



# AI in Telefonica

# AI has a huge expected impact on business, based on many successful applications

According to Gartner, AI will likely generate \$1.2 trillion in business value for enterprises in 2018, 70 percent more than last year. “AI promises to be the most disruptive class of technologies during the next 10 years ...” said John-David Lovelock, research vice president at Gartner.

## Why is AI so popular today?

Impressive applications

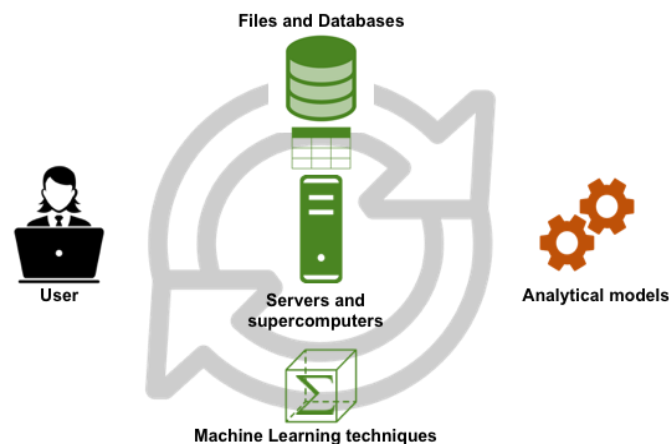
- Cancer diagnosis
- Self-driving cars
- Automatic translation
- Personalization
- Music composition and other arts
- Holding debates

## Artificial Intelligence and Machine Learning Already exist for more than 60 year

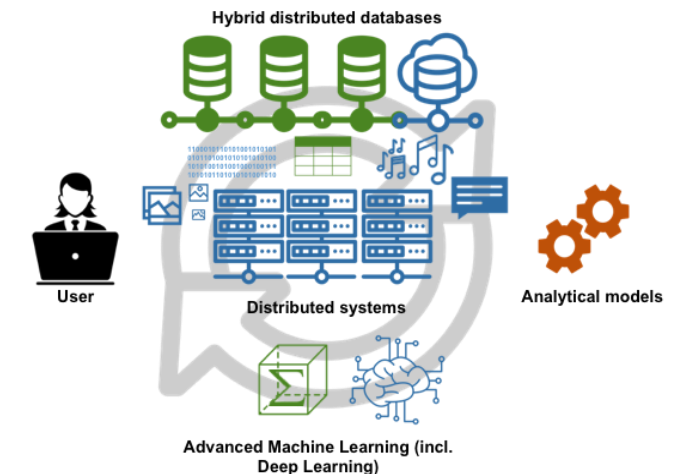
Why is AI so successful today?

- Data abundance
- Processing power
- Deep learning

### Traditional Machine Learning



### Advanced Machine Learning



# We are entering the next wave of technology

## next wave

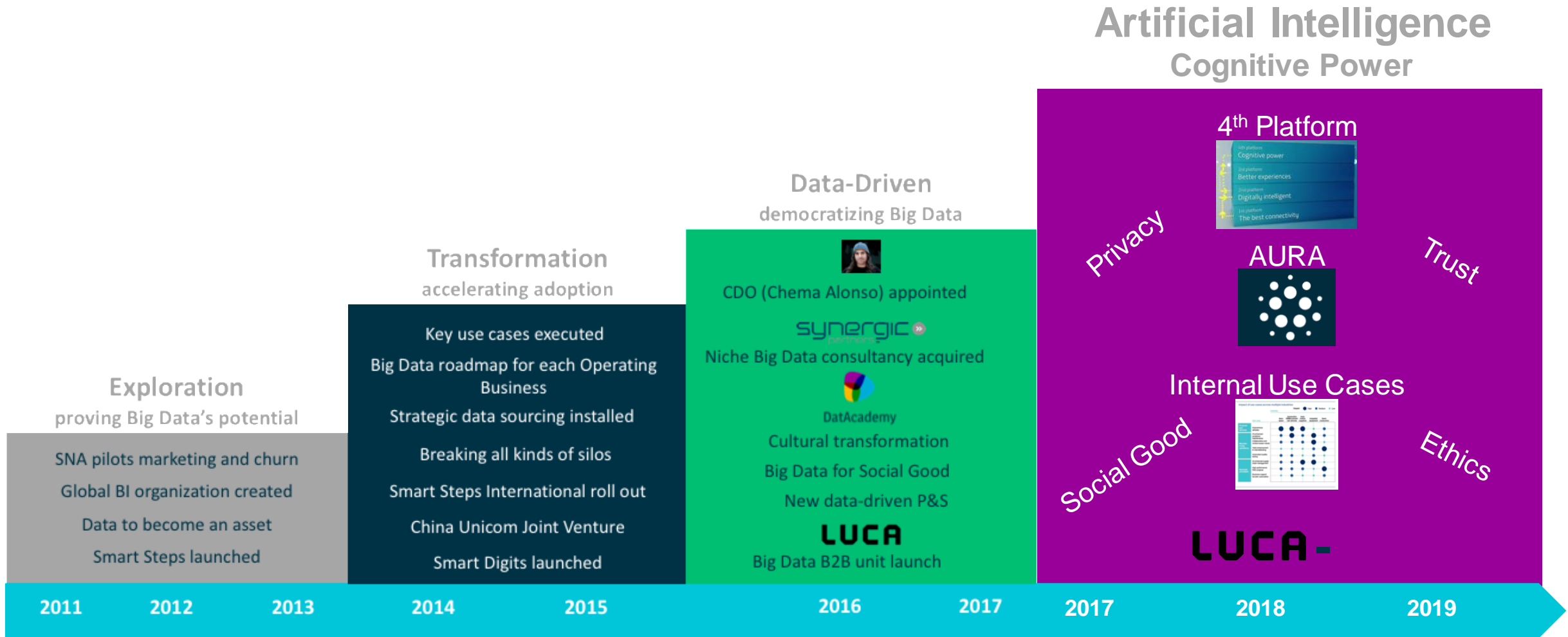
*Connectivity*

*Services over  
connectivity*

*Big Data*

*Cognitive  
Intelligence*

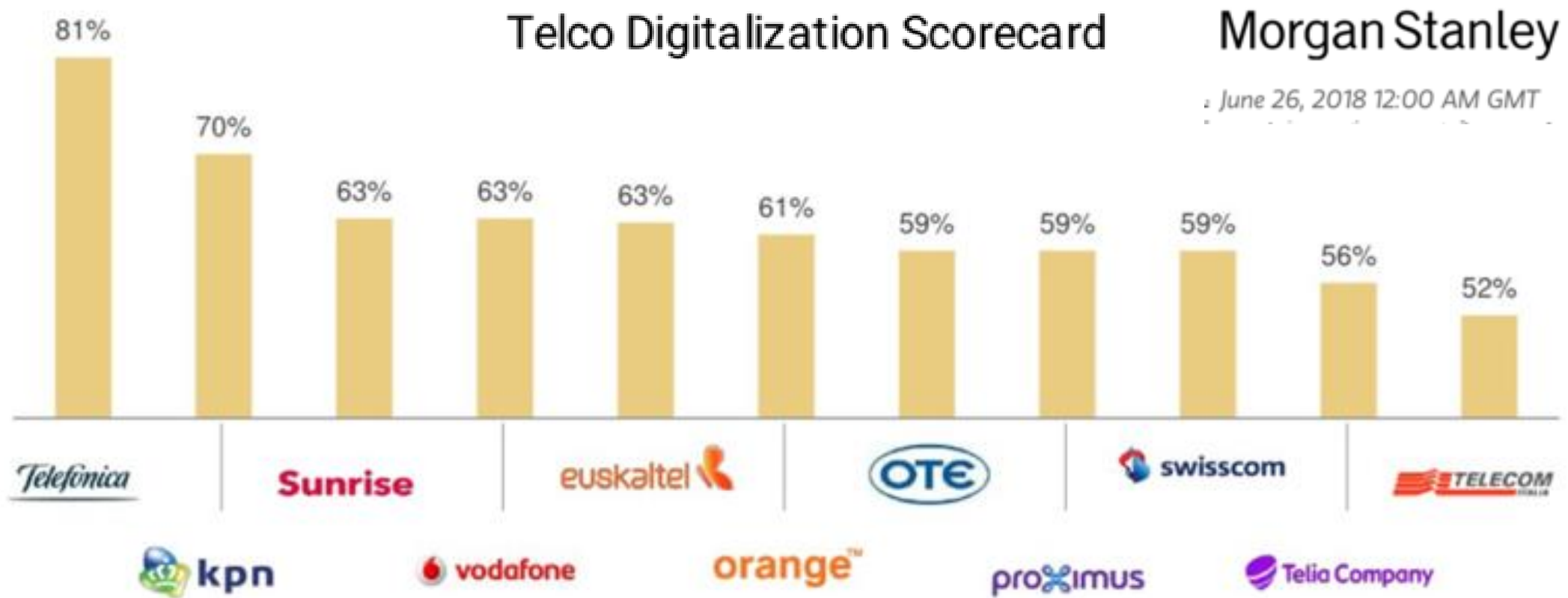
# Which is the next phase (AI) of a long, challenging journey



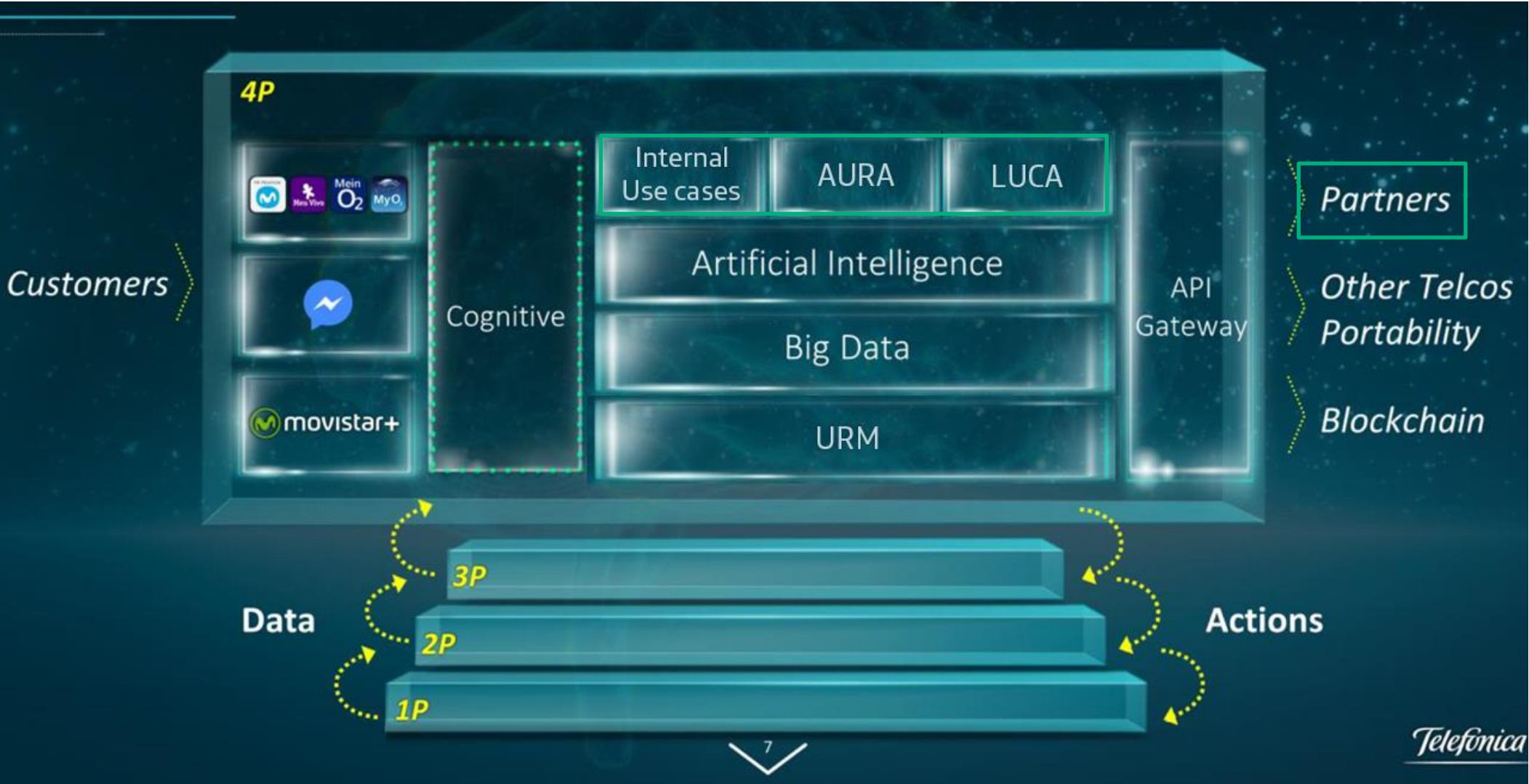
# We have become a platform company, digitalizing wherever we can



# Which has made us one of the top digitalized telcos



# The 4P is the kernel of our data & AI strategy



# We apply Data & AI internally to optimize our business



## Customer Life Cycle & Value Management

- Credit Scoring 
  - Smart Pricing 
  - Value@Risk 
- 
- NBA 

## Smart Marketing

- Device Recommender 
- VAS value 
- Analytics automation 
- B2B Market Landscape 
- P/S Recommender 

## Optimization

- PoS Footprint (Canal 2.0) 
- Spectra Platform 
- Neptuno 

 Available solution ready to be deployed  
 PoC/development in progress





# Through a comprehensive portfolio



## Crowd analytics 1. Smart Steps Platform



LUCA Tourism



LUCA Transit



LUCA Audience



LUCA Store INTERNET OF THINGS

## Consent-based data 2. Smart Digits



LUCA Account Takeover Protection



LUCA Scoring



LUCA Match



LUCA Verify



LUCA Sign-Up



LUCA Proximity

## Layer over B2B services 3. Comms & IoT Analytics



LUCA Comms

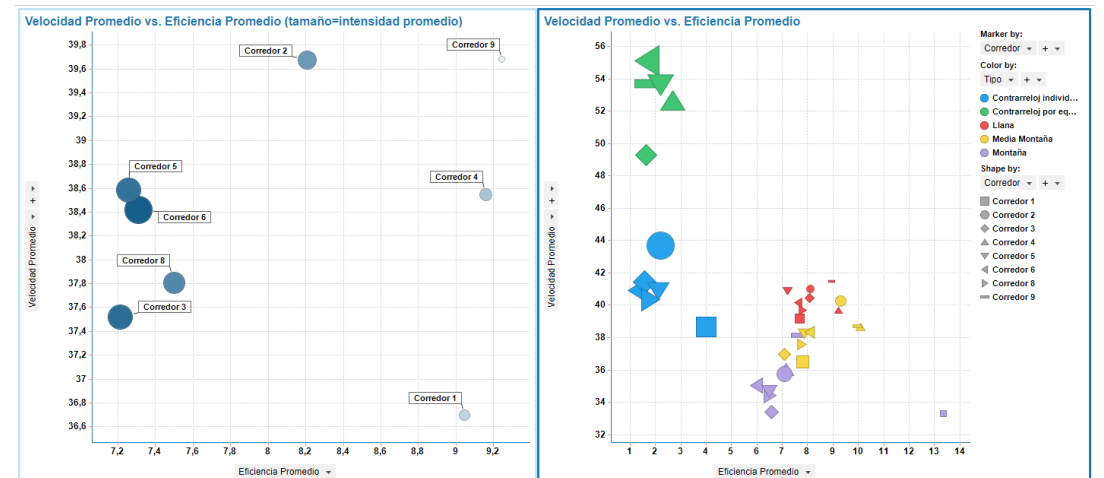
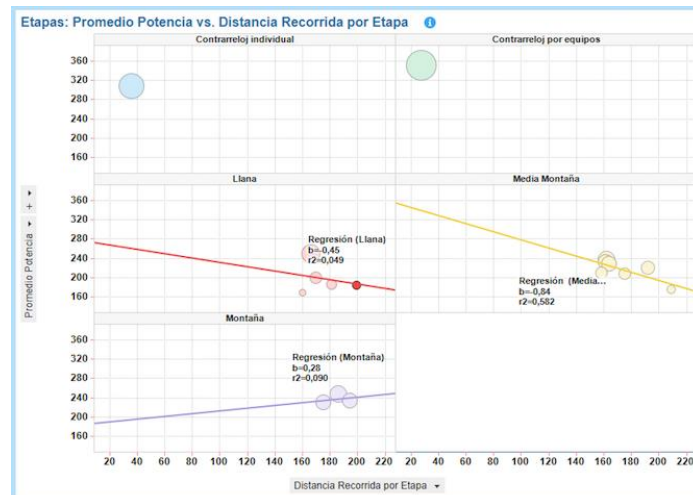
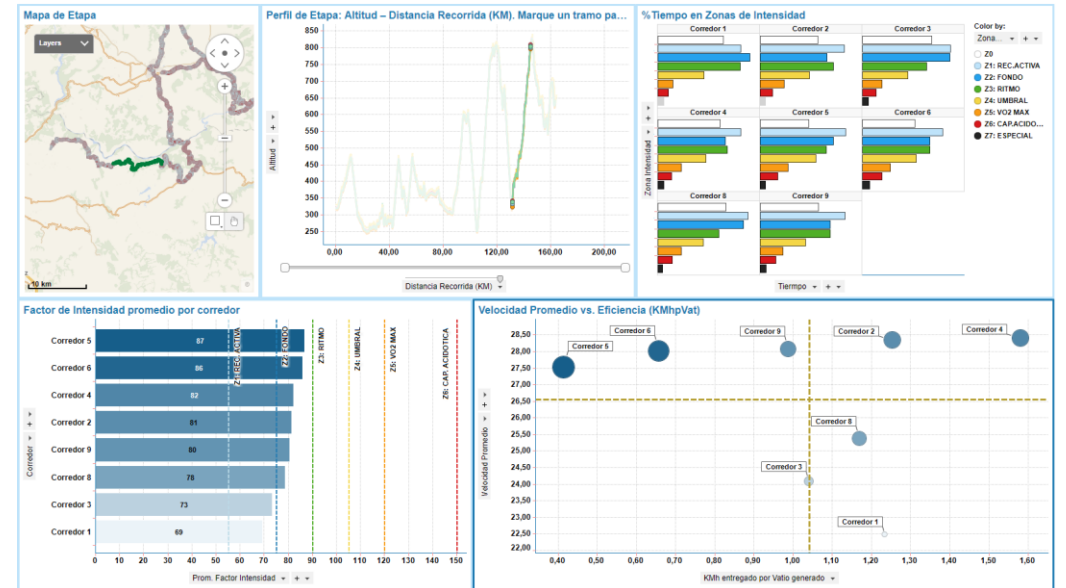


LUCA Fleet INTERNET OF THINGS

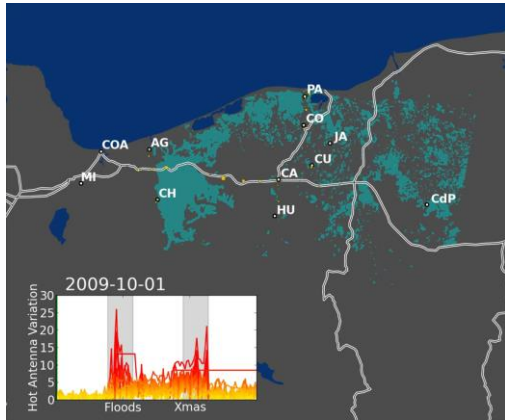


LUCA Energy INTERNET OF THINGS

# We also support professional cycling with Big Data and Machine Learning



# Through partnerships, Data & AI supports the UN's Sustainable Development Goals



Using antenna activity to understand flood impact in Mexico

**LUCA**

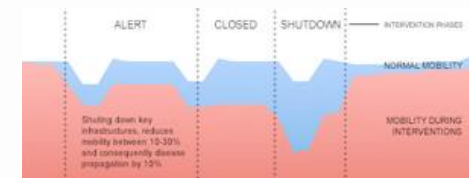
Natural disasters in Colombia



Air quality in large cities



Bring Internet where there is no 3G, 4G coverage



Cell phone mobility patterns measure the impact of Government measures to reduce spread of Swine flu (MX)

*Telefonica* DATA UNIT

# Aura is Telefonica's customer-facing Artificial Intelligence ...



**Aura is Telefonica's Artificial Intelligence** platform which aims to establish a new relationship model with customers by using personal data and cognitive services on top of our telco infrastructure.

- Enabling a revolution in the way customers interact with the Group's systems and services.
- Based on the principles of data transparency and customer empowerment.
- Personalizing and contextualizing the response to each customers
- With potential to become our customers link to any TEF service, anywhere, anytime.

# Aura is accessible through different channels



Channels availability



Launched in 6 OBs in at least 1 channel



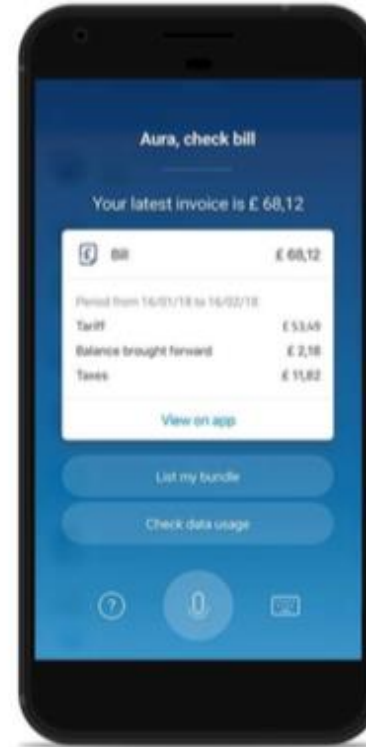
New channels to come during 2019 and 2020 ...



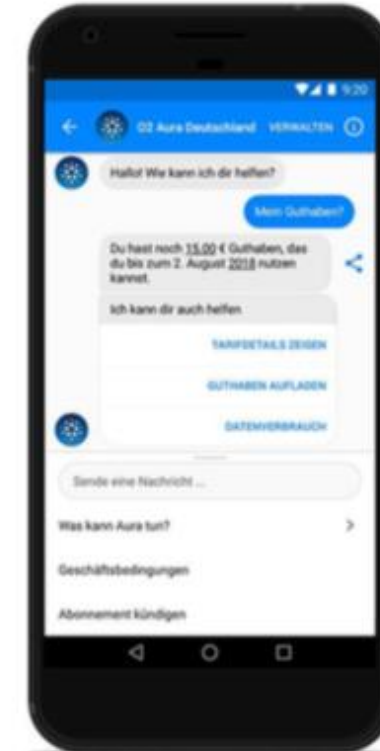
Aura in Movistar+ TV app



Aura in Meu Vivo Mais app



Aura in O2 Ask app



Aura in Facebook Messenger



# Aura solves queries from several topics and domains



## Billing queries

Check my last bill, See bill details



## Balance & Top-up

Check my balance, Make a topup

## Understanding my bundle

Show my bundle, What is my data allowance



## Issue Management

Raise an issue, Check status

## Data Usage

Check data usage, Forecast on data



## Make the most of my TV

Search TV content, Recommend me, Play on TV

# With all those AI & data opportunities also comes great responsibility

We are developing **AI principles** to ensure a human-centric application of AI



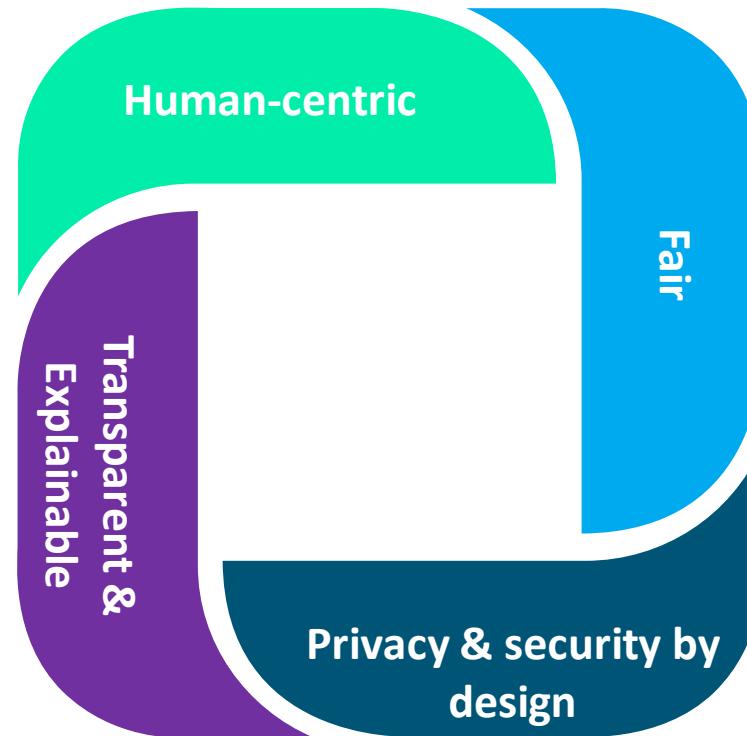
## Human-centric

- AI at the service of humanity, and not against



## Transparent & explainable

- No black-box algorithms and transparency about data use



## Fair

- No unfair bias and no discrimination



## Privacy & security by design

- As for all our technological products and services





# Thank you

@vrbenjamins

richard.benjamins@telefonica.com