

16^a

CONFERÊNCIA ANUAL 2019

O Mundo Digital na Próxima Década

Reitoria da Universidade Nova de Lisboa
3 de Outubro 2019

Patrocínio Platinum

claranet

easyVISTA™

Patrocínio Ouro

apcer

Patrocínio Prata

bmc

Rumos



NOVO BANCO[®] DIGITAL

Data Science & AI

Hello
future.

Bernardo Caldas
Head of Data Science

bernardo.caldas@novobanco.pt

Novo Banco Vision

Short-mid-term

'Enabling NOVO BANCO to become Portugal's best commercial bank for the Digital age'

World-class Digital self-service capabilities

World-class Corporate and Retail “Digital banks”, with market-leading Digital sales and services available on customers' fingertips

Intelligent multichannel relationships

Through advanced analytics and aggregation capabilities, automated engagement and advice for rich customer relationships by RMs, branches, remote or Digital

Seamless multichannel and multi-device experiences

Same experience across all channels (Digital, remote and face-to-face) and all devices (mobile, tablet and desktop)

Mid-long-term

'Enabling NOVO BANCO to play in an age of profound disruption and new players'

Distinctive customer value through open business models

Extreme personalization, customer centricity and open architecture. NB at the center of all relevant relationships with customers

Rich orchestrated ecosystems

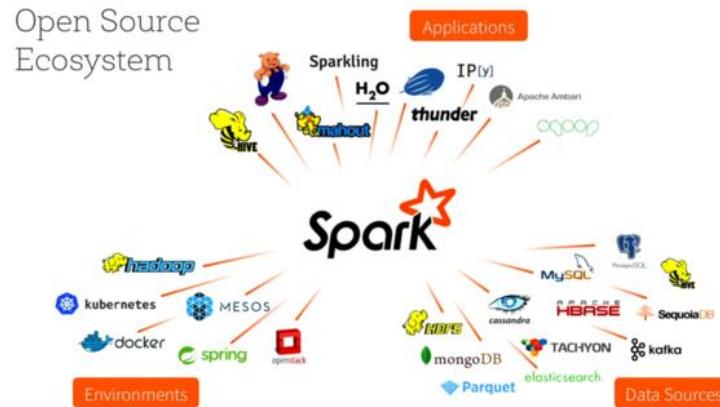
Mobile/Digital NB as the orchestration point of rich ecosystems of services and platforms

Data Science in Banking?



Mainframe

vs



Open Source



Standard equipment

vs



Custom needs

Typical Data Science Use Cases

Risk

- Credit limit assessment
- Credit decision automation
- Advanced/early default alerts
- Fraud detection

2

1

Operations

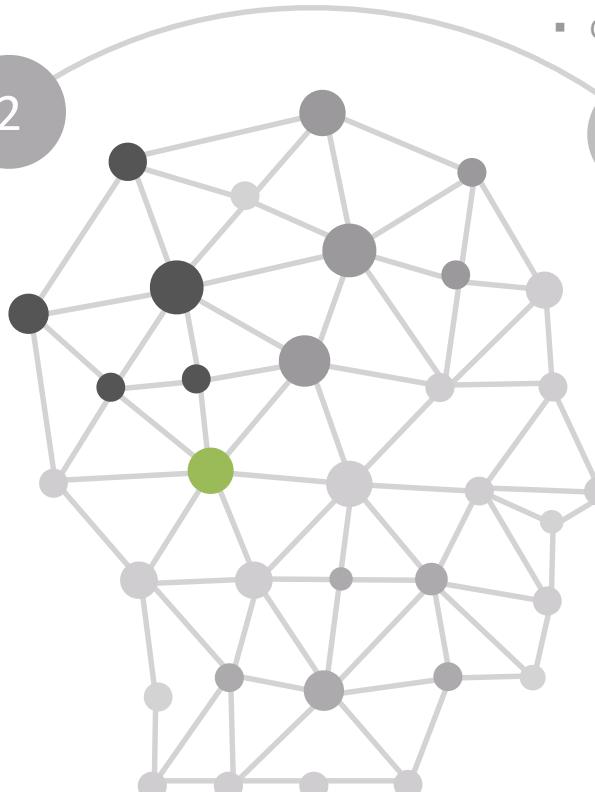
- Automatic process dispatching
- Automatic contract generation
- Cash management/ prediction in branches and ATMs

3

4

Marketing/Sales

- Next best action
- Transactional analysis
- Customer experience
- Sales forecast



Compliance, Treasury, etc

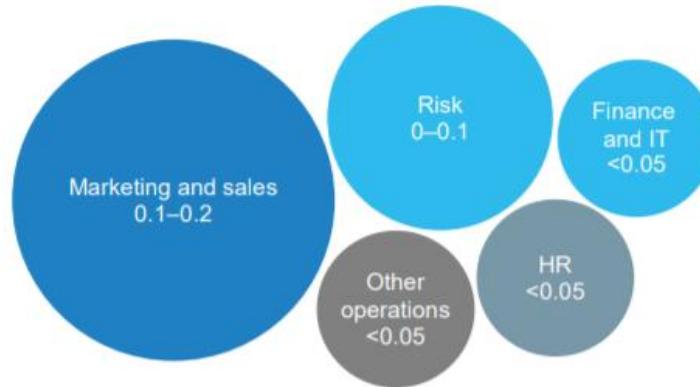
- Anti-Money Laundering
- Know Your Client
- Capital forecast

Where is the value?

In banking, marketing and sales and risk are among the areas with the most potential value from AI

Banking example

\$ trillion



| | | | | | |
|---------------------------|--------------------------------------|---|---|---|---|
| Channel management 0.1 | Customer service management 0–0.1 | Customer acquisition/ lead generation <0.05 | Fraud and debt analytics 0–0.1 | | |
| | | Next product to buy (NPTB) <0.05 | | | |
| | Churn reduction 0.05 | Pricing and promotion <0.05 | Analytics-driven finance and IT <0.05 | Analytics-driven hiring and retention <0.05 | Workforce productivity and efficiency <0.05 |

NOTE: Numbers may not sum due to rounding. Not to scale.

SOURCE: McKinsey Global Institute analysis

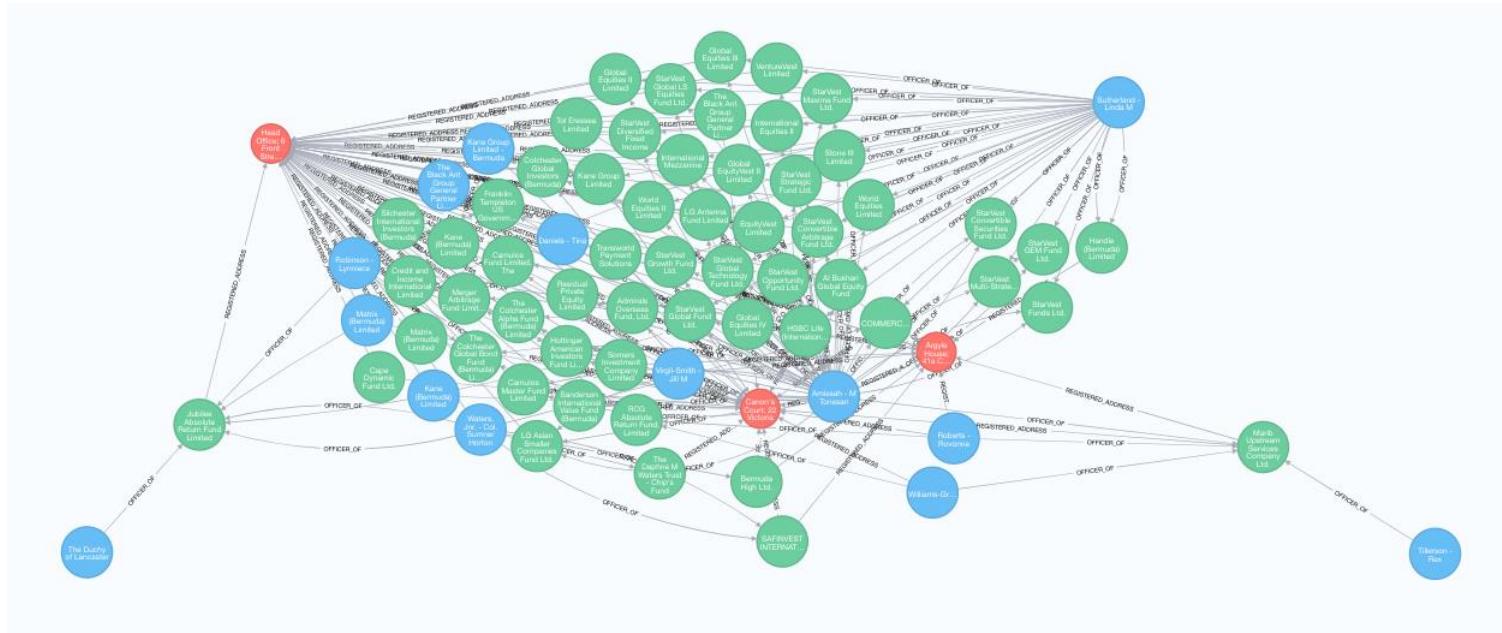
Use Case Examples

Machine Learning embedded in Products



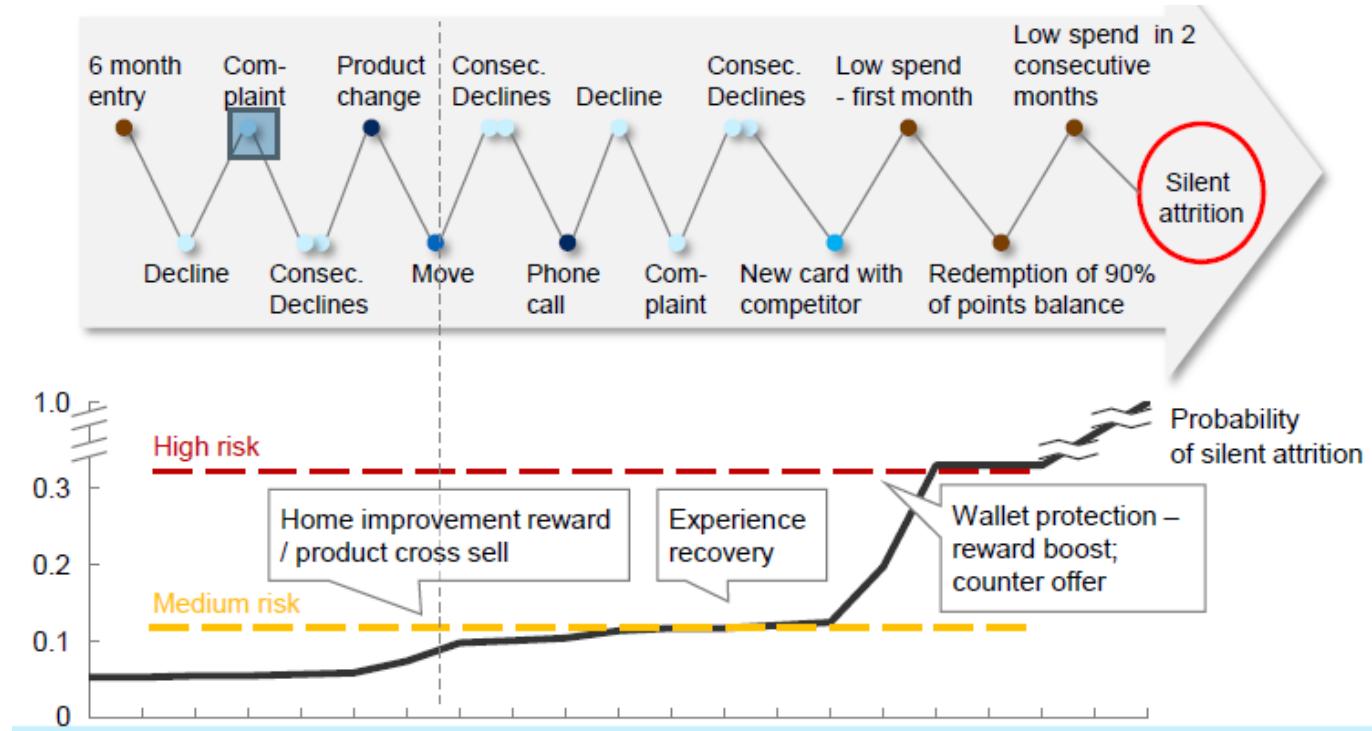
Use Case Examples

Anti-money laundering using Graphs and Deep Learning



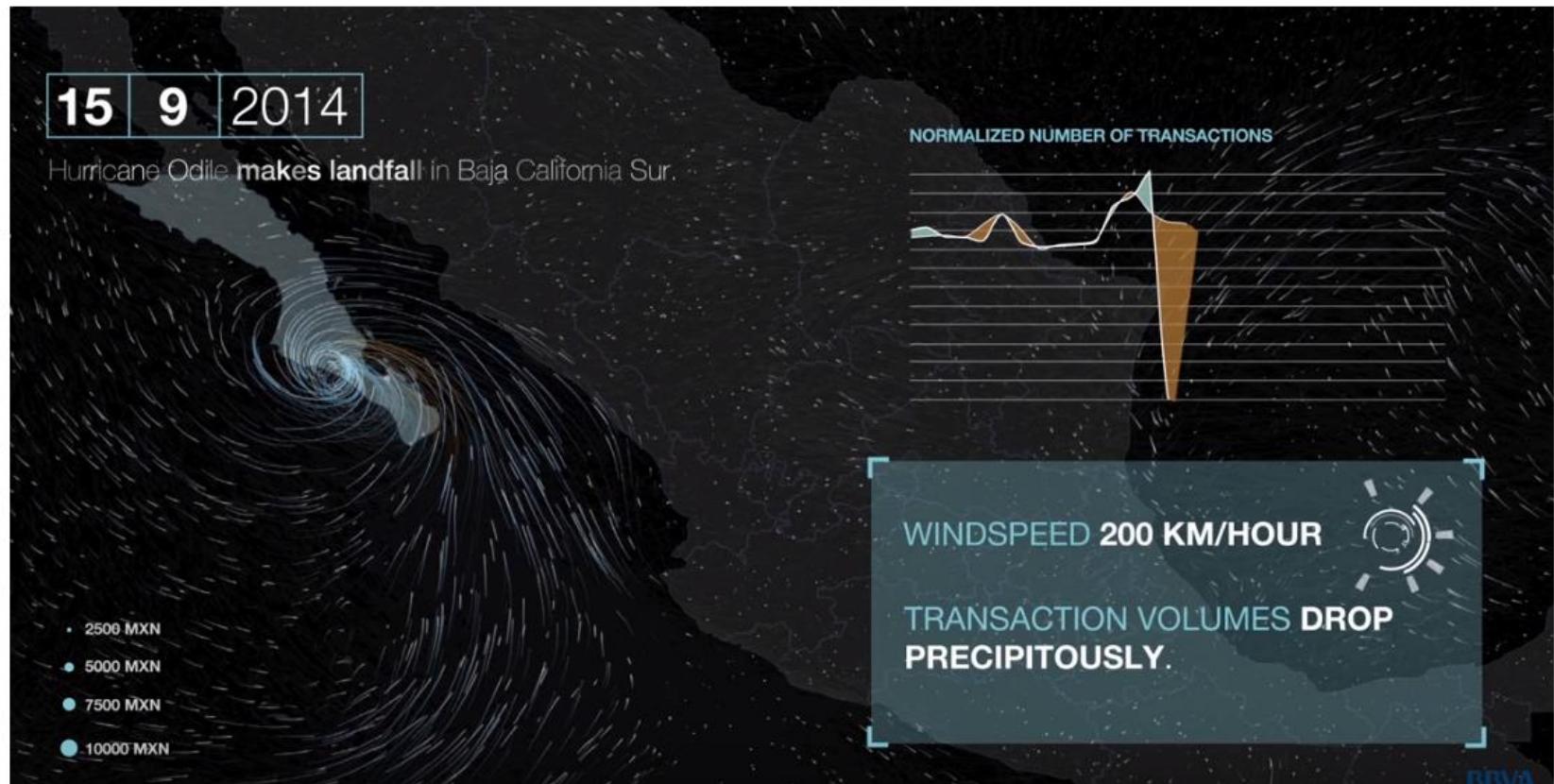
Use Case Examples

Churn prediction via Customer Journey modelling (RNN)



Use Case Examples

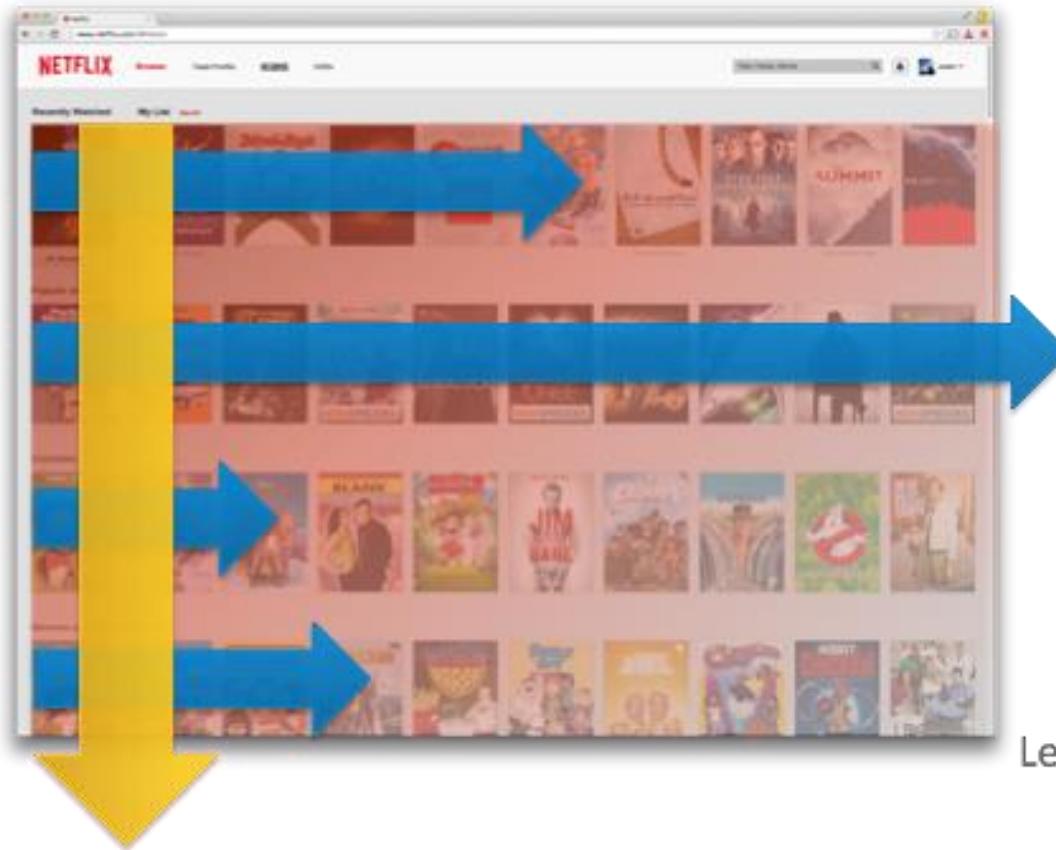
Economic activity prediction in crisis situations



Use Case Examples

New business models

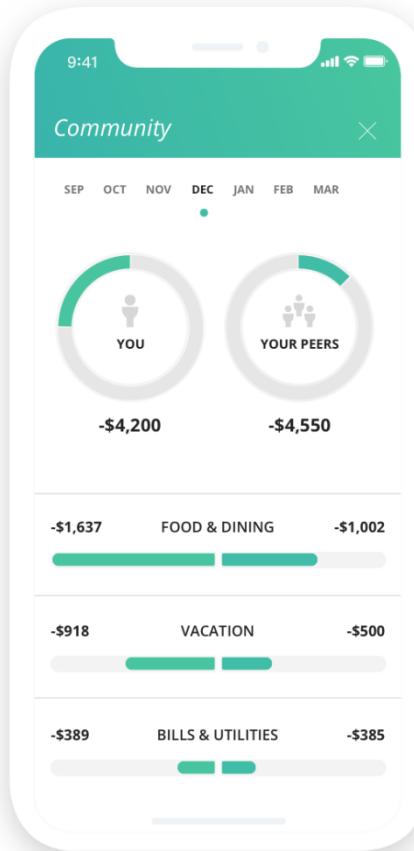
More likely
to see



Less likely

Use Case Examples

New services



Use Case Examples

Public sector partnerships

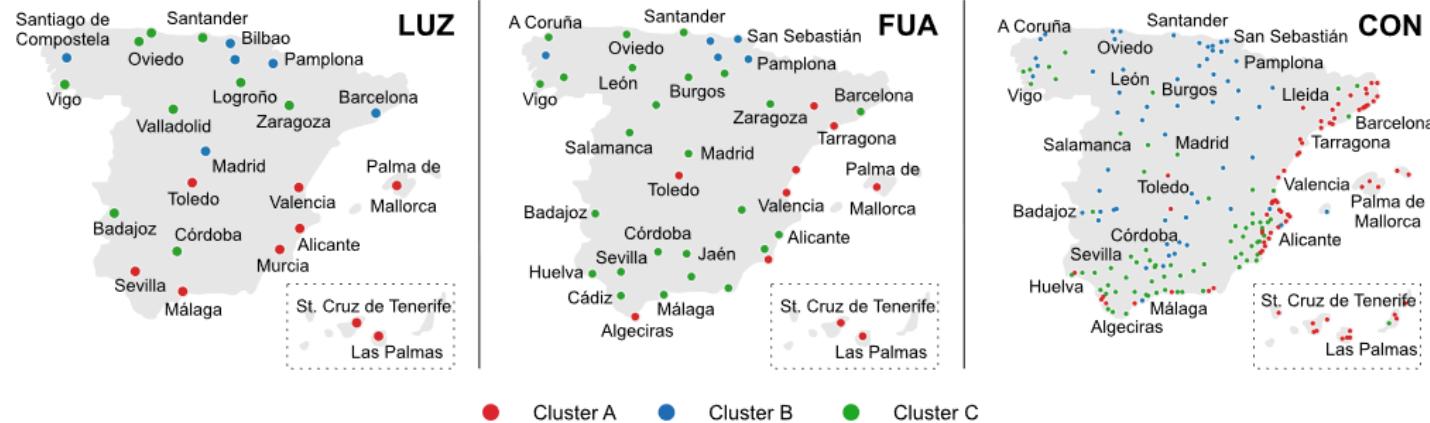
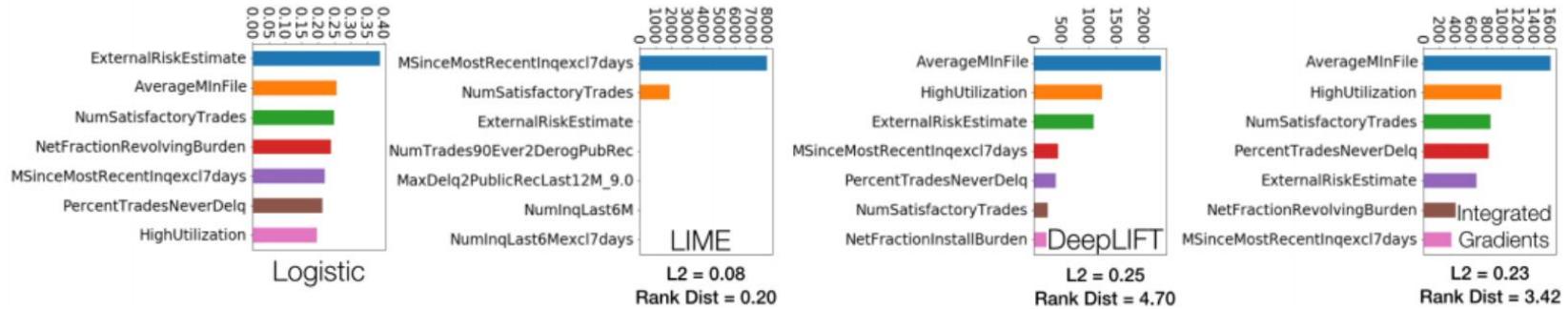


Fig 7. Classification of Spanish cities into three categories based on the spending behavior of their residents. Classification was performed separately for the three different city definition levels—Large Urban Zones (LUZ), Functional Urban Areas (FUA), and Conurbations (CON). Clustering into two categories can be, to large extent, recreated by merging clusters B and C into one (the consistency between the two- and three-cluster cases was quantified as high as 100% for LUZ, 98% for FUA, and 97% for CON).

Use Case Examples

Increase Trust & Explainability in AI





16^a
E CONFERÊNCIA
ANUAL 2019

O Mundo Digital
na Próxima Década

itSMF

The IT Service Management Forum

Portugal ■