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de volta e totalmente repaginada!

**Conheça o novo**



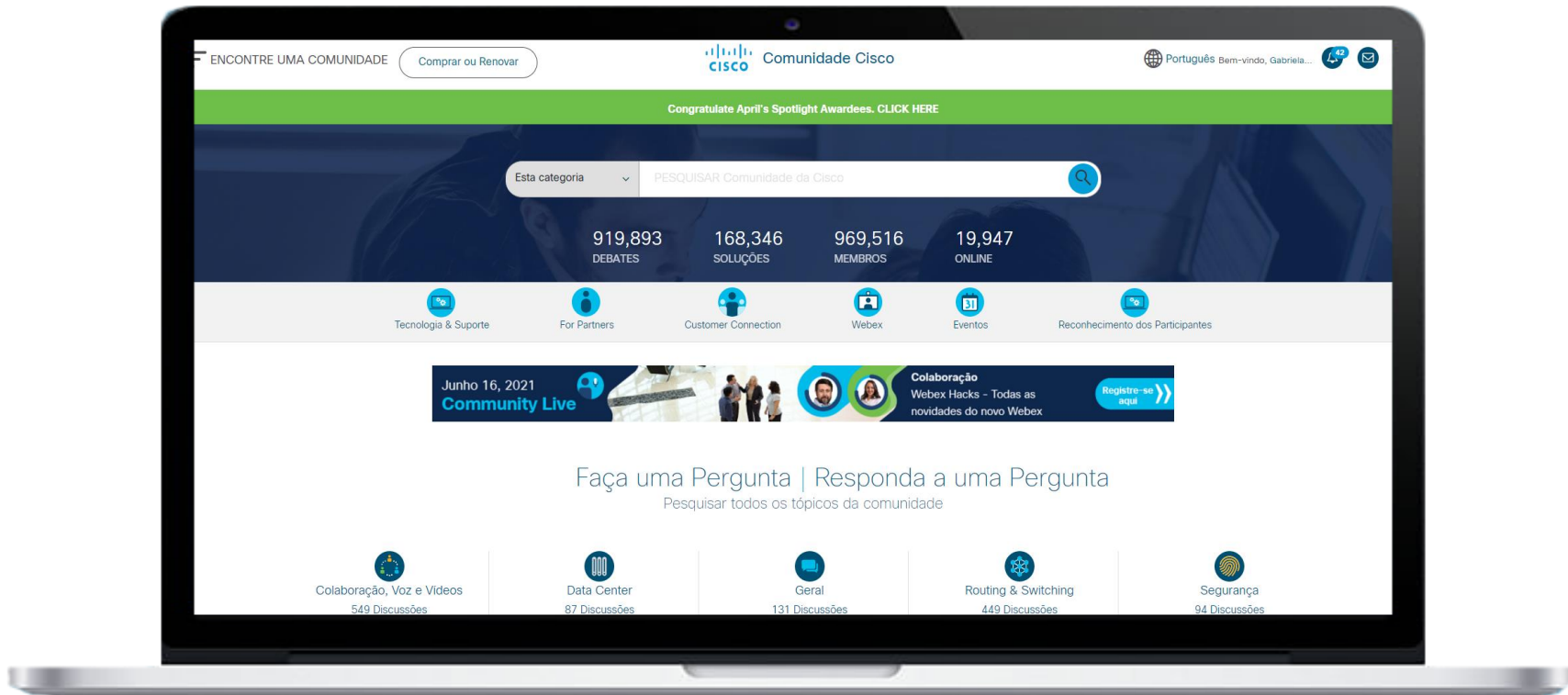
**Quint@s Quinze**

# Smart Offices: Transformando seu escritório em espaços colaborativos inteligentes



Flavio Correa, Technical Solutions Architect, CCIE #38913

Sergio Polizer, Technical Solutions Architect, CCIE #26069



<https://community.cisco.com/t5/comunidade-da-cisco/ct-p/comunidade-portugues>



Flavio Correa





Sergio Polizer





# Agenda

**01**

O trabalho híbrido e espaços colaborativos inteligentes

**02**

Tecnologias de conectividade e Indoor IoT

**03**

Tecnologias de colaboração e espaços inteligentes



# Smart Offices: Transformando seu escritório em espaços colaborativos inteligentes



Flavio Correa, Technical Solutions Architect, CCIE #38913

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# Agenda

- Novos desafios do modelo de trabalho híbrido
- Smart Office – espaços de trabalho inteligentes, mais eficientes e seguros
- Tecnologias de conectividade e Indoor IoT para espaços inteligentes
- Tecnologias de colaboração para espaços inteligentes
- Demonstrações das soluções



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## *SLIDO 1*

Como foi a sua experiência com o trabalho remoto?



# New Workplace needs for a Mobile Hybrid Workforce



## Best Mobile Experience

Pervasive mobility at office spaces to accommodate a Hybrid Workforce



## Intelligent Infrastructure

Use of the latest technologies to keep the business running with maximum visibility, simpler operations and safer workspaces



## Increase Security Capabilities

Cisco Zero Trust for Workplace to handle more user and IoT in a intelligent and secure manner

# Business Resiliency solutions

Reimagine possibilities with Cisco Connected Experiences

Solutions

## Secure remote workforce

## Trusted workplace

Foundational capabilities



Flexible remote access



Secure remote collaboration



Secure access



Seamless collaboration

Additional capabilities

Remote Contact Center

Virtual Desktop Infrastructure

Remote Operations

Social Density Insights

Remote Expert Access

Optimized Application Experience

Proximity Reporting

Asset & Facility Monitoring



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## *SLIDO 2*

Sua organização tem planos de reabertura dos escritórios?



Tecnologias de  
conectividade e  
Indoor IoT para  
espaços  
inteligentes





# Safe

Create a trusted workplace that helps enable a safe return to office.



# Smart

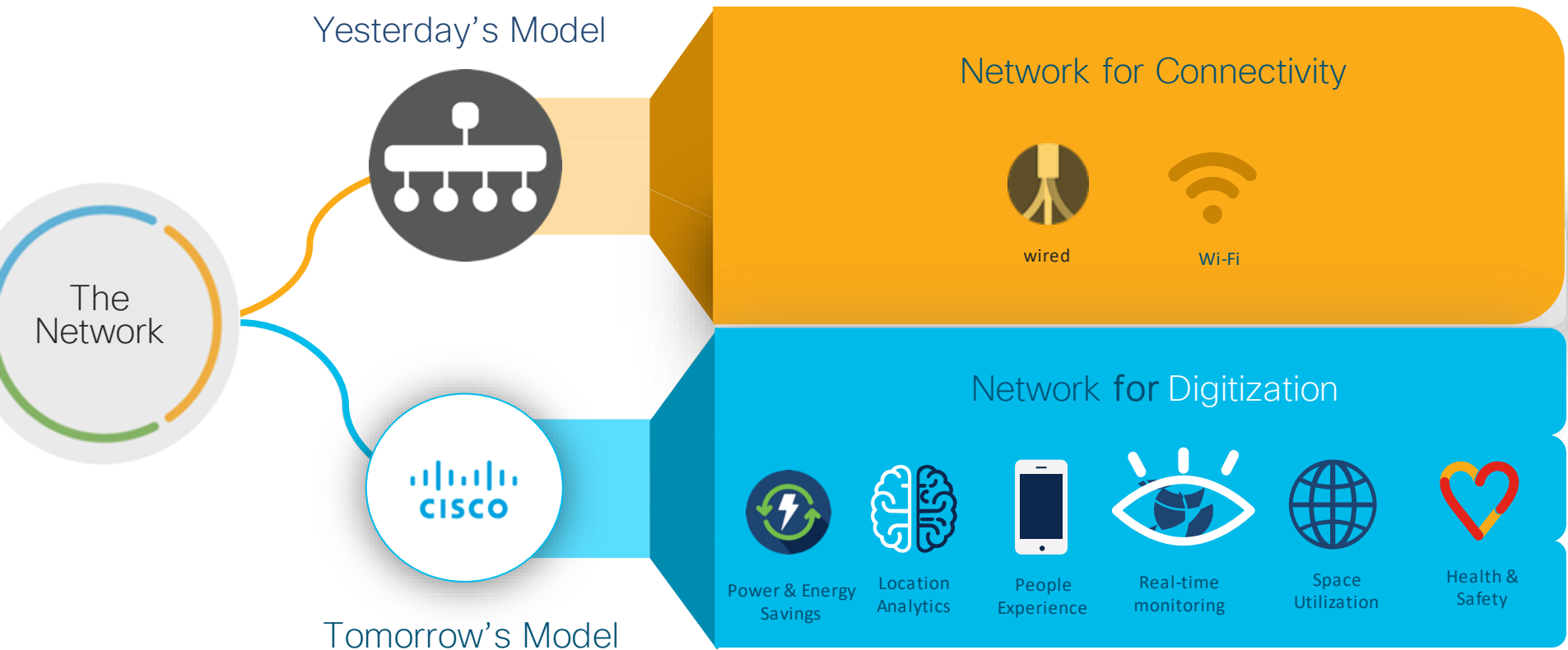
Make buildings smarter with our Enterprise IoT solution. Discover, deploy, monitor IoT devices, activate partner apps for outcomes, at a significantly lower TCO.



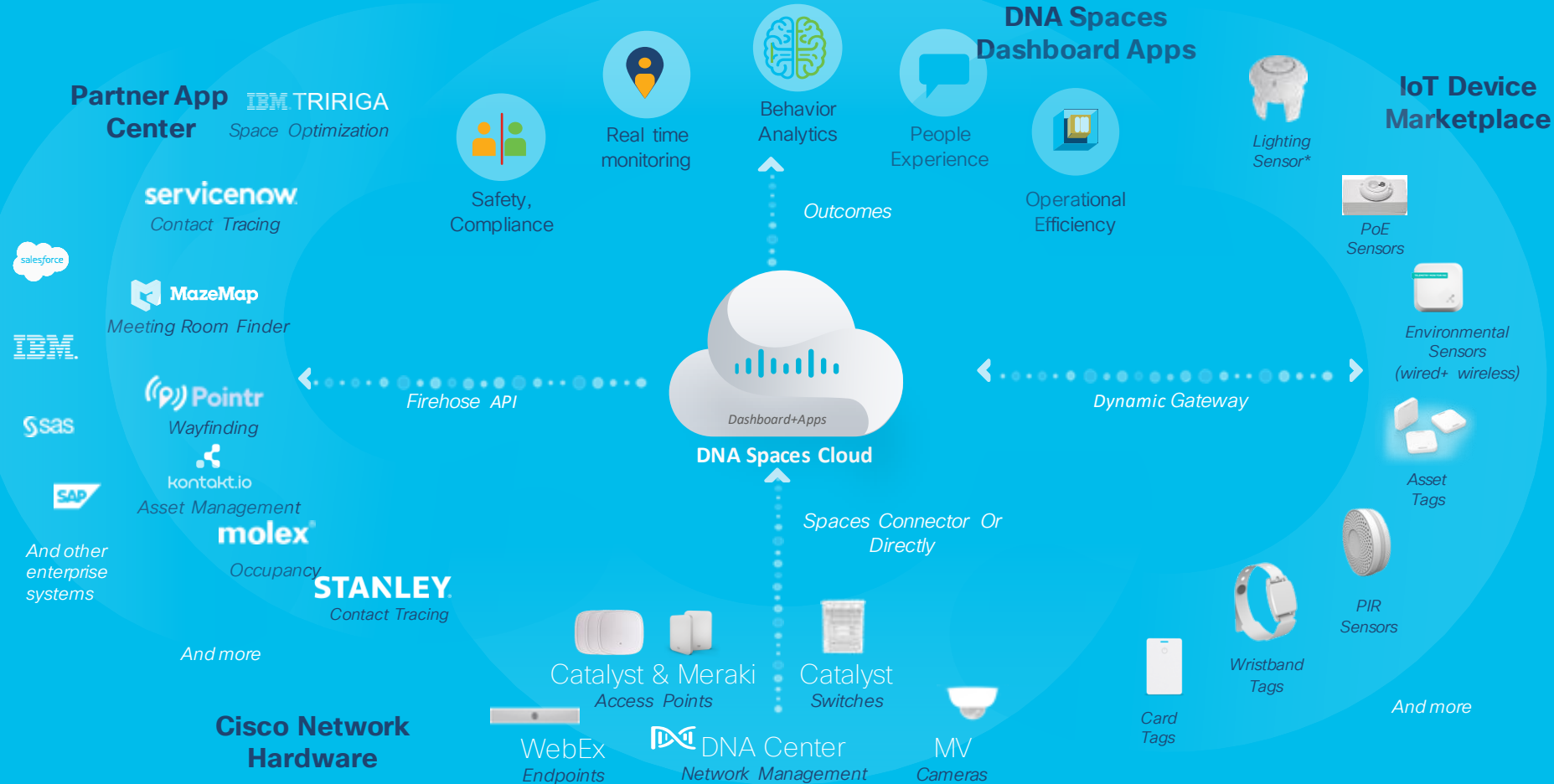
# Seamless

Connect people & things seamlessly with your buildings and create moments that matter.

# The network is the new building foundation

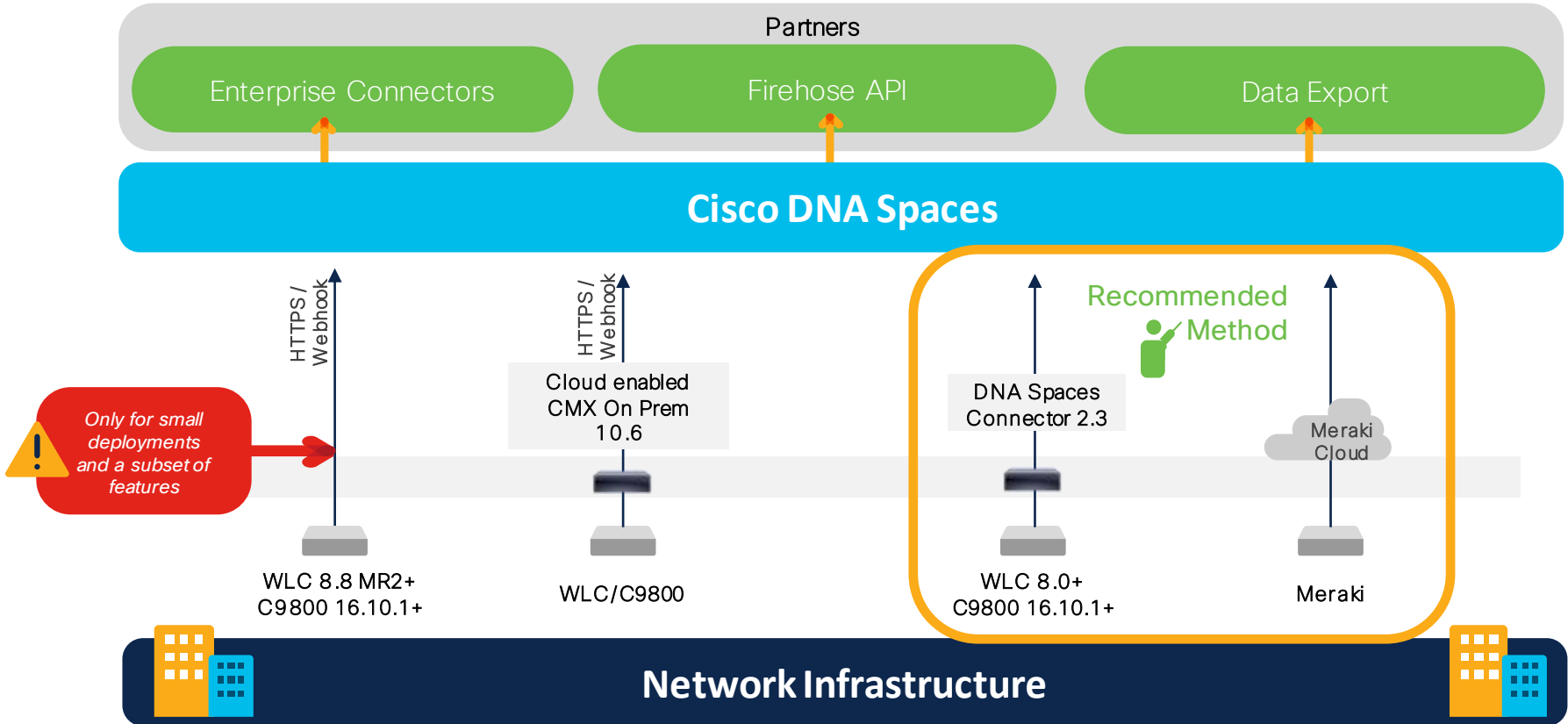


# Cisco DNA Spaces: Analytics and Insights for Smart Offices



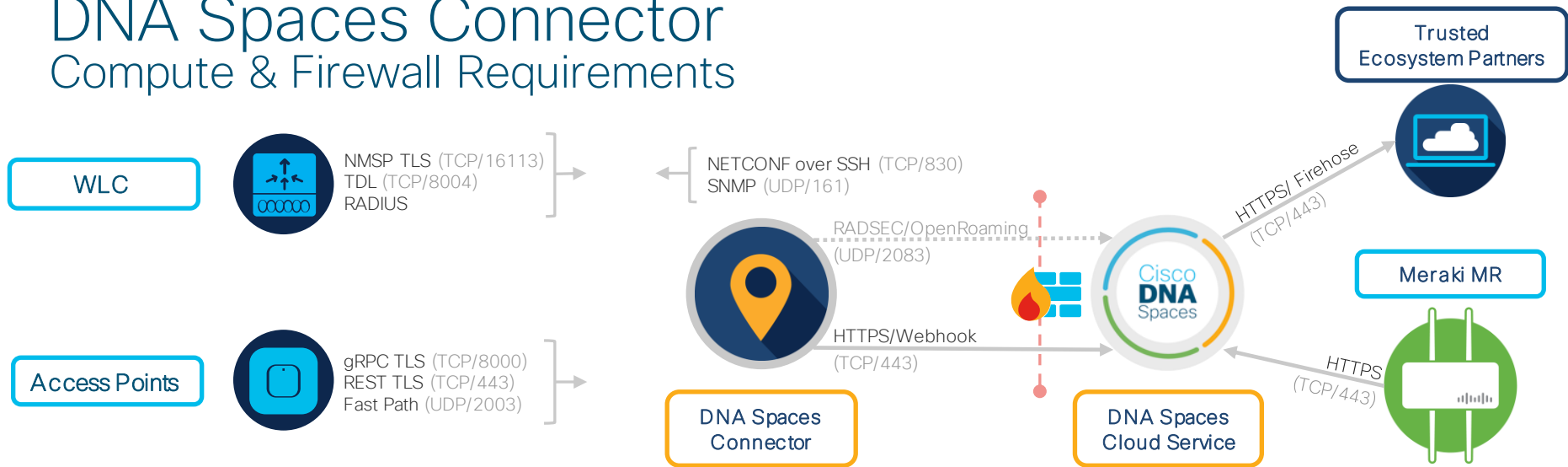
# Support All Cisco Wireless Solutions

Compatibility and Interoperability across Aironet, Catalyst, and Meraki



# DNA Spaces Connector

## Compute & Firewall Requirements



### Connector - Compute Requirements

Hypervisor Support	ESXi 6.5.0 & 6.7U2 (Tested)	
	<b>Typical</b>	<b>Options</b>
vCPU	2 vCPU	2 / 4 / 8
RAM	4 GB	4 / 8 / 16 GB
Hard Disk	60 GB	60 GB

### Connector - Internet Connection Requirements (HTTPS)

	Primary	Secondary
<b>Americas</b>	52.20.144.155	54.176.92.81
<a href="https://connector.dnaspaces.io">https://connector.dnaspaces.io</a>	34.231.154.95	54.183.58.225
<b>EMEA</b>	63.33.127.190	3.122.15.26
<a href="https://connector.dnaspaces.eu">https://connector.dnaspaces.eu</a>	63.33.175.64	3.122.15.7

# 1. Safe Office



## Real Time Occupancy & Density Triggers

Visualize real time occupancy and trigger notifications when thresholds are met

## Proximity Reporting

Understand the extent of interactions with affected employees and potential exposure to floors and buildings across the workplace

## Contactless Engagements

At Location multi channel contact less engagements based on location and persona

## Location Analytics

Perform trend analysis and benchmarking. Measure Impact of events and changes at locations

## Presence & Footfall

Presence and footfall from Meraki MV cameras



# 1

## Safe Workspaces Demos

1. Real Time Occupancy & Density Triggers
2. Proximity Reporting
3. Signage for Safety

[UBC Signage Example](#)



### API Trigger

Gary's team uses the digital signage in the lobby to display the real-time density threshold status to visitors as they enter the building. This helps in building employee confidence.



# Firehose API View of client counts



Partner applications can choose to receive client device counts, which is available as part of streaming Firehose API.

Large customers can choose to build their own custom applications leveraging this data

```
{
  "recordUid": "event-e5d88469",
  "recordTimestamp": 1595890802940,
  "spacesTenantId": "spaces-XXXXXXXXXX5",
  "spacesTenantName": "NiravTurakhia",
  "partnerTenantId": "niravturakhia",
  "eventType": "DEVICE_COUNT",
  "deviceCounts": {
    "location": {
      "locationId": "location-f7d837b2",
      "name": "Floor",
      "inferredLocationTypes": [
        "FLOOR"
      ],
      "parent": {
        "locationId": "location-f2321125",
        "name": "Building",
        "inferredLocationTypes": [
          "NETWORK",
          "BUILDING"
        ],
        "parent": {
          "locationId": "location-7d450bbc",
          "name": "System Campus",
          "inferredLocationTypes": [XXXXXX],
          "parent": {XXXXXX}
        }
      }
    }
  },
  "associatedCount": 7,
  "estimatedProbingCount": 707,
  "probingRandomizedPercentage": 0,
  "associatedDelta": 0,
  "probingDelta": 13,
  "estimatedDensity": 0.07933333333333334
}
```

# Sid's IoT Test App CLOUD | Rest of World | DRAFT | v1.0



- App Center
- Use Cases
- App Tile
- Behaviors
- Events**
- Integration Details

**Raw Camera Count**  
This event is sent when there is a change in individual camera count (computed via the Meraki Video Camera) at the location.

**Network Telemetry**  
This event is sent on a periodical interval with health and performance telemetries at the location

**Location Anchor Update**  
This event is sent when there is new location anchor added/updated/removed in IoT Services

**BLE RSSI Update**  
This event is sent when there is a ping from BLE device at the location

## Event Settings

**Choose Locations**  
Send events that are triggered at the following locations

- All Location Types     Location Types

**MAC Address sharing**  
Receive Client Mac addresses with events

- No     Yes

**Social Identifier Sharing**  
Receive Social Identifier with Events

- No     Yes

- Location
  - Wi-Fi
  - BLE
- People Count
  - Wi-Fi
  - BLE
  - RFID
  - Meraki Cameras
  - Webex Endpoints
- IoT Sensors
  - Telemetry
- Webex Endpoints
  - Presence
  - People Count

# 2. Smart Office

A photograph of a modern office meeting room. Several people are seated around a glass table, looking at a large screen displaying a meeting. The room is bright and contemporary, with white walls and a large window in the background.

## Space Utilization

Optimize real estate space by understanding space utilization and occupancy at a building, floor, room and desk level

## Asset Management

Easily track and map the movement of different assets that have high monetary value throughout locations

## Environmental Monitoring

Temperature and humidity monitoring of sensitive assets

## Room Finder

Locate closest, unoccupied meeting rooms and navigate to them

## Indoor Navigation

Provide users with turn-by-turn navigation, allowing them to take the shortest route to their destination.

# Smart Office Use Cases – IoT TAGs & Sensor



## Asset Management

Locate valuable assets in real-time and monitor asset utilization



## Room finding

Find, navigate to and schedule available conference rooms



## Employee Safety

Keep employees safe with real time notifications & location updates



## Environmental Monitoring

Monitor environmental conditions for sensitive assets and zones



## Space Utilization

Allocate space based on occupancy and right-size your real estate portfolio



## Work in Progress Tracking

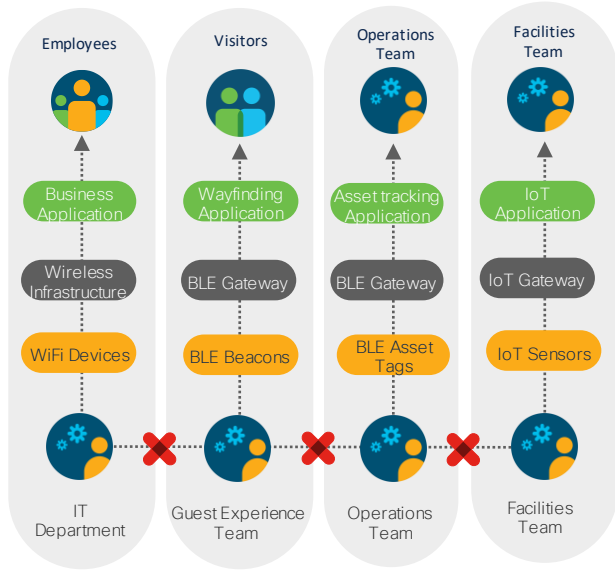
Manage and track workflows for optimal efficiency and monitoring



# Eliminate IoT Sensor Overlay

## Outcomes at Scale

Solutions To Date

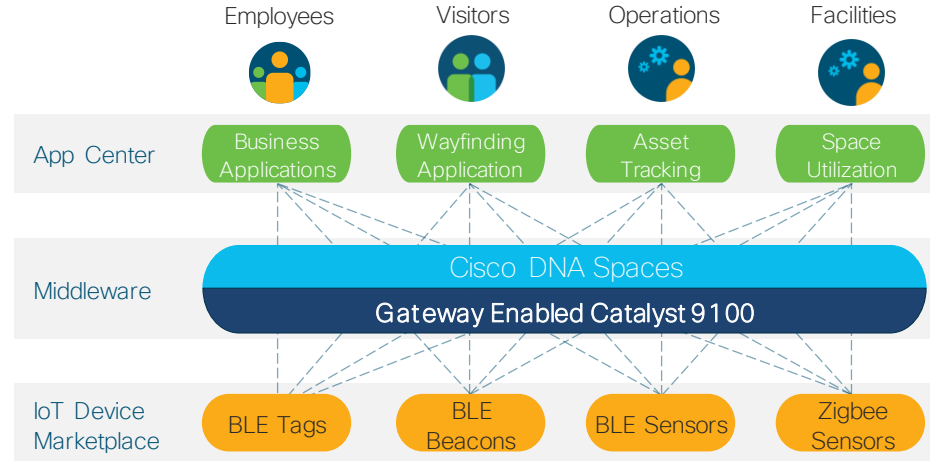


**1** Fragmented & proprietary solutions

**2** Difficult to replicate outcomes at scale

**3** Disjointed end-to-end support model

## DNA Spaces – Indoor IOT



**1** Open stack at a lower cost enabling multiple devices & apps

**2** Higher Scalability through the DNA Spaces cloud

**3** Unified support model with end-to-end visibility

Multi-Lingual  
Access Points



Sensor & Tag  
Lifecycle  
Management



Hosted Applications

Cisco Access  
Points



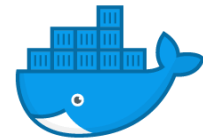
BLE



Wi-Fi



Zigbee\*



docker



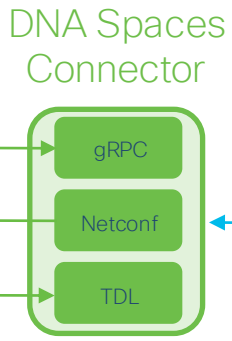
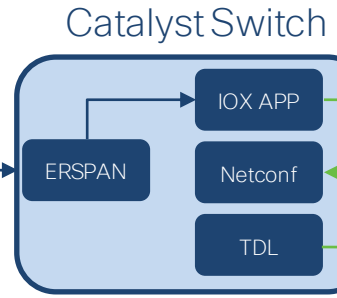
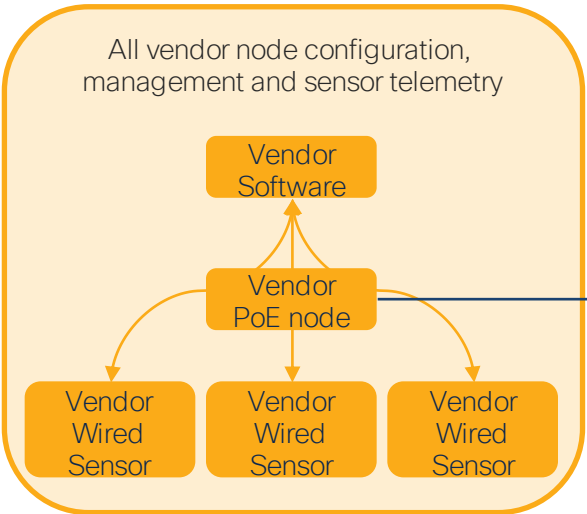
Wi-Fi6 APs

Cisco Catalyst APs are IoT Gateways

# IoT Gateways on Catalyst Switches for wired endpoints

## Wired Endpoints

All vendor node configuration, management and sensor telemetry



On-Prem

Cloud





- ## 2 Smart Workspaces Demos
1. Environmental Monitoring
  2. Asset Management



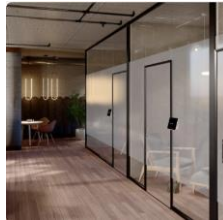
A woman with long braids, wearing glasses and a black face mask, is focused on her work at a laptop. She is wearing a green sleeveless top. In the background, other people are also working at desks, some wearing masks. The scene is set in a bright, modern office environment. A large blue diagonal overlay covers the right side of the image, containing the text.

# Tecnologias de colaboração para espaços inteligentes



Update your  
office spaces

Video enabled  
meeting  
spaces



### Focus / Concentration Rooms

- Webex Desk Series - Dedicated Video device
- OBTP, Content Share, Virtual Background, Auto framing and noise reduction
- Zero touch option & device is wiped down during the day

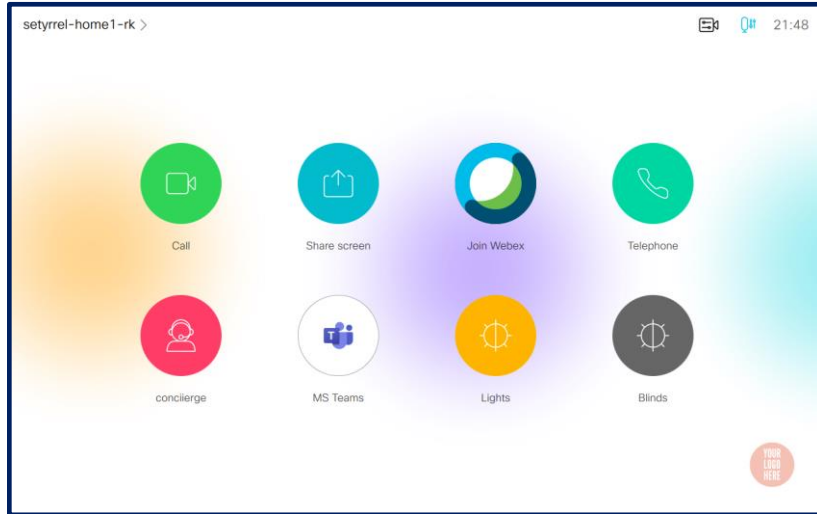
### Existing Meeting Rooms + Huddle Space

- Webex Room Kit range - Small to Large Customisable Video device
- Used with the room existing screens
- Customisable with Camera, Codec & multiple input/output options

### Large Meeting Rooms

- Webex Room Device - Medium to Large
- Room needs new screens, camera, speakers and a full dedicated video device

# Customization without heavy programming



## CUSTOMIZATION

 Personalization

 UI Extensions Editor

 Macro Editor

 Developer API

<https://roomos.cisco.com/>

<https://github.com/CiscoDevNet/roomdevices-macros-samples>

# Cisco DNA Spaces + Webex Endpoints

## Room Finder

Get live view of availability of all rooms nearby and navigate to it



## Occupancy Monitoring

Help keep employees safe by monitoring room occupancy.

Create Automated alerts to monitor



## Automated Booking Systems

Integrate with booking systems to save time and be more productive



16



# Webex Integration Architecture

2

DNA Spaces Processes the messages and sends data in firehose



Firehose

3

Enable Use Cases with the data from DNA Spaces

Partners



1

Detects Presence or count of people

Webex Endpoints



https

```
{
  "recordUid": "event-3331335b",
  "recordTimestamp": 1570213298000,
  "spacesTenantId": "spaces-tenant-dc8d3aa5",
  "spacesTenantName": "CXC",
  "partnerTenantId": "cxc",
  "eventType": "TP_PEOPLE_COUNT_UPDATE",
  "tpPeopleCountUpdate": {
    "tpDeviceId": "SJC Mexico City WB",
    "location": {
      "locationId": "location-854d183e",
      "name": "Mexico City",
      "inferredLocationTypes": [
        "ZONE"
      ]
    }
  },
  "presence": true,
  "peopleCount": 4,
  "standbyState": 1,
  "ambientNoise": -1,
  "drynessScore": -1,
  "activeCalls": 0,
  "presentationState": 0,
  "timeStamp": 1570213298000
}
```



At least EXT or ACT License needed on DNA Spaces to send data to partners

# Webex Endpoints sensors

Sensor	DX, SX & MX Series	Room & Board Series	Navigator	Desk Pro
Temperature			Yes	Yes
Humidity			Yes	Yes
Air Quality			Roadmap	Roadmap
Light			Yes	Yes
General Noise		Yes	Roadmap	Yes
Ambient Noise		Yes	Roadmap	Yes
Acoustics		Yes	Roadmap	Yes
Presence	SX & MX only	Yes		Yes
People Count	ST60 Only	Yes		Yes

Currently DNA Spaces consumes only these telemetry from Webex



# 1. Safe Office



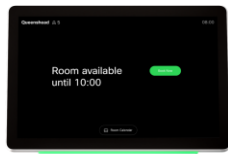
Update your office spaces

Keep employees safe



## Digital Signage

- Use signage mode on dedicated displays and collaboration devices
- AppSpace for enhanced capabilities



## Safe Room Navigation

- Book space with voice command via Navigator panel
- Easily find a room with green status light
- Device easily sanitized throughout the day



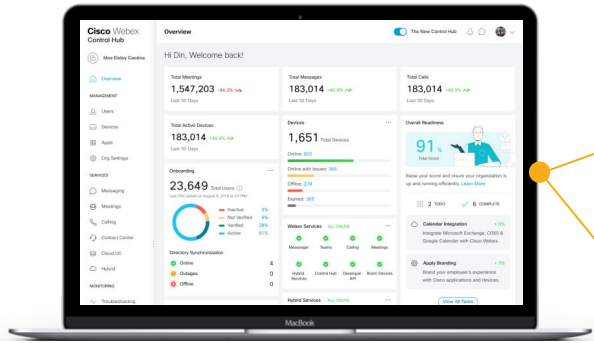
## Zero Touch Meeting

- Webex Video Devices identify the user as you walk in the room via the Webex APP
- Start your meeting with your own device
- Control the meeting with your voice & gestures



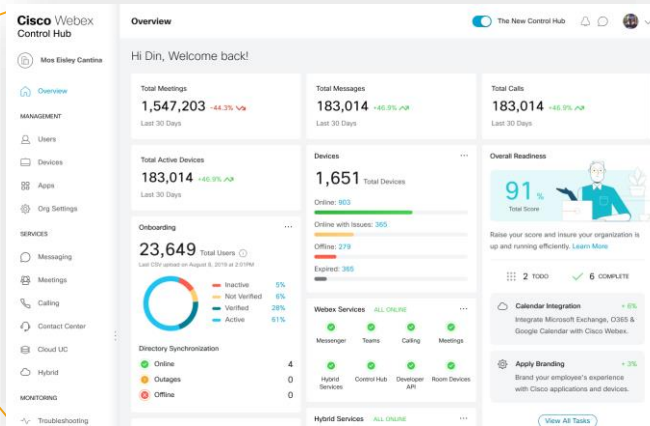
# 1. Safe Office

Gerencie Usuários, Devices, Telefonia e reuniões em um só local



Manage all locations, people & devices

Don't wait for users to say there is a problem... know first & fix



- All Users
- All Devices
- All Application
- Full Analytics
- All in Real Time
- Automated

Webex Control Hub  
One application to manage everything



# 1 Safe Workspaces Demos

1. Real Time Occupancy & Density Triggers
2. Proximity Reporting
3. Signage for Safety

# 2. Smart Office



Update your office spaces

Automated Hot Desking



Webex Desk Camera turns hot desk monitors into VIDEO devices



IoT Presence Sensor



Coming Soon  
Sept '21



PC Docked to Hub



Webex Desk Hub

- Book a desk
- Smartphone log in via Webex APP
- Smartphone charger
- PC Power / Headset charge
- Device is wiped down |during the day



Flexible Worker comes to the Office:

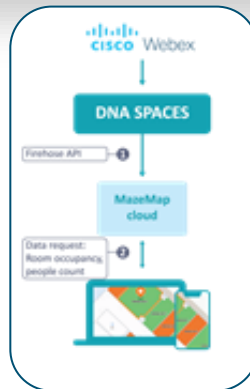
- Webex Client on PC/MAC Laptop
- Cisco Headset for privacy



# Webex Room Finder - Occupancy Visualization


## Overview

Cisco DNA Spaces, Webex, and MazeMap provide a unified solution for users to locate the nearest available telepresence room or space leveraging occupancy cloud data via DNA Spaces **Firehose** API from cloud-registered Webex devices. Automatic rebooking of a room for safe social distancing overflow can be used to prevent rooms from going over capacity. If room overflow occurs, Webex registers an overflow and books an additional room. The room booking tool also integrates with Microsoft Outlook to provide you with a calendar invite with details of the meetings location on the map.




**1**  
WebEx

- ✓ Cloud enabled Webex Board, Room Kit or Room Series end point.




**2**  
DNA Spaces

- ✓ DNA Spaces Extend License



**3**  
MazeMap

- ✓ MazeMap Service





**webex**  
by **CISCO**

## Smart Workspaces Demos

2

1. Environmental Monitoring
2. Asset Management
3. Room Finder & Indoor Navigation
4. Smart Utilization: Room presence and Hot Desking

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## *SLIDO 3*

Quais das soluções apresentadas se aplica na sua organização?



# Safe

Create a trusted workplace that helps enable a safe return to office.



# Smart

Make buildings smarter with our Enterprise IoT solution. Discover, deploy, monitor IoT devices, activate partner apps for outcomes, at a significantly lower TCO.



# Seamless

Connect people & things seamlessly with your buildings and create moments that matter.

# New Workplace needs for a Mobile Hybrid Workforce



**Best Mobile  
Experience**



**Intelligent  
Infrastructure**



**Increase Security  
Capabilities**

**Resilient, Secure, Intelligent**



Cisco  
Catalyst



Cisco  
Meraki





Quint@s Quinze

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Muito Obrigado!

