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2G and 3G Switch-Off

Are your telecare dispersed alarms ready for the 2G/3G switch-off?

What you need to know.

Craig Barlow, Managing Director | Appello

Carl Atkey, Chief Technical Officer | Appello

Iain Hockings, Head of Marketing | Appello

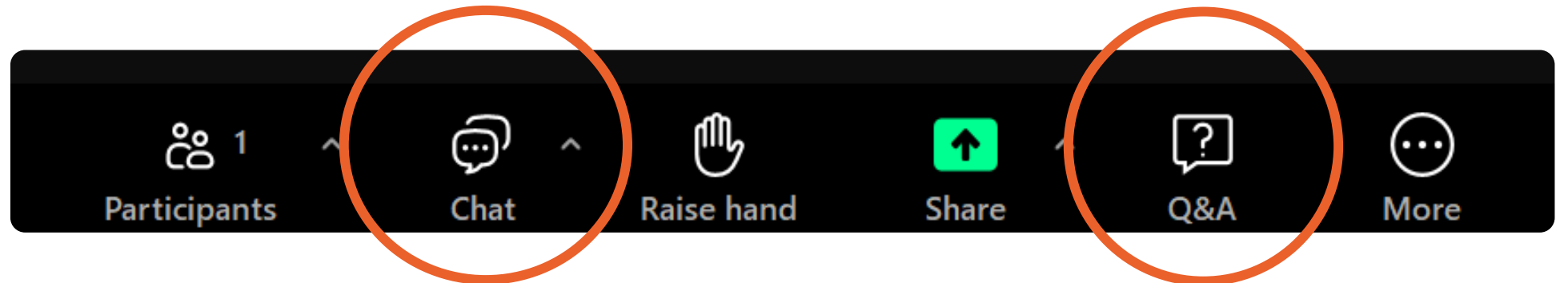Tim Mulrey, Business Strategy & Transformation | TSA

David Hammond, European CEO | Chiptech

House Keeping
Welcome

- Please type questions in the Q&A Box – upvote or comment on other delegates questions.

- Use the Chat Box to chat with each other, comment or share resources.

- Please complete the survey at the end of the presentations, the Q&A session will then follow.

- The event is being recorded and will be shared post event.

Webinar Presenters
Welcome

Craig Barlow
Managing Director

Carl Atkey
Chief Technical Officer

The voice of technology enabled care

Tim Mulrey
Business Strategy &
Transformation

David Hammond
European CEO

About Appello
Welcome

- **c400k** vulnerable people connected
- Over **5 million** calls managed annually
- **100+** housing providers trust Appello
- Over **65,000** digital telecare devices installed
- Winner of multiple awards

2G and 3G Switch-Off Webinar
Agenda

- **The 2G/3G switch-off – An Overview**

- **Why is it being phased out and the impact**

- **Key dates**

- **Risks to dispersed alarms**

- **Connectivity considerations**

- **How to prepare**

- **Q&A**

Mobile Networks

2G/3G

Differences between 2G, 3G, 4G and 5G
2G/3G Switch-off

|	2G	3G	4G	5G
Data Speed	64 Kbps	2 Mbps	20 Mbps (High speed, high capacity and low cost per bit).	400 Mbps
Bandwidth	364 Kbps	3 Mbps	100 Mbps	10 Gbps
Use cases	• Digital signals instead of analogue. • Enabled SMS and MMS services.	• Send/receive large emails. • Video communication.	• Support interactive multimedia, voice, video. • Ad hoc and multi-hop networks. • Support for previous wireless technologies. • Uses same fibre cables as 3G. Improved security. • Internet service: Ultra Broadband.	• High speed. • High resolution video streaming. • Internet service: Wireless World Wide Web. • Cloud storage.
Impact on Dispersed Alarms	• Some devices reliant upon 2G for voice and data resilience. • Imminent VMO2 risk.	• 3G Decommissioned, devices should be upgraded.	• Target technology (with VoLTE support)	• Consumer applications currently. • High bandwidth, service availability not as robust as 4G for critical applications.

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3G Switch-Off
2G/3G Switch-off

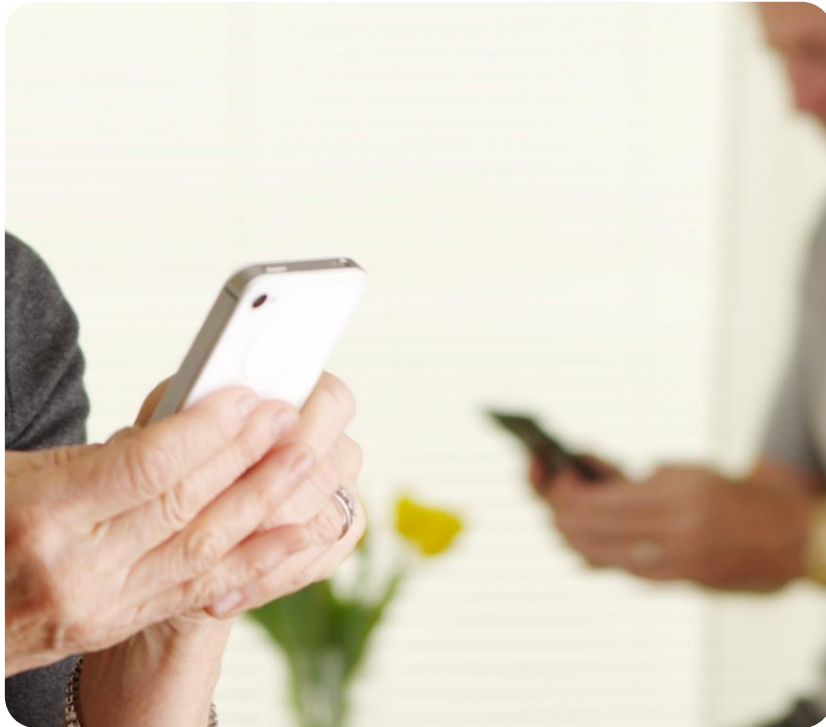| 2024 | 2025 |

Telecare devices reliant on 2G
2G/3G Switch-off

250,000
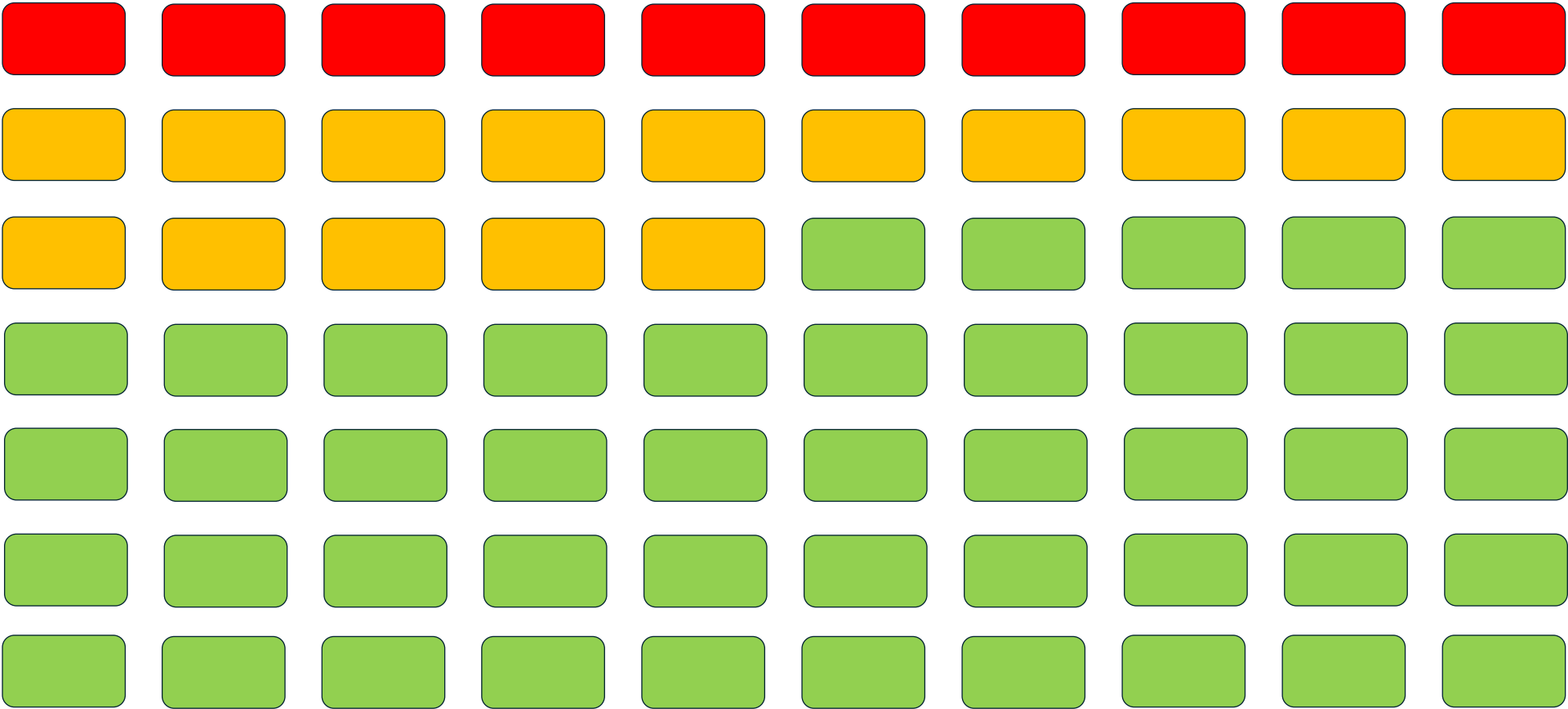
700,000

2G Roaming

2G Sunsetting

2g Restriction 2025

Tim Mulrey
Business Strategy & Transformation
TSA

21 May 2025

Recap of announcement

- **Summary of announcement**
  - VMO2 will be withdrawing global inbound roaming services on its 2G/3G networks on 1 October 2025

- **Additional Information**
  - VMO2 have cited the closure of its 3G network and its impact on smart-metering as the main reason for restricting access to 2G networks
  - All Global Roaming SIMs (apart from Telefonica Spain) will be restricted from accessing VMO2 2g from 1st October 2025 – there will be no piloting or region by region mast restriction like the 3G switch off
  - VMO2 believe Vodafone UK offer the same connectivity as VMO2 as predominately masts are shared so devices connected to VMO2 will always have a Vodafone network available

Impact of Restriction

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- **Initial Impact Findings**
  - Circa 728,000 Hybrid/Digital SIMs in operation in the UK
    - 61,777 4g or 3g or 2g devices connecting to VMO2 in the last 6 months
      - 9,099 potential 'red flag' SIMs identified

- **Potential Red Flag SIMs (disconnected post Oct 1st)**
  - These are SIMs that are potentially wholly reliant on VMO2 2g
  - Mitigating actions:
    - Roll out of VoLTE (SIM) and VoIP (SIM and/or Ethernet) to push voice and data entirely onto the 4g network
    - Temporary removal of VMO2 2g from 4g and 2g devices
    - SIM additions or swap outs where appropriate
    - Device swap outs where appropriate
    - Permanent removal of VMO2 2g in advance of October 1st

- **Potential Amber Flag SIMs (One network post Oct 1st)**
  - These are 2g-reliant SIMs with access to only one remaining 2g network (either BTEE or Vodafone)
    - Unknown number at this stage but likely to be significant
  - Represents a 30% to 50% increase in risk to resilience (single point of failure)

Industry advice

- Analogue to Digital migration remains the priority, however:

  - If funds allow, seek to replace 2g-reliant devices where possible

- If replacing all 2g-reliant devices ahead of

  - Ensure you are working with your device supplier / maintainer on a mitigation strategy for your estate, for example:

    - All capable devices to be switched to VoLTE / VoIP / Ethernet connectivity

    - Consider using OFCOM post code information to identify which areas of the UK may be reliant on VMO2 2g coverage (https://www.ofcom.org.uk/phones-and-broadband/coverage-and-speeds/preparing-for-2g-switch-off---devices-using-international-roaming-sims-2g-network-coverage-data-and-predicted-new-2g-inbound-roaming-not-spots)

    - All 2g-reliant devices to have access to VMO2 2g removed in a safe way well ahead of October 1st deadline

    - Ensure any devices being recycled have VMO2 2g network removed before being deployed to a new property

- For dedicated independent support, please contact allIP@tsa-voice.org.uk

Thank you

Connect with TSA
https://www.tsa-voice.org.uk/contact/

TEC Voice
https://www.tsa-voice.org.uk/news_and_views/tec-voice/

Identify

Compatible

Congestion

Call back
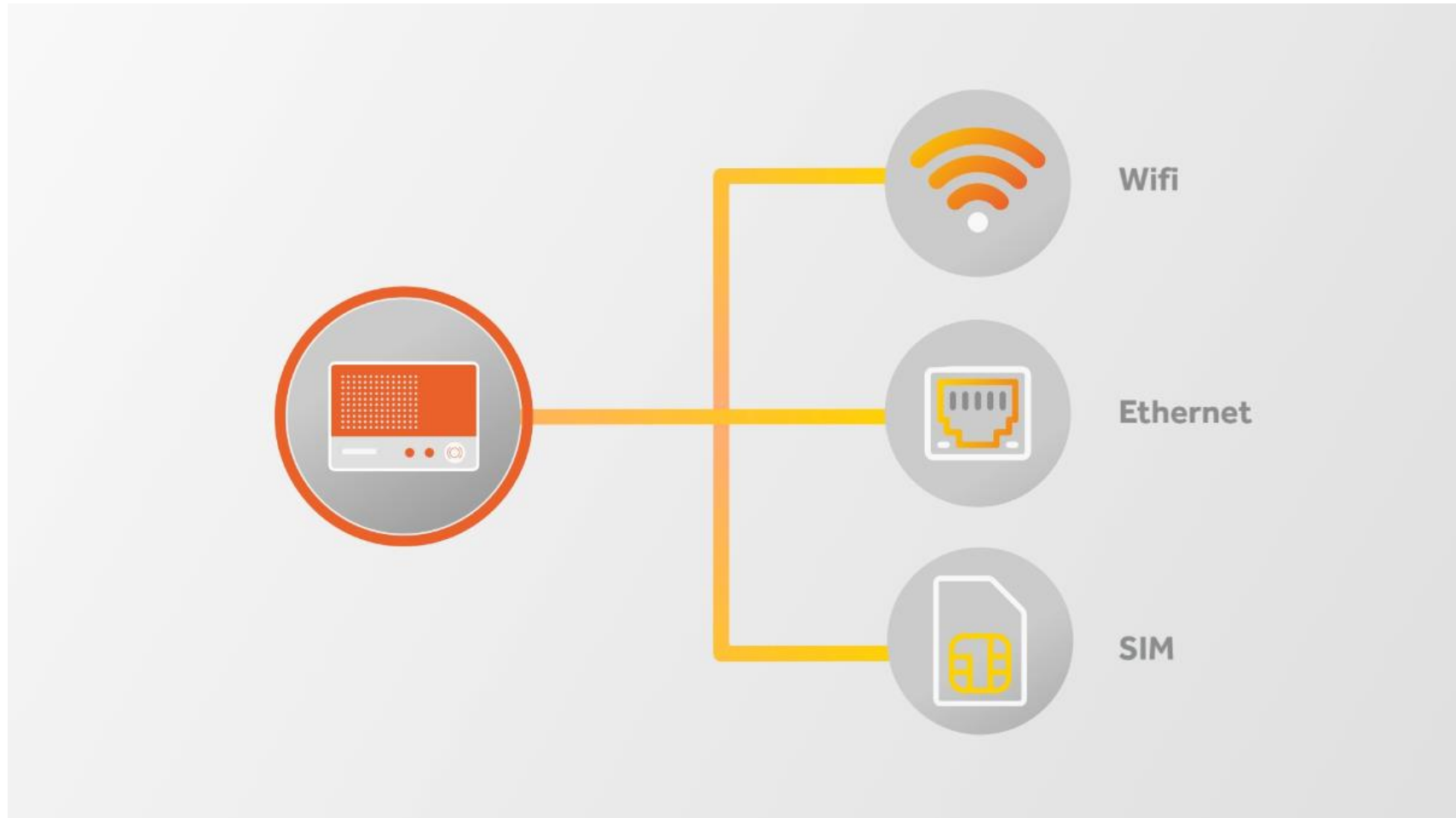
About Chiptech

Founded in New Zealand in **2000** with a strong innovation history

Launched in the UK **six years** ago

Now serving over **170 customers** in the UK

Making a difference to **over 220,000** elderly and vulnerable people with our digital telecare devices in the UK

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Network History

2G and 3G networks have been a **critical** part of our telecom and national infrastructure since the **1990s** and early **2000s**

Both access technologies have **data** and **voice** services, which are vital for **telecare communications**

The infrastructure to support these technologies is getting old, and **newer, more efficient technologies** are emerging, 4G, which allows more innovation.

Bandwidth is split up by access technology, so as more traffic uses new bands, bandwidth needs to be **released** from other technologies to support it.

Current Network Landscape

3G Networks

3G networks have been decommissioned, except for VMO2, which is scheduled to switch off in October 2025

2G Networks

Still widely used by critical infrastructure and expected to remain operational until 2028 - 2033
VMO2 will restrict inbound roaming from October 2025
Vodafone and VMO2 share masts, so the roaming restriction impact is limited

4G Networks

Coverage is excellent and expanding under the Shared Rural Network Programme
Preferred for telecare due to fast, reliable data and high-quality voice (VoLTE)

Network Generations	Network
2G	VMO2, EE, Vodafone (no Three 2G network)
3G	VMO2 only (Switch off in October 2025)
4G	All four networks
5G	Common in consumer but not life safety commercial applications

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4G VoLTE Benefits

Improved Network Coverage
4G networks are more widespread and robust than older 2G/3G networks. 4G VoLTE ensures reliable connectivity, even in areas with weak signals.

Faster Call Connection
4G VoLTE reduces call setup times, typically taking take 1-2 seconds to connect compared to 2G/3G calls taking 3-6 seconds.

Enhanced Voice Quality
4G VoLTE delivers crystal clear voice, making conversations clearer and more natural.

Prioritised Voice
Mobile networks can differentiate 4G VoLTE traffic from normal data traffic and prioritise if the network is congested.

VoLTE

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Guidance for Service Providers

Understand the technologies used by your equipment

Identify any 3G only devices and 2G devices that only have access to O2 and upgrade **before October 2025**

Procure dual-path 4G devices as standard and upgrade 2G only devices before the 2030 switch-off

Ensure products are using 4G voice

If the equipment uses 2G/4G, obtain confirmation from your product provider that they can change between the technologies

Ensure that the installed SIMS have access to all four major networks

Voice over 4G – VoLTE/VOIP

Work with your product providers and TSA

Thank You

info@chiptech.com

Contact your supplier to confirm:

- What networks your telecare devices use and if they are compatible with 4G networks.

- What they plan to do if devices rely on 2G and 3G?

- Do they have multiple connectivity options?

Q&A Session