

Converting language into a digital asset

Customer Service: il futuro tra Speech Analytics e Chatbot

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Agenda

- ✓ Cedat85 – Pioneer in Automatic Speech Recognition (ASR)
- ✓ Context
- ✓ Use Cases

Cedat85

Pioneer in Automatic Speech Recognition

- Working on speech recognition since 1985
- Organic growth (10%+ YoY)
- Internal R&D Department (computer scientists, Linguists, Physicists, Mathematicians, Philosopher) with internal software development
- 85% graduate from highest international universities
- Investing more than 35% of revenues in Innovation
- More than 30+ years expertise in Speech digital processing, Text Analysis, Deep Neural Networks, Machine Learning
- Average 20+ years Senior management international experience in the company management
- 300+ Customers and over 3 Millions hours of transcription every year

Our Solutions

mediamonitor

TV - Radio Broadcaster, Media companies, Press offices

DIGITAL
DEMOCRACY

Government, Public Institutions, Municipalities

ADSCRIBE

Legal affairs and compliance offices

+VOCE™

Innovation Depts, System Integrators

SMART CALL

Contact centers, marketing departments, Customer Service Operations

- ⑩ Batch and real-time processing
- ⑩ Speaker independent
- ⑩ Speaker coverage: dialect, speaking style, gender, age, non-native
- ⑩ Channel coverage: mobile phone, VoIP, microphones
- ⑩ Environmental noise: office, car, train, public places
- ⑩ Limited power computing resources
- ⑩ Audio segmentation (no audio length limit)
- ⑩ Online speaker adaptation
- ⑩ Client APIs (Https / websockets Interface for streaming, synchronous & asynchronous off-line transcription)
- ⑩ Available languages
- ⑩ Hosting – On premises - hybrid



Our customers



... and 250+ Municipalities, Universities, Foundations, private customers

Context

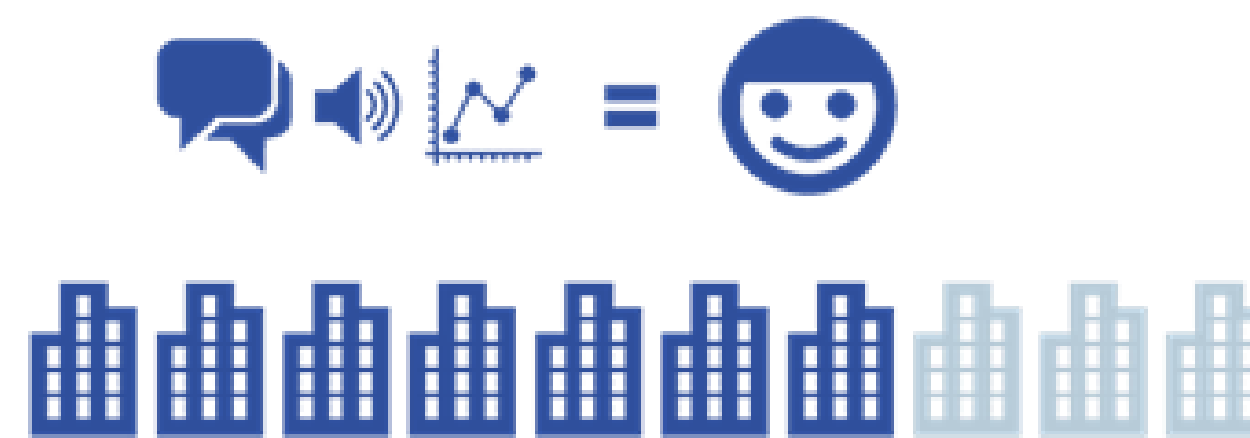
83%
OF U.S.
CONSUMERS



prefer dealing with human beings rather than digital channels to solve customer service issues

Source: Accenture

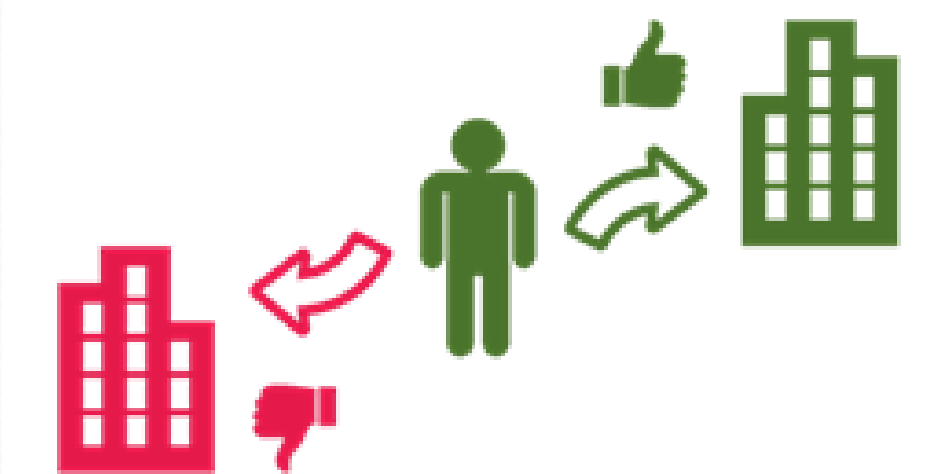
7
OUT OF 10
COMPANIES



believe that speech analytics can lead to improved customer experience; more than half think that its deployment can lead to revenue enhancement

Source: Opus

\$ 1.6
TRILLION



the estimated cost of customers switching due to poor services in the U.S.; customers demand more human interaction

Source: Accenture

Voice will play a growing role in interactions across devices in the next two years. Customer self-service will be a top-five customer service trend.

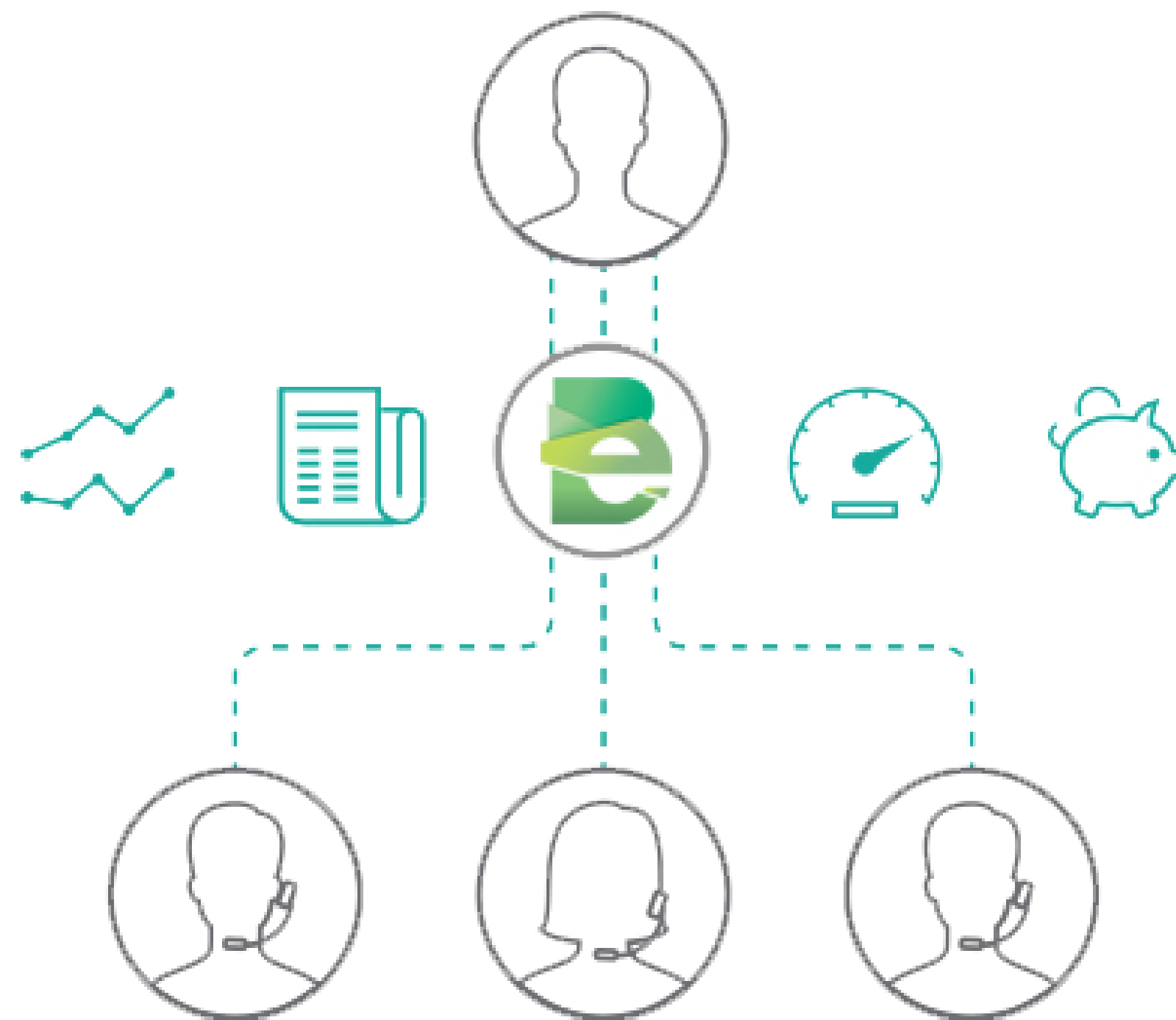
By 2019, 40% of enterprises will be actively using chatbots to facilitate business processes using natural-language interactions. (Gartner)

Context

The role of Contact Centers

Enormous volumes of precious information transit through Contact Centers every day.

While many companies are focusing on Social channels, the power of information that are handled by contact centers are not yet fully exploited.



Context

Where ASR take actions?



The contact between customer and customer service

Through a Virtual Customer Assistance technology (VCA) is possible to recognize and better manage customer request integrating ASR, NLP, Semantic, giving control to human operators only when necessary.

Call analysis – Speech Analytics

Understanding and analyzing information coming from the direct voice of the people involved in the call, the operator and the client. With this direct approach is possible to identify unsatisfied customers and manage the situations in a proper way, offering new business potential and problem solving, improving quality, reducing time gaining more satisfied customers.



Closing customers' contact

Classify, verify Vocal Orders with compliance check with contractual rules and contract contents, such as: correct customer contact detail, sales terms and conditions and other relevant data. Each recording that is below the quality value set by the company are taken apart for a «Manual» auditing by qualified employees.



Use Case # 1

BeSmartCall

Speech Analytics

**100% OF CALLS
MONITORED**
24/7/365
COST REDUCTION

СОСТАВЛЕНИЕ

**MONITORING AGENTS
TRAINING**
• FOCUS COACHING ON
CRITICAL ASPECTS
• **IMPROVE EFFICIENCY**

• ПОВЫШЕНИЕ ЭФФЕКТИВНОСТИ
КРИТИЧЕСКИХ АСПЕКТОВ

REAL TIME MONITORING
• QUICK RESPONSE
• **IMPROVE EFFICIENCY**

• ПОВЫШЕНИЕ ЭФФЕКТИВНОСТИ

**IDENTIFYING NEW
OPPORTUNITIES**
• CUSTOMIZE OFFERS
• **GROW REVENUE**

• СКОМ БЕЛЕННЕ
ОПОРТУНИТЕ ЧИЛИКО

**UNDERSTANDING
CUSTOMER NEEDS**
• HIGHLIGHT
CRITICAL CALLS
• **REDUCE CHURN**

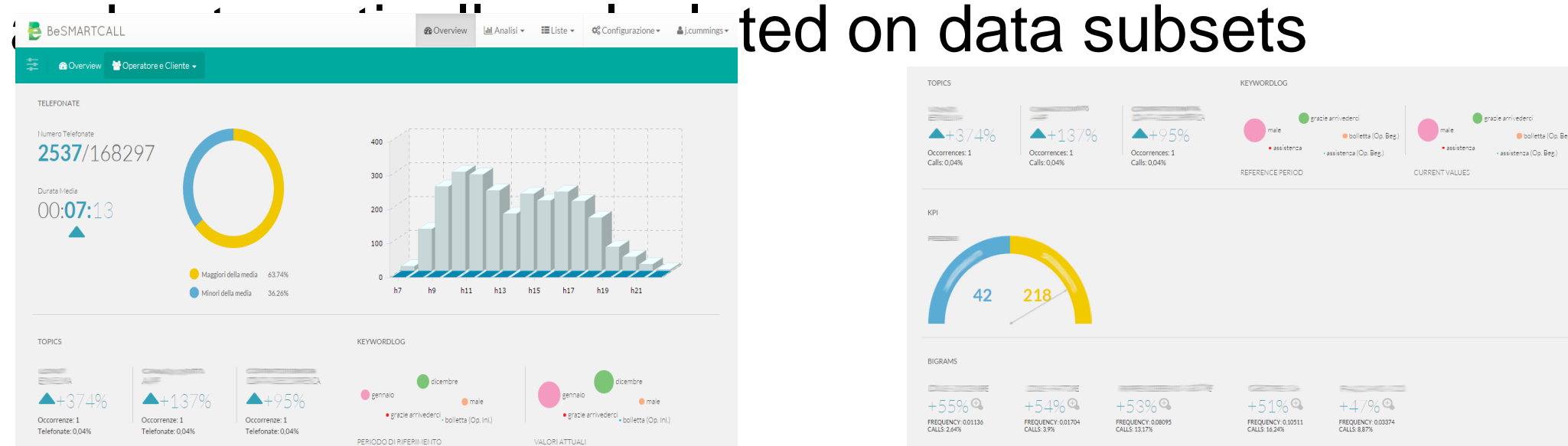
• БЕДНЦЕ ЧИЛБИ
КРИТИЧЕСКИХ ВЫЗОВ

Use Case # 1

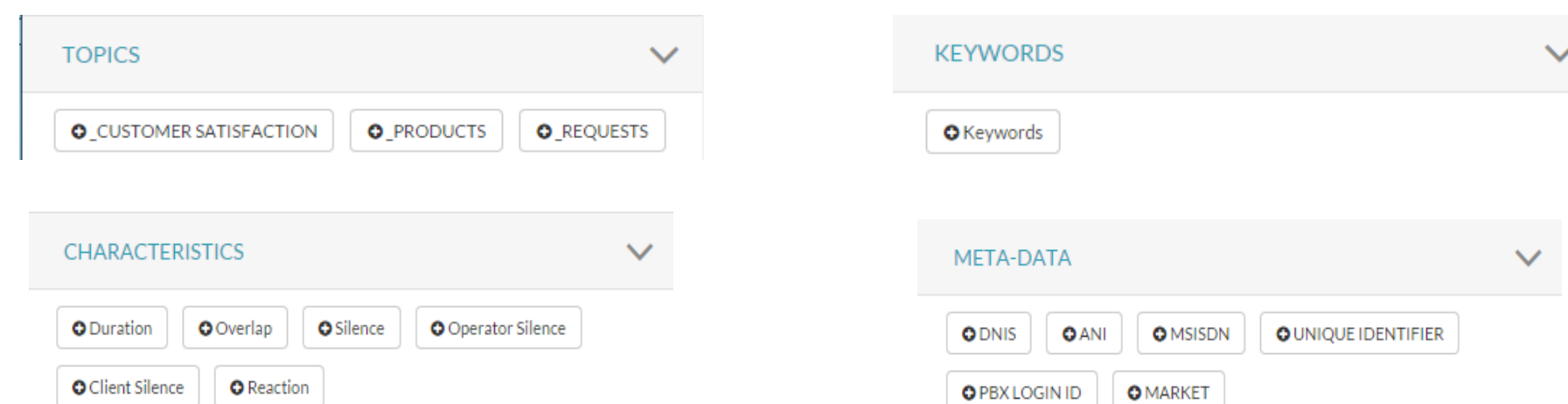
BeSmartCall

KEY FEATURES

- **DASHBOARD:** Instant analytical report with customizable update frequency
- **TRENDS:** Customizable Reports including statistics, graphics dynamically updated on data subsets



- **FILTERS:** Calls can be filtered by topic, type, silence, etc.



- **STATISTICS** Real time statistics

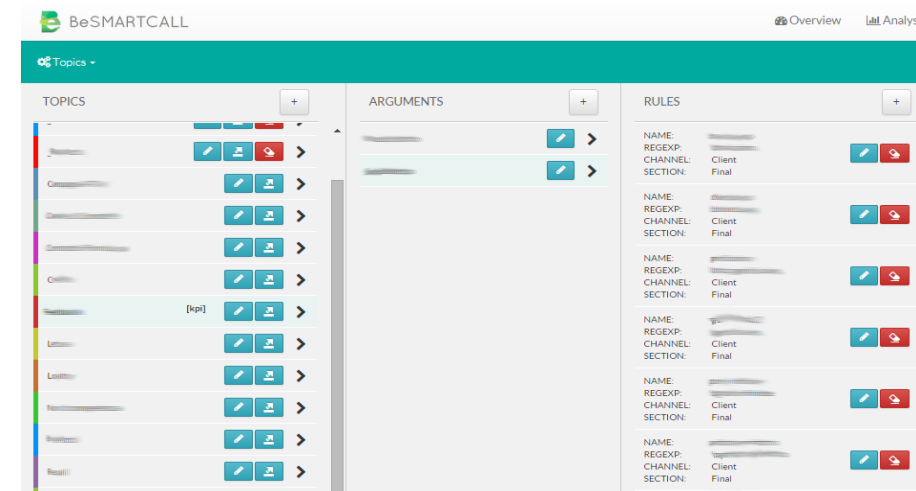


Use Case # 1

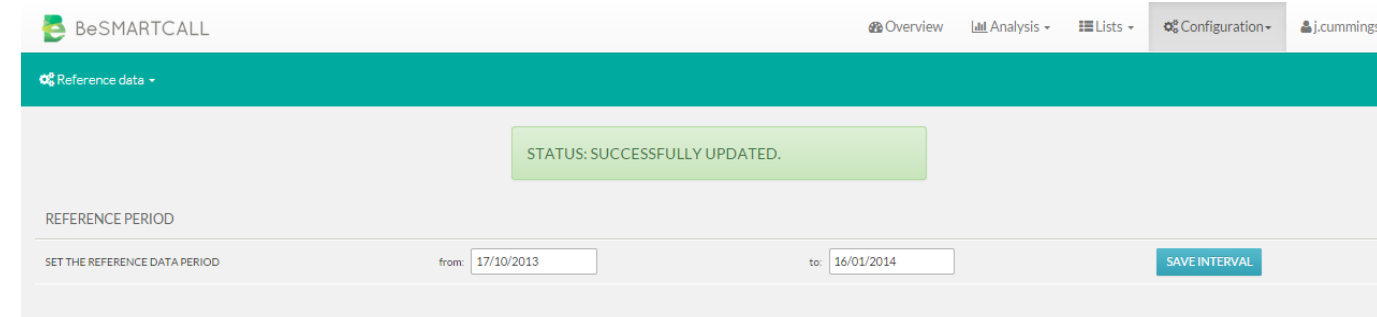
BeSmartCall

EXAMPLE

- **CONFIGURATION:** Easy Web Interface configuration. Customizable analysis for specific needs



- **ANALYSIS:** 100% of the calls are analyzed and transcribed



- **DRILL DOWN, SEARCH & LISTEN:** Search into the calls, Read, listen, Analyze each single call details



Use Case # 1

BeSmartCall

KEY POINTS and RESULTS

Listen the customer voice through analysis and transcription of direct calls allowed to:

- Identify unsatisfied customers for a better handling and service
- Create new business opportunities, up selling, cross selling
- Reach better quality in customer services
- Get time reduction and problem solving

Over 1,5 millions/year of recorded calls

Use Case #2

Vocal Order Validation

OBJECTIVE

Reduce to minimum potentially “Zero” the manual verification of Vocal Orders.

THE PROJECT

The project had the scope **to Classify, verify Vocal Orders** with compliance check with contractual rules and contract contents, such as: correct customer contact detail, sales terms and conditions and other relevant data. Each recording that is below the quality value set by the company are taken apart for a «Manual» auditing by qualified employees.

Use Case #2

Vocal Order Validation

KEY FEATURES

Key features

- **V.O. acquisition** - The V.O. are uploaded in a database for script download and audio-files analysis.
- **Manage of script sections** - Scripts are organized in sections so that can be specify additional information such as:
 - Type (Vocal or Pre-Vocal)
 - Level of attendance (OK or NOT-OK)
 - Keywords
- **Handling of discarded scripts** - for each discarded scripts is possible to visualize:
 - The entire script
 - The single portions
- **Audio files analysis**
 - STT (Speech To Text): transcription of the audio-file for each V.O.
 - Analytical comparison of the transcription with the call-script
- **Search, retrieval and visualization of the analyzed V.O.** - filtering V.O. with search and retrieval
- **Vocal Order validation**

Use Case #2

Vocal Order Validation

EXAMPLE

Example of Validation

Elenco Sezioni				
Confidence	Copione	Operatore	Cliente	
100%	Signora [redacted] se acconsente procediamo con la registrazione per fornirle le informazioni precontrattuali nel rispetto del Codice del Consumo	signora [redacted] se acconsente procediamo con la registrazione per fornirle le informazioni precontrattuali nel rispetto del Codice del Consumo	si	<input checked="" type="radio"/> OK <input type="radio"/> KO
100%	Possiamo procedere	possiamo procedere	si	<input checked="" type="radio"/> OK <input type="radio"/> KO
100%	Signora [redacted] ora le fornirò alcune informazioni che è importante lei abbia prima di aderire al contratto con [redacted] società del gruppo [redacted]	signora [redacted] le fornirò alcune informazioni che è importante lei abbia prima di aderire al contratto con [redacted] società del gruppo [redacted]		<input checked="" type="radio"/> OK <input type="radio"/> KO
100%	[redacted] di cui le ho parlato è un' offerta di Gas del mercato libero per uso abitativo	[redacted] di cui le ho parlato è un' offerta di gas del mercato libero per uso abitativo		<input checked="" type="radio"/> OK <input type="radio"/> KO
98%	e prevede un prezzo della componente a copertura del corrispettivo variabile relativo alla commercializzazione per il [redacted] Euro/smc non comprensivo di IVA e imposte	e prevede un prezzo della componente a copertura del corrispettivo variabile relativo alla commercializzazione per il [redacted] non comprensivo di IVA e imposte		<input checked="" type="radio"/> OK <input type="radio"/> KO
100%	Le condizioni del pacchetto assicurativo salute e benessere le saranno fornite unitamente al contratto di fornitura decorsi i [redacted] condizioni del pacchetto assicurativo decadono automaticamente in più potrà trovare il regolamento della operazione a premi sul sito di [redacted]	le condizioni del pacchetto assicurativo salute e benessere le saranno fornite unitamente al contratto di fornitura [redacted] mesi le condizioni del pacchetto assicurativo decadono automaticamente in più potrà trovare il regolamento della operazione a premi sul sito di [redacted]		<input checked="" type="radio"/> OK <input type="radio"/> KO

EXAMPLE

AZIONI

Convalida

Invalida

The manual validation is the confirmation or the rejection of each single call.

- Reduction of validation time
- Increasing of confirmed V.O. by the operator

Use Case #2

Vocal Order Validation

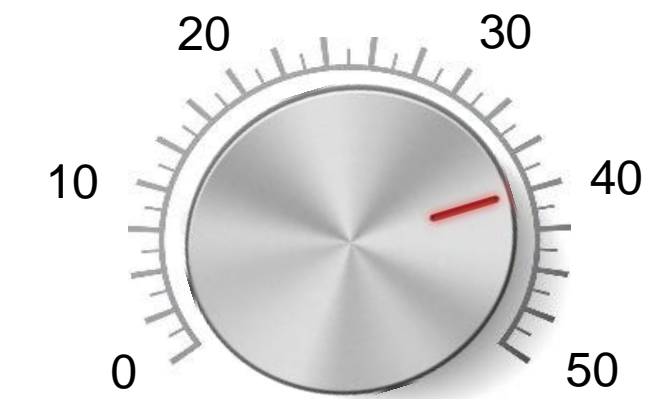
KEY POINTS and RESULTS

Costs reduction

Manual verification

Normally on 10% of Vocal Order is checked

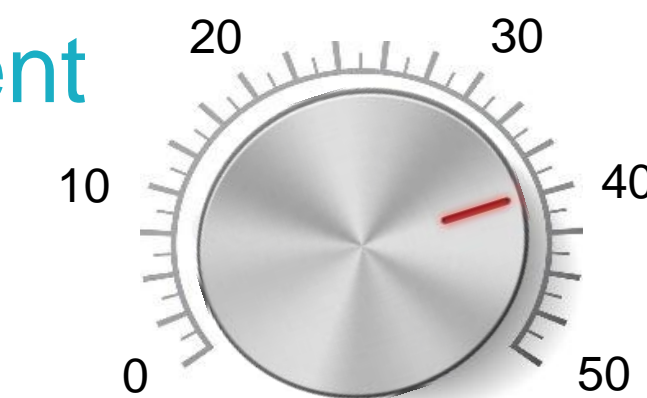
Dedicate operators



Dedicated Team for manual verification of Vocal Order

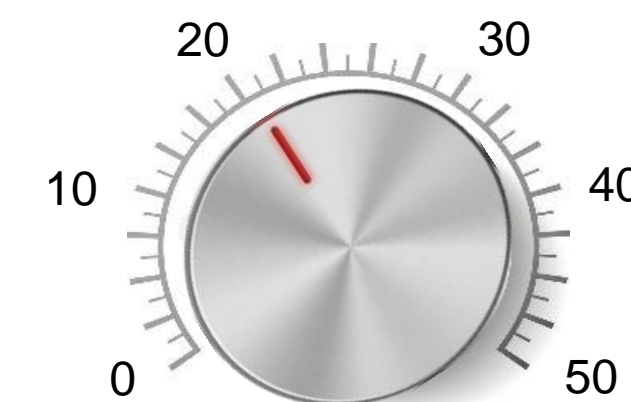
Vocal Order Management

The system is now able to validate 100% of Vocal Orders with the same team



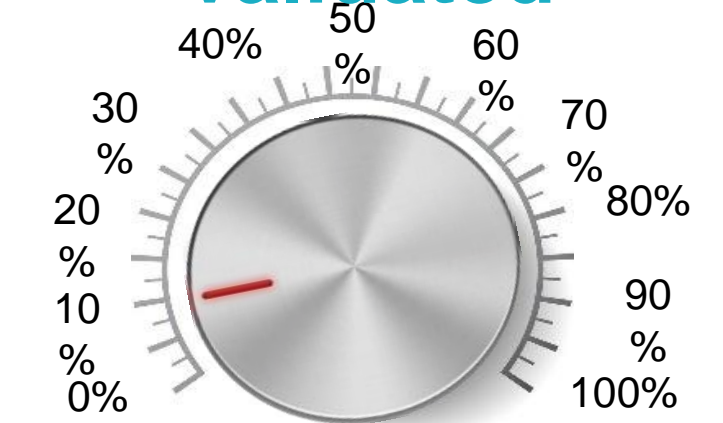
Same team allocated for checking Vocal Orders

Now is possible to accurate fine tuning between allocated resources and % of validated Vocal Orders

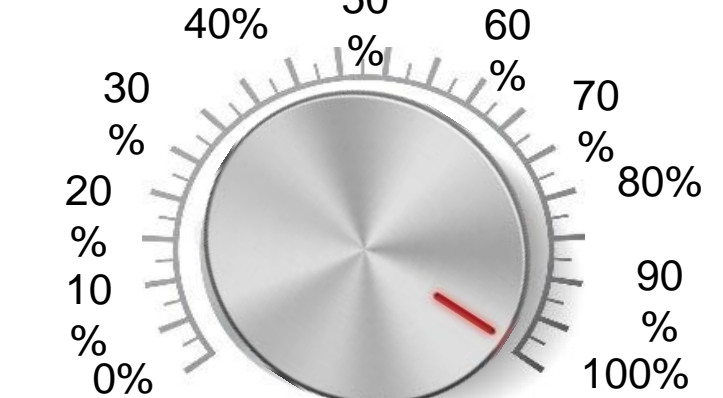


Team reductions

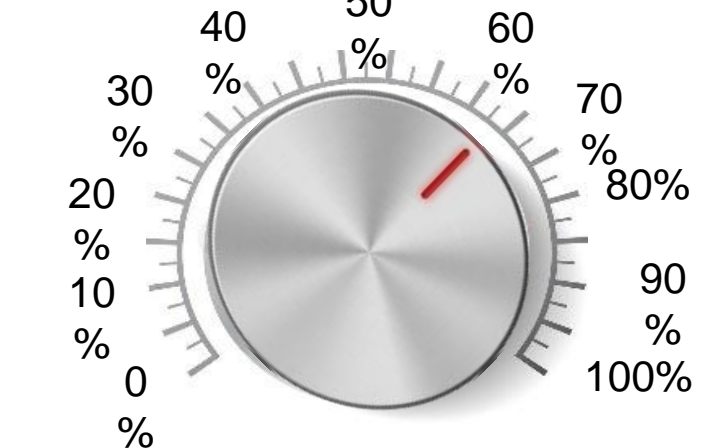
Vocal Order validated



Only 10% of Vocal Orders is manually checked



100% of Vocal Order validated



Percentage of validated Vocal Order depending on incumbent needs

Use Case #2

Vocal Order Validation

KEY FEATURES

Vocal Order Automation

Contract validation for contract placed through phone **process automation** and **compliance check** for signed contracts.

Contract signature through **Contact Center** Operator, with vocal recording (**verbal ordering / vocal order**).

Normally the **validation** is executed manually with a time for validation taking **1,5/2 times** the Vocal Order duration

Vocal Order Management

Automatic verification of contractual terms taken during the Vocal Order session

Cost reduction Automatic Vs. Manual

Reduced manual interventions in checking the quality of vocal order recording.

Thank you!
Grazie!

**Customer Service: il futuro tra Speech Analytics e
Chatbot**

Roma 28 settembre 2017