

A/B testing alternative to optimise the ROI at Air France-KLM Marketing

DIRK DE RAAFF | TIJMEN KORT

KLM Royal Dutch Airlines

## Hi there!

#### Tijmen Kort

Global Marketing Data Scientist KLM Royal Dutch Airlines

> LINKEDIN.COM/IN/TIJMEN-KORT TIJMEN.KORT@KLM.COM



#### Dirk de Raaff

Head of Quantitative Marketing KLM Royal Dutch Airlines

LINKEDIN.COM/IN/DIRKDERAAFF DIRK-DE.RAAFF@KLM.COM



#### KLM Royal Dutch Airlines

**Since 1919** 



#### **162 Destinations**

In 72 countries. And many more with our global partner network.



#### 111 Aircraft

Including our new Airbus A321 Neo!



#### Global campaigns

900+ Central and local campaigns



30M<sub>+</sub>

Passengers are welcomed on board per year



## Digital Marketing

15 different channels

22 local offices

2 airlines - Air France KLM



21M<sub>+</sub>

Fans & followers on our social media channels

Imagine this

## You are a marketer at a large international company

## And you and your team have just launched a big global sales campaign

Go-live was successful! But the main question is: How are you going to determine the incremental impact?

## A/B testing is the gold standard, but...

## Logistical complexity

Running A/B tests across multiple countries and channels can be a logistical nightmare

#### A/B testing is the gold standard, but...

## Logistical complexity

## Opportunity costs

Running A/B tests across countries and channels ca logistical nightmare

Revenue loss from groups that don't see the campaign

#### A/B testing is the gold standard, but...

# Logistical complexity

## Opportunity costs

# Organizational complexity

Running A/B tests across countries and channels ca logistical nightmare

Revenue loss from groups th don't see the campaign

Big variety of skills and backgrounds. How can we make sure everyone looks at the performance in a similar way?

## That's why we have created **OPTIMA**

The one-stop-shop for marketers to accurately measure the incremental impact of over 900 annual marketing campaigns for both Air France and KLM.

# Before

## In the 'old days' you had to...

For over 900+ campaigns

For 2 airlines

Gather data from 15 channels

Design your experiment setup

Run the analysis for 65+ market

Draw conclusions without getting overwhelmed!

# Before

#### Now with OPTIMA...



## Automated and quick

Optima provides quick and automated results of the complex data



#### Easy to use

Easy to interpret the data without any technical knowledge or data scientist needed



## Reliable and validated

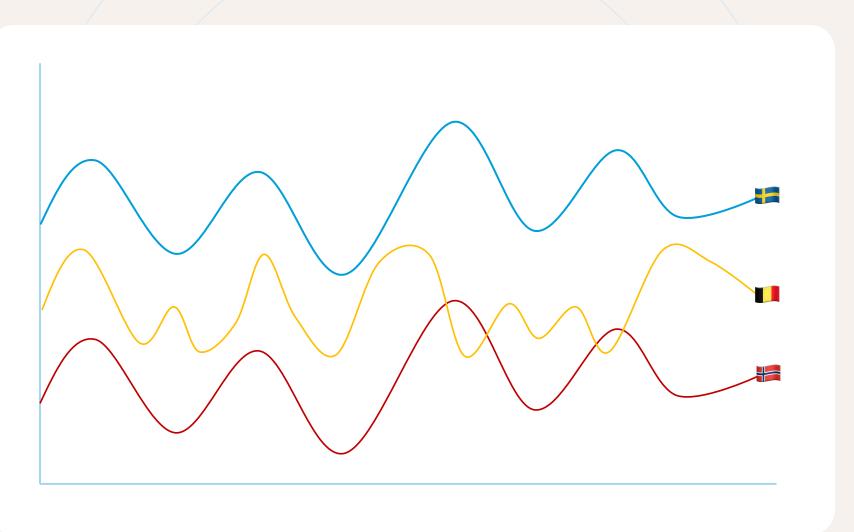
Reliable results with validation methods similar to A/B testing

#### How does this work?

OPTIMA models the counterfactual (*what would have been*) based on statistically strong reference markets.

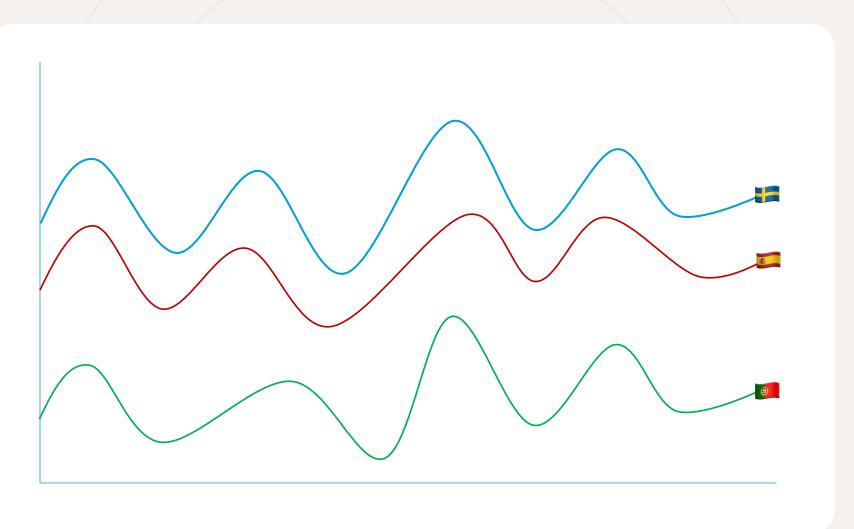
## 01. OPTIMA finds comparable markets

It searches for markets with a similar correlation



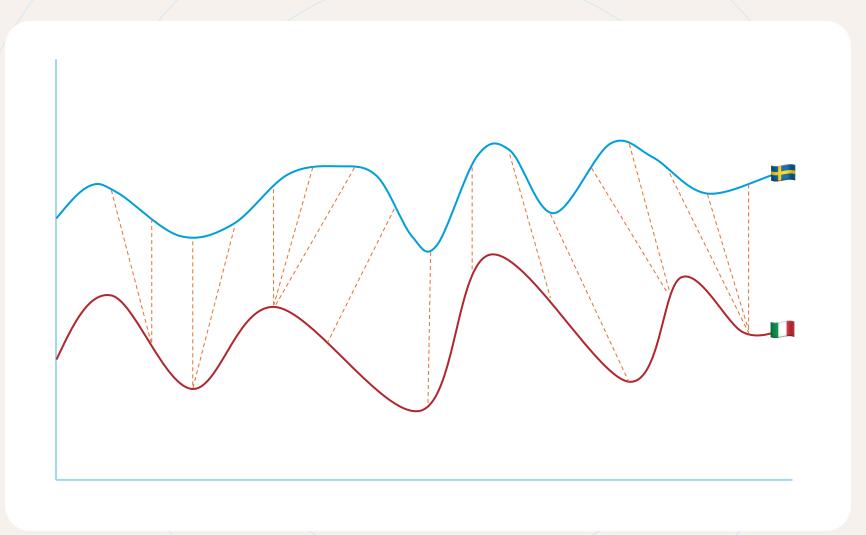
## 01. OPTIMA finds comparable markets

And it searches for markets with a similar distance



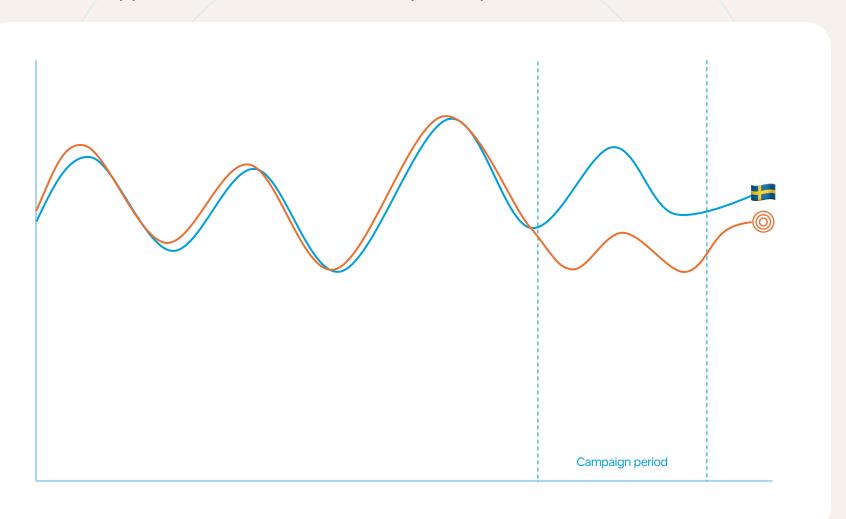
## 01. OPTIMA finds comparable markets

Dynamic time warping is used to identify markets with similar sales patterns, even if the timing of events differs.



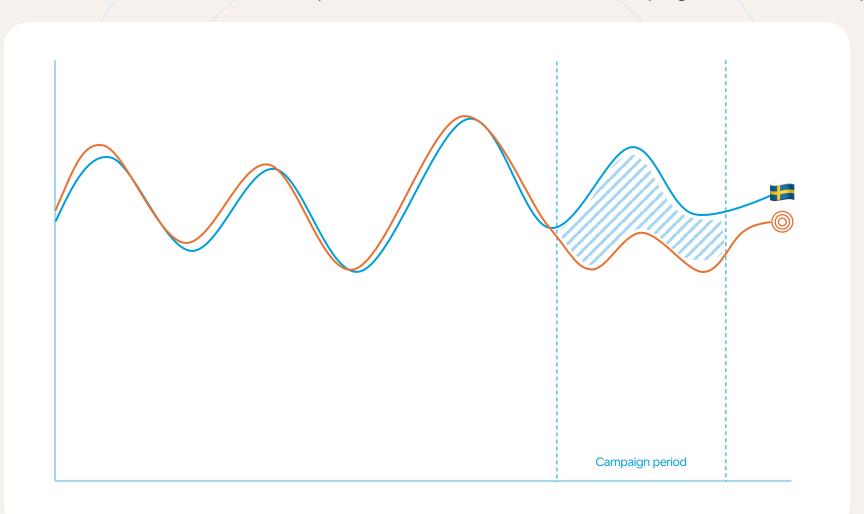
### 02. OPTIMA applies statistical modelling

It applies causal inference techniques to predict the counterfactual



## 03. OPTIMA determines campaign impact

The difference between observed and predicted results indicates the campaign's incremental impact



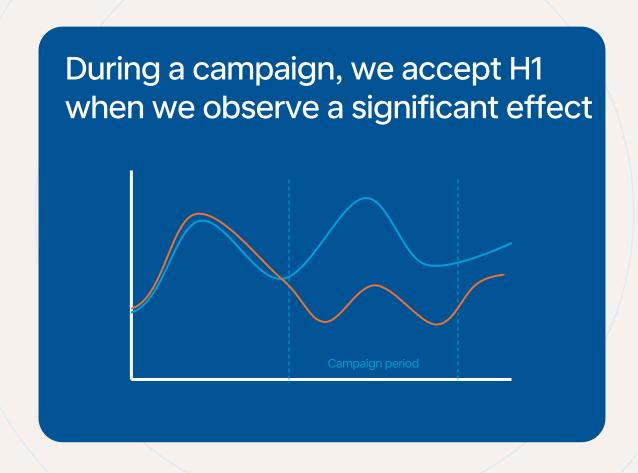
# Looks amazing!

But, how do we know this works?

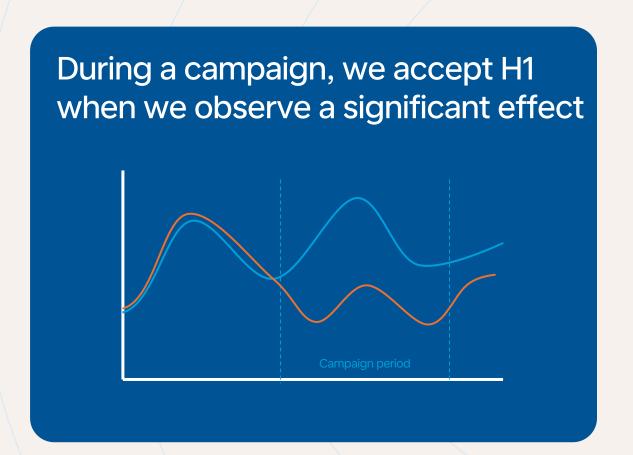


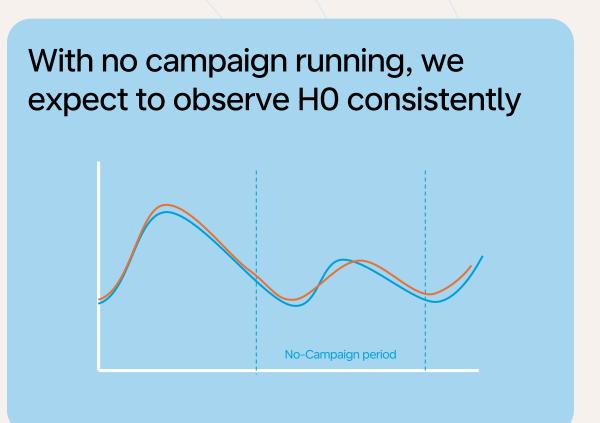
By checking our assumptions...

## By checking our assumptions...



## By checking our assumptions...





That is exactly what we saw!

The benefits of **OPTIMA** 



## The new standard within AirFrance-KLM

OPTIMA is nearly five times more accurate than Air France KLM's previous methods



## Data-backed validation for new campaign strategy

With the use of OPTIMA, we have created an optimized campaign strategy, resulting into higher performance



## Testing new and revised concepts on performance

Adapt campaign concepts based on the learnings of previous campaigns

# Thank you!

Any questions?

DIRK DE RAAFF | TIJMEN KORT