Outection

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Outliers out!

The team

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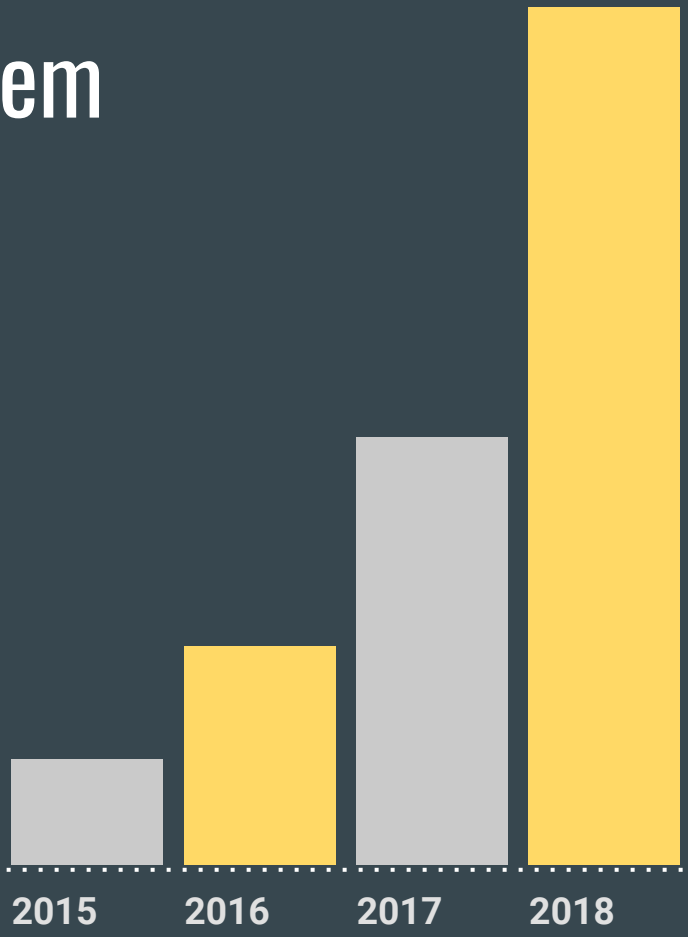
The problem

Global digitalization of banking operations

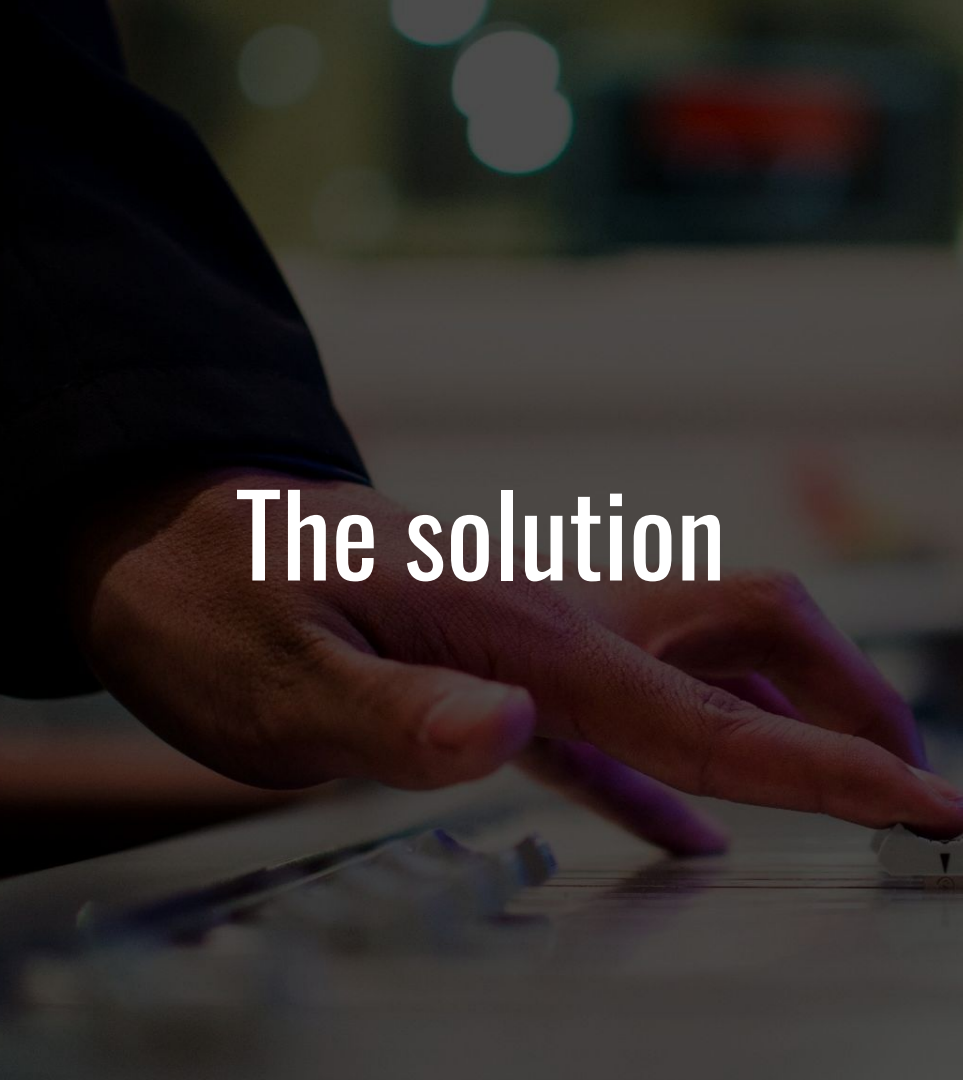
implies

Increasing risk of fraud



Mission statement:

How to efficiently detect fraud in banking operations?



The solution

Latest Machine Learning algorithms:

- Robust Estimator of Covariance (1999)
- Local Outlier Factor (2000)
- One-class SVM (2001)
- Isolation Forest (2008)
- Autoencoder (2012)

Business model

High profit due to high amount of true positive detected
Low cost due to few errors in our algorithms

Total amount of fraud in 2016 in France: €800M
Average amount of fraud: €160

		PREDICTED	
ACTUAL		"P"	"N"
	P	TRUE POSITIVE Outlier detected as outlier Profit: €160	FALSE NEGATIVE Outlier detected as inlier Cost: €160
	N	FALSE POSITIVE Inlier detected as outlier Cost: €1	TRUE NEGATIVE Inlier detected as inlier Profit: €0

Sales

Startup launch

Promising results: already around 60% fraud detected (€16M for 10% market share)

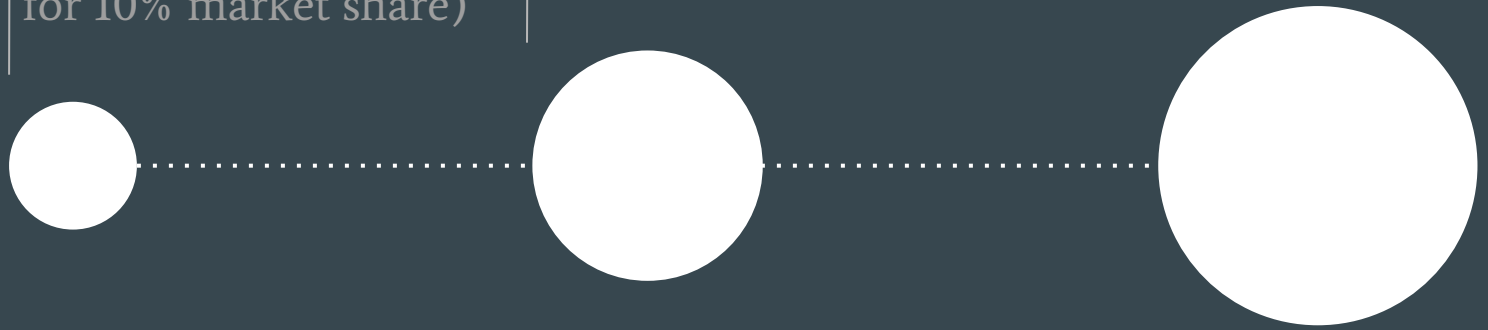
Research & Development

Improving fraud detection of our algorithms:

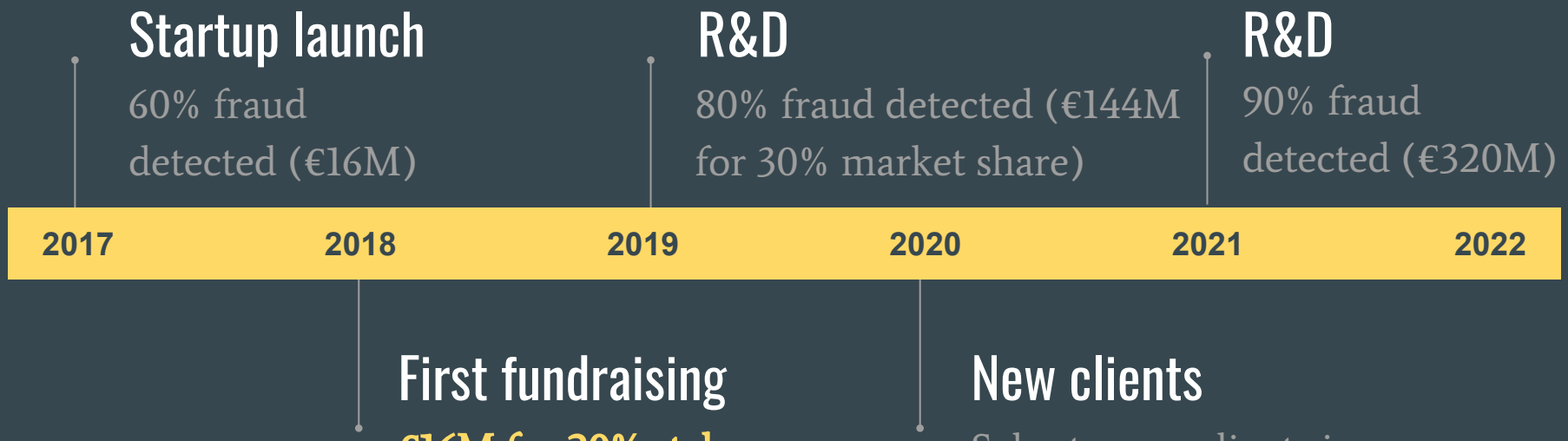
€16M for 20% stake

High performance

Almost all fraud detected: Profit around €800M



Projections




Questions?