

# DATA SCIENCE AND MACHINE LEARNING IN CREDIT RISK MANAGEMENT

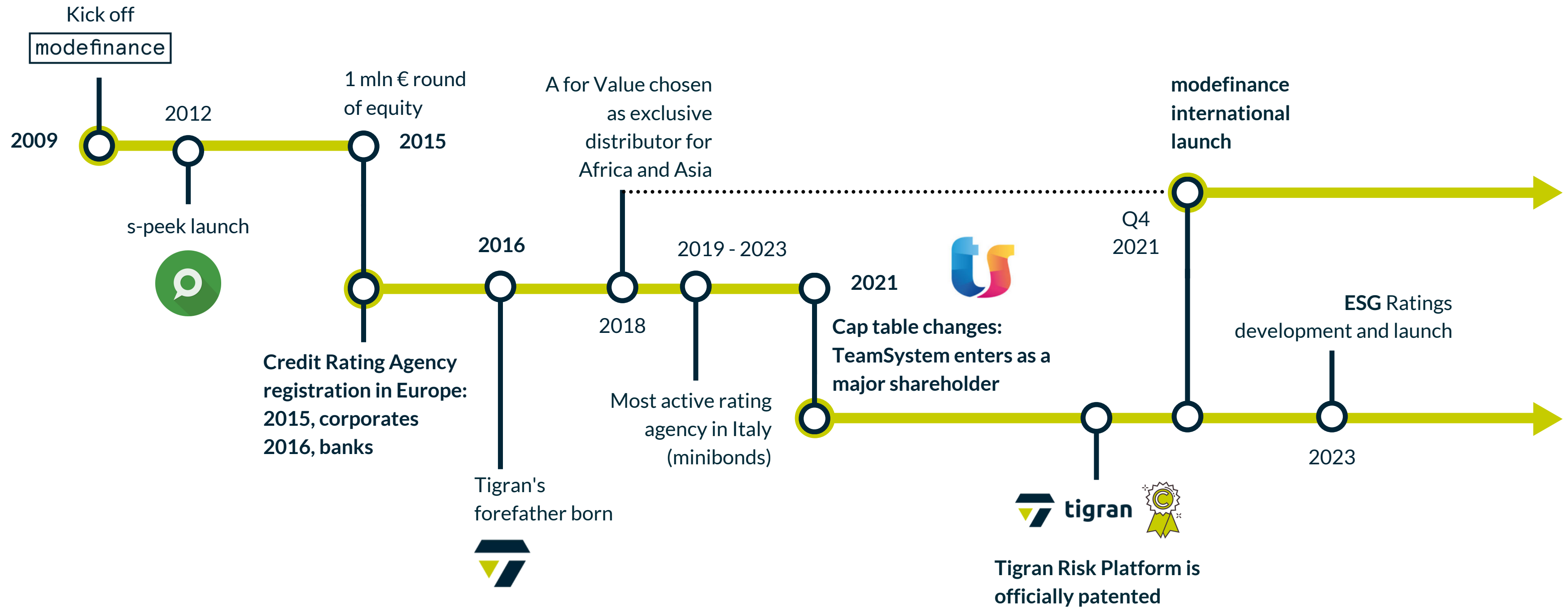
by the first Fintech Rating Agency in Europe

modefinance

a TeamSystem company



# roadmap



# credit risk management today: the data gap



## SO MANY DATA, SO LITTLE VALUE

- outdated information with no consistent update
- inactivity and *status quo* attitude
- very low predictive value
- unable to leverage newsflows and nowcasting



## ANALOG OPERATIONS IN A DIGITAL WORLD

- complex manual, paper-based procedures
- miscommunication
- NPLs increase



## UNABLE TO COMPETE ON A GLOBAL, LONG-TERM MARKET

- time-consuming loan request processing
- poor customer experience
- lack of custom and flexible solutions

"How to organize a more coherent risk assessment process?"

"Where does the value come from?"

"How to automate and digitalize current operations?"

"Saving time and resources means focusing on single problematic events?"

**"ARE WE ABLE TO BE MORE  
COMPETITIVE?"**

# market trend: the data science perspective



## NOW-CASTING

- new data & new regulatory environment (PSD2) will open the way to "real-time" risk-assessment.



## DATA AUTOMATION

- data preparation and data analysis automation are improving current operations and reducing costs



## DATA VALUE CAPTURE

- data science tools favor a higher value capture thanks to data management standardization



## UNSTRUCTURED DATA INTEGRATION

- data from unstructured sources are increasingly managed via big data & analytics solutions



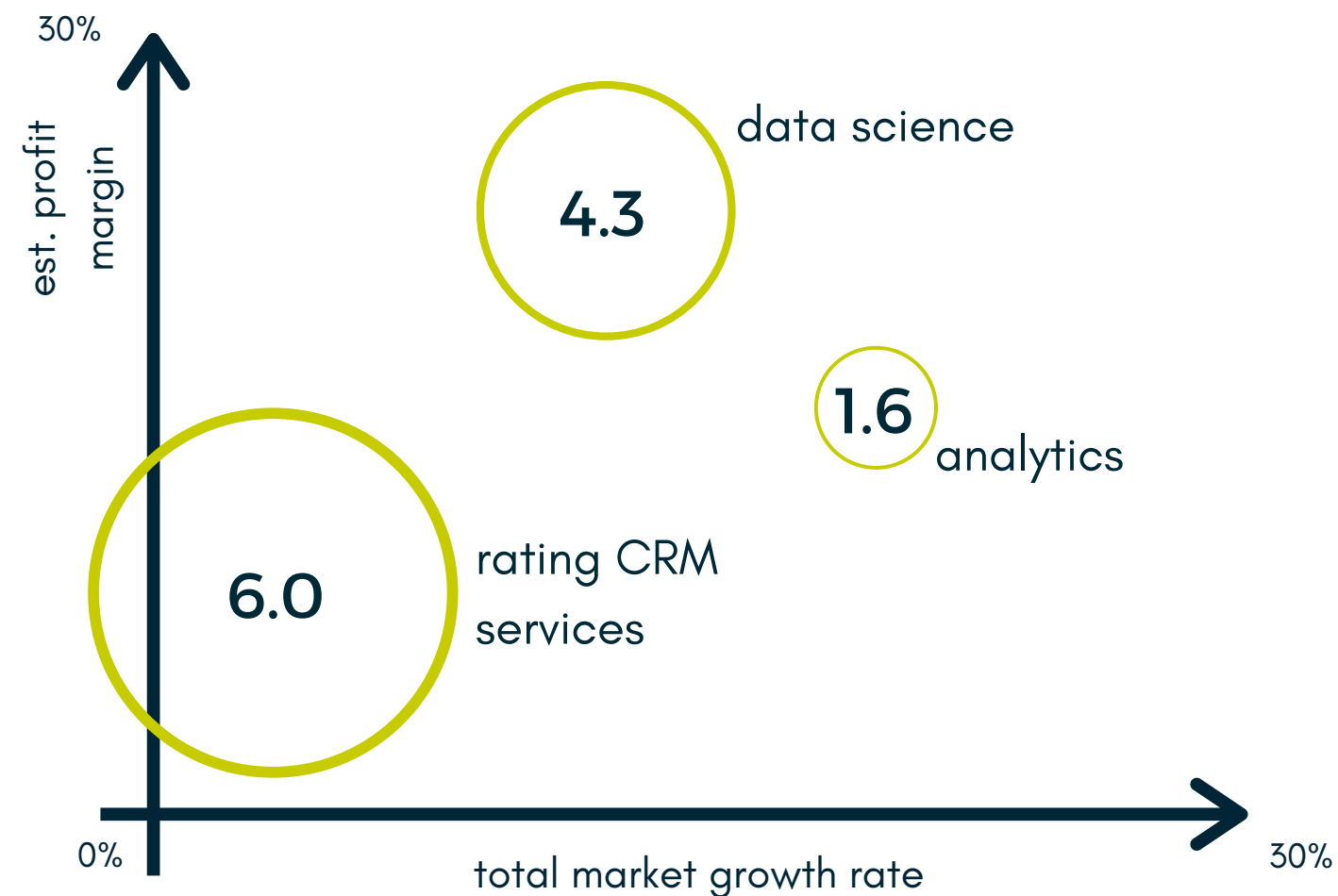
## INCREASED RISK COVERAGE

- new data/big data offer the opportunity to risk-assess a larger number of companies

# market opportunity

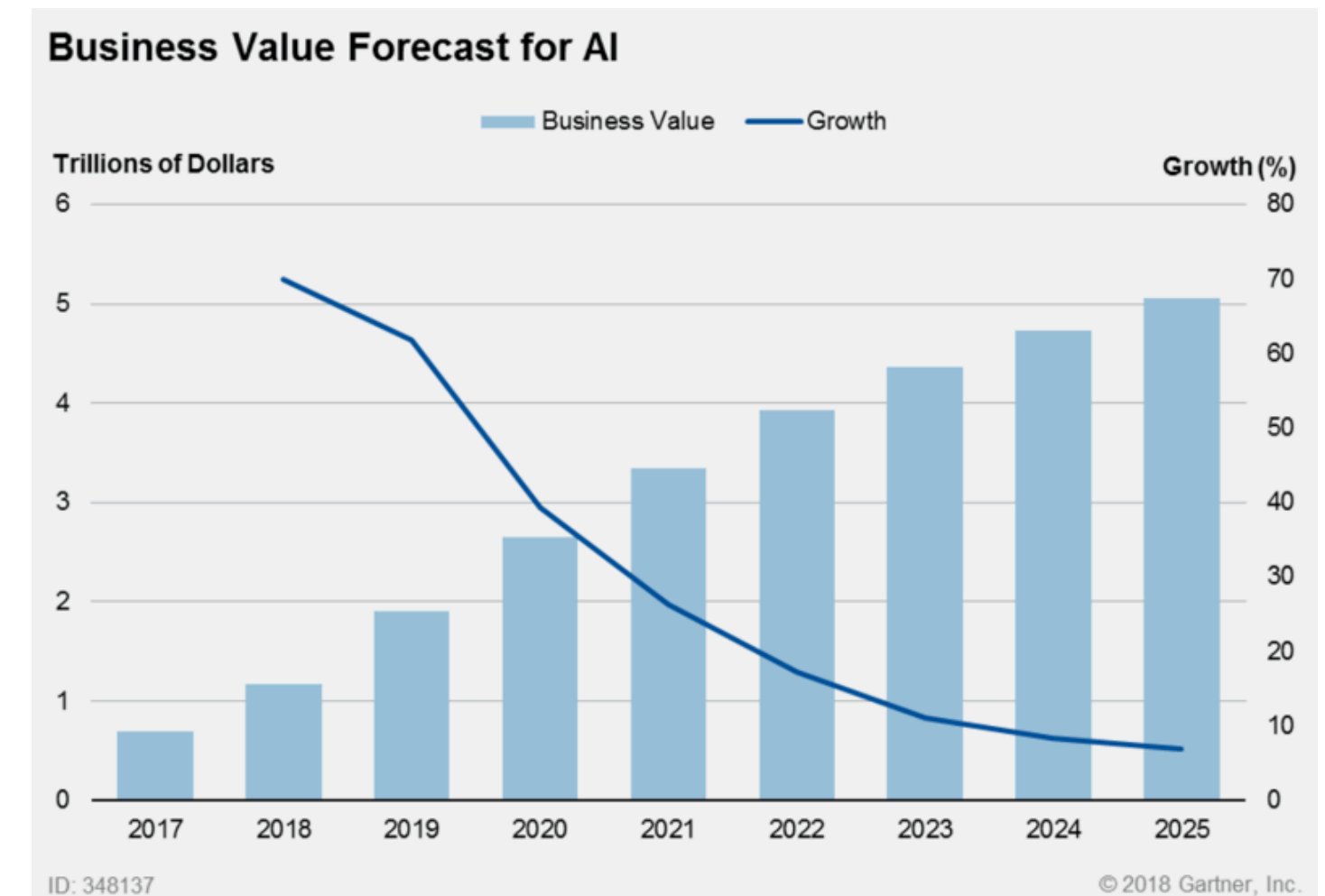
modelfinance market: a unique opportunity to serve different revenue pools  
(rating, Credit Risk Management services and data science) ...

## MARKET DIMENSION 2021 in b \$



....growing unmet demand for customized solutions to manage increasing credit risk challenges...

## THE AI ACCELERATOR



....with further potential coming from AI applications...

modelfinance 2023 All information shall be treated as strictly confidential.

# different markets, different solutions

Banks & financial institutions  
Investment funds & capital markets  
Large corporates



- global approach
- AI platform, flexible and customizable
- automate and digitalize processes
- Ratings and financial forecast
- PD, CL, debt capacity, VaR, LGD

Financial institutions  
Large corporates  
SMEs



## ESG Rating & assessments

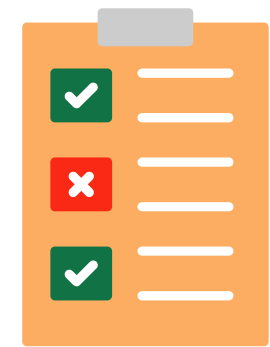
- long-term sustainability and future social and environmental impacts
- a proprietary system of integrated ESG assessments, based on the latest AI technologies
- standardized ESG data sources

SMEs  
Professionals



- all EU companies
- mobile app
- freemium access to public data
- Score, CL and financial information
- sector analysis and 12m monitoring

Banking & financial institutions  
Corporates (IPO / Bonds)



## certified public Credit Rating

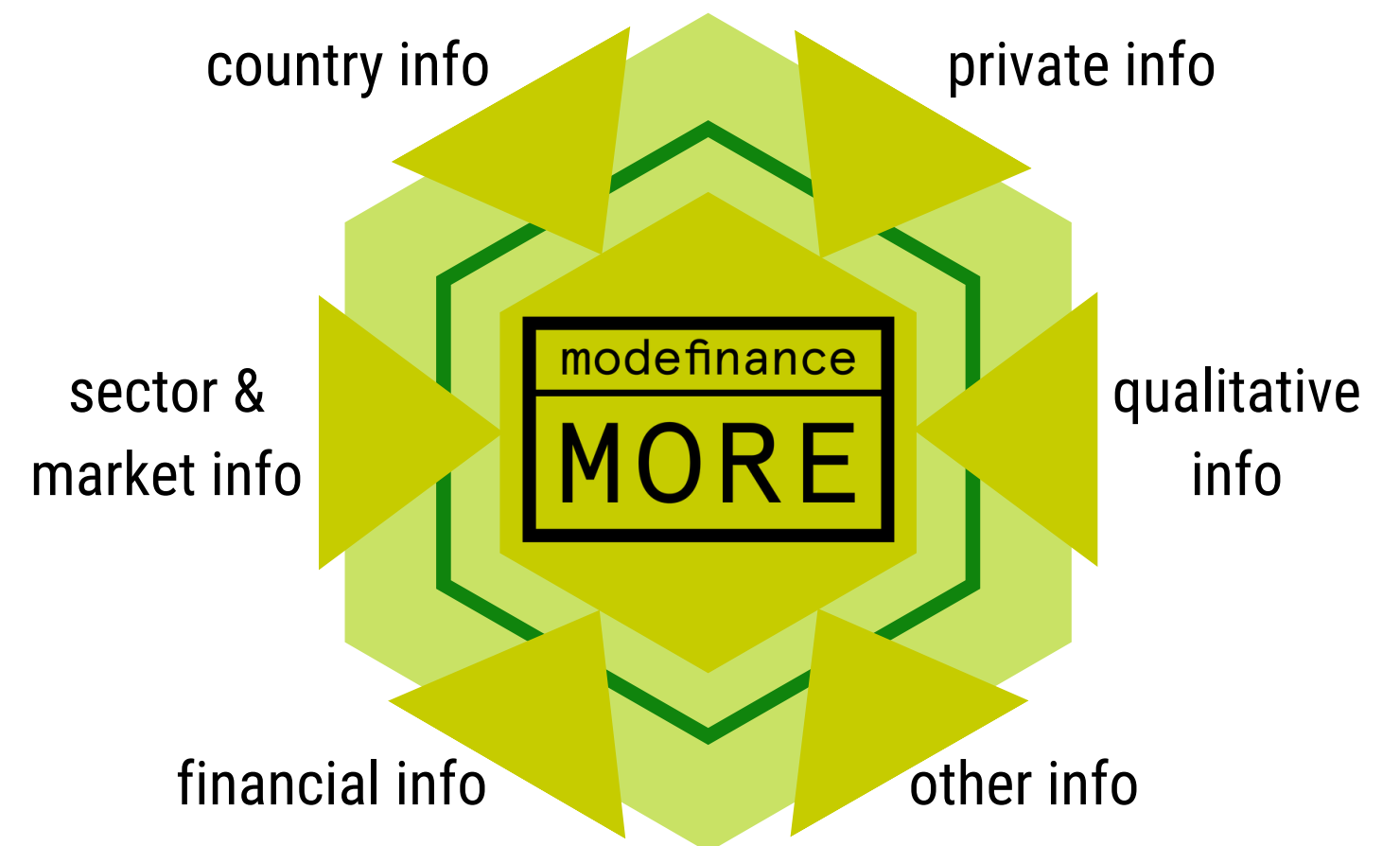
- accurate and nowcasting data
- quantitative and qualitative analysis
- official Rating, certified

# modefinance technology core

modefinance has developed a set of **proprietary** big data methodologies and machine learning algorithms:

**MORE** evaluates any company and financial institution in the world, without geographic, sector or country limits. It permits the user to access real-time data, extract more value and automatize their current internal analyses.

- applicable to >300m corporates and 60k banks worldwide
- reviewed and tested real-time
- capable of quantitative/qualitative data integration
- transparent, no black-box approach, full visibility on explanatory factors







tigran is a **patented software**, the first RaaS platform, **Rating as a Service**, a powerful and reliable AI risk platform whose goal is to secure exposure from counterparty risk, automating internal procedures.

### Key benefits:

- Workflow automation and simplification
- Decision making process' time and costs reduction
- Tailored custom models
- Full cycle management: from pre-feasibility to approval



# tigran key competitive advantages



## MULTI-SECTOR APPROACH



## CUSTOMIZED DATA INTEGRATION



## CLOUD-BASED MODULAR TOOLS



## NOWCASTING DATA APPROACH



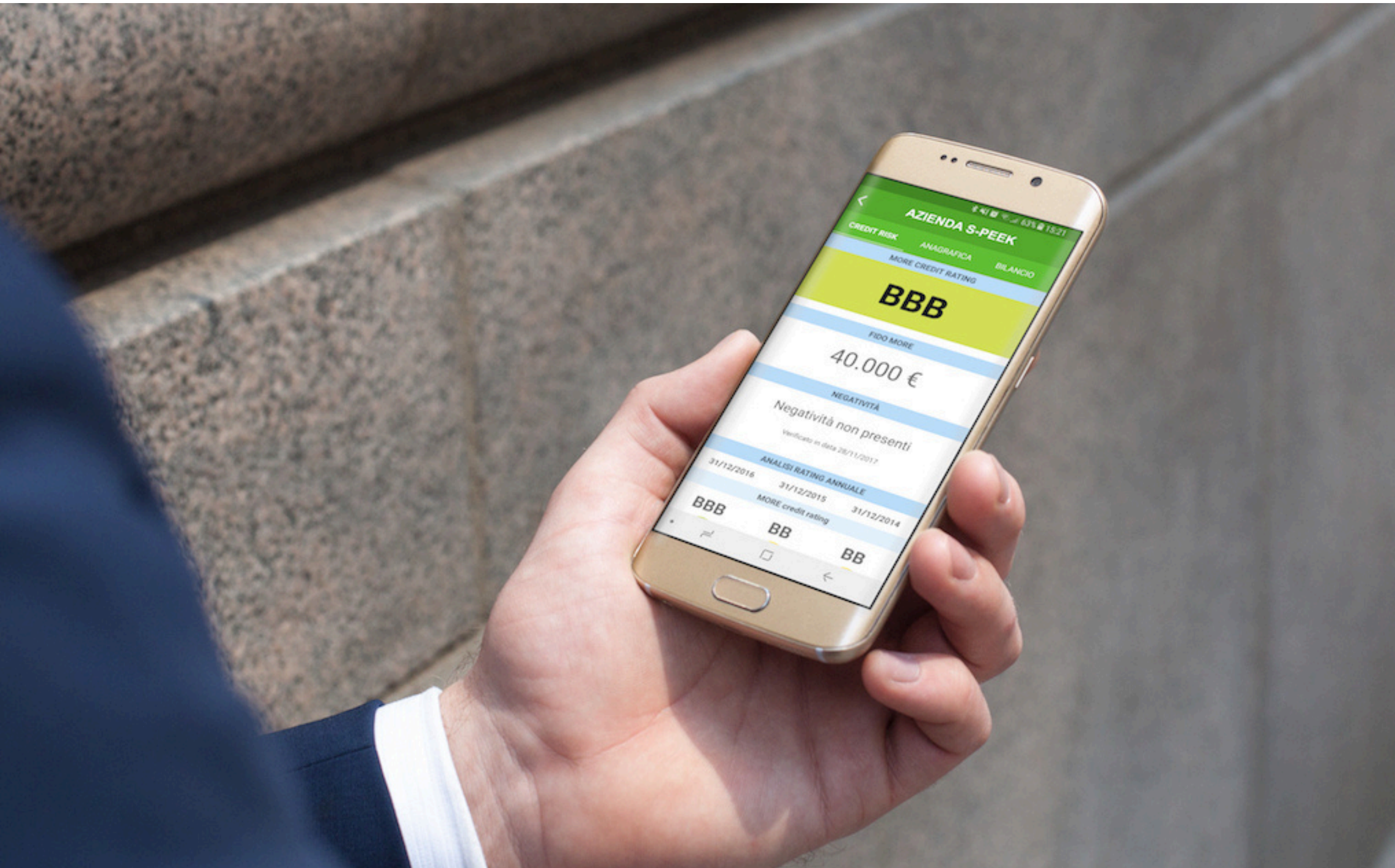
## IMPROVED RISK MANAGEMENT

- a credit rating and risk management model for both corporates and financial institutions
- rating and analytics on the entire portfolio with customized qualitative analysis when needed
- easy onboarding
- adaptive and customizable tools rooted on core fundamental analysis
- real-time access to data, to detect trends, value & assets
- significant reduction of companies' analysis process
- internal risk management policies and procedures adaptability

# tigran case studies



Client	Generali Investments	Samsung	CheBanca!	Turk Eximbank	DuPont	Metsa
Type	Financial institution	Large corporate	Bank	Financial institution	Large corporate	Large corporate
Country	ITA	KOR/MA	ITA	TUR	USA	SWE
Application	Portfolio risk profile assessment on both public and private companies	Wholesalers and retailers credit score monitoring Custom PD	Clients' risk assessment	Worldwide Rating and Credit Limit assessment for exports	Worldwide clients' risk assessment	Worldwide clients' risk assessment
Problems solved	Risk assessment standardization  Rating on a global scale, automated	Internal data customization  Costs reduction	Custom risk assessment  Policies & procedures simplification	Risk assessment standardization  Internal data value	Global risk assessment  Data integration  Standard CRM rules	Risk assessment standardization  Global reach



s-peek is a web and mobile application, that allows users to access Credit Scoring, Credit Limit and financial data of **more than 25million companies**, all around Europe

### Key benefits:

- Free to download and use
- Easy to use and understand information
- Public and verified data sources
- Mobile and interactive solution, always accessible in a few clicks
- Collaborative platform for teams



# s-peek key competitive advantages



## ROUGH ACCESS TO INFORMATION

- an easy access to more than 25million European companies, app-based, reliable and verified public information



## EXPENSIVE SOLUTIONS

- free to download, free to register: easy entry-point to rating and financial info, with a freemium approach



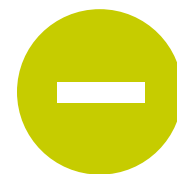
## THIRD-ENTITIES' EVALUATIONS

- auto-evaluation as an instrument to help SMEs to understand rating, bankability and how to better access credit



## LACK OF COMMUNICATION, LONG EMAIL-BASED PROCEDURES

- faster communication inside teams, where all the users are able to access information and exchange data, for a reliable financial decisions' process



## HIGH AND COMPLEX DSO

- know to work better: improve SMEs' working capital management

# EU Fintech credit rating agency CRA & ECAI



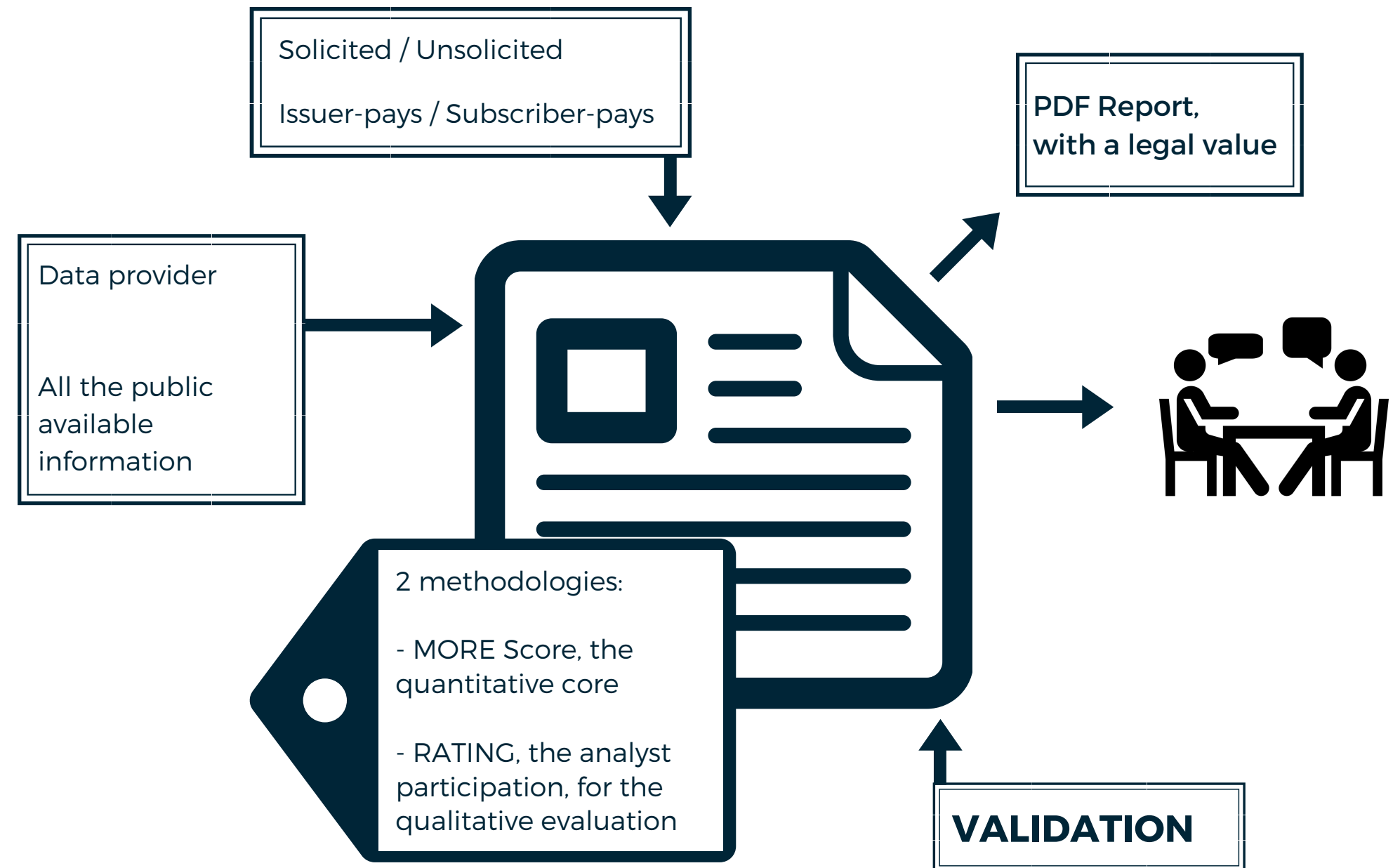
Date: 10 July 2015  
ESMA/2015/1127

## PUBLIC STATEMENT

### ESMA registers modeFinance as credit rating agency

The European Securities and Markets Authority (ESMA) has formally approved the registration of modeFinance S.r.l., based in Trieste, Italy, as a credit rating agency (CRA) under Article 16 of the CRA Regulation. The registration takes effect from 10 July 2015.

modeFinance's registration as a CRA means that its credit ratings can be used for regulatory purposes within the European Union.





**an official validation for the corporates' and banks' evaluation, with legal value**



**NO LIMITS**

- MORE permits to evaluate any corporate and bank in the world, without any geographical, sector or dimension limit



**TIME-SAVE**

- a fast and time-saving approach permits our analysts to be always on time with a reliable and certified Rating



**INDEPENDENCE**

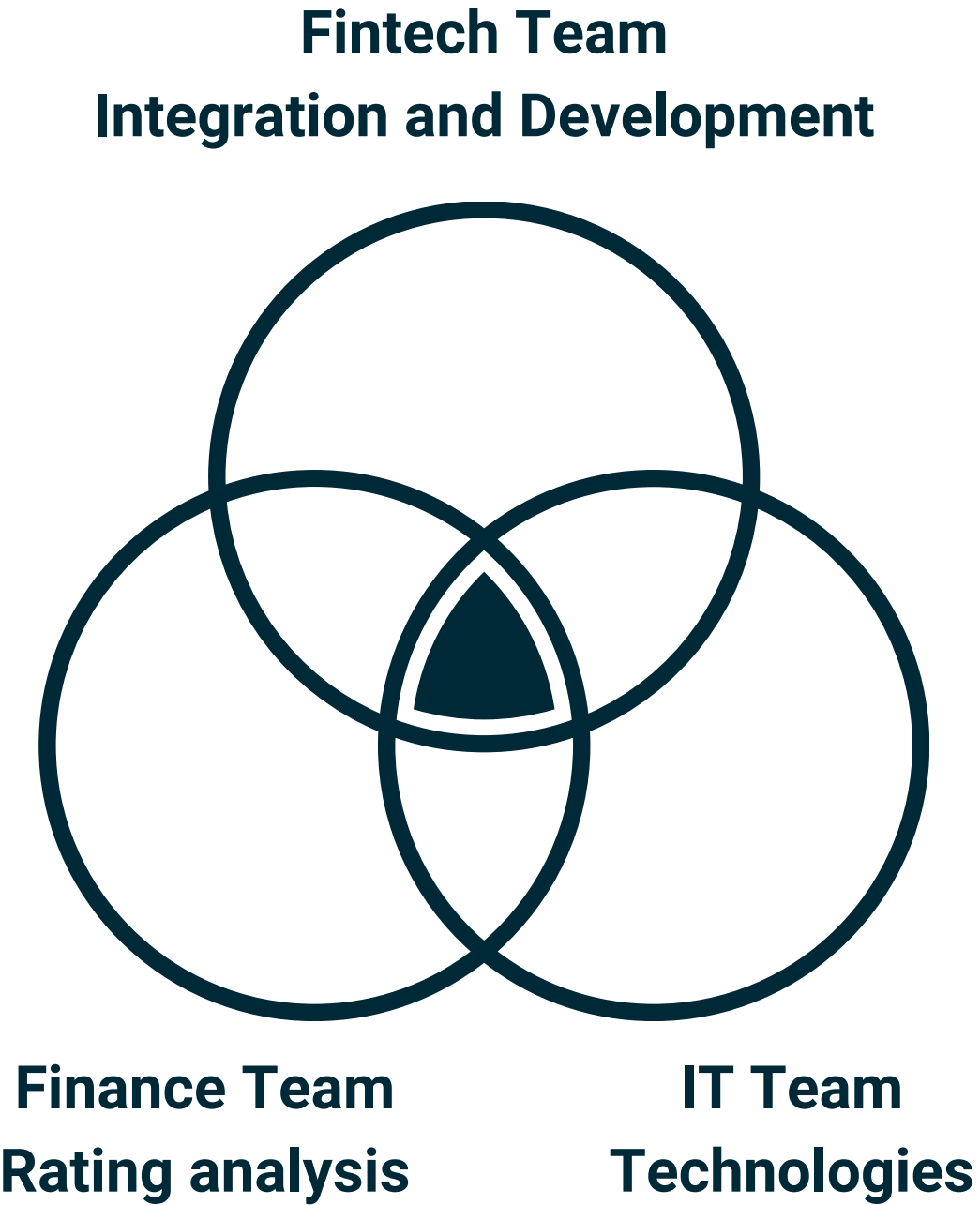
- we provide all the documented and certified acts of independency, for the most trustworthy and open relationship with the final user



**TRANSPARENCY**

- we act under the "democratization of Rating" vision

# modefinance approach

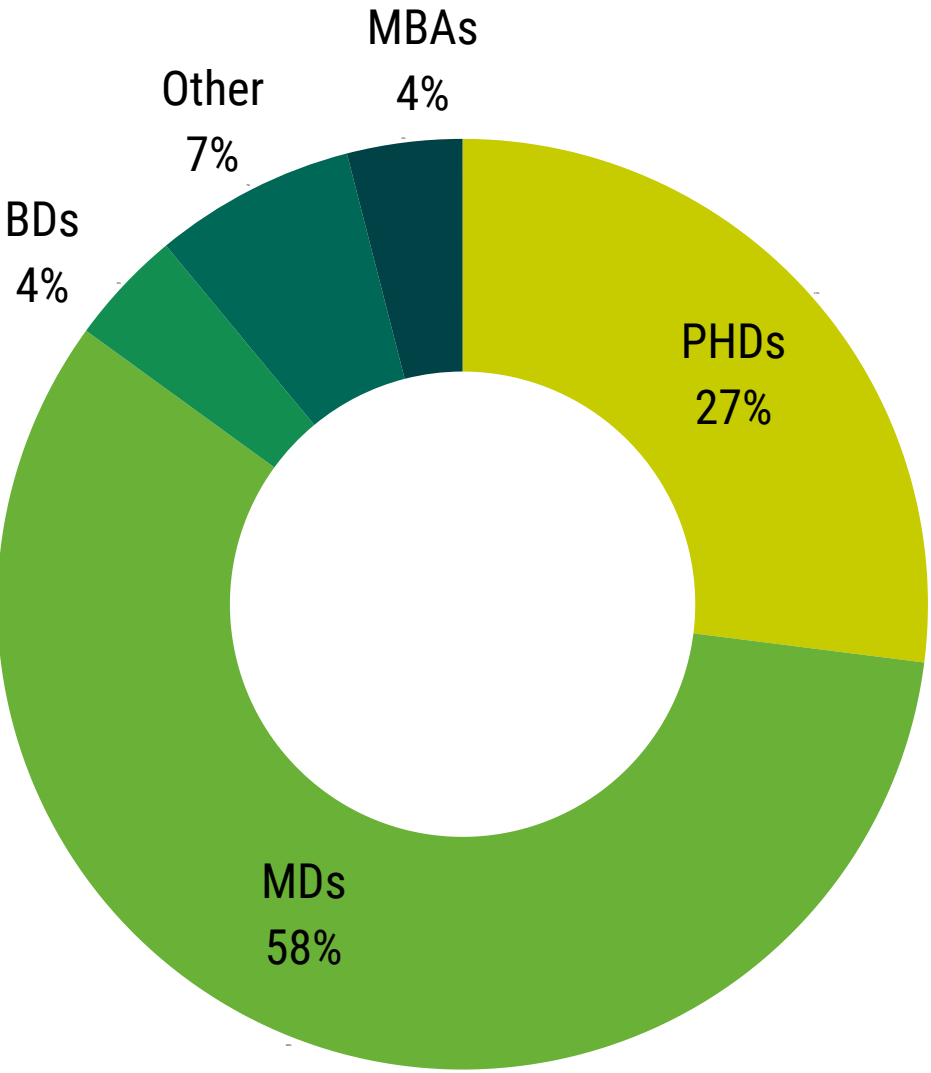


lean approach with strong  
integration among IT, Fintech  
and Finance

inter-disciplinary competences  
and resources development

real-time information sharing  
and update to best serve the  
clients

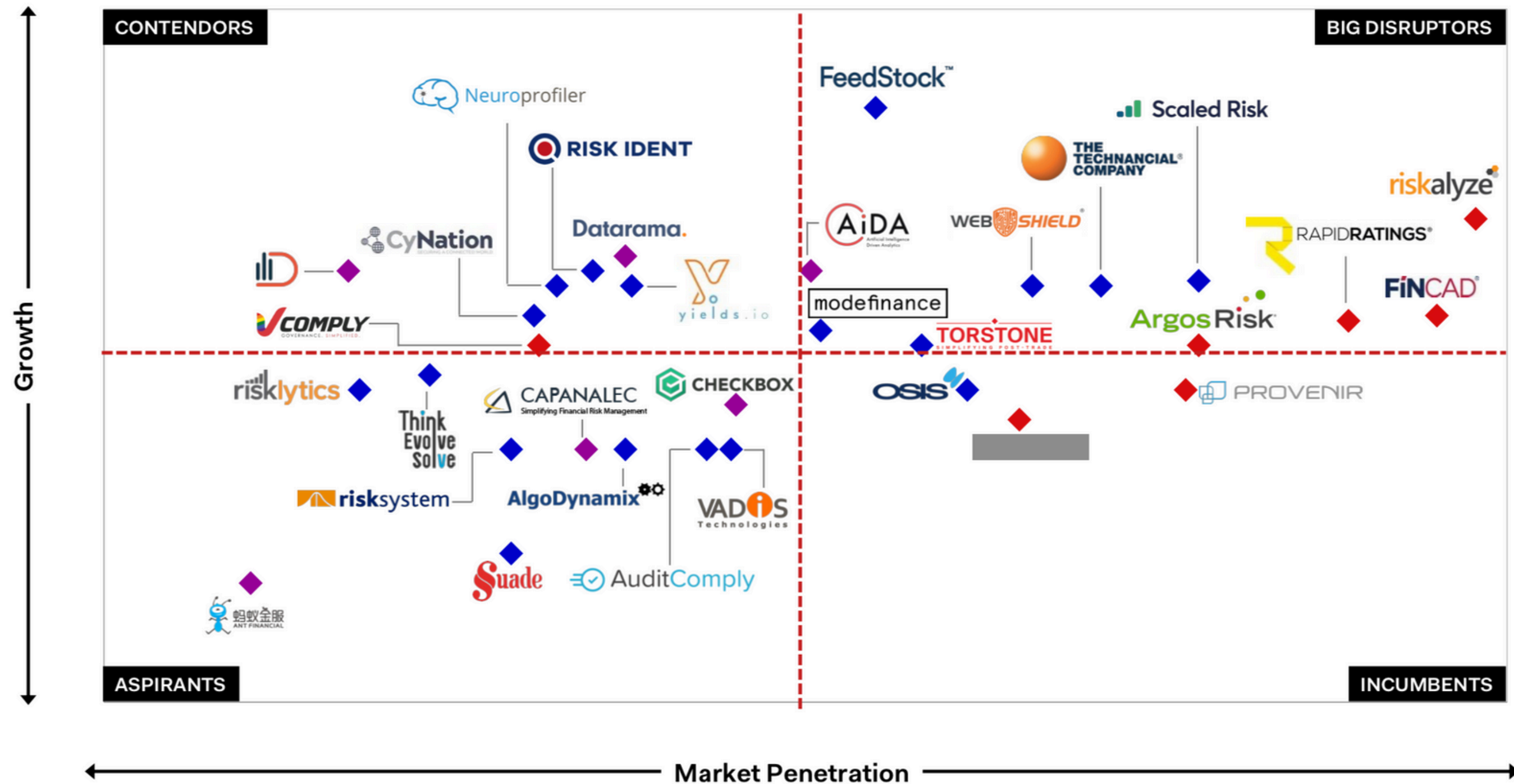
## Employees expertize:





# a Risk Management disruptor

◆ AMERICAS ◆ APAC ◆ EMEA



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