Transforming a traditional wealth manager to a cutting-edge data-driven company

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

- **Private Banking**: Discretionary asset management, investment advice, financial planning, savings & deposits, structured products and lending.
- **Discretionary asset management, investment advice, financial planning, savings & deposits, structured products and lending**
- **Online wealth management**: Online wealth management solutions, discretionary asset management, savings and pension solutions.
- **Focus on NL, BE**: Focus on NL, BE.
- **Asset management**: Fiduciary wealth management services and niche investment strategies (high div. equities, small-caps, real estate, credits, infrastructure, government bonds, etc.).
- **Offices in NL, UK, FR**: Offices in NL, UK, FR.
- **Merchant Banking**: Equities research and trading, capital market transactions, corporate finance and debt advisory services.
- **Offices in NL, BE, UK, US**: Offices in NL, BE, UK, US.
Our data science transformation was/is challenging

Who wants change?

Who wants to change?
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?

1. Creating understanding and buy-in
2. Embed data science into organisation
3. Mature and scale data science work
Creating business buy-in
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

**Traditional Business Intelligence**
- It rained 231 days last year
- It will rain at least 200 days next year
- Probability for rain tomorrow is 95%
- Walking -> Bring umbrella
  Car -> Plan for longer commute

**Advanced Analytics**
- We lost 5 million customers last year (23%)
- We will lose at least 20% of our customers next year
- We will lose Jon Smith tomorrow (92%)
- Give Mr. Smith a call to offer 3% discount on renewal

**Business Intelligence (BI)**
- BI-Style Predictions
  - Probability for rain tomorrow is 95%

**Predictive Analytics**
- We will lose Jon Smith tomorrow (92%)

**Prescriptive Analytics**
- Give Mr. Smith a call to offer 3% discount on renewal
Embed data science in the organisation
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?

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

**Tools & Technology**
- Data ingestion and management, analytics product development and management, Azure cloud infrastructure, computing power and tech support.

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

**Collaboration**
- 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

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.

<table>
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<th>Driving business value from Advanced Analytics across Business Units</th>
<th>Private bank</th>
<th>Evi</th>
<th>KCM</th>
<th>Merchant Bank</th>
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*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
Mature and scale data science efforts
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
Use cases at VLK
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
Thank you for your attention
Rate today’s session

Cyberconflict: A new era of war, sabotage, and fear

We’re living in a new era of constant sabotage, misinformation, and fear, in which everyone is a target, and you’re often the collateral damage in a growing conflict among states. From crippling infrastructure to sowing discord and doubt, cyber is now the weapon of choice for democracies, dictators, and terrorists.

David Sanger explains how the rise of cyberweapons has transformed geopolitics like nothing since the invention of the atomic bomb. Moving from the White House Situation Room to the dens of Chinese, Russian, North Korean, and Iranian hackers to the boardrooms of Silicon Valley, David reveals a world coming face-to-face with the perils of technological revolution—a conflict that the United States helped start when it began using cyberweapons against Iranian nuclear plants and North Koreans missile launches. But now we find ourselves in a conflict we’re uncertain how to control, as our adversaries exploit vulnerabilities in our hyperconnected nation and we struggle to figure out how to deter these complex, short-of-war attacks.

David Sanger
The New York Times

David E. Sanger is the national security correspondent for the New York Times as well as a national security and political contributor for CNN and a frequent guest on CBS This Morning, Face the Nation, and many PBS shows.

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