

David Bounie, Prof.

david.bounie@telecom-paris.fr



Télécom Paris,
Institut Polytechnique de Paris
www.xai4aml.org

The team



David Bounie, Economics



Winston Maxwell, Law



Stéphan Clémenton, Applied Mathematics

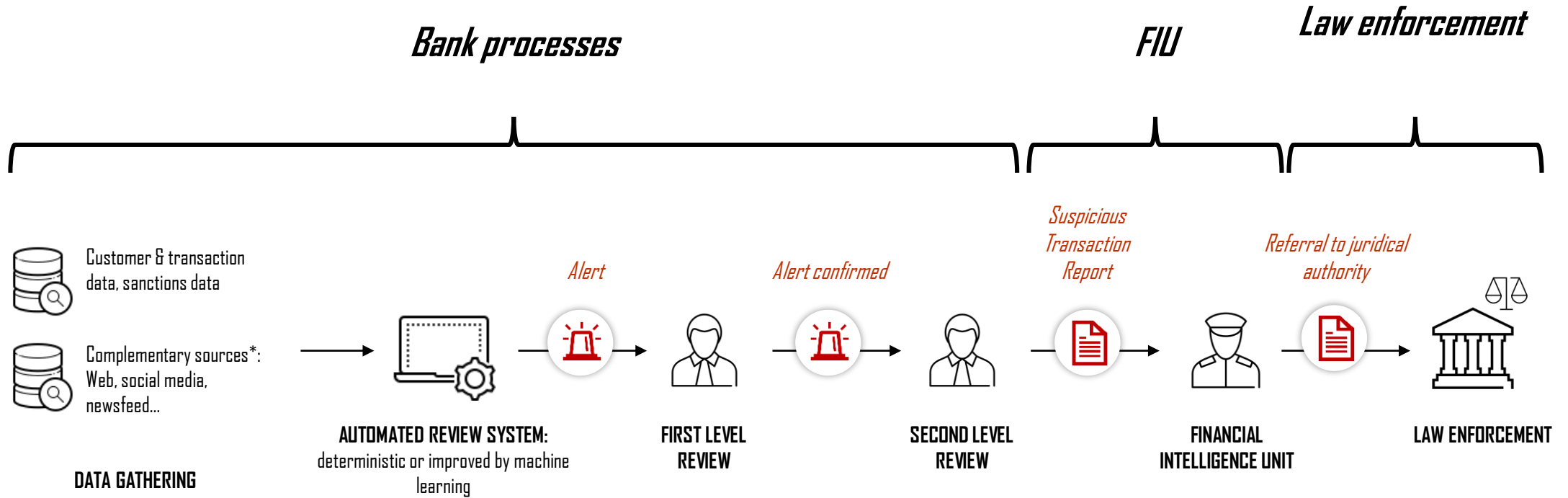


Astrid Bertrand, PhD

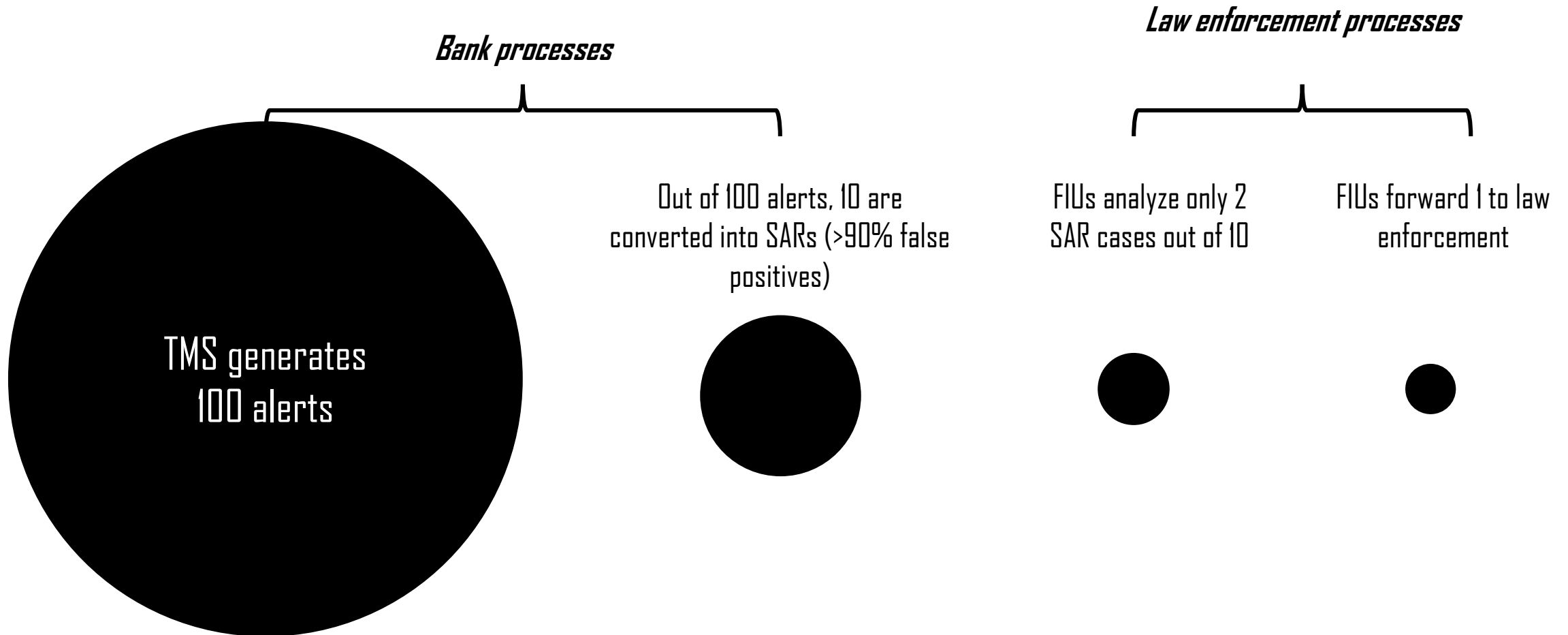
The partners



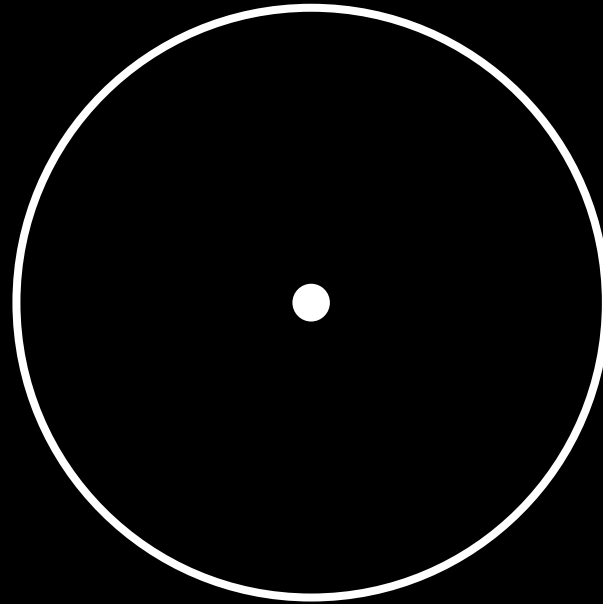
The AML process in a nutshell



99% of alerts have little or no utility to law enforcement



€200 billion in criminal funds circulate every year in Europe...



...Yet only 1% of criminal funds are confiscated.¹

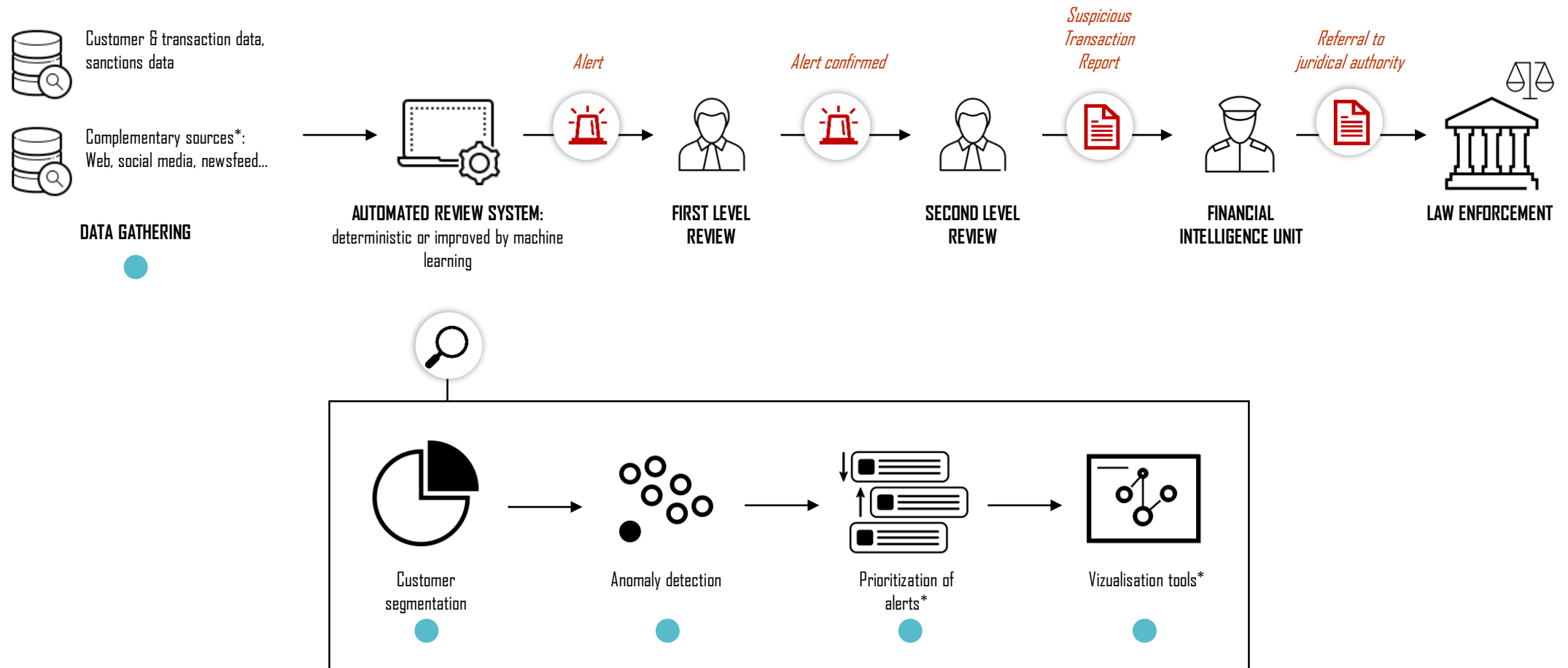
¹Europol, *"From suspicion to action - Converting financial intelligence into greater operational impact."*, Sept. 2017.

Current AML systems exhibit high false positive alerts while showing low success rates in catching illicit funds.

AI can help improve AML systems, but creates new forms of risks for individuals.

Explainability is a key factor to mitigate those risks.

How AI can help?



* Not Always deployed by banks.

● AML stages where Machine Learning can be valuable

Why is explainability important?

AML-CFT: *Why is it suspicious enough to shut down?*
Fundamental rights: *Why are my assets being frozen?*

SOCIETAL
POINT OF VIEW

Is my algorithm functioning properly?
Do I detect any drift in behavior over time?

TECHNOLOGIC
AL POINT OF
VIEW

Is my model AML compliant?

Contrarily to other profit-maximizing firms that will always prefer efficiency over explainability, Financial Institutions won't risk a fine for AML, a field that has no business value.

REGULATORY
POINT OF VIEW

Challenges for explainability in AML

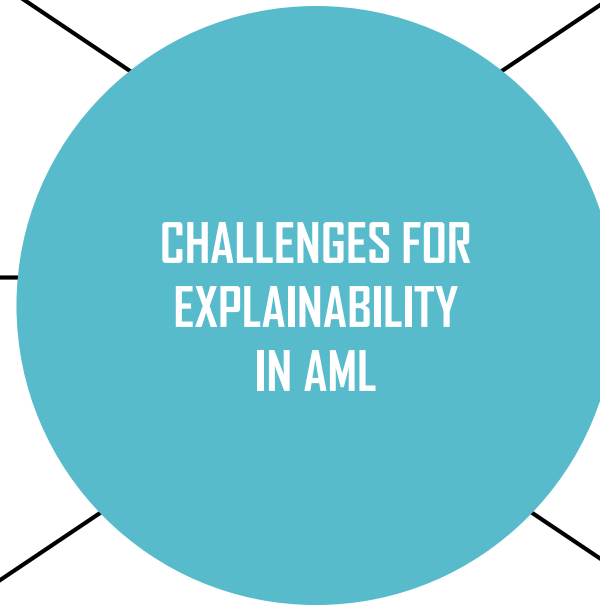
Multiplicity of audiences:

Internal controller, Auditor, ACPR, TRACFIN, Individual impacted by the model, CNIL.

Avoid bias & discrimination

Access to the data :

Data used for the explanation can raise data privacy issues.



CHALLENGES FOR
EXPLAINABILITY
IN AML

Multiplicity of business cases: bank/insurance

R&D

Go beyond post-hoc approaches (LIME, SHAP, etc.): Graph Conv. Networks, etc.

Economic viability :

The explanation should also take into account economic factors.

Thank you for your attention!

Point of contact: david.bounie@telecom-paris.fr

Research Chair website: www.xai4aml.org