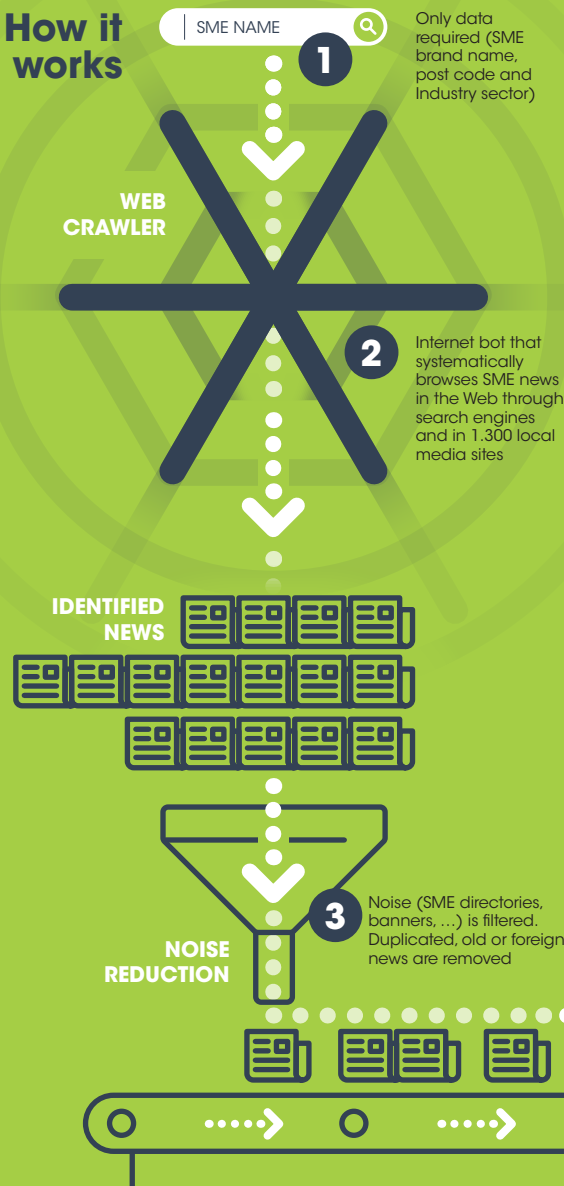# Artificial Intelligence applied to SME lending decisions

AROA ✳
Automated Reputational Online Assessment

How it works

SME NAME 🔍

1 Only data required (SME brand name, post code and Industry sector)

WEB CRAWLER

2 Internet bot that systematically browses SME news in the Web through search engines and in 1.300 local media sites

IDENTIFIED NEWS

3 Noise (SME directories, banners, …) is filtered. Duplicated, old or foreign news are removed

NOISE REDUCTION

News are classified according to the relevance and sentiment (positive/negative) of their content

NEWS CLASSIFIERS

4 Relevance — Sentiment

5

What is AROA?
A Machine Learning algorithm based on Natural Language Processing that extracts the SME reputational sentiment from on-line news.

Benefits/ solutions it provides
An increase in the predictive capability of existing models through the usage of non-traditional customer data.

In a context of lack of relevant data to built more robust SME creditworthiness scoring models.

How it can be used
Real time API.
SME by SME

Programmed batch process.
SME portfolios

SME AROA SCORING
✳ ✳ ✳ ✳ ✳

An algorithm calculates a reputational scoring for each SME based on the classification results

Relevance Classifier
75%
PRECISION

Sentiment Analysis
92%
PRECISION

Use cases

New risk predictor input to be included in **application and/or behaviour scores.**

New information to be included in the **monitoring process** as an early warning system for default and changes in credit worthiness.

SME **relevant information** provided to credit risk analysts.

Impacts

Greater efficiency by **reducing assessment time** in the underwriting process.

Lower default rate and the associated **positive impact on the portfolio cost of credit** (30%[1] increase of Gini index).

Savings in provisions for credit losses due to lower migrations from Stage 1 to Stage 2

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Contact us

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