

Real-world insights from an AI honeypot

How a time-wasting robot is contributing to a new generation of scam protection

Jonathan Nelson, Director of Product, Hiya

28B+
calls analyzed
monthly

550M+
people protected

40+
countries

Agenda

Have we solved the problem?

Gathering intelligence

What we learn from decoys

Intelligence into Protection

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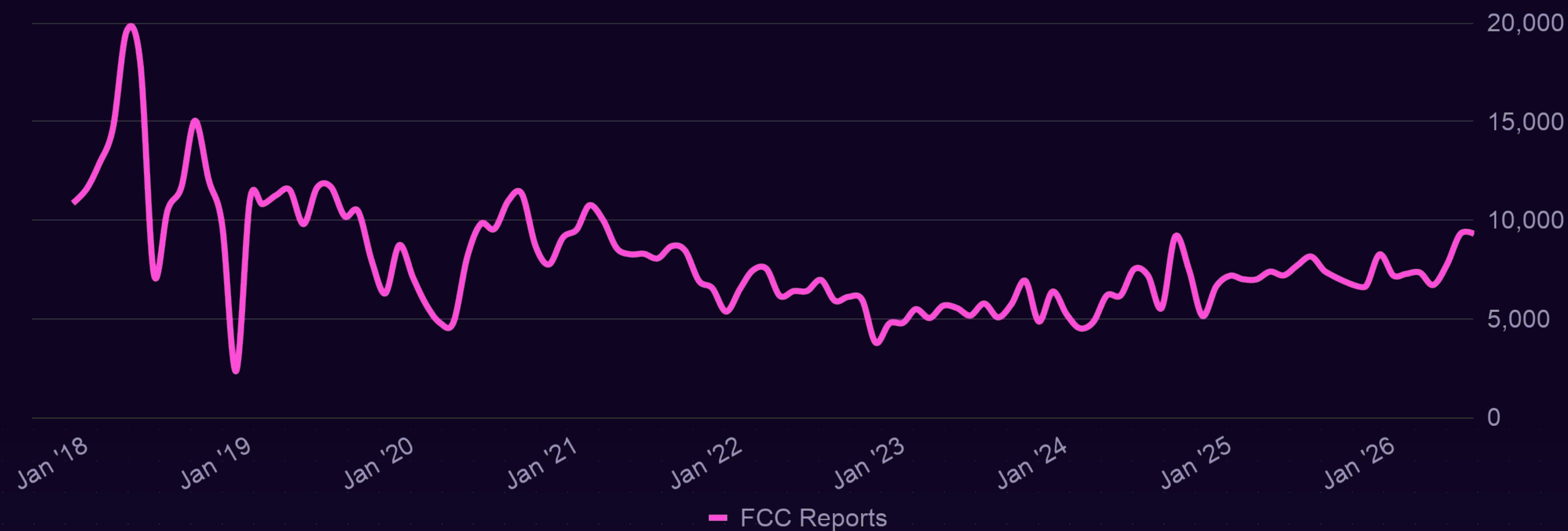
SECTION

01

Have we solved the problem?

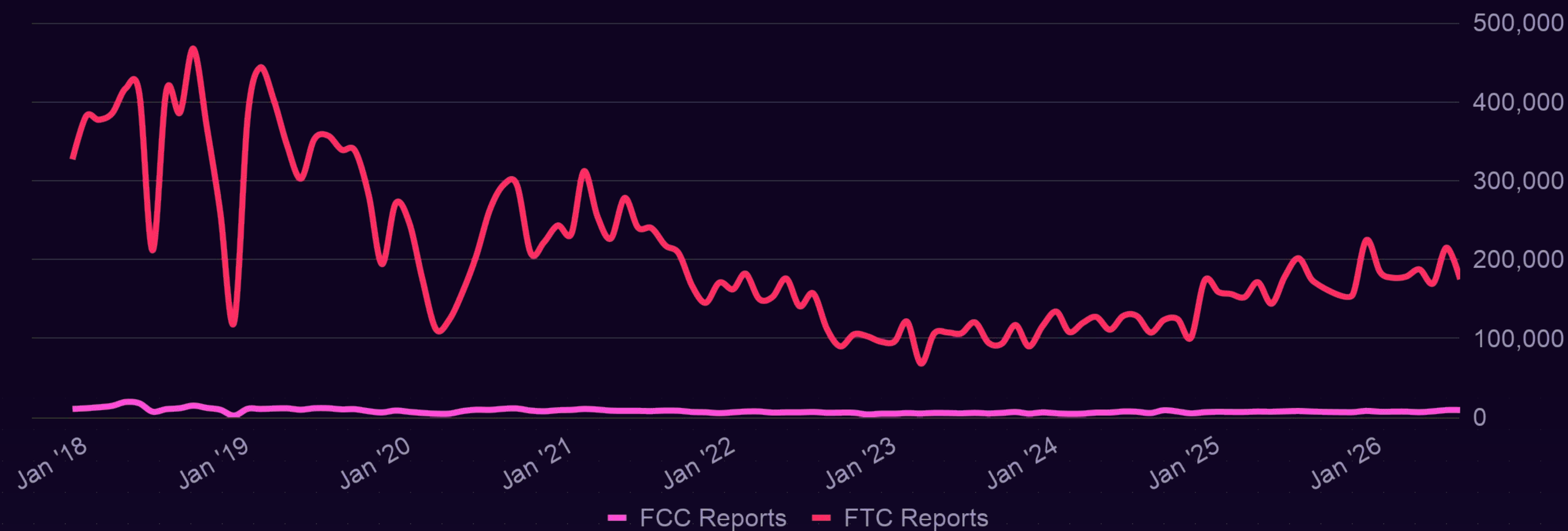
HAVE WE SOLVED THE PROBLEM?

FCC complaints from US citizens



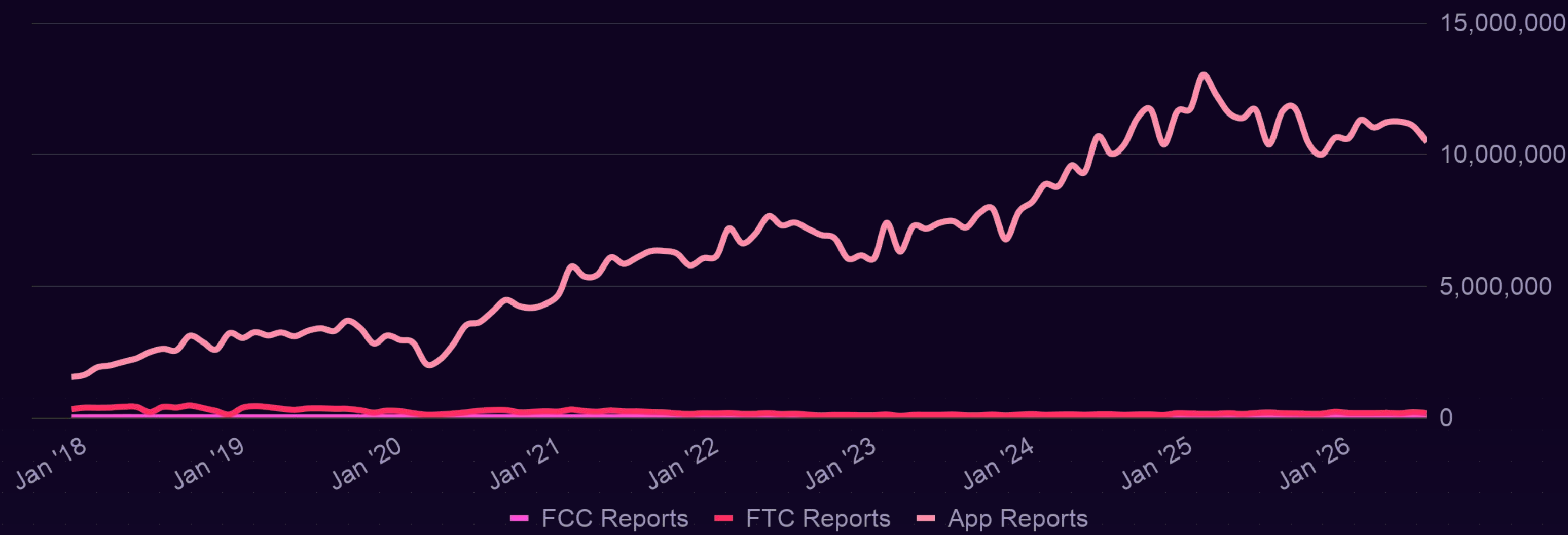
HAVE WE SOLVED THE PROBLEM?

FCC and FTC complaints from US citizens



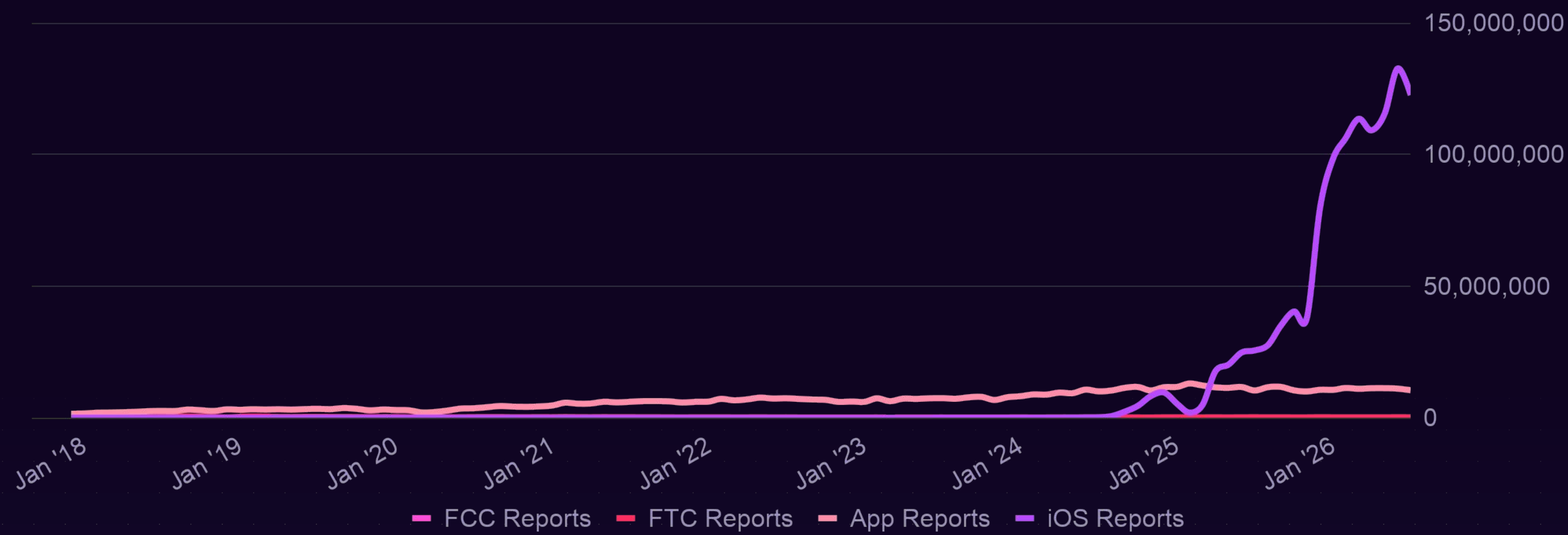
HAVE WE SOLVED THE PROBLEM?

FCC, FTC and app complaints from US citizens



HAVE WE SOLVED THE PROBLEM?

FCC, FTC, app, and iOS complaints from US citizens



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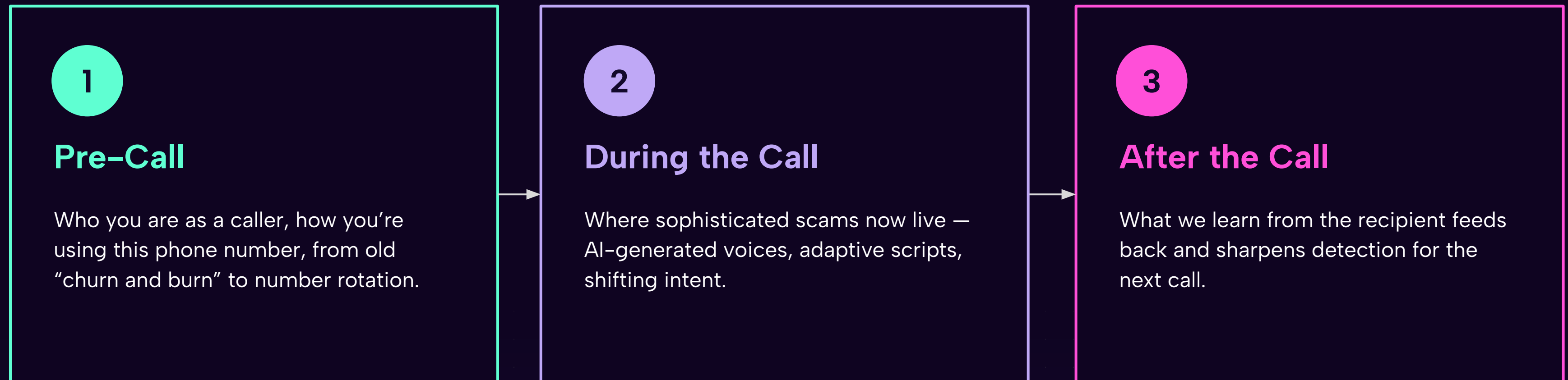
SECTION

02

Gathering intelligence

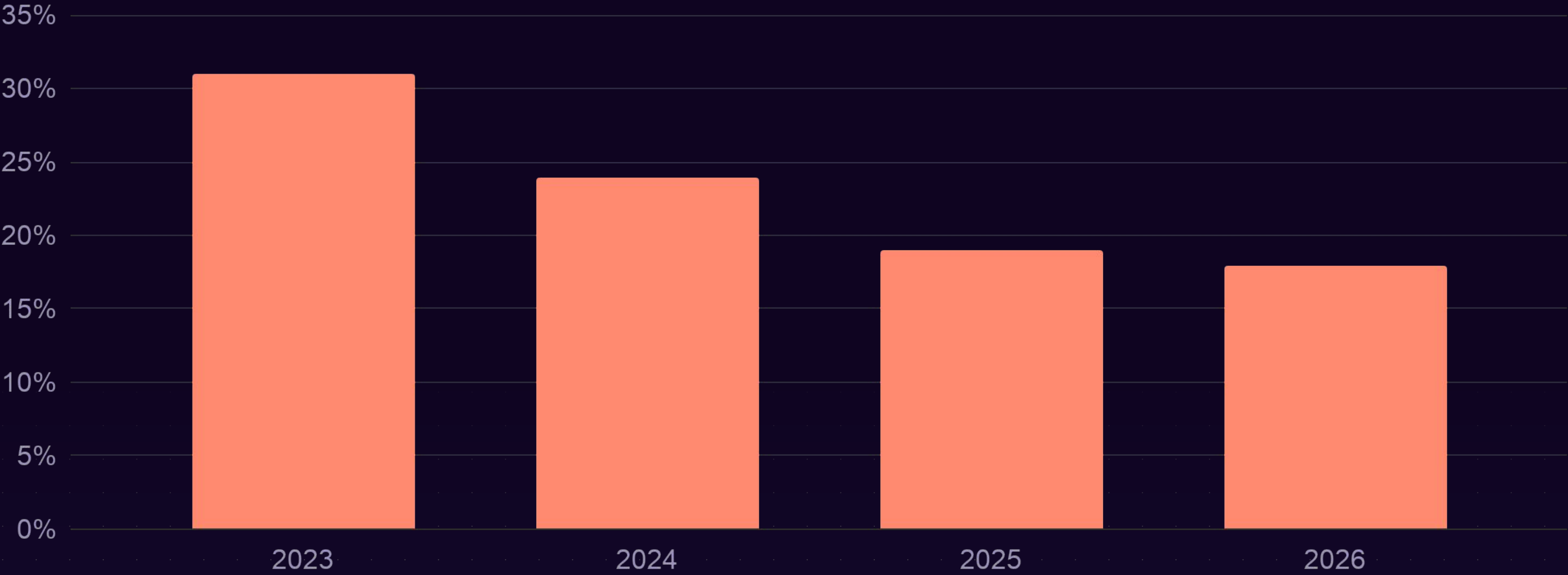
Intelligence can be gathered across the call flow

Services like Hiya Protect can glean insights on spammer and scammer behavior across the entire call flow – the same surface area we need to protect.



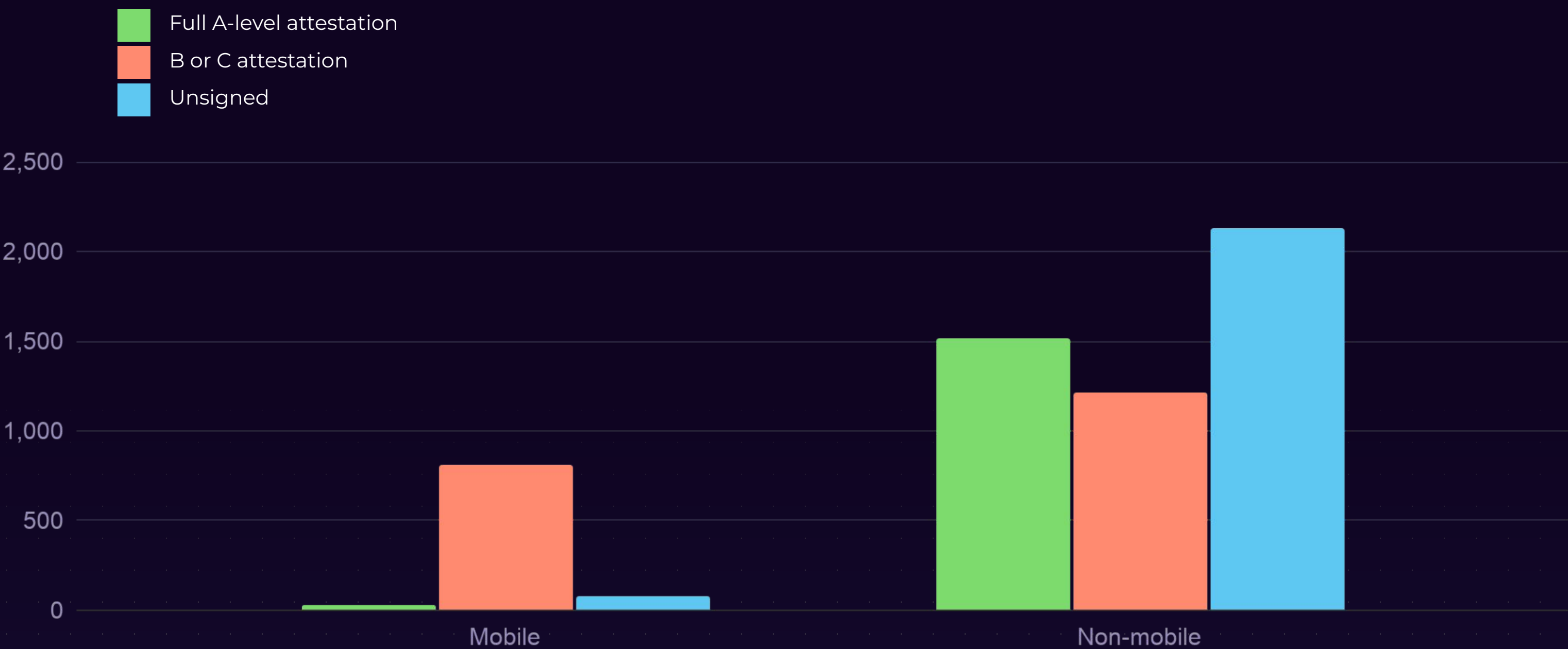
We know how spammers use their numbers

Number rotation, once used in nearly one-in-three spam phone calls, is around 18% now. But the decline is stalling out.



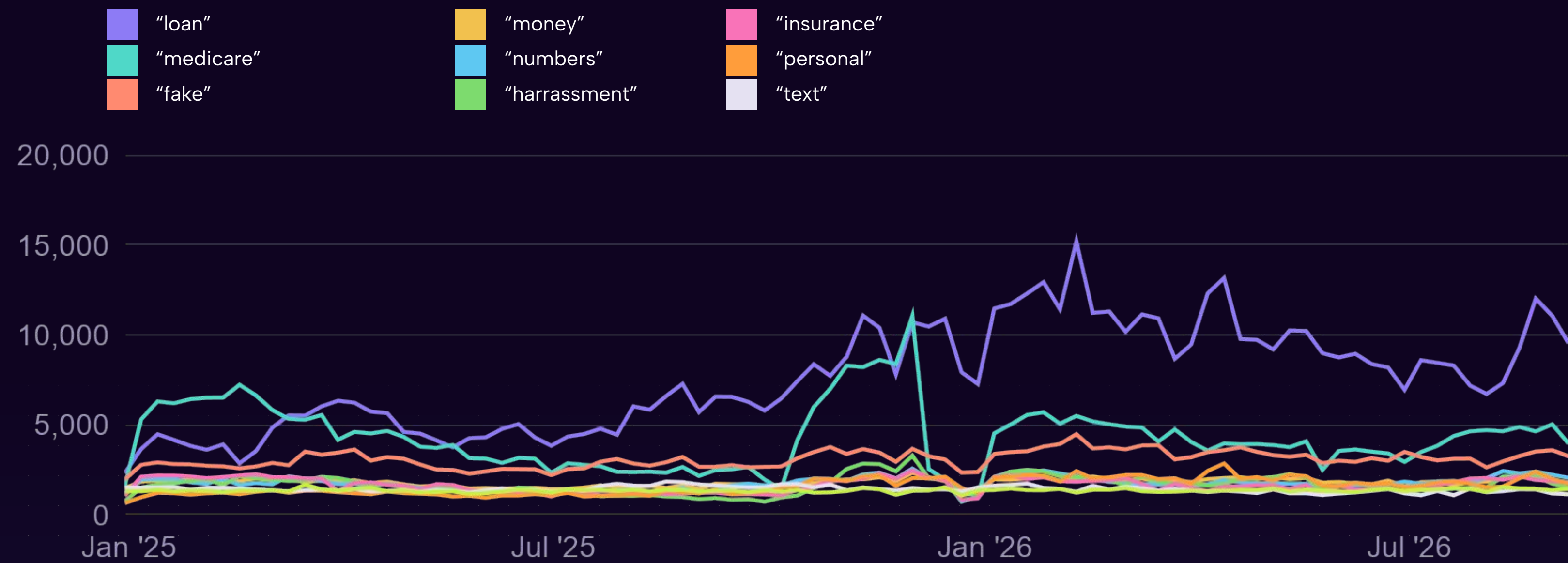
We know how spammers use their numbers

Unless it's a mobile phone number, your attestation doesn't carry much weight for the desirability of your phone calls.



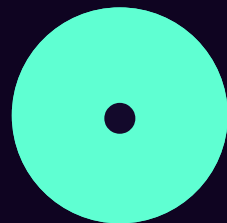
We know something of what the spammers are saying

Comments from recipients give some insight into how these campaigns are actually being structured, but it's far from a complete picture.



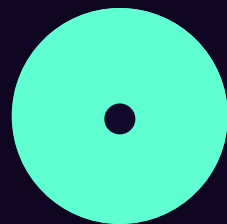
Meet the Hiya decoy agents

An AI honeypot, built to keep scammers on the line long enough to learn from them.



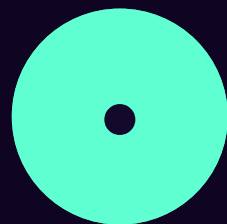
What they are

AI-driven personas that engage suspected scammers in real, live conversations — waiting on the line so a human doesn't have to.



Why they're useful

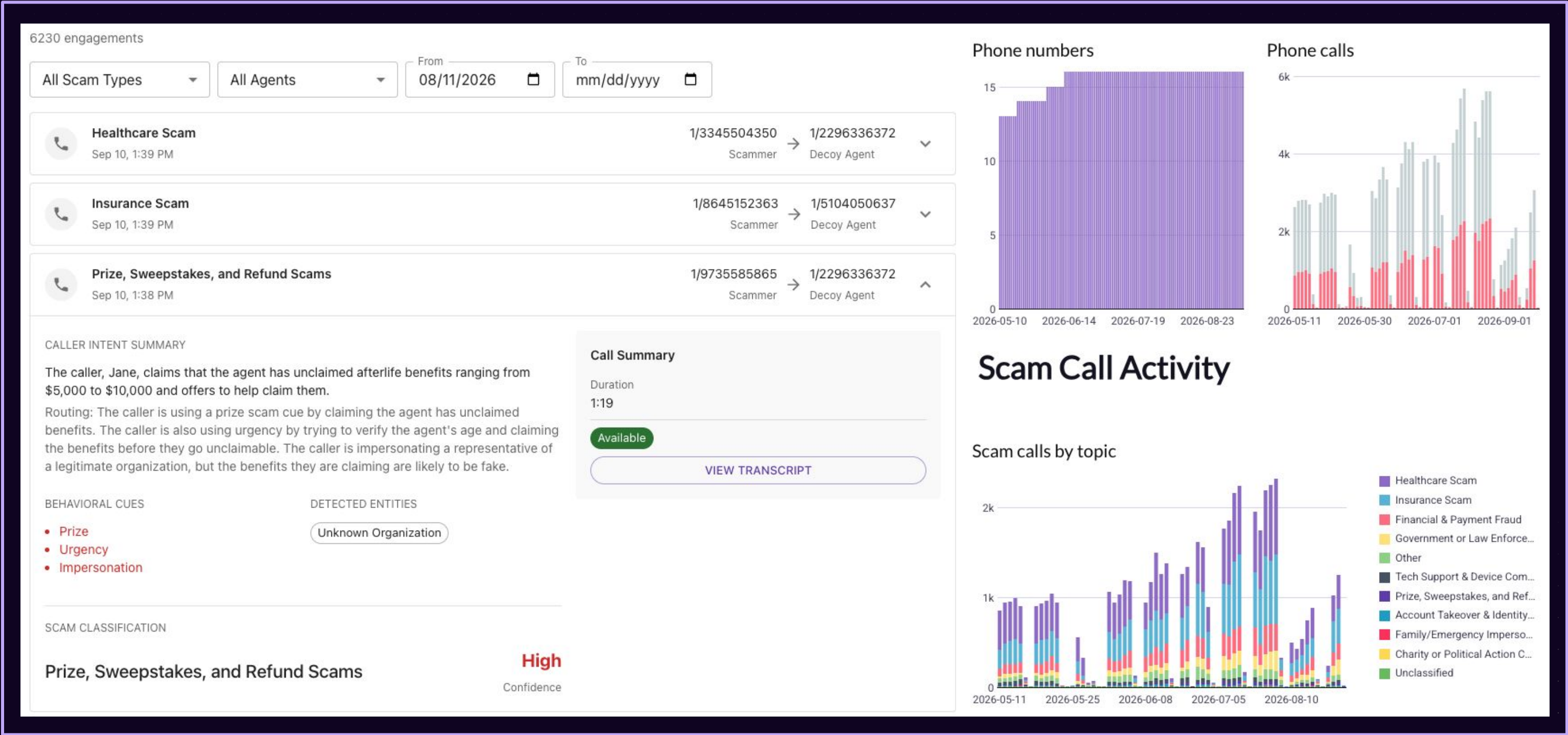
They keep scammers talking, which surfaces scripts, tactics, and infrastructure we wouldn't otherwise see.



How we use them

Every engagement feeds transcripts and metadata back into the models behind our detection and in-call protection.

Decoy agents are available for deployment



What we learn from decoys

Sometimes recipients could use a wingman

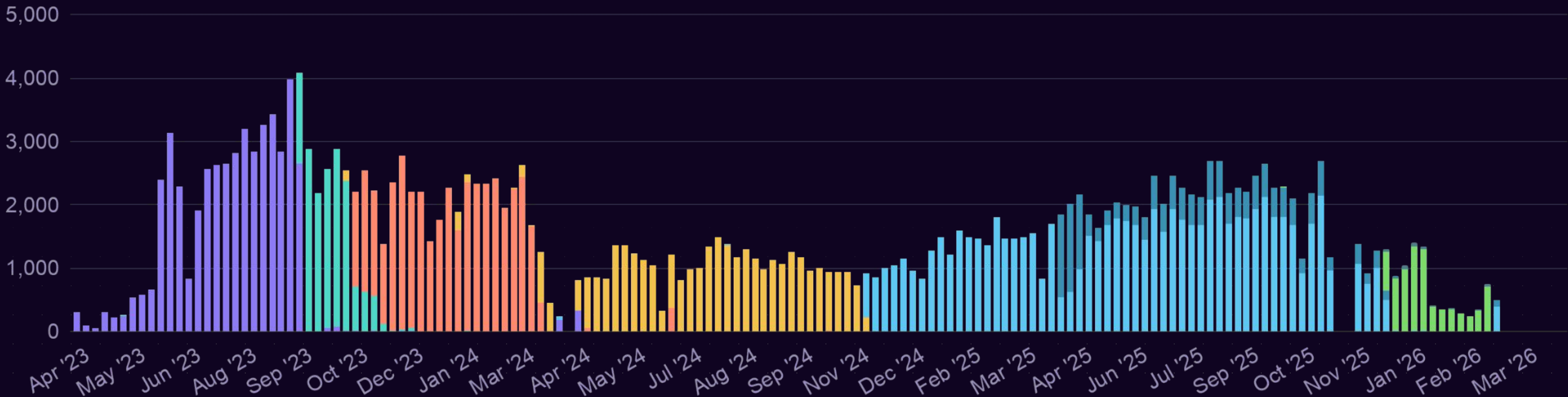


Meet Tom, one of four lovable AI decoy agents developed by Hiya.

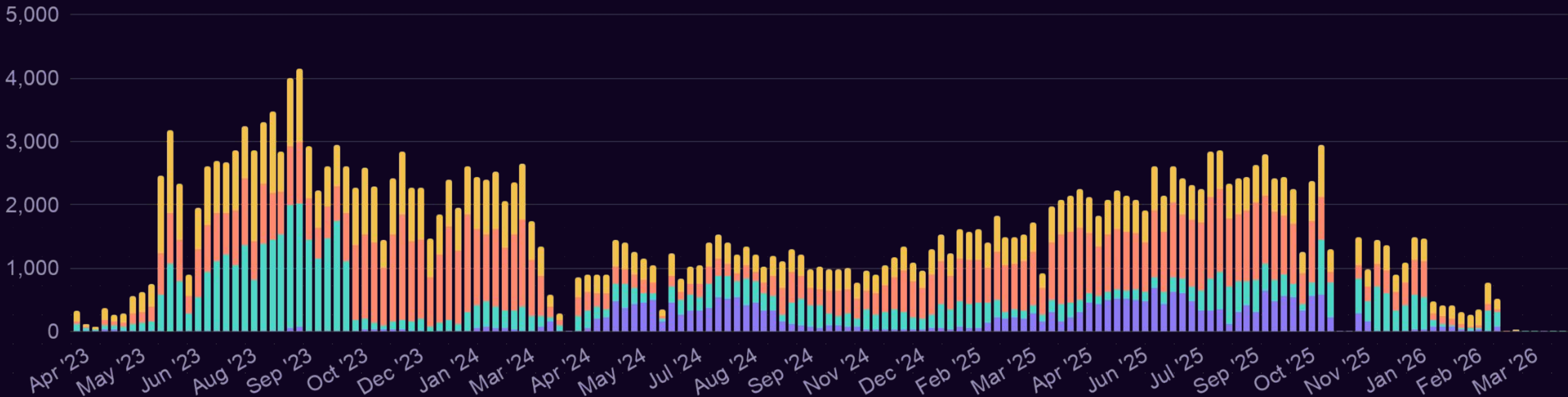
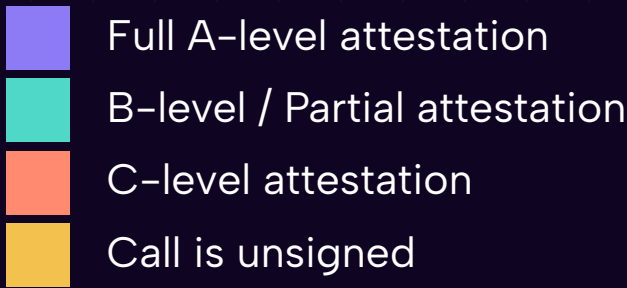


Scams can quickly move beyond our defenses

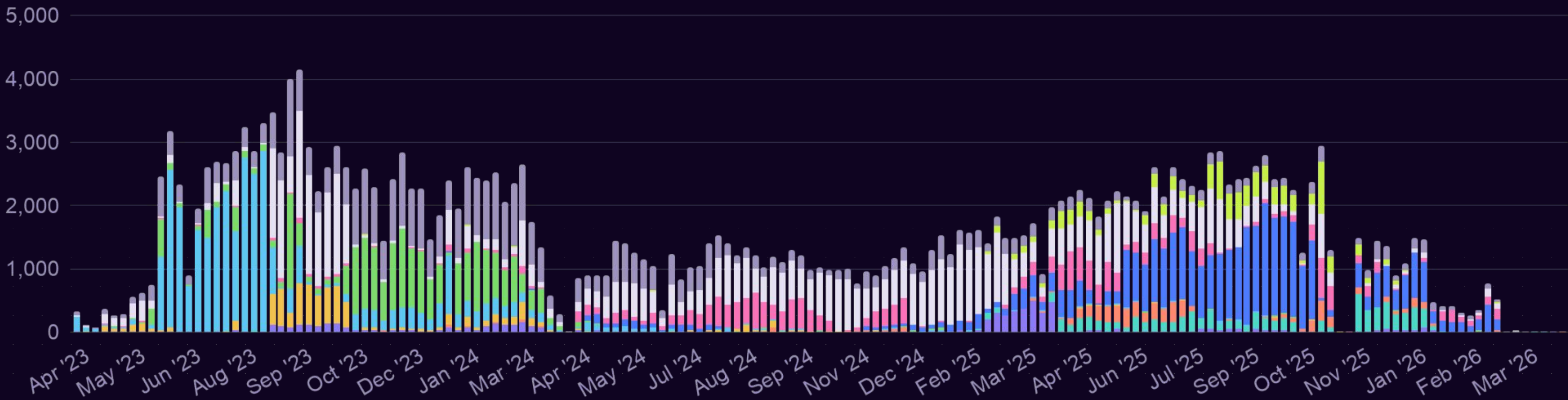
- “...remind you that 50% discount offer on Comcast Xfinity expires today.”
- “...calling you from Spectrum to let you know that your existing account is qualified for 50% off.”
- “...Spectrum has applied a 50% discount on your monthly bill.”
- “...inform you that Spectrum is removing the 40% discount offer on your monthly bill.”
- “...Comcast Xfinity, your 50% discount scheduled for removal” / “...repeatedly attempted to contact, discount permanently removed.”
- “...from Spectrum, your 50% discount on monthly bill is being removed today.”



Scams can quickly move beyond our defenses

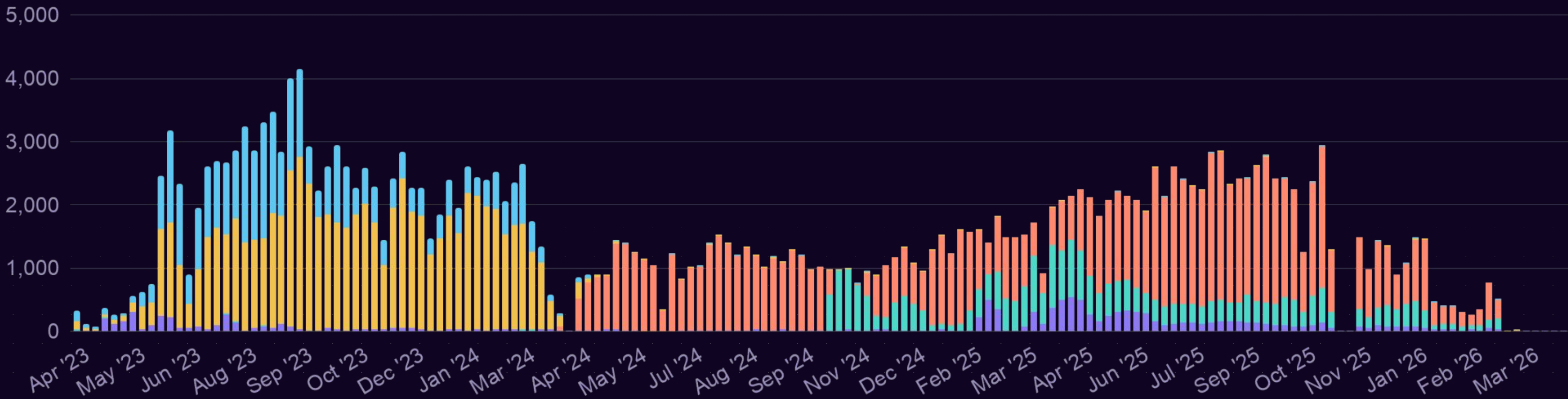


Scams can quickly move beyond our defenses



Scams can quickly move beyond our defenses

- No clear call-back action
- Call-back action (number unknown)
- "...call back at the number on your caller ID"
- Single, common dominant call-back number
- Highly varied call-back numbers



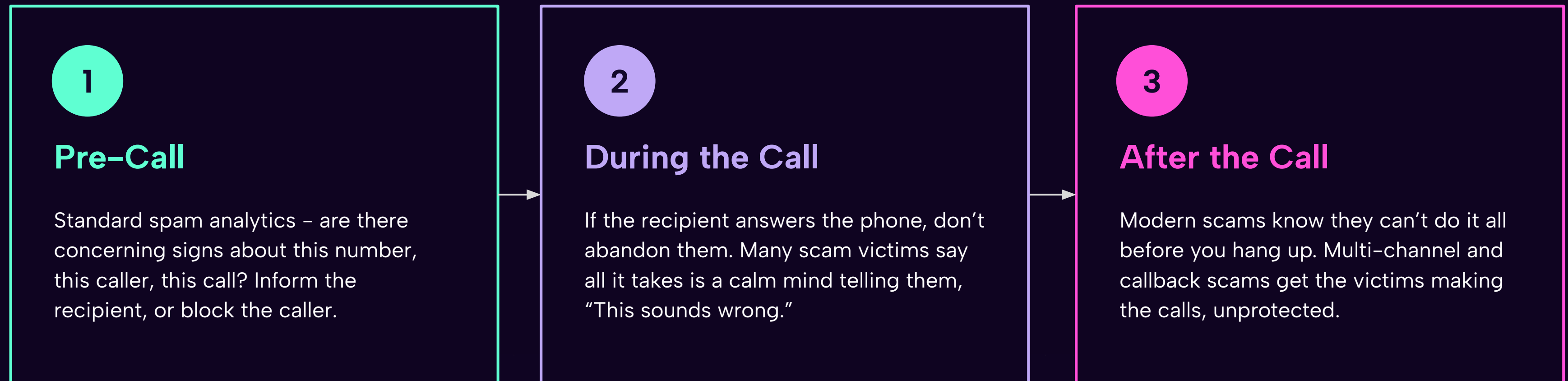
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SECTION

04

Intelligence into protection

Protection can be applied across the entire call flow



Protection can be applied across the entire call flow

1

Spam Analytics & Branded Calling

Reputation scoring and authenticated caller ID — the pre-call foundation most operators already have today.

2

Intelligent Call Screener

An AI-driven screening conversation before the subscriber ever answers — combining real-time voice analysis, intent, and reputation signals.

3

In-Call Scam Protection

Real-time scam-intent detection during an active conversation. Voice authenticity signals and behavioral cues trigger a discreet, in-call warning if fraud is suspected.

4

Decoy Agents

AI personas that engage suspected scammers directly — wasting their time and capturing tactics that sharpen every model downstream.

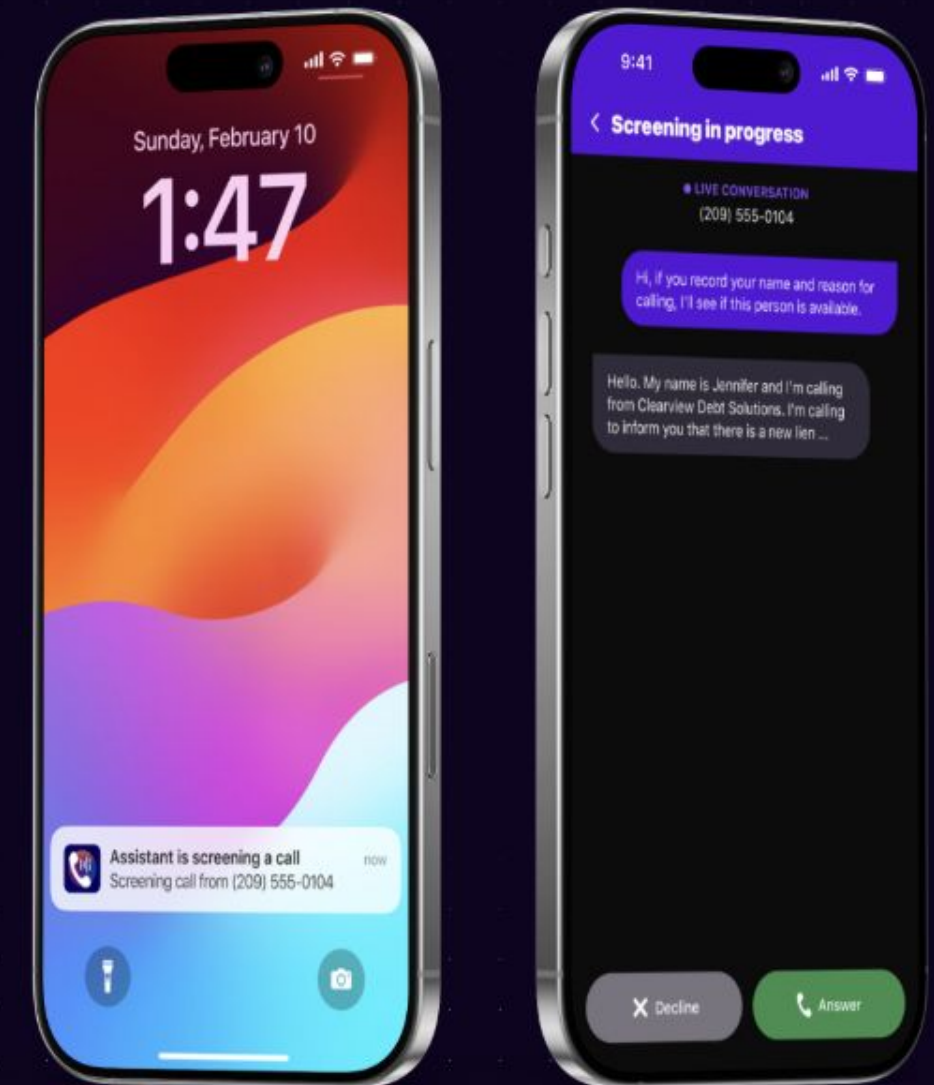
An AI screener that catches scams, not just names

Beyond name & reason

A standard screener can capture a caller's name and stated reason for calling — that's identification, not protection.

Scam behavior detection

Hiya's screener listens to the conversation itself — flagging urgency, secrecy, and other fraud cues before the subscriber ever answers.



A screener that only asks “who and why” gives scammers the stage, not a shield.

A ride-along voice of reason in your calls

In-Call Scam Protection warns subscribers while there's still time.

Voice authenticity

Is the voice on the line human or AI-generated? Detecting deepfake and synthetic voices in real time.

Intent detection

Is the conversation heading toward a scam? Models assess and update risk as the dialogue evolves.

Behavioral cues

Urgency, secrecy, aggression, and other patterns common to fraud attempts.

Trigger a discreet, real-time warning before money or information changes hands.



What real calls reveal

Consumers are being attacked by these malicious calls – and might fall victim without help. Statistics are for only 10 weeks of phone calls.

27%

*Of users have answered
a synthetic voice call*

9%

*Of users have answered a call
with clear scam signals*

2% (1-in-50)

Of users have answered a call that was both.

In-call attacks will get stronger

In-call protections are needed:

- When analytics is uncertain
- When the user answers anyway
- When the user called a call-back number

CLOSE

Key takeaways

01

“Dumb” screeners are dangerous

A call screener that delivers the scammer’s message without further thought is just adding to their success rates.

02

AI can be the voice of reason

While the scammers try to keep their victims from thinking clearly or asking for help, AI can break through.

03

Continuous learning is key

Hearing the scammers’ tactics through the decoy agents gives Hiya the knowledge needed to train better services.

Questions?

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