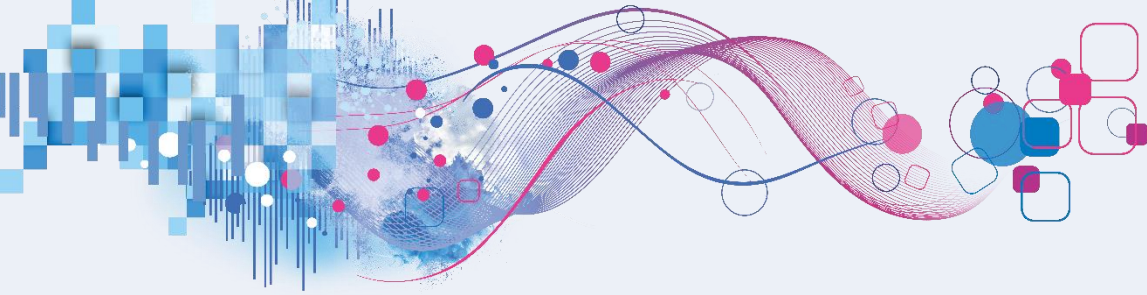


Big Data and Advanced Analytics:

Big Data: What it Really means and How to Turn it into Business Advantage

03 November 2017





Agenda

1. Introductions
2. We've entered the digital era
3. Artificial Intelligence & Machine Learning
4. Big Data and Machine Learning for Business Value
5. Case Study: Web Data Analytics for SMEs

The new frontier: Unlocking the power of data

GET STARTED ▶

2017 Forrester Survey

590 C-Level and functional leaders responsible for risk, IT, fraud and operations in Europe, the Middle East, and Africa

We've entered the digital era

Old:
inside-out

New:
outside-in

Products

Experiences

Services

Outcomes

Desires



Today's business environment demands more advanced analytics



78%

Are increasing
or maintaining
their investment
in analytics

Organisations are under pressure:

- **79%:** To meet compliance with new and existing regulations
- **52%:** The **cost to service** customers has increased in the last 12 months
- **65%:** To improve customer protection and **reduce fraud**
- **40%:** Being able to cope with the **volume and complexity of data**

Recap: Organisations struggle to become data-driven

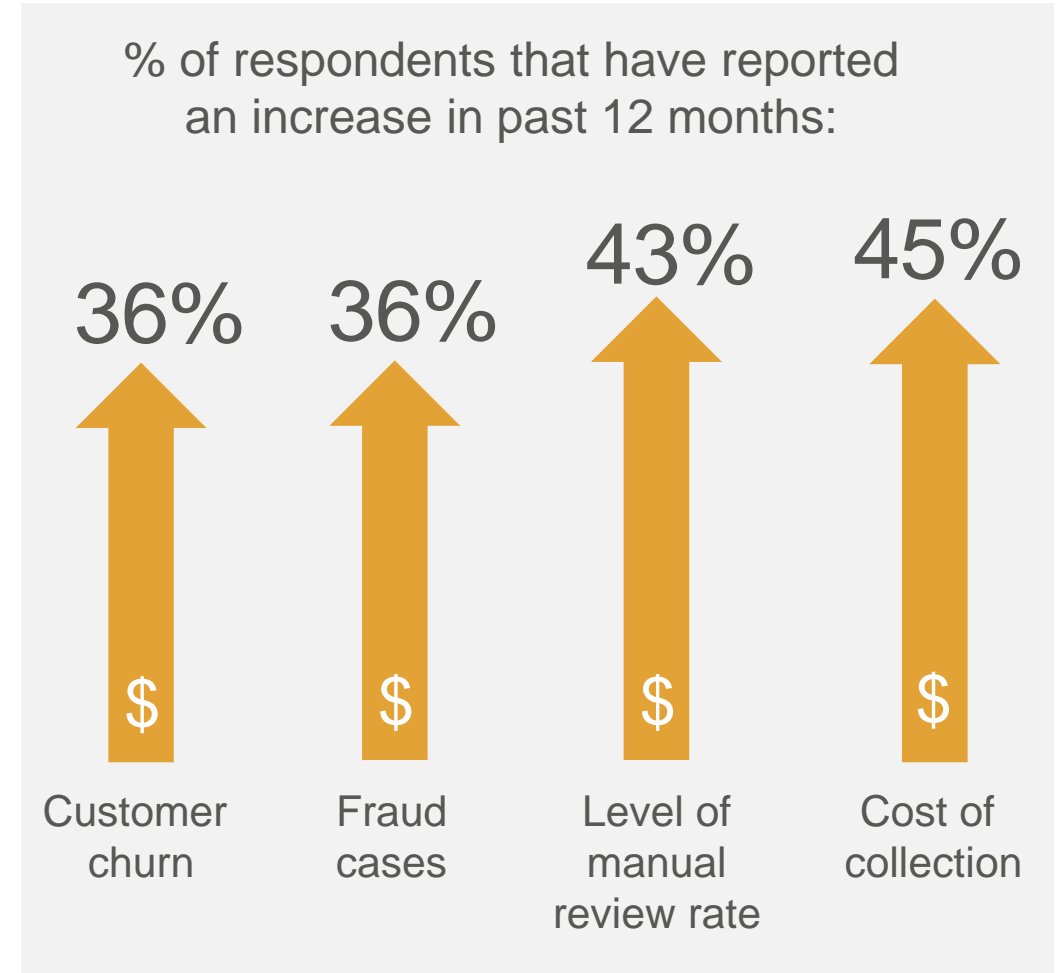


40%	Of business decisions still rely on opinion and gut feeling
35%	Said they are able to use analytics to extract value from their data
50%	Are not able to get relevant insight from data to drive decision making

KEY CHALLENGES

Growth / variety and quality of data (53%)

Lack of analytics skills and resources (50%)



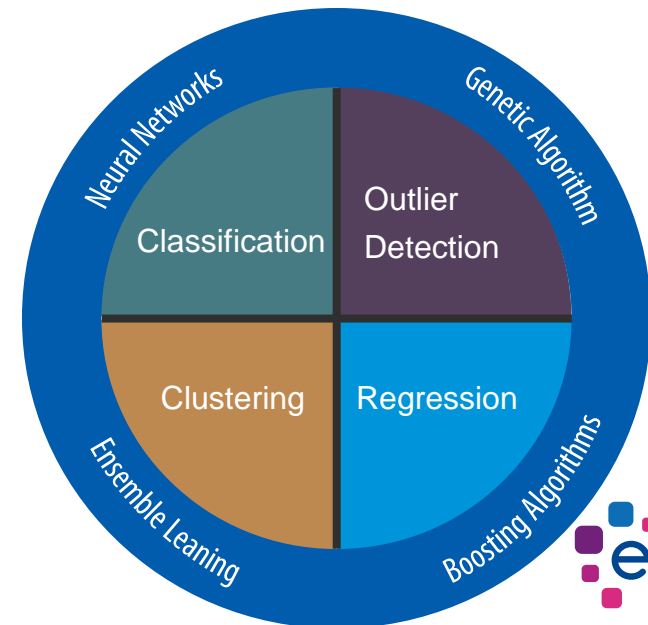
Artificial Intelligence & Machine Learning



Artificial intelligence (AI) is intelligence exhibited by machines

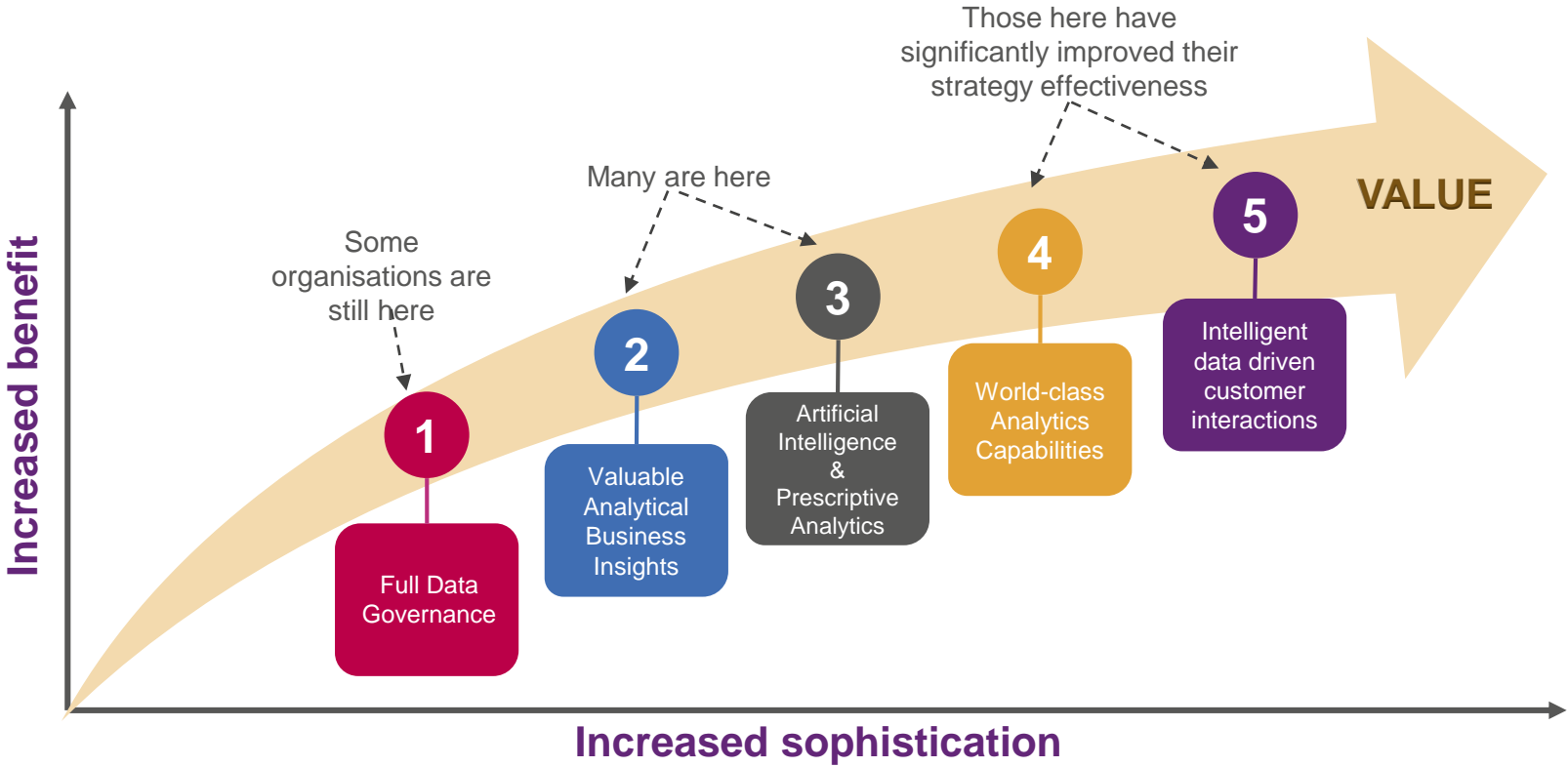
*Colloquially, the term "artificial intelligence" is applied when a machine mimics "cognitive" functions that humans associate with other human minds, such as **"learning"** and **"problem solving"** and includes: pattern recognition, predictive modeling, text mining and search, genetic programming, heuristics, inference, and ontology, and data analytics.*

Artificial intelligence is commonly referred to as **machine learning** and based on a number of advanced mathematical methods for optimization, regression and classification and finds application in a wide variety of fields.



The 5 critical steps to reduce risk and boost growth

What are the next steps?



Analytics discovery workshop



Get inputs on how to improve your processes, streamline your functions and unleash revenue potential

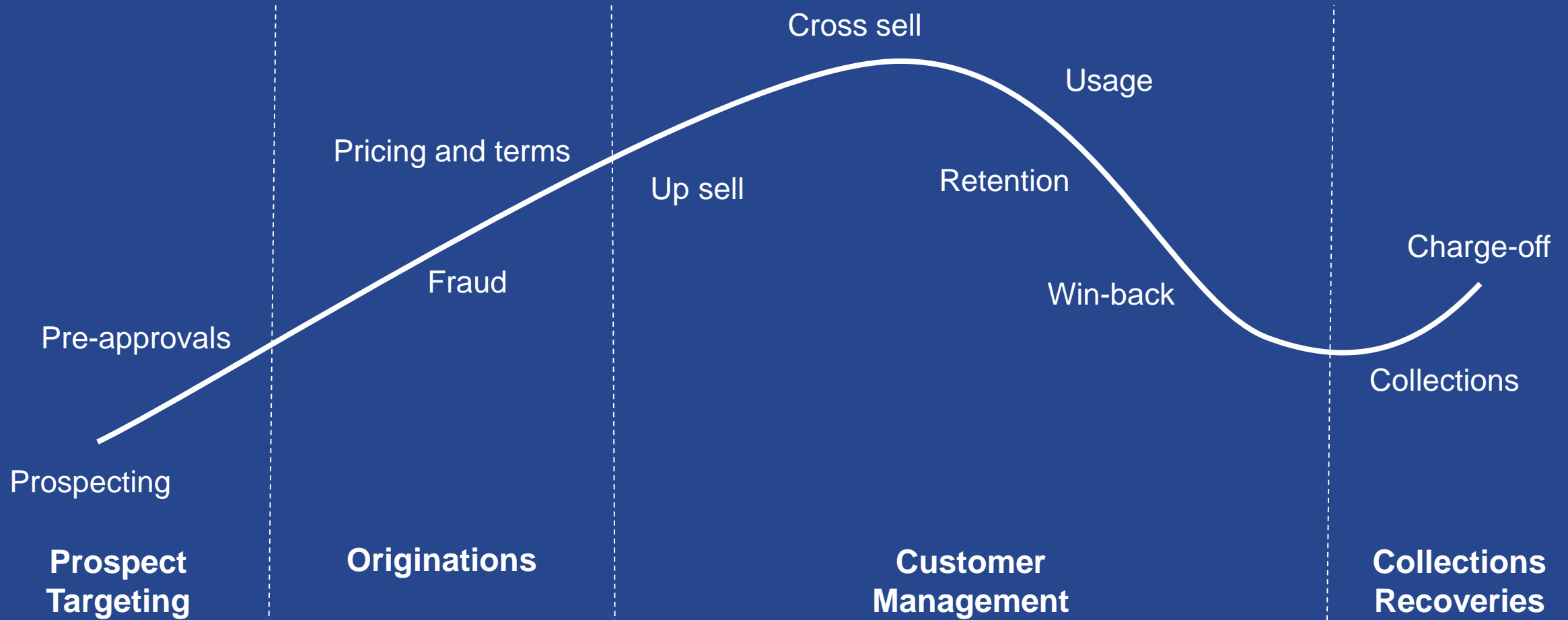
Machine Learning adds value at many levels

Understanding the solution space: what is my business need?

Decision strategy design: what is the data available and the best models for it?

Execution: deploying optimal machine learning models

And can be applied at many decision points



Big Data and Machine Learning for Business Value

*The positive impact in Customer Lifecycle**

Prospecting

+ 25% *increase of performance for policies pricing model*

Origination

+ 11% *increase in accuracy for application models*

CRM

+ 200% *more conversions against a no score selection*

Collections

+ 15% *Increase in the collected amount*

** source: Experian*

Exemples on how Experian makes it happen



Transactional Data Insights

Knowing Your Customer in a transactional level



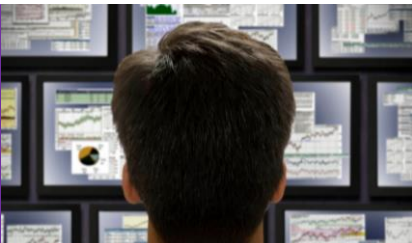
Speech Analytics

Turning voice calls into predictive models



Web Data Analytics

Assessing the customer behaviour through on-line presence measurement



Automatic System for Fraud Insights

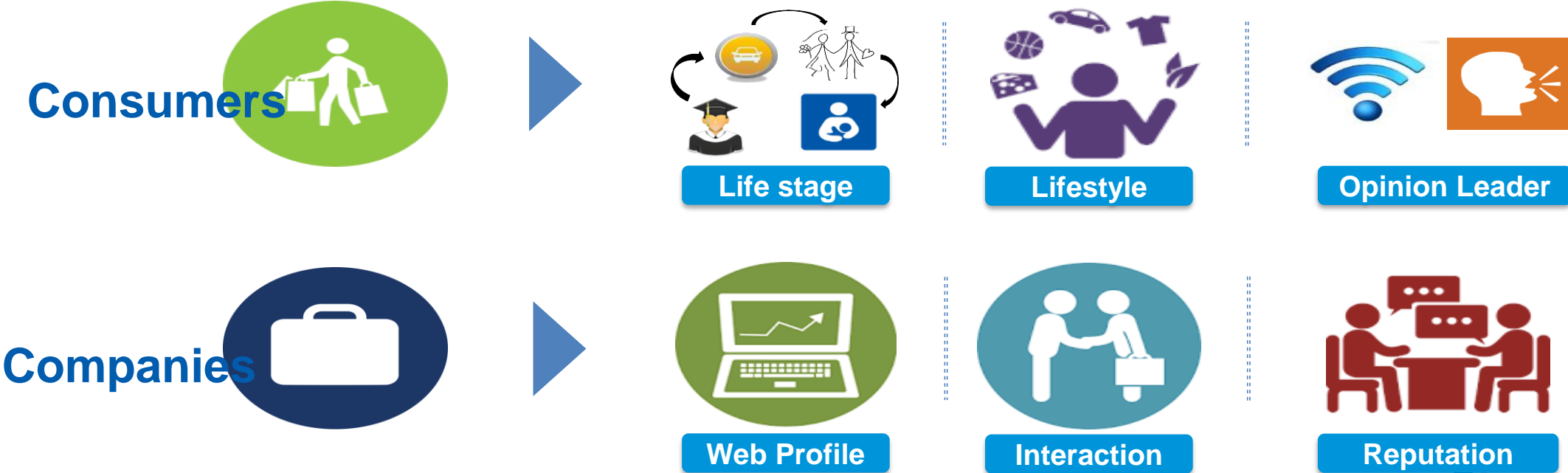
Boosting fraud detection with machine learning algorithms

Web Data Analytics (WDA)

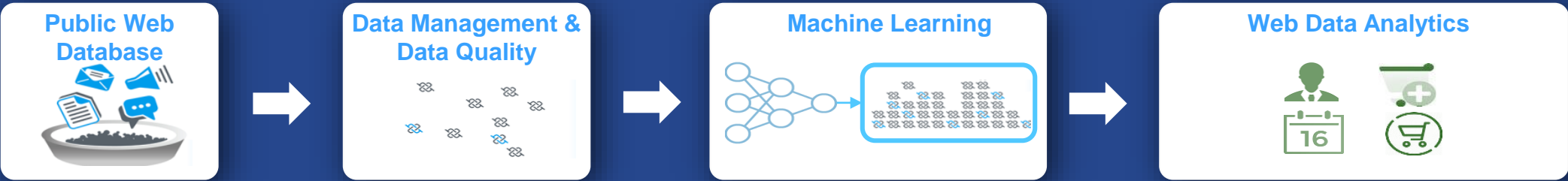
WDA is a complete solution for the measurement, collection, analysis and reporting of web data to have a much better knowledge of your customers within the credit lifecycle

Assessing the customer behaviour through on-line presence measurement

WDA uses new sources of data for individuals and companies to go over the credit data knowing consumer preferences and how they interact with companies on the web



Mining the Unstructured Web Data

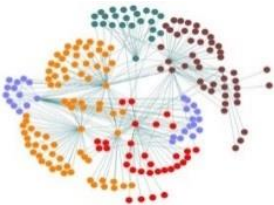


Development overview

Internal tool for web crawling using search engine services

Internal Tool Kit to classify sites and domains by subjects

Text Mining methodology working with ontologies

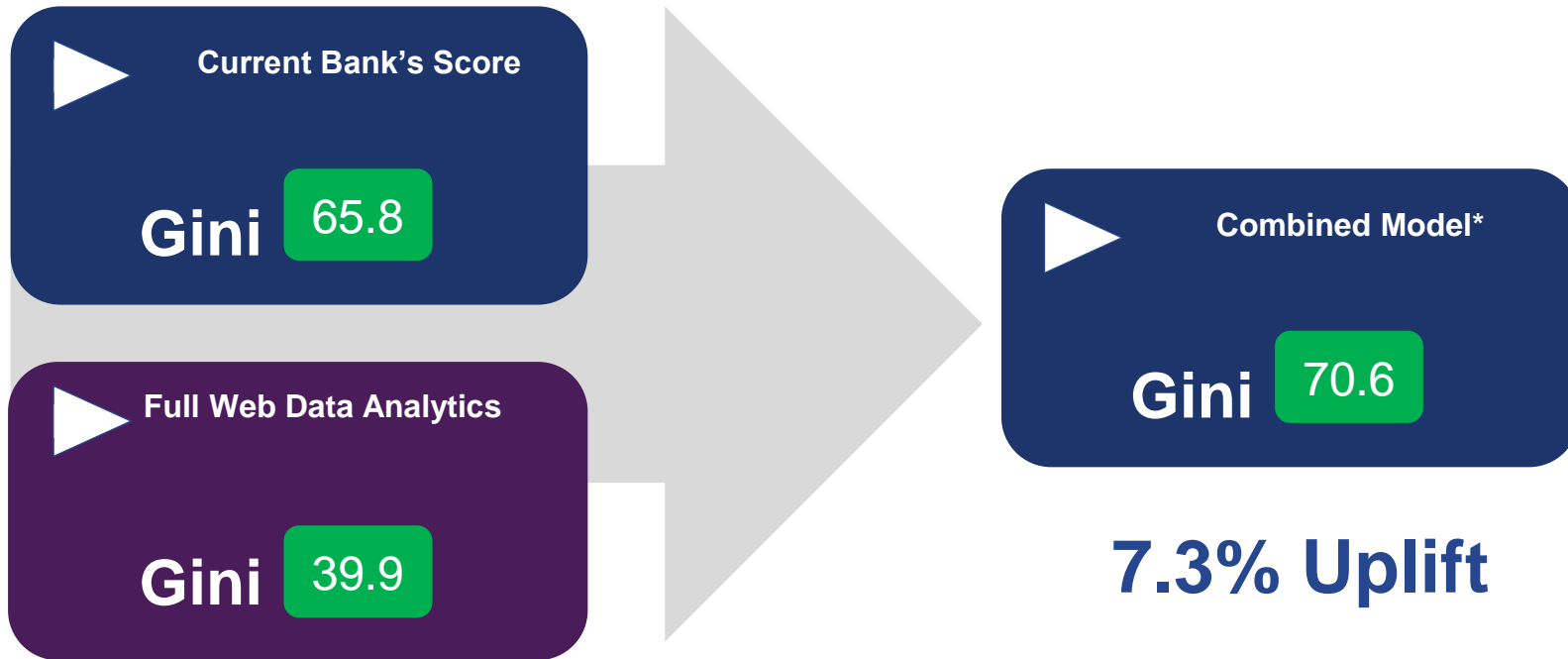


The results are used to:

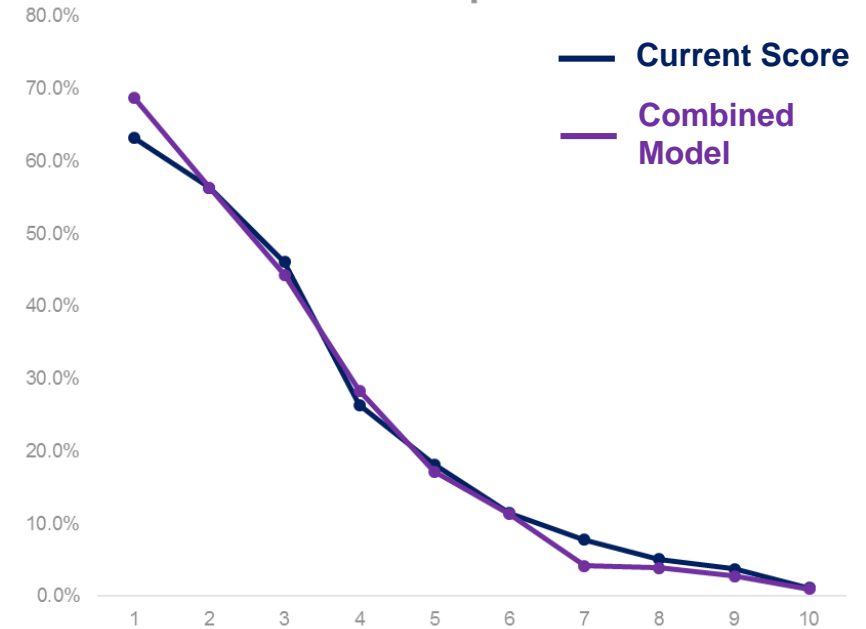
- Enrich the segmentation and predictive models
- Marketing and CRM
- Risk management

WDA in Action

Web Data Analytics Experian + Bank Score

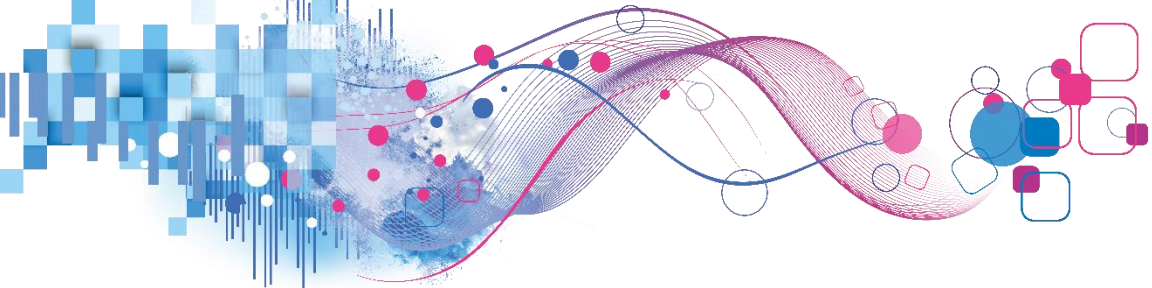


Score Distribution Comparison

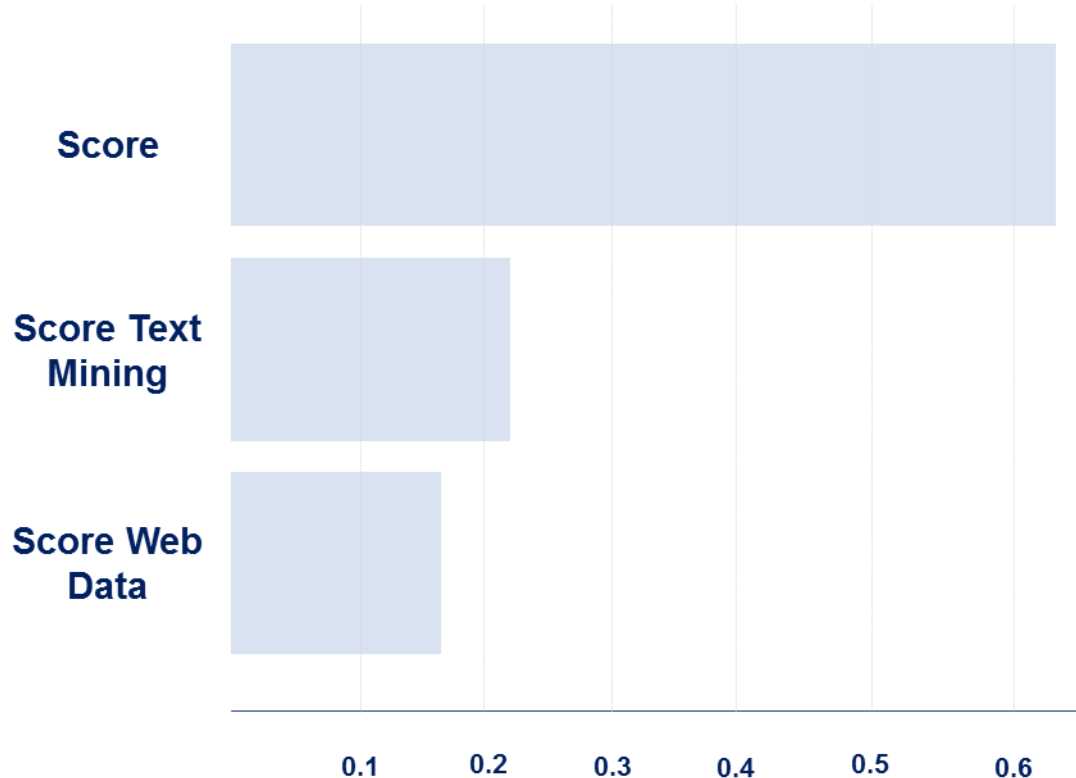
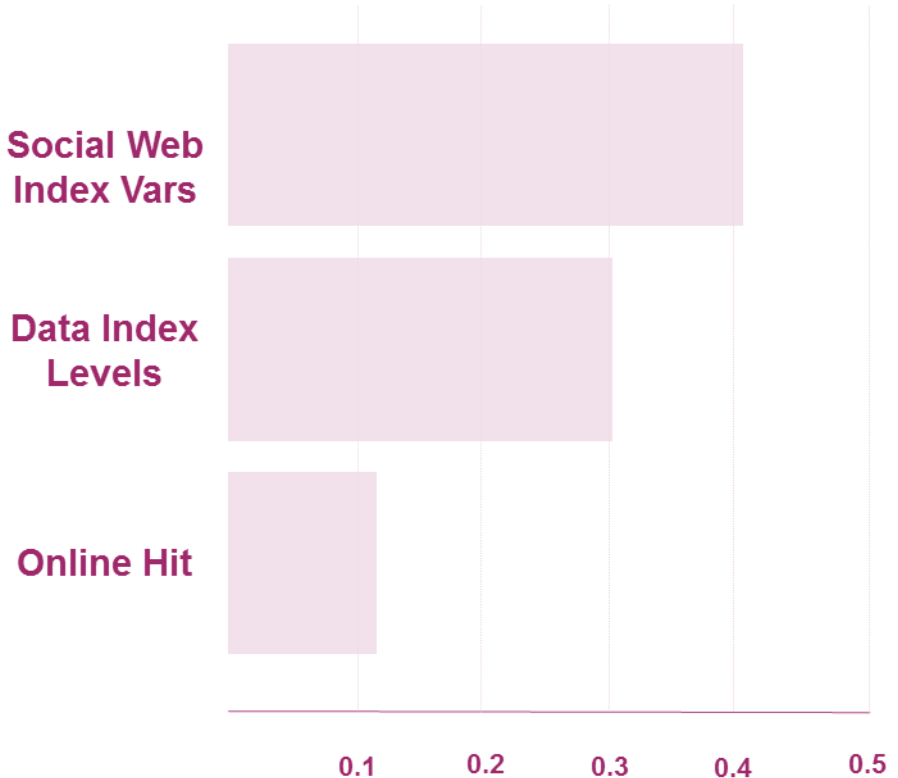


*Only Bank Score + Web Data Analytics

- Bad rate uplift from 63.2% to 68.7% in the 10% worse population;
- Cumulative rate of Bads rising from 26% to 29% in the worst 10% of the accepted population;



Variables and Score Importance



Improving risk models

Machine Learning in action

Large bank aimed to enrich predictive models with new data sources and consumer behavioural data

Methodology

- Web Crawling through selection and classification of relevant sites to collect Web Data
- Creation of Data Mart to design customer profiles based on web data
- Applying machine learning models, detailed scores calculation using web data and integration with Internal Data

The challenge

- Enhance risk models with new data sources
- Portfolio expansion on existing customers
- Improve application models for non banking population

Business Benefits

11%

increase in accuracy for risk application scores

25%

increase in performance for policies pricing model

Portfolio expansion on existing and new customers

More accuracy for non-banking consumers evaluation



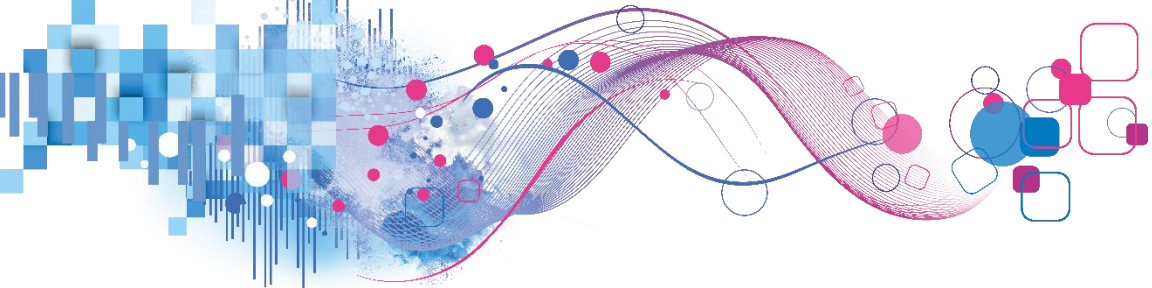
About Experian

We are the leading global information services company, providing data and analytical tools to our clients around the world. We help businesses to manage credit risk, prevent fraud, target marketing offers and automate decision making. We also help people to check their credit report and credit score, and protect against identity theft. In 2016, we were named by Forbes magazine as one of the “World’s Most Innovative Companies”.

We employ approximately 17,000 people in 37 countries and our corporate headquarters are in Dublin, Ireland, with operational headquarters in Nottingham, UK; California, US; and São Paulo, Brazil.

Experian plc is listed on the London Stock Exchange (EXPN) and is a constituent of the FTSE 100 index. Total revenue for the year ended 31 March 2016 was US\$4.6 billion.

To find out more about our company, please visit www.experianplc.com or watch our documentary “[Inside Experian](#)”.



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