Real Time Customer Quality of Experience

MWC 2016
On-Life TELCO

Today: WE CHOOSE IT ALL

Social Network
Digital
DO
IPTV
Course of the Future
Service Operation Center
Opportunities
Network Operation Center
Quality
People

Advanced Analytics
High Speed Data
Instant Messaging
Applications
VoIP
Big Data
Society
Globalization

Momentum
Multiple Devices & Internet Access
Customers

Telefónica
We Choose Customers

**Experience**

We anticipate incidents via proactive work, so concrete and effective task are taken in a faster way. *Keep Quality Index*

**Analytics**

*BIG Data Platforms - Real Time Data*

Aggregated data, opens a new way of working and adapting Network recourses to customer’s needs

**Assurance**

*We Transform our perspective*

We focus in our customers and they must have the best experience using our network and all services in all countries / areas managed by Telefónica
Big Data & Analytics

**Big Data** is more than just technology, is a philosophy

This powerful tool, transforms data into knowledge. Result comes from facts, not subjective thoughts.

*A New Way*

Of thinking and making things happen

**Analytics**, helps us take better decisions

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A New Perspective

Mobile Speed

- 5G
  - 10 GBPS
- 4G
  - 25 MBPS
- 3G
  - 5 MBPS

Internet of Things

- IoT Inception – 4.4 Billion
- 11.2 Billion
- 22.9 Billion
- 34.8 Billion
- 50.1 Billion

Things Online Per Person

- 6 Things Online Per Person

- Sensors, Smart Things, Houses, Network Systems, Cars, TV
- Exponential growth leads us to a new perspective, billions of data will be transfer daily.
- Ensure Customer’s Experience Today

4 years to Go
Customer Experience Index (CEI)

- Comprehensive approach to **measure customer experience**

- **Strategic differentiator** that enables Telefónica to understand and optimize customer experience in real time

- Computed by using **powerful algorithms** that combine objective QoE measurements from a network point of view with subjective factors

- **Highly customizable segmentation:**
  - Areas
  - Services
  - Group of users
  - ...

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[Graph showing data on customer experience index and satisfied users.]
Our vision for 2020

Analytics

Satisfaction

Big Data

Customers

Service

Experience
SOC Demo Architecture Sites

In order to monitor QoE Mobile Broadband traffic for the MWC...

...We monitor Catalonia Area within a layer of probes deployed in 5 sites

In Central Site, the information collected is processed and results in

TCEI (Telefónica Customer Experience Index)
SOC Platform Architecture

- **Data Storage and Mining**
  Center use BIG DATA techniques to store all SDRs for Analytics or user queries to the application layer.

- **Real Time Processing**
  KQI / KPIs are shown into a high level layer, updated every minute for specific groups. Other users are updated every 5 minutes.

- **Memory Computing**
  Calculates predefined KQIs/KPIs every 5 minutes (Batch processing).

- **Data Adaptation**
  Converts XDRs into SDRs (Service detail records) including information such as: network elements, devices, users groups and other dimensions.

- **Passive Probe**
  Monitors user plane and control interfaces, to acquire and list raw data (XDRs) with a QoE point of view.