



# Can tourism businesses operate in more environmentally sustainable ways and save money without undermining guest satisfaction?

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Tourism | The University of Queensland

The Low Harm Hedonism Initiative  
<https://business.uq.edu.au/research/low-harm-hedonism>

@SaraDolnicar

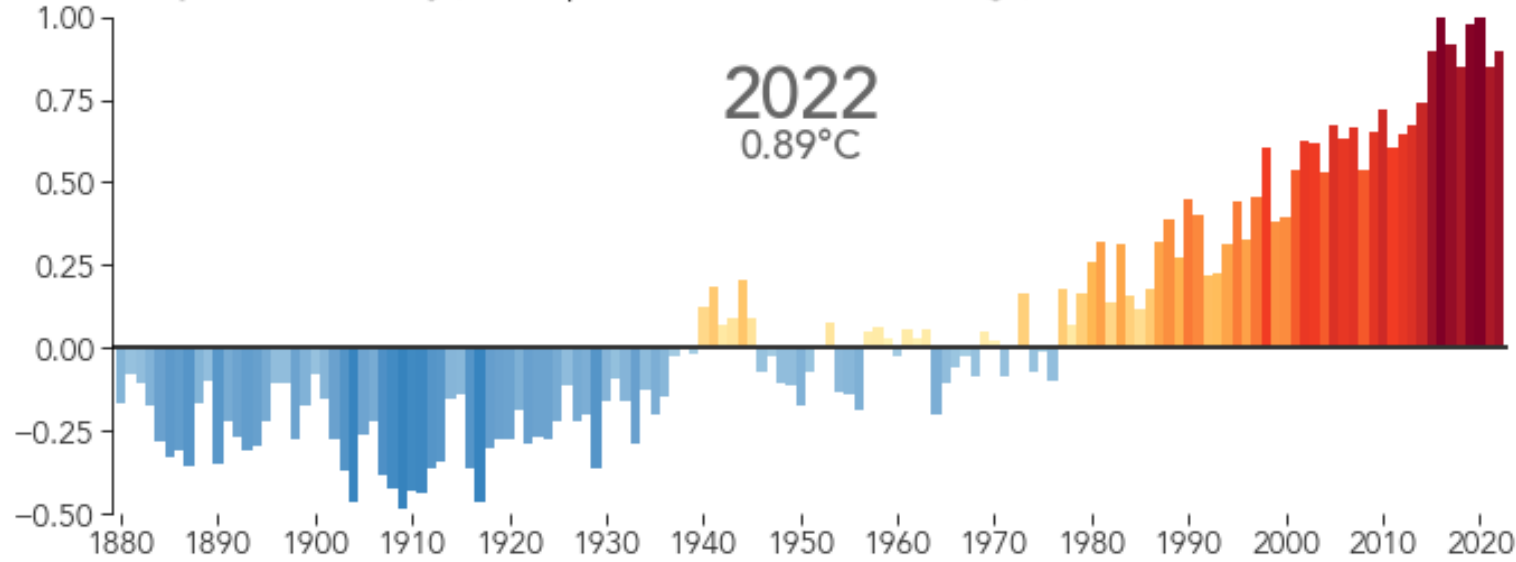
“We are **sleepwalking** to climate catastrophe”

UN Secretary-General  
**António Guterres**



### Last 9 Years Warmest on Record

Global Temperature Anomaly (°C compared to the 1951-1980 average)



↑  
My  
mom  
born

↑  
I  
was  
born

↑↑  
My  
kids  
were  
born



“We are on a highway to climate hell  
with our foot still on the accelerator”

UN Secretary-General  
**António Guterres**

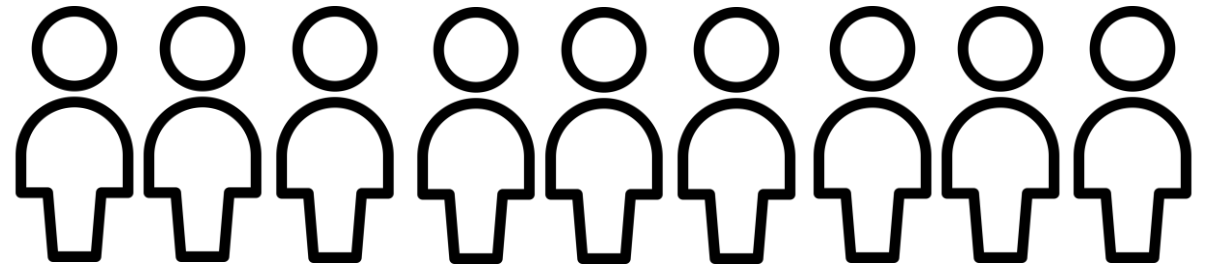


# The tourism industry ...

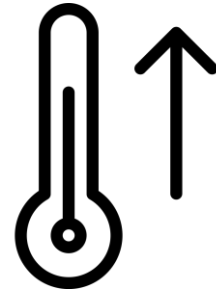


10% of GDP

1 in 10 jobs



## The tourism industry ...



8-10% of global CO<sub>2</sub> emissions,  
increasing by 3% annually



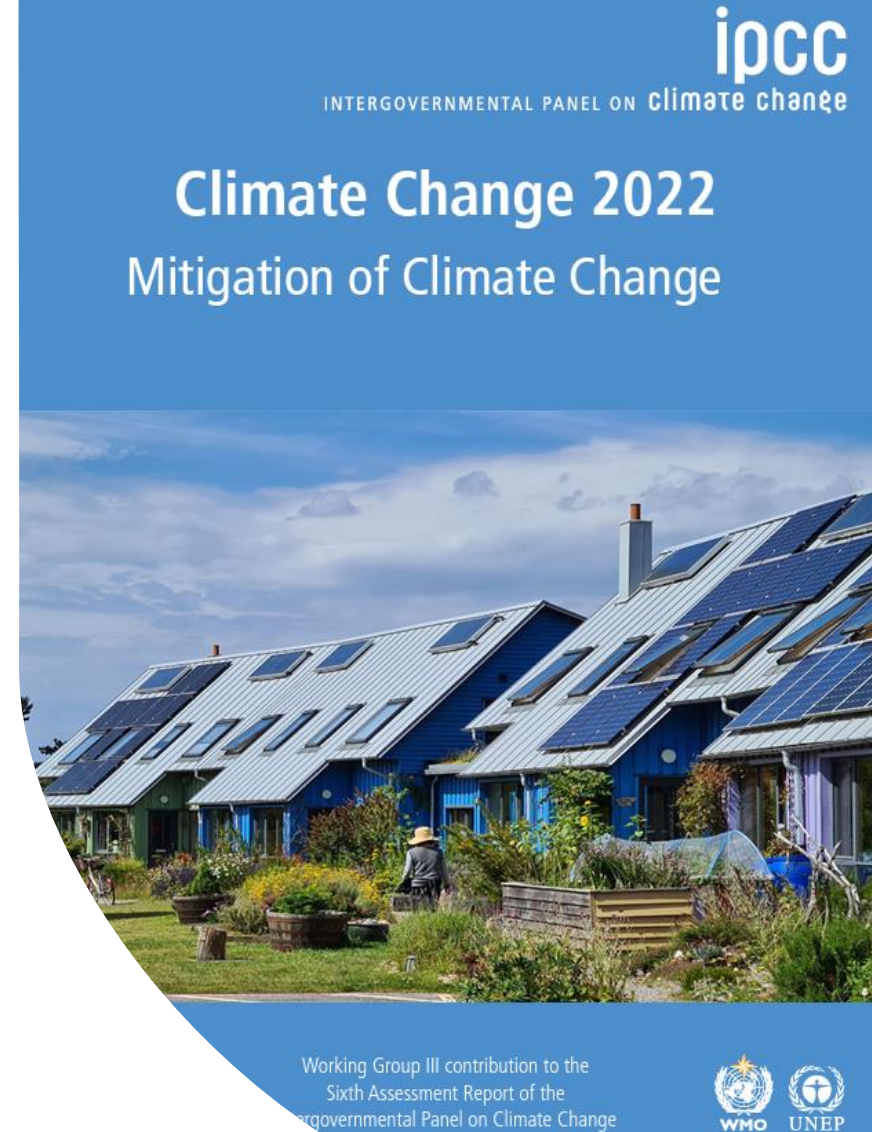
300 litres per  
guest per night



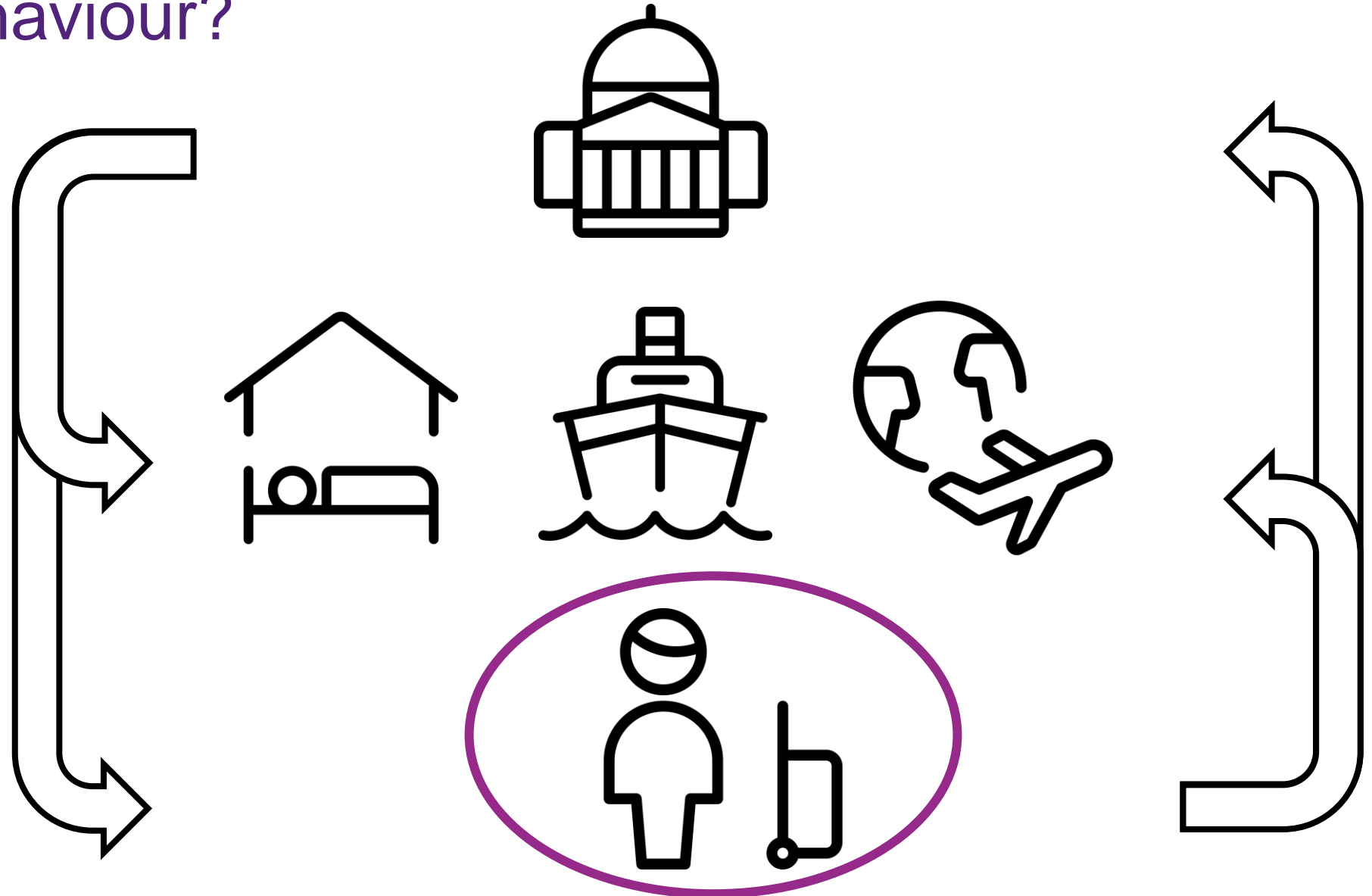
35 million tons of  
solid waste annually

“Changes to behaviour can result in a 40-70% reduction in greenhouse gas emissions by 2050”

IPCC  
2022



# Whose behaviour?

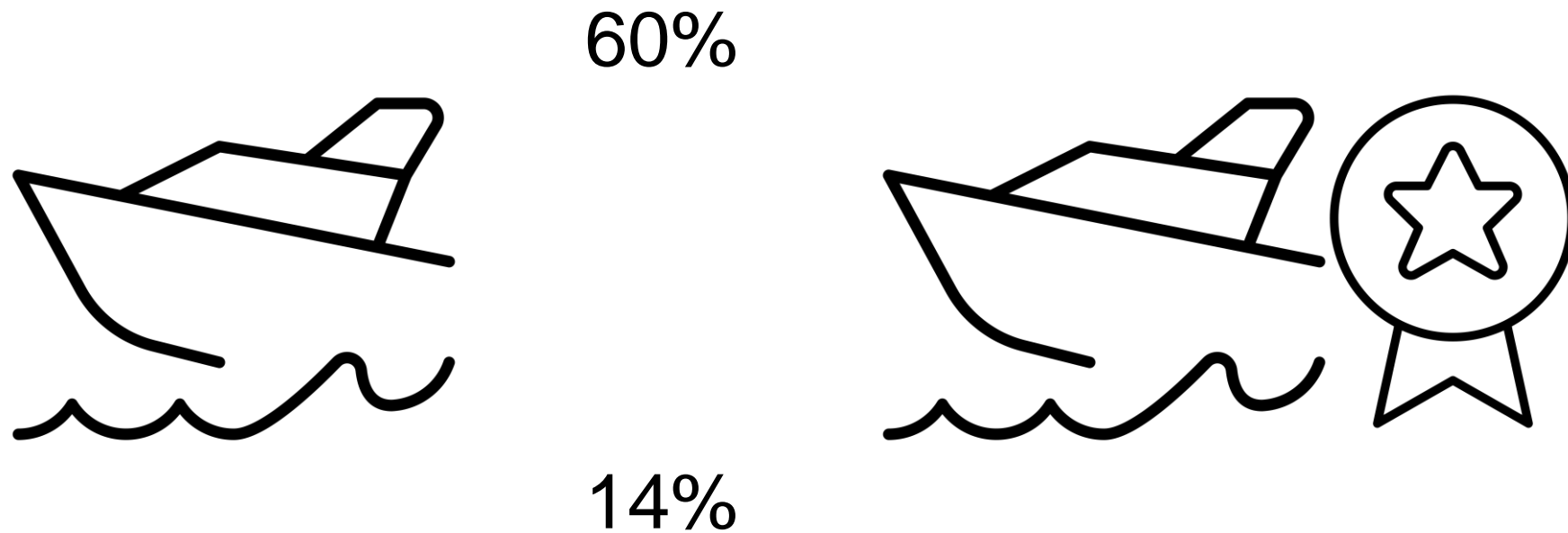




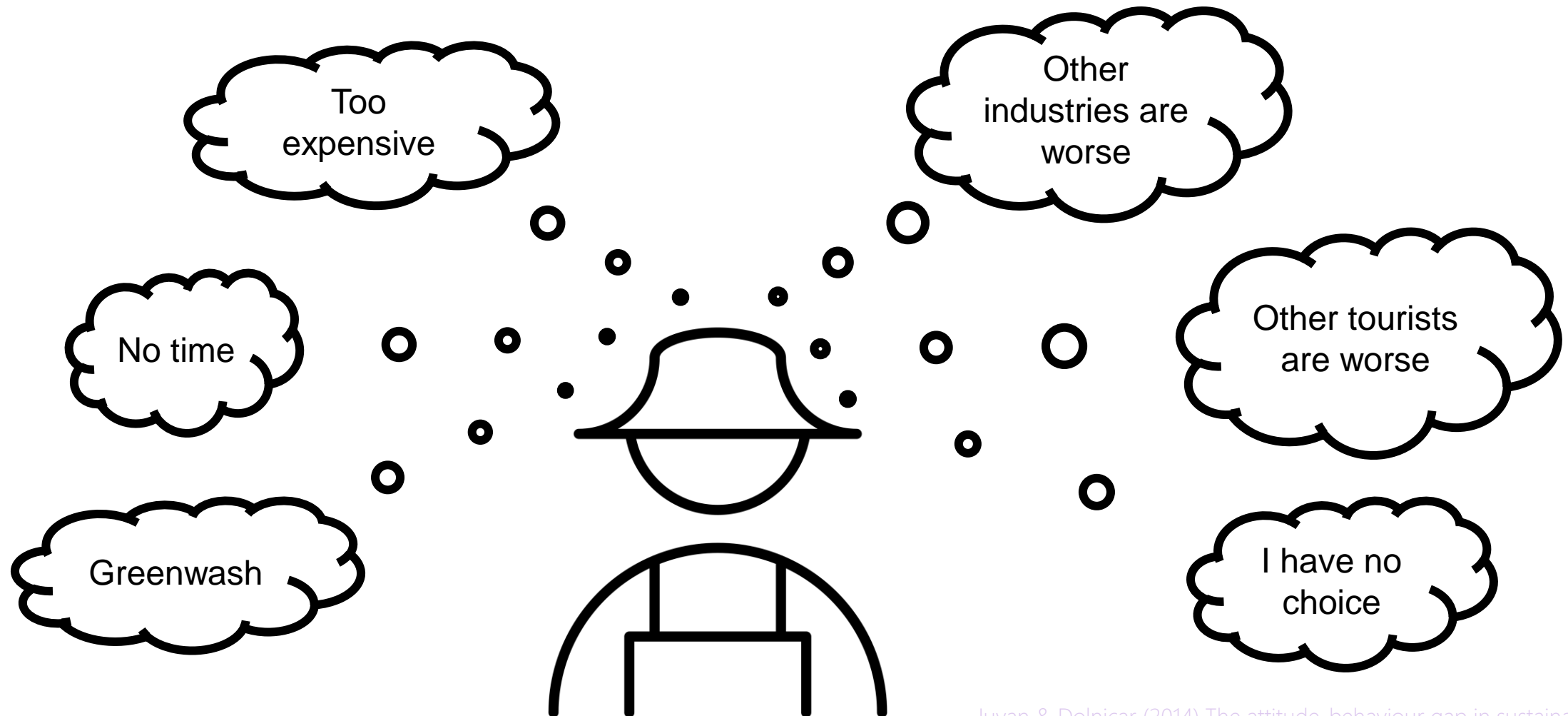
# Assuming information → attitudes → behaviour



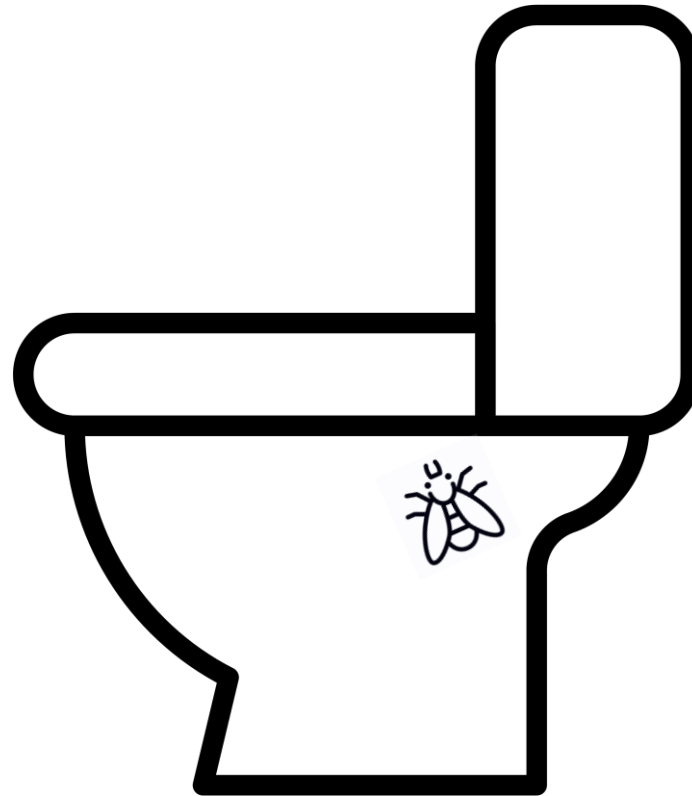
## But does that approach work?

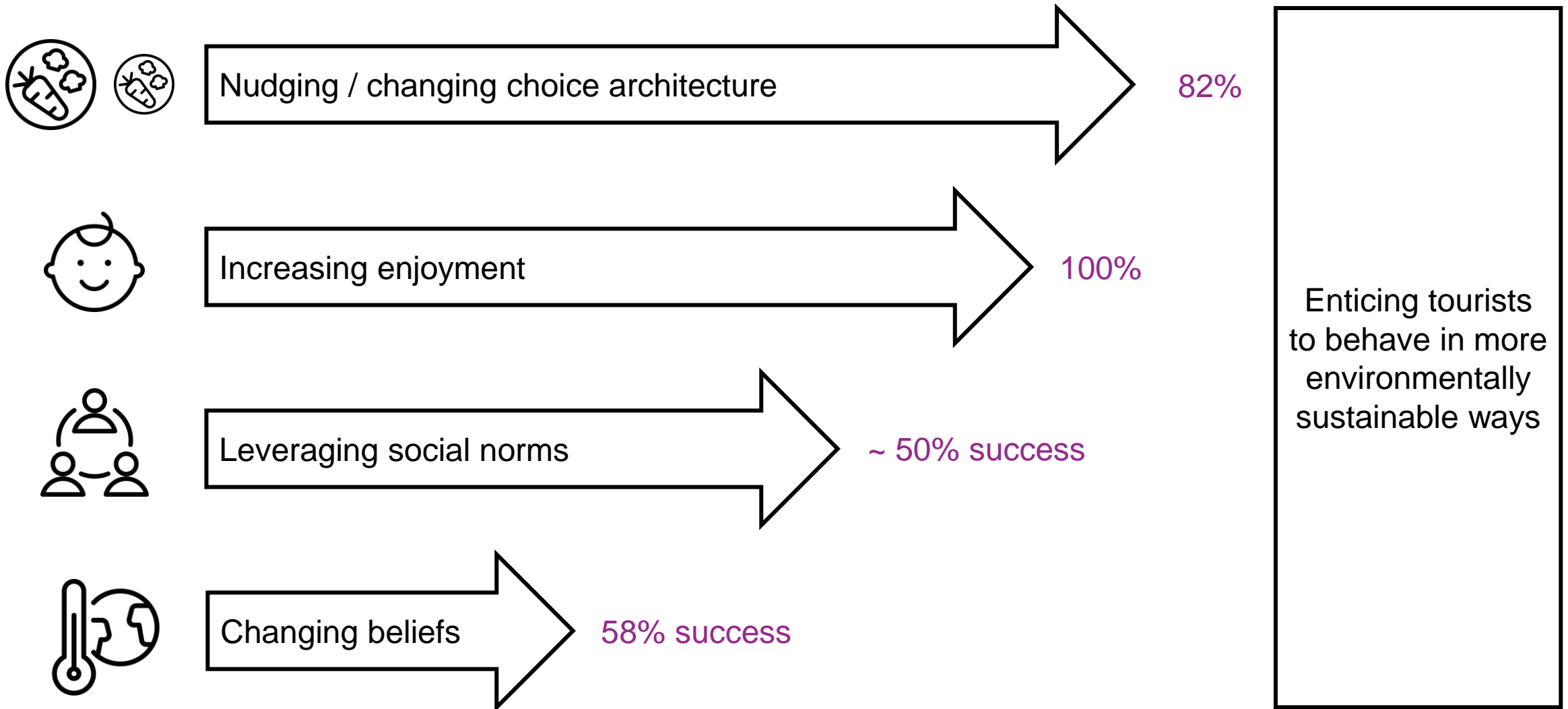


## Even environmental volunteers find excuses

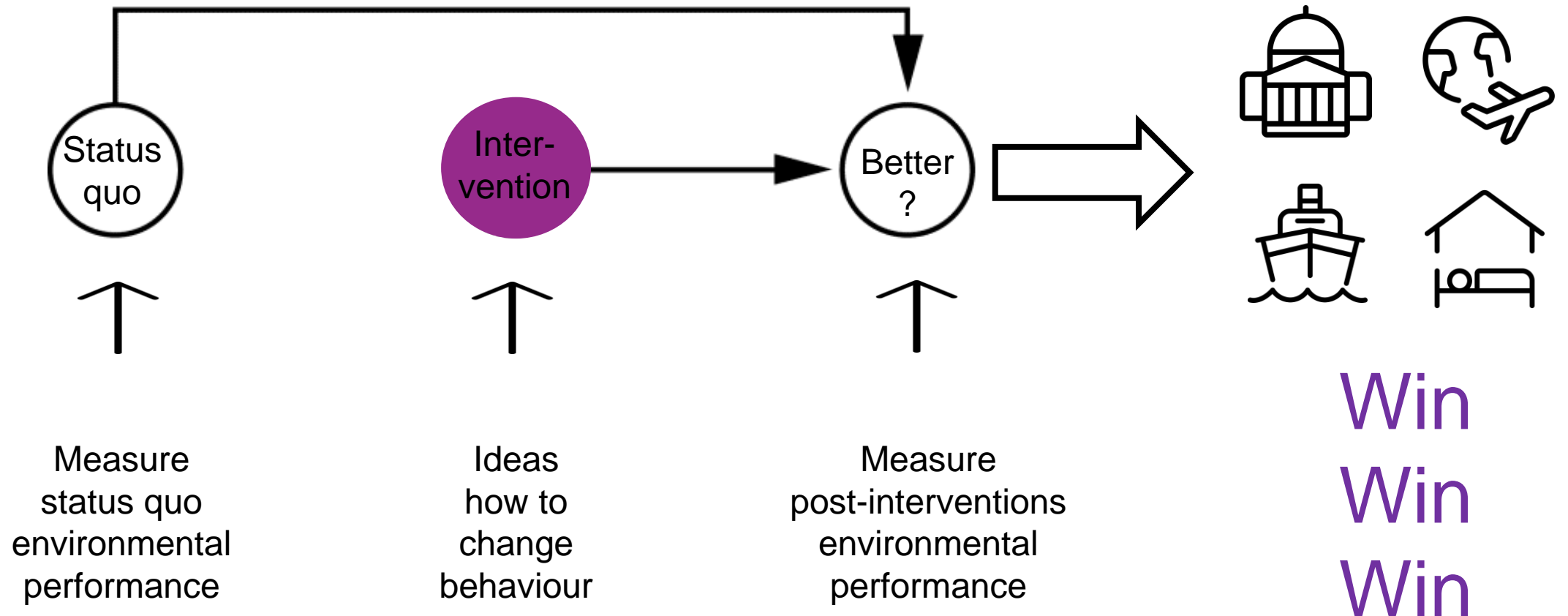


# Many behaviours we just don't think about

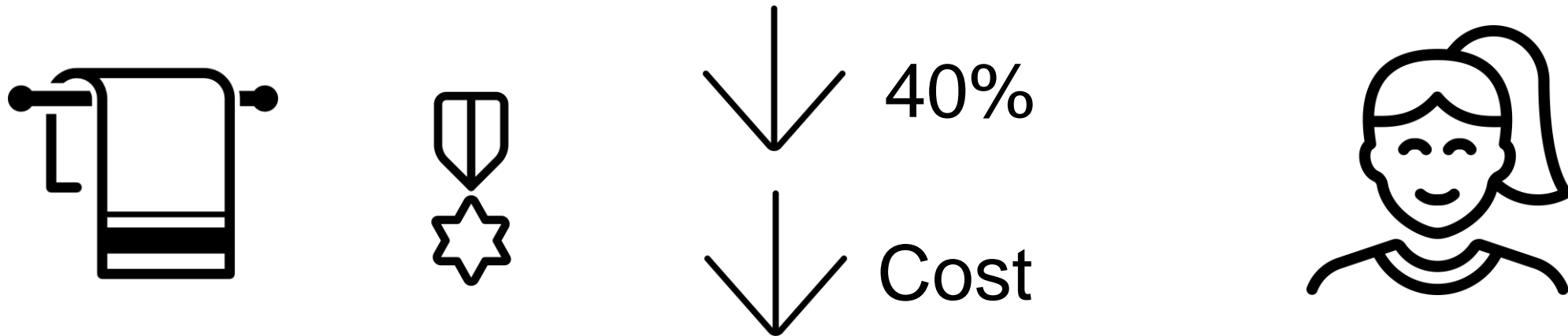




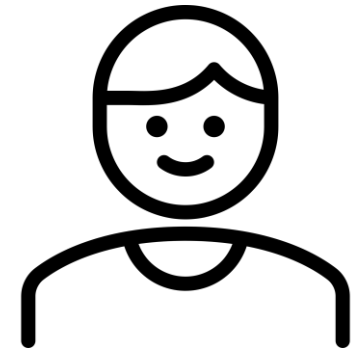
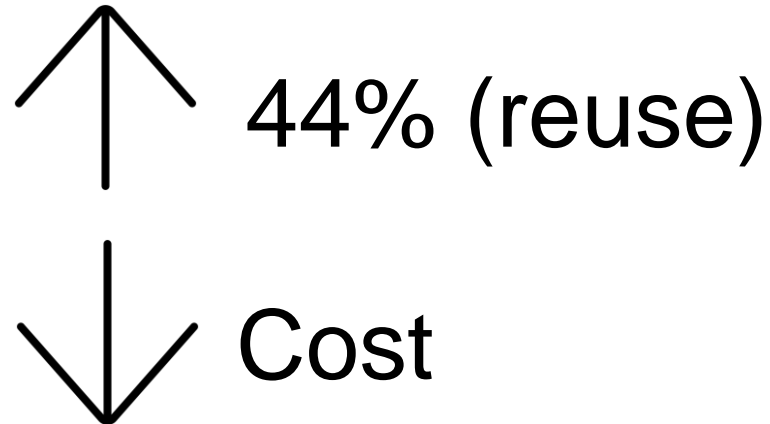
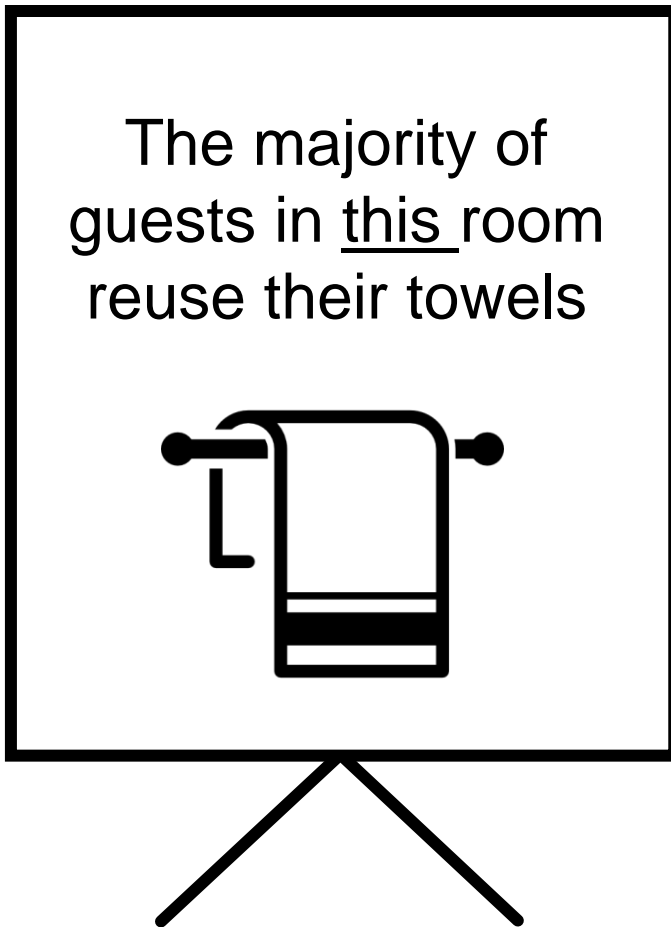
# We need to develop effective practical measures



# Increasing towel reuse

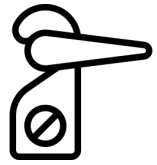


## Increasing towel reuse

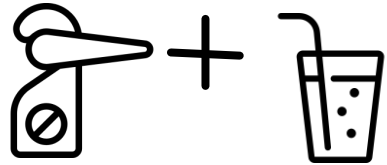




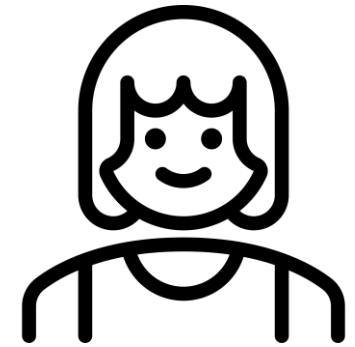
# Reducing room cleaning



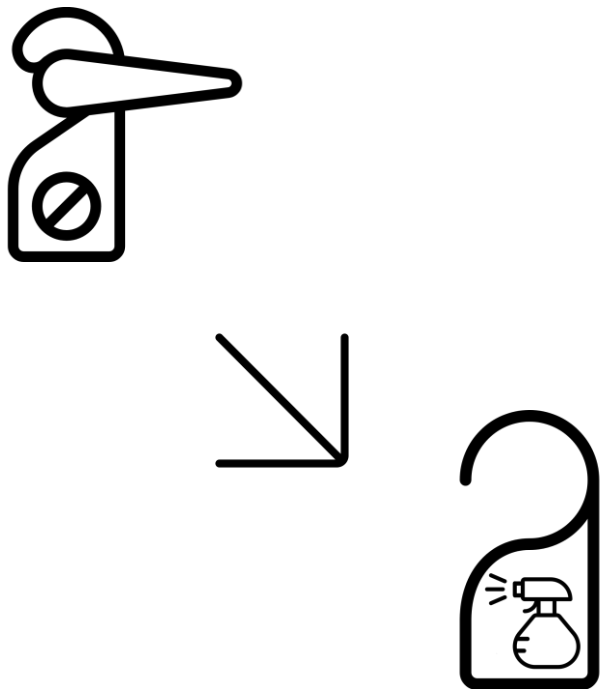
↓ 42%



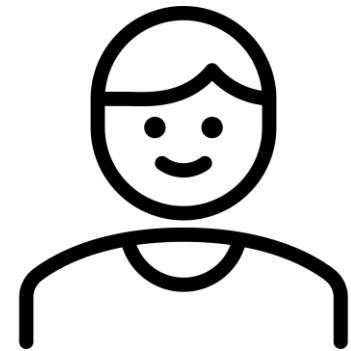
↓ Cost



# Reducing room cleaning



↓ 63%  
↓ Cost



hotel park  
ljubljana \*\*\*



Watch video: <https://youtu.be/tpX0spjpE8M>

Dolnicar, Knežević Cvelbar & Grün (2019) "To clean or not to clean?" Reducing daily routine hotel room cleaning by letting tourists answer this question for themselves. *Journal of Travel Research*, 0047287519879779.

# Reducing plate waste

HOTEL	Histrion <input checked="" type="checkbox"/>	Vile Park <input type="checkbox"/>
SOBA / ZIMMER	252	
PRIHOD / ANKUNFT	24.8.	
ODHOD / ABREISE	30.8.	
NARODNOST / NATIONALITÄT	HR	
ŠT. ODRASLIH / ANZAHL DER ERWACHSENEN	2	
ŠT. OTROK / ANZAHL DER KINDER	1	
STAROST OTROK / ALTER DER KINDER	3	

DATUM	ŽIG	DATUM	ŽIG	DATUM	ŽIG
DATUM	STEMPEL	DATUM	STEMPEL	DATUM	STEMPEL
27.8.	😊				
28.8.	😊				
29.8.	😊				

Sammeln Sie Stempel während Ihres gesamten Aufenthalts und erhalten Sie am Ende ein Geschenk!

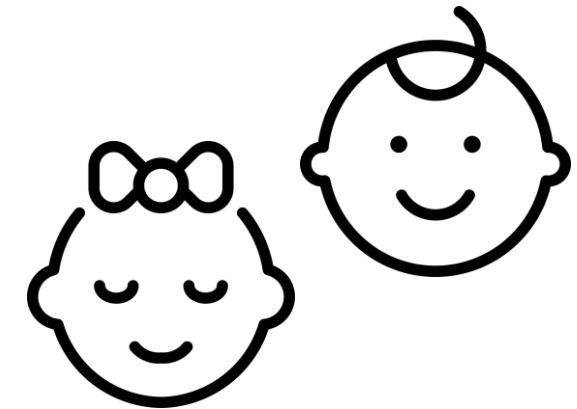
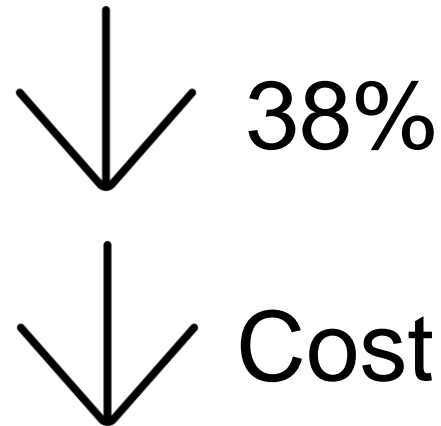
  

HOTEL	Histrion <input checked="" type="checkbox"/>	Vile Park <input type="checkbox"/>
SOBA / ROOM	2163	
PRIHOD / ARRIVAL	4.8.	
ODHOD / DEPARTURE	11.8.	
NARODNOST / NATIONALITY	SL	
ŠT. ODRASLIH / NUMBER OF ADULTS	2	
ŠT. OTROK / NUMBER OF CHILDREN	1	
STAROST OTROK / CHILDREN'S AGE	10	

DATUM	ŽIG	DATUM	ŽIG	DATUM	ŽIG
DATE	STAMP	DATE	STAMP	DATE	STAMP
4.8.	😊	9.8.	😊		
6.8.	😊	10.8.	😊		
6.8.	😊				
7.8.	😊				
8.8.	😊				

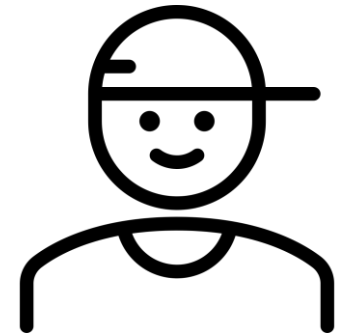
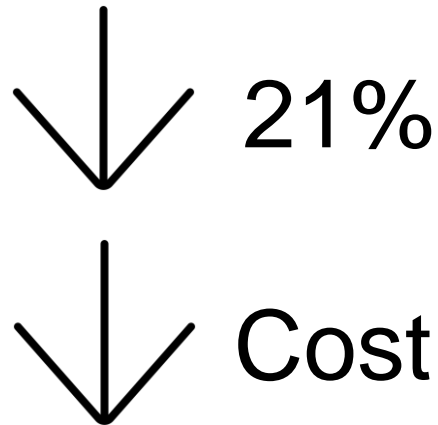
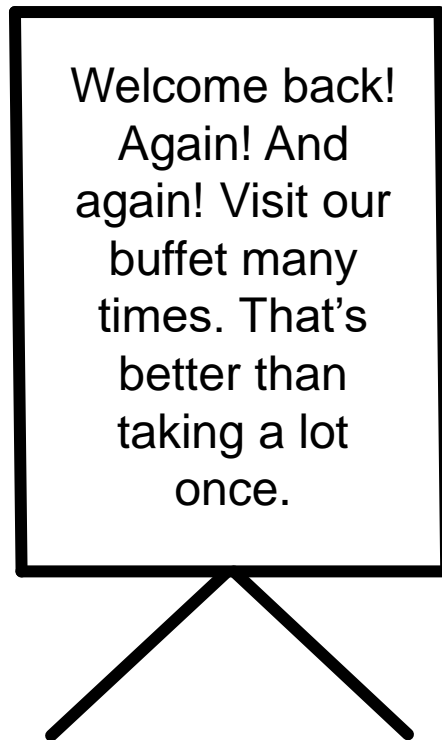
Collect stamps for the entire duration of your stay and receive a present.



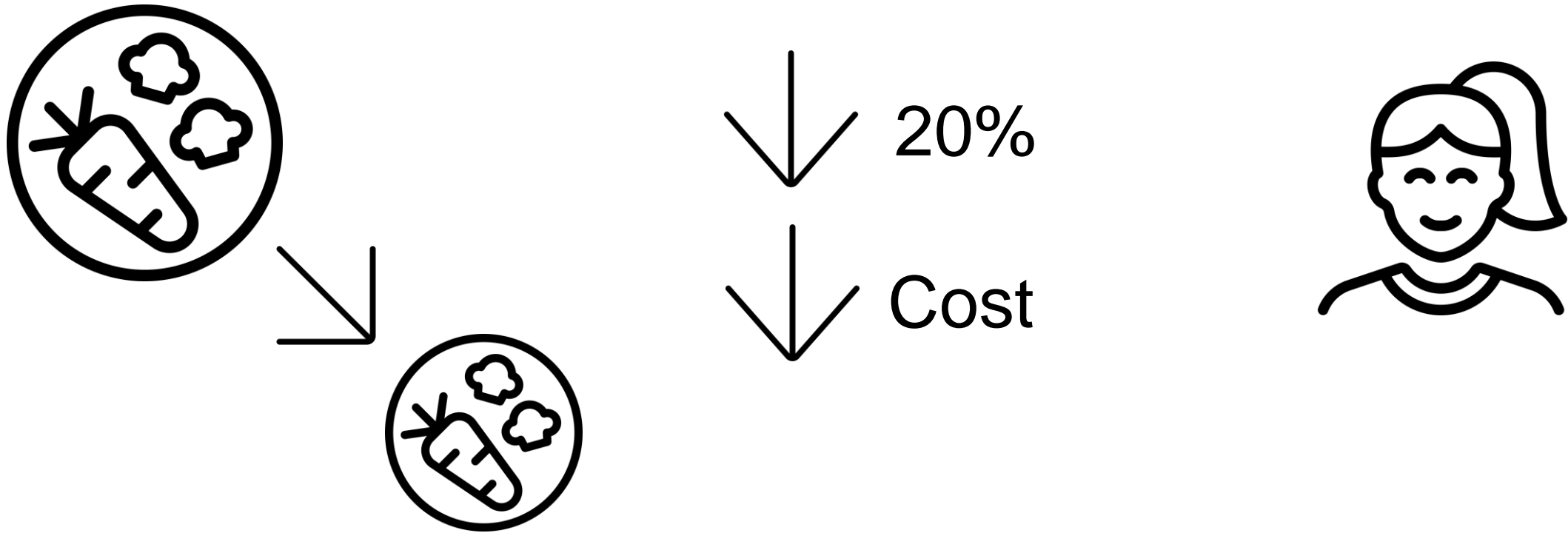
**Hoteli Bernardin**  
RESORTS & CONVENTION CENTER



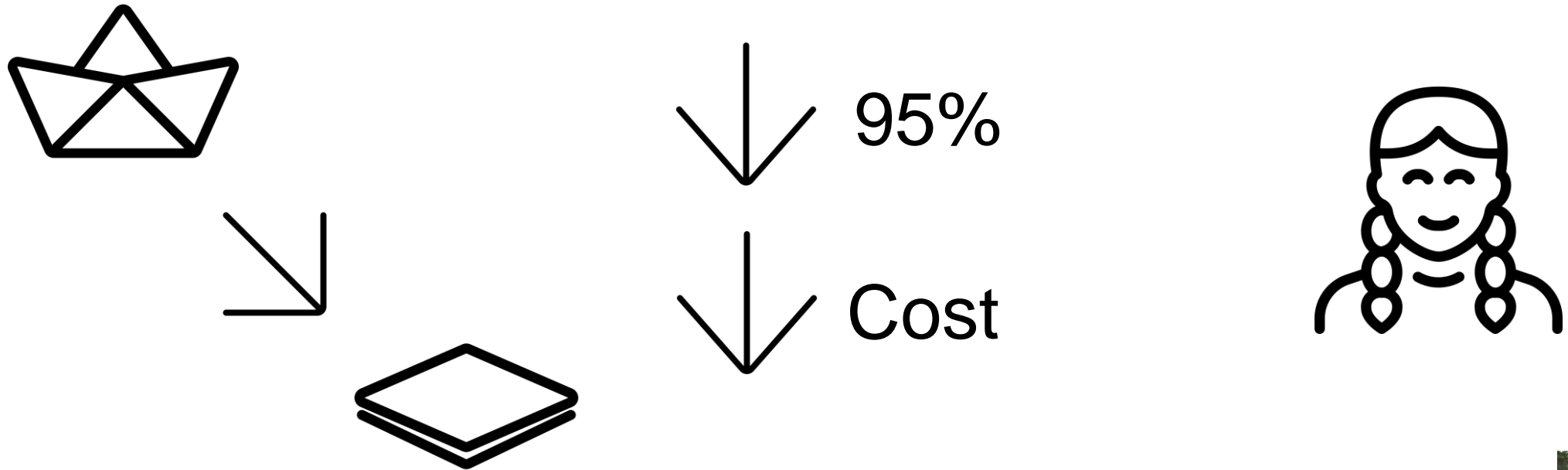
# Reducing plate waste



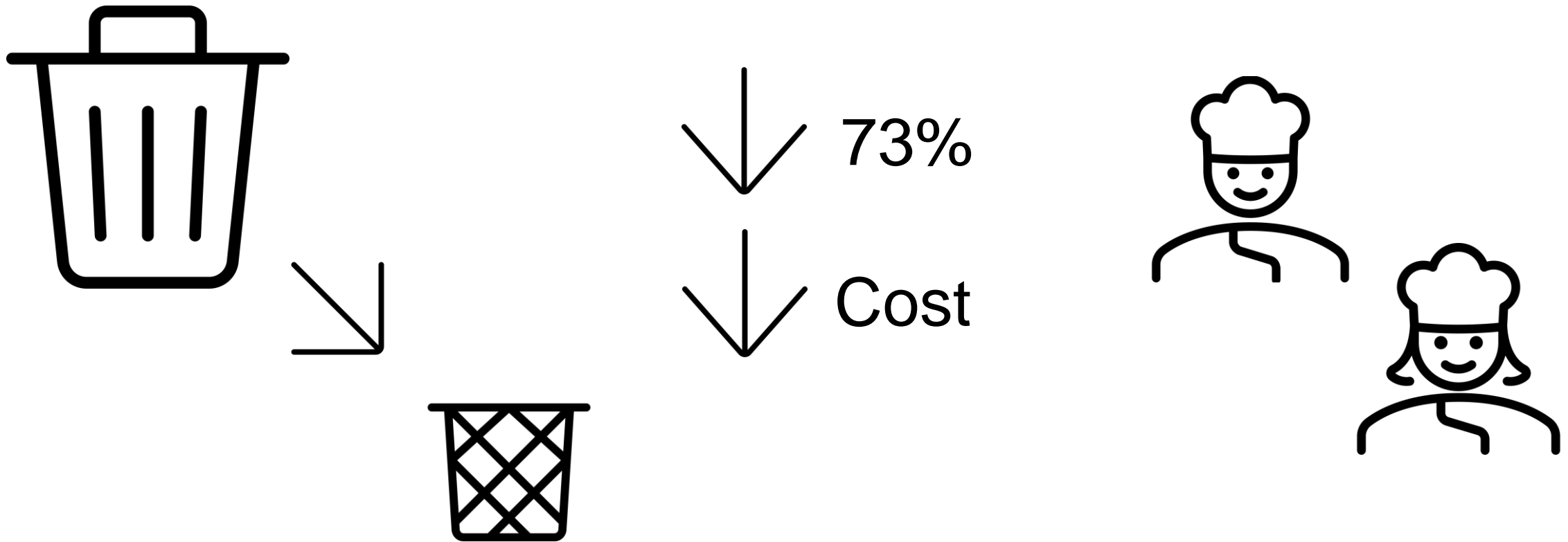
# Reducing plate waste



# Reducing the use of cotton serviettes



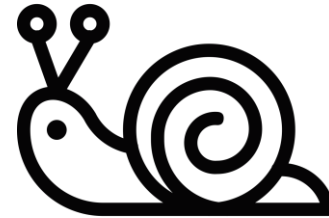
# Reducing food preparation waste



# Slow progress



Labour intensive



Snail speed



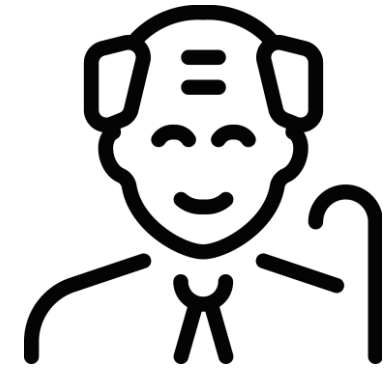
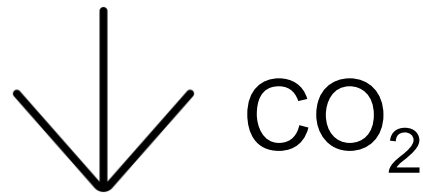
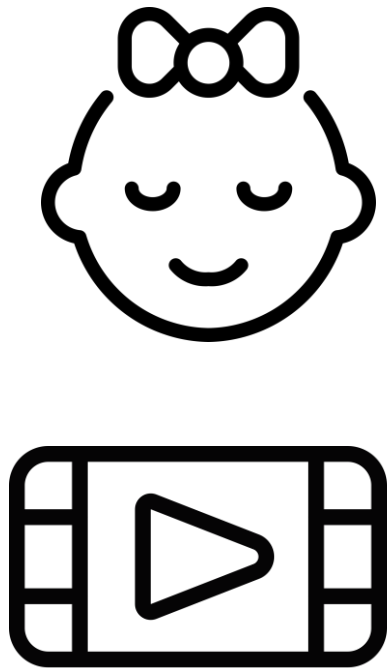
Expensive



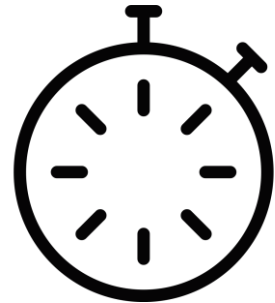
Random



## Increasing booking of low-CO<sub>2</sub> holidays



# Reducing (hot) water use in showers



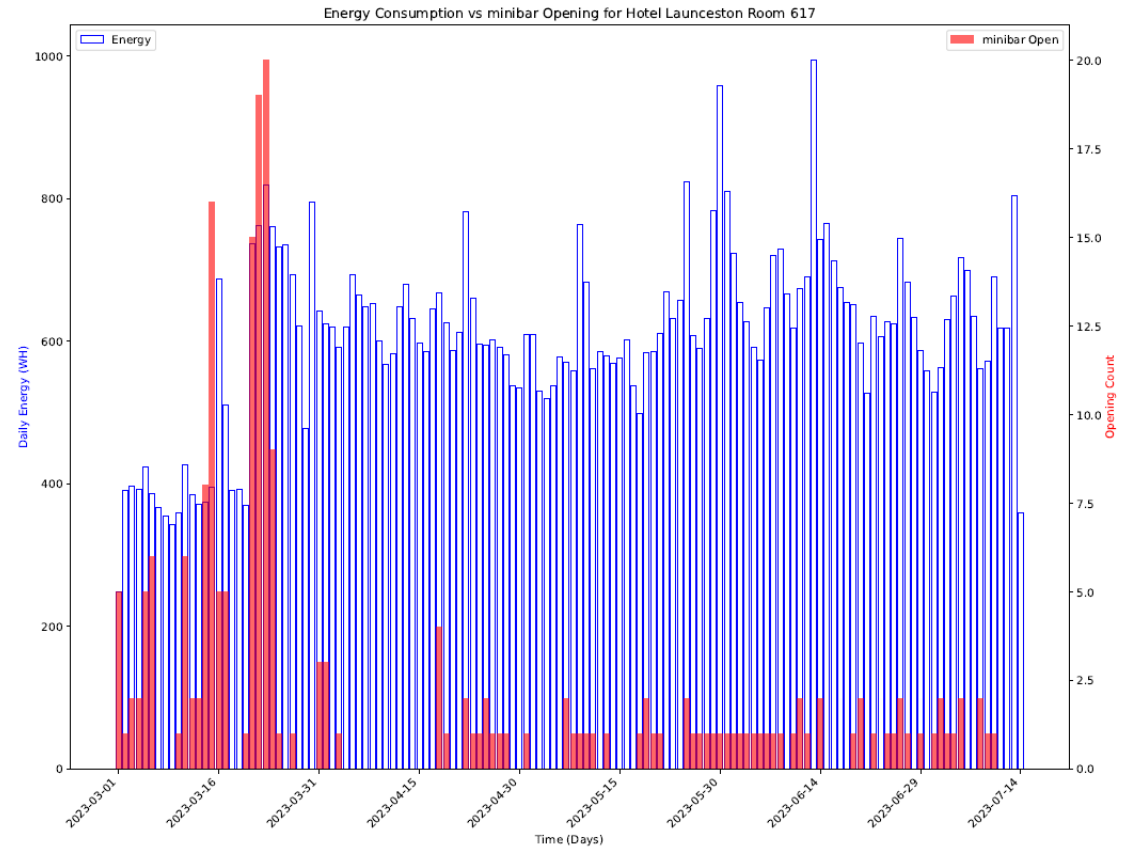
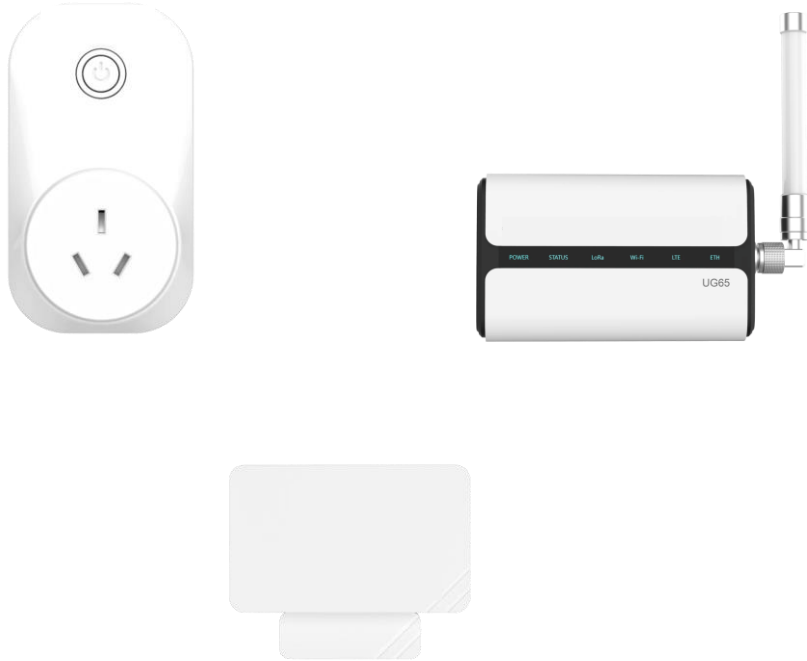
↓ 11%  
(power)

↓ 26%  
(water runtime)

Tiefenbeck, Wörner, Schöb, Fleisch & Staake (2019) Real-time feedback promotes energy conservation in the absence of volunteer selection bias and monetary incentives. *Nature Energy*, 4(1), 35-41.

Pereira-Doel, Font, Wyles & Pereira-Moliner (2024) Reducing shower duration in tourist accommodations. *Journal of Travel Research*, 00472875241245045.

# Gain insights to inform policy decisions



# Test ways to reduce emissions (and save money)

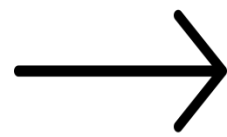
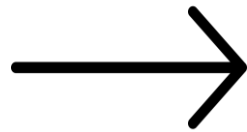
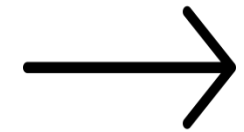
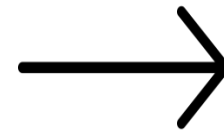


Plate waste in grams generated per minute

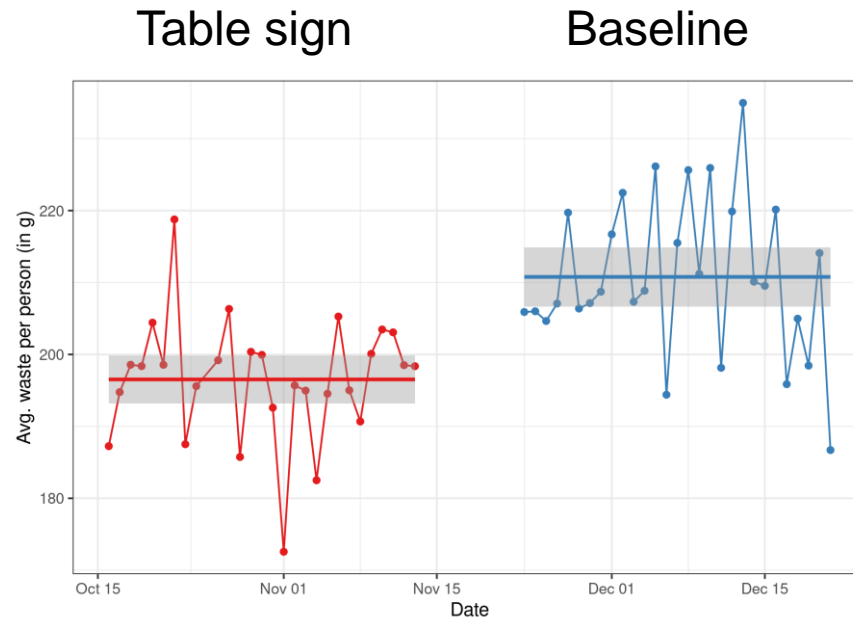


Number of people in the dining room

Shuyang Wisdom Hotel



# Test ways to reduce emissions (and save money)

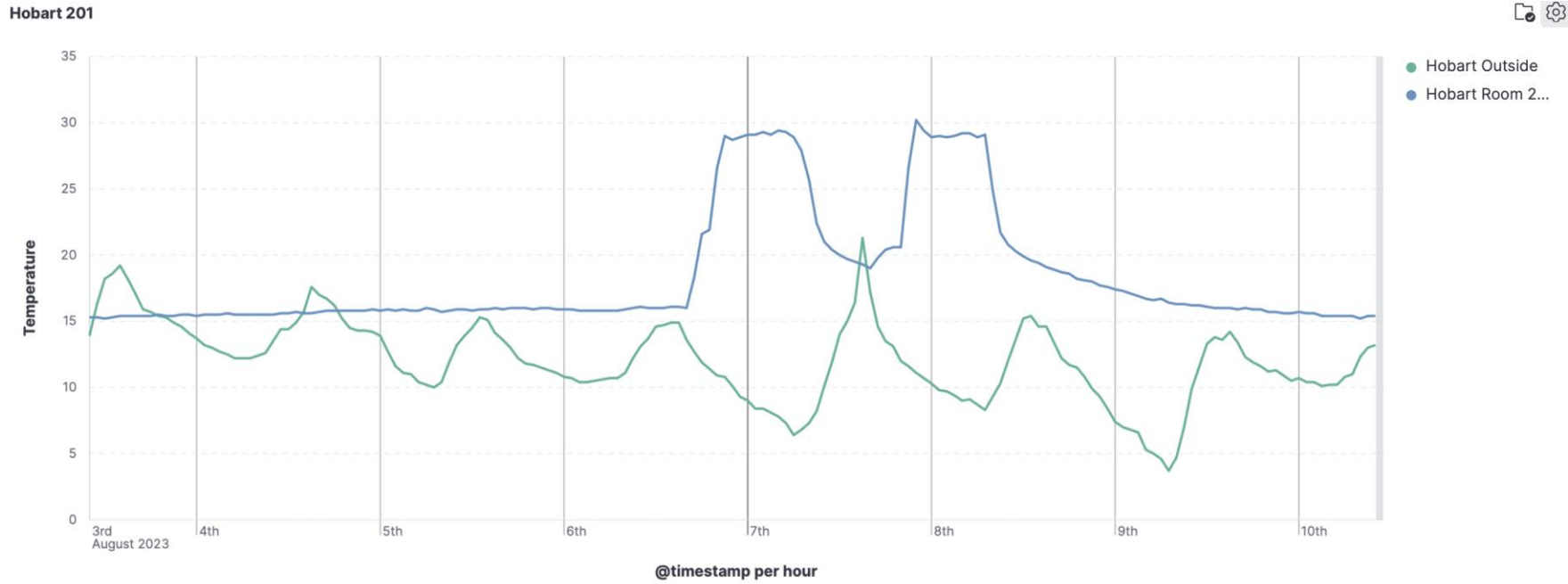


6.8% reduction

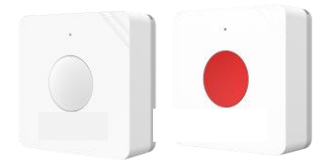
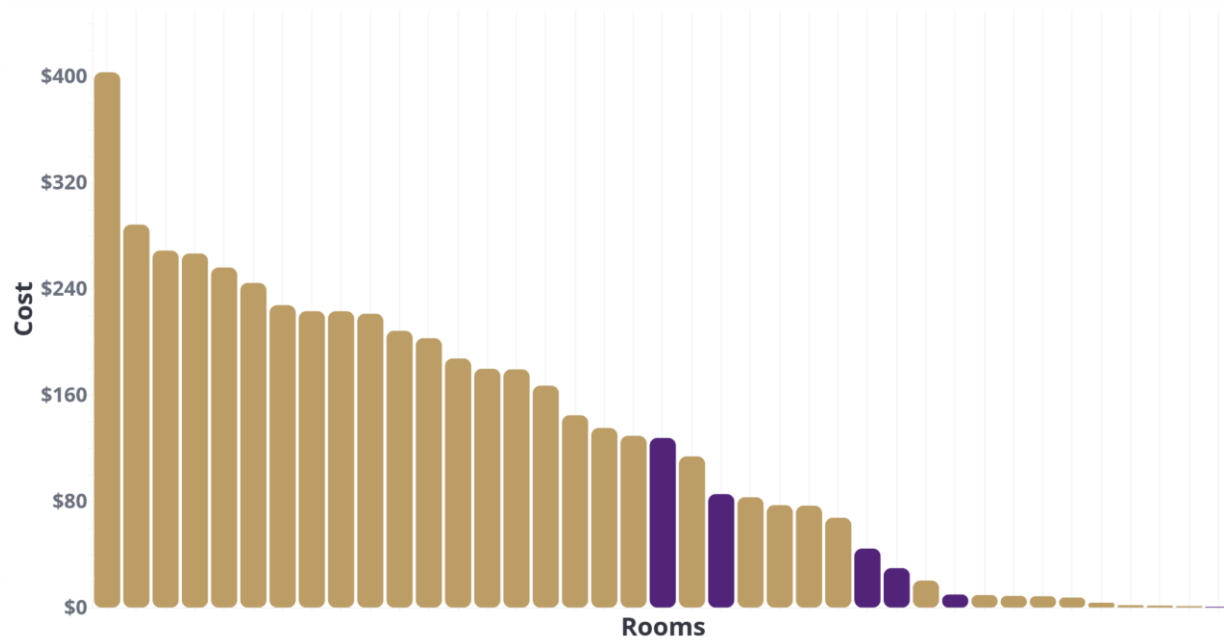
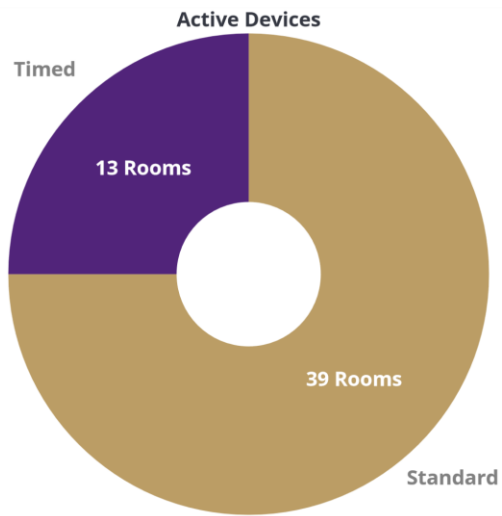
Shuyang  
Wisdom  
Hotel



# Monitoring development over time and then ...



# ... change behaviour



60% reduction

# Conclusions

Sustainability does not always cost money / reduce guest satisfaction

It can be a win-win-win

Research-industry collaboration needed (field experiments)

Technology needed (large scale testing)

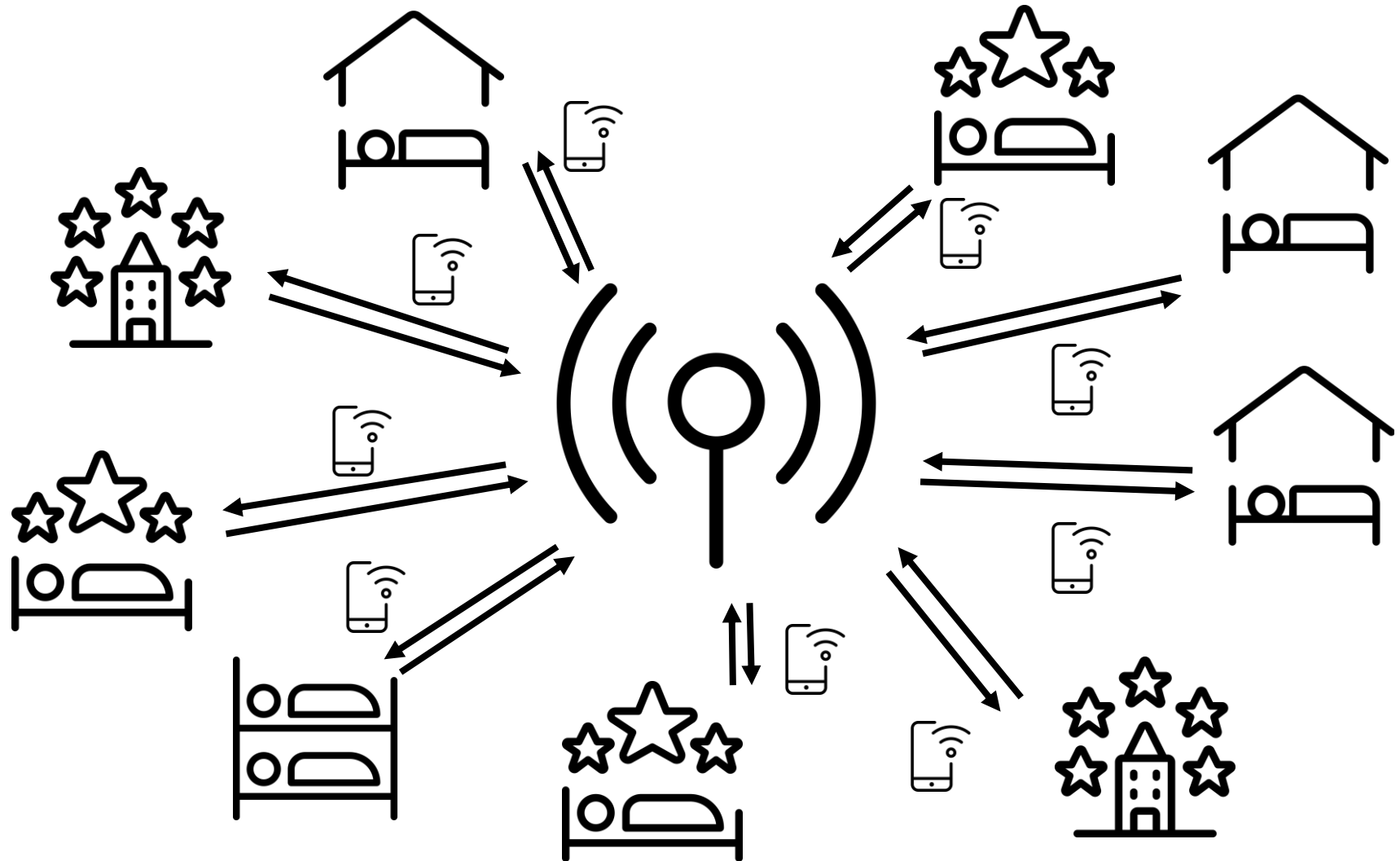
Legislation optimal – for speed

It is urgent, we don't have another 30 years



# Be at the frontline of testing new approaches

Join the Environmental Behaviour Change Lab (limited to 15 hotels)



# Thank you for your attention

Professor Sara Dolnicar  
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**The Low Harm Hedonism Initiative**  
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