Introduction

The new Age is focused on Customer satisfaction...

1900	1960	1990	2010
Age of Manufacturing	**Age of Distribution**	**Age of Information**	**Age of the Customer**
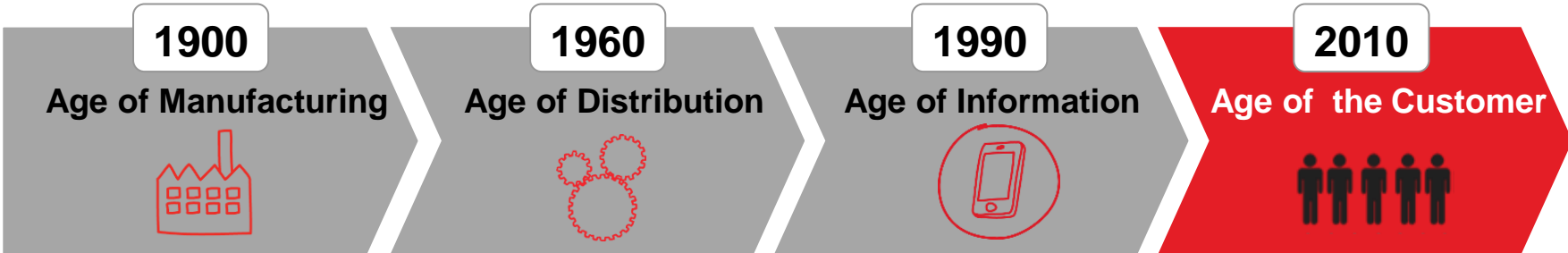
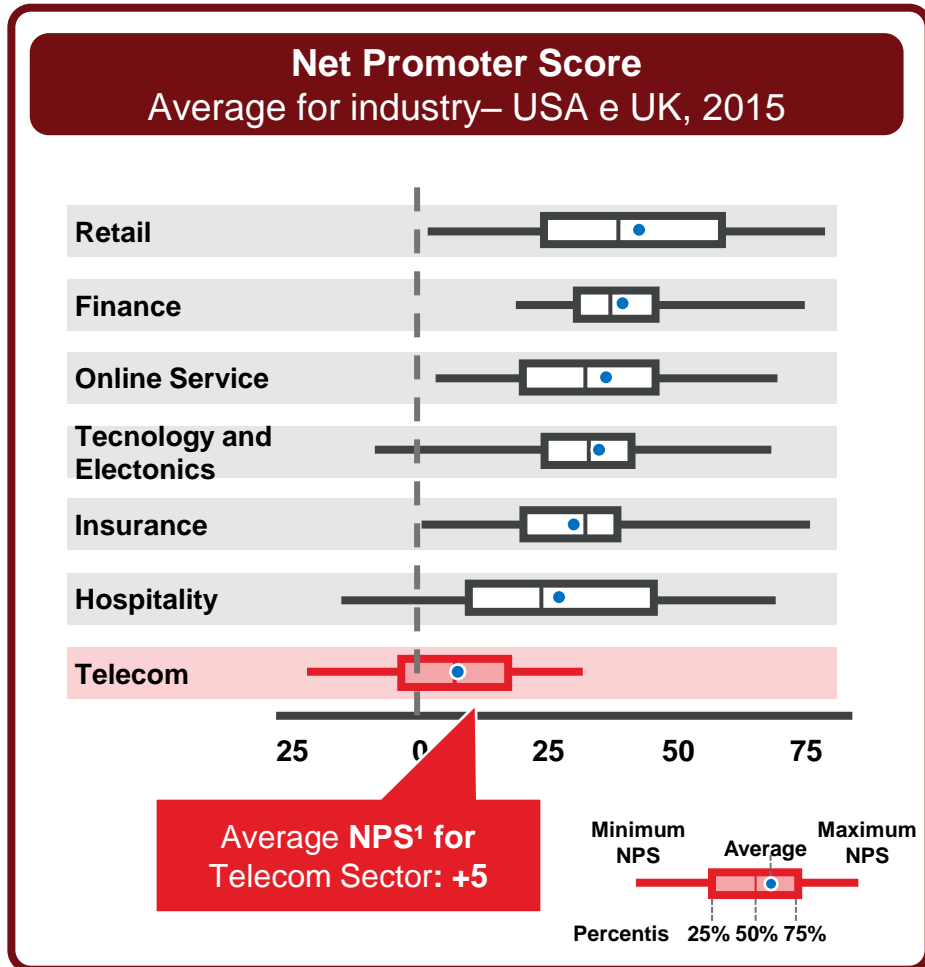|			
Mass Manufacturing makes industrial powerhouses successful	**Global connections and transport systems are the key for the success**	**Connected computers and supply chains indicate that who control the information has the market dominance**	**Consumers are the focus and have higher level of exigency for satisfaction**

Ford, GE, BOEING · Walmart, UPS, P&G, TOYOTA · Google, COMCAST, amazon, Capital One · amazon, salesforce, macy's
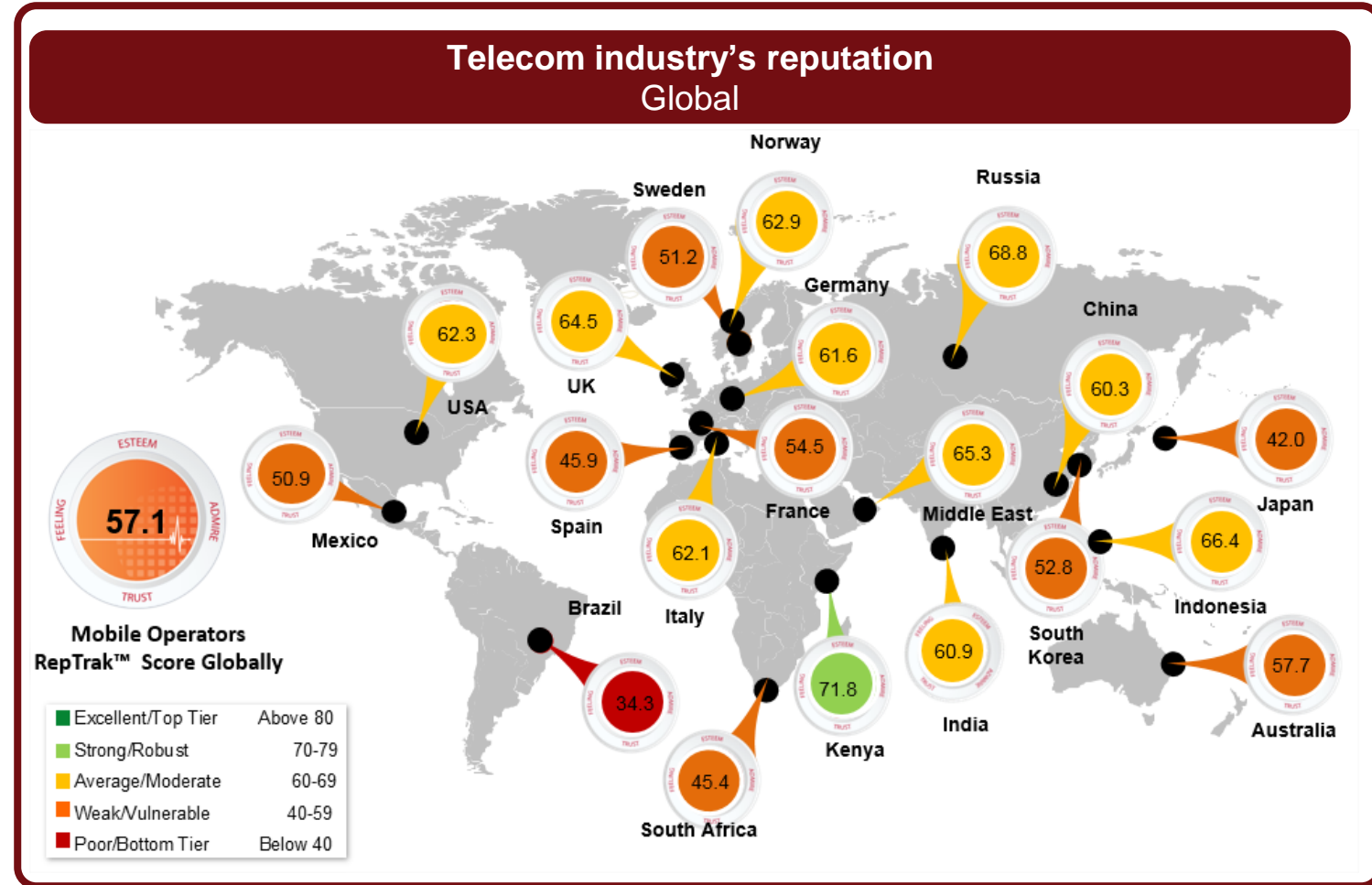
Source: Forrester Research – Competitive Strategy In the Age of the Customer – October/2013

Around the world the telecom sector has difficulties regarding customer satisfaction

Net Promoter Score
Average for industry– USA e UK, 2015

Retail	
Finance	
Online Service	
Tecnology and Electonics	
Insurance	
Hospitality	
Telecom	

Scale: 25 0 25 50 75

Average NPS[1] for Telecom Sector: +5

Minimum NPS — Average — Maximum NPS

Percentis 25% 50% 75%

Telecom industry's reputation
Global

Norway 62.9
Sweden 51.2
Russia 68.8
Germany 61.6
China 60.3
USA 62.3
UK 64.5
France 54.5
Middle East 65.3
Japan 42.0
Mexico 50.9
Spain 45.9
Italy 62.1
South Korea 52.8
Indonesia 66.4
Brazil 34.3
Kenya 71.8
India 60.9
South Africa 45.4
Australia 57.7

57.1

Mobile Operators RepTrak™ Score Globally

Legend	Score
Excellent/Top Tier	Above 80
Strong/Robust	70-79
Average/Moderate	60-69
Weak/Vulnerable	40-59
Poor/Bottom Tier	Below 40

It is common to find differences between evaluation of Service Providers about their service and customer perception

| Design | Acquisition | Fulfillment | Usage | Payment | Support | Churn |

Low speed

Excessive usage of data

Apps offline

Intermittence

Dropped Calls

Why is it so slow? It doesn't do what I expected it to! I don't understand how to use it!

MIND THE GAP

High Availability Fast fix times Works as designed

????

Consumer

Service Manager

Service Operations Team

Capacity available

Network Indicators OK

Appropriated 3G and 4G coverages

Equipments OK

And TIM already started this long journey to become a customer-focused company

Serious problems with user experience

... Transparency was rescued...

- **TIM Customer Web Portal**
  - Feedbacks
  - Coverage

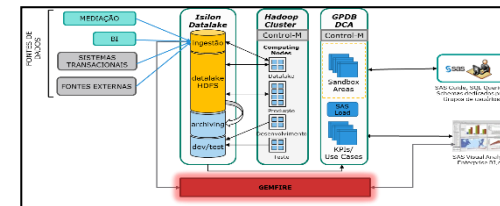**... and the Company position was leveraged**

- **4G Leadership**

  > TIM consolidates as the brazilian leader in 4G coverage
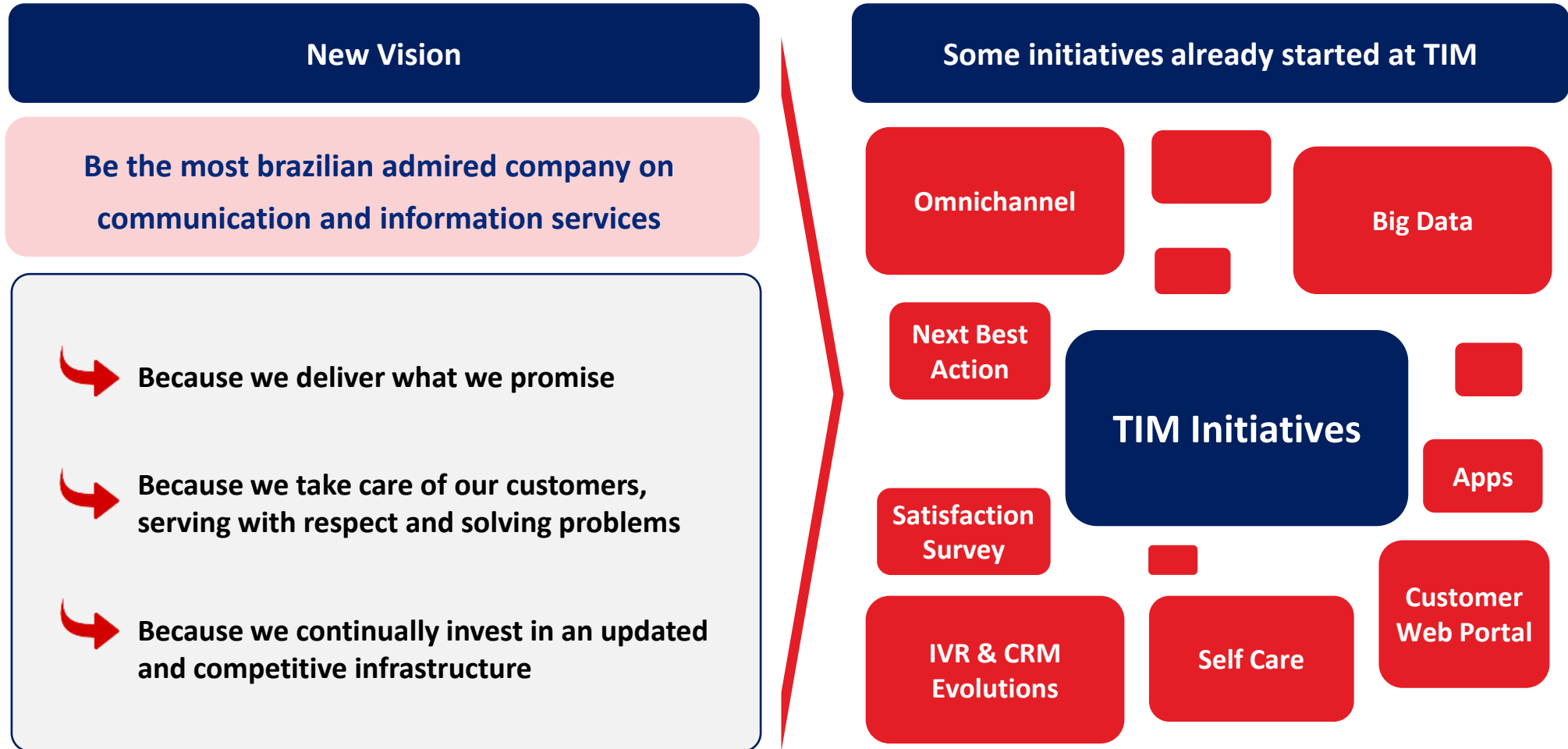
- **New Portfolio**
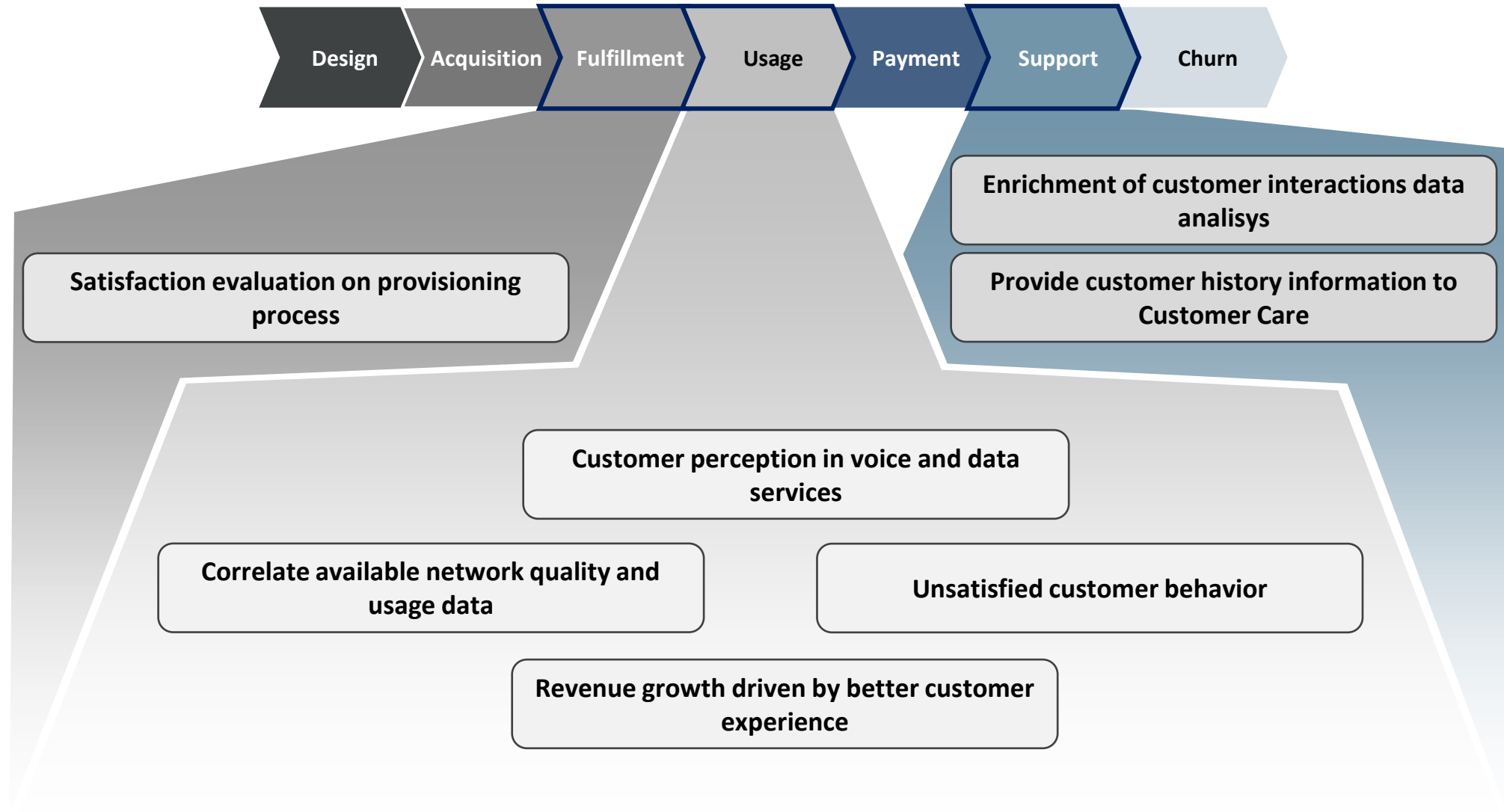

- **Big Data Project**

source: TIM Brazil

TIM Initiatives

TIM is modifying its operations in order to focus increasingly on the experience of its customers

New Vision

Be the most brazilian admired company on communication and information services

➥ **Because we deliver what we promise**

➥ **Because we take care of our customers, serving with respect and solving problems**

➥ **Because we continually invest in an updated and competitive infrastructure**

Some initiatives already started at TIM

Omnichannel

Big Data

Next Best Action

TIM Initiatives

Apps

Satisfaction Survey

IVR & CRM Evolutions

Self Care

Customer Web Portal

TIM Initiatives | Main Use Cases

Design → Acquisition → Fulfillment → Usage → Payment → Support → Churn

Satisfaction evaluation on provisioning process

Enrichment of customer interactions data analisys

Provide customer history information to Customer Care

Customer perception in voice and data services

Correlate available network quality and usage data

Unsatisfied customer behavior

Revenue growth driven by better customer experience

Use Cases

Location of Customer Care Interactions

Concept

- Identification of users who complained about Service Quality
- Locating of users through the Maincell, Workcell and Homecell in quadrants with approximately 1,5km²

Methodologies

1 – Main Cell
Most cell used

2 – Work e Home Cell
Work : 08h - 18:59h
Home : 19h - 7:59h + Weekends

| Customer Care complains | CDR Voice* Cell most used by the Customer | Customer Care complains | CDR Voice* Cell most used in the Work and Home windows |

Areas with the higher customers concentration - RJ
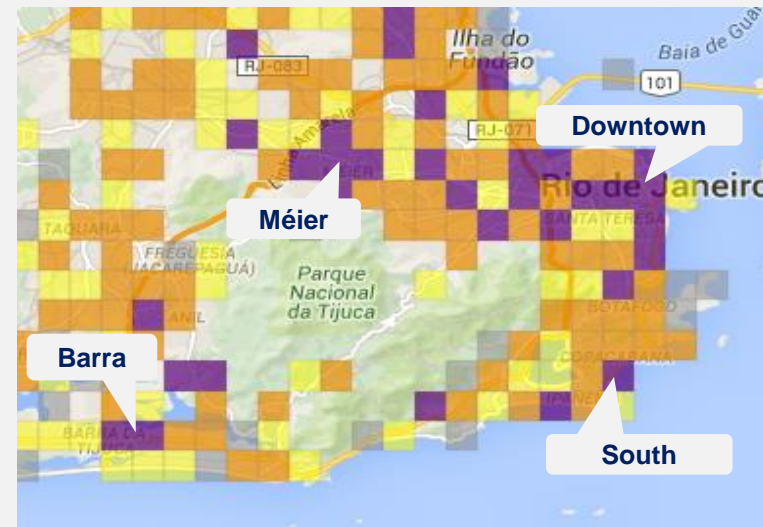
Subtitle:
- ⬜ 0
- ⬛ 1 ≤ C ≤ 3
- 🟨 10 ≥ C > 3
- 🟧 30 ≥ C > 10
- 🟪 C > 30
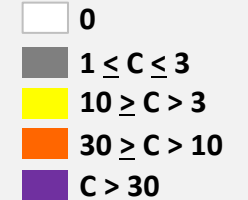
Results

- Identification of areas with high and low concentrations of users with interactions with Customer Care
- It was not identified any correlation with the serveability* index

Benefits

- Areas for activities prioritization and investments optimization
- Increase of customer experience visibility
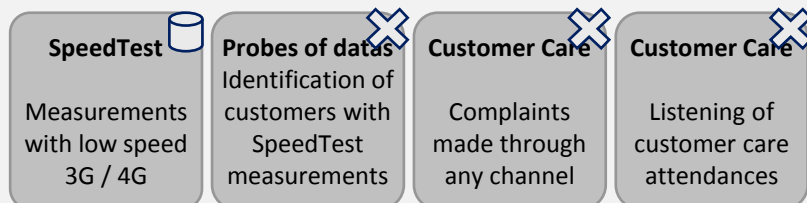- Enrichment of customer information available on the Customer Care

* Indicator composed by drop call, accessibility and availability

SpeedTest Per Customer

Concept

- Identification of TIM customers in SpeedTest Base using information available in other systems
- Mapping the Customers performance regarding to speed and latency tests
- Mapping the customer behavior in service channels

Methodologies

SpeedTest	Probes of datas	Customer Care	Customer Care
Measurements with low speed 3G / 4G	Identification of customers with SpeedTest measurements	Complaints made through any channel	Listening of customer care attendances

Ilustrative

Customer 1

DATA	MUNICÍPIO	CÉLULA	TEC.	DL (kbps)	UL (kbps)	Lat. (ms)
09/07/2015 08:32	TERESINA (PI)	PW1100A	3G	2343	937	191
09/07/2015 08:33	TERESINA (PI)	PW1100A	3G	1088	639	143
09/07/2015 08:34	TERESINA (PI)	PW1100A	3G	49	684	166
09/07/2015 08:34	TERESINA (PI)	PW1100A	3G	61	1089	151
09/07/2015 08:35	TERESINA (PI)	PW1100A	3G	51	845	163
09/07/2015 08:36	TERESINA (PI)	PW1100A	3G	59	1231	157

Results

- Two customers who made tests in Speedtest were indentified with data service problems and call center complaints.

- Identification the throughput of segments and plans

Benefits

- Understand how customer experience influence on the customer care complaints indicator

- Visibility of misunderstanding or lack of information during customer care

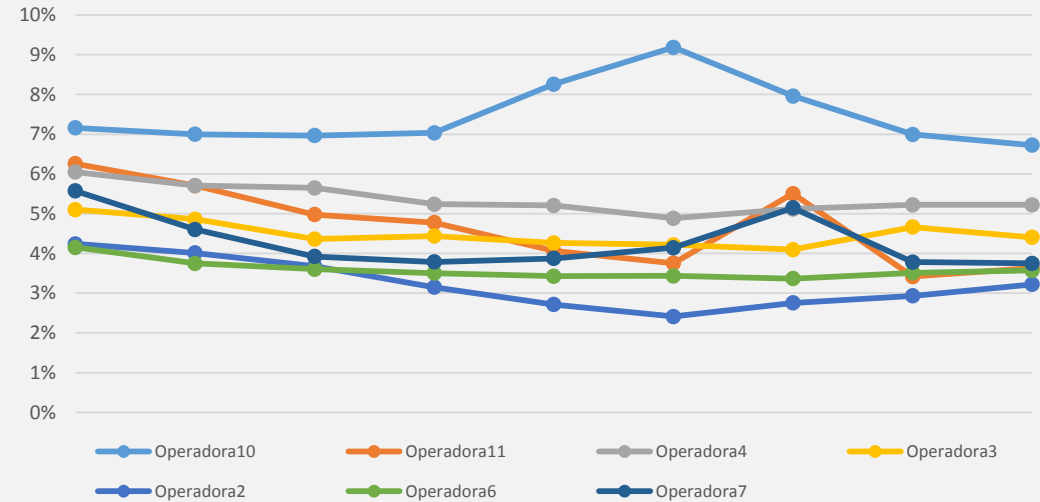# Voice Quality Indicator

Concept

- Recalling: consecutive calls between two users A and B within 120 seconds between the end of the first one and the beginning of the second.
- Recalling Type 1: TIM → TIM or TIM → Other Operators
- Recalling Type 2: Other Operators → TIM

Methodologies

Big Data

Voice CDRs originated and received calls

Filter of the recalls made

Grouping of calls by CSP and other operators

Ilustrative

Recalling per CSP*

Operadora10 · Operadora11 · Operadora4 · Operadora3 · Operadora2 · Operadora6 · Operadora7

Results

- Mapping of CSPs that have higher rates of recalls
- Recalling indicators by operators for recalling Type 1 and Type2
- Recalling indicators for each device vendor (Apple, Samsung, LG…)
- Recalling indicators for customer care

Benefits

- Understand of Other Operators' CSP usage and encourage the use of TIM's CSP
- Improve network and interconnection with other operators
- Prioritize manufacturers and devices with lower rates of recall
- Understand the behavior and prioritize investments in order to improve the customer care

*Código de seleção de prestadora

Customer X Service X Device

Concept

- From the 4G network data CDRs are mapped the cover status of 4G on cities, the types of traffic generated, type of device used and type of SIM chip used by the customers, identifying clusters of interest.

Methodologies

Big Data CDRs of datas → 4G traffic filter (Cities and Customers) → Filter of the types of chip and apparatus

Ilustrative

Book Cluster 4G

City Coverage	SIM type	Device	Traffic	
4G Cover	4G SIM	Device N4G	N4G traffic	6.494.000
4G Cover	N4G SIM	Device 4G	N4G traffic	834.000
N4G Cover	4G SIM	Device 4G	N4G traffic	590.000

Results

- **Book Cluster 4G:** Segmentation of clusters considering the parameters:
  - Value segment Compatibility
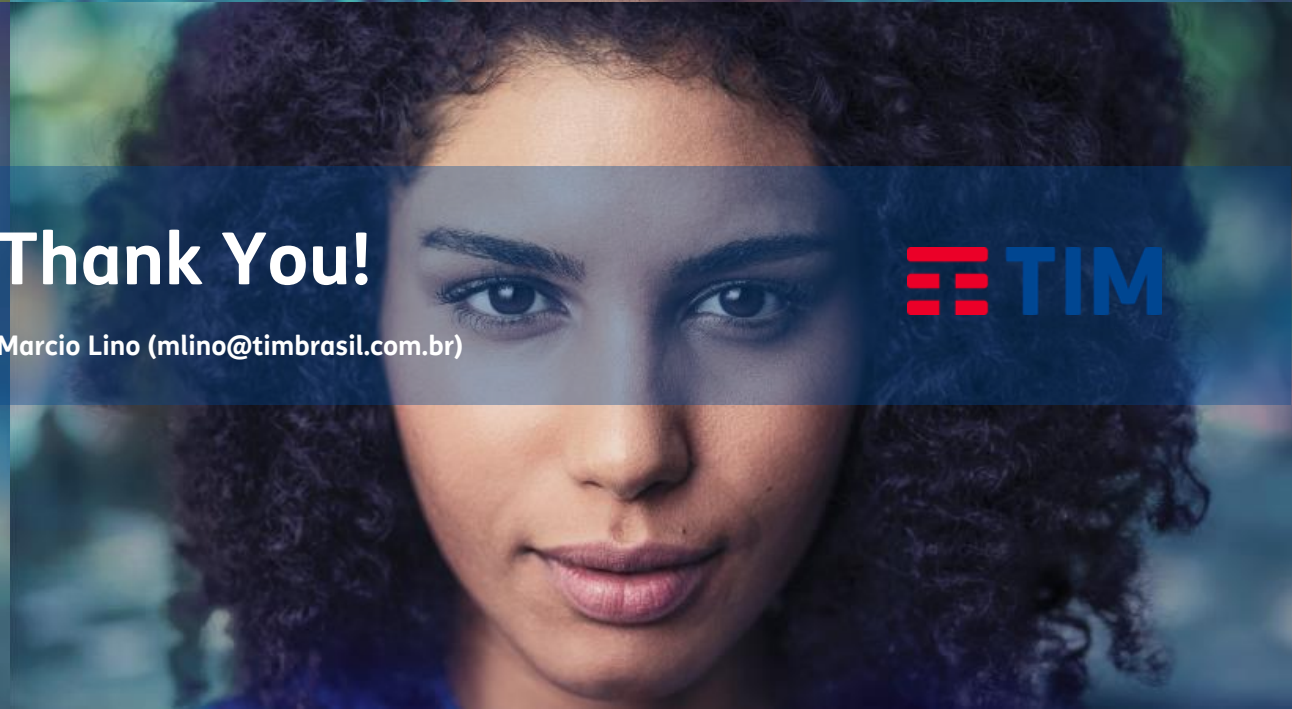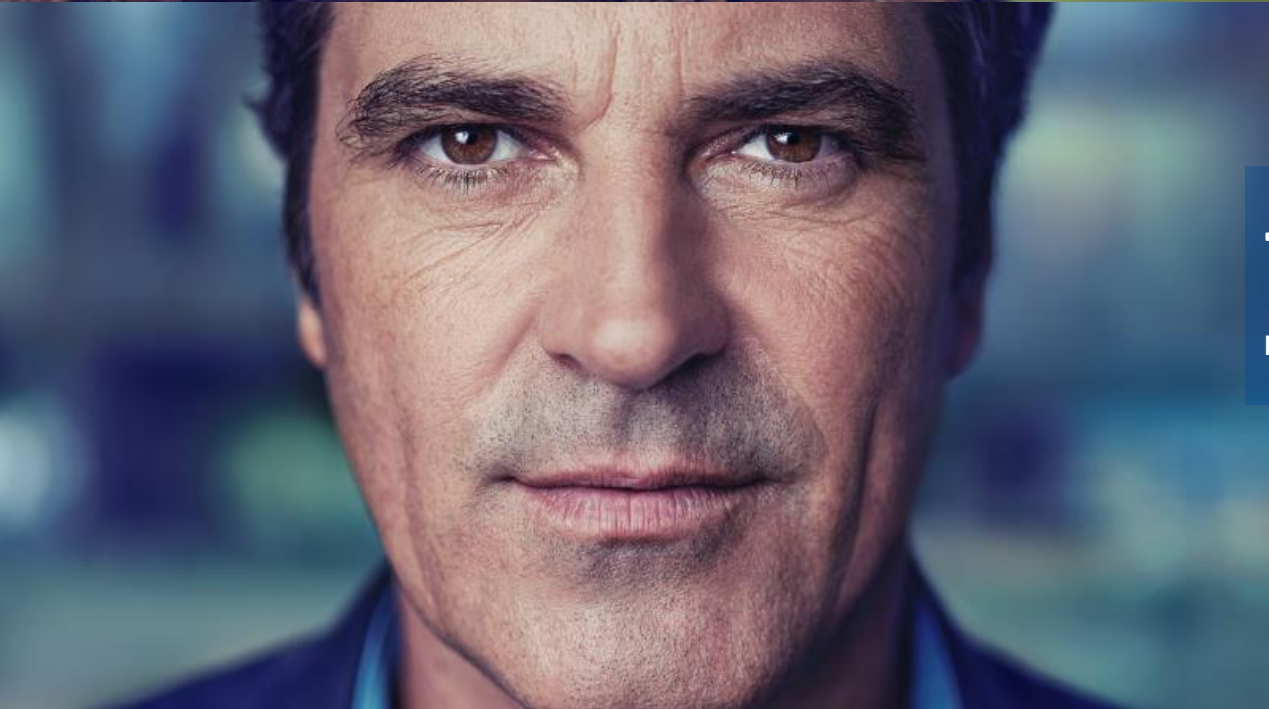 - Device type (4G / Not 4G)
  - 4G coverage
  - SIM Chip 4G

Benefits

- **Device exchange :** Encouraging exchange to 4G device

- **Chip exchange:** Improvement of actions for migrations from 3G chip to 4G chip

- **4G expansion :** Identifying priority areas to increase 4G coverage

Thank You!

Marcio Lino (mlino@timbrasil.com.br)

TIM