




This presentation explains the following topics:

-  Network capabilities
-  IT Products and Services catalog
-  FAQ

- About the WifiNetwork
- About the DigitalAssets
- About other customer experiences

Network Capabilities



WIFI NETWORK CAPACITY
128.000 Concurrent Users

INTERNET

Throughput 40Gb/s
(20 Gb/s in HA configuration)

CABLING CAPACITY

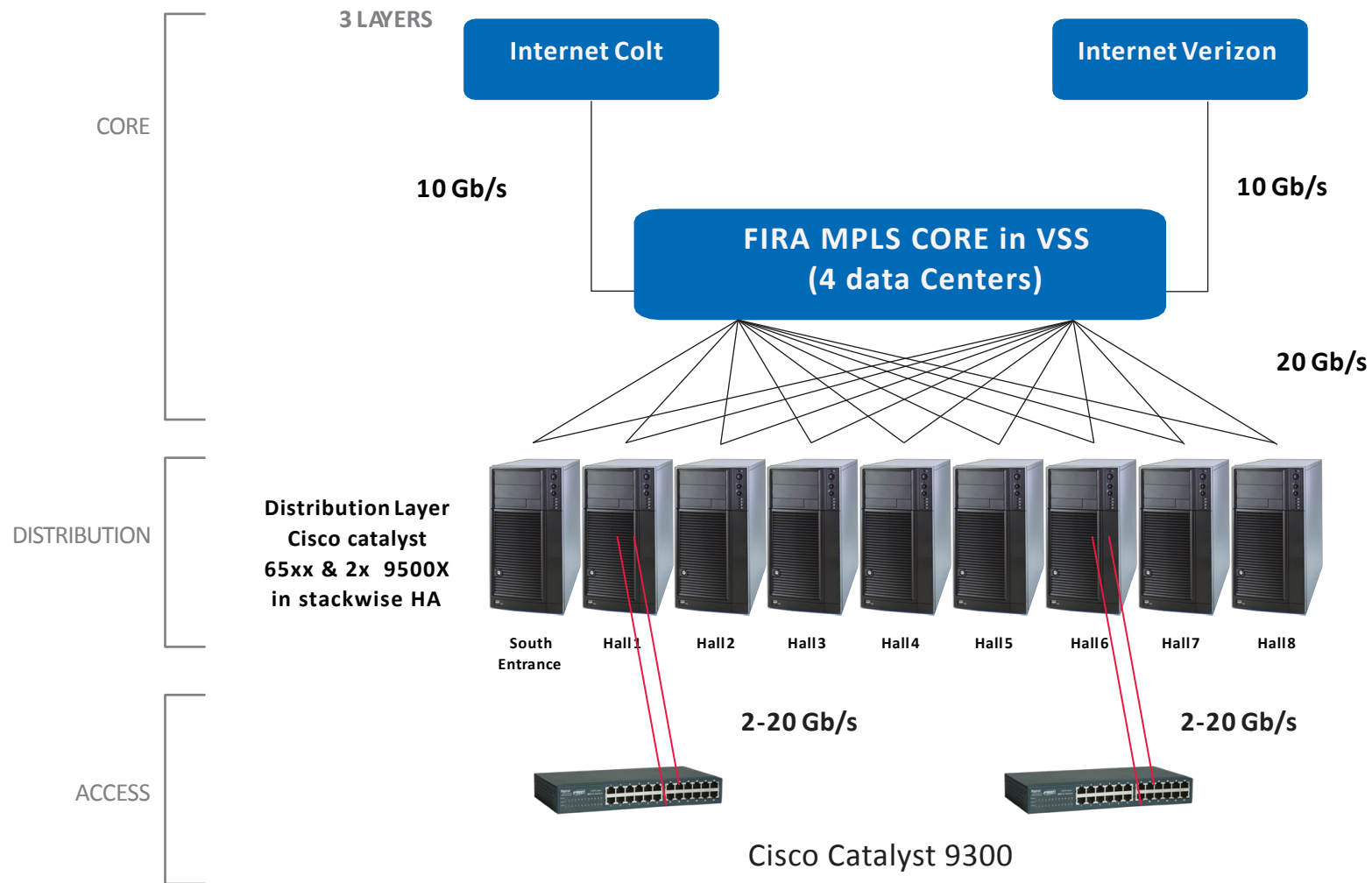
16.000 available ports

Network Overview

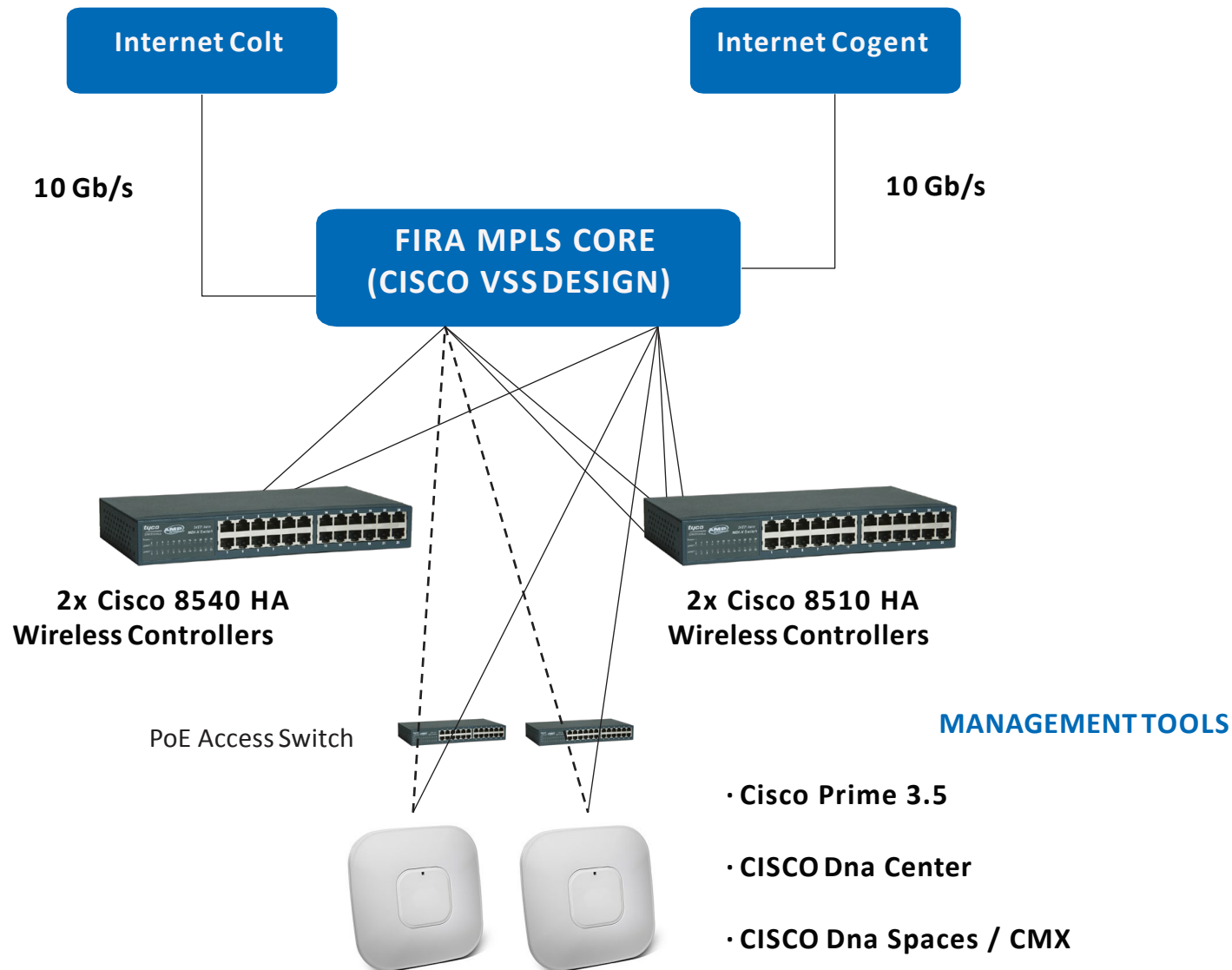
4 X MPLS CORES IN VSS HIGH AVAILABILITY

Autonomous System

10 x /24 IPv4 Public IPs and /29 IPv6



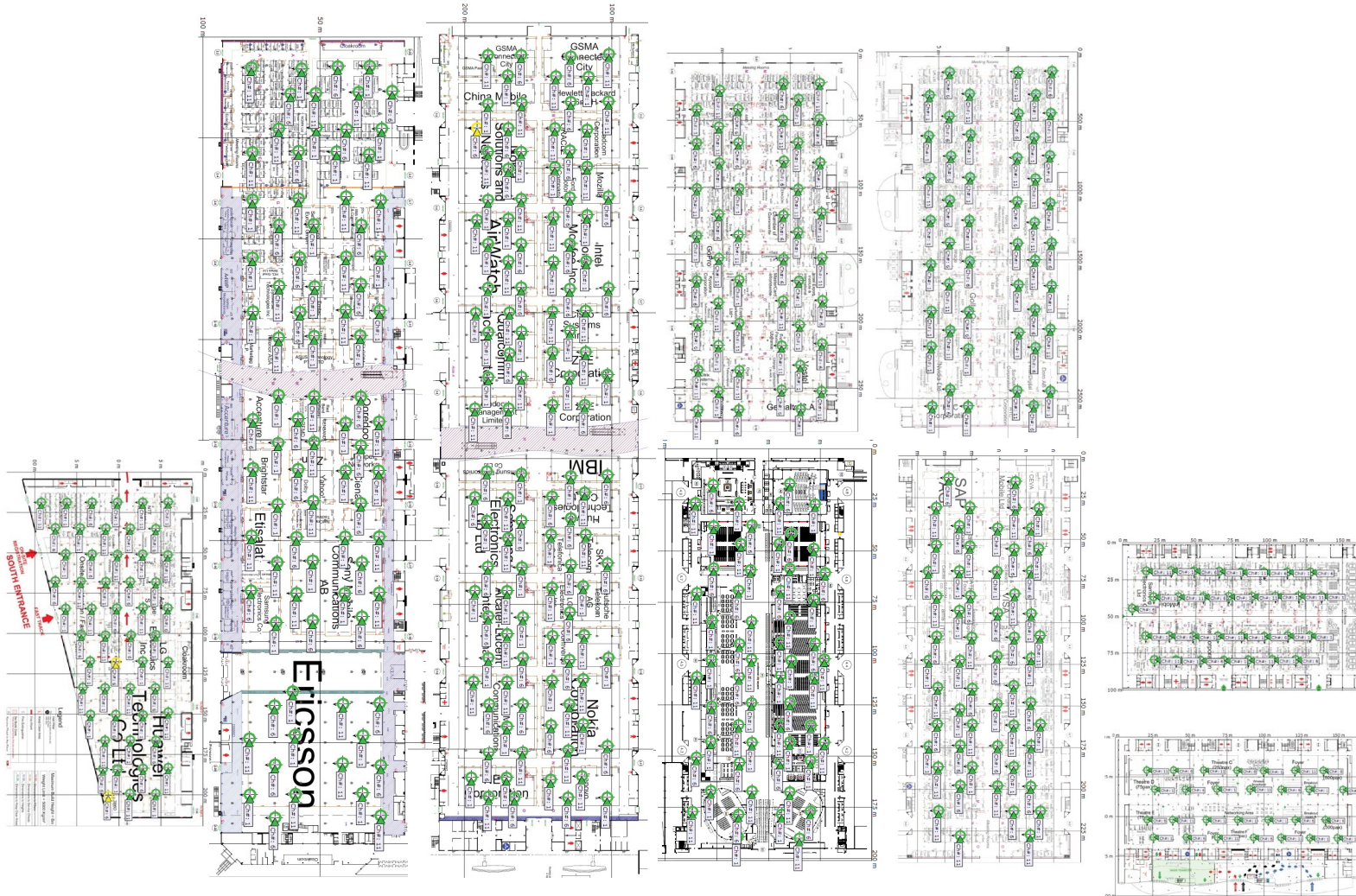
Wifi Network



1700 Cisco Access Points (1530 wifi5 802.11ac) and 170 new **wifi6 802.11ax**

AP Locations

The network has 1700 APs, approximately one every 250sqm, covering all exhibition and hotspot areas.



IT Products and Services Catalogue



Product Families

There are 7 families available within our range of products:

Cable

- Network Cabling CAT6 (exhibitor, organization, venue)
- Network Cabling Optical Fibre (cabling and power certification)
- Phone Cabling
- Cable Tagging
- Corridors Cable Patching
- Cabling and Material Collection after the show

WiFi

- Private Network(SSID linked to the wired service)
- WaaS (WiFi as a Service for the whole venue with specific services)
- Customized landing pages (HTML, authentication, reporting, final documentation)
- WiFi Radio Planning and Customized Solutions and Designs
- PreSharedKey, 802.1x, landing page and Openroaming/passpoint authentication
- Rogue Access Points management tool

Clean Pipes Security Service

- baseline
- Advance
- Tailor made

Voice /Telephone Service

- Installation support for POS terminals and ISDN lines
- Supply and Installation of Analog, Digital and IP Phones



Product Families

Internet Advanced Services

- ISP Backhaul management
- High Level Support to Fira's providers for QoS, audiovisual streaming...)
- UPS Secured Power Lines
- Consultancy for specific requests

Management Services

- Project Management
- Show/Event Whitepapers
- Monitoring Tools: customized dashboards to monitor services
- Specific Tools Design and Development (CRM, Provisioning, Ticketing, Tracking...)

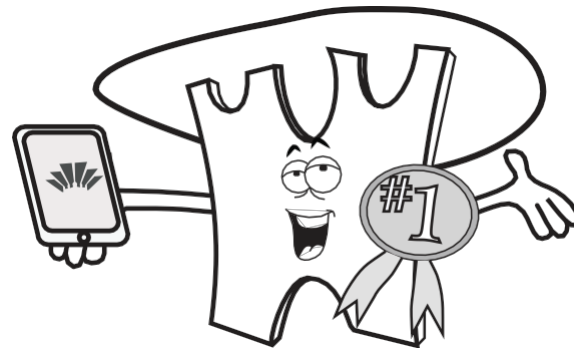
Other Professional Services

- Custom Call Centers / Call Campaigns Management
- Support to Attendees:
 - Frontdesk
 - Call Center
 - Field Technicians
 - WiFi On-Site Regulation Team
- Product Catalog Customization
- Communication Policy Management for each Show
- IT Policy Definition



Successful Stories

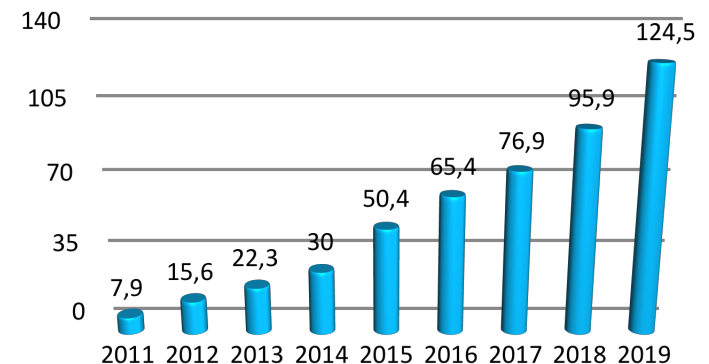
MWC2010-19



Service Figures:

- **30516 Concurrent Wi-Fi Connections 2015 (World Record!!)**
- 5,000 Wired Connections 2019
- 40.000 Mbps Aggregated Throughput to Internet 2019
- 96449 unique devices 2016
- Total data exchanged Internet(TB) 124.5 Tbytes 2019

Internet Data Exchanged (TBytes)



Frequently Asked Questions



Frequently Asked Questions



Wi-Fi

What bands are supported?

- The new network supports the bands defined in standards 802.11 a/g/n/ac/ax (**wifi6**)

Venue bandwidth and potential allocation to the show/event:

- Currently the venue has a backhaul of 20 Gbps per Hall and the whole venue is connected to 2 x Internet Services Providers (10 Gbps Colt and 10 Gbps Verizon).
- A higher bandwidth could be provided if required
- The access network supports up to 300-400 Mbps per access point in 5 Ghz radio (each AP has a 2,4 GHz radio and a 5 GHz radio) in ideal conditions (no interferences, short distance to AP, uniform distribution of client devices). The number of permanent APs per Hall is as follows:

Hall 1: 56 APs

Hall 2 + EMR: 195 APs

Hall 3: 157 APs

Hall 4: 63 APs

Hall 5: 50 APs

Hall 6: 61 APs

Hall 7: 53 APs

Hall 8: 121 APs

HotSpot Areas: 350 APs

in Restaurants, Convention Centers, Walk-Way, Outdoor Spaces, Offices...

Ability to monitor and control usage – e.g. can we slow down people watching sports while at the show using wifi bandwidth?

Our network can be tuned to achieve the desired requirements, allowing many filter options such as:

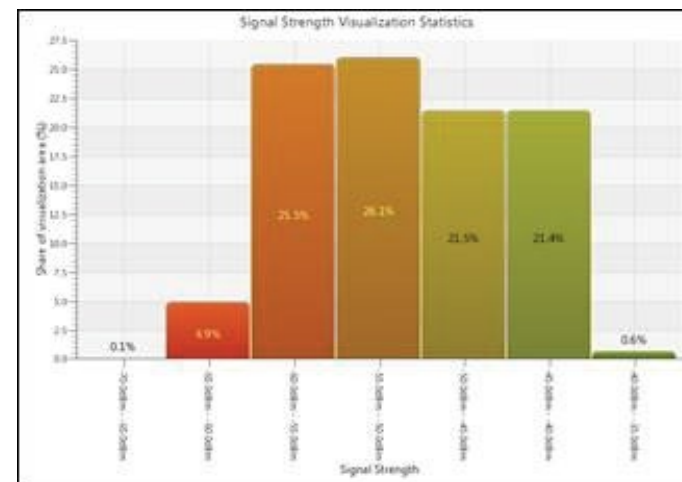
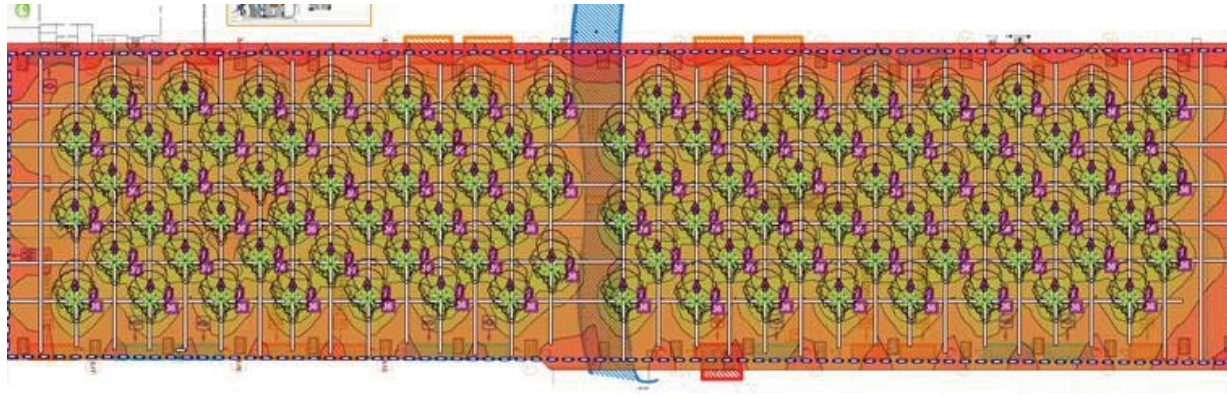
- Application / Protocol based filters
- Bandwidth control per user /application
- Traffic Shaping, Firewalling...

Do they have any best practice guidelines for exhibitors?

In most shows exhibitors are not allowed to use their own WiFi APs and they are encouraged to use the venue's network services in 5 GHz. The WiFi policy was distributed among all exhibitors.

Can Fira provide a heat mapping solution or provide support for it?

A number of monitoring tools is available for Fira to assure the quality of the services. Some of these tools can be made visible for customers that require such a piece of information.



Smart Services



The GSMA Mobile App
Transforming the Event Experience!

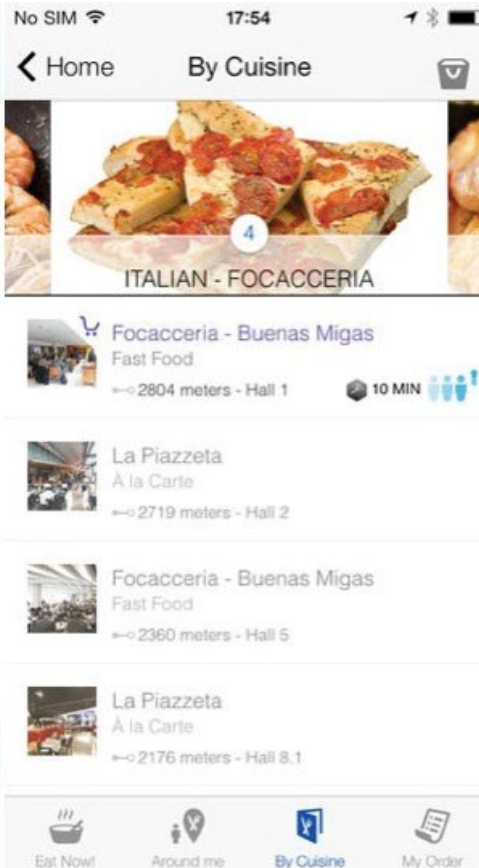


events **MOBILE** WORLD CONGRESS


Welcome **1 Oct 2013**
We look forward to welcoming you to Mobile World Congress 2014 and hope you enjoy using... >
MWC

- Schedule
- Speakers
- Mapping
- Exhibitors
- Find People
- MyReg & Badge
- Transport
- Food
- News & Social
- My Inbox
- My Event

WHAT'S NEW



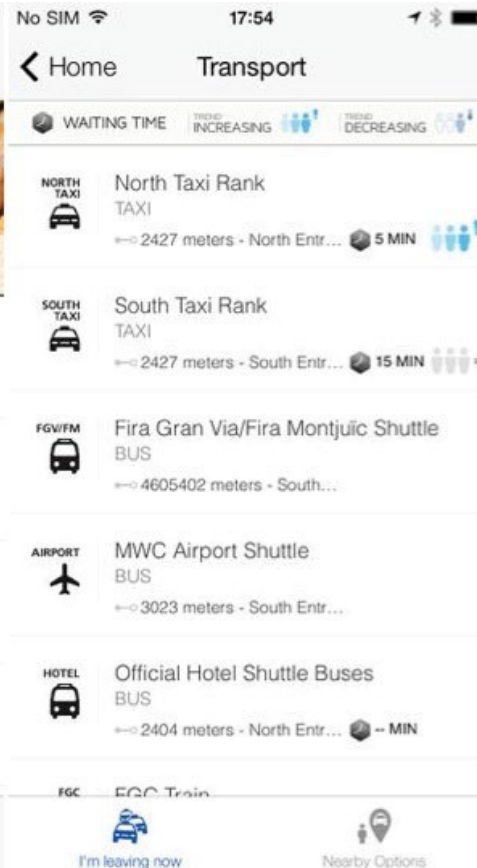
Home **By Cuisine**



ITALIAN - FOCACCERIA

- Focacceria - Buenas Migas
Fast Food
→ 2804 meters - Hall 1 10 MIN
- La Piazzeta
À la Carte
→ 2719 meters - Hall 2
- Focacceria - Buenas Migas
Fast Food
→ 2360 meters - Hall 5
- La Piazzeta
À la Carte
→ 2176 meters - Hall 8.1

Bottom bar: Eat Now! Around me By Cuisine My Order



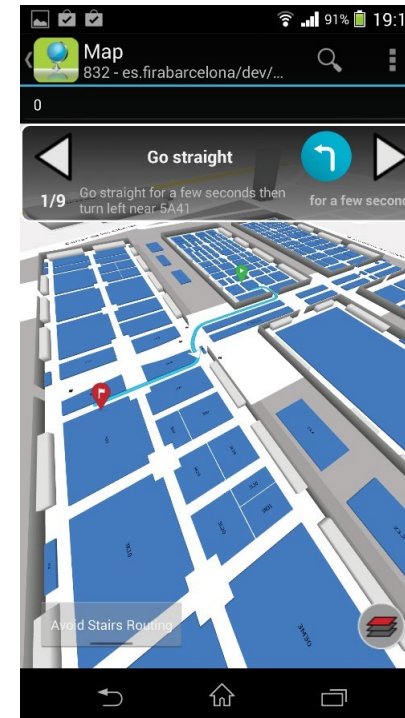
Home **Transport**

WAITING TIME TREND INCREASING TREND DECREASING

- NORTH TAXI** North Taxi Rank TAXI
→ 2427 meters - North Entr... 5 MIN
- SOUTH TAXI** South Taxi Rank TAXI
→ 2427 meters - South Entr... 15 MIN
- FGV/FM** Fira Gran Via/Fira Montjuic Shuttle BUS
→ 4605402 meters - South...
- AIRPORT** MWC Airport Shuttle BUS
→ 3023 meters - South Entr...
- HOTEL** Official Hotel Shuttle Buses BUS
→ 2404 meters - North Entr... -- MIN
- FGC** FGC Train

Bottom bar: I'm leaving now Nearby Options

Smart Services - Mapping



3D MAP

Includes most important references of the environment

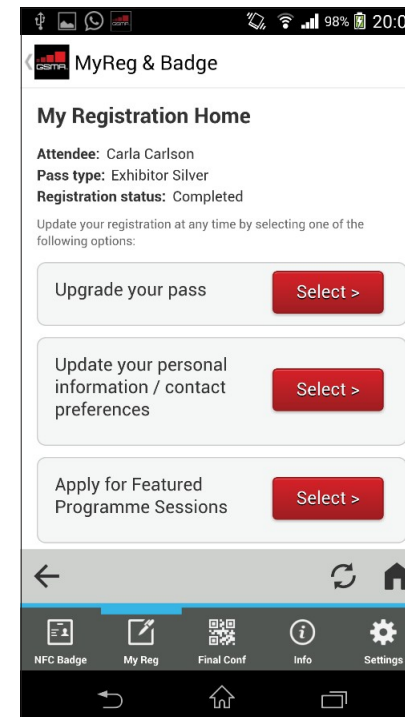
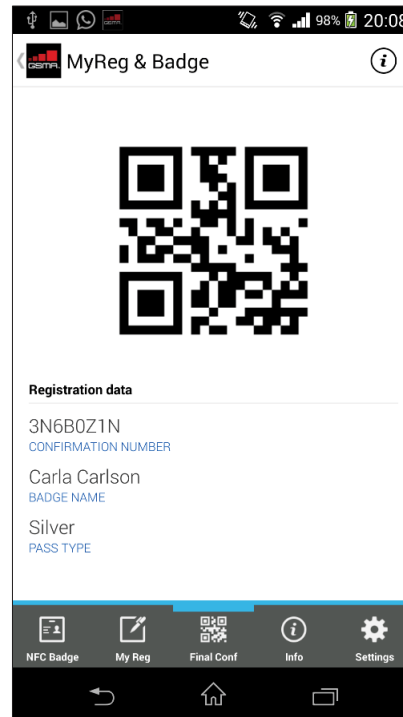
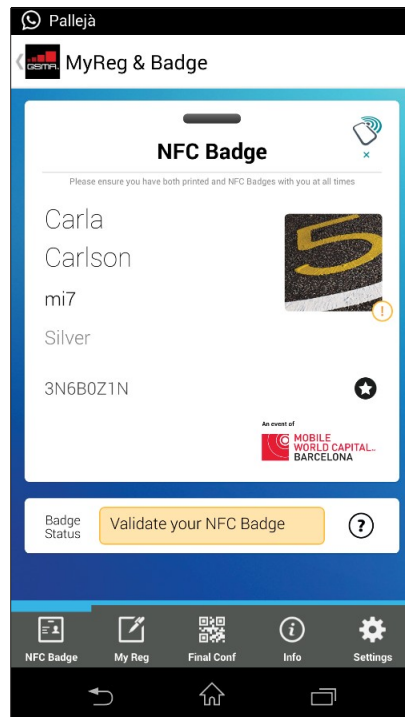
More than 250 Points of Interest

Geolocalization

Navigation

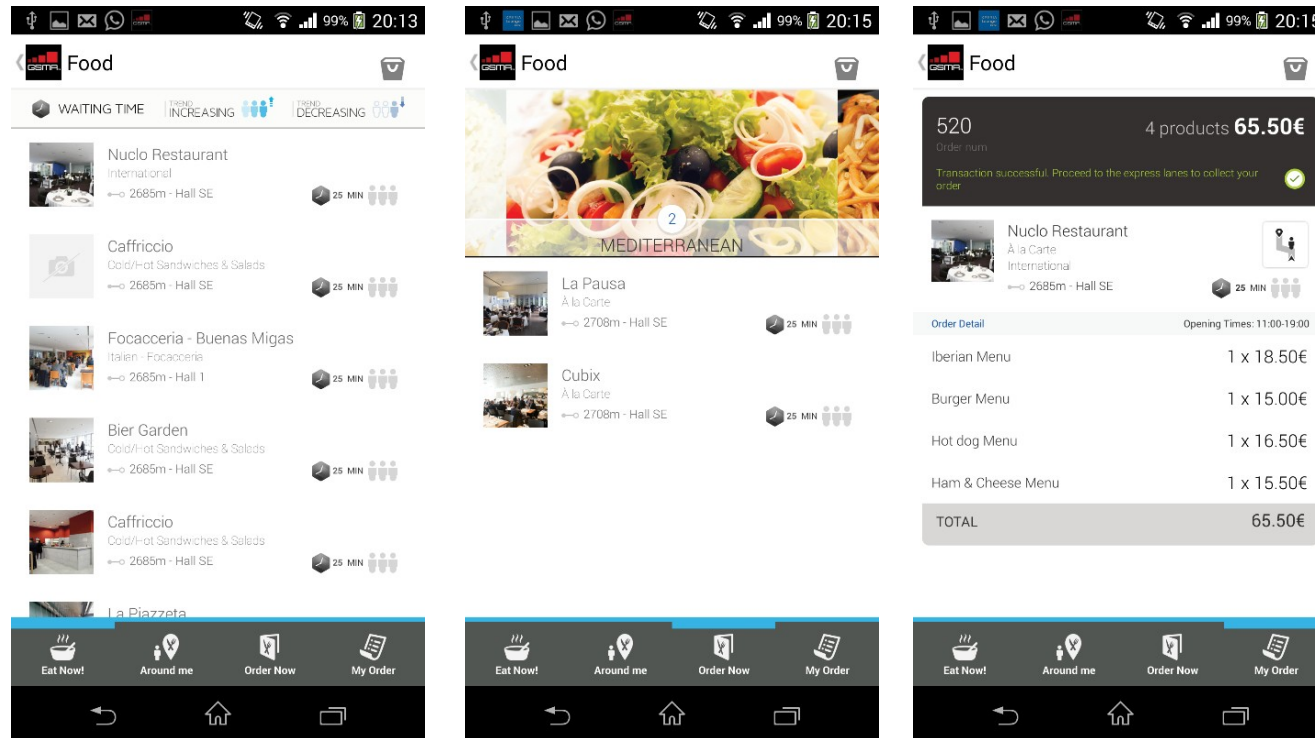
Time Calculation

Smart Services - Badge

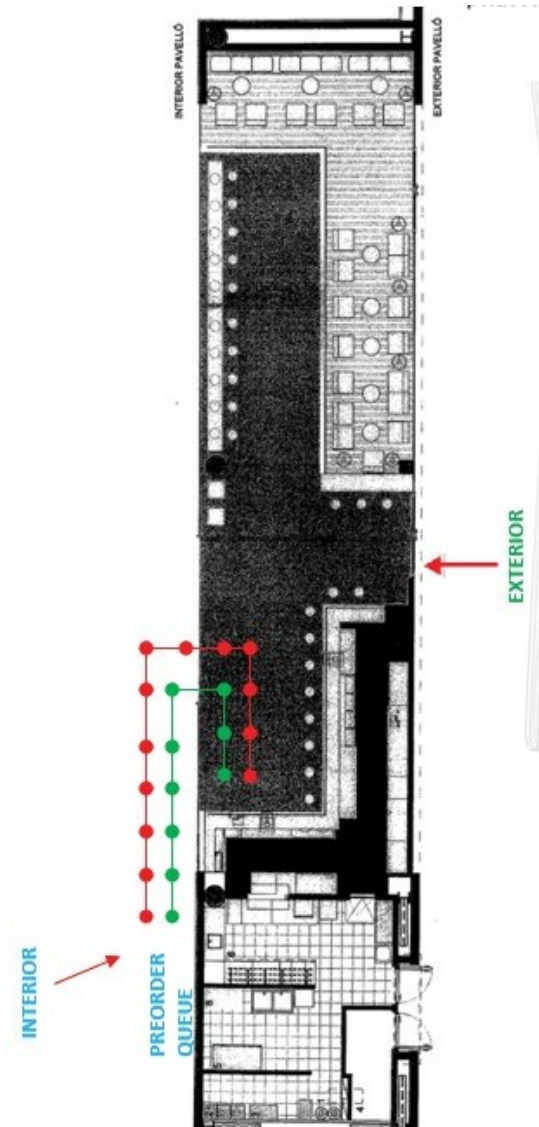



Automatic picture validation for registration
Paperless: Final Confirmation with QR code
Upgrade options within the app

Smart Services - Food



Restaurants classified by type of food
 Queue time Information and Evolution
 12 restaurants with pre-order capability
 Map integration: route to restaurant and time for arrival




by Fira de Barcelona


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Capture contacts with your Smartphone


And make the most out of them

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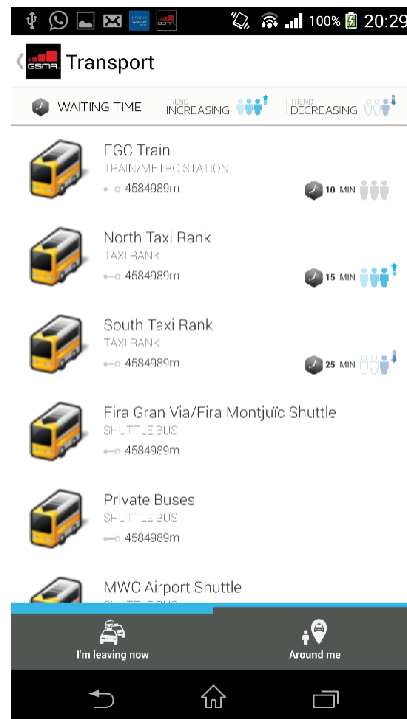
Leadretrieval is available for:
 
 Barcelona | 24 - 27 February 2014

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 ACCESS TO THE PORTAL
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Smart Services - Transport



Information regarding 12 transport points (taxi, bus, train)
TAXI and train wait times and evolution
Integration with maps: route and time for arrival calculation