



 iride**VOICE**

People still call!

Today, organizations strive to turn all possible data into actionable insights. Analyzing structured data alone is no longer enough.

Phone calls generate a mix of **structured and unstructured data** that can be used to **unlock tremendous new insights**.

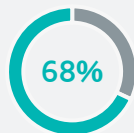
In 2022, **72%** of all customer service interactions are happening over the phone – channel that customers prefer for handling problems



increase in
difficult calls

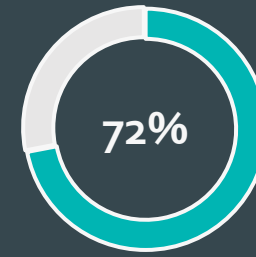


increase in
hold time



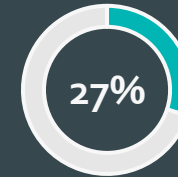
increase in
escalation

Source: Harvard Business Review



Contacted Customer Service
by Calling on the Phone

OTHER METHODS CUSTOMERS TRIED TO CONTACT CUSTOMER SERVICE



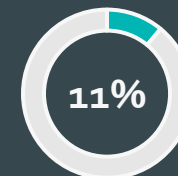
Email



Online contact form



Interactive (online) chat



Other digital channels: Messenger,
Twitter, WhatsApp, ecc

* Multiple responses allowed

Source: CFI Group, *Contact Center Satisfaction Index, 2022*

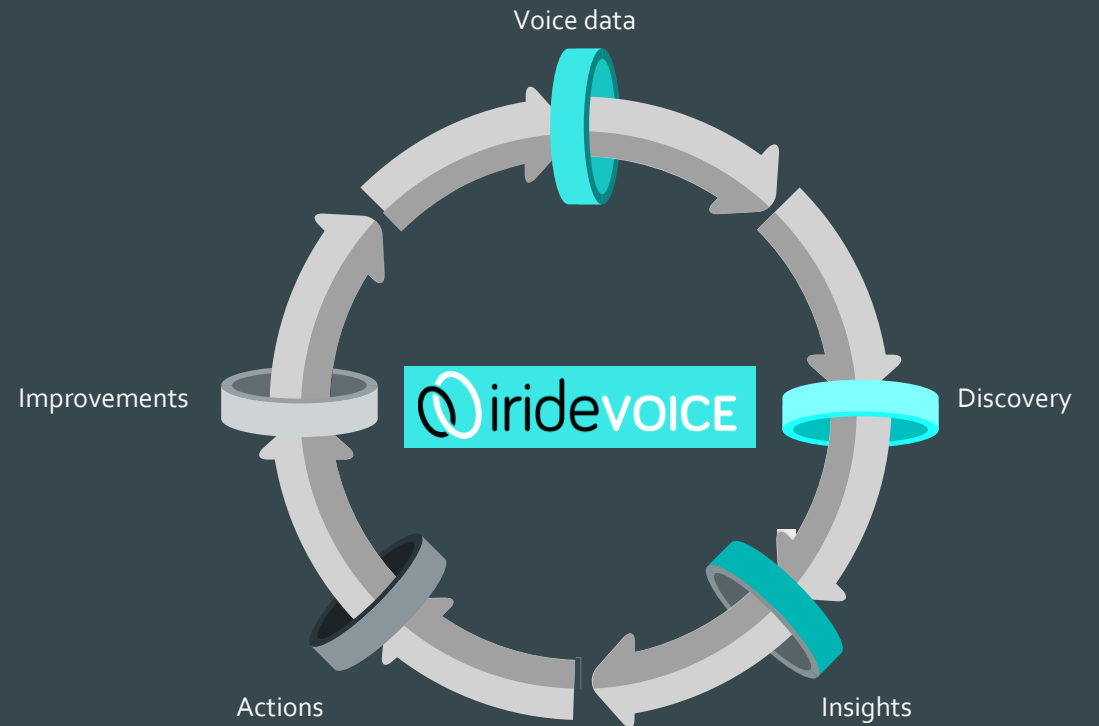
What is irideVOICE

Iride® Voice is a **tool designed to boost the value of voice data in a contact centers** across all the customer interaction-intensive industries.

Iride® Voice helps contact centers to **view its function less as a cost driver and more as an opportunity** to provide strategic experience-oriented customer service while optimizing the day-by-day operations.

Iride® Voice is a **speech analytics platform** that allows to keep an ear to the ground for new and upcoming trends to get an edge over competition.

Iride® Voice enables continuous improvement of contact center operations by **shifting** from sampling model to **data driven model**.



irideVOICE addresses contact center challenges

Contact Center challenges	irideVOICE	Results
Agents must be trained better for handling difficulties	<ul style="list-style-type: none"> Quality assurance and measurements on enlarged samples or 100% of calls. Mapping of training needs 	Improved quality
There is no excuse for lack of compliance	<ul style="list-style-type: none"> Script and regulations adherence Anonymization 	Compliance by design
Operational efficiency	<ul style="list-style-type: none"> Call reason identification Automation opportunity detection Hidden inefficiency discovery 	Improved efficiency Improved self-service operations
Customers satisfaction	<ul style="list-style-type: none"> Risk and critical calls detection Sentiment analysis Dissatisfaction drivers identification 	Customer satisfaction Better interactions Reduced churn rates
Legitimation of voice data collection efforts	<ul style="list-style-type: none"> Increased data coverage Customer needs & pains identification Market & competition insights Brand reputation analysis Cross/Up-sell opportunities 	Opportunities for brand, product and service improvement and positioning Faster time-to-insight Better decision making

irideVOICE most distinctive capabilities

Capabilities

- Accurate speech transcription with fast modelling for specific needs powered by noise adaptation and audio quality adaptation.
- Natural Language Understanding powered by Composite AI to guarantee faster time-to-result.
- Dozens of dashboards and reporting options to monitor Service Performance, Content Analysis, Team Efficiency, Customers and Agent Performance.
- Script adherence and script tracking.
- Data enrichment: tagging places, people, products, competitors, etc.
- Anonymization and morphing.
- Deep content classification based for emerging topics, concepts, phrases and keywords.
- Complex events and scenarios mapping (upsell opportunity, competitor mention, sales process, ecc).
- Sentiment and emotion analysis.
- On-demand search and correlation discovery.
- Root-cause analysis.

irideVOICE

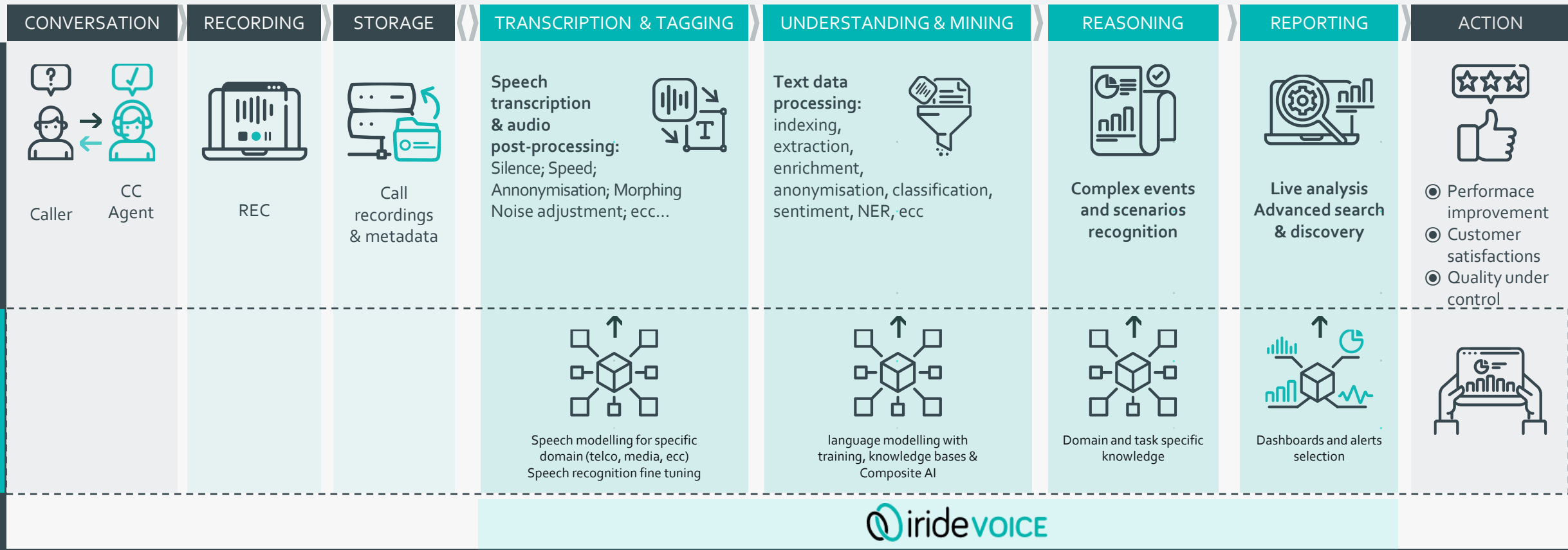


Opportunities

- ✓ Insights for operational efficiency
- ✓ Extension and automation of service quality measurement
- ✓ Automation of compliance procedure
- ✓ Agents' training needs and improvements
- ✓ Non solicited market trends
- ✓ Competition insights
- ✓ Customers needs and pains
- ✓ Brand reputation
- ✓ Upsell/Cross-sell opportunity

irideVOICE is for YOUR business

Iride® Voice provides variety of capabilities and multiple configuration options. As every business is different, it is never the same thing. It is trained and customized for specific business needs



irideVOICE is for YOUR business

Iride® Voice reporting have standard sections with choose-what-you-need contents

The screenshot displays the IrideVOICE SA analytics dashboard. At the top, there is a navigation bar with the logo and menu items: Configuration, Search and Discovery, Analytics, and User management. The main content area is titled 'Available categories' and is divided into five columns:

- AGENT:** Call management efficiency, Training needs, Quality assurance
- CONTENT ANALYSIS:** Topics, Emotion, Sentiment, Mood, Silence
- CUSTOMER:** Satisfaction, NPS, Geodistribution, Customer needs
- SERVICE PERFORMANCE:** Call volumes and distribution, Handtime, Call reason
- TEAM ASSURANCE:** Call management efficiency, Training needs, Quality assurance

Below the categories, there is a section for 'REAL EXAMPLES' which shows various report configurations for each category:

- 1 CONTENT ANALYSIS:** Commercial Proposition Overview, Complex Event Call Dimensions, Content Analysis, Critical Calls, Deep Content Analysis, Event Analysis, Main Topic Call Dimensions, Risk Calls, Scenery Adherence, Simple Event Call Dimensions, Time Call Dimensions
- 2 CUSTOMER:** Customer Satisfaction
- 3 SERVICE PERFORMANCE:** Process Monitoring, Service Performance
- 4 TEAM:** Call Management Efficiency, Team Assurance, Team Training Need
- 5 AGENT:** Agent Assurance, Agent Management Efficiency, Agent Training Need
- 1 CONTENT ANALYSIS:** Commercial Proposition Overview, Complex Event Call Dimensions, Content Analysis, Critical Calls, Deep Content Analysis, Event Analysis, Main Topic Call Dimensions, Risk Calls, Scenery Adherence, Simple Event Call Dimensions, Time Call Dimensions
- 2 CUSTOMER:** Customer Satisfaction, Geospatial Call Dimensions
- 3 TEAM:** Call Management Efficiency, NPS, Team Assurance, Team Training Need
- 4 AGENT:** Agent Assurance, Agent Management Efficiency, Agent Training Need
- 5 SERVICE PERFORMANCE:** Process Monitoring, Service Performance

irideVOICE is for YOUR business

Iride® Voice reporting have standard sections with choose-what-you-need contents

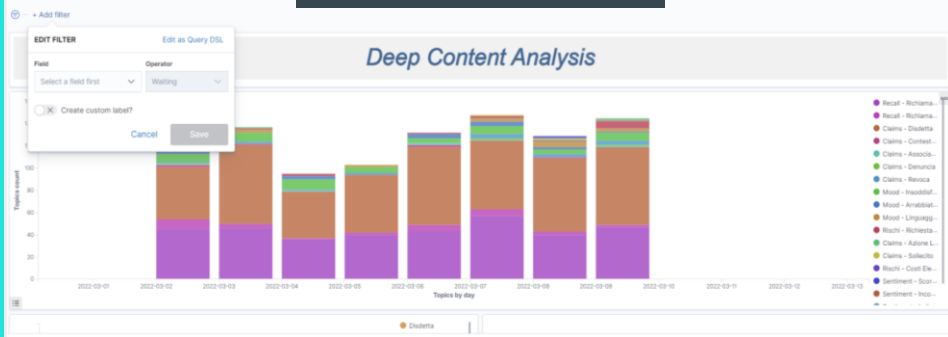
The screenshot shows the irideVOICE SA web application interface. At the top, there is a navigation bar with the company logo and menu items: Configuration, Search and Discovery, Analytics, and User management. The main content area is titled 'Analytics' and features a section for 'Available categories'. This section is divided into five columns, each representing a different analytics area:

- AGENT:** Call management efficiency, Training needs, Quality assurance.
- CONTENT ANALYSIS:** Topics, Emotion, Sentiment, Mood, Silence.
- CUSTOMER:** Satisfaction, NPS, Geodistribution, Customer needs.
- SERVICE PERFORMANCE:** Call volumes and distribution, Handtime, Call reason.
- TEAM ASSURANCE:** Call management efficiency, Training needs, Quality assurance.

drill down and filters

REAL EXAMPLES

conversation tracking



The screenshot shows a 'Transcription detail #2079' view. It includes an 'Information' section, 'Speakers details', and an 'Audio' player. Below the audio player, there is a list of 'Events identified' with timestamps and descriptions. The transcription text is visible at the bottom of the screen.

irideVOICE is for YOUR business

Iride® Voice reporting have standard sections with choose-what-you-need contents

The screenshot displays the irideVOICE SA web application interface. At the top, there is a navigation bar with icons for Configuration, Search and Discovery, Analytics, and User management. The main content area is titled 'Analytics' and features a section for 'Available categories' with five columns: AGENT, CONTENT ANALYSIS, CUSTOMER, SERVICE PERFORMANCE, and TEAM ASSURANCE. Below this is a 'REAL EXAMPLES' section containing a word cloud and five box plots.

Available categories:

- AGENT:** Call management efficiency, Training needs, Quality assurance
- CONTENT ANALYSIS:** Topics, Emotion, Sentiment, Mood, Silence
- CUSTOMER:** Satisfaction, NPS, Geodistribution, Customer needs
- SERVICE PERFORMANCE:** Call volumes and distribution, Handletime, Call reason
- TEAM ASSURANCE:** Call management efficiency, Training needs, Quality assurance

REAL EXAMPLES:

- content discovery:** A word cloud showing the most frequent main topics in the cloud, with 'Disdetta' and 'Richiamata 24h' being the most prominent terms. Other terms include 'Indisponibilità', 'Linguaggio Inappropriato', 'Scortesia', 'Richiesta Sconto', 'Insoddisfazione', 'Contestazione', 'Costi Elevati', 'Denuncia', 'Revoca', 'Azione Legale', 'Sollecito', 'Arrabbiatura', 'Richiamata 48h', 'Associazione Consumatori', 'Incompetenza', and 'Mancata Professionalità'.
- Overall Speech Length (secs):** A box plot showing the distribution of overall speech length in seconds, with a median around 200 seconds.
- Overall Speech rate:** A box plot showing the distribution of overall speech rate, with a median around 60.
- Conversation Duration (secs):** A box plot showing the distribution of conversation duration in seconds, with a median around 200 seconds.
- Overlap between Turns (secs):** A box plot showing the distribution of overlap between turns in seconds, with a median around -5 seconds.
- Agent/Customer Overlap rate:** A box plot showing the distribution of agent/customer overlap rate, with a median around 1.

conversations measures

IrideVOICE exploits the full potential of the most underused source of information

Speech is the most complex representation of human knowledge.

It contains not only words but also speed, silence, and many other cues to indicate emotions, inclinations, hesitations, etc.

Speech data holds knowledge that is simply not available from any other source.

Due to its inherent complexity it is often not used or underused.

Speech data is different than original text, and it is the field of expertise of Iride®

Voice based on 10+ years of industrial and academic research both in speech recognition and understanding.



Selected scientific papers

Low-Latency Speech Separation Guided Diarization for Telephone Conversations, IEEE SLT, 2022.

Interpretable Dysarthric Speaker Adaptation based on Optimal-Transport, Proc. of Interspeech, 2022.

Conversational Speech Separation: an Evaluation Study for Streaming Applications – AES Europe 2022.

EasyCall corpus: a dysarthric speech dataset, Proc. of Interspeech, 2021.

Supervised online diarization with sample mean loss for multi-domain data, Proc. of IEEE ICASSP, 2020.

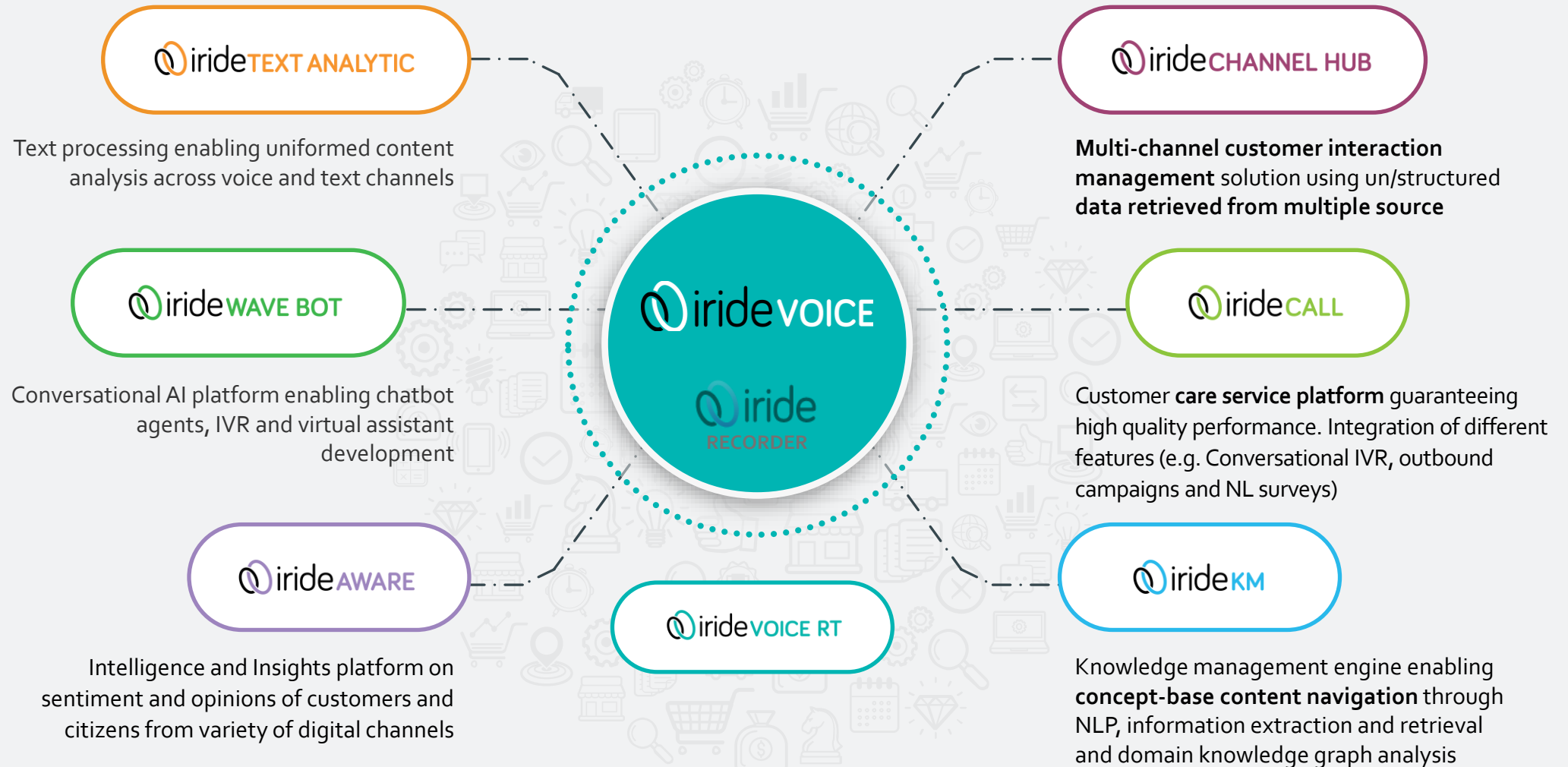
Almawave-SLU: A new dataset for SLU in Italian, 2019

Transfer Learning for Industrial Applications of Named Entity Recognition, 2019

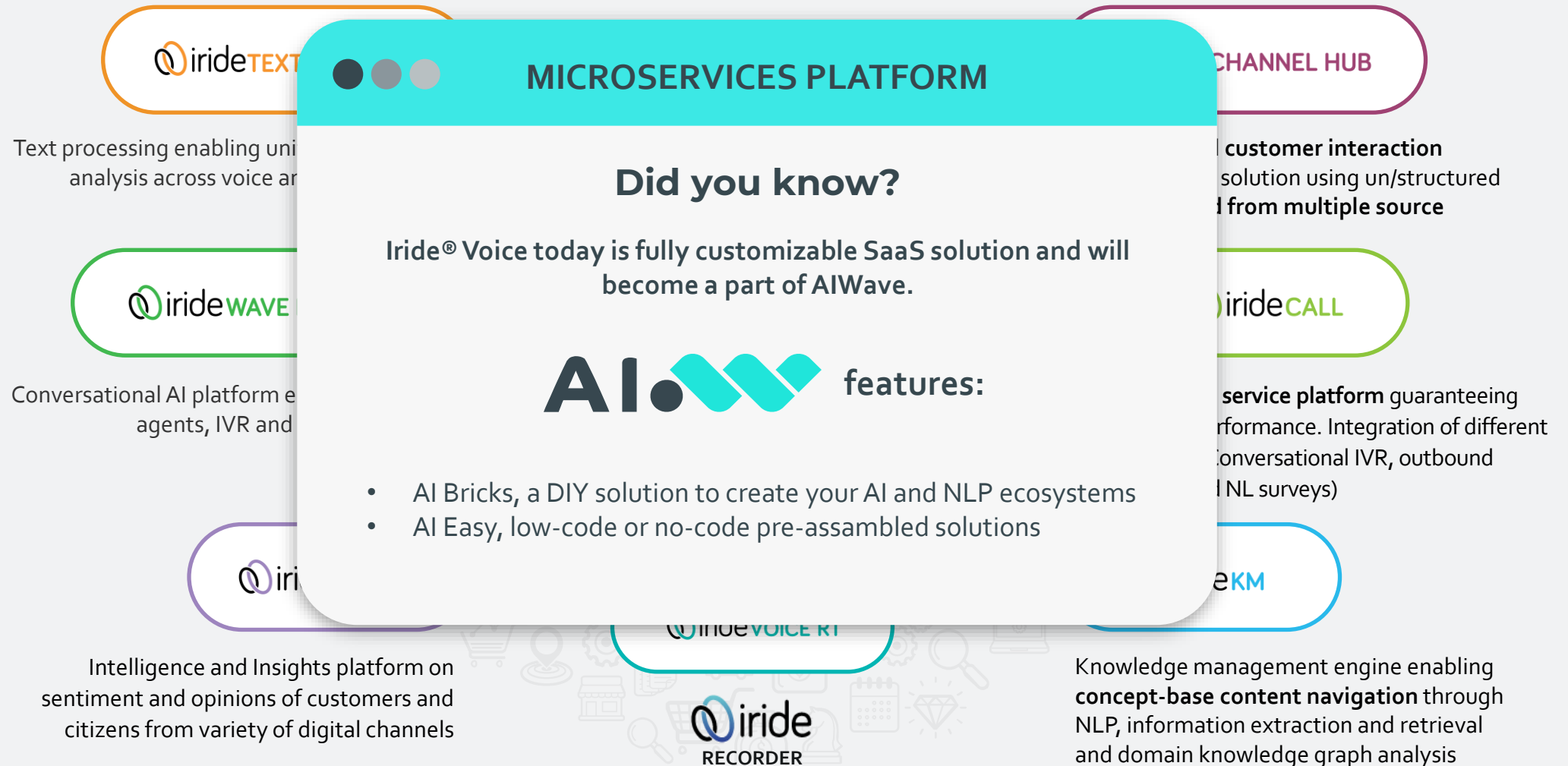
Neural Sentiment Analysis for a Real-World Application, 2017

A Multithreaded Implementation of Viterbi Decoding on Recursive Transition Networks, Proc. of Interspeech, 2011

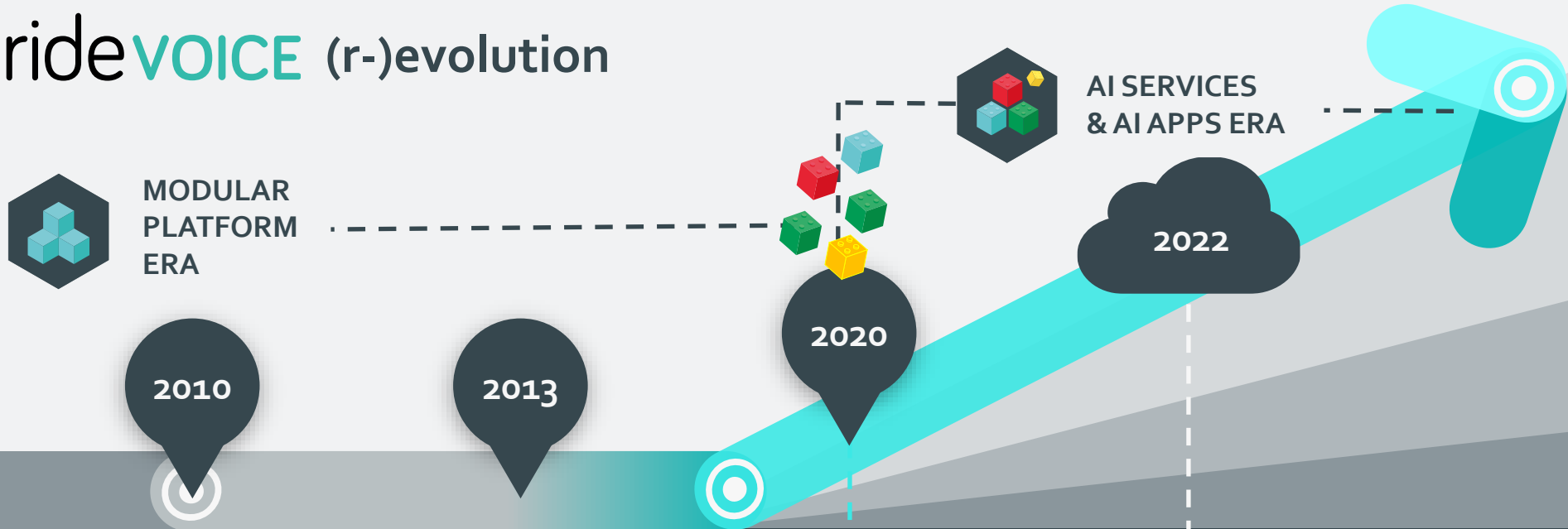
irideVOICE in an interconnected ecosystem for multichannel operations



irideVOICE in an interconnected ecosystem for multichannel operations



irideVOICE (r-)evolution



LANGUAGE TECHNOLOGIES

BASED SERVICES, TECH ACQUISITION AND DEVELOPMENT



THE FUTURE HABITAT OF IRIDE PRODUCTS

- irideTEXT ANALYTICS
- irideVOICE irideVOICE RT
- irideCALL irideKM
- irideVERBAL ORDER
- irideWAVE BOT irideBKO
- irideCHANNEL HUB irideCM
- irideAWARE irideTRAINER

SPEECH TECHNOLOGIES

- Audioma®
- FlyScribe®
- Verbamatic®

Hybrid NLP and Composite AI

NEXT

CLOUD NATIVE ARCHITECTURE RE-ENGINEERING

Iride platform re-engineered in micro-services: the AI Bricks to ease the process of building modular, scalable and customisable solutions

AI

PaaS - AI Bricks: technologies, tools, models for building customised solutions

SaaS - AI Easy: AI-infused apps



irideVOICE is not only a software



DESIGN

- Business needs identification
- Business goals and KPIs definition
- Business and IT constraints and opportunities analysis
- Data availability for training check: formats, volumes, etc
- Other data availability



CUSTOM-FITTING

- Speech recognition modelling
- Language understanding modeling (classification, clustering, sentiment, etc)
- Data flows management
- Business processes and logics integration
- Dashboards and reporting set-up



RUNNING

- Business users training
- System operations training
- Analytics and business support: product and domain matter expert to articulate business opportunities and quantify ROI
- KPIs, emerging trends and issues monitoring
- System maintenance



CONTINUOUS IMPROVEMENT

- Speech and language models incremental fine tuning
- Actions and impact measurement



EVOLUTION

- New use cases and further customisations



Thank you!