How Next-Generation Call Centers Turn Higher Call Volumes into Better Service
Today’s Next-Generation Call Center

While it might seem hard to fathom, today’s next-generation call centers are actually becoming more effective as their call volume goes up. They are accomplishing this even with increased labor costs, constant agent churn, higher customer expectations, and a pressing focus on reduced wait times and problem resolution times.

The ability to be more effective, even as call volumes rise, is possible because more customer interaction data supports important data modeling capabilities that thrive in a Big Data scenario. Data modeling allows business leaders to uncover insights that can help deliver a better customer experience. This is a key realization for call center executives, because traditionally the opposite has been true. Now, however, new machine learning algorithms are available to analyze customer interaction data and provide real-time information that can improve business processes. As a result, there has been an uptick in the emergence of next-generation call centers that are using this technology.

Next-Generation Call Centers Powered by Machine Learning

How Can Call Center Executives Put Customer Interaction Data to Work?

- Understand how customers feel—Find out what percentage of calls started with negative sentiments and ended with positive sentiments or vice versa.
- Uncover hot spots—Uncover the most common topics associated with negative sentiments.
- Discover patterns—Learn whether most negative-sentiment-related calls happen over weekends.
- Reveal relationships—Find out what callers who expressed negative sentiments have in common.
- Raise customer satisfaction—Shorten wait times and speed resolutions.
- Reduce agent churn—Increase job satisfaction and lower skill barriers.
- Increase productivity—Shorten agent’s time to productivity with automated on-the-job training.

Figure 1. Accelerating better resolutions and decisions

1 A Machine Learning Primer For BT Professionals
Big Data And Machine Learning Make Sci Fi Like App Experiences Possible Now, Forrester Research, September 8, 2015.
How Can Customer Interaction Data Help Agents Provide a Better Customer Experience?

As a customer describes their issue to the agent on the phone, their speech is analyzed in real time. A suggested resolution automatically appears on the agent’s screen, without any manual search or intervention by the agent. The agent is able to provide a fast and effective resolution, which results in a high rating from the customer and a better overall customer experience.

Using Machine Learning to Find Data Models

Forrester Research defines machine learning as algorithms that analyze data to find models—models that can predict outcomes or understand context with significant accuracy and improve as more data is available.

Typical Next-Gen Call Center Flow

<table>
<thead>
<tr>
<th>Step</th>
<th>How Machine Learning Increases Performance</th>
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<tbody>
<tr>
<td>Customer describes issue to agent</td>
<td>Speech analytics enables real-time speech-to-text transcription, which converts spoken speech to a text transcript of the most likely words.</td>
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<tr>
<td>Context-appropriate resolution appears automatically</td>
<td>Text analytics reviews textual content with statistical algorithms to develop contextual understanding of issue, and automatically matches issue with appropriate resolution derived from accuracy refinement powered by machine learning.</td>
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<tr>
<td>Business leaders monitor sentiments</td>
<td>Sentiment analysis on transcribed text determines the degree to which a given text’s sentiment is positive, negative, or neutral for the entire content or a segment of the content. Subtle changes in voice volume, tone, and periods of silence are detected to help identify the general mood of the caller.</td>
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<tr>
<td>Business leaders uncover hot spots</td>
<td>Cluster analysis is performed on transcribed text by automatically grouping a large set of similar information, including information in varying formats. Each cluster represents a concept area, which allows the business to identify inherent themes and emerging trends.</td>
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<tr>
<td>Business leaders discover patterns</td>
<td>Auto-categorization on transcribed text organizes the corpus of enterprise data according to pre-defined or dynamically generated categories for easy navigation. Existing legacy taxonomies can be maintained or enriched with contextual understanding.</td>
</tr>
<tr>
<td>Business leaders see relationships</td>
<td>A knowledge graph on transcribed text and call metadata uses advanced graph analytics technology to discover relationships between entities that lead to richer and more impactful knowledge discovery. Find out who knows whom, who knows what, what common traits your important customers share, and more.</td>
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Is Analyzing Audio Data Alone Enough?

Audio data from customer/agent conversations contain key information, but there are other channels where customers interact with support staff and voice their opinions about your organization or product.
Every customer channel has the potential to provide valuable insight, which makes it important to analyze all segments of customer interaction data. Making decisions without key data could hinder decision-making and expose you to unnecessary risk.

Consider these additional data sources to get a more complete picture of what is happening and why:

- Online chats
- Email inquiries
- Verbatim surveys
- Social media networks where abundant video such as YouTube product reviews, audio, and text data exist
- Call center notes

How Micro Focus Enables Next-Generation Call Centers

Micro Focus® IDOL, a unified platform for text and rich media analytics, is a flexible solution powered by machine learning. IDOL analyzes audio, text, video, and images and performs workflow automation. It is available via an open source, out-of-the-box, self-service analytics tool or can be easily integrated into third-party data visualization tools. IDOL simplifies access to diverse data sources, develops and improves an organization’s contextual understanding of data, and accelerates the delivery of relevant knowledge to agents. Business leaders can use IDOL to uncover actionable insights that drive greater value into the organization.

Unlike traditional machine learning where data scientists develop, train, and iterate models over an extended period of time before developers can program them into applications for end users, IDOL delivers applied machine learning by providing pre-built and pre-trained models that are ready to go from the onset. For example, IDOL supports over 30 languages for speech to text, right out of the box.

The modular nature of IDOL offers increased flexibility to streamline the deployment of different analytics capabilities. Its unified platform approach includes seamless integrations across data domains and formats, giving business users extensive customization options to meet exact requirements. These capabilities help ease phased adoption, facilitate custom deployment, and allow you to protect your technology investments.

IDOL is proven across many environments that use customer interaction data. Call centers, in particular, have a need to uncover key and sometimes correlated factors that impact agent productivity and customer satisfaction. For instance, with financial services providers, there is often a need to speed up access to relevant market intelligence to guide investment decisions.
Maximize Your Return on Resources

In a hyper-competitive world, organizations are seeking ways to get the most value from their assets—people, processes, and data. Machine learning-powered analytics enables:

- Sales call center agents to improve their success in targeting customers with the right product/service mix via real-time, automated recommendations based upon accurate profiling.
- Support call center agents to improve their success in rapid problem resolution with the right response via a real-time, automated solution engine that is able to refer in real time to past cases of success.
- Call center executives make better decisions faster by uncovering root causes of customer problems and operational issues.

Learn why IDOL puts artificial intelligence (AI) to work on all your data in The Forrester Wave: Cognitive Search And Knowledge Discovery Solutions, Q2 2017, Cognitive Search Is Delivering The AI Version Of Enterprise Search. Forrester has named Micro Focus a leader in cognitive search and knowledge discovery. (Get the report.)

The collective intelligence of call center agents correlates to call center success. This intelligence can be enhanced through machine learning-based analytics that can uncover actionable insights contained in ever-increasing volumes of customer interaction data. Using this technology, call centers can create a more efficient and effective environment and maximize their return on resources.

Figure 2. Next generation call center agents

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www.microfocus.com/idol