The CX Pros Guide to Speech Analytics

Table of Contents

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Introduction

For most CX professionals, speech analytics is an unfamiliar technology. It's most likely associated with the contact center which, for most CX Pros, is a black hole of mystery and in some cases CX indifference. Capable speech analytics solutions, however, offer an incredibly rich source of customer experience detail that cannot be obtained anywhere else!

This guide seeks to educate those charged with improving customer experience on how speech analytics can uniquely empower CX initiatives. An "outside the contact center" perspective is designed to help Customer Experience Officers, Managers and users of Customer Experience Management (CEM) platforms break through the siloed walls of their contact centers to take advantage of unsolicited intent, effort and emotion for CX insight and action.
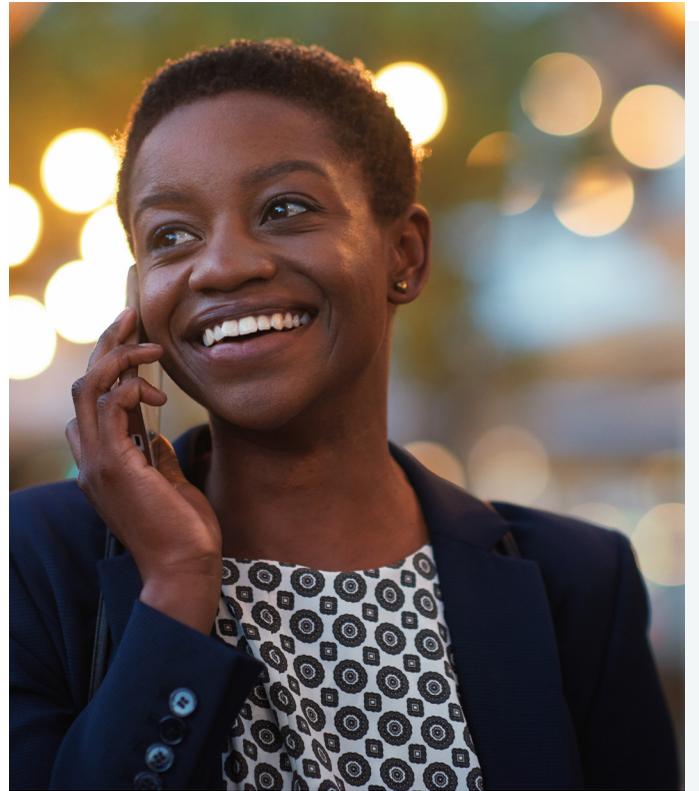
Unsolicited and Unstructured Data

CX Pros live the survey life. Emails and other channels of communication are used to ask questions and hopefully get quantitative and, in some cases, qualitative data back for customer experience metrics. Response rates and who and when you reach out for feedback are daily agonies for many. Bias is another concern, raising its head based on question content, timing and characteristics of who actually responds to a survey.

Unsolicited data, on the other hand, is feedback received without asking for it.

Bias concerns are minimized along with potentially receiving feedback on something that you may not have ever considered to be a CX influencer.

Unstructured data means that you get beyond the boundaries of the 0-10 "will you recommend me?" with freedom from a rigid format. Structured data is certainly valuable, but unstructured data is really the essence of unconstrained feedback.

Unsolicited and unstructured data defines speech analytics. When customers call your contact center speech analytics can be used to convert that rich freeform audio into structured data. What makes speech analytics CX effective is that it's not simply transcription. "Categories" are applied to define intent, sentiment and more. For example, there are MANY ways to express dissatisfaction including how you are speaking. Speech analytics captures all of that!

You can receive all kinds of CX insights when customers have freedom of expression beyond a directed format. As Gartner research noted when highlighting important developments in the VOC market: "Several important developments have been observed over recent years in the VOC including increasingly sophisticated capabilities to ingest, parse, understand and obtain insight from unstructured data of both text and voice, including customer service calls, social media posts and open-ended survey questions."[1]

What Can You Do with That Data

As you can imagine, that can be an immense amount of data. It is, but what makes it so applicable for CX optimization is exactly how your CEM platform delivers value.

You can define words, phrases and sentiment to search, generate alerts, and track frequency and trends. You can identify:

- Why your customers are calling to uncover intent

- What your agents and customer are actually doing to pinpoint key behaviors

- How your customers (and agents) feel from an emotional perspective

This unsolicited evidence is rocket fuel for your CX engine. Data efficiently available from every call creates comprehensive CX insights to pinpoint the most impactful drivers of satisfaction and loyalty along with driving action to change from the voice of EVERY customer!

1. Gartner Research, Market Guide for Voice-of-the-Customer Solutions, October 17, 2017

2. Forrester Research, The US Customer Experience Index, 2018, June 19, 2018

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What About the Phone?

They don't call 'em call centers anymore. Without a doubt contact centers everywhere are dealing with email, chat, text and a whole lot more. However, telephony remains king for most contact centers. There is research that points to issues such as millennials preferring digital channels, and customers defaulting to the telephone for the more difficult issues.

In any case, a telephony interaction is one of the most "personal" touchpoints you can have, especially for the more challenging "moment of truth" dialogs.

For CX Pros in most organizations your telephone calls will be an amazing source of insight:

Voice of the Customer (VoC)

The actual voice of the customer will express what's defining their effort and emotion in working with your organization with qualitative "color." Likes, dislikes, issues, and competitive mentions are just a few examples of unsolicited feedback frequently amplified with audio expression.

Voice of the Employee (VoE)

Understanding how your agents interact will help you understand where to prioritize effort to make change that moves the CX needle.

Emotion

Forrester research has noted that how your customers feel about engaging with your organization can have a greater impact on loyalty, even beyond ease of use and effectiveness.[2] Gaining any sort of emotional measurement adds a CX dimension that is usually difficult to quantify.

Dynamic Immediacy

ou can capture feedback from every interaction (if you want), with an ongoing ability to discover new insights without waiting for a survey response.

Contextual Awareness

Survey outliers from very negative and even extremely positive responses can be exceptionally valuable for driving action or completely misleading, due to feedback that does not paint a complete picture. Comparing survey feedback with speech analytics and even its associated audio might show that the agent did everything correctly for a completely unreasonable customer.

Avoid Survey Challenges

Data from your phone interactions is not a replacement for your survey efforts. By all means, targeted transactional questions and more in-depth loyalty surveys are essential. However, you can enrich your CX efforts by sidestepping some persistent survey challenges as well as adding a different level of feedback with speech analytics: If you're using a Customer Experience Management (CEM) platform you are probably generating alerts from your survey feedback.

Speech analytics can be a new resource for the same type of alerts with the added benefit of covering 100% of your contact center interactions!

Low scores, keywords in verbatim and possibly even emotional triggers generated from a text analytics source are examples.

Survey Fatigue

Response rates continue to fall as customers are bombarded for survey feedback. Abandon rates can be challenging as well, especially with longer surveys. Capturing data from your contact center interactions means you don't need to ask your customers for feedback as frequently.

Cognitive Disconnects

Survey respondents may not remember key details that influenced their experience. Or, they may interpret a survey question differently than was intended. Speech analytics captures step-by-step customer experience contributors in the moment without survey question influence.

Sample Management

Especially challenging for larger organizations with multiple products is balancing to whom and when you reach out with a survey. Too often and you damage the brand. Not often enough and you miss potentially critical feedback. Speech analytics provides the flexibility to cover every interaction, or target based on timeframes, customer types, call attributes and much more.

Non-Response Bias

Your CX measures are likely skewed if your survey responses are only being fielded from the extremely dissatisfied or the exceptionally satisfied. Speech analytics makes it easy to unobtrusively monitor a wide range of CX influencers across the entire range of contact center interactions.

Agent Influence

Customers are frequently hesitant to provide negative feedback to the agent with whom they just spoke. Also, "agent gamification" such as "make sure you give me a 10" may ultimately lead to CX measures that are unrealistic. Speech analytics eliminates agent impact in directing feedback, yet perhaps unexpectedly highlights how agent performance can impact CX with structured data evidence.

Not A Complete Survey Alternative

Capturing CX insights with speech analytics is powerful. It's not, however, some sort of a solution that becomes your sole source of CX truth:

Population Representative

Not everyone calls. Also, you might introduce a bias element to consider if you are in an organization where most customers default to a phone call only after unsuccessfully attempting self-service.

Targeted Insight

Questions may be required when probing for the additional detail such as why a customer feels a certain way, if a call center agent feels they are valued, or if a specific product or service is meeting expectations.

Structured NPS

Net Promotor Scoring (NPS) and other CX methods may require specific quantitative survey input to satisfy each metric's requirements.

"Combine survey data (solicited feedback) with speech analytics data (unsolicited feedback) for the most complete understanding of your customers."

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What Speech Analytics Can Do for CX

What CX Pros need to understand is how customer experience is captured and represented with speech analytics, which metrics to look for and what can be done to drive CX action from a new source of customer experience awareness.

Match Your Alerts

If you're using a Customer Experience Management (CEM) platform you are probably generating alerts from your survey feedback. Low scores, keywords in verbatim and possibly even emotional triggers generated from a text analytics source are examples. Speech analytics can be a new resource for the same type of alerts with the added benefit of covering 100% of your contact center interactions!

Voice of Your Employee (VOE)

The Voice of the Customer is on the tip of every CX Pro's tongue, but what about your employees? "Moment of Truth" interactions happen every day in your contact center. How do you know if your agents are leading the charge for your brand loyalty? The answer is most likely that you don't know. In fact, for many CX Pros the contact center is a black hole of customer experience invisibility. You may be able to get some customer service stats such as First Call Resolution and Handle Time, but what about politeness, empathy and overall quality of your agent's performance? You can survey your agents. That helps, but fear of jeopardizing job security may influence survey answers. Also, there is seldom much enthusiasm for taking agents offline to answer surveys.

Speech analytics unobtrusively and objectively captures the voice of your employees. You can track the nuts and bolts of how understandable your agents are and if they are delivering the proper introduction. Beyond that, you can capture scores for politeness, compliments, level of ownership and more unsolicited feedback. How the frontline engages with customers independent of product, policy or promotions can be an indicator of where effort is needed to improve CX. Speech analytics captures all this intelligence on an ongoing basis for 100% of your calls!

For the CX Pro, you realize how your contact center interactions are perceived relative to how you are trying to shape your brand perception. It's also a great resource for uncovering CX issues where the root cause is frequently beyond contact center control. For example, website mis-directions or marketing campaigns that surprise agents will be revealed via agent dialogs.

CX Pulse

A speech analytics solution will fortify ongoing survey efforts with metric scoring, becoming a better predictor of CX. This means that a CX Pro can "take the temperature" of CSAT scores, level of effort and even emotional components at any time. Speech analytics solutions that offer automated scoring (many do not), will capture a wide range of useful CX stats for snapshot awareness or trend predictions.

The example at right displays statistics for CSAT, level of customer effort and emotion. A capable speech analytics solution will allow you to examine statistics such as these over a defined period of time. For CX Pros this means continuous "CX awareness at hand" with immediate attention when you detect increases or decreases beyond normal levels.

▼ Custom-CSAT (Avg 96.84)		
Satisfied	18693	99%
Indifferent	190	1%
Dissatisfied	26	<1%
▼ Custom-Customer Effort (Avg 90.25)		
Low	9835	52%
Medium	6158	33%
High	2916	15%
▼ Custom-Emotion (Avg 79.63)		
Content	10323	55%
Frustrated	5463	29%
Indifferent	3123	17%

Forrester Research notes in their CX Index that "emotion has a bigger impact on brand loyalty than effectiveness or ease in every industry."[3]

How does a CX Pro get their arms around emotion? Surveys undoubtedly help because you can ask and hopefully receive an honest assessment if a customer feels appreciated or respected. But what if you could layer additional insight based on every interaction with your contact center? Speech analytics can help CX Pros quantify emotion with acoustic measures (how someone said something), as well as what they said.

Speech tempo, agitation and especially % silence within a call will yield stats that can be captured as frustrated, content or indifferent separate from what they said. Annoyance, disappointment, and frustration always drive customers away. A speech analytics solution that measures these emotions will immediately draw the attention of a CX Pro.

The example below shows how emotion can be captured when customers are dealing with specific product components. "Sentiment" is categorized as positive or negative by combining what callers are saying with the acoustics of their speech.

All Product Items > **iphone 6** > Features > Contact ID

Features		Sentiment	Positive Sentime Score	Negative Sentiment Score
Features avg		3.71 (1991)	4.36 (1991)	-0.65 (1991)
Apps	☰	3.32 (192)	4.08 (192)	-0.76 (192)
Battery	☰	4.04 (445)	4.52 (445)	-0.48 (445)
Camera	☰	4.11 (796)	4.43 (796)	-0.33 (796)
Connectivity	☰	2.58 (103)	3.67 (103)	-1.09 (103)
Headset or Speaker	☰	3.54 (28)	4.66 (103)	-1.12 (28)
Memory	☰	3.21 (133)	3.69 (133)	-0.48 (133)
Screen	☰	3.45 (1038)	3.82 (1038)	-0.37 (1038)
Voice Quality	☰	5.42 (21)	5.99 (21)	-0.57 (21)

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But what about how your frontline deals with customers and how they project your "brand's emotion?" A speech analytics solution that statistically breaks down and measures components of each call provides insight from your side of the house.

For example, are agents opening with the proper greeting AND being polite, empathetic and complimentary? A capable speech analytics solution measures these emotional characteristics as you can see in the example below (where politeness apparently needs some coaching).

All Product Items > **iphone 6** > Features > Contact ID

Agent	Agent Quality Customer Service	Percentage Silence Score	Politeness Score	Empathy Score	Agent Ownership Score
Agent avg	40.86 (208)	55.47 (206)	19.19 (208)	30 (15)	44.08 (208)
Alex Portnoy	42.06 (19)	63.75 (19)	27.68 (19)	0 (2)	33.33 (19)
Atticus Finch	43.97 (11)	60.17 (11)	27.27 (11)	NA (0)	45.45 (11)
Augustus McCrae	53.40 (8)	82.94 (8)	12.50 (8)	NA (0)	50 (8)
Aureliano Buiendia	46.19 (12)	73.05 (12)	16.67 (12)	100 (1)	33.33 (12)
Bigger Thomas	43.25 (14)	62.82 (14)	21.43 (14)	NA (0)	42.86 (14)
Gregor Samsa	42.45 (11)	54.80 (11)	18.18 (11)	0 (1)	54.55 (11)
Ignatius Reilly	45.01 (17)	67.78 (17)	23.53 (17)	NA (0)	41.18 (17)
Jay Gatsby	44.23 (12)	58.76 (12)	16.67 (12)	NA (0)	41.67 (12)
Mike McDaniels	12.74 (3)	7.51 (3)	0 (3)	0 (1)	33.33 (3)

The result for CX Pros is that you can identify if your agents are exhibiting behaviors that you know make customers feel appreciated and grateful. There is no magic measure for emotional states such as "happiness."

However, what CX Pros get with a capable speech analytics solution is a two-way street for measuring what customers say and how they say it, along with statistical proof points for how your frontline team is contributing to the key emotional drivers of your customer base.
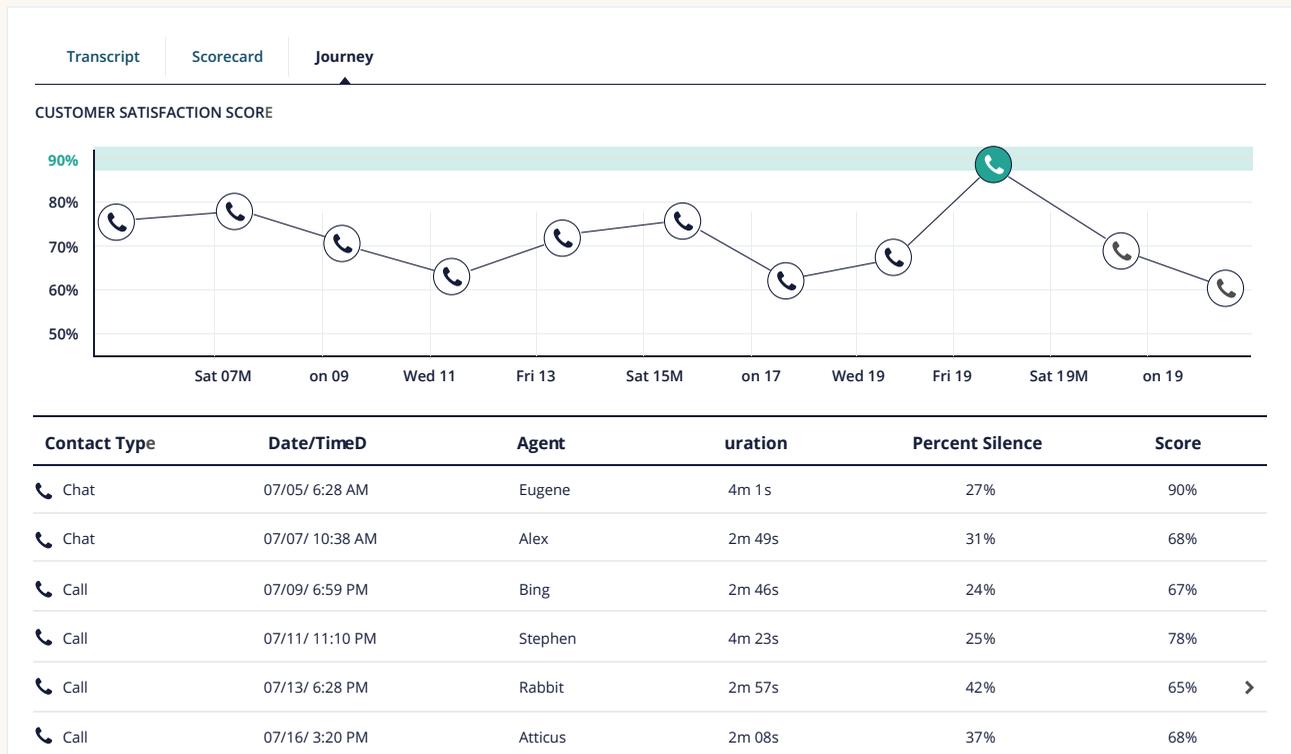
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Journey Mapping

Getting a handle on your customer touchpoints is fundamental for CX Pros. The problem is that Journey Mapping is becoming more difficult, especially when organizations deal with siloed product and service teams. On top of that, customers are increasingly using multiple channels to communicate. A capable speech analytics solution will be a unique resource for customer journey mapping by stepping beyond silo and channel boundaries to capture insight from 100% of contact center interactions.

Evidence of repeat calls and even channel hopping contacts can be gathered. It's possible to track repeat contacts and compare that against metrics that deliver CX insight. For example, the journey map displayed at the bottom of the previous page maps a customer's repeat caller against CSAT scoring.

For a CX Pro this solid empirical touchpoint evidence mapped against a solid customer experience metric is gold for driving action. Opinions and anecdotes are replaced by metrics and data visualization.

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| Transcript | Scorecard | **Journey** |

CUSTOMER SATISFACTION SCORE

Contact Type	Date/TimeD	Agent	uration	Percent Silence	Score
Chat	07/05/ 6:28 AM	Eugene	4m 1s	27%	90%
Chat	07/07/ 10:38 AM	Alex	2m 49s	31%	68%
Call	07/09/ 6:59 PM	Bing	2m 46s	24%	67%
Call	07/11/ 11:10 PM	Stephen	4m 23s	25%	78%
Call	07/13/ 6:28 PM	Rabbit	2m 57s	42%	65%
Call	07/16/ 3:20 PM	Atticus	2m 08s	37%	68%

Survey Validation

CX Pros constantly deal with NPS scores from survey responses and other feedback-fueled CX measures. Pain points such as a low detractor score can lack context behind the reason, even if accompanied by a verbatim record. This strikes at the heart of one of the greatest challenges for a CX Pro. It's great to have customer experience insights, but difficult to drive meaningful change with that awareness.

A speech analytics solution will add unsolicited feedback to a survey response. Additionally, a CX Pro can experience the customer AND agent perspective that contributed to a survey score for qualitative intelligence. For example, your attention might be drawn to a low scoring survey from a longtime customer. You can use speech analytics to review the interaction that is linked to that survey response. At your fingertips are satisfaction and emotional scoring for the customer as well as for how the agent handled the interaction. A bonus is that you can experience the audio as well as review a tagged transcript.

In some cases insights revealed from this validation will not be what you expected. You may find that the agent did everything in his/her power, including being empathetic and polite in dealing with an unreasonably irate customer. Or, you might uncover a previously unknown issue that impacts CX that the agent had no control over. In either case, audio, transcript and survey data is available for you for further investigation or as evidence to more effectively drive change.

Survey Enhancement

Encouraging survey engagement to improve response rates and feedback is an ongoing challenge. Personalization is one way to boost your feedback effectiveness. Personalization helps by showing customers you already know something about them. For example, if the survey is transactional in nature, include relevant details about the transaction such as the channel or location and offer additional questions based on those transactional details. Most organizations can access this data today via their CRM.

But what if you could make a survey more meaningful and engaging with additional personalization? Speech analytics supports this by structuring data that can be used to "personalize" certain survey questions. Speech analytics powers this with contextual awareness. What this means is that you can search for customers that are exhibiting a predictive behavior and then issue a survey with questions that target that behavior.

For example, in your speech analytics you could search for interactions where customers were emotionally frustrated with a reference to a particular product or service. Resulting customers could then be issued a survey with questions tailored to target needs of the customer linked with the product or service with which they are associated.

Verbatim Meaning

Qualitative feedback with a verbatim question in an IVR or agent conducted survey can deliver great value. Converting open-ended and unstructured data into a useful format can be challenging. In some cases, organizations feel they have too much qualitative data. Who has time to read it, never mind figure out what's important? At the other end of the spectrum is avoiding voice-based qualitative feedback because it's perceived as too complicated to process.

With speech analytics categorization consolidates meaning by taking into account the many ways spoken words express a thought or feeling. Speech analytics tags meaning, making it easy to search and visualize near-real-time CX insights and evaluate emerging trends. As a result, you can more efficiently zero in on what's likely to have CX impact.

Using speech analytics for your verbatim feedback provides CX Pros with a couple of key benefits:

1. You can search for specific attributes such as dissatisfaction or frustration.

2. You can increase qualitative feedback through efficiencies such as automated scoring that draws attention to key issues within large data sets.

Silo Shifting

One of the biggest challenges faced by CX Pros is resistance to customer experience initiatives due to priorities focused elsewhere, "not my problem" syndrome, and simple departmental indifference. Having CX insight is great, but driving action is tough.

Speech analytics will fortify your customer feedback with customer experience scale that potentially dwarfs survey response as a representative percentage. Insight from 100% of your contact center interactions means access to an "analytics blanket" that immediately resolves confidence scope. For example, you might point to the "statistical significance" of a range of survey responses that indicate an issue with a return policy. With speech analytics you can retrieve every call associated with that specific issue along with CX-indicative scores that are inherently objective.

This objective evidence is powerful incentive for action. Survey feedback and contact center analytics layer solicited and unsolicited Voice of your Customer proof that's difficult to ignore. Additionally, Voice of the Employee speech analytics value means that a CX Pro can also have data-driven confidence in how the frontline deals with the customer when a CX impacting issue rears its head.

Real-Time Action

It is possible for speech analytics to be deployed for real-time service. What this means is that an alert could be generated noting something such as "churn risk" while a call is in process. This means that "in the moment" intervention is possible, such as agent script diversion. Or, supervisory assistance could be in play.

For CX Pros this literally means instant insight to action. But it can also be a more challenging framework to navigate. Dynamically changing agent behavior based on customer experience indicators puts a CX Pro squarely in contact center manager territory. This can be a big cultural shift, especially when the contact center is focused on average handle time, first call resolution and other metrics that for the most part do not consider dialog context.

For CX Pros it helps to consider contact center management's perspective if real-time CX intervention makes sense. Take time to learn about how the contact center is incentivized by its level of customer service. Does CX feedback makes its way to the frontline today? By evaluating these issues, a CX Pro will be better prepared to approach the contact center with a partnership approach to make CX insight a cultural imperative for the contact center and as a result for the entire organization.

How it Works

The following is designed to enable CX Pros with a working knowledge of speech analytics from the customer experience perspective.

At a high level, speech analytics delivers a unique level of CX insight across the following five steps of its operational performance.

Interactions	AI Powered Transcript	Categorization & Tagging	Predictive Scoring	Insights
Omnichannel Interaction Acquisition (with metadata)	**Transcription & Acoustic Measurements**	**Semi-Supervised ML-Driven Contact Classification**	**Weighted, Rules-Based Automated Scoring**	**Agent Performance & CX Insights**

Interaction Acquisition

This is where audio interactions are captured, primarily from a contact center voice recording system or potentially in real time. Omni-channel is email, chat and other text-based input that can be integrated with audio capture.

Transcription & Acoustics

Speech to text along with how someone speaks (agitation) is measured. Redaction means sensitive numeric data is eliminated from transcripts and audio files.

Contact Clasification

Meaning is tagged to words, phrases and acoustics.

Automated Scoring

Metrics are applied based on previously established inputs that can include classifications, weighting and more.

CX Insights

Search, Trend, Discover, Compare and Report

CX Pro's Speech Analytics "Need to Knows"

How You Capture the Voice of Your Customers and Employees

- **Why Call Recording is There** – It's most likely not for CX. The top reasons are usually for agent quality management, compliance monitoring and dispute protection. For CX Pros this means that you need to educate your contact center management that what you are looking for is customer experience insight. You don't want to inadvertently create a notion that you are looming as just another agent performance "hammer."

- **Security** – Avoid the data sharing door slam. An easy out for a silo-defended contact center is that there's sensitive data there that cannot be shared. Capable speech analytics solutions, however, can automatically eliminate (redact) sensitive numeric data such as credit card numbers from transcripts and audio. For capable speech analytics solutions a CX Pro can reference that this can be done with PCI DSS (Payment Card Industry, Data Security Standard) confidence. Secure redaction can be accomplished in real-time and for any historic library of calls as well.

- **Stereo or Mono** – You need VOC and VOE. Check if an existing call recording infrastructure is available. If stereo – no problem. Mono means that a speech analytics solution cannot quite as easily discern between customer and agent speakers. This can be resolved by speech analytics vendors offering speaker separation software. Mono does not prevent users from extracting VoC vs. VoE insight, but stereo certainly makes it easier. For CX Pros this is a good "Need to Know" when evaluating your speech analytics vendor.

Speech Analytics Accuracy

All speech analytics are not created equal. Accuracy in terms of transcription and categorization (meaning) can vary tremendously from vendor to vendor. For example, Forrester Research noted in a comparison of speech analytics vendors that "Accuracy varied dramatically from vendor to vendor. Errors in transcription ranged from the mundane ("let me get "mistakenly transcribed as "let me guess") to the baffling and surreal ("the cat's soccer pants"). Beyond technology, other factors influence speech analytics accuracy such as a noisy environment.[3]
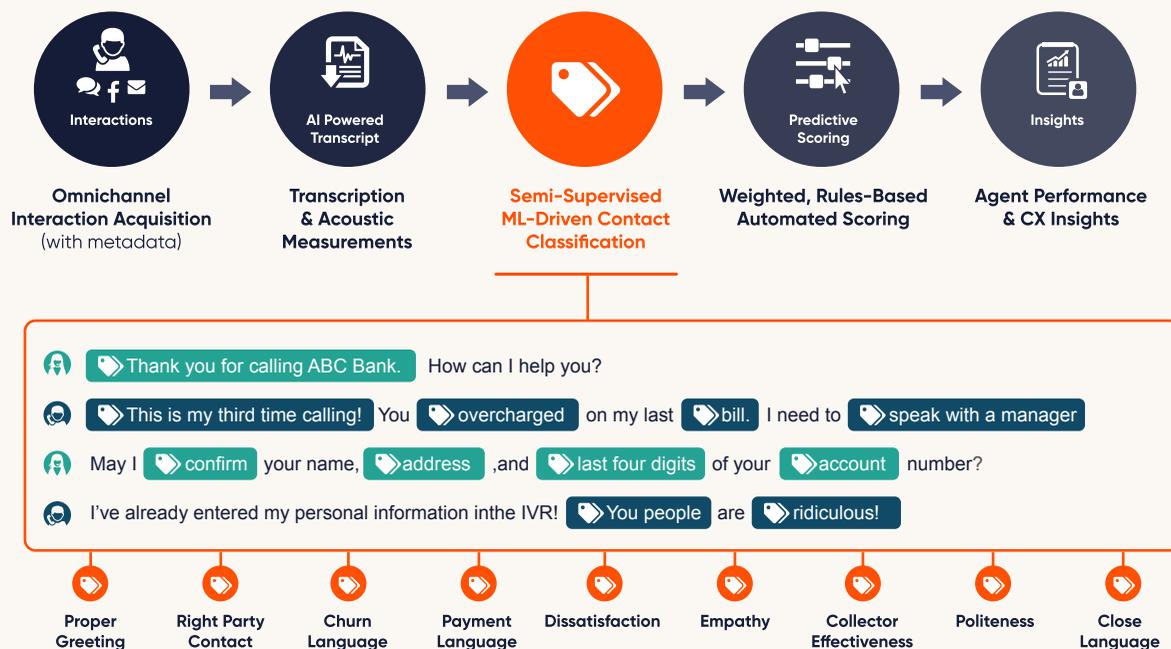
- **Word Accuracy and Meaning** – Meaning is more important for CX. There are different core technologies used by speech analytics vendors, which are the reason for variances in accuracy. Word accuracy refers to accurately transcribing what was heard. Category accuracy is meaning such as dissatisfaction.

For some vendors these stats can be extremely high, for others, not so much. For CX Pros don't be concerned about mis-transcribing a reasonable percentage of words as long as you capture meaning (category accuracy). Make sure you test drive your speech analytics proposed solutions to avoid "cat's soccer pants" errors because every speech analytics vendor will claim accuracy as a benefit.

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3. Forrester Research, The Forrester New Wave™: AI-Fueled Speech Analytics Solutions, Q2 2018, June 22, 2018

Classification

Classification refers to the assignment of meaning for structed data. Categorization works by automatically tagging voice dialogs and other channels of communication with meaning based upon language patterns, keywords and phrases. An example of how categories are applied to customer and agent speakers is shown below:

Interactions → **AI Powered Transcript** → **Semi-Supervised ML-Driven Contact Classification** → **Predictive Scoring** → **Insights**

Omnichannel Interaction Acquisition (with metadata) | Transcription & Acoustic Measurements | Semi-Supervised ML-Driven Contact Classification | Weighted, Rules-Based Automated Scoring | Agent Performance & CX Insights

🏷Thank you for calling ABC Bank. How can I help you?

🏷This is my third time calling! You 🏷overcharged on my last 🏷bill. I need to 🏷speak with a manager

May I 🏷confirm your name, 🏷address ,and 🏷last four digits of your 🏷account number?

I've already entered my personal information inthe IVR! 🏷You people are 🏷ridiculous!

Proper Greeting | Right Party Contact | Churn Language | Payment Language | Dissatisfaction | Empathy | Collector Effectiveness | Politeness | Close Language

CX Need to Knows

- **Focus on the CX Drivers** – Use select categories to zero in on key VOC and VOE drivers. Capturing data from all contact center calls is a unique resource for insight, but it can amount to data overload. CX Pros should keep in mind that your priorities will tend to be different than contact center management, demanding a different focus. For example, churn language from your customers and empathy exhibited by your agents will be more important for you than opening and closing script adherence. To get started, focus on a select group of categories, tracking scoring and results.

CX Need to Knows

- **Customize your CX** – You can tailor categories for more effective automated CX insight. Categories are built by including many different words and phrases to describe meaning. For example, "dissatisfaction" is noted when someone says, "you people", "been on hold long time", and MANY other terms. That's great for CX Pros because you don't have to start from scratch for key CX indicators such as "churn language" for VOC or "politeness" for VOE. But it doesn't stop there!   Capable speech analytics solutions make it easy to customize categories. For example, a CX Pro might add a specific product name or offer tracked in relation to dissatisfaction. This creative automation yields contextual insight that highly likely to help a CX Pro capture targeted insight with evidence to drive action when needed.

Acoustics

What you can get from voice that you can't capture elsewhere is meaning behind HOW someone expresses intent and emotion with voice pace, tone and inflection.

Speech analytics can provide CX Pros with an acoustically-captured emotion dimension that helps focus attention on the impact and scope that an emerging CX issue will have on satisfaction and loyalty. Acoustic measures include word tempo, agitation (include inflection) and % silence. All of these can be scored to enable a search targeted (for example) on the most agitated customer interactions.

CX Need to Knows

- **Percentage Silence is a Key CX Indicator** – Lack of acoustics from customers and/or agents tends to point to a problem. Percentage silence as a relative metric will point to frustration or lack of understanding on the VOC side, or a process barrier expressed within VOE. You will always have an acceptable silence range, but when the % climbs higher relative that what you can score as norm, then you know there's a problem somewhere. For CX Pros, % silence can be a "flag" indicator especially for VOE issue where it appears an agent must search across multiple systems and scripts to find and answer and respond to a customer. The reason why % silence is not just a contact center management stat is because a root CX cause may lie outside of the contact center's control. That's when a CX Pro can use this insight for awareness as well as for leverage to drive action.

- **Emotion Can Be a Metric** – Acoustics can help point to or characterize a CX issue, but it's not a magic bullet. There's not a magic happiness, grateful or respected button. But there are acoustic measures that can help a CX Pro benchmark emotion at least to some extent. One example is tracking an emotion statistic built upon a category (dissatisfaction) and acoustics (agitation). For a CX Pro this means that you can track emotion noted as "content," "discontent" or "indifferent." Acoustics are an intensifier in this case and help characterize emotion along with what was said. For example, a CX Pro can review all interactions where a customer expresses dissatisfaction and is also really "ticked off."

Agent	Agent Quality	Politeness	Empathy	Ownership	Compliments	Agent intro	FCR Close	Speech Understandability
Agent avg	70.58 (801)	65.69 (801)	70.54 (46)	76.18 (801)	7,83 (801)	93.20 (801)	60.13 (801)	99.07 (301)
Ashley Brennar	73.44 (53)	61.90 (63)	75 (4)	84.13 (63)	11.11 (63)	92.06 (53)	47.62 (53)	100 (63)
Brant Figueroa	82.59 (71)	73.24 (71)	60 (5)	97.18 (71)	4.25 (21)	92,.18 (71)	71.83 (71)	100 (71)
Calvin Jonnessey	73.52 (66)	65.91 (66)	71.43 (7)	83.33 (66)	9.09 (66)	100 (66)	48.48 (56)	100 (63)
Frida Torres	73.77 (63)	76.19 (63)	100 (6)	77.78 (63)	11.11 (63)	93.65 (63)	58.73 (63)	100 (85)
Hester Notmag	55.54 (85)	36.82 (85)	0 (1)	58.82 (65)	3.53 (85)	81.18 (85)	41.18 (85)	100 (68)
Irish Mackey	75.39 (68)	74.63 (66)	100 (3)	79.41 (68)	11.26 (58)	96.53 (68)	66.18 (66)	100 (63)
Lucrecia Borgia	72.71 (81)	80.56 (63)	40 (5)	76.19 (63)	6.35 (60)	96.83 (58)	74.60 (53)	100 (63)

- **Audio Evidence "Weaponizes" CX Action** – Spoken expression helps drive action. One of the biggest challenges facing CX Pros is changing or optimizing process and procedures based upon CX insight, especially when crossing departmental boundaries. A speech analytics solution arms CX Pros with audio evidence along with statistical validation. Remember that capable speech analytics solutions automatically redact sensitive numeric data, so secure sharing can be done. An audio snippet of a dissatisfied customer with an acoustic intensifier will be hard to ignore!

CX Discovery

Emerging issues as spoken by customers or agents will offer CX Pros benefits ranging from predictive awareness to "put the fire out" attention.

Capable speech analytics solutions will present emerging topics in formats such as word clouds and bubble maps with size of font or bubble corresponding to frequency. Note that the topic bubbles shown below also delineate between customer and agent speakers:

CX Need to Knows

- **Pay Attention to Agent Speakers** – Building topic references can point to a CX root cause issue. Issues that lead to a less than optimal customer experience are frequently beyond the control of your contact center. When a CX Pro sees an increasing frequency to "website" or "new campaign" you might want to investigate if incorrect digital instructions are generating unnecessary calls, or if lack of communication from the Marketing team have made agents unprepared for questions. Use unsolicited VOE feedback to focus your initial investigation.

- **Customers Will Voice Their Challenges** – Remember that a phone call frequently occurs when self-service fails. Product and service issues will rear their heads with speech analytics driven organic discovery. Unexpected issues that require a call might mean an escalating CX impactor. "Out of the norm" references with building volume can be a trigger to investigate further by drilling into call detail.

Avoid CX Platform Defense

A CX Pro knee jerk reaction may be to simply send speech to text transcripts from unsolicited contact center data to your Customer Experience Management platform.

After all, you are already doing text analytics with your existing CX platform AND you can (what might feel like) take control of unsolicited contact center data and "make it your own." This is a bad idea for a number of reasons.

CX Need to Knows

- **Voice and Text-based Communication are not the Same** – Audio transcription is even more "unstructured." How people communicate with voice is different from text-based expression. Audio conversations are not bounded by sentence structure and tend not be guided by a logical question and answer flow of detail. Absence of punctuation and capitalization in speech to text transcripts compounds the challenge of understandability. Capable speech analytics solutions overcome these challenges with categorization that "tags" meaning tuned for spoken dialogs. For CX Pros this means using the categories within a speech analytics solution such as dissatisfaction, churn language and more to "index" CX insight from unstructured contact center data. Then, target specific categories by linking speech analytics transcripts and audio with survey data from the same conversation, or use categories as alerts for your CEM platform.

- **Acoustical Measures are not CX Platform "Visible"** – Speech analytics captures HOW someone said something in addition to what they said. Acoustic measures such a silence, agitation and tempo are speech analytics metrics. CX platforms are created with a text analytics foundation with no ability to deal with acoustics. Agitation and temp are intensifiers for feedback captured with speech analytics. Percent silence is valuable as an intensifier as well as on its own as an indicator for lack of understanding, evidence that there is a system or process issue and more. None of these valuable root-cause indicators would be present if text analytics were applied to a voice transcription.

- **Speech Analytics is "Big Data"** – Speech to text transcription with associated audio files requires massive storage. CX Pros are familiar with text-based survey feedback with structured rating and the occasional verbatim feedback. File sizes are generally under a megabyte and easy to transport. Speech analytics is a whole 'nother story! Capturing audio with transcription from every call into your contact center generates a volume of data that CEM platforms are not generally scaled to handle. CX Pros should use the automated scoring, categorization and search resources within a speech analytics platform to zero in on impactful CX insight, then work with your CEM platform to integrate speech analytics data.

Multichannel Unsolicited Feedback

We are focusing on speech analytics, but what about all the other forms of text-based feedback? Emails, chats, social media and more are another unexplored territory of unsolicited customer feedback that's usually locked within the silo of its technology in many organizations.

Can speech analytics "do text?" The answer for some is yes!

Similar categorization and automated scoring applied in the speech to text process can also be used if the system can deal with unstructured text feedback. There are key benefits for CX Pros:
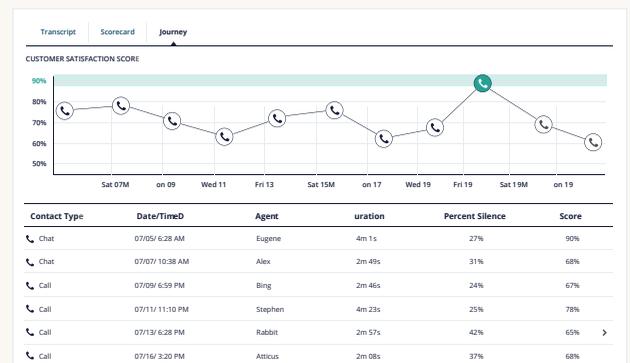
CX Need to Knows

- **Multichannel Journey Mapping Delivers Touchpoint Evidence** – Power your customer journey mapping with indisputable data driven evidence. Customer journey mapping exercises are frequently based on anecdotes, opinions and conjecture. A speech analytics solution with multichannel support means that you can view actual data of customer touchpoints mapped against a metric such as sentiment. With proper metadata a CX Pro can present what happens for multi-touch journeys including channel hopping! For CX Pros this data is invaluable for helping to drive change when siloed managers can visualize what happens if a CX issue with a root cause in their domain is creating multiple contacts.

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- **Consolidate Unsolicited Multichannel Feedback with Consistent Scoring** – Make unsolicited feedback from your contact center an easy to access unified resource. Some speech analytics solutions also include text analytics. When available, this can be a great benefit for CX Pros by including unsolicited feedback from other channels within the same speech analytics platform. Chat discussions, especially, are bountiful CX insight hunting grounds along with detail from social media, text messages and email. Similar categorization can be applied (remember voice and text communication are fundamentally different) to help consolidate search and discovery of CX issues.

	Transcript	Scorecard	Journey			

CUSTOMER SATISFACTION SCORE

Contact Type	Date/TimeD	Agent	uration	Percent Silence	Score
Chat	07/05/ 6:28 AM	Eugene	4m 1s	27%	90%
Chat	07/07/ 10:38 AM	Alex	2m 49s	31%	68%
Call	07/09/ 6:59 PM	Bing	2m 46s	24%	67%
Call	07/11/ 11:10 PM	Stephen	4m 23s	25%	78%
Call	07/13/ 6:28 PM	Rabbit	2m 57s	42%	65%
Call	07/16/ 3:20 PM	Atticus	2m 08s	37%	68%

Get Started with Speech Analytics for CX Insight and Action

Unsolicited feedback from 100% of your contact center calls (and possibly other channels) will reveal rich CX insight from the voice of your customers as well as the voice of your employees.

As a CX Pro that's attractive, yet potentially overwhelming when you realize the potential scale of transcripts and audio that you might be slammed with if your contact center just starts sending data without context for what you are looking for. How do you get started with implementing speech analytics to capture the most impactful unsolicited VOC and VOE insight?

- **Prioritize your CX Use Cases** – Evaluate where you suspect that you will gather the most relevant CX insight for your specific needs. For example, would you like to validate survey results with interaction evidence? Or, are you seeking some VOE insight because it's so hard to obtain with intermittent internal surveys? CX use cases for speech analytics are previously defined within this document. Use these to establish a prioritized list of where to start with speech analytics for CX and as for a roadmap for the future.

- **Partner with your Contact Center Manager** – Share your speech analytics fueled CX Insight ideas with your contact center team. Remember that in some cases the contact center may be wary of sharing what they might consider "their data" beyond contact center boundaries. Take some time to explain how you can use unsolicited feedback for CX optimization throughout the organization. Frame your goals so that a contact center team can help establish categories, automate scoring and more to send you the most impactful CX data.

- **Consider Parallel Platform Value** – You don't have to immediately embark on a technical integration between your CEM platform and speech analytics to realize CX value from unsolicited feedback. You can compare survey feedback with contact center interactions associated with survey results for root cause analysis. Or, you can use the metadata and scoring from contact center interactions as source data for issuing surveys. Speech Analytics and CEM platforms within examples such as these will deliver CX results without technical integration. There are manual steps involved of course. However, a benefit is rapid results.

- **Integrate with your CEM Platform & Metadata** – Sending categorized alerts such a dissatisfaction, churn language and more to your CEM platform affords the advantage of alert distribution within your existing CX infrastructure. An option can be to match some of the alerts you may have set up from survey feedback within a feed from speech analytics.

- **Socialize your Unsolicited Feedback Direction** – Make everyone aware of what you plan to accomplish. Remember that your organization associates you with survey feedback and CSAT scoring. Adding unsolicited feedback with transcription and audio examples to help drive awareness and action will be a new concept for many. Avoid surprises with at the very least a brief overview of what CX value you expect as a result and any reporting/awareness that departments across the organization will realize.

- **Close with an ROI** – When speech analytics-fueled CX insight drives action remember to follow-up with a Return on Investment (ROI) analysis. Audio evidence from speech analytics in particular can add emphasis with emotion to help garner additional CX investment.

CallMiner Speech Analytics "Quick Hitters" for CX Pros

The primary intent of this CX Pros Guide to Speech Analytics is raise awareness for how CX Pros can take advantage of unsolicited feedback within contact center interactions by using speech analytics.

It is important to note however that there are significant differences among solutions offered by speech analytics vendors. The following "Quick Hitters" will serve as a brief overview of CallMiner features and benefits from the perspective of a CX Pro.

- **Automated Scoring** – CX Pros can easily focus on interactions where attention is needed, or kudos are in order with CallMiner's automated scoring. A popular speech analytics root cause analysis is to compare a group of lower scoring interactions associated with poor CSAT compared against higher scoring examples against the same metrics. Reasons based on what callers and agents said tend to become evident as root cause reasons.

- **VOC and VOE** – CallMiner makes it easy to identify customer and agent speakers in categorized transcription. CallMiner also resolves challenges when a contact center does not record calls in stereo with speaker separation software. Additionally, packaged CallMiner categories that apply to agent behaviors such as ownership and empathy help provide insight into how employees encourage customer experience values.

- **Organic Discovery** – Topics that are rising in frequency are displayed within CallMiner's TopicMinerTM for "visualized" attention.   Graphical division separating customer and agent speakers is ideal for CX Pros searching for CX root causes impacting issues.

- **Automated Multichannel Customer Journey Mapping** – CallMiner can map your customer journey inclusive of hops across calls, chat, email and more when you tag contact center interactions with a common identifier. It becomes easy to immediately view how many times in aggregate your customers take 2, 3, 4 or more times to resolve an issue. One-click drill down pops a transcript with audio (if supported by the channel).

- **Security** – CallMiner PCI (Payment Card Industry) secure redaction instantly removes sensitive numeric data from audio files and transcripts. This makes it easy to share data beyond the contact center with secure confidence. CallMiner's SaaS-based speech analytics is also a highly secure infrastructure.

Conclusion

Capable speech analytics solutions enable CX Pros to gain insight at scale from 100% of calls. Elements such as categorization, scoring and data visualization sharpen insight, enabling CX Pros to creatively weave unsolicited Voice of the Customer (VOC) feedback with their survey responses.

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As Forrester Research notes; advanced CX programs "Collect and analyze both unsolicited and unstructured feedback.

Companies can mine that unstructured feedback to understand what is causing bad experiences and to identify previously unknown issues."[4]

Additionally, Voice of your Employee (VOE) is a frequent CX blind spot for many CX Pros. Speech Analytics pulls back the curtain of contact center CX invisibility by shining the light on how agents are engaging with customers. Dialog along with acoustic components provide color for emotion along with content that can be invaluable CX root cause evidence!

Speech analytics enables CX Pros to take their customer experience initiatives to a new level with insight captured from a broader range of customer interactions on a continuous basis.

Metrics for the key loyalty driver of emotion as well as dialog from your voice channel arm CX Pros with data-empowered CX evidence from which to spark awareness and drive action. Root cause evidence such as emotionally charged audio works to eliminate siloed corporate barriers for meaningful CX action and results. CX Pros should consider capable speech analytics solutions as a necessary component of any VOC program due to an ability to fortify a survey program with continuous unsolicited feedback.

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4. Forrester Research, How To Build Your Voice Of The Customer Program, December 22, 2017

About CallMiner

CallMiner is a speech analytics platform that drives business improvement by connecting insight to tangible action. We use the power of A.I. to scale human understanding, analyze interactions at the deepest levels, identify patterns and root causes, and reveal opportunities.

We believe that business improvement starts with a deep interest and curiosity in people. How do we detect a customer's true emotion, and how do we act on it to shift a business's culture and steer it on the most successful path? We aim to close these gaps through innovation, but the heart of our work lies in humanity: understanding, followed by action. We apply this same principle within our culture, promoting an attitude of kindness, compassion, genuine interest and respect for one another.

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