

Unified Communications Improves Business Outcomes, Lowers Costs, and Enhances Environmental Sustainability

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Microsoft Information Technology (Microsoft IT) used a business value framework developed by Forrester Research to more precisely measure the overall business impact and the return on investment (ROI) of unified communications (UC) at Microsoft. The analysis showed that the UC solution was generating an internal rate of return of 240 percent by enabling employees to save more than U.S. \$212 million annually. The outcome and continued use of the analysis methodology justify further investments in UC technology.

Customer Profile

The vision of Microsoft Corporation, as the worldwide leader in software for business and personal computing, is to enable people and businesses throughout the world to realize their full potential. Employing more than 90,000 people, Microsoft had revenues exceeding U.S. \$60 billion for the year ending June 2008.

Situation

Microsoft IT used deployment goals and customer satisfaction results to measure the success of its unified communications deployment in 2008. However, to justify future upgrades, the organization required a methodology to measure the business value of the solution.

Solution

Microsoft IT used a business value framework from Forrester Research to estimate the value of the unified communications deployment to the organization.

Benefits

- Validation of the Forrester methodology
- Facilitation of communications between Microsoft IT and business groups
- Valuable benchmark data for future business cases

Situation

Microsoft IT is in the middle of a company-wide UC deployment to provide e-mail, instant messaging (IM), presence, conferencing, telephony, and unified messaging, which will give employees a full range of options to communicate effectively. After meeting the deployment targets for fiscal year 2008 (ending in June 2008), Microsoft IT deemed the project a success. However, a difficult economic climate required Microsoft IT to gather financial data in planning deployments of new solutions. More specifically, the team needed to measure the ROI of the following deployed technologies:

- **Instant messaging and presence.** Microsoft has 150,000 users (employees, vendors, and partners) enabled for IM and presence. These users send more than 70 million instant messages per month and conduct nearly 2 million peer-to-peer audio conversations per month.
- **Conferencing.** Microsoft has 150,000 users enabled for Web and video conferencing. Users currently conduct about 60,000 meetings per month by using the Microsoft® Office Live Meeting hosted service or Microsoft Office Communications Server 2007 Web conferences, totaling 220,000 person-hours each month. Microsoft IT also deployed more than 2,200 Microsoft RoundTable™ video-conferencing devices to offices around the world to support video conferencing.
- **Voice.** Microsoft has 40,000 users at 28 locations globally who use the voice capabilities of Office Communications Server 2007. These users conduct more than 1 million calls per month through Office Communications Server.
- **Unified messaging.** Currently, 75,000 users in 80 offices worldwide use Microsoft Exchange Server 2007 Unified Messaging. These users receive voice-mail messages in their Microsoft Office Outlook® Inbox and can access their e-mail messages and calendar information by telephone.

Microsoft IT measured the success of this project through deployment and usage metrics and through customer satisfaction surveys. Though Microsoft IT felt that the project yielded significant economic benefits, the team lacked a methodology to measure and track these

benefits. Microsoft IT decided to pursue a method to quantify the benefits that the company receives from its current investment in unified communications. The team also performed an analysis of the expected benefits from a future Office Communications Server upgrade to support its deployment.

Note: For more information about the deployment of Office Communications Server 2007 at Microsoft, refer to: <http://technet.microsoft.com/en-us/library/cc297283.aspx>. For more information about the deployment of Exchange 2007 Unified Messaging at Microsoft, refer to: <http://technet.microsoft.com/en-us/library/bb735150.aspx>.

“Live Meeting and IM, as well as SharePoint and Groove, are vital tools for employees in our different offices around the world to communicate and collaborate, whether in developed or emerging markets. Live Meeting in particular enables us to make faster and better decisions while reducing our dependency on air travel, which lets us spend more time with customers and partners to grow the business in an environmentally responsible way.”

Jean-Philippe Courtois
President
Microsoft International

Solution

Microsoft IT decided to use the business value framework that Forrester Research developed. A business value framework identifies the most important benefit areas for a solution and provides equations to calculate these benefits. Business value frameworks typically result in a business case that contains the costs and benefits of the solutions and financial metrics derived from these cost and benefit numbers. The following financial metrics can be used to compare the financial returns that different projects generate:

- **Payback.** The breakeven point for an investment. This is the point in time when the benefits equal the costs.
- **Net present value.** The total value to the customer from investing in the solution, expressed in today's dollars.
- **Internal rate of return.** The rate of return that the company expects from investing in a solution.
- **Return on investment.** The expected return calculated by dividing net benefits by costs.

Forrester used its Total Economic Impact methodology to develop the framework. Forrester conducted an extensive analysis of Microsoft UC deployments at 15 companies to generate the cost, benefit, and risk assessments used in the framework. The costs section includes the entire investment necessary to deploy the solution and achieve the benefits. Benefits are the value to the organization and can affect both IT and business units. Forrester uses risk assessments to measure the uncertainty of the cost and benefit numbers. In this case, Microsoft IT was measuring costs and benefits that it had already achieved, so it did not need the risk assessments.

Note: For more information, refer to *The Total Economic Impact of Microsoft Unified Communications Products and Services*, from Forrester Research, at: <http://www.microsoft.com/downloadS/details.aspx?FamilyID=77e747f9-5ea0-4739-b81d-b0cd3735ff65&displaylang=en>.

Cost Framework

The cost framework includes the categories of software, hardware, deployment and training, and administration and maintenance. Microsoft IT estimated these costs for the Office Communications Server 2007 and Exchange Server 2007 Unified Messaging deployment. To prepare a complete analysis, Microsoft IT included software costs by using standard Microsoft pricing for Enterprise Agreements and estimated deployment costs based on a single deployment after a product launch. Because this was a software upgrade rather than a new deployment, Microsoft did not include administration and maintenance costs.

The deployment of Office Communications Server 2007 at Microsoft presently includes more than 130 servers and 60 gateways, costing about \$8 million. Users have received 25,000 IP phone devices and 2,200 RoundTable video-conferencing devices at a cost of \$6.6 million. Microsoft IT estimated migration and deployment costs at \$1.1 million¹. The software-and-services costs of \$34 million over three years are based on an Enterprise Agreement licensing program at enterprise retail pricing.² Table 1 lists these costs in detail.

Table 1. Deployment Costs of Office Communications Server

	Year one	Year two	Year three
Server hardware	7,951,850	Not applicable	Not applicable
Phone devices	6,630,000	Not applicable	Not applicable
Software and services	14,433,343	19,328,527	19,328,527
Migration/deployment	1,097,656	Not applicable	Not applicable
Total cost	30,112,850	19,328,527	19,328,527

The deployment of Exchange Server 2007 Unified Messaging consists of 12 servers and 160 gateways acquired at a cost of \$520,800. Microsoft IT estimated migration and deployment costs of \$260,000 for this solution.³ Licensing costs of \$5.5 million over three years cover the costs for server licenses and Exchange Enterprise CALs for the 75,000 users currently enabled.⁴ Table 2 lists these costs in detail.

Table 2. Deployment Costs of Exchange Server Unified Messaging

	Year one	Year two	Year three
Server hardware	520,800	Not applicable	Not applicable
Software and services	1,850,000	1,850,000	1,850,000
Migration/deployment	260,000	Not applicable	Not applicable
Total cost	2,630,800	1,850,000	1,850,000

1 This estimate assumes that the solution would be deployed after the software was officially released. Microsoft IT actually deploys software and runs pilot programs throughout the product development cycle.

2 The software licenses cover all of the servers, end-user Client Access Licenses (CALs), and services (such as Microsoft Forefront™ Security for Office Communications Server and public IM access) that would be required to implement the Office Communications Server 2007 deployment at Microsoft.

3 See note 1.

4 See note 2.

Benefit Framework

Forrester used customers' experiences to identify many potential benefits from unified communications that can be quantified. Microsoft IT also modified the categories, where required, to reflect technology gains of the solution, and it added a category for environmental impact to reflect the importance of sustainability efforts on business decisions.

Microsoft IT did not quantify each of these benefit areas. In some cases, data was not available from the associated business group. When organizations are applying a business value framework to their solution, they need to identify which benefit areas are most applicable to their business and then work with the relevant departments to gather the required data. They also need to include additional measures specific to their industry or organization.

Table 3 lists the benefits that the methodology identified.

Table 3. Summary of Benefits

Benefit area	Estimated annual benefit	Metric	Equation
Improved business outcomes			
Increased end-user productivity (through improved communications)	\$86,000,000	28 minutes per day per employee	Hours saved per day × workdays per year × cost per hour × percentage used for other activities
Increased end-user productivity (through avoided travel)	\$17,000,000	45,600 trips avoided	Number of trips saved × average hours per trip × cost per hour × percentage used for other activities
Shortened sales cycles	\$10,920,000	6.5% increase in proposals	Number of salespeople × revenue per proposal × increased number of proposals × profit margin
Faster project completion	Not quantified	Not applicable	Number of additional projects completed × revenue per project × profit margin
Ability to retain and attract employees	Not quantified	Not applicable	Number of employees × change in churn rate × hiring cost per employee
Faster resolution of customer issues	Not quantified	Not applicable	Change in number of support calls × cost per call
Reduced costs			
Reduced travel costs	\$93,000,000	10% reduction in trips per employee	Number of trips saved × average cost per trip
Reduced audio conferencing costs	\$3,100,000	50% reduction	Cost per minute × number of minutes used × percentage of reduction in minutes

Reduced IT infrastructure and administration costs	\$1,650,000	\$22 per office move	Reduction in cost per move x number of moves per year
Reduced real-estate and facility costs	\$644,000	50% reduction in square footage per employee	Cost per square foot x square feet saved per person x number of people
Reduced voice-mail costs	Not quantified	\$30,000 per new site	Cost to install or maintain per site x number of sites
Environmental sustainability			
Reduced carbon dioxide (CO2) emissions	17,000 metric tons	100,000,000 miles in avoided airplane travel	Decreased airplane miles x CO2 per mile + decreased car miles x CO2 per mile

Improved Business Outcomes

Increased End-User Productivity

“There is no doubt that our unified communications implementation has not only streamlined internal communications and conferencing, but also increased the speed at which we can connect with our enterprise customers. Our sales force can now get the right resources together by inviting them to chats and Live Meeting sessions regardless of their location.”

Samm DiStasio
Sr. Director, Enterprise Sales Priorities
Microsoft Corporation

In a recent survey of Microsoft users conducted by Microsoft IT, the average reported productivity gain from improved communications by using UC technology was 28 minutes per day, which is a great improvement from the 12 minutes per day that users reported before the upgrade from Microsoft Office Live Communications Server 2005. The improvement can be attributed to the additional workloads that Office Communications Server 2007 provides (such as conferencing and multiuser IM and audio calls), the improved integration with other Microsoft Office products, and increased adoption by employees. To be conservative, Microsoft IT estimated that only 10 percent of this benefit is applied to other productive activities. The resulting time savings enables Microsoft to avoid an additional \$86 million in employee costs.

The Microsoft Travel group has worked closely with the UC team since early 2008 to reduce employees' reliance on air travel. Microsoft Travel calculates that Microsoft employees avoided taking more than 45,000 trips in fiscal year 2008. With an average travel time of nine hours for a roundtrip in 2008, employees saved an additional 420,000 hours in travel time. Assuming that half of this time was recaptured for work-related activities, this time is valued at \$17 million.

Shortened Sales Cycles

To estimate the sales cycle benefits, Microsoft IT looked to the Enterprise Sales group, which has 1,800 account managers. These salespeople work on large accounts with long sales cycles and are continually collaborating with technical specialists, customers, and partners to provide excellent customer service. The Microsoft sales department estimates that these account managers have been able to increase the number of proposals that they generate by 6 percent because of UC technology. After factoring in the improved sales cycles according to the average deal size and win rate, the sales department estimates that these additional proposals generate an additional profit of almost \$11 million annually.

Faster Project Completion

Software development teams at Microsoft are often spread across locations around the globe to make the best use of available resources and to ensure that development work can continue 24 hours a day. These teams use unified communications to communicate across geographic boundaries and create bonds between team members who may have never met. Development managers gave feedback that projects finish faster, but at this time, this benefit area could not be directly tied to an increase in revenue for Microsoft.

Ability to Retain and Attract Employees

Unified communications enables employees to work independent of their location, so they do not need to be in the office or tied to a desk to be effective. Many Microsoft employees take advantage of the technology to work remotely in formal programs such as teleworking. Employees can also work remotely when inclement weather prevents travel to the office. Microsoft does not have enough information to accurately model the effect of these programs on employee retention at this time.

Faster Resolution of Customer Issues

Microsoft uses its own UC tools—such as the Microsoft Easy Assist program, based on Office Live Meeting technology—to solve issues for external customers. With Easy Assist providing access to the user's computer, complicated issues can be resolved quickly. Although issues are solved quicker, Microsoft did not quantify the impact on of this benefit.

Reduced Costs

Reduced Travel Costs

Microsoft encourages all its employees to use UC solutions, particularly Office Live Meeting and RoundTable, to enhance collaboration and reduce the need to travel. Even though Microsoft has been using Web conferencing as an alternative to travel for the past five years, gains are still being made. In the fiscal year ending June 2008, Microsoft employees reduced their air travel in terms of both total miles flown and number of trips per employee. The total miles per employee decreased by 6 percent, and the number of air trips per employee fell by 10 percent. By avoiding more than 45,000 trips, with an average cost of \$2,050, the company saved a total of \$93 million in travel costs.

Reduced Audio Conferencing Costs

The release of Microsoft Office Communications Server 2007 R2 will enable Microsoft IT to provide audio-conferencing bridges for employees without using an external service provider. To estimate the potential savings, Microsoft IT developed a rollout plan. Based on this plan, the team estimated the cost to deploy and the number of users receiving the service each year. Then, based on the transfer of users to Office Communications Server audio conferencing from the existing hosted audio-conferencing service, the team estimated the expected reduction in minutes.

Microsoft currently spends more than \$8 million in service provider costs for audio conferencing. These costs include charges for audio-conferencing bridges, toll charges, and toll-free numbers. Microsoft IT expects these costs to rise by 25 percent per year. Microsoft will continue to pay for toll-free access for external users, but Microsoft IT expects the cost savings to be 50 percent of current charges, totaling more than \$9 million over the next three years.

"UC offers a great solution that improves communication and data sharing between Microsoft employees worldwide. The partnership between Microsoft Travel and the UC team with executive support has definitely made a positive impact. As we expand our partnership, we expect to see an even greater reduction in miles flown and CO2 emitted into the atmosphere."

Eric Bailey,
Sr. Manager, Microsoft Travel
Microsoft Corporation

Reduced IT Infrastructure and Administration Costs

Microsoft IT has seen administrative cost savings totaling \$1.65 million annually from the voice deployments of Office Communications Server. Maintaining voice infrastructure in offices around the world is costly, and Office Communications Server helps reduce these costs. Microsoft IT accommodated 30,000 office moves last year involving telephony equipment and this year expects the number to be 75,000. The deployment of unified communications enables Microsoft IT to avoid hiring additional staff to support this level of moves. To reflect this cost savings, the internal charge to move an employee has decreased from \$30 to \$8.

Reduced Real-Estate and Facility Costs

The switch to software-powered voice over IP (VoIP) has had a dramatic impact on the Facilities division of Microsoft. Historically, Facilities planned office space based on revenue projections—any forecast in revenue growth led to a forecast of increased office space needs. Now, Facilities tries to optimize existing office space rather than add new space.

Unified communications can enable employers to implement flexible office arrangements. For example, the Microsoft office in the Netherlands needed to address a shortage of office space. At the time, the leased floor area per person was 16.4 square meters (176 square feet) per person, and only 25 percent of employees shared desks. Rather than simply move to a large office location, the project team developed an office plan to accommodate more employees by using less space. The new building, which opened in April 2008, has no assigned desks and requires only 8.82 square meters (95 square feet) per person. Each employee can work anywhere in the office by using a laptop, headset, webcam, or smartphone and connecting to the network through wireless or plugging in at a desk. Meeting rooms contain RoundTable devices for video conferencing. Microsoft has saved more than \$640,000 per year from this one location and anticipates generating similar savings in many additional locations as its office leases are renewed.

“When we make the decision to relocate office space, we always think how we can provide a more efficient office. First, we look at how we are using the office today and is this the office we need in the future. Second, we look at how to make sure we are taking advantage of our products to increase our efficiency.”

Ed Folge
Area Portfolio Manager
Microsoft Corporation

Note: For more information about improved space allocation in Microsoft Netherlands, watch the *New World of Work* video at:

<http://video.msn.com/?playlist=videoByUuids:uuids:93375d7e-55b8-49e4-9073-f8bbb9e535c8&showPlaylist=true>.

Reduced Voice-Mail Costs

The availability of unified messaging capabilities through Exchange Server 2007 has enabled Microsoft to reduce the cost of providing voice mail to new office locations. Before the deployment, Microsoft installed two local servers for the previous unified messaging system and two voice cards at each office location. The total cost for deployment was approximately \$30,000 per location. With Exchange Unified Messaging, the servers are centralized at datacenters and each server can handle many offices. The only cost to add a new office is for local gateways, and the total cost is approximately \$7,000.

Environmental Sustainability

Implementing unified communications at Microsoft has enabled employees to reduce their environmental impact. Employees can telework more frequently and reduce their automobile usage. Employees also frequently use Web conferencing as a substitute for traveling to meetings. Microsoft uses both Office Live Meeting and Office Communications Server Web conferencing to host approximately 60,000 conferences every month. Microsoft Travel

estimates that employees avoided flying more than 100,000,000 miles in the past fiscal year, saving 17,000 metric tons of CO2.

Conclusion

Based on the Forrester methodology, Microsoft IT believes that the investment in UC technology has paid huge dividends for Microsoft over the years through improved business practices and reduced costs. By calculating the benefits received both within Microsoft IT and across the company, Microsoft IT learned that the investments made in UC technology were well spent. Microsoft IT expects the investment in Office Communications Server 2007 and Exchange Server 2007 to produce a three-year internal rate of return of 240 percent and pay for itself in two months. These metrics are based on a total investment of \$76 million and annual benefits of \$212 million.

Microsoft IT was able to successfully measure the current financial benefits of the internal deployment of unified communications. The success at using the Forrester business value framework will make it easier to justify future investments in this technology. The benefits from this project included:

- Validation of the Forrester methodology.
- Facilitation of communications between Microsoft IT and business groups.
- Valuable benchmark data for future business cases.

For More Information

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