



Solutions of the Future

Keynote: Connecting the Unconnected

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Connecting the Unconnected

Agenda

Taxonomy

- Internet of Things (IOT)
- Internet of Everything (IOE)

My IOT to IOE Story

Cisco IT IOE Program

Cisco IT IOE Use Cases

- HD Location Services
- Smart Spaces

Q&A

Connecting the Unconnected

From the Internet of Things to the Internet of Everything (\$19T)



People

Connect people in more relevant and valuable ways

Process

Deliver the right information to the right person (or machine) at the right time

Data

Leverage data into more useful information for decision making

Things

Physical devices and objects connected to the Internet and each other for intelligent decision making

IOE: Bringing together (IOT, mobility, cloud, big data & analytics, social) >>> valuable insights, faster decisions

My Personal Transformation

From Marathoner to Tri-Athlete...From IOT to IOE

IOT

2011 Boston Marathon

Unconnected, local

Proprietary hardware and products

Manual training logs

Non-compatible devices

Off-line training

Limited race tracking

IOE

2015 Ironman World Championships

Connected, global

Open-source software and services

Auto., digital training plans and actuals

Integrated cloud solutions – mobile/web

Real-time, collaborative, social training

Predictive and real-time race tracking

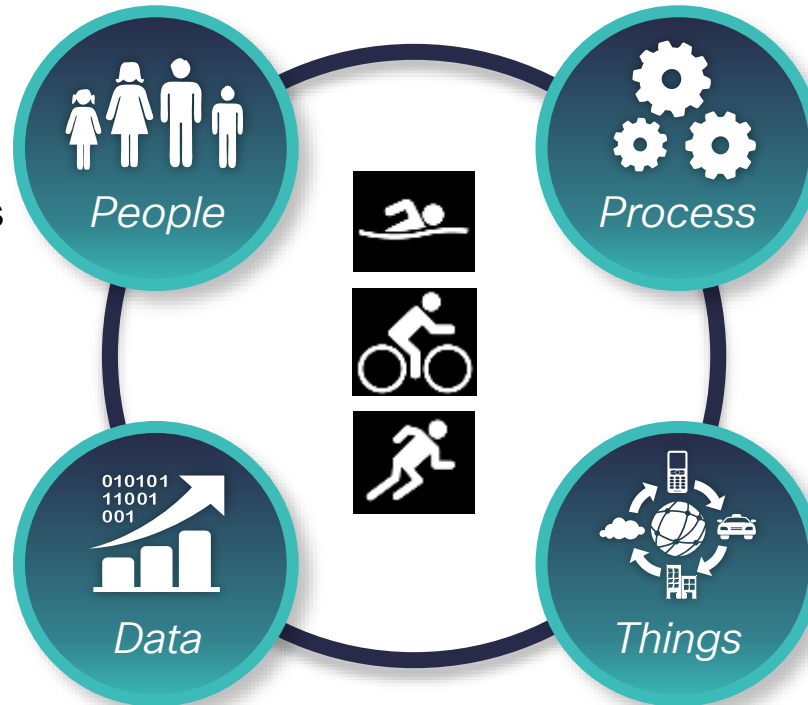
The Connected Tri-Athlete

Internet of Things + mobility + cloud + big data and analytics + social = IOE

Connecting people, process, data and things that were previously unconnected to drive value

- Coach
- Nutritionist
- Teams, Charities
- Training Partners
- Doctor(s), EMS

- Heart Rate
- Distance
- Cadence
- Nutrition
- Recovery



- Build Training plans
- Conduct Nutrition Tests
- Track Charity Contrib.
- Find Training Partners
- Inform Providers

- Smart Watch
- Smart Phone
- SaaS Bike Trainer*
- Mobile Apps
- Cloud Services
- Social Media

My Connected Tri-athlete Life

A seamless, efficient, peace of mind experience for me, my family, friends, & providers



The Connected Bike and Potential Attack Surfaces

The potential trade-off of connected convenience? Personal data hacked

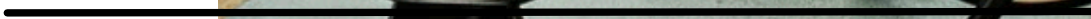
Wi-Fi (Mobile Apps)



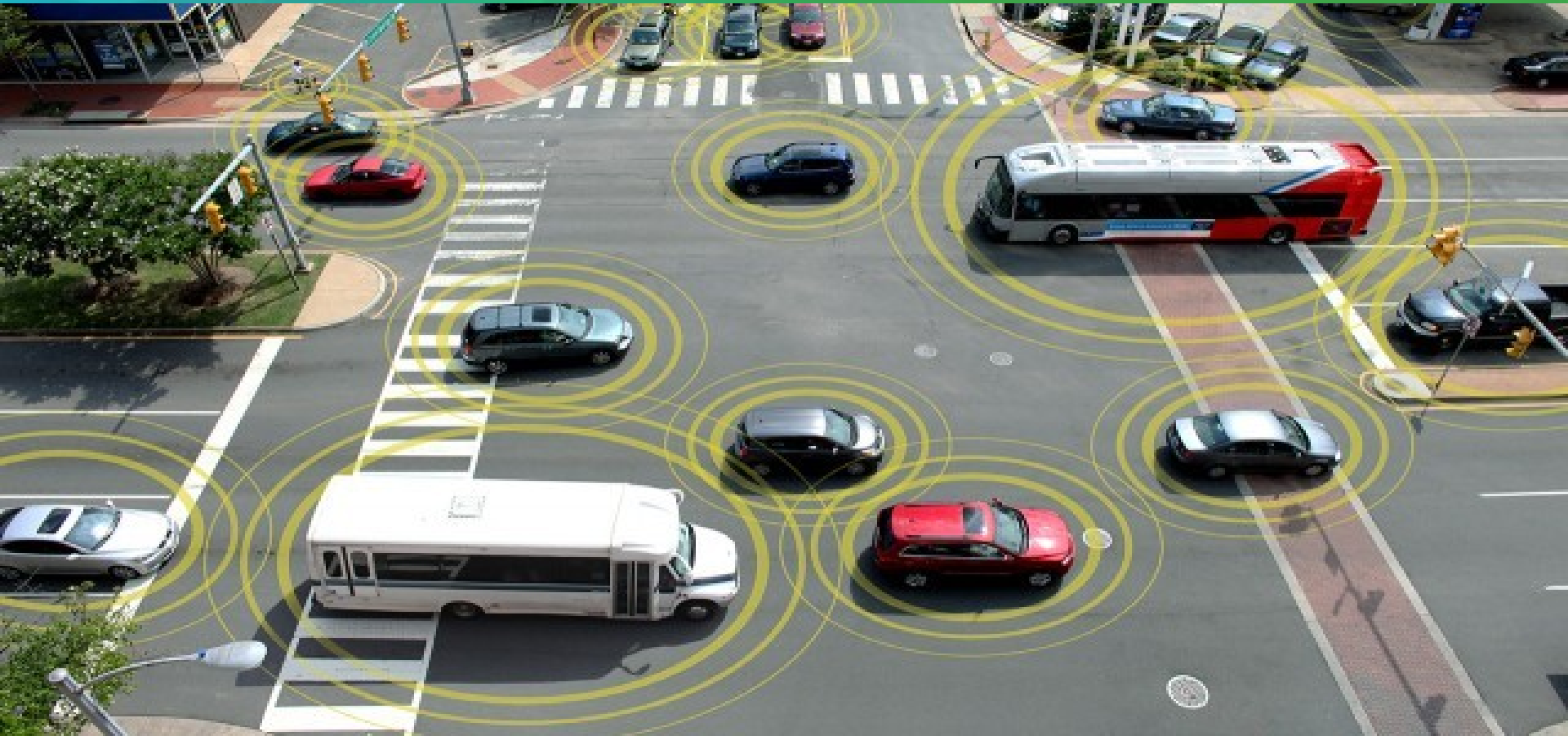
ANT+ (Cadence Meter)



Blue Tooth (Trainer Computer)



The Connected Car and Attack Surfaces



Cisco IT IOE Program

Cisco IT IoE Architecture

Sample
Criteria:
UX, Time to Cap.,
Ops simplification, risk
avoidance/mitigation,
ROI, TCO, ...

Architecture &
Common
Services

Blueprint for
Developers

Foundation



Cisco IT IoE Program Initiatives

IT Operations Initiatives

(Launched or in pilot)

\$790 million

IT IoE Security Initiatives

(Launched or in pilot)

\$330 million

Annualized values


For 10 IT IoE Initiatives

\$190 million

\$1.1 Billion+

*Projected value over 10 years
for 10 IT IoE initiatives that are
launched or in pilot*

Estimates developed by Cisco Consulting Services



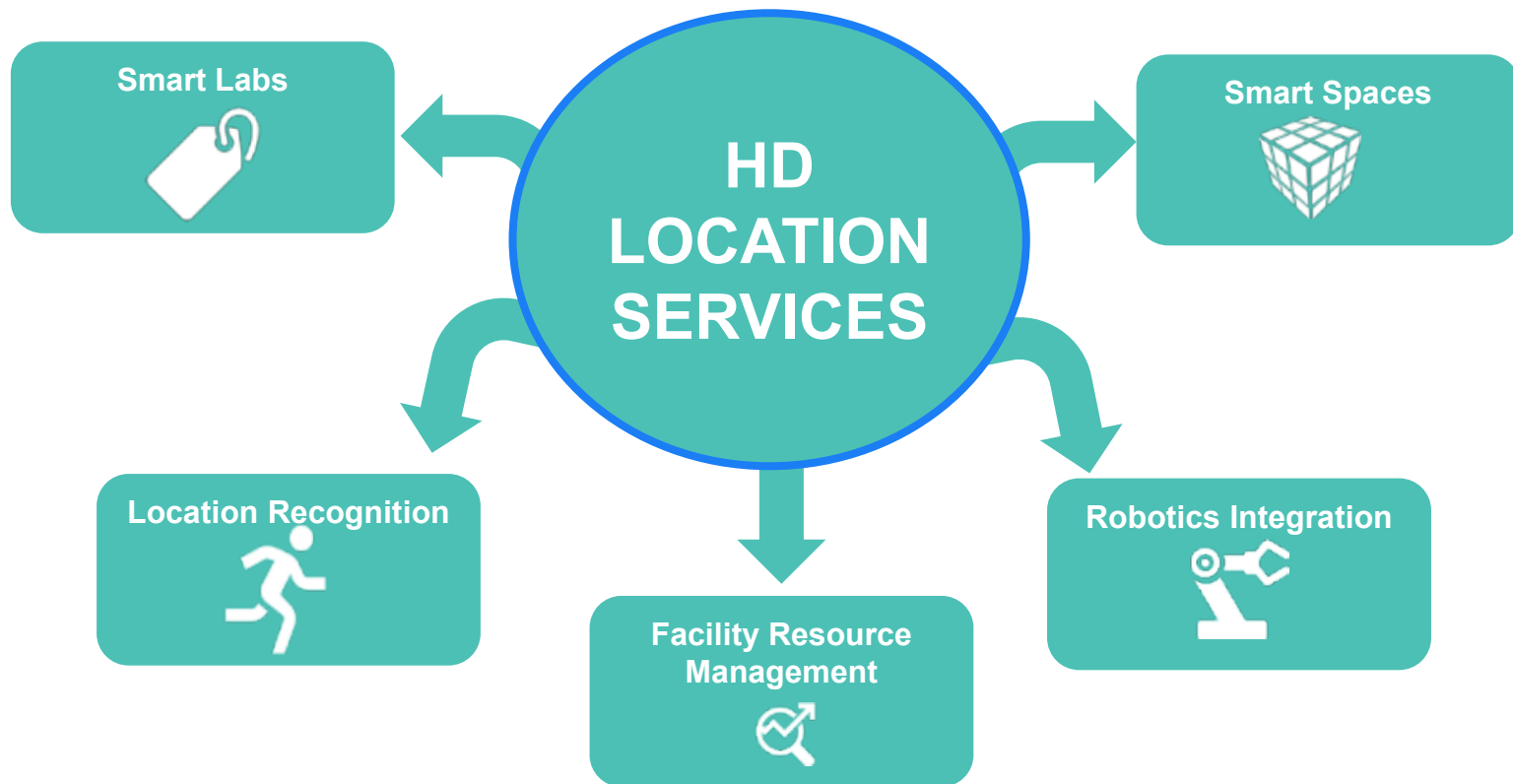
By 2020, there will be approximately
50 billion objects connected to the Internet.
IoE will require the Security of Everything!

Source: IDC

Cisco IT IoE Program – Use Cases



HD Location Services Solutions



HD Location Services – Smart Labs

Smart Labs



Using Cisco HALO technology, Smart Labs provides:

- Fixed asset management
 - Real-time asset tracking
 - Loss prevention
- Planning and scheduling
 - Enables location-based sharing and reuse of lab assets
- By year 5, est. \$30M annual value

Cisco HALO

- “Hyperlocation”: WiFi client location solution, with 1m accuracy, vs today’s $\pm 5/10$ m



HD Location Services – Location Recognition

Location Recognition



SJC Health and Fitness Center uses HD Location Services to provide push notifications to members who are in the vicinity of the center

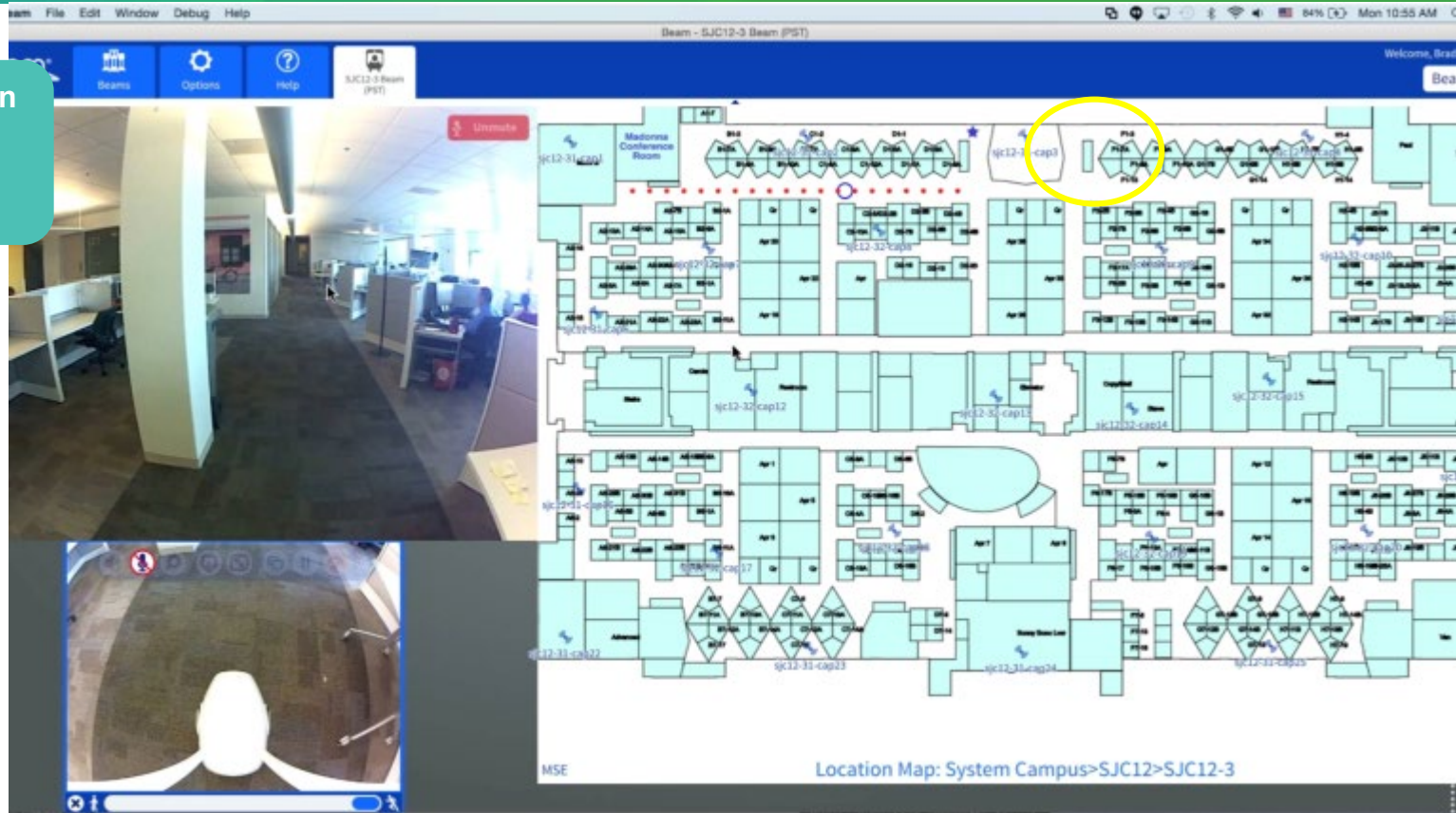


HD Locations Services - Robotics

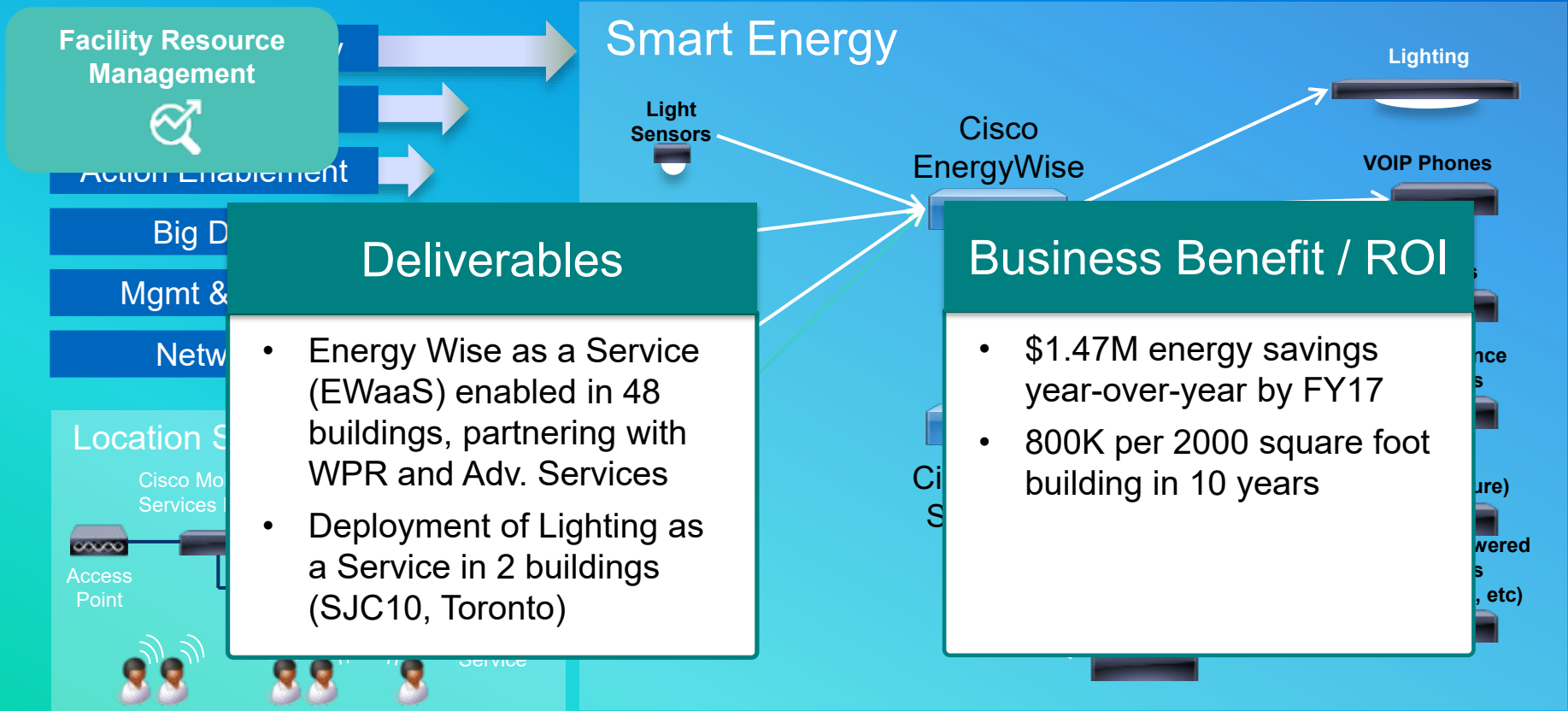
Robotics Integration



Beam-Pro



HD Location Services – EWaaS, LaaS



Smart+Connected Personalized Spaces

50%

is the observed utilization of corporate office space

Static allocation of workspace is inefficient.

\$1000

is the cost of gross rent per employee per month assuming 17% net cost per employee and gross rent of \$600 per sq foot per year

The 2011 Cisco Connected Workplace Report:

66%

Of employees globally place a workplace flexibility on today

54%

Of employees are classified as mobile (Highly Mobile, Campus Mobile or Neighborhood Collaborator)

New Workplace Paradigms:

- Not thinking with personalization
- More team & meeting spaces
- Active usage of collaboration technology
- On-demand workspace



Improve office space efficiency & Enabling Future Workplace Experience

Enable improved utilization of office spaces and resources using IP devices.

Ensure success of office not thinking by offering a modernized workspace and personalization

Ensuring adoption of flexible workspace by workforce

View & Reserve Work Space
View OfficeSpace space availability

Quick select from among the facilities

Search based on workspace attributes like type, equipment

Reserve one time or over multiple days



Locate Work Space & Colleagues
Use smart phone and tablet

Locate work space

Locate Colleagues by searching interactive floor map

Locate work space

Locate Colleagues by searching interactive floor map

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Check - In:
Adopt check-in without reservations, are allowed based on policy?

At check-in user's digital and comfort settings take effect

Digital Settings:
IP Phone extension, calendar, personal storage, pictures, calendar, RSS feeds etc.

Room Comfort Settings:
Room ambient settings, temperature, blinds, lights change

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Room ambient settings, temperature, blinds, lights change

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CHECK OUT

Check Out:
Cisco EnergyWise devices go into energy saving mode?

Building device lights, HVAC, blinds go in energy saving mode as per policy configuration

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Benefits

For the Organization:
Lower real-estate costs per employee

Simplify the adoption & leveraging of new technology & workforce trends

Enhance the workforce experience - leading to overall employee satisfaction

Finance returns enable overall growth to drive value spending time

Aligns well with corporate sustainability goals & initiatives

For the Workforce:
Improved productivity due to lowered time taken in finding, reserving and using a workspace

Reduce office experience through personalization

For the IT Team:
Ease of integration with traditional IT systems via Collaboration IP phones, Servers, Pbxes

Lower key setting, systems to reduce operational CAPEX & OPEX on Smart Workplace initiatives

Enhance Business IT alignment significantly

For the Facility Team:
Lower real-estate costs per employee due to improved real estate utilization

Reduction in facility services and energy costs

Visible space utilization, supports sustainable operation of workspace real estate in a dynamic growth environment

Smart Spaces capabilities for your workplace

Meeting Advisor	Automatic virtual and physical meeting room bookings based on location of participants	Personalization	Allows behaviors in app and in environment to be configurable by end users (presence, lighting, temp)
Smart Post Box	Pushes notifications when packages are delivered to 'Post Box' with access code	Smart Environment	Enables control of lighting and temperature
Biometric Identity	Alternative IoE friendly methods for authentication for kiosks, mobile and more	Guest Experience	Extends Cisco Smart Spaces to visitors and allows them to request and obtain temporary access
Personal Assistant	Integration with fitness providers and calendar to provide activity suggestions	Resource Utilization	Reporting on usage of resources
Resource Information	Meta data for resources like capabilities in a conference room, or when last pot of coffee made	Transportation	Tracks locations of intra shuttle service and availability of parking spaces
Meeting Assistant	Countdown timer for meeting; sends 5 minute warnings to participants	Platform for Personalization	Exposes services for broadcasting messages to dynamic groups of people based on location.
Way Finding	Looks up and finds people, places, and things	Virtual Tour	Wizards and demonstrations of Smart Space elements and how they can be used
Resource Availability	Understands whether or not a resource is really in use or not	Cisco Wow	Suggests times to leave to get work on time or suggests days to work from home based on traffic and/or availability
Smart Update	Updates Jabber "Available" presence with last known checked in location	Platform for PA	Web services capable of natural language processing

Smart Spaces – New Sample Capabilities

Connected Lighting

Connected Lights in Executive suites. Theme based lighting controls from Cisco Smart Spaces Application.



APR Check-in signs

PoE powered Audio Privacy Rooms
Check-in signs with color coded visual indicators



Kiosk

Kiosk with way finding, Indoor navigation, APR Check-in and Conference room booking



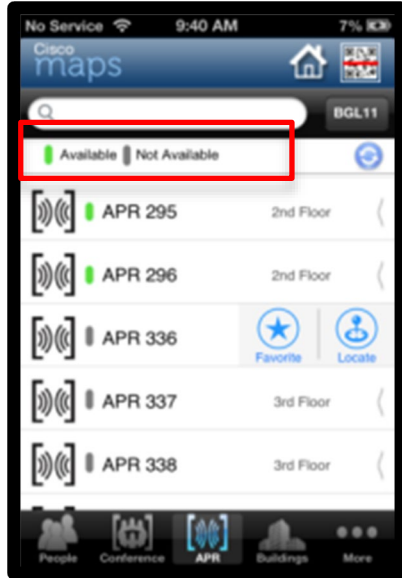
Digital Signage

Dynamic context specific content to users in the workplace



Smart Spaces – Mobile Experience

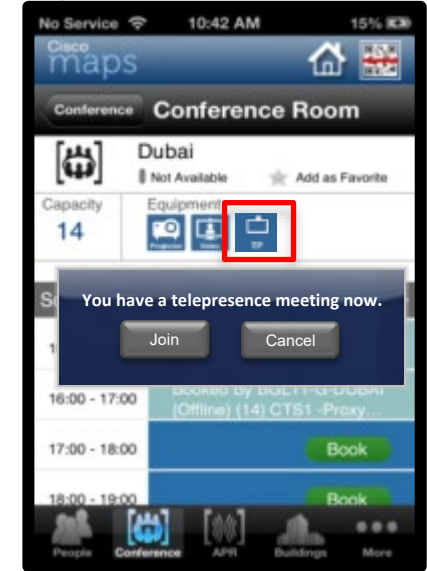
Smart Space Assignment



Intelligent Proximity



Intelligent One-Click WebEx / TP



Smart Spaces



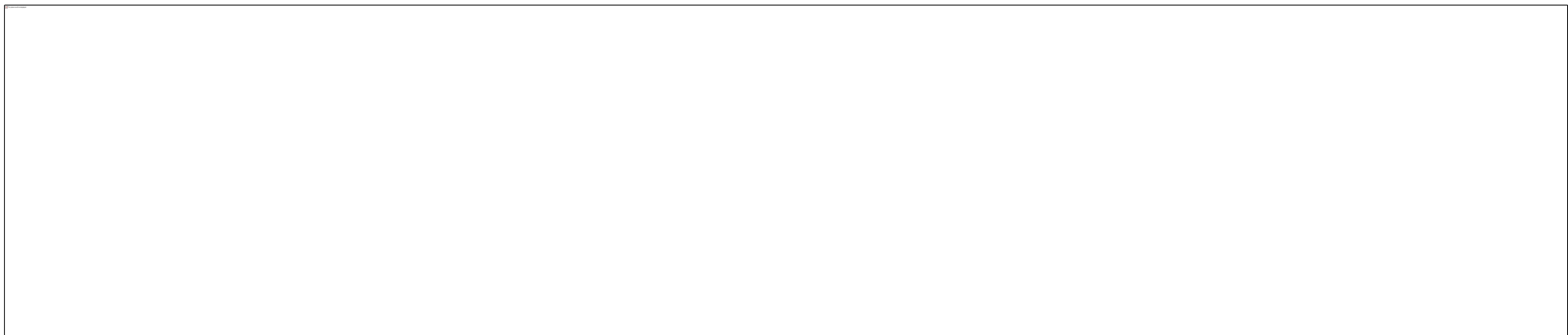
Some Key Take Aways

IOT and IOE are real, it's time to transform [yourself, your teams, your business, your community, ...]

*“Disrupt or be disrupted”
- Cisco Executive*

Are you connected? Are you ready?

Q&A



Supply Chain Hybrid Cloud Future Architecture

Deliverables

- Real-time package tracking using RFID at carton level in 50% of CM and SLC sites

Business Benefits / ROI

- \$800K savings year-over-year starting in FY17
- Real-time visibility
- No process latency
- Cost reductions

Supply Chain Hybrid Cloud - Vision

Enable Cisco's success by delivering **ADAPTABLE**,
INNOVATIVE, and **SCALABLE SUPPLY CHAIN SERVICES**
that **OPTIMIZE CUSTOMER OUTCOMES**

FOUNDATIONAL



Quality
Excellence



Delivery
Excellence



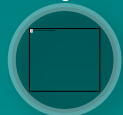
Cost
Excellence



New Product
Introduction

ADVANCED CAPABILITIES

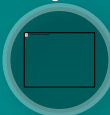
Risk
Management



Segmentation



Acquisition
Integration



Security



Factory of
the Future



Connected
Supply
Chain



Development



Supplier
Collaboration



Workforce
of the Future



Sales & Operation
Planning



Sustainability

Supply Chain Hybrid Cloud – Scope



Supply Chain Excellence as a Service

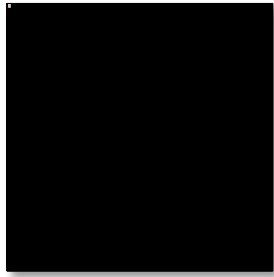
Orchestration Capability in the Cloud
to optimize Data Movement and real
time Visibility of the Ecosystem to
deliver Operations Excellence



Inventory Visibility

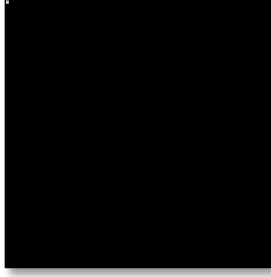
Partner Applications that are available
for Ecosystem to Use when Needed
for real-time Packout Status of
Inventory

Supply Chain Hybrid Cloud – Benefits



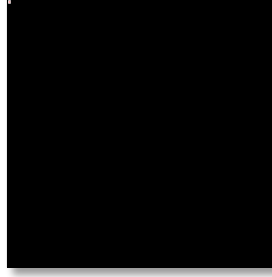
FLEXIBLE

Choice of Provider
Data across Ecosystem
Data Sovereignty
Capacity Augmentation



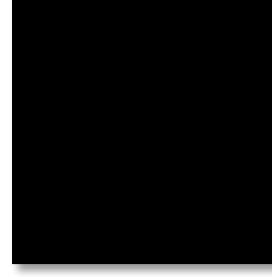
REAL TIME

Synchronous
Significant Reduction
in Data transfer time



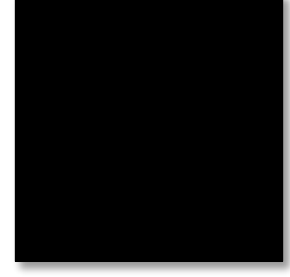
VISIBILITY

Data Driven decisions
Alerts & Notification
End-to-End Visibility



PREDICTIVE

Data Analytics with
Prediction and
Prescriptive capabilities
for
Adaptive Supply Chain



IoE

Internet of Everything
capabilities for
Connected Warehouse
& Smart Factories