how to become a data driven company

from data warehousing
to data analytics

Besser begleitet. PostFinance

Who am I?

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- born 1976 in Groningen, The Netherlands
- Master of Science – University of Phoenix (AZ)
  Computer Information Systems
- past: contractor (DBA / Project Management / Team Management)
  Team Manager Database @IKEA,
  Technical Lead Infrastructure Engineering @Sunrise,
  Department Head Service Engineering @Opitz Consulting
- current: Head of Data Warehouse Development at PostFinance
  Member of the Board of Advisors of Teralytics AG
- main focus area‘s: Telecom, Finance and Retail.
- hobby‘s: golf, whisky, freelance sound engineer and tv producer.
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Main Problems

how can we prevent to get different results

from different systems

about

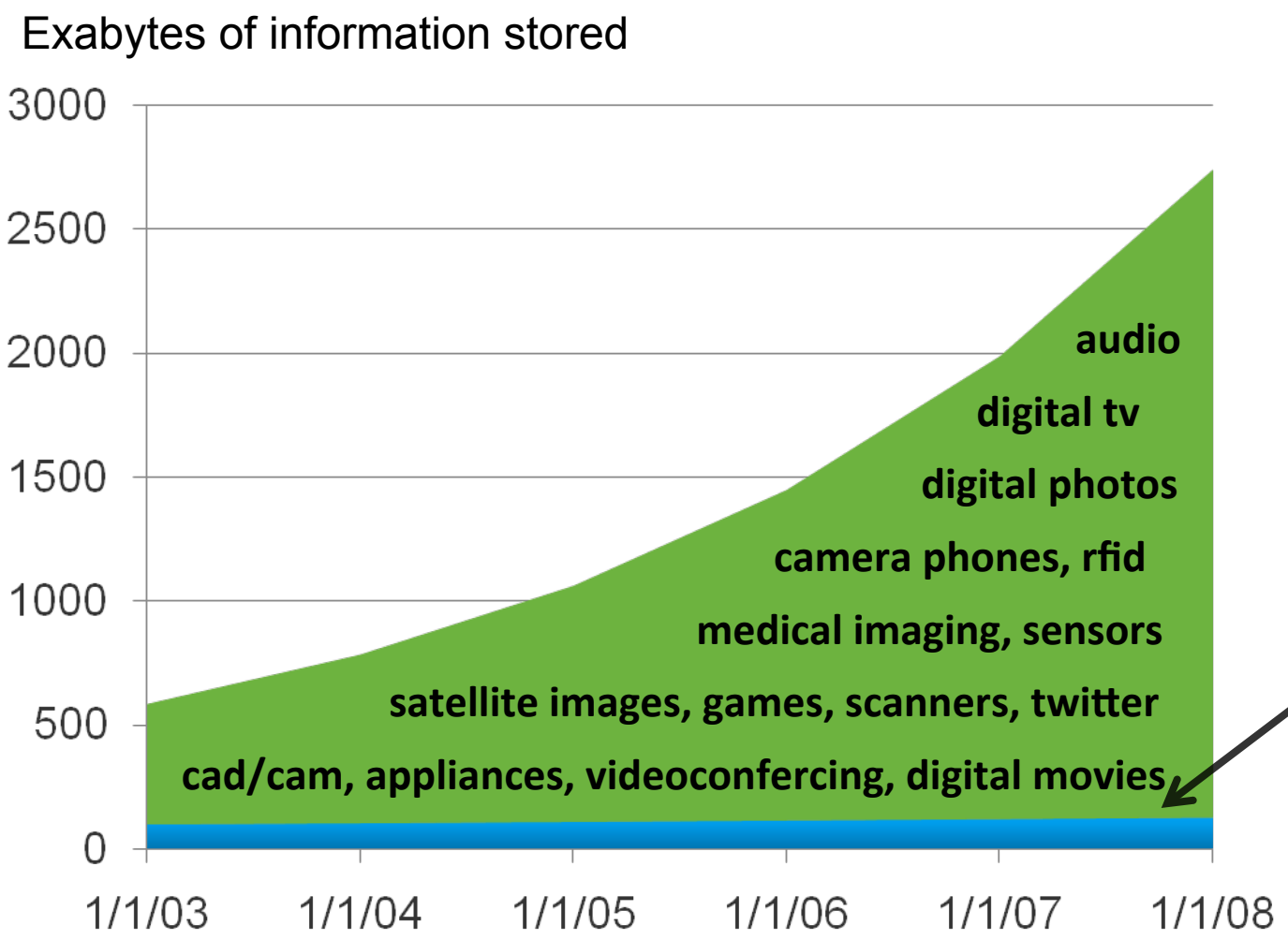
the same KPI’s?

how can we use our own data

to

support our operational processes?

More data, way more data



20 Zetta by 2015

1 Yotta by 2030

Yes, you are part of the *yotta generation*…

Source: The Information Explosion, 2009

Data Warehousing / Business Intelligence / Business Analytics

vast amounts of sources and data

Traditional Data Warehouse infrastructure

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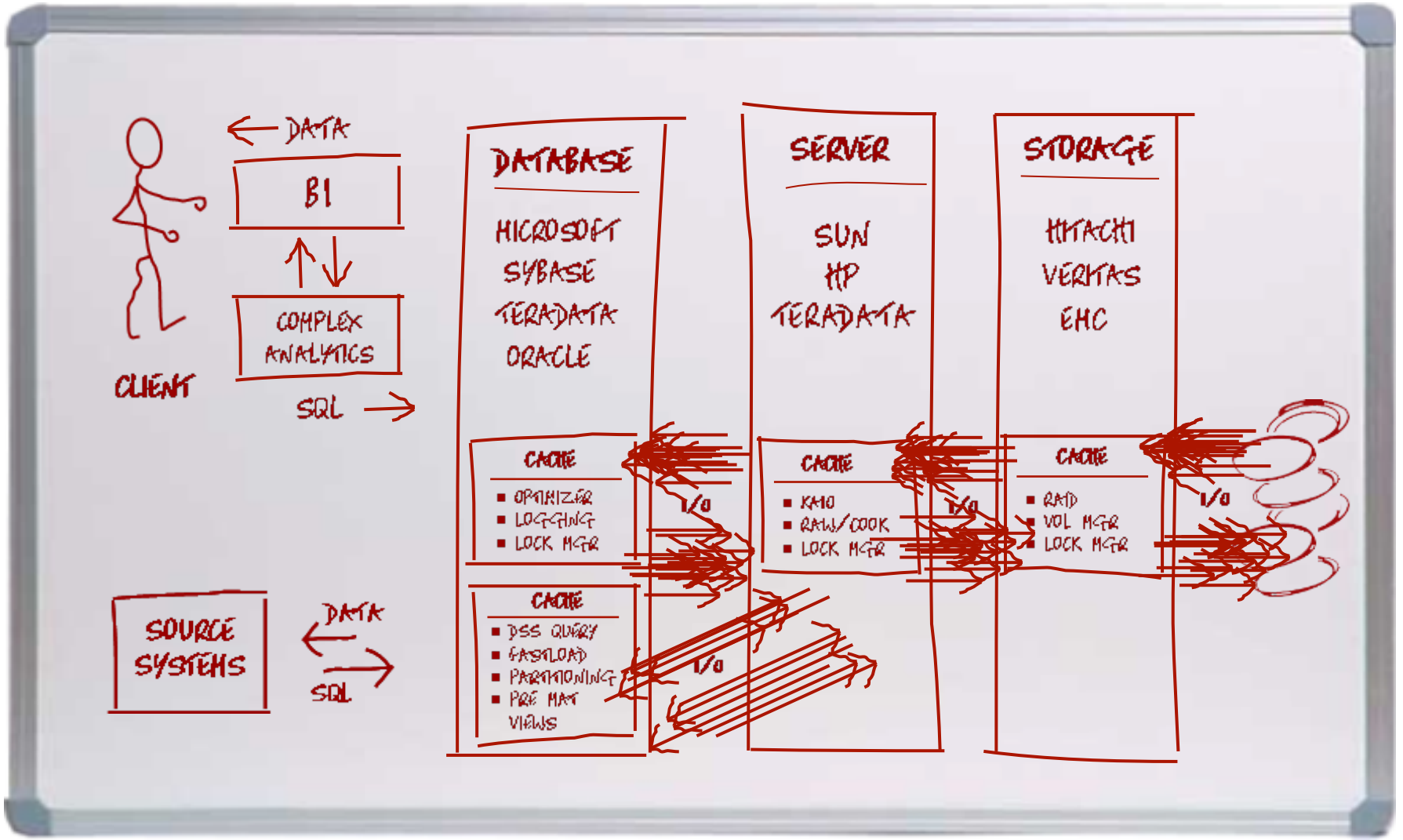
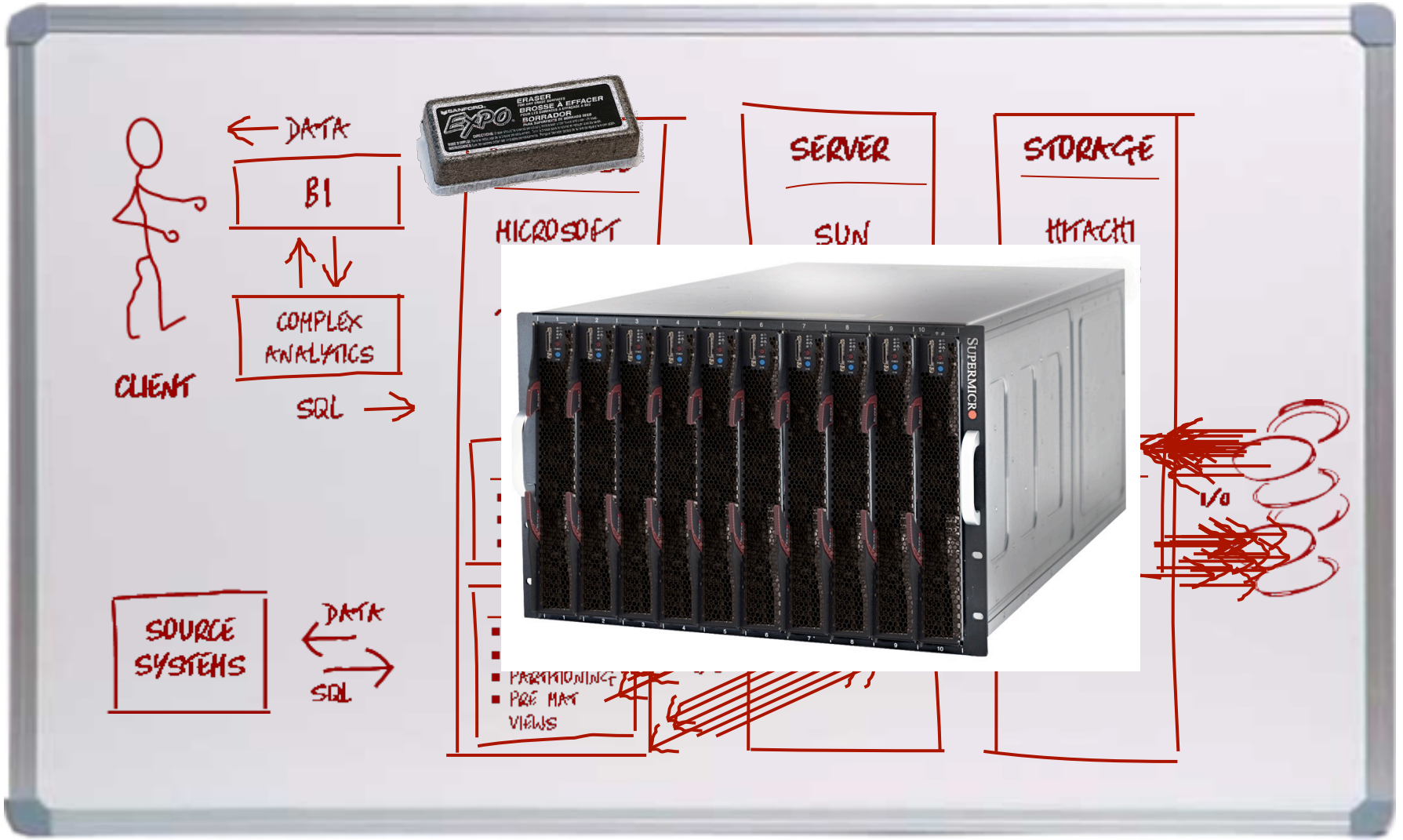


Let’s simplify the mess …



… and bring analytics into the warehouse

Big Data or Right Data?

By combining technologies you do not loose your investments but you can gain from new technologies which weren't there even 3 years ago ...

Key Success Factors

- time to market
- single source of truth
- wide data collection scope
- reusability of data, company wide, not limited by location or departments.
- use only relevant data,
- but store also irrelevant for future use

- to use wide business-intelligence to know our business even better!

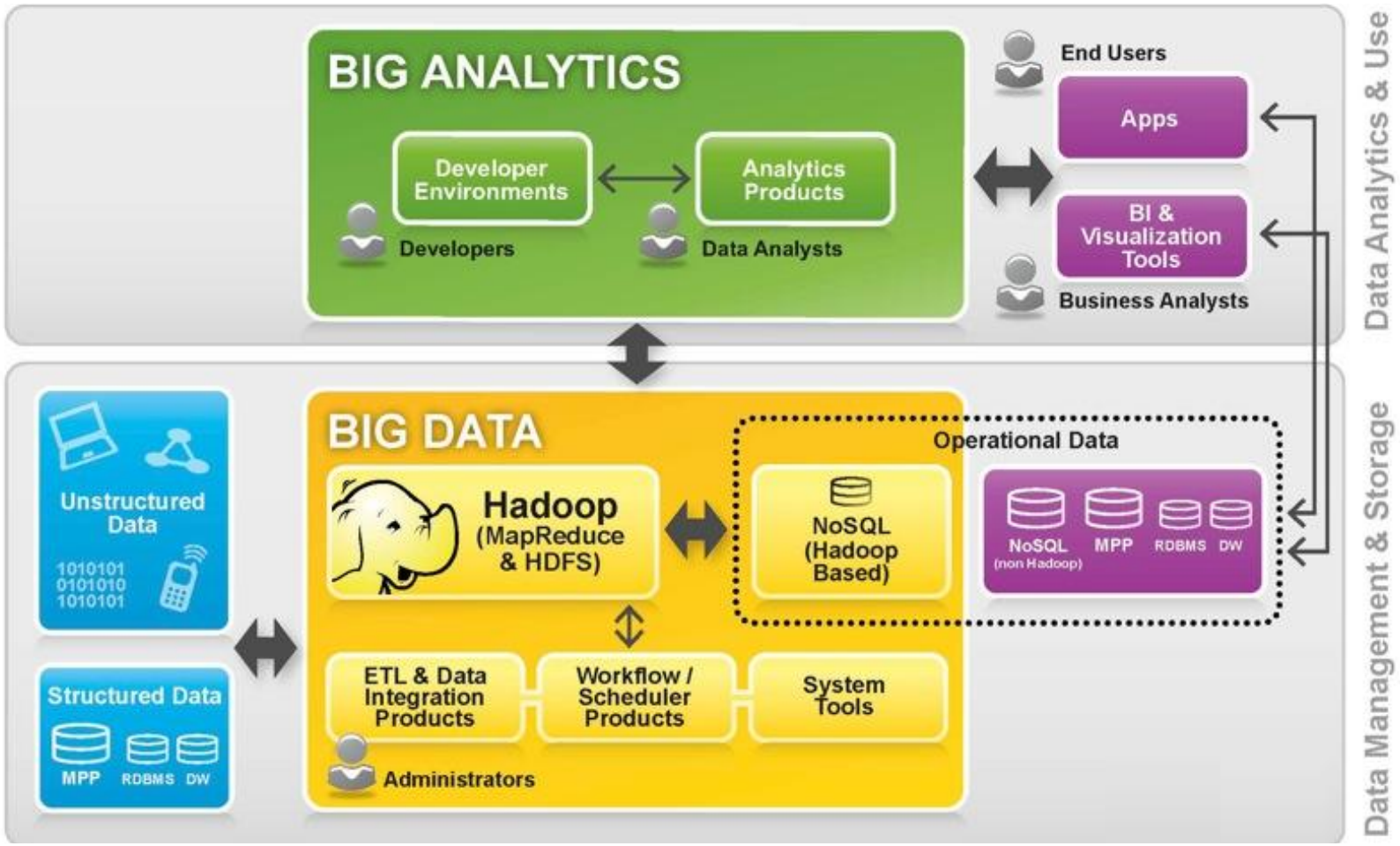
Did you know ...

that Boeing jet engines can produce **10 terabytes** of operational sensor-based information for **every 30 minutes** they turn. A four- engine jumbo jet can create 640 terabytes of data on just one Atlantic crossing; multiply that by the more than 25,000 flights flown each day, and you get an understanding of the impact that sensor and machine-produced data can make on a Business Intelligence environment.

Current challenges

- load-to-report, very unflexibile
- longer nightly loads – is the night still long enough?
- long processes in project management to make changes
- does the project-requester still now why (s)he needed the data when finally delivered, or has an alternative solution been created in the meanwhile?
- several different „sources-of-truth“ ...

Technology Chances – Data Analytics via bDWH



Bringing business and Data Analytics strategies together

Goal:

Leveraging untraditional sources, social media and transactional data to gain the elusive 360 degree view of the customer and your business.

First steps

- data analytics is all about colocating your companies data
- find sources to create reusable, normalised/congregated data
- prototype for reporting, do not cover _all_ data!
- listen to your users, what do they need
- iterative development, no need for scrum
- take small steps, no big bang approach!
- let the users learn to handle this new data

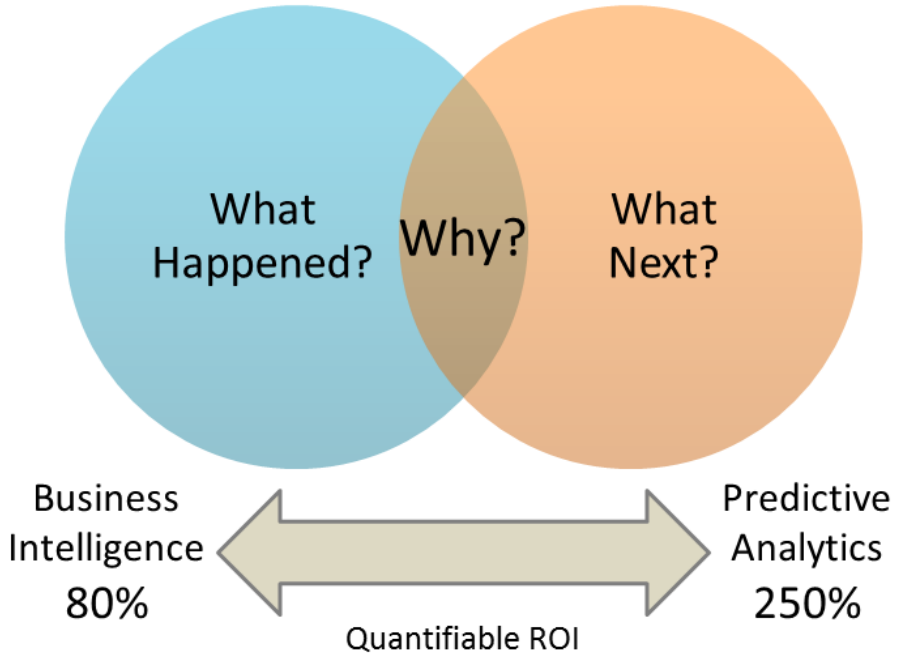
- Data Analytics should not be an IT project, nor should it only be business driven, cooperation is the key!

First challenges

- champion business value, without a sponsor you will fail.
- bring together existing internal knowhow, combine it with external knowhow. don‘t silo your teams.
- it‘s not about hardware, it‘s about the concept and way of thinking.
- reusable data, but which data is the ‚sole truth‘?
- who owns your data? do they really want to have all this transparency?
- tooling, centralized or decentralized tools?
- think of new and future business-concepts to be supported.

Predictive Business Intelligence – Data Analytics

- you know what you know – perfect, use it!
- you know what you don‘t know – learn
- you don‘t know what you know – investigate
- you don‘t know what you don‘t know – ....



Lessons learned

- don‘t try to do it all alone, talk to other departments
- collaboration is king! Learn from other industries, maybe they are not that different (investment banker vs. rocket scientist)
- don‘t silo your teams – IT <-> Analysts <-> Business
- champion the business value!
- it‘s a new era – we all have to learn, no-one has the complete wisdom (yet ☺)

Added Value example – 360 Degree Customer Focus

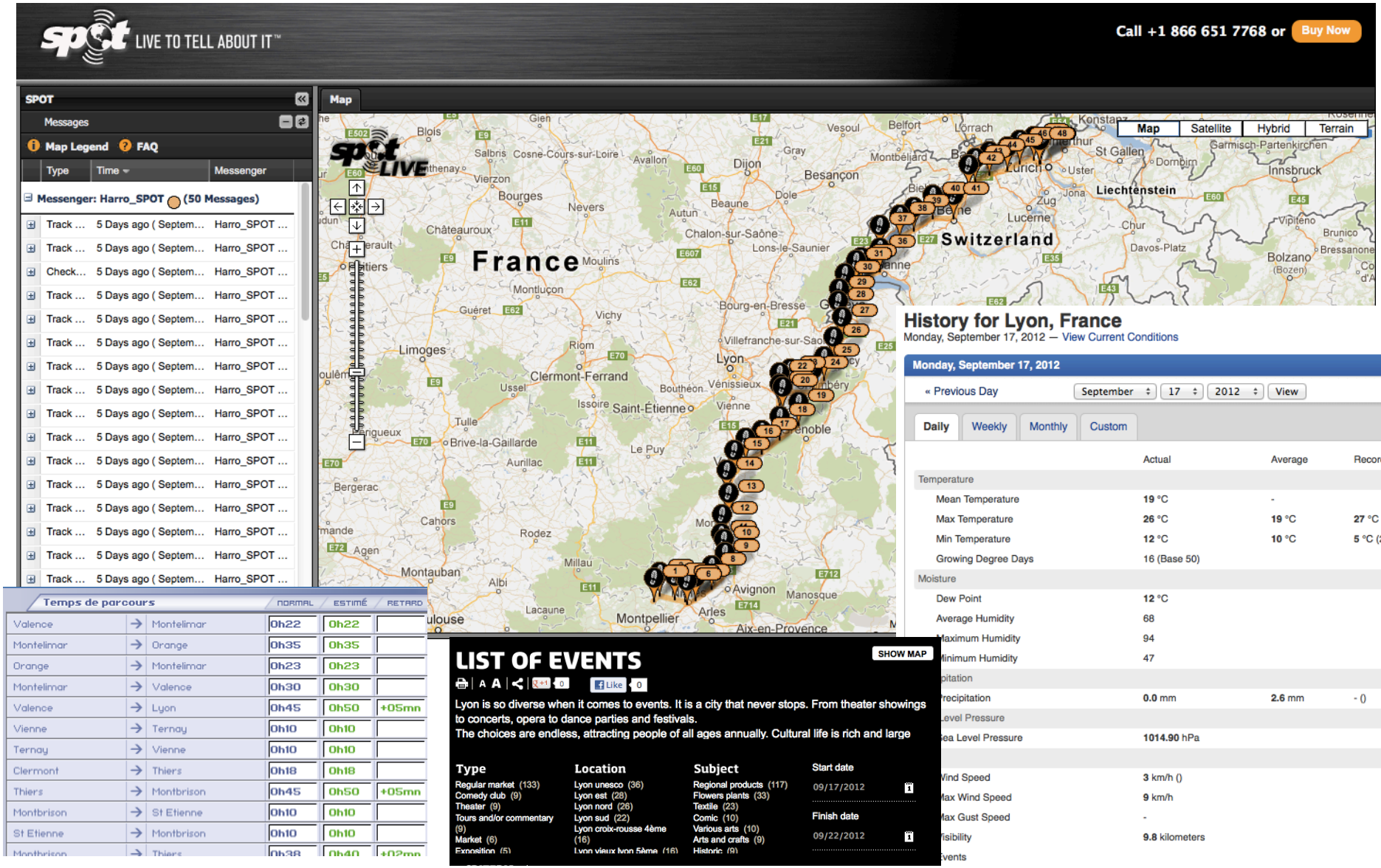
- product recommendations
- live event detection (fraud / AML / risk / compliance)
- propensity models
- segmentation
- churn risk models
- customer value models (eg. profitability)
- offerings
- personalization (customer-intelligence / -service)

Reference Case I – American Express

- no fixed card-limit
- active transaction monitoring based on:
  - customer profile
  - credit rating firms (4! in the usa)
  - active balance
  - payment history

- result: lower security: payment in profile: only signature, otherwise: pincode or direct contact by phone with AmEx
- result: less reversed transactions (<3%) -> lower costs!
- result: better insight in customers spending -> prediction!

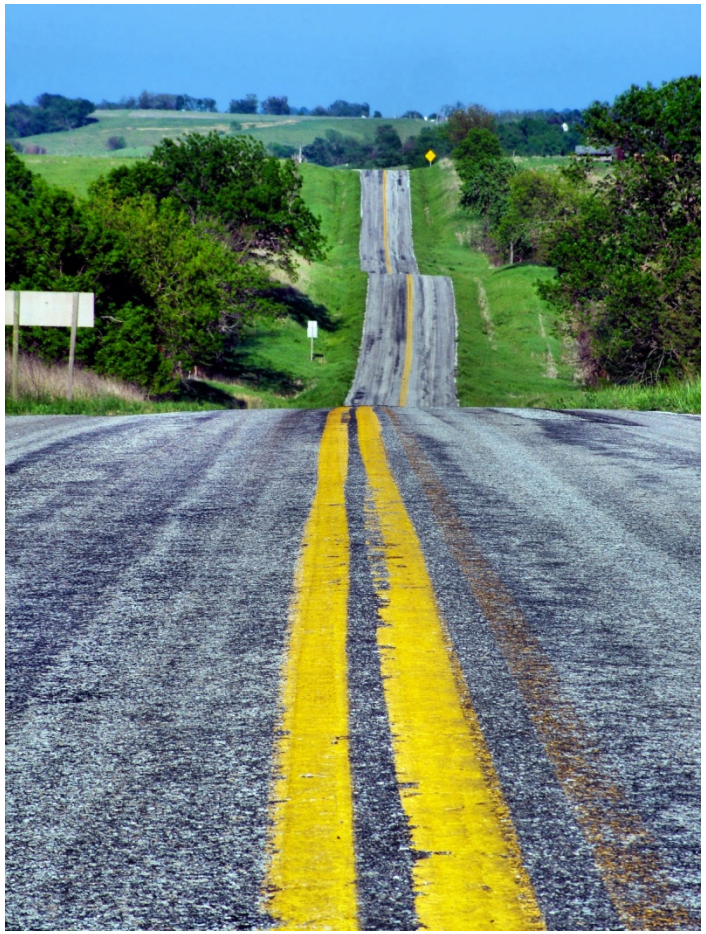
Reference Case II - Logistics



And now ...?

Big Data and Business Analytics are not just projects,

they are journeys ...



Q & A and Discussion

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