

Identity and Payments in new environments



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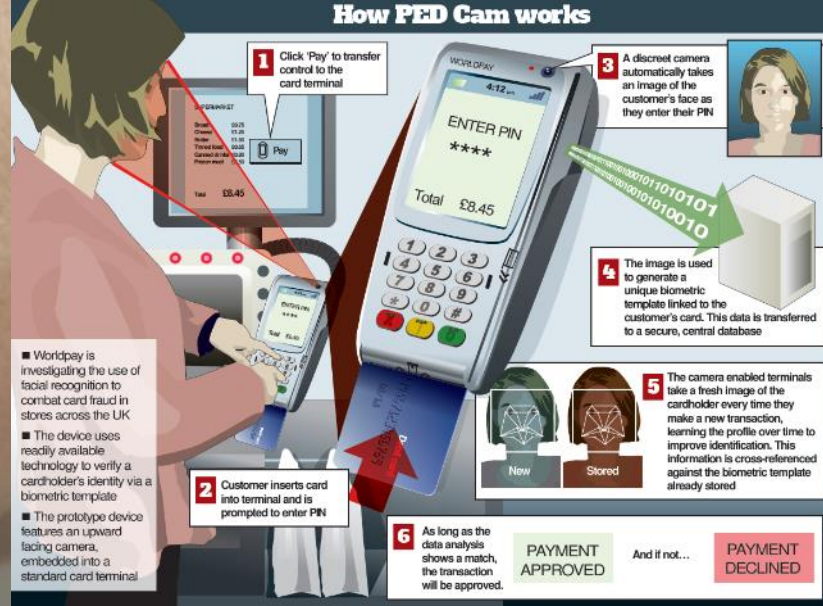


What will we cover?

1. Friction Free
2. Identity at the heart of payments
3. Translucency
4. Payments in VR
5. Machine and payments



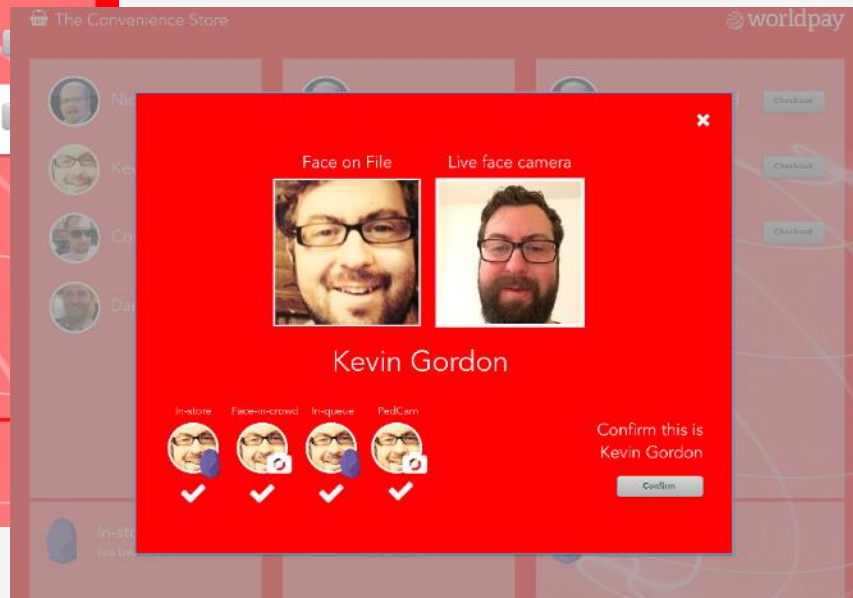
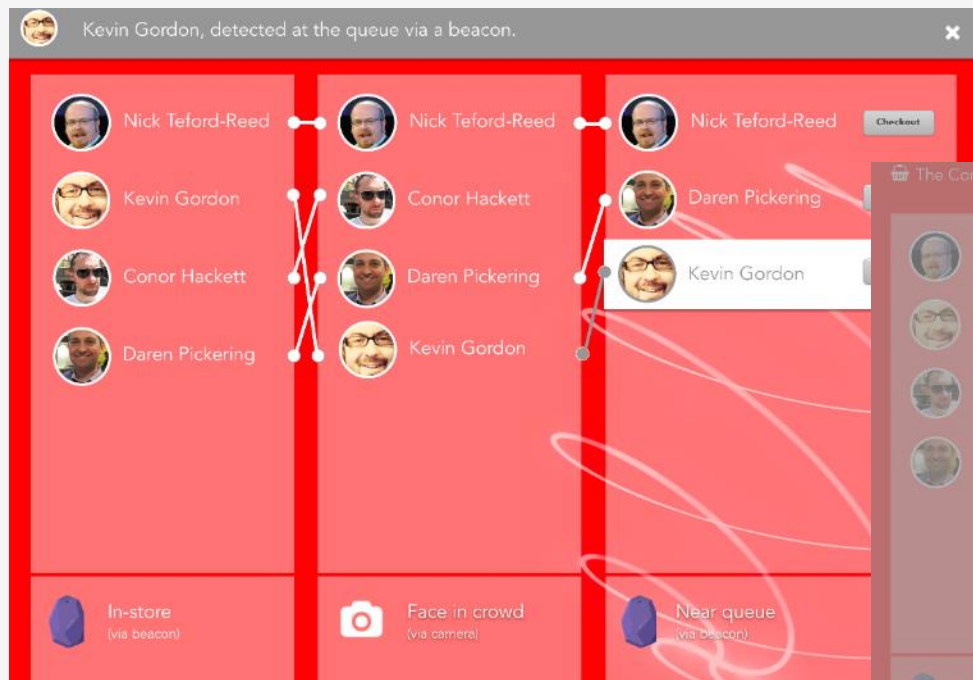
Friction-free payments:
So invisible it'll feel like stealing



Identity:

Who proves who you say you are?

Translucent Payments





Unreal terminals: Payments in Virtual Reality



5%

Of shoppers have used VR in a retail setting in the UK

35%

Of shoppers say they would want to purchase something in VR.

40%

Of consumers think VR will become as popular as smartphones in the future

43%

Of consumers are concerned with the security of VR payments



Payments in Virtual Reality

A Worldpay proof of concept demo

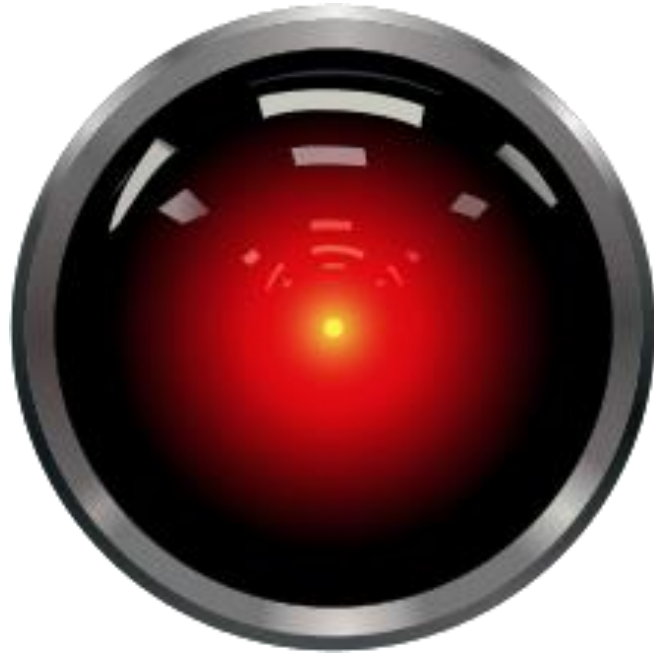
[Video](#)

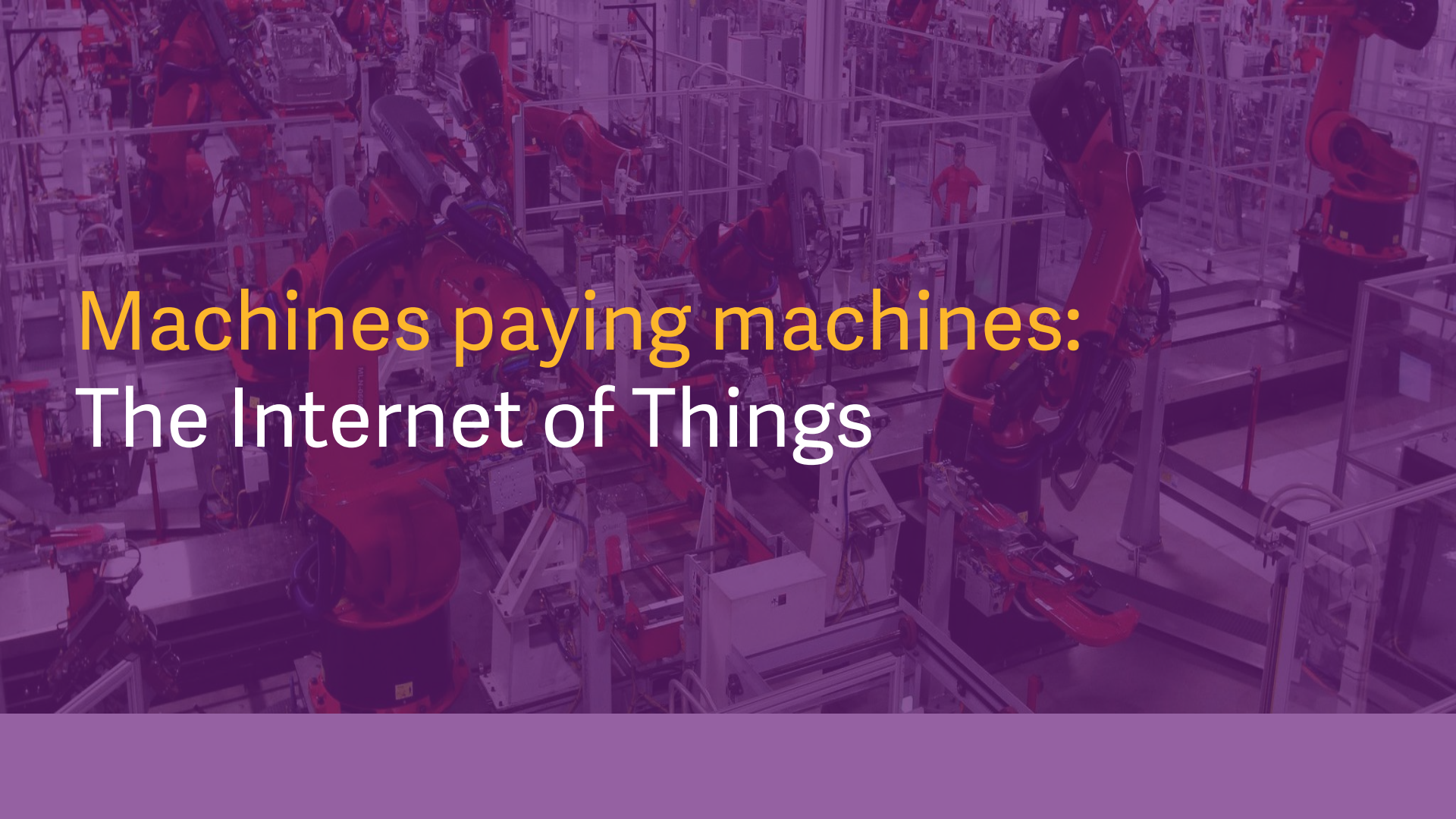


Authentication and Identity in VR

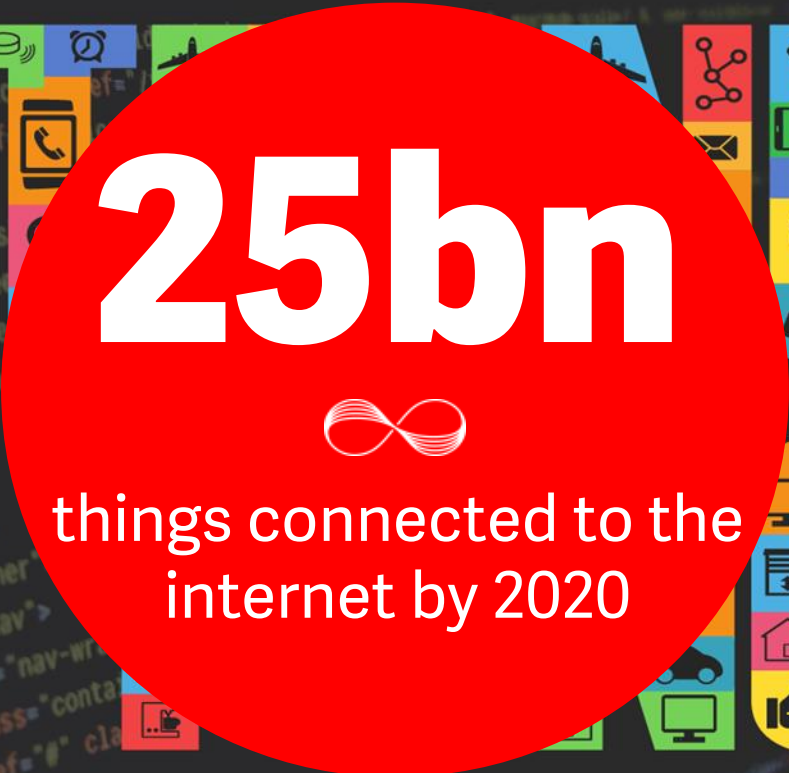
- PIN authentication
- Biometrics
- Contextual
- Friction and consent
- The Second Life factor
- Agents acting on our behalf?

I'm afraid I can't do that, Dave



A wide-angle photograph of a modern industrial manufacturing facility. The scene is filled with numerous red robotic arms, likely KUKA or similar brands, mounted on various workstations and assembly lines. The robots are positioned at different heights and angles, some reaching over conveyor belts or workpieces. The background shows a complex network of metal frames, pipes, and industrial equipment, creating a sense of a large-scale, automated production environment. The lighting is bright and even, highlighting the metallic surfaces and the organized layout of the factory floor. A person in a red shirt is visible in the distance, providing a sense of scale to the massive machinery.

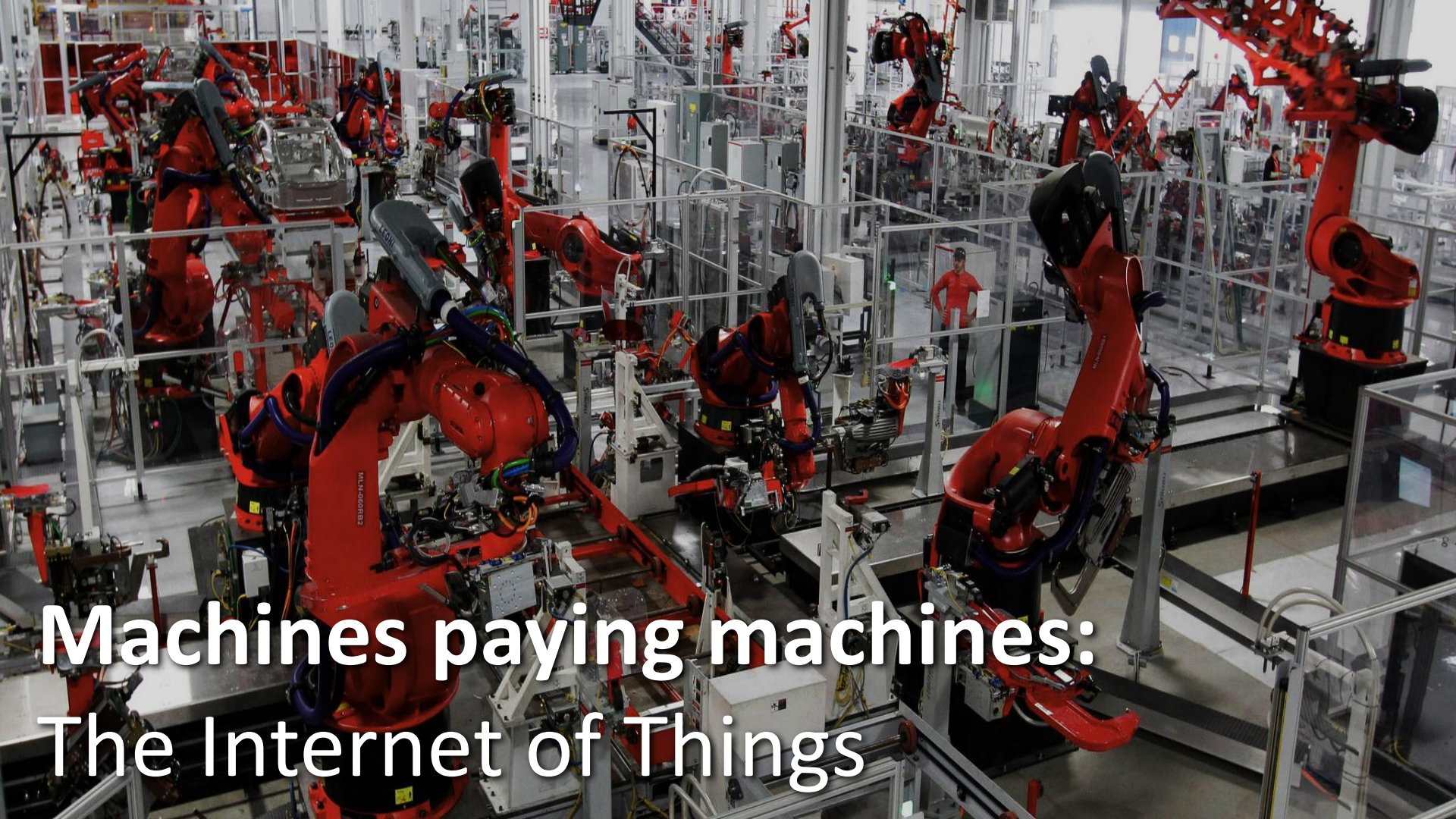
Machines paying machines: The Internet of Things



25bn



things connected to the
internet by 2020



**Machines paying machines:
The Internet of Things**

A futuristic kitchen scene with a red overlay. In the center, a white rectangular box contains the text "Consumer research". The background shows a modern kitchen with a large digital display on the wall showing a clock (05.06.40) and a person's silhouette with various icons. To the right, a smart screen displays weather and temperature information. The kitchen features a sink, a countertop with various items, and a large bowl. The overall aesthetic is high-tech and modern.

Consumer research

Four factors in tension



PREDISPOSITION

How familiar are they with IoT?
Have they used any connected devices?



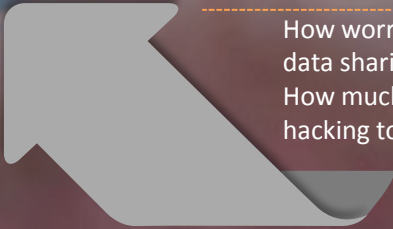
CONVENIENCE

How much do they value convenience across a number of hypothetical situations?



CONTROL

How much control do they need to retain?
How much autonomy are they willing to grant?



SECURITY

How worried are they about third party data sharing?
How much of a problem is device hacking to them?

The Worldpay IoT readiness index

1. China (88.62)

2. Brazil (84.07)

3. Spain (61.32)

4. USA (59.05)

5. Singapore (56.77)

6. Sweden (52.22)

7. Australia (40.85)

8. Germany (27.2)

9. Netherlands (20.37)

10. UK (9)



24%

Would be comfortable letting
connected devices order for them

75%

Worry about connected devices
being hacked by fraudsters

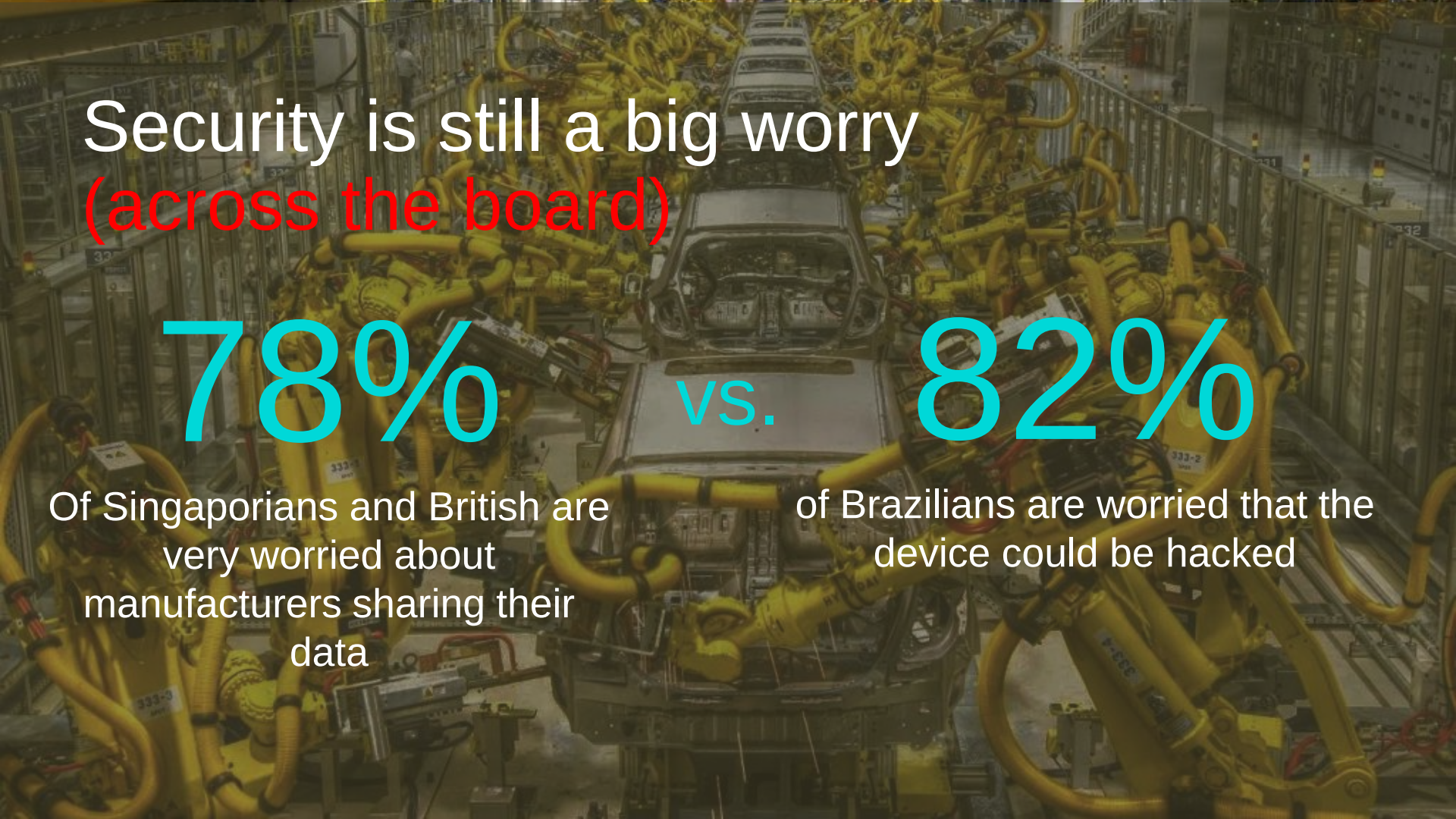
19%

Would be comfortable giving their
payment details to a Chatbot or
virtual assistant

24%

Would consider using an
automated parking system





Security is still a big worry
(across the board)

78%

vs.

82%

Of Singaporeans and British are
very worried about
manufacturers sharing their
data

of Brazilians are worried that the
device could be hacked

Good news on connected cars

58%

Want the car to buy petrol
and pay tolls

68%

Of Chinese want the car to pay
for parking

56%

Of Brazilians



Convenience

Chatbots and Virtual assistants

Emerging vs. Established

I would be comfortable giving a chatbot/virtual assistant my payment information to use on my behalf

20-30%

UK, Germany,
Netherlands and
Sweden

34-35%

US, Australia,
Singapore

38-47%

China and Brazil

Chatbots and Virtual assistants

“Siri, the usual table please”

I would be comfortable with VA booking, paying or both

72%

Worldwide

No country below

58%

UK and Netherlands



 worldpay

Payment Liabilities in the Internet of Things

Simple manual payment	Humans initiate the payment.
Simple automated payment	IoT device can make simple payments, made according to predetermined or pre-programmed rules
Complex autonomous payment	IoT device uses AI and machine learning to take intelligent purchasing decisions and make payments autonomously. Decisions cannot be predicted by any human
Negotiated autonomous payment	The device can also autonomously negotiate prices, and potentially contract terms, with other devices and applications.

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Current
Rules
work

Rules fail
– Things
needs to
be legal
'persons'

[natural persons](#) (also called *physical persons*) and [juridical persons](#) (also called *juridic, juristic, artificial, legal, or fictitious persons*, [Latin](#): *persona ficta*).



The Internet of insecure things

Technology / Strangers can talk to your child through wifi-linked toys, tests find

🕒 2h



The Guardian, 14th November, 2017

Looking ahead





Thank you!
Any questions?