DATA SCIENCE

Data Science and Retail Marketing

WHAT IS DATA SCIENCE?

Combination of statistics, IS and social science to understand, model and even predict given phenomena

Data first – old ways of doing and data flows or no flows need to be reexamined

1) What data is needed ? i.e. Data sources and sensors

2) What signals are there ? What does it look a like ?

3) Detailed data analysis (Segments e.g. single democratic Christian man with one elderly parent living in the same household)

4) Action

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DATA SCIENCE

Can be applied to

Icahn School of Medicine Mount Sinai intensive healthcare unit with 160 data signals from each patient

Pharmaceutical distributor warehouse (distributes 1/3 of US medicine) McKesson

Agriculture – wine industry Gallo-IBM

Retailing

Anything

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DRIVING TO STORE/ACTION, TRADITIONAL

- Mobile

  Displays
- Customer letters (email)
  - SEM (SEA+SEO)
  - Twitter lead cards

Measuring mobile: SK

SK Ravintolat

MOBILE MASHUPS

- Public and private (company) internal data mashups (data and functionality integrated.

- Possibility to integrate different apps/functionalities, databases to present information in one seamless service to customer.

- E.g. single view Dominos Pizza (Pizza builder for customers + mobile apps, Pizza Tracker).

- But most importantly mobile in app messages ! Think e.g. old email but with context awareness data e.g. GPS data ☺

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ELISAVIDERA SMART DISPLAYS – DIGITAL SIGNAGE

Kamppi similar but not same displays

https://www.youtube.com/watch?v=70nl2b85r8Q

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AND OTHERS DRIVING TRAFFIC

SEA +SEO= SEM

Newsletters (Email biggest ROI of digital)

Twitter advertising and lead generation cards (LGC)

CUSTOMER LETTER - PATH TO PURCHASE EXAMPLE FROM OUR RESEARCH

- 10 companies provided access to their live e-newsletters account

- Thousands of e-newsletters over several years

-

- 6 months period was selected and the e-newsletters were analyzed

- Four regions are used to depict the visual scene of e-newsletters

CUSTOMER LETTER - PATH TO PURCHASE EXAMPLE FROM OUR RESEARCH

- The average click-through rate of email is 16% with an open rate of almost 20%.

- The un-subscription rate is low at 0.22%.

- We analyzed number of links, number of words in subject line and body, number of pics etc. impact to CTR.

Figure 1. Division of email newsletter into four regions of visual sight.

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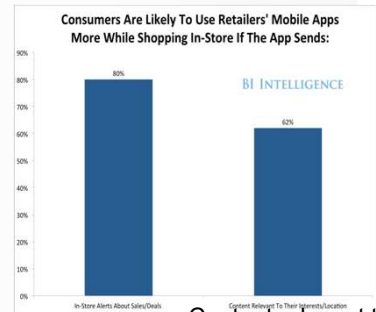# STORE

- Beacons
- Smart displays
- Real-time category management

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CONTEXT / LOCATION AW

- Apple's iBeacon technology - in-store Bluetooth location trackers designed to interact with smartphones - enables retailers and app publishers to identify people individually the moment they enter a shop

- iBeacon available with many vendors

- Similar to iJack service developed by Teliasonera in early 2000 which they abandoned in 2004

Get In-Store Notifications

Consumers Are Likely To Use Retailers' Mobile Apps More While Shopping In-Store If The App Sends:

BI INTELLIGENCE

Sales/deals 80%

Content relevant to interest/ Location 62%

Swirl 2013

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DATA VISUALIZATION - DASHBOARDS
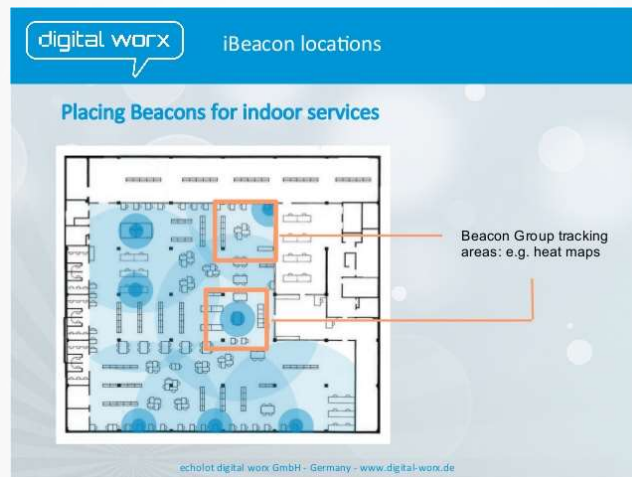
digital worx   iBeacon locations

Placing Beacons for indoor services

Beacon Group tracking areas: e.g. heat maps

echolot digital worx GmbH - Germany - www.digital-worx.de

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Virtual changing booths

•Some months ago, Urban Research, a fast-growing and popular fashion, home and lifestyle retailer, launched an experiment in Tokyo's Parco Ikebukuro.

•Allows customers to stand in front of one of two 60-inch screens, select clothing items they want to try on and see themselves dressed in the products within seconds.

•Customers' movements are represented fluidly on the screen in 3D and customers can use an integrated iPad to take pictures of themselves and share them with friends on social networks.

Virtual changing booth in Japan | Source: Wikimedia

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VIRTUAL CHANGING BOOTHS BENEFITS

- No inventory needed

- Scan a QR code to buy

- Easy, especially men seem to like it

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REAL-TIME CATEGORY MANAGEMENT

• Lush sales team can change the layout

of their stores in response to real-time sales data.

"Not only has this helped to tap in to the ambitious spirit of staff - competing over which store can do best in terms of sales and performance - but it also gives them information to improve the customer experience."

• For example, if staff notice a particular bath bomb is selling well with a certain shampoo, they can change the store layout so the items are closer together.   (Source BBC)

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BEHAVIORAL MARKETING -DIGITAL
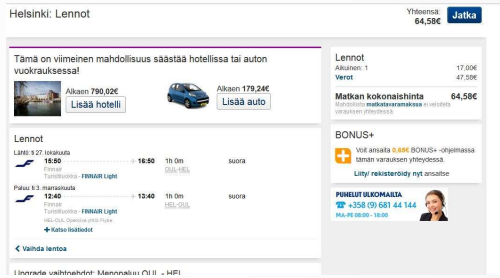
• E-sales

• Newsletters

• Social

• Shopping cart abandonment recovery

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E-SALES

E-sales (salesperson while in "physical" store if not busy handles chat, social media store, online store, virtual world store at the same time) – selling multiple channels

In the project tested with Konebox
(old K-group retailer of consumer electronics)

SOCIAL RETAIL (AS IF THE RETAIL HASNT ALWAYS BEEN SOCIAL...)

•Delta Air Lines has launched The Delta Ticket Window, a Facebook application that lets members *find, book and share* flights via the "Book a Trip" tab on the airline's Facebook Page.

•The application was built to keep the user on Delta's Facebook Page for the duration of the booking process, as well as give them the opportunity to share their booked flight with friends
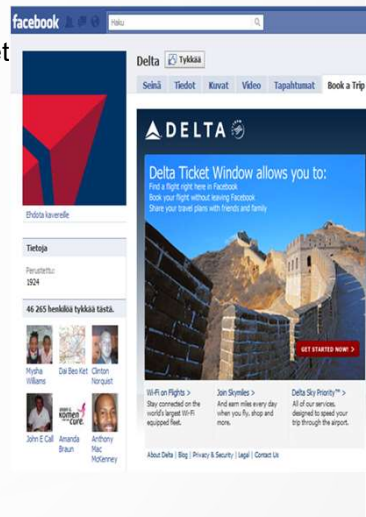
SOCIAL RETAIL (AS IF THE RETAIL HASNT ALWAYS BEEN SOCIAL...)

- Social login - Facebook or other SNS enabled social commerce with given retailer

- Authenticate identities

- Pull customer information from particular SNS

- Tailor / customize in real-time the retailers website

- Social labs study showed that in 2012 only 6% of top 500 online retailers used social login

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ONE OF OUR PROJECTS: SHOPPING CART ABANDONMENT RECOVERY (TRIGGERED EMAILS)

Nosto – or similar SW

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AND OTHERS…

- Website morphing (design, analytics and responses e.g. inserting cookies to anonymous to track and when identified add the browsing history, browsing to abandon activation emails)

- Marketing automation – aims to CEM

- Hotels with automated (learning – predictive) pricing algorithms

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PUTTING IT ALL TOGETHER – OMNI CHANNEL FUNNEL

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LEVELS OF ACTION

- Individual level data

- Marketing action level data

- Campaign level data

- Multichannel data

- All above over time (CLV)

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MEASURING LEVELS OF ACTION

- Data first

- Giving scores 0-100 for actions taken by consumer

- Scoring actions over time (time in program, website clicks, email clicks, Twitter, LinkedIn, Instagram, Facebook etc. +/- scores, buying patterns and cycles etc.)

- Measuring over time

- Calls for behavioral marketing that individualized but automated

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MARKETING, SALES & MONEY?

Outside non digital marketing efforts

Outside digital marketing efforts

Store marketing efforts

Online store marketing efforts

Revenue

The aim of marketing is to know and understand the customer so well the product or service fits him and sells itself. (Peter Drucker)

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The Future
NEXT EXIT

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DATA RICH ENVIRONMENT

- Big data computing power & storage

- Sensors and sources (RFID, GPS, others)

- Big data SW and experienced staff (data based programming skills Python etc.)

- Time-series analysis / econometric modelling researchers

- Data visualization techniques

- Data rich environment analytics SW (SAS, IBM etc.)

- Managerially interesting and relevant questions? Who wants to consume what, where and when ? Optimization of CRM, SCM or NPD/Innovation

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CUSTOMER VALUE / EXPERIENCE MANAGEMENT

- Revenue performance management – marketing automation

- Relevant (Big) data - new / nuanced segments, price – dynamically

- From transactional data towards linking data towards more compelling customer experience based on customers behavior understanding (+social behavior data)

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CUSTOMER VALUE / EXPERIENCE MANAGEMENT (BEHAVIORAL MARKETING)

- Identifying relevant customer data from different channels (store visit, use of service, posting opinions, ordering, liking, commenting, uploading) and using that data to understand customers in order to systematically and continuously use data in advertising, sales and marketing, brand creation and service experience creation while managing the overall customer experience chain and at the same time measuring and automating this process. (Jari Salo)

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