

callsign®

INTELLIGENCE BEYOND RECOGNITION



SECTORS

BANKING	>
E-GAMING & MEDIA	>
GOVERNMENT & ENTERPRISE	>
INSURANCE	>
LOYALTY	>

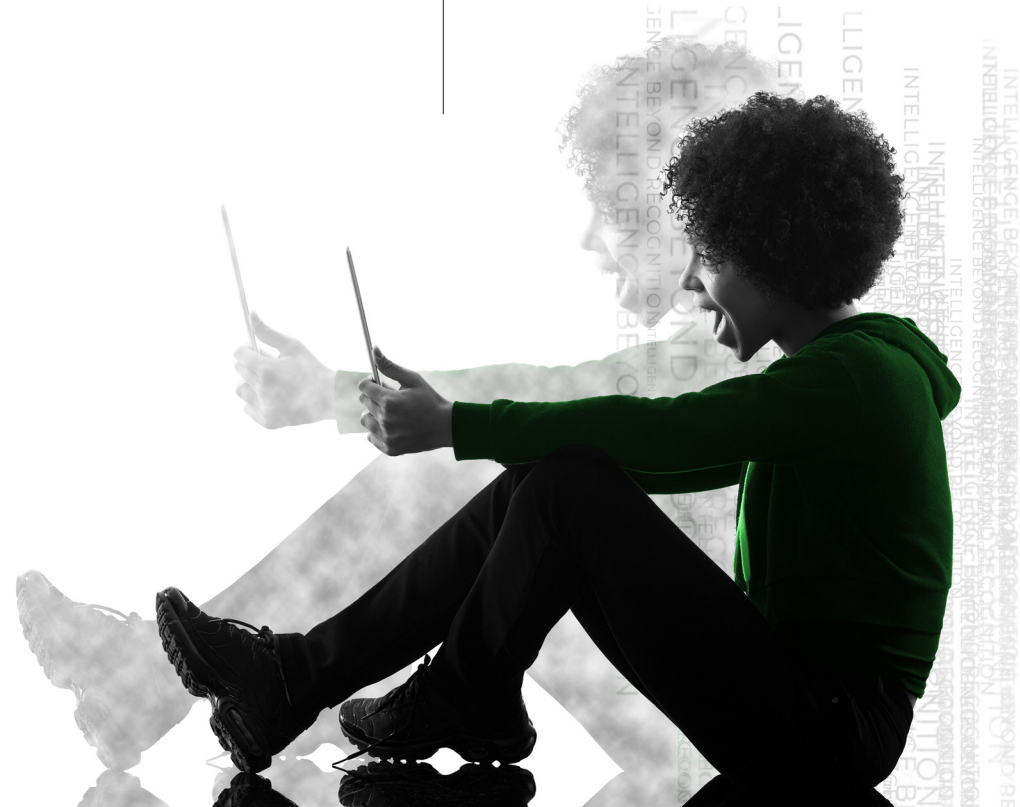
USE CASES

PREVENTING FRAUD	>
IMPROVING SECURITY	>
ENHANCING UX	>
SUPPORTING COMPLIANCE	>

THE CALLSIGN SOLUTION

INTELLIGENCE ENGINE	>
POLICY ENGINE	>
AUTHENTICATION ENGINE	>
VERIFICATION ENGINE	>

ABOUT CALLSIGN



Callsign is changing the rules of identity

What we do is simple, really.

We make sure people are who they say they are.

And we do it seamlessly so that users can **get on**.

How? With intelligence beyond recognition.



Sectors

Organisations are facing an identity paradox

Regulators are enforcing compliance with regulations like GDPR and PSD2



Organisations need to keep identity data safe and be accountable for doing so



Users want increasingly seamless, friction-free authentication journeys

Callsign solves this paradox. With Intelligence Driven Authentication™ (IDA) technology, all three are sorted in one neat solution. We're helping businesses in banking, insurance, e-gaming and more deliver seamless authentication to their employees and consumers.

BANKING



E-GAMING & MEDIA



GOVERNMENT & ENTERPRISE



INSURANCE



LOYALTY



Banking

If anyone's in need of an all-singing, all-dancing authentication solution, it's banks.

Not only are they faced with the regulatory pressures of GDPR and PSD2, they're also operating in an increasingly competitive landscape, with consumer-centric FinTechs shaking things up in the industry. Increasingly, banks are the guardians of their customers' digital identities, so being able to guarantee data security is a must. But, at the same time, being able to deliver the friction-free authentication that consumers have come to expect is essential to thriving as a business.

This is where Callsign comes into its own.

- **Thousands of data points:**
Our technology uses multiple data points, helping banks to accurately verify user identity in real time
- **Friction-free verification:**
Callsign intelligence means new customers can be on-boarded and existing customers verified seamlessly, without the need for SMS or card readers
- **Preventing fraud:**
Through real-time identification and timely due diligence, Callsign helps banks reduce fraud rates and prevent money laundering
- **Ensuring accountability:**
Being able to prove due diligence is essential to meeting compliance standards – Callsign helps banks do this by default
- **Reducing costs:**
Callsign's risk-based decisioning minimizes the use of expensive hardware and SMS verification

“The estimated amount of money laundered globally in one year is 2–5% of global GDP – or \$800bn–\$2tn.”

United Nations

“Customer experience factors... are the most influential in a customer's choice of provider after the attractiveness of rates and fees.”

EY Global Consumer Banking Survey 2018

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PREVENTING FRAUD	>
IMPROVING SECURITY	>
ENHANCING UX	>
SUPPORTING COMPLIANCE	>

E-gaming & Media

E-gaming and media businesses are particularly susceptible to account takeover and identity fraud. This can manifest in many ways:

- Fake social media accounts created for fraudulent purposes
- VPNs used to gain access to content in restricted locations
- Fraudsters targeting the industry's abundance of identity data

Businesses in these sectors have a responsibility to tackle this problem. At the same time, they're expected to deliver a seamless, increasingly mobile experience for consumers. Callsign makes this possible.

- **Real-time validation:**

We use thousands of data points to ensure the user is who they say they are, where they say they are, making it easier than ever to identify fraudsters, hackers, and even problem gamblers

- **Accountability:**

The Callsign solution provides proof of consent, helping businesses in e-gaming and media stay compliant and avoid costly legal challenges

- **Seamless UX:**

By identifying users quickly and accurately, our solution helps deliver seamless authentication, keeping consumers and gamers safe and engaged

As many as 48 million Twitter accounts are bots

CNBC

Facebook closed down 583 million fake accounts in Q1 2018

The Independent

Online gaming to grow 8.6% per year from 2017 to 2025

PR Newswire

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PREVENTING FRAUD	>
IMPROVING SECURITY	>
ENHANCING UX	>
SUPPORTING COMPLIANCE	>

Government & Enterprise

The cost of fraud to businesses each year is in the billions. And much of it can be attributed to employee-related fraud, whether directly or through a third party hack.

The Callsign solution proactively defends against employee-related data breaches, while actually removing friction from the authentication process. Which happens to have the added benefits of increasing productivity and helping businesses with regulatory compliance.

Callsign for government and enterprise:

- **Improved user experience** – First and foremost, Callsign's friction-free authentication allows employees to **get on** with their jobs without cutting security corners
- **Remove pointless operational costs** – Businesses can ensure that their employees are who they say they are, where they say they are, and doing what they say they are doing in one easy-to-manage platform
- **Ensuring accountability** – Our solution provides proof of consent, helping businesses stay compliant with data security regulations

All businesses want to reduce fraud and increase productivity. Callsign helps them do both – preventing data breaches while saving time, money, and resource.

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PREVENTING FRAUD



IMPROVING SECURITY



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SUPPORTING COMPLIANCE



Insurance

It's rich pickings for fraudsters in the insurance landscape.

What will they try their hand at next? Motor insurance, application or opportunistic fraud? Ghost brokering, staging an accident or playing the part of a phantom passenger? Increasingly a target for fraudsters, it's little wonder that insurance fraud is at an all-time high.

At the same time, technology-led players (InsurTechs) are shaking up the sector. Through innovation and digitization, they put the consumer at the heart of what they do.

Fighting insurance fraud

Callsign stops insurance fraud in its tracks. Our intelligence engine can:

- Pinpoint potential fraudsters at the point of registration and throughout the claims process
- Correlate location, device and behavior to deliver real-time identification
- Determine registration patterns to minimize false positives
- Block new applications from false locations or scripts

Improving user experience

At the same time as fighting insurance fraud, we're improving the identification experience for insurance companies and consumers:

- **Easy management:** Making it simple for companies to ensure the user is who they say they are, while staying accountable and keeping operational costs low
- **Friction-free:** Making identification and authentication quicker and more seamless for consumers, keeping them safe and – crucially – engaged

“Insurance fraud increased by 1600% from 2016 to 2017.”

Cifas Fraudscape Report, 2018

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IMPROVING SECURITY



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Loyalty

Loyalty accounts are a bit like sitting ducks.

Not only are they at risk of third party account takeover, seen as being easy to drain, as well as an easy-access route to further identity fraud, but there's member and staff fraud to consider too. Loyalty loopholes can be exploited from all sides.

There's also the fact that consumers usually save up their points, rewards, or air miles, so these accounts can end up being pretty valuable assets. And yet, they're not subject to the same authentication security as other payments or transactions.

Callsign makes loyalty accounts and transactions as secure as any other.

- **Real-time validation:**

Using thousands of data points, we can instantly verify that the account holder is who they say there are

- **Accountability:**

Being able to prove who made a transaction helps businesses avoid the cost of disputed loyalty account claims

“Of all non-card present fraud in 2016, 4% of attacks were on loyalty and reward point accounts. That number jumped to 11% in 2017.”

Javelin Strategy and Research

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IMPROVING SECURITY

ENHANCING UX

SUPPORTING COMPLIANCE

Use Cases

We know the Monday person is different from the Friday person

Callsign technology is all about seamlessly determining that someone is who they say they are – whatever the day, time, or context. On Monday or Friday, at home or abroad, on mobile or desktop.

That ‘someone’ could be a business’ employees or consumers. Our solution can be rolled out to either (or both), and can even be focused around high-risk users or activities.

It’s Callsign’s powerful policy engine that decides what kind of authentication journey is used (and when), depending on who’s doing what, where, and how). Enabling us to deliver appropriate, seamless authentication every time.

Typing. Swiping. Location. Behavior. Biometrics. Devices. Passwords.

These are just some of the data points underpinning Callsign technology.

We use thousands.

Our intelligence engine analyzes data points across device, location and behavior. It combines device characteristics and ID information with where the transaction is taking place, as well as behavioral data like movement, pressure, key strokes – including details like wrist strength, muscle memory and hand size.

By pulling this level of data from multiple sources in real time, our solution builds an accurate, detailed picture of a user’s digital identity. This is used to verify whether a user’s behavior fits within their normal pattern – and **makes spotting bots easy**. If the behavior is ‘normal’, the user can get on; if it’s not, our platform dynamically introduces extra authentication steps.

Callsign’s intelligent technology gets to work straight away – and it never stops learning.

Bot Demo Video

PREVENTING FRAUD



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SUPPORTING COMPLIANCE



Preventing fraud

Callsign technology is unique in being able to identify fraudsters and prevent fraud without adding friction to the authentication journey for genuine end users. We do this with dynamic, intelligent authentication journeys that stop cyber criminals in their tracks.

One big threat to security these days is account takeover. It's a great business to be in – if you're one of the bad guys. Imagine the job description: remote working, flexible hours, and gullible customers. And as for the salary: let's just say it's in the hundreds of millions.

But it's a challenge for any business that manages digital accounts. What's more, consumers expect seamless account access for themselves at the same time as protection from the bad guys.

Callsign guarantees friction-free fraud prevention.

- **No more mistakes** – Every mistake is a lost potential customer or transaction, which Callsign's accurate identification technology helps businesses to avoid
- **Stop the bots** – Analyzing multiple data sources in real time means our solution can spot abnormal behavior quickly and block attempts by scripts or from false locations
- **Focused deployment** – Callsign technology can be rolled out gradually, focusing on high-risk users first and prioritizing fraud reduction
- **Lowest false positives rate** – Callsign has the lowest false positives rate in the industry, all thanks to the intelligence underpinning our solution

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Improving security

As account takeover and the use of bots skyrocket, improving security is a priority for all businesses. And let's not forget that account holder fraud isn't the exclusive domain of anonymous third parties – there's also account borrowing and first person fraud to think about. Yes, there are bad guys out there, but your employees and consumers pose a threat, too.

That's why Callsign technology can be rolled out to both. Leaving no stone unturned when it comes to improving security.

Leading the fight-back

At the heart of improving security is the need to verify that someone is who they say they are, where they say they are, and doing what they say they are doing. Callsign does exactly that, improving security for businesses and their genuine account holders with:

- **Real-time identification:**
Correlating the location, device and behavior of account holders in real time using thousands of data points
- **Dynamic authentication:**
Defining a specific, step-up authentication journey when enhanced due-diligence is expected or required
- **Secure accountability:**
Keeping businesses covered from both financial and regulatory perspectives with proof of consent
- **Zero breaches:**
Our technology has also experienced zero breaches – again, thanks to our in-built intelligence engine

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[PREVENTING FRAUD](#)[IMPROVING SECURITY](#)[ENHANCING UX](#)[SUPPORTING COMPLIANCE](#)

Enhancing user experience

When we say that Callsign reduces fraud at the same as enhancing the user experience and increasing productivity, you might wonder how we do it all – but **we do**. Whether it's rolled out to employees or consumers, removing friction for the end user is one of the things Callsign does best.

- **Seamless authentication**

Callsign's intelligence means being able to identify users in real time, quickly and accurately, so they can get on with whatever it is they're doing – whether it's work or play

- **Data protection**

Callsign can immediately tell the difference between genuine intent and manipulated intent, preventing social engineering and protecting data, interactions and transactions

- **Competitive edge**

User experience is a key differentiator in the digital age, so using Callsign gives businesses a genuine competitive edge, not to mention time and cost savings

- **Avoid abandoned transactions**

Superfluous authentication can lead to abandoned transactions, but Callsign makes them a thing of the past – while reducing calls to helpdesks too

- **Peace of mind**

Believe it or not, there is such a thing as too frictionless when it comes to identification (e.g. high-value transactions) – but Callsign delivers appropriate journeys every time

Users don't want to jump through hoops when they're behaving as they normally would. Callsign means they don't have to.

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SUPPORTING COMPLIANCE



Supporting regulatory compliance

All businesses must comply with GDPR. Any business that facilitates payments must also comply with PSD2. At the same time, consumers expect seamless authentication journeys – especially for low-risk transactions.

Callsign makes all of this doable.

Taking care of PSD2

Our solution takes care of PSD2 by default. The regulation requires businesses to grant XS2A, allowing accounts to be accessed by third parties and payments to be initiated remotely. Whenever XS2A is granted, SCA must also be applied. Callsign's authentication engine has this covered.

Crucially, our platform also ensures businesses are accountable for performing SCA. Arming them with evidence that they've checked and proved that someone is who they say they are, supporting GDPR compliance along the way.

And we do all of this while removing friction from the identification process.

GDPR

General Data Protection Regulation (2018)

PSD2

Revised Payment Services Directive (2018)

XS2A

Access to accounts

SCA

Strong customer authentication

USE CASES

PREVENTING FRAUD



IMPROVING SECURITY



ENHANCING UX



SUPPORTING COMPLIANCE



The Callsign solution

Intelligence Driven Authentication™ (IDA)

At Callsign, we've got the technology to deliver **intelligence beyond recognition.**

Callsign's IDA platform draws on multiple data points in real time to help businesses verify that their employees or consumers are who they say they are – without adding friction to the process. Helping those employees and consumers get on with their jobs and digital lives, while the business itself reduces fraud and increases productivity.

Southfields IDA Demo

INTELLIGENCE ENGINE >

POLICY ENGINE >

AUTHENTICATION ENGINE >

VERIFICATION ENGINE >



Intelligence engine

Sitting at the core of the IDA platform is the intelligence engine, built to ensure our solution strikes the perfect balance between security and usability. The engine approaches authentication in two phases:

1 Recognition

Whenever an interaction or transaction is made, the intelligence engine is looking for recognized characteristics that are consistent with user identity profiles. These will sit in one of three areas: device, location or behavior.

2 Trust

Once recognized characteristics have been collated, the intelligence engine examines how trustworthy they are and determines a confidence score using statistical modeling and machine learning techniques. It's this score that is pushed through to the policy engine.



The intelligence engine plays a big part in removing friction for the end user, using a confidence score based on recognition and trust to verify that the user is who they say they are without the need for intrusive, repetitive authentication. The engine is constantly refined over time as more data is gathered.

THE CALLSIGN SOLUTION

INTELLIGENCE ENGINE	>
POLICY ENGINE	>
AUTHENTICATION ENGINE	>
VERIFICATION ENGINE	>

Policy engine

Callsign's policy engine is what determines an appropriate authentication journey for the end user. It's API-driven, based on the confidence score from the intelligence engine, as well as context derived from internal and external intelligence sources.

The policy engine is used to determine what kind of authentication journeys are used in what circumstances – depending on what action is being performed, by who, and how. The journeys it creates are formed by something you own (card or device), something you know (password or PIN), or something inherent (biometrics).



As more and more data enters the Callsign platform, IDA's policy engine can be adapted to further reduce its error rate. To minimize impact on the end user, changes can be phased and tested to ensure they're robust before being fully rolled out.

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INTELLIGENCE ENGINE	>
POLICY ENGINE	>
AUTHENTICATION ENGINE	>
VERIFICATION ENGINE	>

Authentication engine

And now to the part of the platform pulling the authentication strings. The authentication engine takes the original confidence score from the intelligence engine, that's since passed through the policy engine, to orchestrate authentication requests at every point of an interaction or transaction, ensuring a user's digital identity is verified throughout.

To meet regulatory standards, Callsign's authentication is based on at least two of the following:

- **Possession:**
something you own – e.g. card or device
- **Knowledge:**
something you know – e.g. password or PIN
- **Inherence:**
something about you – e.g. biometric data

Callsign authentication journeys can include both hardware tokens (e.g. smart cards or key fobs), as well as telephone authentication (e.g. on-screen PINS, call verification, and one-time passwords).

Callsign's authentication engine can be programmed to ensure that only appropriate authentication factors are used in any given context. Taking user demographics into account, for example. This ensures a friction free experience for the user.

THE CALLSIGN SOLUTION

INTELLIGENCE ENGINE	>
POLICY ENGINE	>
AUTHENTICATION ENGINE	>
VERIFICATION ENGINE	>

Verification engine

Last up, it's time to verify once and for all that the user is who they say they are. This is the job of the verification engine.

Telecoms data

One way it does this is with telecoms data, cross-referencing with existing mobile network data to authenticate the documentation or data provided by the user during an interaction. Access to this kind of data is a key factor in being able to identify and authenticate speedily, in real time, without impacting user experience.

eID&V

The Callsign verification engine also offers a range of eID&V services, allowing it to check against a number of other data sources. These include:

- **Documentation** – e.g. passports, driving licenses
- **Data** – e.g. addresses, credit data, utility data
- **Databases** – e.g. telecoms, police, electoral, government

This enables us to move away from offline checks, which can lead to a significant number of abandoned transactions and lost revenue. For example, during KYC (Know Your Customer) checks when a new account is being opened.

Not only does this help businesses avoid abandoned transactions, but also to build even stronger digital user identities that will speed up the verification process in the future. Retaining custom, reducing fraud, and removing friction – all at once.

THE CALLSIGN SOLUTION

INTELLIGENCE ENGINE	>
POLICY ENGINE	>
AUTHENTICATION ENGINE	>
VERIFICATION ENGINE	>

About Callsign

Callsign is a British technology company, with roots firmly grounded in the North West of England – home of the industrial revolution. Now we're stepping up to drive the identity revolution.

We've watched technology making people's lives easier. But we believe it's just as important that it makes people's lives better. That's why we're doing what we're doing. And why we're committed to being the best we can be – at work, at home, and in the community.

Our mission:

To seamlessly power the identification of every web, mobile and physical interaction.

Callsign: facts and figures

- Team of 100+
- Predominantly engineers
- London-based
- \$35m Series A in 2017
- 5x yearly growth for 3 years

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