This presentation explains the following topics:

- Network capabilities
- IT Products and Services catalog
- FAQ
  - About the Wifi Network
  - About the Digital Assets
  - About other customer experiences
Network Capabilities

WiFi Network Capacity
64,000 Concurrent Users

Internet
Throughput 10Gb
(5 Gb in HA configuration)

Cabling Capacity
16,000 available ports
Network Overview

4 CORES
Autonomous System (AS)

3 LAYERS

CORE

DISTRIBUTION

ACCESS

Internet Colt

Internet Cogent

FIRA MPLS CORE
(CISCO VSS DESIGN)

Distribution Layer
Cisco catalyst 65xx

South Entrance
Hall 1
Hall 2
Hall 3
Hall 4
Hall 5
Hall 6
Hall 7
Hall 8

2 Gb/s

2 Gb/s

2 Gb/s

Cisco 37XX Stack Access Switches

Access 10/100/1000 + Fiber
Network Capabilities

Wifi Network

FIRA MPLS CORE (CISCO VSS DESIGN)

2x Cisco 55xx Wireless Controllers

PoE Access Switch

Internet Colt

Internet Cogent

2 Gb/s

2 Gb/s

2x Cisco 85xx HA Wireless Controllers

MANAGEMENT TOOLS

- CISCO NCS PRIME
- CISCO WCS
- CISCO MOBILITY SERVICE ENGINE

Over 800 units of Cisco 2600, 3700 Series Access Points
The network has more than 800 APs, approximately one every 20m, covering all exhibition areas.
There are 6 families available within our range of products:

**Cable**
- Network Cabling CAT5e (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**
- SOHO-Like WiFi (private 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
- Multiple Vendor Solutions

**Voice / Telephone Service**
- Installation support for POS terminals and ISDN lines
- Supply and Installation of Analog, Digital and IP Phones
- Management of the Corporate Phone Services and Invoices
- Proactive Monitoring of Backhauling and PBXs Critical Events
Product Families

**Internet Advanced Services**
- ISP Backhaul management
- High Level Support to Fira’s providers for QoS, audiovisual broadcasting…
- 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

MWC2014

Service Figures:
**22,000 Concurrent Wi-Fi Connections (World Record!!)**
5,000 Wired Connections
5,000 Mbps Aggregated Throughput to Internet

EASD 2013

Service Figures:
5,382 Concurrent Wi-Fi Connections
571 Wired Connections
420 Mbps Aggregated Throughput to internet
Successful Stories

**HP Discover 2013**

Mixed Services between Customer and Venue

Fira provides:
- Customized VLANs
- Multiple Vendor WiFi Infrastructure Solution
- Network Cabling

Customer provides:
- Layer 3 Management
- NAT/PAT
- WiFi Landing Page

Service Figures
- 11,000 Concurrent Wi-Fi Connections
- 1,000 Wired Connections
- Aggregated Throughput to internet: 2,100 Mbps
Successful Stories

VMWorld 2013

Mixed Services between Customer and Venue
Fira provides:
Customized VLANs
Layer 3 Management
PAT
Network Cabling
Customer provides:
WiFi Access Points
NAT services for the WiFi
Service Figures:
1,121 Concurrent Wired Users
Aggregated Throughput to internet. 1,000 Mbps
**Wi-Fi**

**What bands are supported?**
- The new network supports the bands defined in standards 802.11 a/b/g/n/ac

**Venue bandwidth and potential allocation to the show/event:**
- Currently the venue has a backhaul of 2 Gbps per Hall and the whole venue is connected to and ISP with a 2 Gbps BGP redundant line from GV and 1 Gbps from MJ (3 Gbps aggregated throughput). A higher bandwidth could be provided if required (as for MWC 4 Gbps)
- The access network supports up to 20-25 Mbps per access point 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:

<table>
<thead>
<tr>
<th>Hall 1</th>
<th>Hall 2</th>
<th>Hall 3</th>
<th>Hall 4</th>
<th>Hall 5</th>
<th>Hall 6</th>
<th>Hall 7</th>
<th>Hall 8.0</th>
<th>Hall 8.1</th>
<th>HotSpot Areas</th>
</tr>
</thead>
<tbody>
<tr>
<td>56 APs</td>
<td>98 APs</td>
<td>114 APs</td>
<td>90 APs</td>
<td>48 APs</td>
<td>57 APs</td>
<td>48 APs</td>
<td>28 APs</td>
<td>33 APs</td>
<td>273 APs</td>
</tr>
</tbody>
</table>

in Restaurants, Convention Centers, WalkWay, 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.
Other Initiatives

Smart Services

The GSMA Mobile App
Transforming the Event Experience!
Other Initiatives

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
Other Initiatives

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
Capture contacts with your Smartphone
And make the most out of them

Get it now!

Leadretrieval is available for:

Manage your surveys and information groups
Export your leads
Activity Reporting

Fira Barcelona
Other Initiatives

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
Digital Signage

**Circular Led**
(1 unit)
Recommended format: MOV*
104 m long x 1,5m height
Resolution 3992x112

**LCD Projector**
(10 units)
JPG, MPEG-2*
Resolution 1024x768

- Walkway (one side)
  6.50 m X 4.80m X 2
- Hall 2 (hanging double sided)
  6.50 m X 4.80m X 4
- Hall 2-3 (one side)
  6.50 m X 4.80m X 2
- Hall 3-4 (one side)
  7.50m X 5.60m X 2

**Watchout between Halls 7 and 8**
8 projectors overlapped 20% each (1024px X 768 px ) X 8 = 6759 px X 768px
total dimension: 31.30 m X 4m

**TFT Screens 42” horizontal**
(36 units)
JPG, MPEG-2*
Resolution 1280x768
Dimension 1m X 0.57m each
Side by side 2m X 0.57m
9 groups, 18 sides
Digital Signage

Fixed Elements

Circular Led (Total 1 unit)
Recommended format: MOV* (no sound available)
Resolution 3992x112
104 m long x 1.5m height

LCD Projector (10 units)
JPG, MPEG-2*
Resolution 1024x768
Walkway (one side): 6.50 m X 4.80m X 2
Hall 2 (hanging double sided): 6.50 m X 4.80m X 4
Hall 2-3 (one side): 6.50 m X 4.80m X 2
Hall 3-4 (one side): 7.50m X 5.60m X 2

TFT Screens 42” horizontal (36 units)
JPG, MPEG-2*
Resolution 1280x768
Dimension 1m X 0.57m each
Side by side 2m X 0.57m (9 groups, 18 sides)

Watchout between Halls 7 and 8
8 projectors overlapped 20% each (1024px X 768 px ) X 8 = 6759 px X 768px
total dimension: 31.30 m X 4m

Moveable Elements**

Totem 42” screen vertical (Total 18 units)
Recommended format: JPG, MPEG-2*
Resolution 768x1280
Dimension 0.57m X 1m

Totem 57” screen horizontal (Total 2 units)
Recommended format: JPG, MPEG-2*
Resolution 768x1360
Dimension 1.25m X 0.70m

*If movies are delivered in their final format, please take into account that all the files must be to 30fps.

** The totems are meant to be installed along the walkway and south access. Exact location of totems depends on availability of sockets and network connections in the area. Please contact our team to find a solution that suits you.