

YEARLY SOLICITATION PLAN

Using data to maximize
the long-term performance
of the charity fund

GROUP 9

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**FROM THEORY TO
PRACTICE**

01

OBJECTIVE



OBJECTIVE

Design a campaign plan ensuring the long-term performance of the charity fund



SAVE

energy and money



PRESERVE

relationships with donors



ADAPT

to budget constraints



VARIABLES & CONSTRAINTS

NUMBER OF SOLICITATIONS

Decide how many times each donor should be solicited

DATE(S) OF SOLICITATION

Identify the best solicitation dates for each donor

COST CONSTRAINT

Each campaign costs 25 k€
Each solicitation costs 0.85 €

AVAILABLE DATA

Acts and Actions datasets provided by the charity fund

02

CONTEXT



SOME KEY FIGURES



2016

9 major
campaigns

160 165 donors
solicited

805 753
solicitations

2017

9 major
campaigns

168 397 donors
solicited

976 213
solicitations

**What to
expect next...**

9 major
campaigns

177 052 donors
to solicit

911 765
planned solicitations
(provisional budget: 1 000 000€)



DONORS ANALYSIS



JEAN-PAUL



4591



Velaux

- Increasingly generous donor since 2006
- Donates around 1000€ per year since 2010
- In average, is solicited six times each year and makes two donations



MARIE-THERESE



513



Trappes

- Active and generous donor since 1995
- Donated 860€ in 2017 with 14 spontaneous donations and 5 solicited donations



DONORS ANALYSIS



YANNICK



1004919



Strasbourg

- Made a unique donation of 30€ in 2015
- Was contacted 18 times since this donation but doesn't answer

Who should be solicited?

**Probably not Yannick, but
Marie-Therese and Jean-Paul
are interesting...**

03

STRATEGY

**COMBINATION OF AN
ADVANCED SCORING
MODEL AND A SMART
ALLOCATION OF
SOLICITATIONS BASED ON
DONOR PREFERENCES**





SCORING CRITERIA



INITIATIVE

Does this donor make unsolicited donations?



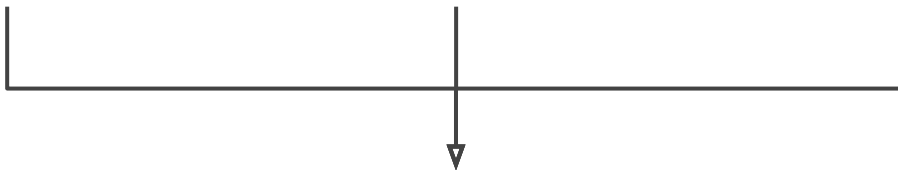
RESPONSIVENESS

Does this donor respond to our solicitations?



LIFETIME VALUE

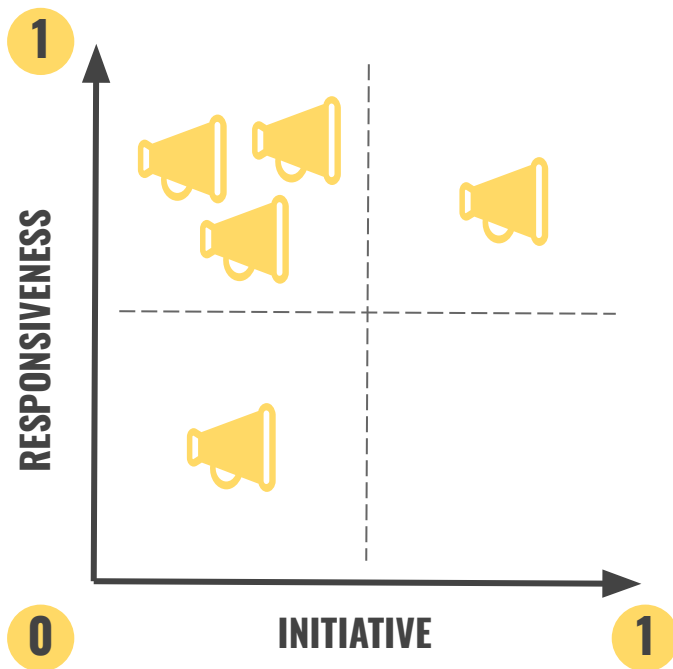
How valuable is the future relationship with this donor?



ADVANCED SCORE



RESPONSIVENESS & INITIATIVE



RESPONSIVENESS:

An estimation of the **probability** of the donor **responding to a solicitation** (making a donation after being solicited) based on the ratio between the number of times the donor responded to a solicitation over the number of solicitations the donor received, since 2012.

INITIATIVE:

An estimation of the **probability** of the donor **making a spontaneous donation after its first donation** (without being solicited) based on the ratio between the number of times the donor made a spontaneous donation over the number of donations (except automatic payments) of the donor, since 2012.



LIFETIME VALUE

Customer Lifetime Value (CLV):

An individual measure of the **predicted net profit** attributed to the entire **future relationship** with the donor, **focusing on long-term perspective** and estimated through three different elements :

Probabilistic donor
attrition model

Probability of a
donor to be
“alive” in the
charity at some
point

Donors' behaviour
model

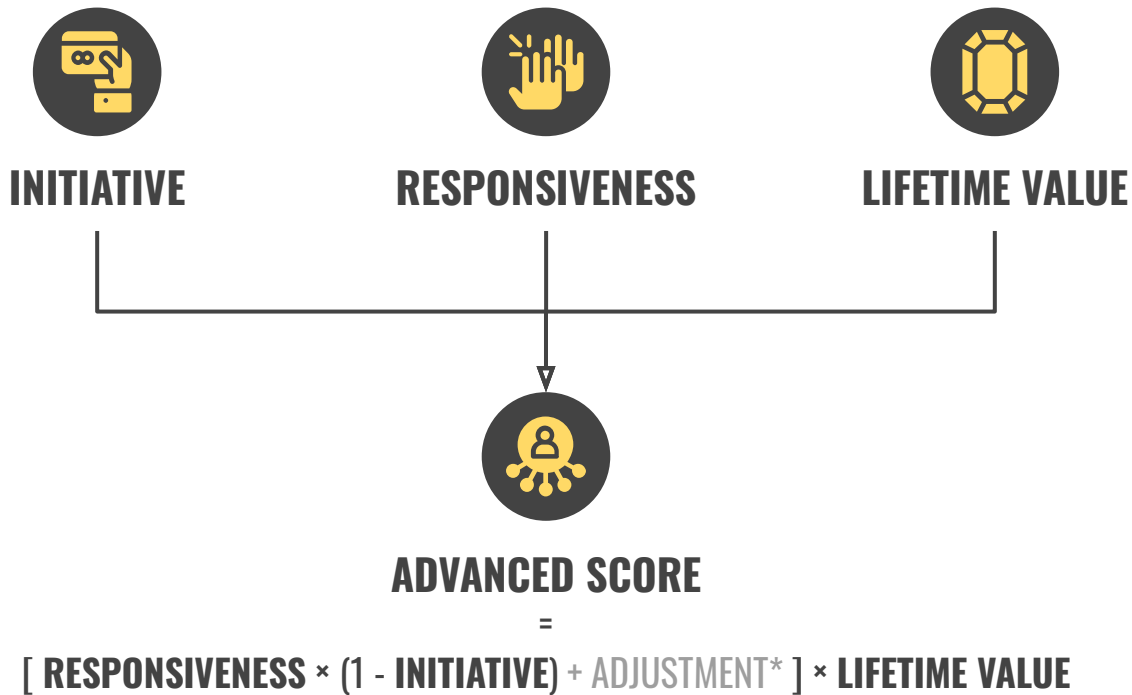
Number and
amount of
donations to
expect from a
customer

Time value of
money

Discount rate



SCORING COMPUTATION



*small positive number to prevent a zero-score in extreme cases



BETTER THAN CLV ALONE

- 💡 These three donors have very close CLVs, but very different advanced scores.
- 💡 The advanced score provides an incentive to solicit reactive donors, and not to lose ressources soliciting those who tend not to respond or to spontaneously donate.



* 6 donations per year between 2015 and end of 2017 of around 30€ each



* 22 donations per year between 2009 and end of 2017 of around 30€ each



* 7 donations per year between 2014 and end of 2017 of around 40€ each



SCORING RESULTS



JEAN-PAUL

4591

Velaux

- Initiative: 0
- Responsiveness: 0.31
- Lifetime Value:
8683.21€
- **Score: 3087.36**



MARIE-THERESE

513

Trappes

- Initiative: 0.67
- Responsiveness: 0.68
- Lifetime Value:
2709.85€
- **Score: 737.77**





SCORING RESULTS



YANNICK



1004919



Strasbourg

- Initiative: 0
- Responsiveness: 0
- Lifetime Value:
62.24€
- **Score: 3.11**



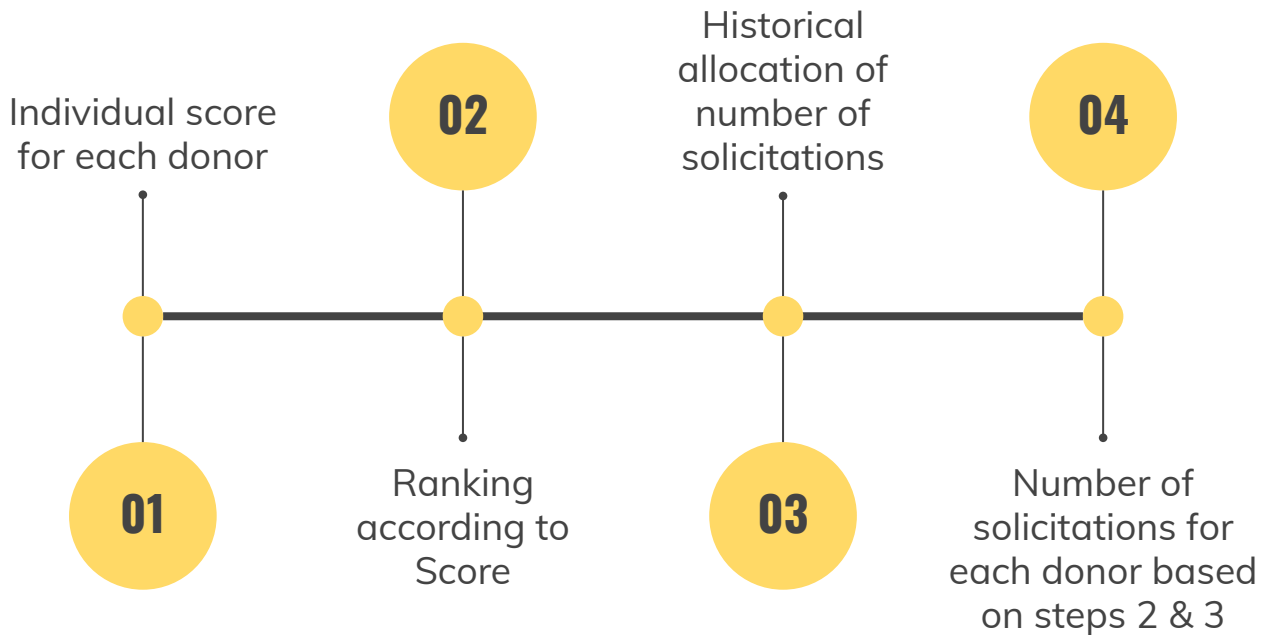
**Jean-Paul and Marie-Therese
have very nice scores ! They
should be contacted quite
often.**

But how often ?



INDIVIDUAL SOLICITATION FREQUENCY

The higher the score, the more frequently a donor should be solicited.

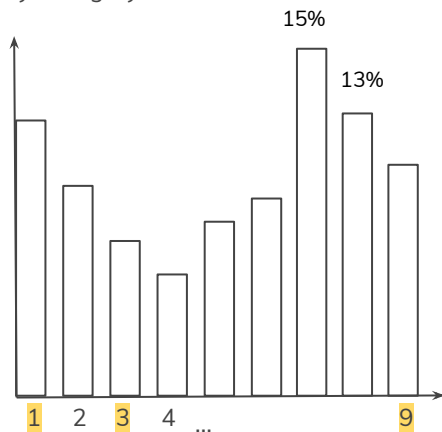




INDIVIDUAL SOLICITATION FREQUENCY

Example on made-up data to explain the frequency-category allocations

% of donors in a frequency-category



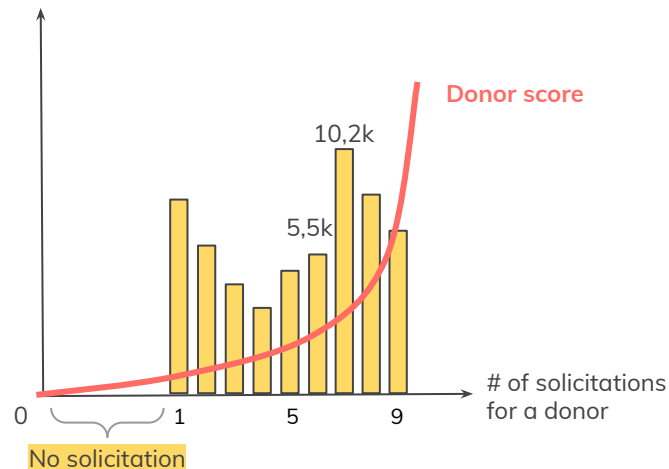
Given a **budget constraint**, we can compute the best **number of donors** for each **frequency-category**



of solicitations for a donor = frequency category

Historical Allocations

of donors in a frequency-category



Donors are assigned to a frequency-category based on score-rank

Future Allocations

04

**FROM THEORY TO
PRACTICE**



A CONTINUOUS PROCESS

Once at the **beginning** of the year, and then **after each campaign**, the whole process can be re-executed, to determine **who should be solicited** throughout the rest of the year and **how often**, taking into consideration **adapted constraints** (rest of budget, ...) and donors' responses

**BEGINNING OF
THE YEAR**



First solicitation
plan

CAMPAIGN 1



Solicit the donors
that have been
chosen

Donors' response

**JUST AFTER
CAMPAIGN 1**



Update the data
and compute a
new plan

CAMPAIGN 2



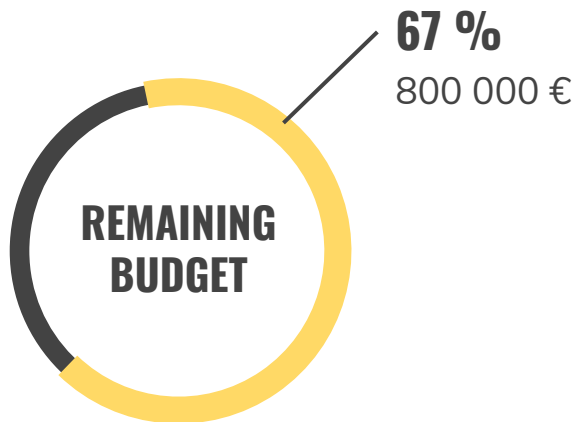
Solicit the donors
that have been
chosen

Donors' response



PARAMETERS TO UPDATE

Example on made-up data for explanation purposes



DONORS' PROFILES

Based on latest campaigns' results

RESPONSIVENESS & INITIATIVE

MONTHS FINISHED & REMAINING

JAN - MAR

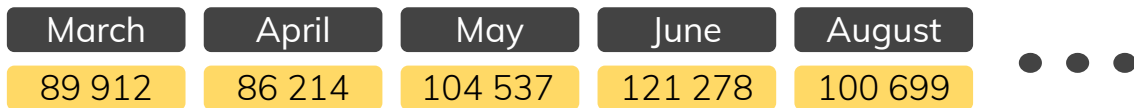
APR - DEC



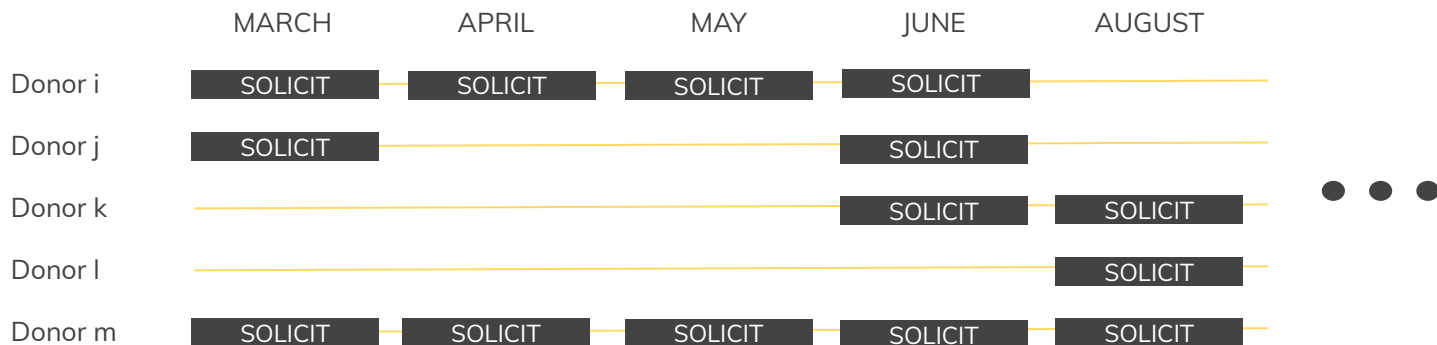
OUTPUT : SOLICITATION PLAN FOR NEXT CAMPAIGNS

Each time the process is executed, it provides a **precise solicitation plan** for the coming months, **updated** thanks to the **most recent data**, with **recommended solicitations** for **each** campaign.

- Total number of solicitations per monthly campaign.



- Schedule of future solicitations for each donor based on historical donation patterns and taking into account a one-two month time-difference between solicitation and donations



The slide features a solid yellow background. On the left side, there is a vertical white stripe. Two horizontal dark grey lines extend from the left edge of the slide, one above and one below the center. On the right side, two horizontal dark grey lines extend from the right edge, also one above and one below the center.

THANKS!



Appendix (1/2)

How many donors should we solicit, per campaign?

	March	April	May	June	August	October	November	DecemberA	DecemberB
1	89912	86214	104537	121278	100699	106004	119560	82437	102005

Which donor should we solicit, per campaign?

	March	April	May	June	August	October	November	DecemberA	DecemberB
1	144	106	106	64	106	106	106	106	106
2	185	128	144	128	128	144	128	147	128
3	258	147	147	144	144	147	144	148	144
4	283	185	148	147	147	148	147	153	147
5	319	208	185	148	148	152	148	185	148
6	329	242	258	185	153	153	153	208	185
7	410	283	319	208	160	185	185	242	208



Appendix (2/2)

After re-running the code at the end of May (March, April and May campaigns are done)

How many donors should we solicit, per campaign?

	March	April	May	June	August	October	November	DecemberA	DecemberB
1	0	0	0	111033	102785	105270	110640	97566	103274

Which donor should we solicit, per campaign?

	March	April	May	June	August	October	November	DecemberA	DecemberB
1	NA	NA	NA	106	106	106	106	106	106
2	NA	NA	NA	128	144	144	128	147	144
3	NA	NA	NA	144	147	147	144	148	147
4	NA	NA	NA	147	148	185	147	185	148
5	NA	NA	NA	148	153	208	148	258	185
6	NA	NA	NA	185	185	258	185	283	208
7	NA	NA	NA	208	208	283	208	319	283