



E-FORUM

**L'IA AU SERVICE
DE VOTRE EFFICACITÉ COMMERCIALE**

LIÈGE 2024

L'IA au service de votre efficacité commerciale



Leila REBBOUH

Data & AI Evangelist chez Delaware BeLux





delaware

Cas d'usage de l'IA dans le retail

Leila Rebbouh, PhD

25 avril 2024



Les 5 roues d'un projet IA réussi

data strategy

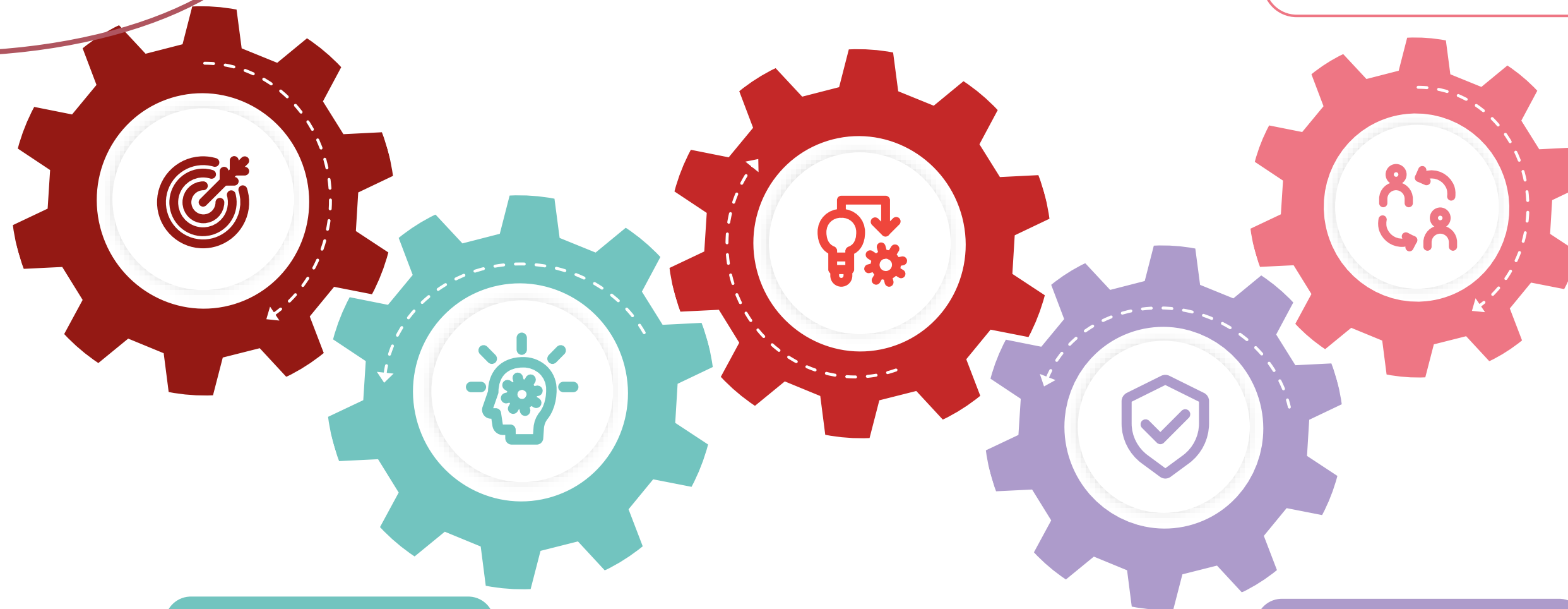
- vision & roadmap
- linked to corporate strategy
- new models: data economy

technology

- architecture
- tools
- Platforms

change

- skillset
- communication
- training & coaching
- change leadership & sponsorship



data culture

- mindset
- data literacy
- awareness
- seeing opportunities & impact from data to value

data governance

- processes, policies & rules
- organization, roles & responsibilities
- definitions
- security & privacy



Stratégie Data

Data Monetization Framework



Improving delivers financial value indirectly by improving processes and work tasks with data, and thus reducing the cost of goods sold or reducing overhead costs



Wrapping delivers financial value indirectly by bundling core products with analytics features and experiences and thus increasing the product value proposition



Selling involves the direct conversion of data or information solutions into revenue



Data Monetization en Retail

2

Customer focus

30% of organizations pursue a customer focus strategy, including most **retailers** and many **heavy-asset** and **finance** companies.

Outcomes:

- 60% Cost reduction
- 30% Sales increase
- 10% Direct revenues

Average overall company revenues from data: 8.8%

I-W-S approaches:



Wrapping, supported by improving



4

Future ready

30% of organizations pursue a future ready strategy, including many **technology**, **healthcare** and **public health**, and **finance** companies.

Outcomes:

- 30% Cost reduction
- 40% Sales increase
- 30% Direct revenues

Average overall company revenues from data: 24%

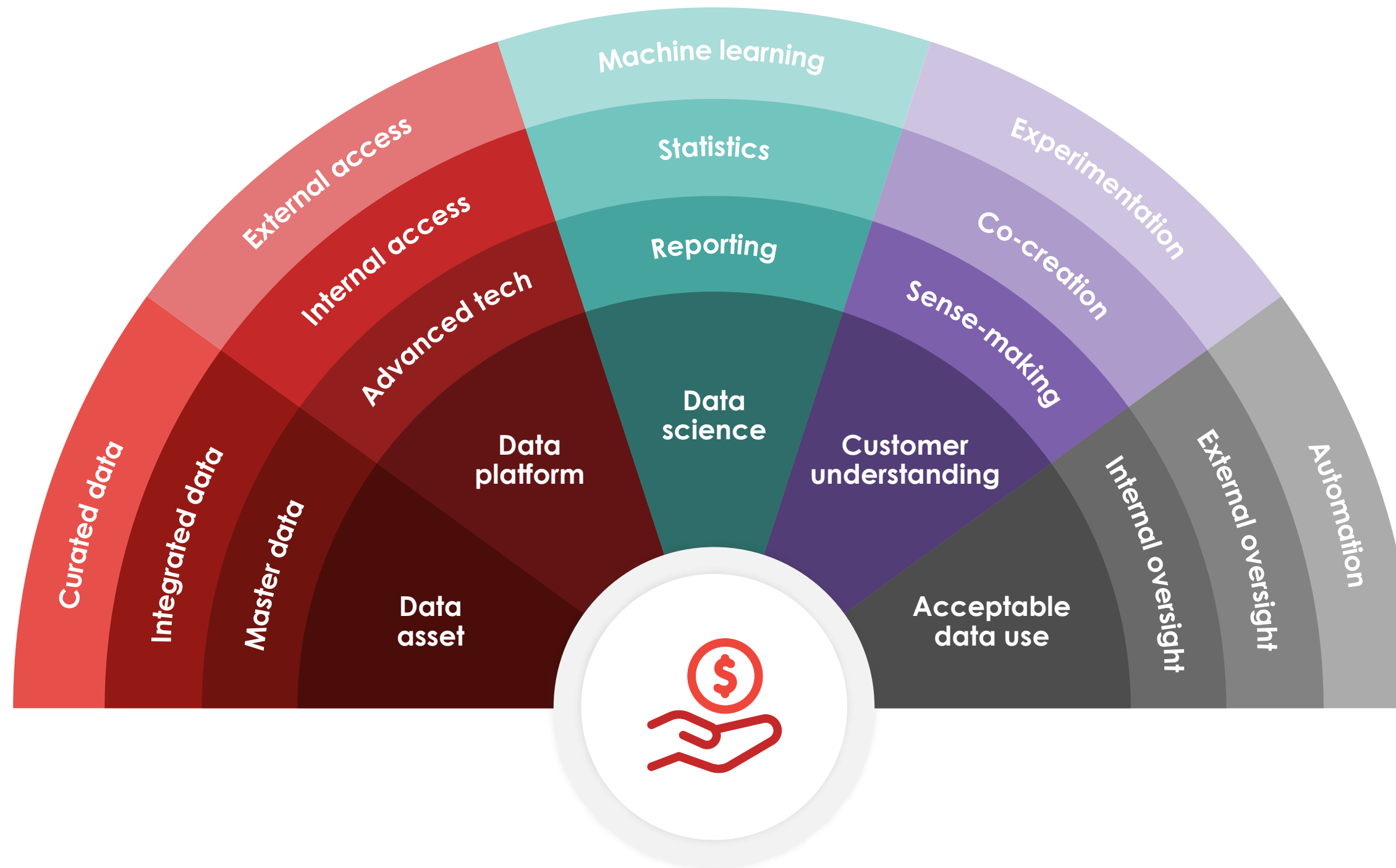
I-W-S approaches:



Improving, wrapping, and selling



Les 5 piliers de compétences



Cas d'usage en Improving



Génération automatique de descriptifs produits

En 2018, Leroy Merlin a utilisé une méthode d'IA (NLG) pour générer automatiquement des narratifs de descriptifs de produits en e-commerce- sur base des caractéristiques des produits.

Ensuite, ces textes étaient automatiquement intégrés dans le site.

L'objectif poursuivi était la réduction du coût du copywriting.

Avec l'avènement de la **GenAI**, de nombreux ecommerces utilisent maintenant des outils de génération de contenus.



Optimisation de la répartition de la demande d'achats

Préparation biannuelle des collections saisonnières basée sur l'intuition des acheteurs et les ventes passées.

Processus complexe et chronophage qui ne tient pas compte des capacités d'exposition spécifiques des magasins → coût logistique important dus aux transferts

Un outil de projection est mis en place, en intégrant des algorithmes avancés d'**optimisation** et des données en temps réel sur les stocks et les performances des ventes, afin de prendre des décisions plus éclairées et d'améliorer l'efficacité opérationnelle et la rentabilité.



chaussures
maniet!Luxus



Cas d'usage en Wrapping



Recommandation de produits - Trafic

Objectif: améliorer la personnalisation de la Communication Clients

Technique IA : collaborative filtering

Exemples :

Booking.com



digital
wallonia
.be

LE PLAISIR À PRIX MALIN
trafic



Algorithmes utilisés

Cosine similarity

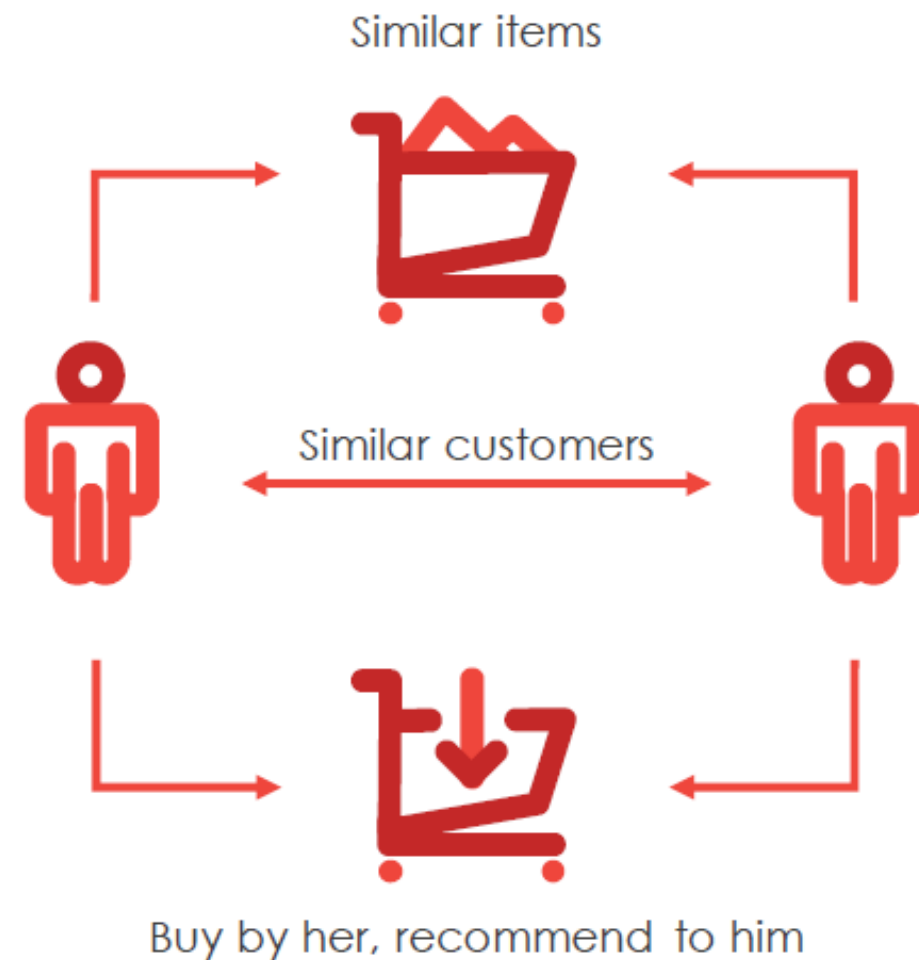
- Collaborative filtering technique

- Collaborative filtering technique
- Item based
- Transparent
- Easy to combine with business rules
 - Pre-business rules
 - Post-business rules

Alternating least squares

- Collaborative filtering technique

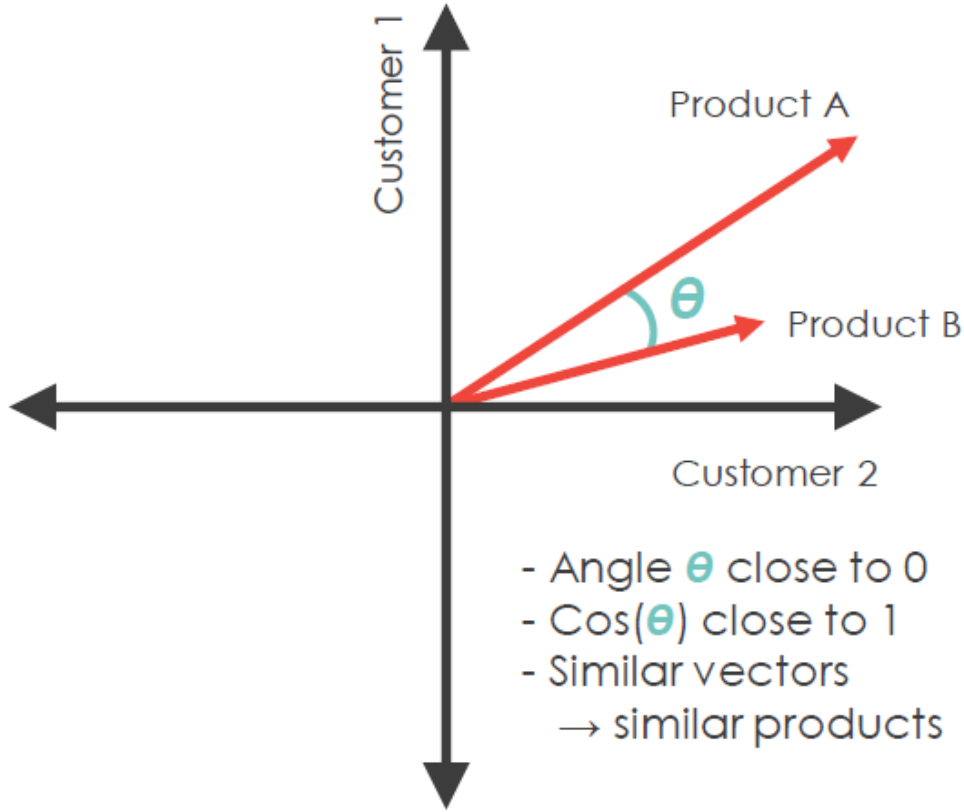
- Collaborative filtering technique
- Customer based
- Black box
- Difficult to combine with business rules
 - Post-business rules only



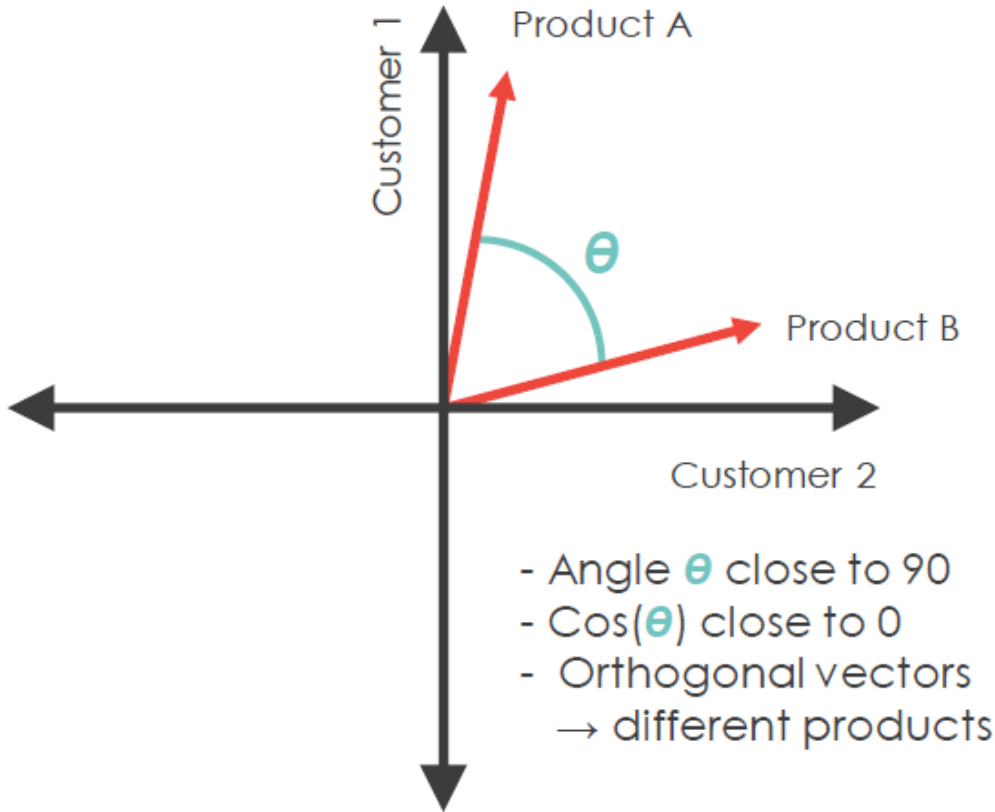
People who have similar preferences in the past are likely to have similar preferences in the future.

Cosine Similarity

	Product A	Product C
Customer 1	3	1
Customer 2	4	3



	Product A	Product C
Customer 1	3	1
Customer 2	4 1	3



Cosine Similarity

Filter on

- Minimum customer purchases: 25
- Minimum purchased products: 500

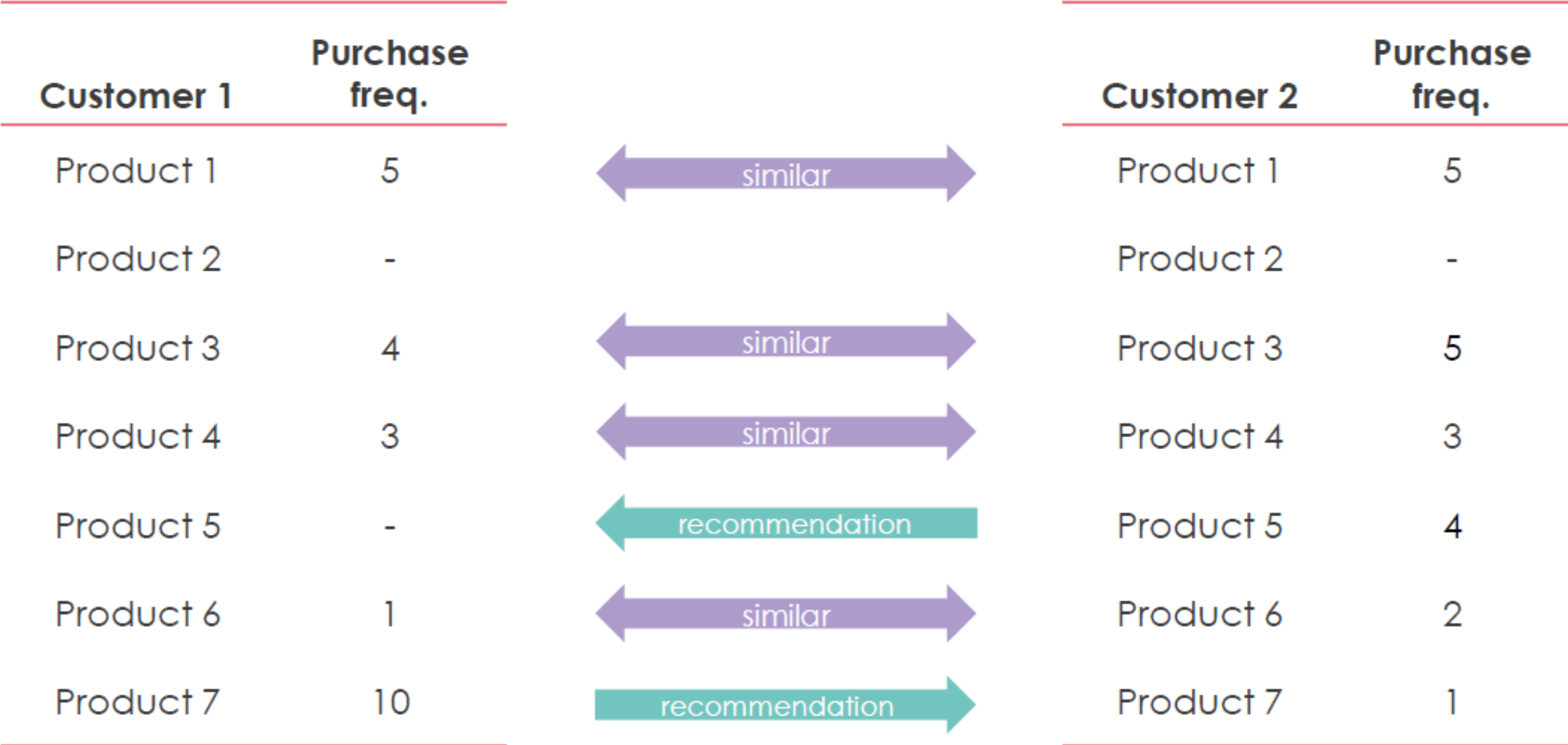
Product	Related product	Cosine similarity
ASSIETTE DESSERT MARTELEE 23*15 CM	ASSIETTE PLATE DIWALI BLANC 25 CM	97.16%
ASSIETTE DESSERT MARTELEE 23*15 CM	ASSIETTE PLATE DIWALI NOIR 25 CM	95.74%
ASSIETTE PLATE DIWALI BLANC 25 CM	ASSIETTE PLATE DIWALI NOIR 25 CM	94.68%
Alcool ménager CITRON 500ML Forever Vint	Alcool ménager FRAMBOISE 1L Forever Vint	92.96%
PLAID CORAL 130X160 TAUPE	PLAID CORAL 130X160 GRIS CLAIR	92.23%
SET 300 CURE DENTS BAMBOU	CANETTE ISO 1 L	88.12%
SET 300 CURE DENTS BAMBOU	OUVRE BOITE A AILETTE AVEC DECAPS.	85.99%
12 feutres de coloriage fins purebasic	Ciseaux enfant couleur purebasic	85.36%
CANETTE ISO 1 L	OUVRE BOITE A AILETTE AVEC DECAPS.	84.71%
12 feutres de coloriage fins purebasic	B*Compas couleur purebasic	84.25%
SET 300 CURE DENTS BAMBOU	PLCHE A DECOUPER BLC 25X16X1.2CM	84.19%
CANETTE ISO 1 L	PLCHE A DECOUPER BLC 25X16X1.2CM	82.85%
HP 305 Black	HP 305 COLOR	80.98%
PLCHE A DECOUPER BLC 25X16X1.2CM	OUVRE BOITE A AILETTE AVEC DECAPS.	80.92%
EPSON 603 YELLOW	EPSON 603 MAGENTA	80.60%
CATISF C&T BOEUF 60G	CATISF C&T CANARD 60G	79.84%
Itunes 50 euros	Itunes 25 euros	79.66%
EPSON 603 YELLOW	EPSON 603 CYAN	75.15%

The explicit matrix of the cosine similarity can be reviewed and is clearly showing the correlations. (Big table: +- 10 000 000 000 rows)



Alternating least squares

Alternating least squares



Evaluation des modèles

Downside of recommendation models

Very hard to assess and evaluate the model's performance & accuracy

=> if we evaluate a prediction and see that the client purchased the product historically, is it still a good recommendation?

The only way to review model performance in a relevant manner is through A/B testing in a marketing action

Target customer: 533960

Cosine

Start product: 12 INTERCALAIRES A4 CARTON

Selecting one product that the client often purchased in the past

Product category	Product name
INTERCALAIRE	6 intercalaires A4 carton
CLASSEUR A LEVIER	Classeur levier A4 5cm PP bleu
PROTÈGE DOCUMENT	100 pochettes perforées Pure Basic
PROTÈGE DOCUMENT	50 pochettes perforées lisses Maestro
STYLO BILLE	BI/Bic 4 couleurs Medium

ALS

Start customer: 533960

Product category	Product name
FEUILLES PR CLASSEUR	Bloc de cours A4 100 feuilles 60gr quad
FEUILLES PR CLASSEUR	CLAIREFONTAINE BLOC COURS A4 200P Q5
PROTÈGE DOCUMENT	50 pochettes perforées lisses Maestro
INTERCALAIRE	12 INTERCALAIRES A4 CARTON
EFFACEUR /CORRECTEUR	B* 2 rouleaux de correction purebasic



Cas d'usage en Selling



Plateforme intégrée fournisseurs-clients

Customer First Solutions

Walmart Luminate was created to address existing pain points of merchants and brands while enabling rapid, customer-centric innovation with a single, omni-customer view.

Shared.

Merchants and brand owners have a shared view, leading to effective decision-making.

Complete.

Access to complete, omni-channel view of perception, shopping behavioral and performance data.

Dynamic.

Web-based, interactive tool empowers brands to make data-driven decisions with speed and confidence.

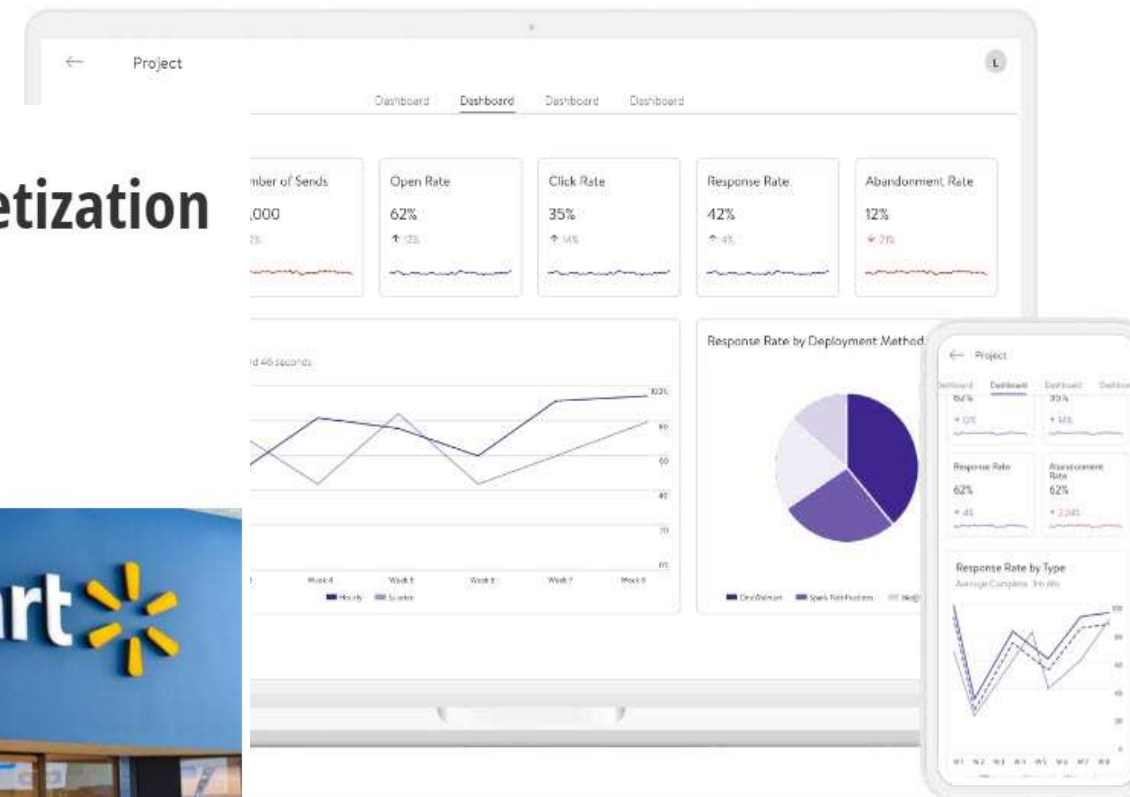
05/17/2022

Walmart Doubles Down on Data Monetization and Retail Media, Battles Inflation



Liz Dominguez
Managing Editor

The retail industry as a whole is getting hit hard by inflation, but Walmart is poised for growth, facing headwinds by investing heavily in its data monetization offering, Walmart Luminate, and its retail media service, Walmart Connect.



Digital Wallonia



Diagnostic de maturité

Analyse 360° des activités, identification des opportunités offertes par l'IA et définition d'un plan d'action.

3500€ de subside (70%)

Proof of concepts

Mise en place de démonstrateurs (Proof of Concept) sur l'intelligence artificielle.

28 000€ max de subside (70%)



Contacts



Olivier Cuvelier

Responsable Digital Wallonie

Olivier.Cuvelier@delaware.pro



Benoit Loffet

Responsable Data& AI Wallonie

Benoit.Loffet@delaware.pro



Merci de votre attention



FORMATION IA RETIS – 15 mai à Liège



E-FORUM LUXEMBOURG – 08 octobre



Sponsor



Partenaires

WE Wallonie
Entreprendre

GRE
LIÈGE

iddUP

spi

Wallonia.be
EXPORT
INVESTMENT

CCI
LUXEMBOURG BELGE

**be
com.**

basse-meuse
développement

**Commerce
Liégeois**

CW
CERCLE
DE WALLONIE

feweb

SymbiOZ
Réseau des entreprises dynamiques

CRÉAJob
COUVEUSE D'ENTREPRISES!

cha[]enge
Start your business

UCM

**digital
wallonia
.be**

beo

ALPi

avomarc
prêt... entreprenez!

Cap Numérique