



# The value of innovative retail technology

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- Expert group Innovative Retail Technology
- The Store Sales Cycle Model
- Cases: Interactive wine racks & humanoid robot
- Overall lessons learned
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# Expert Group Innovative Retail Technology

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# Focus and approach

- ShoppingTomorrow expert group 2018-2019.
- Key question: Do innovative retail technologies really add value and how can they be applied most effectively?
- Cases by experts, as much data-driven as possible.
- Retailer-centered approach, both pro's *and* con's of technology.
- Deliverables: a model, 12 cases, overall lessons learned.

# Steering Committee Innovative Retail Technology

- Tibert Verhagen (HvA)
- Jesse Weltevreden (HvA)
- Mayke Steeman (HvA)
- Rob Wierenga (Uneto-VNI)
- Marije Hovestad(KvK)
- Marcel Evers (INretail)
- Tessa Vosjan (INretail)
- Sophie van Rooij (Thuiswinkel.org)
- Frank van der Heide (tuinbranche Nederland)
- Jann de Waal (info.nl)

# The experts



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Professor,  
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Chief Customer Officer,  
Hello Customer



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Digital Retail Experience Manager,  
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**Floor Wijnen**  
Data scientist,  
IceMobile Agency B.V.

# Store Sales Cycle Model

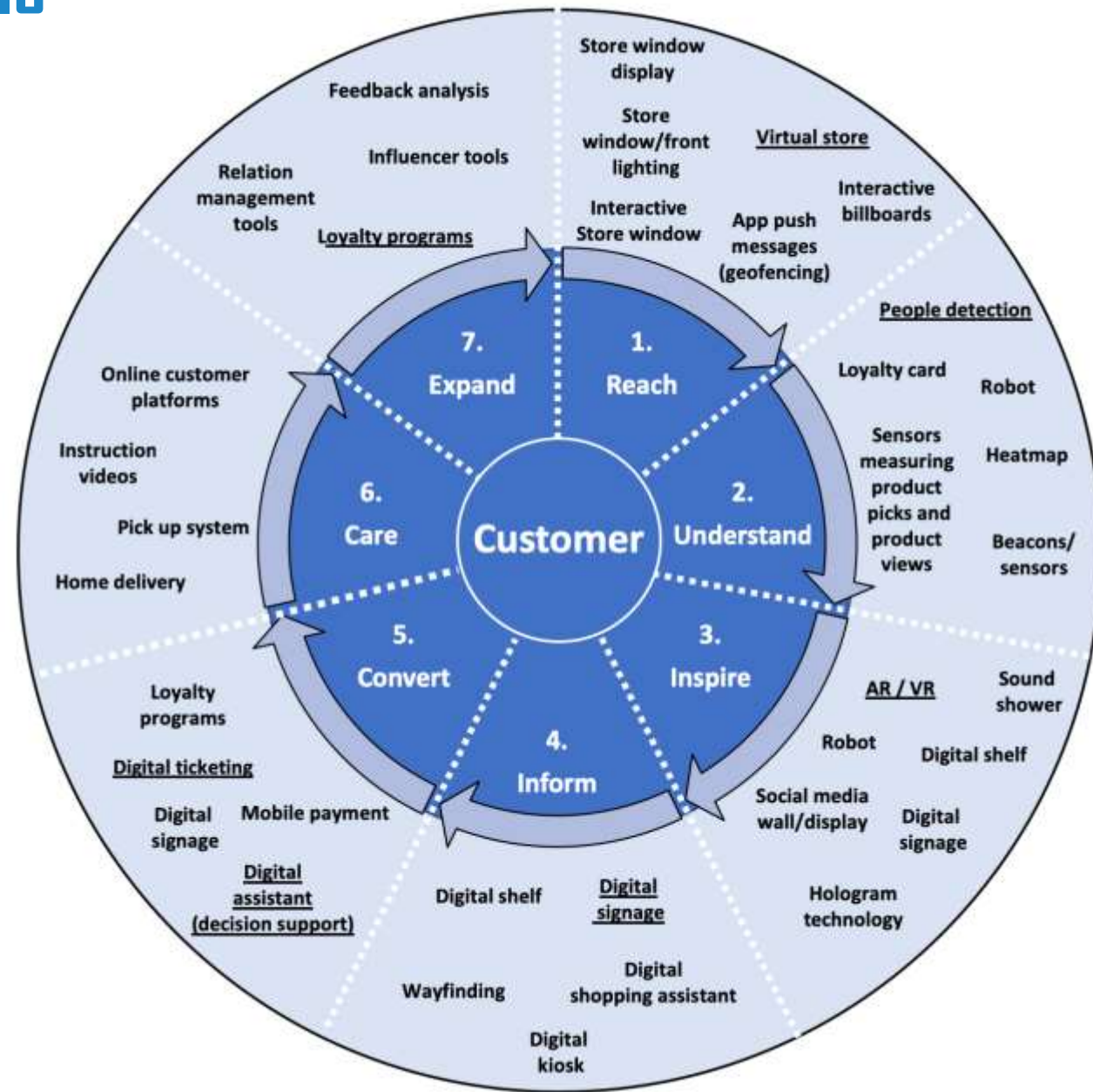
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# Need for a model

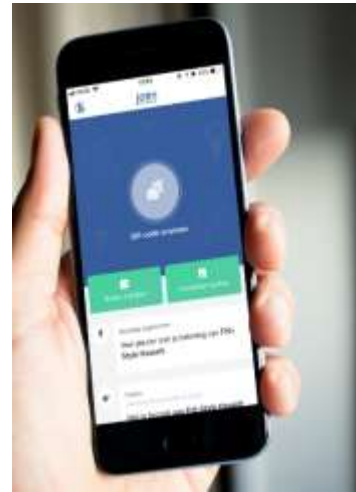
- One-sided view on customer is over.
- Retailer in a more proactive, leading role (Edelman & Singer, 2015 HBR).
- From customer support to proactive sales.
- Central role: Innovative technology.
- Time for a new model...



# The Store Sales Cycle Model



# Cases



# Case: Interactive wine racks drinkcenter Oud-Turnhout

(Tim Gielen, Dobit Solutions)

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# Drinkcenter Oud-Turnhout

- Liquor store of brewery family Keersmaekers.
- Large assortment, lots of product knowledge, good service.
- Issue (1): competition.
- Issue (2): choice leads to stress.



# The technology

- Touchscreen display combined with interactive wine racks.
- Touchscreen display: preference-based searching.
- Interactive wine racks: lighting up based upon entered preferences.
- Costs: 60.000 euro (touchscreen application, hardware, 16 meter of racks, interactive lighting, analytics).



# Results in the first month

- 783 unique sessions.
- Significant rise of wine sales.
- Insight into the filters used: mainly the more generic terms (cheese, fish, pasta).
- Both customers and employees use the application.
- Drinkcenter is very satisfied about the technology.

# Learnings (1/3)

- Use of the touchscreen display & interactive wine rack lead to more sales.
- Interesting side effects:
  - Customers perceive the drinkcenter as more innovative (image).
  - In combination with the attached scanner: a more efficient process of stacking the shelves.



# Learnings (2/3)

- Collaboration is key: Drinkcenter, dobit, supplier of the racks/shelves, supplier of interactive lighting, digital pricing.
- Technological integration demands more attention:
  - Dataflow between cash register system, website, price tags and the application itself.
  - Customization of connections.
  - Power supply of different systems.

# Learnings (3/3)

- Quality of database determines value of the application:
  - The more relevant information about wine, the more interesting the search and search results are.
  - In case of a lack of information: API's of large wine platforms (e.g., Vivono) could be a valuable alternative.

# Case: Robot Pepper Belgian Chocolate House

(Malaika Brengman, Vrije Universiteit Brussel)

<https://www.softbankrobotics.com/emea/en/index>

<https://www.brubotics.eu>

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# Belgian Chocolate House

- Formula of International duty Free.
- Bring together the best of Belgian chocolate brands; every brand it's own display and in-store communication.
- Unique high quality assortment.
- Customer experience is key.
- Challenge: more store visits.



Foto: Tbch.be

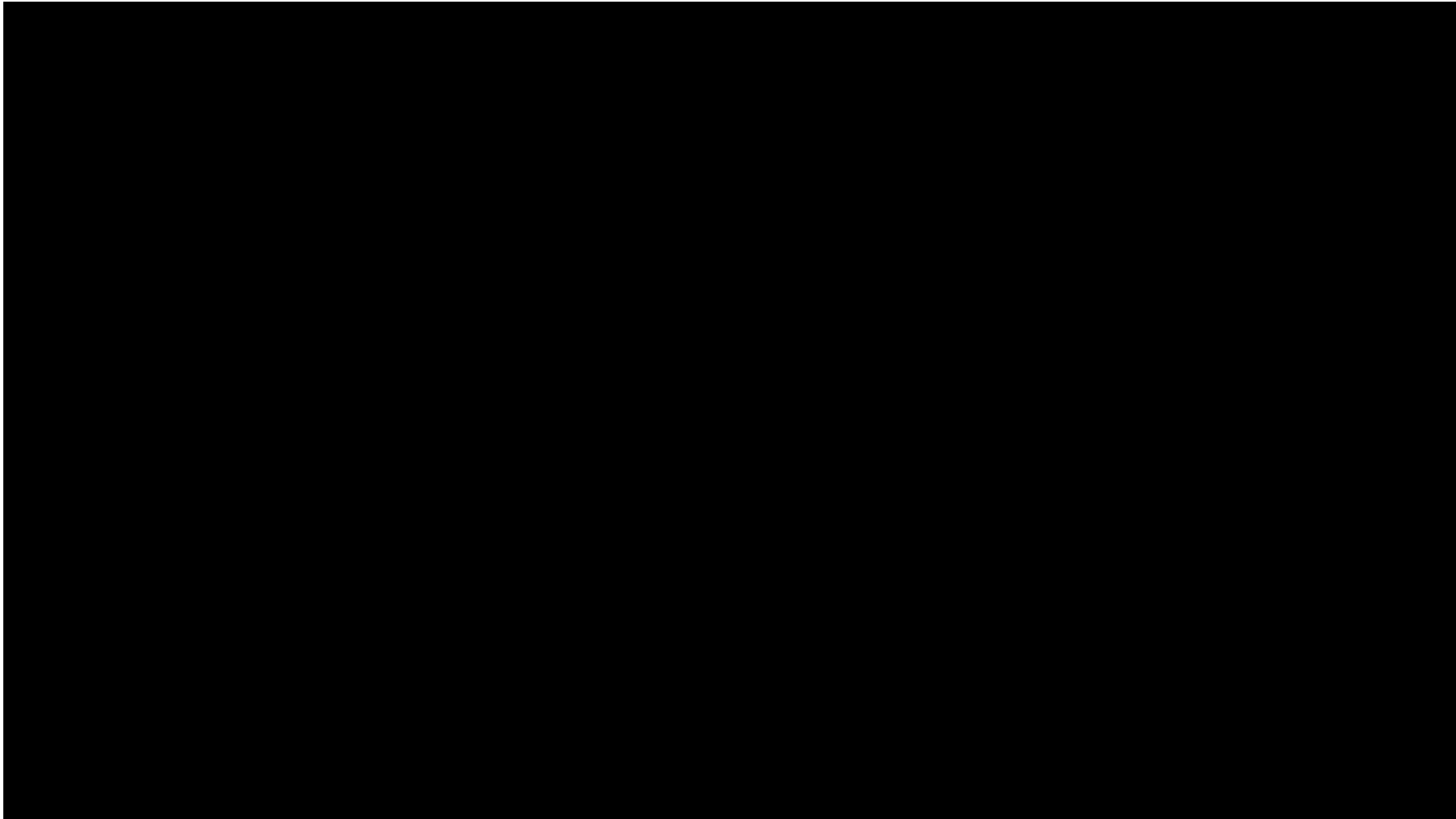
# The technology

- The humanoid robot Pepper.
- Communicates with consumers: listens, talks, moves.
- Display on its chest.
- Connected to the Internet.
- Able to recognize emotions and improve itself (machine learning).



# Research setting

- Pepper put in front of the TBCH store at Zaventem airport.
- Quiz game about chocolate.
- Comparison: Pepper vs. tablet kiosk vs. control condition.
- Video observation: 42 hours of video recoding.
- AIDA model as basis: technology use (Attention), viewing the store (Interest), entering the store (Desire), buying at the store (Action).



[https://www.youtube.com/watch?v=ei3qu\\_P0zto](https://www.youtube.com/watch?v=ei3qu_P0zto)

# Results (1/2)

- 106.357 passers-by:
  - Control group: 33.900
  - Tablet kiosk: 36.394
  - Pepper: 36.063.
- Attention: Tablet kiosk 34 interactions, Pepper 929 interactions.
- Interest: Pepper attracts most consumers but these look less at the store compared to users of the tablet kiosk.



# Results (2/2)

- Desire: Users of Pepper more often visit the store than users of the tablet kiosk.
- Action: Users of the tablet kiosk relatively more often make an in-store purchase. In an absolute sense, however, Pepper leads to more revenues.
- Additional survey (307 respondents): Pepper outperforms the tablet kiosk in terms of hedonic and utilitarian value, which positively affects store image and store visit intentions.

# Learnings (1/2)

- Following the 12 employees of DBCH, the use of Pepper has been successful.
- Pepper: draws attention, provides entertainment, welcomes potential visitors. Also able to provide more information and basic advice, and function as payment terminal.
- Adds value during crowded days and of interest to visitors who avoid social interaction.

# Learnings (2/2)

- Limitations of Pepper:

- Programming might be hard.
- Limited movement options.
- Voice recognition & noise in the store.
- Delicate.
- Needs to be secured/protected.
- Acceptance by in-store personnel is a prerequisite.



# Overall lessons learned

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# Value of innovative retail technology

- Confirmed in most of the 12 cases.
- Demonstrated via:
  - Hard KPI's: visitors, dwell time, transactions, etc.
  - Soft KPI's: social shares, intentions, subscribes etc.
- Observation: Selection of right KPI's seems to depend on stage(s) of Sales Store Cycle Model.

Stage Store Sales Cycle Model	Important KPI's
1. Reach	Attention rate, store visits, new versus returning visitors, (social) followers.
2. Understand	Customer preferences, dwell time, interaction with store personnel, in-store movement.
3. Inspire	Engagement, number of technology users, usage time of technology per user.
4. Inform	Number of technology users, usage time of technology per user.
5. Convert	Sales, sales per employee, average transaction value, items per sale, margin per sale, purchase intention.
6. Care	Numer of technology users, number of customer service requests.
7. Expand	Customer satisfaction, customer retention, NPS, social shares, unsubscribes.

# ROI of innovative retail technology

- Relatively hard to assess due to secondary effects.
- Secondary effects:
  - Image
  - Customer insights
  - Media exposure
  - Efficiency in-store personnel
  - Customer-centered culture

# Measurement of innovative retail technology

- A must to assess the impact. So most stores will do so, right?.....
- Structural and consistent measurement are needed!

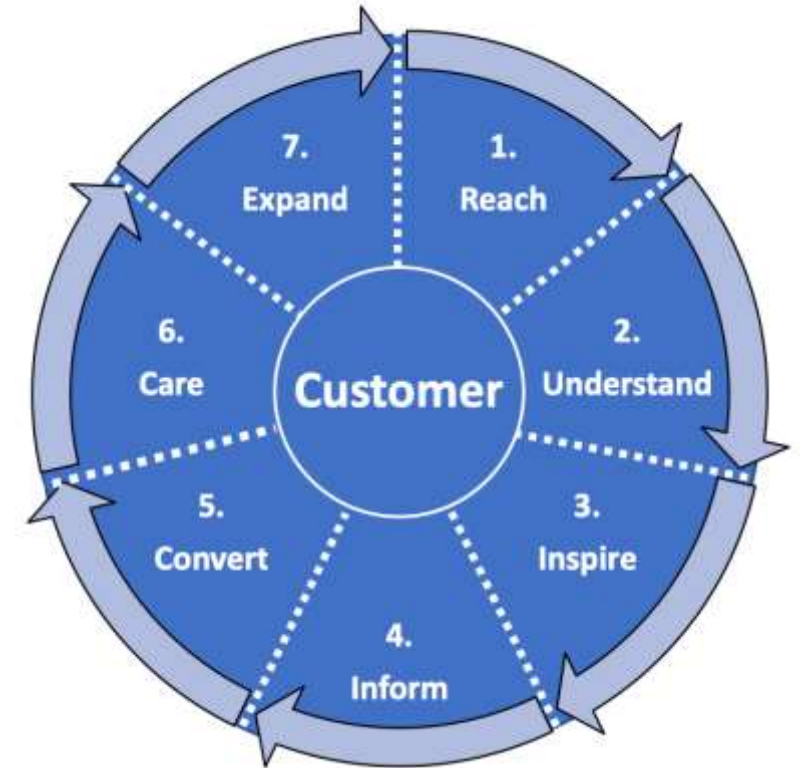


V-count.com



# Selecting innovative retail technology.

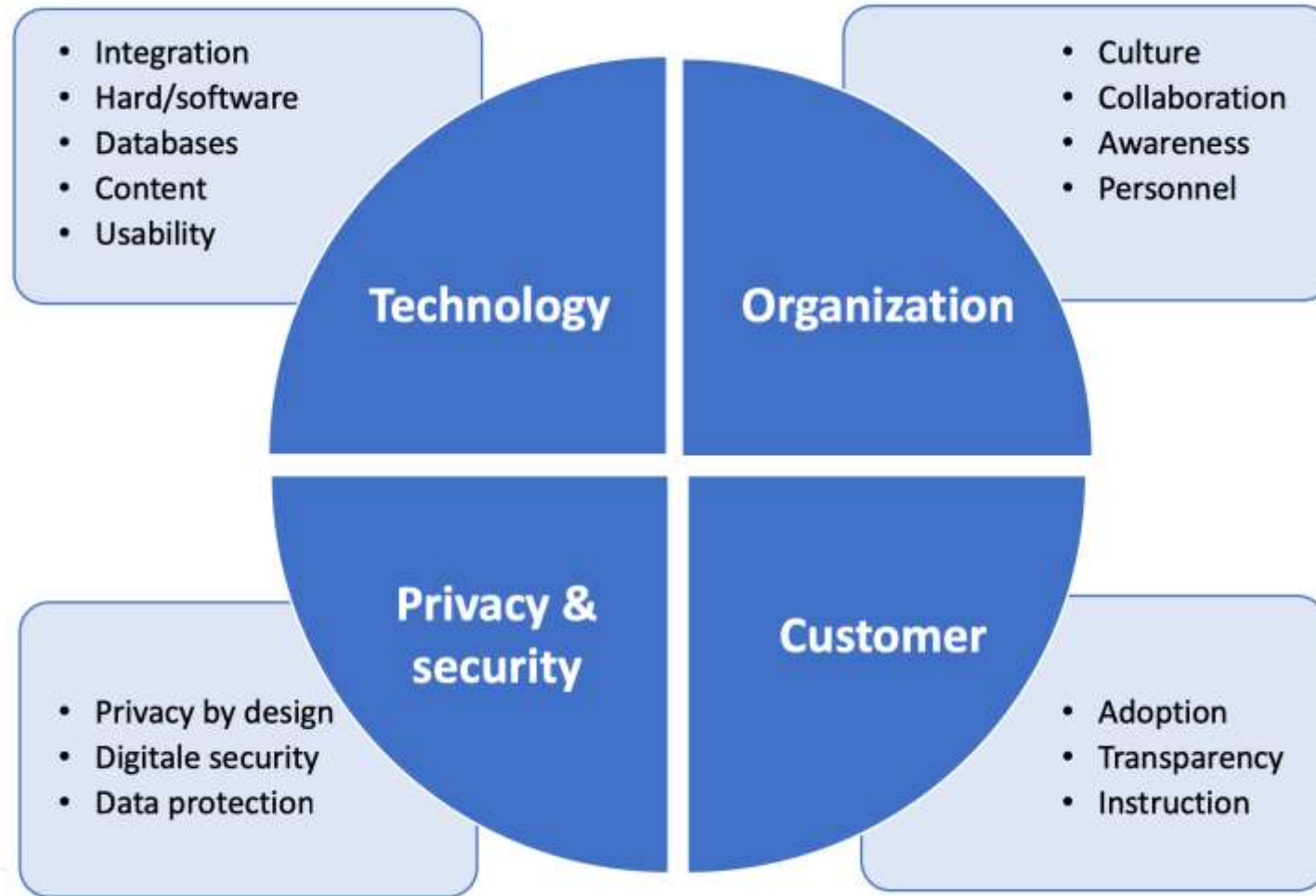
- Technology = a means to an end!
- Stages Store Sales Cycle Model as starting point:
  - Which stage(s) to focus on?
  - To tackle what issues?
  - With what kind of technology?
  - Why this technology?
- Taking points of attention into account.



# Points of attention

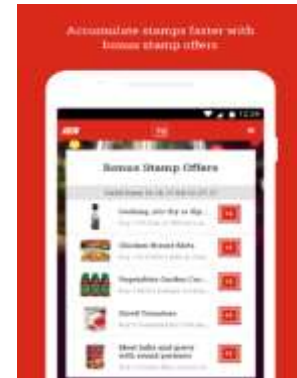
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# Points of attention



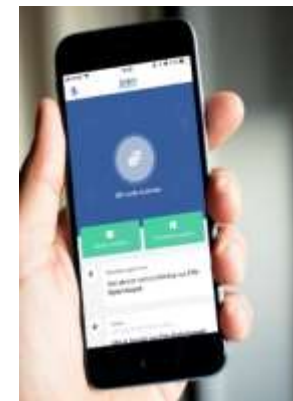
# Points of attention: Technology

- Connecting with existing systems is a prerequisite.
- Costs, maintenance and updates hard- and software.
- Connecting databases and data sources.
- “A succesful use of technology is driven by a user-centered focus on usability and functionality (content).” (Floor Wijnen, IceMobile).



# Points of attention: Organization

- “Technology only works if fully integrated in the organization and its culture” (Marcel Evers, INretail).
- Communication and ways of working of implementation parties.
- A long term and well-supported vision is needed.
- Involvement and instruction of personnel.



# Points of attention: Privacy & security

- Design and develop technology in such a way that only personal data is collected, stored and used that serves a specific purpose.
- Prevent that unauthorized parties get access to personal data (security).
- Meet all data protection principles (GDPR).



# Points of attention: Customer

- Promotion of technology use.
- Honesty and transparency regarding technology use.
- “In-store personnel have a crucial role in stimulating customers to use technology. Involve and motivate them” (Tim Gielen, DOBIT Solutions).





Download the book (for free) via: [www.cmihva.link/RetailTechnology](http://www.cmihva.link/RetailTechnology)



**Any remaining questions?**

# Thank you for your attendance!

**Dr. Tibert Verhagen**

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