



RFM SEGMENTATION & TEMPORALITY / TIME OF PURCHASE

AGENDA

A photograph of two hands, one from a person in a dark suit and white shirt cuff, and another from a person with a bracelet, reaching towards each other against a blurred background of a sunset over a beach.

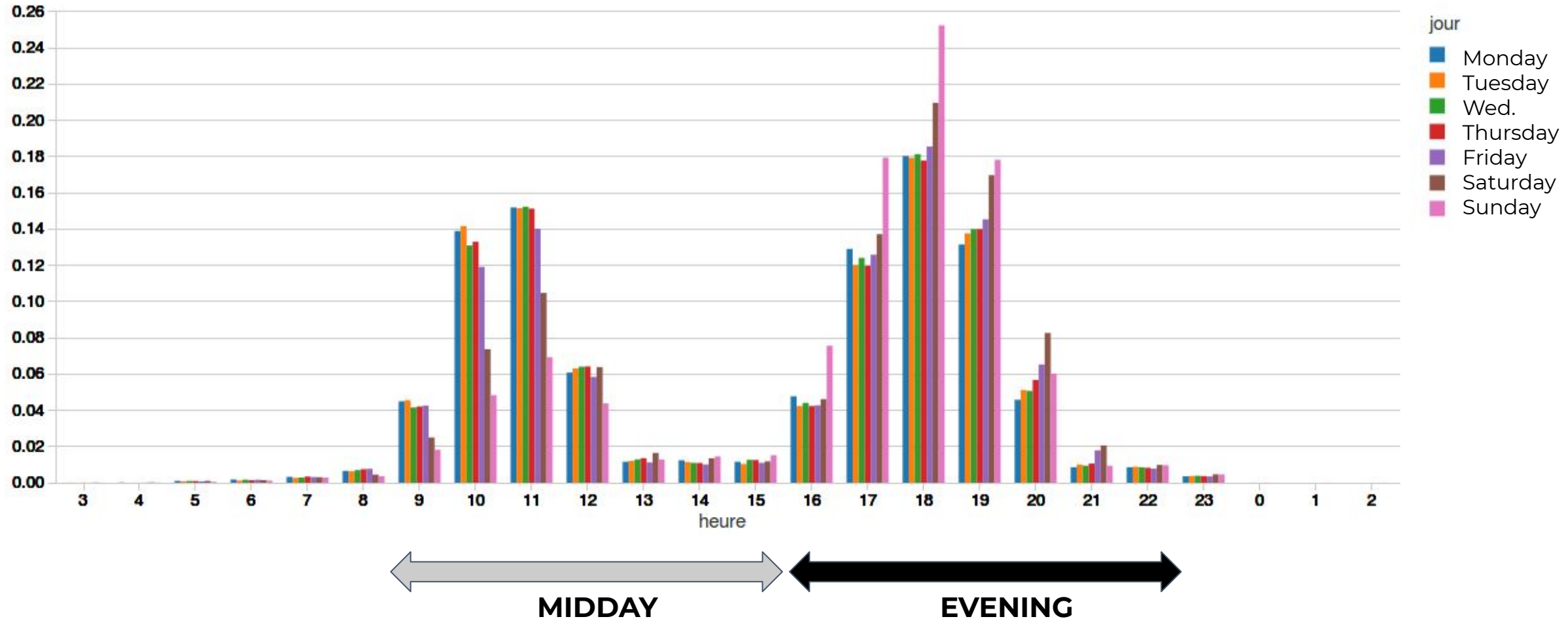
◀ TEMPORALITY / TIME OF PURCHASE

◀ RFM SEGMENTATION

TEMPORALITY / TIME OF PURCHASE

GENERAL OBSERVATION

Distribution of transactions per day/hour

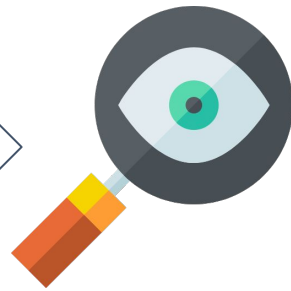


METHODOLOGY



Scope of observation

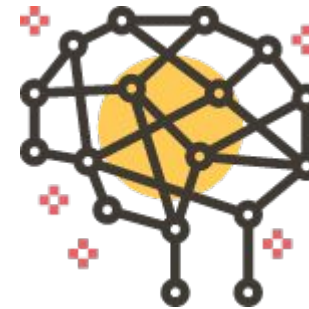
Individuals who made at least one purchase during the period July 2017-June 2019



Dimensions to observe

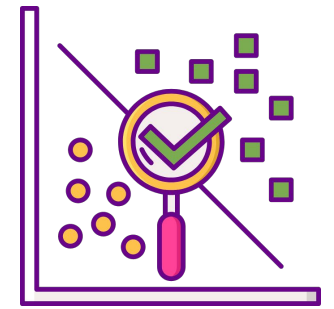
> 2 periods/day
midday/evening

> 2 periods/weeks
week/weekend
Week = Monday > Friday midday
Weekend = Friday evening > Sunday evening



Unsupervised learning

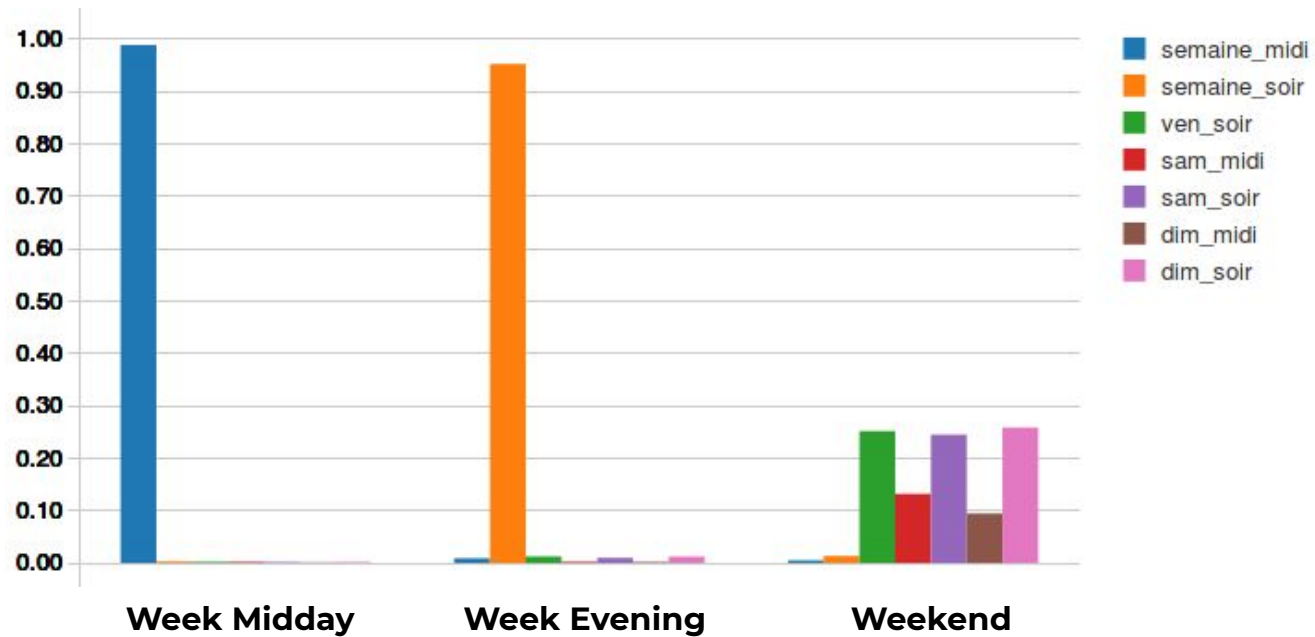
Input & learning to create clusters



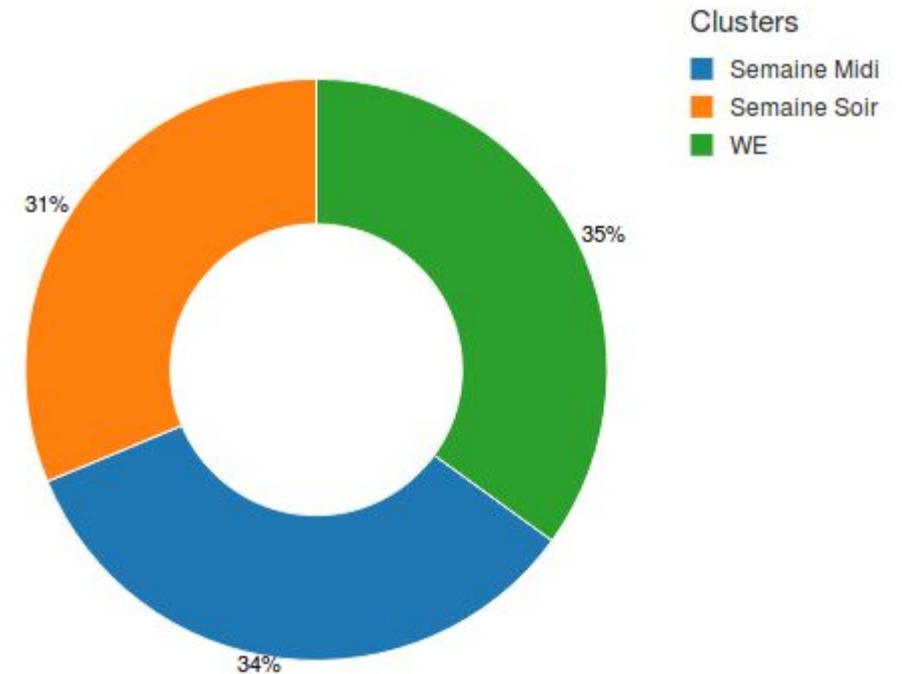
Cluster creation

Homogeneous & heterogeneous clusters

RESULTS



3 clusters are emerging. Weekend consumers do not have heterogeneous day/midday/evening patterns.



Balanced breakdown between the different clusters.

EXAMPLE USE/ACTIVATION

Adapt the message & timing according to the time of consumption.

Tuesday, 11:00 a.m.

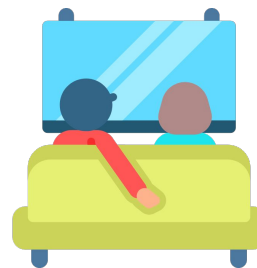
Sushi for lunch? We'll deliver it for free in 30 minutes.
Order now >>



Week Midday

Thursday, 5:00 pm

The new season of Casa Del Papel has just come out :)
Ceviche & TV tonight ?
Order here >>



Week Evening

Saturday, 5:00 pm

The French Championship game is on tonight, let's invite friends over to enjoy a sushi platter for the game.
Order a box to share >>



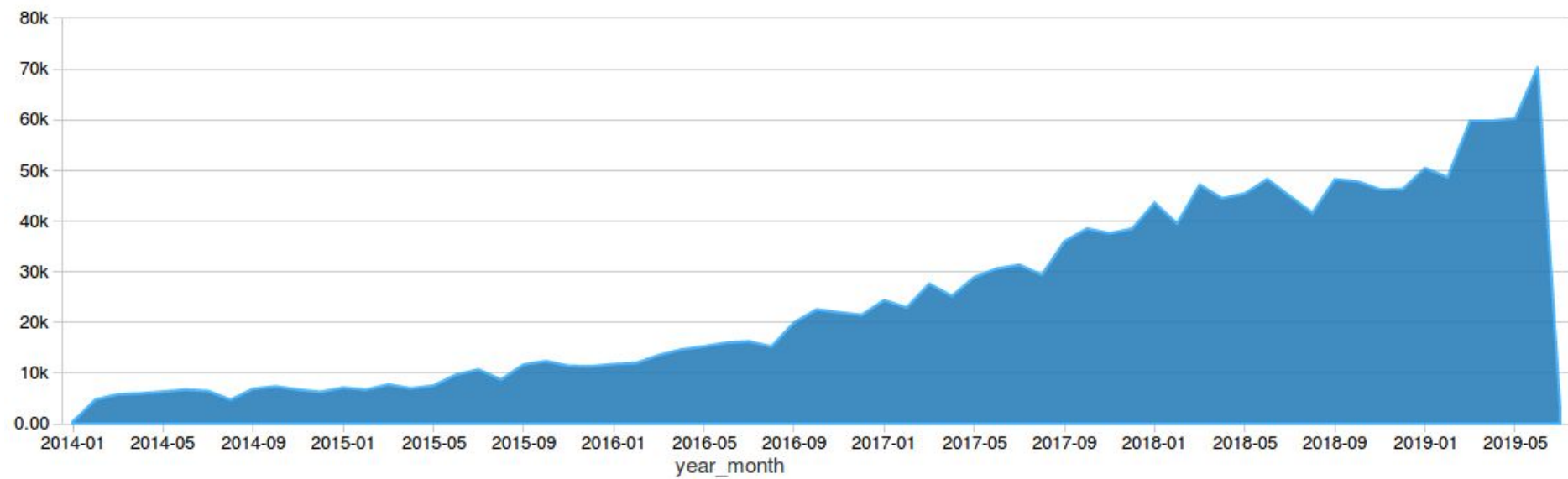
Weekend

A close-up photograph of a row of sushi rolls on a dark slate plate. A pair of black chopsticks is lifting the front-most roll, which is topped with salmon and roe. The roll's interior shows white rice, a piece of white fish, and a slice of avocado. To the right of the sushi are some green cucumber slices and a red garnish.

SEGMENTATION **R**ecency **F**requency **M**onetary Value

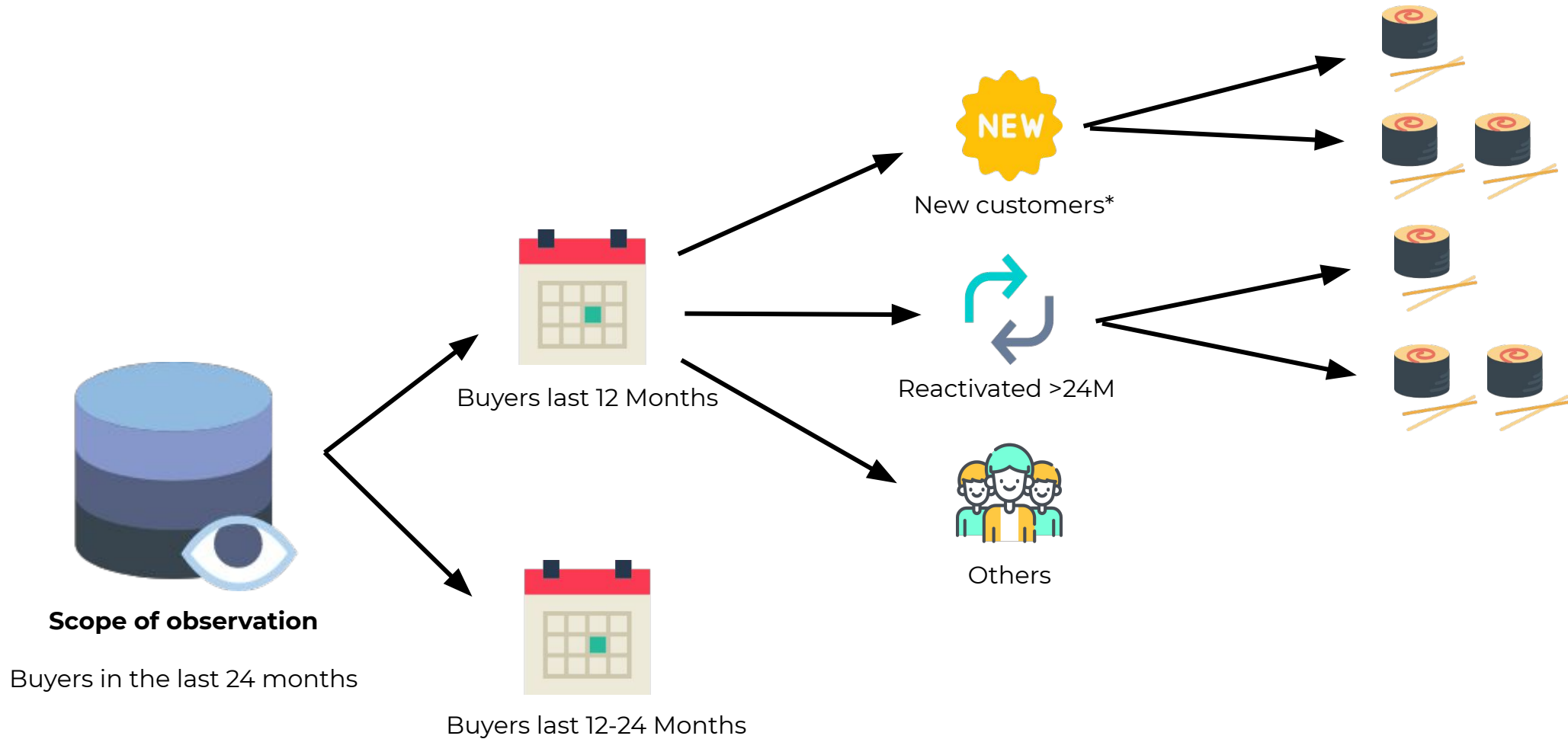
GENERAL OBSERVATION

Strong growth in transaction volume



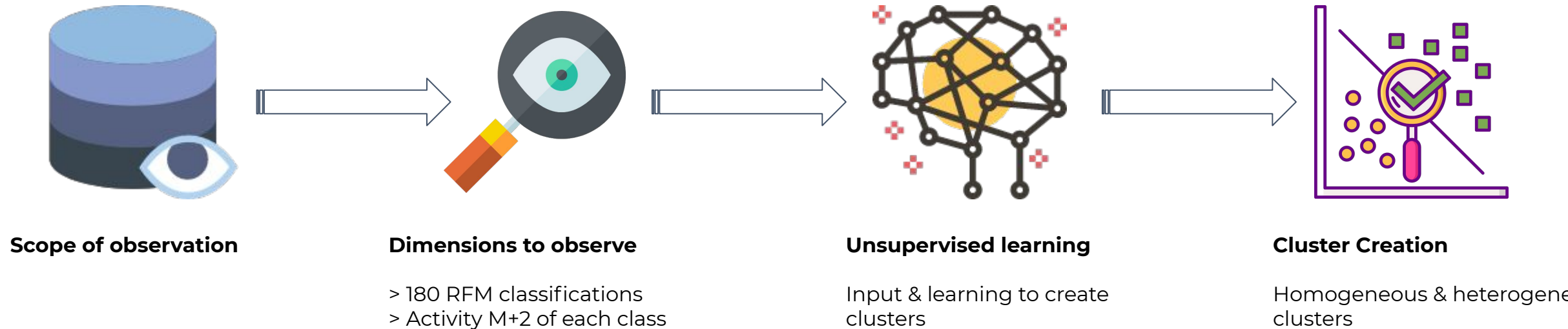
METHODOLOGY

OBJECTIVE: to classify individuals according to their value (Recency/Frequency/Monetary Value)



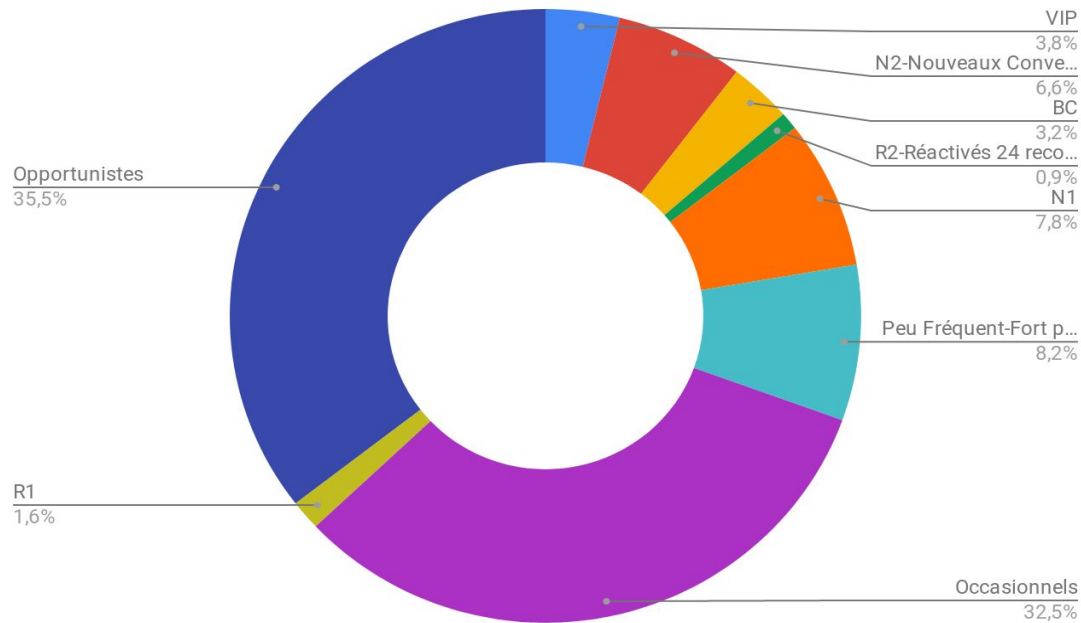
*Transaction date within the last 60D

METHODOLOGY

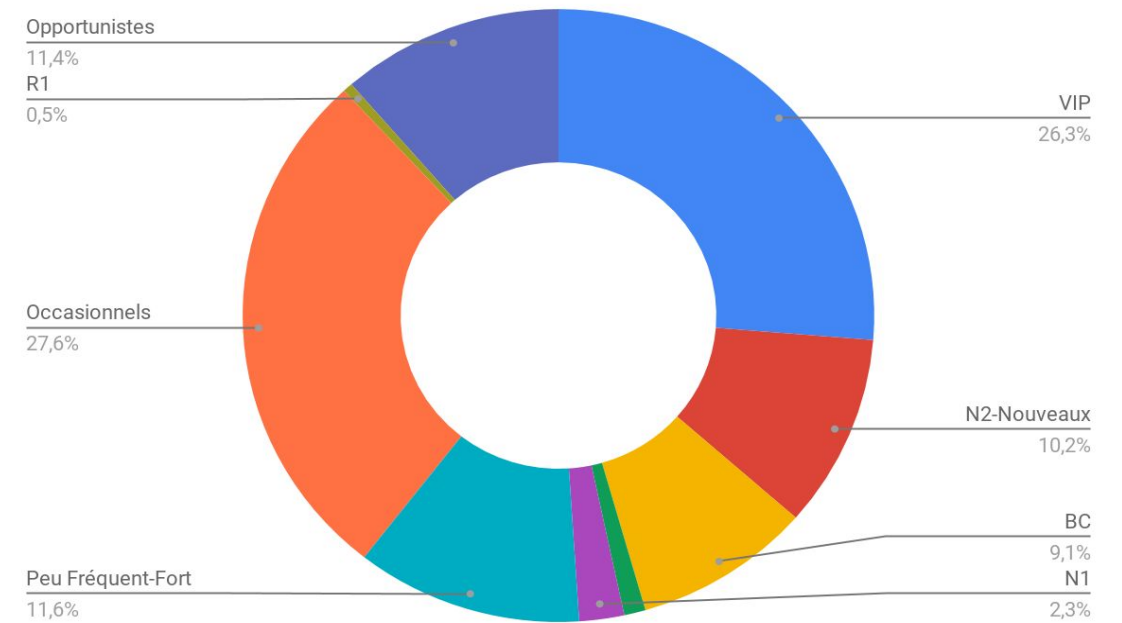


CLUSTER BREAKDOWN

Volume Breakdown



Turnover breakdown



>> VIP + GC + PF/FP represent 15% of the volume and 39% of the turnover
 >> Very little volume reactivation = almost 50% of turnover
 >> Opportunists + Occasional represent 68% of the volume and 39% of the turnover

CLUSTER DETAILS & OBSERVATION +2 MONTHS

Au 30 avril 2019							M+2 (May 1 - July 1, 2019)			
Segment	Nb clients CRM	Taux acheteurs 0-12 mois	Récence moyenne 0-12 mois (en jours)	Taux d'acheteurs 13-24 mois	Panier moyen 0-24 mois	Nb achats moyen 0-24 mois	Taux d'acheteurs	Panier moyen	Nb purchases/cli	CA/customer
VIP	5904	100%	32,7	97,7%	45,3 €	20,1	63,8%	43,0 €	2,8	76,8 €
GC	5030	100%	56,7	87,0%	36,7 €	10,1	38,5%	13,9 €	4,8	25,7 €
Low Frequency-Strong Basket	12773	80%	167,6	47,5%	56,0 €	3,3	5,7%	49,5 €	1,6	4,5 €
Occasional	50571	58%	115,8	59,6%	46,4 €	2,4	5,2%	39,2 €	1,5	3,1 €
Opportunists	55249	57%	124,5	50,6%	24,7 €	1,7	2,8%	31,0 €	1,4	1,2 €
N1	12173	100%	28,7	0,0%	38,8 €	1	13,1%	38,3 €	1,7	8,5 €
N2-Newly Converted	10231	100%	23,7	0,0%	38,3 €	5,3	49,9%	36,0 €	2,7	48,5 €
R1	2446	100%	206,4	0,0%	39,6 €	1	5,6%	37,5 €	1,4	2,9 €
R2-Reactivated 24 regained	1438	100%	113	0,0%	38,5 €	4,2	27,7%	39,9 €	2,2	24,3 €
TOTAL active 24 months	155815	70%	106,6	47,7%	37,8 €	3,2	11,5%	33,6 €	2,5	9,7 €



VIP: on average 1 purchase/month & AB 45€.



GC: on average 1 purchase/2months & AB 37 €.



PF-FP: on average 2 purchases/year & AB higher than VIPs > €56



Occas : on average 3 purchases/year & AB equivalent to VIP > 46€.



Opportunists: on average 3 purchases/year & AB much lower > €25



New 1 purchase in the last 60 days: only 13% re-purchase rate at M+2



New 2 purchases in the last 60 days: 50% repurchase rate at M+2



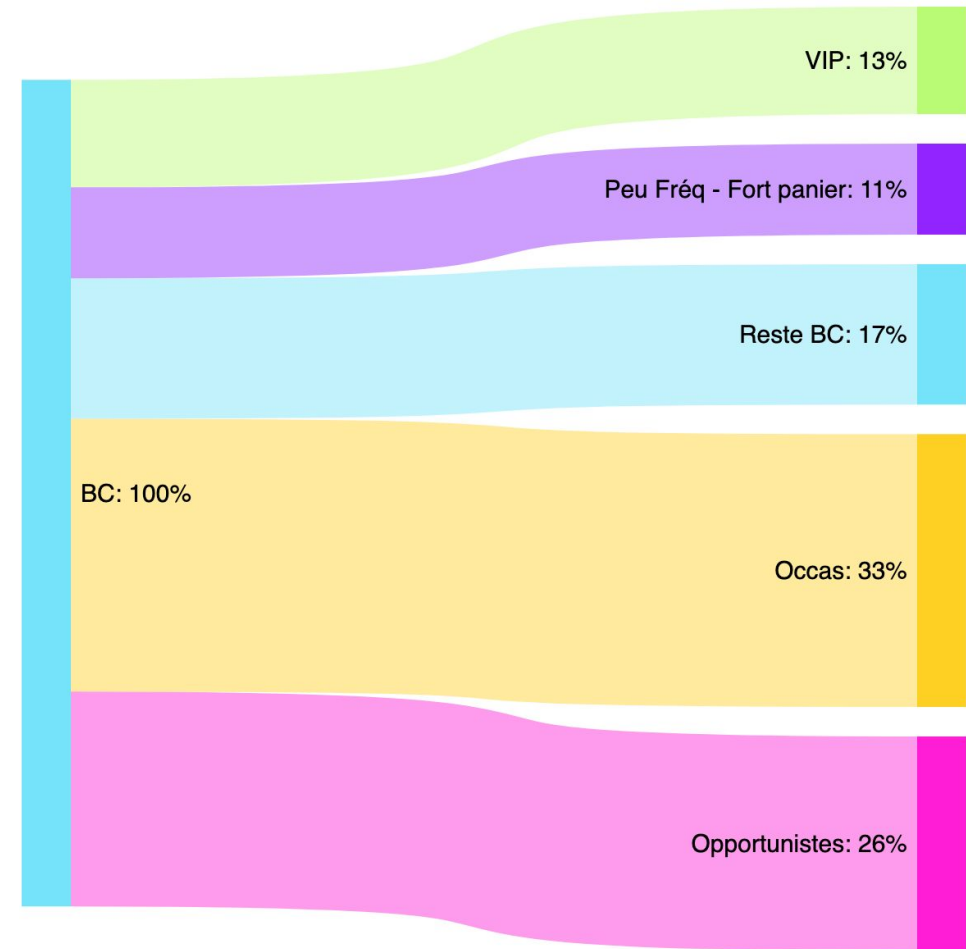
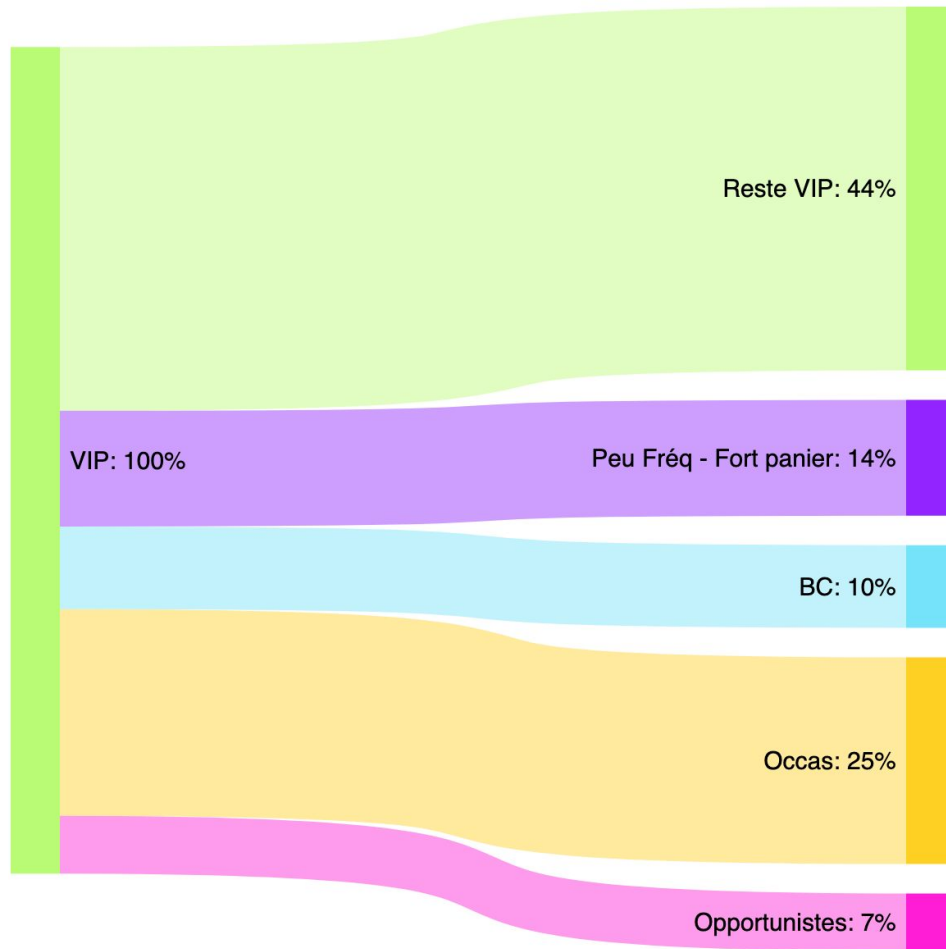
Reactivated 1 purchase: only 6% repurchase rate at M+2



Reactivated 2 purchases: 28% repurchase rate at M+2

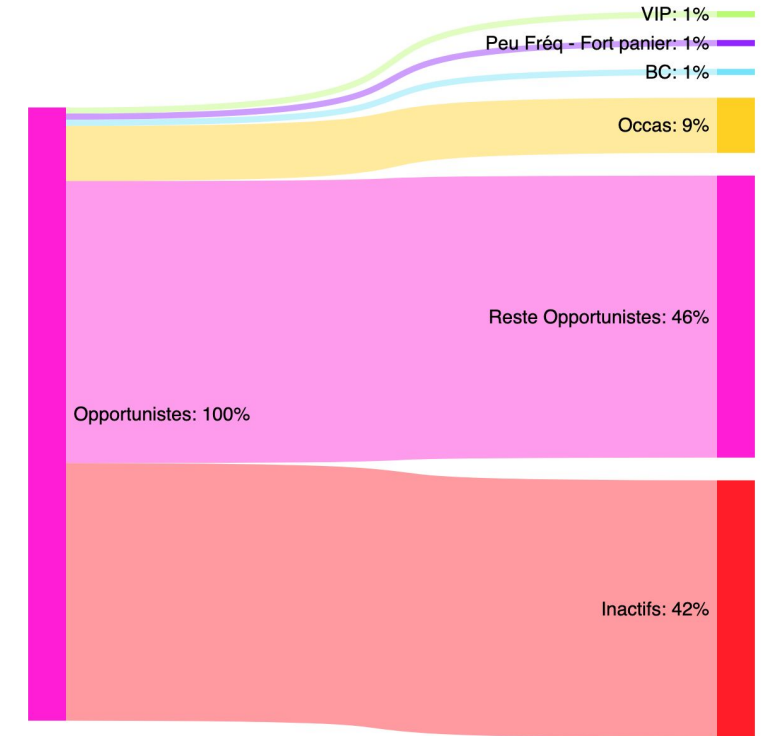
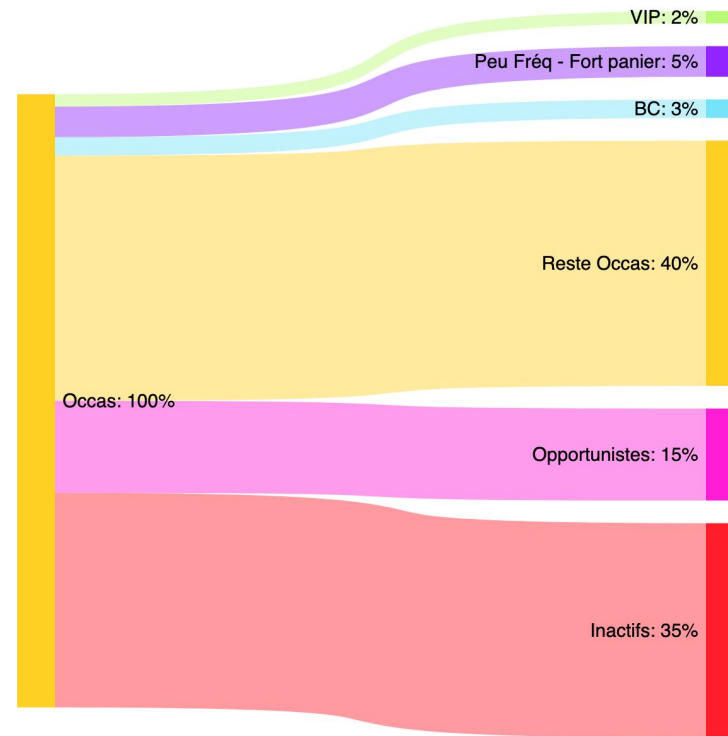
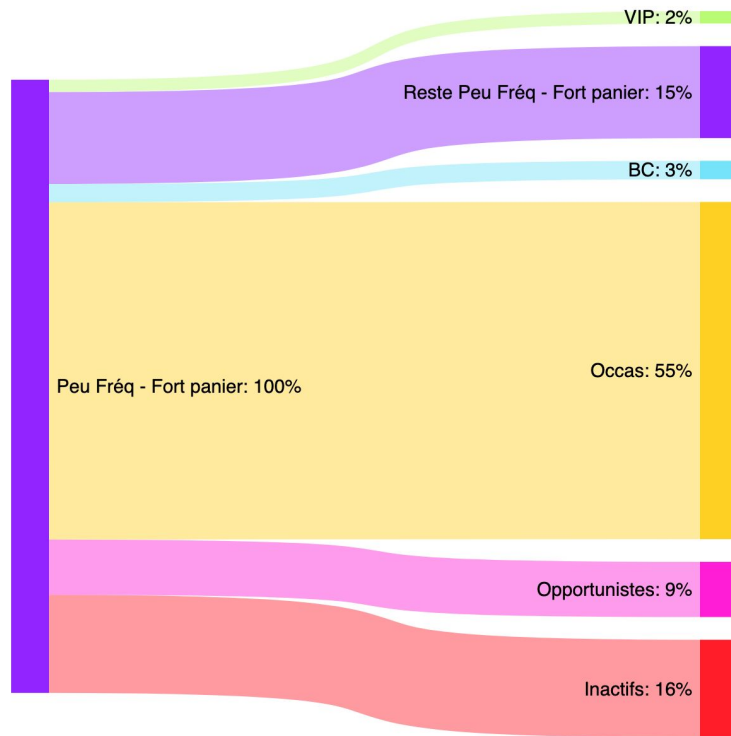
TRANSITION MATRIX - TOP OF FILE

Clusters June 2018 → June 2019



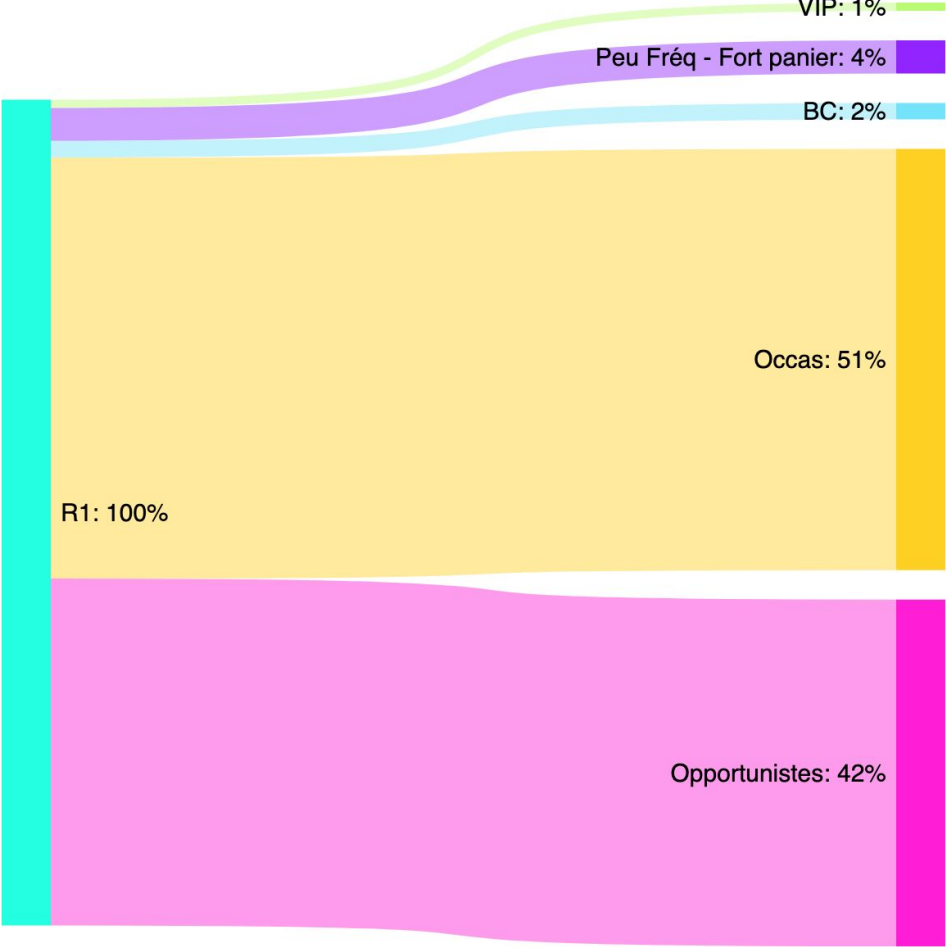
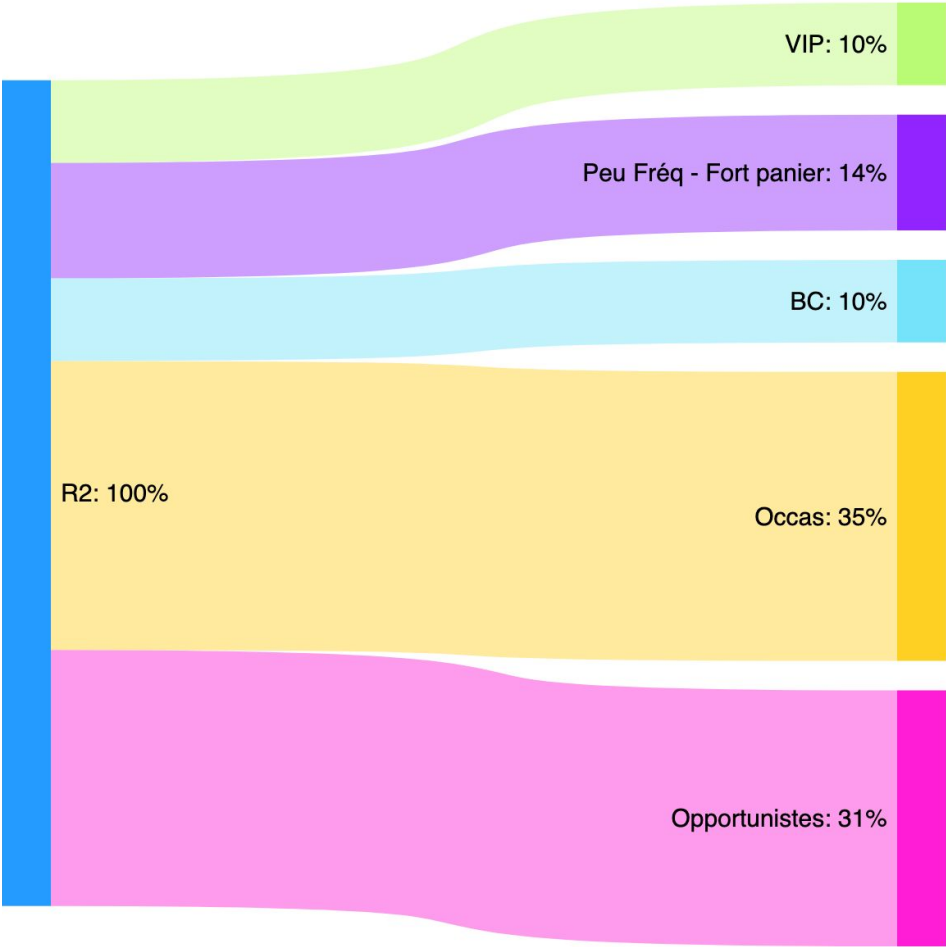
TRANSITION MATRIX - BOTTOM OF FILE

Clusters June 2018 → June 2019



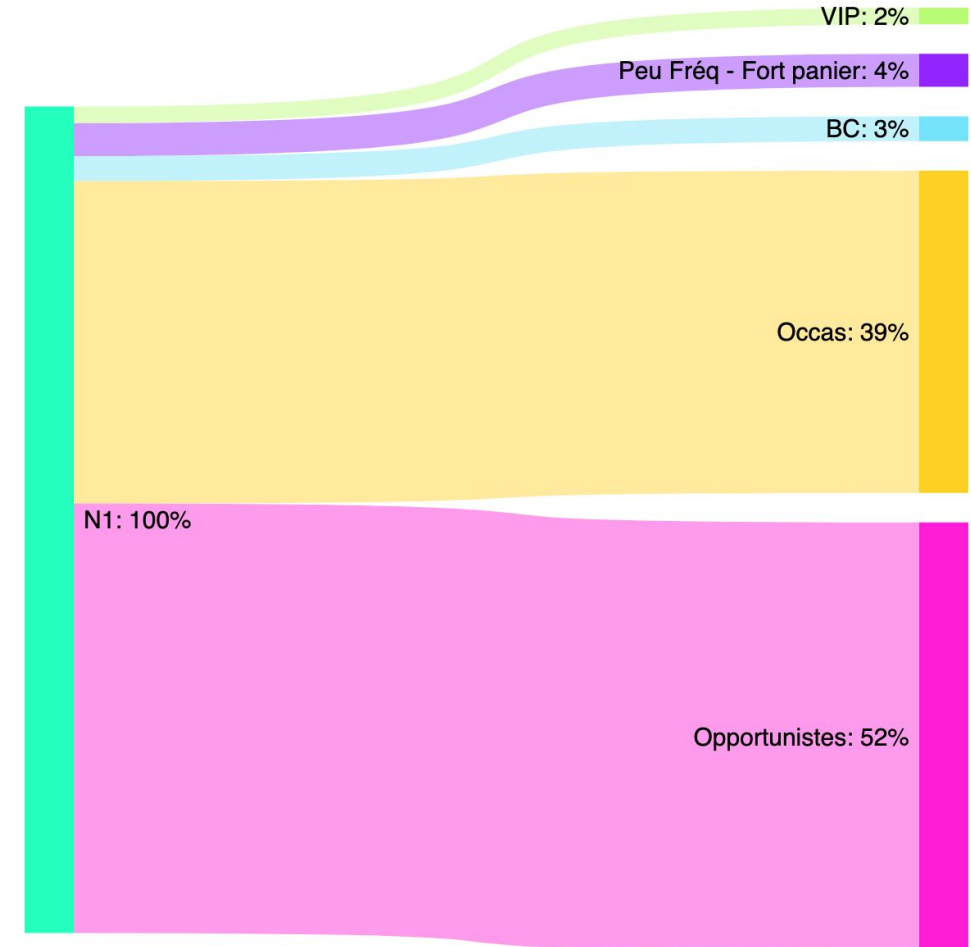
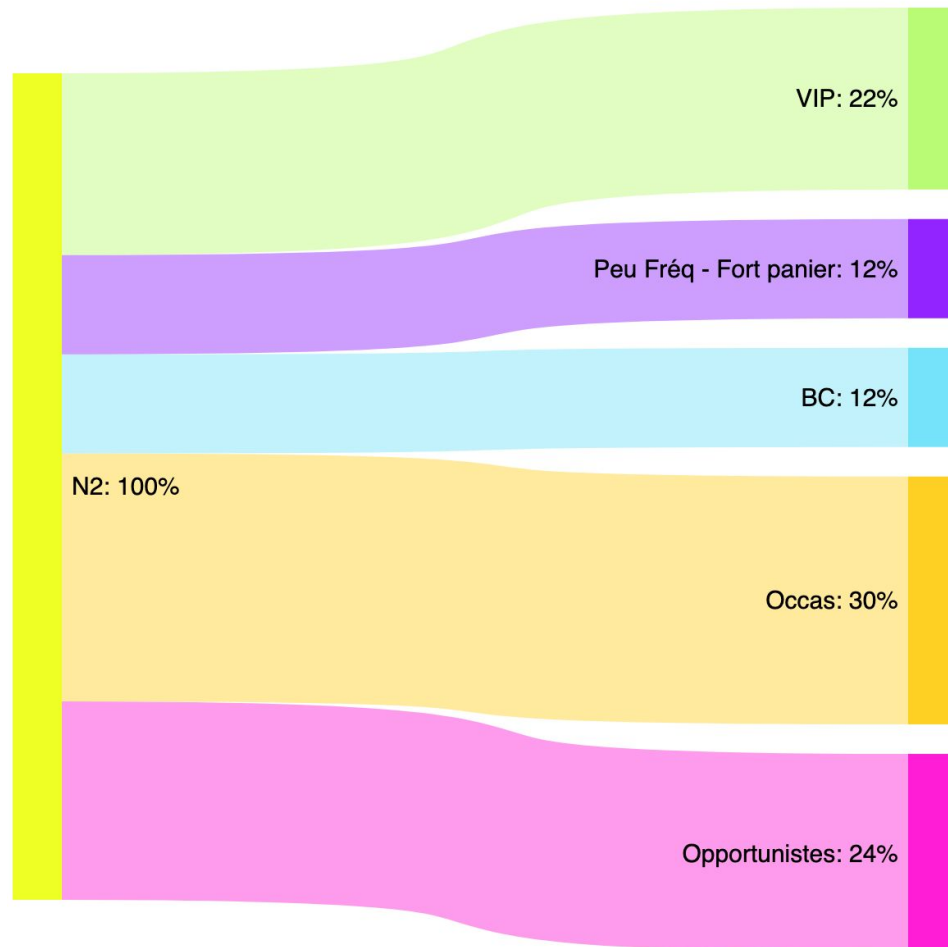
TRANSITION MATRIX - REACTIVATED

Clusters June 2018 → June 2019



TRANSITION MATRIX - NEW

Clusters June 2018 → June 2019



TRANSITION MATRIX - Details

Clusters June 2018 → June 2019

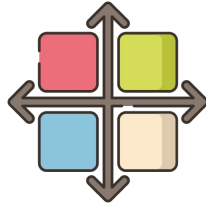
Before\Today	1-vip	2-gc	3-pffp	4-occasional	5-opportunistic	passive
1-vip	44,5%	9,4%	14,3%	25,3%	6,6%	0,0%
2-gc	12,7%	16,5%	11,5%	33,4%	25,9%	0,0%
3-pffp	2,0%	3,1%	13,8%	54,7%	9,2%	15,5%
4-occasional	1,4%	2,6%	4,9%	39,4%	14,5%	34,9%
5-opportunistic	0,3%	1,1%	1,1%	8,8%	45,2%	40,8%
6-R2	10,5%	9,6%	13,9%	34,5%	31,5%	0,0%
7-R1	0,6%	2,2%	3,4%	51,6%	42,2%	0,0%
8-N2	22,4%	11,7%	12,4%	29,5%	24,0%	0,0%
9-N1	1,8%	3,2%	4,2%	39,4%	51,4%	0,0%

OBJECTIVES, USES/ACTIVATIONS

RFM segmentation makes it possible to give meaning to customer relations and, above all, to help marketers **manage and prioritize their actions**, particularly with regard to the quality of their offers and their contact plans with their different types of customers.



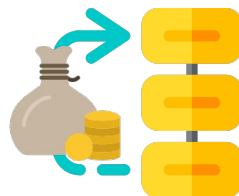
Analyzing the BDD & prioritizing strategic issues



Monitor the evolution/development of BDD

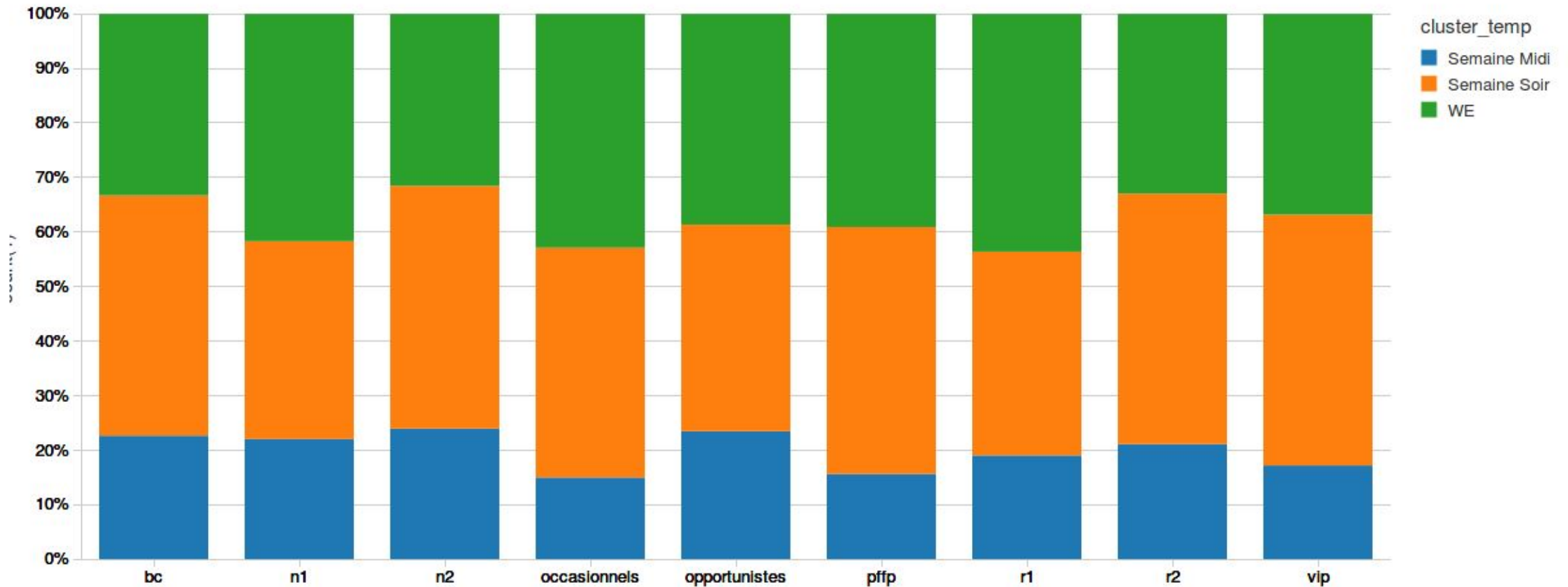


Prioritize targets based on messages/operations



Adjust/prioritize budgets

RFM X TEMPORALITY



Adapt the timing, budget & message according to the intersection of segmentations.

! Point of vigilance : volume !

INVESTMENT / BUDGET

1/Temporality Qualification Model :

Set Up / Implementation Process :

- Data Sciences : 1 day of R&D = 1200€(VAT excl.) – offered
- Data Analysis :
1.5 day of analysis and PDF restitution = 1 350€(VAT excl.)
1 day of production + concept = 900€(VAT excl.)

Or Set up 2 250€ (VAT excl.)

Calculation processing fee / monthly = 570€ VAT excl.

2/ RFM Segmentation Model

Set Up / Implementation Process :

- Data Sciences : 1.5 day of R&D = 1800€ (VAT excl.) – offered
- Data Analysis :
3 days of analysis and PDF restitution = 2 700€ (VAT excl.)
1 day of production + concept = 900€ (VAT excl.)

Or set up 3600€ (VAT excl.)

Calculation processing fee / monthly = 750€ VAT excl.



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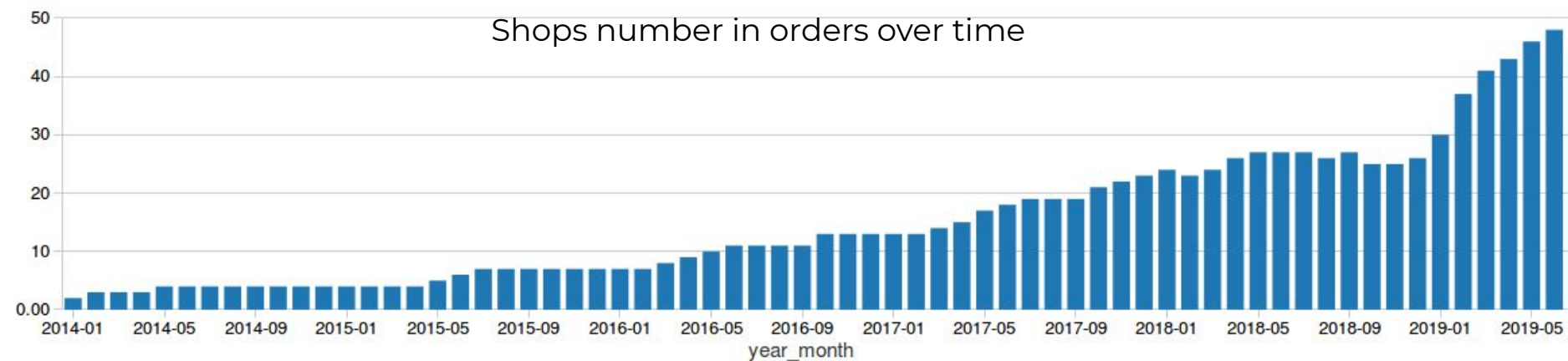
Customer Value RFM



- Study of activity over time
- Build a cluster based on Recency, Frequency and Monetary Value
 - **Objective : order customers according to future value, based on past behavior**
- Analyze results
- Apply on another periods and analyse actions

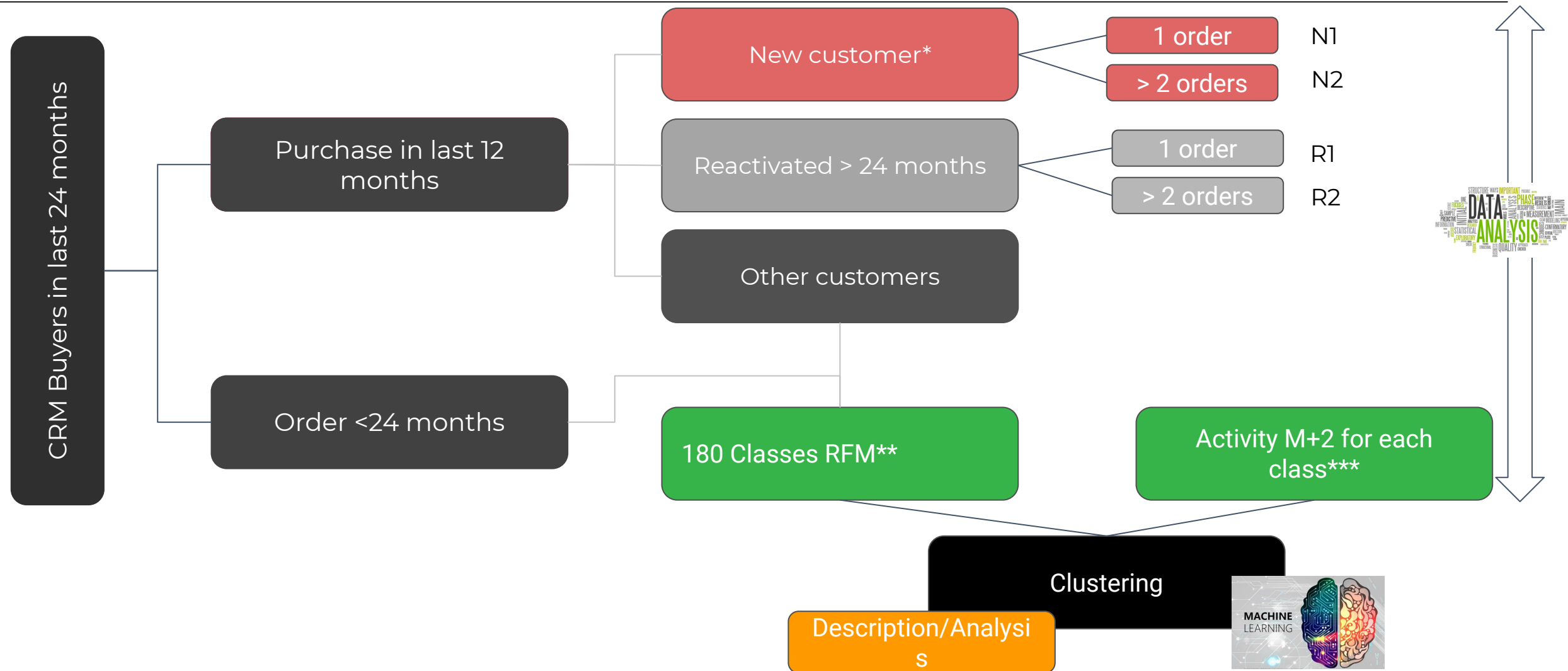


Côté Sushi : activity over time





Cluster Methodology



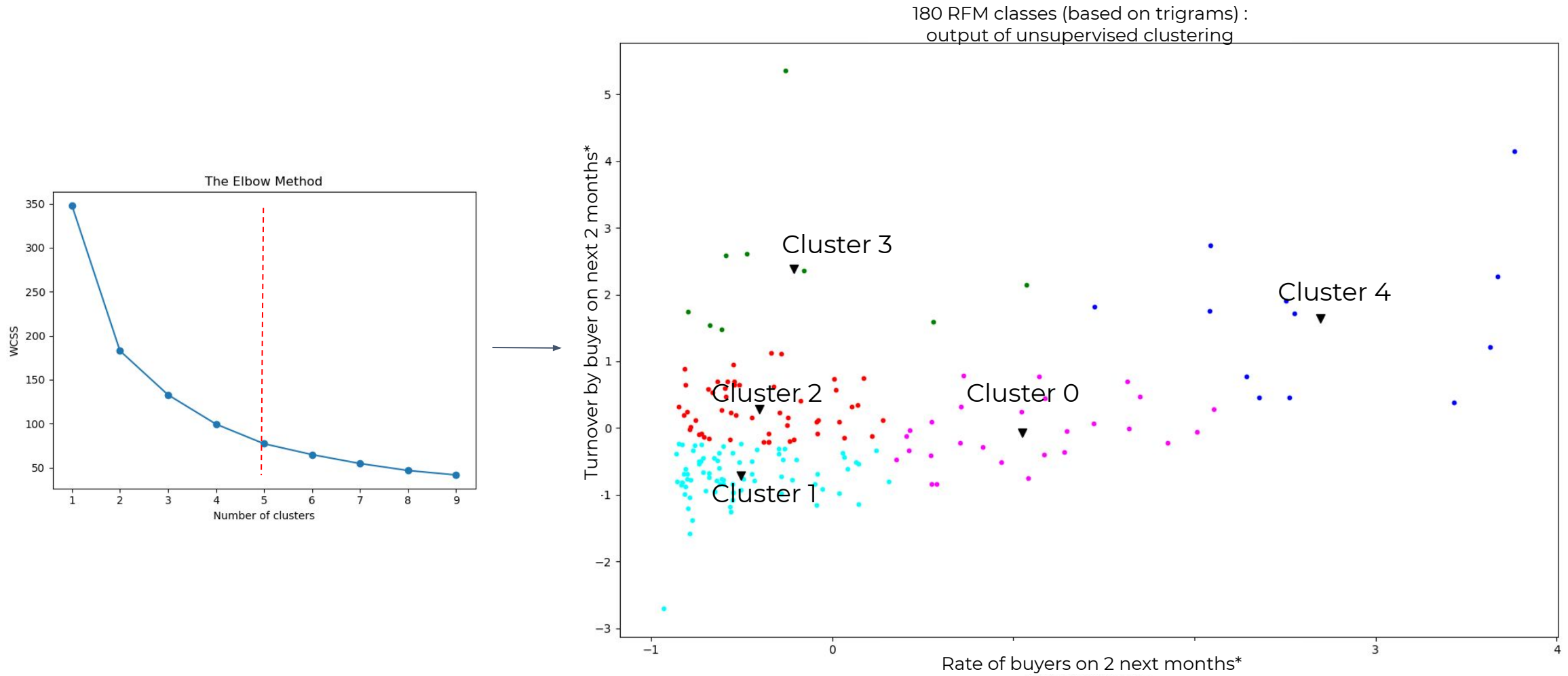
* based on inter-order for $\frac{3}{4}$ of new customers : 60 days

** based on Recency, Frequency and Monetary Value and their percentiles → Trigram and about 180 combinations

*** study on purchases between may 2017 and april 2019 for RFM classes (about 155 000 CRM customers), and May-June 2019 for next 2 months



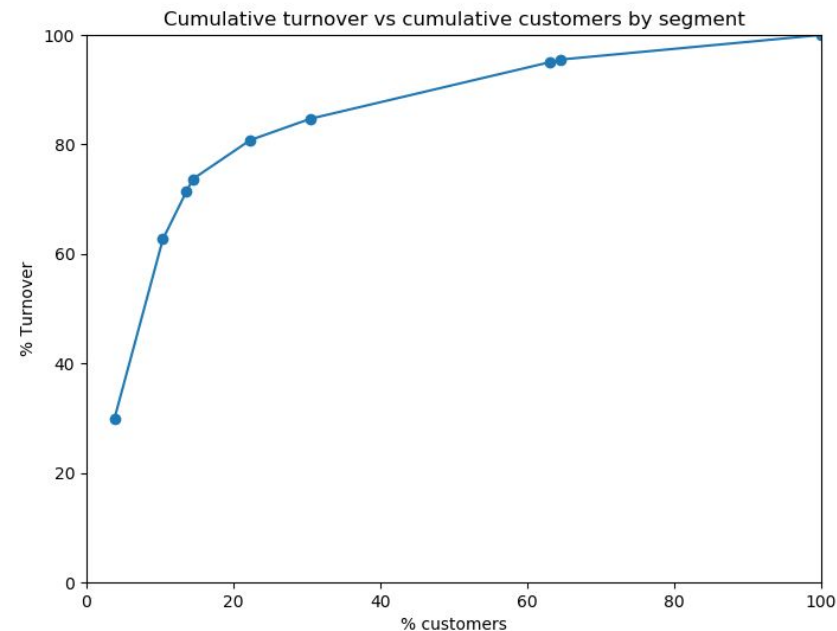
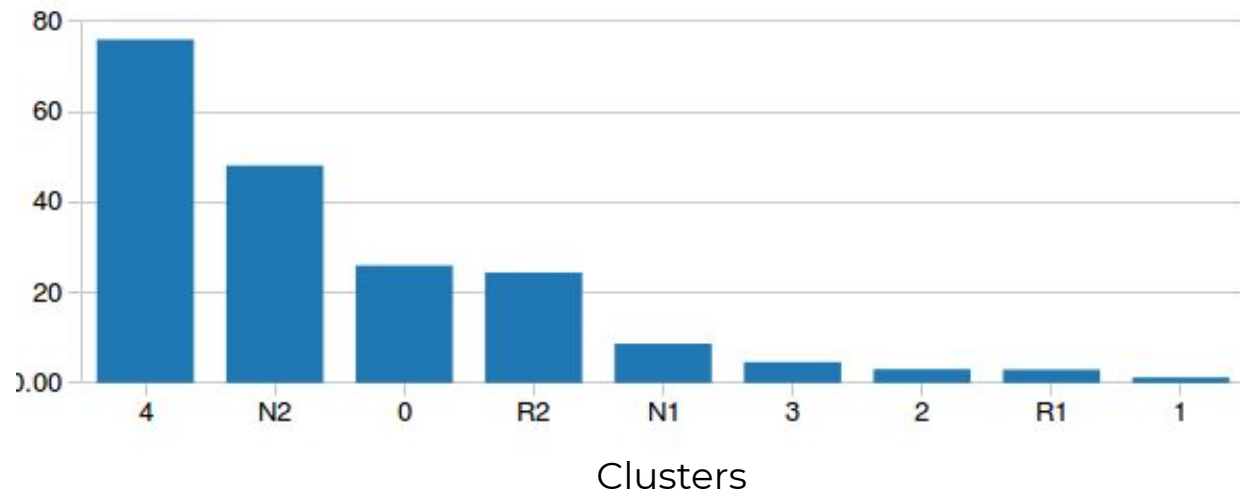
Result of Kmeans on RFM classes



* Here data is centered and reduced



Turnover by customer in 2 next months, by cluster

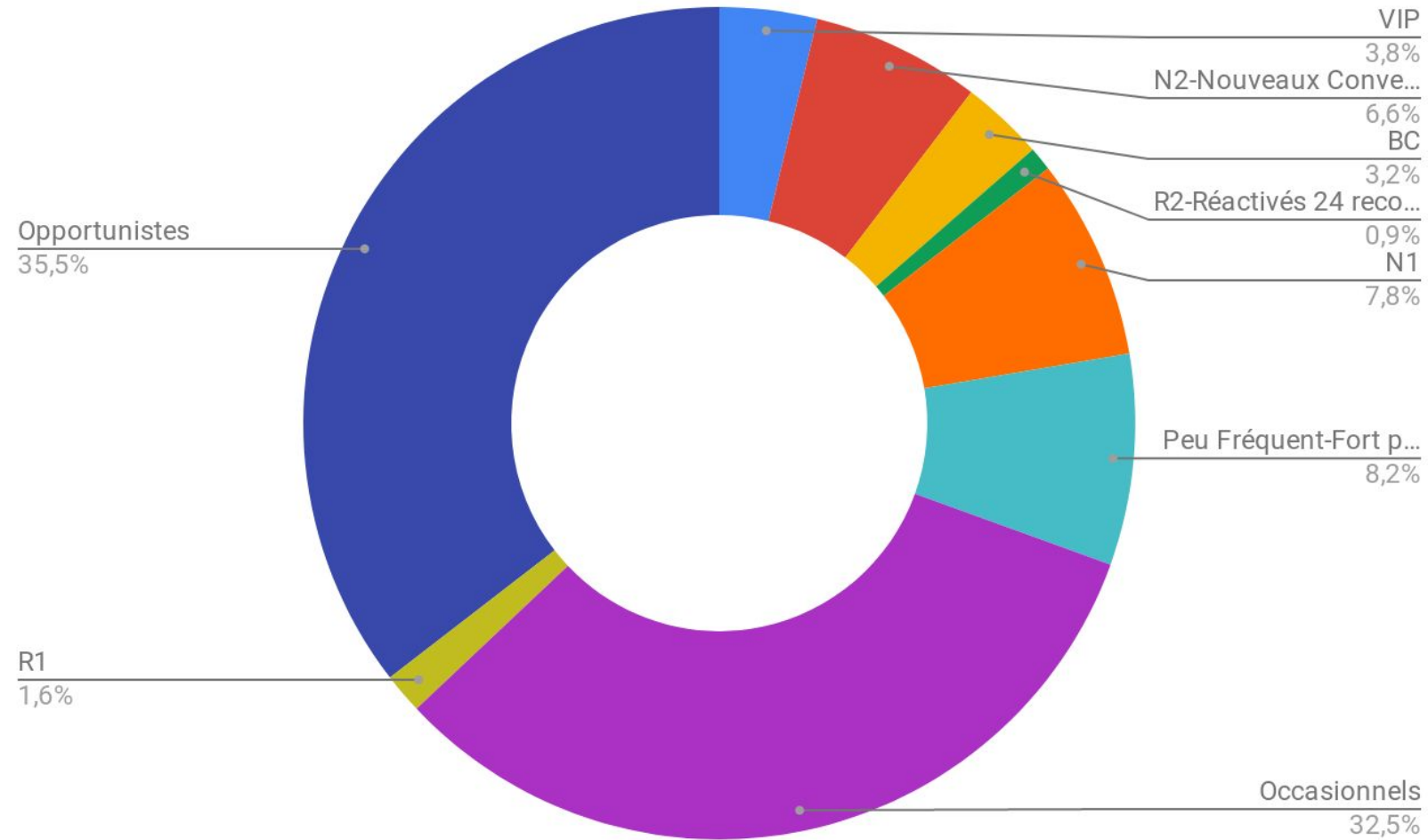


We can see that clusters are very different on future behavior. For example, customers in cluster 4 spend about 77€ in next 2 months.

Another point is difference between a new customer with only one purchase, and others (N1 vs N2).



Distribution by cluster





Au 30 avril 2019							M+2 (1er mai - 1er juillet 2019)			
Segment	Nb clients CRM	Buyer Rate 0-12 mois	Recency Average 0-12 months (in days)	Buyer Rate 13-24 months	Average Basket 0-24 mois	Nb average purchases 0-24 mois	Buyer Rate	Average Basket	No. of purchases/cus tomers	Turnover/cust omer
VIP	5904	100%	32,7	97,7%	45,3 €	20,1	63,8%	43,0 €	2,8	76,8 €
N2-Newly Converted	10231	100%	23,7	0,0%	38,3 €	5,3	49,9%	36,0 €	2,7	48,5 €
BC	5030	100%	56,7	87,0%	36,7 €	10,1	38,5%	13,9 €	4,8	25,7 €
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R1	2446	100%	206,4	0,0%	39,6 €	1	5,6%	37,5 €	1,4	2,9 €
Opportunists	55249	57%	124,5	50,6%	24,7 €	1,7	2,8%	31,0 €	1,4	1,2 €
TOTAL active 24 mois	155815	70%	106,6	47,7%	37,8 €	3,2	11,5%	33,6 €	2,5	9,7 €

Sample reading :

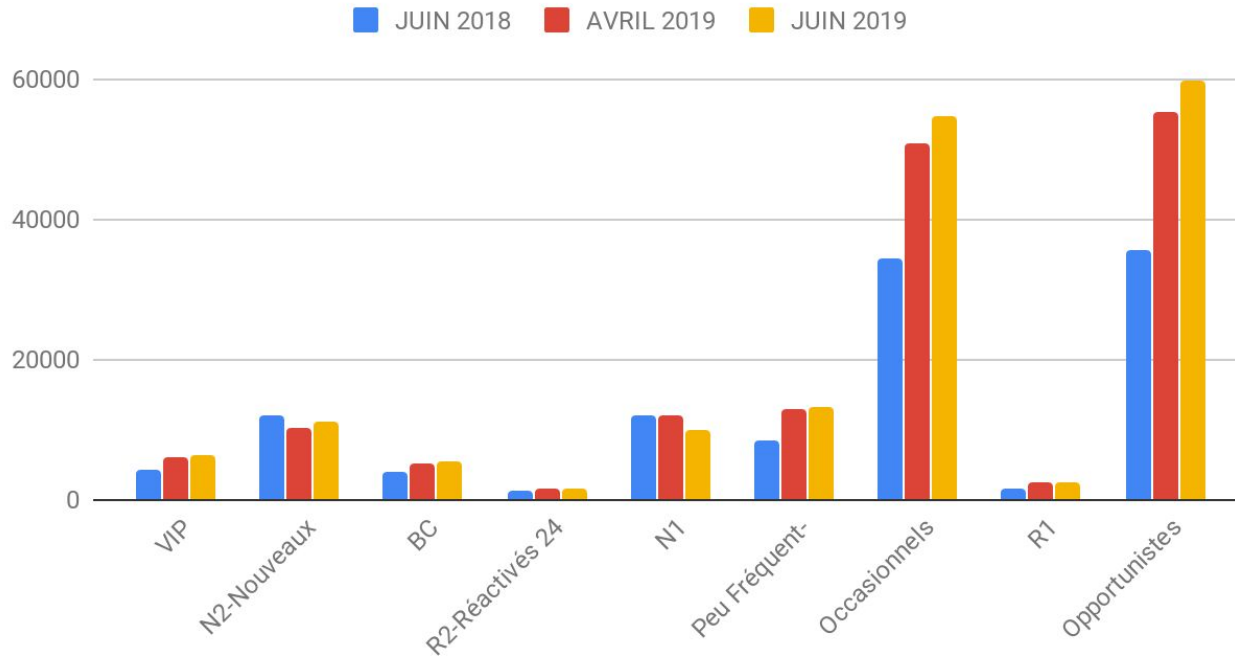
On April 30th, VIP represents 5900 customers. On last 24 months, in average, they spent 45€ for each purchase and realize about 20 orders by customer. On next 2 months, they have spent each about 77€.

In the same time, “Opportunistes” are only 2,8% to have bought in these 2 months.

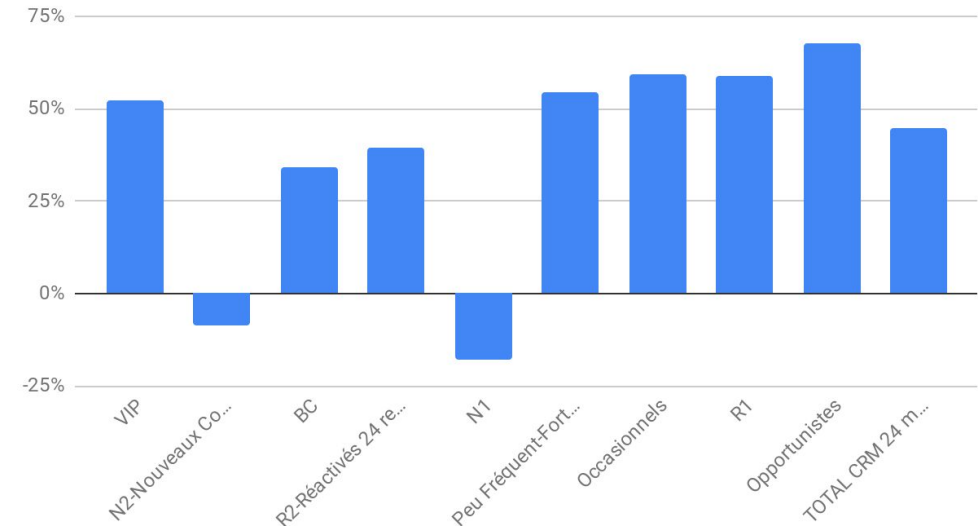


Evolution over time

Number of customers by cluster over time



Evolution between June 2018 and June 2019 by cluster



Like activity evolution, number of CRM customers is surging (about 44% in one year). Clusters are growing between 34% (BC) and 68% (Opportunistes).

Note that it's normal that the number of new customers doesn't grow, because at the beginning, number of customers in database is small, so all buyers are new customers.



Loyalty and churn

Clusters June 2018 → June 2019

Before\Today	1-vip	2-bc	3-pffp	4-occasionnels	5-opportunistes	passifs
1-vip	44,5%	9,4%	14,3%	25,3%	6,6%	0,0%
2-bc	12,7%	16,5%	11,5%	33,4%	25,9%	0,0%
3-pffp	2,0%	3,1%	13,8%	54,7%	9,2%	15,5%
4-occasionnels	1,4%	2,6%	4,9%	39,4%	14,5%	34,9%
5-opportunistes	0,3%	1,1%	1,1%	8,8%	45,2%	40,8%
6-R2	10,5%	9,6%	13,9%	34,5%	31,5%	0,0%
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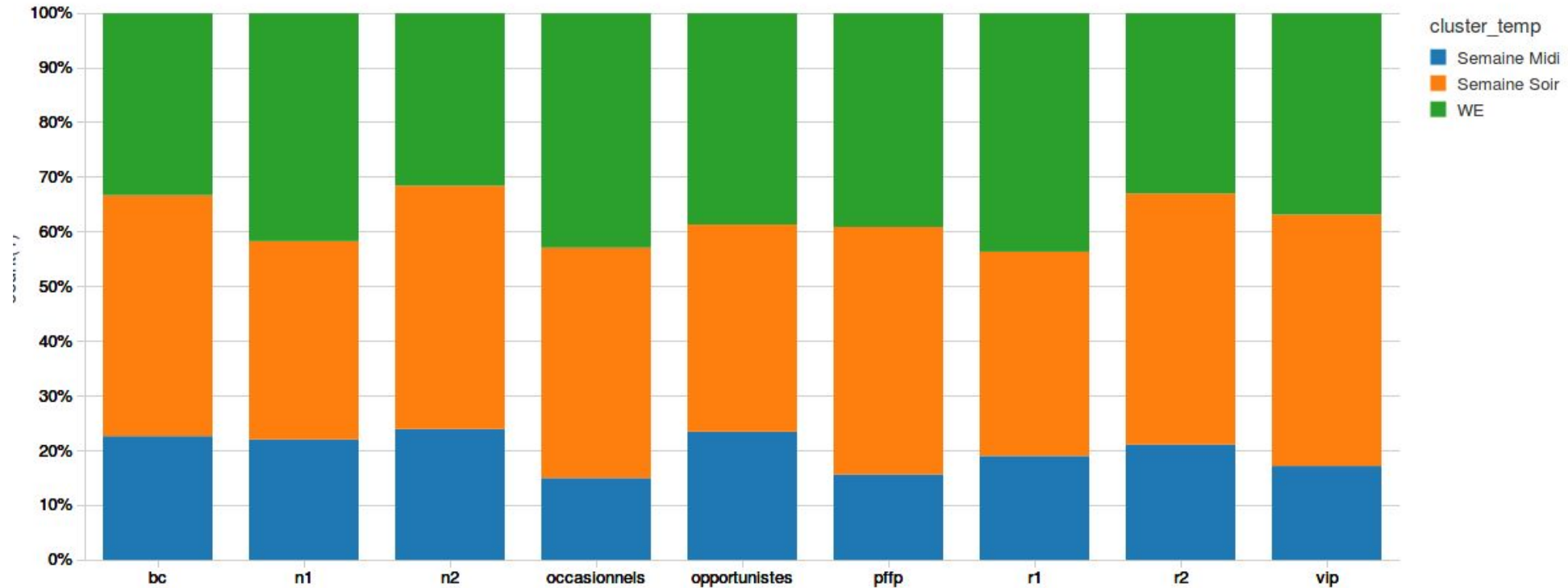
About 45% of VIP stay VIP 1 year later and about 13% of GC become VIP.

We can note differences about loyalty between R2 and R1, or N2 and N1. Indeed, it's very important concentrate efforts on 2nd purchase for New and Reactivated customers.

Finally, one of objective could be to win some points of loyalty for Occasionnels, who are the highest number.



Cross with temporality behavior



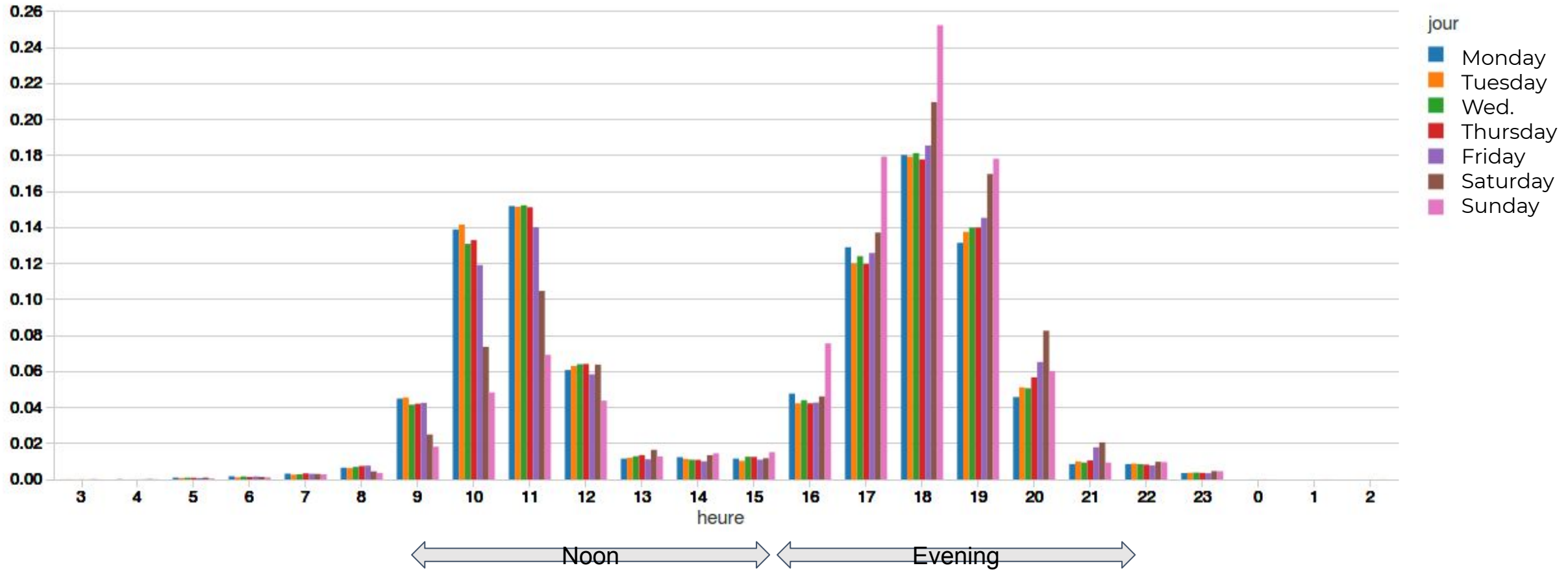
There are few differences between RFM cluster about temporality behaviour.
So it would be interesting to mix use of these 2 segmentations.

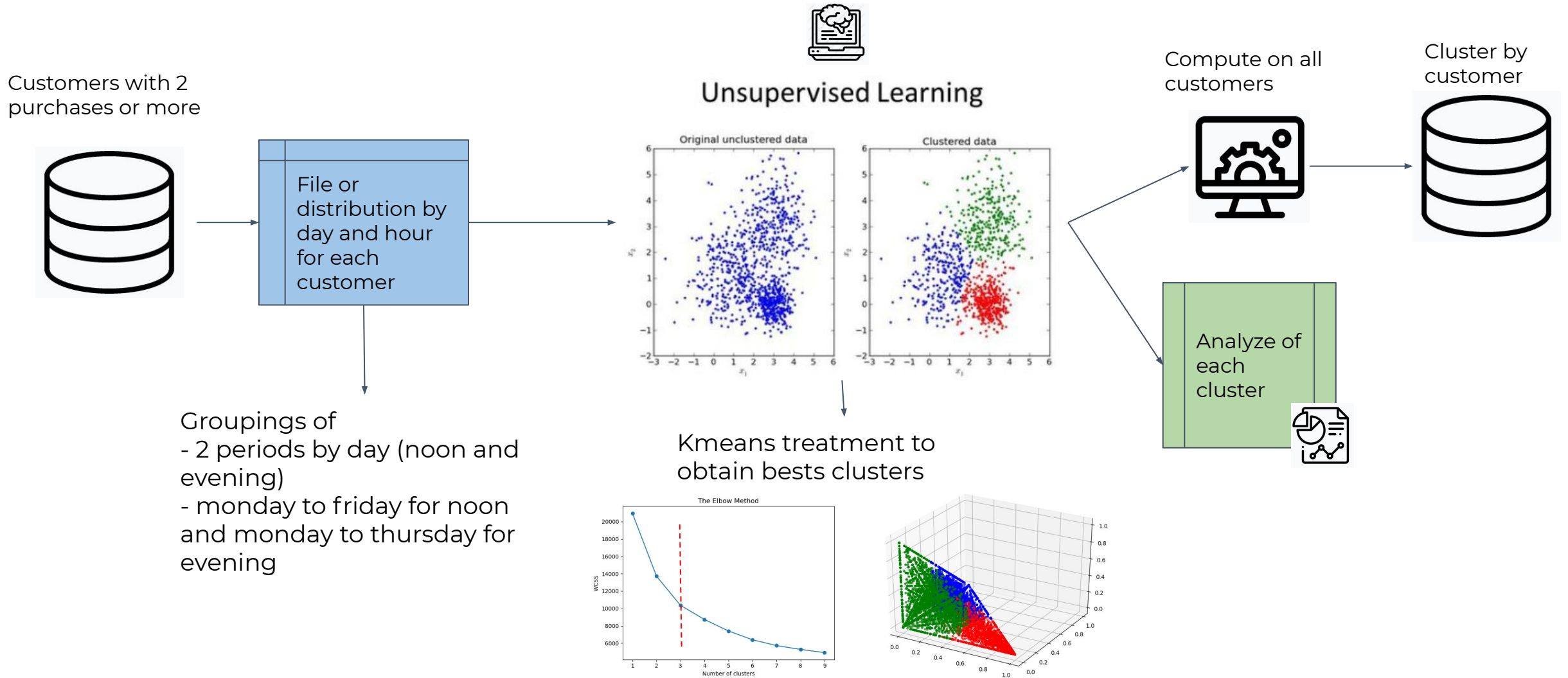


Temporality behavior



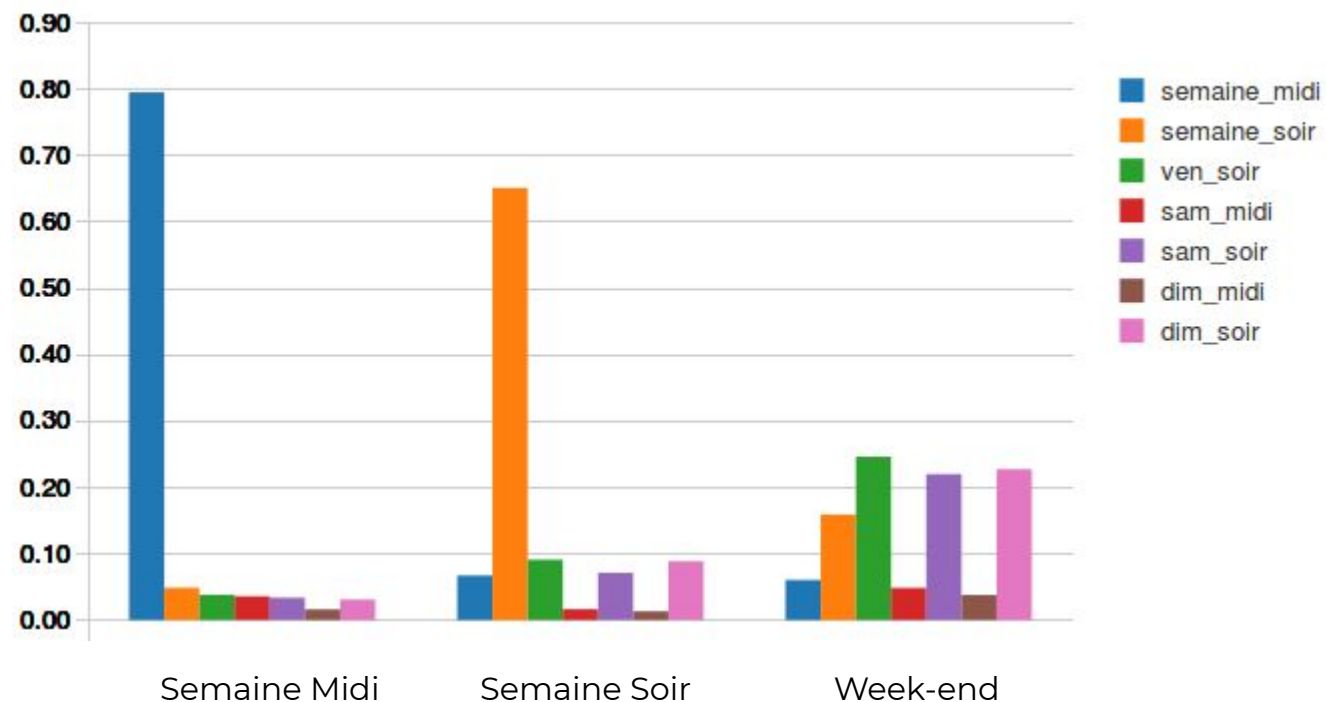
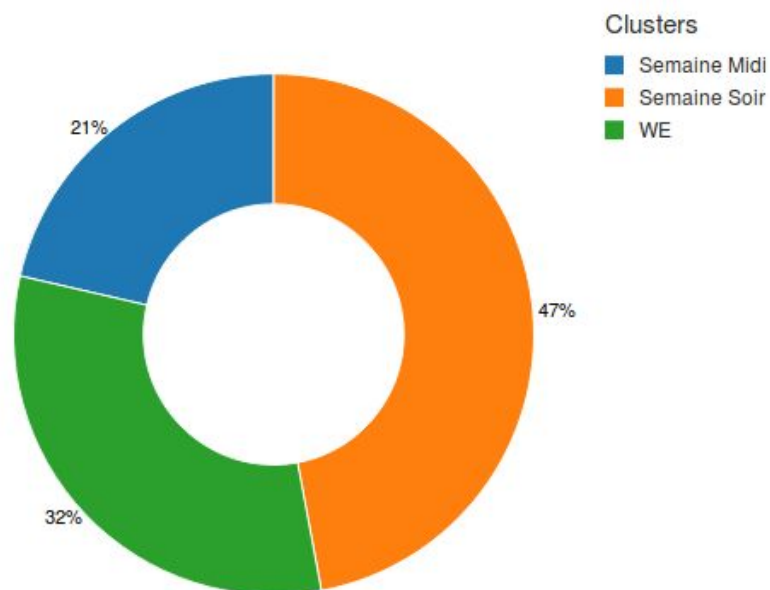
Orders distribution by day and hour







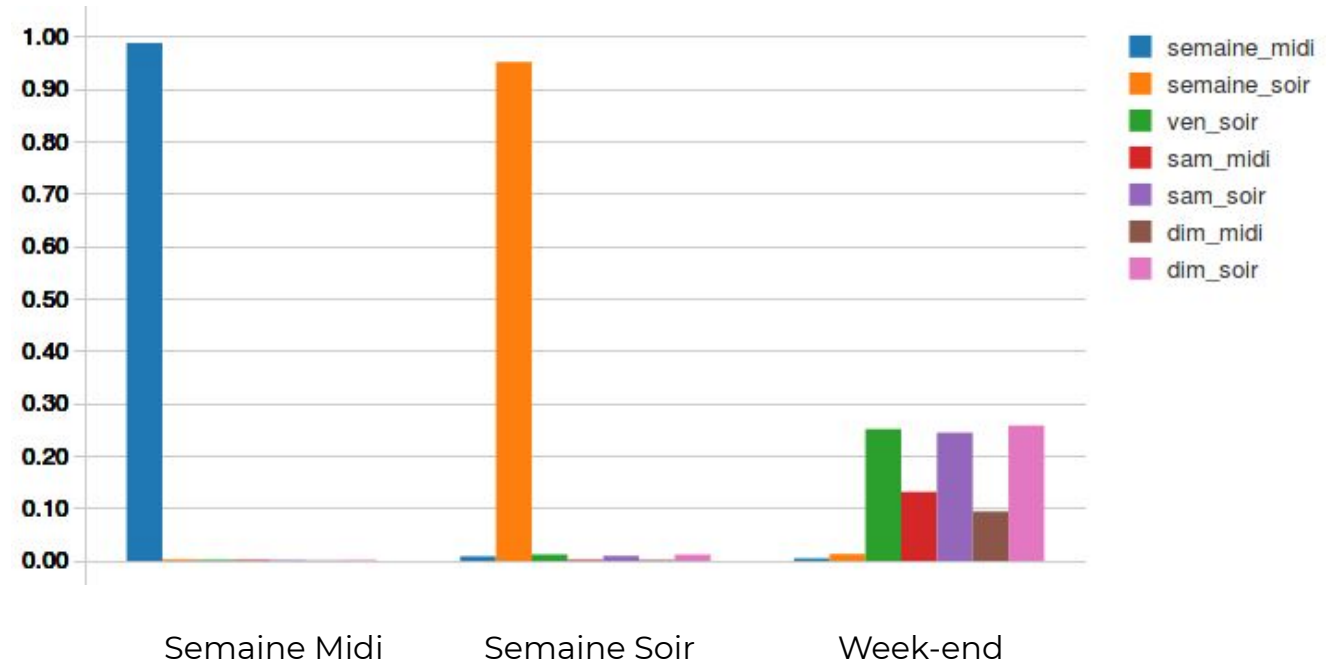
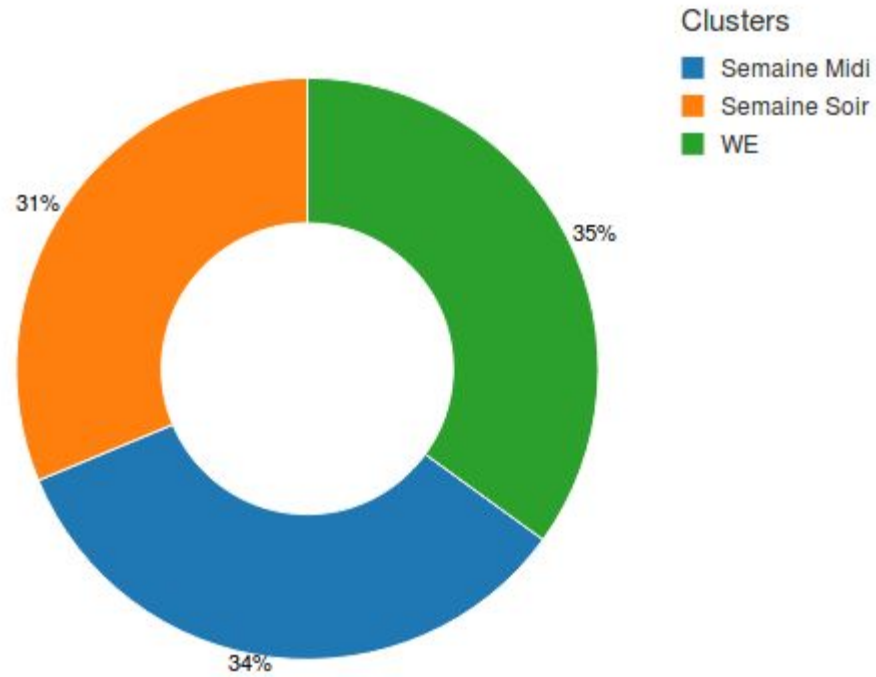
Results (on customers with at least 2 purchases since 2018*)



3 main clusters. One for exclusive buyers at noon, another for week buyers but evenings, and lastly a group for buyers with orders mainly during week-end, especially evening.



Apply on all customers*



Apply these clusters on all customers (even those with one purchase) isn't a problem.
Clusters stay reliable.