



Booking.com

Experimentation @Booking.com

Jorden Lentze
20th of September, 2018

Many thanks to Willem Isbrucker

1. **Booking.com, nice to meet you**
2. The business impact
3. Experimentation @Booking.com



Jorden Lentze

Product Owner, Booking.com

- 1 year at Booking
- Previous at Google and ABN AMRO
- Conversion Rate Optimization
- 300+ experiments
- Rotterdam



<https://www.linkedin.com/in/customerdrivenoptimization/>

Booking.com



Timeline.



1996

Founded in Amsterdam

Winterberg



Winterberg





2000

8 employees



2016

13,000+ employees



2012

4,000 employees



2018

17,000+ employees



200+
Offices



28 million
total reported listings



43
Languages supported



161,000,000+
Reviews from real guests



1,550,000+
Room nights booked
every 24 hours

...Today's Top 20 Worldwide Internet Leaders *Today* = USA @ 11...China @ 9

Public / Private Internet Companies, Ranked by Market Valuation (5/29/18)

Rank 2018	Company	Region	Market Value (\$B)	
			5/29/13	5/29/18
1)	Apple	USA	\$418	\$924
2)	Amazon	USA	121	783
3)	Microsoft	USA	291	753
4)	Google / Alphabet	USA	288	739
5)	Facebook	USA	56	538
6)	Alibaba	China	--	509
7)	Tencent	China	71	483
8)	Netflix	USA	13	152
9)	Ant Financial	China	--	150
10)	eBay + PayPal*	USA	71	133
11)	Booking Holdings	USA	41	100
12)	Salesforce.com	USA	25	94
13)	Baidu	China	34	84
14)	Xiaomi	China	--	75
15)	Uber	USA	--	72
16)	Didi Chuxing	China	--	56
17)	JD.com	China	--	52
18)	Airbnb	USA	--	31
19)	Meituan-Dianping	China	--	30
20)	Toutiao	China	--	30
Total			\$1,429	\$5,788

A person wearing a white Stormtrooper helmet and armor stands in a grassy area with a wooden bench and green foliage in the background. The image is split vertically, with the left half being a slightly darker, more muted version of the right half. The word "Why?" is centered over the split line.

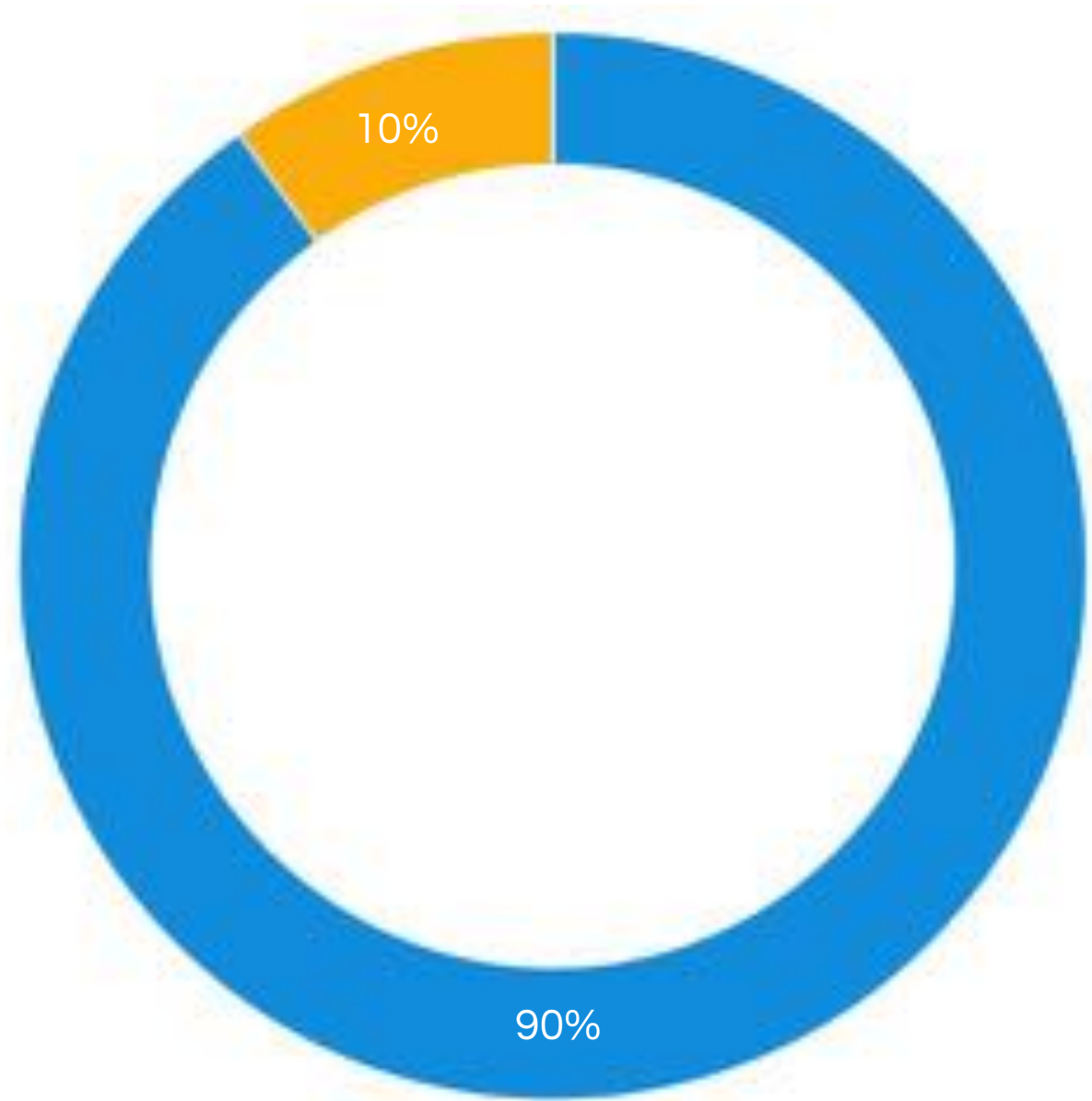
Why?

9/10 experiments fail.

90% of product decisions have an inconclusive or negative effect on a product's primary metric

Source: VWO 2016.

(8.75/10 tests fails according to AppSumo)



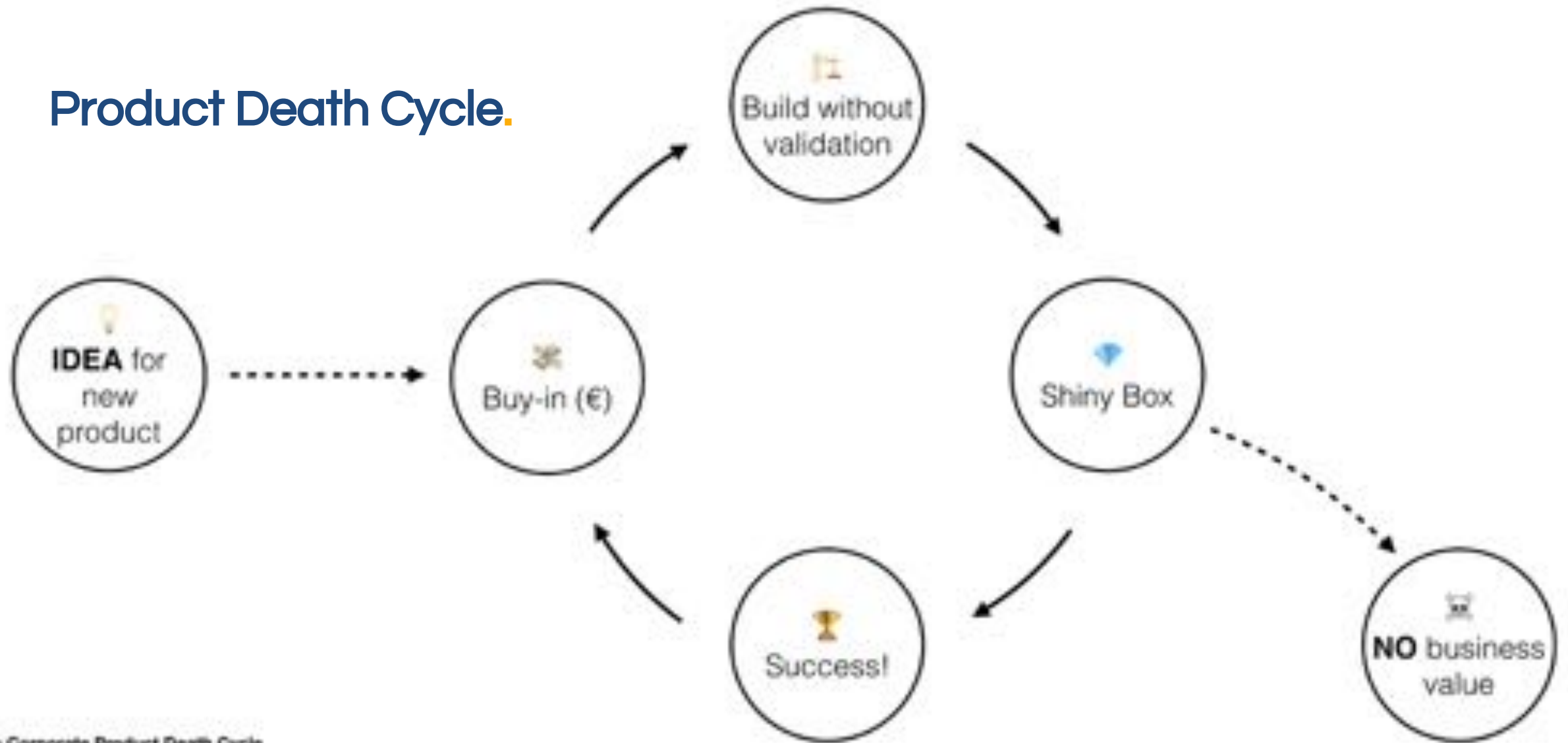


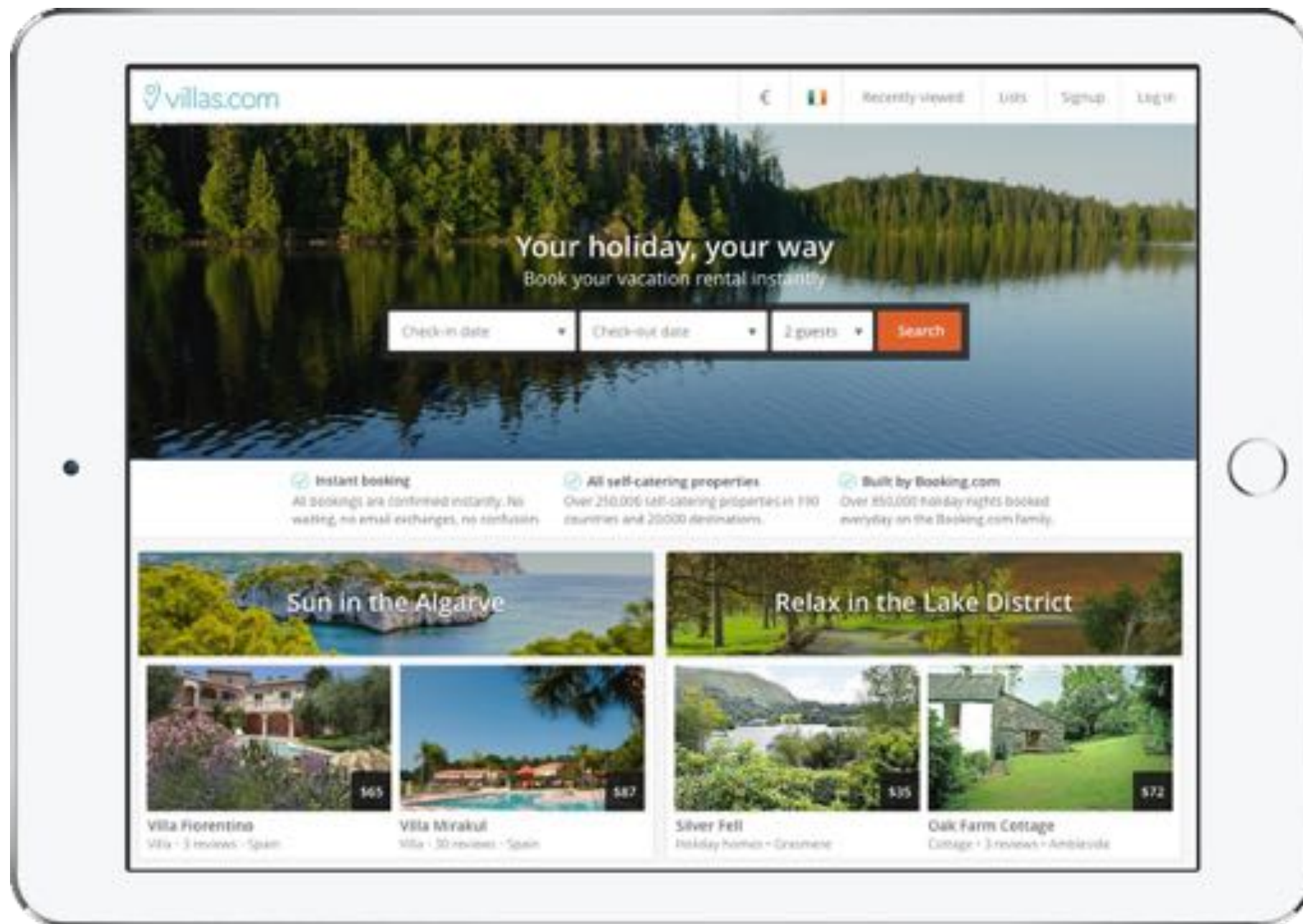
“Booking’s utilization of A/B testing has contributed to Booking enjoying conversion rates 2-3x higher than the industry average.”

Evercore Equity Research
<https://goo.gl/rFP>

Booking.com

Product Death Cycle.





Vind deals voor elk seizoen

Van een vakantie op het platteland tot een hip en...

Waar gaat u naartoe?

☐ Ik reis voor werk

Binnenkort op vakantie? Bestel nu

Maastricht

130 accommodaties

Riemen vast voor de landing op Booking.com



Villas.com is onderdeel geworden van Booking.com. Vanaf nu vindt u hier al onze 1.257.193 vakantiehuisjes en appartementen naast onze grote selectie hotels.

Maakt u zich geen zorgen als u nog een bestaande booking heeft. Deze is nog steeds geldig. Log in bij Booking.com met uw accountgegevens van Villas.com. Hier vindt u alle informatie over uw bevestiging.

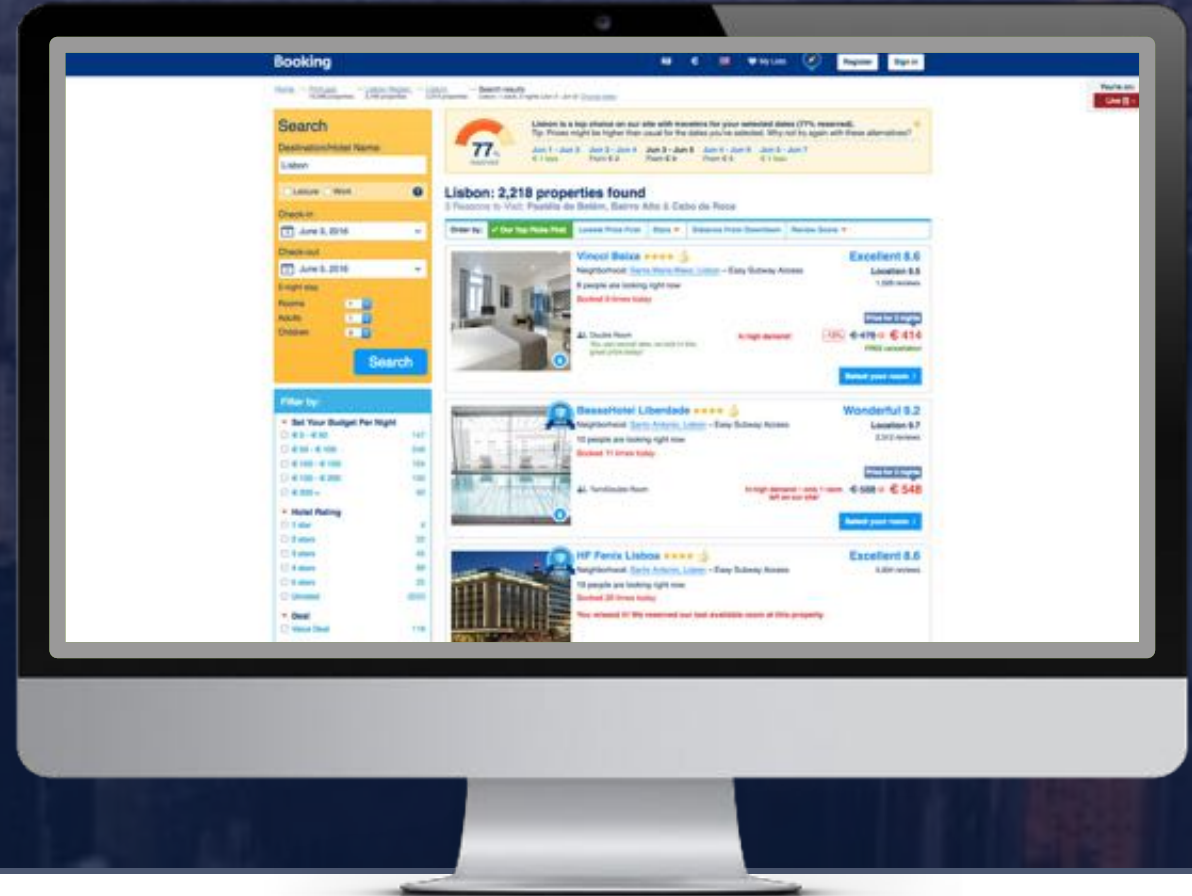
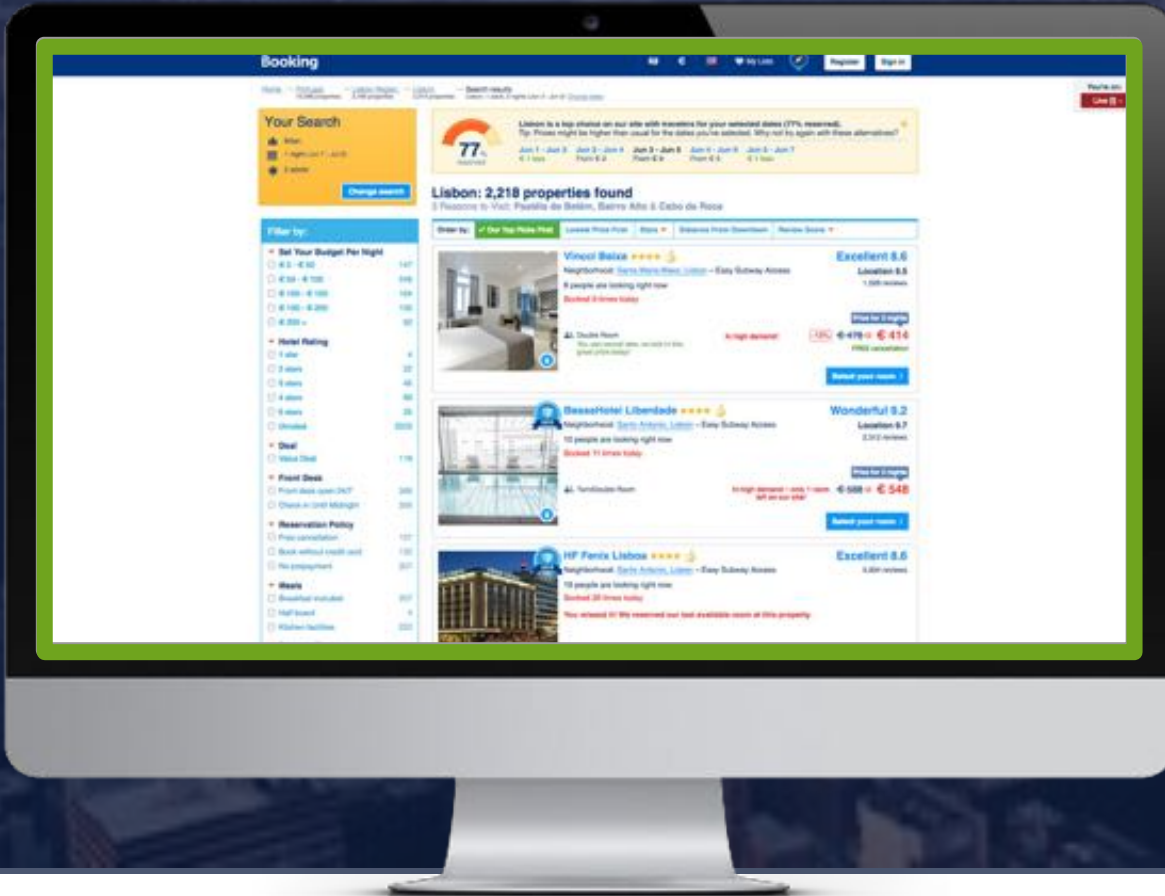
A photograph of two young children sitting at a table. The child on the left is holding a slice of orange to their mouth. The child on the right is wearing a striped shirt and has a pacifier in their mouth. The image is overlaid with a dark blue semi-transparent layer. A solid yellow vertical bar is on the far left. The text 'Experimentation at Booking.com' is centered in white.

Experimentation at Booking.com

Booking.com

Base. 

Variant. 



Which one performed better?

Booking.com

Base.



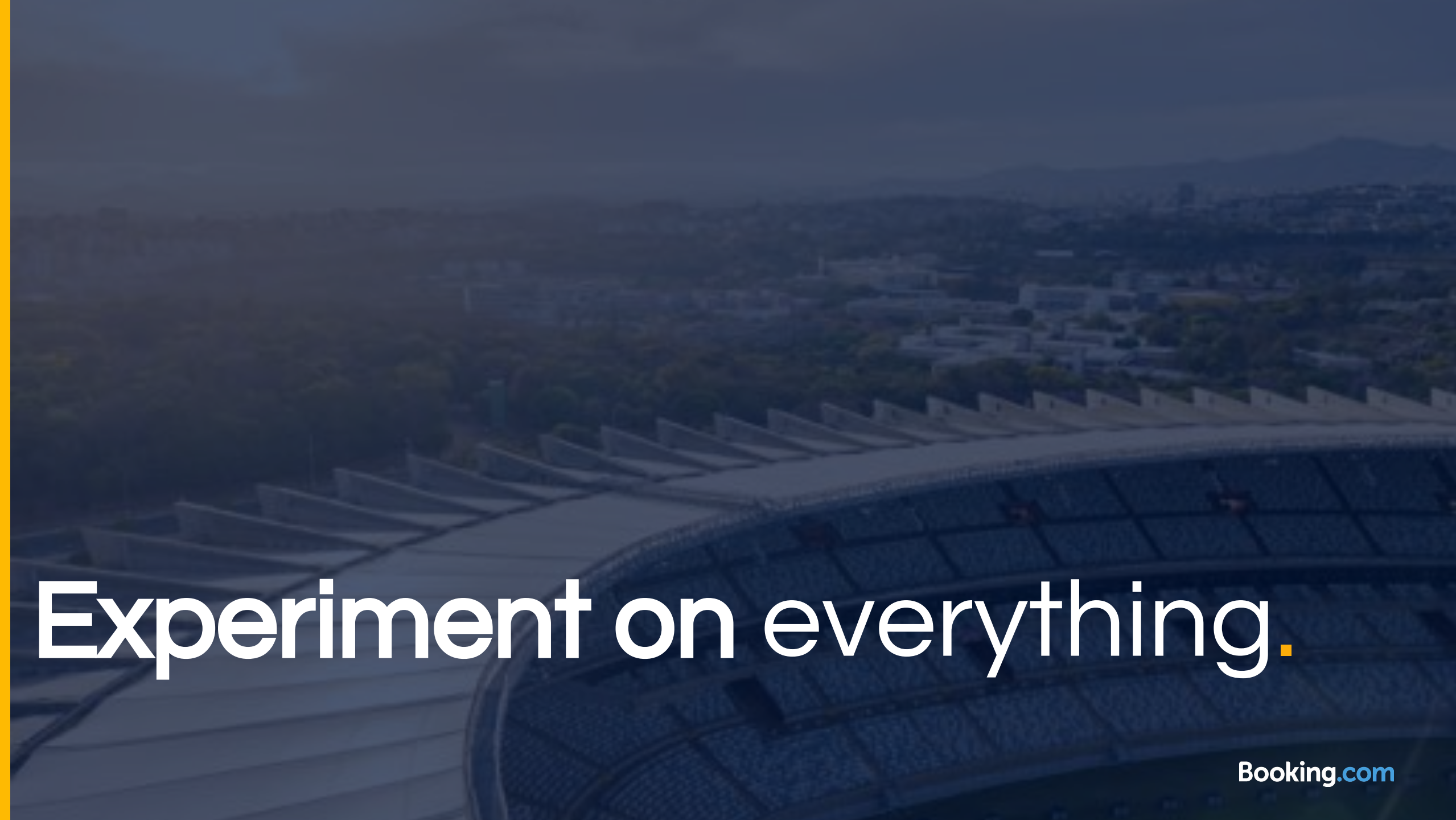
Variant.



Hypothesize & Experiment.

- Hypothesize
- Calculate power
- Run for prescribed time
- Stop, rerun or Full On
- Iterate

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Experiment on everything.



Experiment atomically.

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A dark, blue-tinted photograph of a person sitting at a desk, working on a computer. A desk lamp is visible, and the person's back is to the camera. The image is used as a background for the title.

Interactions.

Experiment on Everything + Test Atomically = A lot of experiments!

A laptop with a silver base and a black bezel around the screen. The screen is filled with a solid orange color. Centered on the screen is the text '1,000+' in a large, white, sans-serif font. Below it, in a smaller white sans-serif font, is the text 'concurrent tests.' with a period at the end.

1,000+

concurrent tests.



Idea \neq Hypothesis.

Hypothesis Template.

Based on **[prior]** we believe that changing **[condition]** for users **[sample]** will make them **[outcome]**.

We will know this when we see **[effect(s)]** happen to **[metric(s)]**. This will be good for customers, partners and our business because **[motivation]**.



Idea \neq Hypothesis.

- All secondary metrics selected a priori along with their direction of change to avoid Texas Sharpshooter Fallacy

An aerial photograph of a city street grid. In the center is a large, circular park area with green grass and some trees. The surrounding area is filled with buildings, streets, and cars. The image is slightly blurred and has a dark, blueish tint.

**Properly Powered.
Full Week Cycles.**

Experiments should:


- All experiments should have run time calculated beforehand using the power calculator of your choice. Or use ours :-)
<https://bookingcom.github.io/powercalculator/>
- Experiments should then be run for the next closest full week cycle.



No HIPPOs.



Teams made for
experimentation.

The background is a blurred office environment. On the left, there are several whiteboards with handwritten notes and diagrams. In the center and right, there are desks with computer monitors and people working. The overall lighting is dim, with a blue tint, and a yellow vertical bar is on the far left.

Allow 100% access to data.



Guidelines, not rules.



Embrace failure.



Fail fast.



Don't assume
correlation.



Don't assume
reproducibility.

Winterberg



Go where the experiment takes you



<https://blog.booking.com/>

Thank you.



Booking.com



Thanks to

Willem Isbrucker

Senior Product Owner, Booking.com

- Search products at Booking.com
- 2 years at Booking
- Many more in Product
- 1000+ experiments



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