Building a Unified Communications and Collaboration Environment That Supports Virtual Teams
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Introduction

During the 2008 Summer Olympics in Beijing, an astounding 25 world records in swimming were broken. One of the contributing factors to these record-shattering performances was a radical, technologically advanced, reduced-friction racing suit that enabled athletes to shave precious tenths of seconds off of their race times. Teams that were able to use the new technology enjoyed a significant advantage over their competitors, even before the racers entered the water. In today’s highly competitive business world, the same holds true. Companies that successfully employ new technologies can become more agile and responsive; those that don’t often find themselves struggling just to keep up.

Unified Communications is giving businesses today that kind of advantage. Corporations are moving to Voice over IP (VoIP) telecommunications, presence-enabled applications, and converged fixed-mobile communications, making it possible to find people in virtually any location, on almost any device. Businesses are also using team collaborative tools such as online whiteboarding, shared applications, and team workspaces, enabling dispersed employees to work together more effectively. Forward-looking companies are adopting blogs, podcasts, wikis, tweets, and other similar technology into the work environment. These tools, arising from the popular culture, are intermingling with corporate tools as teams naturally select what works best for them. The result is a powerful convergence of technology known as Unified Communications and Collaboration (UC&C).

Companies that embrace these evolving technologies are discovering that they can derive much greater value from their workforces. Geographically dispersed teams work more cohesively and make better and quicker decisions when they can connect on the fly. Decreases in human latency yield faster time to market, increased sales wins, and higher customer satisfaction. Through UC&C tools, virtual teams can operate with greater agility to navigate through difficult market conditions and explore new opportunities. Some see the emergence of UC&C as the catalyst for a sea change in long-established business organizational models, particularly as new methods of team productivity supplant conventional corporate hierarchies as potent mechanisms for wealth creation.

Understandably, the Chief Information Officer (CIO) will play a pivotal role in helping a business capitalize on UC&C investments. It’s the CIO who has the most direct hand in creating the virtual teaming infrastructure that will enable and support evolving, collaborative modes of work. To be successful, a CIO needs to understand that designing fundamentally human processes is substantially different from mapping the impersonal, routine business processes that are so familiar in today’s IT departments. IT departments, in turn, will need fresh approaches to designing and implementing UC&C systems and measuring their effectiveness and value.

This white paper will examine the challenges associated with implementing a UC&C environment that supports virtual teams and will consider best practices for addressing those challenges. This paper will also demonstrate that organizations that develop an effective and productive UC&C environment for their virtual teams can realize tangible benefits in the performance of the enterprise.
The Potential Benefits of Virtual Teams and UC&C

The Emergence of Virtual Teams and UC&C

Any discussion of UC&C should start with an examination of how virtual teams have emerged over the last decade. Simply defined, a virtual team is a group of individuals who work collaboratively from different physical locations. Typically, these team members have complementary skills and knowledge that produces greater value when working together as opposed to separately.

Several factors have contributed to the emergence of virtual teams. A substantial number of mergers and acquisitions (M&A) has occurred over the past four years, and current economic conditions are likely to accelerate M&A activity as stronger competitors absorb the weaker ones. Corporate globalization has led to an increased number of virtual teams that are distributed over a greater number of locations. Outsource vendors are taking on projects that are more deeply tied to the core business functions of their clients, creating the need for virtual teams that extend across enterprises. Notably, the business and economic forces that are driving the creation of virtual teams have not played themselves out and are likely to continue for the foreseeable future.

This growing reliance on virtual teams requires enterprises to adapt their processes to work well with them. Workflows that were designed for colocated teams must be adapted to a virtual environment. The technology available to these teams will define, enable, or limit how they work, and skilled application of UC&C technology will be essential to creating productive virtual teaming environments.

The Potential Benefits of UC&C-Enabled Virtual Teams

A recent Frost & Sullivan report indicates that collaboration is a key driver of business performance. “Based on analyses of our survey, we found that collaboration positively impacts an organization’s business performance. Overall, 36 percent of a company’s performance was due to its Collaboration Index. This is more than twice the impact of a company’s strategic orientation (16 percent) and more than five times the impact of market and technological turbulence influences (7 percent). This is a key finding because it empirically demonstrates that increased high-quality collaboration can improve business performance.”

Some organizations are reluctant to experiment with virtual teams, largely due to an assumption that they are not as productive as colocated teams. However, the technology exists to make virtual teams just as productive, including new communications, collaboration, project management, and productivity assessment tools.

Beyond this, UC&C and virtual teaming, by their very nature, open the door to additional benefits including:

- **Ability to find the best global talent.** Tapping into a worldwide talent pool enables companies to build teams to suit, whether that means assembling a team for experience, specialization, value, and so on.
- **A just-in-time workforce.** With easily accessible online tools, employers can bring in outside contractors to handle peak work loads, short-term job assignments, and so on, reducing human resource commitments.

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1 Frost & Sullivan, 2006 Meetings Around the World Study sponsored by Verizon Business and Microsoft.
• **Reduced costs of business travel.** UC&C tools create environments where dispersed teams can work effectively, inherently reducing travel expenses, time away from the office, and carbon footprint. In fact, executives can claim the reduced daily emissions of telecommuting employees as a part of the company’s green initiative.

• **Decreased relocation expenses.** For multinational corporations, the time and cost associated with relocating knowledge workers can be significant. With UC&C-enabled virtual teams, the disruption and delay of moving can be eliminated, allowing employees to become productive much faster and without relocation costs.

• **Faster product development and delivery.** With virtual teams strategically located around the world, businesses can implement a “follow-the-sun” strategy that engages product development teams around the clock. Globally distributed development also gives companies relevant local experience and insight.

• **Better employee work/life balance.** Valuable employees seeking to balance career and family life can be accommodated through telecommuting, which preserves corporate knowledge and experience and helps control employee turnover, reducing the need and expense of recruiting and retraining replacement employees.

Many organizations are already realizing these benefits. Companies that are in the process of defining their own UC&C objectives should understand the full potential of both direct and coincidental benefits and factor that into their planning.

### The Challenges of Building a UC&C-Supported Virtual Team Environment

#### The Challenges of Implementing a Successful UC&C Environment

While virtual teams can deliver incremental value to companies, implementation of effective UC&C technologies presents unique challenges that are as much about business processes as they are about technology implementation. Both are inextricably linked. If not designed and built correctly from the onset with full support from the IT department, virtual teams can cost the company time and resources, as well as create frustration among team members.

While it may seem obvious, the IT business analyst should understand that the processes and business goals surrounding UC&C are very different from the routine processes that characterize enterprise automation software. Human communication and collaboration is unpredictable and fluid. It is susceptible to environmental factors that can facilitate or impede effective teamwork. This especially holds true for virtual teams where the work environment is completely created, defined, and mediated through the use of technology.

To be supportive, a UC&C implementation must help virtual teams adequately address several challenges:

• **Overcoming distance and time.** Communicating at a distance can be difficult. A colleague explaining a complex concept over the phone, for example, can’t simply walk down the hall for a face-to-face discussion. Additionally, spontaneous conversations are reduced or often eliminated when people work virtually, making it difficult to generate the creative sparks that arise from impromptu brainstorming sessions.

Time can also be an issue. When one team member’s midday is another team member’s midnight, real-time communication becomes unfeasible. In these cases, more thought will need to be given to messaging-driven tools and public discussion boards.
UC&C tools must be good enough to bridge distance and time and provide the communication that can accelerate the work of teams. Modern information systems and high-speed networks have made real-time communication a possibility in the business world. In turn, business culture has adopted real-time communication as standard operating procedure. However, while UC&C tools can create a sense of community and increase the pace of business, they can also force team members to work odd hours or erase the boundaries between work and personal life. When employees feel like they have to always be “on,” they may experience burnout at a faster rate.

- **Establishing culture, trust, and leadership.** Cultural differences can present challenges when team members come from countries with varying social behaviors. For instance, in Western cultures people challenge each other to improve upon ideas. Eastern cultures tend to value conformity and harmony over confrontation. Bridging these differences will require training to create awareness and model new behaviors. Additionally, issues such as age, work styles, and personal comfort with technology often create work barriers that can be as formidable as cultural barriers.

Although it may seem unproductive, team members should be encouraged to engage in casual non-work related discussions. Informal interaction that involves non-task related items often builds the close-knit relationships that are necessary for establishing trust, cooperation, team cohesion, initiative, and efficiency. As team members come to know each other, trust in individual competency and ability will continue to grow.

Because virtual workers are more likely to feel disconnected than their traditional counterparts, leaders should periodically engage teammates via videoconferencing to establish and maintain the type of trusting relationships that face-to-face communication best promotes. Also, to keep team productivity from drifting, leaders need to establish clear goals and milestones, monitor completed progress, and communicate how each team member’s individual work fits into group and company objectives.

- **Using technology and communications effectively.** In a virtual world, nothing can be assumed to be known until it has been explicitly communicated via a UC&C communication tool. Ideal UC&C tools should be easy to use and readily accessible so that team members turn to them first to communicate. This will minimize the potential for impromptu conversations between local team members that might exclude off-site team members.

The Role of IT: Supporting the Business Unit

To be successful, it is vital that the CIO understand how UC&C technologies impact IT’s role in supporting the business unit. Just as IT business analysts work with internal clients to adapt business automation software to employee needs, they will need to do the same for collaborative technologies. To do this, IT must acquire a comprehensive understanding of the team processes that the UC&C technology will support. Achieving this level of awareness requires detailed assessment and would typically include the following:

- **Observe and evaluate how the team currently collaborates.** By attending team meetings or browsing team discussion boards, IT can discover how UC&C technologies can help correct breakdowns or reduce impediments to collaborating virtually. For example, IT may observe that a product design team is not able to easily collaborate on a complex design project simply by updating documents and sending them back and forth. Team members themselves will often identify inefficient or frustrating collaborative work processes.

- **Build a business case and recommend appropriate supporting technology.** UC&C should speed up decision making and enhance teamwork, which in turn should lead to better business results such as reduced product development time, increased sales wins, or faster customer resolutions.

- **Evaluate UC&C technology effectiveness and ROI.** By working directly with teams, IT can adapt UC&C technology to employee needs and measure its impact on team outcomes.

In general, as IT personnel design and build the environment in which virtual teams will work, they need to understand when technology is helping teams, when it is hindering them, and when it is not being as effective as it can be.
Getting the Most Out of a UC&C Environment

Understanding How Teams Work

Before creating an effective and productive UC&C-enabled virtual team environment, the IT department and business units should create a shared understanding of an individual team’s needs. Appointing a team sponsor to liaise with IT can help during both the initial design and ongoing assessments. The recommendations listed below can help UC&C stakeholders better understand corporate culture behaviors and adapt UC&C tools to actual work processes.

• Identify team work modes and outputs. Collaboration encompasses a wide range of interactions including brainstorming new ideas, co-creating products, reviewing peer work, planning, scheduling, and more. While these interactions typically occur via scheduled meetings, many team interactions also occur spontaneously. UC&C tools for the team should be able to facilitate, capture, communicate, and archive collaborative output. Any digital tool can capture work (including real-time tools). Making those archived documents, files, clips, and so on discoverable and searchable makes them more useful.

• Understand and measure team core processes. When designing and implementing a UC&C solution, IT personnel must clearly understand a virtual team’s processes and include all the tools necessary to be efficient and productive. For example, automobile designers would need shared applications, whiteboards, and rich communication tools to hash out design issues. Insurance appraisers, on the other hand, may only need tools for assigning work and disseminating information.

• Document how work is organized and completed. Teams can be self-organizing or leader-driven. Either way, they will need tools to record shared goals and milestones. Teams must be able to see who owns each assignment, record and verify its completion, find completed work, and review it. This can be done with a spreadsheet document for simple projects or a shared project management tool for more complex ones.

• Address time and distance challenges. Teams that work in neighboring time zones can use real-time communication tools for a large part of the working day, while globally dispersed teams will need to rely on message-driven communications. Even so, all teams will need a way to archive transpired communications for future reference.

• Identify potential technology barriers and constraints. Established work processes may rely on older information systems that are not easily connected to online tools. Or some team members may travel frequently, giving rise to the need for tools that work with mobile devices. Be sure to uncover all pre-existing systems, processes, and usage scenarios and incorporate them into technology planning.

Applying Presence-Driven Technology to Teamwork

UC&C presents a great leap forward in real-time communications as voice and other forms of communication can now operate on the same network in a highly integrated manner. When communications tools are integrated within a UC&C solution and are configured to use rich presence information to determine a user’s availability, team members can locate and access each other virtually anytime, anywhere, and on a variety of devices. This dramatically accelerates human-to-human communication and makes it simpler for remote team members to initiate conversations.

Perhaps the greatest value of presence-driven communication is its ability to facilitate spontaneous, highly productive interactions. Consider the natural progression of team member A, who needs quick input on a product design. Seeing team member B’s availability online, A opens communication with B via instant messaging. When neither can answer the question
they invite team member C, who they notice is also online. As the complexity of the discussion grows, they click a button to seamlessly move into a VoIP-enabled voice conversation. Needing to visually illustrate a concept, they click another button to open a shared application or virtual whiteboard. With this variety of tools at their disposal, all team members are able to get answers and come to a shared understanding quickly—all without interrupting the flow of work.

Real-time tools such as video, audio, and web conferencing are valuable for managing virtual team meetings. Advances in videoconferencing have made the oft-maligned tool far more user friendly and effective, allowing for non-verbal, esoteric, or subjective communications to take place. This can be particularly useful for visually driven assessments such as design concept and advertising treatment evaluations.

Message-Based Tools

On the other hand, teams that don’t share working hours likely need message-based tools to facilitate communication and disseminate information to the entire team. Technologies such as e-mail, wikis, discussion forums, blogs, podcasts, document management systems, and more—organized into easily accessible team portals—are the best tools for documenting and storing information for the team to access as needed. Using RSS feeds and e-mail or text-message notifications, team members can automatically notify colleagues with work updates or ongoing communications, keeping everyone aware of team progress.

Relationship/Team-Building Tools

Another class of software that may not be as obvious to business managers but can nevertheless be highly beneficial to teams is social networks. Business programs that are similar to Facebook and LinkedIn can play a role in communicating personal information that might not normally come up. Past work history and professional credentials help foster trust and build relationships among team members, while knowledge of hobbies and personal charities can spark friendships and team cohesion.

Assessing UC&C Value and Effectiveness

Assessing UC&C’s Value for Virtual Teams

Typically, the business unit will need to write a business case before investing in UC&C technology. To do this properly, it is important for the IT business analyst to understand that the value derived from this technology will be considerably different from more traditional business automation applications. When attempting to assess value, it would be fair to say that UC&C can help deliver top and bottom line value. However, measuring those values requires different approaches.

Quantitative Assessment. Organizations that need a quantitative forecast should assess UC&C via cost savings potential. A large engineering and electronics company recently commissioned a study of customer-facing employees and found that UC&C can substantially reduce costs resulting from inefficient (but fairly standard) business communications processes and help boost productivity. Operational inefficiencies identified in the study included disjointed collaboration systems, unnecessary business travel, incremental communications costs of mobile workers, and lack of parity in communications services supporting remote locations.

Productivity Gain Assessment. Organizations can also justify UC&C investment through an analysis of potential productivity gains. This is a process that will likely need to be driven by the business unit against business goals. UC&C tends to be most valuable for knowledge workers who are involved in non-routine knowledge work such as research and development. When properly designed and implemented, UC&C and business process innovation has the power to improve knowledge worker productivity and boost top-line performance.
For example, a car manufacturer recently reduced the time it takes to bring a new vehicle to market from 60 months to 35 through a process they call “telecooperation.” When developing the vehicle, managers split the design and production among globally dispersed teams and arranged for work to be completed in parallel, rather than sequentially. Collaboration tools and altered work processes contributed to a dramatic decrease in production time, helping the company adjust to the changing economics of the auto industry and gain a competitive advantage.

Gauging the Effectiveness of UC&C

Perhaps the best approach to understanding the logic behind gauging the effectiveness of UC&C is to consider the differences between enterprise automation software and UC&C. Because enterprise automation software supports repetitive business processes and focuses on operations and bottom-line results (for example, increasing factory output, decreasing WIP inventory, and reducing the average time of customer service calls), measuring its effectiveness is fairly straightforward.

However, gauging the effectiveness of a UC&C implementation requires a different measurement method. Analysts need to understand that they are looking for patterns of behaviors in a flow of non-repetitive human behavior to get a general sense of how things are working. Disruptions that are revealed in those patterns are likely to arise from a combination of human behavior, process design, and technology. When problems surface, it is essential that the analyst conduct root cause analysis for these factors before recommending corrective action. The following points help establish the context for such an analysis:

1. Human behavior cannot be precisely accounted for. Each individual comes to the team with their own skills, habits, expectations, and the like. Personality can have a significant impact on team dynamics. While these issues are outside of the IT department concern, process and technology will necessarily impact and influence team behavior in both supportive and unsupportive ways.

2. Processes can be well or poorly designed for virtual teaming. Individuals must understand their role in each process, including the scope of that role, what function they serve, and how work is to be accomplished. The technology must help all team members come to a shared understanding of processes and coordinate execution.

3. Technology will facilitate all team interactions and embody all team processes. The design, capabilities, and limitations of a virtual team’s UC&C technology solution will shape what is possible and what isn’t. How well the tools are integrated will determine how easily communication and process can flow from one medium to another.

Consider how these factors impact a virtual team working to improve software quality assurance testing methods. A software engineer in Austin assigned to write new QA process specifications is unaware that the lead developer has been called to the field for an emergency customer visit. His inability to connect with the lead developer to clarify essential information leads to project delays from the start. When the report is complete, it is uploaded to the team document management system, but the project plan is not updated. With no notification that the specification document is complete, the project manager in San Francisco idles the project for a week before learning that it is ready to be handed off to the QA team in the Philippines. The Manila team is asked to review and comment on the first draft but misinterpret their instructions to mean “start implementing the plan and let us know if you have any problems.” Because the other teams cannot see the Manila team’s internal process, it is two weeks before the project manager catches the misunderstanding and corrects the process.
Without a proper root-cause analysis on each of the breakdowns, it would be hard to know what solutions will best resolve them. In many cases the solution will be a combination of things, including information and communications systems, process improvements, training, employee performance evaluations, and more.

Detecting root causes of virtual team breakdowns and correcting them will often require a cross-discipline approach. As such, IT will find it beneficial to partner with other enterprise teams to create productive UC&C environments. Those teams can include human resources, corporate training, corporate communications, and the business units.

Conclusion

The importance of virtual teams in today's globalized business world is growing. Organizations are discovering that virtual team processes can positively contribute to corporate operations and influence how companies adapt to business challenges. UC&C-enabled virtual teams can not only match productivity levels of traditional teams, but offer advantages that are not possible with colocated workers.

On the other hand, improperly planned and executed UC&C solutions waste corporate time and resources and create a sense of frustration among virtual team members. To increase the likelihood of success, IT must thoroughly understand the team processes that UC&C technology will support and build a business case that selects appropriate supporting technology. After implementing a UC&C solution, IT should evaluate team processes, output, efficiency, and overall execution of team objectives. Careful problem analysis can help determine root causes and identify appropriate corrections. When assessing business value, managers should keep in mind that while UC&C's impact on the balance sheet is more top line, measurement should be feasible via a quantitative cost savings analysis or through an assessment of potential productivity gains.

Identifying UC&C Opportunities in the Organization

Deciding where to implement new technologies can be difficult. A good place to start is by assessing a team's strategic importance to the company's overall success. The closer a virtual team is to the core business, the greater its impact on producing or sustaining revenue and the more critical it is to support the team's work. Providing UC&C tools to these teams can produce meaningful return on investment.

Technology investments should be aligned with business goals. Organizations in a cost-cutting phase should look for opportunities where UC&C can help teams reduce travel expenses or eliminate time inefficiencies. Organizations trying to do more with less should look for ways to accelerate process with improved virtual teaming.

How Can Verizon Business Help You Get Started?

If you have questions about how to get started with UC&C, Verizon Business has the professional expertise and network that can help increase your business resilience and support you in gaining a competitive advantage. Whether you are looking for a unified communications system to be hosted or managed, your enterprise doesn't have to make a significant investment to enable a comprehensive UC&C system. The Verizon Integrated Communications Package (ICP) can be delivered as a service to you directly from our global IP network—one of the most resilient and reliable networks in the world. Contact a Verizon Business account manager to discuss availability in your area.