Smart+Connected Campus

Enabling The Workplace Of The Future

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Are You Thinking Of A Smart Campus For Your Enterprise?

• A) Yes and very soon
• B) We already have a smart campus
• C) No plans currently
• D) Smart Campus? What is that?
The physical workplace, and how and where people work are being redefined

**Devices**
- 15 billion connected devices by 2015 and growing
- 2 networked devices per capita: 2015
- Connecting not just people but machines (2 billion by 2015)

**Collaboration**
- Workplace more distributed than ever
- Lots of geographically dispersed teams
- Often have to bridge multiple time zones

**Flexibility**
- Younger workforce driving change
- Still need to retain ageing talent
- Higher traffic congestion
- Growing demand for home-office and near-office options

**Consumerization**
- Consumerization of IT
- Driving new product innovations
- IT applications and services are more socially aware and user friendly

**Work Life**
- Interplay between professional and personal lives
- Balance key to talent attraction and retention
Posing New Challenges

Transforming the workplace is a cross-functional initiative and not owned by a single department anymore.

How do I attract and retain the best talent?

How do I meet internal and external stakeholder expectations?

How can I implement new apps and IT innovations with minimal disruption?

How do I collaborate and work more effectively?

How do I outsource my real estate costs and still meet business needs?
In a Smart Campus ...

- **User Experience**: Drives adoption of workplace practices
- **IT Systems**: Integrate & Unify both user facing & back-end technologies
- **Facility Systems**: Makes optimal use of existing facilities & underlying systems
Building blocks of a Smart Campus

1. Smart+Connected Parking
   - Give citizens live parking availability information to reduce circling and congestion

2. Smart+Connected Information kiosk
   - Monitor and manage traffic incidents to reduce congestion and improve livability

3. Smart+Connected Safety & Security
   - Automatically detect security incidents, shorten response time, and analyze data to

4. Smart+Connected Visitor management
   - Inform the host about the arrival of visitor. Issue entry pass after remote verification by

5. Smart+Connected Café management
   - Manage street lighting to reduce energy and maintenance costs

Converged and centralized management

Shared Infrastructure
Benefits of a Smart Campus

User Experience
- Better Flexibility
- Better collaboration
- More “neighbourhood” spaces
- Safe and Secure environment

Operational Efficiency
- Efficient space utilization
- Integrated Operations Centre
- Proactive Alarm & Alert
- Enhanced Preventive maintenance
- Integration to Enterprise ticketing systems

Energy
- Real Time Energy Management
- Rule based energy consumption
- LEED certification points
- Lab energy usage optimization

Information Value
- Building performance metrics
- Energy Trending & Reporting
- Facility: Incident, Alarms, and Trend Reports
Mr Kumar works for a company with a Smart Campus, which provides automated service solutions from the time he arrives at the building to when he leaves.

Experience of a Smart Campus – Sample Scenario

1. Vehicle with RFID tag enters the parking lot, and is guided to parking space by digital signage.

2. As soon as the vehicle enters the parking lot, the VIP elevator starts moving down to the basement for Director Hong. His identity is authenticated using a smart card, and the related data will be sent through the DS.

3. Building information and daily schedules sent to smartphones from the groupware through the FMC.

4. Smart cards are used for entering/exiting and using elevators.

5. On Director Hong’s arrival, the lighting and the air conditioning are automatically turned on.

6. Building information, notices, and announcements are displayed on the digital signage machines installed in the office in real time for employees.

7. When employees leave the office for the day, non-essential items are powered down for saving energy.

8. IP CCTV installed outside the building provides traffic information.

9. IPT provides automated services such as lighting, temperature, building information, and projector connection.
Key Benefits of an IoE-enabled City
Benefits Maximized when Solutions Combined

- **Parking**
  - Increased compliance and faster search times

- **Lighting**
  - OpEx reductions
  - Crime reductions

- **Road pricing**
  - Improved traffic flow
  - City revenue

- **Waste management**
  - OpEx reductions
  - Usage-based pricing

- **Toll booths**
  - Faster throughput
  - Reduced congestion

- **Buses (bus stops)**
  - Reduced wait times
  - Higher occupancy

- **Particulate monitoring**
  - Improved health
  - Improved compliance to standards
## How Cisco Benefited

<table>
<thead>
<tr>
<th>Typical floor in San Jose</th>
<th>Legacy environment</th>
<th>Cisco Connected Workplace</th>
</tr>
</thead>
<tbody>
<tr>
<td>Usable area</td>
<td>49,000 sq. ft.</td>
<td>49,000 sq. ft.</td>
</tr>
<tr>
<td>Work space</td>
<td>70% individual 30% collaborative</td>
<td>30% individual 70% collaborative</td>
</tr>
<tr>
<td>Use pattern</td>
<td>Traditional, Assigned</td>
<td>Flexible, Unassigned</td>
</tr>
<tr>
<td>Seat capacity</td>
<td>300</td>
<td>375</td>
</tr>
<tr>
<td>Enclosed meeting spaces</td>
<td>16</td>
<td>72</td>
</tr>
<tr>
<td>Usable area / employee*</td>
<td>163 sq. ft.</td>
<td>111 sq. ft.</td>
</tr>
<tr>
<td>Chargeback per employee</td>
<td>$5,162 per year</td>
<td>$2,596 per year</td>
</tr>
<tr>
<td>Persons housed</td>
<td>255</td>
<td>400-500*</td>
</tr>
</tbody>
</table>

*Based on 75% Badge-In Rate
So Now - Are You Thinking Of A Smart Campus For Your Enterprise?

• A) Yes and very soon
• B) We already have a smart campus
• C) Tell me more!!!
• D) When can we start?