Omni Channel Consumer Empowerment

Strengthening the role of the consumer in an omni-channel world.

Denis Vuckovac, Researcher, Auto-ID Labs ETH / HSG
5th October, 2016
Auto-ID Labs: GS1’s research partner and focus on «Internet of Things»

- Auto-ID Labs are research partners of GS1 and our research focus is the “Internet of Things” in the retailing context.
- Located at top-ranked universities:
  - Cambridge, UK
  - MIT, USA
  - ETH + HSG, CH
  - Fudan, CN
  - KAIST, SK
  - Keio, JP
- Links: [www.autoidlabs.org](http://www.autoidlabs.org), [www.autoidlabs.ch](http://www.autoidlabs.ch)

Sources: [www.autoidlabs.org](http://www.autoidlabs.org)
Auto-ID Labs are GS1’s partner for IOT-related research

Auto-ID Labs ETH / HSG in Zurich

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Not about a single transaction but building a relationship – learn and implement

Customers
- How much is shipping?
- How long does it take?

Businesses
- Where is my customer?
- How expensive is it?

Last Mile in eCommerce

Last Mile in Physical Retailing

- Where can I get it?
- How much is it?
- Who is my customer?
- What does he want?
Get to know your customer in high-resolution (time + individual)

Level of Transaction Data Aggregation

<table>
<thead>
<tr>
<th>Time Dimension</th>
<th>Customer Granularity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weekly</td>
<td>Store Avg.</td>
</tr>
<tr>
<td>Daily</td>
<td>Household</td>
</tr>
<tr>
<td>Real-time</td>
<td>Individual</td>
</tr>
</tbody>
</table>
Get to know your customer in high-resolution (time + individual)

Level of Transaction Data Aggregation

Time Dimension
- Weekly
- Daily
- Real-time

Customer Granularity
- Store Avg.
- Household
- Individual

Situation of case study

Industry Average

Goal
Fast paced environment struggles with lost sales and no adequate loyalty solution

<table>
<thead>
<tr>
<th>Research Partner Situation</th>
<th>General Context</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Largest convenience store chain</td>
<td>• Swiss grocery chains achieve loyalty program penetration &gt;80%</td>
</tr>
<tr>
<td>• Reaching 10% of Swiss population daily</td>
<td>• However: our partner has no information on the average consumer and cannot learn individual consumer’s preferences</td>
</tr>
<tr>
<td>• Two key peak hours due to commuting</td>
<td>• No way to link transactions</td>
</tr>
<tr>
<td>• Waiting queues cause lost sales</td>
<td></td>
</tr>
</tbody>
</table>
What do we know from today’s low resolution

**Basket Stats**

- Ø Items / Basket: 1.7
- Ø Value / Basket: 7.5 CHF

**Transaction Pattern**

**Average Number of Transaction During Weekdays**

- Number of Transactions per Hour
- Hour of Day
- Seconds

The Global Language of Business © GS1 2016
Traditional solutions won’t do it...

**Self Checkout**
- Physical Self Scan Terminal
- Mobile scanning, but payment at terminal
- Additional devices
- Terminals

**Mobile Payment**
- Many not intuitive nor advertised, little used
- Only at regular PoS
...so we built our own...

I. Produkt scannen & in den Warenkorb legen
... and run it “in the wild” at three pilot stores at Zurich main train station ...
...to finally get to know the customers

<table>
<thead>
<tr>
<th>Gender</th>
<th>Age</th>
<th>Train station frequency</th>
<th>Perceived Lost Sales</th>
<th>Motivation</th>
<th>Buys what</th>
<th>Buys when</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>35-44</td>
<td>4</td>
<td>0</td>
<td>Time saving</td>
<td>Cold Coffee Drink, Soft Drink</td>
<td>07:55</td>
</tr>
<tr>
<td>Female</td>
<td>35-44</td>
<td>4</td>
<td>3</td>
<td>Time saving</td>
<td>Coffee to go</td>
<td>05:53</td>
</tr>
<tr>
<td>Female</td>
<td>25-34</td>
<td>4</td>
<td>3</td>
<td>Time saving</td>
<td>Coffee to go, Sandwich</td>
<td>08:05</td>
</tr>
<tr>
<td>Male</td>
<td>25-34</td>
<td>3</td>
<td>2</td>
<td>Time saving</td>
<td>Sandwich</td>
<td>08:08</td>
</tr>
<tr>
<td>Female</td>
<td>35-44</td>
<td>4</td>
<td>NA</td>
<td></td>
<td>Soft Drink</td>
<td>Morning/Noon</td>
</tr>
</tbody>
</table>
...to finally get to know the customers
But this is just the beginning...

Opportunity 1: Make them feel special!
Opportunity 2: Engage them more!
Opportunity 3: Help them to discover things!

Mobile Self-Checkout
(Base Use Case that provides high resolution data)
Opportunity 1: Make them feel special!

Opportunity 2: Engage them more!

Opportunity 3: Help them to discover things!

Mobile Self-Checkout (Base Use Case that provides high resolution data)
How about a “frequent flyer program” for products?

Transmission of proof of purchase tokens to brand

Give them location-based product status tier levels!
Opportunity 1: Make them feel special!

Opportunity 2: Engage them more!

Opportunity 3: Help them to discover things!

Mobile Self-Checkout (Base Use Case that provides high resolution data)
Commuters have to commute back...

We know they have more time on their way home, so how can we activate them?
Build a personal channel with a customer to reward and incentivise future behaviour

VABINGO

Bingo-like Gamification Elements

Trigger new actions

Personalised Playing Field

Receive Rewards
Opportunity #3: Discover things!

Opportunity 1: Make them feel special!
Opportunity 2: Engage them more!
Opportunity 3: Help them to discover things!

Mobile Self-Checkout
(Base Use Case that provides high resolution data)
Find the newest, special issue or the coldest Coke in town
Auto-ID Labs ETH / HSG

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