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CONVERSATIONAL AI

Technical Datasheet

Why Conversational AI Analytics for your business?

There is a **NEED** for business intelligence (or insights) to help businesses achieve operational efficiency, and performance improvement (including Quality Assurance (QA) and compliance). Businesses need solutions that can deliver insights about customers' views and perform a widespread and detailed analysis of what the call is about, why the customer is calling, the type of language or messages used in the call, how the customer was handled, his sentiment, the root causes of satisfaction or dissatisfaction and the eventual outcome. Businesses will be able to learn how to improve their customer retention and satisfaction, and inspect contact center operational efficiency and performance. Some businesses would be interested to uncover competitive intelligence as well, identify when competitors' pricing information is mentioned on a call, and passes this back to the commercial team to revisit their own pricing structure.

Customer Experience & Satisfaction
Customer sentiment
Satisfaction Drivers & Detractors
Trends/Patterns: Common issues/pain points
Customer issues resolution times (CES)
First Call Resolution (FCR)

Agent Performance & Compliance
Script Adherence
Average Handle Time (AHT)
Probing Effectiveness
Compliance Adherence
Product Knowledge Gaps

Operational Efficiency Boost & Revenue
Automating call Analysis
Reducing Manual Workload
Speeding up decision-making
Call Driver Analysis/Call Reason
Sales Conversion Rates
Churn Risk Indicators

THE PROBLEM is that the available traditional analytics solutions used relied on static, scheduled reports. But this statistical historic analysis is built on fixed and after-the-fact data that had major shortcomings:

1) the reporting was inflexible, making it difficult for businesses to drill down or dissect and visualize the data further, accordingly not very insightful. For example a business might know that x% of its customers are satisfied, and y% dissatisfied, but it still has no real idea why this is, or even how it will impact upon their profitability.

2) the information is based on previous observation periods which didn't provide a view into how the contact center is performing "right now," no real-time analysis possibility, making it impossible for businesses to see and adapt to real-time conditions.

3) Since the amount of recorded voice data available to most businesses can be overwhelming, this led to analyze only samples of the data in place and this is not accurate and time consuming, not to mention expensive.

Are You Truly Hearing Your Customers? TODAY businesses manually analyze millions of interactions from phone calls and chat apps to extract insights. The number of interactions can be overwhelming, they end up analyzing a small sample of the calls - **Time-consuming**, **Costly** & **NOT accurate!!**
Missed opportunities to identify pain points, improve processes, and drive revenue!!

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THE SOLUTION is to use iConvo's Historical speech analytics that analyze 100% of recorded calls, making the most of these vast amounts of data by weaving AI. iConvo is a sophisticated software that considers all aspects of the conversation—from the caller's sentiment, to monitoring employee compliance and knowledge (understand agent effectiveness on calls within sales, collections, and customer service)—allowing businesses to directly pinpoint areas of customer experience improvements and contact center operational efficiency. By eliminating random call sampling, clients would be able to redirect the focus of QA teams towards value-add tasks that will improve the bottom line. Leveraging AI to analyze conversations, we help you understand your customers' views on your brand and product, their suggestions for improvement, and what they think you excel at. This wealth of information, embedded in your calls, emails, and chats, is unlocked and made accessible through our technology.

THE APPROACH:

To deploy AI analysis on existing data lacks we need to codify and automate the ML workflow (whose steps are shown below) by creating an ML Pipeline:
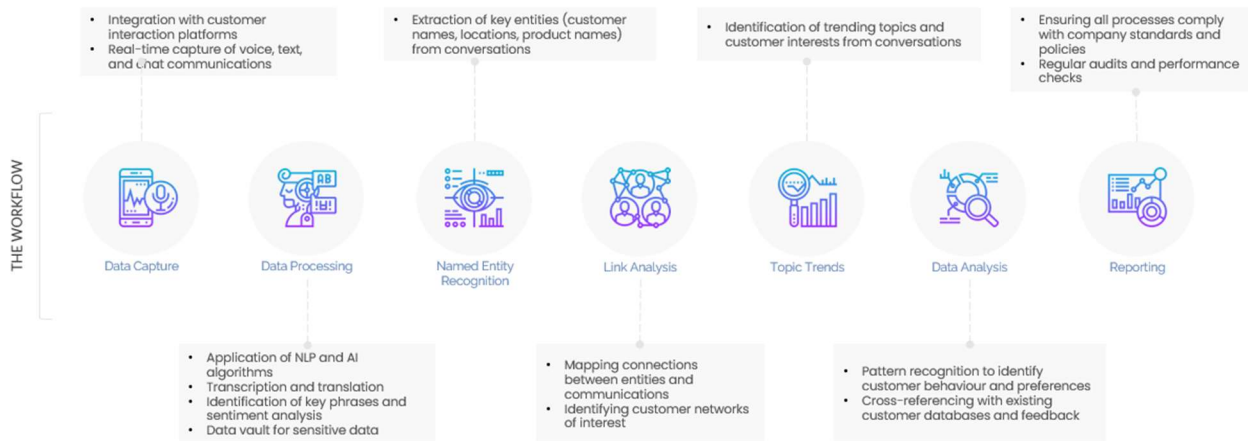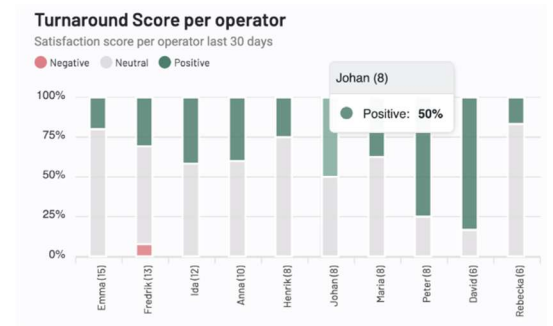
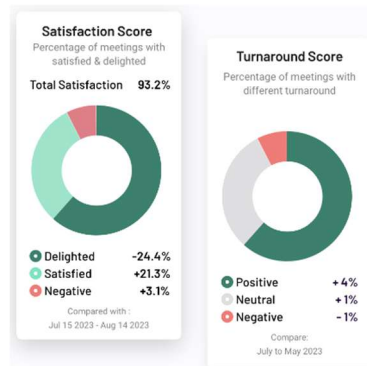| Data Collection	Data Processing	Near Realtime Analysis	Actionable Insights	Continuous Improvement	Compliance & Security

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iConvo's Workflow for the Customer Experience (CX)

THE WORKFLOW

- Integration with customer interaction platforms
- Real-time capture of voice, text, and chat communications

Data Capture

- Application of NLP and AI algorithms
- Transcription and translation
- Identification of key phrases and sentiment analysis
- Data vault for sensitive data

Data Processing

- Extraction of key entities (customer names, locations, product names) from conversations

Named Entity Recognition

- Mapping connections between entities and communications
- Identifying customer networks of interest

Link Analysis

- Identification of trending topics and customer interests from conversations

Topic Trends

- Pattern recognition to identify customer behaviour and preferences
- Cross-referencing with existing customer databases and feedback

Data Analysis

- Ensuring all processes comply with company standards and policies
- Regular audits and performance checks

Reporting

- Alongside transcription, we utilize AI to **categorize and summarize** all calls, thereby creating context and data surrounding these interactions. This allows you to delve into and filter the data, understanding the drivers behind contacts and issues.
- **Filter & Search** - Free text search through millions of calls in milliseconds. Observe trending charts based on search terms. Navigate directly to the specific paragraph where these terms are mentioned. View and listen to the exact words spoken, allowing you to connect deeply with each individual customer.
- **Sentiment Analysis** - By analyzing the sentiment of every call, down to each paragraph, we gain insights into the factors influencing customer sentiment, be they positive or negative.
- **Turnaround Score** - assessing the evolution of sentiment during each call, to determine whether the conversation becomes more positive or negative. This metric allows for analysis at the employee level, evaluating the efficacy of customer service representatives in positively influencing customer sentiment.
- Utilizing sentiment analysis, we develop a **Satisfaction Score**. This score enables analysis at the category level, employee level, and trend analysis over time in order to identify the primary drivers of both positive and negative contacts to comprehend your customers' perception of your brand, product, and processes.

Top Saved Keywords

Keyword			
Returns 2.5K mentions	1.25k mentions	938 mentions	312 mentions
New address 2.0K mentions	250 mentions	1.0k mentions	750 mentions
Item defect 1.8K mentions	1.0K mentions	8 mentions	792 mentions
Shipping 195 mentions	250 mentions	1.0k mentions	750 mentions
In-store 195 mentions	250 mentions	1.0k mentions	750 mentions
Purchase 195 mentions	250 mentions	1.0k mentions	750 mentions
Location 195 mentions	250 mentions	1.0k mentions	750 mentions
Contact 195 mentions	250 mentions	1.0k mentions	750 mentions
Thank you 195 mentions	250 mentions	1.0k mentions	750 mentions
Bill problem 195 mentions	250 mentions	1.0k mentions	750 mentions

Satisfaction Score
Percentage of meetings with satisfied & delighted

Total Satisfaction **93.2%**

- Delighted -24.4%
- Satisfied +21.3%
- Negative +3.1%

Compared with
Jul 15 2023 - Aug 14 2023

Turnaround Score
Percentage of meetings with different turnaround

- Positive + 4%
- Neutral + 1%
- Negative − 1%

Compare:
July to May 2023

Turnaround Score per operator
Satisfaction score per operator last 30 days

- Negative
- Neutral
- Positive

Johan (8) ● Positive: 50%

(chart x-axis: Emma (15), Fredrik (13), Ida (12), Anna (10), Henrik (8), Johan (8), Maria (8), Peter (8), David (6), Rebecka (6))

OUR CONVERSATIONAL ANALYTICS ENGINE

A Multilanguage Generative-AI Approach

tools

Targeted insights
Transcript & Summarization
Topics, Intents, and Keywords
Root Cause
Entities Recognition
Sentiments and Emotions

Agent insights
Resolutions
Positive Feedback
Improvement Suggestions

Customer insights
Pain Points
Unresolved objections
Buying signals

reasoning

Assisted Resolution
Assisted Discovery
Process Automation
Cognitive Analytics
Case creation

Conversational AI Engine

knowledge

Knowledge Graph
Entities Relations
Features Correlation
Inferred behavioral analysis
Business knowledge

- Multilingual Natural Language Processing (sentiment & text analysis and language understanding)
- Multilingual Speech Analytics (Generative AI Speech recognition & Speaker diarization)
- AI reasoning & summarization, Insights
- Semantic Search & Analytics
- Assisted Resolution - AI acts as a powerful assistant to human agents and end-users, providing insights, automating tasks, and guiding them towards effective and timely resolutions. Feedback can be sent on email, or on chat messenger like WhatsApp or in the portal itself.
- Knowledge Graph - to model and correlate insights across customer interactions.

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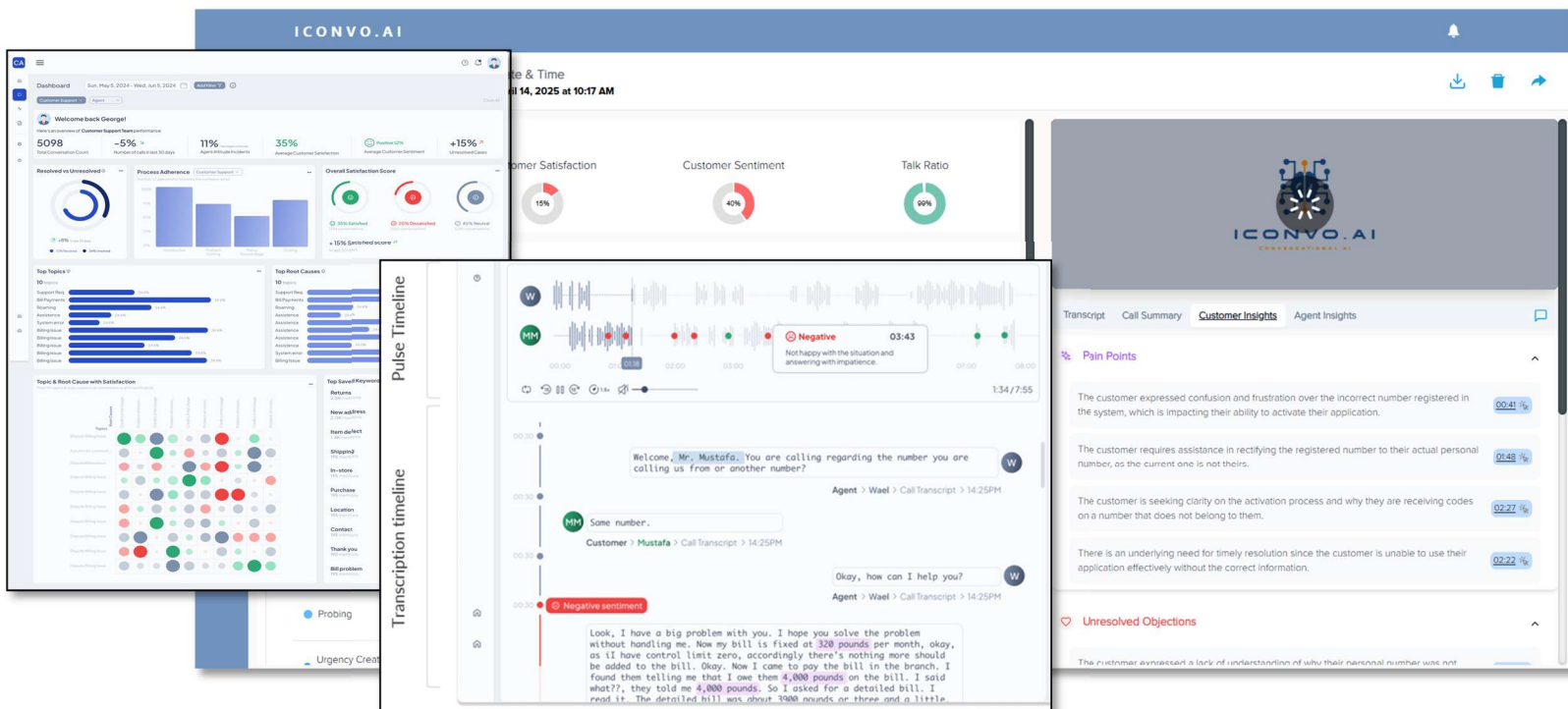
Dashboard

Customizable Dashboard to show all important KPIs for business in one user friendly screen from which you can see how your call center is performing. Users can drill down to the conversation details.
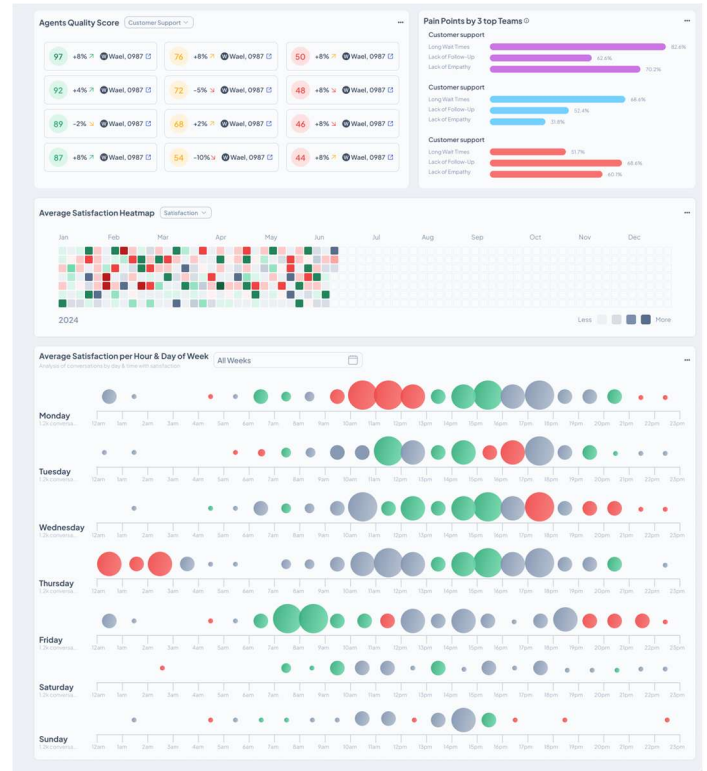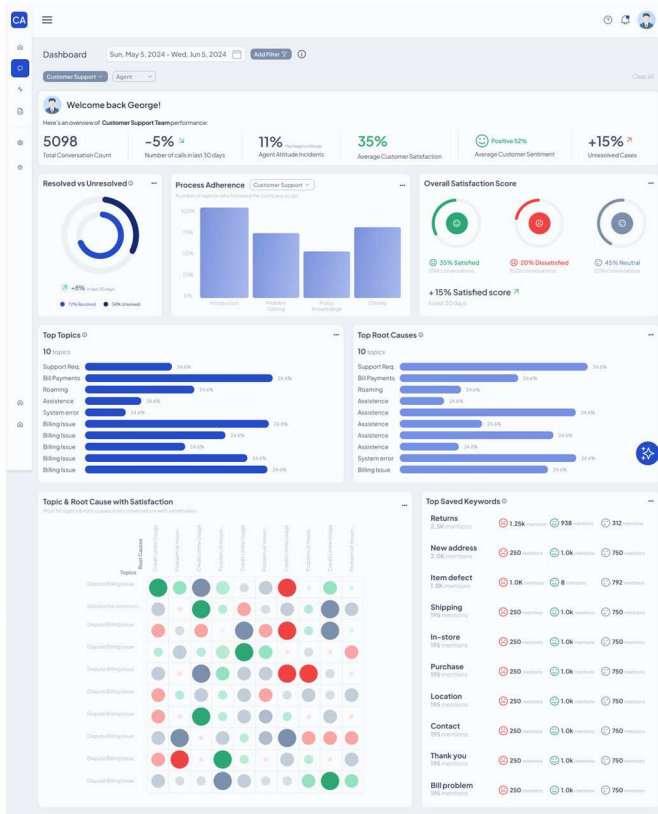
Targeted insights
Business-Aware Summarization
Topics, Intents, and Keywords
Entities Recognition
Sentiments and Emotions
Agent performance

Insights over time
Trending Topics
Top pain points per team
Overall CSAT
Topics vs Root Cause

Chat with your data
Ask questions about your data
(Time aware, Context-aware)

Drill Down - Per Call Analysis – Single Screen

Our summarization tool is designed to extract the essence of every interaction, allowing you to collect the key insights from each meeting. As each business case is unique, we have tailored our solution to meet diverse need effectively.

If your focus is customer service, our system will identify the root cause, reason for the call, and resolution status, providing a clear view of each customer's journey and the effectiveness of issue handling. Your sales team will benefit from summaries that highlights introduction, objections raised and the outcome of each conversation, equipping them with the needed tools to improve strategies and engagement.

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All summaries are projected in a common view for you to easily search within and get an overview in the same place ('Call Activity' area). By analyzing all summaries you can quickly spot trends, understand your conversations and collect detailed insights.
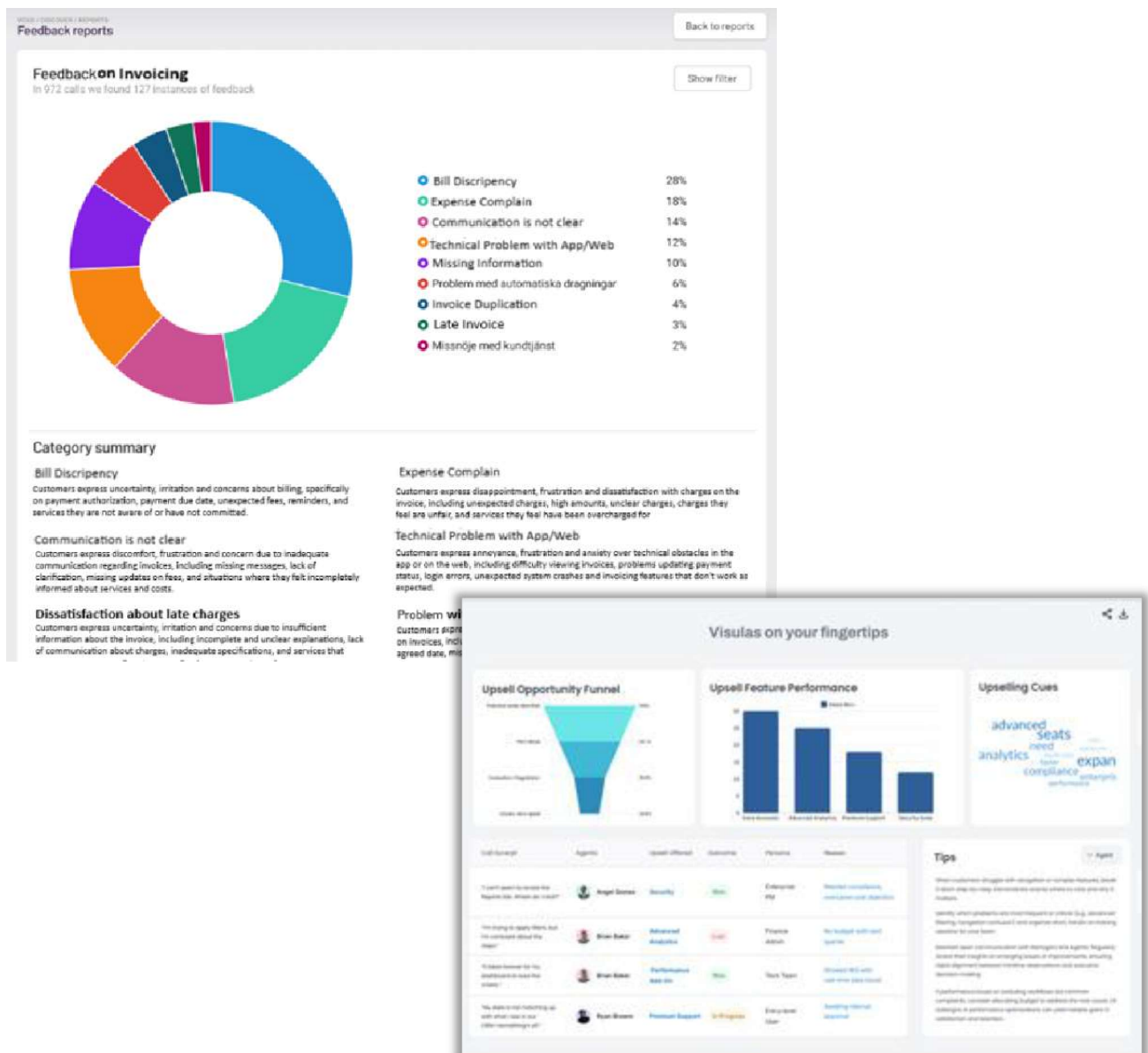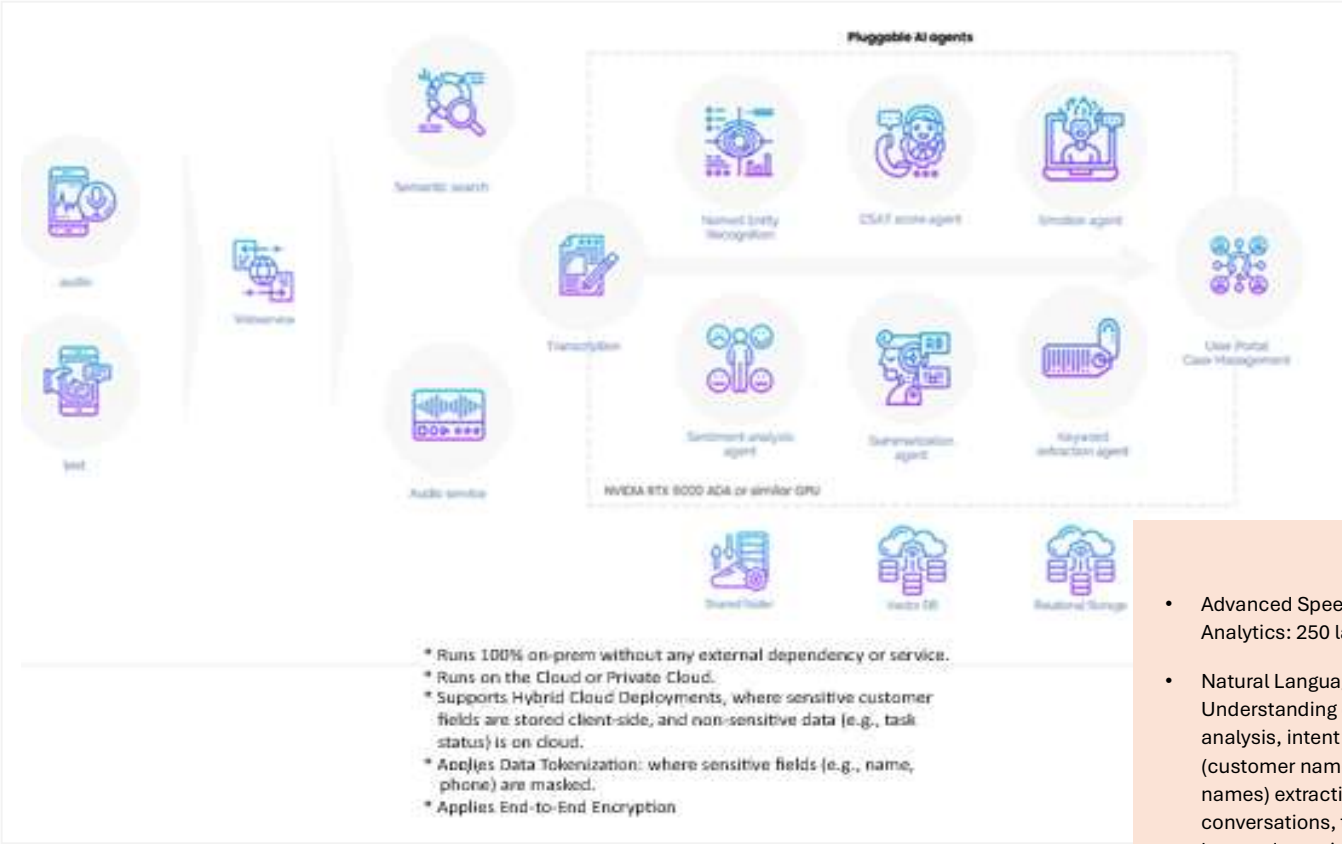

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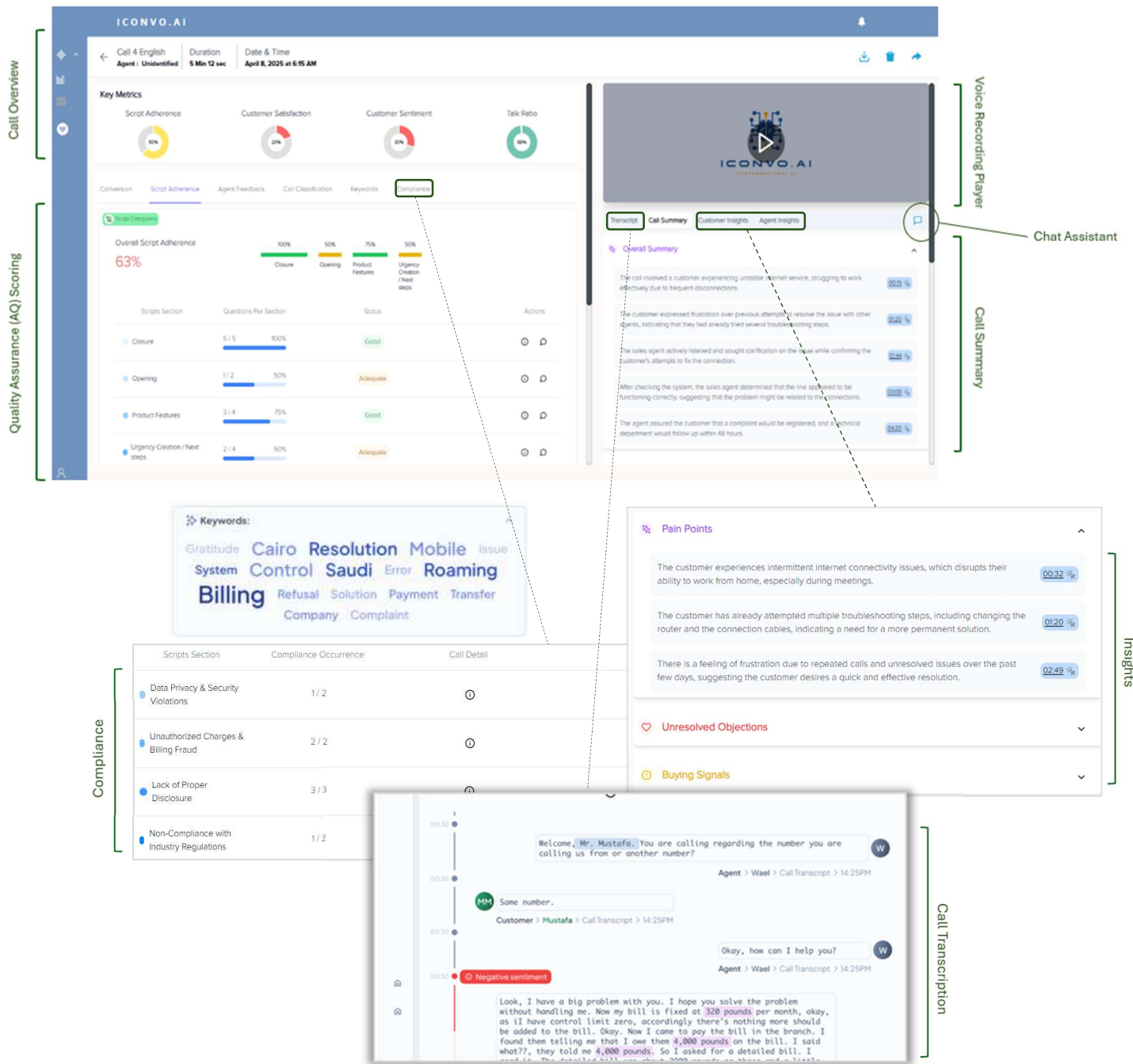
Reporting

With the help of generative AI we automatically find and categorize all your customers' feedback in a convenient report. You can run the report on all of your calls or you can specify what type of calls or timespan to get even more focused feedback.

The categorization provides data on the frequency of similar feedback types from customers, aiding in prioritizing issues. The summaries, coupled with easy access to specific calls for reading and listening, ensure no detail is overlooked. This enables direct action to enhance your customer experience.

Share report with all departments, on their feedback - Ensure that all departments in your company have access to the report, empowering them to respond effectively to customer feedback.

Product Architecture

Pluggable AI agents

Semantic search, Transcription, Named Entity Recognition, CSAT score agent, Emotion agent, Sentiment analysis agent, Summarization agent, Keyword extraction agent, User Portal Case Management, audio, Videoware, text, Audio service, NVIDIA RTX 6000 ADA or similar GPU, Shared folder, Vector DB, Relational Storage

* Runs 100% on-prem without any external dependency or service.
* Runs on the Cloud or Private Cloud.
* Supports Hybrid Cloud Deployments, where sensitive customer fields are stored client-side, and non-sensitive data (e.g., task status) is on cloud.
* Applies Data Tokenization: where sensitive fields (e.g., name, phone) are masked.
* Applies End-to-End Encryption

Reference HW Sizing (with HA)

Voice Files - Daily Volume	2000 calls/day, 333 Hours
Average Length of Conversation	10 Minutes

Data Retention	Audio files, 6 Months , Conversation details, 5 years
Analysis Timeline	5 minutes Post Receipt

Node Type	# CPU Cores	Memory	GPU	Storage (usable storage)	# of nodes
K8s master node	4	16GB		256GB (local disks)	3
K8s worker node	16	64GB		10TB (local disks)	2
K8s GPU node	32	256GB	2x NVIDIA A100 or H100 (80GB VRAM each)	2TB (local disks)	2
Jump box	4	16 GB		1 TB	1
Storage node	8	32GB		15TB	4
Total	100	640 GB	4 * NVIDIA A100 or H100 (320GB VRAM)	83.75TB	12

Assumptions:
- This sizing encompasses an HA architecture (HW load balancer is needed to ensure a full HA setup)
- Only usable storage was considered (Depending on the underlying RAID storage configurations the raw values may increase)
- Both ARM64 (e.g. Ampere) or AMD64 (e.g. Xeon, Ryzen) CPUs can be used

- Advanced Speech-to-Text (STT) & Text Analytics: 250 languages.

- Natural Language Processing (NLP) & Understanding (NLU): Sentiment analysis, intent recognition, entity (customer names, locations, product names) extraction from conversations, topic detection, keyword spotting.

- AI Agentic Workflows: Automation of post-call summarization, next-best-action suggestions for agents, automated ticket creation, CRM updates based on conversation content.

- Customizable Dashboards & Reporting: Real-time and historical analytics on call drivers, customer pain points, agent performance, compliance risks, sales opportunities.

- Integration Capabilities: Seamless integration with existing CRM, Contact Center as a Service (CCaaS) platforms cations systems.

- Security & Compliance: Built-in features for data masking/redaction, role-based access control, encryption, and adherence to regional data privacy laws.

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BENIFITS

Enhanced Customer

- Improved capability to monitor and analyse customer interactions & sentiment

- Greater accuracy in identifying customer needs and preferences

Efficiency:

- Reduced manual workload through automation
- Faster processing and analysis of large volumes of customer data

- Optimize Support Efficiency: Understand common troubleshooting steps, identify knowledge gaps, and improve agent guidance.

- Improve sales effectiveness: Analyse successful sales conversations to replicate best practices and identify opportunities for upselling/cross-selling.

Compliance:

- Adherence to company standards and policies. Identify and flag non-compliant agent behavior and ensure adherence to regulations (e.g., disclosure requirements, fraud prevention).

- Secure and confidential handling of customer data

- Strengthen Fraud Detection: Identify linguistic patterns and keywords indicative of potential fraud or suspicious activity.

Insightful Reporting

- Actionable reports for customer experience teams

- Detailed logs and transcripts for performance reviews

- Reduce Churn: Identify at-risk customers based on negative sentiment and unresolved issues.

Proactive Customer Engagement:

- Early identification of customer issues, like recurring technical issues and service disruptions

- Real-time alerts to address potential concerns

NER, Topics and Link Analysis

- Accurate identification and mapping of key customer entities and their connections

- Enhanced understanding of customer relationships and networks

- Identification of emerging trends and shifts in customer communication topics

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Reduce the number of L1 tickets by up to 80%

Increase FCR by up to 65%

Reduce resolution time by up to 50%

Boost customer retention by up to 3x

Achieve up to 20% increase in conversion rates with optimized call execution and actionable insights.

Reduce after-call work by up to 50%, while increasing QA coverage to 100%, ensuring no conversation goes unanalyzed.

Analyze conversations in 250+ languages with 80% lower cost and 10X more feedback as compared to a human driven process.

Boost compliance accuracy by 97% through automated adherence monitoring and real-time error detection.

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Intuitive Interface

View customer journey and uncover trends and insights via interactive dashboards with rich data visualization options like phrase-clouds and interactive charts. Drill down to get a closer look at things that matters to your business-like customer retention, brand awareness, sales opportunities, script adherence and compliance, and more.

Flexible Deployment Options

SaaS

Private Cloud

On-Premises

Hybrid

iConvo analytics supports various deployment options that perfectly aligns with your infrastructure and goals, without compromising on features, security, or adaptability.

Implementation Support

Our Professional Services team will ensure a smooth rollout.

Customization Options

We stay tuned in to your changing needs with custom solutions that meets your business evolution.
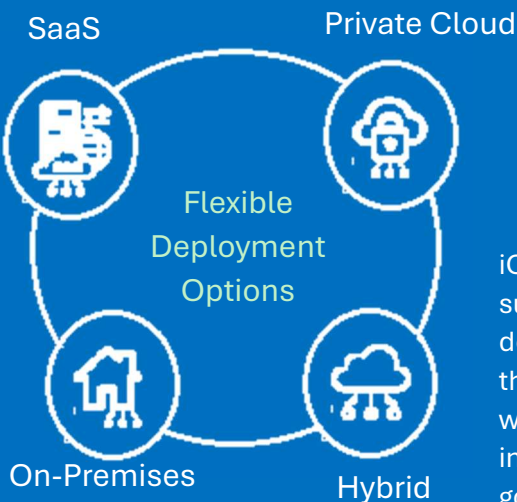
24x7 Support

Our Professional Services team delivers around the clock support – just a phone call away.

Innovation Center

Our subject matter experts continuously explores established best practices and emerging strategies and shares it with you.

Training

Online or on-site training bring agents and managers up to speed in hours.

Security

The data is stored in an encrypted vault on your premises' local network, only accessible by authorized users on selected networks on the client side. The data vault masks sensitive data, ensuring that it is not visible to unauthorized users. We support Data Tokenization, where we store only anonymized, tokenized data within iConvo systems; sensitive fields (e.g., name, phone) are masked. If the vault is stolen, the data remains inaccessible by any means. All data access is audited, and all unauthorized attempts are immediately identified and reported.

At iConvo, we pioneer AI-driven SaaS solutions, specializing in AIOps, Advanced Analytics with Hyper automation and Fraud detection. Our commitment to excellence and simplicity defines us. With cutting-edge technology, we architect transformative journeys, ensuring businesses thrive in the dynamic digital landscape.

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