NG Bailey

Intelligent Buildings & THE IoT's

James Hill – NG Bailey IT Services

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Company Overview

- Safety First & Foremost
- Formed 1921, family owned, over 90 years of history
- 2,500 employees
- £450m plus turnover
- Annual investment in training of £3m
- Offering a Design, Build, Operate and Maintain solution to the marketplace – integrating five core divisions.

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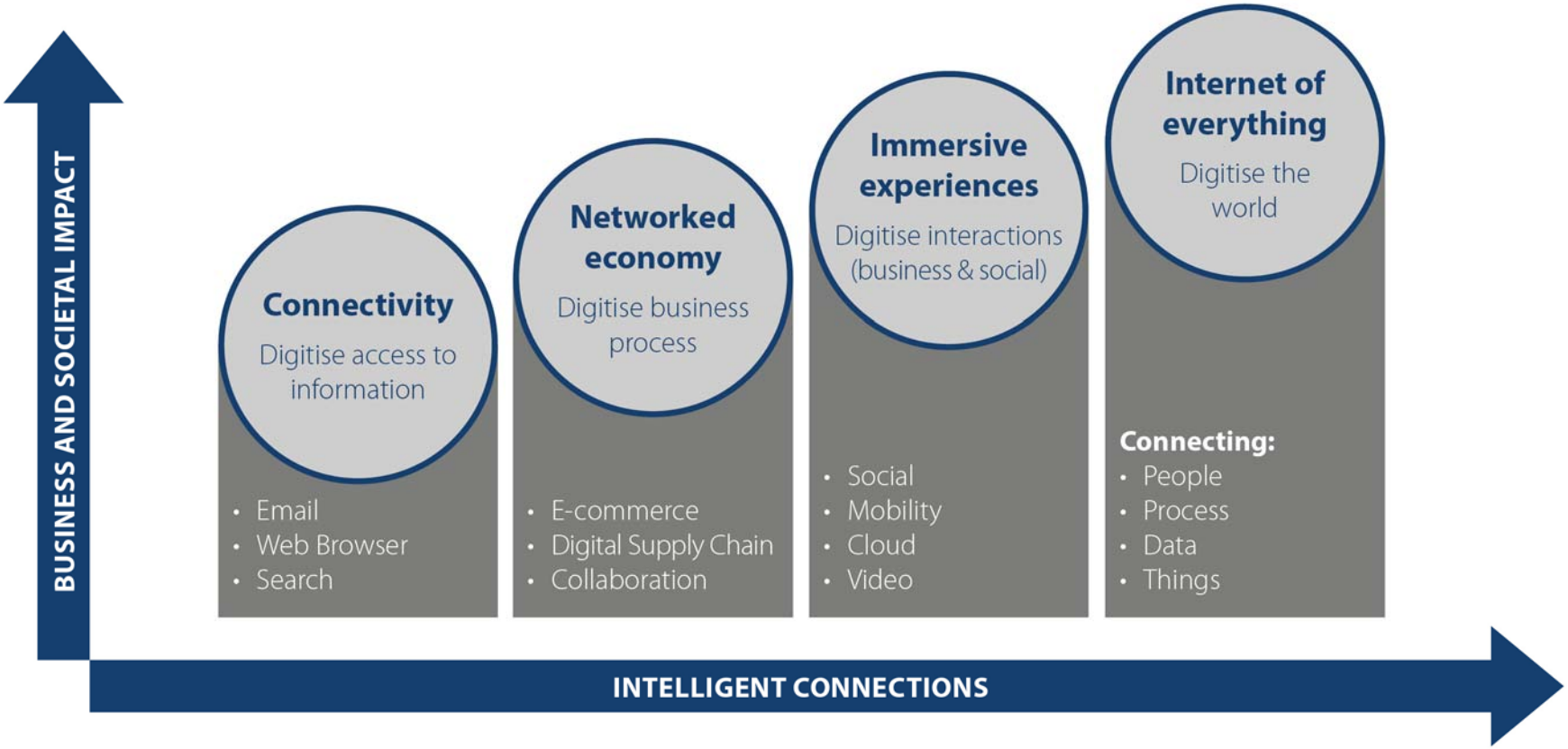
Evolution of the Internet



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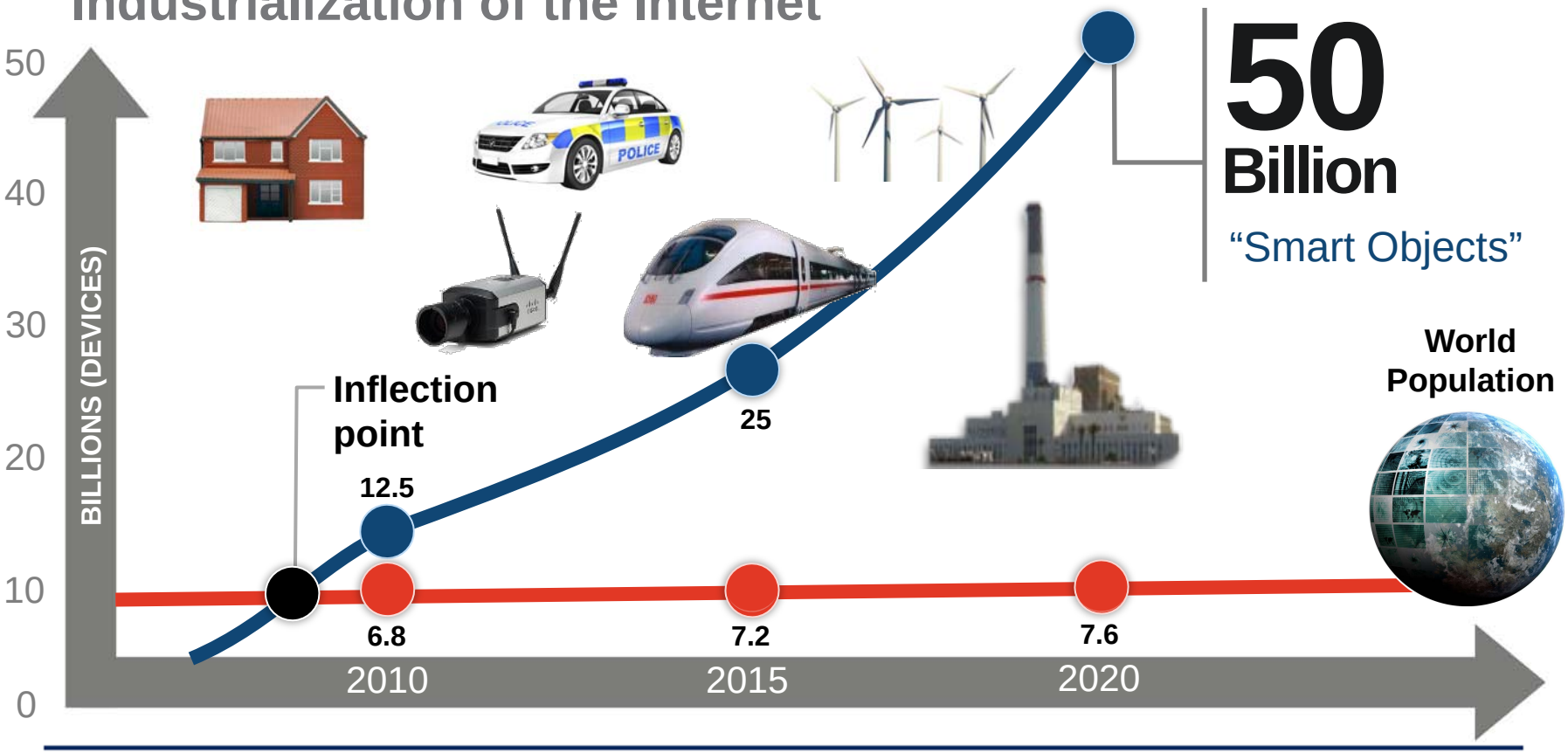
The Internet of Everything – "Industrialization of the Internet"



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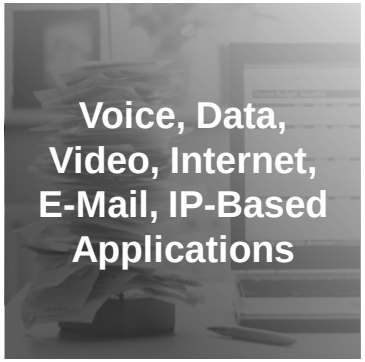
Gradations of Convergence

BUILDING SYSTEMS

INTEGRATED BUILDING MANAGEMENT

ICT

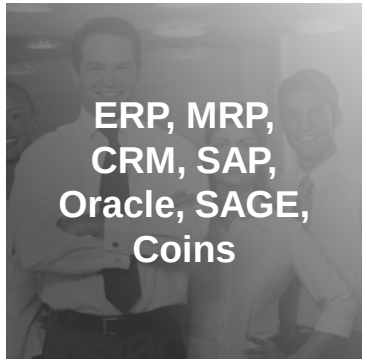
ICT SYSTEMS



INTEGRATED COMMUNICATIONS

ICT

BUSINESS SYSTEMS



INTEGRATED BUSINESS PROCESSES

“building performance” through systems integration

“business performance” through enterprise integration

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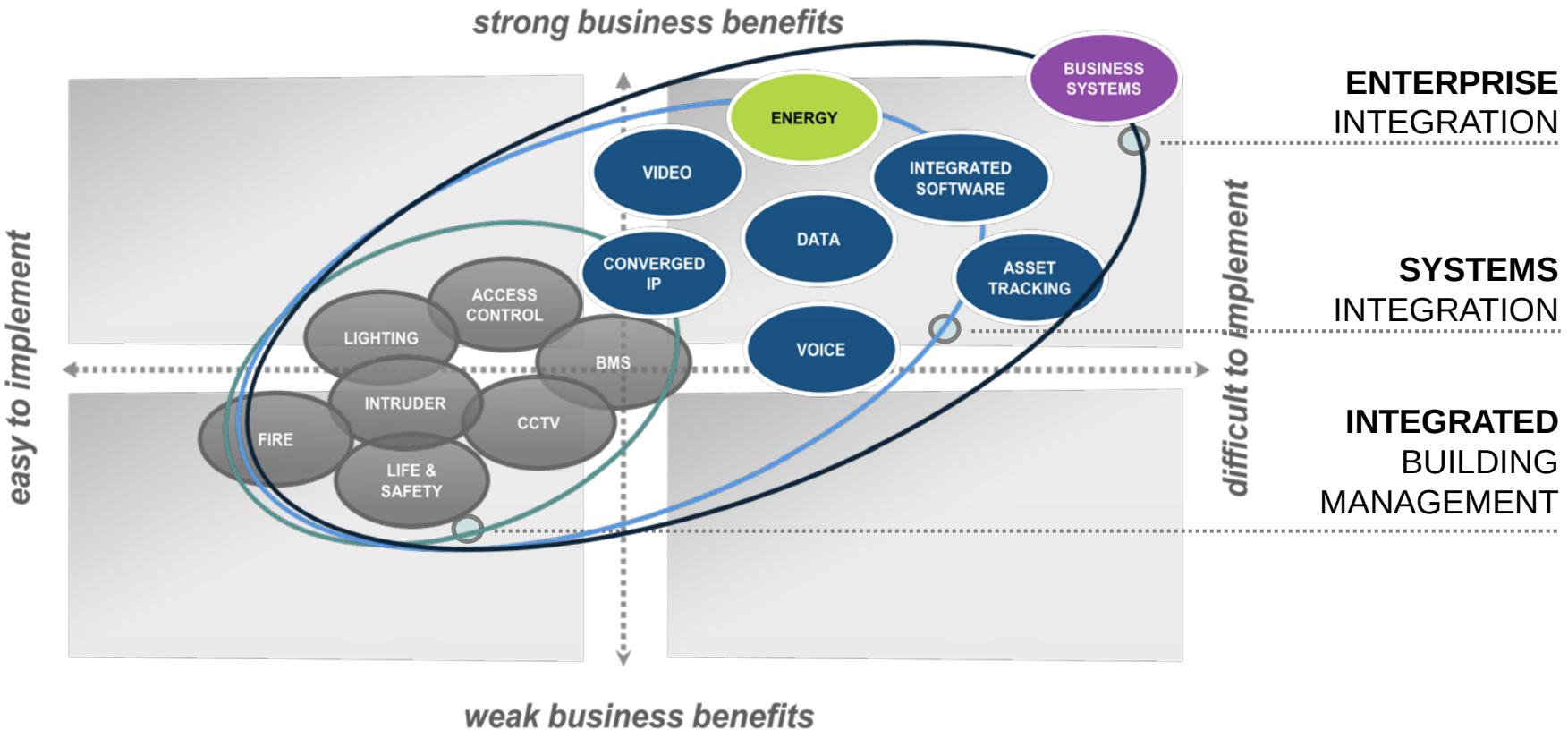
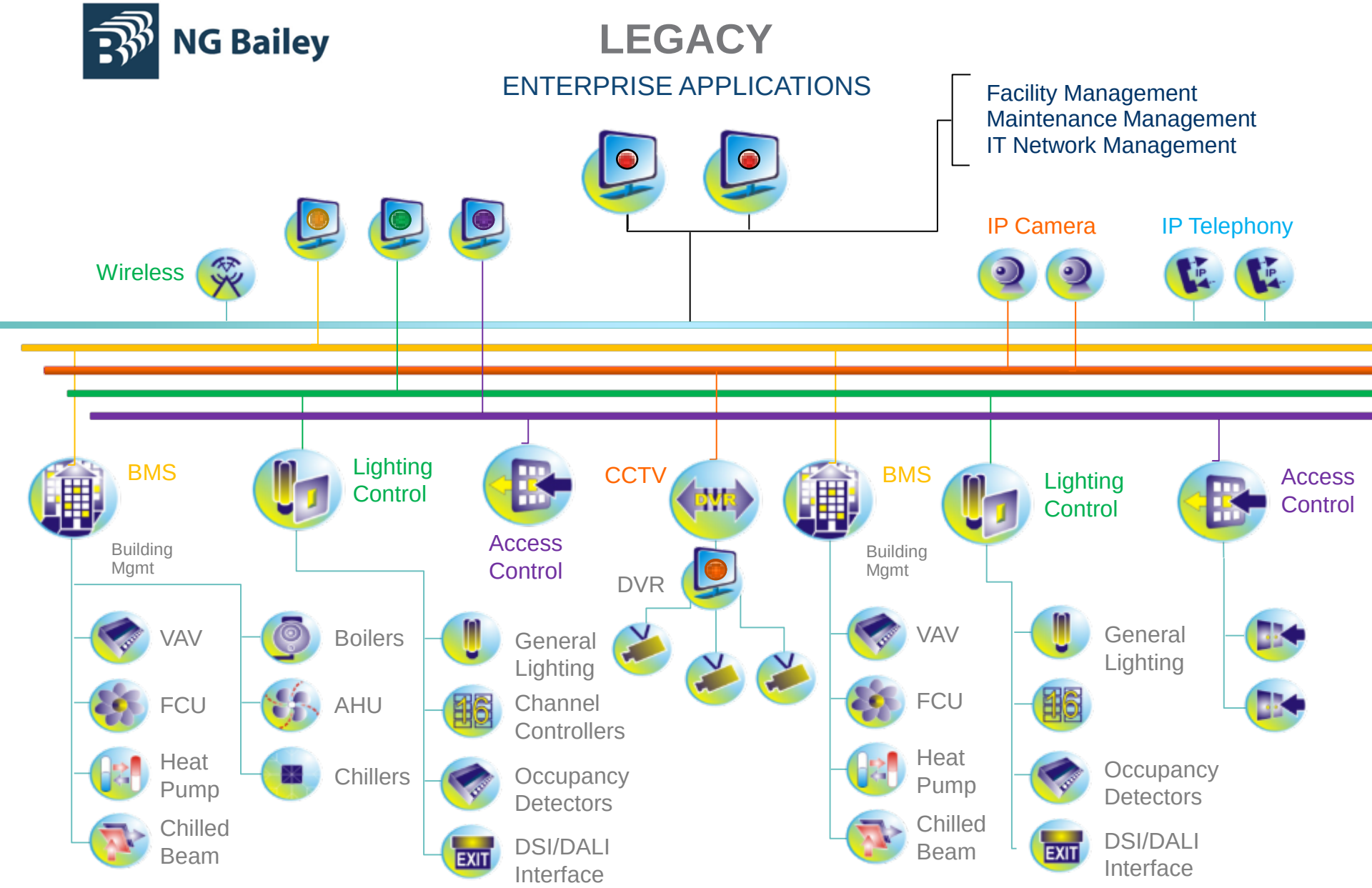
Integration Opportunities

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LEGACY
ENTERPRISE APPLICATIONS
Facility Management
Maintenance Management
IT Network Management
Wireless
IP Camera
IP Telephony
BMS
Building Mgmt
VAV
FCU
Heat Pump
Chilled Beam
Boilers
AHU
Chillers
Lighting Control
General Lighting
Channel Controllers
Occupancy Detectors
DSI/DALI Interface
Access Control
CCTV
DVR
DVR
BMS
Building Mgmt
VAV
FCU
Heat Pump
Chilled Beam
Lighting Control
General Lighting
Occupancy Detectors
DSI/DALI Interface
Access Control

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CONVERGENCE

ENTERPRISE APPLICATIONS

Energy Management
Building Management
Facility Management
Security Management
Maintenance Management
IT Network Management

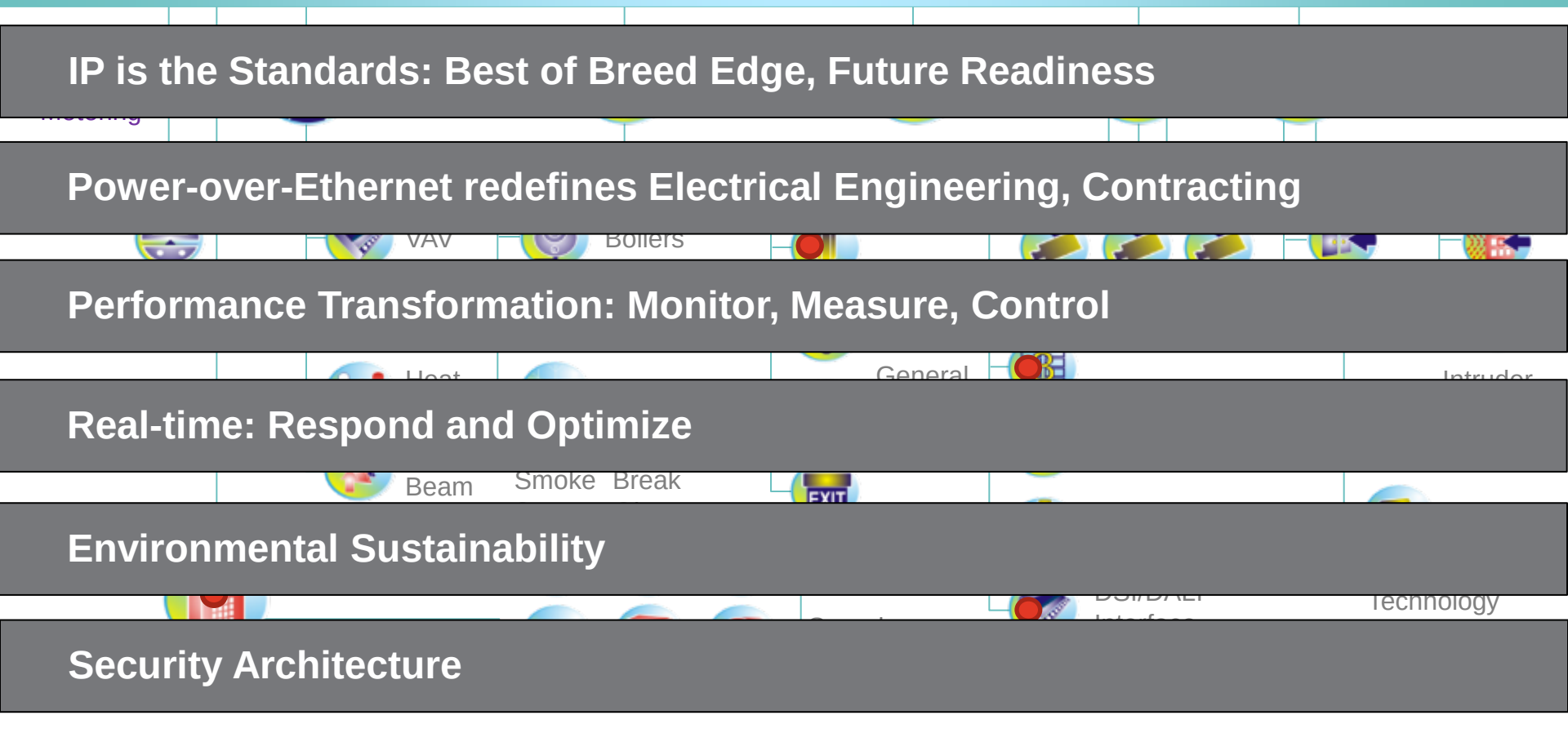
Middleware Server

Translation of disparate protocols to Common format

Wireless

IP Camera

IP Telephony



IP is the Standards: Best of Breed Edge, Future Readiness

Power-over-Ethernet redefines Electrical Engineering, Contracting

Performance Transformation: Monitor, Measure, Control

Real-time: Respond and Optimize

Environmental Sustainability

Security Architecture

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Big Data

"Big Data" is data whose scale, diversity, and complexity require new architecture, techniques, algorithms, and analytics to manage it and extract value and hidden knowledge from it…

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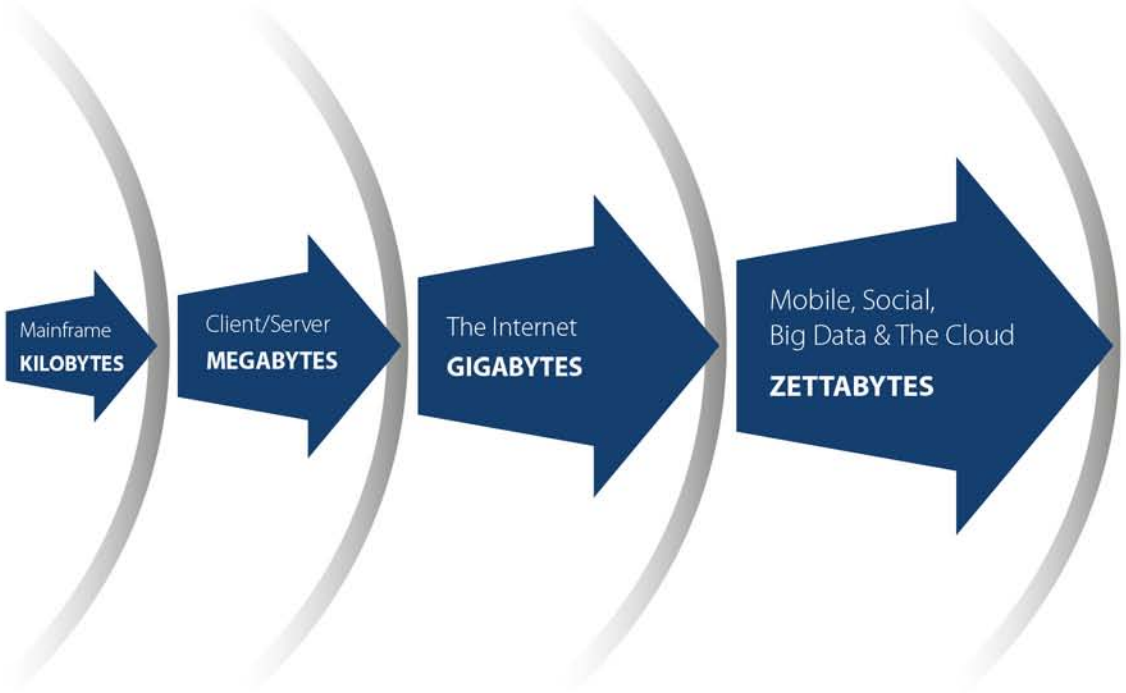

Every 60 seconds

- **98,000+** tweets
- **695,000** status updates
- **11 million** instant messages
- **698,445** Google searches
- **168 million+** emails sent
- **1,820TB** of data created
- **217** new mobile web users

Yottabytes

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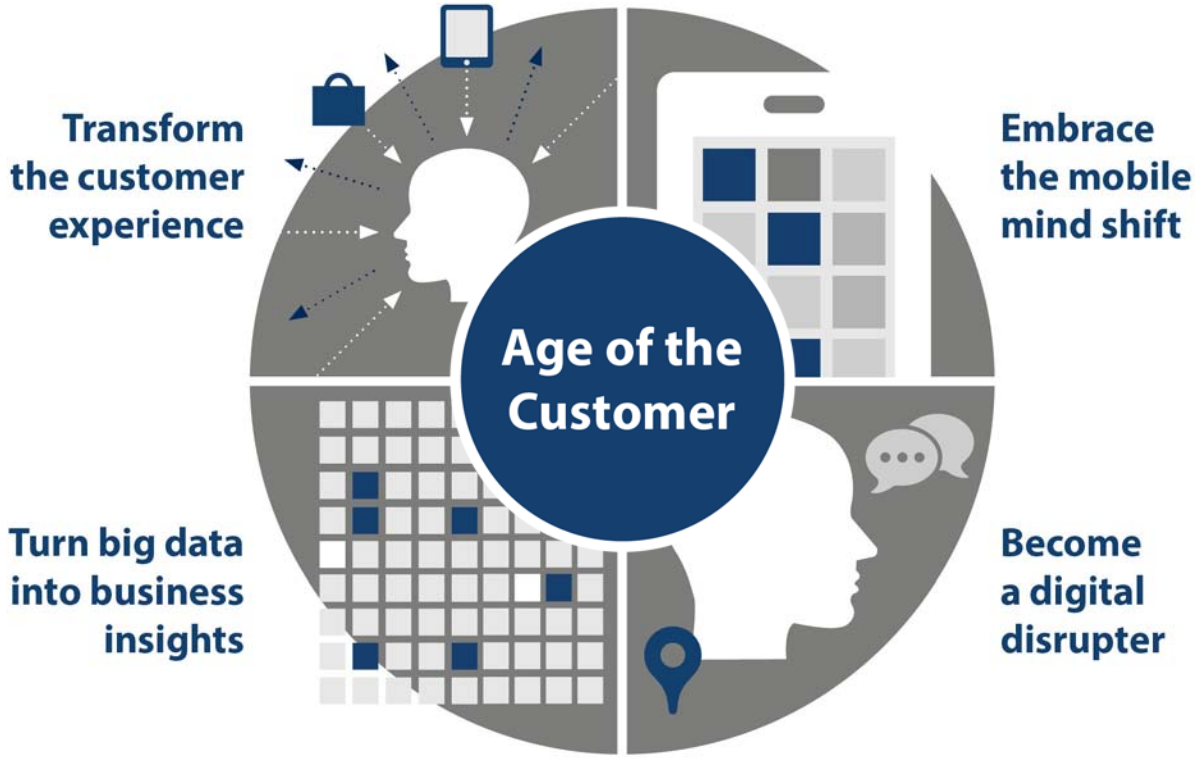
What does this mean to our customers?



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Digital Disruptors

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IoT is here Today - Connected Retailer

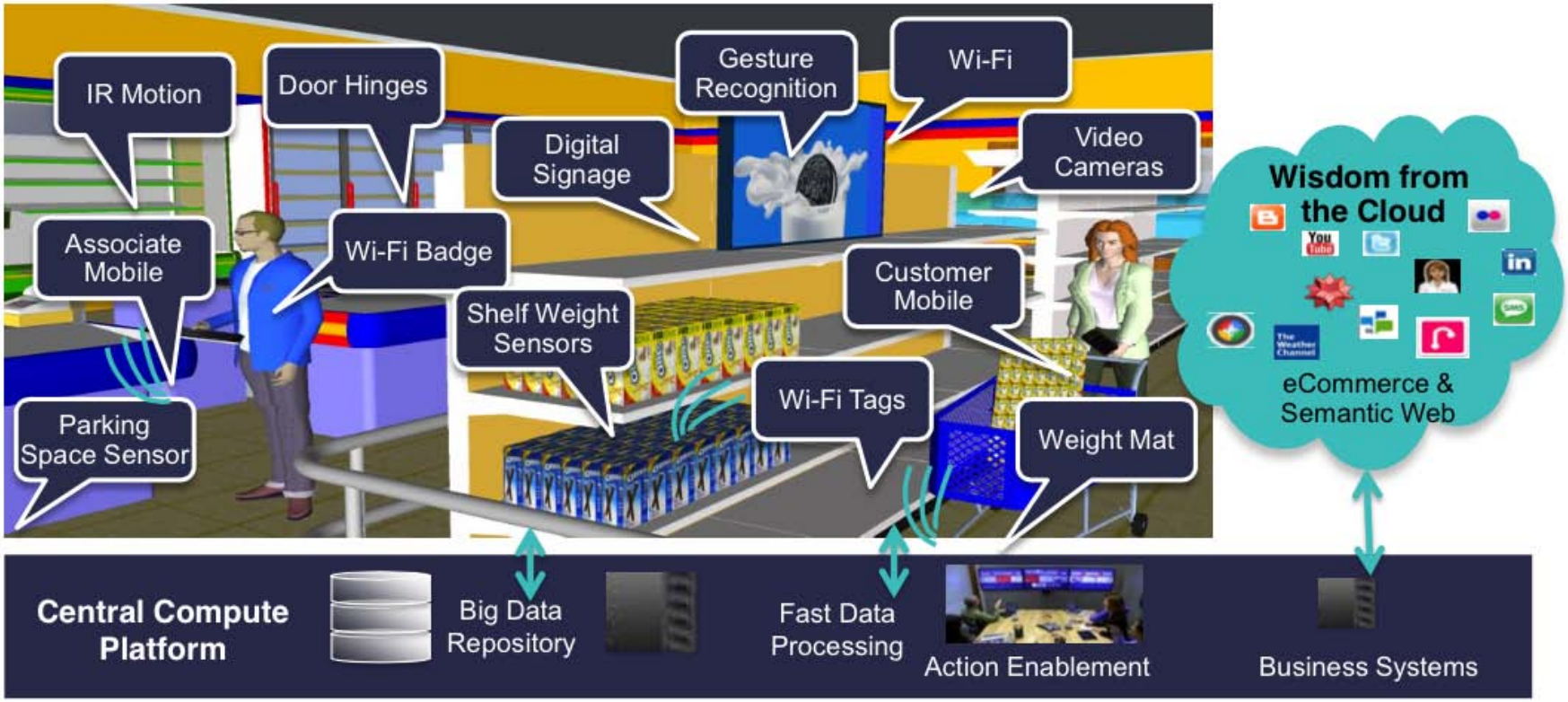

Image courtesy of Cisco

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Internet of [Building] Things

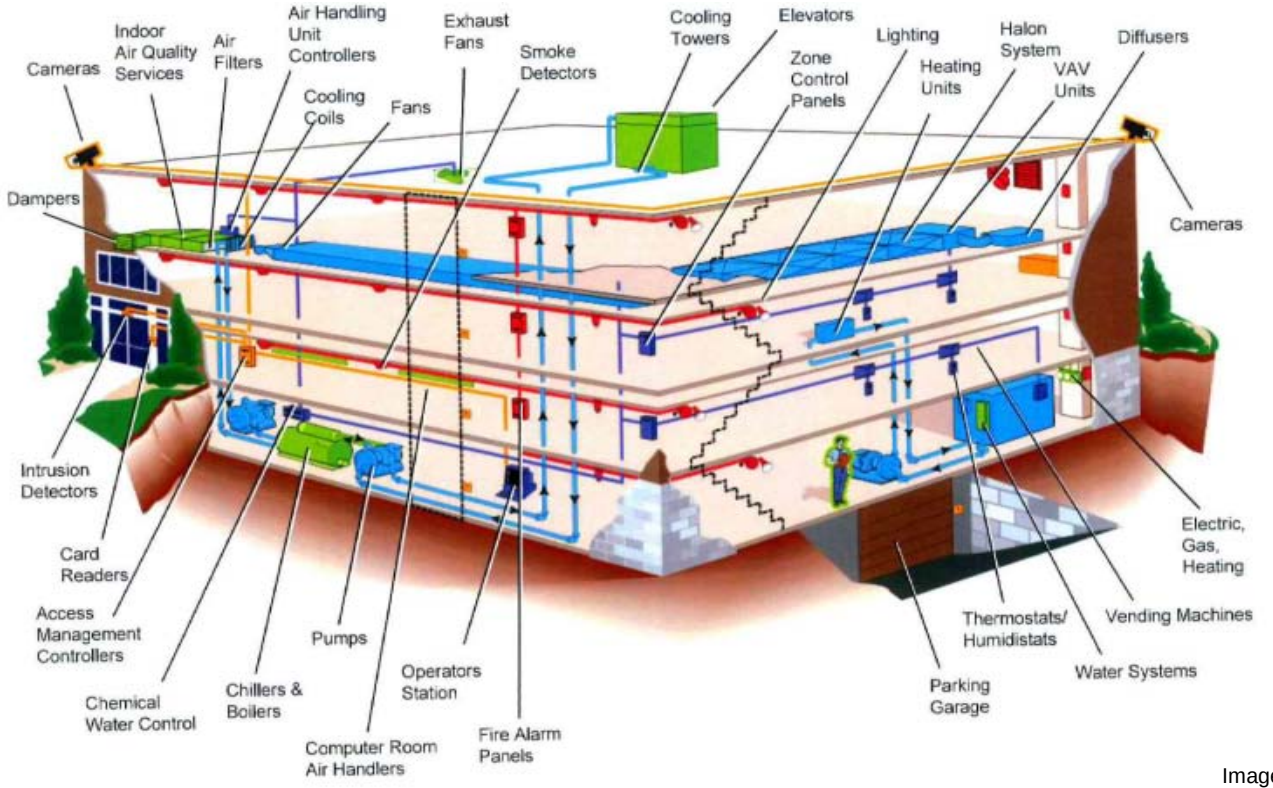

Image courtesy of Cisco

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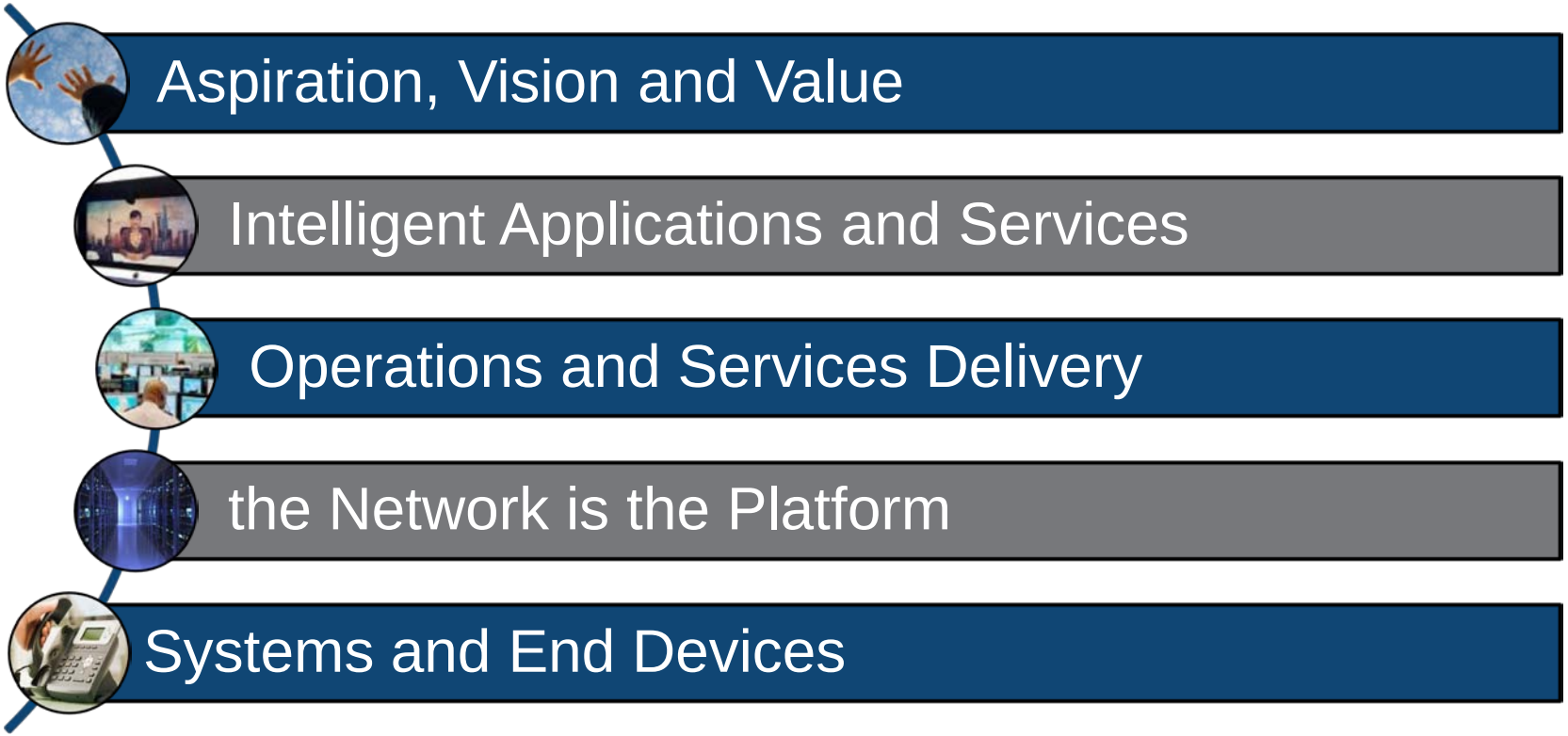
Value Architecture



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Questions & Answers