5G consumer potential

박병성 수석 네트워크 컨설턴트

Common myths

"5G is going to play a crucial role in the B2B side rather than the consumer side."

TM Forum, Mar 2019

"5G initial use cases are going to be all about business."

ZDNet, Feb 2019

"When 5G arrives nothing much will change for customers; while the speed might be faster for most users, that would be hardly noticeable. There is little hope of people spending more money on 5G."

Telecom analyst, Dec 2018

"If most punters are unlikely to pay more for 5G, why all the rush?"

theregister.co.uk, Dec 2018

"The uncertainty and skepticism around the potential of 5G for consumers is very similar to the early days of 4G LTE."

4G cellular networks might not live up to hype

Phys.org, Nov 2010

"5G is not like 2G, 3G or 4G. It is not going to address consumers. It needs to be more directed and steered towards enterprise use cases and enterprise solutions."

Operator CTO

Busting the myths

01

Myth

There are no near-term consumer benefits of 5G.

02

Myth

There are no real use cases for, or price premium on, 5G.

03

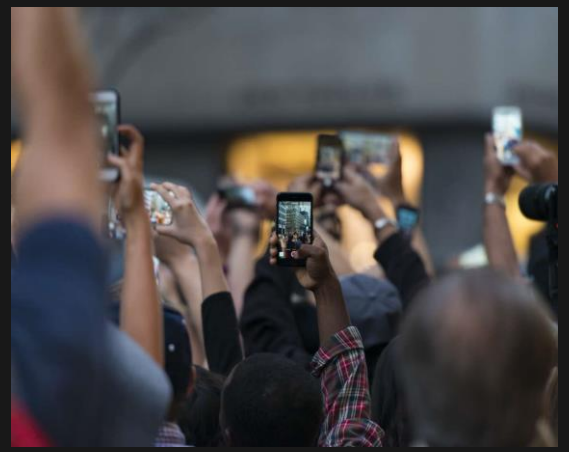
Myth

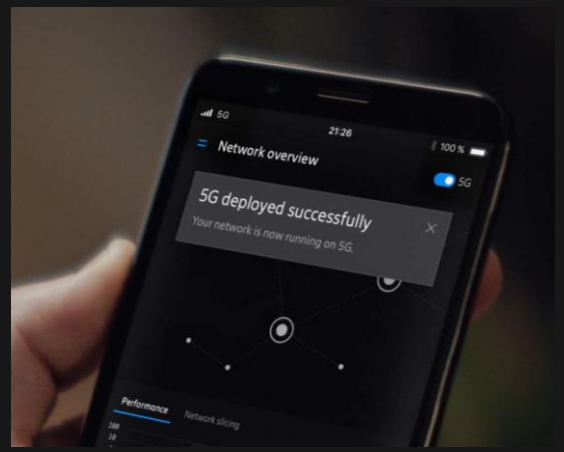
Smartphones are the only solution for 5G.

04

Myth

Current usage patterns accurately predict future demand.





Representative opinion of 1 billion smartphone users

Source: Ericsson Consumer & IndustryLab, 5G consumer potential (May 2019)

35,000

Interviews were held with 35,000 consumers across 22 countries.

Qualitative research was carried out with two focus groups each in New York, London and Seoul.

Expert interviews

Francesco Radicati
Technology Analyst,
State Farm

Derek McManus
COO,
Telefónica UK

Berit Svendsen
Former head, Telenor Scandinavia, and CEO, Telenor Norway

Jan Trionow
CEO,
Three Austria

Salim Kouidri
Vice President, Engineering and Operations (New York), T-Mobile US

Mikael Dahlkvist
Senior Manager,
Sony Mobile

Keith Robson
Chief Operating Officer, 5GIC,
University of Surrey

Stuart Revell
Advisor to the 5GIC,
University of Surrey

Jeff Dodds
Managing Director, Mobile,
Virgin Media

Per Lindberg
Senior Manager Connectivity,
Product Strategy, Volvo Cars

Jonas Rönnkvist
Director Connectivity Strategy
& Business, Volvo Cars

Expert interviews

Chetan Sharma
CEO,
Chetan Sharma Consulting

Ben Roome
CEO,
Digital Mobile Spectrum Ltd

Matt Stagg
Director of Media Strategy,
EE

Vesa-Pekka Nikula
Executive Vice President,
Production, Elisa

Johan Hagegård
Entrepreneur in AR/MR,
IMRSV

Kenneth Stewart
Chief Wireless Technologist
and Intel Senior Fellow, Intel

Mischa Dohler
Professor of Wireless
Communications,
King's College London

Maarten Ectors
Chief Innovation Officer,
Legal & General

Jan Erik Solem
CEO, Automotive,
Mapillary

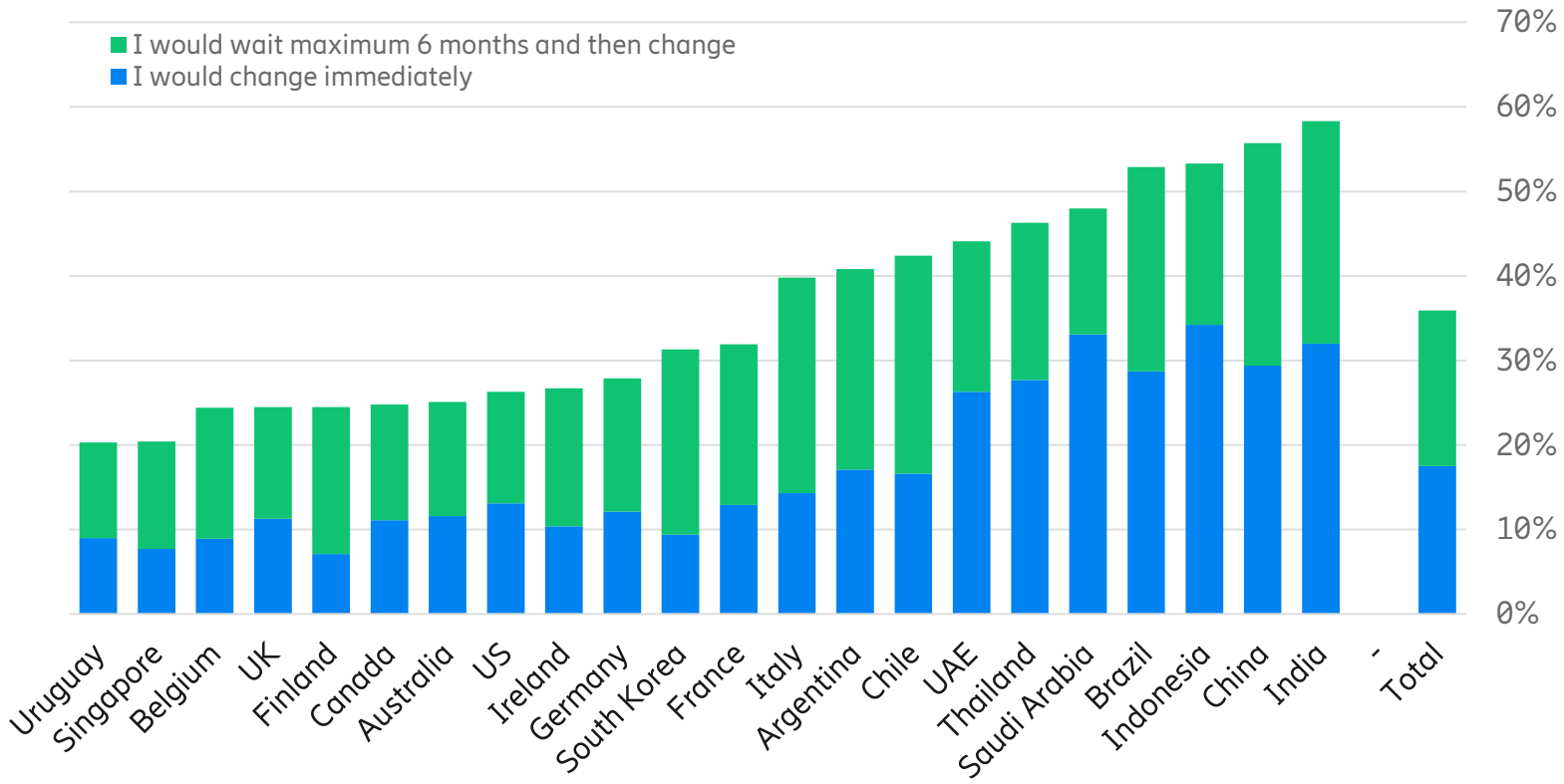
Emil Dautovic
VP, Automotive,
Mapillary

Brendan Gill
CEO,
OpenSignal

Alexandra Rehak
IoT Practice Head,
Ovum

Switching to a 5G provider

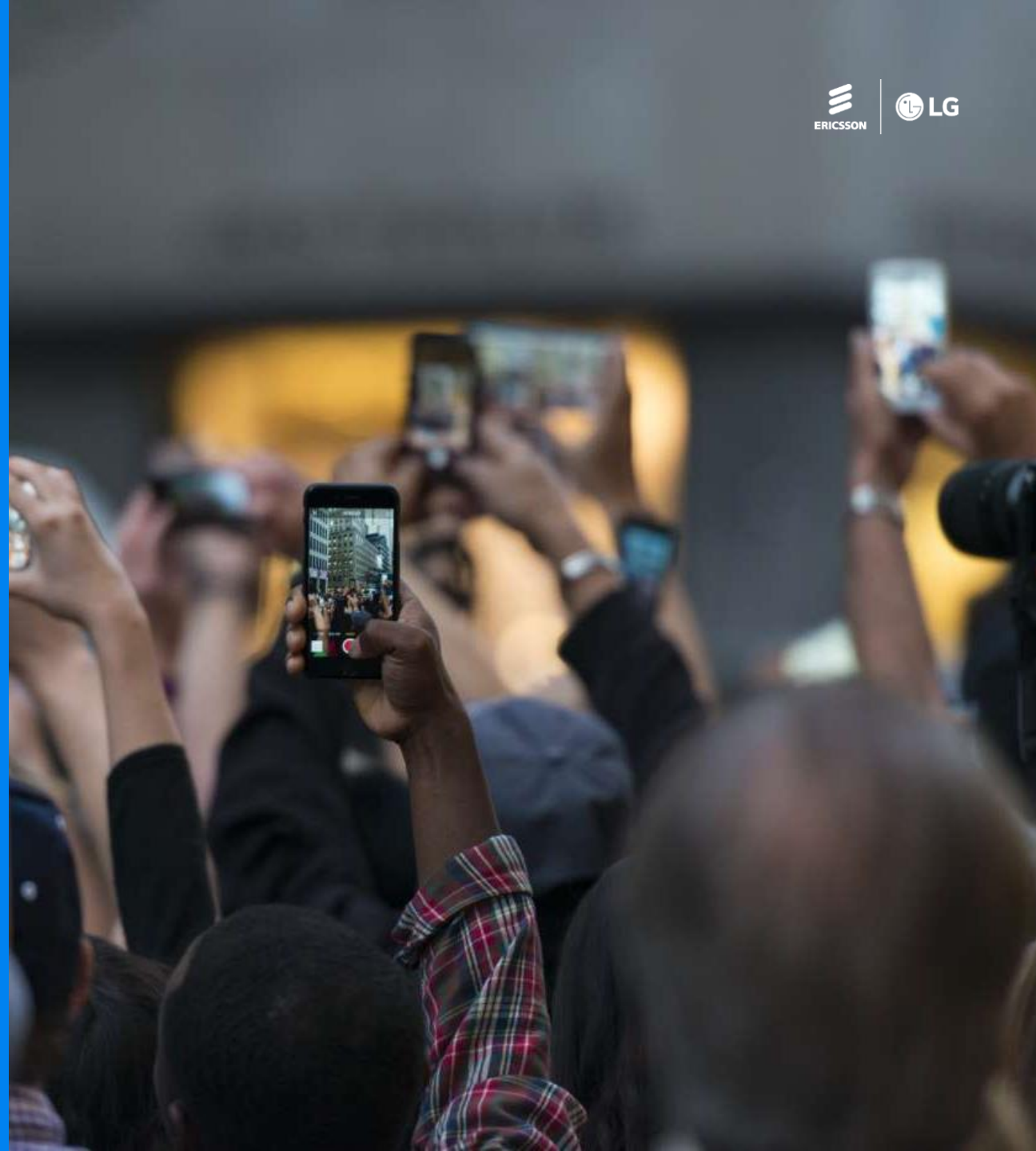
What if your own operator does not switch to 5G, but another operator in the market does?



Base: Smartphone users aged 15–69 across 22 markets
Source: Ericsson Consumer & IndustryLab, 5G consumer potential (May 2019)

More than half of smartphone users in China and India, and one in four in the US, Australia and Canada, expect their own provider to switch to 5G or will wait a maximum of six months before moving to another provider that does.

Busting the myths

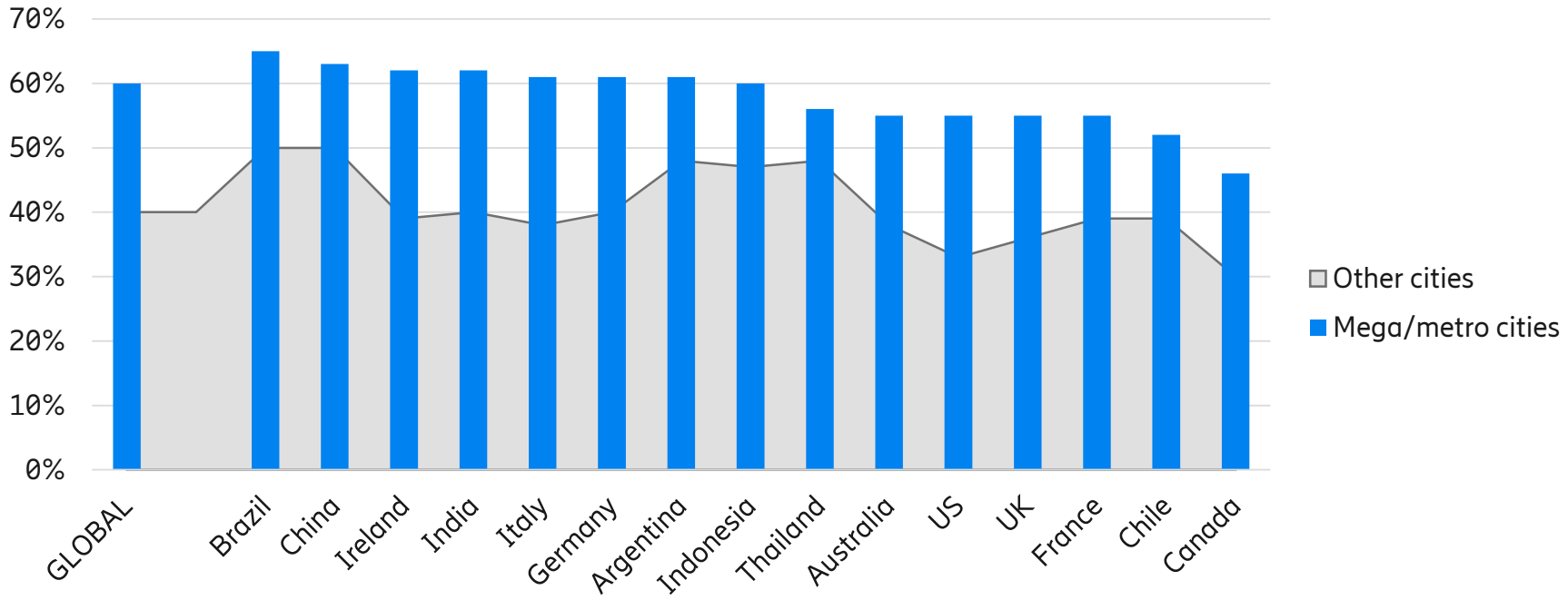


Myth 01

There are no near-term consumer benefits of 5G.

Network congestion is visible in megacities

Proportion of smartphone users facing issues in crowded areas



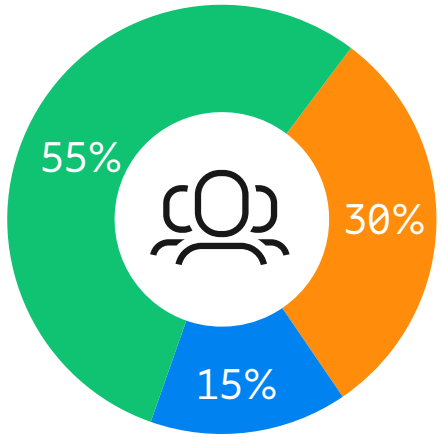
6 in 10 face issues with mobile broadband performance in crowded areas of mega cities.

São Paulo (68%); Kolkata (68%); Delhi (65%); Rio de Janeiro (65%); Beijing (65%); Dublin (63%); Rome (62%); Buenos Aires (62%)
Shanghai (62%); Jakarta (62%); London (60%); Los Angeles (58%); Bangalore (58%); New York (57%); Paris (57%)

Base: Smartphone users aged 15–69 across 15 markets in the survey
Source: Ericsson Consumer & IndustryLab, 5G consumer potential (May 2019)

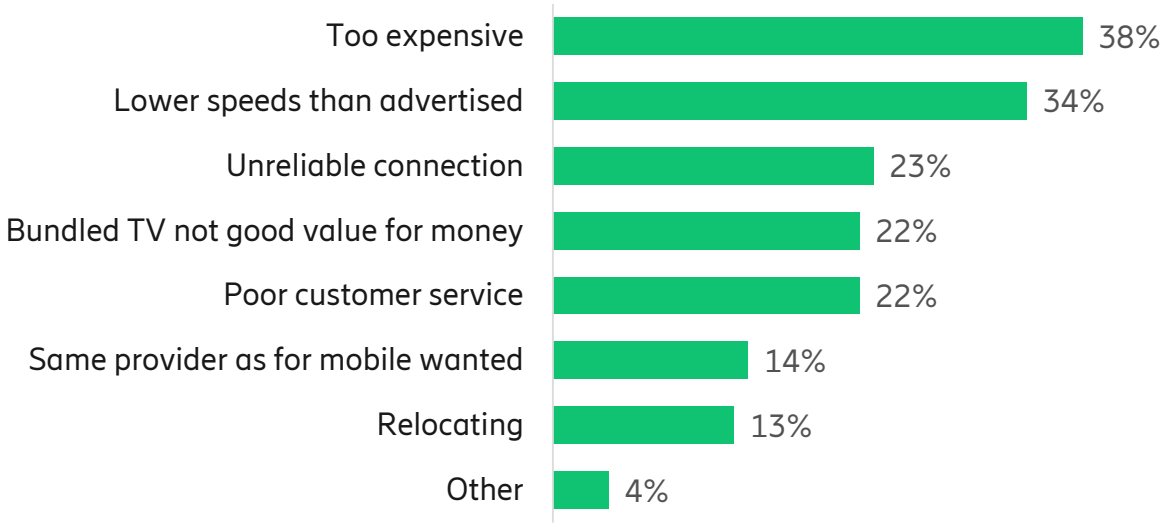
Consumer satisfaction with home broadband

Likelihood of switching



- Unlikely to switch
- Likely to switch fixed broadband provider in the next 6 months
- Dissatisfied with home broadband, but unlikely to switch in the next 6 months due to limited broadband alternatives available

Reasons for switching fixed broadband provider



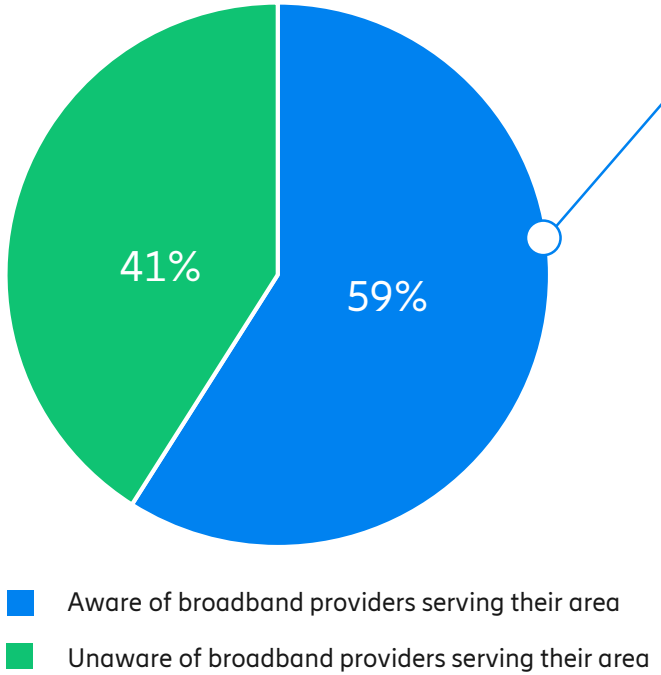
Among those looking to switch, 8 in 10 are interested in a 5G home wireless broadband offering.

Around 22 percent of consumers say the TV bundle has become increasingly unappealing.

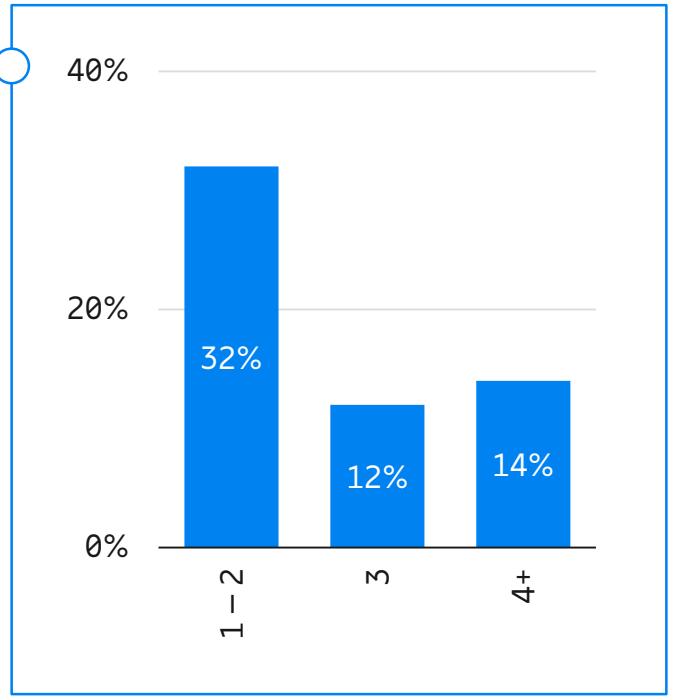
Base: Smartphone users aged 15–69 in Australia, Argentina, Brazil, Belgium, China, Canada, Chile, France, Finland, Germany, India, Indonesia, Ireland, Italy, KSA, South Korea, Singapore, Thailand, Uruguay, the UAE, the UK and the US
Source: Ericsson Consumer & IndustryLab, 5G consumer potential (May 2019)

A new option: 5G home wireless broadband in the US

Home broadband provider awareness



Number of providers consumers are aware of



Base: Smartphone users aged 15–69 with home broadband in the US
Source: Ericsson Consumer & IndustryLab, 5G consumer potential (May 2019)

1 in 3

In the US, 1 in 3 know no more than 2 fixed broadband providers serving their area, and 41 percent are not even aware of any other providers.

Consumer realities

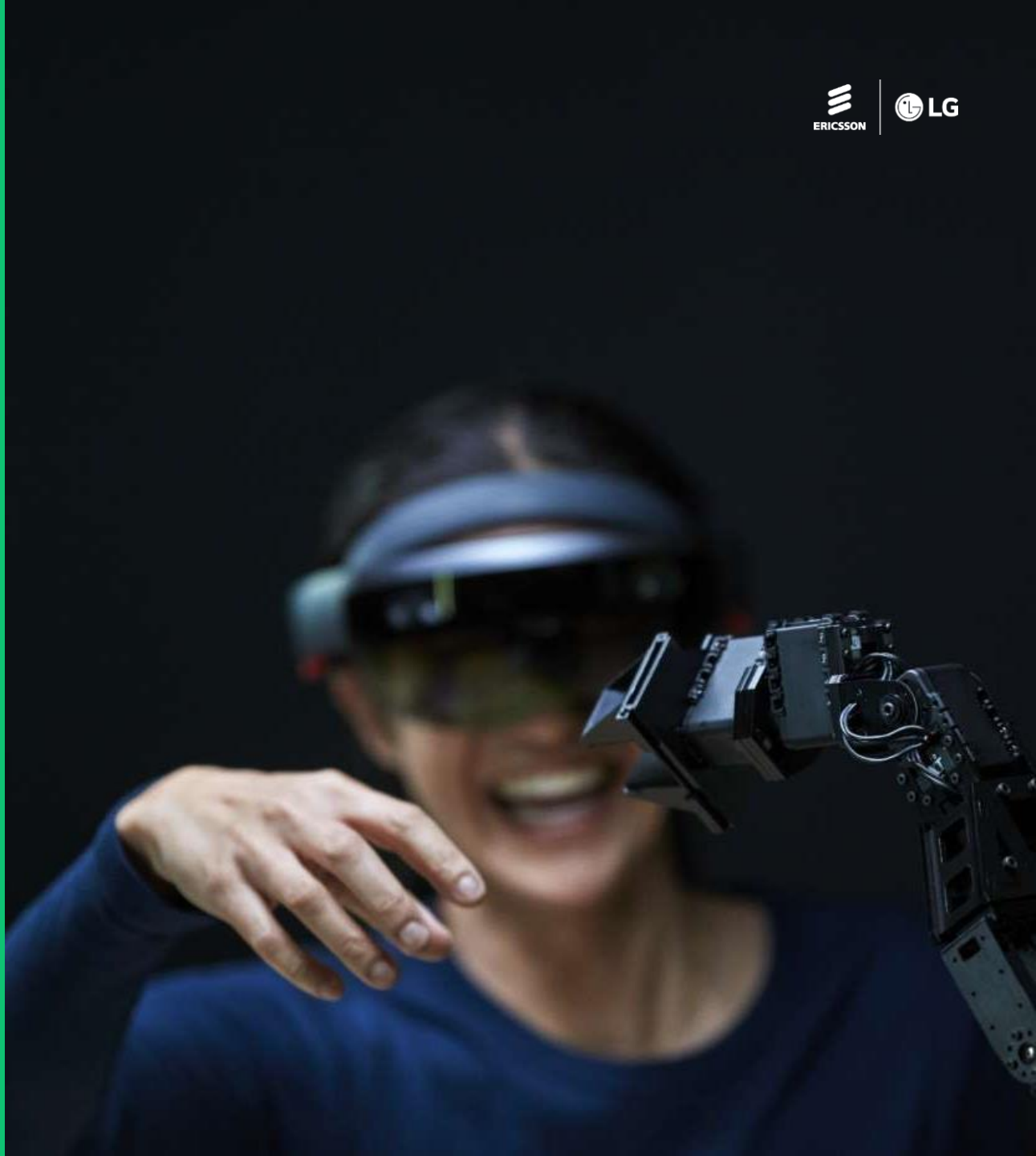
01

Myth
There are no
near-term consumer benefits of 5G.

In the near term, consumers expect 5G will offer:

- A step change in network performance and video streaming experience
- Urban network congestion is visible to 6 in 10 consumers in mega/metro cities globally
- Consumers expect more home broadband choices; half of those interested in 5G home wireless broadband are either dissatisfied or lack broadband choices

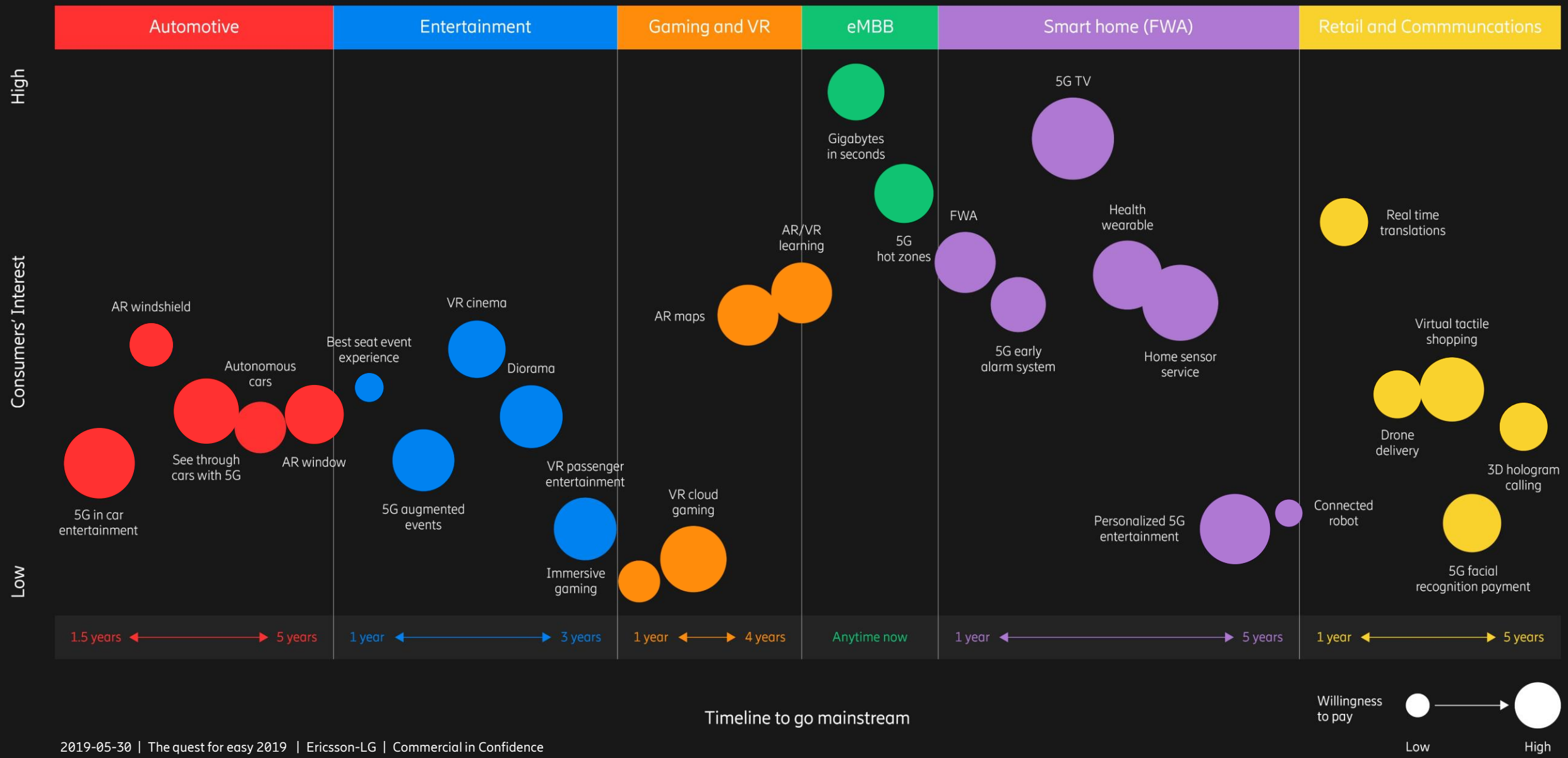
Busting the myths



Myth 02

There are no real use cases for, or price premium on, 5G.

Consumer use cases - Interest roadmap



Consumer expectations on 5G services

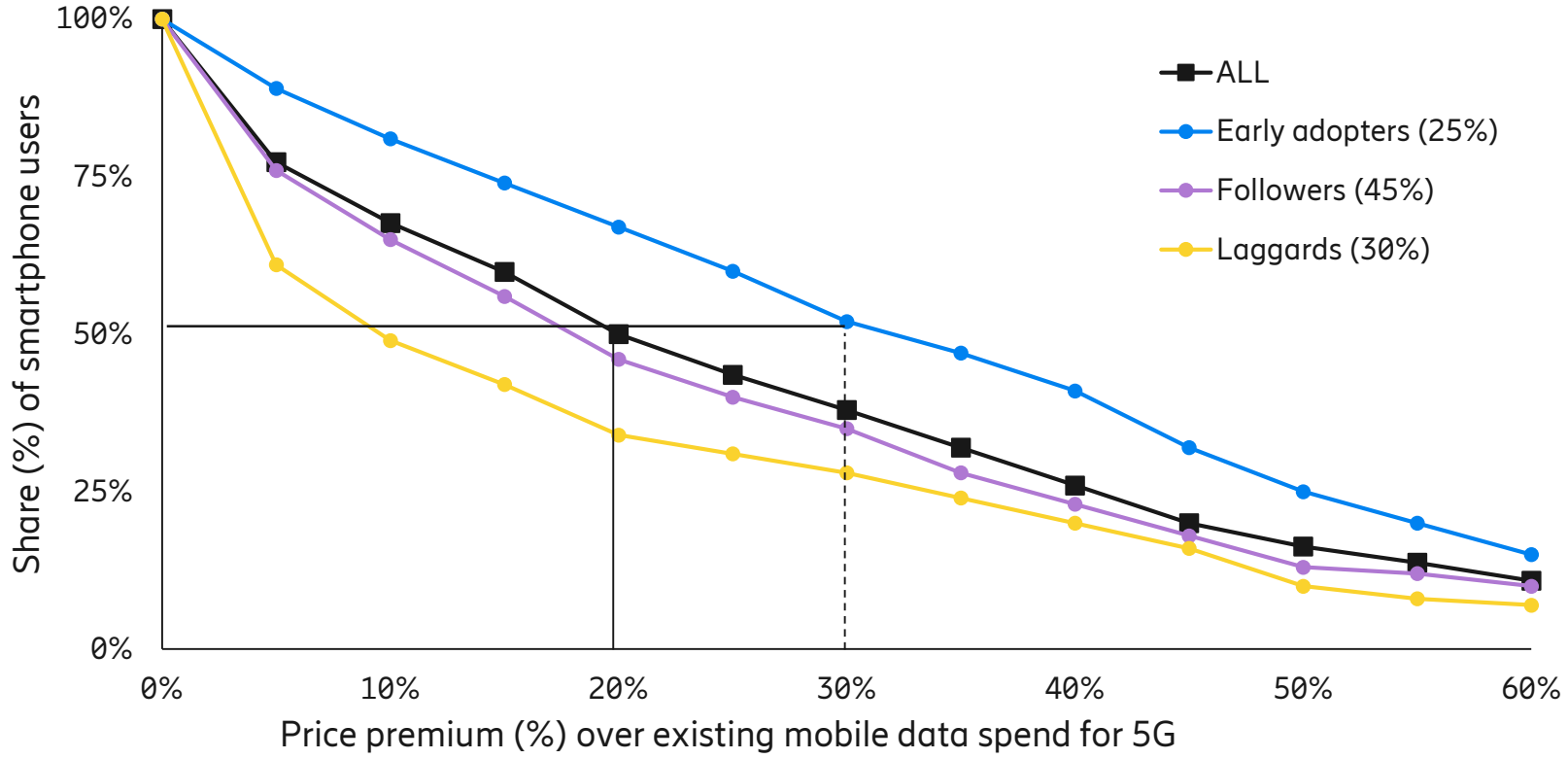
Ranking of top 5 apps /services to be included in a 5G plan

Top 5 services/apps expected to be included in the 5G plan	Argentina	China	France	Saudi Arabia	South Korea	United Kingdom	United States
5G TV package	5	2	1		5	1	1
Smart home sensor service	2	1				3	4
5G hot zones	1		3	3	2	2	2
Diorama		5		1	4	5	3
3D hologram	3		2	2			
VR shopping		3	5		1	4	
Health wearable			4				
Facial recognition payment		4			3		
5G in-car entertainment				5			5
AR/VR learning	4						
5G augmented events				4			

Base: Smartphone users aged 15–69 across 7 markets
Source: Ericsson Consumer & IndustryLab, 5G consumer potential (May 2019)

Half of early adopters willing to pay 32 percent more for 5G

Share of smartphone users and price premium on 5G



Median Price premium across markets

Globally	**20%**
South Korea	10%
US	15%
Finland	15%
Canada	15%
Italy	30%
Brazil	30%
UAE	35%
Argentina	35%

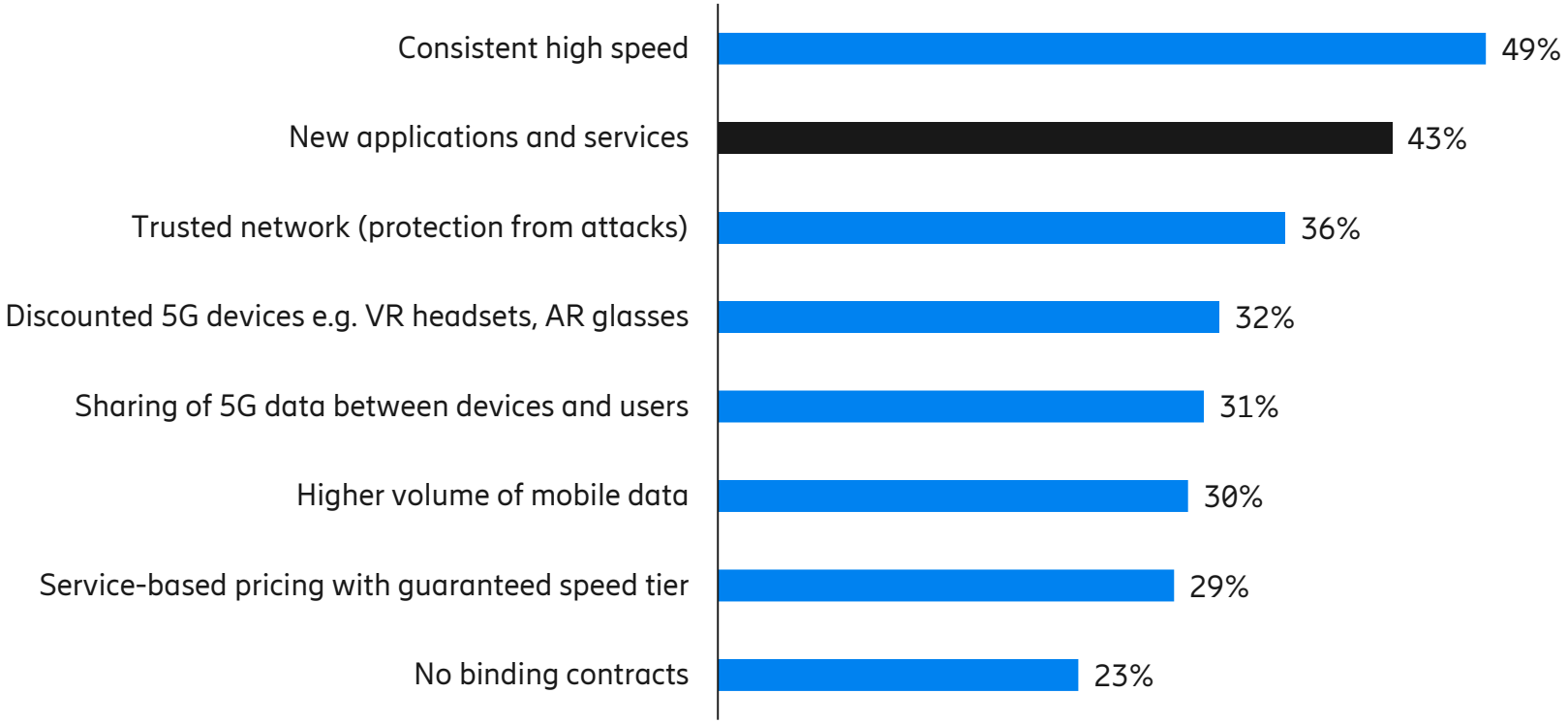
Base: Smartphone users aged 15–69 in Australia, Argentina, Brazil, Belgium, China, Canada, Chile, France, Finland, Germany, India, Indonesia, Ireland, Italy, KSA, South Korea, Singapore, Thailand, Uruguay, the UAE, the UK and the US
Source: Ericsson Consumer & IndustryLab, 5G consumer potential (May 2019)

New use cases important for high spenders

4 in 10

New applications and services are expected as an important part of the 5G plan by 4 in 10 smartphone users who are willing to pay a significant premium for 5G.

Important expectations from a 5G subscription plan

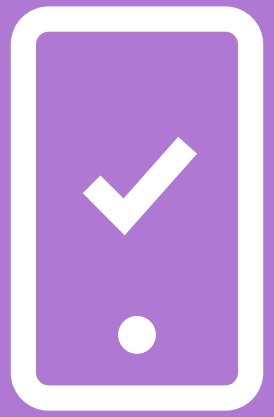


Base: Smartphone users aged 15–69 who are willing to pay a sigificant premium (40%+) for 5G in Brazil, China, Canada, France, Finland, Italy, South Korea, the UK and the US
Source: Ericsson ConsumerLab, 5G consumer potential (May 2019)

Latency is the new speed

"If and when we can provide a lower latency service for our customers, there is definitely a premium they are willing to pay for it. Think of VR; if the latency goes beyond 10 milliseconds, people start feeling nauseous. In certain services, lower latency is a must."
Vesa-Pekka Nikula,
Executive Vice President, Elisa Finland

"Speed only attracts so many users. With clear and new use cases, they will be willing to pay more for them."
Francesco Radicati, Tech Analyst, State Farm



Of those surveyed, 6 in 10 smartphone users say it's very likely that with 5G we will all be experiencing how responsive the network is, rather than its sheer speeds.

Consumer realities

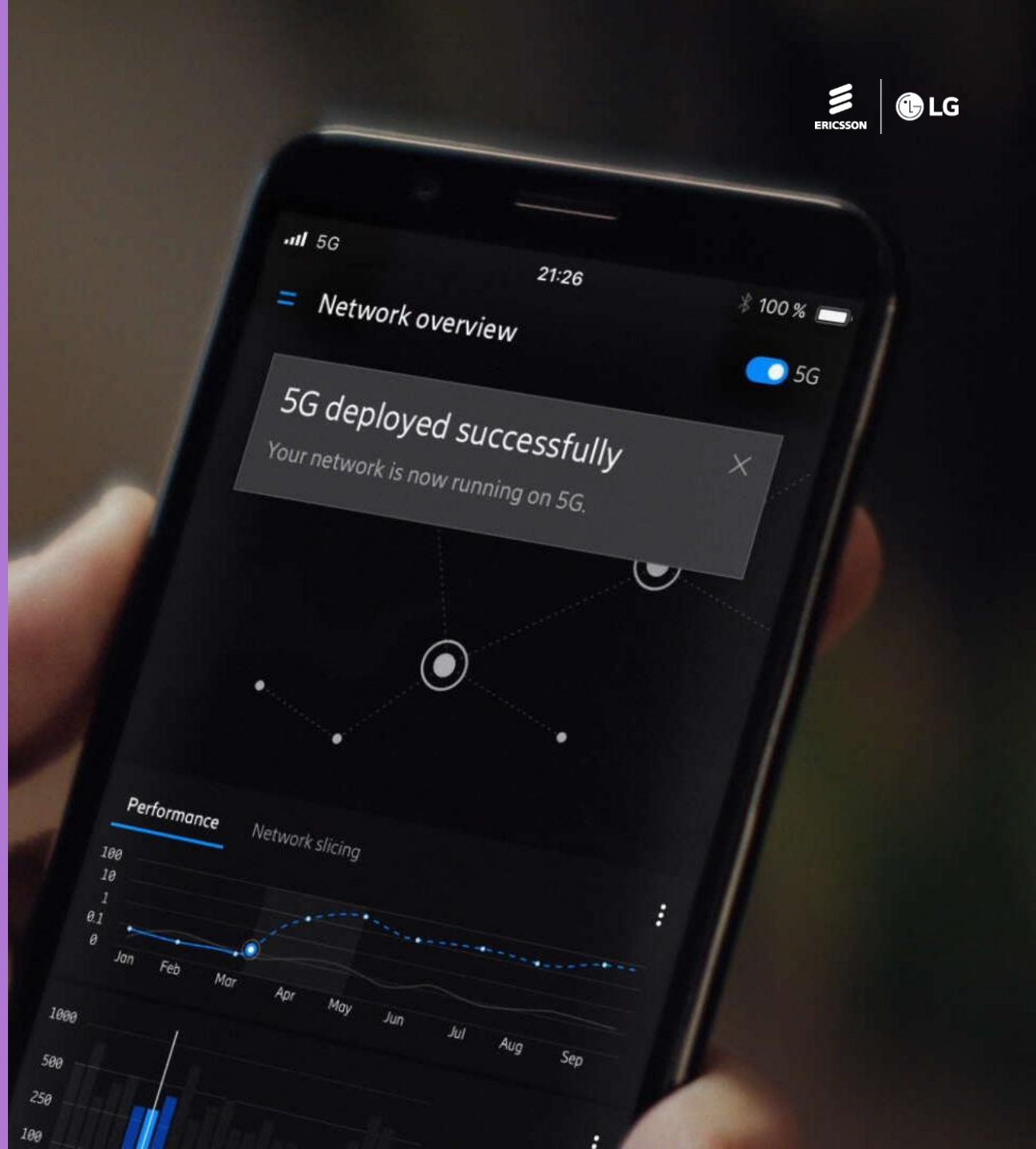
02

Myth
There are no real use cases for, or price premium on, 5G.

Consumers see value in 5G use cases and are willing to pay:

- Most use cases are predicted to go mainstream in 2–3 years of launch, with 67 percent willing to pay
- New apps and services as well as a secure network are expected by 4 in 10 high-spenders
- Smartphone users would pay a 20 percent premium for 5G, and early adopters as much as 32 percent

Busting the myths



Myth 03

Smartphones are the only solution for 5G.

5G needs an iconic device

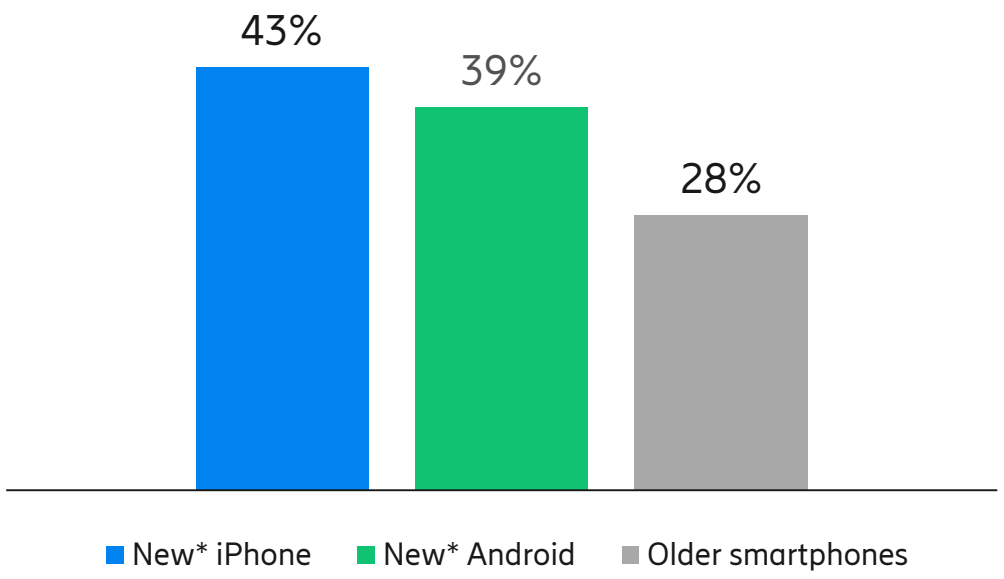
— Despite owning smartphones released in the past year, 4 in 10 say these are not capable to take advantage of 5G.

Expert Insight

"The smartphone as we see it now does not have anything on it. It can't take advantage of 5G, such as holographic apps, in the longer term."

Matt Stagg, Director of Media Strategy, EE

'% who agree that the smartphones as they are today have nothing in them to be able to take advantage of 5G'



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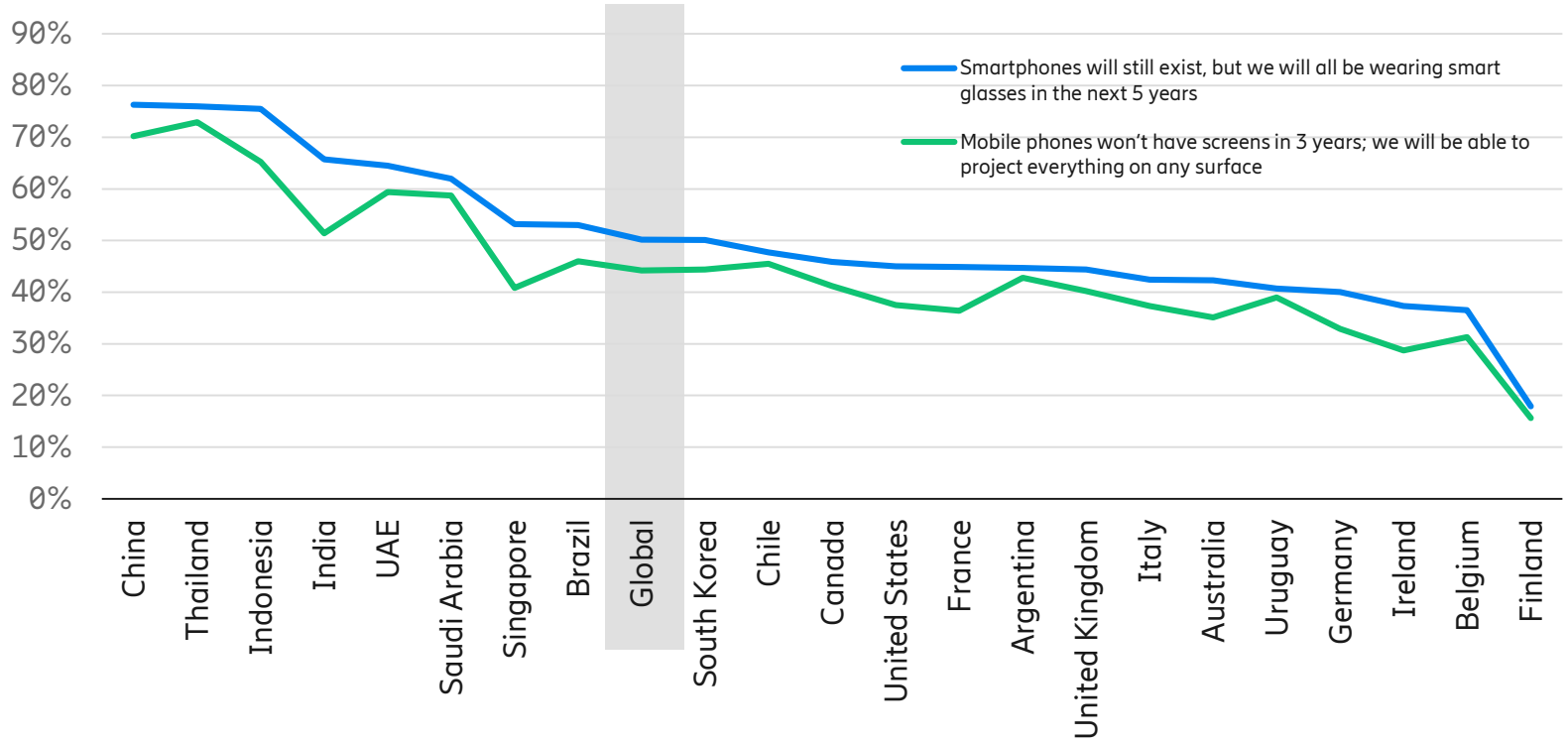
Source: Source: Ericsson Consumer & IndustryLab, 5G consumer potential (May 2019)

In a few years, will smartphones still exist?

Percentage of users across markets predicting the future of smartphones

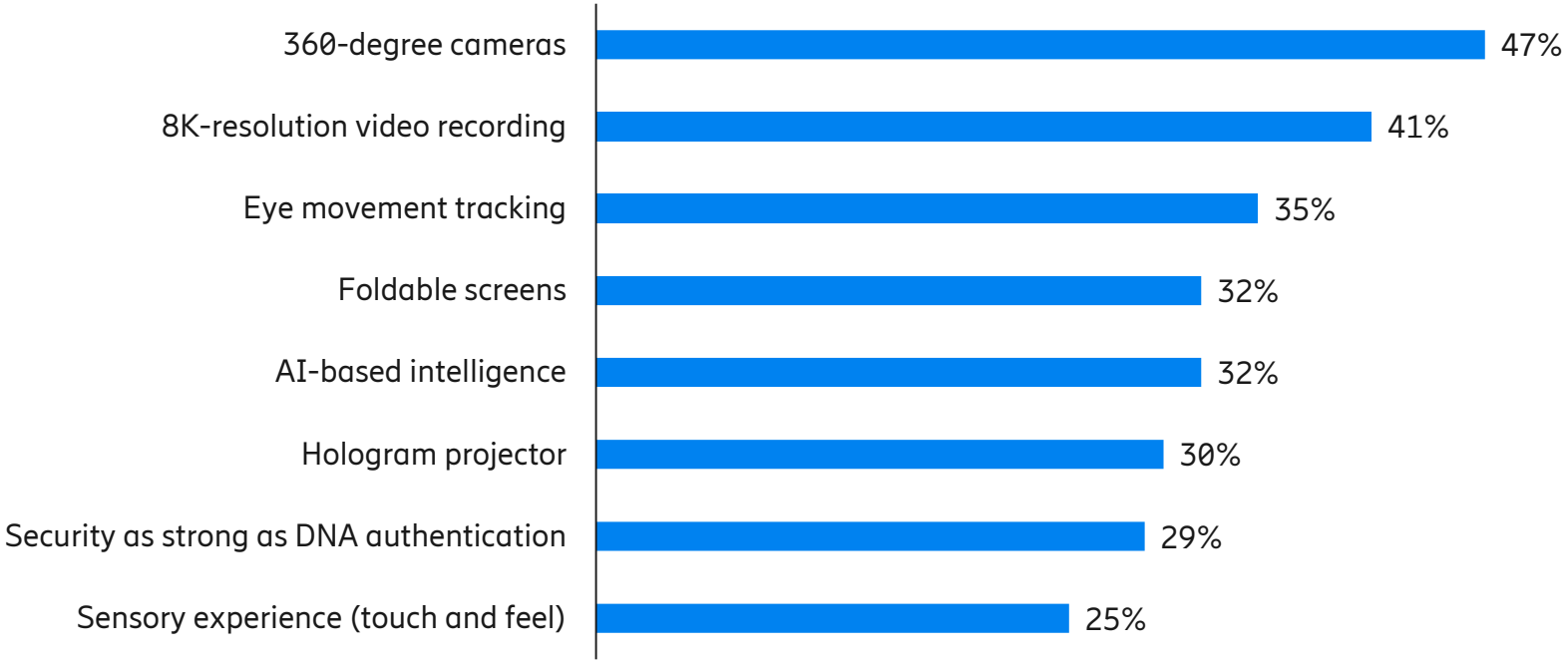


Base: Smartphone users aged 15–69 across 22 markets
Source: Ericsson Consumer & IndustryLab, 5G consumer potential (May 2019)

50 percent of smartphone users predict that we will all be wearing AR glasses by 2025.

The smartphones of today need to evolve

Features expected from a 5G smartphone



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Source: Ericsson Consumer & IndustryLab, 5G consumer potential (May 2019)

4/10

Globally, 4 in 10 chose features among those expected of a future 5G device.

81%

At least one feature beyond battery life and extreme storage is expected by 81 percent.

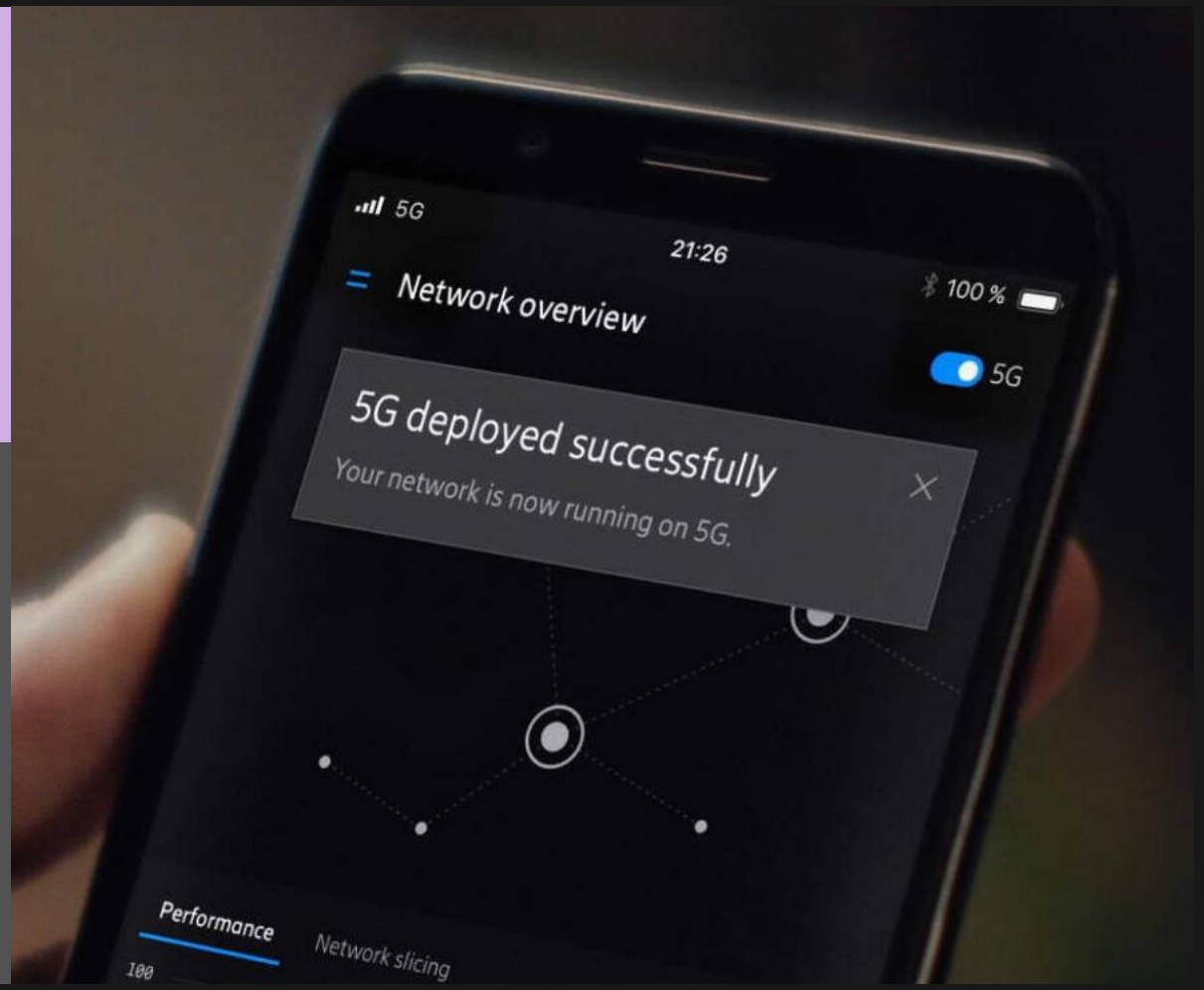
Consumer realities

03

Myth
Smartphones are the only solution for 5G.

Smartphones alone are unlikely to drive 5G adoption:

- Of new iPhone owners, 43 percent doubt today's smartphones are good enough for 5G
- 4 in 10 expect foldable screens, holographic projection and 360-degree cameras in future smartphones
- Half think smartphones will still exist but we will all be wearing augmented reality (AR) smart glasses in the next five years



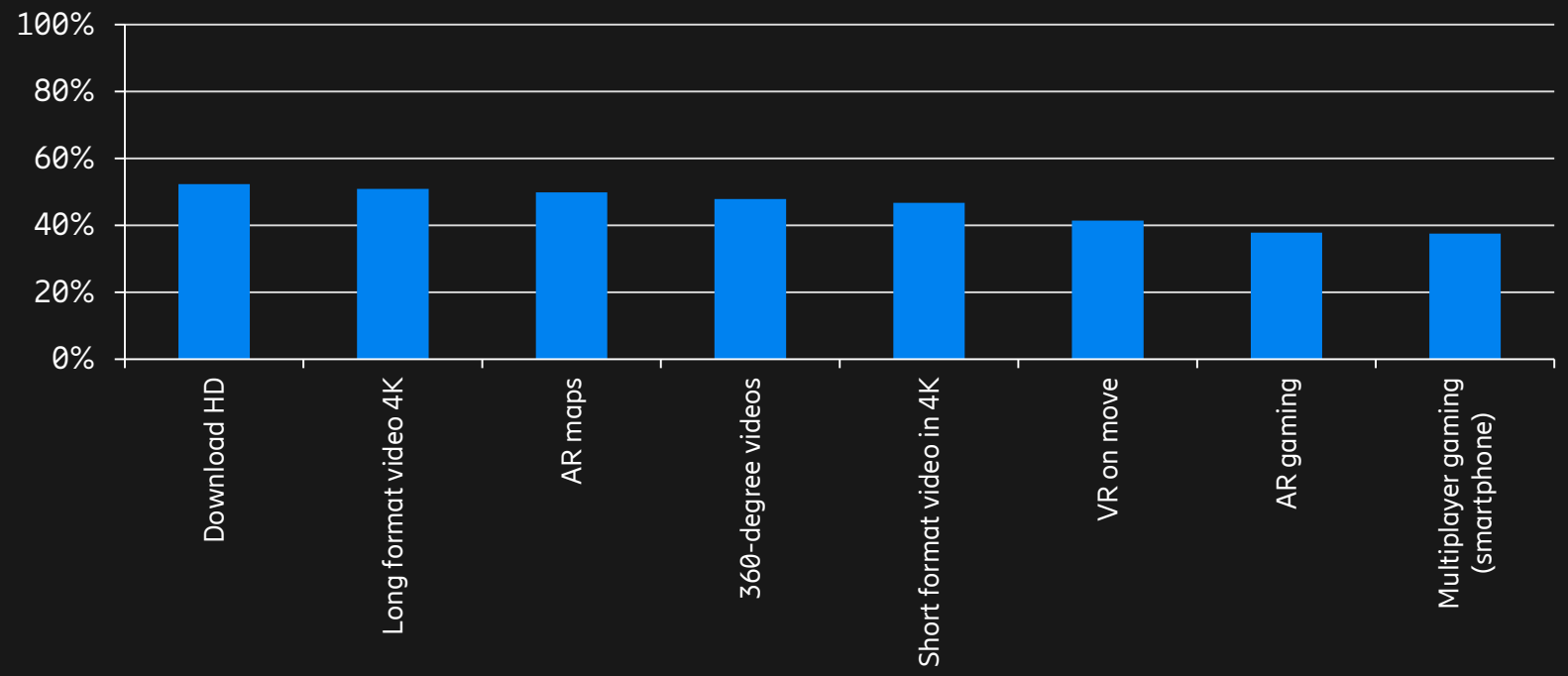
Busting the myths

Myth 04

Current usage patterns accurately predict future demand.

Future usage behaviors

How many users will start using or increase their use of the following apps/services with 5G?



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Source: Ericsson Consumer & IndustryLab, 5G consumer potential (May 2019)

1/2

Half of consumers say they will start watching YouTube and Netflix in 4K and will download more HD video content once 5G is available.

A new internet with 5G

60%
3D holographic calls could be used weekly according to 60 percent and for 14 percent they could replace video calls.

6/10
In South Korea, a 5G-connected home robot could become the ultimate status symbol in the next 5 years for 6 in 10.

6/10
Shopping in virtual reality could happen on a weekly basis for 6 in 10.

53%
AR apps could become the most downloaded category of apps in the next 5 years, according to 53 percent.

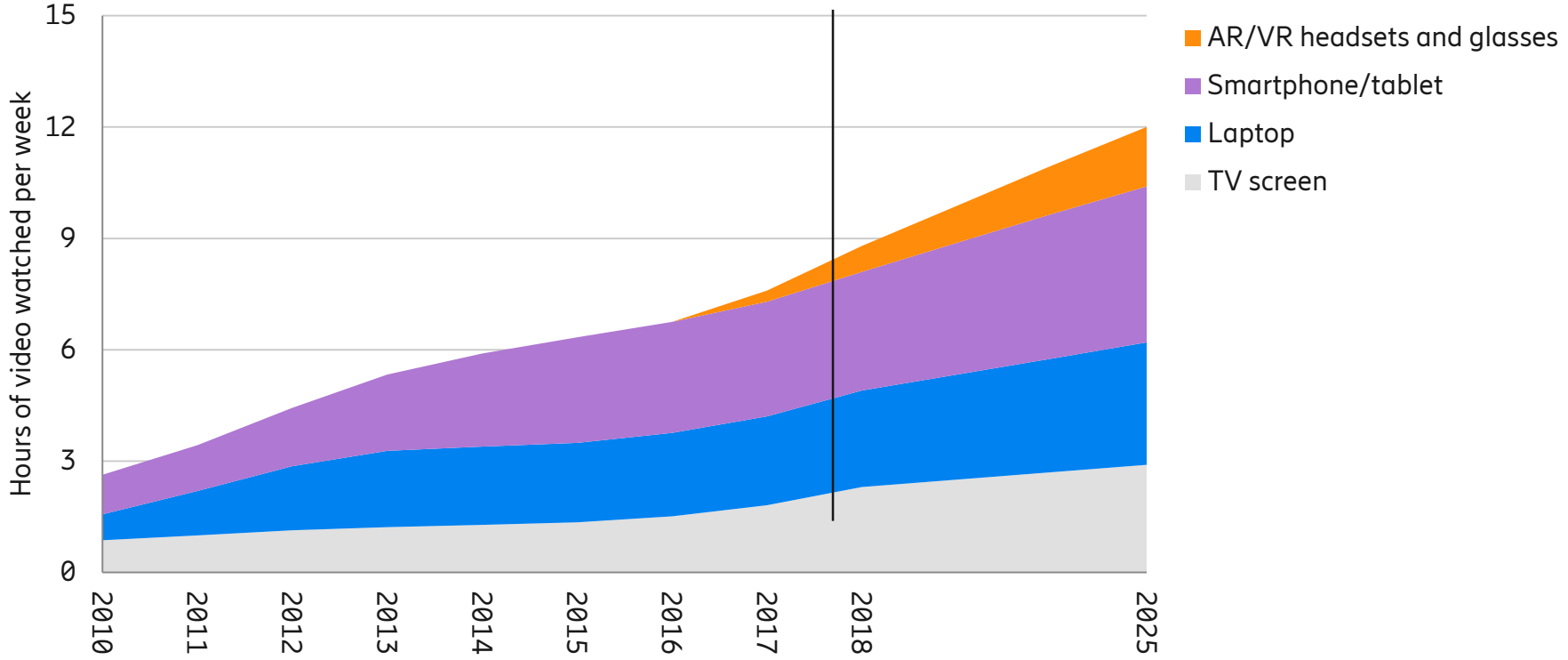
5/10
5G could make it possible to work on the go more – like taking your office everywhere – for 5 in 10.

4/10
5G car connectivity could be as important for 4 in 10 as fuel efficiency and engine power within 5 years.

Base: Smartphone users aged 15–69 in Australia, Argentina, Brazil, Belgium, China, Canada, Chile, France, Finland, Germany, India, Indonesia, Ireland, Italy, KSA, South Korea, Singapore, Thailand, Uruguay, the UAE, the UK and the US
Source: Ericsson ConsumerLab, 5G consumer potential (May 2019)

Video consumption to rise with 5G

Self-reported weekly average time spent watching TV/video per screen* when out of home and estimated time in a 5G future

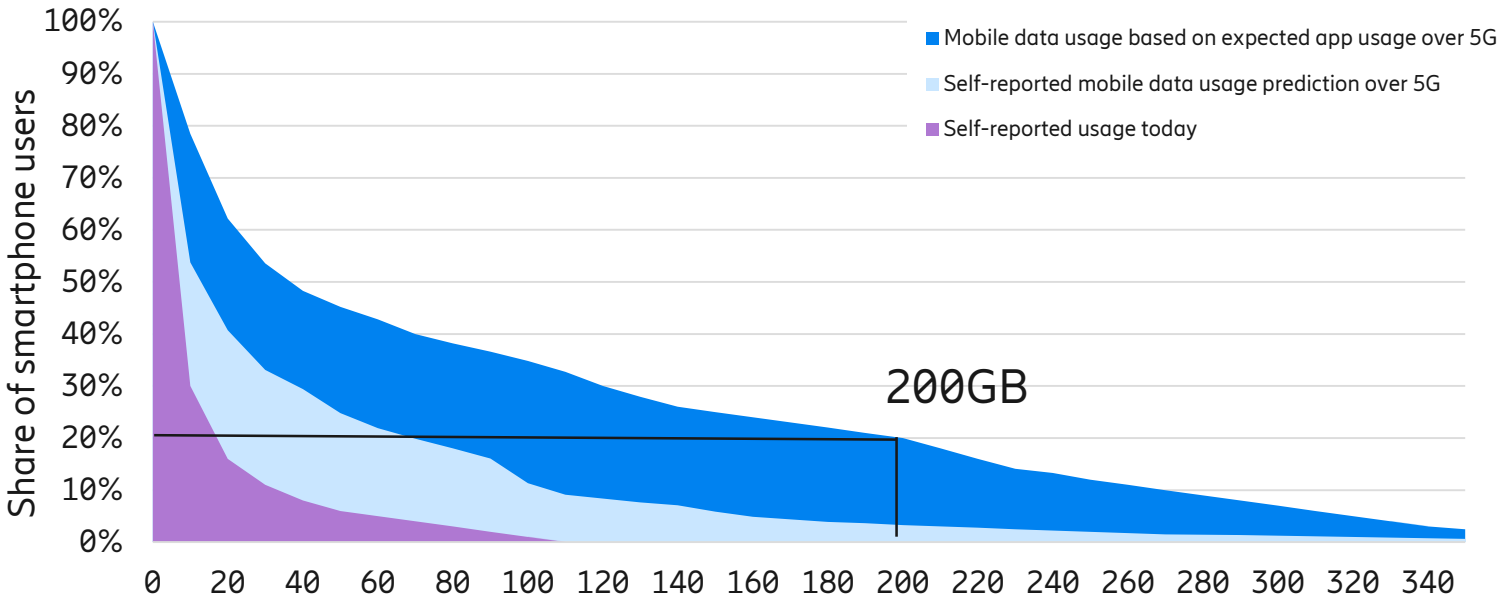


Three hours' more video content will be consumed weekly on mobile devices, one hour of which will be on AR/VR glasses in a 5G future.

Base: Population aged 16–59 with access to broadband at home and who watch TV/video at least weekly within 6 countries (Brazil, China, Germany, South Korea, the UK and the US)
Source: Ericsson ConsumerLab Analytical Platform 2010–2015 (TV & Media study) and 5G consumer potential (May 2019)
*3 years' moving average

Increased mobile data usage with 5G

Consumer predictions on changes in mobile data usage per month due to 5G



200GB

One in five could use 200GB/month on 5G devices, 10x higher than current usage.

50%

On average, half of all smartphone users expect their mobile cellular data usage to increase over 5G.

Base: Smartphone users aged 15–69 in Australia, Argentina, Brazil, Belgium, China, Canada, Chile, France, Finland, Germany, India, Indonesia, Ireland, Italy, KSA, South Korea, Singapore, Thailand, Uruguay, the UAE, the UK and the US
Source: Ericsson Consumer & IndustryLab, 5G consumer potential (May 2019)

Note: Based on self-reported expected future usage of services combined with Ericsson Mobility Calculator data to estimate the future mobile data consumption per month on a 5G device

Consumer realities

04

Myth

Current usage patterns accurately predict future demand.

Consumers predict massive changes in future usage on 5G:

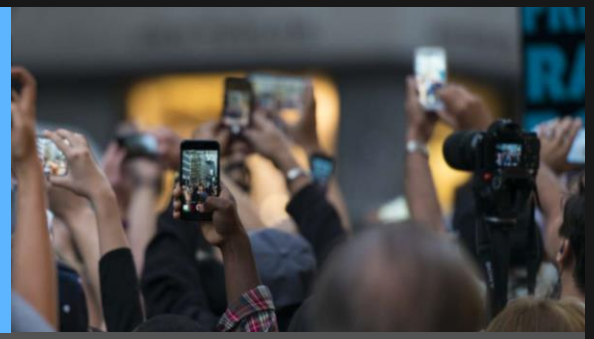
- Three hours' more video will be watched away from home weekly, one on AR/VR glasses
- 20 percent of users could see a 10x data usage increase on 5G, totaling 200GB per month
- 5G-connected home robots will be a status symbol for 6 in 10, while 4 in 10 expect 5G access in the car to be as important as fuel efficiency and engine power within 5 years

Consumer realities

01

Myth

There are no near-term consumer benefits of 5G.



In the near term, consumers expect 5G will offer benefits:

- A step change in network performance and video streaming experience
- Relief from urban network congestion visible to 6 in 10 consumers in mega/metro cities globally
- More home broadband choices; half of those interested in 5G home wireless broadband are either dissatisfied or lack broadband choices

02

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Consumer realities

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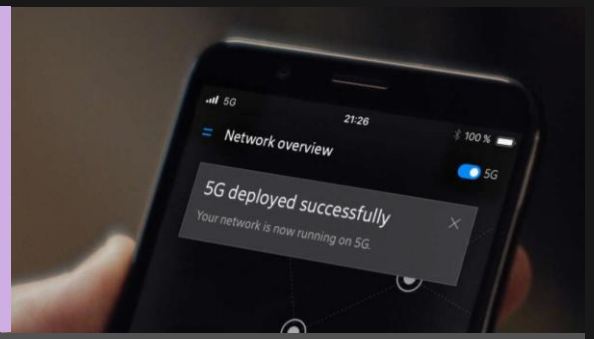
Smartphones are the only solution for 5G.



Smartphones alone are unlikely to drive 5G adoption:

- Of new iPhone owners, 43 percent doubt today's smartphones are good enough for 5G
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- Half think smartphones will still exist but we will all be wearing augmented reality (AR) smart glasses in the next five years

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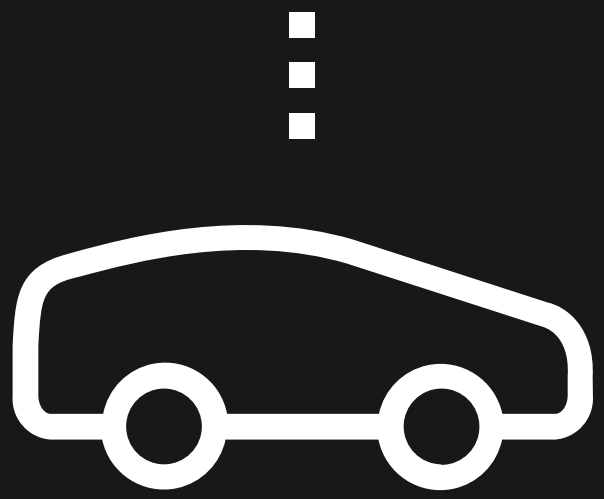
ERICSSON | LG

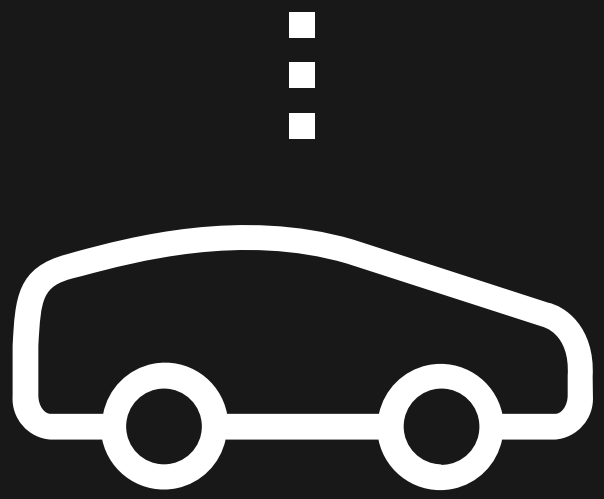
Go back



Autonomous cars

A vehicle that can operate completely autonomously without any driver assistance.

Go back



Autonomous cars

A vehicle that can operate completely autonomously without any driver assistance.

Go back

Facial recognition payment

Pay via face identification in public places with advanced facial-recognition technology and AI. 5G speeds ensure fast processing.

Go back

5G early alarm system

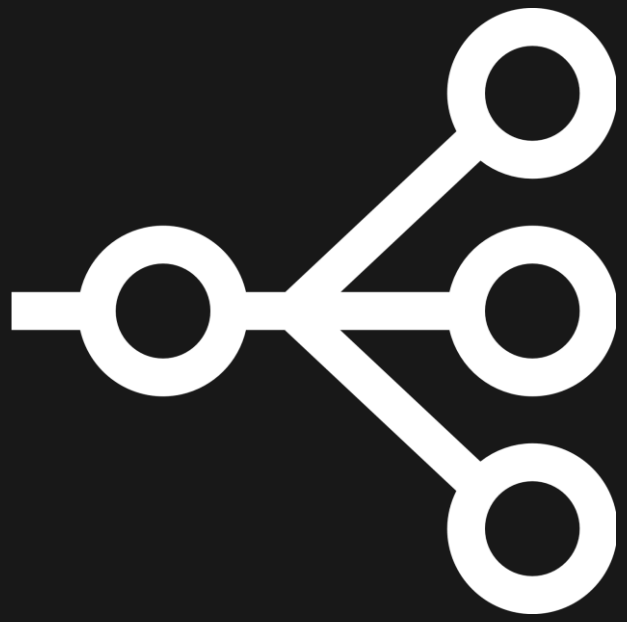
Connected surveillance cameras that monitor your home and use image recognition for detecting and predicting break-ins and incidents.

Go back

Health wearable

Monitor body signals and metrics (skin temperature, pulse, breathing, blood pressure) with wearables that predict the onset of infection and update your health status in real time.

Go back



Fixed wireless access (FWA)

5G delivers ultrahigh speeds, low latency and is as reliable as a fixed broadband connection. 5G Wi-Fi (FWA) is simply Wi-Fi that you get over a mobile 5G network

Go back

Immersive gaming

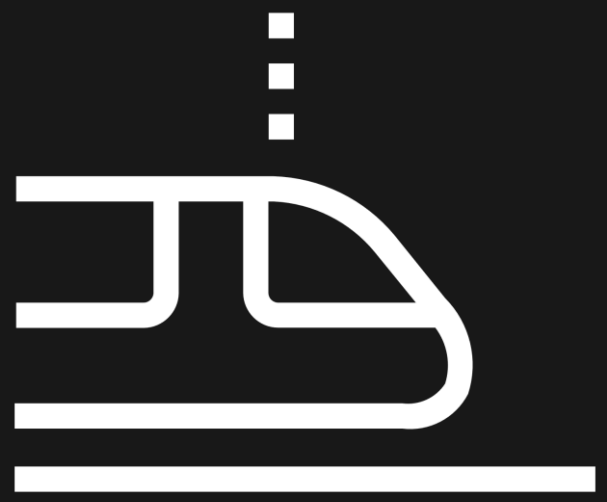
Play VR games without any lag virtually with other remote players and feel as if you are within the game.

Go back

AR window

5G enabled AR windows on trains and buses that highlight landmarks for passengers an can be interacted with (zoom in/out).

Go back



VR passenger entertainment

Using a 5G smartphone and a in-seat Mobile VR Headset will enable train passengers to watch a selection of curated 3D and forward-facing 360-degree films in Virtual Reality.

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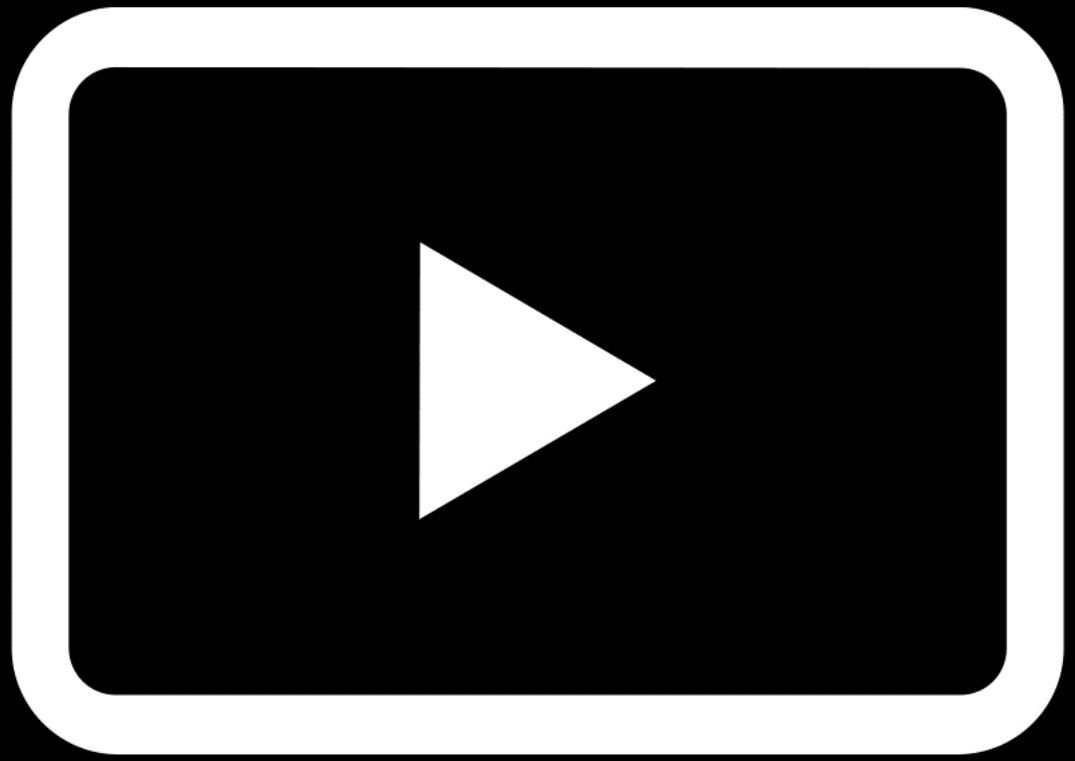

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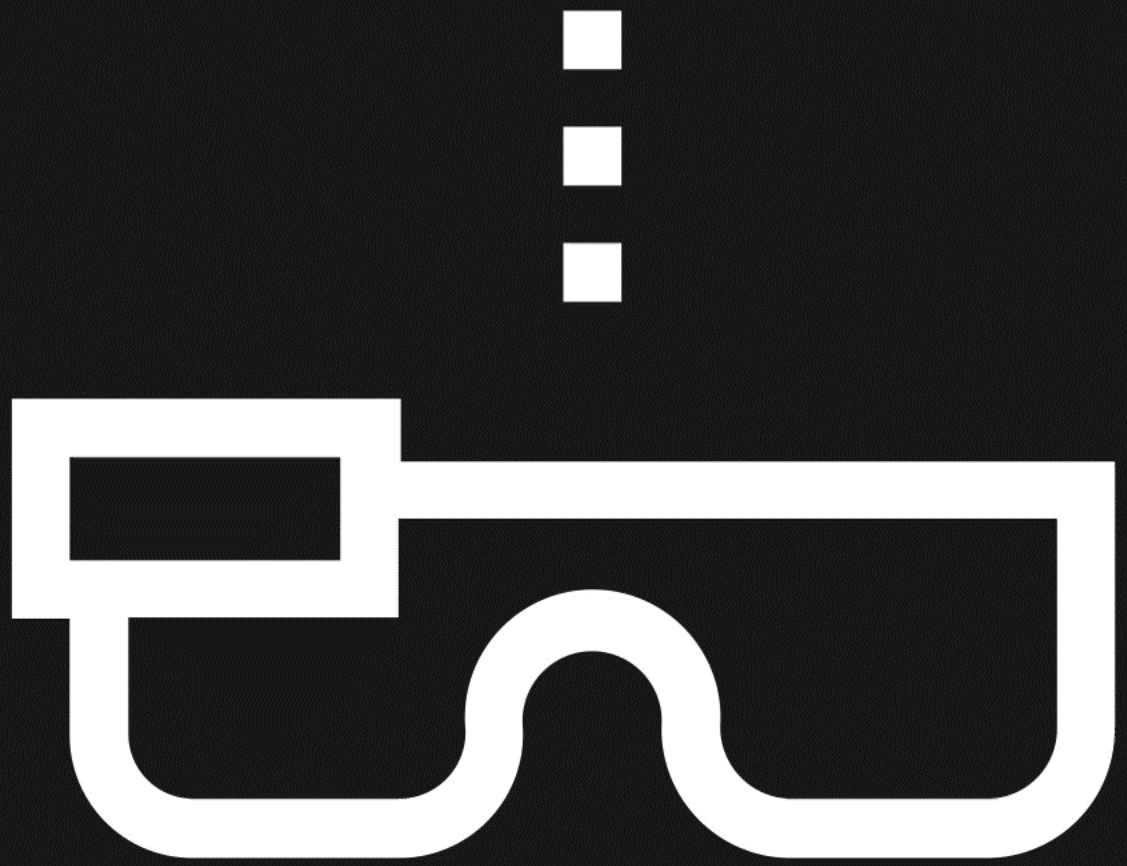

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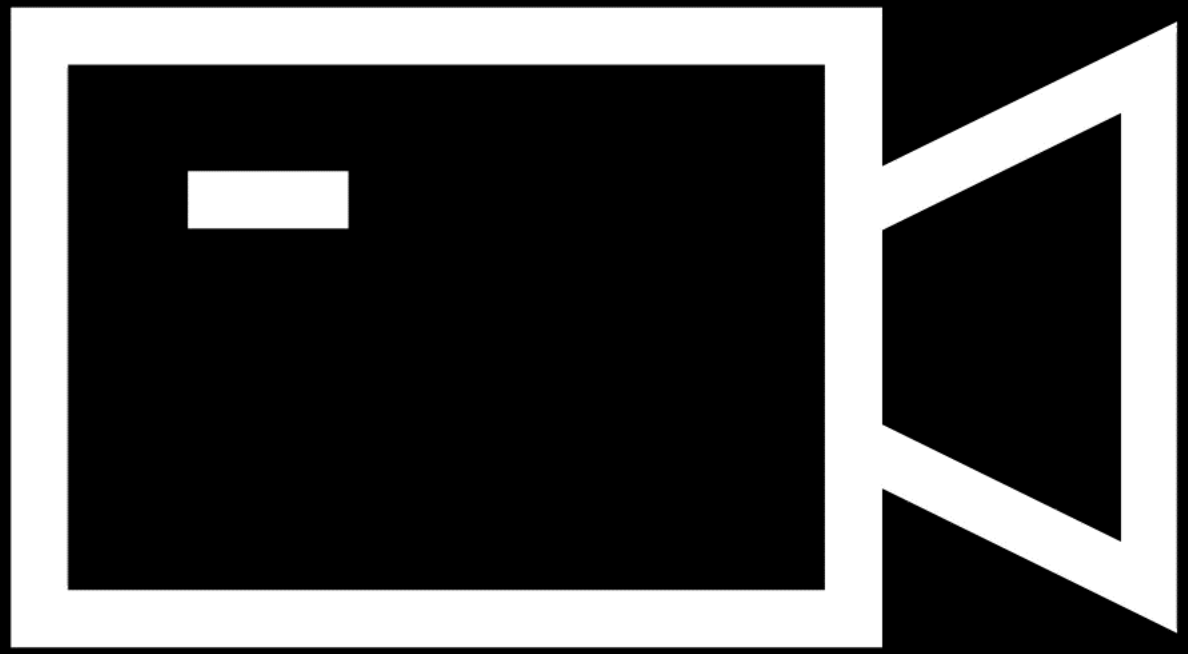

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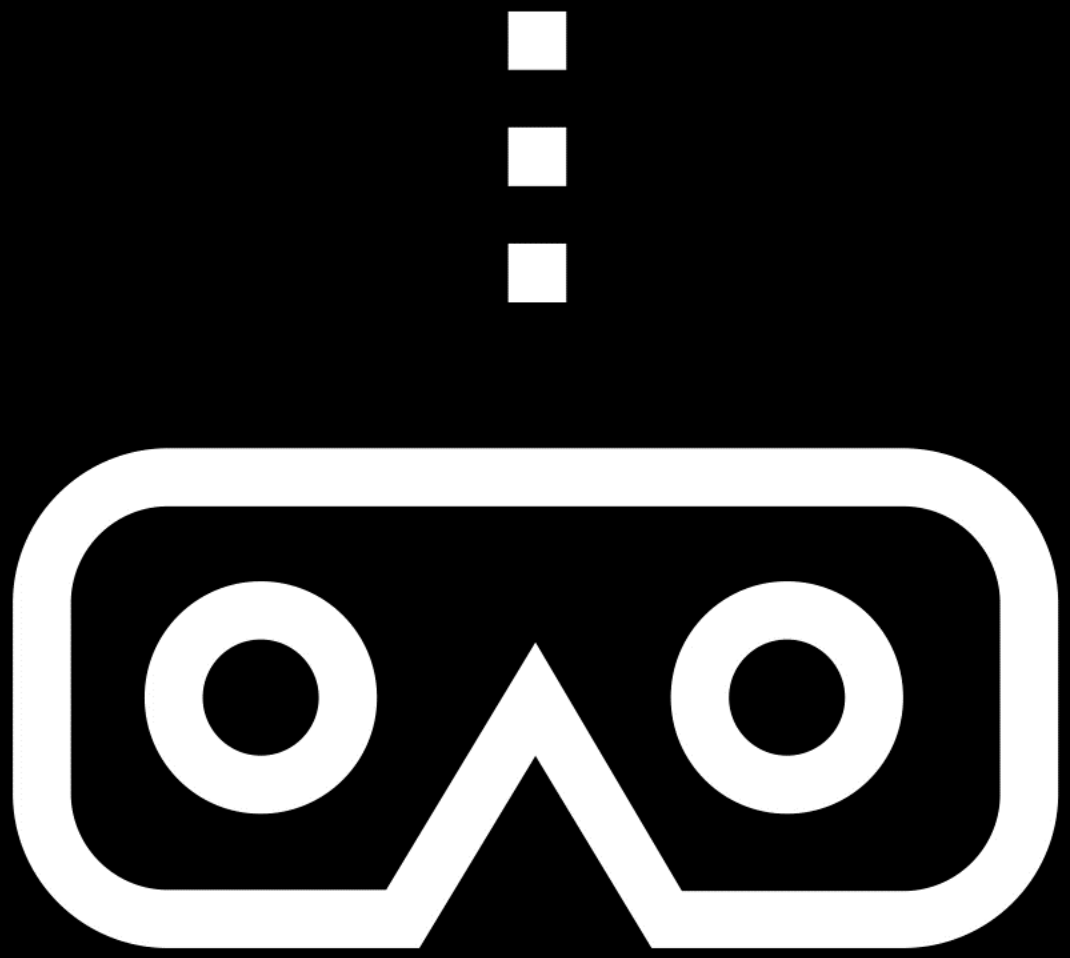

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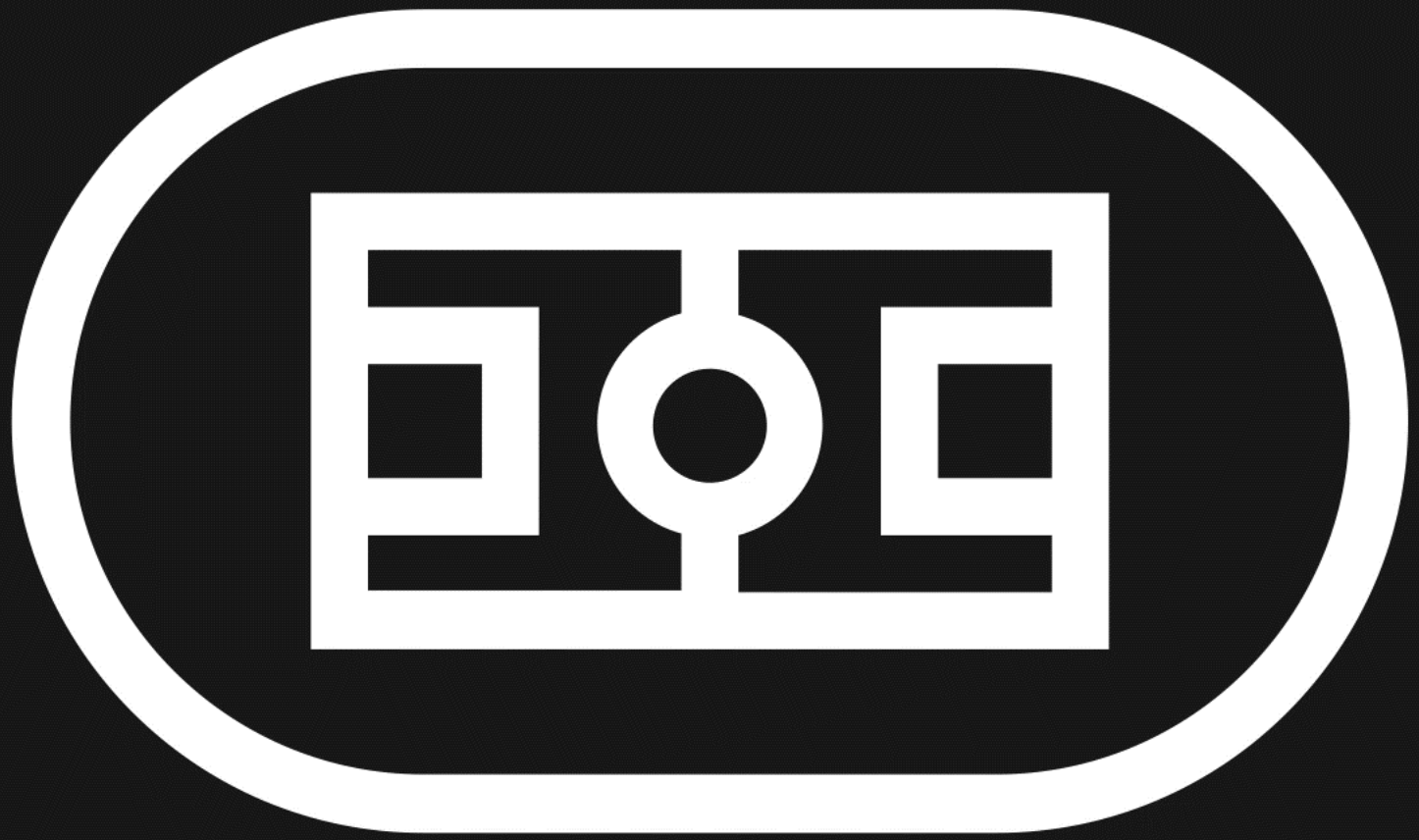

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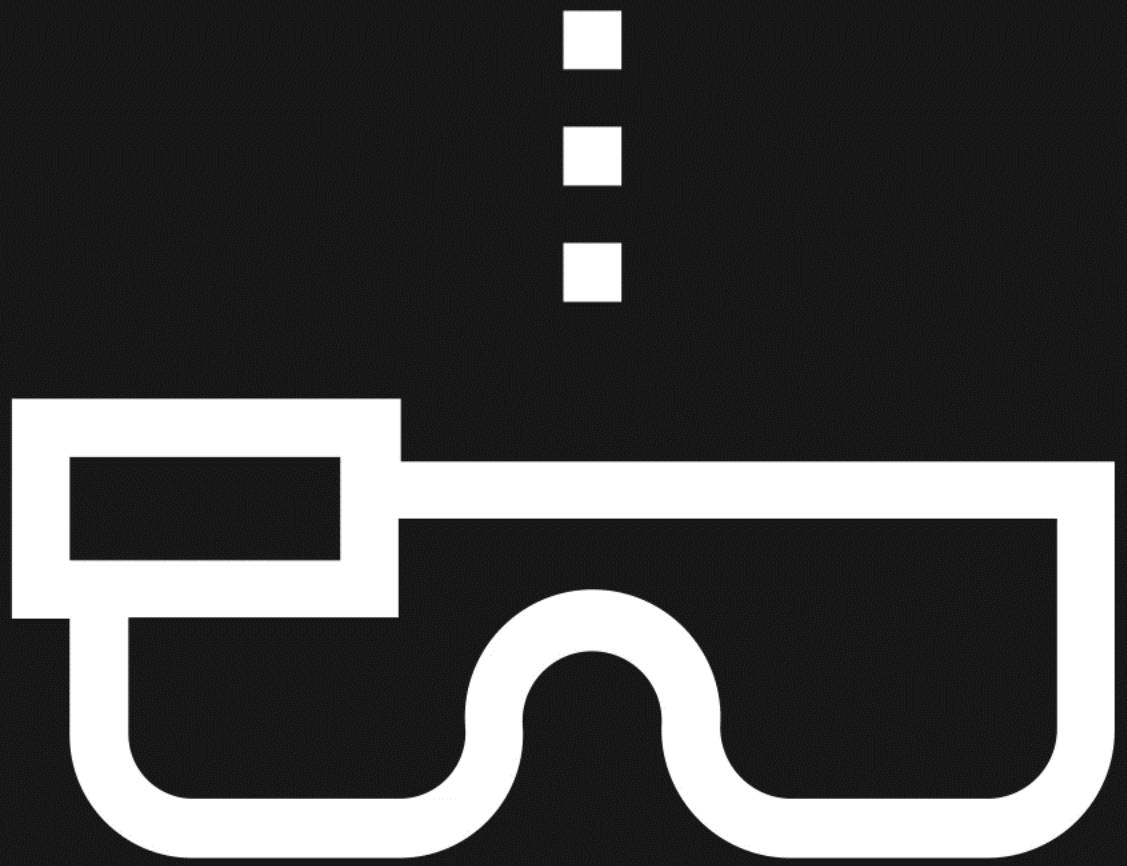

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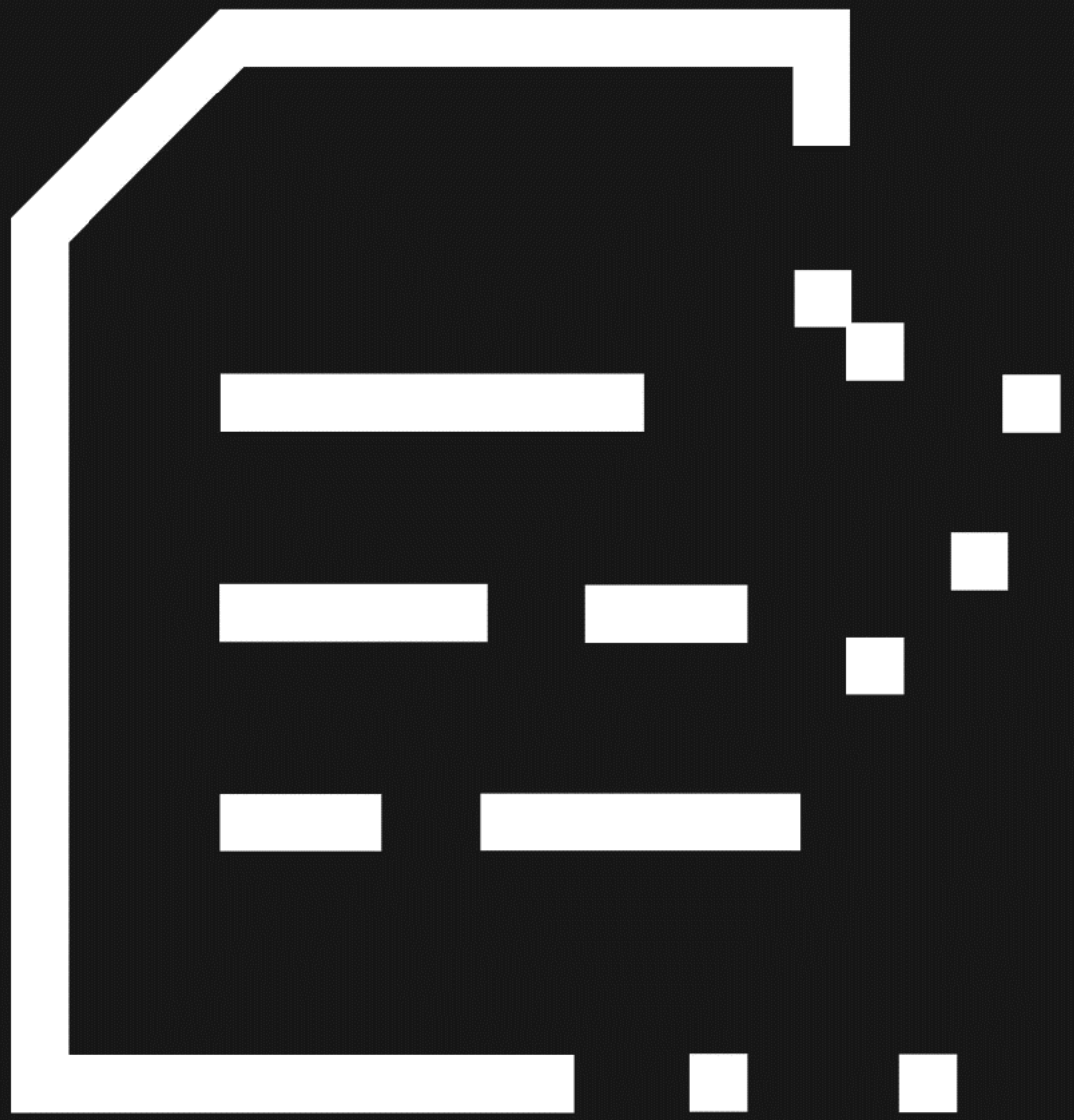

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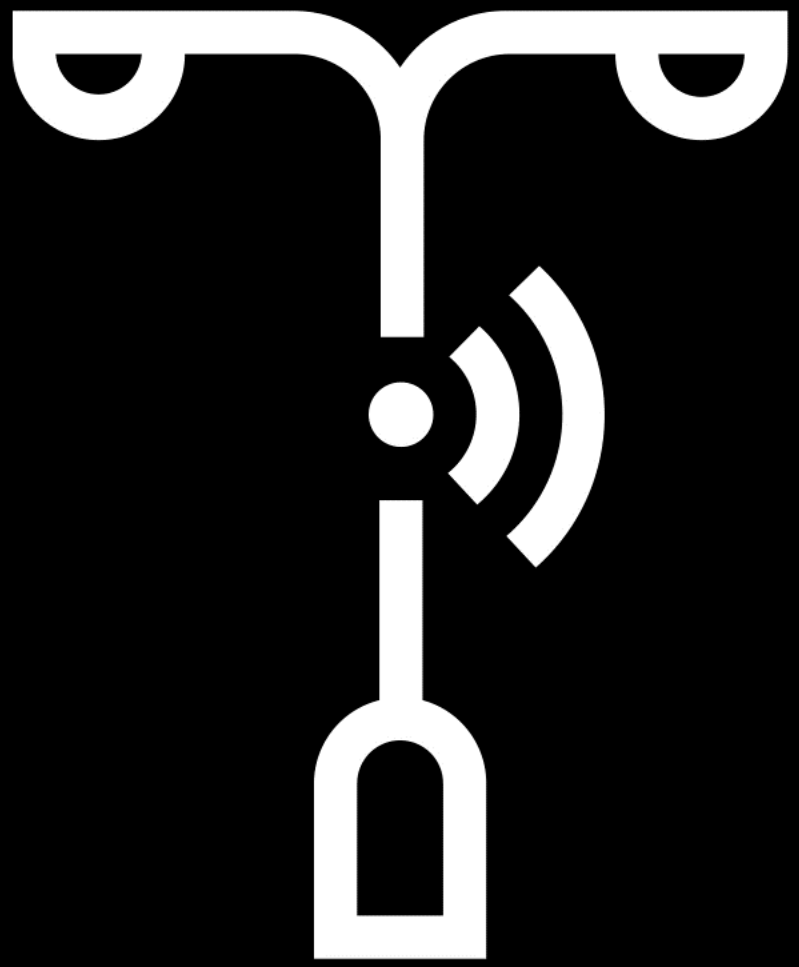

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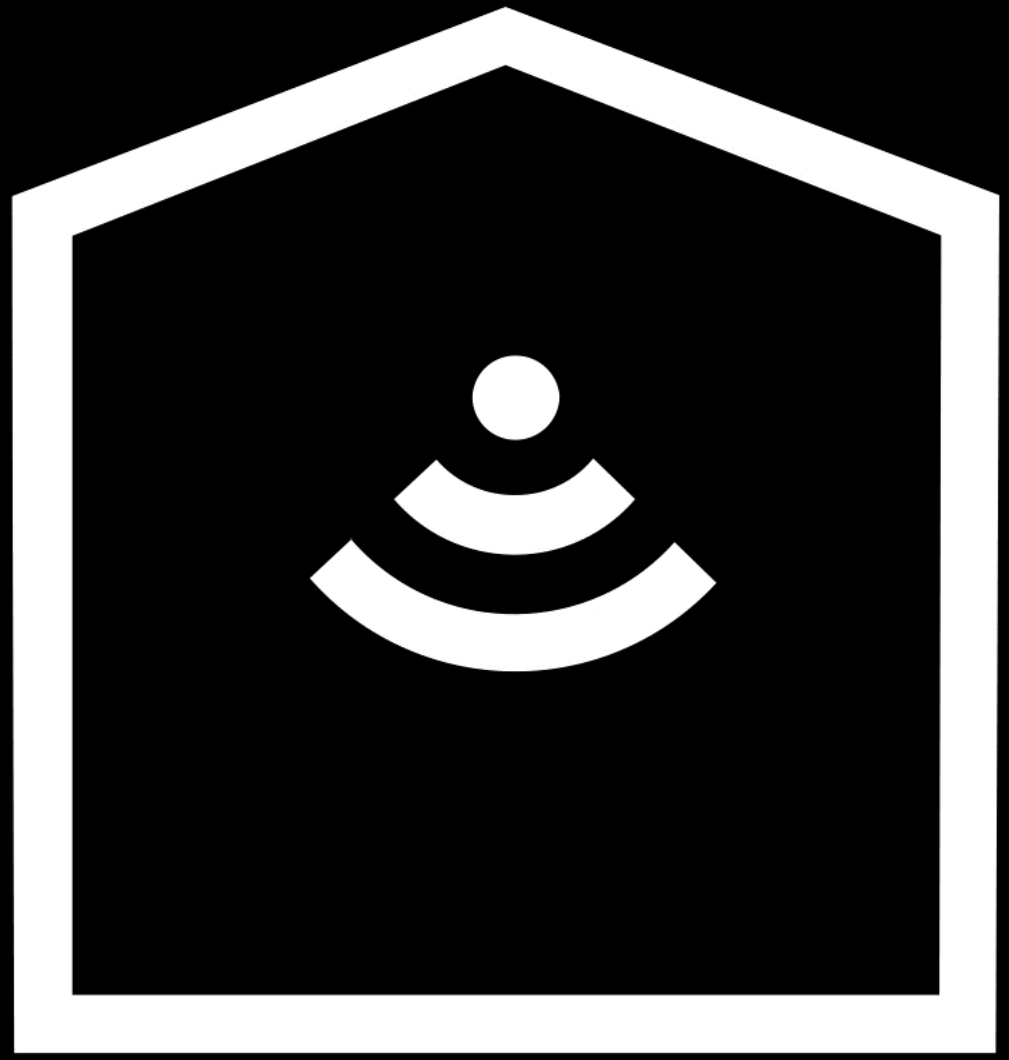

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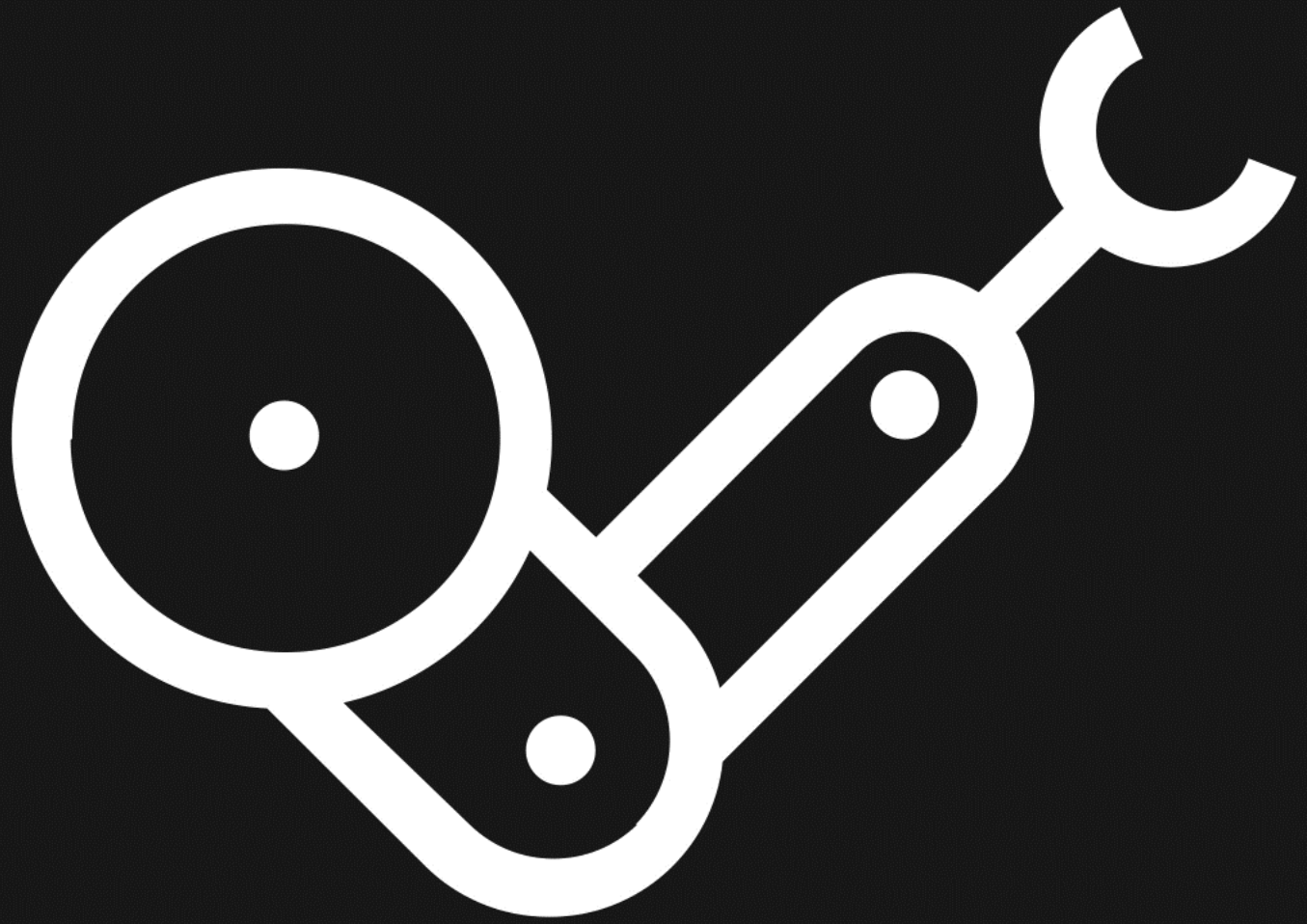

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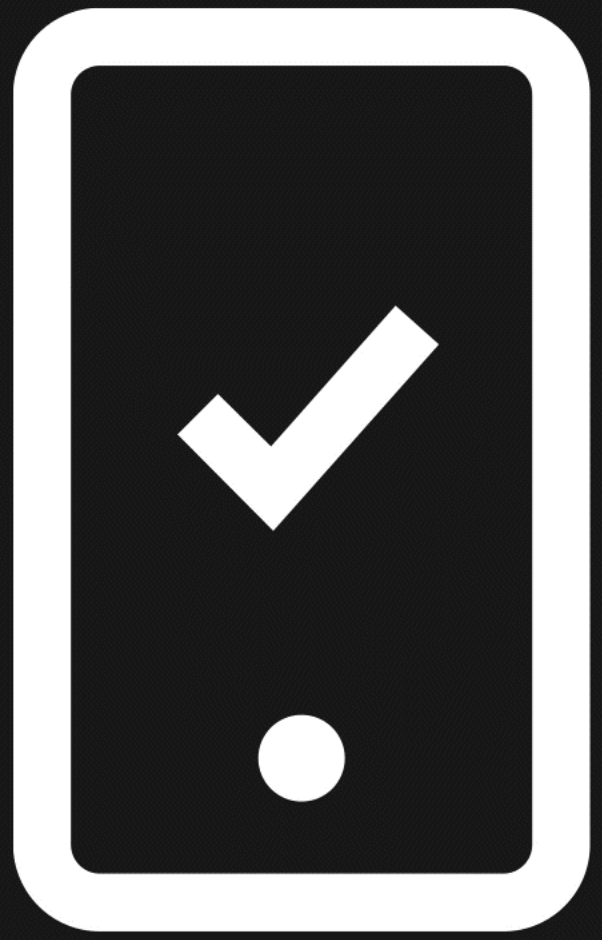

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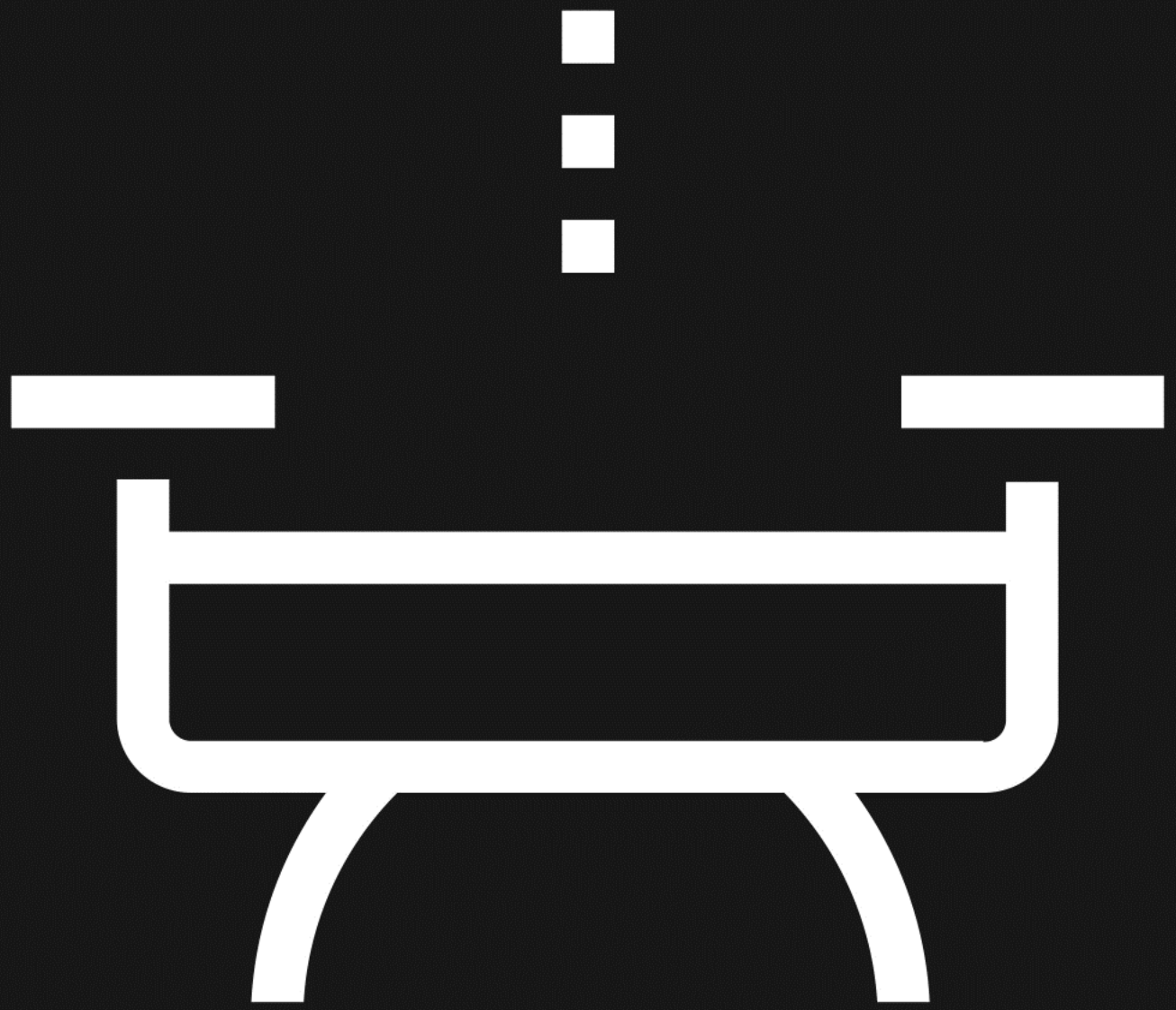
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