# Debunking A/B testing illusions: the path to reliable results.

November 7<sup>th</sup> 2024







Discover

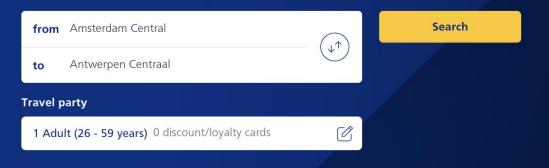
**Travel information** 

**Customer service** 









→ Disruptions and maintenance





















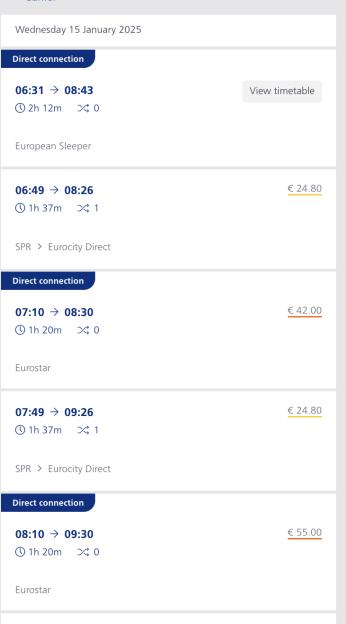
**Number 1 in the Netherlands** Reliable and personal

Travel through Europe with ease Ready to hop on? **Discover Europe** 

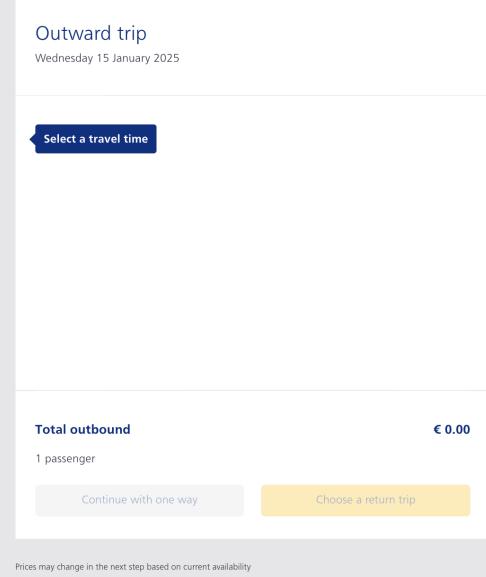


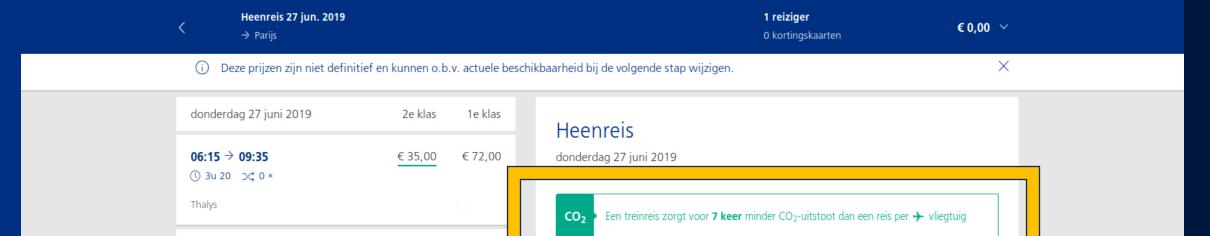


**08:49** → **10:26** 



€ 24.80





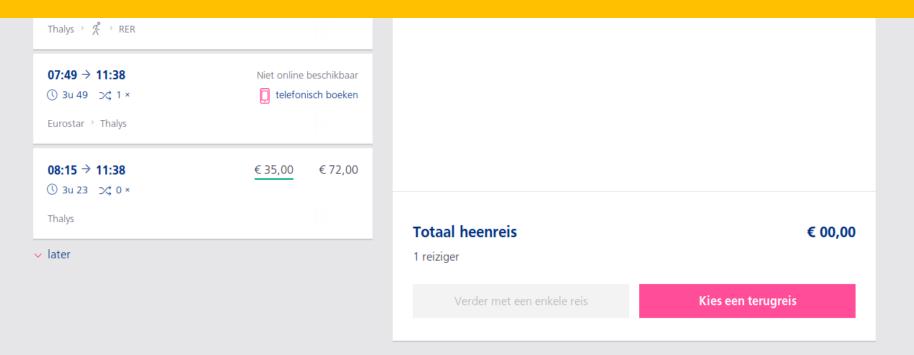
€ 35,00

€ 72,00

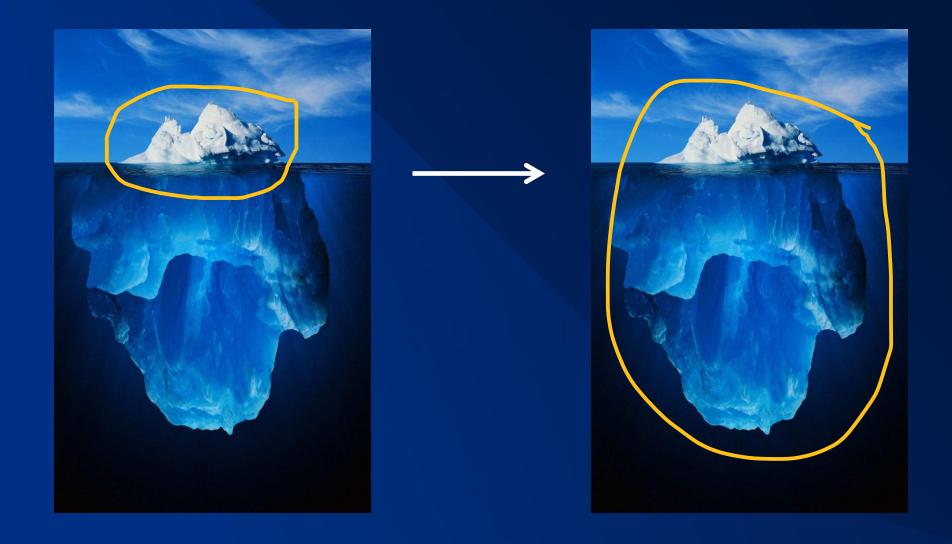
**07:15** → **10:38** 

Thalvs

A journey by train emits 7 times less CO<sub>2</sub> emissions than the same journey by plane



# Collaboration VU Amsterdam



# Example 1: sustainable choice replicates

Emphasizing sustainability of train travels results in similar results over multiple tests.







Tested on desktop, tablet and mobile

G

Repeated on multiple pages including the homepage and booking flow

# Example 2: removing check page from checkout flow does not replicate

Simplifying the online checkout by removing a checkpage, we expected a significant change in conversion.

Outward and inward trip selection

Check trip details

Personal details

Checkout

**Payment** 



Tested on desktop, tablet and mobile

Conflicting results: 1<sup>st</sup> test → Winner

 $2^{\text{nd}}$  test  $\rightarrow$  Loser

3<sup>rd</sup> test → Inconclusive

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Repeated with multiple runs

# 50% of A/B tests do not replicate

## More than 50% of our A/B tests, have a different result on the second run.

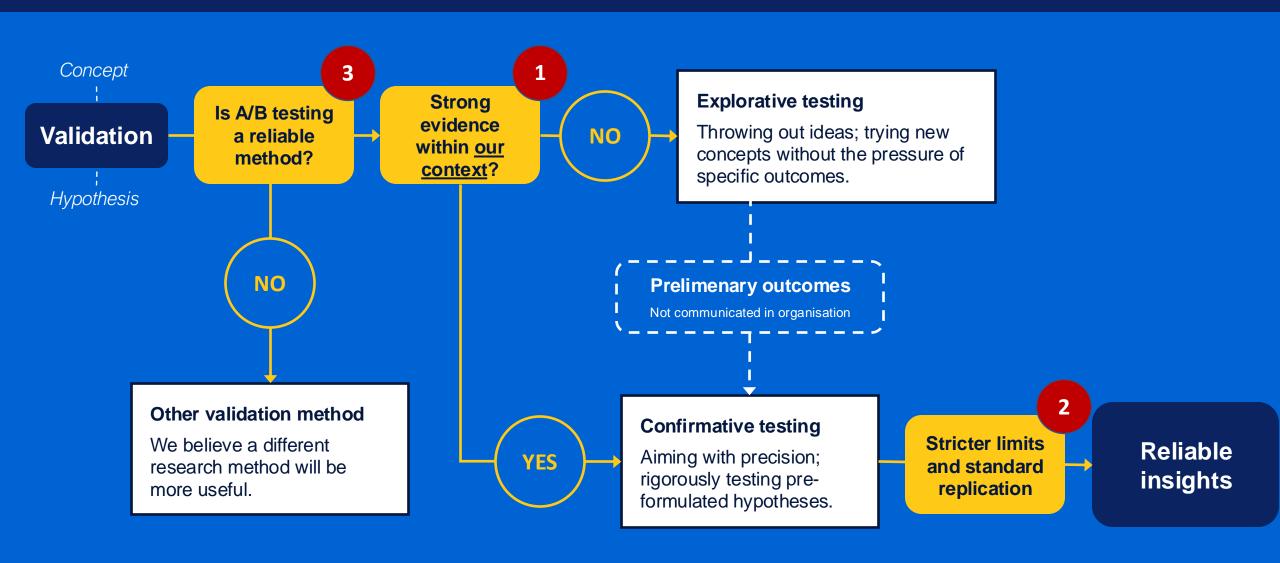
**Neutral** results, on both runs

Results of tests are significantly positive or negative, on both runs

Different test result on

the second run

# We made three key changes to our validation process:



### Key takeaways

Challenge yourself

Start re-testing your A/B tests to assess the reliability of your results.

Focus on Quality Over Quantity

Prioritize meaningful, reliable insights over the number of tests conducted.

Differentiate Your Tests

Distinguish between explorative tests (new ideas) and confirmative tests (validate hypotheses).

Collaborate with Experts

Partner with academic institutions to refine your methods.

Engage with Peers

Share experiences and learn from others in the industry.

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Thanks for your attention.
Any questions?

