



Paul Gampe

CTO

May 2024

Web3 technologies **and Network as a Service**

A production use case example of a Web3 company and the
Console Connect Software Defined Interconnection Platform

Hello_



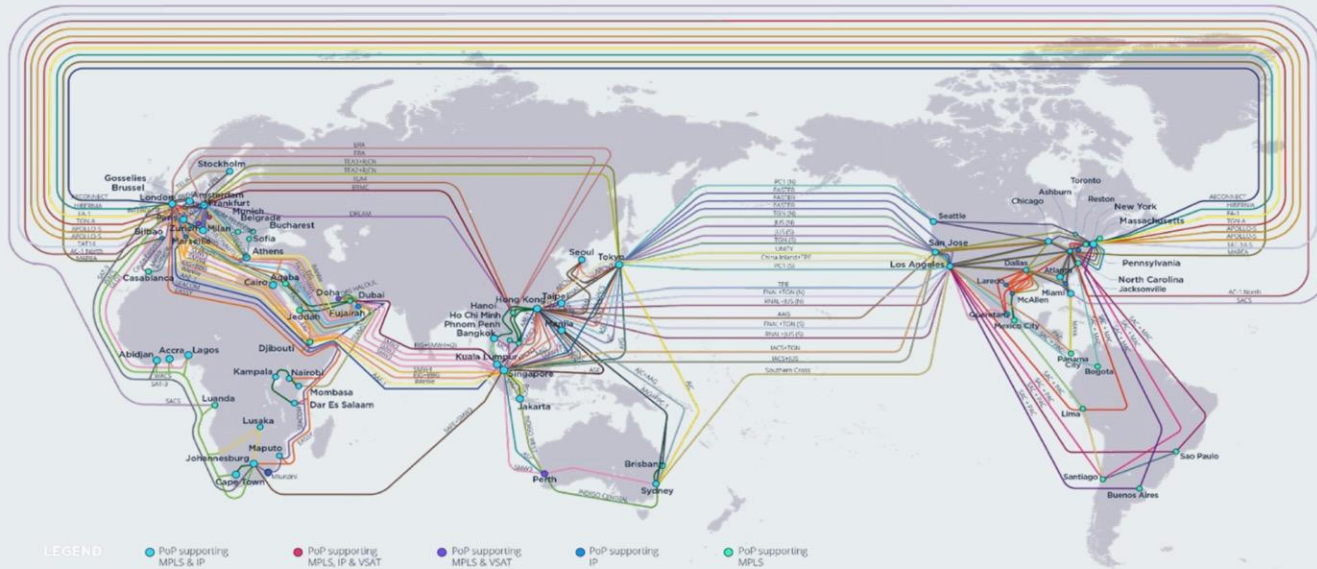
One of the world's leading IP networks —

Did you know our IP network carries 17% of the world's internet?

140
PoPs

AS3491
Top 10
global peering

Data as of April 2021



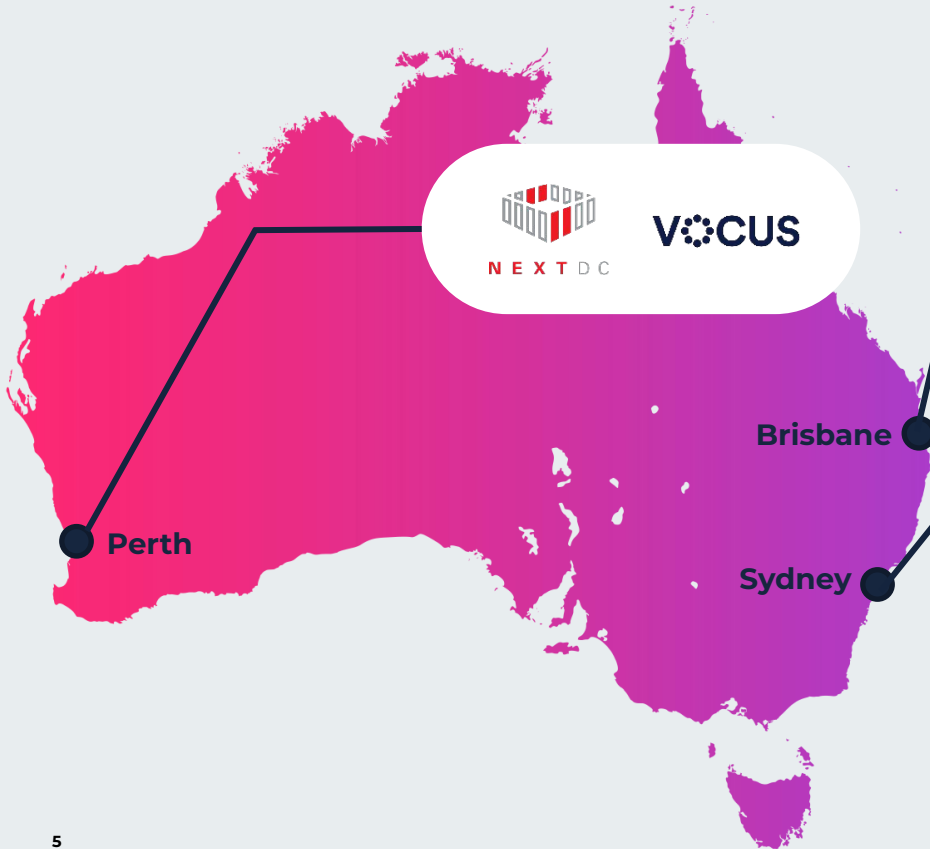
Carries
17%
of all internet routes

Exceeds
18Tbps
in global capacity

Section 01

Services available from Australia and New Zealand

Enabled Data Centres in Australia



NEXT DC VOCUS



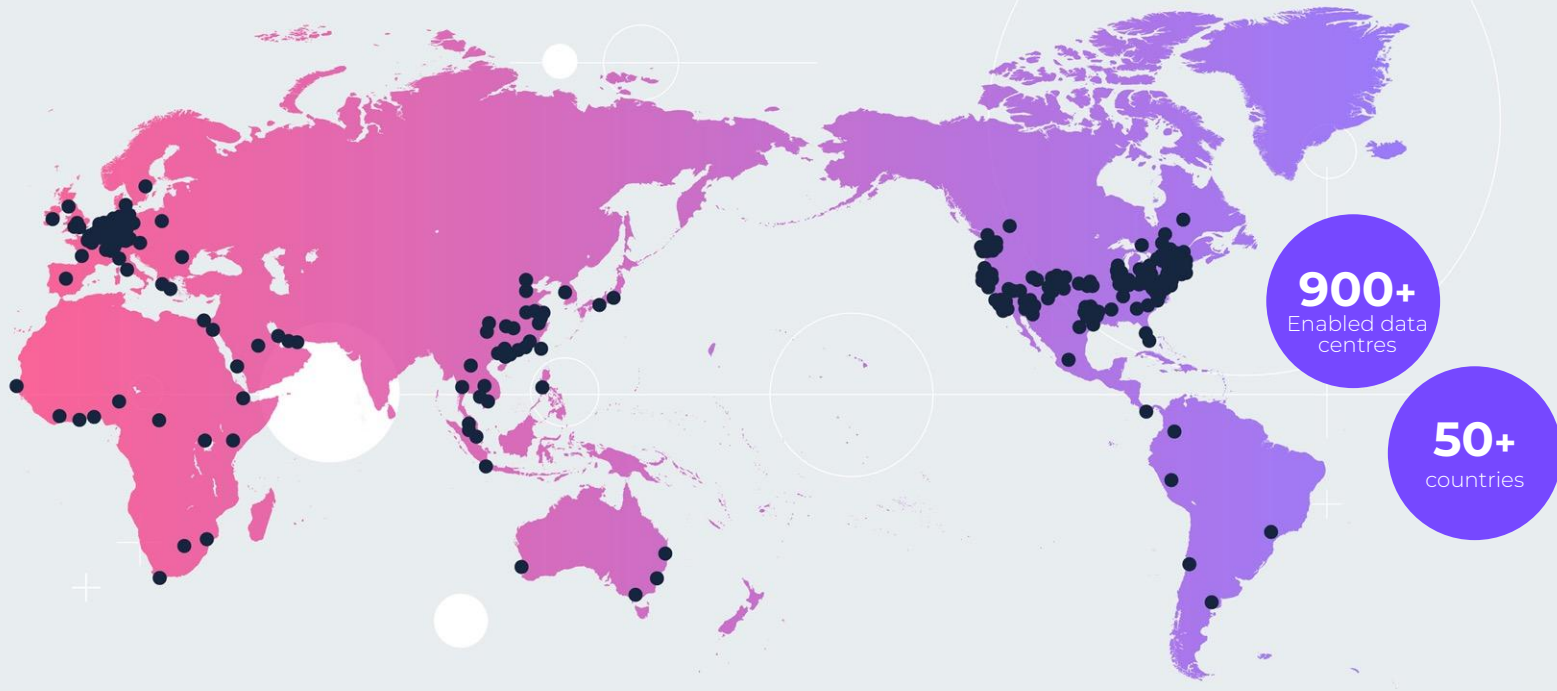
NEXT DC



5G networks EQUINIX GLOBAL SWITCH
macquarie DATA CENTRES NEXT DC

New Zealand coming soon

Connect to any **data center on our global infrastructure**



Connect to any public cloud provider globally



Connect to any SaaS application on our platform globally



Connect to internet exchanges



Choose your **access port**—



Edge Port

An Edge Port brings Console Connect all the way to your office building.

- Get **real-time quotes** for a fixed-line connection directly to your office building
- Choose your port **speed** and contract **terms**
- Receive **alerts and updates** on your order
- Connect your office directly to **clouds, data centres** and hundreds of **business partners** worldwide
- Order **multiple Edge Ports** to privately connect your office locations worldwide

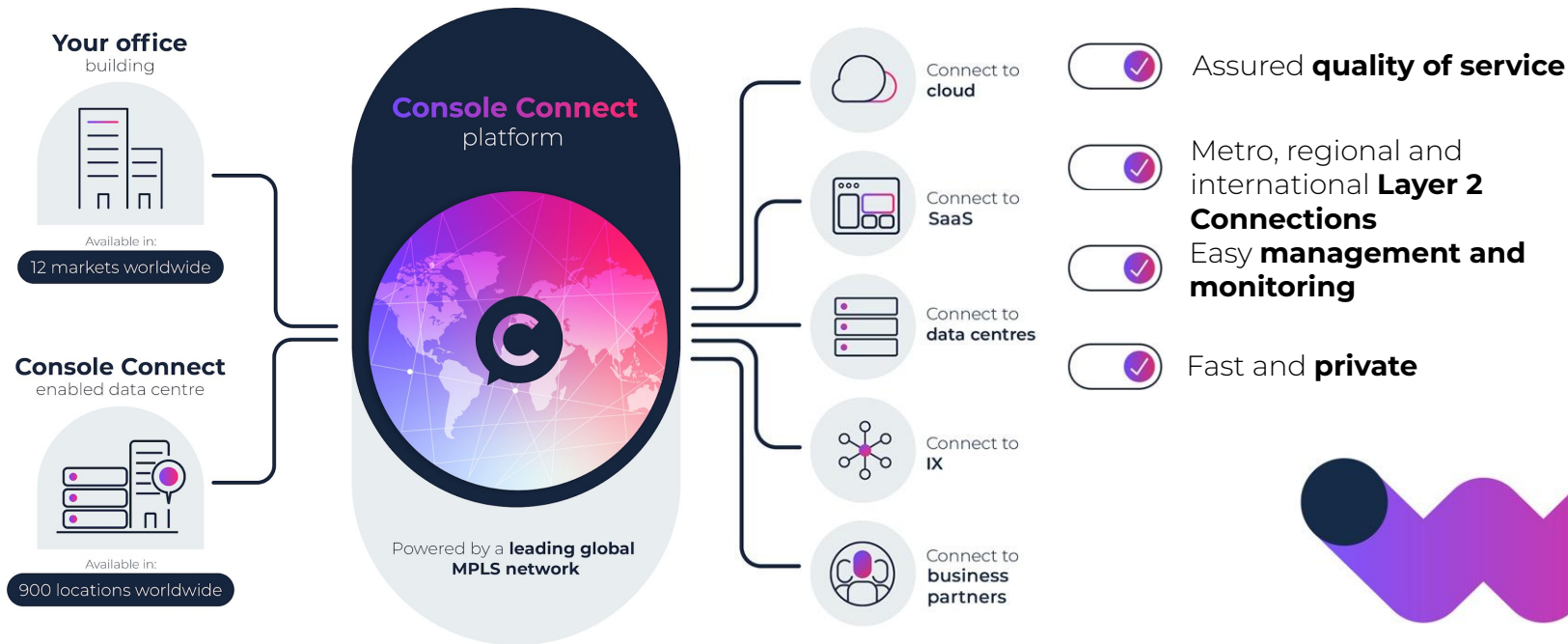


Data Centre Port

Console Connect is readily available at 900+ data centres in 50+ countries worldwide. Plug straight into our network at your data centre location.

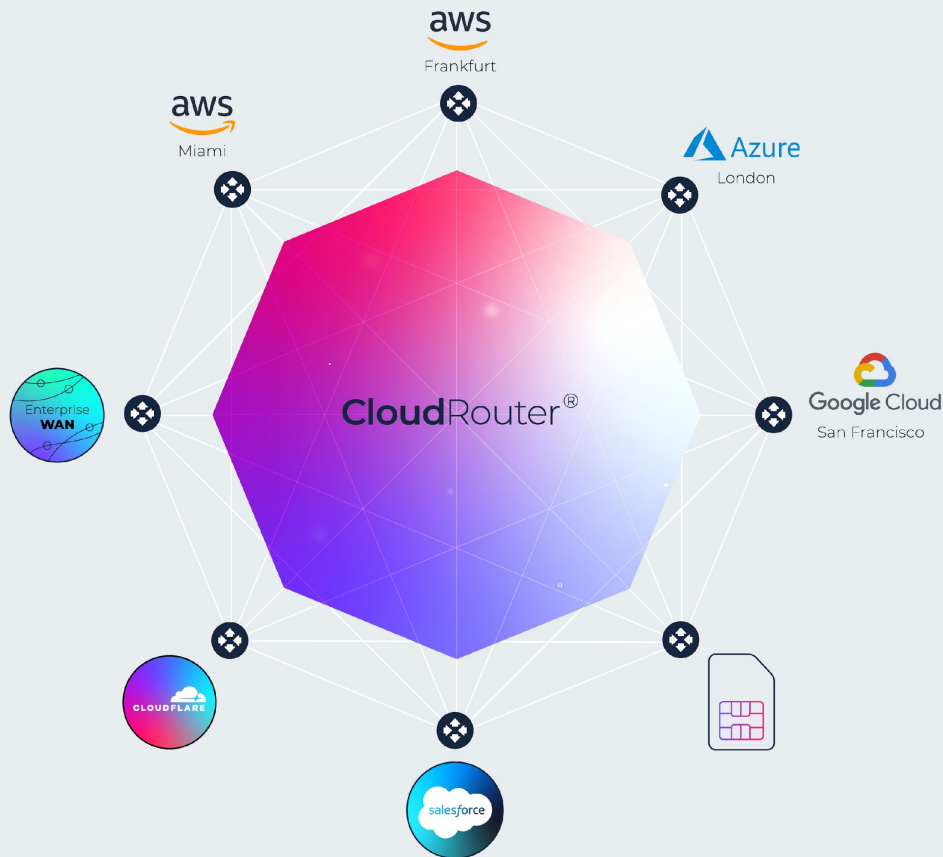
- Log-in to Console Connect and **find your data centre location**
- Choose your port **speed** and contract **terms**
- Check on your **port status** via our web portal
- Directly connect to other **data centres, clouds** and hundreds of **business partners** worldwide

Interconnection, **layer 2 (point-to-point)**



Interconnection, layer 3 (mesh) —

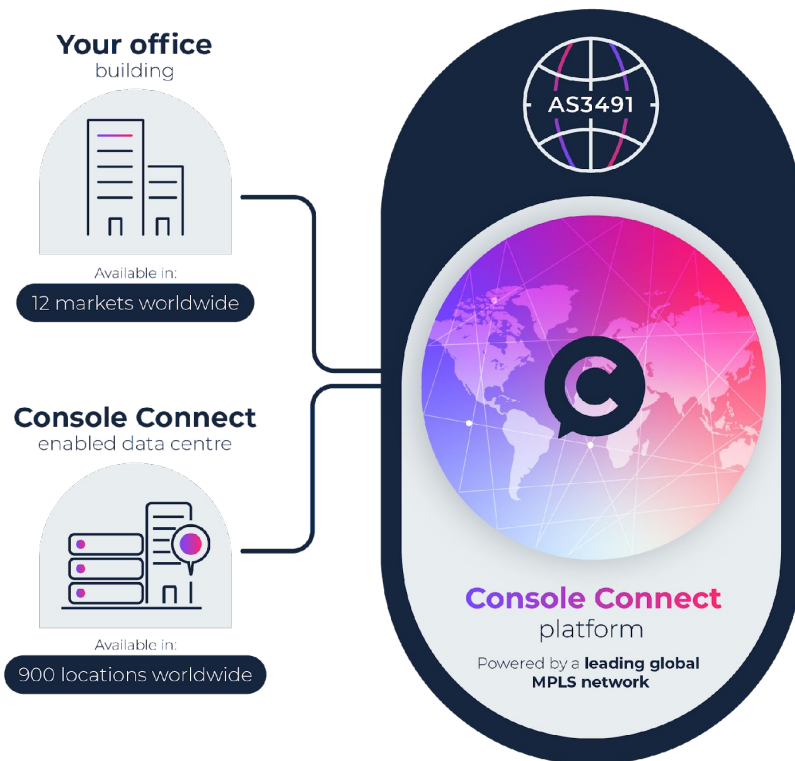
- Create a **Layer 3 mesh**
- Remove **pain and complexity**
- More **efficient routing**
- Add/remove **edge locations**
- Adjust **class of service**



IP transit **Internet on-demand (IoD)**

Access a leading IP transit internet connection for your business services.

- Reliable, scalable internet connection
- Delivered via own multi-terabit, fully resilient, single AS global Ipv4 and IPv6 backbone (AS3491)
- High-quality peering with global and regional carriers, ISPs, ICPs and public Internet Exchanges
- Network security features, including Distributed Denial of Service (DDoS) protection



Section 02

Network-as-a-Service

And automated settlement

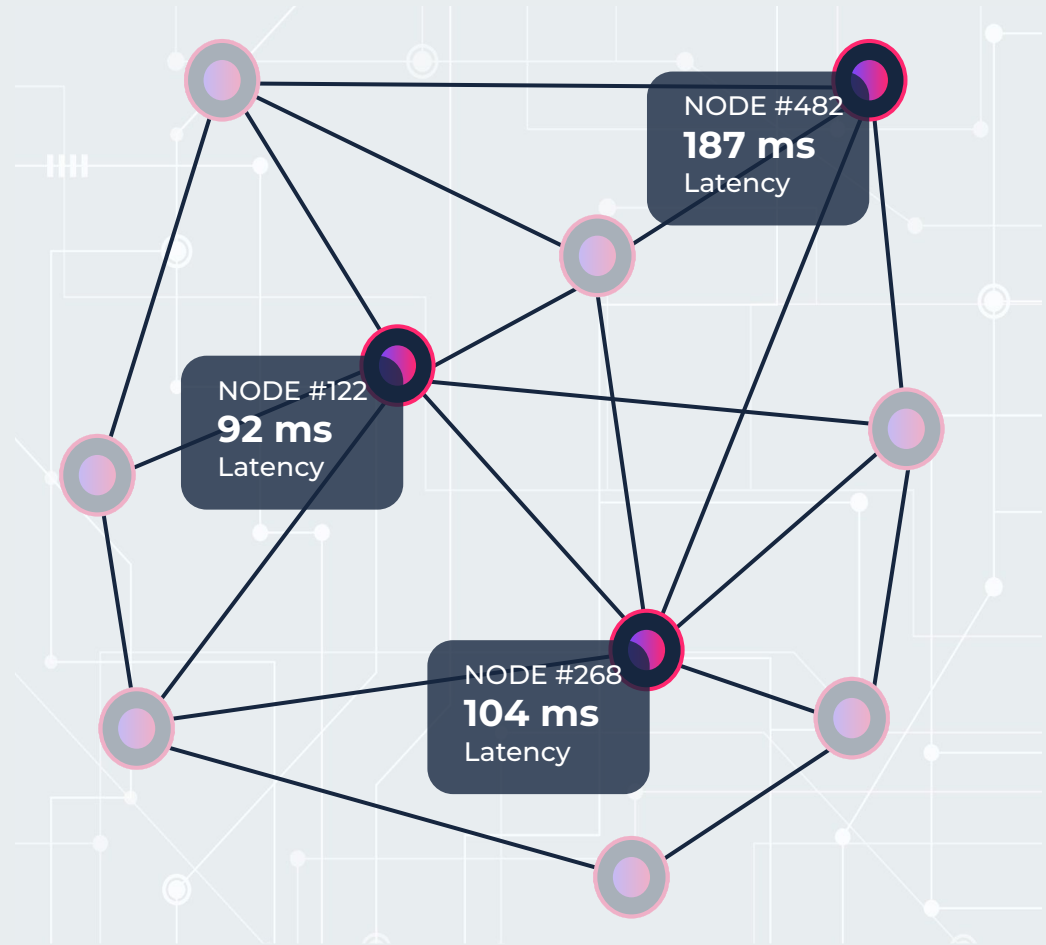
“Syntropy is building a multi-chain data availability layer, providing a decentralized and scalable way to access, retrieve and interact with **real-time and historical on-chain data** —

Syntropy

DARP nodes

DARP nodes constantly share latency information and other metrics in between each other, creating a global intelligence layer for Internet pathways.

- ✓ DARP Connectivity – for route optimization
- ✓ SDN Connectivity – for network traffic
- ✓ Improved network latency
- ✓ Reduced packet loss
- ✓ Edge Compute - Utilizing Console Connect's programmable core network

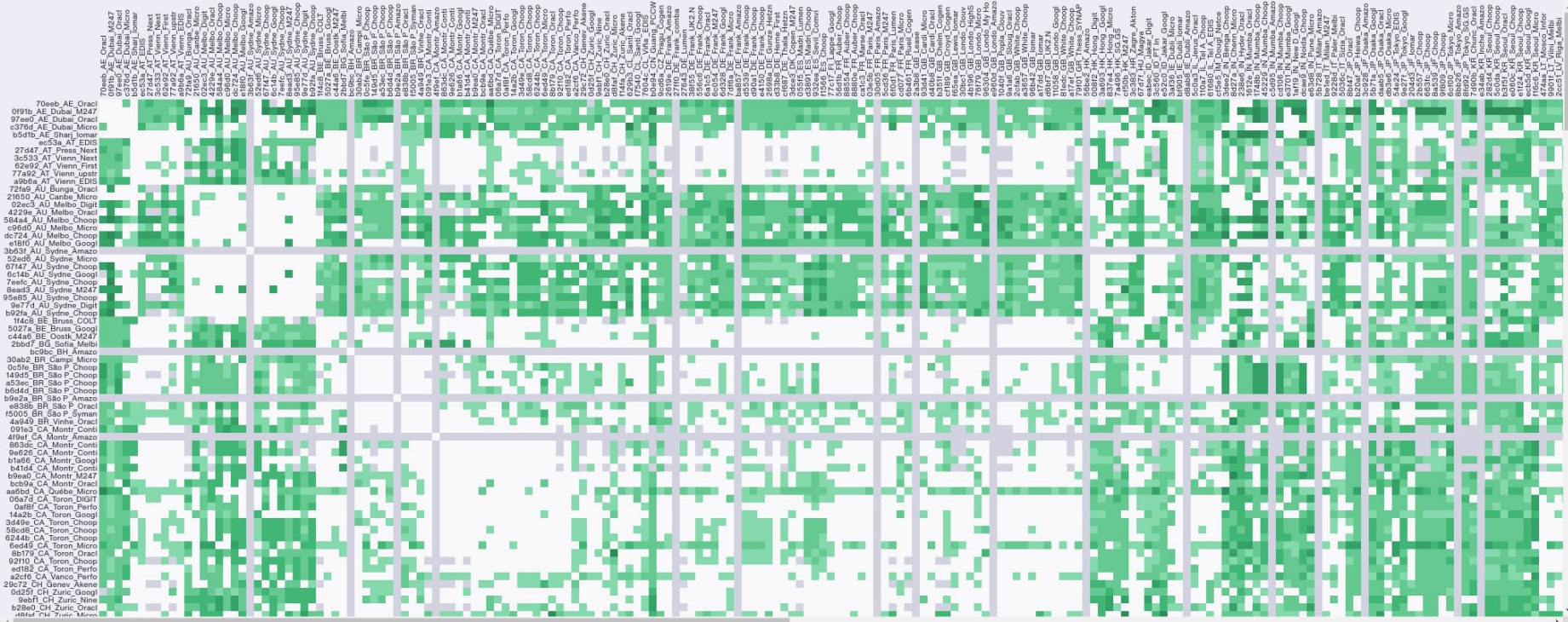


Routed latency

Public latency

Relay latency

FILTERS



0ms > 200ms

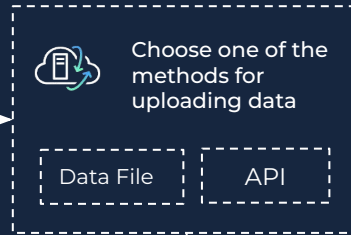
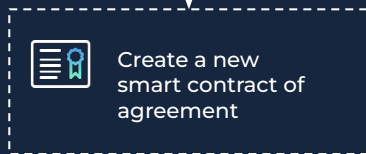
100%

Smart Contract Swimlane Diagram

Parties

Create Smart Contract

Execute Smart Contract



Finished

Blockchain



Settlement Rules via Smart Contract

Stargate Dashboard Monitoring Proposal Validation Invoice Syntropy Network Limited

Proposals / SDN&Darp-PCCW-Syntropy

SDN&Darp-PCCW-Syntropy Draft Comment Logs

Initiator: Syntropy Network Limited | Partner: pccwglobal | Created Time: 2023-07-25 09:39:18

Primary Key

2 Fields Import Add New Field

Field Name	Field Type	Data Sample
calDay Max 16 characters	Date YYYY-MM-DD	2023-07-08
DataCenter Max 16 characters	String 64 <small>Please enter the length of the string</small>	Enter a data sample

Comparative Data

2 Fields Import Add New Field

Field Name	Field Type	Validation Rules	Data Sample
SDNUsage Max 16 characters	Numeral 0 Max 8 decimal places	10%Allowed	901141945
DarpUsage Max 16 characters	Numeral 0 Max 8 decimal places	Initiator's Accepted	Enter a data sample

Cancel Additional Settings Save and Continue

Smart Contract Proposal Generation Settlement rules can be defined in the UI between two (2) companies which translate into a smart contract. The smart contract gets executed at the end of the billing cycle with an invoice generated from the matching data submitted between the (2) companies. The outstanding items goes through a manual dispute process via the UI.

Settlement Rules Explained

Matching Rules

- Date
- DataCenter (Location)

Data Handling

- Traffic from SDN:
 - Accept exact match and 10% difference
- Traffic from DARP:
 - Accept all

Syntropy-PCCW Approved

Initiator: PCCW GLOBAL | Partner: SYNTROPY NETWORK LIMITED | Created Time: 2023-09-18 09:32:04 | On-Chain ID: --

Description: Monthly settlement

+ Create Validation

Validations 1 Comment Logs

Primary Key and Comparative Data

Primary Key

Field Name	Field Type	Data Sample
ca_day	Date Format:(YYYY-MM-DD)	
server_name	String Format:(Max length: 64)	

Comparative Data

Field Name	Field Type	Validation Rules	Data Sample
SDN_usage	Numeral Format:(2 decimal)	Rule: INITIATOR's data will be auto-accepted if 10% difference based on INITIATOR data.	
Darp_usage	Numeral Format:(2 decimal)	Rule: Automatically accept the data value uploaded from the INITIATOR	

Additional Settings

1 Data Upload Process

The validity period of the validation initiated through this proposal is 365 day(s). After the validation expires, data cannot be uploaded. If one party has already completed the data upload, the data will be considered **Invalid**

2 Periodic Validation

Initiate the validation manually

3 Dispute Expiration Setting

Allow unresolved disputes moves to future 1000 week(s). Unresolved disputes will be accept data from Initiator after the deadline.

Partnership use case

Smart Contract - Deep Dive

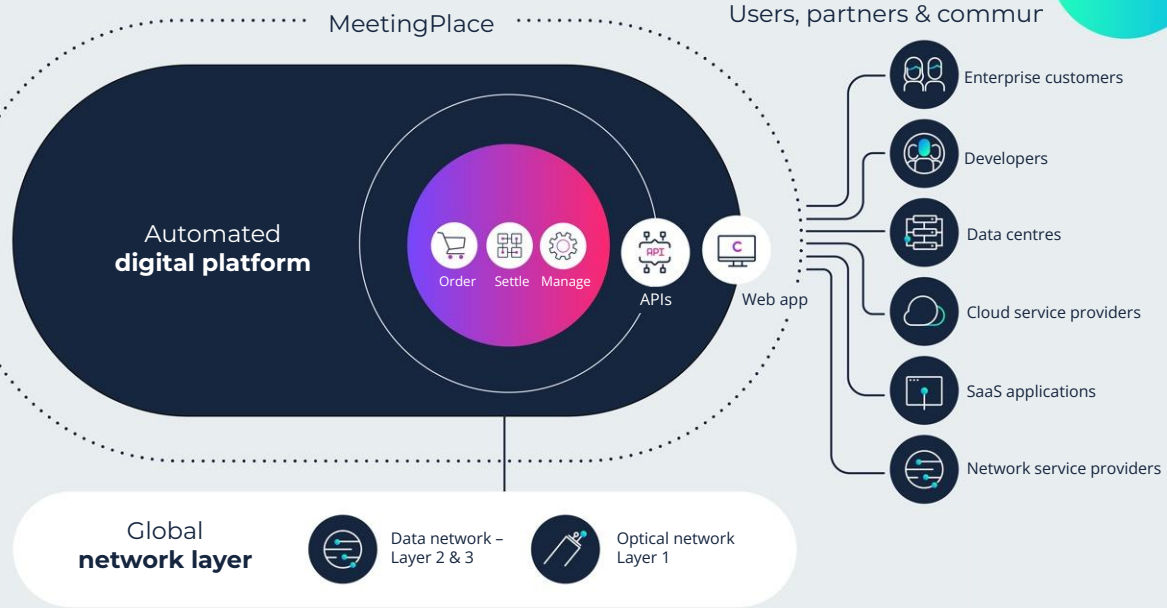
- Data Aggregation
- Data Comparison
- Data Handling via the Settlement Rules Defined

```

1 DataMatch (ContractId initiatorDataId, ContractId partnerDataId, ContractId agreementId)
2   let initiatorOriginalData = Fetch(initiatorDataId)
3     partnerOriginalData = Fetch(partnerDataId)
4     agreement = Fetch(agreementId)
5     compareFields = agreement.compareFields
6     for(compareField: compareFields) {
7       let
8         initValue = initiatorOriginalField.value
9         partnerValue = partnerOriginalField.value
10        compareRule = compareField.compareRule
11        DataFieldCompare(initValue , partnerValue, compareRule)
12    }
13 DataFieldCompare(initValue , partnerValue, compareRule)
14   let basedOnValue = if (compareRule.accept == INITIATOR) then initValue else partnerValue
15   if (compareRule.rule == ABSOLUTE && abs(initValue - partnerValue) < compareRule.threshold ||
16       (compareRule.rule == PERCENT && basedOnValue != 0.0 && abs((initValue - partnerValue)/basedOnValue)*100 < compareRule.threshold))
17   then do
18     let status = DisputeData.THRESHOLD_SAME
19     acceptData = if compareRule.accept == INITIATOR then initValue else partnerValue
20     create(status, acceptData)
21   else do
22     let status = DisputeData.PENDING_AGGREEMENT
23     acceptData = None
24     create(status, acceptData)
25 Fetch(ContractId smartContractId)
26 return fromChain(smartContractId)
  
```

Integrate Console Connect NaaS services via API

- Console Connect NaaS APIs enable developers to automate network connectivity across different providers.
- Our API ecosystem abstracts the complexity & rate of change in cloud provider API endpoints.
- Hence, developers can deploy services more quickly via single points of access to the world's largest software-defined connectivity platform.



Thank you

Australia

Level 3 | 200 Mary Street | Brisbane QLD 4000 | Australia

United Kingdom

7/F 63 St. Mary Axe | London EC3A 8AA | UK

France

2/F 16 rue Washington | 75008 Paris | France

Greece

340 Kifisias Avenue/340 Olimpionikon | Neo Psychiko 154 51 | Athens | Greece

Germany

Schillerstr. 31 | 60313 Frankfurt/M. | Germany

United States

475 Springpark Place | Suite 100 | Herndon | VA 20170 | USA

Singapore

6 Temasek Boulevard | #41-04A/05 | Suntec Tower Four | 038986 | Singapore

Hong Kong

20/F, Telecom House | 3 Gloucester Road | Wan Chai | Hong Kong

Japan

11F – 11A-3 | Imperial Hotel Tower | 1-1-1, Uchisaiwaicho, Chiyoda-ku | Tokyo 100-0011 | Japan

South Africa

Building 12 | 1 Woodmead Drive | Woodmead | Johannesburg 2191 | South Africa

UAE, Dubai

Office 401 & 408 | Level 4 | Arjaan Business Tower | Dubai Media City | Dubai

Talk to us: sales@consoleconnect.com





Daisey Stampfer

Superloop Group Executive – Business & Wholesale

AI. Telco. It's happening.

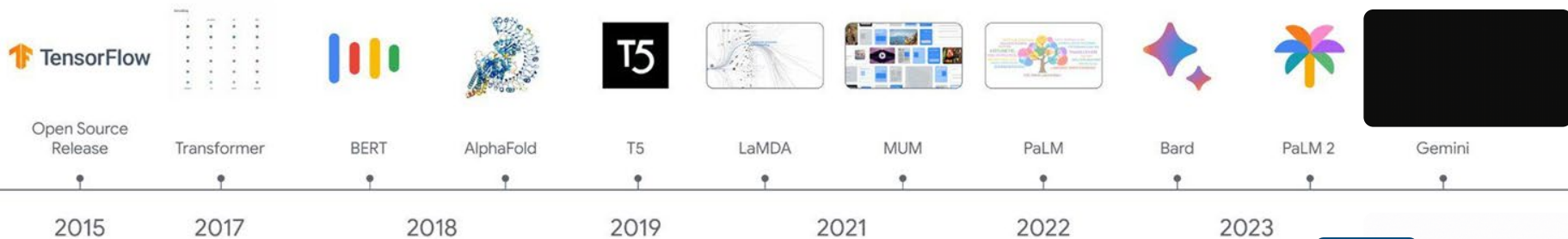
CommsDay Summit
May 1st 2024



E CHICAGO ST
00

Google builds the foundations of AI innovation

Our pioneering R&D of the past decade is what made recent advances in AI possible



3,000
Researchers

7,000
Publications

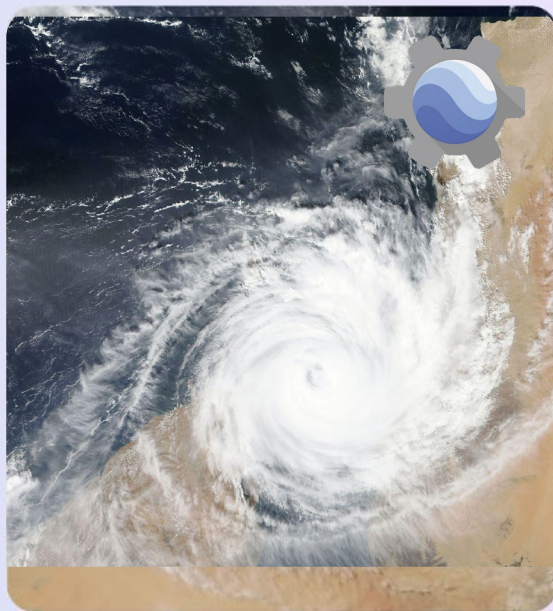
Responsible AI at the foundation

- ✔ Built & tested for safety
- ✔ Upholds high scientific standards
- ✔ Socially beneficial
- ✔ Privacy in design
- ✔ Accountable to people
- ✔ Avoid creating unfair bias

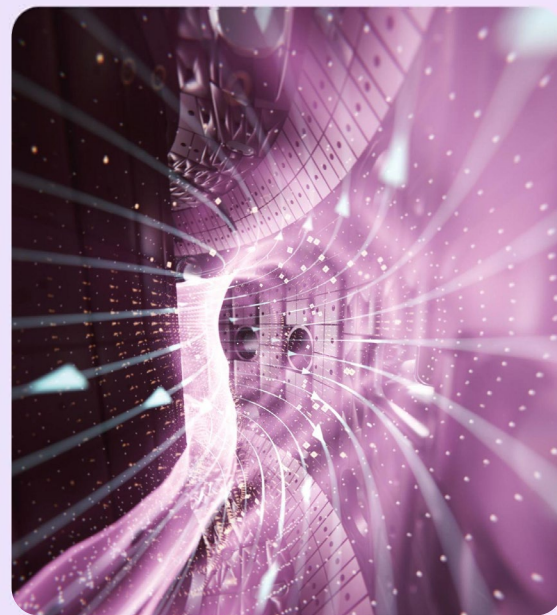




Alphacode
competitive-level
programming



GraphCast
weather prediction



Plasma Control
to accelerate
fusion science

Gemini

proliferates the Google Ecosystem

Gemini for Telco

Build with Gemini Pro

Performance Max is now powered by Gemini

Gemini for Google Cloud

Draft emails faster with Gemini

Gemini is enhancing Search (SGE)

Get Gemini in Gmail, Photos, Slides and more

Gemini in Maps

Gemini Nano on Pixel 8 Pro

Gemini in Google Messages

Gemini in BigQuery

Google Cloud

Making AI helpful for everyone

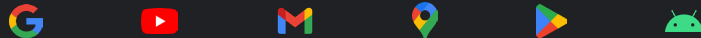
World leading models

Gemini Gemma

World leading infrastructure

 TPU  GPU

The knowledge and experience to integrate ML into services delighting
billions of users across the world



Samsung and Google Cloud

Join forces to bring generative AI to Samsung devices

Samsung is deploying Google Cloud's generative AI technology to Samsung smartphone users around the globe.

Leveraging various Google GenAI capabilities, Samsung users will gain access to numerous new product features:

- ★ **Gemini Pro:** Generalize and seamlessly understand, operate across, and combine different types of information, including text, code, images, and video
- ★ **Imagen 2:** Bring safe and intuitive photo -editing capabilities into the users' hands
- ★ **Gemini Nano:** Enable on-device LLM delivered as part of the Android 14 operating system, the most efficient model of Gemini for on -device tasks

SAMSUNG

Galaxy AI

We're thrilled that the Galaxy S24 series is the first smartphone equipped with Gemini Pro and Imagen 2 on Vertex AI. After months of rigorous testing and competitive evaluation, the Google Cloud and Samsung teams worked together to deliver the best Gemini -powered AI experience on Galaxy."

Janghyun Yoon

Corporate EVP, Head of S/W Office of Mobile eXperience Business, Samsung Electronics



Google's AI answering Verizon's support calls



verizon



Reimagining the customer experience through Google Cloud's AI and ML expertise, creating an experience that not only delights consumers, but also helps differentiate Verizon in the market.



Faster and more personalized digital experiences for customers, as well as shorter call times and quicker resolutions.



Verizon runs the **largest contact center** in the world



CCAI is helping with **shorter call times** and **more satisfied customers**



~ 85% containment



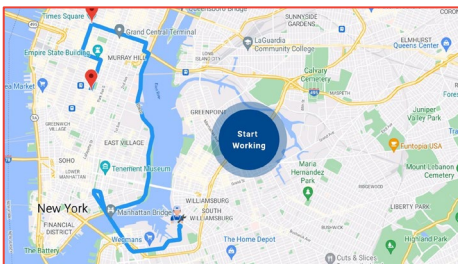
~ 30% reduction of time agents took on call



100%+ increase in number of live chats agents can handle

“Verizon's commitment to innovation extends to all aspects of the customer experience. These customer service enhancements, powered by the Verizon collaboration with Google Cloud's CCAI, offer a faster and more personalized digital experience for our customers, while empowering our customer support agents to provide a higher level of service.”

Shankar Arumugavelu
Global CIO and SVP, Verizon



This is a Cisco ASR 1000 -X router.
In order to connect to it, here is how to:

- 1. Enable console access:** Ensure the router's console port is enabled, and the required cables are connected.
- 2. Connect serial cable:** Connect a serial cable from the router's console port to a serial port on your computer.
- 3. Configure serial port settings:** Configure the serial port settings on your computer to



How can I help you? →



350 Secret Data
Center,
New York, NY 12345

Network performance issue at cell site

System has reported issue in
throughput...

[more](#)

Upload router image	Done
Get diagnostic instructions	Done
Connect to the console	Try
Verify the network status	Try
Test and replace the SFP	Try
Update the ticket status	Save

Network Incident Response

Agents for field operations



Technician Assist

Multimodal interactions for troubleshooting.

02

Training Assist

SME knowledge base with prescriptive instructions.

03

Route Planning

Integrated maps and direction for site and warehouses.

04

Expert Workforce Scheduling

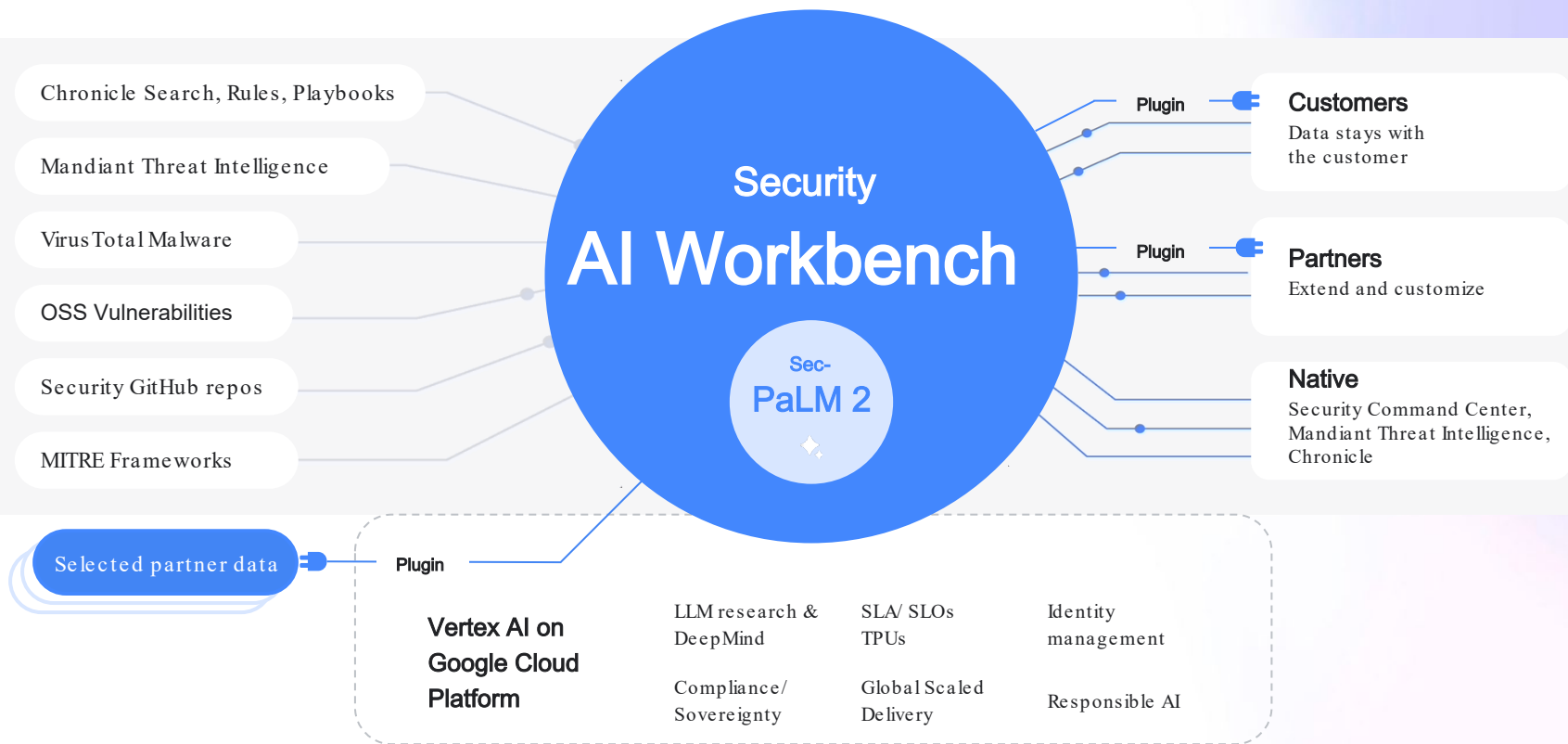
Optimize [un]trained talent and task pairing.

05

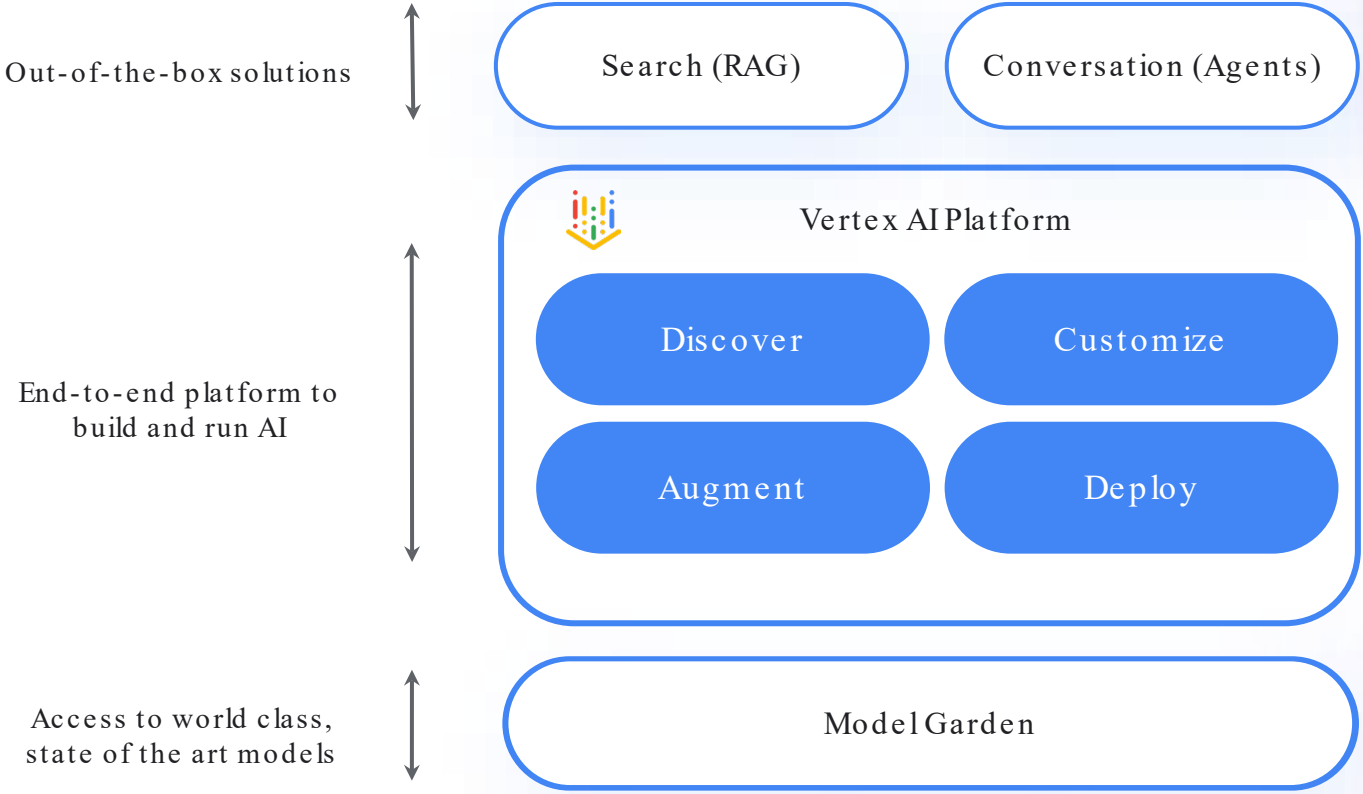
Inventory and Incident Optimization

Accurate inventory management and ticket annotation.

Securing your network with Google AI

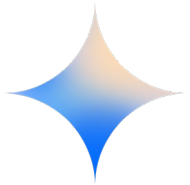


Build transformative enterprise-ready AI experiences



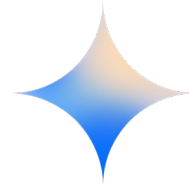
A collection of logos and indicators for AI models and services, including the Gemini logo, Gemma logo, and a "+13 0" indicator.

Google's approach is different from others



We Build IP

A deep history of
research and
innovation



We Respect your IP

Leading with ethical
AI, grounding in
truth, and protecting
customer privacy



Platform Partnership

An AI platform that
supports open
standards and multi-
cloud

What we have learned about AI success

Platforms are more future-proof



AI is evolving rapidly. Choosing a platform allows for changes in model choice over time.

Ensuring security, compliance & privacy



Protecting customer and business data requires end-to-end excellence

Reducing cost & complexity



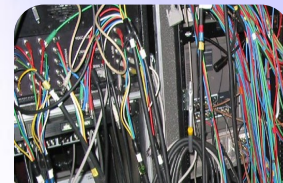
Reduce use of products that weren't designed to work together, driving costs and risks

Driving innovation and efficiency



Prioritise usability and governance, with a focus on new value creation, not only cost savings.

Unlocking disparate data sources

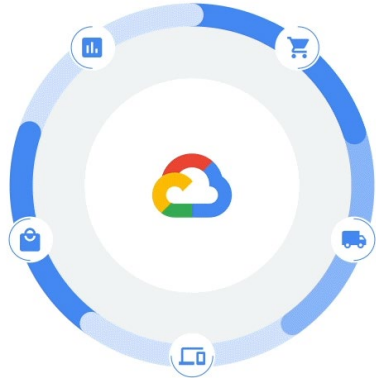


Data is often distributed across and locked within legacy systems

A Growing Ecosystem of Customers and Partners



Building your AI Strategy and Long-term Partnership



Partnering with the Cloud AI provider that shares your core competencies

Consumers

Security

Retail Devices & Services

Network / Telco Platform

Thank you!

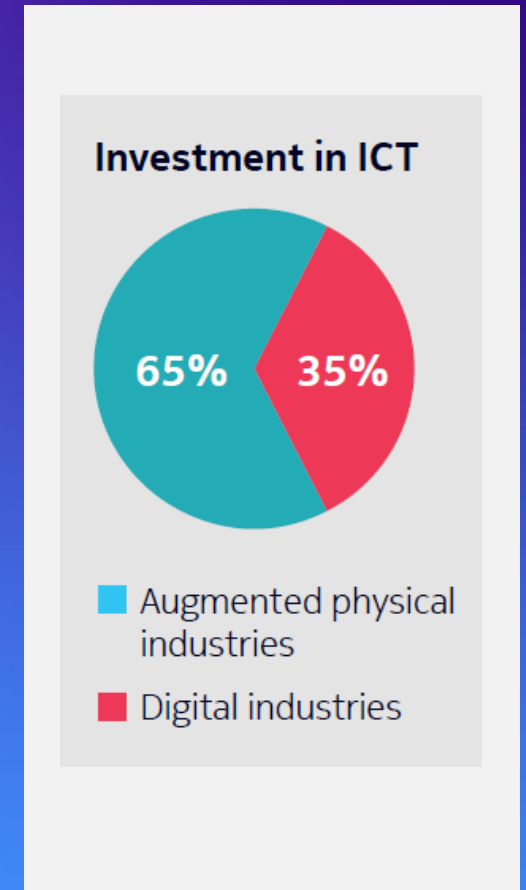
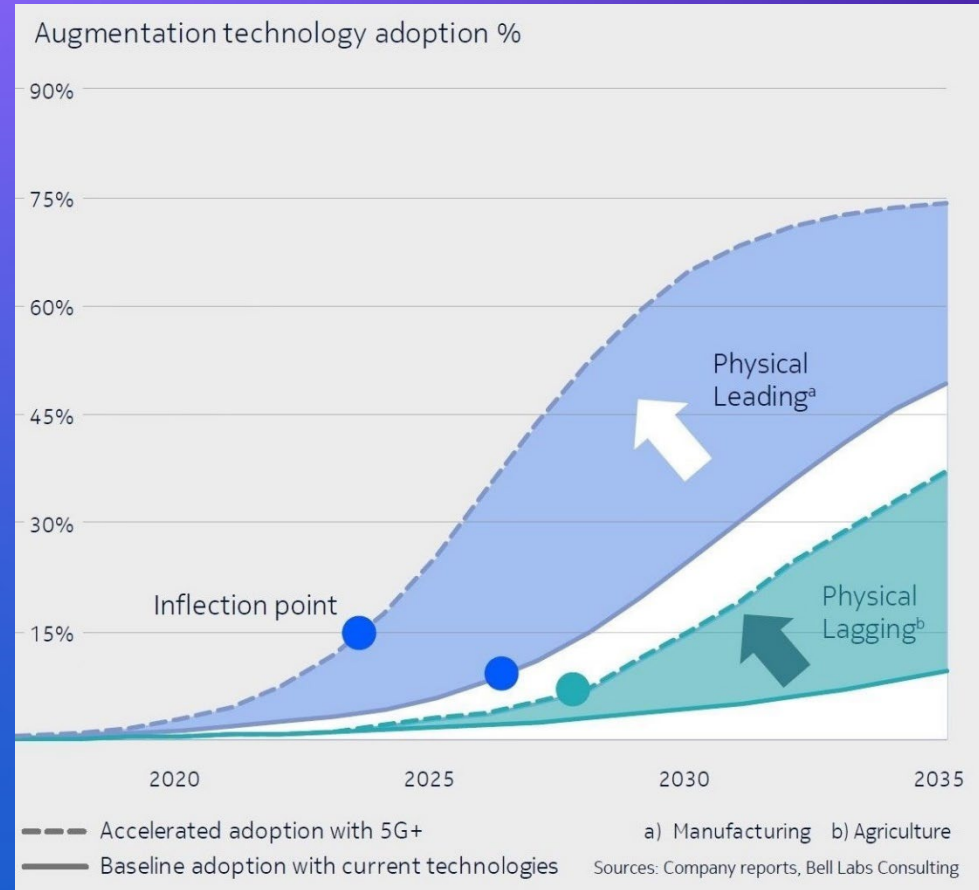
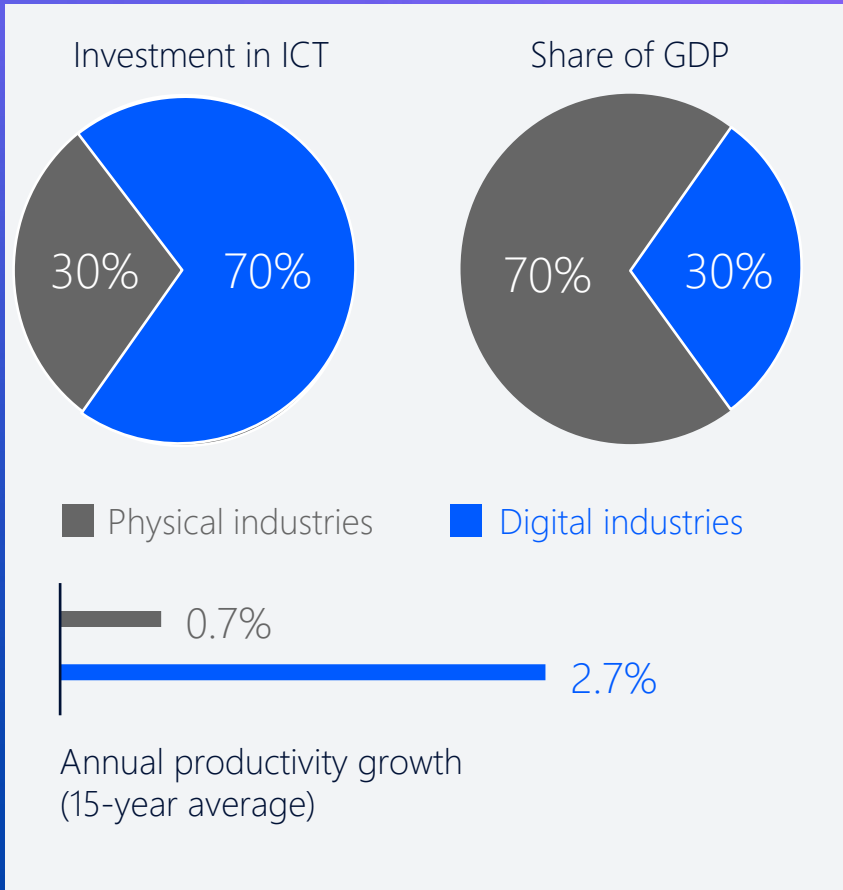


Accelerating OT Digitisation

Andrew Cope, 1st May 2024



The “Big Inversion” was always going to take time...



We already see Industry and enterprise metaverse is not a fad

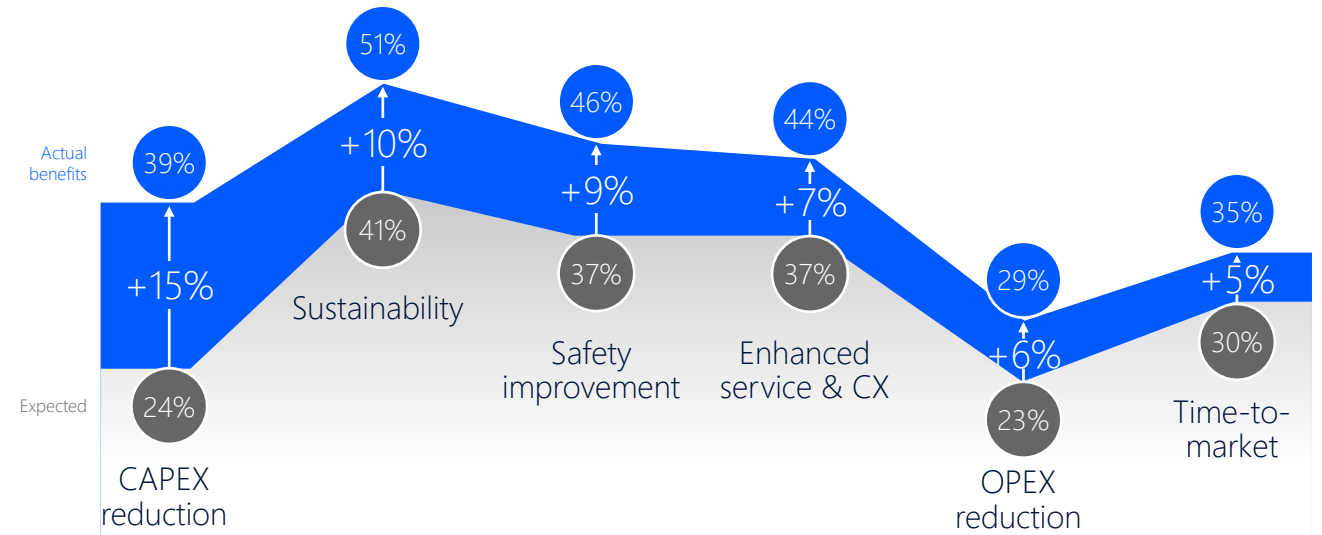
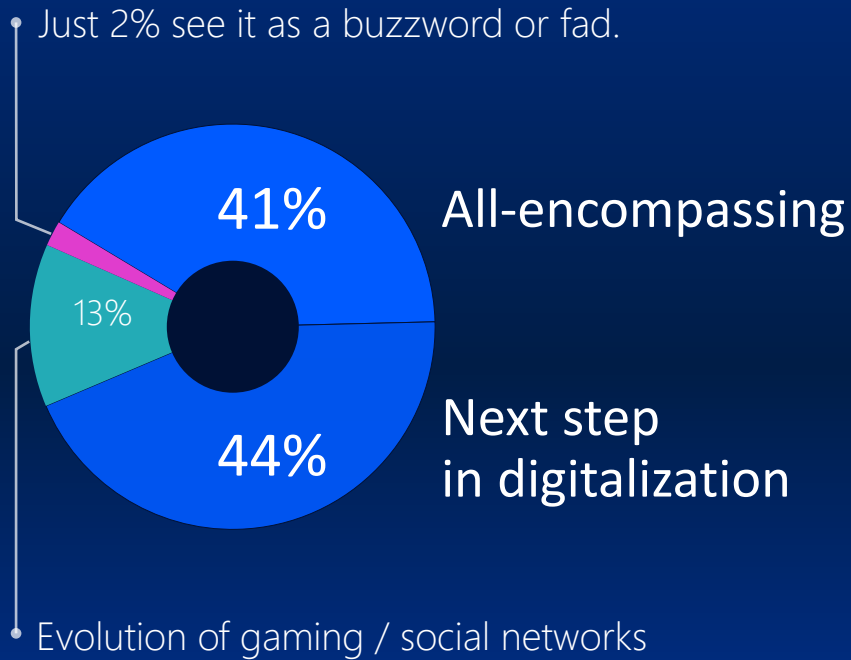


Industrial and enterprise metaverse use cases



It's happening now

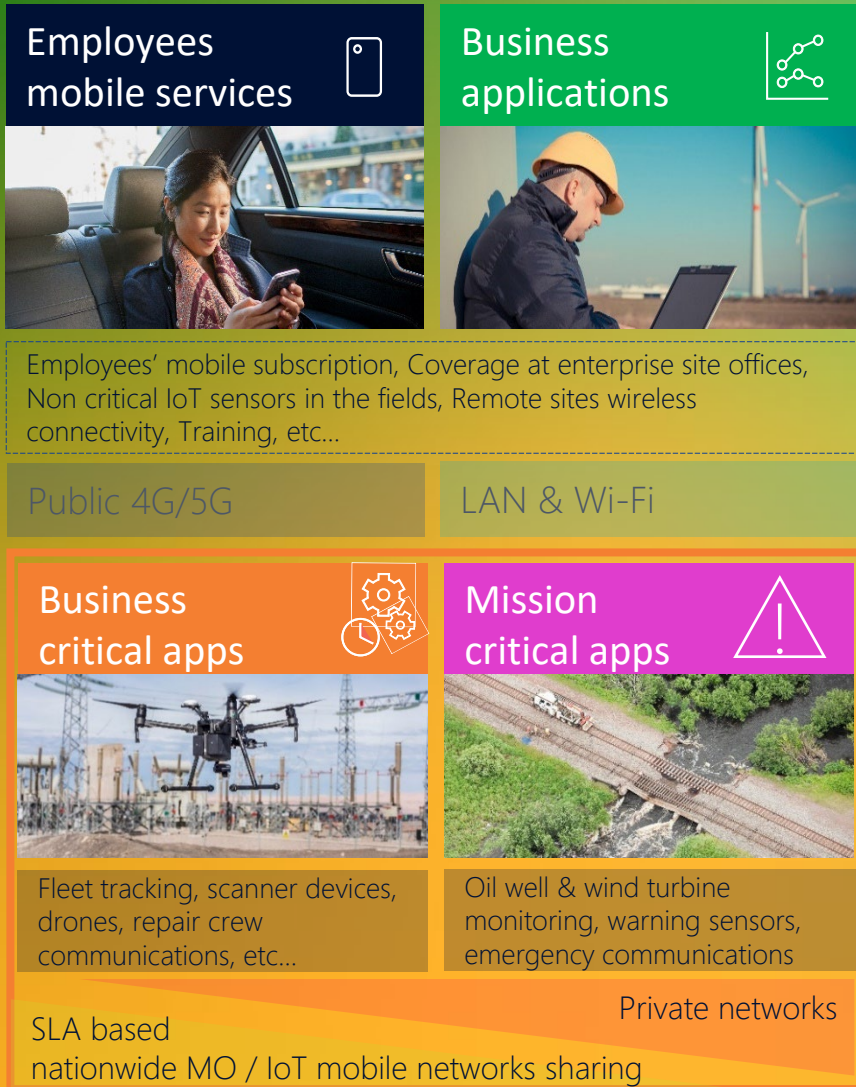
... with better-than-expected results



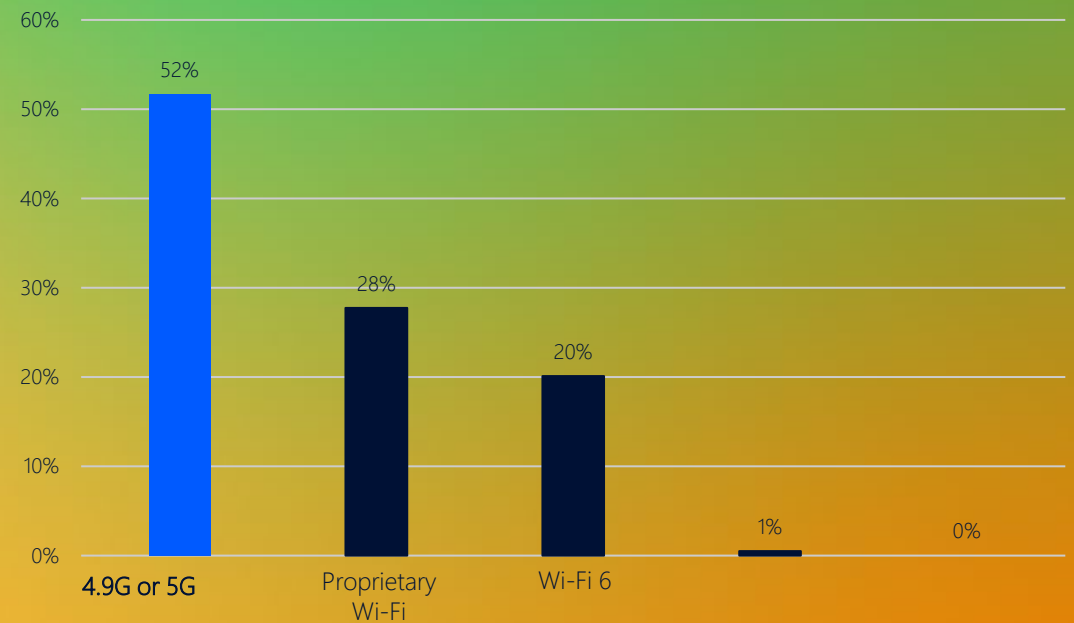
It typically starts with 1 use case...



With multiple connectivity options



And while LTE/5G is the preferred choice for business/mission critical connectivity*

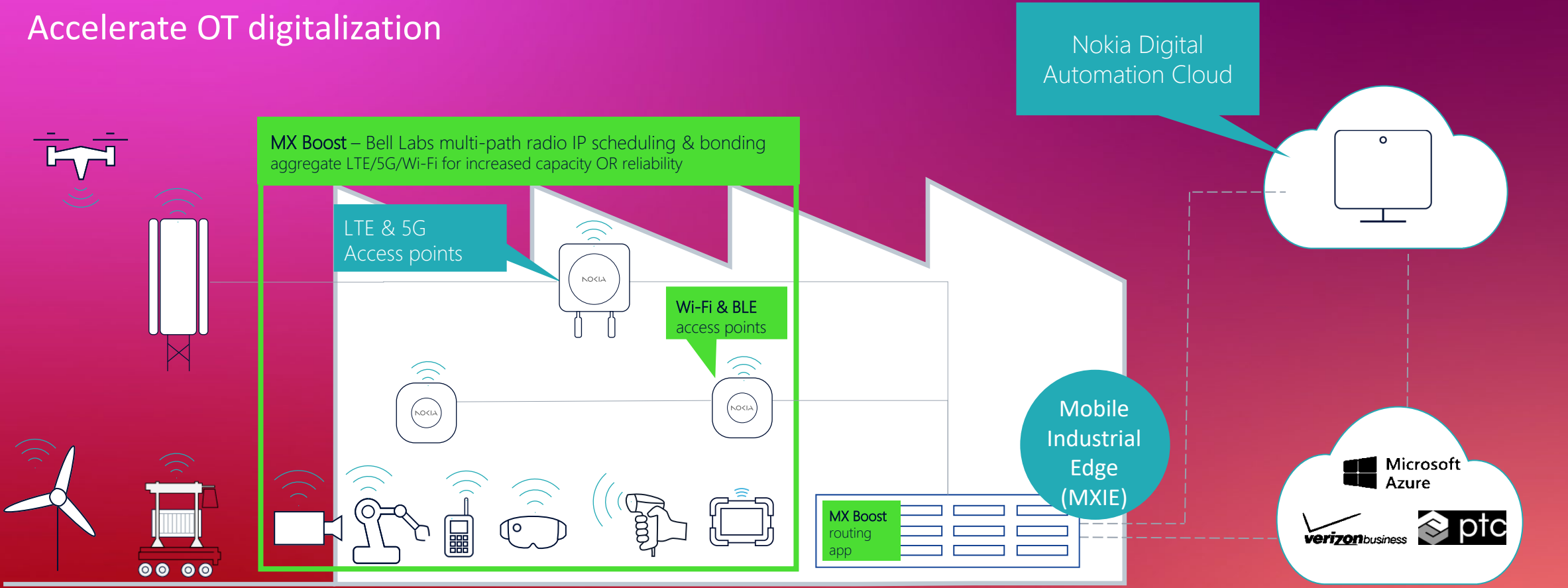


It's still only half the market.

* 2021 Nokia-ABI research, 600+ manufacturers survey

Nokia Digital Automation Cloud

Accelerate OT digitalization



Reliable & deterministic wireless connectivity for digitalisation of OT assets, workers, and autonomous/AI/ML actions.


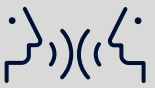











MX Industrial Edge, LTE/5G NSA/SA, Wi-Fi controller & Industrial Apps

3P apps, Webscale & Industrial Connectors, API

Rich set of digitalization enablers

Nokia Industrial Application Catalogue

● Nokia ● Partner

Wireless connectivity  Nokia Digital Automation Cloud (DAC) Nokia DAC Wi-Fi Nokia CBRS domain proxy Nokia MX Boost	Comms  Nokia Team Comms Nokia Group Communications*	O&M  Nokia Network Digital Twin Nokia Industrial device management	Worker Safety  Portalify Smartview Secapp
Video analytics  Eviden Quality Inspector	Tracking & positioning  Nokia High Accuracy Indoor Positioning (HAIP) Nordic ID Svarmony-aryve HERE HD GNSS	Robotics & mechatronics  Nokia Drone Networks	<p>Pre-configured industrial applications accessed from the catalogue</p> <hr/> <p>Automated provisioning and life cycle management for apps on MXIE edge</p> <hr/> <p>Includes Nokia and 3rd party applications – offering growing</p> <hr/> <p>Applications brewing within many categories such as Security, IIoT and digital twin and Robotics & mechatronics</p> <p>Nokia Industrial Application Catalogue</p>
Connected worker & XR  Taqtile Manifest Nokia MX Workmate	Enterprise security  Zscaler Private Access Palo Alto NGFW	Industrial connectivity  Siemens MindConnect Software Agent	
IIoT & digital twin  Nokia Integrated Operations Centre (IOC) Litmus Edge Crosser Node	Video enabler  Smart Mobile Labs EVO	Cloud connectivity  Azure ARC Azure IoT Edge	

Nokia Focus Segments

Manufacturing



Ports/Logistics



Mining, oil, and gas



Utilities



Rail/Transportation



Public Safety/First Response



Collaborating with entire ecosystem to drive Industry 4.0



Service provider partners

Expertise in building & operating mobile network or public clouds, spectrum partners



Industrial bodies and ecosystem partners

Kick starting the industry with more LTE and future 5G industrial connected things



System integrators & Consulting

Deeper industry expertise and specialised channel to market
Broadening the sphere of influence



ANZ's Digital Backbone

BHP

tpg TELECOM

VOCUS

OPTUS

CHORUS



Spark^{nz}

FIELD
SOLUTIONS



one.nz

YANCOAL
克煤澳大利亚有限公司

SA Power Networks
Empowering South Australia

nbnTM

Public Transport Authority



VICTORIA
State Government
Department of Transport and Planning

Rio Tinto

NOKIA

NOKIA



Communications Alliance

CommsDay Summit May 2024

Stronger Co-Regulation



Amend the *Telecommunications Act 1997* (& other legislation/regulation as necessary) to provide:

- clearer definition of “CSP”;
- improved requirement for all relevant CSPs to join the TIO scheme;
- process for all CSPs to be required to be (publicly) registered by the ACMA,
- all Consumer-related Industry Codes be deemed as directly enforceable i.e. removing ‘direction to comply’ step.

ACMA, CA & TIO to agree an annual works program – early engagement on regulatory instruments due for review.

Industry & ACMA to commit resources to development or review/revision (where possible) within a defined agreed timeframe.

Possible Tel. Act Amendments



Direct enforceability of industry consumer codes

The below is a proposed amendment to Part 4, Division 6 of the Telecommunications Act 1997 (Act). The proposed amendment follows the language of section 121 and 122 of the Act.

It seeks to enable the ACMA to proceed to immediate enforcement action for contraventions of a registered industry code that “deal[s] wholly or mainly with one or more matters relating to the relationship between carriage service providers and their retail customers”¹, without removing the option of issuing formal warnings where those are deemed appropriate. The proposed amendments are confined to ‘consumer codes’.

The reason being that technical and operational codes require substantial technical expertise, contraventions are more likely to result from system failures and externalities (including natural hazards) and are less likely to cause severe consumer harm. Accordingly, a more graduated enforcement action is appropriate.

The proposed amendments are modelled on Subdivision C—Compliance with misinformation codes of the Communications Legislation Amendment (Combatting Misinformation and Disinformation) Bill 2023 (which sought to amend the Broadcasting Services Act 1992).

Regard has been had to the ACMA Telecommunications (Infringement Notices) Guidelines 2022 and information provided on the ACMA website.

It appears that, subsequent or in parallel to an amendment of the Act, the Telecommunications (Listed Infringement Notice Provisions) Declaration 2022 may require amendment to capture the proposed amendments to the Act.

References to compliance with industry codes being voluntary ought to be removed where they occur in the Act (e.g. Simplified Outline of Part 6 and Part 33).

After Part 4, Division 6, sections 122 of the Telecommunications Act 1997.....

TCP Code Revision



- Focus on enforceability
- Expanded protection for vulnerable customer
- Enhanced, enforceable rules to protect customers experiencing Domestic & Family Violence
- Stronger requirements for responsible selling
- Customer Service – ‘Live Channels’ mandatory
- Organisational culture & compliance

Financial Hardship Standard



- Good intent
- Internal inconsistencies re contact channels
- Authentication problems & friction with ACMA's authentication determination
- Difficulties re pre-paid services
- Duration requirements
- Three month 'holds'.

CA Scam Code is working



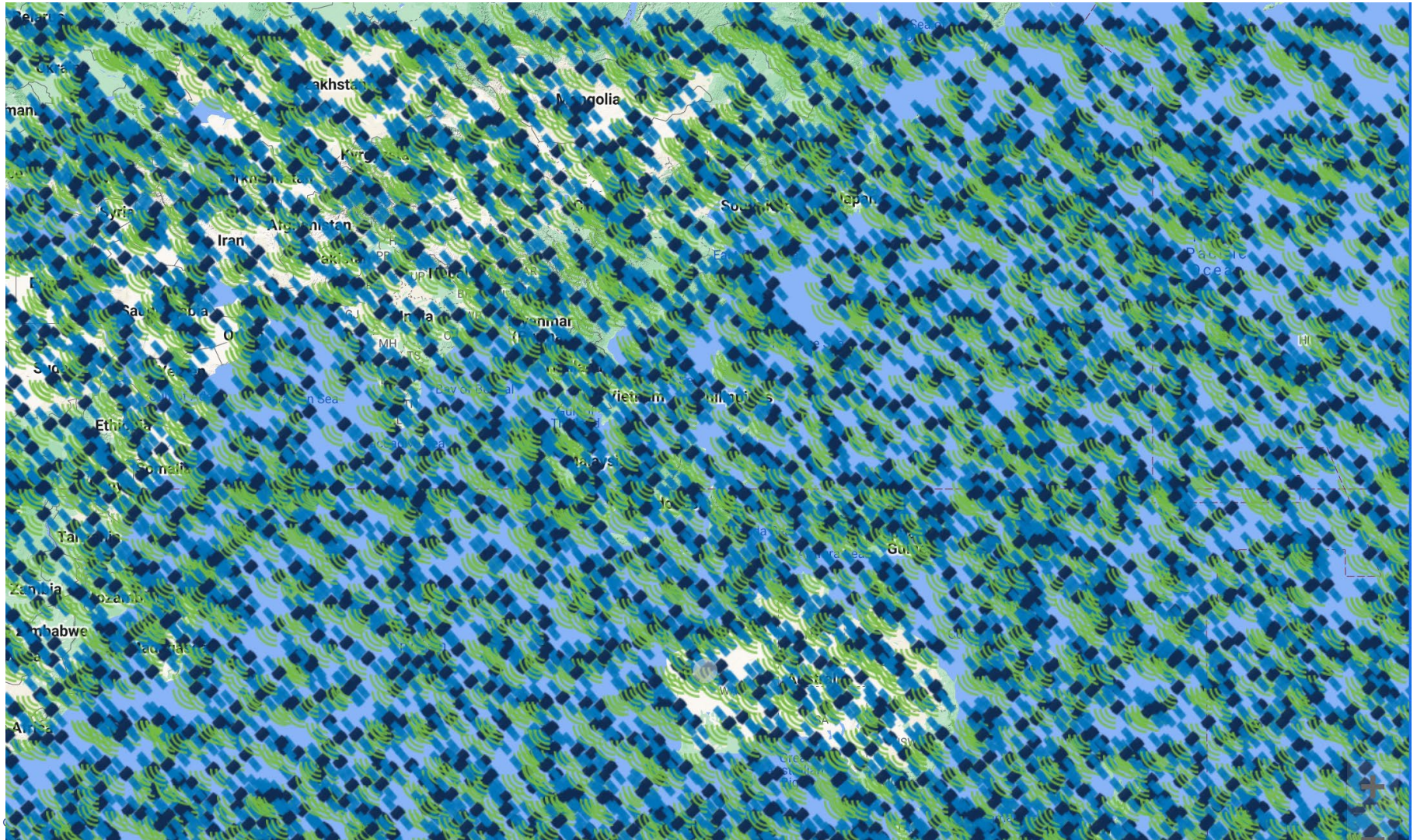
Since the development by industry and subsequent registration of the Code by the ACMA in December 2020:

- More than **2 billion calls** identified as scam calls have been reported as **blocked**;
- October – December 2023: more than 246 million scam calls blocked.

Inclusion of measures for scam short messages in July 2022. Since then:

- More than **443 million scam SMS** have been reported as **blocked**;
- October – December 2023, more than 106 million scam SMS blocked.

Satellites for Connectivity



GLOBAL TELCO CONSUMER SURVEY 2024

Trends and Implications for Australian Telcos

1 May 2024 - Sydney

AS A LEADER IN STRATEGY CONSULTING OLIVER WYMAN SERVES THE LARGEST TELCO OPERATORS GLOBALLY

\$3.1 BN+

revenue annually

6,800+

professionals worldwide

75%

top global Telco operators served by Communications, Media and Technology practice

70+

offices in 31 countries. Sydney, Melbourne, Canberra and Perth in Australia

THE OLIVER WYMAN ANNUAL CONSUMER SURVEY PROVIDES INSIGHTS INTO CHANGES IN CONSUMER PREFERENCES ACROSS THE GLOBE

Global telco consumer survey:

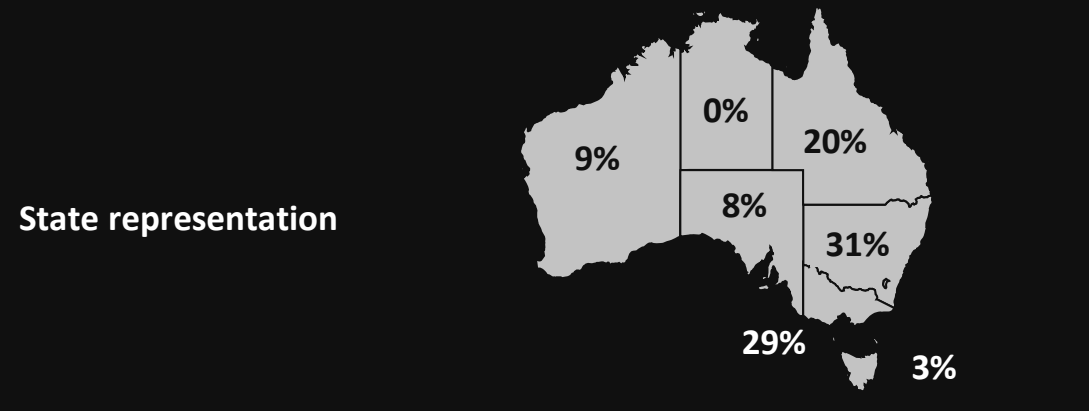
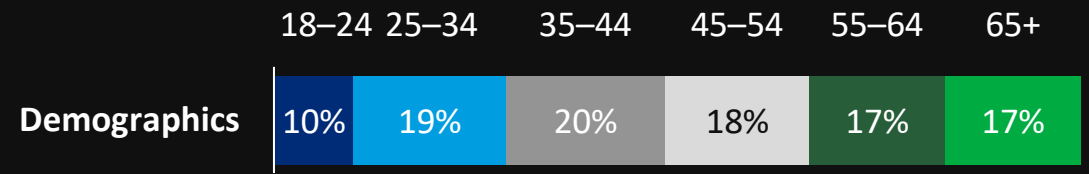
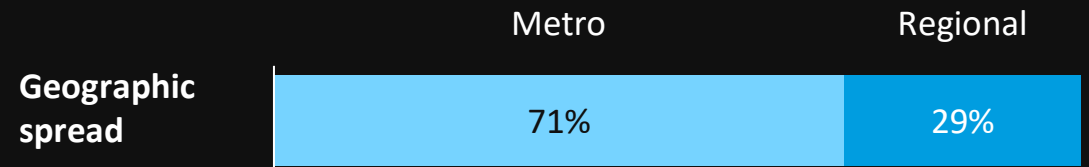
10 countries in total, data available for 6

Total global sample >10,00 respondents

of respondents

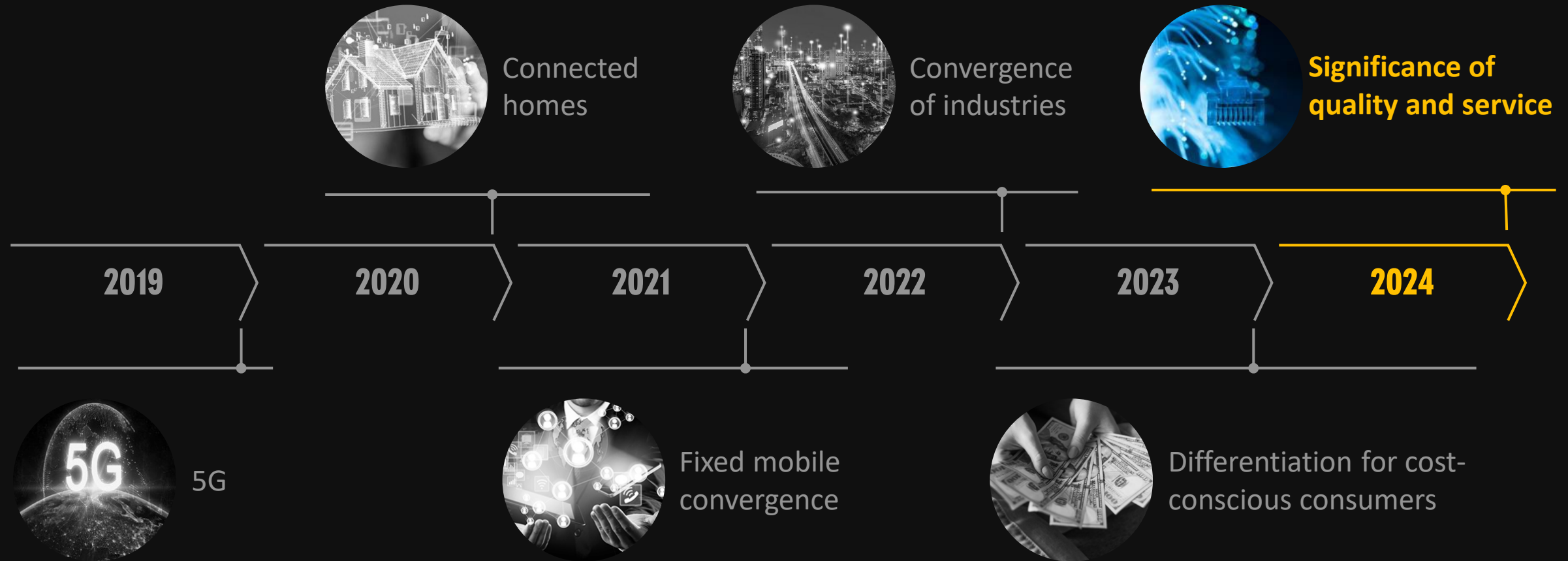


Breakdown of the Australian respondents



THE SURVEY PROVIDES CURRENT DATA ON KEY MARKET TRENDS

Big themes covered in global telco surveys in recent years



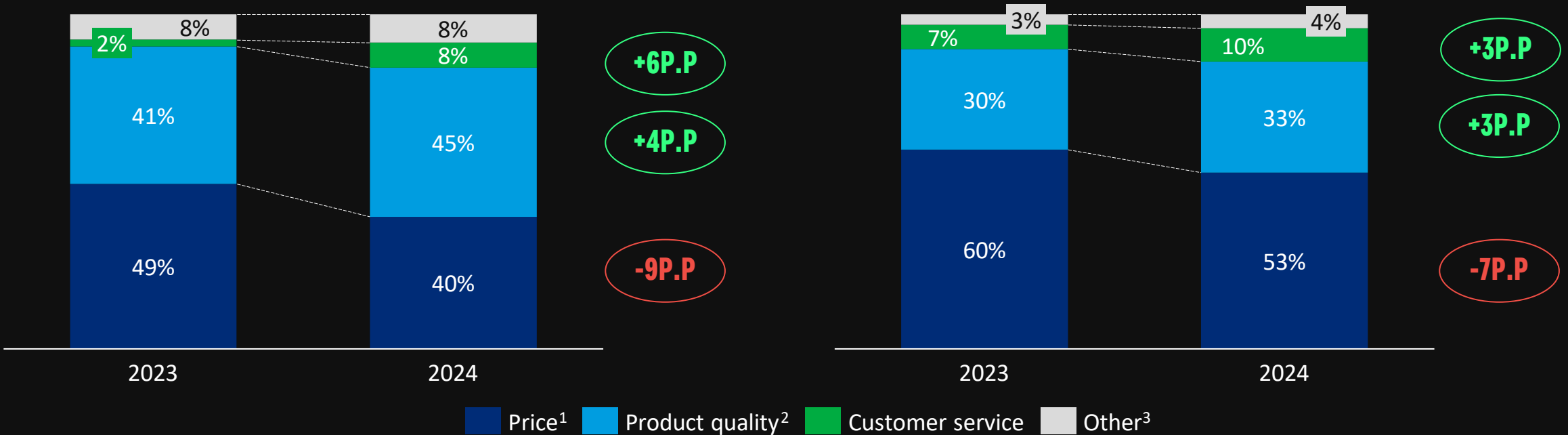
PRODUCT QUALITY AND CUSTOMER SERVICE ARE BECOMING INCREASINGLY IMPORTANT FOR CONSUMERS



Consumers' top reasons to switch fixed broadband providers | % respondents








Consumers' top reasons to switch mobile providers | % respondents



1. [Broadband] includes Bill/Price, Consistent pricing over contract term ; 1. [Mobile] includes Bill cost, Discount for lock in contracts, Mobile phone discounts; 2. [Broadband] includes Upload speeds, Download speeds, new technology available, Availability of unlimited data, Availability of advanced home WIFI equipment, Bundling with another provider; 2. [Mobile] includes Signal coverage, Service reliability, Network speeds, Regional coverage; 3.[Broadband] includes Flexibility In contract/ cancellation terms, Moving to a new address, Other value added service with another provider (i.e., advanced tech support); 3. [Mobile] includes Provider brand
 Sample size: Fixed switching 2023: 292, 2024: 453; Mobile switching 2023: 289, 2024: 410
 Source: Oliver Wyman CMT Global Consumer Survey 2024

THERE FIVE AREAS OF VALUE OPPORTUNITIES THAT WILL SHAPE THE TELCO INDUSTRY

TODAY'S TOPICS	OPPORTUNITY AREA	KEY FACTS
 BROADBAND	Product quality is becoming a more important driver for customer lifetime value e.g. higher speed tiers	+18 p.p. in willingness to pay for speed upgrades vs. last year
 MOBILE	Network quality e.g. coverage, reliability and speeds is a key driver of satisfaction and loyalty , particularly for younger generations	+25 p.p. propensity to churn if network not perceived as the best
 CONVERGENCE	Unlike older generations, Gen Z and Millennials are more open to cross industry bundling with their Telcos	Digital natives are 2 – 4x more likely to bundle than older generations
 TRUST AND DATA	Consumers are willing to pay their Telcos for security features e.g. network protection, endpoint security	38% - 50% of consumers are willing to pay for security features
 IMMERSIVE TECH & GENAI	Telcos enjoy more trust from consumers than Big Tech, allowing them to implement GenAI technology into their services	58% of Australians are familiar with GenAI and 37% use it at work or in their personal lives

Sample size: Australia 2,017; UK 2,000; Germany 2,021; Spain 1,000; Italy 1,001; France 1,000
 Source: Oliver Wyman CMT Global Consumer Survey 2024

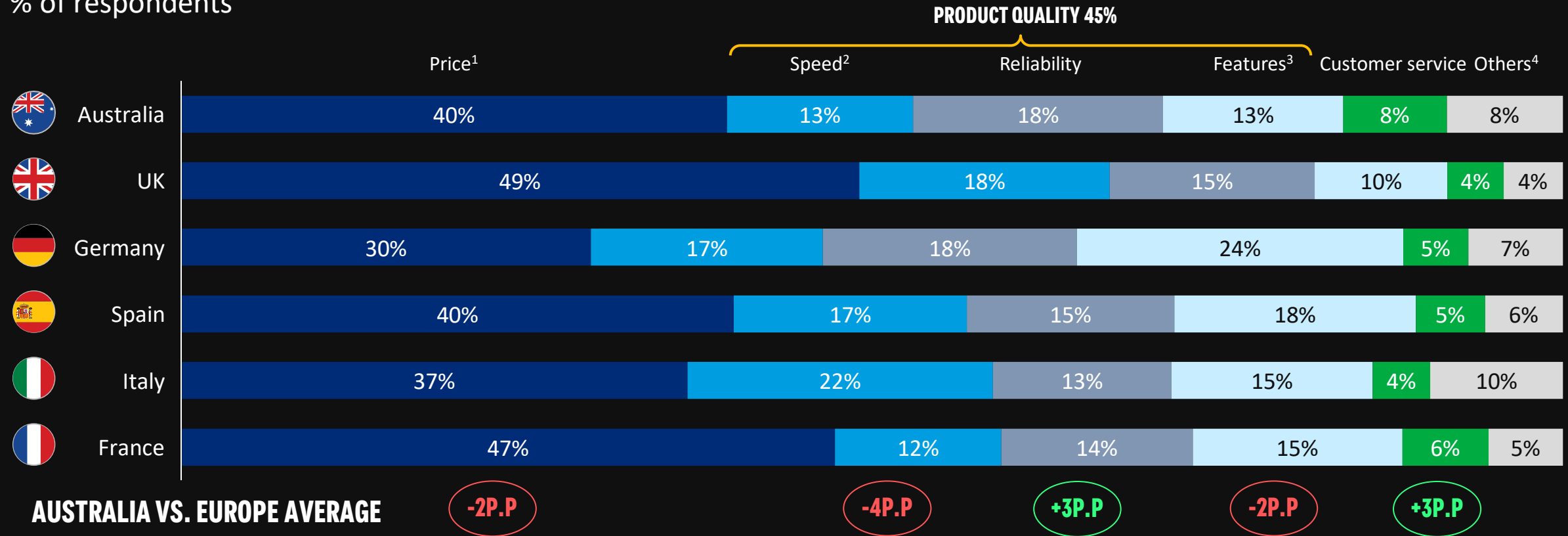
1.

FIXED BROADBAND



RELIABILITY AND CUSTOMER SERVICE ARE MORE IMPORTANT DRIVERS OF CHURN FOR AUSTRALIANS AS COMPARED TO EUROPEANS

Most important reason for switching, for customers seeking to switch
% of respondents

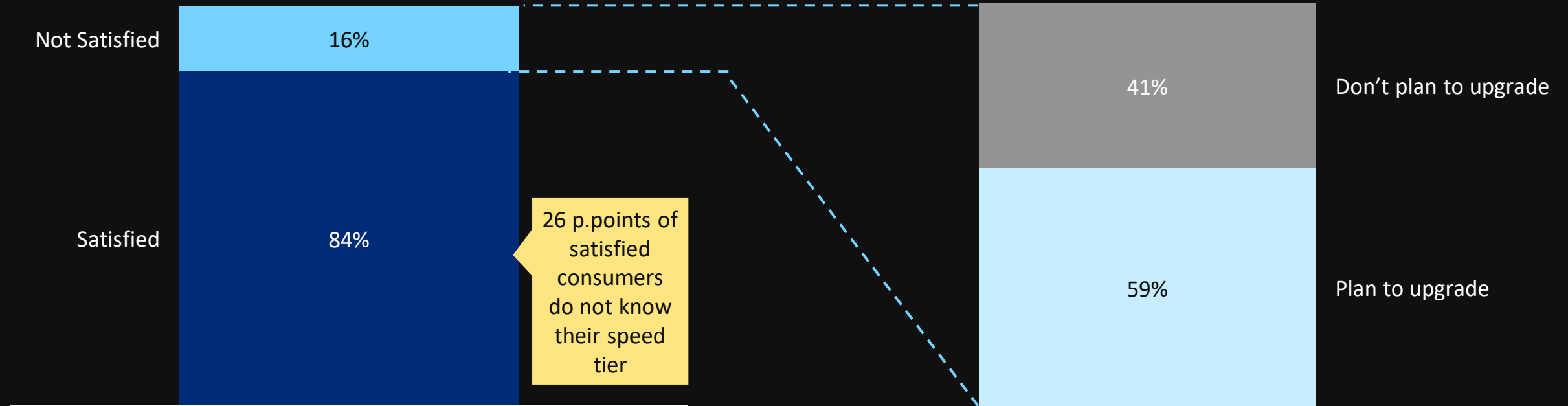


1. Includes Bill/price, Consistent pricing over contract term; 2. Includes Upload speeds, Download speeds; 3. Includes New technology available, Availability of unlimited data, Availability of advanced WiFi equipment, Bundling with another provider; 4. Flexibility in contract/ cancellation terms, Moving to a new address, Other value-added service with another provider (i.e., advanced tech support)
Switch sample size: Australia 453; UK 559; Germany 394; Spain 162; Italy 246; France 227, excludes "I don't know", "I want to try something new", and Open text responses
Source: Oliver Wyman CMT Global Consumer Survey 2024

MOST AUSTRALIANS ARE SATISFIED WITH THEIR BROADBAND SPEEDS AND THE MAJORITY OF DISSATISFIED CONSUMERS PLAN TO UPGRADE

Fixed broadband speed satisfaction
% respondents

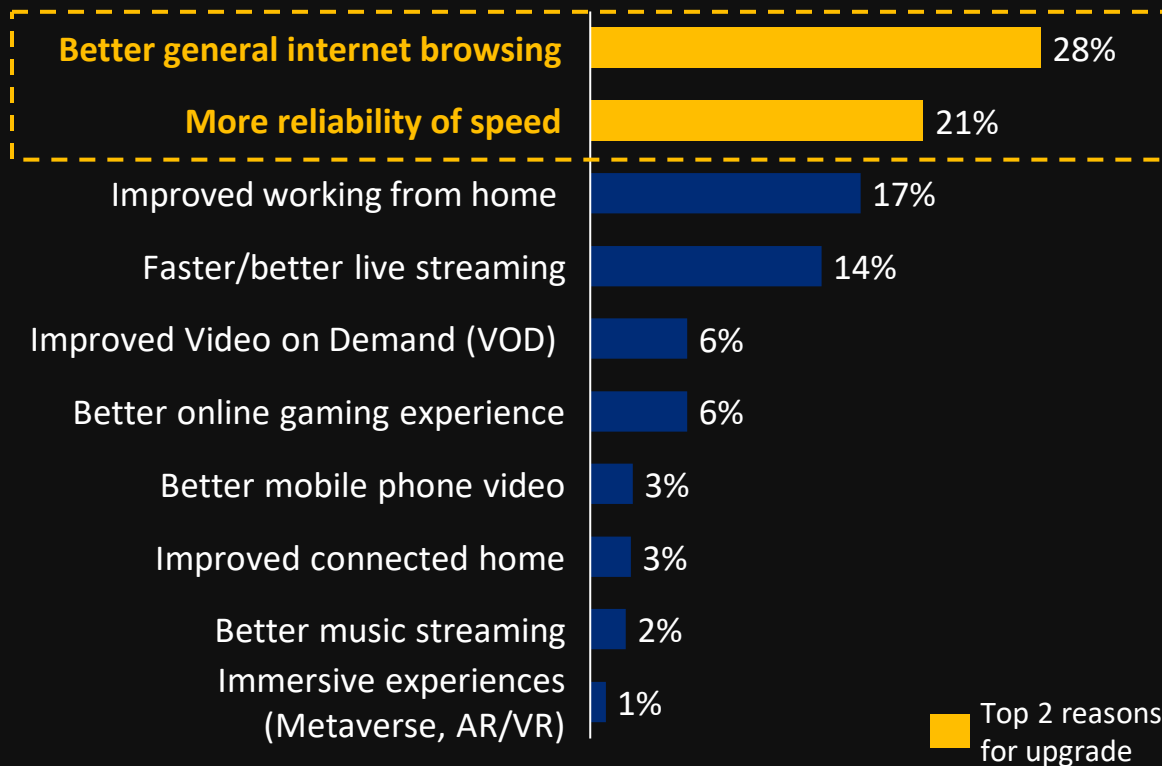
Speed upgrade intent, of those dissatisfied with current speeds
% respondents



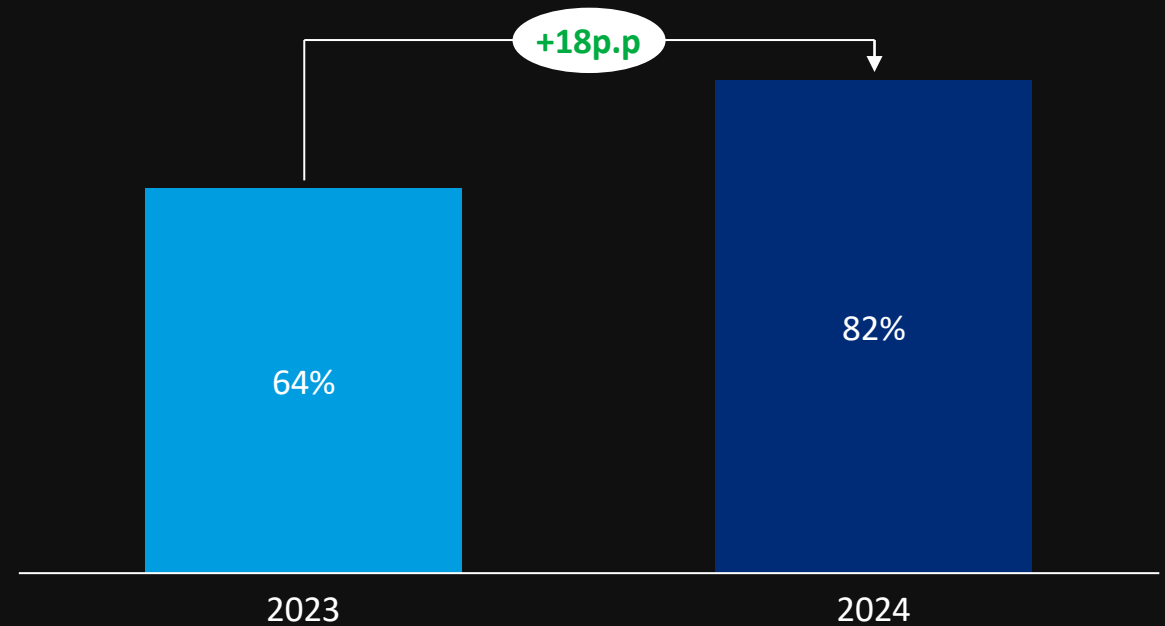
Sample size: Speed Satisfaction 1,712 (excludes "I don't know" responses)
Source: Oliver Wyman CMT Global Consumer Survey 2024

MORE CONSUMERS ARE PLANNING TO UPGRADE FOR RELIABILITY AND EXPERIENCE, WITH LARGE INCREASE IN WILLINGNESS TO PAY SINCE 2023

Top reasons behind broadband speed upgrades¹
% unique responses



Willingness to pay extra for upgrade
% of respondents planning to upgrade



1. Based on consumers' top 3 reasons for speed upgrade
Upgrade sample size(unique responses): 2024 Australia 465, Willingness to pay sample size: 2023 Australia: 367 ; 2024 Australia 164
Source: Oliver Wyman CMT Global Consumer Survey 2024

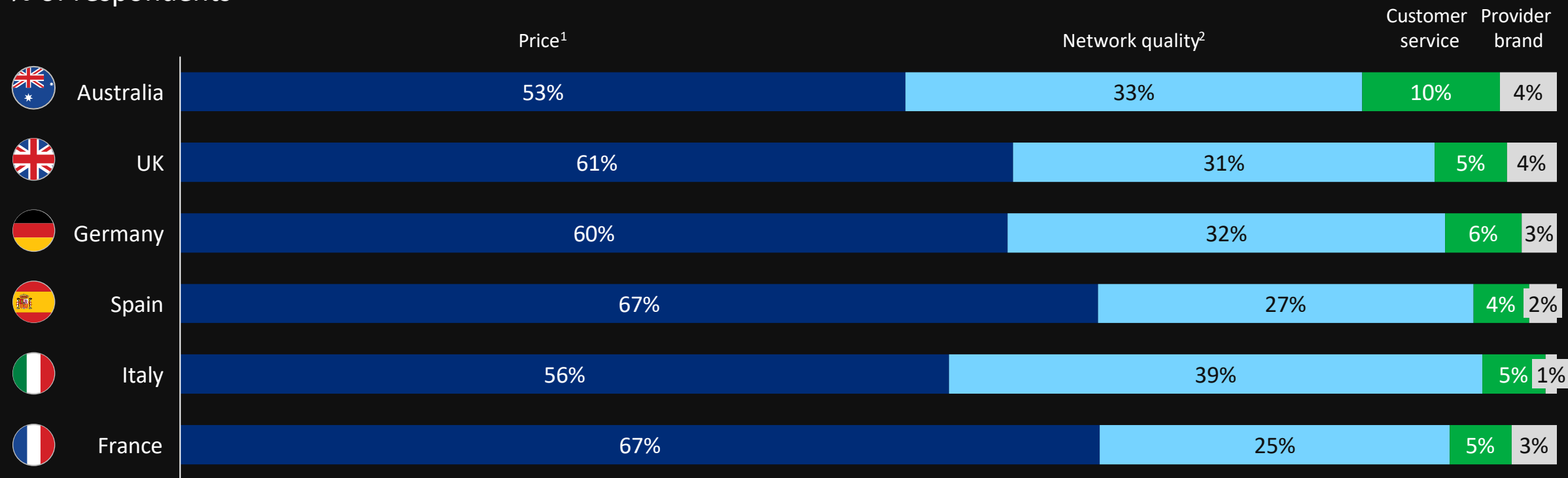
2.

MOBILE



FOR AUSTRALIANS, NETWORK QUALITY AND CUSTOMER SERVICE ARE MORE IMPORTANT DRIVERS OF CHURN WHEN COMPARED TO EUROPEANS

Most important reason for switching, for customers seeking to switch
% of respondents



AUSTRALIA VS. EUROPE AVERAGE

-8P.P

+2P.P

+5P.P

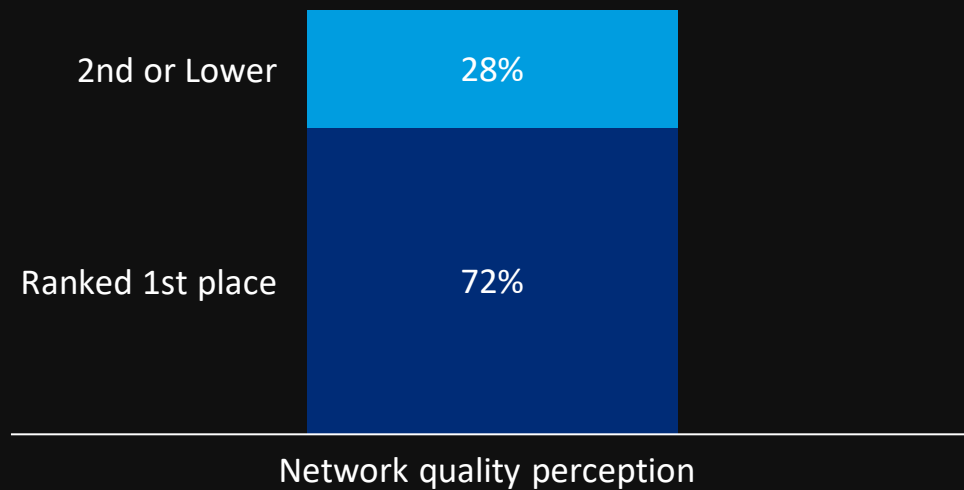
1. Includes Bill cost, mobile phone discounts, discounts for lock in contracts ; 2. Includes signal coverage, service reliability, network speeds

Switch sample size: Australia 410; UK 552; Germany 431; Spain 198; Italy 240; France 244 (only top reason for switching considered, excludes "I don't know", "I want to try something new" and open text)

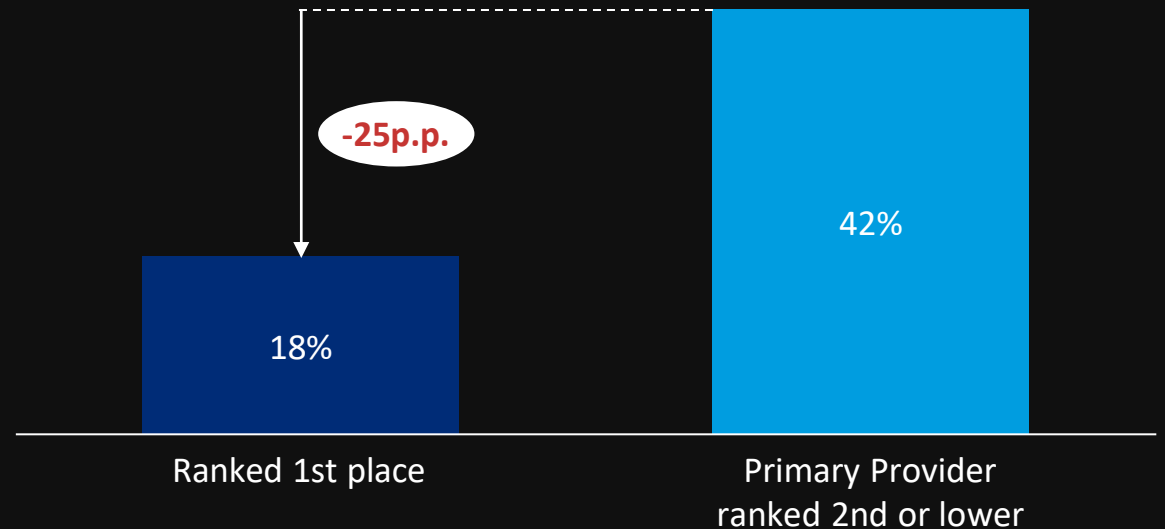
Source: Oliver Wyman CMT Global Consumer Survey 2024

PERCEIVED NETWORK QUALITY DRIVES CONSUMER LOYALTY

Consumers ranking of their primary mobile provider's network quality¹
% of respondents



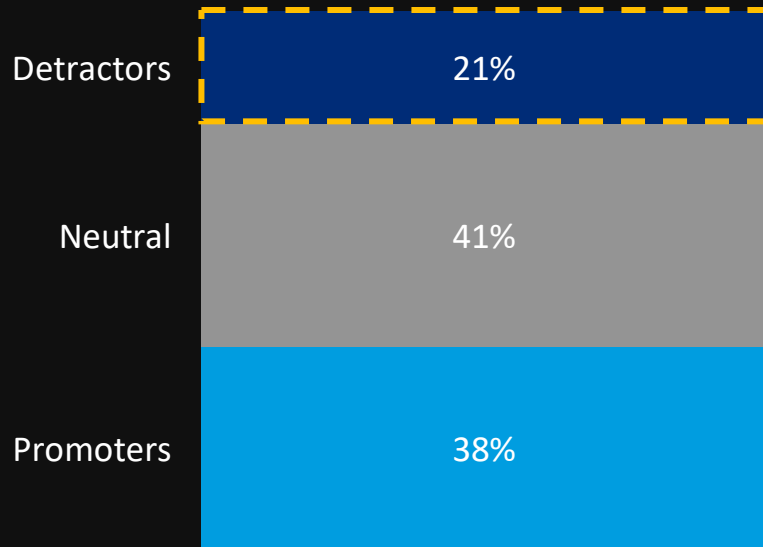
Churn propensity in next 12 months by perceived network quality of primary mobile provider
% of respondents



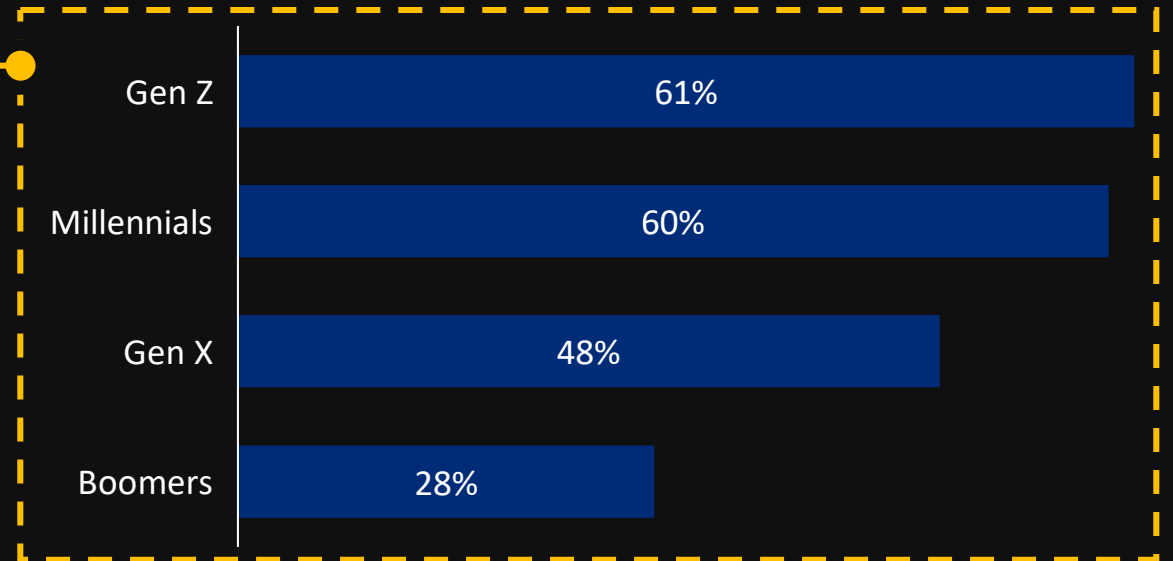
1. Network quality refers to data reliability, reliability for phone calls, network coverage, network speed, 5G upgrades
 Sample Size: Perceived network quality 1,808 (excludes blanks)
 Source: Oliver Wyman CMT Global Consumer Survey 2024

GENZ AND MILLENNIALS ARE SIGNIFICANTLY MORE LIKELY TO TAKE ACTION AND SWITCH PROVIDERS IF THEY ARE DISSATISFIED

Distribution by NPS categories¹
% of respondents



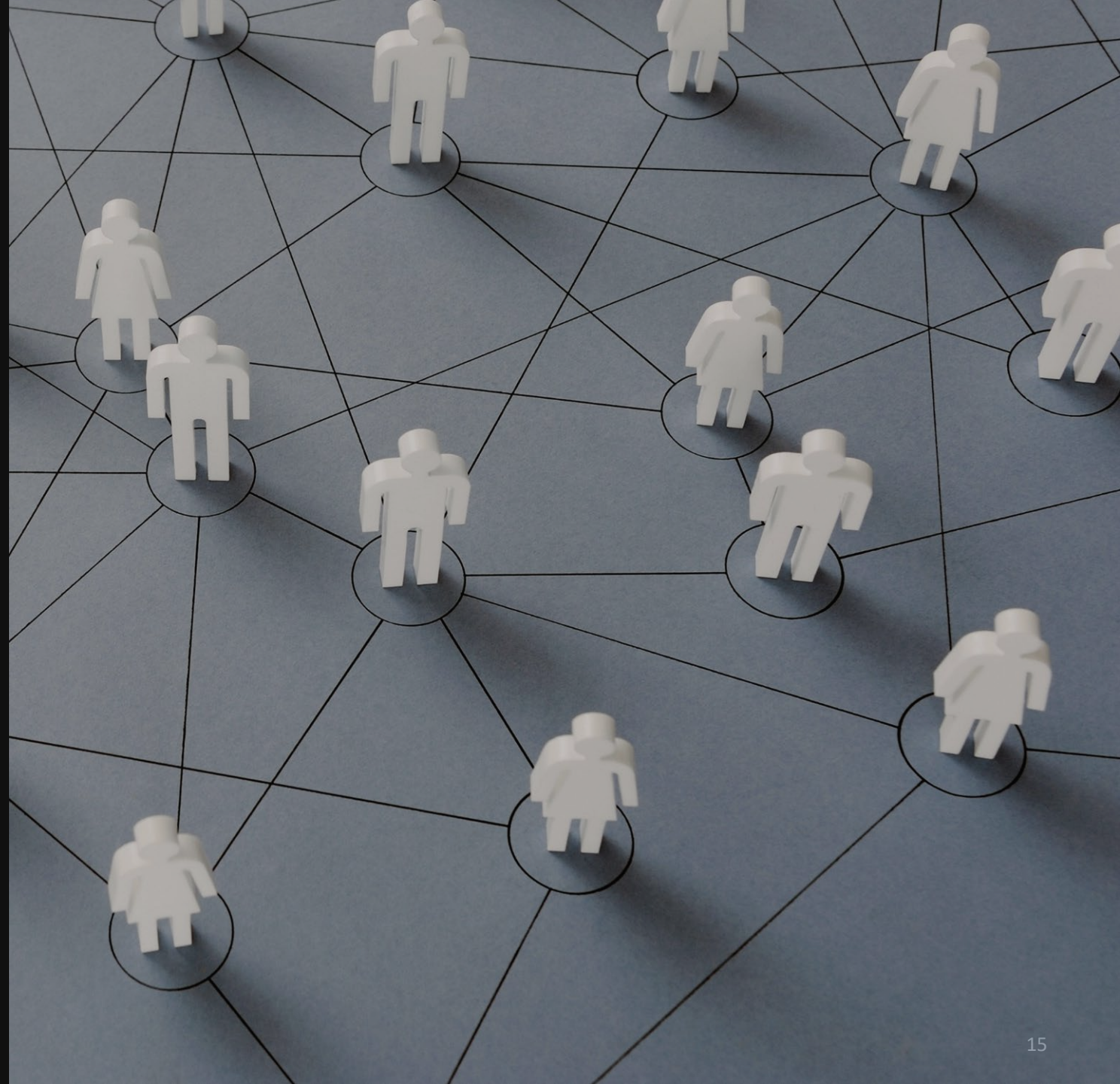
Propensity to switch mobile providers, NPS detractors¹
% of respondents by generations²



1. NPS categories defined based on how likely respondents are to recommend their provider on a scale of 1 to 10. Detractors (1-6), Neutral (7-8), Promoter (9-10); 2. GenZ 18-24 (10% of sample); Millennials 25-34, 35-44 (39% of sample) ; GenX 45-54 (18% of sample); Boomers 55-64, 65 or older (34% of sample)
Sample size: Australia 1,835
Source: Oliver Wyman CMT Global Consumer Survey 2024

3.

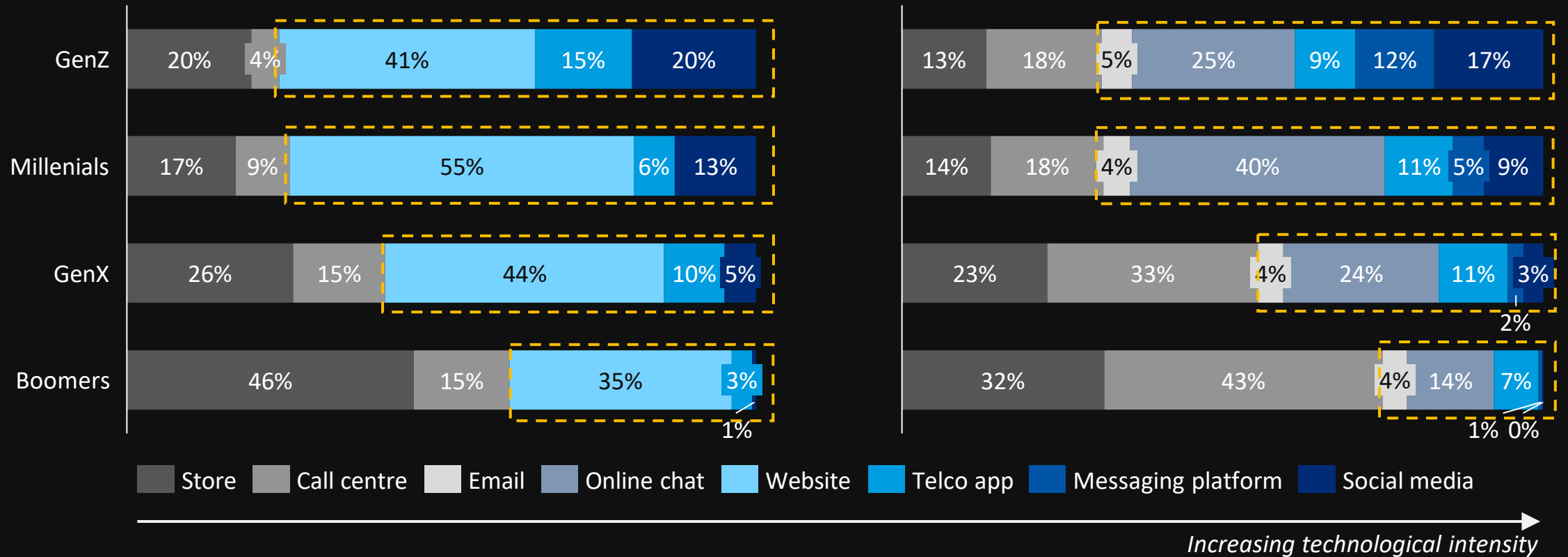
CHANNEL & CONVERGENCE



DIGITAL CHANNELS HAVE BECOME AN ESSENTIAL PART OF SALES AND SERVICE PROVISION FOR YOUNGER AUSTRALIANS

Preferred channels for purchases, by generation¹
% of respondents

Preferred channels for customer service, by generation¹
% of respondents



1. GenZ 18-24; Millennials 25-34, 35-44; GenX 45-54; Boomers 55-64, 65 or older

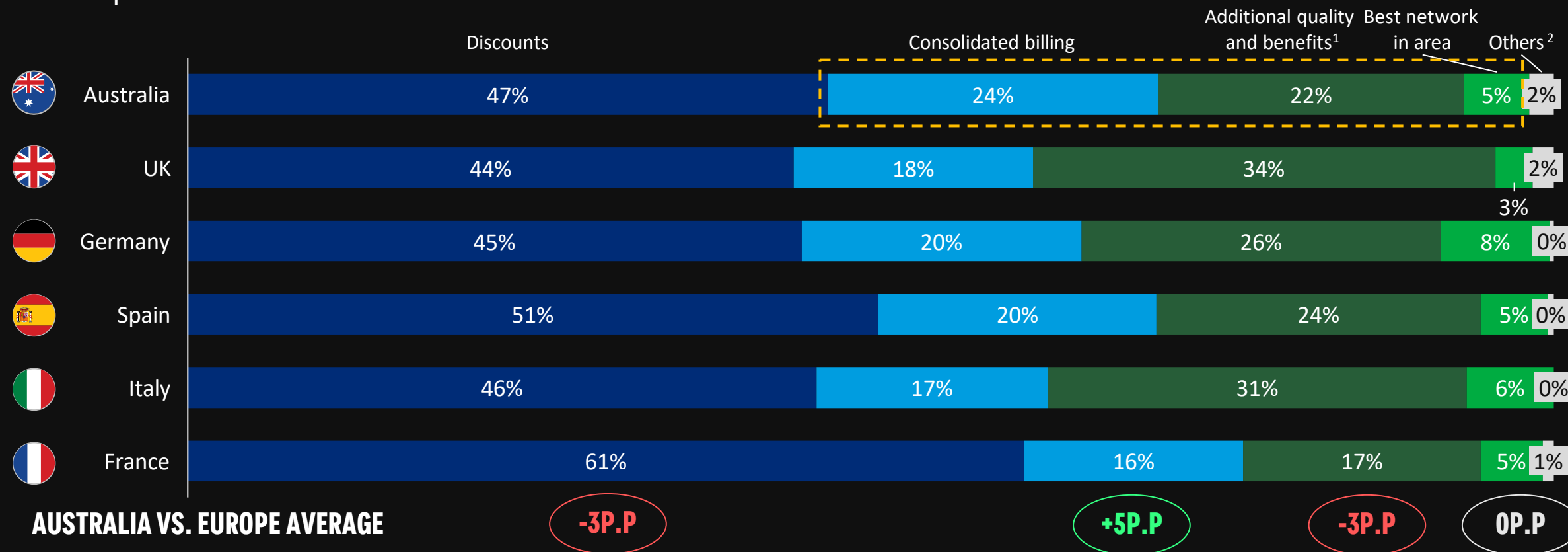
Sample size: Purchase channel 1,569; Customer service channel 1,775 (excludes customers that indicated "No preference - whatever I have access to at the time" and blank responses)

Source: Oliver Wyman CMT Global Consumer Survey 2024

THE CONVENIENCE OF A SINGLE BILL AND QUALITY ASPECTS OF SERVICE EXPLAINS OVER HALF OF THE INTENTION TO BUNDLE IN AUSTRALIA

Top reason for bundling, respondents that bundle fixed and mobile services

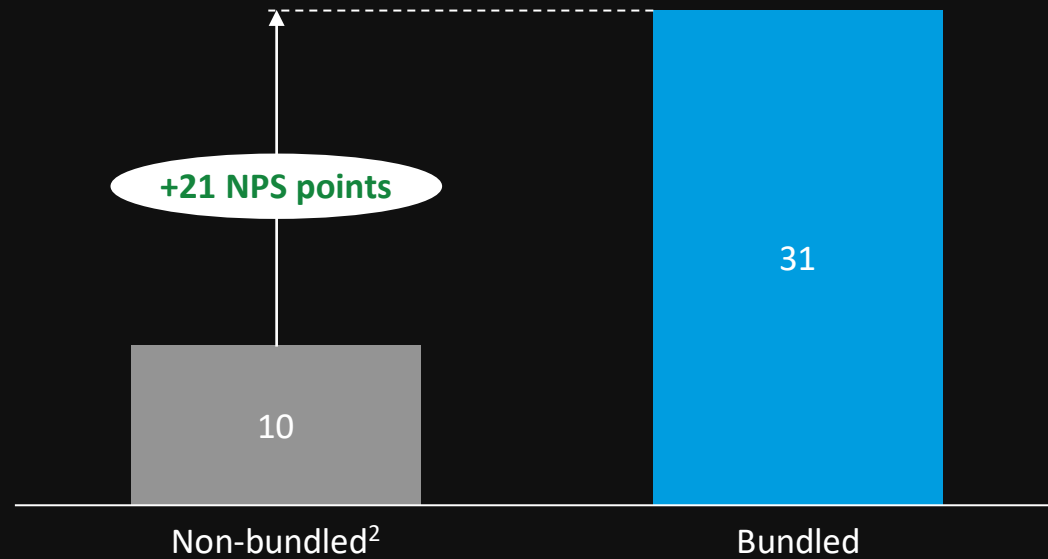
% of respondents



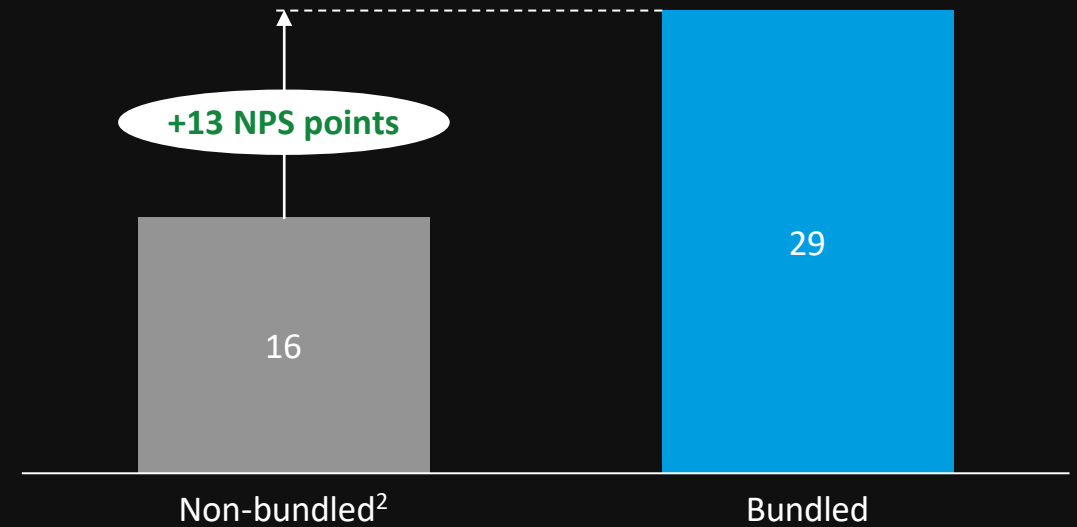
1. Includes Additional perks and benefits (e.g., double the internet speed, unlimited data, priority customer service, loyalty programs, etc.); 2. Includes Open text responses
 Bundling sample size: Australia: 334, France: 374, Germany: 376, Italy: 189, Spain: 712, UK: 257
 Source: Oliver Wyman CMT Global Consumer Survey 2024

BUNDLED CUSTOMERS HAVE A SIGNIFICANTLY HIGHER NET SATISFACTION THAN NON-BUNDLED CUSTOMERS ACROSS BOTH FIXED AND MOBILE

Net promoter score for fixed broadband provider¹
NPS score



Net promoter score for mobile operator¹
NPS score



■ Non-bundled ■ Bundled

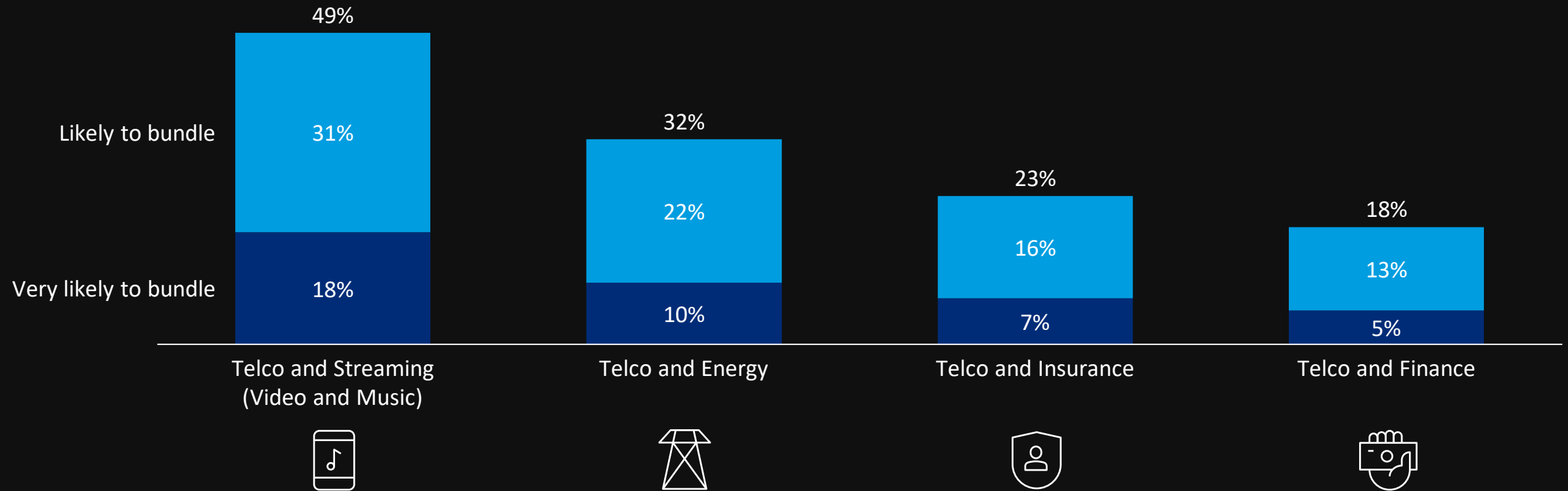
1. Net satisfaction calculated by subtracting the proportion of detractors (score 1-6) from the proportion of promoters (score 9,10); 2. Includes consumers who bought fixed and mobile services from different providers and those who bought from the same provider but without a bundle

Sample size: Bundled 335, Non- Bundled 1,280

Source: Oliver Wyman CMT Global Consumer Survey 2024

AUSTRALIANS ARE MOST OPEN TO BUNDLING STREAMING AND ENERGY SERVICES WITH THEIR TELCO OPERATOR

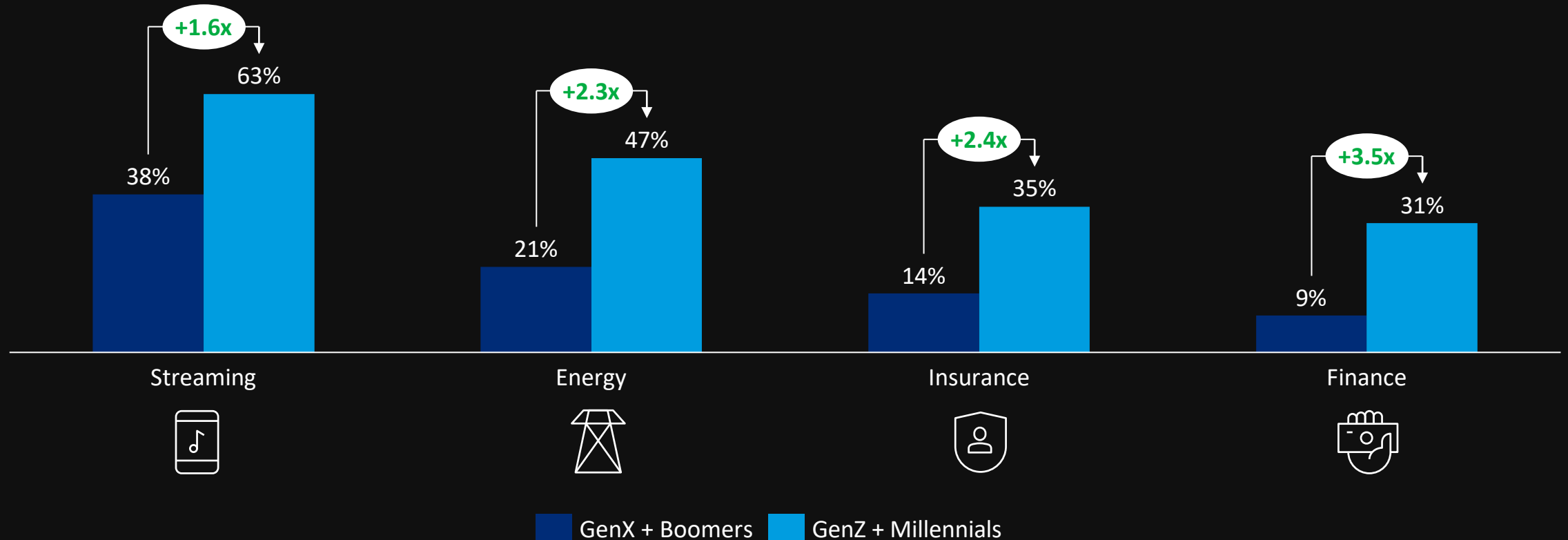
Willingness to bundle services from other industries¹
 % of respondents



Willingness to bundle based on responses of “Likely” or “Very likely” to bundle services
 Sample size: Australia 1,695
 Source: Oliver Wyman CMT Global Consumer Survey 2024

GEN Z AND MILLENNIALS ARE SIGNIFICANTLY MORE WILLING TO BUNDLE SERVICES ACROSS INDUSTRIES THAN OLDER GENERATIONS

Willingness to bundle¹ services from other industries
 % of respondents by age group²

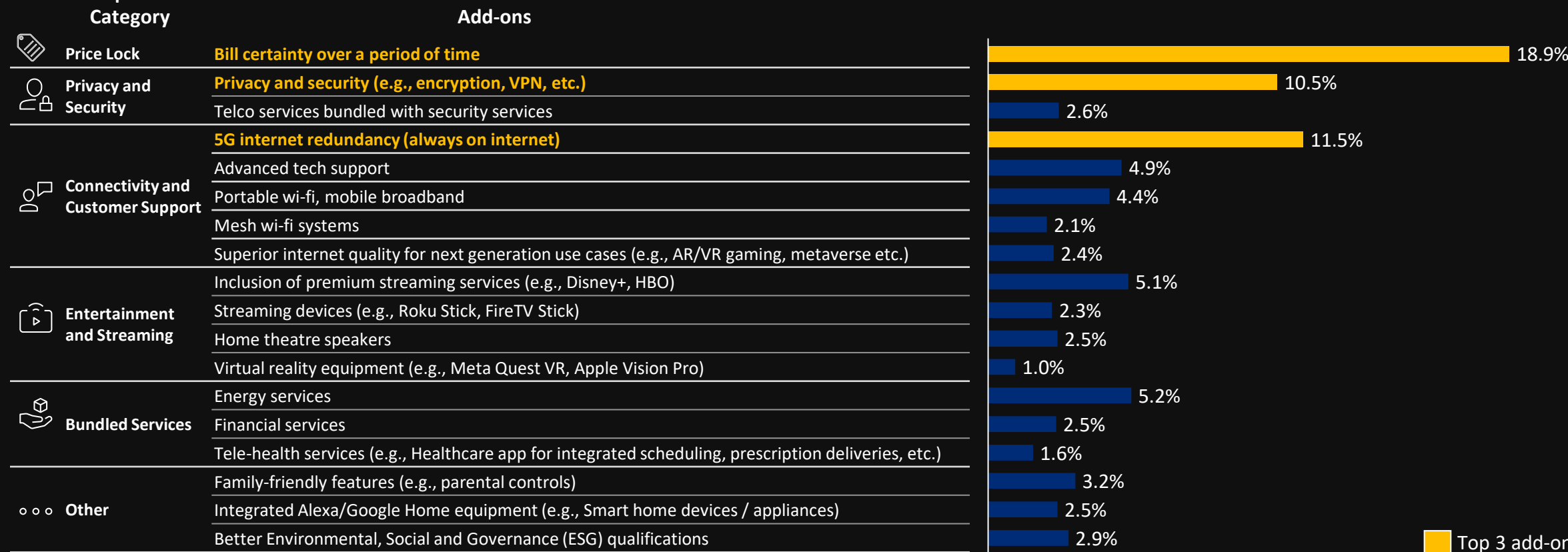


1. Willingness to bundle based on responses of “Likely” or “Very likely” to bundle services; 2. GenZ 18-24; Millennials 25-34, 35-44; GenX 45-54; Boomers 55-64, 65 or older
 Sample size: 1,695
 Source: Oliver Wyman CMT Global Consumer Survey 2024

AUSTRALIAN CONSUMERS ARE MOST INTERESTED PRICE CERTAINTY, SECURITY AND REDUNDANCY

Top add-ons¹ by category

% of respondents²



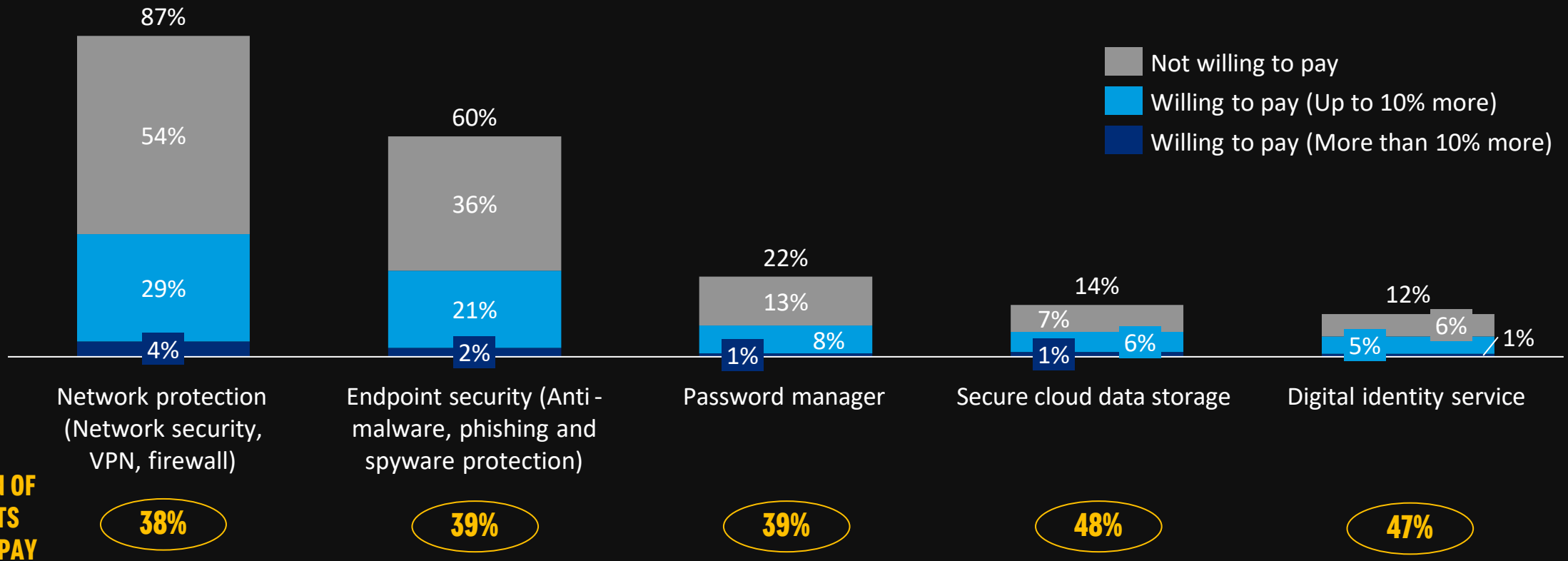
1. Based on products ranked most (1) and second (2) most interesting; 2. Excludes the 13.8% of respondents who expressed they did not want add-ons

Sample size Australia 2,017

Source: Oliver Wyman CMT Global Consumer Survey 2024

DEEP DIVE: CONSUMERS ARE MOST INTERESTED IN NETWORK PROTECTION AND ENDPOINT SECURITY WITH ~40% WILLING TO PAY FOR IT

Most important privacy and security features¹, and willingness to pay extra for these
% of respondents



PROPORTION OF RESPONDENTS WILLING TO PAY

1. Based on products ranked most (1) and second (2) most important privacy features
Sample size: 2,017
Source: Oliver Wyman CMT Global Consumer Survey 2024

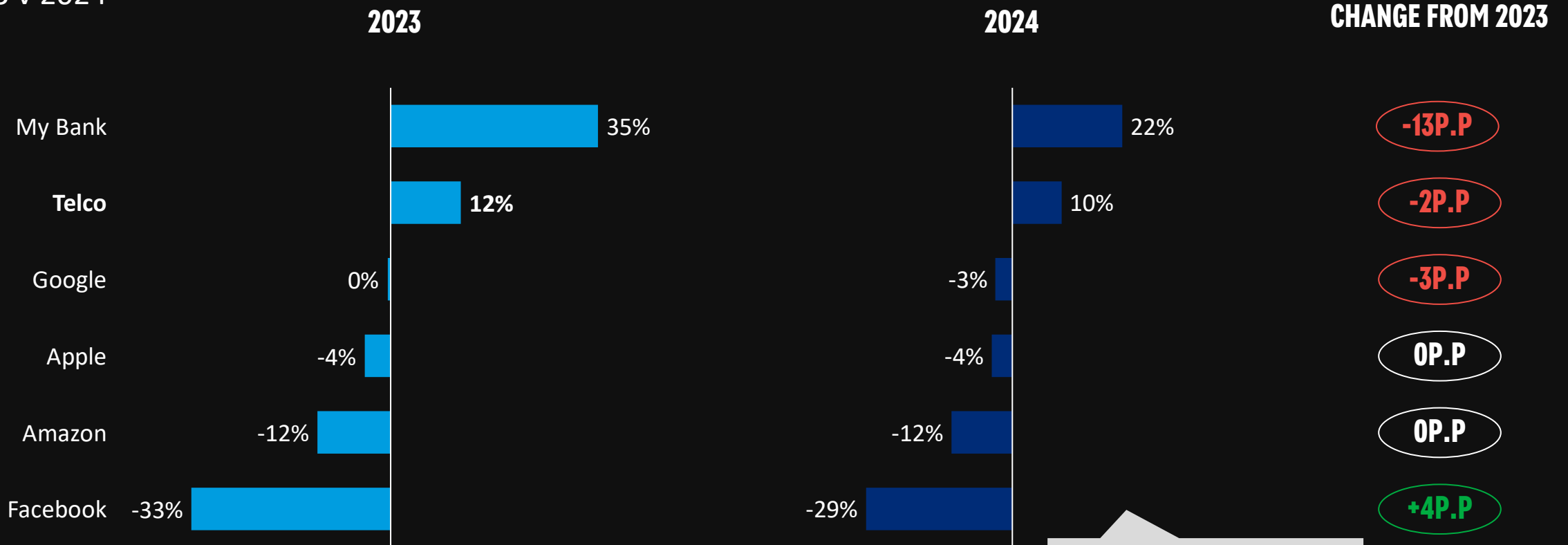
4.

TRUST & DATA



TRUST IN MAJOR INSTITUTIONS TO PROTECT CONSUMERS' PERSONAL DATA HAS CONTINUED TO WANE

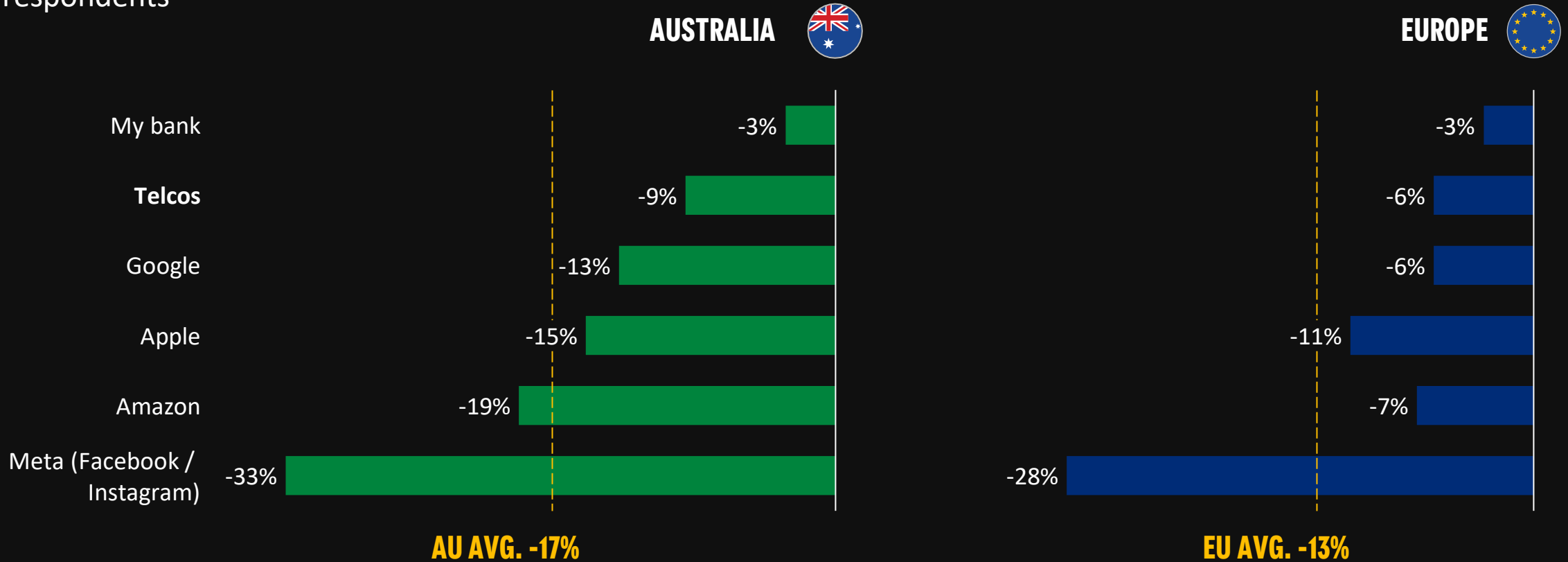
Consumer net trust in institutions regarding protection of their personal data and privacy¹
 % 2023 v 2024



1. Net trust calculated by high trust (I fully trust them) minus low trust (I'm totally sceptical), divided by all trust scores
 2023 Data Privacy Sample Size: Australia 1,013 | 2024 Data Privacy sample size: Australia 2,017
 Source: Oliver Wyman CMT Global Consumer Survey 2024

AUSTRALIANS ARE LESS OPTIMISTIC ABOUT INSTITUTIONS' RESPONSIBLE USE OF GENAI, BUT TELCOS ARE MORE TRUSTED THAN TECH GIANTS

Consumer net trust in institutions regarding responsible use of GenAI ¹
 % of respondents



1. Net trust calculated by taking the highest trust responses "I fully trust" (5) minus lowest trust responses "I am fully sceptical" (1) divided by total trust score. Note: 3 = neutral
 Sample size: Australia 2,017; Europe 7,002
 Source: Oliver Wyman CMT Global Consumer Survey 2024

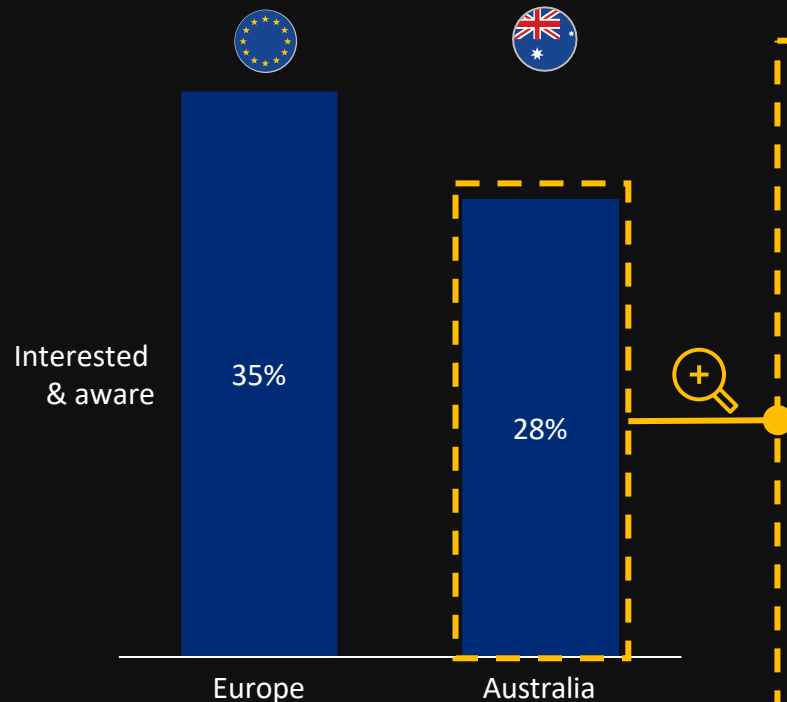
5.

IMMERSIVE TECH AND GEN AI

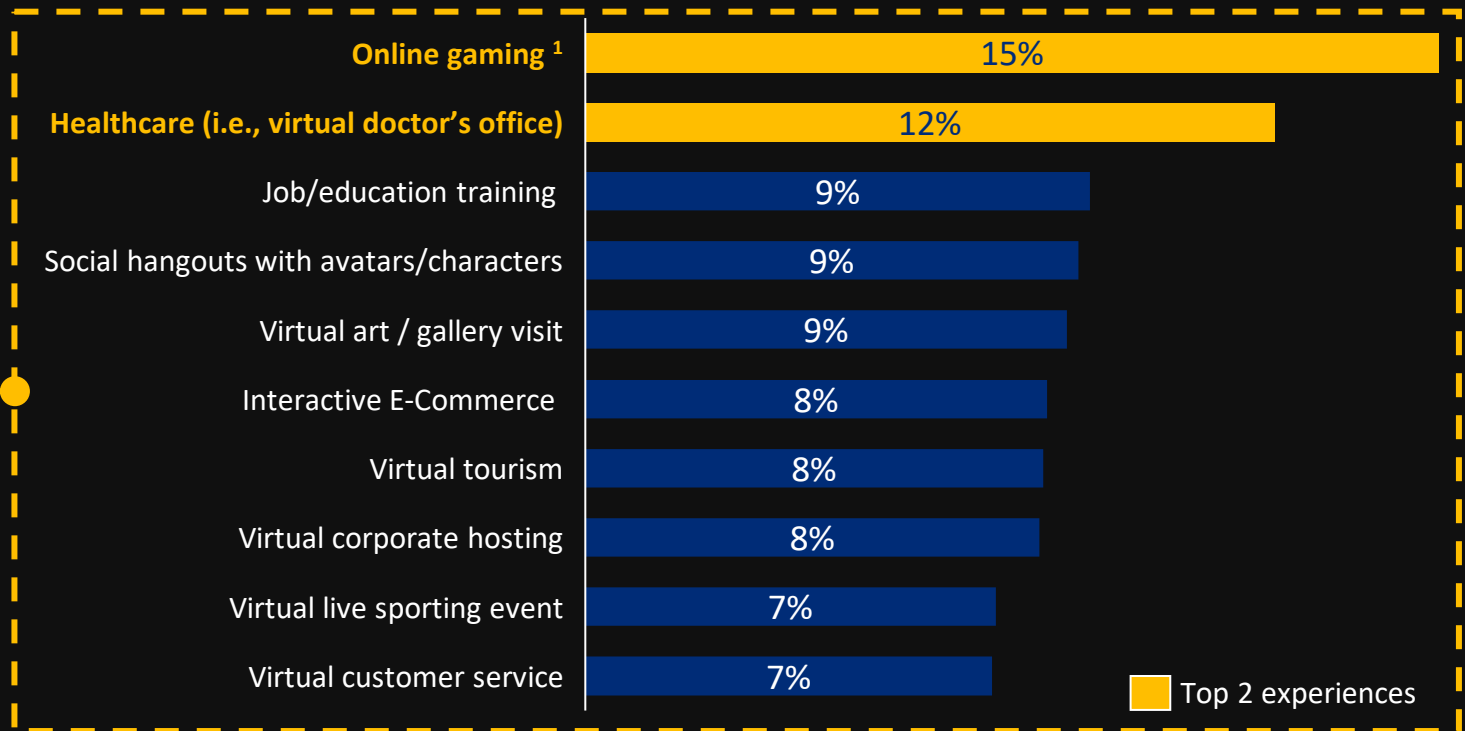


28% OF AUSTRALIANS CONSIDER IMMERSIVE TECHNOLOGY AND THEY ARE MOST ENGAGED WITH GAMING AND HEALTHCARE USE CASES

Consideration of immersive technology
% respondents



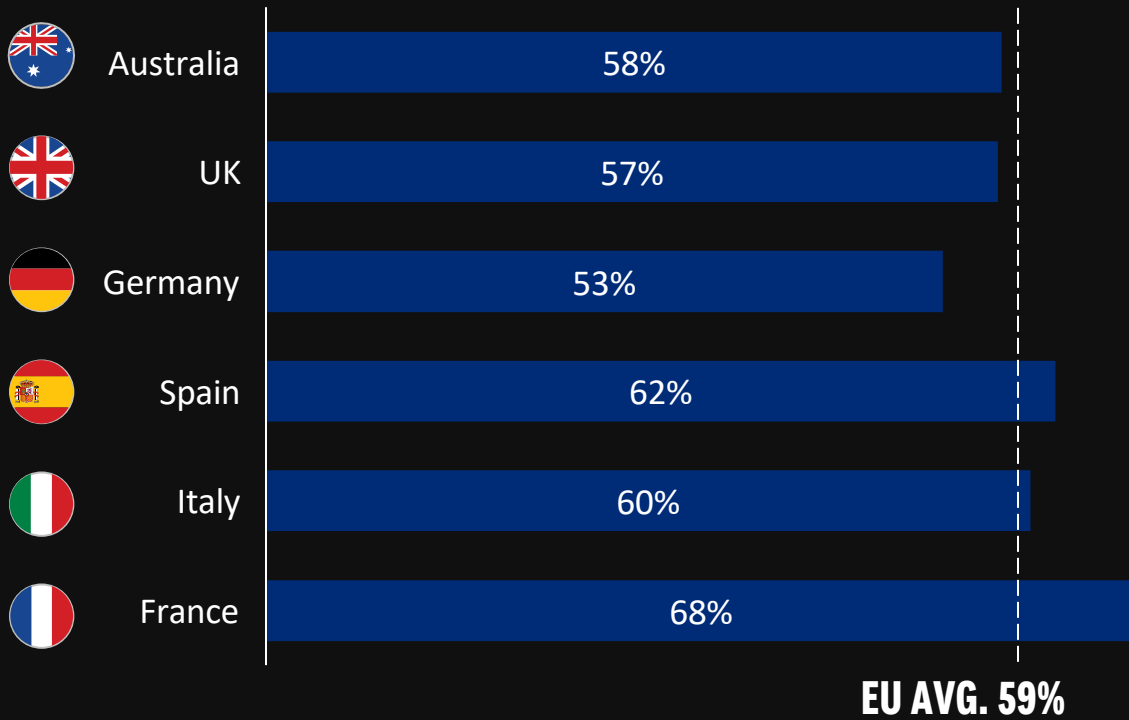
Engagement with immersive technology by use case
% respondents



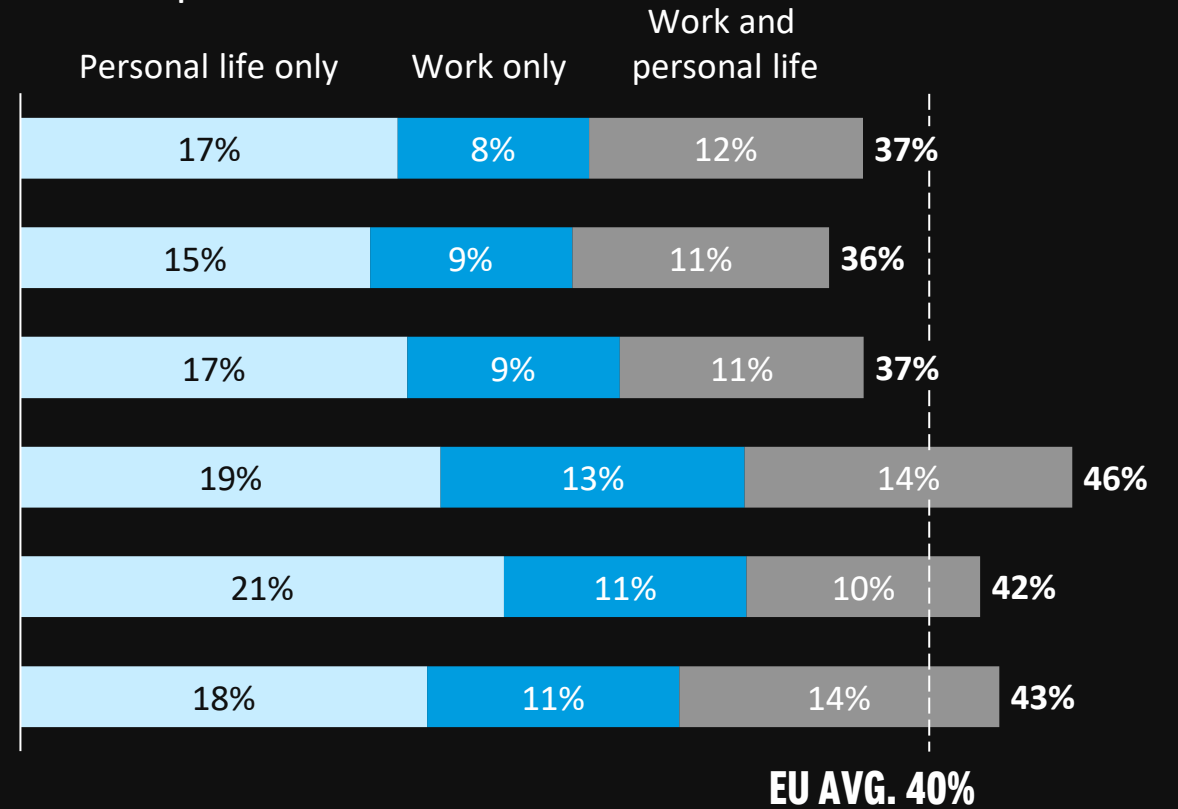
1. Does not include online gambling
 Sample size: Australia 1,997, Europe 6,913 (excludes Blanks) ; Use case Sample Size Australia: 562 ; Europe: 1,427 (excludes "I am not interested", "I don't know", Blanks, and Open text)
 Source: Oliver Wyman CMT Global Consumer Survey 2024

58% OF AUSTRALIANS ARE FAMILIAR WITH GEN AI TOOLS, AND MORE THAN A THIRD USE IT AT WORK OR IN THEIR PERSONAL LIVES

Familiarity with GenAI Tools ¹
% of respondents



GenAI adoption
% of respondents



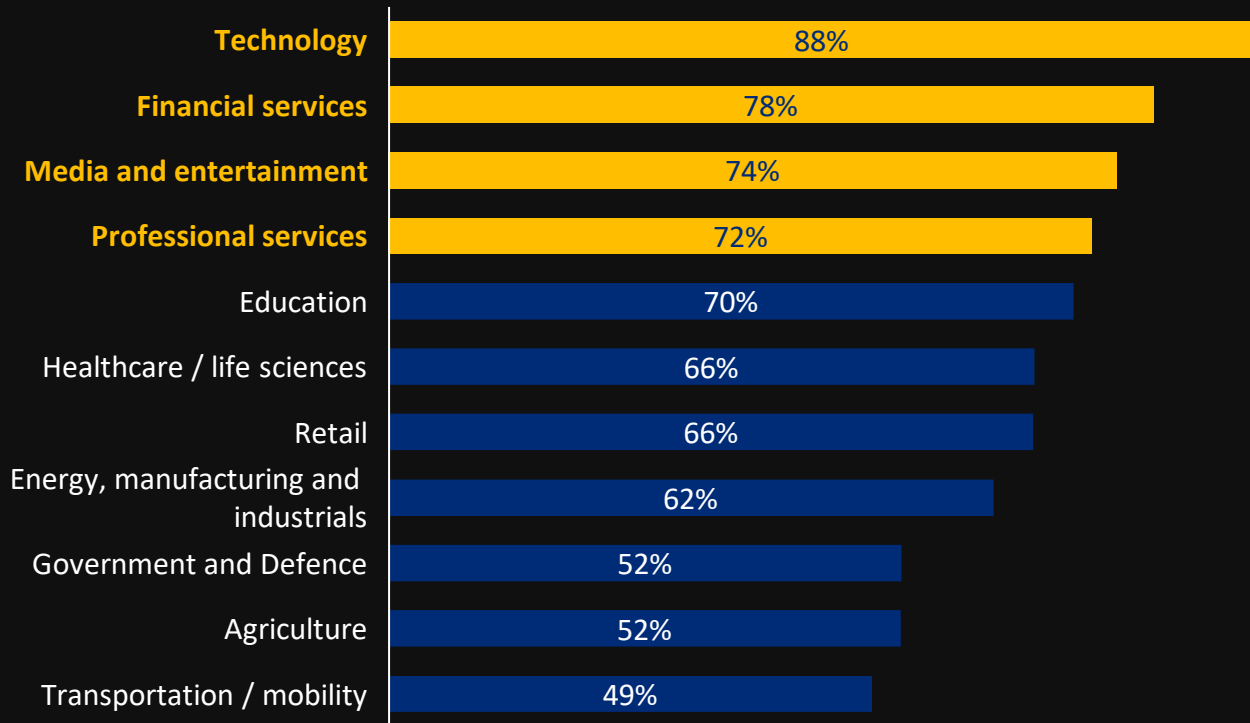
1. Familiarity indicated on a 10-point scale from 1 = Not familiar, 10= Very familiar; grouped 'Not Familiar' 1-4, 'Familiar 5-10'

Familiarity sample size: Australia 1,952; UK 1,867; Germany 1,876; Spain 968; Italy 953; France 936 | GenAI adoption sample size: Australia 2,017; UK 2,000; Germany 2,001; Spain 1,000; Italy 1,001; France 1,000

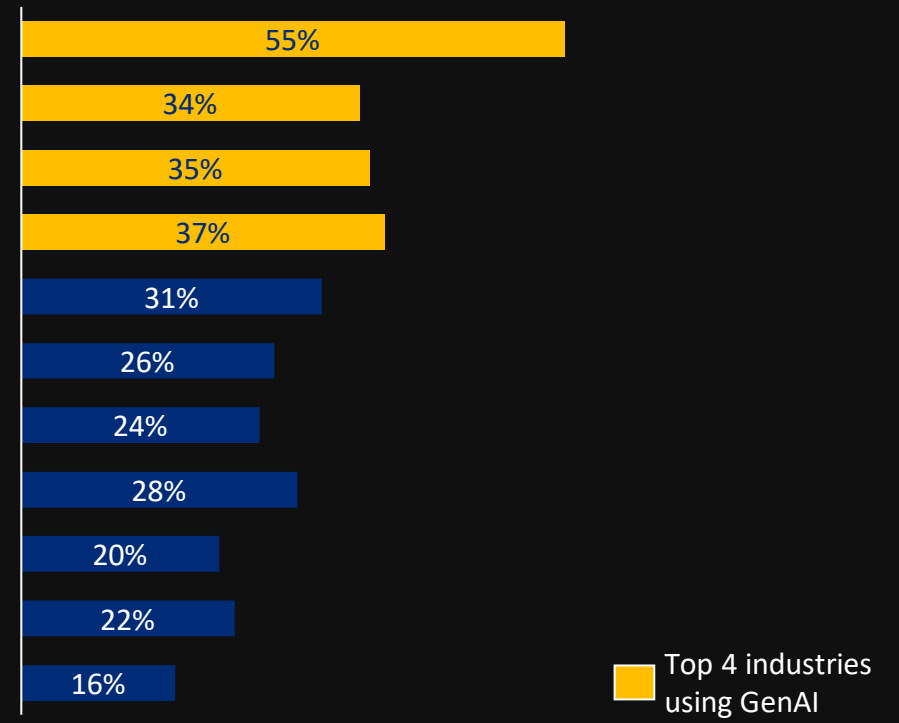
Source: Oliver Wyman CMT Global Consumer Survey 2024

AUSTRALIANS IN TECHNOLOGY AND SERVICES OCCUPATIONS REPORT GREATER FAMILIARITY AND USE OF GENAI TOOLS AT WORK

Familiarity with GenAI Tools by industry¹
% of respondents



GenAI use at work by industry
% of respondents

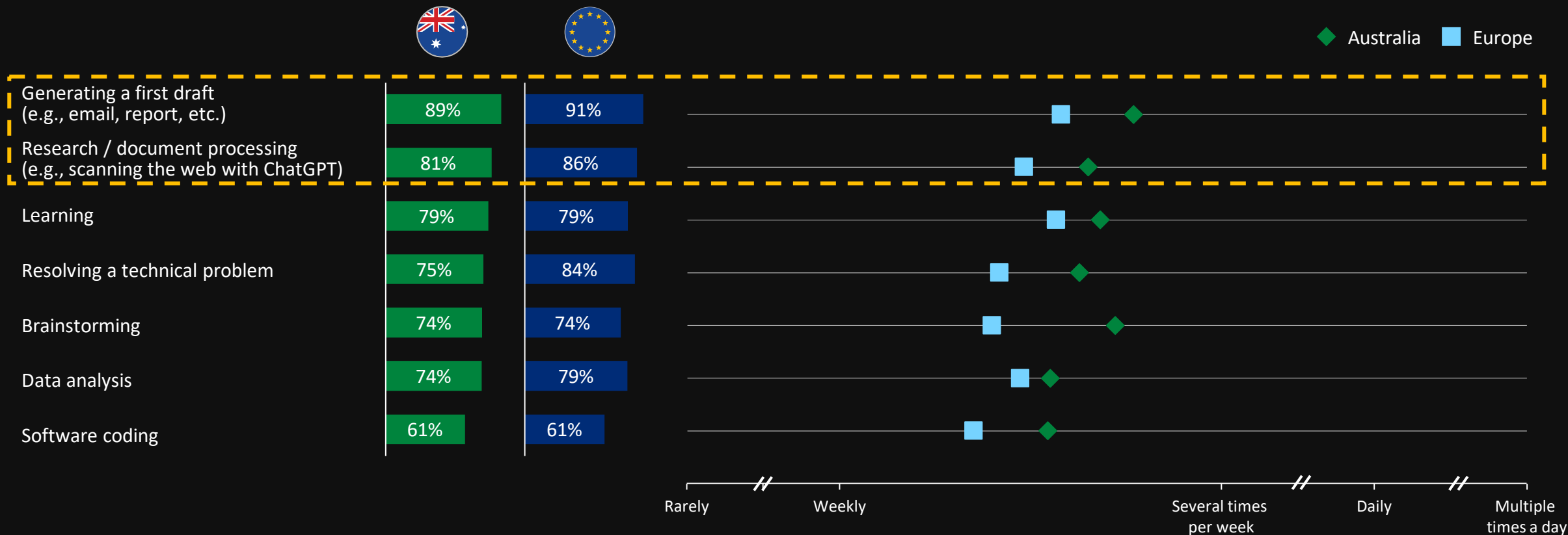


1. Familiarity indicated on a 10-point scale from 1 = Not familiar, 10= Very familiar; grouped 'Not familiar' 1-4, 'Familiar 5-10'
 Familiarity sample size: Australia 1,952; UK 1,867; Germany 1,876; Spain 968; Italy 953; France 936 | Use at work sample size: Australia 2,017; UK 2,000; Germany 2,001; Spain 1,000; Italy 1,001; France 1,000
 Source: Oliver Wyman CMT Global Consumer Survey 2024

AT WORK, OVER 80% OF AUSTRALIANS LEVERAGE GENAI FOR DRAFTING AND RESEARCH, AND THEY USE IT MORE FREQUENTLY THAN EUROPEANS

Adoption of GenAI at work, by use case
% of respondents

Frequency of GenAI use, of those that have used GenAI ¹
Average frequency



1. Average of options: 'Never used', 'Rarely', 'Weekly', 'Several times per week', 'Daily', and 'Multiple times a day' (excludes 'I have not used GenAI for this task')

Sample size: Australia 413; Europe 1,546

Source: Oliver Wyman CMT Global Consumer Survey 2024

OUR COMMUNICATIONS, MEDIA AND TECHNOLOGY TEAM IS HAPPY TO CONTINUE THIS DISCUSSION

Get in touch for further discussions



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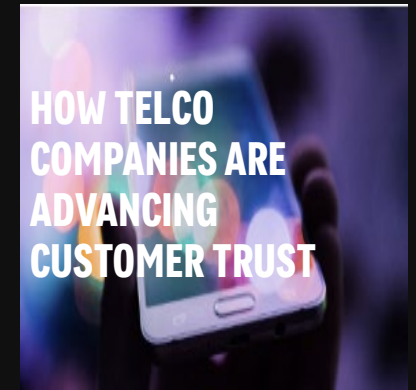
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Oliver Wyman telecommunications studies



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