

# A touchless future?

**Multi-market consumer report:**  
Attitudes to touchscreens  
and touchless alternatives in  
retail and QSR

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# Executive summary

**During the pandemic, we witnessed attitudes shift against public touchscreens. In 2022, are those attitudes here to stay?**



In May 2020, at the beginning of the pandemic, Ultraleap surveyed circa 500 consumers in the UK and US. The survey found that around 80% of people perceived public touchscreens to be unhygienic.

Over 70% also said they were likely to interact using a touchless alternative in the future. Other studies showed similar trends. A large 2020 Capgemini study found that 77% expected to increase their use of touchless interactions to avoid touchscreens during the pandemic. 62% expected to continue this behaviour post-pandemic.<sup>1</sup>

Two years on, the pandemic is at a less acute stage in many markets. Is the public still as worried about the hygiene of touchscreens? Or have these concerns faded away?

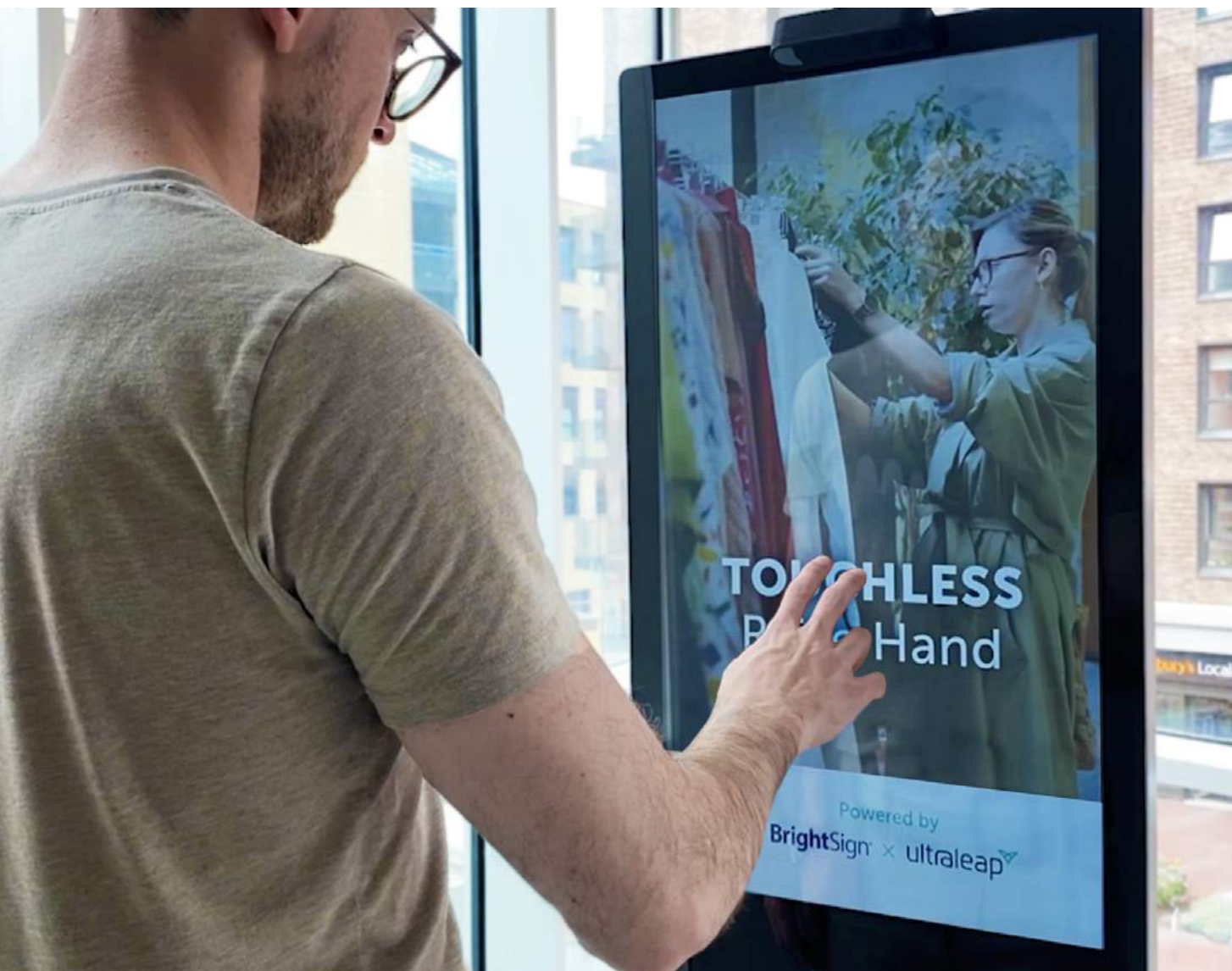
Answering this question is a customer experience problem. Self-serve touchscreens are an integral part of business operations for many retail and quick-service restaurant (QSR) companies. But if the public is still concerned about hygiene, asking unwilling consumers to interact using screens they perceive to be unsafe risks negative brand associations, reduced footfall, and lost revenue opportunities.

<sup>1</sup><https://www.capgemini.com/insights/research-library/the-art-of-customer-centric-artificial-intelligence/>

Building on our 2020 study, we ran a survey across the UK, US, China, and Japan with over 2000 respondents and more than 500 in each market. In this research, we delved deeper into attitudes towards public touchscreens, looking across four major markets to understand the size of the problem globally.

We found that concern around touchscreen hygiene remains prevalent across all markets, and covers concerns beyond COVID-19. Most respondents are changing their behaviour at least sometimes to avoid germs on public touchscreens. A sizeable minority are always changing their behaviour.

We also found that the public is not only open to but actively positive about touchless solutions – making this a solvable problem and a commercial opportunity. For example, because self-service screens in QSR have typically higher order sizes, persuading even a small percentage of consumers who would have gone to the counter to use self-serve instead results in a significant uplift in sales and profits.



# Consumer attitudes and behaviours snapshot



52%

agreed or strongly agreed with the statement "I think public touchscreens are unhygienic."



29%

report always changing their behaviour around public touchscreens to avoid germs.



25%

of consumers touch the screen as little as possible.



10%

of consumers claim actively to avoid places where they must use touchscreens.



83%

would be open to using a touchless solution in a store or restaurant.



68%

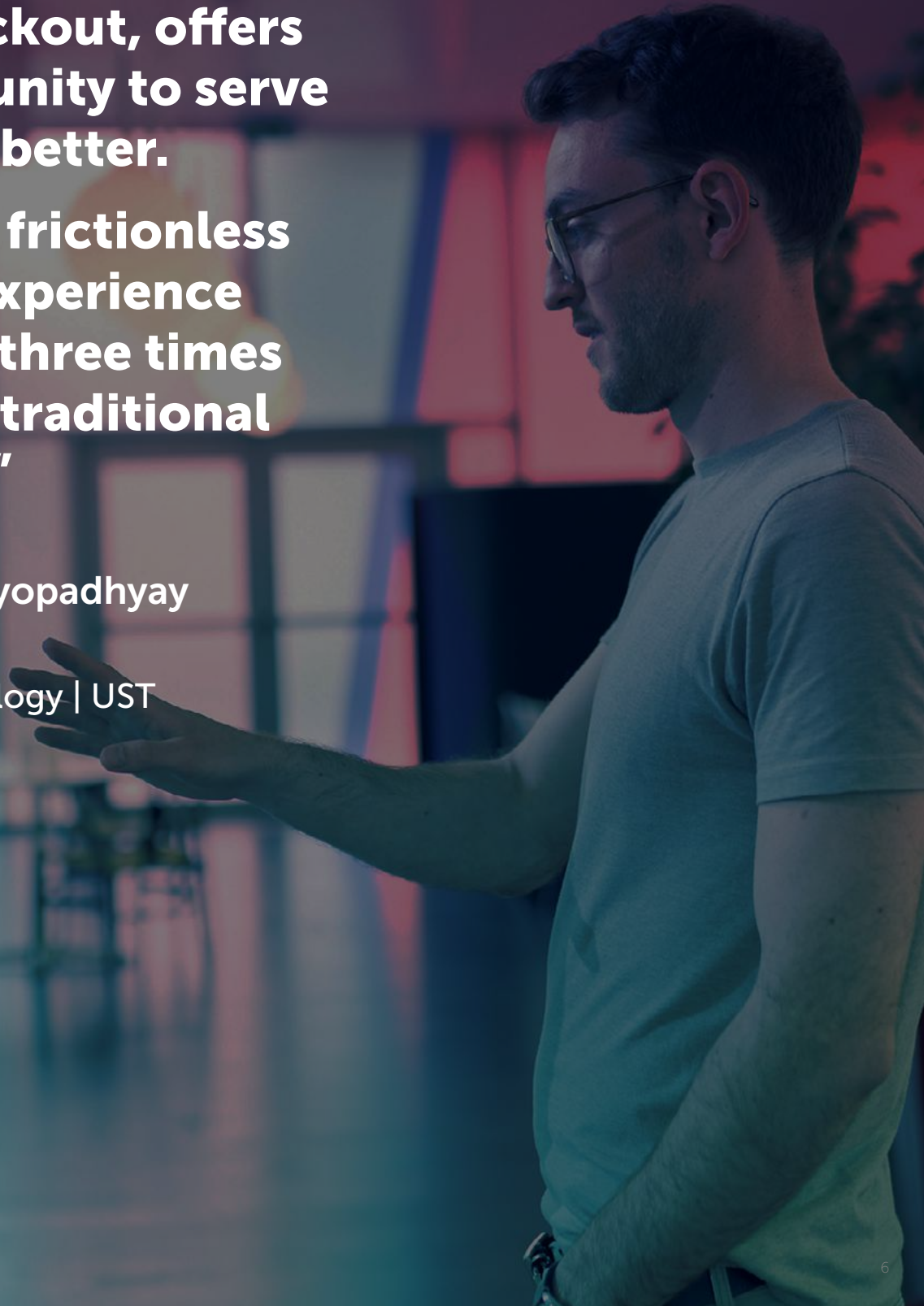
would be more likely to visit a store or restaurant offering touchless self-service.

**“Touchscreen hygiene is a significant user experience issue that impacts both brand perception and retail operations.**

**Adopting touchless solutions, such as UST’s Vision Checkout, offers the opportunity to serve consumers better.**

**It’s a clean, frictionless customer experience that is also three times faster than traditional checkouts.”**

**Subhodip Bandyopadhyay**  
General Manager,  
Emerging Technology | UST



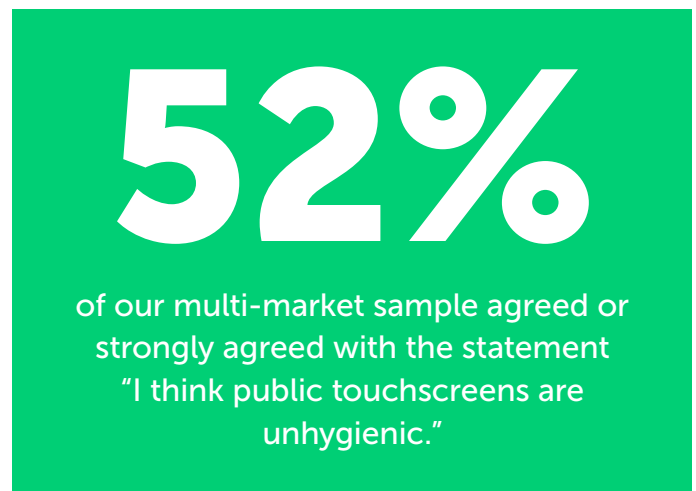


# Consumer attitudes to touchscreens

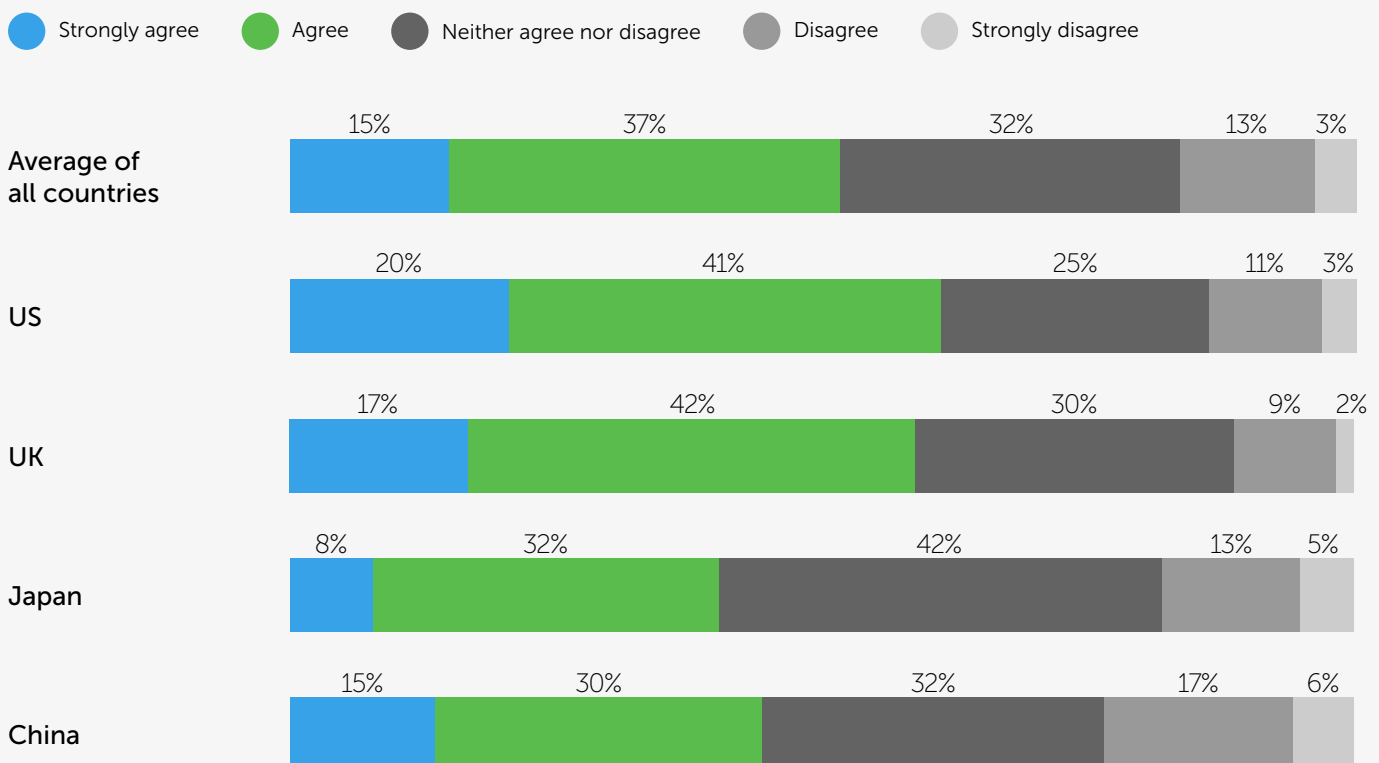
# Most consumers believe public touchscreens are unhygienic

We probed respondents about attitudes towards touchscreens, both benefits and drawbacks.

We found that a substantial part of society across all markets strongly believes public touchscreens are unhygienic. For QSR and retail brands who seek broad public appeal, there's the question of how much this concern eats into key segments and may prevent self-service interactions in stores and restaurants.



## Agreement with 'I think public touchscreens are unhygienic'





Despite hygiene concerns, most consumers also find public touchscreens convenient and easy to use. The convenience factor is consistent across all markets, and overall the majority find them easy to use.

This confirms something we already know: Most consumers don't have a problem with using self-serve POS touchpoints, the problem is touching the screen. Remove that, and it seems consumers are largely positive about screen-based self-service.



# Most consumers are changing behaviour to avoid germs on touchscreens

Most respondents in the US, UK, and China report at least sometimes changing their behaviour (for example using hand sanitizer) around public touchscreens to avoid germs.

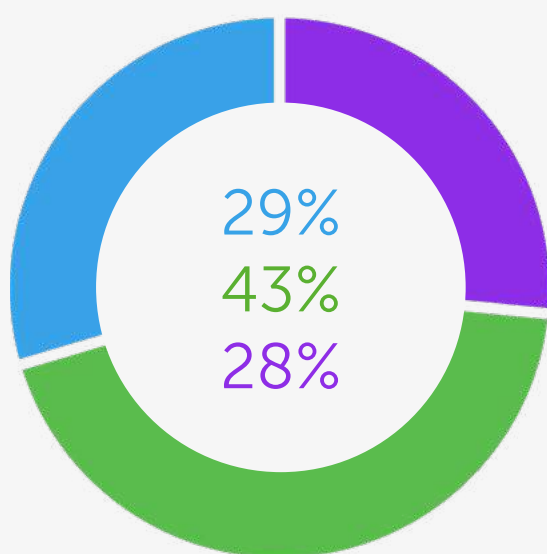
A considerable 78% in the US, 75% in the UK, and 87% in China report sometimes changing their behaviour. It's fewer in Japan, at 46%, but still represents nearly half of respondents.

Across our samples, a significant 29% report always changing their behaviour.

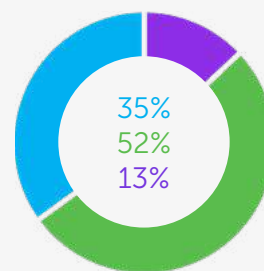
That's a lot of potential distractions to consumers at self-service touchscreens. It prompts the question of what the commercial impact of these touchscreen avoidance behaviours might be for brands.

## When using public touchscreens, do you do anything to prevent spreading germs or being exposed to germs?

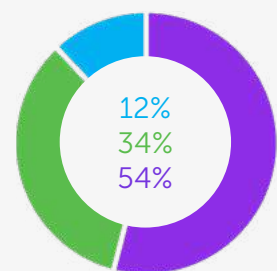
● Always    ● Sometimes    ● Never



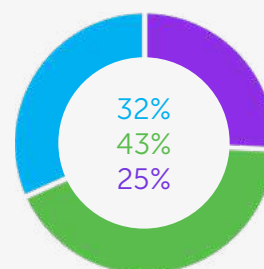
Average of all countries



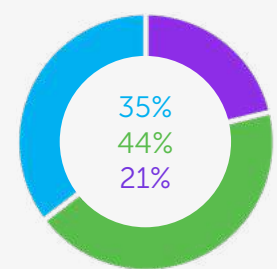
China



Japan



UK



US

# How touchscreen avoidance behaviours impact brands

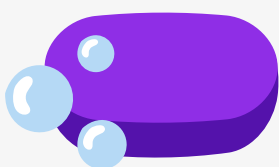
In the survey, we probed respondents further on how they changed their behaviour to protect themselves and others from the perceived risks of touchscreens. We found that 45% of our multi-market sample reported having used hand sanitizer after touching a public screen. Significant numbers also report touching the screen as little as possible (25%), or even avoiding places where they must use a touchscreen (10%).

These touchscreen avoidance behaviours are likely to have a direct commercial impact. That a sizeable 25% of consumers touch the screen as little as possible limits the opportunity for upselling at self-service. Meanwhile, that 10% claim to avoid places where they must use touchscreens indicates that a small but significant group of consumers choose to not visit specific stores or brands.



# Touchscreen avoidance behaviours

- 11% I don't let my children use them
- 10% I avoid places where I have to use public touchscreens
- 25% I touch it as little as possible
- 25% I wash my hands after using the screen
- 29% I use hand sanitiser *before* using the screen
- 45% I use hand sanitiser *after* using the screen



**“Consumers appreciate the functionality and ease of touchless technology more than ever.”**

**Jack Stratten**  
Insider Trends



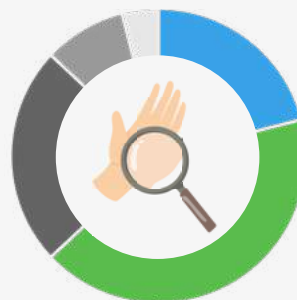
# Hygiene concerns are broader than just COVID-19

We probed respondents on whether public touchscreen hygiene concerns were about COVID-19, other germs, or general cleanliness.

Globally, we found that concerns about touchscreen hygiene is not restricted to COVID-19 and that the levels of concern are remarkably similar across the distinct factors.

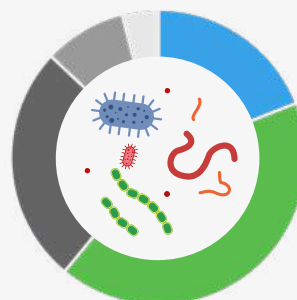
That is, for each factor probed, we found that circa 20% of our sample strongly agree and 40% agree with having concerns.

## The different kinds of touchscreen hygiene concern across UK, US, China and Japan



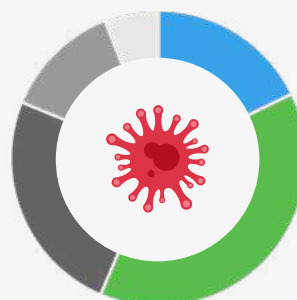
I'm concerned that my hands are unclean after touching public touchscreens

**21% Strongly agree**  
**42% Agree**  
**24% Neither agree nor disagree**  
**9% Disagree**  
**4% Strongly disagree**



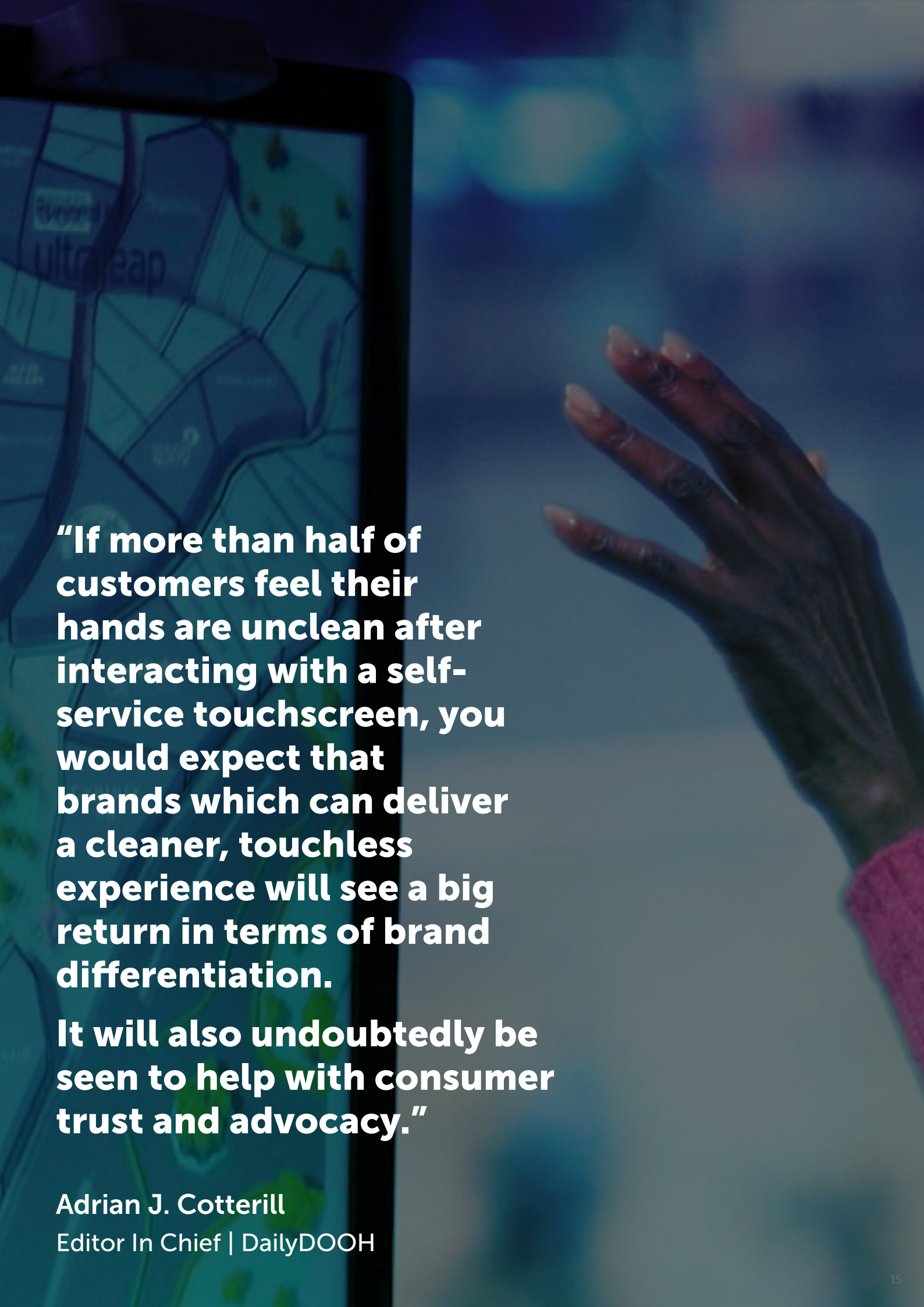
I'm concerned that public touchscreens could expose me or others to germs other than COVID-19

**19% Strongly agree**  
**42% Agree**  
**26% Neither agree nor disagree**  
**9% Disagree**  
**4% Strongly disagree**



I'm concerned that public touchscreens could expose me or others to COVID-19

**19% Strongly agree**  
**39% Agree**  
**25% Neither agree nor disagree**  
**13% Disagree**  
**6% Strongly disagree**

A hand with a pink sleeve reaches towards a touchscreen displaying a map. The map shows various streets and landmarks, with the word 'ultracap' visible in the upper left. The background is a blurred blue and purple gradient.

**“If more than half of customers feel their hands are unclean after interacting with a self-service touchscreen, you would expect that brands which can deliver a cleaner, touchless experience will see a big return in terms of brand differentiation.**

**It will also undoubtedly be seen to help with consumer trust and advocacy.”**

**Adrian J. Cotterill**  
Editor In Chief | DailyDOOH



# Consumer attitudes to touchless alternatives



# Most consumers are open to a touchless solution

Respondents were presented with a short video of a person interacting with a touchless screen using gesture control, powered by Ultraleap's TouchFree application.

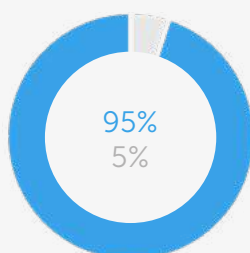
We found that the vast majority – 83% across the four samples – claim they would be open to using the touchless solution in a store or restaurant.



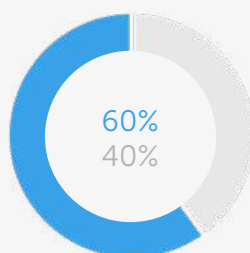
Image of the video used in the survey: touchless self-service in a fast-food setting

Imagine you saw a touchless interactive screen, like the one above, in a public place like a store or a fast food restaurant. Would you use it to make a purchase?

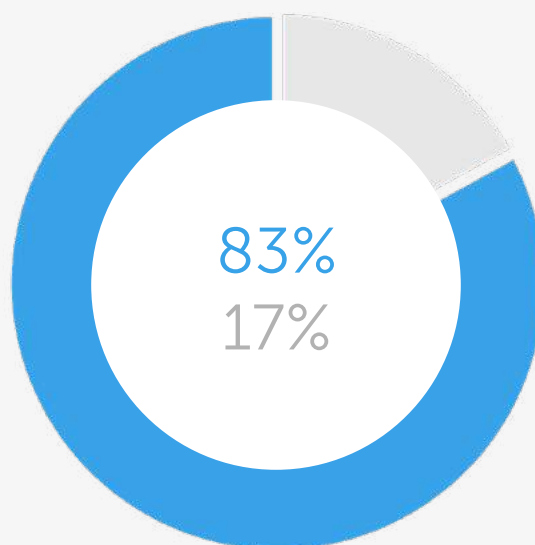
● Yes, I would use it    ● No, I would not use it



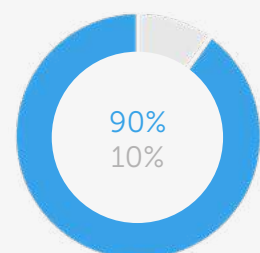
China



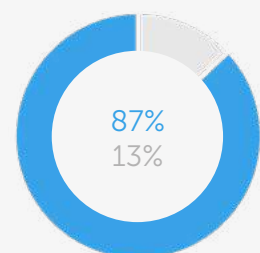
Japan



Average of all countries



UK



US

**“The challenge of public touchscreen hygiene is increasingly looking like a solvable problem – and a commercial opportunity – as consumers strongly indicate their openness to touchless solutions.”**

Jeff Hastings  
CEO | BrightSign

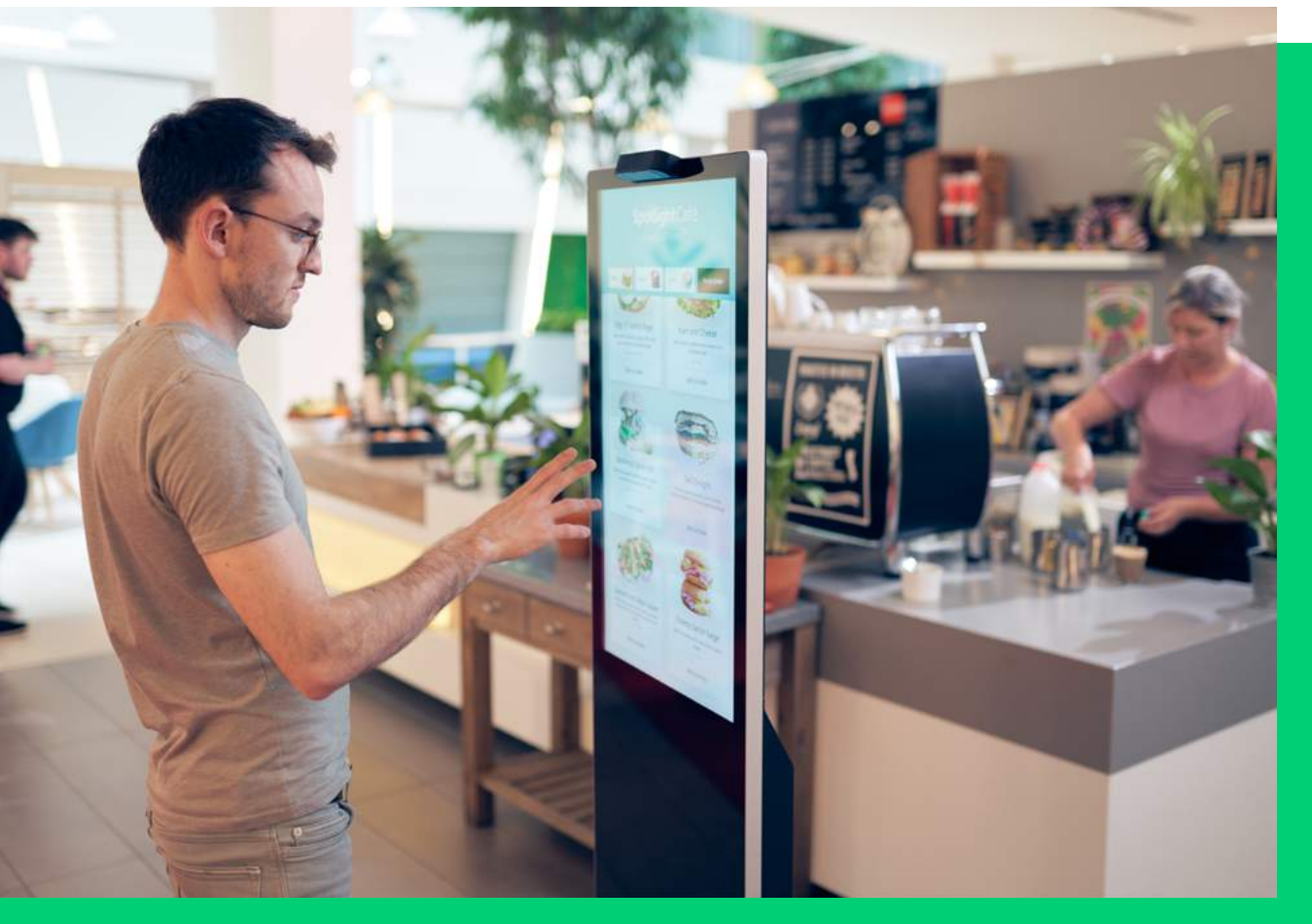
**TOUCHLESS**  
BrightSign  
Hand

Powered by  
BrightSign® × ultraleap<sup>™</sup>

# Retail and food ordering are where touchless would be most useful

Globally, respondents expect to find a touchless solution such as the one they were shown most useful for ordering food and drink in a restaurant (52%), using a self-service checkout in a store (45%) and when using

an ATM (37%). This matches where they find public touchscreens useful today. For this question, there were no notable differences between the countries.



# Top 10 locations for a touchless solution



Ordering food and drink in a restaurant



Using a self-service check-out in a store



Browsing products or items in a store



Browsing a digital map in a mall



Checking in or out of a location



Interacting with an exhibit



Playing with an interactive advert



Playing a game in an arcade



Using an ATM to withdraw cash



Purchasing tickets for public transport

# Availability of touchless self-service influences brand choice

We asked survey respondents whether they would be more likely to visit a grocery store or fast-food restaurant if it offered a touchless self-service screen.

While this was a blunt question and should be taken with some caution, it provides a strong sign of the extent to which consumers seem eager to use touchless solutions – particularly in China, where a massive 94% of respondents answered yes to this question.

68%

claim they would be more likely to visit a grocery store or fast-food restaurant if it offered a touchless self-service screen

## Would you be more likely to visit a grocery store or fast food restaurant if it offered a touchless self-service screen?

Yes  No

China



Japan



UK



US



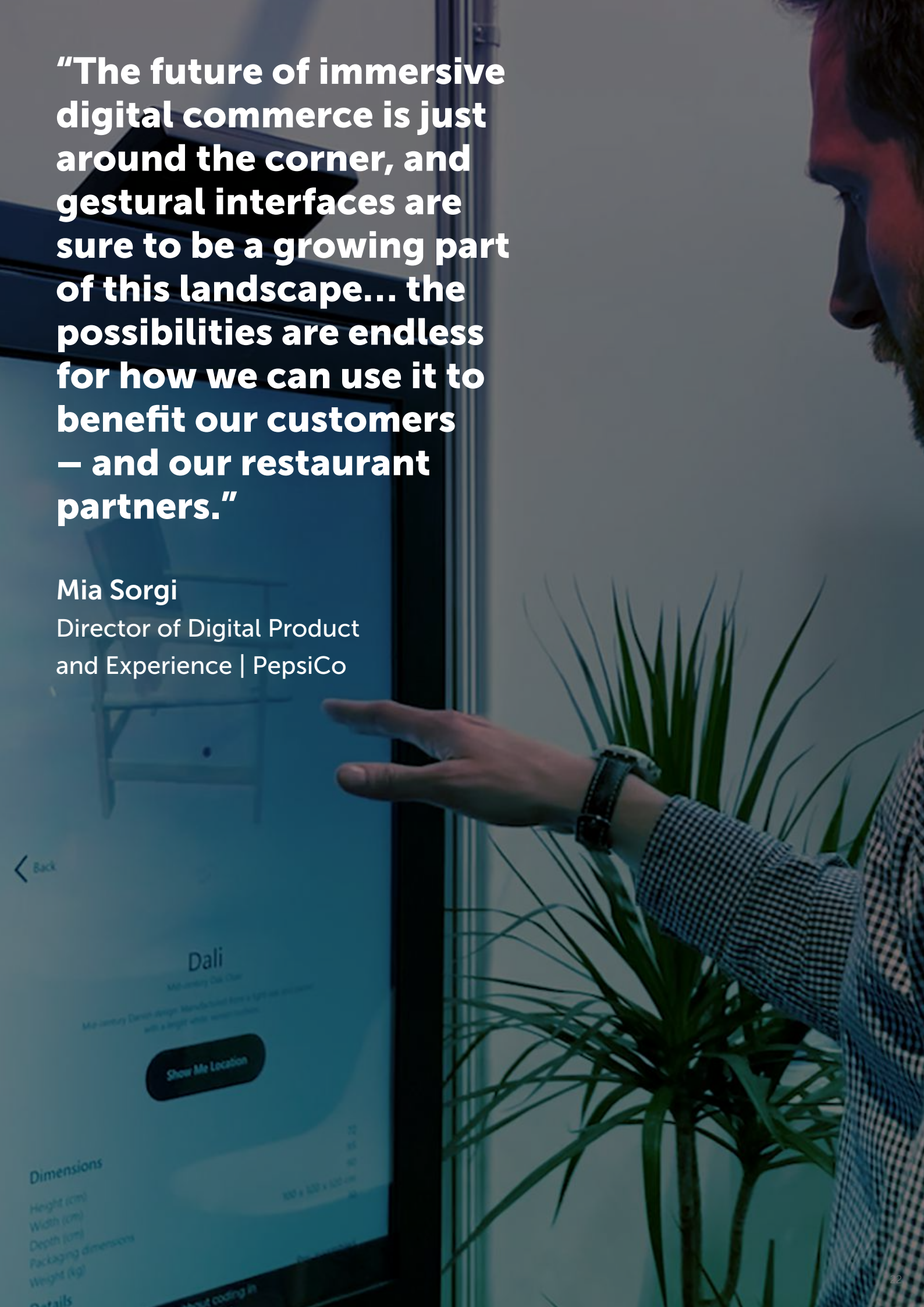
Average of all countries



**“The future of immersive digital commerce is just around the corner, and gestural interfaces are sure to be a growing part of this landscape... the possibilities are endless for how we can use it to benefit our customers – and our restaurant partners.”**

**Mia Sorgi**

Director of Digital Product and Experience | PepsiCo





# Sizing the commercial opportunity of touchless screens

# The “hygiene-sensitive” consumer group

In a quick-service restaurant (QSR) setting, self-service machines provide a commercial uplift by reducing the cost through fewer checkout staff and bringing in more revenues through typically higher-than-average order sizes.

However, we found a significant group of consumers now strongly believe touchscreens are unhygienic. They may also demonstrate behaviours to avoid touching screens - 10% say they avoid places where they have to use public touchscreens.

Combining all countries, we found that 21% of consumers strongly agree with “I’m concerned my hands are unclean after touching public touchscreens.” But they also find touchscreens to be convenient. We can hypothesize that there is a behavioural segment who would use self-service more if it were touchless.

QSR and retail brands could therefore potentially lower staff costs and increase revenues by serving this group better.



**78%** say they find public touchscreens convenient.



**51%** claim they “always” do something to avoid germs on touchscreens.



**84%** say they would use a touchless solution in a store or restaurant.



**51%** say they would use the touchless screen because it’s cleaner.



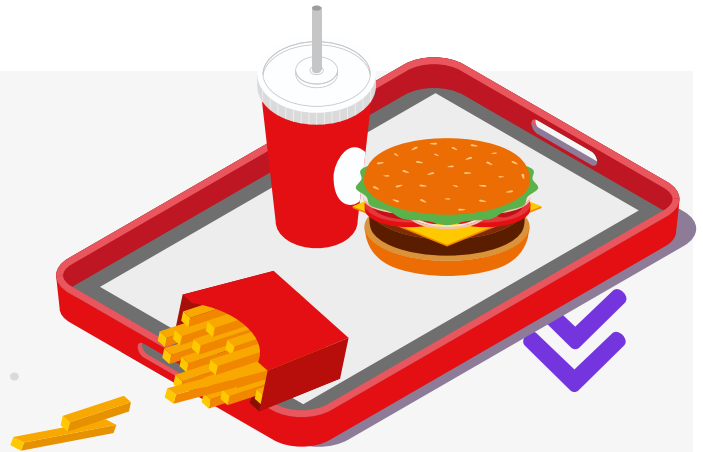
**74%** say they would be more likely to visit a fast-food restaurant if it offered touchless self-service.



# Opportunity for upsell

## 1000+ customers

Let's say a fast-food restaurant serves 1,000 customers per day in-store through a combination of self-serve touchscreens and counter service orders.



## +\$3 transaction value at self-service

The average transaction value at the restaurant's self-service screens is \$3 higher than at the counter.



## But 5% reject self-service because of hygiene

Informed by the data in this study, let's say 5% of the restaurant's customers avoid the self-service touchscreens due to hygiene concerns.



## The restaurant installs a touchless option



## Up to +50 customers day

By installing a touchless option, the restaurant could persuade up to an extra 50 customers a day to use self service.

## Up to +\$4,500 per month

The restaurant could gain up to an extra \$150 per day or \$4500 per month additional revenue if it offered a touchless option.



# Conclusion

In this survey, we found that across all four markets a significant segment of consumers – around 60% – have at least some consideration or concern about the hygiene of public touchscreens.

These hygiene concerns seem to have evolved from being about COVID-19 to being about general uncleanliness and germs. So, it's likely these attitudes towards public touchscreens will outlast the pandemic and are here to stay.



60%

have at least some consideration or concern about the hygiene of public touchscreens

Many consumers claim to have adaptive behaviours around public touchscreens, such as using hand sanitizer and touching the screen as little as possible. For brands that want to provide a premium experience in their stores and restaurants, brand association with uncleanliness is likely to be something to avoid.

Of course, any concerns about uncleanliness are not enough to stop significant proportions of consumers from using public touchscreens. Most consumers still find touchscreens easy to use and convenient. This is good news for

companies who have come to rely on self-service touchscreens in customer experience, as the problem isn't the self-service itself – it's touching the screen.

**“Retailers and brands have an opportunity to increase revenue by bringing in a touchless solution.”**

Further good news is that we found the problem of touchscreen hygiene is solvable. The public in our four markets is open to the idea of touchless solutions, with many preferring to use a touchless screen above a touchscreen – particularly in a fast-food context. Many also claim that the option of a touchless screen would make them more likely to visit a store or restaurant.

Touchless solutions look like a consumer-approved opportunity for retail and QSR companies looking to optimize customer experience.



# Ultraleap TouchFree solution

# Ultraleap TouchFree

Ultraleap TouchFree is an end-to-end solution for quick and easy deployment of touchless experiences using gesture control.

## What you need to make TouchFree work



A digital display



Ultraleap  
TouchFree Software



Ultraleap 3Di  
Hand Tracking Camera

## The TouchFree Solution Stack



### Application | TouchFree

End user application perfect for retrofit opportunities by enabling a 'no-code' upgrade of existing touchscreen UI to gesture control.



### Tools | TouchFree Tooling

Tools to enable content creators/ISV's to integrate Ultraleap touchless technology into their existing or newly developed interactive applications.



### Camera | 3Di

The Ultraleap 3Di camera is designed to be connected to an interactive screen. Built for easy integration for permanent installations and supports 1:1 interactivity for up to 42" screens.

**“Many shoppers prefer touch-free interfaces so they don’t have to come in contact with public surfaces...**

**With gesture control from Ultraleap, retailers can enhance the customer experience through touch-free ordering and improve operational efficiencies by redeploying and focusing store associates to other customer service tasks.”**

**Qualcomm Retail**



# Who we've worked with



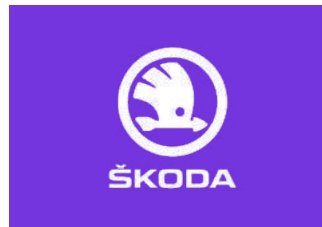
LEGO touchless, tactile advertising campaign. Developed by Ocean Outdoor.



Touchless digital poster standees developed by cinema/advertising specialist CEN.



PepsiCo developed touchless menu for ordering, piloted with KFC Poland via partner Amrest.



Skoda touchless interactive advertising campaign.



Touchless Vision Checkout developed by UST, featured in Nourish + Bloom Market.



Cortina Productions touchless display for the Aquarium of the Pacific Voices in the Sea exhibit.



# Ready to get started?

We have a team of more than 150 spread across the world, with locations in Silicon Valley, US and Bristol, UK.

It includes world-leading experts in interface design, acoustics, machine learning, and computer vision.

Ultraleap is ISO 9001 accredited and our technology is widely used in VR/AR, automotive, digital out-of-home marketing, and self-serve kiosks.



## How we support you

Ultraleap offer an end-to-end solution for touchless interactive kiosks, from initial design and integration through to marketing support.



**Design guidelines  
and review**



**Technology  
integration support**



**User testing/pilots  
setup and guidance**



**Go-to-market  
support**

**TALK TO OUR TEAM**

<https://www.ultraleap.com/contact-us/>

**BUY ULTRALEAP 3Di CAMERA ONLINE**

<https://www.ultraleap.com/product/ultraleap-3di/>

# Appendix – Methodology



# Appendix

The survey was designed without free-text entry fields to remove the need for qualitative analysis. The survey was in five parts:

- Public touchscreen usage
- Public touchscreen attitudes
- Public touchscreen hygiene attitudes and behaviour
- Touchless screen attitudes and expectations
- Interaction preferences in retail and fast food restaurants

We used SurveyMonkey's targeted panels to strive toward a nationally representative sample of 500+ respondents in each market.

The samples were balanced for age and gender, and in the US, also for pay. We have achieved a robust sample with a narrow Margin of Error of +/- 4%, and a 99% completion rate.

## Limitations

The findings should be interpreted with three response biases in mind:

- Respondents will tend to overreport behaviours and attitudes which put themselves in a good light, e.g., that they are clean people who care about hygiene.
- Respondents are prompted about hygiene concerns, so by the end of the survey, they are primed to think about hygiene.
- Respondents by the end of the survey know that it is about touchless solutions and may tend towards politeness in their answers.
- A further methodological limitation to keep in mind is the nature of the sample: we don't know to what extent people who respond to SurveyMonkey surveys are fully representative of the public, and there will be differences between the profiles of the samples between the markets.

Finally, it's important to keep in mind cultural differences in interpreting the findings. It's well-trodden terrain in survey design that US respondents tend towards more polarised viewpoints, and Japanese respondents tend towards picking neutral answers. We find this trend quite distinctly in our data.

[www.ultraleap.com](http://www.ultraleap.com)