BREAKING DOWN DATA SILOS

7 Steps to Optimize Business Performance by Unifying Contact Center and CRM Data

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A GUIDE TO UNIFYING YOUR CONTACT CENTER DATA

Who Should Read This

This eBook is for contact center management and business executives looking for ways to **optimize the business performance** of their contact center.

- **If yours is an existing contact center** with infrastructure that has been built up over the years, this eBook provides best-practice steps to break down the resulting data silos, unify them, and optimize your contact center for business performance.
- **If yours is a new contact center** and you have the opportunity to build your infrastructure from the ground up using modern technologies, this eBook will provide best practices to prevent building data silos.

The Emergence of Data Silos in Contact Centers

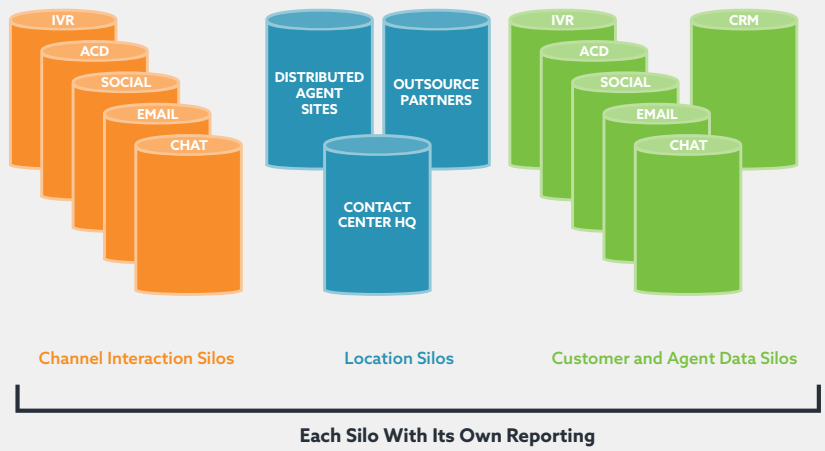
Over the years, as "call centers" have evolved into "contact centers", acting as the front line of interaction with customers for sales, service and capturing customer information, data silos have emerged created by new channels, distributed locations, and new sources of customer data.

Many agents are no longer housed together in one location, but are distributed globally – some working from home and some managed by outsourcing partners.

While voice remains the communication method of choice for the large majority of consumers, email, chat and video channels are gaining acceptance.

In some companies, agents use one system to make and receive calls, another to send and receive emails, another for chat conversations and a CRM to capture information about each customer interaction

FIGURE 1 - THE DATA SILOS OF THE CONTACT CENTER



While these advances have brought efficiencies and cost reductions to many contact centers, they have also introduced complexity by creating silos of agent, customer and interaction data. These data silos result from each system – ACD, IVR, CRM, and others – having its own database and reporting.

As a result, management is required to pull data and reports from multiple systems and manually correlate the data to get a complete picture of what is going on in the contact center. This makes it difficult to determine what drives business performance and what agent and customer behaviors and attributes result in the best business outcomes.

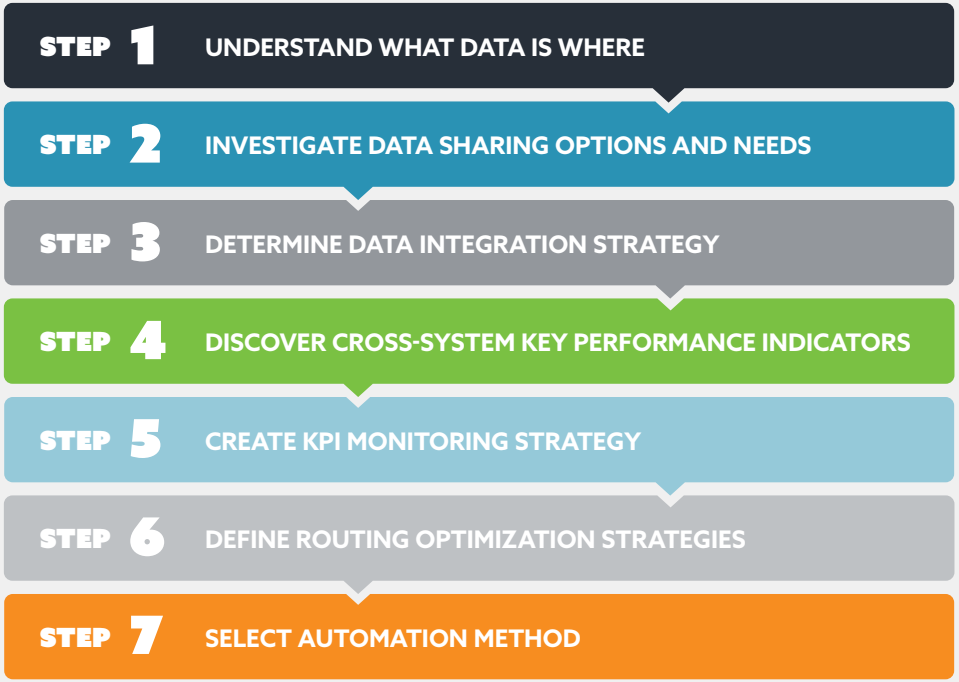
THE 7 STEPS TOWARD BUSINESS PERFORMANCE OPTIMIZATION

There is a wealth of valuable information buried in the large volumes of data that contact centers generate every day. By unifying the data in the various contact management and CRM applications, analyzing it as a whole and taking action on the insights, contact centers can optimize themselves for business performance, not just efficiency and cost reduction.

With this business optimization comes the opportunity to increase sales, upsells, customer retention, customer satisfaction and first call resolutions. By optimizing for business performance, contact centers can become the strategic assets to the business they strive to be.

Here are 7 steps to start this business optimization process and break down the data silos that have emerged in the contact centers of today.

FIGURE 2 - 7 STEPS TO OPTIMIZE BUSINESS PERFORMANCE BY UNIFYING CONTACT CENTER AND CRM DATA



STEP 1

UNDERSTAND WHAT DATA IS WHERE

Different contact center systems collect varied types of customer, agent and interaction data. Some collect data on the quantity – or volume and length – of interactions, others the quality – or content and context – of interactions. The first step towards performance optimization is for you to understand the data your different contact center systems collect and its value to you.

Table 1 provides examples of the qualitative and quantitative data in different contact center systems and their value.

TABLE 1. QUALITATIVE AND QUANTITATIVE CONTACT CENTER DATA

DATA TYPE	NATURE	SOURCE	EXAMPLES	VALUE
Quantitative	Measures the amount, volume or length	• ACD • IVR	• Call wait time, length of call, transfers, hold times • Path the customer takes to reach an agent • Agent assigned • Wrap up codes	Managing operations since it provides call volumes, size of queues, service level data and whether or not issues are being resolved
Qualitative	Tracks the content, context and result of interactions	• CRM • Order Entry	• Customer and agent demographics • Case and interaction history • Product interest or issues • Purchase history • Next steps • Sales	Managing the business since it provides customer and agent characteristics, interaction content such as product malfunctions and service outages, and how issues are being resolved

STEP 2

INVESTIGATE DATA SHARING OPTIONS AND NEEDS

Different call center systems support sharing data with others systems in different ways. Spend some time understanding what your real needs are and whether your systems support the usage scenarios you need to break down your data silos.

Typically, your results will be faster and your insights deeper if your technology is purpose-built for the Contact Center

TABLE 2. REAL-TIME DATA SHARING APPROACHES

APPROACH	DEFINITION	SAMPLE USE SCENARIO	TYPES
CTI (Computer telephony integration, aka computer–telephone integration)	Any technology that allows interactions on a telephone and a computer to be integrated or coordinated	Use data from a phone call to query a database, such as the CRM, and use the query results to drive call routing or to display the customer information to an agent, for example 'screen pop"	• **Third-party call control** – interactions between arbitrary numbers of computers and telephones made through and coordinated by a dedicated telephony server that governs which information and functions are available to a user. Good for enterprise applications. • **First-party call control** – operates as if there is a direct connection between the user's computer and the phone set. The computer can generally control all the functions of the phone at the computer user's discretion. Typically, only the computer associated with the phone can control it, thus best for desktop applications.
Batch	The periodic creation of a data file for export and the subsequent import of the data by another system	Share multiple data records at a time on a scheduled or periodic basis to create historical reports or change the behavior of systems for the following period, for example daily, weekly, monthly or quarterly	• **XML (Extensible Markup Language)** – human and machine-readable and particularly good for text • **CSV (Comma Separated Values)** – human and machine-readable and particularly good for numbers
Real-time	The immediate or constant sharing of data as events occur and data is created	To generate real-time dashboards or drive the behavior of systems in real-time, even going so far as having one system update the database of another system in real-time	• **Traditional ETL (extract, transform and load)** — pulls a file, transforms and loads it into another system in real-time — BI product lines like Pentaho and Informatica offer this • **Big Data Streaming** — good for the millions of events contact centers create every hour — examples: Kafka for message queueing, Spark for transformation and Elastic Search for indexing and storing large quantities of real-time and historical data for quick access

STEP 3

DETERMINE DATA INTEGRATION STRATEGY

There are four strategies that are used to break down the data silos of contact center systems.

The two in Table 3A are more traditional approaches that have been used over the past 15 years. The two in Table 3B are more contemporary approaches that some innovative companies have implemented to gain a competitive advantage.

The approach you choose will largely be driven by the systems, architectures, resources and time you have to work with, unless you decide to upgrade one or more systems.

TABLE 3A: DATA INTEGRATION STRATEGIES – TRADITIONAL APPROACHES

APPROACH	DEFINITION	EXAMPLES	ADVANTAGES	CONSIDERATIONS
Cross-system Reporting	Query multiple databases and join their data into a single report at run-time	• Open Source BIRT • Actuate BIRT • Information Builders • Many others	• Fast • No need to deal with data transfers between databases • Can be scheduled to run daily	• Requires developer with familiarity of the data structures in your systems • Requires ongoing maintenance as vendors release new versions and business requirements change • Resource intensive, so usually runs overnight
Custom Data Warehouse	Brings data together from multiple applications into one integrated multi-multidimensional database for analysis	• Traditional vendors: IBM, SAP, Oracle • Open source vendors: Pentaho, Talend • Many others	• Very effective for reporting on data from multiple systems • Can be uniquely tailored for your business • Come with analytic tools to slice and dice	• Costly to build and maintain • Typical takes 18 months of development before it becomes operational • Analytics limited to that of multidimensional cube • Can require significant user training

TABLE 3B: DATA INTEGRATION STRATEGIES – CONTEMPORARY APPROACHES

APPROACH	DEFINITION	EXAMPLES	ADVANTAGES	DRAWBACKS
Establish Database of Record	Designating the database of one contact center system to collect and store data from other systems into an integrated set of records	Salesforce Sales and Service Clouds	• Can create customer records like a "call record" in the CRM that gets filled with data from the ACD and IVR and gets attached to account and cases • Some vendors have partnered to provide off-the-shelf solutions such as BroadSoft and Salesforce	• Requires the vendors to have an open and extensible database able to create new fields and accept data from other systems • Needs product experts, IT resources or vendor to do this properly
Analytics Repository pre-built for Contact Center	• Big data repositories designed to integrate and correlate data from multiple systems including call management, order entry, new media, CRM • Understands the data fields, formats and records coming from the systems and combines those representing the same customer interaction into single records for analysis	• BroadSoft CC-One • Some traditional contact center vendors have acquired technologies for this	• Fast to implement • Enables more contact center-specific analytics for performance optimization • Analytics can start sooner and insights can go deeper • Some allow you to leverage the systems you already have and provide assurance that as new technologies come out you can adopt and integrate them	• Requires systems that support batch or real-time data sharing • Some vendors require all contact center systems are from their company

STEP 4

DISCOVER CROSS-SYSTEM KEY PERFORMANCE INDICATORS

Once the quantitative data from your call management systems and the qualitative data from your CRM are integrated in some way, new Key Performance Indicators (KPIs) are available that map operational data to business performance and positive interaction outcomes.

During this step, you determine the cross-system KPIs that are important to your business and that you want to monitor regularly. For example:

- Characteristics and behaviors of customers with the highest propensity to buy
- Agent characteristics and behaviors that result in best interaction outcomes
- Characteristics and behaviors of customers likely to churn
- Sales by time of day, area code, length of call, team, etc.

Some factors that have been shown to make a difference in contact center business performance and which you will want to investigate can are highlighted in Table 4.

TABLE 4. COMPONENTS OF CROSS-SYSTEM KPIS

DATA	EXAMPLES
Customer Demographics	Purchase history, current status, age, marital status, family size, location, income, etc.
Agent Demographics	Their training, skill levels, personal characteristics, geographies, personalities, drivers, etc.
Customer Call Behaviors	Time of day, day of the week, length of call, wait times, IVR paths, transfers, etc.
Desired Business Outcomes	Sales, upsells, customer satisfaction, first call resolutions etc.

This step takes some analytic skills. You must slice and dice the cross-system data to find the correlations, trends and patterns between the qualitative and quantitative data to determine what drives business outcomes.

There are three ways to accomplish this step, but the best is typically a combination of all three:

1. Do It Yourself (DIY)

If you have strong analytics skills or access to a good analyst, you can do this analysis using the reports, query tools or slicing and dicing capabilities of whichever data integration method you chose.

2. Hire Data Scientist Consultants

Data Science has become a skill much in demand over the past decade. As a result, Data Science consultancies and freelancers have emerged and some contact center vendors have formed Data Science teams that help their clients find their business drivers and optimize their contact center systems. Ask your vendors if they have such a team at your disposal.

3. Use Analytics Technology

There are a variety of analytics technologies that can help you find the trends, patterns and business drivers in your cross-system data. These include pattern recognition technologies, artificial intelligence and predictive analytics technologies. Ask your contact center system vendors if they have or use any such technologies that could assist you.

> **One contact center found that customers that called at night from certain area codes and stayed on the phone for 45 minutes were the most profitable**

STEP 5
CREATE KPI MONITORING STRATEGY

Once you know what you are tracking, you need to determine how you want to monitor the KPIs. Some you may want to monitor in real-time, such as call queues and sales. Others you may want periodic reports on such as those regarding agent performance or how factors change over time. Every KPI will fall into one or more categories.

1. Real-time Dashboards

These are valuable for dynamic environments wanting to make intra-day decisions and changes. Some contact centers have set up command centers that track all interactions across the globe and how they are being handled by various teams, sites and outsourcing partners. It is a great way to maintain service levels across sites and have the information you need to make changes immediately to avoid problems or to take advantage of opportunities.

2. Periodic Reporting

These will be of use for more stable metrics that don't fluctuate wildly and are best viewed on a daily, weekly or monthly basis.

3. Historic and Period-over-period Reporting

To really see the impact you made by breaking down the silos of your contact center systems, trend analysis reports are invaluable. They will tell you how various business drivers, performance metrics and their correlations change over time. Business dynamics change, so what drove your positive business outcomes last quarter or last year may not be the same today. You will want to keep an eye on them so you can adapt operations and systems accordingly to maintain optimum performance.

Once you know the format and frequency you want your information, you can work with your analyst, report writers, IT team or vendors to create the dashboards and reports you need.

Leading contact centers such as Office Depot and Guthy-Renker have seen business performance improvements in the seven figures by marrying their business data with their operational data and providing real-time dashboards to all contact center stakeholders so issues can be addressed proactively.

FIGURE 3 – REAL-TIME DASHBOARD

STEP 6

DEFINE ROUTING OPTIMIZATION STRATEGIES

All of this visibility and insight into the correlation between the quantitative data in your ACD and IVR call management systems and the qualitative data in your CRM can be used to not only manage the contact center, but also drive the behavior of contact center systems to optimize for business performance.

Using the analytics to drive IVR and ACD call routing is a huge opportunity to improve performance. This can obviously be done manually by the manager or administrator once you review the reports and dashboards, but by using some of the data and functional integration strategies mentioned above, it can be automated.

With the systems and/or data integrated, the ACD and IVR can query the CRM for customer, account, case, sales and agent performance data to make routing decisions at run-time.

> **"We are now able to make the best decisions for our customers in real time. By using BroadSoft CC-One's advanced call-routing technology, we are able to match each customer with the best available agent without the need for any manual intervention."**
> – Director of Operations and Analytics, Office Depot, Inc.

TABLE 5. ANALYTICS-DRIVEN ROUTING STRATEGIES

ROUTING STRATEGY	DEFINITION
Service-level	Define maximum wait times and reroute calls to overflow agents and vendors
Skills-based	Assign proficiency scores to agents and send them calls that match their skills
Performance	Match customers in real-time with agents that have the best performance records for delivering the best business outcomes
Demographic and personality	Match customers with agents with whom they will most likely have an affinity
Customer status routing	Route customers with churn behaviors to agents best at retention and those with buying behaviors to those best at sales
Value-based	Prioritize customers with a high propensity to buy or lifetime value and route to agents that are performing well that day, week or month
Media-prioritization	Route interactions based on an agent's proficiency with a media type
Abandon caller prioritization	Prioritize someone who previously abandoned to get connected with an agent sooner than others
Last agent	Offer repeat callers the option to talk to the same agent they talked to in their last interaction

STEP 7
SELECT AUTOMATION METHOD

There is more than one way to automate these routing strategies based on the capabilities and integration options of your systems. Be sure to investigate your options with your vendor and IT team to see which are practical for you.

1. Out-of-the-box ACD Functionality

Most ACDs offer skill-based, round robin, next available, and longest-idle routing, but if they have good CTI or an open architecture, they may be able to accommodate some of the more analytics-driven approaches.

2. Decision Engines

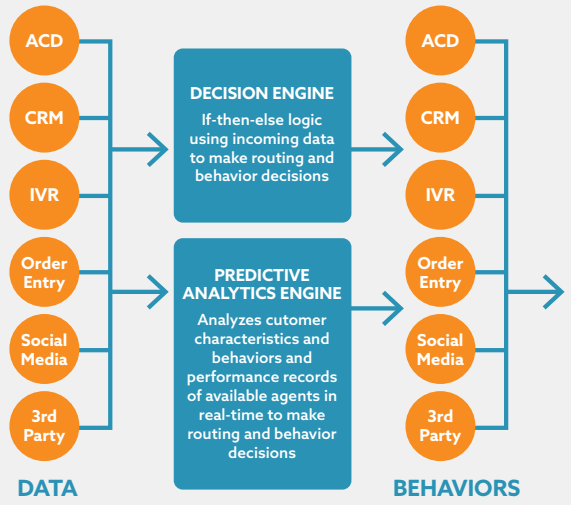
Some contact center system vendors are implementing decision engines where you can define "if this – do this" logic based on data parameters passed to the decision engine from the IVR, ACD or CRM in real-time. See if your vendors offer a decision engine you can incorporate into your infrastructure.

3. Predictive Analytics

For the call center, this predictive analytics technology is just beginning to emerge, but you should keep it on your radar and if you are shopping for a new vendor, make sure you are considering vendors working on adding predictive analytics. This technology automatically "learns" what works best and drives the best business outcomes and automatically refines routing strategies in real-time based on actual performance, without human intervention.

> **Typically, your results will be faster and your insights deeper if your technology is purpose-built for the Contact Center.**

FIGURE 4 – USING DATA TO DRIVE SYSTEM BEHAVIORS



CONCLUSION

Breaking down the data silos between the call management and CRM systems empowers you to really understand the qualitative and quantitative factors – and their relationships – that drive agent performance, contact center business performance and customer satisfaction.

As a result, operations, systems and training can be optimized to generate the desired business benefits. Effective data integration creates the opportunity to increase sales, upsells, customer retention, customer satisfaction or whichever business metrics will make your contact center a strategic contributor to the business.

There are also some great efficiency and productivity gains to be achieved by breaking down the application silos of your call management and CRM systems. We encourage you to read the companion eBook "Breaking Down Data Silos: 7 Steps to Improve Operational Efficiency by Unifying Contact Center and CRM Data". Improving the productivity and efficiency of agents, managers and administrators can make a significant impact on your contact center's bottom line.

When you offer a better run contact center focused on business performance optimization that dynamically changes to meet the needs of the market, the real winner is your customer. They get the service they need, when they need it, in the most efficient way possible. And isn't that the real goal?

About BroadSoft

BroadSoft is the technology innovator in cloud communication, collaboration, and contact center solutions for businesses and service providers across 80 countries. We are the market share leader for cloud unified communications with a secure and trusted platform chosen by the world's leading service providers. BroadSoft Business empowers users and teams to share ideas and work with purpose to achieve breakthrough performance.

For contact centers, BroadSoft offers CC-One, an omni-channel cloud solution that uses predictive analytics to lower operating costs and improve business outcomes, transforming the contact center into a strategic business asset. Whether you are a new business creating your first contact center, a medium size business looking to improve contact center operations, or a large enterprise needing visibility and control over multiple contact center sites and systems, BroadSoft has a contact center solution for you.

For more information, visit us at **www.broadsoft.com/cc-one.**

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