

Usando el Internet de las Cosas para aumentar la Eficiencia Urbana y Satisfacción Ciudadana en Servicios Urbanos

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Smart Cities Latin America
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Usando el Internet de las Cosas

1.IoT, IoE y Ciudades

2.Ciudades Interesantes

3.Lecciones Aprendidas

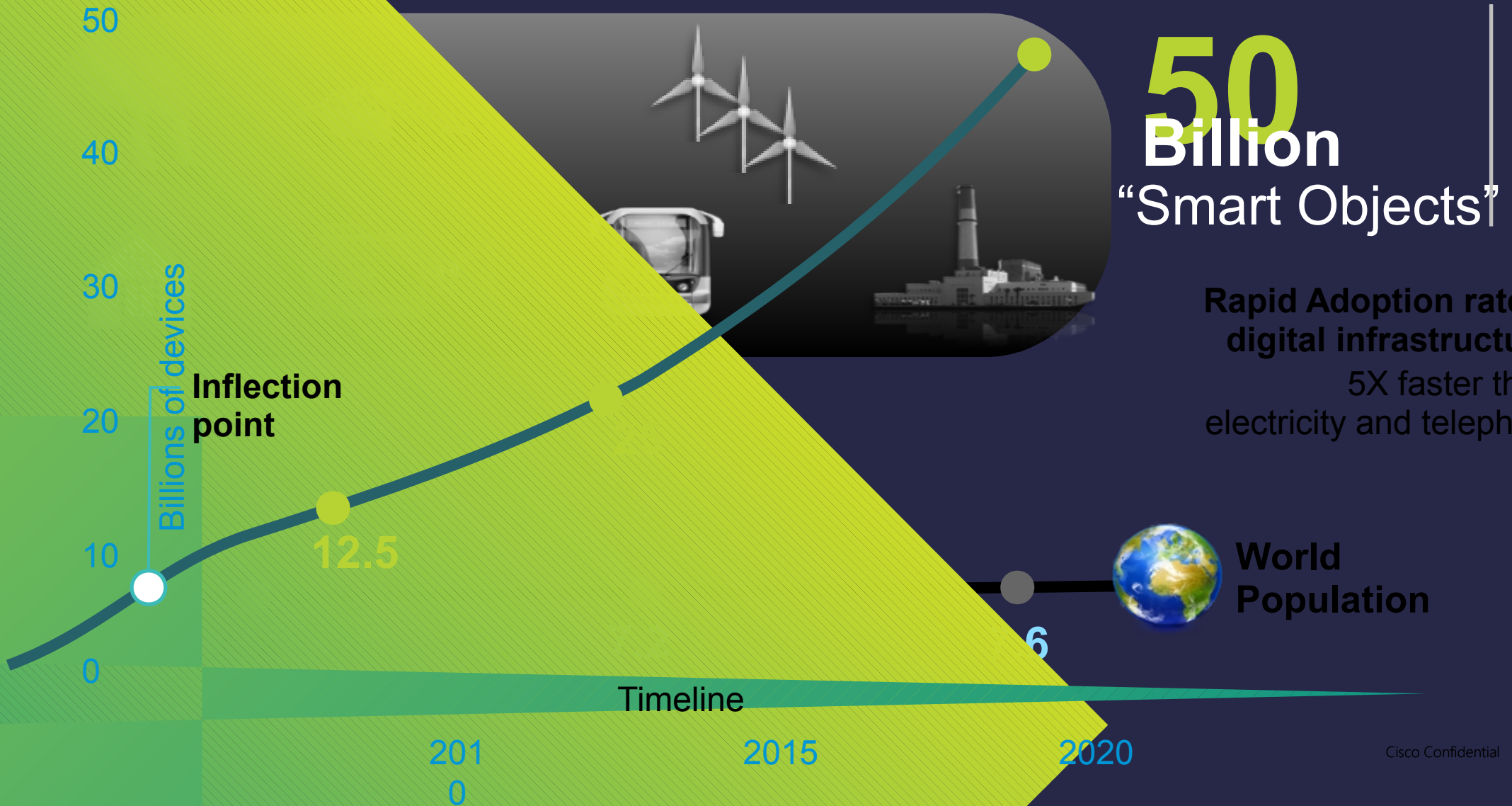
Costa Rica: poblacion urbana que crece

Urban Population

Global



En el Internet de las Cosas, todo se conecta a todo



The Internet of Everything (IoE)



People

Connecting people in more relevant and valuable ways.



Process

Delivering the right information to the right person (or machine) at the right time.



Data

Leveraging data into more useful information for decision making.



Things

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

People-to-People + People-to-Machine + Machine-to-Machine

Intereses Urbanos Motivan Interes en Tecnologia

1

Citizen
Engagement



2

Economic
Growth



3

New
Revenue
Streams

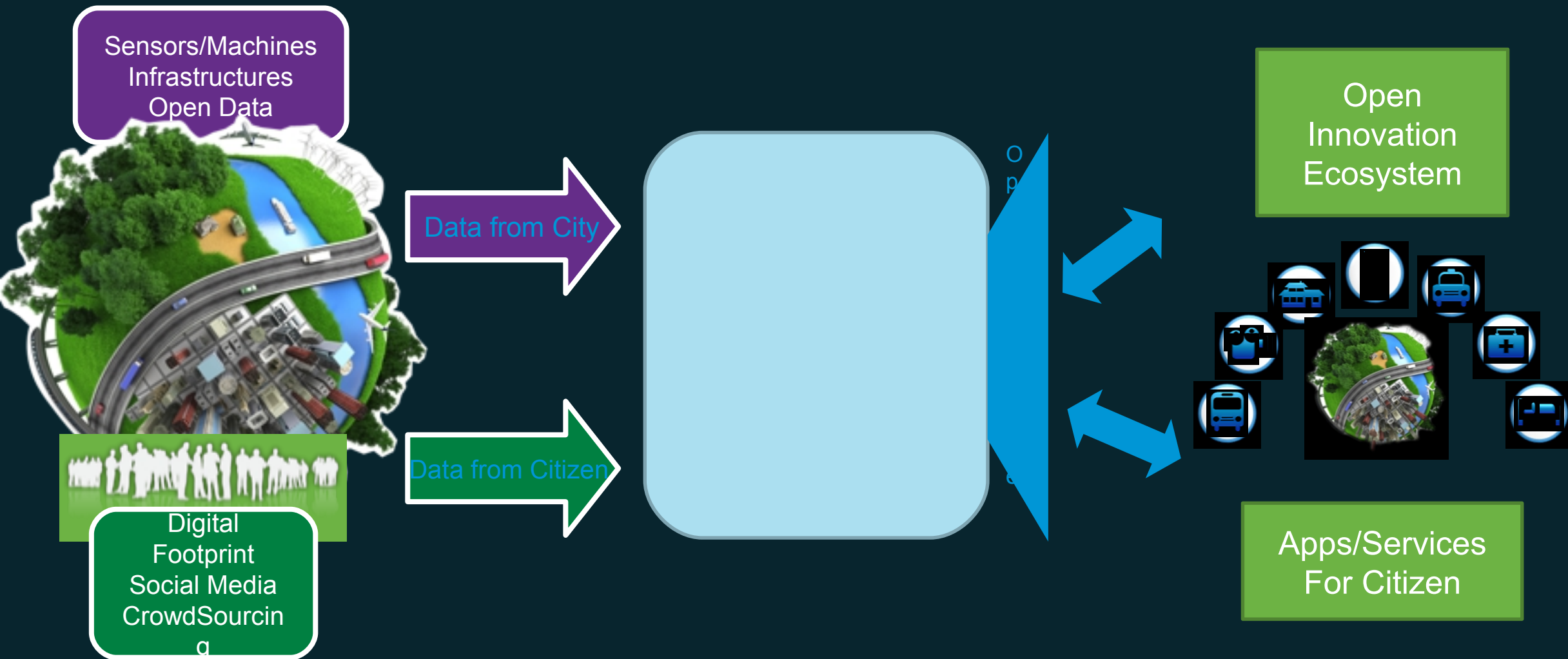


4

Operatio
nal
Efficienci



Smart+Connected Communities: Nuevas Posibilidades



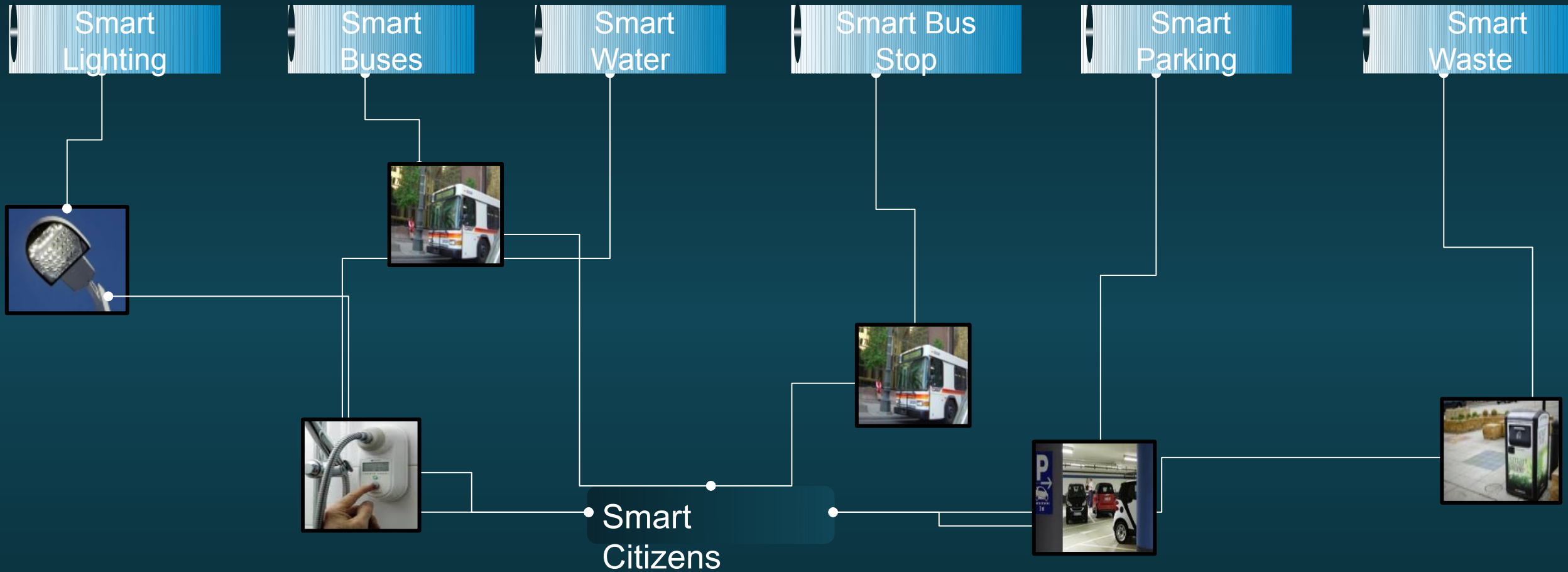
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Barcelona: Smart City...Urban Value Creation



Revenue

Citizen Experiences

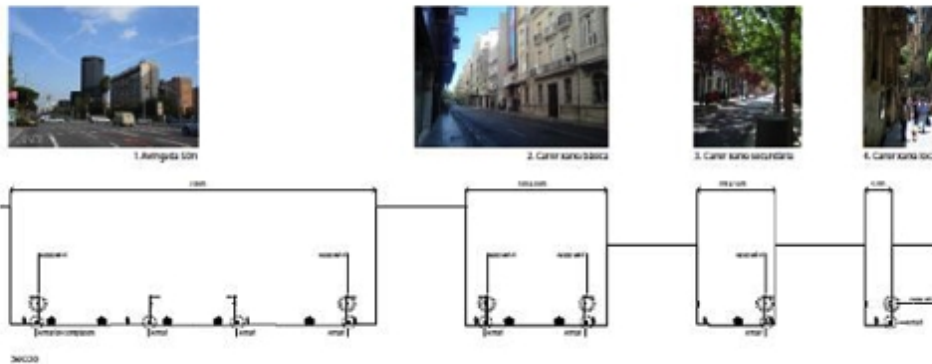
Jobs

Productivity

Cost Avoidance

3. Estructura de Wi-Fi Urbano.

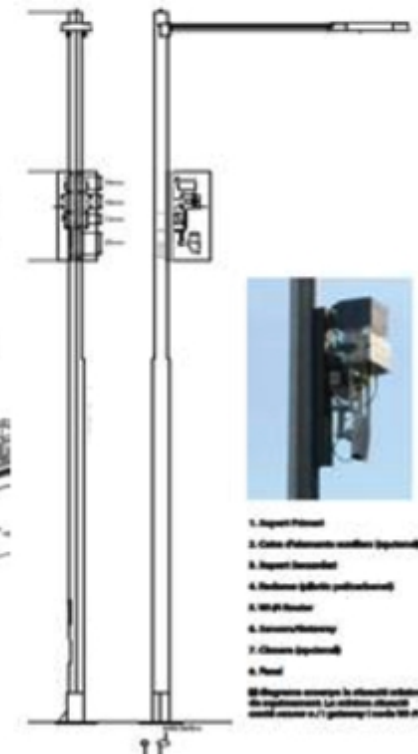
La ciudad debe contar con una red de puntos de acceso wifi distribuido homogéneamente en la ciudad, con el fin de poder conectar los sistemas de información relacionados con Servicios urbanos



- Legal
New contracts with vendors to capture value
- Financial
Sustainable Solutions with proven ROI
- New Infrastructure Service Supply Chain
Lower Operational Costs
- Rollout and Future Proofed areas
Standardized Technology
Organic street-level retrofit



Esquema de distancias para la implantación de puntos de acceso



Wi Fi y sensores en farola

Barcelona Example: Smart Bus Stop

- Barcelona deploying Smart Bus Stop across the city and creating new platform
- Services provided:
 - Large touchscreen kiosks with City Apps
 - Transport, Entertainment, Tourist, City Information
 - Wi-Fi Hotspot (Barcelona Wi-Fi)
 - Advertisement via a separate LCD screen
- Impressions and ad revenues subsidize solution
- Cisco Location Analytics: the City adapts in real time to the flow of citizens in specific times of the day to deploy extra buses, providing a better flow and a better service to citizens



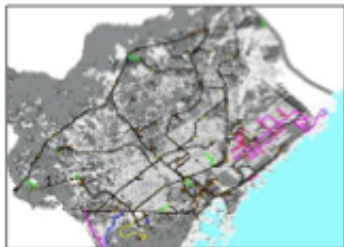


Gestió Integrada de Xarxes Municipals (GIX)

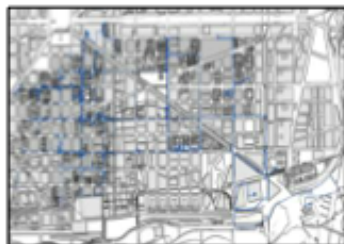
Proposta d'evolució

Mensajes de Barcelona

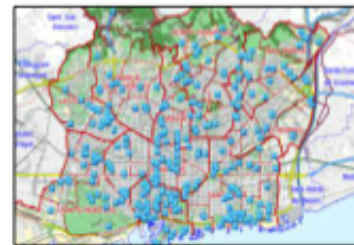
El model actual de gestió d'aquestes infraestructures encara pot millorar en eficiència i en la seva capacitat de proporcionar serveis a l'Ajuntament amb la **transició cap a una solució integrada** de les diferents solucions tecnològiques i xarxes existents en l'actualitat:



- Xarxes destinades al control de trànsit i la mobilitat
- Xarxa corporativa d'ús intern destinada a la informàtica corporativa



- Infraestructura de fibra òptica del 22@.



- Xarxa WiFi per a ús intern i d'accés a internet per al ciutadà



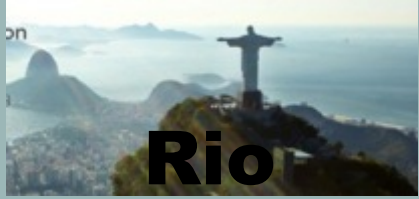
Una xarxa única, escalable, amb una alta capil·laritat i preparada per als reptes associats a les ciutats intel·ligents

1. Convergència de 5 redes distintas (luz, transito como tambien servicios a otras agencias)
2. Utiliza la fibra y la red wifi de BCN
3. Uso doble de la red: para backoffice municipal y para ciudadanos

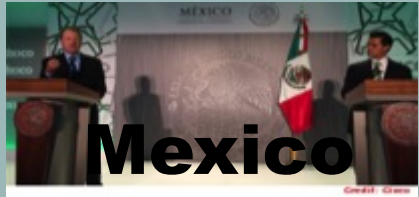


1. Define un mantra para tu ciudad y una visión a largo plazo
2. Analiza su estructura y define prioridades para actuar de inmediato
3. Repiensa los sistemas, no solo los actualices
4. Desarrolla una economía de servicios urbanos
5. Haz tu ciudad más resiliente
6. Construye una ciudad vivible
7. Cambia tu organización, rompiendo silos
8. Comparte tu progreso con otras ciudades, siendo parte del

Latin America - Use Cases



- Rio State: Command & Control Center, monitoring, prevention & mgmt. of catastrophes in 700 high risk areas
- Rio City: Partner with Mayor & Leverage Olympic Sponsorship to Develop a Citizen Collaboration Platform to Connect Citizens & Government
- Vitoria: develop a master plan in partnership with ID to make Vitoria a world class example of a S+CC City
- Brasilia: city Wifi and Metro Ethernet for ubiquitous digital access to citizens and for future IoE solutions



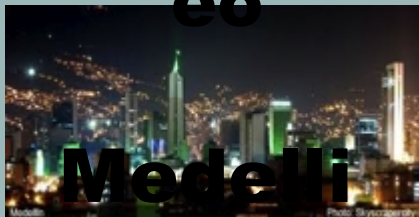
- National Agenda & ICT policy to create platforms for shared services & Gov't cloud solutions
- Mexico Connected: BB connectivity 98% of population, +250k public buildings: schools.
- Launch of national one Tablet per student / 700K+ tablets/equipping & connecting 20K+ classrooms Aug 2014, and end of 2018 +5 million tablets delivered and more than 125 K classrooms equipped and connected



- City of knowledge enabling Ecuador as a Science and Technology exporter
- Created the master IT Plan for the City
- Innovation Center would serve as a space for the ICT students of the Universidad de Investigación de Tecnología Experimental de Yachay for project research and developing



- Plan Ceibal Uruguay. National project for Technology & Social Inclusion. 250K netbooks under the OLPC Program delivered to public schools
- Collaboration ,Telepresence , Webex, UC cover 1K schools that get English classes through a centralized hub
- Students around the country now have the same opportunities that the ones in the capital



- Smart City "Medellin Digital" a reality for 2.5M Inhabitants
- Comprehensive Public Schools, Wifi Public Phones, Wifi access for 150+Public Places , Public transportation
- Project deployed with UNE – Public SP, replicable in mid size cities in Colombia

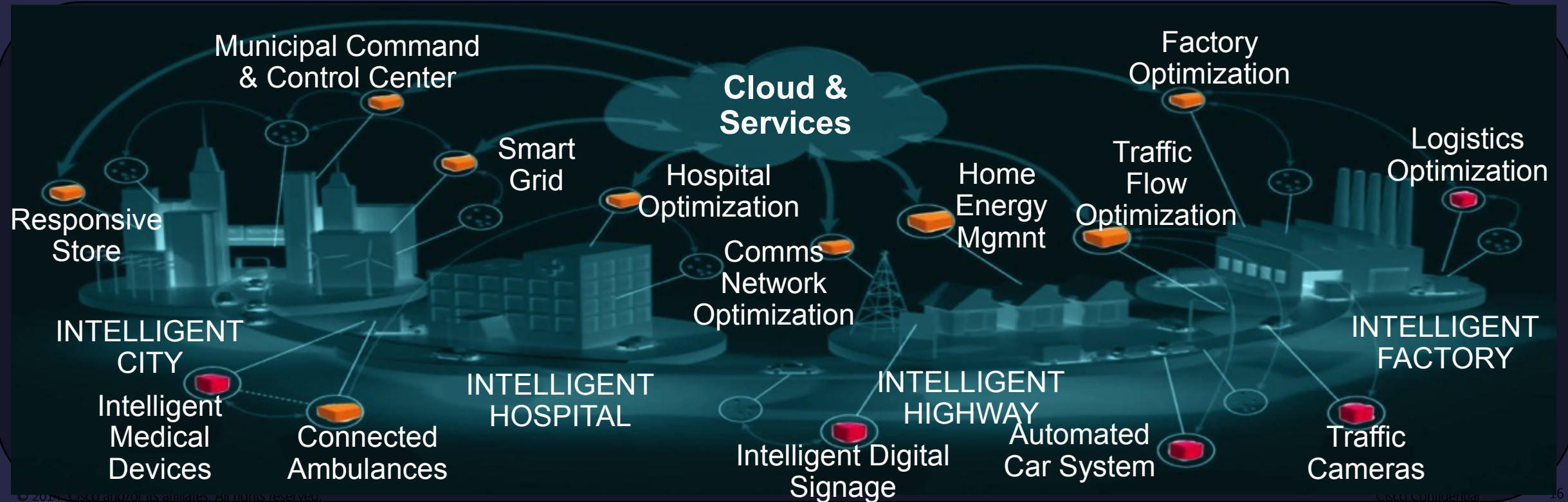
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Smart+Connected City



Marco Estrategico de una Ciudad Inteligente: Responde diferentes necesidades en el uso urbano de la tecnologia

Servicios de
Infraestructura

Servicios al
Ciudadano

Administracion
de la Ciudad

Marco Estrategico de una Ciudad Inteligente Incorpora Soluciones y Infraestructura

Servicios de Infraestructura

Servicios al Ciudadano

Administracion de la Ciudad

Vertical Solutions

- Smart Parking
- Smart Lighting
- Smart Traffic
- Smart Transport
- Public Safety and Security
- Location services

- Remote Expert Government Services (REGS)
- Contact Center

- Operations Center
- Public Safety and Security
- Contact Center
- Smart Spaces

Horizontal Architecture

- Collaboration
- Data Center
- City Wifi
- Borderless Networks
- Security

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Camino a una Ciudad Inteligente



Modernizar

Colaborar

Aprovechar

Thank you.

