

Mobiliar Lab for Analytics at ETH Zurich

Big Data for the Insurance Sector: From Retaining Customers to Deterring Burglars

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Swiss **Mobiliar**
Insurance & Pensions





Agenda

1 Mobiliar Lab for Analytics at the ETH Zurich

2 Research Projects - Overview

3 Research Project - Smart Consumer



Mobiliar as a mutual company

Swiss Mobiliar mission statement: principles and vision

- is a **mutually structured** insurance company
- is **independent** and has a strong capital base
- is geared towards **long-term success**.

Initiatives of Mobiliar cooperative for the society



Mobiliar Forum Thun



University Berne
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Art collection Berne

**Mobiliar Lab für
Klimafolgenforschung**



Mobiliar Lab for Analytics at the ETH Zurich

Objectives of Mobiliar

- Putting Mobiliar's **mutual orientation** into Swiss society via the topic "**living together**"
- **Big Data and Advanced Analytics** are relevant **innovation topics** and therefore of strategic importance
- Tangible objectives: **Investigate**, **analyse** and **visualise** internal and external data sources

Results will be delivered according to the needs of the following **stakeholders**

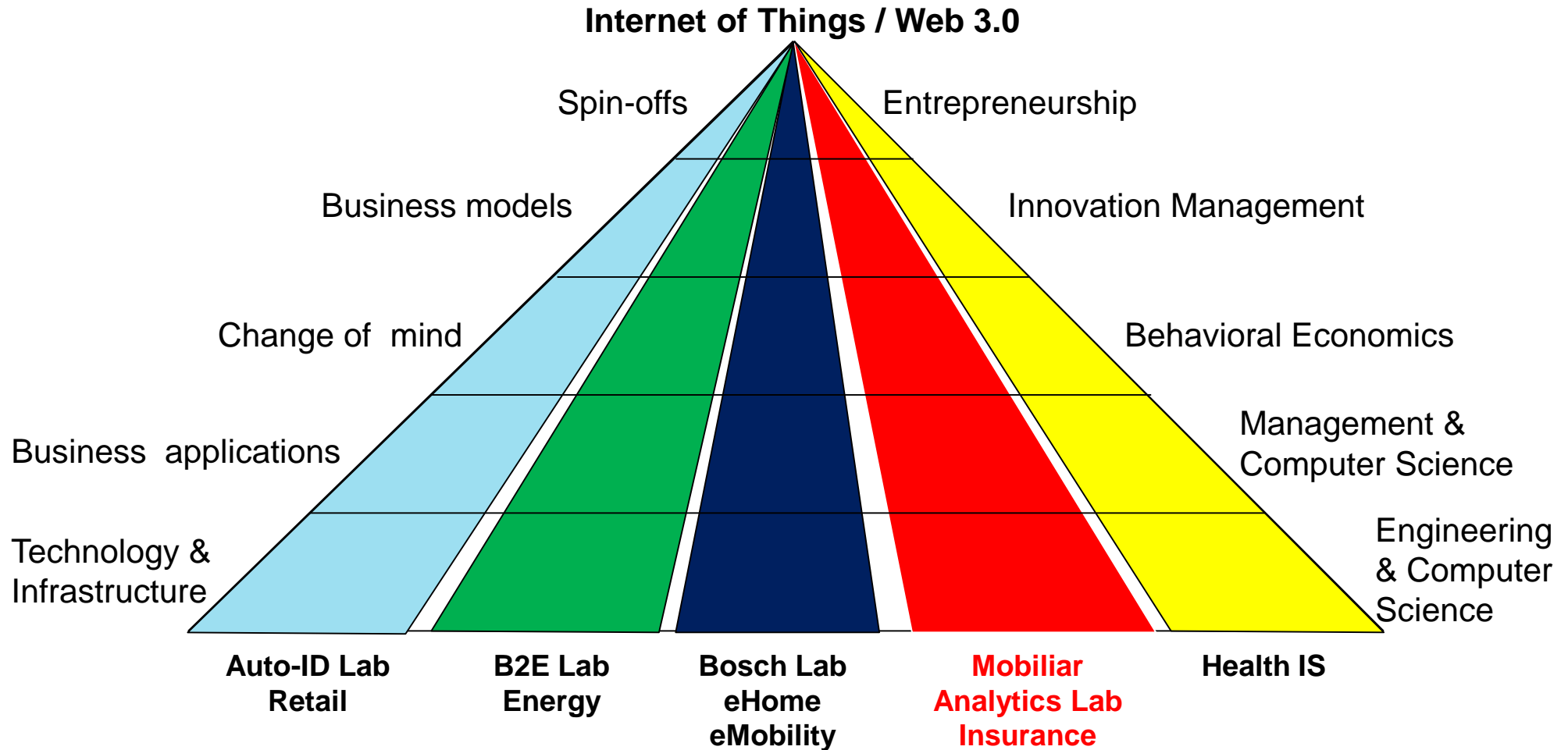
- **Society**
- **Research**
- **Customers of Mobiliar**



Challenges

- **Knowledge transfer** between science and practical day-to-day usage for developing analytics capabilities
- **Communication** between Mobiliar Lab and society about sustainable impacts and changes

Mobiliar perspective – who fits best?



Prof. E. Fleisch: Topics, disciplines and Labs: bridging the technology and management world ...



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Research Project „Home Safety“



Peace of Mind – from Home Safety to Quality of Life

- Rising levels of crime against property in Switzerland and high number of individuals fearing of being victimized
- Switzerland is a top target in Europe for burglars

Approach

- Innovative service that offers support to society in estimating the potential risk level



Mapping burglary risk

- Helping individuals stay better informed regarding their safety



Gathering user generated data

- Encouraging users to contribute with their own knowledge and experience



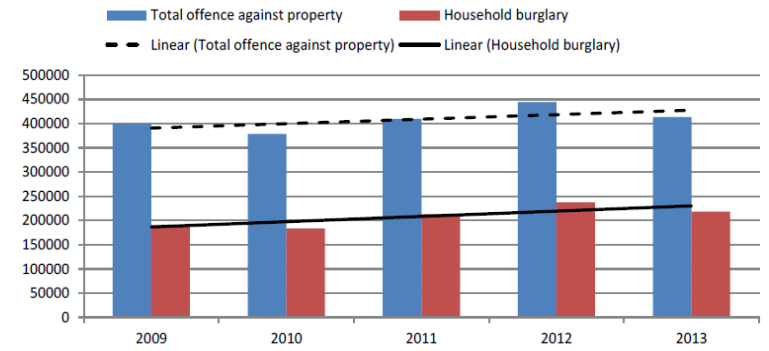
Increasing prevention

- Encouraging users to use preventive measures against burglary



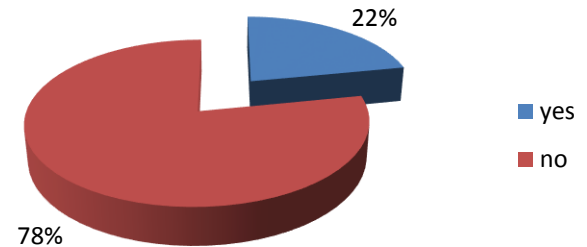
Research Project „Home Safety“

- Rising levels of crime against property in Switzerland and high number of individuals fearing of being victimized
- Switzerland is the top target in Europe for burglars with 932 burglaries/100k inhabitants/year
- 1 in 5 inhabitants think they will be a burglary victim within the next year
- Lack of personalized and localized prevention advice
Currently: general guidelines on police webpages



Source: BFS - Polizeiliche Kriminalstatistik (PKS) 2013

Intervista





- Pilot „SecuriPatrol“ in the region La Chaux-de-Fonds in 2014



Source: 20 Minuten,
8. Januar 2015

Weitere Tests mit Securitas

EINBRÜCHE Die Mobiliar testete in La Chaux-de-Fonds, ob eine erhöhte Präsenz von privaten Sicherheitsleuten Einbrüche verhindern kann. Nun liegen erste Ergebnisse vor.

Source: BZ, 2. Mai 2015



Research Project „Social Media Analytics“

Motivation

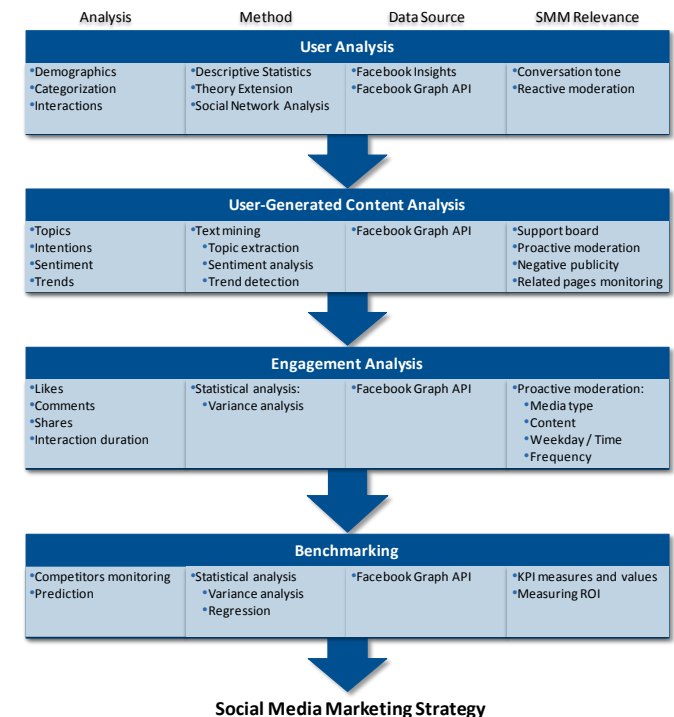
- Social media offers the potential for:
 - Advertising,
 - Product development,
 - Market intelligence.



Approach

- Applying the “Evaluation Framework”¹ over the data from Mobiliar social media channels and their competitors

¹ Dr. Irena Pletikosa Cvijikj:
PhD-Thesis: Evaluation Framework for Social Media Brand Presence, 2012





Research Project „Smart Consumer“

Motivation

- Internet of things and ubiquitous technologies influencing customer behavior („smart & ubiquitous“)
- Understanding of customer behavior and interaction and revealing of insights on changes in customer behavior can provide benefits for enterprise and customers as well



Approach

- Analysis and understanding of usage and behavior of customer
 - in and along different channels,
 - as well as of different customer types
- Analysis Research-Shopping and Online-Shopping in Non-Life Insurance and comparison with traditional distribution channels (agencies, broker)
- Design of innovative prediction models to anticipate customer behavior





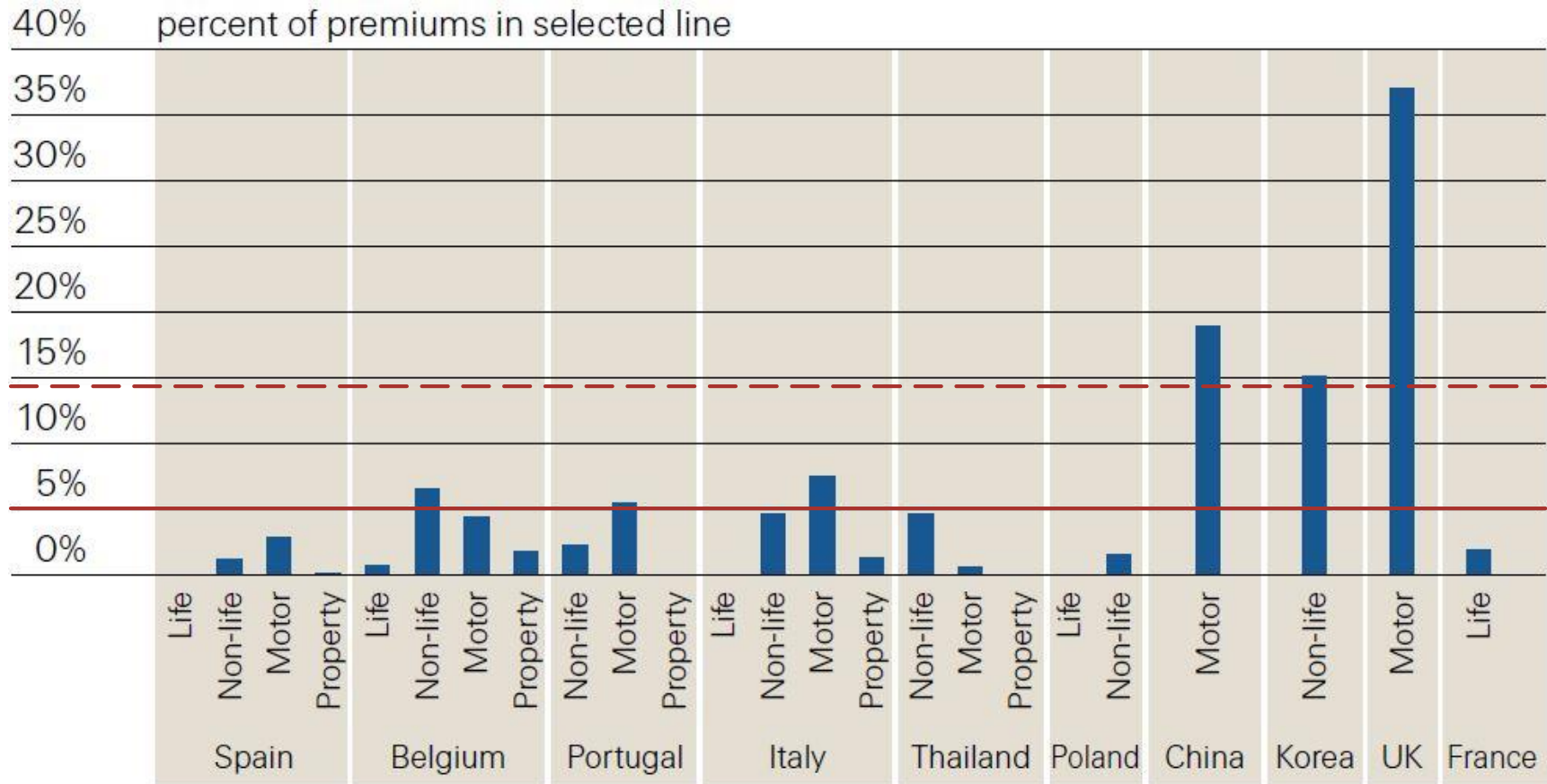
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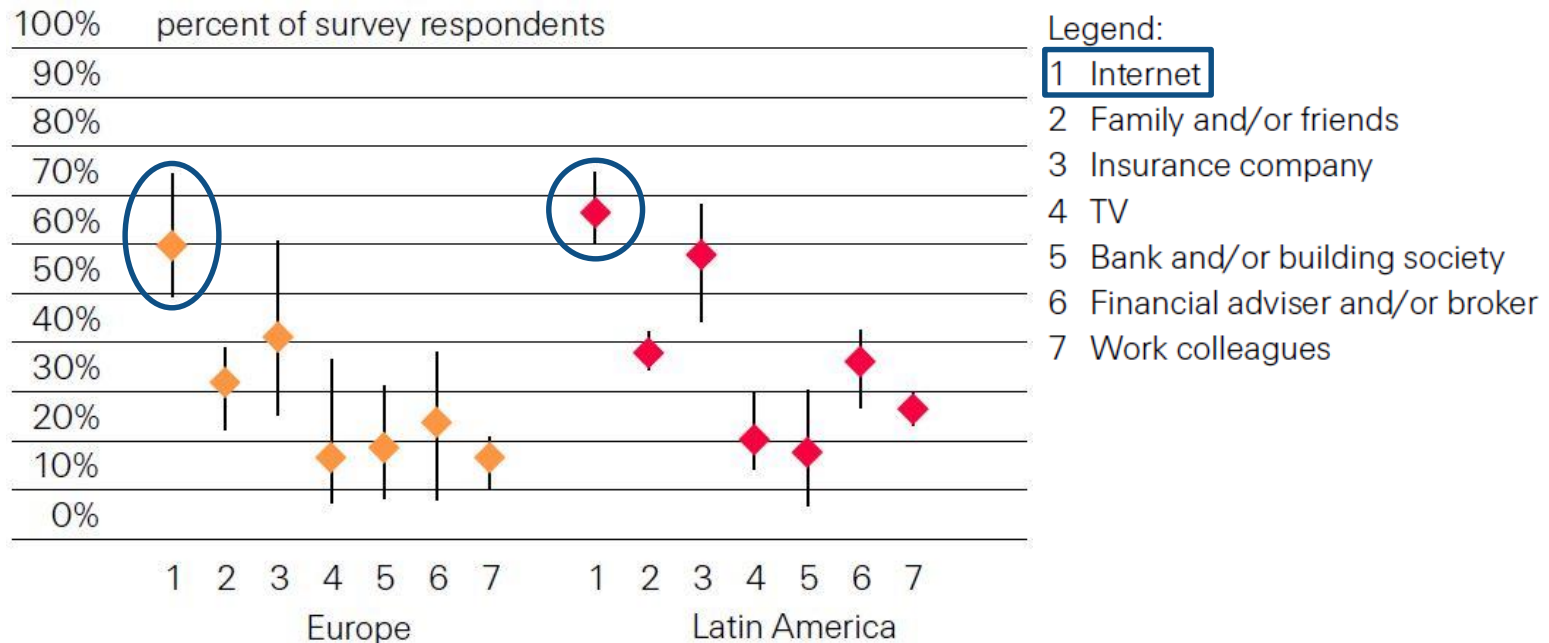
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In 2012 in the EU 14% of all goods were bought digital, but only about 5% insurance policies¹.



In contrast, the Internet is the most utilized channel for research of insurance coverage.¹



This makes a high ratio of insurance customers so called *Internet* → *Store* research-shoppers².

Research-shopper types and research-shopping forms in marketing research

Channels searched	Channel of purchase	Shopper type
Channel A of Firm 1	Channel B of Firm 2	Competitive research-shopper
Channel A of Firm 1	Channel B of Firm 1	Loyal research-shopper
Channel A of Firm 1	Channel A Firm 1	One-stop shopper

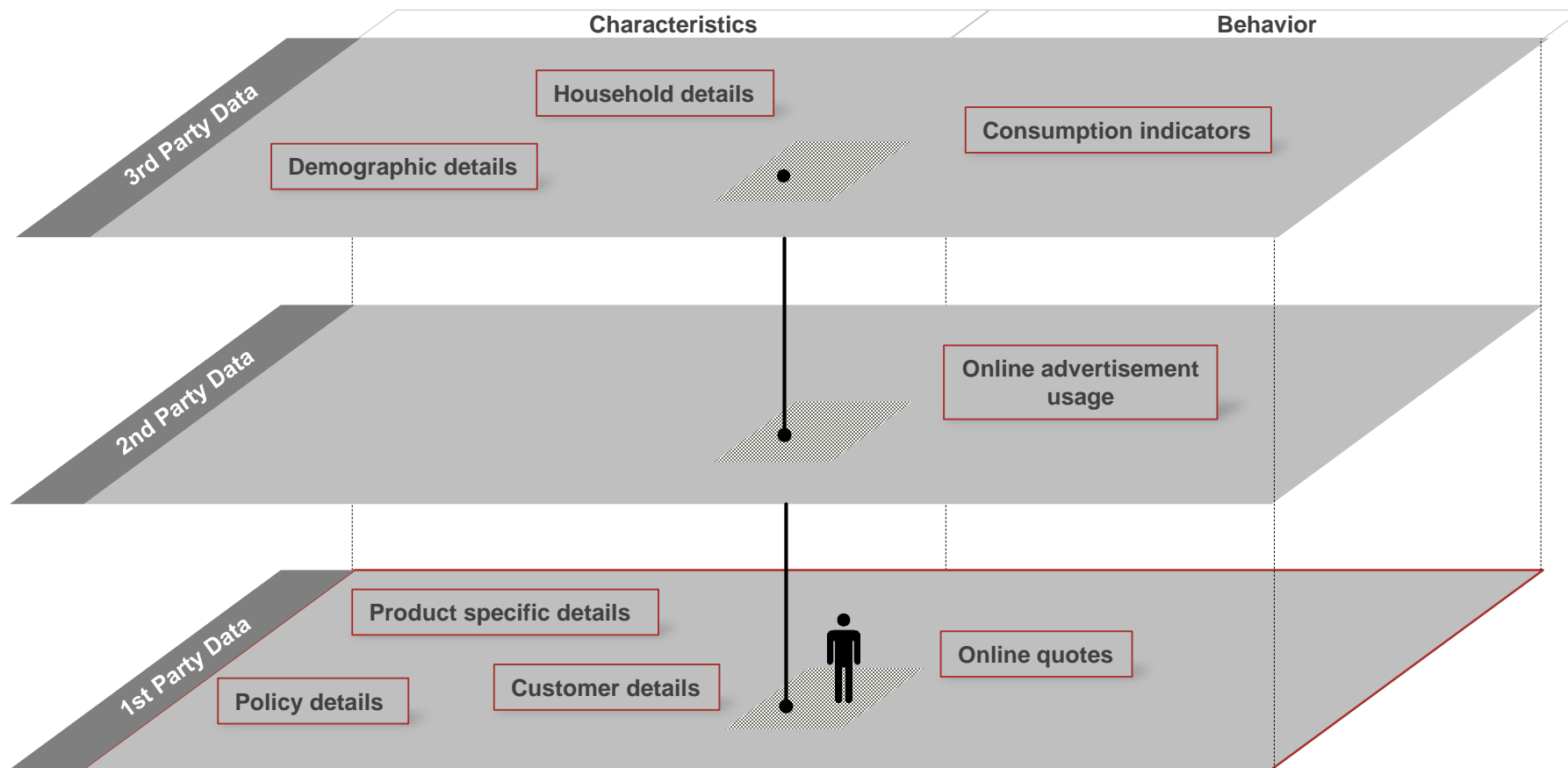
Source: Neslin and Shankar (2009)³

- The research has a focus on loyal research-shoppers, who research in channel A and purchase in channel B of a firm.³
- Further *Internet* → *Store* is most common form of research-shopping.²

The research project aims to improve the accuracy of predicted customer behavior.

- Include (internal and external) data crumbs, which serve as short-term indicators for customer behavior.
- Change the view in the design of the prediction model
 - from Product-Centric
 - to Customer-Centric.

For the research project different data types and sources are considered to improve prediction.



For further requests, feel free to contact me: smau@ethz.ch

Thank you very much for your attention!

