



Cloud Communications Migration Pitfalls – How to Avoid Them



What are the Cloud Communications Migration Pitfalls and How to Avoid Them

Most IT leaders today understand why business functions are moving to the cloud. The reasons range from better agility to dramatic savings on equipment and operational overhead. The trend towards increasing reliance on the cloud includes business phone systems. According to a Broadcom survey of global telecom providers, more than half of businesses will have moved to cloud communications by 2020. The survey also points to accelerated adoption of cloud contact center and team collaboration services.

As you join these forward-looking IT leaders and consider retiring your on-premise PBX or contact center system, it pays to understand the keys to a successful cloud migration. It is also extremely valuable to have insights from seasoned business leaders into some of the potential pitfalls associated with moving to the cloud before you begin the migration.

51% of businesses are expected to adopt cloud communications by 2020.
– Broadcom

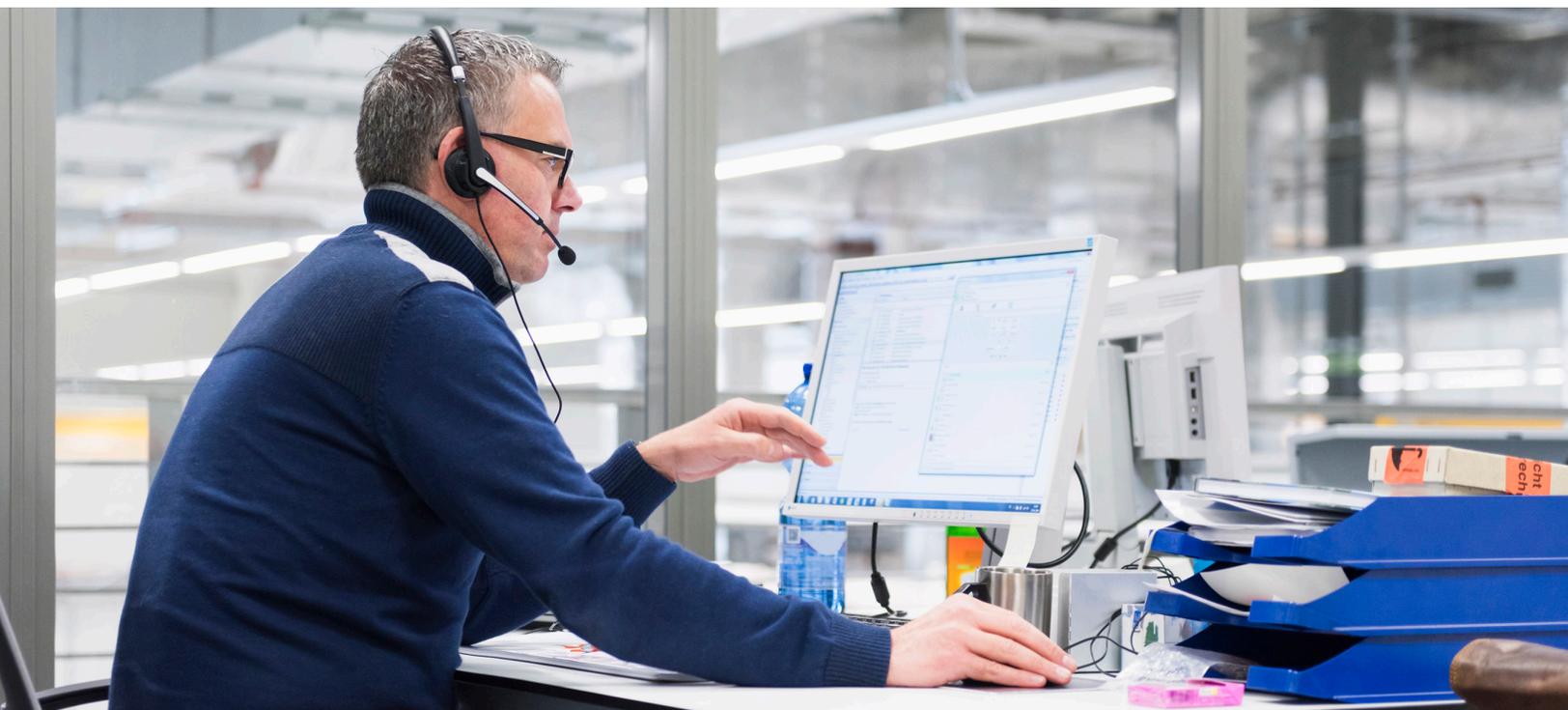
The success of any cloud migration starts with looking for a partner with deep experience and expertise as well as world-class technology. Many cloud-based SaaS applications like CRMs don't depend on your infrastructure or your IT staff to ensure quality and reliability. After all, offloading the costs of hardware, software and IT maintenance to the service provider was the key benefit that originally popularized cloud-based services like Salesforce and NetSuite. Using these services requires little more than a web browser or downloadable app and a relatively stable Internet connection. However, deploying cloud-based unified communications as a service (UCaaS) or contact center as a service (CCaaS) is a major undertaking that relies on a complex interplay between the provider's infrastructure and your own. Consequently, it requires a close partnership between the cloud provider and the customer.

While achieving a smooth transition is a shared responsibility, the cloud provider should take a significant portion of the burden off your shoulders and guide you through the process. Which makes it very important at the pre-sales and POC phases to look for tell-tale signs that reveal how detail-oriented the service provider is, or isn't—because you may need to rely heavily on their expertise. This includes judging

how they examine the current workflows and requirements and how effectively they engage with you to understand your business and technical objectives.

It is also very important to understand that migrating to the proper cloud solution can take you well beyond your primary objectives, which might be switching from an Opex to a Capex model, gaining agility, replacing an end-of-life system or having greater functionality in your communications. For most CIOs, the real driver behind the move is not to simply replicate an existing system. They are looking for much more, including the potential for transformational benefits such as dramatically increased efficiency, more flexibility and practical business insights. Some visionary IT leaders may even be looking to create disruptive new services that embed communications and collaboration features.

The right partner can work with you to examine your individual business goals and current infrastructure, and then offer you benefits that you may have never imagined were possible coming from an on-premise perspective. After defining your unique business objectives, the right service provider can guide you through a trouble-free transition to a cloud-based solution.





Avoiding the Most Common Pitfalls of a Cloud Migration

One of the key benefits you will gain from working with the right cloud partner is leveraging their experience and technical capabilities to sidestep common traps along the path to a successful migration. The four most common potential problems areas are: preparation, technical considerations, testing, and transitioning.

Preparation

Preparation at the pre-sales and POC phase is key to avoiding common cloud migration mistakes. The biggest error companies make in the cloud transition is investing in intermediary solutions and ending up with the same problems associated with legacy siloed applications. Rather than fulfilling the promise of a “modernized IT infrastructure,” you could forsake the huge transformative benefits of a cloud solution for a mirror image of your old on-premise system and its fragmented point solution architecture.

Naturally, you should start by doing some key feature parity assessments. But it’s important not to fixate on one-to-one feature parity because you don’t want to limit your

new system’s potential or find yourself in an unnecessarily difficult position. You have your primary objectives and pragmatic reasons for moving to the cloud today, but you should also have a grand vision for how your systems are going to work in the future. Preparing well for a seamless transition between your different business systems and the different underlying communications helps you avoid unpleasant surprises later.

It is also important to keep an open mind about new functionality the cloud makes possible. For example, one large 8x8 customer provides receptionists for clients in each of its locations. They take calls for clients on an individualized basis, essentially providing a “receptionist as a service” business. Viewed from a feature parity perspective, at the pre-sales phase the question would have been, “Does 8x8 has a comparable feature such as the switchboard application. The answer would have been “Yes,” but looking for feature parity means missing the truly interesting business questions. For instance, with the legacy system the customer had issues with coverage—i.e., if a receptionist didn’t show up for work it was hard to cover the calls.

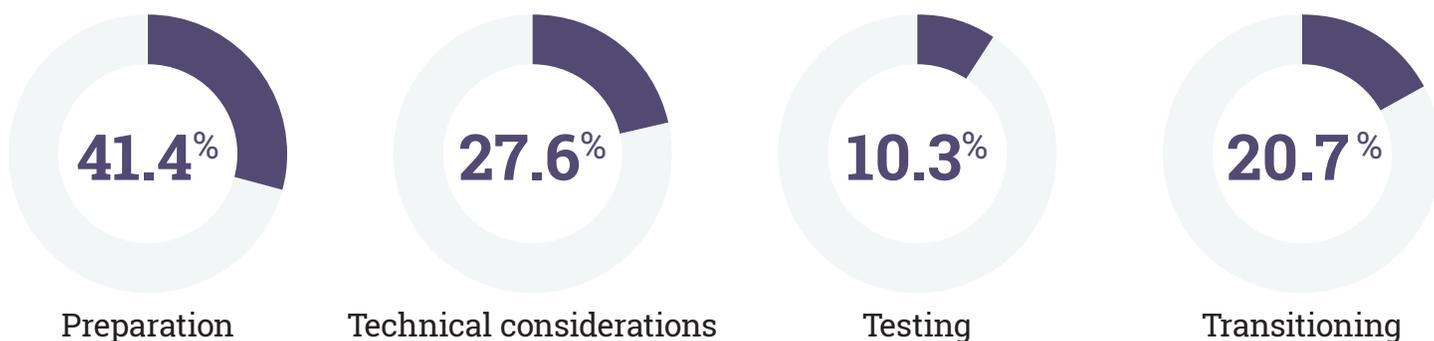
In planning the POC, 8x8 together with the company's CIO looked at this technical challenge from a business perspective—and as an opportunity. The company had hundreds of sites where receptionists were performing this service. It became clear that what the customer needed was not a phone system feature like the switchboard application, but rather a contact center functionality. So 8x8 put this entire layer into a contact center function. Each receptionist could take calls for any office and have all the information about the client instantly available, making it possible to personalize greetings and provide intelligent answers to callers' questions. This solved a larger business problem for our client, one that they didn't originally realize could be solved with communications technology.

By blurring the lines between the contact center and telephony functionalities, the solution achieves significant efficiencies for the organization. It also provides far better visibility into what is going on across the many locations. Now, for instance, they know exactly how many calls each receptionist takes. This enables the company to staff properly and provide much better SLAs and customer satisfaction, while actually reducing their workforce.

Technical considerations

When it comes to technical considerations, the UCaaS/CCaaS infrastructure—which really involves aligning the cloud provider's infrastructure with the customer's infrastructure—is the most important element in the success of any cloud migration. A cloud solution can provide all the additional benefits of Big Data, machine learning, AI and business analytics, but if call quality is poor nothing else matters. Which is why a focus on fundamentals should come first. It is even more important with non-integrated solutions. If you have a contact center system from one vendor, an IP telephony solution from another and a collaboration system from someone else, the infrastructure requirements become even more complex.

In fact, in a recent survey of IT professionals conducted by 8x8, preparation and technical considerations ranked as their two top concerns.



So how do you meet these infrastructure requirements? You need to consider more than simple packet loss and latency issues; there are many different requirements when putting a cloud UCaaS/CCaaS solution on top of your existing infrastructure in order to assure a seamless experience.

You also need a service provider that helps you deliver a quality experience to your users. This makes it important to select a partner that makes this task easy for you. Some vendors may simply give you a list of requirements, and then leave it to your IT teams to figure out how to meet all of them.

A less-than-satisfactory vendor relationship can catch up with you in the implementation phase because

the real-time nature of voice makes it the most difficult application to deliver over a network. Any other application has the luxury of retransmission or buffering. Netflix or YouTube can be buffered; any website can retransmit; but a solid infrastructure capable of ensuring good quality of service is critical when you are handling voice calls. So you need a partner with the technology, tools and expertise necessary to take the burden of network engineering off your IT teams.

Another consideration is how well your cloud provider handles quality of service on third-party networks. The reality is that you will have remote and mobile users on networks that you don't control. In fact, one of the reasons you are moving to the cloud in the first place is for the flexibility to have users on any network, anywhere in the world. You want to deliver the same voice quality and access to your entire business communications system to remote and mobile users as if they are sitting in the office.

This makes the underlying technology extremely important. However, when it comes to providing service on less-than-ideal networks, there is significant variation in the cloud communications solutions available on the market today. Look for third-party validation around voice quality when evaluating a cloud partner.

Testing

The next potential pitfall is testing. Identifying key risk areas, and testing key flows and use cases that you have in your organization as much and as early as possible in the migration process can help to avoid surprises later. It is analogous to agile software development or semiconductor design: you do not want to wait until the software is ready to ship or a chip is in silicon to test it. Likewise, with cloud communications you want to integrate testing at every stage as you implement the system.

One particular area where testing can help avoid problems or even system failure

involves testing failover, disaster recovery and redundancy. While the cloud provider should handle building in and maintaining resiliency in the services they provide, there is a component on your network as well. For example, if the main Internet connection goes down and proper protocols are not in place, failover may not work. So, while it may seem obvious, you need to thoroughly test disaster recovery functions before you need them.

Another critical area where testing can eliminate problems is Wi-Fi. Getting wireless networking right requires a deep understanding of the technology because it is a "single-collision" domain, which means any user's connection is only as good as the worst connection to that endpoint. For example, if a device hangs onto the Wi-Fi access point while the user is walking out of a building and begins to lose connectivity, everyone connected to that access point will be adversely impacted.

Transitioning

There are no out-of-box solutions for rolling out a cloud-based UCaaS system on an enterprise-scale. If a vendor tells you a one-size-fits-all approach will work for you, you can anticipate complications. Every company needs a custom solution to move communications to the cloud. You also need to ensure your investment will meet your business requirements. If you have completed the first three steps correctly, with the guidance of an experienced partner, your cloud transition should be smooth. You will have already decided whether to roll out everything all at once or gradually release in phases. You will have a plan for how to train users to make the change as painless as possible. Finally, you will have vetted your short list of cloud service providers and chosen one who will work closely with you to define and support the transition strategy that best meets your organization's business needs.



Choosing to Partner with 8x8

8x8 offers customers the experience gained in implementations in 157 countries, supporting more than 1 million business users. Our cloud platform serves anywhere from a few hundred users to 30,000 extensions in multiple countries (the largest UCaaS deployment anywhere in the world). 8x8 UCaaS and CCaaS technologies are built entirely in-house and backed by 170+ patents. 8x8 X Series was recently recognized by Gartner as a Leader in the 2018 “Magic Quadrant for Unified Communications as a Service, Worldwide.”¹

The power of a single platform

8x8 is the only major pure cloud communications service provider that has its own UCaaS and CCaaS solutions—not OEMed or outsourced to a third party. From better access to data for analytics to more informed and engaged contact center agents, the synergies and seamless integration between these two systems offer unrivaled benefits and new capabilities to 8x8 customers.

The previous example of the 8x8 customer operating a ‘receptionist as a service business’ illustrates this value of an integrated system well. Since 8x8 has a seamless UCaaS/CCaaS system, we could intercept the calls that were going to individuals within the contact center layer, and still transfer the inbound call from the contact center to the particular client utilizing the same phone number.

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¹ Gartner “Magic Quadrant for Unified Communications as a Service, Worldwide” by Daniel O’Connell, Megan Fernandez, Rafael Benitez, Bjarne Munch, Christopher Trueman, Mihai Nguyen, October 10, 2018

Proven, field-tested transition methodology

8x8 employs a proven transition methodology to ensure the best system design for each customer and a smooth migration experience. This approach has been developed and refined over the course of thousands of implementations around the world, and includes the following:

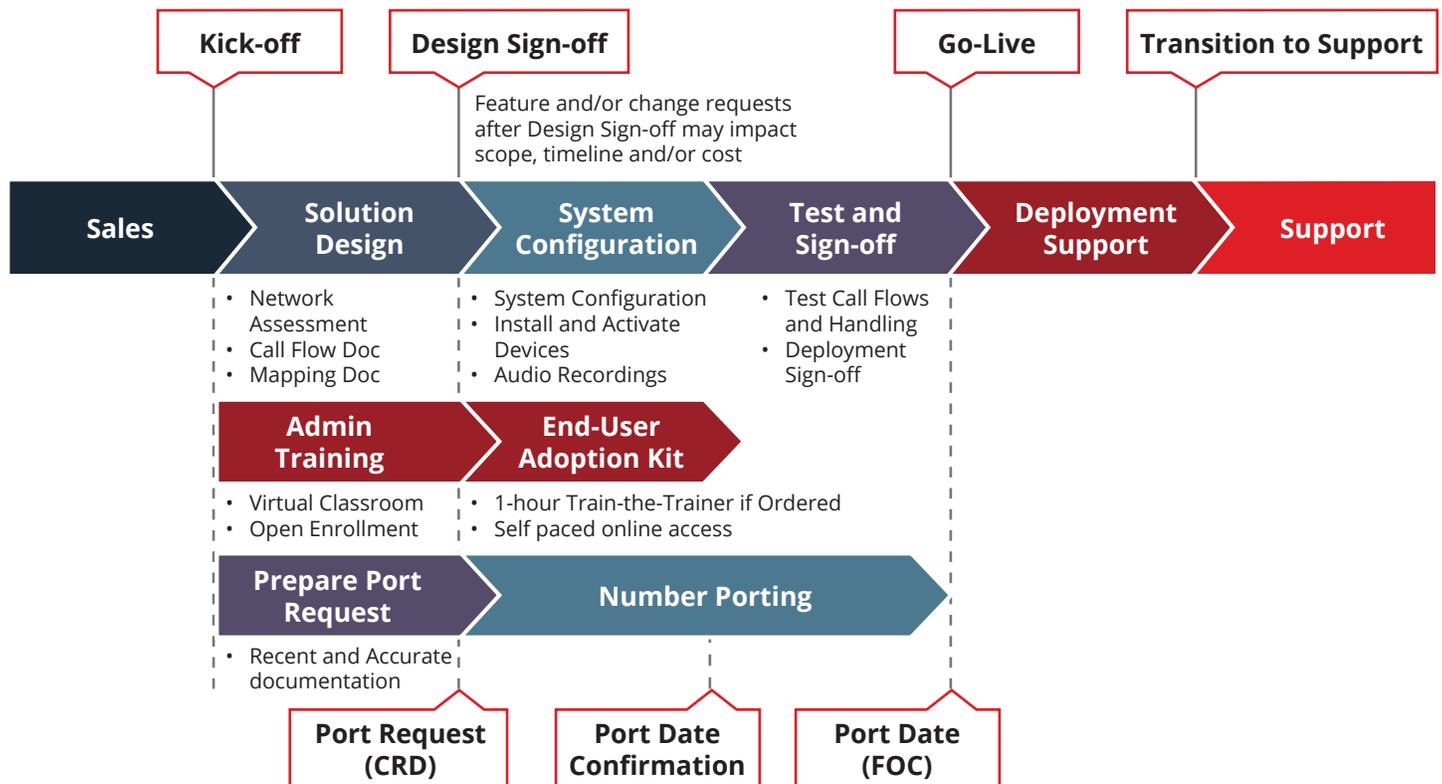
- Pre-Sales Consultation
- Scoping and Solution Design
- System Configuration
- Testing and Sign-off
- Development Support
- Ongoing Support

8x8 recommends this phased approach as opposed to rolling out everything all at once, across all offices. However, extenuating factors—a contract expiration or a dying system,

for example—may require a more compressed approach. In one case, 8x8 helped a customer roll out a 1000-seat implementation, including number porting, in two weeks. In another instance, 8x8 helped a major retail customer open 90 stores per day.

Regardless of your timeframe, the 8x8 transition team will work with you to define the right strategy, and then guide you through the entire process. This deep support begins at the critical pre-sales preparation phase. For example, if a customer were to ask about number porting in Italy, the team would not simply answer, “Yes, we support service in Italy.” Instead, the 8x8 team would ask the customer for numbers to test in Italy to make sure local number porting is possible. This type of support helps to maintain consistency throughout the process. 8x8 also has extensive local number porting agreements with carriers in most major markets around the globe, which not only helps to ensure a fast and smooth migration but can also give your global offices a stronger regional presence by having local telephone numbers.

8x8 path to a successful transition



Unsurpassed quality answers a key technical concern

8x8 is also the global leader when it comes to call quality. The Tolly Group, a leading global provider of testing and third-party validation and certification services, tested the voice quality of four leading cloud services across a variety of normal and less-than-ideal conditions.² They subjected the services to packet loss, jitter (delay), buffer bloat and other conditions that can potentially degrade voice quality. The 8x8 solution delivered the highest voice quality in the majority of the test cases—across various scenarios, client platforms and impairment conditions. In the few cases where 8x8 results were not the highest, they were close to highest.

This superior quality also rang true on less-than-optimal networks. Tolly evaluated the mobile solutions and soft clients of leading cloud providers, and 8x8 came out on top in every category when it came to providing the best quality on less-than-ideal network conditions. This industry-leading quality is the result of our innovative technology, including advanced algorithms to deal with issues such as buffer bloat and provide the best quality of service.

Superior global reach

Another technical consideration is global call quality. When you place a call on the 8x8 network, the system makes a number of real-time decisions regarding call setup and routing based on geographic location and network conditions.

Every VoIP call is comprised of two data types, a signal plane and a media plane. The signal plane deals with call setup, management and teardown while the media plane carries the actual digitized voice. Most cloud solutions route

signaling and media data through the same data center regardless of where a caller is located when their call is initiated. For instance, if a U.S.-based employee is traveling in Sydney, Australia and needs to make a call to a local business in Sydney, the call would still be routed back through his or her “home” data center in the U.S. first. As you can imagine, routing all calls through only a few data centers or making unnecessarily long hops is less than optimal for real-time communications. Conversations can become frustratingly slow as latency and delay degrade the call. It is important to have data centers spread out strategically—that’s why 8x8 has 15 data centers around the globe.

This global reach means not only experience deploying systems in 47 countries but also the ability to handle tactical details such as shipping phones internationally or local number porting. It also means having resources around the world, including 16 facilities for customer support with staff available to assist with your implementation.

Geo-Routing makes 8x8’s global reach uniquely enterprise-grade

Many hosted VoIP solutions route call data through the same data center regardless of the physical location of callers. 8x8 takes a very different and more sophisticated approach. When an 8x8 end-user makes a call, our patented geo-routing technology seeks out the closest data center. Media plane data is extremely sensitive to delays and 8x8 has patented technologies to ensure that this data latency is minimized. Current Internet and carrier network conditions are also taken into account for all routing decisions and the best route is determined in real time. The result of these and other innovations is the industry’s best global call quality.

² Tolly Enterprises, “Analysis of Cloud Communications VoIP Quality Under Normal and Adverse Network Conditions,” May, 2017.

Wi-Fi expertise solves the tricky problems of poor access point connectivity

Getting Wi-Fi technology right is a blend of art and science, and Wi-Fi problems are some of the most common “gotchas” in cloud communication migration. 8x8 has industry-leading experience in the critical area of Wi-Fi implementations.

8x8 also has expertise in maximizing quality over Wi-Fi networks. Many of these techniques are handled at the audio processing level, but 8x8 also preserves the best quality voice connections when endpoints are moving across network boundaries (for instance, from Wi-Fi to 4G, or from one Wi-Fi connection to another Wi-Fi connection). As a result, users can seamlessly roam between cellular, 3G/4G LTE data and Wi-Fi connections. They can also easily flip a call from the mobile app to a desk phone and back again—without other parties on the call noticing the switch.

Network engineering support offloads work from your IT team

A key component of 8x8's network engineering support is our “Networking Genie in a Box” tool. This technology goes far beyond the simple bandwidth testing tools typically offered by cloud service providers. It can do comprehensive testing of the requirements to see if the 8x8 cloud solution will work flawlessly on your infrastructure. One click with this tool can replace numerous hours of network engineering work performed by your IT team to gather the same data. For example, it can tell you if there is any packet fragmentation happening on your network, if the connectivity to 8x8 data centers is working properly, or if geo-routing is working properly.





Case Study: Town Fair Tire



Town Fair Tire Centers started in Fairfield Connecticut in 1967, and has since grown to be the largest tire dealer in New England with more than 95 stores across the Northeast and 1800 employees.

In mid-2015, the company decided to open a call center. Prior to that employees in the stores had handled all the calls. However, the contact center solution the Town Fair Tire IT team selected was acquired by the time their call center opened. Complications arose from the beginning, starting with the loss of their entire contact team. "To say the solution didn't work very well is an understatement. Internal system problems were so severe, the call center had to be shut down and rebooted four to five times a week," explains Michael Barbaro, Senior Vice President, Town Fair Tire. "We struggled mightily with that. We decided to spend \$50,000 on a backup system to handle the busy December season in case our call center shut down."

Unfortunately, the backup system had limited capabilities, so the Town Fair Tire team could not deploy softphones and had to use hardline

phones. Plus, they had no visibility into the queue. Doing the math, they decided a move to a cloud solution from 8x8 would immediately provide significant cost savings, starting with the elimination of the PRIs, POTS lines and the backup system.

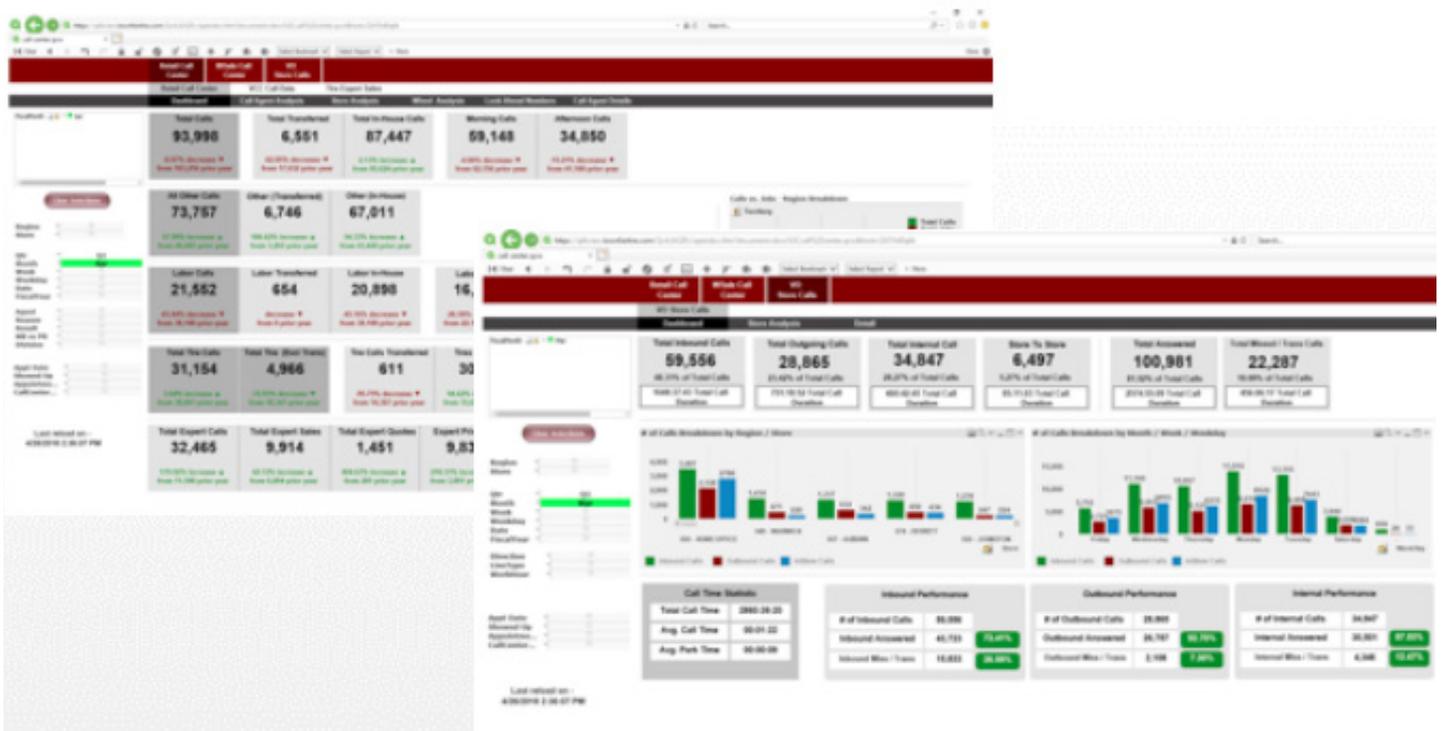
With telephone sales a critical part of the company's business, naturally Barbaro was concerned about call quality. As a first step, the 8x8 technical team came in and did test implementations on every internet connection at every store—as well as at the home office—to verify they had enough bandwidth to not only handle their IT data systems but also Internet calling. "But once we rolled everything out, the voice quality was outstanding. The sales people in the stores immediately recognized the difference from the phone system that we had previously to the HD voice quality that we currently have," continues Barbaro. "We no longer worry about the reliability of our call center because it works every day and there are no issues. We just worry about doing business, which is a big difference from what we had."

Town Fair Tire also benefited from 8x8's integrated solution. Initially, when they decided to replace their existing system they did due diligence only on contact center solutions. However, then they decided they also wanted to migrate the stores to VoIP phone lines. 8x8 was the only contact center solution provider able to offer VoIP calling for the stores. The IT team decided it was better to have one company providing both the call center solution and the phones in the stores so that employees could communicate easily.

They also want to have better analytics. "When you're on a basic POTS system you can look at your phone bill but you don't know how many incoming calls you had, how many outbound calls you made, what your peak hours are for phones," explains Barbaro. "We wanted to get more analytics, and 8x8 worked with us to connect the business intelligence solution we are using to the 8x8 API."



Town Fair Tire - Analytics Integration



The integration between 8x8 and Town Fair Tire's BI tool includes dashboards that provide complete visibility into the call center and the phone system. Analysts can click down for more detail per store, per agent, by hour and more.

This integration provides a wealth of data such as how many calls they receive per hour per agent and peak hours, which helps considerably with scheduling agents more efficiently and reducing costs. It also gives them insights into their wholesale business, which comes in mainly through individual phone lines versus the retail activity at the call center. This data includes how many calls come in as well as how many calls were missed, broken down by hour. 8x8 also helped set up a script so that if a phone line rings for more than 25 seconds it kicks over to the call center, eliminating lost wholesale business from missed calls. Adds Michael Barbaro, "In fact, it has changed the way we do business because we now have the data to see, for example, how call activity relates to store sales and so much more".



8x8, Inc. (NYSE:EGHT) is a leading provider of cloud phone, meeting, collaboration and contact center solutions with over a million business users worldwide. 8x8 helps enterprises engage at the speed of employee and customer expectations by putting the collective intelligence of the organization in the hands of every employee. For additional information, visit www.8x8.com, or follow 8x8 on LinkedIn, Twitter, and Facebook.

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