data driven transformation

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4P Discovery. Insights
what is digital transformation?
CIO’s Guide to Digital Transformation:
WHY DATA HOLDS THE KEY TO SUCCESS

IN ASSOCIATION WITH: Hitachi Data Systems
We have launched LUCA Data-Driven Decisions

Our goal: to empower other organizations to become more data-driven
What isn’t this about?
Big Data is no longer an emerging technology...

"Big data...has become prevalent in our lives"
-- Betsy Burton, Gartner Analyst

“We’ve retired the Big Data hype cycle. I know some clients may be really surprised by that because Big Data was a really important one for many years.” Betsy Burton, Gartner
02 Let Data Speak
Are you listening?

Using CDR traffic to understand the impact of an earthquake in Mexico
Are you listening?

Using sports analytics software to understand footballer behaviour

Xavi: movements faster than 5 m/sec

Messi: movements faster than 5 m/sec
Using mobile data to understand the catchment and profile of tourists to the Fallas Festival
Business Insights for **Tourism Insights**

Using mobile data to understand the **catchment and profile of tourists** to Spain
Business Insights for **Smarter Communication**

Using analytics **to optimize global communications** in multinationals
Big Data for Social Good

Using CDR traffic to understand the impact of floods in Mexico
Open Data for Marketing and Brand Awareness

Using open data as an input for a real-time advertising campaign in London
03 data driven transformation
The Big Data journey has different maturity stages

**Exploration**
- Interested in understanding potential of Big Data
- Keen to run POCs
- Lack of internal know-how and capabilities
- Data sources unknown / uncontrolled
- Strategy and uses cases not defined

**Transformation**
- Decision made to leverage Big Data
- Require methodology and expert resources
- Need technology and infrastructure
- Analytics capabilities to be deployed / outsourced
- End-to-end transformation programme planned, including cultural and org. changes

**Data-Driven**
- Big Data already implemented in a “data-centric” organization
- Data is intrinsic in decision-making
- Data brings organization closer to its customers
- In-house expertise in data science and data engineering
- External data sources used regularly to generate richer insights
- New data-driven business models and processes in creation
And this is Telefonica’s Big Data journey – so far

**Exploration**
proving Big Data’s potential

- SNA pilots marketing and churn
- Global BI organization created
- Data to become an asset
- Smart Steps launched

2011 2012 2013

**Transformation**
accelerating adoption

- Key use cases executed
- Big Data roadmap for each Operating Business
- Strategic data sourcing installed
- Breaking all kinds of silos
- Smart Steps International roll out
- China Unicom Joint Venture
- Smart Digits launched

2014 2015

**Data-Driven**
democratizing Big Data

- CDO (Chema Alonso) appointed
- Niche Big Data consultancy acquired
- Cultural transformation
- New data-driven P&S
- LUCA
  - Big Data B2B unit launch

2016 2017
These are the components to work on during the journey.
Data Engineering – more data sources

Data Warehouse
- Descriptive
  - WHO?
  - Sociodemographic
- Products and Services
- Consumption
  - Behavioral
  - WHAT, WHERE?

Big Data
- Web Logs
- Channels (online & offline)
- Call Centre Content
  - Q of E
  - Interaction
    - HOW?
+ External Data

Customer

Attitudinal
- WHY?
Tools and Infrastructure

What happened?
Why did it happen?
What will happen?
How can we make it happen?

Descriptive Analytics
Diagnostic Analytics
Predictive Analytics
Prescriptive Analytics

Source, Gartner 2012

Volume
Velocity
Variety

3 Vs of Big Data
Structured
Unstructured
Semi-structured
All of the above

Terabytes
Records
Transactions
Tables / Files

Batch
Real-time
Streams
Near-time

hadoop
Map Reduce
HDFS
mahout
hive
hbase

@LUCA_D3
“Data Scientist is the sexiest job in the 21st century.”

“Big Data expertise demand has increased by 85% in the last year.”

“21,000 Data Engineer jobs posted online.”

“90,000 Data Engineer jobs posted online.”
All of which is applied to the Business
which have allowed us to **create value internally**: 

- **Smart Marketing**
  - Real Time contextual campaigns
  - Video analytics
  - E2E churn approach
  - Multi-channel analytics
  - Online channel

- **Business optimisation**
  - Churn Reduction & Optimisation
  - Network Planning Optimization

- **Procurement analytics**
  - Fleet management optimisation
  - Supply/demand analysis
  - Value based analysis
  - Fibre/LTE deployment
Now, food for thoughts
Conway’s law

Organizations which design systems ... are constrained to produce designs which are copies of the communication structures of these organizations

— M. Conway
Every software system embodies particular trade-offs concerning the way in which the services that it provides are implemented.
Thanks for listening!
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