



Communications Surveillance

Corporate Overview

Company background:

- ♥ Headquartered in London with offices in Singapore (2016), New York and Madrid (2019)
- ♥ Established since 2006 and recognised as the industry pioneer for mobile capture
- ♥ Enhanced our product offering to include Voice and eComms surveillance using AI and ML following a recent acquisition in 2019
- ♥ The VoxSmart solution has been built for Financial Markets by specialists in the sector
- ♥ Proprietary technology developed in-house
- ♥ Multi award winning technology, most recently: **Global FinTech Award Winner 2019**

Global Presence

100+ global clients including Tier 1 banks, oil and gas companies, recruitment and legal.



VoxSmart LTD



VoxSmart Trading SL



VoxSmart INC.



VoxSmart PTE



Mobile Capture

Mobile Capture enables firms to be ‘smart’ with mobile by permitting hitherto banned or restricted channels like **WhatsApp** & **WeChat**.

10k

Users

5m

Messages captured a month



WhatsApp Capture



Compliant Texting



Multiple Channels



Archiving



Advanced Search



Always On



Communication Surveillance

Communication Surveillance (Electronic & Voice) ingests, aggregates, indexes and rationalises all ‘traditional’ comms channels like BBG, Mail etc.

20+

Communication ‘sources’

10m

Terabytes of data processed monthly



Supervision



Policy Builder



Advanced Search



Alert Management



Case Management



AI & Machine Learning



Trade Reconstruction

Trade Reconstruction and reconciliation automation for advanced supervision capability. Collapses the regulatory investigation window.

800+

Man hours saved



HSBC will be the first Tier 1 to automate this process for CFTC & SEC Swap Reporting. Reducing man hours by 250%



Regulatory Reporting



End-to-end Context



Audit



AI & Machine Learning

Our mission:

To set the global standard for communication surveillance

Why firms use our technology

With nearly **100 clients worldwide** and over **7000 end users**, there's a reason why Tier 1 institutions choose VoxSmart.



Compliant WhatsApp Solution

We introduced compliant WhatsApp capture to Capital Markets.



Leaders in Voice Surveillance

Delivering the market's most accurate financial voice transcription.



A FinTech run by market practitioners

With over 100 years' accumulative experience in Financial Markets.



Autonomous Trade Reconstructions

Removing the reliance on sourcing information from the trading floor.



Single, unified, platform

For enhanced control and context around your communications.



Remote working solution

To enable mobility for an evolving workforce.



Cloud Hosting

Protecting and securing our customer's data is of the utmost importance. Enterprise-grade cloud storage on **Amazon Web Services (AWS)** is available as standard with single or multi-tenant options.

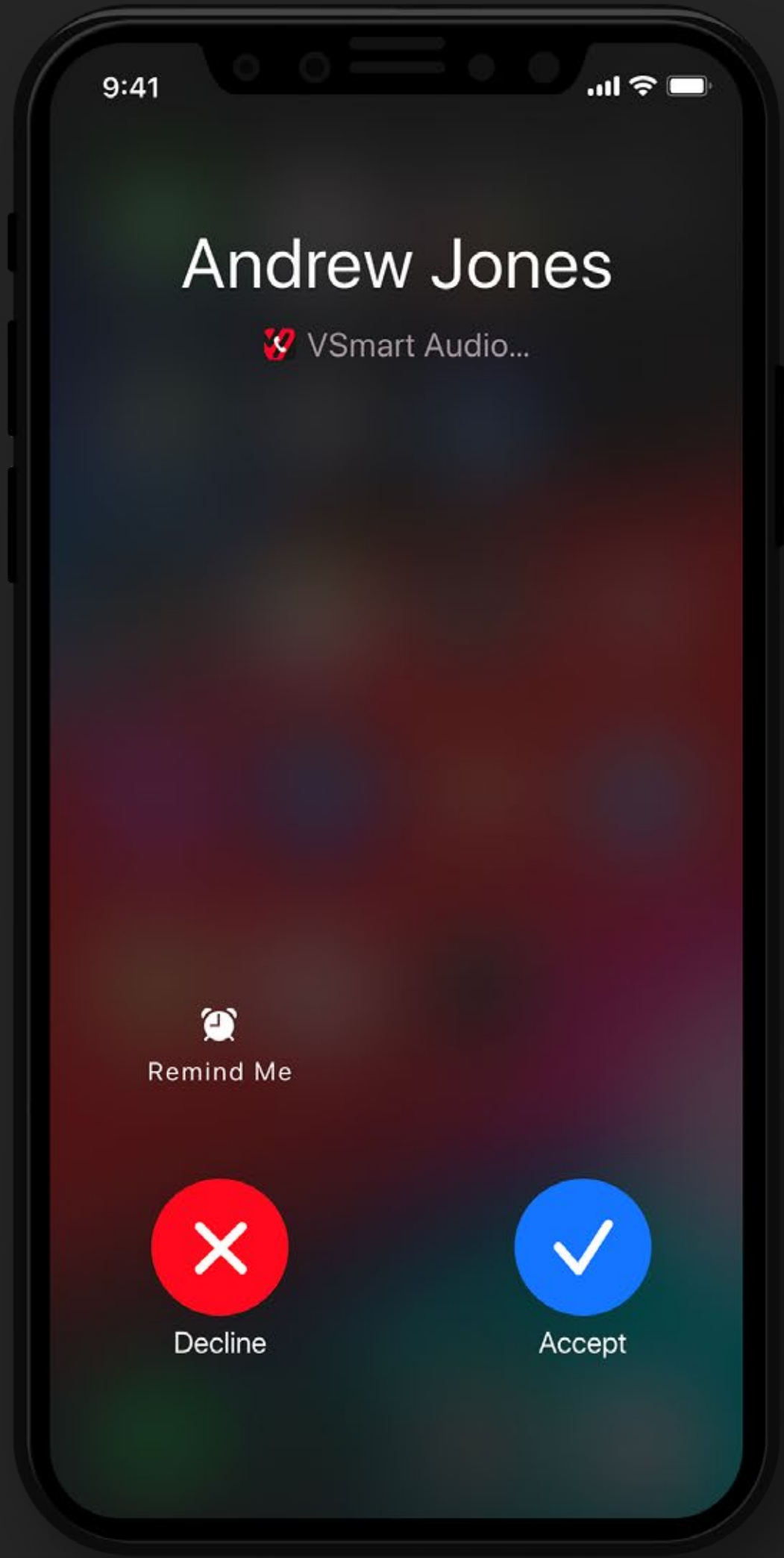
We can also provide on-premise deployments via SFTP or SMTP.



Agile Development

We are **constantly innovating and evolving** our product roadmap according to market trends and client requests. If there are additional communication channels you are looking to capture, we will be happy to investigate the use case further.





Mobile Capture Overview





Ensure compliance and global markets access from anywhere

VoxSmart Mobile Capture is an award-winning solution that records and stores calls, messages and rich media on mobile devices in real-time, providing firms and their employees with a safe and compliant communication channel to conduct their business.

- 20+ Points of Presence (PoP) currently in operation worldwide (with 20 more planned for 2021)
- Prevents and detects attempts of tampering
- No global roaming fees
- Supports Wi-Fi and VoLTE calling when no network is available
- Calls are routed via the users home voice network to save on roaming fees



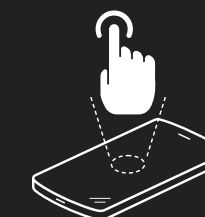
Low-cost Global Coverage

Roam with out restrictions. All outbound international calls are routed via the home PoP and the international leg of the call traverses the low-cost global VMC voice network.



Tamperproof

Our 'Always On' technology is embedded into the operating system of the device meaning that it cannot be removed and alerts to any attempts of tampering.



Native User Experience

Our solution allows direct use of 3rd party applications, so there is no change in user behaviour and a reduced risk of non-compliance.





Award-Winning Mobile Capture Suite





Our feature-rich technology allows voice, voicemail, SMS and WhatsApp messages to be captured in real-time on both Android and iOS devices. Whether you're looking for performance or convenience, our technology has been designed to complement the requirements of your business and your workforce.

We work closely with key strategic partners to provide cloud services, telephony and storage solutions that meet the highest information security standards.

Technology Partners:



Communicate freely while ensuring compliance

	App Based	 VoxSmart	SIM Based
Voice & Voicemail	✓	✓	✓
SMS	✓	✓	✓
 WhatsApp	✗	✓	✗
 WeChat	✗	✓	✗
 Telegram	✗	2021	✗
Available on any network	✓	✓	✗
Native User Experience	✗	Zero change to user behaviour	✓
Global Coverage	✗	✓	✗
Toll-bypass	✗	✓	✗



Instant Message Capture

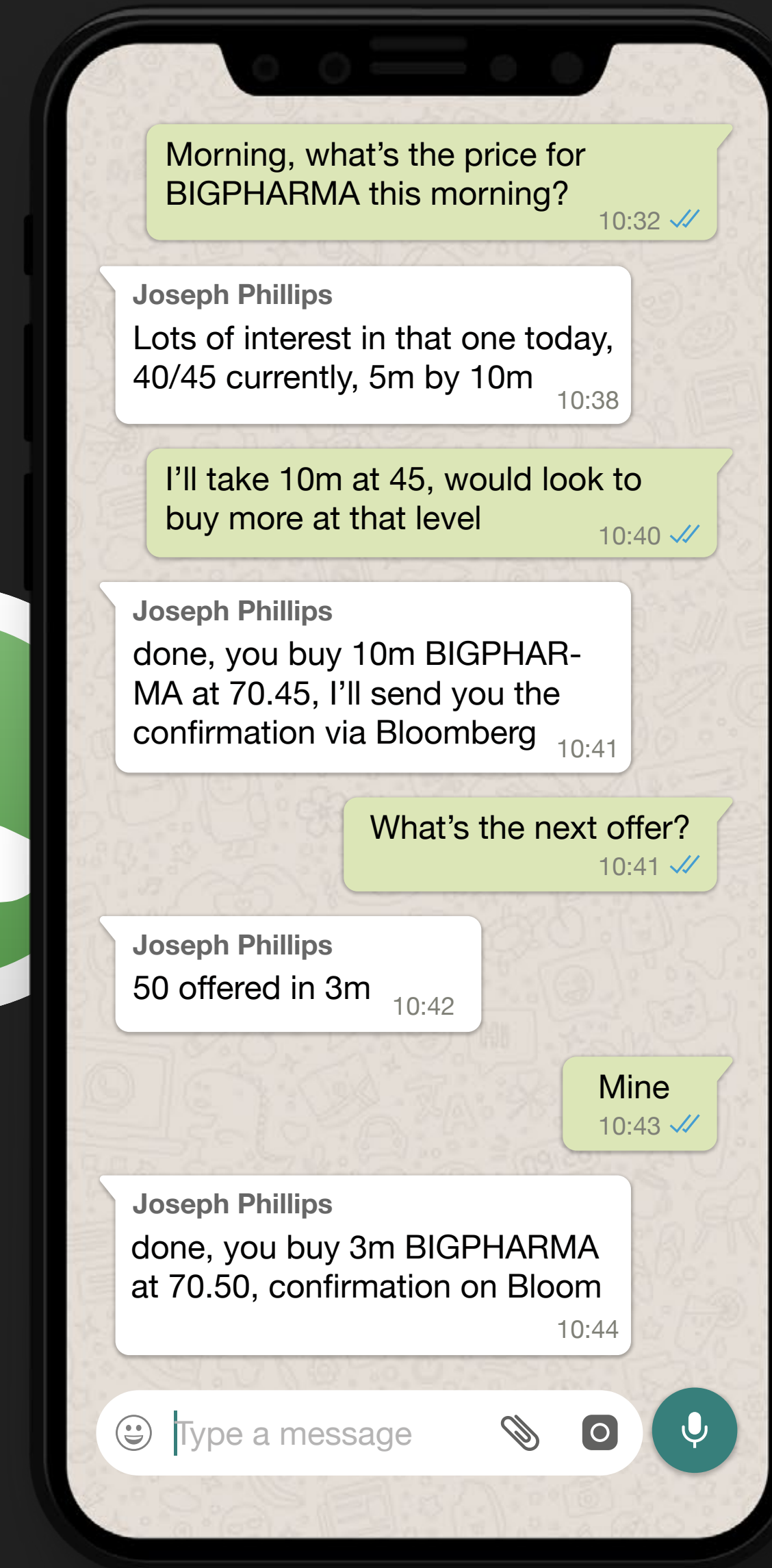
Both mobile and desktop versions of our WhatsApp Capture solution are built using our award-winning, proprietary technology, meaning instant message content is captured in real-time and available for retrieval in full conversational context.

- Available globally with any data connection
- Captures messages from mobile or desktop applications
- Secure end-to-end encryption
- Enterprise grade cloud storage as standard

5000+
End users

50+
Customers using IM Capture

4.5+ million
WhatsApp Messages captured a month



Morning mate, any news?
14:02 ✓✓

Dereck Mason
Official announcement due out tomorrow about the vaccine, 95% success rate
14:02

What's the source?
14:02 ✓✓

Dereck Mason
My brother works there as a research chemist, says this will be game changing.
14:00

Perfect!
14:02 ✓✓



Universal Compatibility



Device Agnostic

VoxSmart Mobile Capture is compatible with any device running Android 8 or iOS 12.1* or above.



**Deployment method and functionality may vary between operating systems.*

Network Agnostic

Our technology works across standard GSM and CDMA networks as well as supporting Wi-Fi and VoLTE calling.

Deployment Agnostic

Our technology can be deployed by any EMM, MDM or UEM agnostic or downloaded directly via Google Play or Apple Stores. We also offer a hosted MDM service.





Communication Surveillance

Overview

VoxSmart

Dashboard

Cases Viewer

Communications Viewer

Employees Viewer

Trades Viewer

Policies Viewer

Alerts

Admin

Communications

Communications Viewer Alerts, Cases, Trades, Employees and other objects related with a Comm

COMMUNICATIONS

Reload

Page 1 of 25182 | View 25 records | Found total 629,540 records

Type	Date (UTC)	Communication Id
+	2018-05-08 12:00:30	BBG_Chat_Com4.xml-FCHAT-0x000000SURVCH14+001
+	2018-04-15 19:00:16	113592_test.eml
+	2019-04-17 15:17:22	FCHAT-test_firstH-secondNH.xml-FCHAT-0x000019FONE2M
+	2019-09-02 10:11:01	subtask-1.eml
+	2019-09-02 10:11:01	subtask-2.eml
+	2019-04-15 15:17:21	6457_chat_1.xml-FCHAT-0x000019FONE2M+001
+	2019-08-12 14:17:22	FCHAT-test_firstH-secondN.xml-FCHAT-0x000019FONE2M+0
+	2019-12-26 04:11:01	creative_accounting_4.eml
+	2019-04-15 15:17:21	6457_chat_creative.xml-FCHAT-0x000019FONE2M+001
+	2020-02-20 09:05:11	Enron_Trader_Power_Plant_creative_3.mp3
+	2019-09-16 12:30:03	Enron_Trader_Power_Plant_creative_5.mp3
+	2018-09-30 11:12:01	subtask-barry_ac10_ac22.eml
+	2018-09-25 11:12:01	subtask-barry2.eml
+	2018-09-30 11:12:01	subtask-barryac6-dustin.eml
+	2018-09-30 11:12:01	subtask-barryac6-dustin1.eml
+	2019-09-05 12:11:01	subtask-ny.eml
+	2018-09-30 11:12:01	subtask-barryac19.eml
+	2018-09-30 11:12:01	subtask-barryac6-dustin-han.eml
+	2017-02-02 07:26:41	a209721.lib.170203.xml-PCHAT-0x40000013D0D82+011



Achieve visibility across every channel to mitigate market abuse and conduct risk

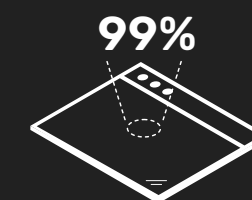
VoxSmart Communications Surveillance is a proprietary software that connects, ingests and monitors all voice and electronic communications created during a trade negotiation for firms to proactively surveil for non-financial risks such as market abuse and misconduct.

- Supports over 20 languages and delivers over 90% accuracy in US and UK English
- Proven to connect to any data source requested to date by our clients
- Pre-built policies to customise your market abuse and misconduct requirements



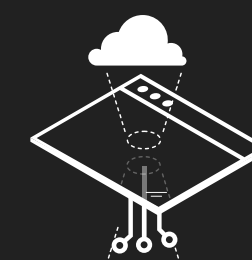
Data Agnostic

Our solution has been designed to connect to all types of vComms, eComms, trade and reference data as well as export it to clients archiving systems.



Highest Accuracy

Unique and powerful voice and text processing pipeline recognises financial jargon and provides accurate transcriptions, reducing False Positives by 60% in first 2 months.



Agile Deployment

We can be flexible and adapt to either cloud or on-premise deployment, with minimal to no involvement from the IT teams in situations such as remote working.



Data Integration






VoxSmart Communications Surveillance has an open philosophy to import and export data from and to external sources.

We have standard (out-of-the-box) connectors to extract and analyse any type of text and audio sources.

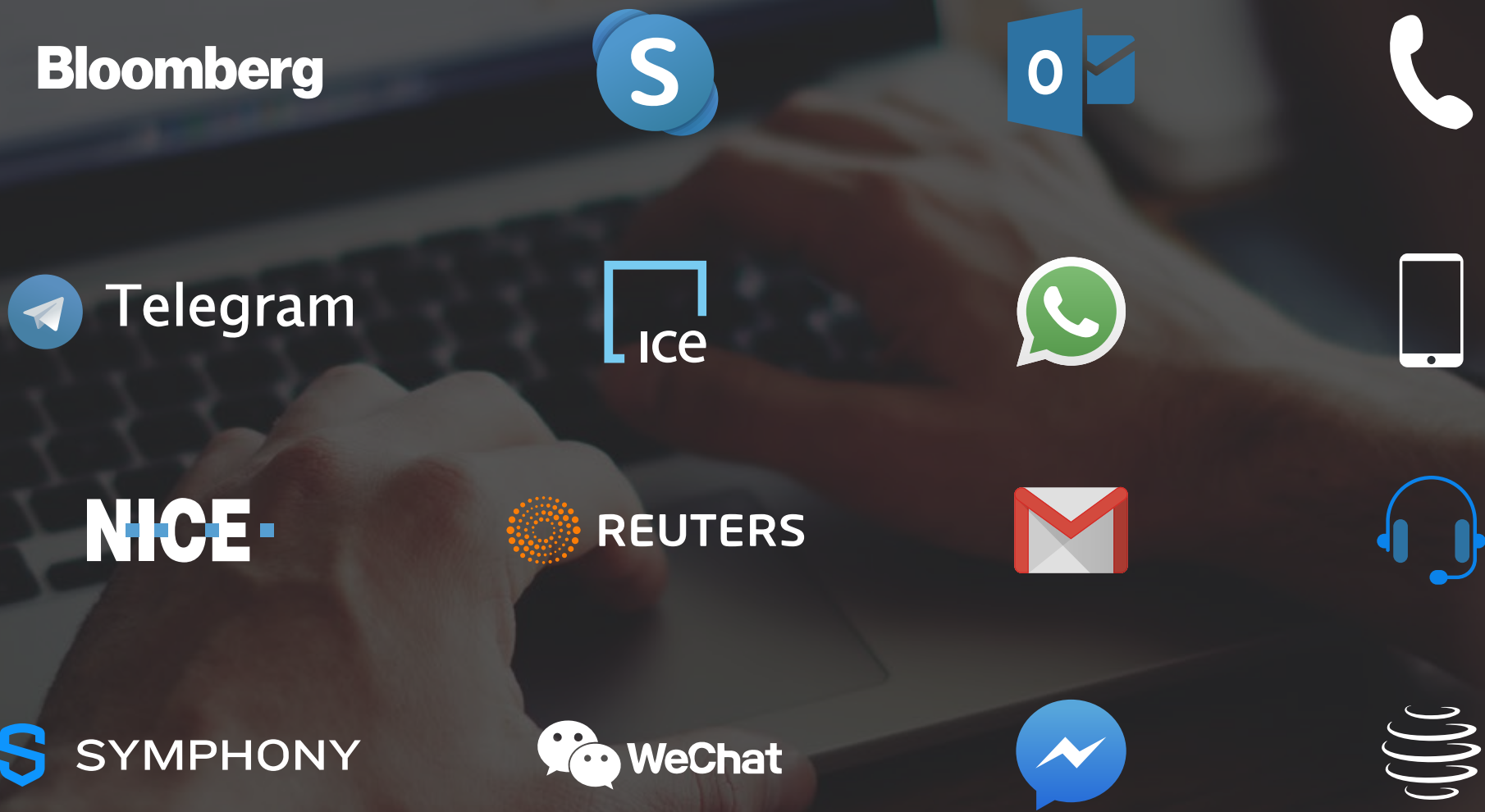
These out of the box connectors use direct integration through APIs, database access or filesystem integration.

We can also create bespoke connectors for any data source required such as in-house trading systems.

Connect to:

- 
Audio Recording
- 
Cloud Platforms
- 
Mail Systems
- 
Financial Systems
- 
Chats/IMS

Proactively surveil your business communications across financial and non-financial channels



To date we've never encountered a data source we couldn't connect to.



How We Process Voice Data

We use a 3-layer process to **clean, normalise and treat voice data** and convert it into text data. We first treat the speech signal by:

- Removing duplicates
- Ignoring silences
- Minimising the impact of background noise
- Searching regularly for language spoken

We then use **Natural Language Processing** to improve the transcription accuracy by factoring in aspects such as audio type and dialect spoken.

How We Process eComms

We treat eComms by **removing duplicate data and identifying disclaimers, spam or marketing communications**. Attachments are also analysed.

Machine Learning techniques are **applied to all communications** (transcribed voice and electronic comms) to identify the use of financial terms as well as classifying communications and detecting financial entities.



1 Language Segmentation

Transcription of voice to text using Speech Recognition.

2 Financial Models

Financial linguistic model applied increasing accuracy of the transcription of financial terms up to 90%.

3 Entity Recognition

ML and NLP used to detect entities and classify communications.

Voice Transcription Capability

Standard Transcription (layer 1)

- We have the ability to ingest up to 80 languages into our voice surveillance system

Enriched Transcription (layer 2)

- We have developed specialised financial language models for all common trading languages
- Our unique audio processing pipeline adapts our speech recognition process to the language domain (financial domain) and communication type (desk, products, etc)

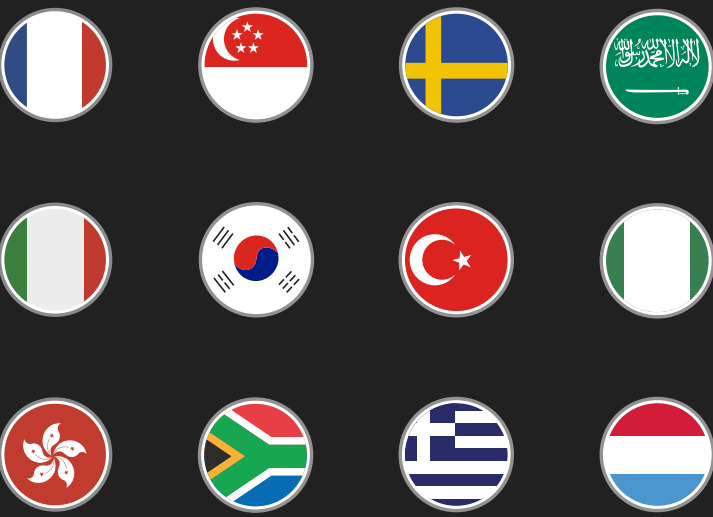
Intelligent Transcription (layer 3)

- We apply Machine Learning to accurately identify terms such as: price, trade ID and counterparty
- We also work with our clients during deployment to ensure the transcription engine is fine tuned to client-specific surveillance scenarios and operational terminology

Standard Transcription Support



80+ Languages available

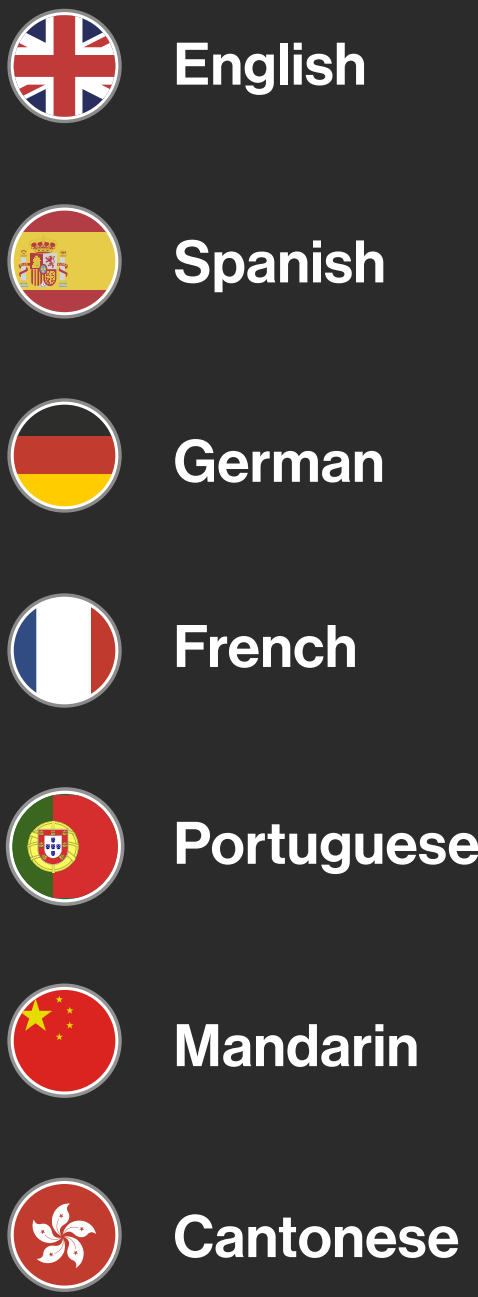


GENERAL TRANSCRIPTION

300-600 hours of audio is required to train these languages for enriched transcription

60-70%
accuracy

Enriched Transcription Support

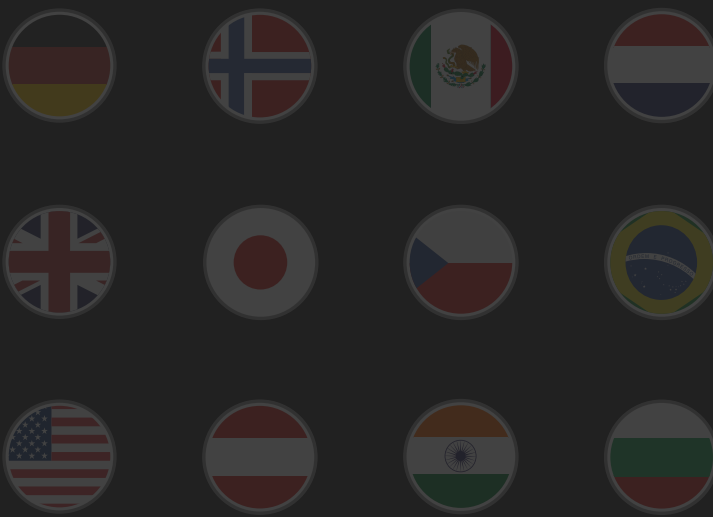


FINANCIAL LANGUAGE TRANSCRIPTION

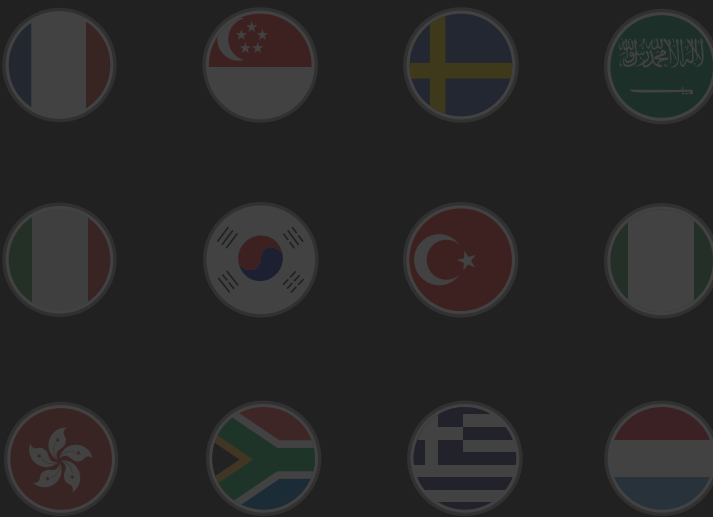
60-100 hours of sample audio is required to train these languages for intelligent transcription (a client-specific model)

70-85%
accuracy

Intelligent Transcription Support



Languages on request



AI-ENHANCED FINANCIAL LANGUAGE TRANSCRIPTION

Intelligent transcriptions models are available for any language upon deployment and tailored to your specific requirements.

up to 90%
accuracy



Surveillance Scenarios and Supervision Tools

We have developed sophisticated search and policy functionality to enable maximum user flexibility and transparency. Users can easily review communications or listen to specific parts of calls while having full visibility of the content or context which has triggered an alert.

Bespoke Supervision

Create your own surveillance scenarios in 7 easy-to-follow steps or select from pre-built scenario examples.

Advanced Search

Combine both lexicon and non-lexicon-based searches and use these when building policies for increased alert precision.

Crystal Clear Controls

Have full visibility of how your surveillance algorithms and rules are working, so you and the Regulator know exactly how alerts are being generated to monitor your workforce.

INSIDER DEALING **ADVICE**
USE OF CONFIDENTIAL INFORMATION
SHARING SECRETS
MARKET MANIPULATION **MISCONDUCT**
COLLUSION **CODE SWITCHING**
INAPPROPRIATE LANGUAGE
HARASSMENT
ABNORMAL BEHAVIOUR
CODE OF CONDUCT INFRINGEMENTS

Monitor these behaviours and more.



Enhance your supervision

Combine all voice and eComms data into one single platform to establish a strong foundation for an efficient and effective conduct supervision and governance framework.

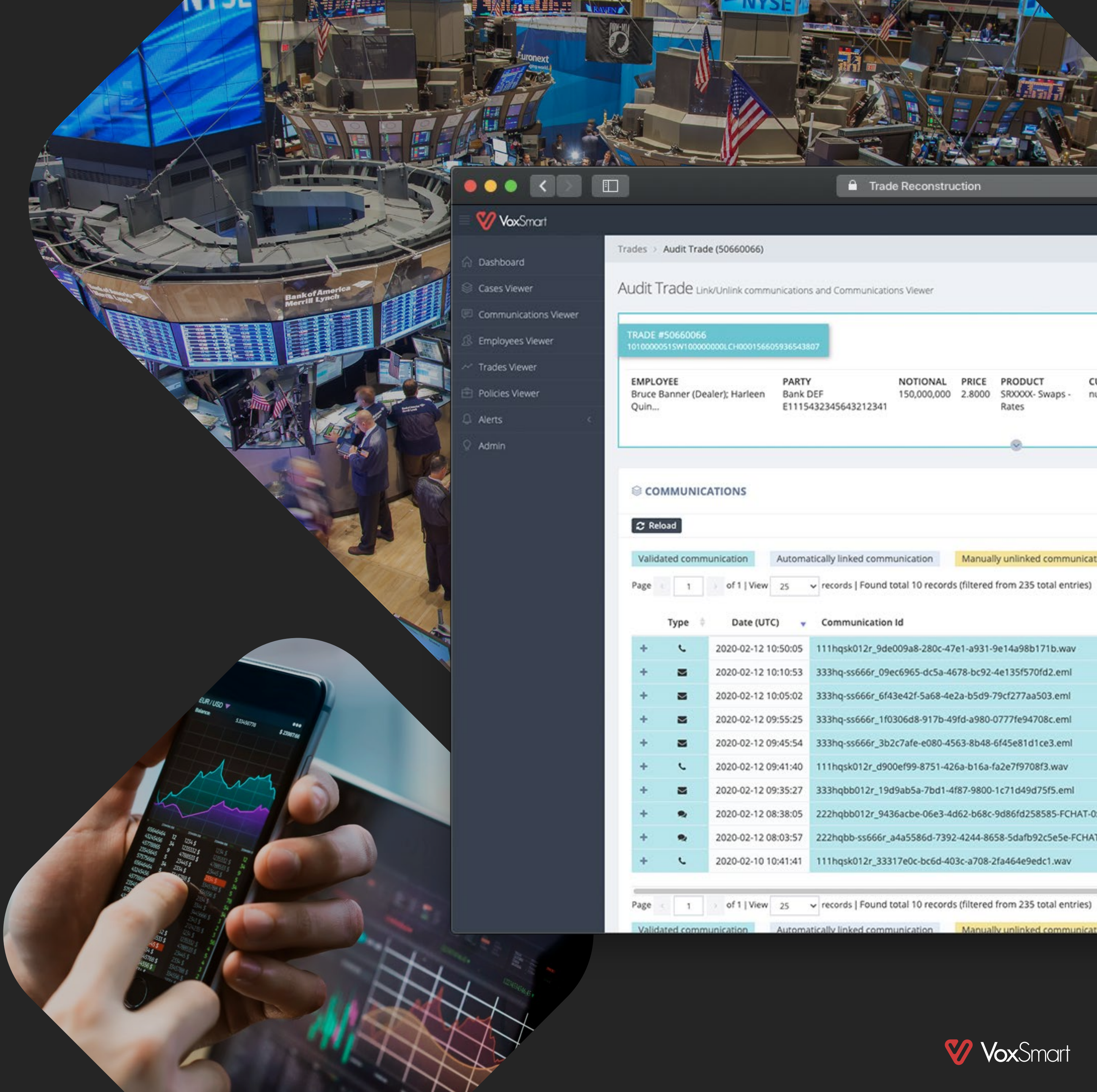


- Single, unified, platform for all Comms
- Autonomous Trade Reconstructions
- Agile case management
- Exports and flexible reporting
- Front Office value



Trade Reconstruction

Overview





Increase transparency and improve oversight of your trading activity

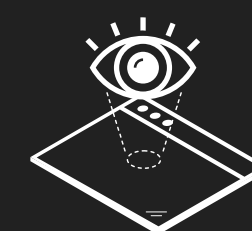
VoxSmart Trade Reconstruction is a powerful technology, enhanced with AI and Machine Learning and custom-built to link financial trades and orders to their corresponding communications for efficient auditing and regulatory reporting.

- Match trades to multiple asset classes
- Proven to help firms review reconstructed trades in 24 hours
- Enhanced accuracy using Machine Learning techniques
- Automate labour-intensive and error-prone manual tasks and focus on what matters most
- Unify the silos that separate your trade and communication data with a single synchronised solution



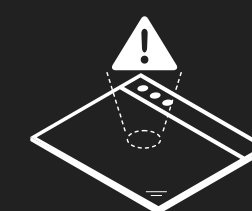
Compliant Reporting

Our system helps you review and export a reconstructed trade quickly and accurately following a regulator request.



End-to-end Visibility

With a complete view of pre-trade, execution and post-trade negotiations, clearly see the context around a trade or order.



Proactively Detect Intent

Quickly spot signs of suspicious employee behavior through the context around a trade and alert to breeches in business conduct.

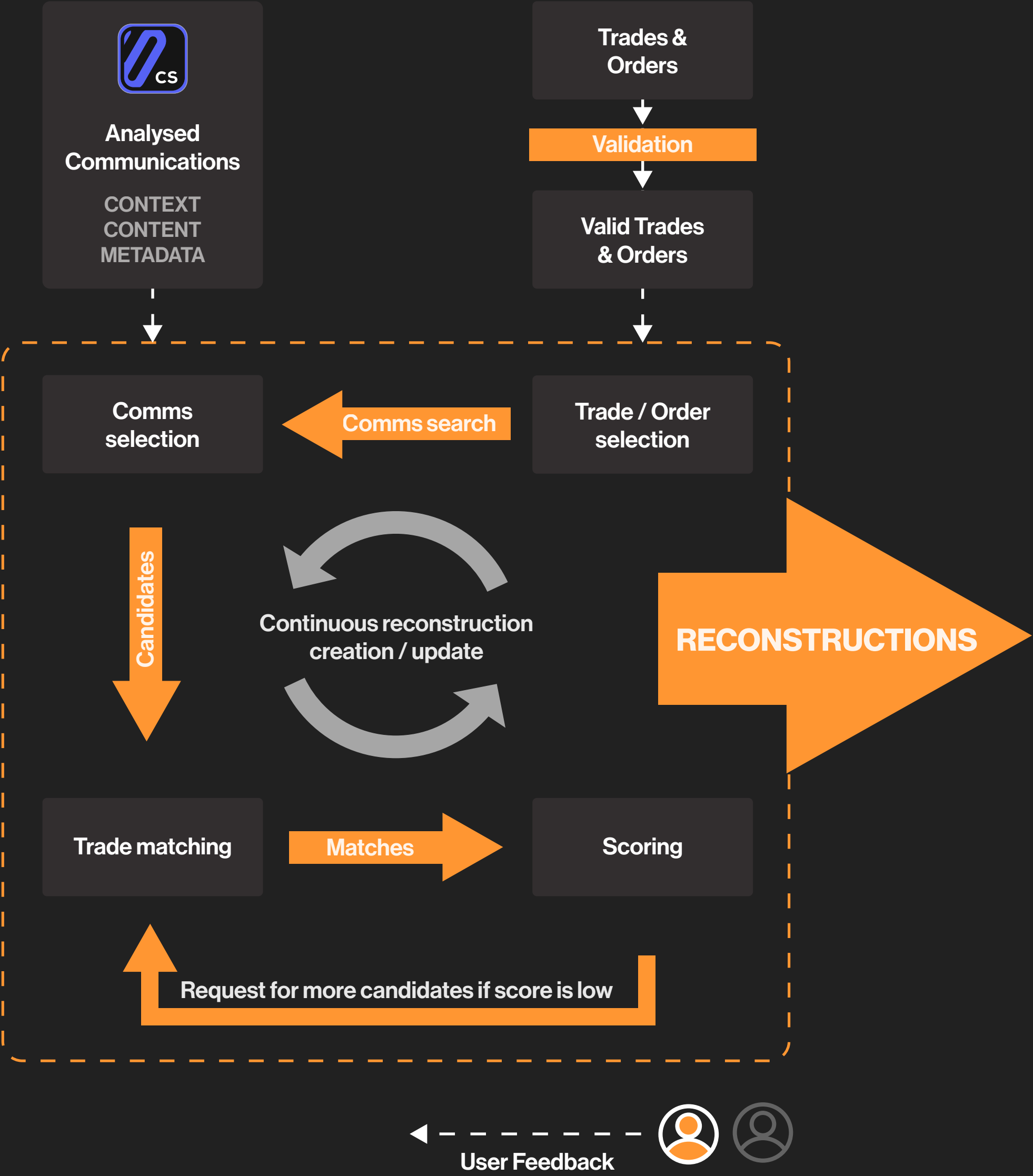




Continuous, automatic and proactive trade reconstructions

Our powerful algorithm automatically links trades to their corresponding communications as soon as they are available in the system. It can be tested, audited, and the success rate is measurable.

High accuracy in communication analysis (especially voice), quality data and Machine learning are all needed to achieve successful trade reconstructions.










Manual vs Automatic: What’s the difference?

On average, it takes over 2 working days to manually reconstruct 20 trades involving 2 traders. Time spent on trade reconstructions can amount to over 800 hours during routine audits or ad-hoc regulator requests.

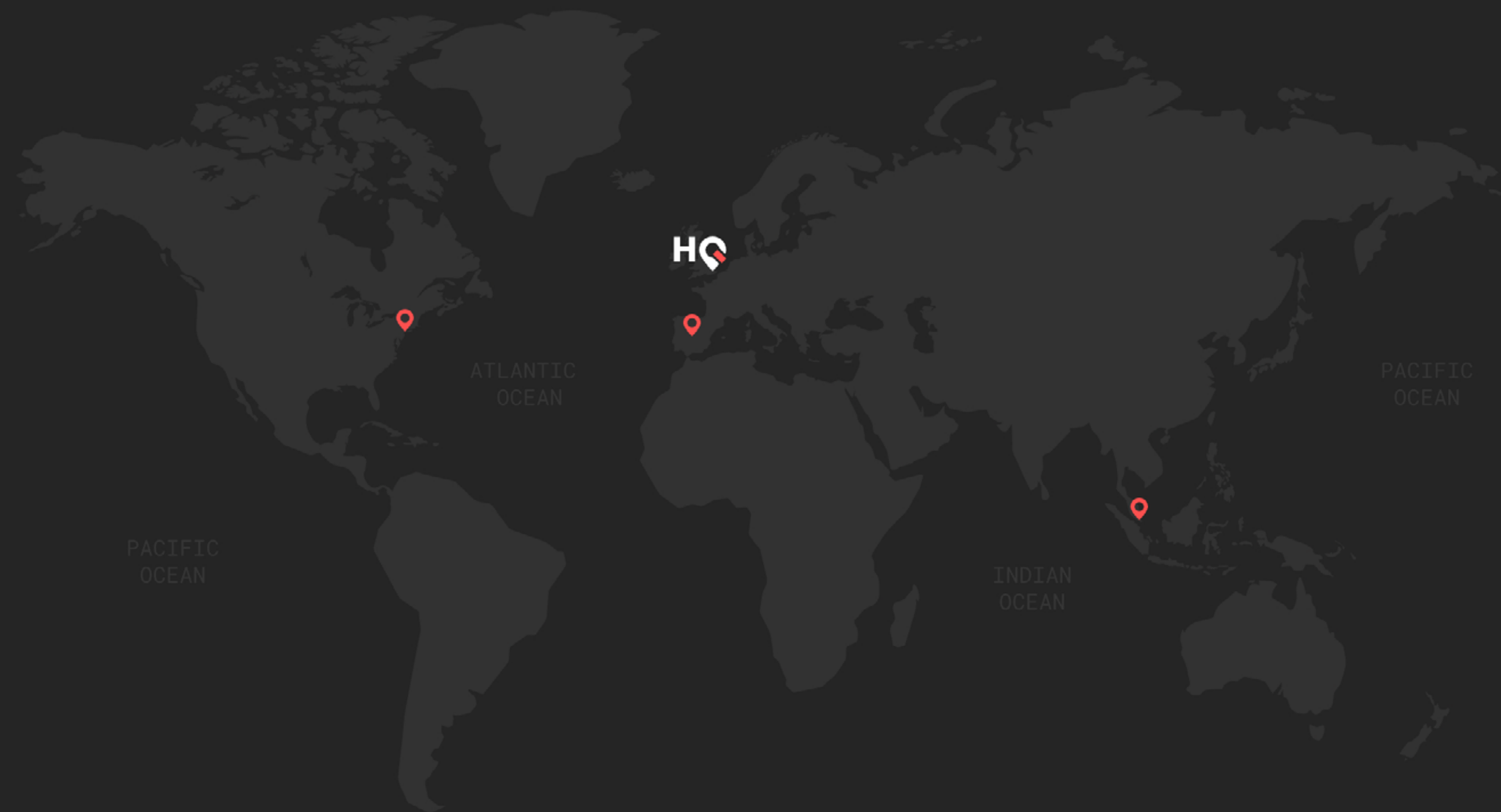
This manual approach drains valuable resource and is unscalable. Unlock instant access to your complete trade lifecycle: from pre-trade negotiations to transaction and post-trade conversations.

Our automatic reconstruction technology reduces 20 hours of manual reconstructions down to instant access at the click of a button. Investigations that used to take months can now take days to complete.



Manual Reconstruction	Automatic Reconstruction	
A compliance team manually listens to every call and reads all electronic communications to identify which are relevant to the requested trade.	System automatically selects from pre-ingested trade and communications data for intelligent trade matching.	COMMUNICATION REDUCTION
 100 hours of audio	 5 hours of audio	95% ↓
 2,500 chats	 350 chats	85% ↓
 7,000 emails	 850 emails	88% ↓

When used with VoxSmart Communications Surveillance, the amount of communications required for trade reconstructions is reduced by up to 95%, meaning fast and efficient results ready at any time.



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