

# Cisco and Interactive Intelligence

The Value of a Combined Solution for Enterprise IP Telephony and Customer Care

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## Executive Summary

Many businesses have standardized on Cisco Unified Communications Manager (CUCM) for IP telephony and are facing a key decision: Do we expand our investment in Cisco to the contact center, or do we look for an alternative solution that can integrate seamlessly with CUCM and, more importantly, simplify our IT infrastructure and better meet the needs of the business?

The issue can be a balancing act among the business, contact center management and IT, all with diverse experiences and perspectives as well as priorities. The business needs a solution to effectively communicate internally and externally. The contact center wants to simplify operations and enhance the customer experience. And IT looks for ways to handle these demands alongside the many other responsibilities and projects already on their plate. Equally important for IT is the ability to leverage and protect existing investments in CUCM and other Cisco collaboration applications.

For companies that have CUCM in place, implementing the Interactive Intelligence Customer Interaction Center® (CIC) suite in the contact center helps with this balancing act. By way of straightforward SIP integration, CIC supplements CUCM with an all-in-one architecture for customer care that both improves performance for the business and simplifies maintenance and administration for IT.

This white paper examines this topic in greater detail, and shares findings from real-world customers that have chosen to implement a combined CIC-CUCM solution.

## A Key Decision

As an enterprise that has standardized on CUCM, you have to decide how best to leverage this investment. The contact center seeks robust, rock solid applications that let them meet dynamic business needs, quickly, across a variety of media; IT seeks compatibility with their existing environment, ease of management, optimized total cost of ownership, and agility.

The goal for many is to implement a single vendor solution across the enterprise and contact center. While this can indeed be the right path, in some cases a single vendor environment is not optimal for the business and/or IT. Therefore, it's important to keep sourcing options open.

Ultimately the key to reaching a sound conclusion is to have your company's IT and contact center organizations working together with an understanding that business drives strategy, and that technology enables strategy to happen.

## United in Vision

While IT and contact center management may have differing perspectives and priorities, they share a common vision: To meet the needs of the business at an effective price point, with easy to manage solutions.

While most IT organizations will tell you meeting the needs and requirements of the contact center are indeed a priority, they will also tell you they're often under extreme pressure with too few resources to handle the many responsibilities and projects they have on their plate.

As technology advances, the array of infrastructure and applications under IT's purview grows, placing even more demands on them. They're left without adequate bandwidth or capital resources to address a challenging and constantly changing customer care environment. They have little time to spare to make changes or develop custom integrations, much less respond to all the day-to-day needs of the contact center.

Regardless of these challenges, market pressures require the business to have greater agility than ever before. When management says it's time to offer a new product or service, or to change the way they deliver existing products and services, there's a need to move fast.

This environment can make it hard for IT and the contact center to see eye-to-eye on priorities. The key therefore is finding common ground that eases the burden on IT and empowers the business while containing costs.

### Shifting responsibilities

One way to make everyone happy is to provide the proper tools, processes, training and controls to let contact center users manage changes themselves without requiring IT involvement. It's a careful balancing act because the average IT department fears relinquishing control, especially when it means someone else might affect the core infrastructure and applications. The right systems and tools, along with the right processes and controls, can empower users without the corresponding technical risk. Cisco customers are achieving this with a combined CIC-CUCM solution. As an example, let's look at one large regional US bank.

The bank has adopted a model of shared responsibility. They are the largest regional bank in their area, and one of the largest among US banks and thrifts, with a contact center operation of 1,000 agents spread across six sites. Members of their cross-functional

evaluation team agreed that a critical requirement was that each of the bank's seven business units be able to run independently without IT intervention. The combined CIC-CUCM solution enabled the contact centers "to run their business" by allowing non-IT staff to make changes to skills, routing paths and reports, freeing up valuable IT resources.

**"What it really boiled down to** was the ease of deployment and operation and the ability to leverage our existing CUCM investment. We wanted something fast to develop, that would change with our business. We wanted to empower the business units to run their own operation without IT intervention."

*VP of Enterprise PBX and Contact Center Technology,  
Large Regional US Bank*

### **Simplifying IT infrastructure and operations**

IT and the contact center share a common desire for simplicity. They want fewer moving pieces that inherently work well together and have common administration and management tools. To that end, many contact center vendors *sell* simplicity through the integration of acquired technologies and/or products provided by technology partners. However, under careful scrutiny, the façade of cohesion often crumbles — instead of getting a unified, tightly integrated solution, IT and the contact center end up with multiple boxes, several points of administration, and additional needs for integration.

The good news is that other contact center vendors can *deliver* simplicity by providing a suite of products built from the ground up to work together. These solutions are proving to be a more convincing answer for the call for simplification.

As a case in point, Unum, a Fortune 500 company that provides long-term and short-term disability, group life and long-term care insurance for more than 100,000 companies, achieved this simplification. Running 1,100 agents across 27 sites, Unum was tired of operating a multitude of disparate "call center" systems (ACD, IVR, reporting, quality monitoring, workforce management), and wanted to move to a single "contact center" platform capable of supporting additional channels and applications. After a thorough evaluation, the Unum IT and business teams collectively decided on a combined Cisco-Interactive Intelligence solution integrated via SIP, where CUCM was the standard IP telephony platform for the enterprise and CIC was brought in for the contact center. The simplification came through CIC's multimedia routing and contact management solution leveraging Unum's existing investment in CUCM. The simplification went as far as replacing their "best-of-breed" tools (Verint call recording and IEX workforce management) with CIC's single integrated platform, which has performance applications of comparable merit.

**“We completed our migration to CUCM, and then decided to move to a single contact center system across all 27 centers to replace our separate ACD, IVR, quality monitoring and workforce management systems. At the end of the day, we chose Interactive Intelligence’s all-in-one platform because it was built from the ground up as a single system, and because it offered a more seamless, simplified environment.”**

***Tony Martins, Manager, Communications Group, Unum***

*Tony Martins, Manager, Communications Group, Unum*

### **Containing costs while offering scale and agility**

Seeking that other, sometimes elusive, goal of price performance, IT wants less infrastructure to manage, and the contact center wants cost-effective licensing with the agility to add channels or functions quickly and easily. Both want routine tasks such as upgrades or other changes to be simple events that don’t disrupt their operations or require significant additional cost.

For contact center deployments, IT values the small footprint of the Interactive Intelligence solution. The companies we interviewed found that 10 servers did the work of 60-80 servers for the competitive alternative, delivering the same or greater functionality. The smaller footprint required lower upfront and ongoing maintenance costs, which resulted in hundreds of thousands of dollars in savings. And, of course, the savings occurred while leveraging the existing investment in CUCM.

Additionally, the licensing provided by CIC gave these companies the ability to use only those applications they needed. This ease of software licensing ensures that changes are simple — basically “turning on” additional capacity or features when needed. The business could therefore focus on the people and process changes without concern for what it will take to get the technology ready.

### **Industry trends**

Consultants at *Strategic Contact* see these contact center industry trends influencing technology planning, purchases, and implementation.

- **Obtain fully integrated or “bundled” solutions that deliver a suite of capabilities on a single platform.** Ideally with common administration and management tools.
- **Work with partners that truly “get it”** when it comes to contact centers and their unique needs for functionality, resiliency and agility.
- **Have sourcing options** to optimize the approach to technology delivery and support.

### **Business is the Driver**

Despite the potential differences in priorities and perspectives, most IT departments recognize that the business is the “customer.” IT sets the stage for the development and delivery of manageable, cost-effective technology by provisioning a suitable voice and data infrastructure that supports business needs. The business, however, defines the requirements for the applications that leverage that infrastructure.

The contact center holds a special position of importance within the business as a key touch point to serve the company’s customers. Their application requirements include:

- **Robust functionality** that covers the gamut of routing, reporting, IVR, CTI and performance tools across all media (voice, email, web chat, etc.) and multiple sites (including home agents and remote offices).
- **Ease of administration and management** across applications, ideally with a common set of tools and user-friendly interfaces to make it simple and quick to make changes — add agents, reassign call types, change routing paths, etc. — and to manage their resources.

IT must support these goals within the context of protecting the enterprise technology strategy and architectural integrity. When it comes to delivering voice and data transport and other basic enterprise functions, use of existing infrastructure is often adequate. However, the importance and complexity of contact center capabilities combine to pose risks if these applications are treated as non-differentiated, or worse, commoditized. Thus, IT must offer choice in mission critical applications that leverage the core infrastructure.

## Technology is the Enabler

With a team united in understanding the business needs, the attention now turns to the technology to enable the contact center to succeed. The technology infrastructure, as well as the knowledge and processes for managing it, are a starting point for delivering applications. A proven, highly invested enterprise platform, such as CUCM, is valuable and should be fully utilized. Your contact center platform should be capable of leveraging CUCM as a foundation for meeting the complex needs of the business. The combined CIC-CUCM solution is well positioned to meet the distinctive needs of a customer-focused contact center.

In fact, companies leveraging CUCM for IP telephony and CIC for the contact center enjoy benefits from being able to better meet the needs of the business *and* freeing up IT resources. Andy Reynolds of Umpqua Bank, with two contact centers and more than 180 bank branch locations throughout California, Washington, Oregon, and Nevada, explains:

### Keys to finding the right solution

- **A cross-functional team** involved every step of the way – strategy, requirements and evaluation, implementation, support and management
- **Clear evaluation criteria** that are understood and embraced by all team members
- **Defined assumptions** such as:
  - We will leverage our enterprise Cisco platform
  - We will have robust contact center functionality that offers ease of use, agility, and integration across our self-service and assisted-service needs
- **Consideration of all critical elements** including functionality, architecture, vendor fit, implementation and support

**“We wanted to free up resources** so our Cisco team could focus on its core charter and better support our corporate standard for telephony infrastructure and collaboration, which is Cisco.”

Thus, a combined CIC-CUCM solution can actually free-up IT resources to enable you to focus on fully leveraging your investment in CUCM and other Cisco collaboration applications across the enterprise.

## Taking a Closer Look at the Combined Solution

Many consider Cisco an important long-term strategic partner, and have invested significantly in CUCM for their telephony infrastructure. Accordingly, for more than a decade it has been a priority for CIC and CUCM to work together seamlessly — both strategically and architecturally. Let’s explore strategic synergies, important architectural considerations and options for integrating CIC and CUCM.

### Strategic Synergies

The Cisco Collaboration Architecture is a reference architecture that enterprise customers are embracing to maximize the value of their Cisco investment and partnership. This comprehensive, modular foundation enables partner components and applications to easily plug into the Cisco framework. An open approach is important to customers and central to the strategy of both Interactive Intelligence and Cisco. Cisco drives this point home in their [Cisco Collaboration Solutions Overview](#):

“Cisco strongly believes that today’s environment requires an interoperable, open architecture that allows for any device or application to use a core set of collaborative services... the Cisco collaboration architecture is based on the principles that heterogeneity is a fact of life and interoperability, openness, and customer choice are paramount.”

This means Cisco customers are free to choose the customer care solution and integration option best suited to their environment. However, there are some key points to consider before you choose that solution to integrate with CUCM.

### Important Architectural Considerations

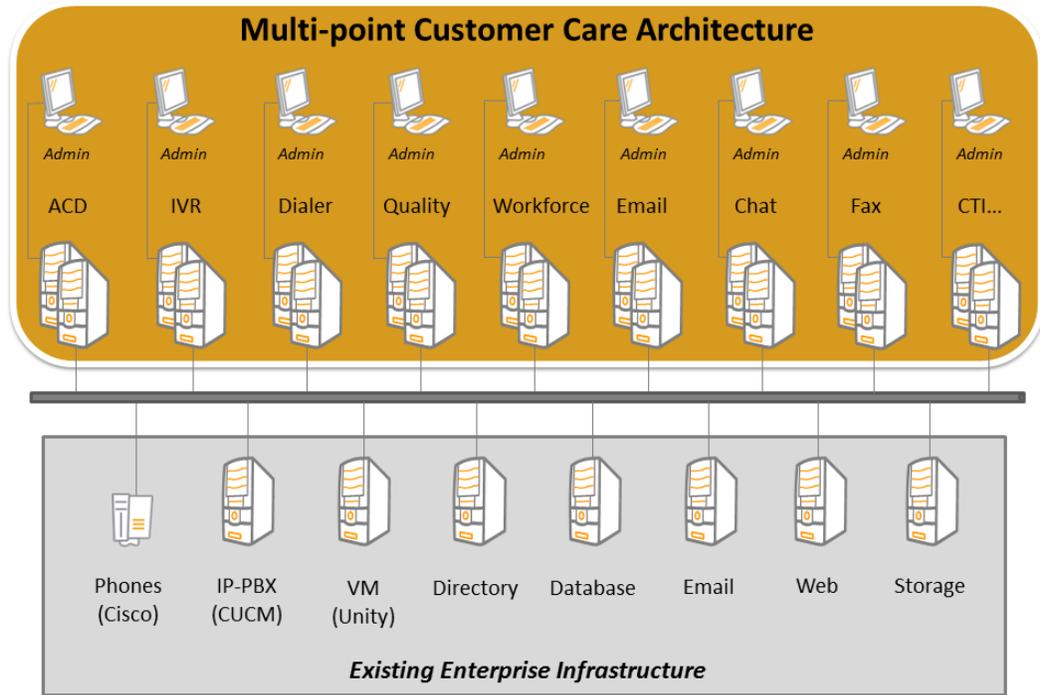
Customer care includes a multitude of functionality that has emerged and evolved over many years. While most vendors in the customer care space offer comprehensive solution sets, the way in which they are architected can differ dramatically. The two primary architectures that have emerged are *multi-point* and *all-in-one*.

#### Multi-point architecture

Multi-point architectures are the integration of acquired technologies or partnerships. Many legacy solution providers have embraced this approach. Figure 1 (see next page) is a visual representation of what a multi-point architecture looks like.

Most companies that have implemented multi-point architectures — customers as well as vendors — are looking for ways to further simplify their technology infrastructure. For customers, this can mean spending additional money on custom integration to bring the multiple points together as a working environment. For vendors, this can mean continuing to place a focus on integrating disparate systems more tightly or abandoning legacy systems for a newly developed, possibly acquired, platform. In both cases, it means a diversion from innovation.

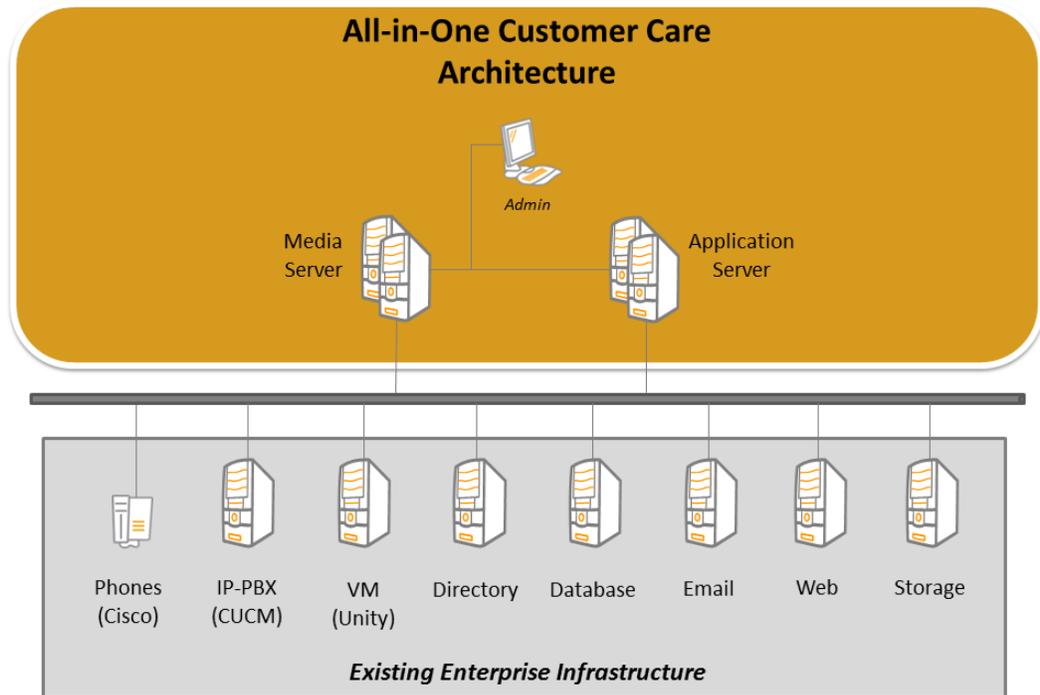




**Figure 1: Multi-point architectures**

**All-in-one architecture**

All-in-one architectures, such as CIC, are built by a single vendor from the ground up. Each functional component is developed on the same platform, using the same tools and interfaces that inherently fuse the components together. Licenses are turned on rather than adding servers to the mix. Figure 2 below is a visual representation of what an all-in-one architecture looks like when combined with CUCM.



**Figure 2: All-in-one architectures**

While the all-in-one approach delivers the same functionality as multi-point solutions (or more), the methods for implementing, managing and maintaining systems are very different. With no help from IT, system administrators and contact center managers can license new features, add agents, configure lines, structure interaction routing and skills, perform moves/adds/changes, and change other elements such as IVR menus. Contact center leaders' eyes "light up" when they see the possibilities for managing and optimizing their resources using a well-integrated suite of administrative and performance tools.

The ease of management of CIC becomes evident, as end users gain comfort and proficiency with the administrative tools quickly. The VP responsible for contact center technology at a large regional US bank describes a typical scenario where he pushed for IT to take a closer look at options to the single vendor approach before making a decision. He used side-by-side comparisons and "bake-offs" to kick the tires and explore the realities of the solutions in order to move beyond the sales and marketing hype. The surprise of a colleague who entered his office while they were in the middle of their evaluation was profound. He saw two call flows on the white board: the CIC option using four steps to do what required 18 steps on the competitor's solution. That's a tangible difference in ease of use and management.

In addition, as a natural by-product of being an all-in-one solution, CIC can be offered as a cloud-based solution. This becomes an exciting alternate way to allow IT resources to be freed-up to focus on the enterprise-side strengths of CUCM and let the customer care side of the business manage their needs through the cloud. As an example, Umpqua Bank was able to enhance their Cisco environment by moving their contact center solution to the cloud.

**"We wanted to offload 30% of the support traffic** by moving our contact center infrastructure to the cloud and having Interactive Intelligence manage it for us. This frees resources to focus on moving departments off old telephony systems to our corporate standard, CUCM. It also allows us to more effectively address our team's charter and take better advantage of advanced functionality available with other Cisco collaboration solutions."

***Andy Reynolds, VP of Network and Telecom, Umpqua Bank***

### ***Integrating Interactive Intelligence with CUCM***

"How do I best integrate CIC with CUCM?" The most flexible approach is via the *SIP* standard. SIP provides deployment flexibility and a choice of agent endpoints: existing Cisco IP phones, industry standard SIP phones (e.g., Polycom®), or the Interaction SIP Station™ or SIP softphone/client, both from Interactive Intelligence.

Figure 3 on the next page shows four simple options for integrating CIC with CUCM via SIP.

## Why SIP integration?

- Accepted global standard for IP communications, including by Interactive Intelligence and Cisco
- Much easier interoperability, SIP-based IP networks deployed worldwide
- Blueprint for real-time voice communications, SMS text messaging, and application sharing
- Open, lightweight and software-based to support IP phones, soft phones and mobile devices
- Dependable tool for IP network and communications security

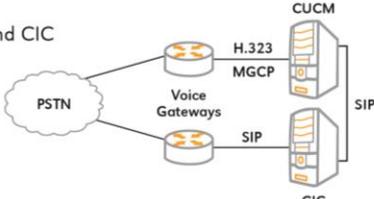
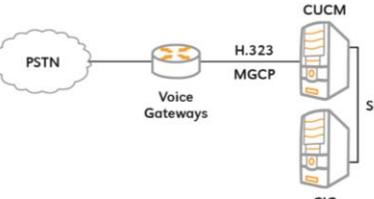
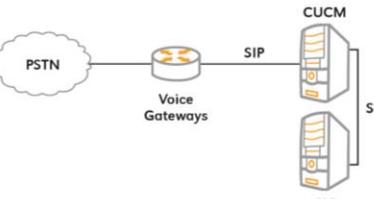
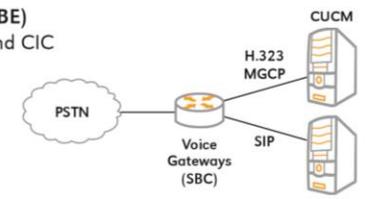
Option	Description	Best suited for
1	<p><b>Dual entry</b> Calls routed from PSTN to CUCM and CIC via separate gateways</p> <ul style="list-style-type: none"> <li>• H.323/MGCP gateway for CUCM</li> <li>• SIP gateway for CIC</li> </ul> <p>CUCM and CIC interact via SIP</p> 	<p>Organizations that desire clear lines of demarcation for the purposes of supporting the contact center</p> <ul style="list-style-type: none"> <li>• IT has specialized team supporting the enterprise</li> <li>• Contact center has own specialized IT resources</li> </ul>
2	<p><b>CUCM front end</b> Calls routed from PSTN to CUCM via H.323/MGCP gateway(s)</p> <p>CUCM and CIC interact via SIP</p> 	<p>Environments where IT desires to leverage existing network infrastructure (including shared trunking) and CUCM is already being used across the enterprise. Also where enterprise and contact center infrastructure/applications are supported by a common team.</p>
3	<p><b>CIC front end</b> Calls routed from PSTN to CIC via SIP gateway(s)</p> <p>CUCM and CIC interact via SIP</p> 	<p>Companies that have a large percentage of their employee base in the contact center (e.g., outsourcers). Also where IT desires to leverage existing network infrastructure and CIC is already being used in the contact center.</p>
4	<p><b>Cisco Unified Border Element (CUBE)</b> Calls routed from PSTN to CUCM and CIC via session border controller</p> <ul style="list-style-type: none"> <li>• H.323/MGCP for CUCM</li> <li>• SIP for CIC</li> </ul> <p>Session border controller acts as intermediary between CUCM and CIC</p> 	<p>Similar to Option 1, but where a legacy environment is in place (versions prior to CUCM 6.x) and IT prefers to have a single entry point for all calls and protocol translation handled at the edge.</p>

Figure 3: Options for integrating CIC with CUCM via SIP

To dig deeper, including diagrams and call flows, review the document [Cisco Unified Communications Manager SIP Integration](http://testlab.inin.com/) at <http://testlab.inin.com/>.

## United in Solution

Who says IT and the contact center can't see eye to eye? Professionals on both sides see the possibilities and advantages in solutions that address a common vision. We encourage you to bring an open mind and the questions of every team member to the discussion. If you do, perhaps you'll find, as did the representative companies we mention here, that Cisco and Interactive Intelligence can indeed provide value as a combined solution.

## Case Studies

### Large Regional US Bank



The largest regional bank in their area with banking and mortgage lending services for consumers as well as small and large businesses. Through several acquisitions, the institution is recognized as one of the largest among US banks and thrifts.

To serve its customers, the bank maintains retail branches throughout their region, plus a contact center operation consisting of 6 sites and 1,000 agents.

#### Business drivers

Communications system to handle dynamic business changes

- Ease of deployment and operation, multiple business units
- Push administration to the business – not possible on previous platforms
- “Cook off” between Customer Interaction Center (CIC) and a competitive solution

#### Solution chosen

CUCM, CIC, Interaction Dialer®, Interaction Recorder®

- CIC integrated with CUCM using all remote stations
  - Phones registered on CUCM, persistent connection
  - Local carrier as current SIP interface, moving to direct SIP trunking; planned integration with SIP-based corporate IVRs

#### Benefits unique to the bank

- 6 to 7 business units run independently
  - IT maintains core CIC apps, “hands off” functionality to each BU
  - BUs manage skills, routing, reporting changes with no IT intervention
- Ease of system/process management
  - Example: CIC call routing routine = 4 steps, other vendor = 18 steps
- Smaller infrastructure footprint... lower cost to maintain
  - 64 servers from other vendors vs. 10 CIC servers, estimated \$2k/server/year = approximately \$100k savings annually
  - Original CIC expenditure = \$800k savings



The Unum family of businesses — Unum US, Unum UK, and Colonial Life — provide disability, long term care, life and voluntary insurance products to 171,000 businesses in the U.S. and U.K., including 37% of today's Fortune 500. Unum itself is ranked number 235 on the Fortune 500.

In serving 25 million people worldwide, Unum maintains a contact center organization consisting of 27 sites and 1,100 agents throughout the U.S and U.K. Unum's call and contact centers range in size from a few agents to hundreds, and incorporate a growing segment of remote work-at-home agents.

#### Business drivers

Single system across 27 contact center sites

- One solution to meet multiple objectives; get business/IT on same page
- Seamless, simplified environment also key objective
  - Applications, administration, IVR development, “open” integration with Unum's existing Cisco enterprise platform

#### Solution chosen

Migration from legacy Avaya and Nortel platforms to CUCM and Customer Interaction Center (CIC) (phased transition in process)

- CIC integrated with Cisco using SIP trunking; all trunking into CUCM
  - Replacing Verint recording and IEX WFM with Interaction Recorder® and Interaction Optimizer® (WFM) from Interactive Intelligence

#### Benefits unique to Unum

- “Interactive Intelligence provides us more contact center solution expertise and agility than larger vendors, such as Avaya”
  - Virtualization across many sites, work-at-home agents
  - Multichannel platform – move from call center to contact center
  - Enhanced web and IVR self-service, maintained “in-house”
  - Smaller footprint: 10 CIC servers vs. 40-50 and 60-70 servers from other vendors



Oregon-based Umpqua Bank is recognized for its entrepreneurial approach and distinctive banking solutions — as well as for its innovative use of technology to deliver those solutions. Umpqua Bank has 184 locations between San Francisco, California, and Seattle, Washington, along the Oregon and Northern California Coast, and in Central Oregon and Northern Nevada.

Central to Umpqua Bank’s customer service operations are its two contact centers in Roseberg, Oregon (50 agents) and Tacoma, Washington (15 agents).

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### Business drivers

Failing infrastructure, largely unsupported. New solution required to consolidate call processes for customers and internal operations

- Call volume/support load – 30% of ticket volume currently contact center related, 30% Cisco support (CallManager), 30% one-off systems (Toshiba, NEC, other systems via corporate acquisitions)
- Objective to eliminate 30% of support calls, free up IT resources to focus on core competency, support Cisco infrastructure

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### Solution chosen

In progress, integrating cloud-based Communications as a Service (CaaS) from Interactive Intelligence with existing CUCM infrastructure

- CaaS to extend Customer Interaction Center (CIC) functionality
  - CIC for call handling
  - CUCM for auto attendant, one-number call forwarding (planned)
  - More fully leverage Cisco environment: Roseberg (primary) contact center site running 4.x CallManager cluster on top of UCC (not call handling solution); Tacoma location running same Cisco configuration

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### Benefits unique to Umpqua Bank

- Return to 30/30/30 call volume/support load
  - CaaS/CIC offload 30% to third-party provider (contact center tickets)
- Maintain all call control while offloading call handling to CaaS solution
  - Banking regulation – improved compliance capability
  - Security – greater control over data and voice traffic, customer information
- Empower contact center sites to “hold their own destiny” moving forward
  - Adaptability for potential future acquisitions (i.e., acquired systems), adding agents, adding new services, etc.

## The Authors



**Lori Bocklund** is president of Strategic Contact, Inc. and is a recognized industry leader in contact center strategy, technology, and operations, with over 23 years of experience to bring to every project. She shares her knowledge and experience through speaking engagements, seminars, articles, and the book she co-authored. Lori has a B.S. in Electrical Engineering from South Dakota State University and an M.S. in Electrical Engineering from The George Washington University.

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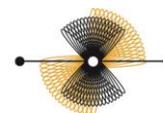
**Strategic Contact** is an independent consulting firm that helps companies optimize the value of their customer contact technology and operations. Strategic Contact helps companies develop and execute plans tied to business goals, conduct assessments and build roadmaps, develop technology requirements, select appropriate solutions, and manage projects to successful implementation.



**Thomas Bailey** has been a writer in the software and electronics industries for more than 20 years, including the last 11 years at Interactive Intelligence. Prior to Interactive Intelligence, he worked in writing and project management roles for ASI/Mid States Engineering, a leading developer of geographic information systems for utility companies worldwide, for Computer Task Group (CTG), and for H.Sams & Co., a publisher of textbooks and technical support

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**Interactive Intelligence, Inc.** (Nasdaq: ININ) is a global provider of unified IP business communications solutions for contact center automation, enterprise IP telephony, and business process automation.



INTERACTIVE INTELLIGENCE  
Deliberately Innovative

The company's all-in-one IP communications software suite is scalable and standards-based, offering a single-platform architecture with inherent multichannel processing. Founded in 1994 and with more than 4,000 customers worldwide, Interactive Intelligence provides its industry-leading software as on-premise solutions and as a cloud-based Communications as a Service (CaaS) offering, including software, hardware, consulting, implementation, support, and education.