Erasmus Center for Data Analytics
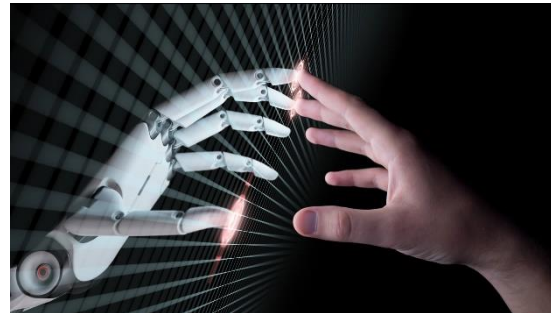
Expert Practice of *Personalization*

Erasmus Centre for **Data Analytics**
Personalization

Prof. dr. Bas Donkers

"Personalization requires smart, timely and context-specific inferences on customer preferences. Tapping into this information and transforming it into value is the key to personalization"

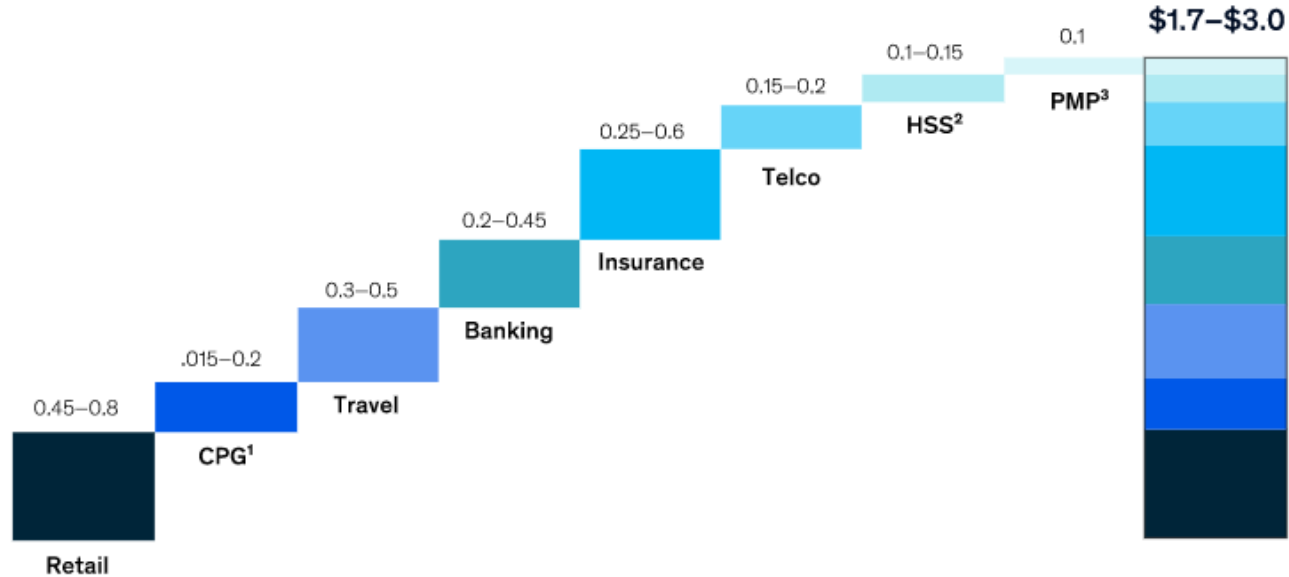# Connecting with customers

Personalization is all about connecting with your customer with the right message at the right time in the right place.

If not, you are unlikely to be heard.

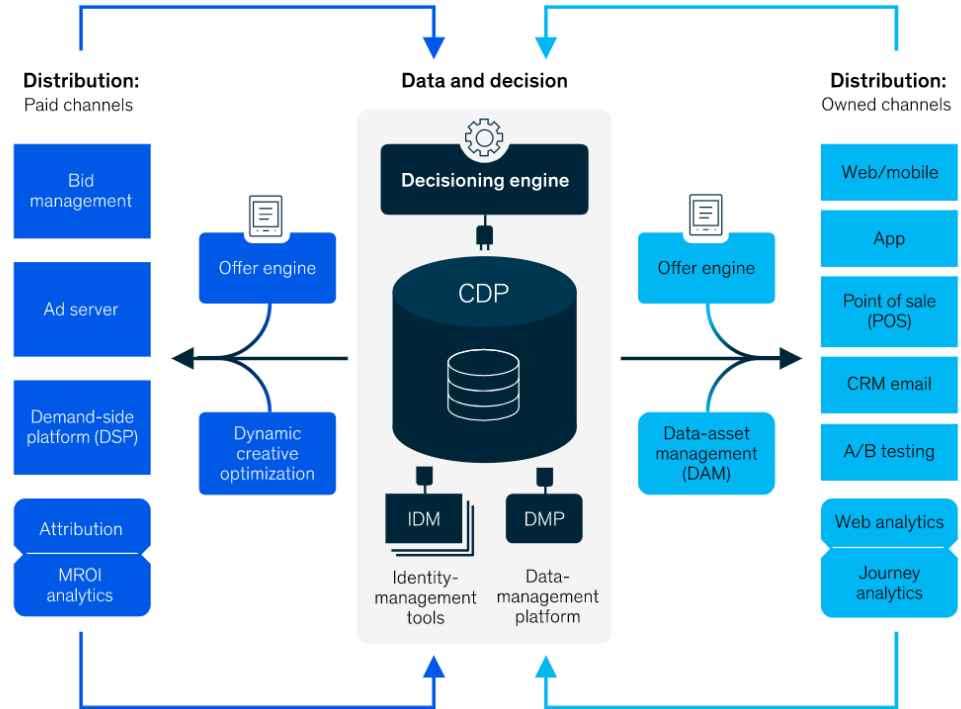# The value of personalization: trillions of dollars

Sector, $ trillion

$1.7–$3.0

0.1 — PMP³
0.1–0.15
0.15–0.2 — HSS²
0.25–0.6 — Telco
0.2–0.45 — Insurance
0.3–0.5 — Banking
.015–0.2 — Travel
0.45–0.8 — CPG¹
Retail

[1] Consumer packaged goods
[2] Healthcare systems and services
[3] Pharmaceuticals and medical products

Source: Based on projections in McKinsey Global Institute, "Notes from the AI frontier: Insights from hundreds of use cases," April 2018. The study notes that this new value "will be captured in a variety of ways, for example, more valued products and services, revenue growth, cost savings, or, indeed, consumer surplus."

Personalization at scale according to McKinsey

Data and decisioning

are at the core of personalization

Decisioning can be automated, but

<u>insight and understanding</u>

are key ingredients for

<u>acceptable and explainable</u>

personalization.

Distribution: Paid channels — Bid management, Offer engine, Ad server, Demand-side platform (DSP), Dynamic creative optimization, Attribution, MROI analytics

Data and decision — Decisioning engine, CDP, IDM (Identity-management tools), DMP (Data-management platform)

Distribution: Owned channels — Web/mobile, App, Point of sale (POS), CRM email, A/B testing, Web analytics, Journey analytics, Offer engine, Data-asset management (DAM)

Image source: https://www.mckinsey.com/business-functions/marketing-and-sales/our-insights/a-technology-blueprint-for-personalization-at-scale

Projects: Insights for personalization

Machine learning is often extremely good at prediction

It is not always clear why a prediction is made

Working at the interface between more traditional econometric methods and more advanced machine learning techniques we aim to provide the best of both worlds.

Projects: Insights into assortments

Personalization requires data-driven insights

- Why do people buy certain products?

- What other products meet a similar need?

- Can we tailor variety in offerings to connect with a broad range of customer needs?

Application of **text analytics techniques** provides insights into such motivational structures.
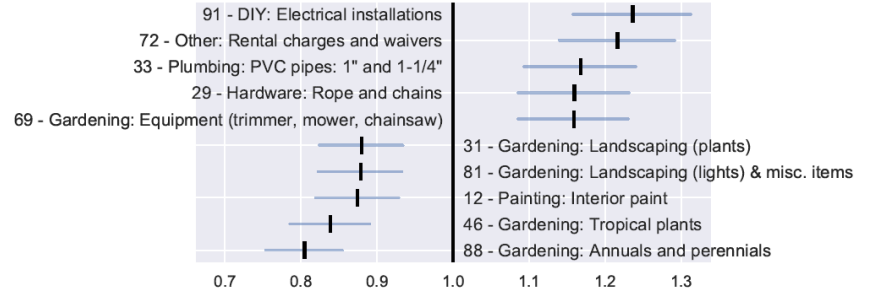
Most and least likely purchases motivations for males entering a DIY store

References:
- Jacobs, Donkers, Fok (2016) Model-based purchase predictions for large assortments. *Marketing Science*
- Jacobs, Fok, Donkers (2021) Understanding Large-Scale Dynamic Purchase Behavior. *Marketing Science*
- Van Maasakkers (2019-2023) PhD project on Marketing Modelling for Large-Scale Assortments
- Case studies student project (2020, 2021) Recommendation systems with side information

Projects: Personalized Pension Investments

Smart data for personalization

Complements "big data" when observed behavior is sub-optimal

Use digital, interactive decision support

Resulting tool received "public choice" award at pensioen3daagse event in 2020[1]

[1] https://www.wijzeringeldzaken.nl/pensioen3daagse/nieuws/Pensioenchecker-winnaar-PensioenWegwijzer-2020/

Erasmus Centre for Data Analytics

Let's meet at the right time, the right place and with the right message

Prof. Dr. Bas Donkers

✉ Donkers@ese.eur.nl

🌐 https://www.centre4data.nl/expert-practices/personalization/

www.eur.nl/en/people/bas-donkers

in https://www.linkedin.com/in/basdonkers/