

C2022



Dal 3 al 6 ottobre,
solo su Learnn.

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MARKETING MIX MODELLING: IL DILEMMA DEL PPC, RISOLTO

Gianluca Binelli



Gianluca Binelli

Founder & CEO @ Booster Box

6,5 years @ Google

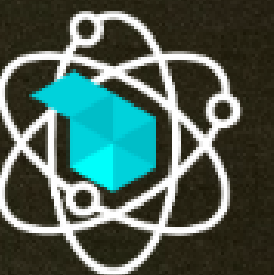
**Advisor for Google's own equity
fund Capital G**

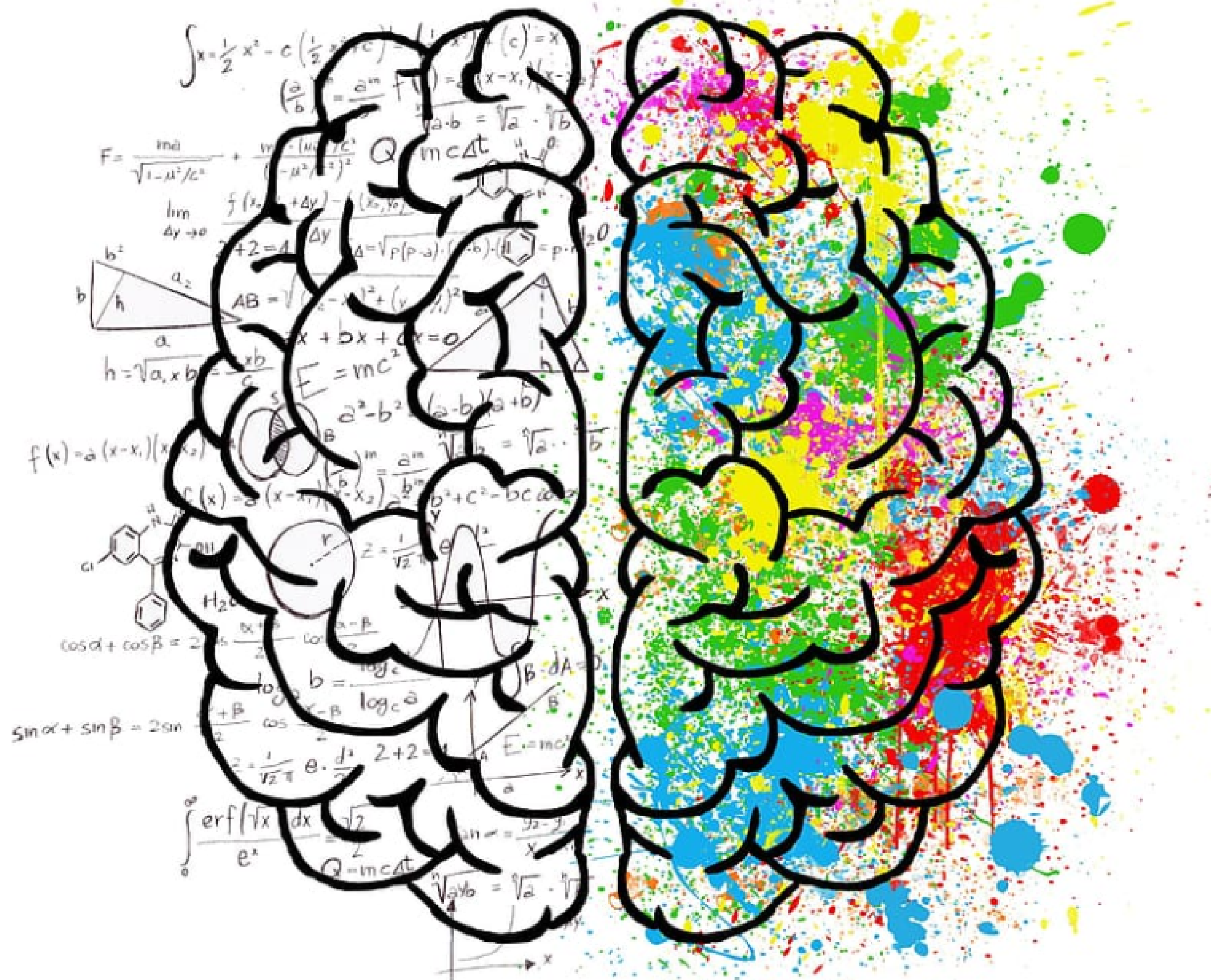
Not a Data Scientist

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We're the **best*** scientific
performance marketing agency

* *according to our mums*
(but also to the Global Agency Awards 2022)





1

**It takes both
brand & performance marketing
to stand out from the crowd**

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facebook



Google



2

Platforms are silos

**Allow MyApp to track your
activity across other
companies' apps and
websites?**

This helps our ad partners aggregate
information about you and provide you
with a more personalized ad experience.

Ask App Not to Track

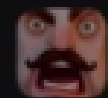
Allow

THURSDAY, SEPTEMBER 2

Today

GET STARTED

5 Quick Tips for Secret



Secret Neighbor
A Horror Social Multiplayer

Ad

Personalized Ads

Personalized ads in Apple apps such as the App Store and Apple News help you discover apps, products, and services that are relevant to you. We protect your privacy by using device-generated identifiers and not linking advertising information to your Apple ID.

Turning on Personalized Ads increases the relevance of ads shown by letting us use data like account information, app and content purchases, and where available, the types of News stories you read.

Apple does not track you or share your personal information with any third parties.

[Learn More](#)[Turn On Personalized Ads](#)[Turn Off Personalized Ads](#)

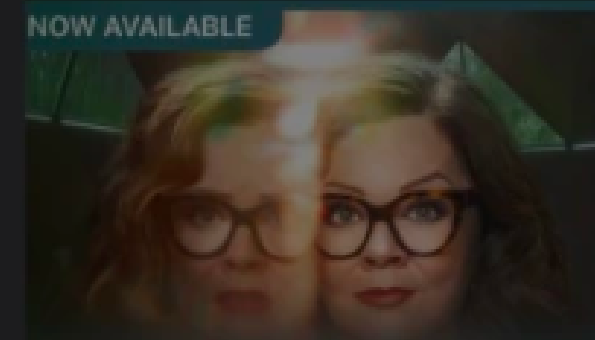
LET'S PLAY

5 Fantastic Transportation Games



Planes, trains, automobiles...and more!

NOW AVAILABLE



PREMIERE

Nine Perfect Strangers on Hulu

A Hulu Original based on the bestselling book.

Today

Games

Apps

Arcade

Search

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TECH

Facebook says Apple iOS privacy change will result in \$10 billion revenue hit this year

PUBLISHED WED, FEB 2 2022•7:54 PM EST | UPDATED THU, FEB 3 2022•11:06 AM EST

Kif Leswing
@KIFLESWING

SHARE    

3

**We need new
growth engines**

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“When everybody is super, no one will be”

Syndrome, The Incredibles



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4

**Algorithms are
becoming a commodity**

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Creative, Strategy, Data

Creative, Strategy, Data

Creative, Strategy, Data

Creative, Strategy, Data

Creative, Strategy, Data

Creative, Strategy, Data

Creative, Strategy, Data

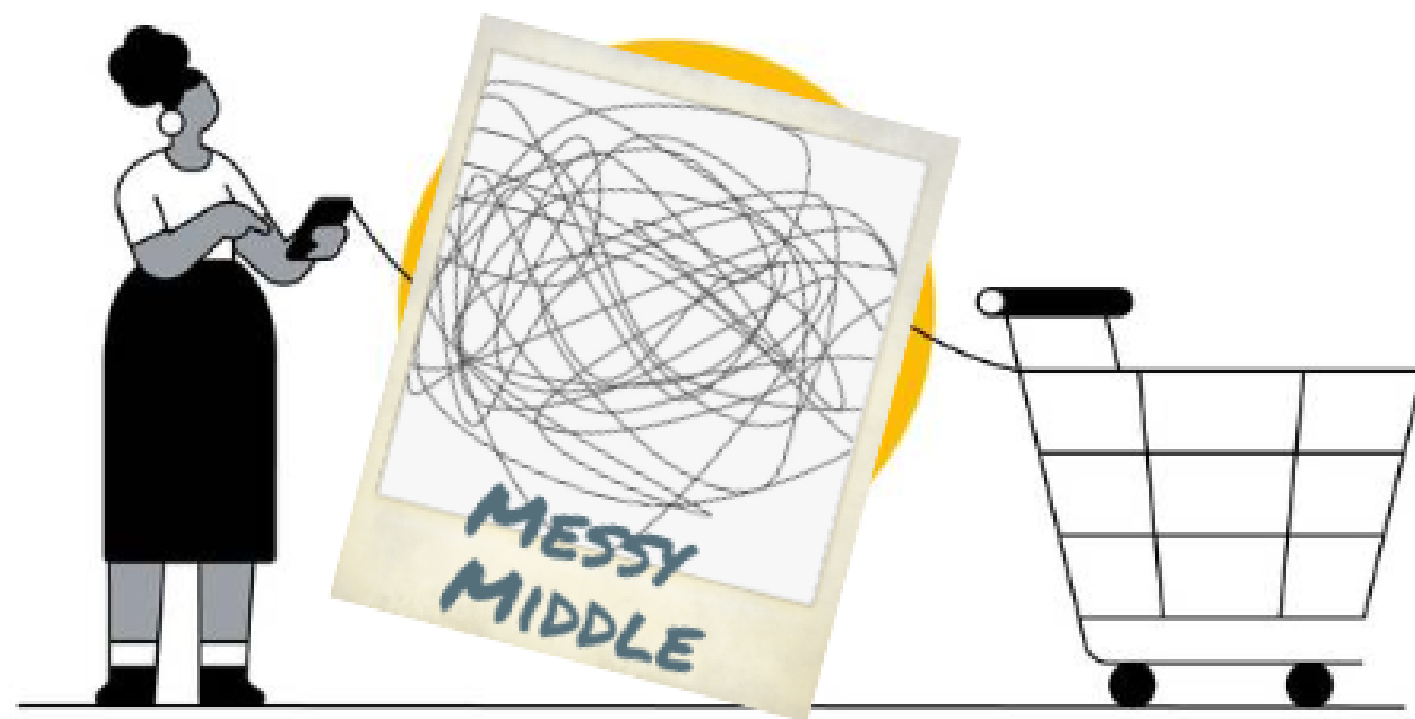
Creative, Strategy, Data

Creative, Strategy, Data

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Why is it so hard?

User behaviors are
complex



Cookieless





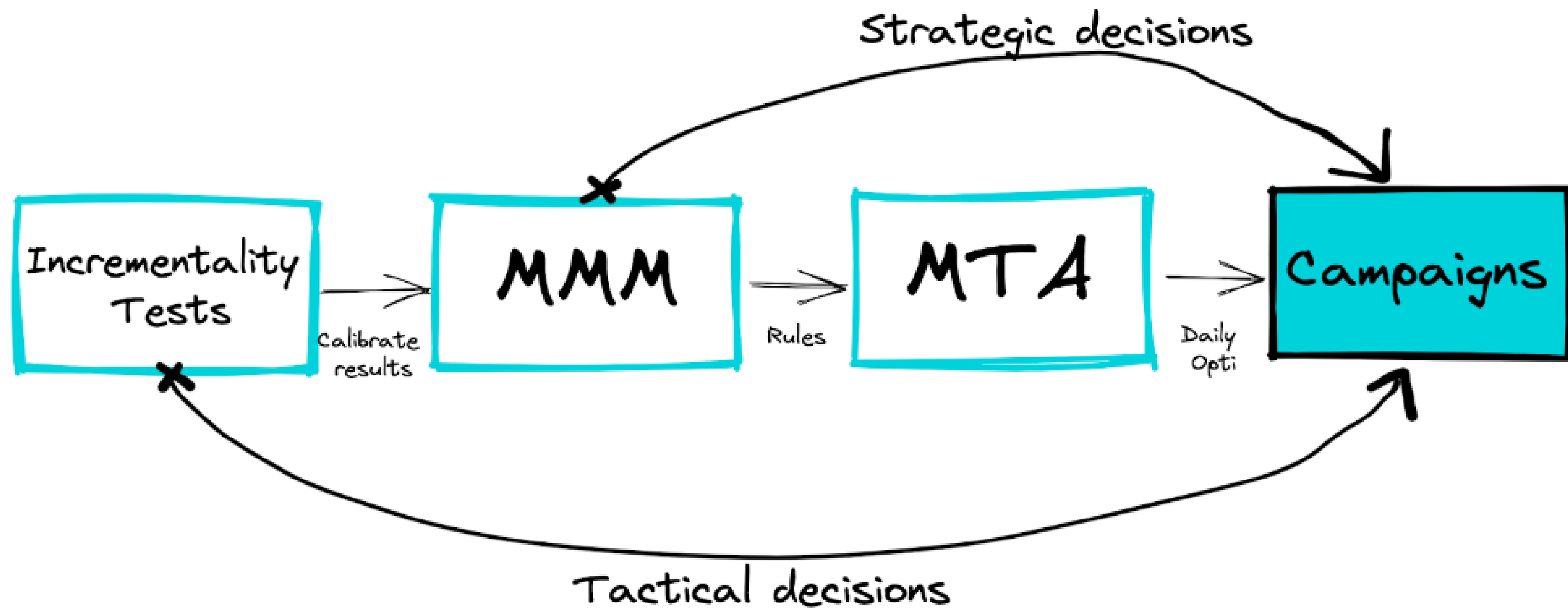
?

Measurement
=
Incrementality
+ Attribution
+ Long term value

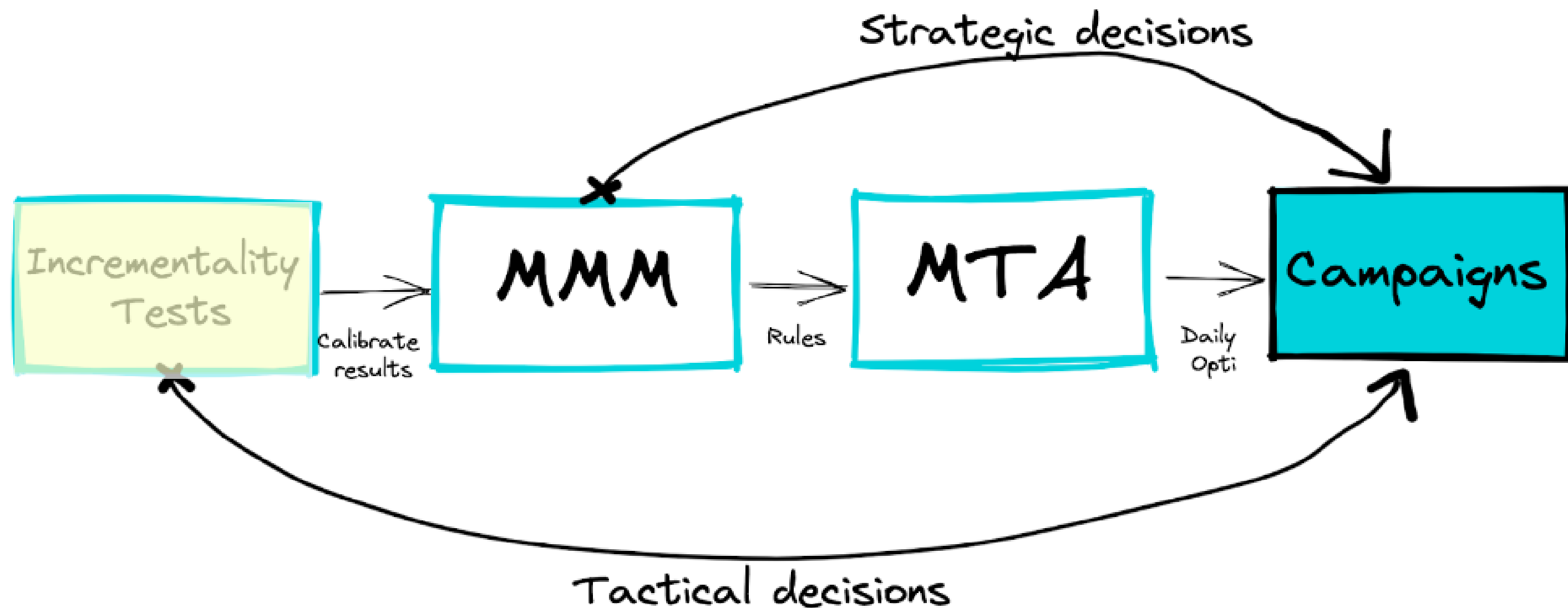


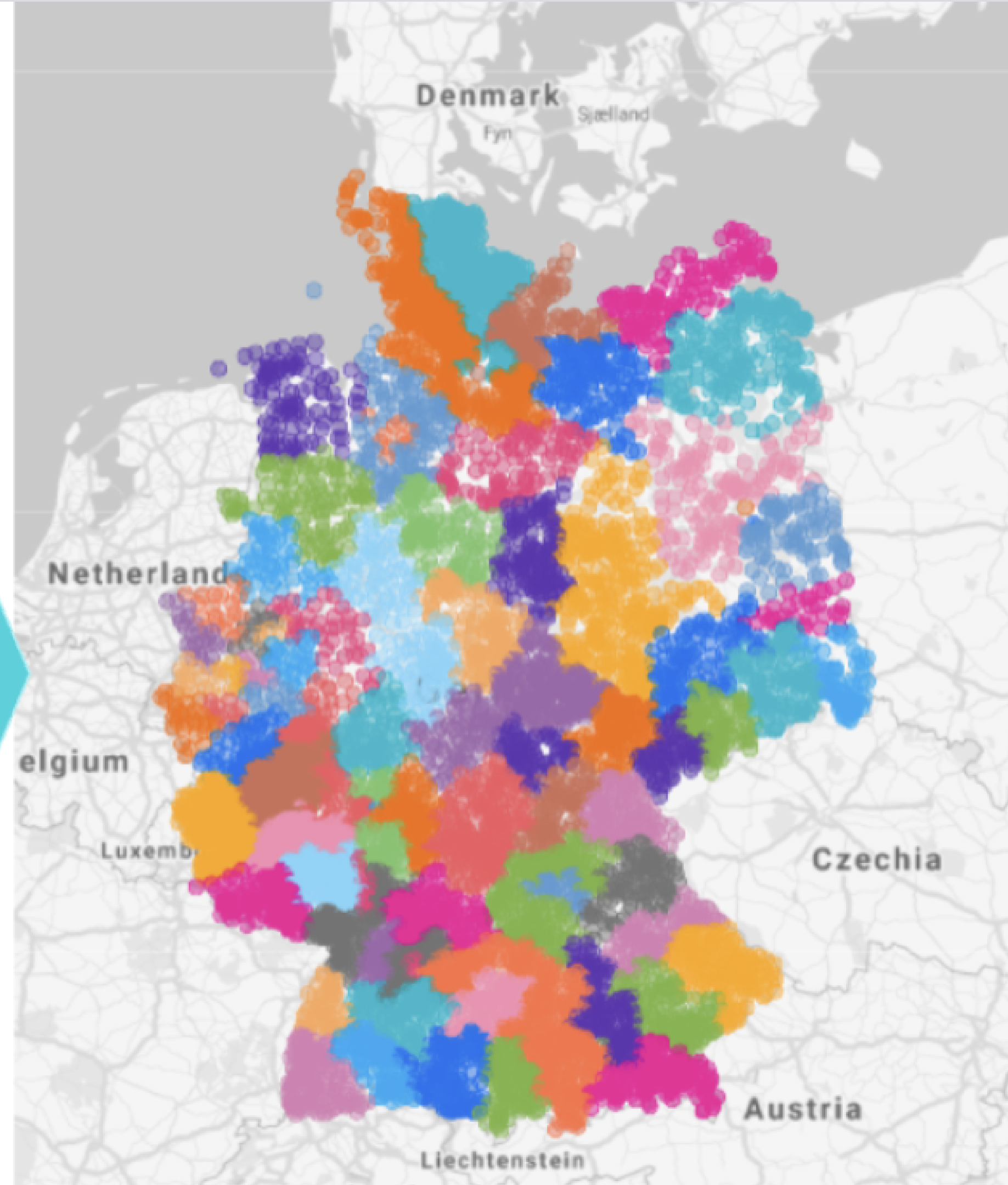
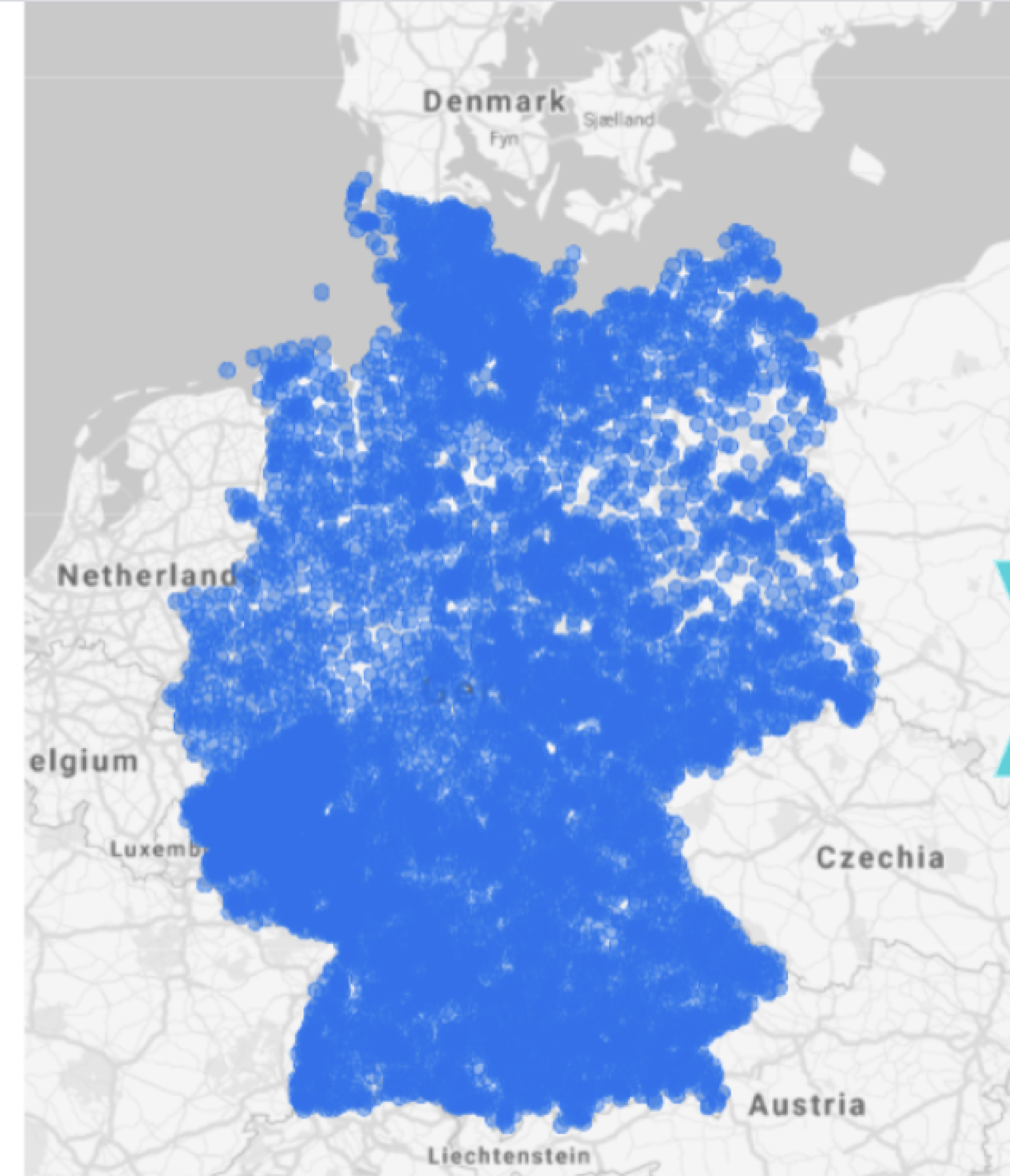
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Our measurement stack (DAVINCY)

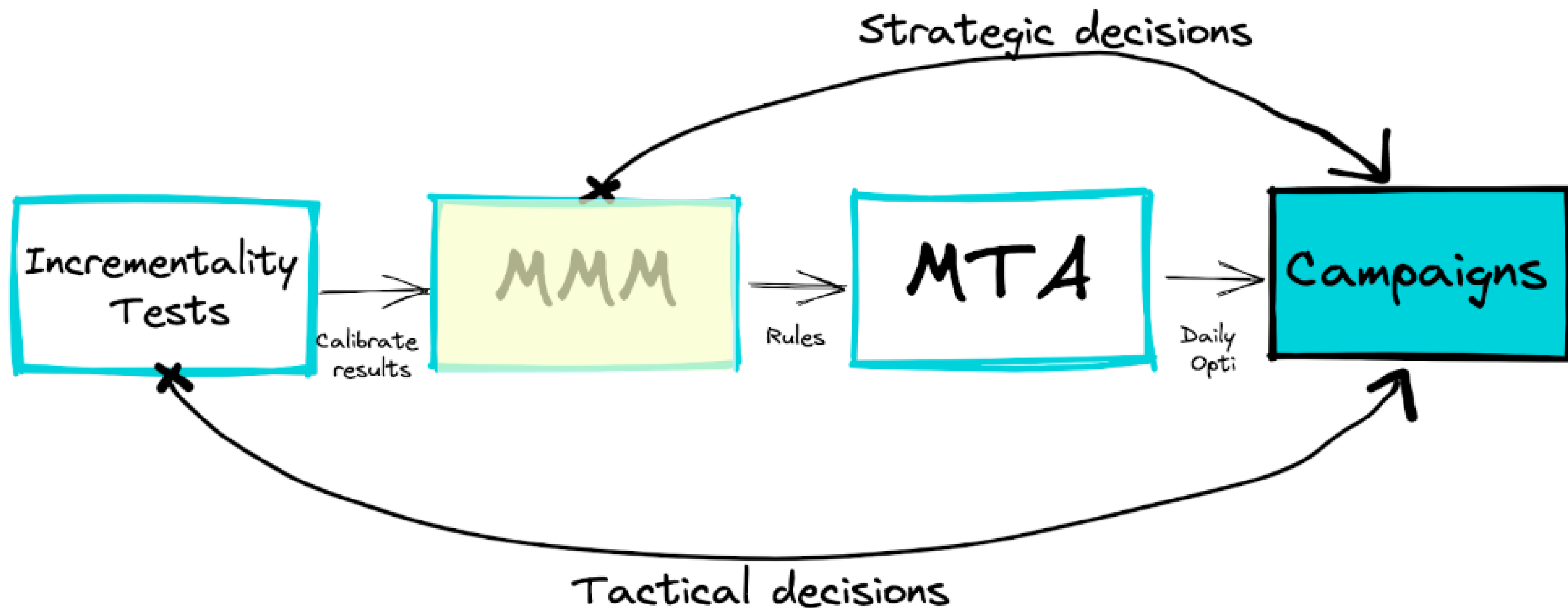


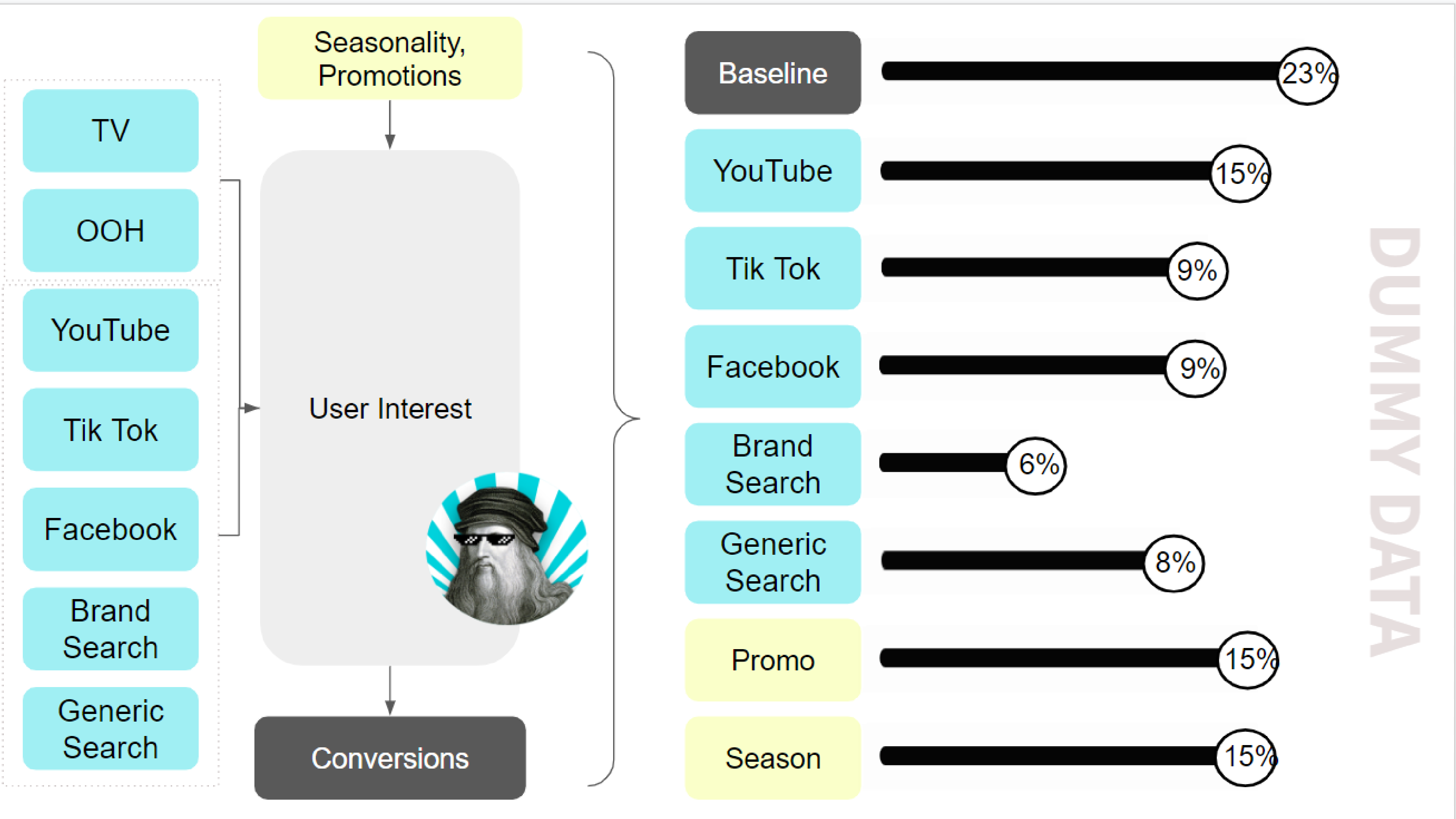
Our measurement stack (DAVINCY) combines a mix of different techniques





Our measurement stack (DAVINCY) combines a mix of different techniques







We are going to
become a
modeling
agency



Our free tool: MMMachine



GET A TASTE OF IT

MMM models are pretty complicated and need to be calibrated by a super-technical person. It is not easy for a non-specialised team to create a Marketing Mix Model from scratch.

In **Booster Box** we crafted our own tool that creates a basic version of a Marketing Mix Model starting from your data.

The Tool is only a **preliminary sample** to take a sneak peek into the insights on your marketing spending data that you will get by embracing MMM's service offered by Booster Box.

After that, we promise you will fall in the desire of getting the full, armed-to-teeth service.

Ladies and gentlemen, we present you:

MMMACHINE

MMMMachine: the Marketing Mix Modelling Tester

Here below you will get your chance to see Booster Box's terrific weapon in action. 🚀

With the help of MMMachine and by supplying your data, you will have a basic Marketing Mix Model. Please note: this is just a quick glance at your marketing spending data, not a complete model. 👁️

Said so, what do you want to bet you'll strive for a full MMM service eventually? ;) We've got you covered, this you already know.

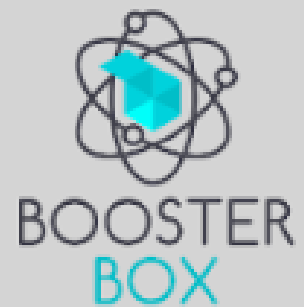
Nothing else to say, let's start the magic! 🧙



🔗 Tick this box to get started!

☐ Click HERE:)

Step 1: download sample data



Choose a file:

Drag and drop file here

Limit 200MB per file

Browse files

know.

Nothing else to say, let's start the magic! 🧙

MMMACHINE
MMModelling Tester

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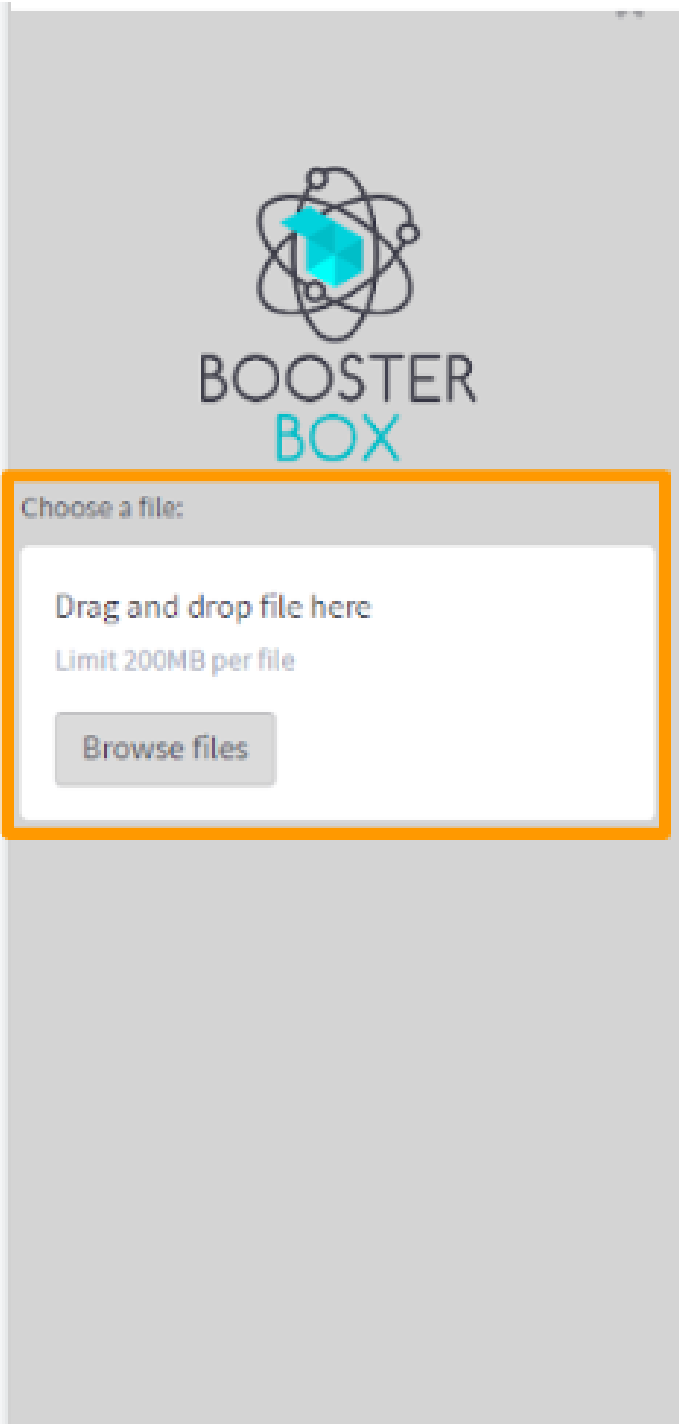
	A	B	C	D	E	F	G
1	week	GAds_sper	FB_spend	YT_spend	Bing_spen	conversior	Holidays
2	29/11/2021	59470.2	1.651.484.513	1.206.225.827	220.76	103	1
3	22/11/2021	74947.85	2.034.316.897	1.191.554.296	166.78	124	0
4	15/11/2021	77666.5	2.858.240.366	1.403.176.364	247.34	139	1
5	08/11/2021	112496.35	4.140.911.555	2.072.360.867	173.12	118	0
6	01/11/2021	79845.08	2.705.570.435	1.501.741.478	170.64	91	0
7	25/10/2021	92608.97	2.328.142.476	1.539.915.892	143.66	99	0
8	18/10/2021	77543.72	2.722.412.963	105.247.405	103.02	113	0
9	11/10/2021	91223.97	2.808.492.211	1.351.774.811	42.42	112	1
10	04/10/2021	77855.42	277.385.838	1.542.841.368	15.96	125	0
11	27/09/2021	78112.35	2.250.347.064	1.139.757.438	157.26	92	0
12	20/09/2021	69054.54	2.831.155.307	1.581.838.357	210.24	87	0
13	13/09/2021	104485.31	3.154.643.052	1.794.879.663	248.42	114	0
14	06/09/2021	64807.51	2.824.241.249	2.524.400.581	122.28	93	1
15	30/08/2021	64853.03	29.081.178	1.797.848.525	126.76	103	0
16	23/08/2021	93046.51	3.772.896.267	3.135.642.737	130.3	126	0
17	16/08/2021	69982.88	3.971.711.317	3.086.714.174	164.72	111	0
18	09/08/2021	59817.28	3.180.217.411	2.578.796.423	147.54	97	0
19	02/08/2021	66422.53	2.629.872.871	189.355.371	182.38	100	0
20	26/07/2021	55750.34	3.037.700.046	9.574.375.652	98.99	90	0
21	19/07/2021	53054.38	2.685.147.179	1.454.933.246	52.5	90	0
22	12/07/2021	58738.07	4.173.527.343	1.886.945.282	56.6	84	0
23	05/07/2021	49699.86	399.441.761	7.646.627.388	54.84	81	1
24	28/06/2021	42972.68	2.005.985.106	728.922.924	48.69	75	0
25	21/06/2021	54324.6	4.602.812.086	1.402.565.938	60.79	97	0

sample_data_conversions

	A	B	C	D	E	F	G	H
1	week	Revenue	GAds_Sper	FB_Spend	Criteo_Spe	Pinterest_	Bing_Spen	Holidays
2	08/03/2021	219476	20473	10868	0	1409	518	0
3	15/03/2021	224634	22859	10933	0	1452	511	1
4	22/03/2021	226429	22417	10999	0	1435	470	0
5	29/03/2021	217469	19540	11046	0	1463	387	1
6	05/04/2021	278757	24446	11043	0	1529	293	1
7	12/04/2021	204788	21009	10749	0	1357	184	0
8	19/04/2021	223406	23576	10626	0	1321	165	0
9	26/04/2021	242171	26376	10893	0	1838	293	0
10	03/05/2021	248648	28454	10920	0	2169	308	1
11	10/05/2021	315499	29341	10876	0	2169	341	0
12	17/05/2021	233290	28610	10880	0	2449	409	0
13	24/05/2021	239587	25876	12816	0	2450	232	0
14	31/05/2021	291777	30652	16792	0	2450	271	1
15	07/06/2021	283764	30055	19410	0	2449	264	0
16	14/06/2021	242140	33918	20664	0	2448	260	0
17	21/06/2021	279101	34393	20850	2114	2450	399	0
18	28/06/2021	301675	34582	21801	3584	2419	578	0
19	05/07/2021	272968	32239	21963	3604	2450	541	0
20	12/07/2021	283025	30103	21878	3600	2450	506	1
21	19/07/2021	293949	34351	20858	3512	2170	379	0
22	26/07/2021	333772	27834	18702	3520	2170	333	0
23	02/08/2021	405106	30907	19006	3562	1941	439	1
24	09/08/2021	360863	29693	18878	3281	2116	398	0
25	16/08/2021	312797	29378	16044	2142	2205	481	0

sample_data_revenue

Step 2: upload data



know.

Nothing else to say, let's start the magic! 🧙

MMMACHINE
MMModelling Tester

Tick this box to get started!

☒ Click HERE :)

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If you imported the dataset, and it looks like expected, tick the box!

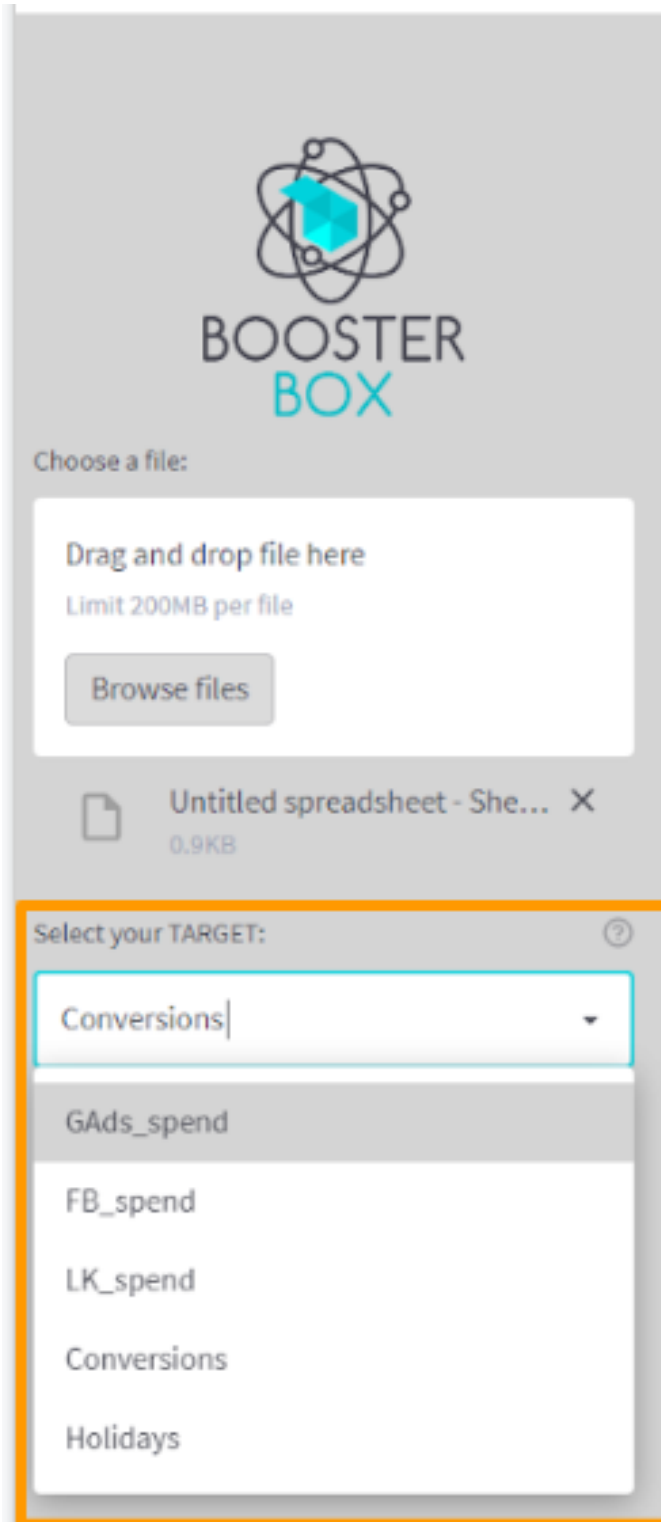
☐ HERE :)

Step 2: upload data

	A	B	C	D	E	F
1	Week	GAds_spend	FB_spend	LK_spend	Conversions	Holidays
2	02/05/2022	73005.8	6.586.625	1547.57	1470.2	0
3	09/05/2022	69048.64	5691.68	1.178.025	1270.77	0
4	16/05/2022	59.215.735	4990	1161.15	1191.05	0
5	23/05/2022	70.742.425	5053.31	878.13	1.214.255	0
6	30/05/2022	54561.99	4.388.755	558.11	1006.05	1
7	06/06/2022	61295.96	4389.31	542.81	1.148.335	0
8	13/06/2022	54000.02	4373.13	1930.17	1133.75	0
9	20/06/2022	52.310.535	5.856.975	1503.75	1175.28	0
10	27/06/2022	55329.23	6.822.125	1533.23	1260.18	0
11	04/07/2022	65702.01	6543.67	1792.62	1.270.215	0
12	11/07/2022	64.895.165	6341.64	1636.8	1.273.805	0
13	18/07/2022	70.369.825	6.816.205	1.465.545	1.164.485	0
14	25/07/2022	70.987.045	6.826.575	1.775.945	1.178.045	0
15	01/08/2022	54089.87	6.920.135	2.056.805	1.060.595	1
16	08/08/2022	41779.2	6140.89	1.994.105	841.84	1
17	15/08/2022	41038.41	5.965.165	1809.18	885.225	1
18	22/08/2022	60.206.725	5866.31	1.290.355	1355.08	0
19	29/08/2022	36720.34	2.696.485	1035.33	948.75	0

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Step 3: answer the questions



The screenshot shows the BOOSTER BOX interface. At the top is the logo. Below it is a file upload section with a 'Choose a file:' label, a 'Drag and drop file here' area, a 'Limit 200MB per file' note, and a 'Browse files' button. Below the upload area is a file preview for 'Untitled spreadsheet - She...' (0.9KB). At the bottom is a 'Select your TARGET:' dropdown menu. The dropdown is open, showing a list of options: 'Conversions' (selected), 'GAds_spend', 'FB_spend', 'LK_spend', 'Conversions', and 'Holidays'. An orange box highlights the dropdown menu, and an arrow points from it to the text 'Select the variable that you consider your TARGET (e.g. Revenue)'.

BOOSTER
BOX

Choose a file:

Drag and drop file here

Limit 200MB per file

Browse files

Untitled spreadsheet - She... X
0.9KB

Select your TARGET: ?

Conversions

GAds_spend

FB_spend

LK_spend

Conversions

Holidays

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Imported Dataset:

	Week	GAds_spend	FB_spend	LK_spend	Conversions	Holidays
0	2/5/2022	73,005.8000	6,586.6250	1,547.5700	1,470.2000	0
1	9/5/2022	69,048.6400	5,691.6800	1,178.0250	1,270.7700	0
2	16/5/2022	59,215.7350	4,990.0000	1,161.1500	1,191.0500	0
3	23/5/2022	70,742.4250	5,053.3100	878.1300	1,214.2550	0
4	30/5/2022	54,561.9900	4,388.7550	558.1100	1,006.0500	1

If you imported the dataset, and it looks like expected, tick the box!

☒ HERE :)

Fill the multiple selection boxes in the sidebar and RUN the model

☐ RUN MODEL

**Select the variable that you consider your
TARGET (e.g. Revenue)**

Step 3: answer the questions

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BOOSTER
BOX

Choose a file:

Drag and drop file here
Limit 200MB per file

Browse files

Untitled spreadsheet - She... X
0.9KB

Select your TARGET:

Conversions

Select INPUT VARIABLES:

Choose an option

FB_spend

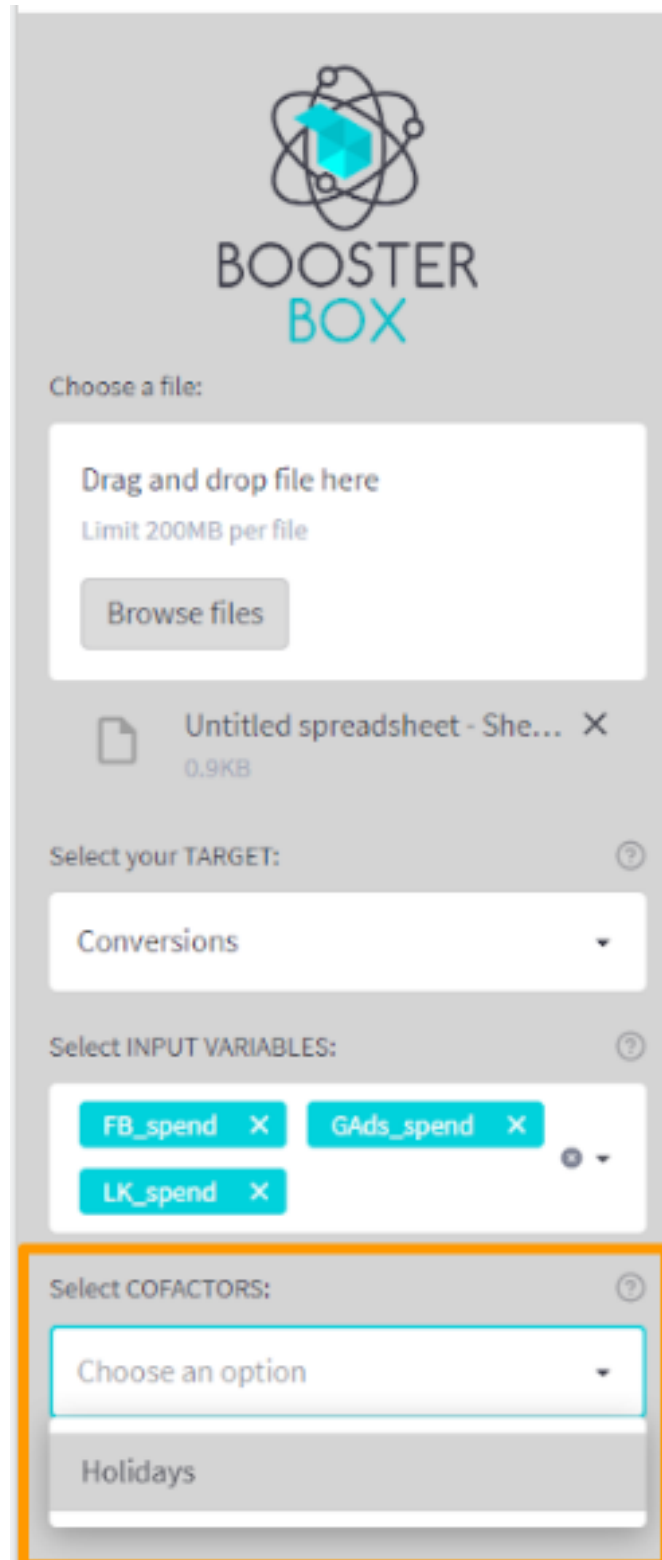
GAds_spend

Holidays

LK_spend

Select the marketing channels spends that you want to input in the model

Step 3: answer the questions



The sidebar of the BOOSTER BOX interface contains the following sections:

- Choose a file:** A drag-and-drop area with the text "Drag and drop file here" and "Limit 200MB per file". Below it is a "Browse files" button.
- Uploaded file:** A file icon and the text "Untitled spreadsheet - She... 0.9KB".
- Select your TARGET:** A dropdown menu currently showing "Conversions".
- Select INPUT VARIABLES:** Three buttons labeled "FB_spend", "GAds_spend", and "LK_spend", each with an "X" icon to remove it.
- Select COFACTORS:** A dropdown menu currently showing "Choose an option". Below it, the option "Holidays" is visible. This section is highlighted with an orange border.

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1	9/5/2022	69,048.6400	5,691.6800	1,178.0250	1,270.7700	0
2	16/5/2022	59,215.7350	4,990.0000	1,161.1500	1,191.0500	0
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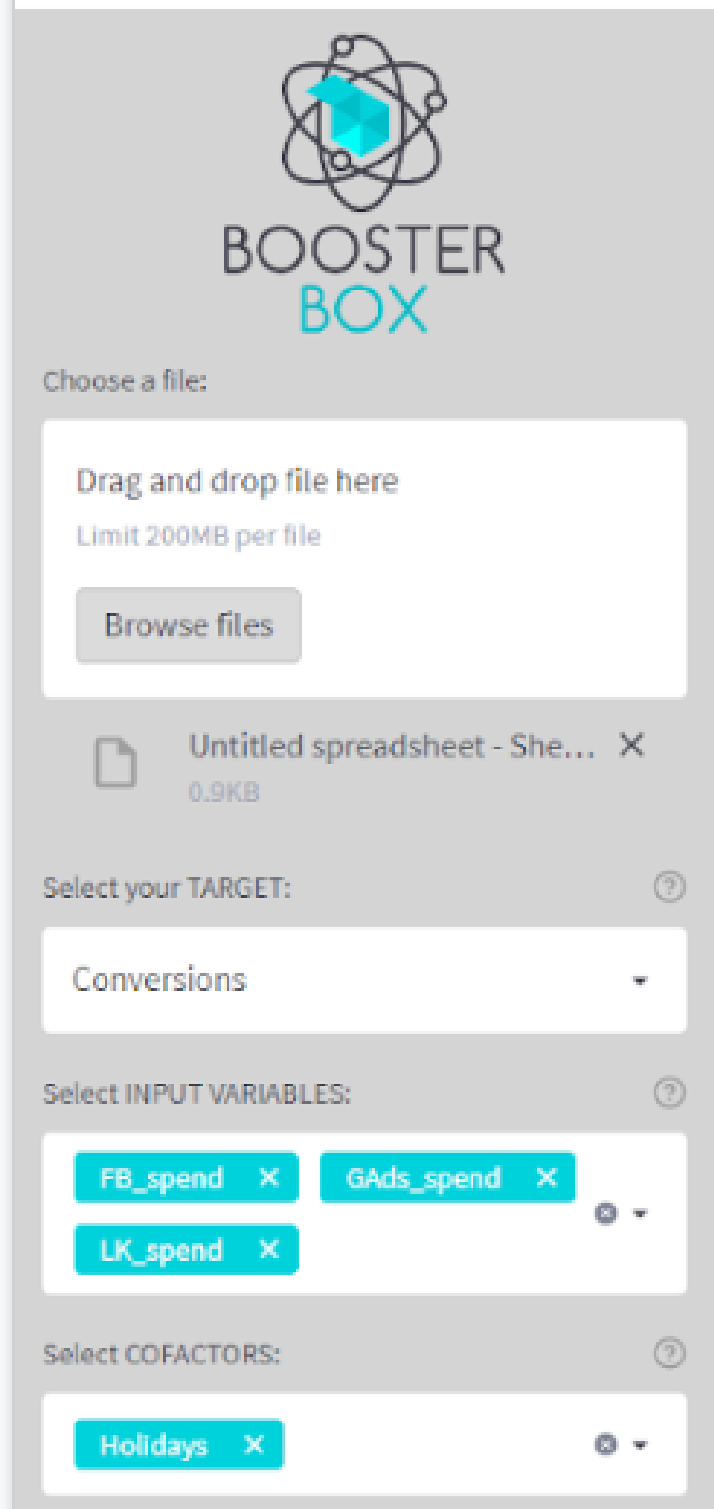
☒ HERE :)

Fill the multiple selection boxes in the sidebar and RUN the model

☐ RUN MODEL

Select the variables to consider as cofactors, for example to take into account seasonality

Step 4: run the model



BOOSTER BOX

Choose a file:

Drag and drop file here
Limit 200MB per file

Browse files

Untitled spreadsheet - She... X
0.9KB

Select your TARGET: ?

Conversions

Select INPUT VARIABLES: ?

FB_spend X GAds_spend X

LK_spend X

Select COFACTORS: ?

Holidays X

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☒ RUN MODEL

Step 4: run the model

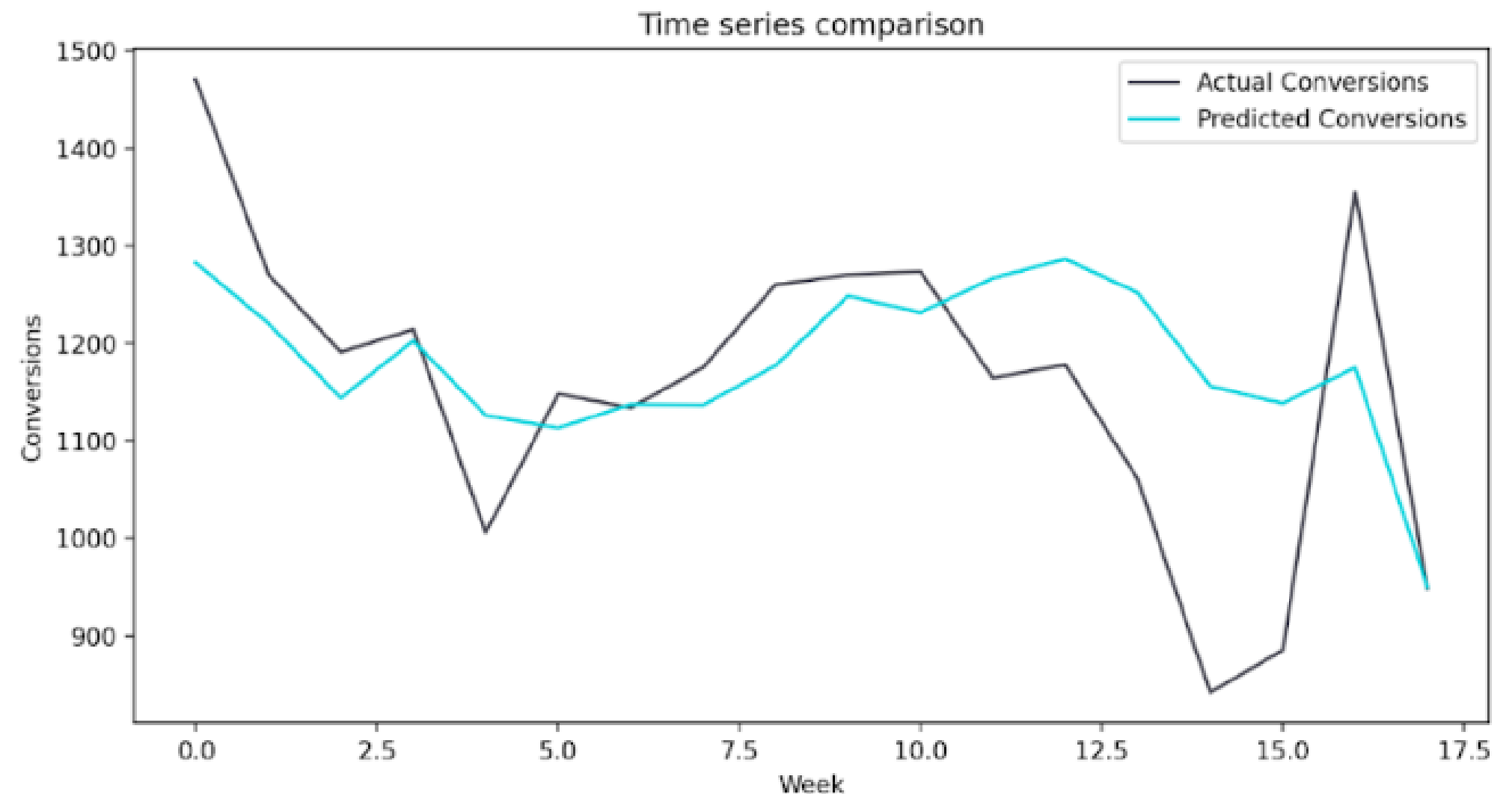
RESULTS TIME:

The proportion of the variation in the target that is explained by the model (R squared) is equal to 30.0%. This is fairly good, considering the simplicity of the model.

YAY! Here's your first output from the data process. How to read this?

The grey line represents the actual target, while the Booster Box blue (yep, that's a color) line represents the target as predicted by the model.

The difference between the two lines gives an idea of how good the fit of the model is.



The regression model took all the data you fed, and elaborated an estimate of the time series of the target. Quick heads up: the model shouldn't follow perfectly high peaks and low valleys - as they're probably outliers and wouldn't be representative of a standard path.

Step 4: run the model



Choose a file:

Drag and drop file here
Limit 200MB per file

Browse files

Untitled spreadsheet - She...
0.9KB

Select your TARGET:

Conversions

Select INPUT VARIABLES:

FB_spend X GAds_spend X LK_spend X

Select COFACTORS:

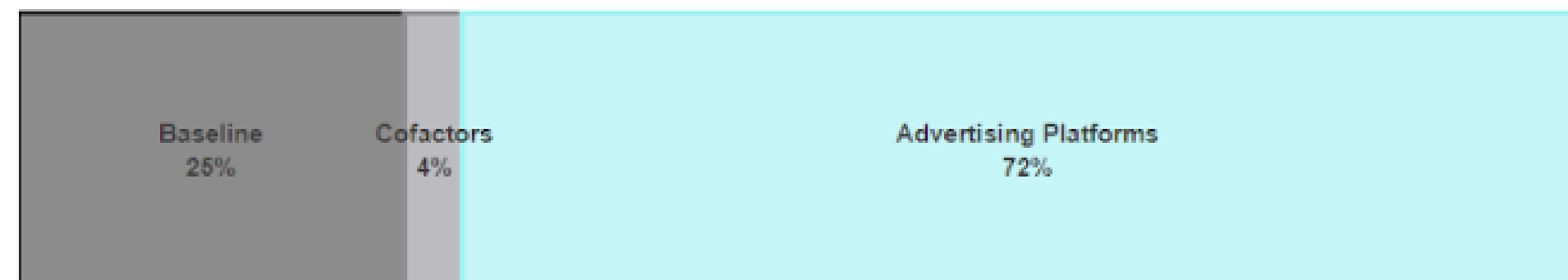
Holidays X

The regression model took all the data you fed, and elaborated an estimate of the time series of the target. Quick heads up: the model shouldn't follow perfectly high peaks and low valleys - as they're probably outliers and wouldn't be representative of a standard path.

Cool, let's go ahead!!!

☒ GO!

Percentage share of Conversions:



- Baseline refers to the percentage share that you would have anyway, without any additional marketing activities.
- Cofactors indicates the percentage share that is due to external factors present in the timeframe (e.g. high seasonality)
- Advertising Platforms refers to the percentage share directly attributed to online marketing activities.

Shall we talk about where the target is mainly located?

The bar shows how the share of your target is attributed across factors by the model.

Step 5: deep dive at channel level



BOOSTER
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Conversions

Select INPUT VARIABLES: ?

FB_spend X GAds_spend X

LK_spend X

Select COFACTORS: ?

Holidays X

Are you ready to deep dive at channel level?

☒ Yes!

Deep diving in the Advertising Platforms (72% of Conversions):



This is just a preliminary model based on a linear regression, but it's easy to see that the output is straightforward and leading to an immediate practical use to adjust your budget or think about the proper allocation between channels.

Do you want to take a step forward?

☐ Of course!

Here's your personalised view of the percentage of share attributed to Advertising Platforms only.

The bigger the area, the bigger the impact of the specific channel on the target you selected.

Step 6: get in touch!

Do you want to take a step forward?

☒ Of course!

Our complete approach to MMM is much more detailed. The complexity of the analysis is higher and the final outcome comprehends:

- Modeling of saturation functions, in order to account for diminishing returns,
- Estimates of the delayed effects of media spends,
- Optimal budget allocation across Advertising Platforms,
- Continuous recalibration of the model

To wrap it up, with our full procedure, you will be able to have priceless insights for actionable decision making.

Get in touch with the MarTech Team to build your own Marketing Mix Model!

growth@boosterboxdigital.com



Grazie per l'attenzione

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Q&A

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