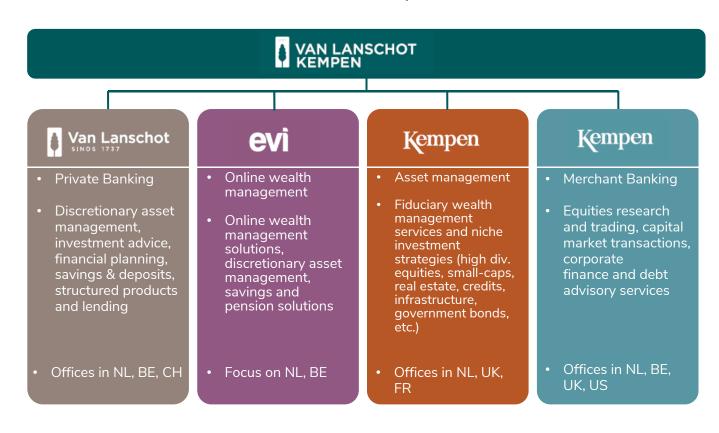
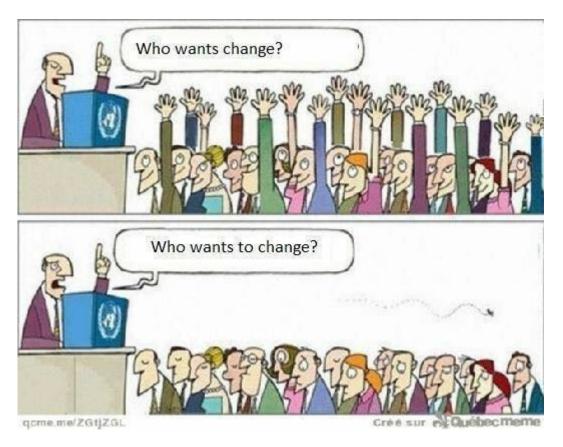


Van Lanschot Kempen (VLK) has four business lines with various data science maturity levels





Our data science transformation was/is challenging





Looking back and looking ahead



Late 2017

- No data science team
- No scalable tools
- One data science use case
- Skepticism from business

Today

- Data science team of 10
- Effective cloud infrastructure
- Delivered value and on-going use cases
- Strong buy-in across business

Next steps

- Data science DevOps
- Develop data science capabilities within business lines



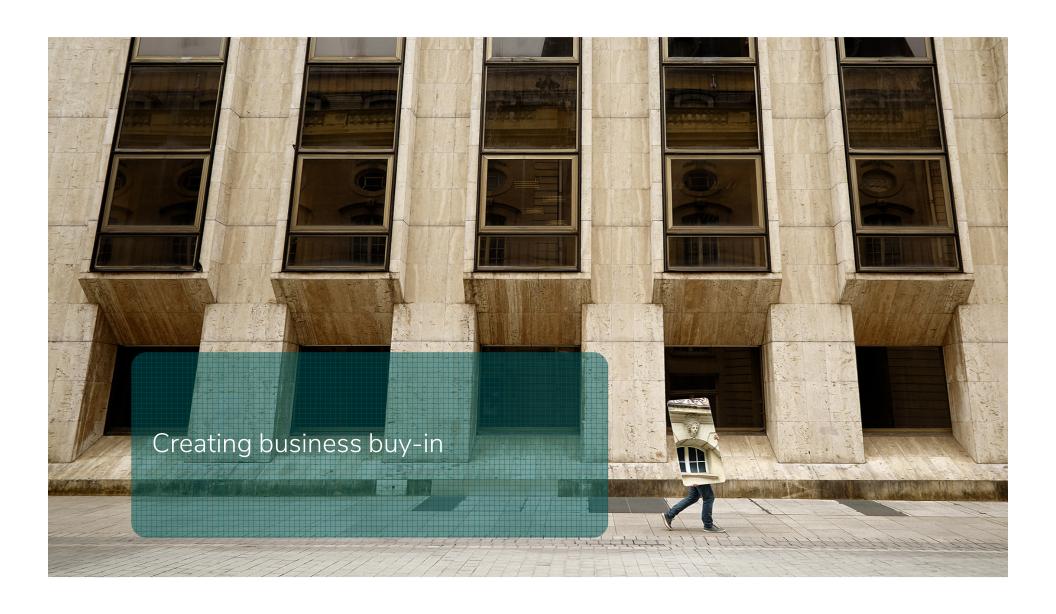
What did we do to get here?

Creating understanding and buy-in

Embed data science into organisation

• Mature and scale data science work





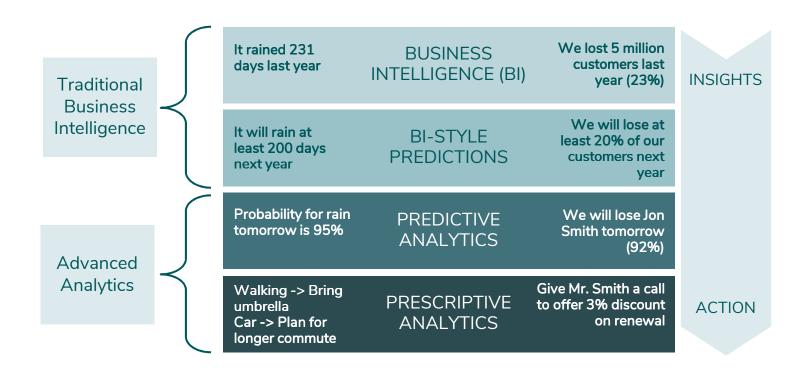
1. Creating buy-in

- Many workshops/talks about "what is data science and what can it do for me"
 - What are others doing in the field?
 - What are we already doing at the company?
- Hackathons to demonstrate usefulness, and kick-start POC projects
- Strong communication around first POC projects
- Finding champions to "spread the gospel"
- Encourage external education programs





Example: Explaining what advanced analytics is





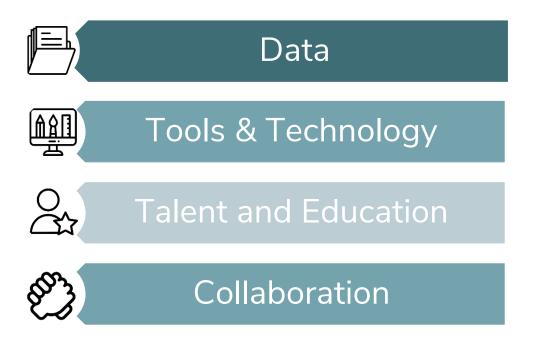


2. Embed it into the organisation

- 1. This is what we need: Set up sufficiently mature technology stack (open source tools, data availability, computing power).
- 2. These people are going to do it: Establish a new central data science team to aid business line analytics teams in data science projects.
- 3. This is what we're going to do: Define project selection for the first (half) year, align with corporate strategy and get management agreement.
- 4. This is how we're going to do it: Define way of working.
- 5. This is the line of reporting: Make data science important part of corporate strategy, create direct reporting line to CEO and EB.



What do we need to make Advanced Analytics happen?



Access to structured and unstructured, internal and external data. Effective cloud storage. Coordination on procuring external data, data governance and access security

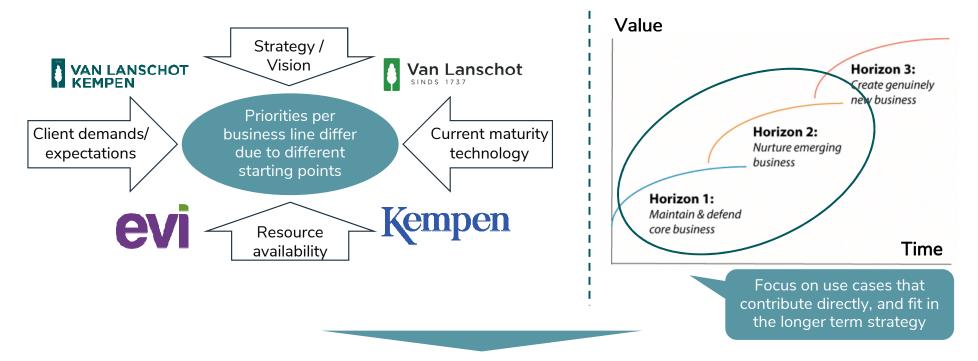
Data ingestion and management, analytics product development and management, Azure cloud infrastructure, computing power and tech support

Data scientists, data engineers, project management and support across the business for implementation, education for those working with new technology

A clear mandate, EB support and assurance of resources across the business. Close collaboration with multiple teams to deliver value



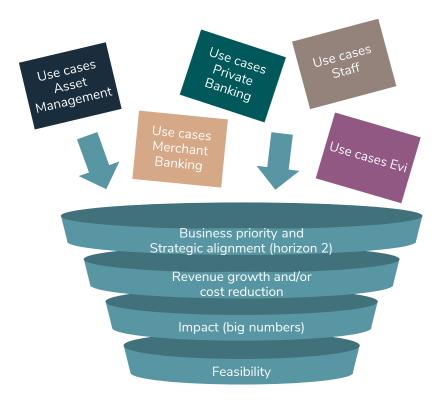
Next steps differ per business line depending on starting point





Prioritization of use cases will be determined per business line through a structured 'use case funnel'

Selection process of use cases for VLK



Propose use case

- 1. Use cases are collected **bottom-up** and from business line MTs, and are **validated** by responsible business units/departments
- 2. Use cases are **prioritized** with top management, and planned in by the Advanced Analytics teams
- 3. During execution the Advanced Analytics team works closely together with the business unit (**product ownership** is within the business)
- 4. Use cases can **change**, be concretized or even be **stopped** (agile approach)
- 5. Eventually use cases are ready once the full value is captured in either cost savings or revenue growth



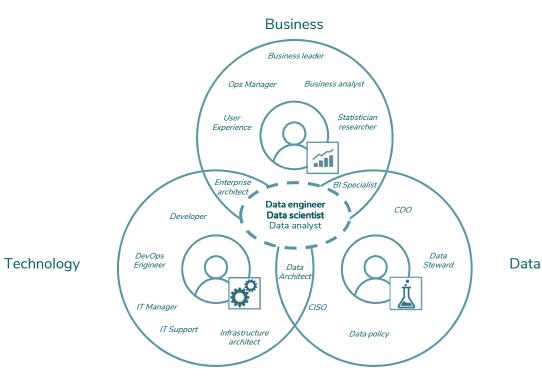
Prioritizing advanced analytics initiatives across VLK is at the discretion of the Executive Board

Driving business value from Advanced Analytics across Business Units					
	Private bank	Evi	KCM	Merchant Bank	Support Functions
Commercial Effectiveness	1	(iii)			
Al-Powered Solutions / Products	2	0	Q		
Operational Efficiency	3		0	Q	

Prioritize per business line and across business lines



To realize full potential of analytics it should be an integral part of the Business supported by Data and Technology



The potential of analytics can only be realized by **strong coordination and collaboration** across the company.

Technology, data and business knowledge needs to be **combined to make an impact**. Advanced analytics needs to **operate at the intersection** of these three.



Advanced Analytics is an integral part of corporate strategy and high on the CEO agenda







3. Mature and scale

Working towards data science **DevOps**:

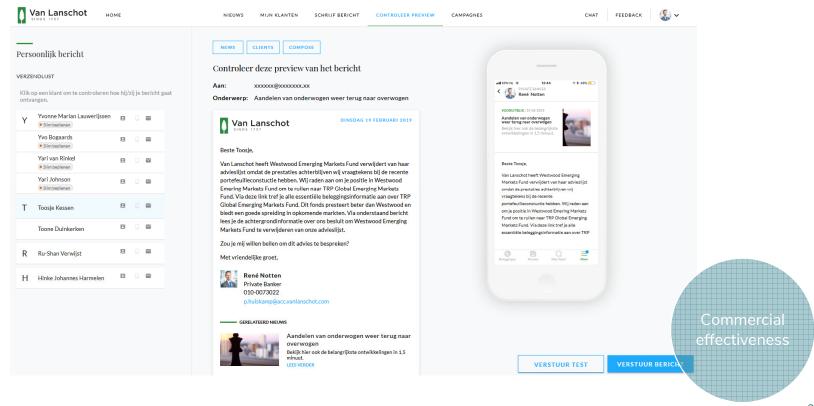
- End-to-end data science
- Smart and fast deployment via for example containers
- Making smart use of new technology such as Azure Machine Learning Services, Automated ML, Cognitive Services etc.
- Working Scrum/Agile across the business







Being smart about what content to send to clients





Predicting customer outflow at Evi

For our online asset manager Evi, we designed a system that tells us which clients are most likely to be unhappy, and deserve some extra attention from the client service team.

Based on supervised learning we take into account financial markets, risk profiles, client interactions with Evi, and investment experience to predict customer churn.





Scouting for new M&A deals with data



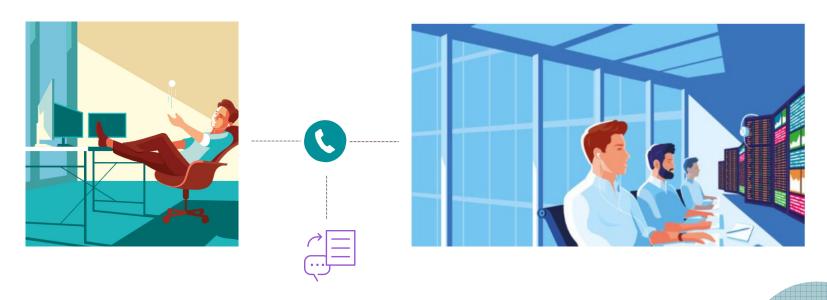
Our Corporate Finance team has limited resources and time.

We are therefore combining data on historic deals, news data, company fundamentals and chamber of commerce data to predict where the next M&A deal happens. We focus mostly on private companies, which have notoriously bad "structured" data coverage.





Understanding our clients by analyzing phone calls



Our clients interact a lot with us via phone.

Can we use that data to better understand our clients needs? How do we turn this data into value?





Client monitoring and fraud detection at the Private Bank



Fraud detection systems in financial institutions have caused a major stir in the Netherlands recently.

Our newly designed system is based on unsupervised learning and combines data from transactions, meeting notes, external lists, and internal CRM systems to detect suspicious cases.

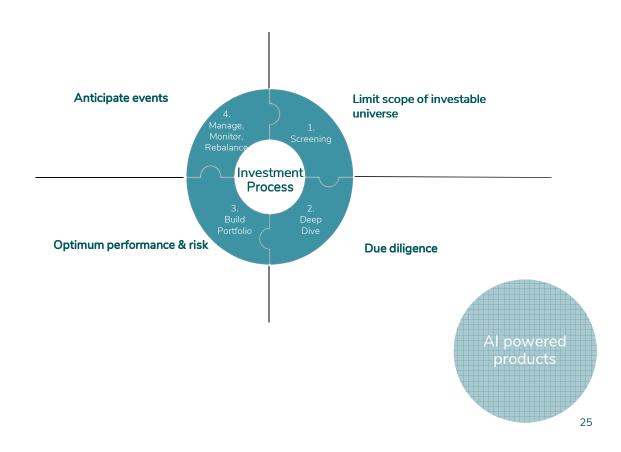




Advanced Analytics in the investment process



Quantamental investing: stock recommender system for screening process

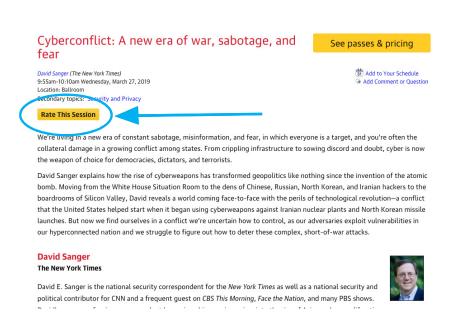




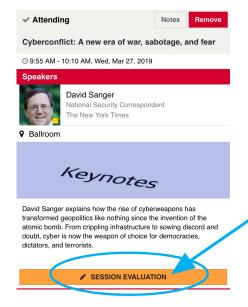


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