BUSINESS ANALYTICS CHALLENGE 2017

DATA
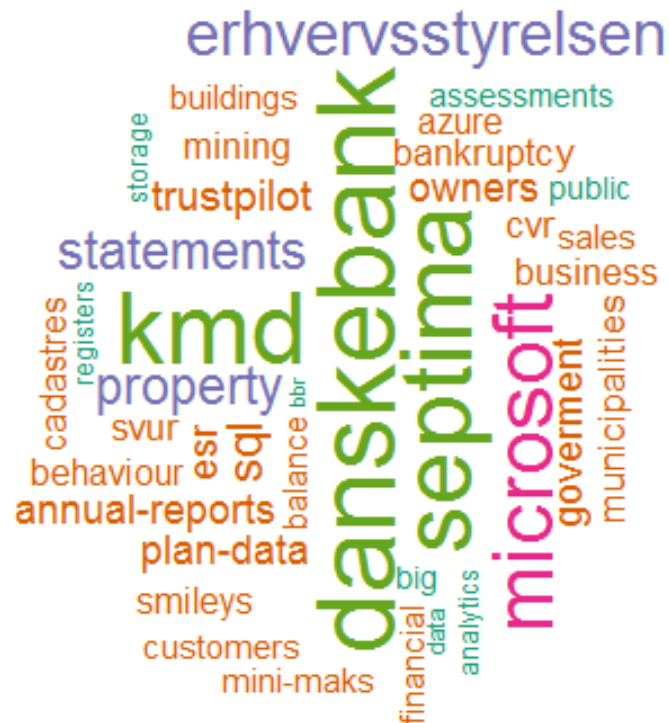
OVERVIEW

INTRODUCTION

FINANCIAL DATA
- BEHAVIOURAL DATA (DANSKE BANK)
- ANNUAL REPORTS

OPEN DATA
- REGISTER DATA
- LAND REGISTRATION

EXTERNAL DATA
- ATTRACTIONS (SEPTIMA)
- SMILEY
- TRUSTPILOT

CONNECTING DATA

General Information
- Online sessions
- Why "big" data?
- Connecting data

Financial data
- Behavioural data
- Financial data (simulated)
- Annual reports

Public data
- Registers
- Smiley
- Registration of property

External data
- Attractions
- Trustpilot

Microsoft   Danske Bank   KMD
IT WITH INSIGHT

Top 10 Trends For Digital Transformation In 2017

Forbes

7. Big data and analytics: The importance of big data in the business world can't be overstated. We know that there's a dizzying amount of valuable data in the world, but few companies are using it to maximum effect. Analytics drive business by showing how your customers think, what they want, and how the market views your brand. In the age of Digital Transformation, almost everything can be measured. In the coming year this will be a cornerstone of how businesses operate. Every important decision can and should be supported by the application of data and analytics.

According to **McKinsey Global Institude** data driven companies are:
- 23 times more likely to acquire customers.
- 6 times as likely to retain those customers.
- 19 times as likely to be profitable as a result.

More data has been created in the past two years than in the entire previous history of the human race. – Bernard Marr

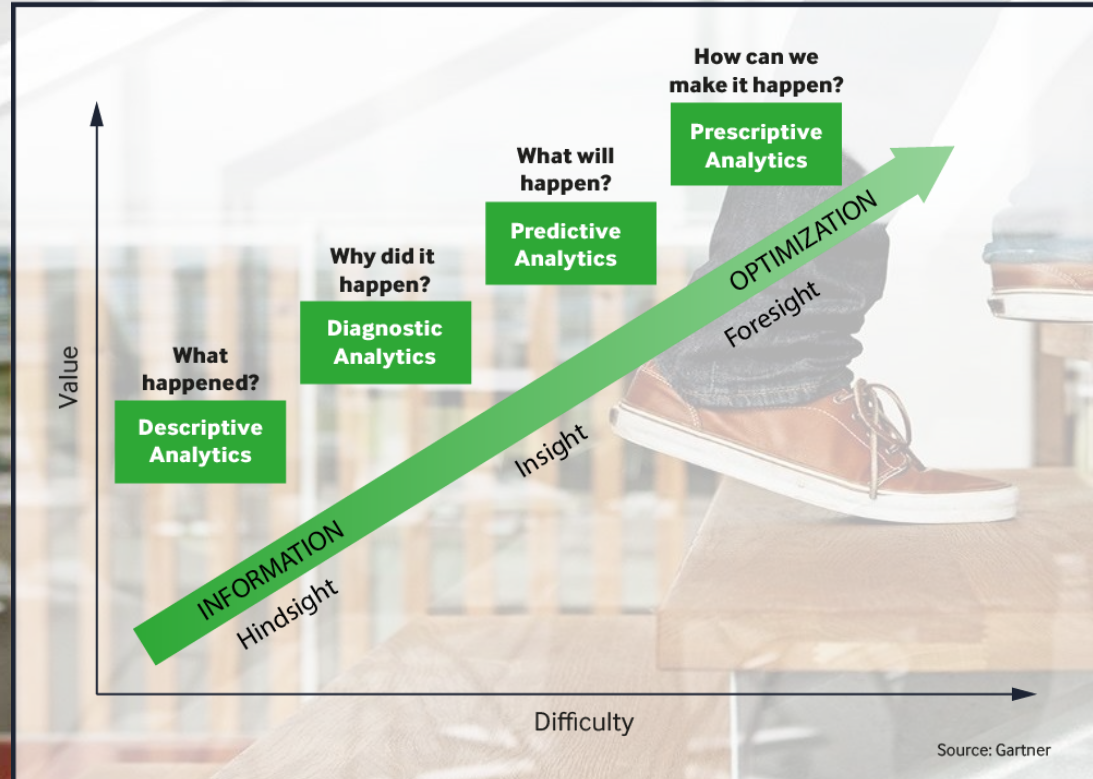Less than 0.5% of all data is ever analysed and used.– Bernard Marr

©KMD

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ADDING VALUE TO DATA

Analytic Value Escalator

How can we make it happen?
Prescriptive Analytics

What will happen?
Predictive Analytics

Why did it happen?
Diagnostic Analytics

What happened?
Descriptive Analytics

Value

Difficulty

INFORMATION — Hindsight

Insight

OPTIMIZATION — Foresight

Source: Gartner

DANSKE BANK DATA DESCRIBES THE FINANCIALS AND THE CREDIT WORHTNINESS OF THE CUSTOMER

Customer information
- Anonymised customer id
- Industry
- Flag for default
- Tenure
- Ownership percent

Credit Behaviour
- Overdraft and reminder information
- Balances
- Satisfaction scores
- Credit rating

Financials
- Simulated based on yearly statements
- Key Balance sheet figures
- Profit and loss figures

HISTORICAL DATA

2012 to 2014

LARGE DATASET
75.000 businesses
206 variables

ANONYMISED

OUR BEST ADVICE
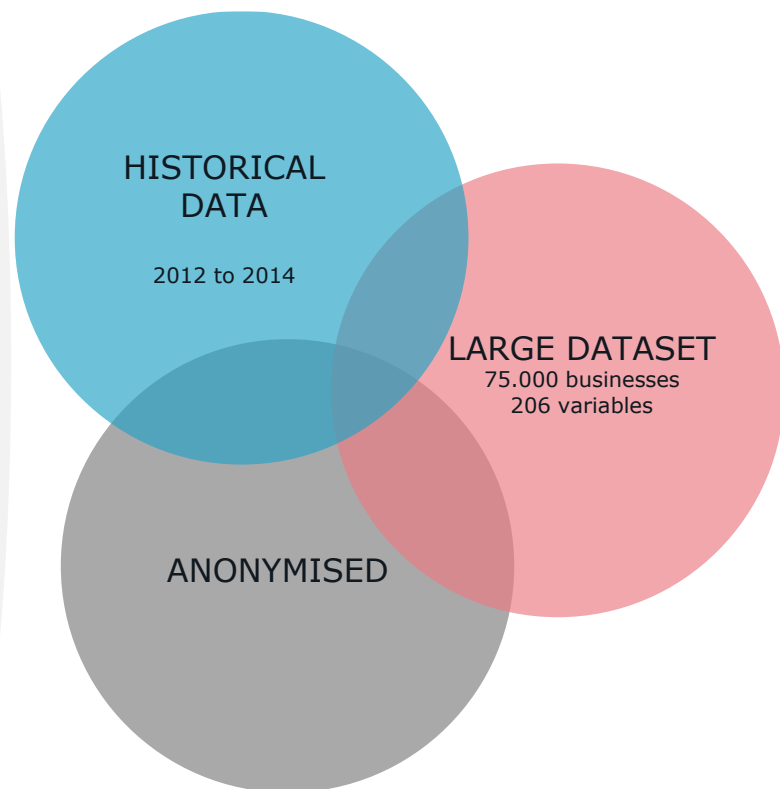
Data cleansing

- Behavior data not cleaned
- Use business logic on financial data e.g. negative assets
- Missing values & outliers

Feature engineering & Modelling

- Test and train dataset

- Consider how YOUR model can predict better than the others

Business interpretation

- Interpret variables and relate them to business understanding

- Google can help!

**KMD A/S
ANNUAL REPORT
2015**

Ballerup
CVR no. 26 91 17 45
14th financial year

Årsrapport
KMD A/S,
Lautrupparken 40, 2750 Ballerup,
CVR 26 91 17 45
for 1. januar - 31. december 2015
er fremlagt og godkendt på selska-

KMD
IT WITH INSIGHT

Microsoft Danmark ApS

Kanalvej 7, 2800 Kgs. Lyngby

CVR no. 13 61 28 70

*Uddrag af
årsrapport 2016*

Danske Bank-koncernen

Financial highlights

DKK'000	2015/16	2014/15	2013/14	2012/13	2011/12
Key figures					
Revenue	1,092,883	1,031,235	940,205	962,692	871,336
Operating profit	198,873	179,565	154,728	166,783	138,187
Net financials	29,110	805	463	346	7,406
Profit/loss for the year	183,329	138,399	117,150	124,829	111,110
Total assets	1,108,630	1,078,640	1,010,904	1,021,759	917,588
Investment in property, plant and equipment	25,016	7,381	3,299	6,427	1,618
Equity	666,701	621,372	599,973	606,823	593,094
Financial ratios					
Operating margin	18.2%	17.4%	16.5%	17.3 %	15.9 %
Solvency ratio	60.1%	57.6%	59.4%	59.4%	64.6%
Return on equity	28.5%	22.7%	19.4%	20.8%	20.7%
Average number of employees	452	446	442	419	412

OPEN DATA IN DENMARK

CVR
(Central Business Register)

BBR
(Building and housing register)

ESR
(property ownership)

Plan data
(Municipal plans)

MiniMaks
(Cadester register)

SVUR
(property assessments)

Registration of property
(included but not documented)

Smiley

Other data sources:

Kulturstyrelsen, Adresser, Geodata (GST), Miljøportalen, GeoDanmark, GEUS, Offentligt Trafik, Jordklassificering, Socialstyrelsen, Momsomsætning, Danmarks statistik, UdINaturen, Motorregistret, Energimærkning, Stoffer i kemiske materialer, Vindkraftanlæg, Folketingets åbne data, Mastedatabasen, Nøgletal Social og Indenrigsministeriet, Open data København, Open data Aarhus, Open data Odense, Husdyrbrugregister, Advokatnævnet, Pengeinstitutankenævn, Arbejdsmarkedet, Sundhedsstyrelsen Læger, Domstolene, Politiet, Statstidende, Realkreditrådet, Sundhedsregistrer, Sundhedsregister, Lægemidler, Arbejdstilsynet, Tilsynsliste læger, Sundhedsprofildata, Ankestyrelsen, Undervisning, Facilitetsdatabase, Eleftersynsrapporter.

Completed in 2015

Building area: 19061 m²

Number of floors: 6

Basement area: 12010 m²

Geo coordinates
Easting: 720060,40
Northing: 6186391,71

Estimated cost:
29,768,000 DKr

Number of toilets: 0

CVR, MINIMAKS AND PLAN DATA

MiniMaks

_Cadester register

_forest protection

_protection of dunes

_pollution

Plan data

_Register of municipal plans

CVR

_all businesses in Denmark.

_See next slide.

CVR EXAMPLE

ATTRACTIONS

Data enrichment on all 800.000 production units (P-units)
in the Central Business Register (CVR)

Distance - direct straight line to:

- Bus/Metro/Train stops
- Windmill

- Tiny lake
- Small lake
- Medium lake
- Large lake

- Small forest
- Large forest
- Coast

ATTRACTIONS

- Driving time in car to the coast line

- Driving distance in car to the coast line

SEPTIMA
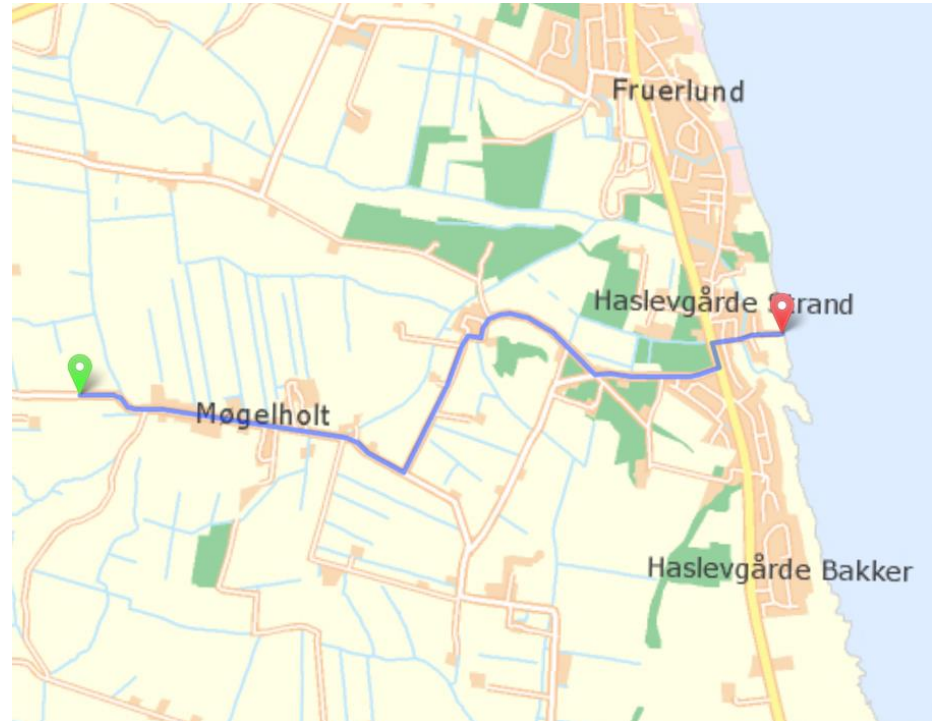
Quality of view indicator

Quantification of view from all
business addresses (production units)
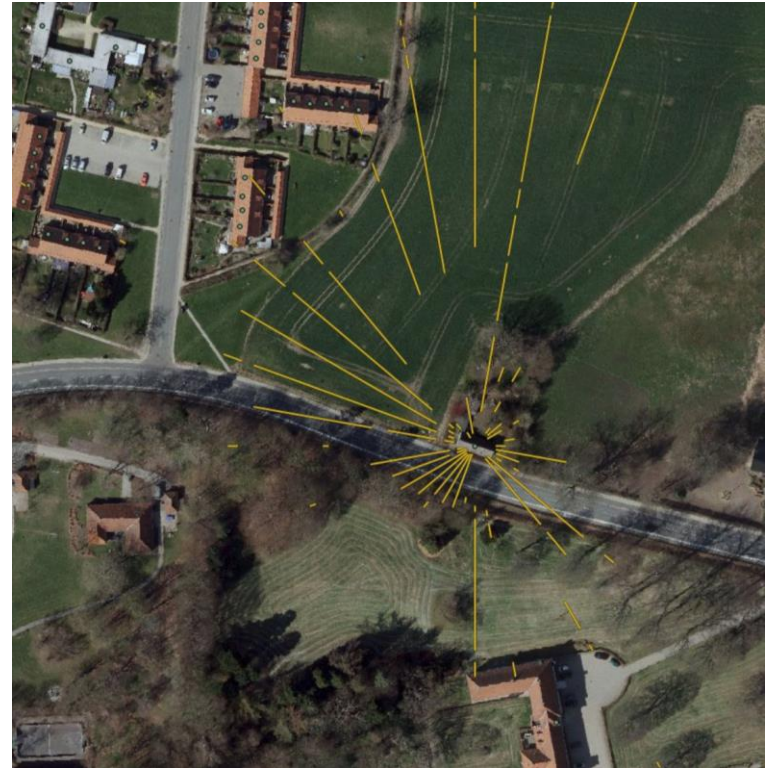
Contains control reports of companies selling or handling food.

Smileys are given according to compliance of regulations.

TRUSTPILOT

Public assessments of companies.

CONNECTING DATA