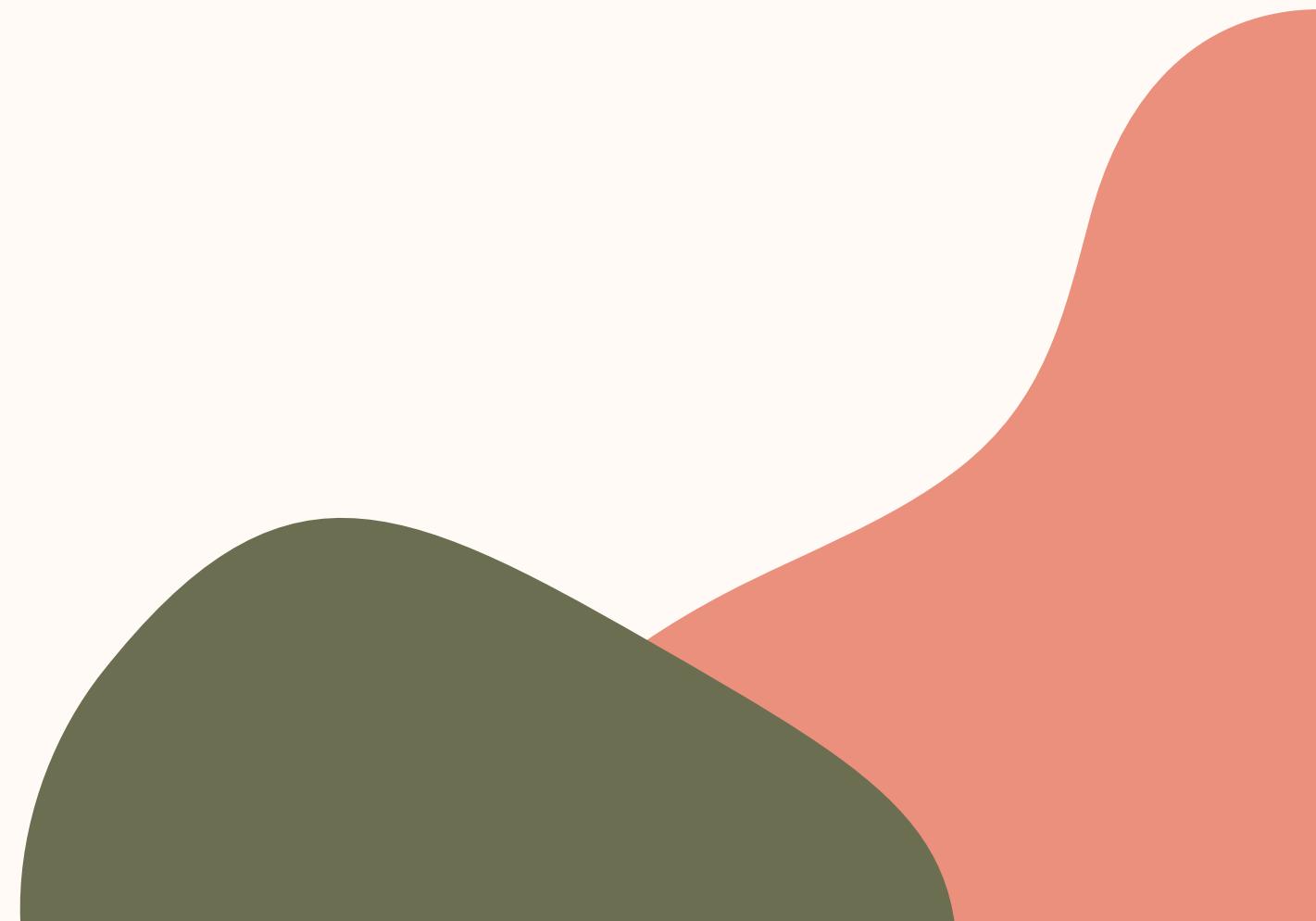

Entrepôt de Données Pinterest.

Massila LAKAF, Imane LAZIZI, Kanzy YOUSSEF



Analyse des Besoins Métier

Contexte Pinterest

- I +480M utilisateurs actifs mensuels.
- I Plateforme de découverte visuelle entre réseaux sociaux et e-commerce.
- I Modèle économique basé sur la publicité (promoted pins).

Actions à Analyser :

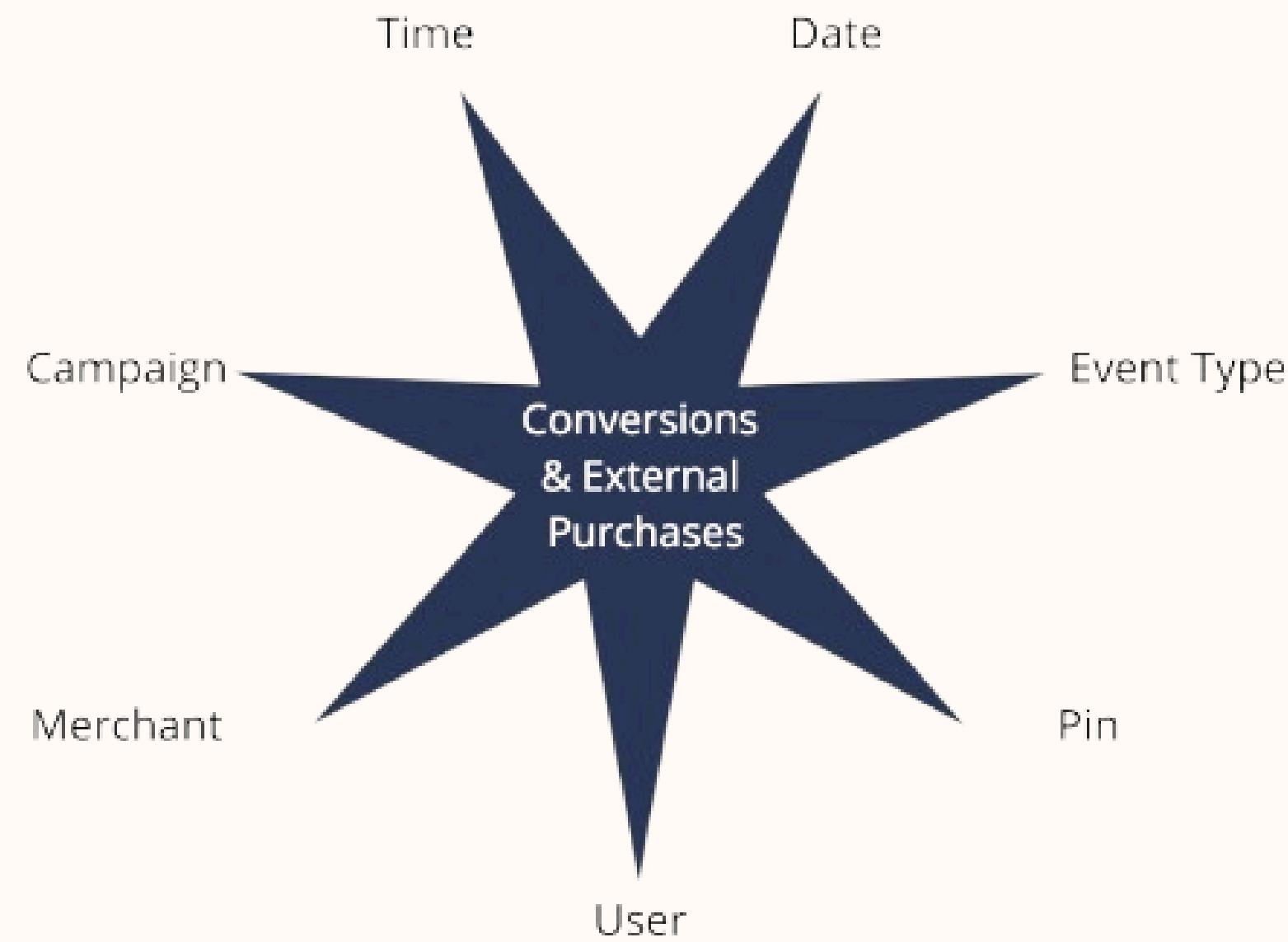
Conversions &
Achats Externes



Clics & Visites Site
Marchands



Modèle Détailé : Conversions •



Deux mesures principales

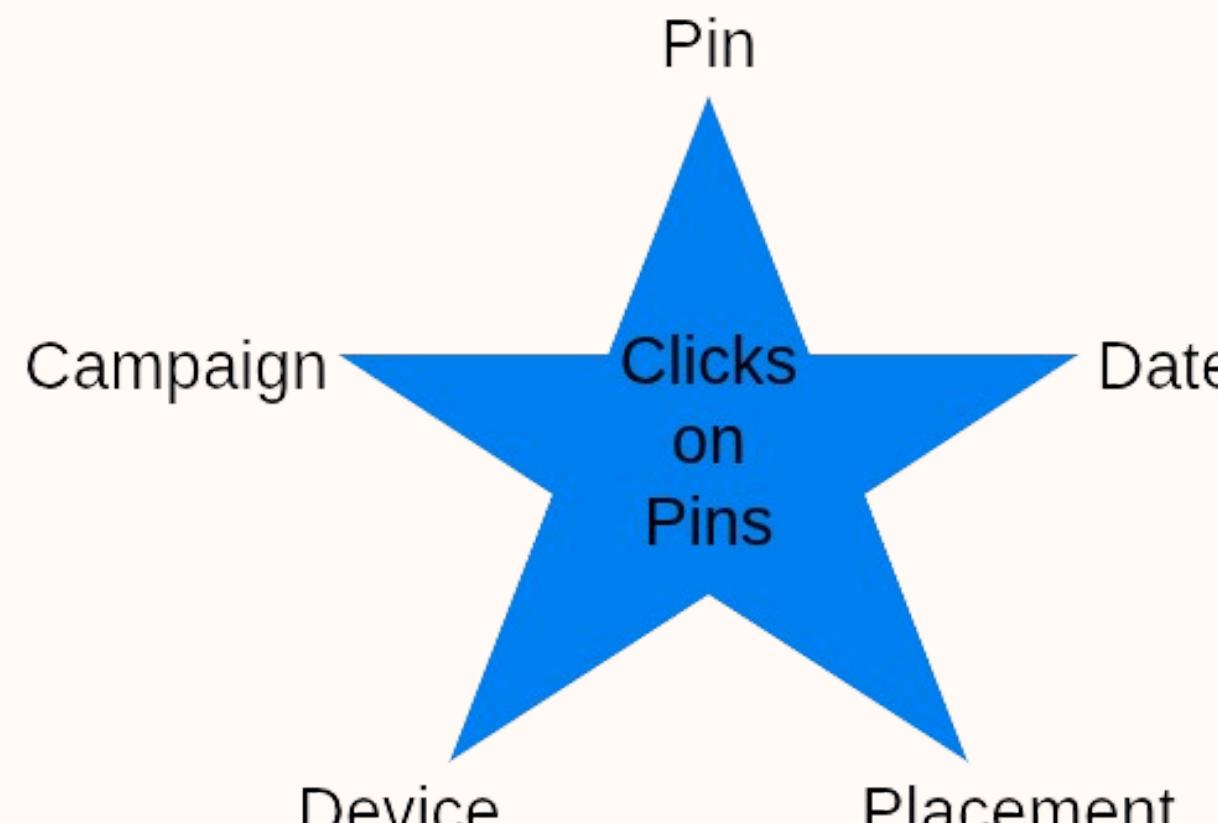
- Iconversions_values : additive
- Iconversion_count : additive

Taille de l'Entrepôt

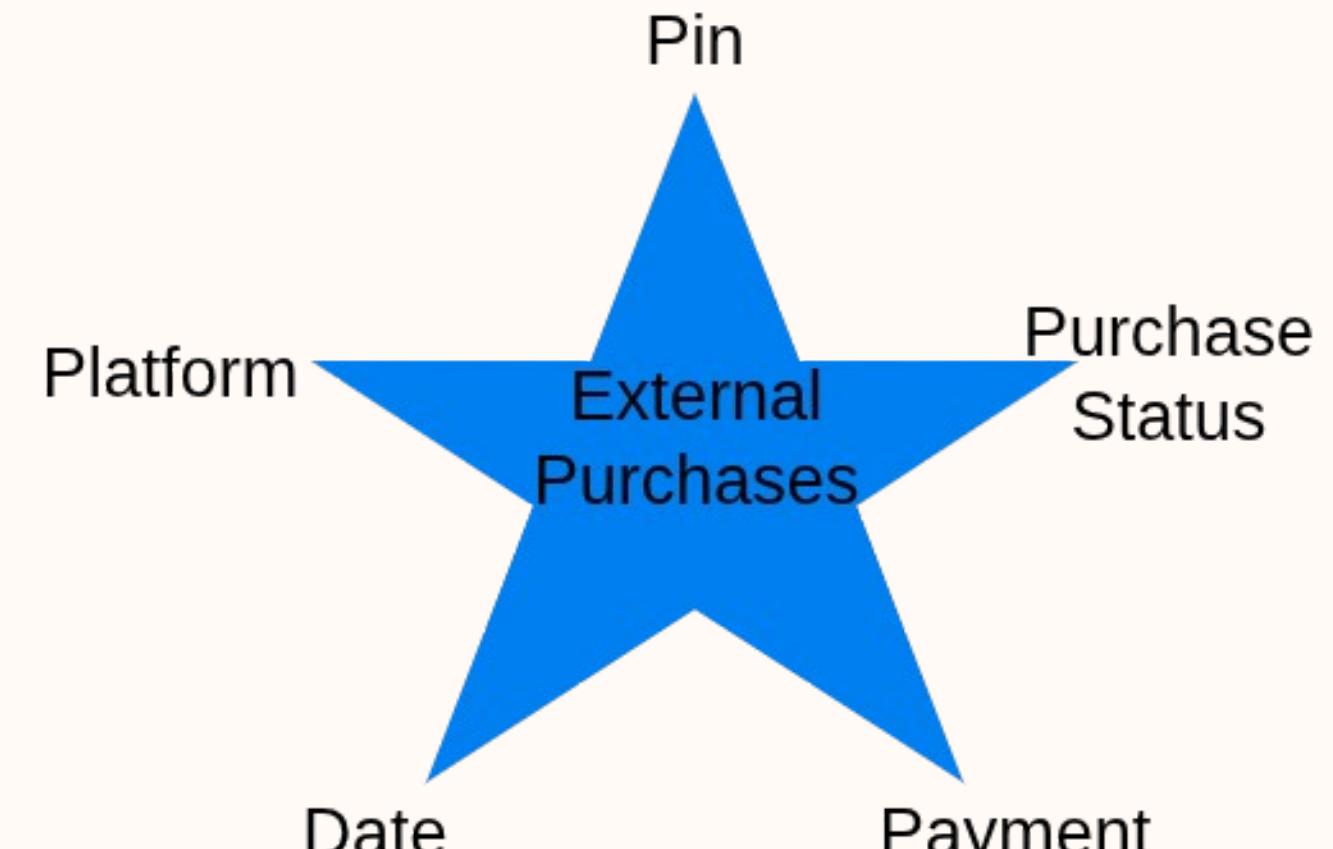
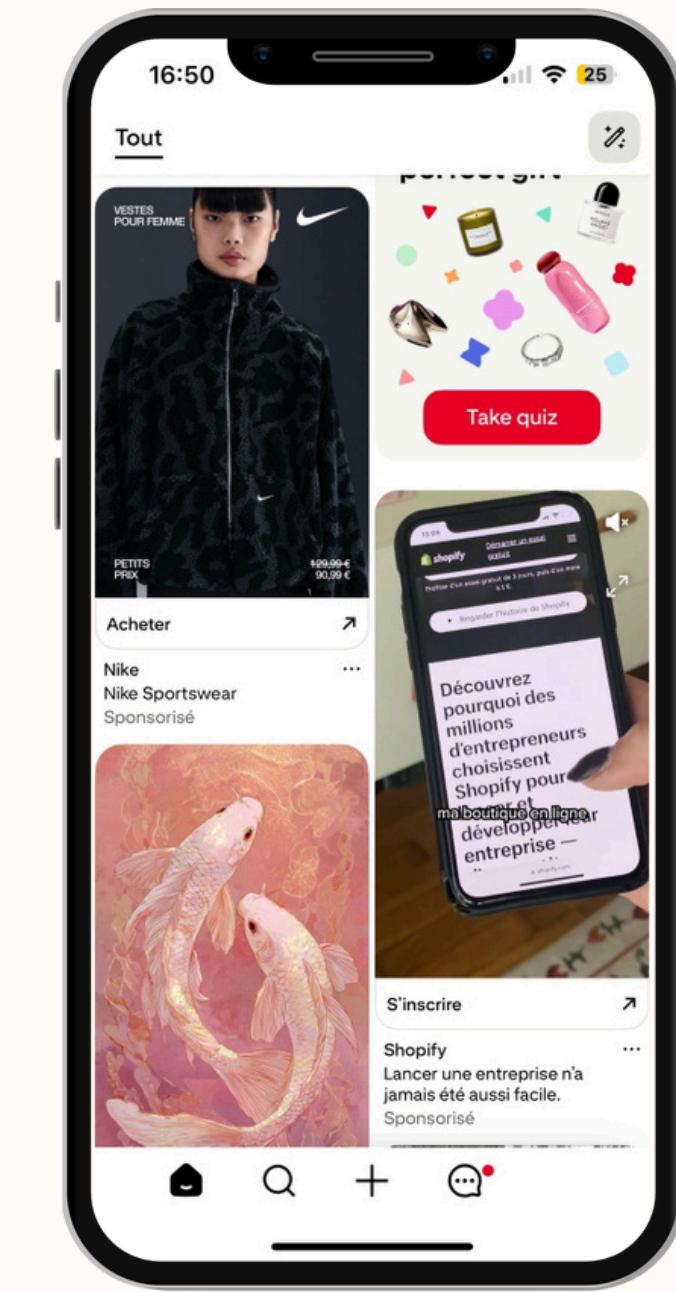
- Icon 115 Millions conversions / an
- Icon 10 Milliards de pins / an



Snapshot & Updated-Records



Snapshot



Updated-Records

Techniques Avancées de Modélisation

Table Pont (Relation N:M)

PinCategory	
(pin_id,category_id)	
pin_id	
category_id	

```
SELECT c.category_name, SUM(f.conversion_value) AS revenue
FROM fact_conversions f
JOIN pin_category_bridge b ON f.pin_id = b.pin_id
JOIN dim_category c ON b.category_id = c.category_id
JOIN dim_date d ON f.date_id = d.date_id
WHERE d.full_date >= DATE '2025-01-01'
GROUP BY c.category_name;
```

Partitionnement Hybride dim_pin

Colones : dim_pin_static + dim_pin_dynamic

Lignes : RANGE par created_at + HASH par
pin_id + index sur is_promoted

Implémentation & Requêtes Analytiques

SELECT

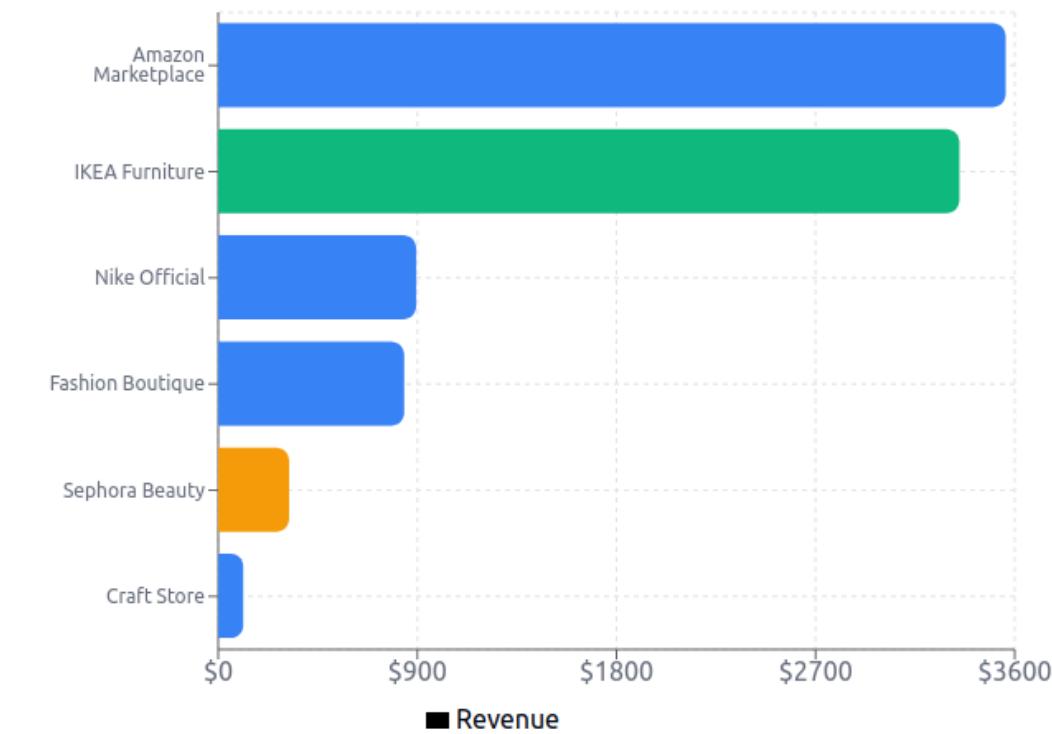
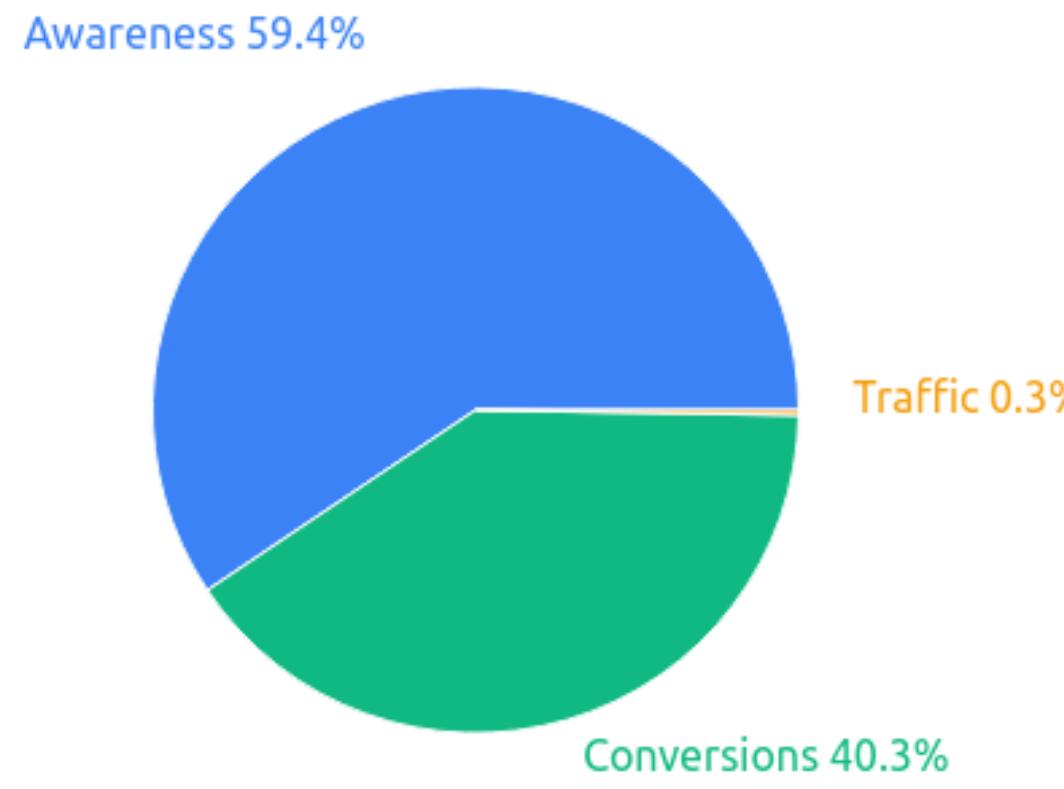
```
c.category_id, t.period_of_the_day,  
SUM(f.conversion_value) as revenue,  
COUNT(*) as conversion_events  
FROM fact_conversion f  
JOIN dim_category c ON f.category_id  
= c.category_id  
JOIN dim_time t ON f.time_id =  
t.time_id  
GROUP BY c.category_id,  
t.period_of_the_day;
```

CATEGORY_ID	PERIOD_OF_	REVENUE	CONVERSION_EVENTS
8	Morning	1110	2
5	Afternoon	1299,99	3
10	Evening	349,98	5
3	Evening	140	1
4	Morning	0	1
4	Afternoon	1198,99	4
10	Night	175	1
3	Night	220	1
9	Afternoon	125,5	1
6	Night	599,99	1
5	Evening	450	1
CATEGORY_ID	PERIOD_OF_	REVENUE	CONVERSION_EVENTS
9	Evening	230	4
9	Morning	110	3
2	Morning	120	2
2	Afternoon	350,49	6
10	Afternoon	409,99	2
8	Evening	750	1
7	Morning	113	4
10	Morning	0	2
8	Afternoon	1499,98	5

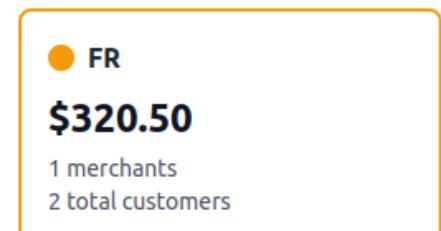
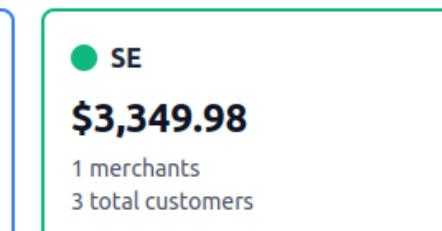
20 lignes sélectionnées.

Performance des catégories par moment de la journée

Autres Exemples de Requêtes



Performance by Country



**Tendance des revenus
par objectif de campagne en
Janvier 2025.**

Top Merchant par pays.

Optimisation

Vues Matérialisées (Treillis d'Agrégation)

MV1 : mv_daily_campaign_merchant

MV2 : mv_user_cohort

MV3 : mv_category_time

Index Bitmap Join

I bji_campaign_objective : Optimise filtres sur objectif campagne (5-10 valeurs)

I bji_is_weekend : Optimise filtres booléens weekend/semaine

Conclusion

Merci pour votre écoute !

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