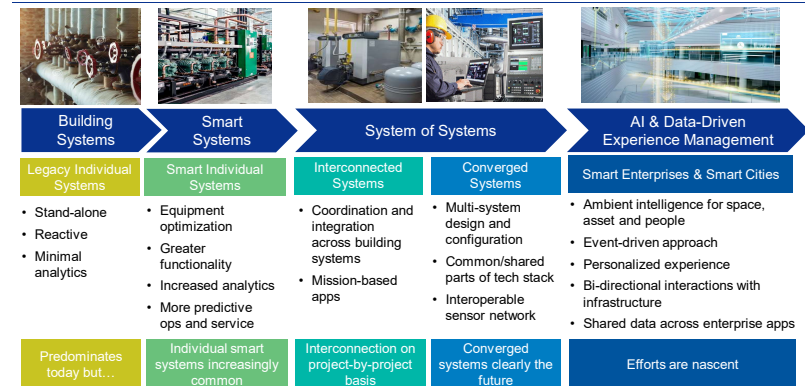
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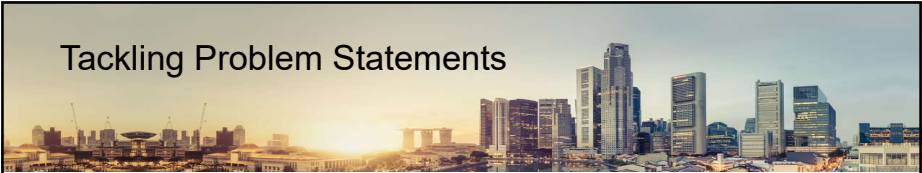
# New Digital World of Cities




Future Outcomes:  
Stand-alone systems to connected & converged systems




### Tackling Problem Statements






#### PLATFORM

- Disparate Data Sources
- OT-IT Consolidation challenges
- Data ingestion and integration




#### APP DEVELOPMENT

- No common and structured data repository for app developers
- Unable to develop applications quickly to address outcomes



#### INTEGRATED APPS


- No easy, ready-to-use apps
- Seamless ability to address energy & assets optimization, occupant experience, enterprise security, safety



#### AI-ENABLED

- Complex environment where space, assets, people, events and time intersect
- To be future-proof, buildings need to be self-configuring, self-learning, self-adaptive, and self-healing

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