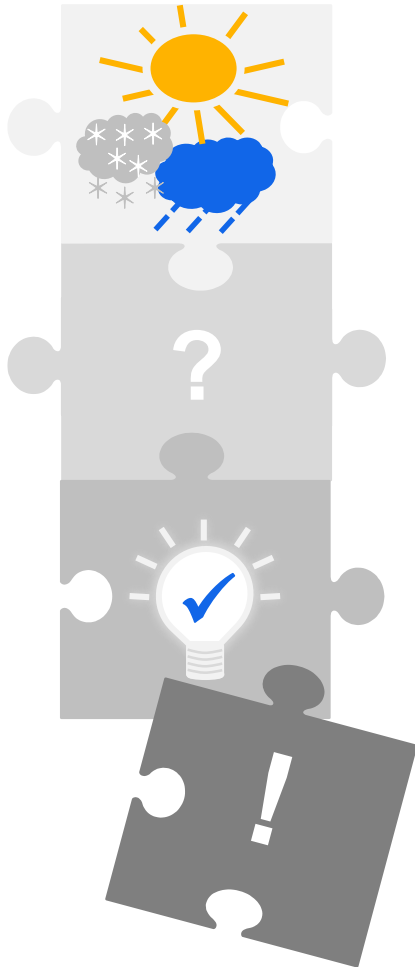


A time series simulation model including weather is used as a tool for detecting and measuring weather effects.



Does weather ...

... have an influence on search query behavior for sunny vacation targets like Mallorca?.....



... affect booking behavior for sunny vacation targets or Last Minute booking behavior?.....



If so ...

... can this knowledge be used to predict the demand for vacation targets more accurately?.....



Bookings and search queries depend on the weather.



A simulation model by meteolytix has shown that query volume on Google search for vacation targets is significantly influenced by the weather. Integrating weather in the model increases explanatory accuracy by 17% compared to a model without weather.



Applying a similar model to Thomas Cook data has shown that the weather does not only affect query volume but also online and offline bookings. Explanatory accuracy is increased by 5% for online bookings and 9% for last minute bookings.



Different weather conditions have different influence on the booking behavior.



Thomas Cook

Offline Bookings

Online Bookings



Continuous rain
(Ø Frequency: 53x per year)



4%



4%



7%



Perfect beach weather
(Ø Frequency: 6x per year)

-7%

-7%

-8%

Last Minute

Mallorca

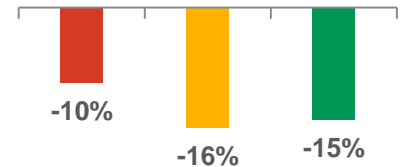
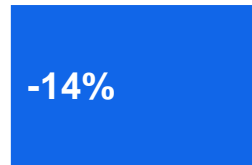
Online

Example: On days with continuous rain, Last Minute bookings go up by 4%, Mallorca bookings rise by 4% and online bookings go up by 7%.

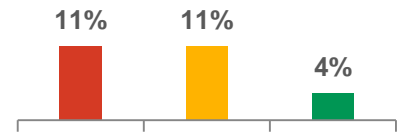
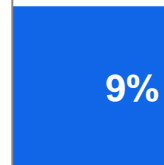
Different weather conditions have different influence on query behavior.



Perfect beach weather
(Ø Frequency: 6x per year)



Continuous rain
(Ø Frequency: 53x per year)



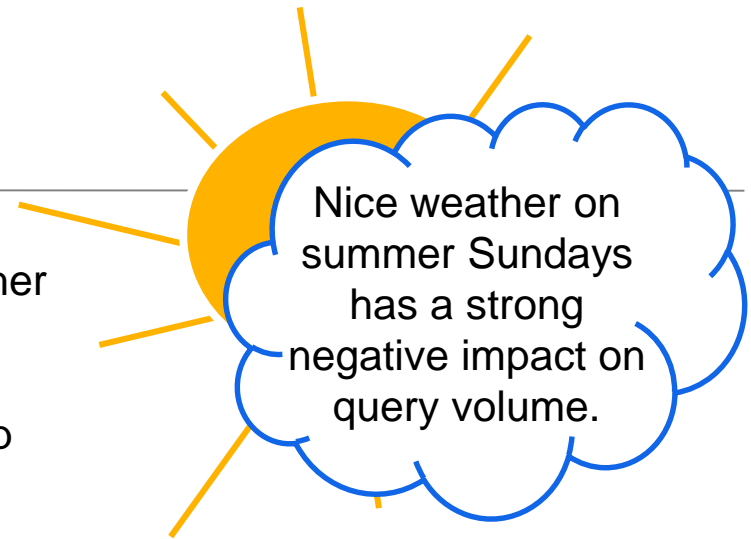
Computer Tablet Smartphone

Example: On days with continuous rain, search queries for vacations to Mallorca rise by 9%. Looking at different devices: Desktop computer search queries go up by 11%, tablet search queries go up by 11% and smartphone search queries rise by 4%.

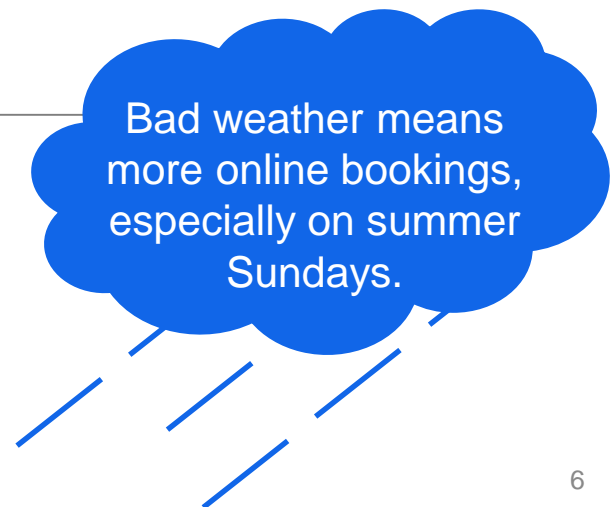
The impact of the weather is stronger on certain weekdays and in different seasons.



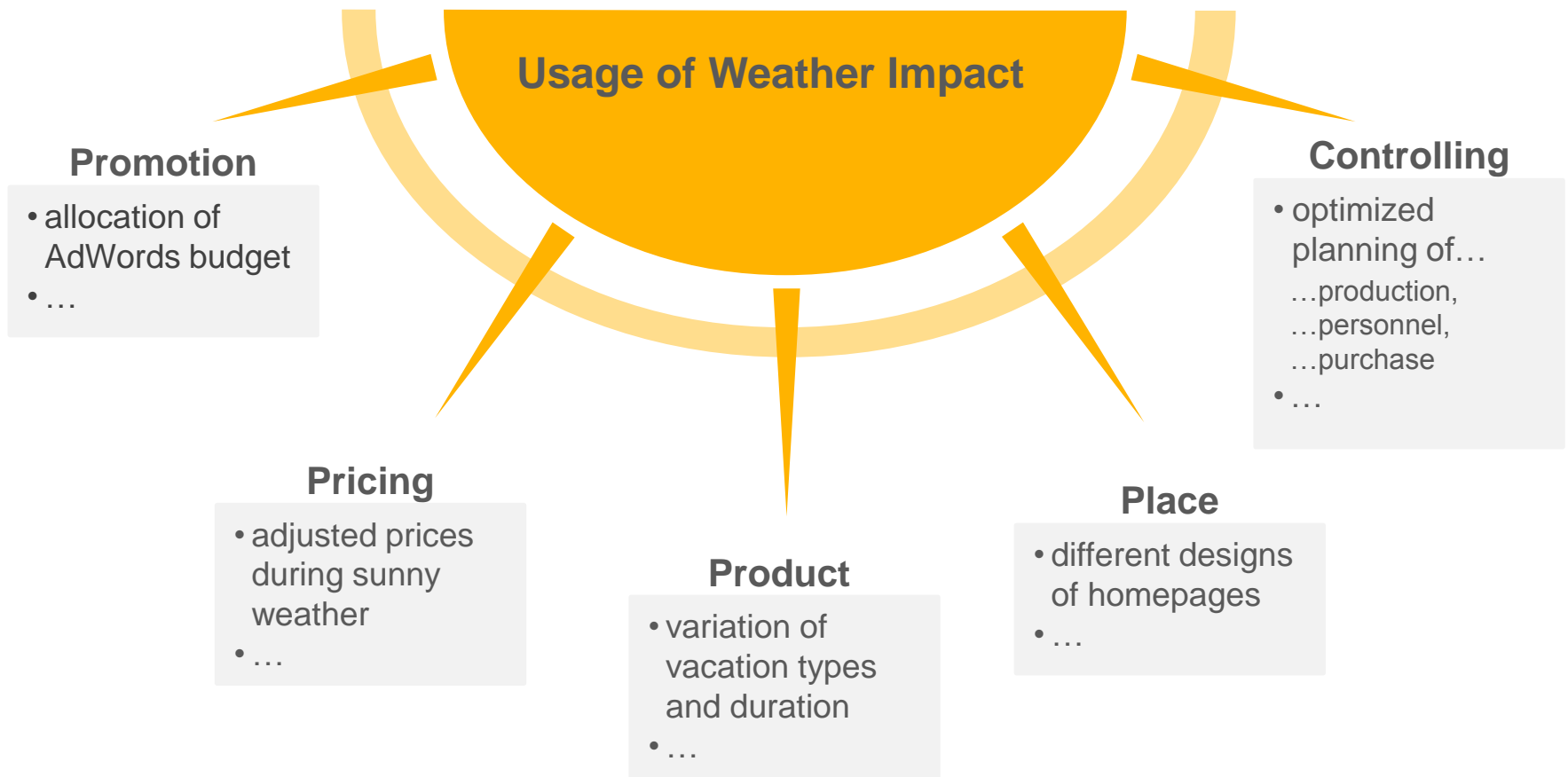
On summer Sundays: Search queries on smartphones rise by up to 74% when the weather is relatively warm and rainy, while queries on computers rise by 24% when the weather is relatively cold and rainy. Computer queries drop by 18% for warm and cloudless weather.



On summer Sundays: Online bookings rise by just 3% when the weather is relatively warm and rainy but rise by up to 17% when its cold and rainy. Online bookings drop by 21% for warm and cloudless weather.



Based on the knowledge of weather effects recommendations for actions can be derived.



For further information on the study please contact meteolytix.



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