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## The Total Economic Impact™ Of Microsoft Unified Communications Products and Services

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## Executive Summary

Business communications are increasingly complex and require workers to manage multiple devices, applications, and face-to-face interactions in an attempt to stay productively connected with one another. Workdays for many people are no longer 9 to 5; work days are now 24x7 and span geographic boundaries, making communication and decision-making even more difficult and much more time-sensitive. People typically list multiple phone numbers and email addresses — so rather than simplifying things, a business card actually makes connecting quite complicated. As a result, when a person wants to reach someone else, s/he typically leaves numerous messages at multiple addresses.

As the information worker population shifts from working in headquarter locations to working anywhere, anytime, and across corporate boundaries, the challenge of reaching key decision-makers in a timely manner increases. The inability to reach others at critical times results in numerous delays and lost productivity. These obstacles are exacerbated as customers increasingly expect immediate response to sales and support situations. Businesses lose productivity, face major project delays, and spend unnecessary time and money on travel due to the inability to reach key decision-makers or schedule critical business meetings. Forrester has found that sometimes businesses slow down or even halt mission-critical projects due to employees' inability to reach key decision-makers.

As soon as the challenges of this sort of person-to-person latency have been addressed, the challenge is raised to one of boosting the effectiveness of teams by improving collaboration. Unified communications support such efforts by shifting communications, as appropriate, from asynchronous channels (email, voicemail) to synchronous modes like instant messaging, PC-to-PC audio and video, electronic whiteboarding, Web conferencing, application sharing, and mobile access.

An emerging suite of integrated technologies, called unified communications (UC), offers the promise of converging voice, data, and video communication and of eliminating many roadblocks in communication, thereby enabling organizations to significantly increase their information workers' productivity. UC integrates collaboration technology, such as calendaring, email, Web conferencing, team rooms, and instant messaging, with communication tools, which include telephones (landline and mobile), audio and video, and voice messaging. Microsoft's currently shipping UC products and services include: Microsoft Office Communications Server 2007 (OCS), Microsoft Exchange Server 2007, Microsoft Office Live Meeting, Microsoft Office Communicator 2007, Microsoft RoundTable, and Microsoft Office Outlook. These products are built upon the foundation of Windows Server Active Directory for simplifying password administration, enabling single sign on, and improving overall security posture.

In July 2007, Microsoft Corporation commissioned Forrester Consulting to examine the Total Economic Impact (TEI) and potential return on investment (ROI) that enterprises may realize by deploying UC products and services (UC products). To understand the financial impact of Microsoft's UC products, Forrester conducted in-depth interviews with 15 Microsoft customers and compiled their results into a composite case study of a 4,000-person digital marketing services company.

In conducting these in-depth interviews with Microsoft UC products customers, Forrester found that organizations can achieve significant productivity improvements and cost savings by deploying Microsoft UC products.

## Purpose

The purpose of this study is to provide readers with a framework to evaluate the potential financial impact of Microsoft's UC products on their organizations. Forrester's aim is to clearly show all calculations and assumptions used in the analysis. Readers should use this study to better understand and communicate a business case for investing in Microsoft's UC products.

## Methodology

Microsoft selected Forrester for this project because of Forrester's expertise in enterprise messaging and collaboration and Forrester's Total Economic Impact (TEI) methodology. TEI not only measures costs and cost reduction (areas that are typically accounted for within IT) but also weighs the enabling value of a technology in increasing the effectiveness of overall business processes.

For this study, Forrester employed four fundamental elements of TEI in modeling the financial framework for Microsoft's unified communications products.

1. Costs.
2. Benefits.
3. Risk.
4. Flexibility.

Given the increasing sophistication that enterprises have regarding cost analyses related to IT investments, Forrester's TEI methodology serves a useful purpose by providing a complete picture of the Total Economic Impact of purchase decisions. Please see Appendix A for additional information on the TEI methodology.

## Approach

Forrester used a five-step approach for this study.

1. Forrester gathered data from existing Forrester research relative to UC and the enterprise messaging and collaboration market in general.
2. Forrester interviewed Microsoft UC strategy and product marketing personnel in order to fully understand the potential value proposition of UC products.
3. Forrester conducted a series of in-depth interviews with 15 organizations currently using Microsoft UC products.
4. Forrester constructed a financial model to represent the findings gathered in the interviews. This model can be found in the TEI Framework section below.
5. Forrester created a composite organization based on the interviews and populated the framework using data from the interviews.

## Key Findings

Forrester's study yielded several key findings:

- **ROI.** Based on the interviews with the 15 existing Microsoft UC customers, Forrester constructed a TEI framework for a composite organization (see below), and the associated ROI analysis illustrating the financial impact areas. As seen in Table 1, the risk-adjusted ROI for the composite company is 563%.
- **Benefits.** Benefits accruing to the composite company, which reflects the experience and dimensions of the companies interviewed for this study, include productivity improvements for individuals and workgroups amounting to nearly \$20 million over a three-year period. Travel cost savings have been conservatively estimated at nearly \$15 million over three years. Reducing the time to complete projects is valued at about \$15 million. Shortened sales cycle can provide \$5 million in value, while reduced costs for dial-in conferencing and lower telephone call costs contribute another \$1.8 million in three-year benefits. Total benefits quantified in this study amount to \$56.5 million or a risk-adjusted, present value of \$39.5 million.
- **Costs.** The costs for this implementation include software expenditures of approximately \$2.1 million. Hardware, professional services, training and internal administration costs amount to approximately \$4.7 million over three years, for a total cost of \$6.8 million or about \$6 million in risk-adjusted, present-value terms.

Table 1 illustrates the risk-adjusted cash flow for the composite organization, based on data and characteristics obtained during the interview process. Forrester risk-adjusts these values to take into account the potential uncertainty that exists in estimating the costs and benefits of a technology investment. The risk-adjusted value is meant to provide a conservative estimation, incorporating any potential risk factors that may later impact the original cost and benefit estimates. For a more in-depth explanation of risk and risk adjustments used in this study, please see the Risk section below.

**Table 1: ROI, Original And Risk-Adjusted**

Summary financial results	Original estimate	Risk-adjusted
ROI	673%	563%
Total costs (present value)	(\$5,920,572)	(\$5,951,619)
Total benefits (present value)	\$45,752,104	\$39,476,241
Total (net present value)	\$39,831,532	\$33,524,622

Source: Forrester Research, Inc.

## Disclosures

The reader should be aware of the following:

- The study was commissioned by Microsoft and delivered by the Forrester Consulting group.
- Microsoft reviewed and provided feedback to Forrester, but Forrester maintained editorial control over the study and its findings.
- Microsoft provided Forrester with the organizations to be interviewed for this study.
- Forrester makes no assumptions as to the potential return on investment that other organizations will receive. Forrester strongly advises that the readers should use their own estimates within the framework provided in the report to determine the appropriateness of an investment in Microsoft UC technology.
- This study is not intended to be a competitive product analysis.

## Microsoft Unified Communications Overview

Unified communications delivers rich, streamlined, and effective communications across email, instant messaging (IM), voice, data, and video. Doing so, it has the potential to enrich productivity tools, business applications, and business processes by streamlining how people communicate with each other.

According to Microsoft, Microsoft's UC products and services give customers an integrated, reliable, secure and cost effective infrastructure for today's communication needs. Microsoft's UC products include:

- **Microsoft Office Communications Server 2007.** Building on the success of Microsoft Live Communications Server 2005, Office Communications Server 2007 is the first Microsoft product to combine Enhanced Voice over Internet protocol (VoIP), enterprise IM, presence, and Web conferencing capabilities within a single offering. Office Communications Server 2007 is a robust, flexible, session initiation protocol (SIP) standards-based, real-time communication platform that enables presence-based VoIP call management; audio, video and Web conferencing; and IM across existing software applications, services, and devices.
- **Microsoft Exchange Server 2007.** The new capabilities of Exchange Server 2007 deliver the advanced security and protection your company demands, the anywhere access to email, voicemail, calendar, and contacts your people want, and the operational efficiency IT needs. Exchange Server 2007 Unified Messaging goes beyond email messaging and today's standalone voicemail systems to deliver a unified inbox experience that includes email messages, voicemail, and faxing functionality, as well as new capabilities such as speech-based auto attendant, which allows users to access their communications from any phone.
- **Microsoft Exchange Hosted Services.** Four distinct managed services are provided for spam, virus, and content filtering (Hosted Filtering), email and IM retention (Hosted Archive), backup email and continuity (Hosted Continuity), and email encryption (Hosted Encryption) that complement on-premise and outsourced email solutions. The services are updated on a quarterly basis, and recent updates include directory integration to simplify user provisioning.
- **Microsoft Office Live Meeting 2007.** Office Live Meeting provides an interactive Web space for conferencing where users can share files, stream audio and video, and work collaboratively. With Office Live Meeting, colleagues can brainstorm in Microsoft Office PowerPoint, edit in Office Word, and crunch numbers in Office Excel, all in real time — no matter where they are. Paired with other unified communications solutions like telephone services, Live Meeting and Microsoft Office will be the solution for live collaboration.
- **Microsoft Office Communicator 2007.** Communicator 2007 is an integrated communications client for Office Communications Server 2007 that provides presence information, and enables users to click to communicate via IM, PC-to-PC voice and video, email or web conferencing. Integration with Exchange and Live Meeting enables users to schedule meetings right from Office Communicator. Integration with enterprise or public telephony infrastructures to provide features such as control of enterprise telephone systems and integration with audio conferencing call providers.
- **Microsoft Office Outlook 2007.** Providing an integrated solution for managing time and information, connecting across boundaries, and remaining in control of the information that reaches us, Office Outlook 2007 delivers innovations for quickly searching through

communications, organizing work, and better sharing of information with others — all from one place.

- **Microsoft RoundTable.** RoundTable is an audio-video collaboration device with a unique 360-degree camera. When combined with Office Communications Server 2007, it delivers an immersive conferencing experience that extends the meeting environment across multiple locations. Meeting participants on site and in remote locations gain a panoramic view of everyone in the conference room as well as close-up views of individual participants as they take turns speaking.

## Unified Communications Capabilities Summary

### *Presence Information: Knowing The Availability Of Colleagues*

Presence information lets people know whether others are available (e.g., online, away, busy, in a meeting, out to lunch). People can publish their availability so others know how best to reach them. The system provides some automation; for example, if a user has not touched the keyboard or mouse for a set number of minutes, that user's presence information turns to "away." Using Office Communications Server's integration with Microsoft Exchange calendaring and the PBX or IP telephone system, additional state information is also automatically published — for example "in a meeting," "on the phone," "out of the office," "free in x hours."

This rich presence enables even more effective communication between colleagues. If a recipient is available online, the sender can click on the recipient's presence icon and send an instant message. With IP telephony enabled, one can also click and call another from the desktop. If the person is traveling, for example, it is easy to click to find her mobile number and make contact that way, or indeed IM on her mobile phone. If the recipient is not available online, one knows to send an email or leave a voice message, which can be received as a WAV file embedded in an email and managed in Outlook.

All of this saves time for both parties. With presence information, a sender does not have to try several different types of communication before reaching a colleague. The receiver does not have to sift through repeated communication in email, IM, and voice messages. In a Forrester survey,<sup>1</sup> 59% of workers stated they would save more than 15 minutes per day with this feature.<sup>1</sup>

### *Instant Messaging: More Immediate Communication*

Instant messaging (IM) is the capability to send and receive text messages in real time over the Internet or a corporate network. The recipient typically sees an alert on the desktop indicating an incoming message and from whom. Enterprise IM maintains this capability within and increasingly beyond the corporate network, adding security that does not exist with public IM systems like AOL, Yahoo!, MSN, and Google Talk.

IM replaces email chains; it can include just those who are party to the conversation while those who do not need to participate in next steps are kindly omitted. Depending on the context and need, parties to an IM conversation can complete their communication with IM, escalate the conversation to a phone call, or launch a collaborative session with Live Meeting.

Office Communications Server 2007 makes it possible for organizations to allow users to connect with IM “buddies” in other organizations — when both organizations are using OCS — and public networks in an arrangement called federation.

### *Web And Videoconferencing: Cost And Time Savings*

Ad hoc Web and videoconferencing improves efficiency in real-time decision-making by providing easy setup, links to presence management, and point-and-click conference launches. Value increases when the time to set up a videoconference drops to near zero. 60% of workers surveyed for a Forrester report indicated that they could save from 1 to 5 hours per week using real-time conferencing.<sup>2</sup> Videoconferencing also reduces travel costs. Videoconferences are increasingly replacing business travel for internal meetings and client or supplier/partner meetings.

The companies that Forrester interviewed for this study cited many examples of using Live Meeting to hold ad hoc work group sessions with colleagues in different regions, countries, and time zones. Interviewed companies also use Live Meeting to extend their organizations’ services to customers, partners, and suppliers. Further, the cost of video hardware has dropped to a point where PC-to-PC video is being increasingly deployed for valuable, albeit seldom, mission-critical situations. For more complex and critical contexts, most organizations interviewed for this study are piloting the use of Microsoft RoundTable, an audio-video unit with a 360-degree camera. RoundTable enables multilocation conferences with panoramic views of everyone in each conference room and close-up views of individual participants as they take turns speaking.

Video capabilities had been implemented by many users within the interviewed companies, although adoption is still in early stages. One organization included in this study reported that the HR department is planning to provide a Webcam to all new entry-level hires to help them get oriented faster in a global, geographically dispersed organization. Forrester discovered that in pilot trials, an important finding was the productivity improvement that occurred when workers could view one another during routine communications. With video enabled between two people discussing an expense report, for example, conversations took slightly longer to complete, but when using video, the issue is usually resolved in a single instance rather than in a series of email messages back and forth between the two parties.

### *Voice Over Internet Protocol (VoIP)*

Software-powered VoIP makes it possible to communicate via telephone over an IP network instead of over traditional PBX telephony infrastructure. Voice communications can be integrated with email, calendaring, voicemail/unified messaging, IM, and conferencing to provide a streamlined experience rather than the disconnected experience provided by legacy systems today. Further, VoIP can significantly reduce the cost of telephone communications. Companies interviewed for this study were engaged in pilot testing of software-powered VoIP, including PC-to-PC calling using various devices and integration of voice with email, IM, and conferencing.

### *One-Click Communication*

We are approaching a time where all you need to find someone is his name, and all the means of contact are available immediately. Several of the organizations interviewed are looking toward a single identity for each employee that aggregates all the contact information (even individual’s areas of expertise) stored in Active Directory with some of the ways staff in the organization communicate (phone, mobile device, conferencing, IM, email, calendaring). Finding the right person becomes faster, and determining his availability and communicating via his preferred, context-dependent medium is smoothed because presence is integrated into Microsoft Office applications. Also, organizations are integrating presence into their own line of business applications more frequently; users can “click to communicate” from within the applications.

### *Mobility*

A minority of users in the interviewed companies carry mobile devices that have been integrated into the UC platform. For some organizations, mobility is an important part of their UC solutions, while for others it is an adjunct set of capabilities for select users. Certain mobile devices can run the OCS client, thus integrating the mobile phone with the individual's presence, IM, and email. Further, with a Windows mobile device, users can open and modify email attachments, attachments within IM and other Word, Excel, or PowerPoint documents.

## Analysis

Forrester took a multistep approach to evaluate the impact that implementing Microsoft UC products can have on an organization:

- Interviews with Microsoft strategy and marketing personnel.
- In-depth interviews of 15 organizations currently using Microsoft UC products.
- Construction of a common financial framework for the implementation of UC.
- Construction of a composite organization based on characteristics of the interviewed organizations.

## Interviews

Fifteen Microsoft customers were interviewed for this study, involving representatives from the following organizations:

1. Fortune 100 consumer package goods company.
2. Global publisher of science, legal, education, and business information.
3. Professional services group within a large Canadian telecom and systems integration company.
4. West Coast literary and talent agency representing top clients in entertainment and sports with offices in New York, Nashville, Kansas City, and Beijing.
5. An eLearning provider of (remote) technical education and software certification training.
6. A leading provider of enterprise content translation and localization services operating 50 offices in 26 countries.
7. A global IT consultancy.
8. An animal nutrition and biosciences company with a strong presence and 14 production facilities in North America, Europe, Middle East, Latin America, and Asia-Pacific.
9. A telecommunications giant in Asia Pacific.
10. Fire and rescue department for a large municipality in Scotland.
11. IP telecommunications network provider of converged voice, video, and data to Fortune 500 customers, carriers, mobile operators, and ISPs around the world.
12. Large mining and minerals company, with operations on every continent.
13. A global provider of business information technology consulting and software solutions.
14. Consumer goods manufacturer with production and engineering centers in North America, Latin America, and China.

15. A leading beverage producer in Australia and New Zealand.

### Work Process Scenarios

Interviewed customers voiced the following scenarios, which illustrate many of the benefits described in this study.

#### Scenario 1

*With presence, I can look at my team and I can see who's available online. I can ask them a question right away and then I'll get the answer right away. I can then respond to my VP when he's asking me questions. And if I don't know the answer, I can get it really quickly.*

#### Scenario 2

*My role is to get the word out on what we are doing now and to describe what our product offering will look like down the line. For years, I have been on the road 10 days per month — 2 work weeks — to talk to our internal people and spread the word. Or, I was in client meetings. Now, since June I have only been away for one day. The real benefit, however, is to our Account Managers and clients because I talk to them about the products. If I am not traveling, I can do more of it. Now I send a Live Meeting request. They still see me and hear me.*

#### Scenario 3

*Next week our global finance team has a conference. The guy from Australia will attend via RoundTable instead of flying 17 hours for a two-day meeting. Same for the Nordic guys. Sure, there is still value in "pressing the flesh," but OCS gives us the opportunity to get people to participate even with budget or personal constraints. They can participate more meaningfully, more productively, and be more "there" than if they were using dial-in conferencing or even if pieces of the event were delivered via Webcast.*

#### Scenario 4

*I was stuck in an airport for several hours when I learned of a sales opportunity from an email on my mobile device. I booted up my laptop and conducted a meeting with three of my colleagues for over an hour (without using a dial-in voice conference call, by the way) to get the proposal process underway. Quick response is key because we are typically on a short timeline already once we hear of an opportunity. The advantage of a rich collaboration environment and UC tools is we can accelerate the front end. From the time we learn of an opportunity to the time we actually respond, we could spend three days or more just trying to track down who has: a) knowledge, and b) availability. Just knowing who is available, we can now quickly start a conversation, add other individuals with the right background, and build the proposal. That three days (saved) is critical. And I would say if we can raise the win rate by 1%, that would more than justify the investment.*

#### Scenario 5

*We sent a team over to Europe for a week to work on a very important project. Then we needed some of those people to work on another, unrelated pitch at very short notice. They were able to go to a local pub with a WiFi connection, and use OCS and Live Meeting to connect with us in the States. We brought up Live Meeting and began working on the document. We accomplished what we needed to do in an hour. We saved a bundle on the cost of cellular calls at five bucks a minute because WiFi is free. More importantly, we were able to have a meeting and work on the document together. That saved at least a day or maybe three in completing the pitch.*

## Scenario 6

*As a marketing analyst, I spend a lot of time looking at research reports, material on the Web, Excel spreadsheets, Share Point Web sites, and PowerPoint presentations. I can't talk to a client unless I have that information open. I can't talk to someone in sales in my organization unless I am in my PC environment looking at the email, looking at the analysis, looking at the current state of the market, and so my PC is necessary for me to do my work, and the communication always happens from that context. Although I seldom move from my desk, if I am going to communicate, my PC is on and my communication is directly related to the content on my screen. So my role requires much deeper interaction and is gated by my ability to share not just my time but also my workspace. UC also enables me to transcend space to be effective. Unified communications lets me share that context. And there is great value in the rapid availability of people, as well as letting my access be known, so that as a subject matter expert, I can be contacted, and people can pass communication to me and vice versa.*

## Additional Findings

The interviews revealed a number of valuable insights on implementation and use of unified communications within the customer organizations:

- Microsoft customers and partners interviewed for this study are in early stages of implementing UC.
- Most of the customers interviewed have not yet implemented the full UC product stack, preferring to pilot and roll out the products that provide the fastest time-to-value for their organization.
- Adoption of unified communications typically begins at the top of an organization.
  - Senior executives are early adopters, especially when a CXO leads the way by using IM, conferencing, or video.
  - Members of the technical staff are also early users/testers.
  - “Friendlies,” staff with a track record of providing valuable feedback to IT, are typically selected to be part of pilot tests.
  - Heavy collaborators (collaborating teams, cross-functional and matrixed groups, sales, and geographically challenged groups and individuals) are early adopters.
- UC capabilities frequently replace hosted pay-per-minute-per-user hosted services, resulting in significant direct cost savings and vendor consolidation benefits.
- Several organizations that surveyed UC pilot participants as part of their implementation found that these users felt more like part of a team and experienced less frustration with their communication (“especially in matrix organizations”), leading to more overall job satisfaction.
- Collaboration tools, notably instant messaging, help transcend language barriers. For staff with English as a second language, supporting others in the organization, IM often works better than email or telephone conversations. It’s faster and more interactive than email (which tends to contain more complex grammar and vocabulary). IM provides each conversation participant with more time to decipher the question compared to a phone conversation.

## TEI Framework

With the information obtained in the customer interviews, Forrester has constructed a TEI framework for those organizations considering an implementation of unified communications. The objective of the framework is to identify the cost, benefit, risk factors, and flexibility that affect the decision to invest in Microsoft's UC products.

### *Composite Organization: "Intercontinental Marketing"*

Based on the interviews with the 15 existing customers provided by Microsoft, Forrester constructed a composite company, which we will call "Intercontinental Marketing." Forrester created a TEI financial framework and an associated ROI analysis for the composite company. By aggregating the findings from the customer interviews and portraying a composite organization that is gaining increasing value from Microsoft's UC products, this Forrester study illustrates the financial impact of deploying UC products.

Intercontinental Marketing is a publicly traded, interactive marketing strategy and services firm with 4,000 employees and \$900 million in annual revenue. The firm is engaged in online and print advertising, the design and building of Web sites for large companies, online ad placement, customer and brand strategy for multiple channels, analytics, and marketing investment optimization. The firm has long-standing relationships with Global 500 clients in the automotive, financial services, media and entertainment, travel, pharmaceuticals, technology, telecommunications, and consumer products industries.

The company's offices are located in Boston (its headquarters), Chicago, Detroit, New York, San Francisco, and London. Intercontinental recently acquired another digital products and technology services firm, which has offices in Paris and Shanghai. 70% of the 4,000 employees are located in the US and 30% are distributed across the UK, France and China.

Forrester created this composite company to reflect an organization with the following characteristics:

- Internal and external collaboration is of highest importance.
- With a dearth of candidates with sufficient skills in digital marketing, hiring qualified staff is difficult. The firm must make the most of its existing talent and maximize retention.
- High-value workers are separated from each other geographically; 80% of them do not work at the headquarters office.
- Client relationships are long-standing, thus offering impetus for deeper communications across firewalls. Nevertheless, most clients maintain relationships with several digital marketing agencies; new initiatives and even extensions of existing projects are frequently put up for competitive bid.
- The organization is forward-thinking and readily adopts new technologies when the products can be demonstrated to provide business value.

Advertising companies are currently struggling to determine how to most effectively organize their traditional and digital capabilities. Multichannel marketing is fomenting a convergence of traditional and digital advertising and demanding that talents in both camps merge in some way. Successful firms will be those that can harness collaboration between the two camps.

Information workers at Intercontinental Marketing heavily use Microsoft Office 2003 and now increasingly Microsoft Office 2007. Intercontinental's environment prior to investment in Microsoft's latest unified communications products included Microsoft Office 2003, Exchange 2003, Microsoft Outlook, and Outlook Web Access.

In late 2006 and 2007, the firm engaged in a pilot test of the full offering of Microsoft UC products (see list above) along with PC-PC voice capabilities, which were implemented for 400 users in the U.S. The financial framework assumes a staged rollout of the UC products. After the initial trial for 400 users, it rolled out the UC products to an additional 2,200 users, for a total of 2,600 users deployed by the end of Year 1. The remaining 1,400 users received access to UC products in Year 2. Costs and benefit assumptions match this rollout schedule, and benefits are subject to varying rates of adoption, depending on user group and technology as described below.

The initial impetus for the investment in the Microsoft UC products was to explore the potential for: 1) reducing travel costs; 2) reducing telephony costs; 3) reducing reliance on voicemail; and 4) improvements in work processes, staff productivity, and collaboration by eliminating common roadblocks to business communication. Intercontinental's core business demands ever-greater collaboration, internally and with customers and partners.

### *Framework Assumptions*

Organizations typically use discount rates (the interest rate used in cash flow analysis to take into account the time value of money) between 8% and 16% based on their current environment. For the purposes of this study, Forrester used a discount rate of 10% in the present value (PV) and net present value (NPV) calculations. Readers should consult with their finance department to determine the most appropriate discount rate to apply within their own organization.

**Table 2: General Assumptions**

General assumptions	Value
Discount rate	10%
Length of analysis	Three years

Source: Forrester Research, Inc.

## **Costs**

The costs associated with International Marketing's deployment and management of the UC solution correspond to its company profile (above). Cost assumptions are based upon aggregated findings from the customers in the TEI study and the other customers in the UC Rapid Deployment Program. The following cost model can serve as a framework for other organizations; however, each organization's costs will vary according to the company's situation, including size, profile, technical and business needs.

There are six main cost categories for the UC solution. These include:

1. Client software licensing costs
2. Server software license costs
3. Hardware costs (for servers and user devices)

4. Professional services from system integrators to design and deploy the system
5. End user training costs
6. Internal IT administration costs for ongoing management and support

### *Client Software*

Intercontinental Marketing has an existing Microsoft Enterprise Agreement for the full platform, which includes Microsoft Office Enterprise, Microsoft Windows Client, and Client Access Licenses.

**Microsoft's Enterprise Client Access License (CAL) Suite.** Client Access Licenses to Microsoft UC products can be purchased either by individual component or as part of the Enterprise CAL Suite. After evaluating both options, Intercontinental Marketing determined that it was more advantageous and aligned with its overall IT goals to purchase Microsoft's Enterprise CAL Suite. The Enterprise CAL Suite includes both Core CAL components as well as Enterprise CAL components for the following products:

- Windows Server CAL.
- Exchange Server Standard & Enterprise CAL.
- Office Communications Server Standard CAL & Enterprise CAL.
- SharePoint Server Standard CAL & Enterprise CAL.
- Windows Rights Management Services.
- System Center Configuration Manager Configuration Management License (CML) and Client Operations Management License (OML).
- Forefront Security Suite.

Based upon its licensing terms, this equated to a cost of \$97 per license or \$388,000 per year for 4,000 users for licenses and Software Assurance. For the ROI analysis, the full price of Enterprise CAL Suite is taken into account, even though the benefits are measured only for the UC products in the Enterprise CAL Suite. Therefore, Intercontinental is considering the benefits it receives from the non-UC products in the Enterprise CAL Suite (i.e. SharePoint, Rights Management) as "free".

**Office Live Meeting:** Intercontinental Marketing has decided to provide conferencing capabilities through a combination of OCS 2007 (for on-premise conferencing) and LiveMeeting hosted services. Some users' conferencing needs can be met with capabilities of OCS 2007, while other users need the more enhanced features available through Live Meeting hosted services. They licensed Microsoft Office Live Meeting Professional for 200 users in the initial trial period (year zero in the financial model), 1,300 users in Year 1, and 1,500 users in Year 2 and 3 at cost of \$138 per named user annually. They rolled out OCS 2007 on-premise Web conferencing to 200 users in the initial trial period, 1,300 users in year 2, and 3,500 users in year 3. There is no additional cost for OCS 2007 on-premise Web conferencing, since it is included in the Enterprise CAL Suite cost.

### *Server Software*

Intercontinental Marketing has one data center in Boston to service its US locations. Each international location has its own servers. Intercontinental conducted the 400-user pilot in the US during the initial trial period. It then expanded to other three international locations to include an additional 2,200 users, for a total of 2,600 users deployed by the end of Year 1. They implemented redundant servers to ensure high availability. Intercontinental Marketing licensed Windows Servers, Exchange Servers, and Office Communications Servers at a cost of \$29,500 for the initial

deployment, and \$373,000 for additional deployment in Years 1 through 3. The cost represents the annual price of License and Software Assurance.

### *Hardware*

**Server hardware.** Additional hardware was acquired at a total cost of \$224,000 in the initial deployment phase, and additional servers at a cost of \$690,000 in Year 1. Annual hardware maintenance fee is 10% of hardware. This cost includes gateway servers and PRI card for PBX integration.

**Additional hardware.** IP-enabled phones were purchased for all 4,000 users at a cost of \$1.3 million. Based upon an assessment of the user needs and preferences, Intercontinental deployed a mix of high end IP-enabled phones (for 40% of users), and low end devices (60% of users), such as IP-phones, USB plug-ins and/or Bluetooth headset or headphones. Intercontinental marketing also purchased 32 RoundTable units at a cost of \$96,000.

### *Professional Services*

Intercontinental Marketing used professional services from a third-party Microsoft partner firm for implementation and administrator training on Microsoft's UC products.

**Deployment.** Intercontinental Marketing hired a third-party partner to implement the solutions following the phased roll-out plan. It cost \$60,000 in the initial deployment, and \$88,000 and \$56,000 in the subsequent deployments in Years 1 and 2 respectively, for a total of \$204,000. This represents a total of 102 consulting days at an average rate of \$250 per hour.

**Network Upgrade.** Network upgrade is not included in the cost element as Microsoft does not expect that customers will require network service quality upgrades in order to implement OCS. While the network needs to be right-sized for the number of users and the particular usage modes (voice vs. video vs. collaboration), most existing corporate network environments should support OCS without upgrades or requiring Quality of Service (QOS) techniques on the network.

### *Training*

The firm hired a third-party consultant for user training for the initial 400 employees participating in the pilot program. The cost for this training totaled \$15,000 (including facility and instructor for six days). The cost of participants' time in training is also included at an average hourly rate of \$60 for one hour of training for participants, or \$24,000. Training costs for the initial pilot thus amounted to \$39,000. Training costs for the rest of the organization are assumed to be delivered via online tutorial and some onsite informal lunch-and-learn type events. The amount in Year 1 is calculated to be \$222,000 including \$90,000 for training development and delivery, plus the value of one hour per employee for attendance ( $2,200 \times \$60$  cost per hour  $\times 1$  hour). For Year 2 the amount is \$84,000 ( $\$60 \times 1,400$  remaining participants). The total training costs sums to \$345,000.

### *Internal Administration*

Intercontinental Marketing requires two IT professionals to administer the systems annually, which includes end-user support. Fully loaded compensation costs for each IT professional equals \$180,000 or \$360,000 annually for both.

### Total Costs

Total initial costs for this implementation are shown in the table below.

**Table 3: Total Costs**

Costs	Initial	Year 1	Year 2	Year 3	Total
Client software licensing cost	415,600	567,400	595,000	543,000	2,121,000
Server software licensing cost	29,500	130,000	130,000	113,000	402,500
Hardware costs (servers & user devices)	384,400	1,537,400	613,400	91,400	2,626,600
Professional services: implementation	60,000	88,000	56,000	0	204,000
End user training costs	39,000	222,000	84,000	0	345,000
Internal administration/maintenance	0	360,000	360,000	360,000	1,080,000
<b>Total</b>	<b>\$928,500</b>	<b>\$2,904,800</b>	<b>\$1,838,400</b>	<b>\$1,107,400</b>	<b>\$6,779,100</b>

Source: Forrester Research, Inc.

## Benefits

*"We expect unified communications to increase our ability to move forward faster."*

— CIO, global business services firm

In interviews with Microsoft customers, Forrester identified the following key benefits of Microsoft's UC products: 1) increased productivity by communicating more efficiently and faster; 2) travel cost reductions; 3) reduced time to complete projects; 4) shortened sales cycle; 5) reduced costs of dial-in pay-per-minute telephone conferencing; and 6) reduced long-distance telephone charges.

### *Benefits Description And Quantification*

#### *1. Productivity Improvements By User Group*

In seeking a greater understanding of the benefits of UC, Forrester has made an effort to relate the benefits to high-level groups of users at Intercontinental Marketing. The following descriptions of user groups are based on Forrester's research on the Information Workplace and unified communications, in general, and discussions with the interviewed companies, in particular.<sup>3</sup> Forrester examined the main roles within Intercontinental Marketing as a framework for a) evaluating the changes in work practices that are being brought about as a result of UC, and b) estimating the time savings (or compression of work into a given amount of time).

In conservatively estimating the amount of time that can be freed for the roles described above, Forrester considered:

- The degree to which roles require immediate communication.
- The number of parties with whom each role must regularly connect.
- The amount of time workers spend in Outlook, Office documents, and other applications coupled with the amount of collaboration that would simultaneously be optimal. A new marketing document would rank high here while a monthly static report would rank lower.
- The amount of time they spend online.

Forrester's compensation assumptions for each worker group are summarized in Table 4.

**Table 4: Salary Assumptions**

Ref.	Metric	Calculation	Rainmakers/ Senior Executives	Cognoscenti	Content Managers	Infrastructure Workers
A1	Number of employees		100	400	1,000	2,500
A2	Hours per year		2,000	2,000	2,000	2,000
A3	Fully loaded compensation		\$300,000	\$250,000	\$150,000	\$90,000
A4	Hourly	A3 / A2	\$150	\$125	\$75	\$45

Source: Forrester Research, Inc.

### Rainmakers And Senior Executives

Rainmakers are the relationship-oriented owners of client work and satisfaction. Although they manage just a few incumbent clients, the span of these relationships is very complex, involving hundreds of company employees and client staff as well as media suppliers and partners. They are also engaged in public presentations, industry events, new business development, and liaisons with other account leaders. As one IT staffer noted, “We want to reduce noise for these people. They are very relationship- and communications-focused, and it’s all about reducing the noise and making sure that the time they spend communicating is focused, and is focused in the right place.” Travel requirements for people in these senior roles range from 30% to 75%.

Forrester estimates that UC can give these 100 employees at Intercontinental Marketing at least 100 hours per year (or about 25 minutes per day) in Year 3 when adoption reaches 100%. This is consistent with UC users interviewed for this study frequently citing 30 minutes time per day gained as a conservative estimate of the current value of unified communications, with comments like, “UC is worth at least 30 minutes a day for me, and that’s just presence and IM.” Forrester assumes this level of benefit will not be fully reached until Year 3.

Note that the quantification method here is somewhat simplistic — it values executives’ time based on their compensation. More challenging is assessing the value of making better decisions and charting more informed next steps for the company as a result of eliminating communication blocks for these high-level staff. An alternative method for calculating this value is described at the end of this section.

**Table 5: Incremental Output: Rainmakers And Senior Executives**

Ref.	Metric	Calculation	Year 1	Year 2	Year 3	Total
B1	Number of workers	100				
B2	Hourly rate per worker	\$150				
B3	Adoption rate		65%	90%	100%	
B4	Number of hours (saved)	100				
B5	Percent captured	50%				
Bt	Incremental output: Rainmakers, Senior Executives	$B1*B2*B3*B4*B5$	\$487,500	\$675,000	\$750,000	\$1,912,500

Source: Forrester Research, Inc.

### The Cognoscenti

Cognoscenti are the subject matter experts with broad sets of media, marketing, and management skills. They are collaborative, creative-oriented media leaders and the go-to people during the course of client projects. At any given time, they lead several focused teams that are dedicated to specific clients and their respective disciplines. Cognoscenti travel to client sites and visit partners 15% to 25% of their time.

Forrester estimates that UC can free 100 hours per year for these 400 employees at Intercontinental Marketing, although as in the calculation above, this assumption includes a ramp-up rate and the full benefit is not reached until Year 3.

**Table 6: Incremental Output: Cognoscenti**

Ref.	Metric	Calculation	Year 1	Year 2	Year 3	Total
C1	Number of workers	400				
C2	Hourly rate per worker	\$125				
C3	Adoption rate		60%	80%	100%	
C4	Number of hours (saved)	100				
C5	Percent captured	50%				
Ct	Incremental output: Cognoscenti	C1*C2*C3*C4*C5	\$1,500,000	\$2,000,000	\$2,500,000	\$6,000,000

Source: Forrester Research, Inc.

### **The Content Managers**

This is a large role category at Intercontinental Marketing, comprising both individual contributors and team leaders. Content managers are the workers most immediately engaged with the creation of advertising copy, collateral, digital media and direct marketing materials. They also engage in data analysis and development of research tools, and they carry out much of the vendor management work. Their focus is often internal- and desktop-oriented, although they are nevertheless in frequent contact with their counterparts on the client and supplier sides. Their travel time ranges from 20% to 80%.

Forrester estimates that UC can free 60 hours per year for these 1,000 employees, or slightly more than 1 hour per week.

**Table 7: Incremental Output: Content Managers**

Ref.	Metric	Calculation	Year 1	Year 2	Year 3	Total
D1	Number of workers	1,000				
D2	Hourly rate per worker	\$75				
D3	Adoption rate		50%	70%	90%	
D4	Number of hours (saved)	60				
D5	Percent captured	50%				
Dt	Incremental output	D1*D2*D3*D4*D5	\$1,125,000	\$1,575,000	\$2,025,000	\$4,725,000

Source: Forrester Research, Inc.

### The Infrastructure Workers

Workers in this group support the ongoing activities, development, and efficiency of the company's staff. They carry out support and maintenance of knowledge management systems, business processes, and report preparation. Some provide analysis, monitor industry trends, support internal client team needs, and assist with responses to new business opportunities. This group also includes employees in IT, human resources, and finance/accounting functions. These employees travel less frequently than client-facing and managing staff.

Forrester conservatively estimates that UC can free 40 hours per year for these 2,500 employees, or less than 1 hour per week.

**Table 8: Incremental Output: Infrastructure Workers**

Ref.	Metric	Calculation	Year 1	Year 2	Year 3	Total
E1	Number of workers	2,500				
E2	Hourly rate per worker	\$45				
E3	Adoption rate		50%	70%	90%	
E4	Number of hours (saved)	40				
E5	Percent captured	75%				
Et	Incremental output: Infrastructure Workers	$E1 * E2 * E3 * E4 * E5$	\$1,687,500	\$2,362,500	\$3,037,500	\$7,087,500

Source: Forrester Research, Inc.

**Note on adoption rates:** Adoption rates reflect the rollout schedule described above. Further, Forrester assumes that the benefits of UC described above will accrue over time as workers adapt to the use of the technology. The rate of adoption is assumed to be most rapid among those who are least well served by current tools. Rainmakers and senior executives, for example, are the "dreamers" and visionaries in the organization, who are least served by current tools. They develop marketing campaigns and strategize about clients' marketing direction. Until the advent of UC and collaboration technologies, they lacked tools for immediate access to others in order to brainstorm, plan, and figure out which ideas have the greatest payoff and highest likelihood of success. Cognoscenti are the "problem-solvers" tasked with implementing the ideas generated in collaboration with the Rainmakers and addressing problems or exceptions raised by people on the frontlines (i.e., "Content Managers"). They lacked tools for easily sharing best practices, reusing work, managing business processes, accessing detailed information, and measuring the value of work. Content managers are workers in the "doer" job dimension; they are best served by today's tools but they lack tools for automating and streamlining exceptions like non-availability of resources or people.

**Note on percent captured:** Forrester assumes that for information workers only a portion of the time gained from improved productivity — ranging from 50% to 75% — will actually be realized by

the organization; not all of the time saved will be converted into productive output. This percentage is higher for workers engaged in more task- and process-related activities.

Table 9 summarizes the productivity benefits that Forrester believes Intercontinental Marketing can gain as a result of the current UC capabilities that have been implemented.

**Table 9: Summary Of Productivity Benefits**

Ref.	Role	Calculation	Year 1	Year 2	Year 3	Total
F1	Rainmakers		\$487,500	\$675,000	\$750,000	\$1,912,500
F2	Cognoscenti		\$1,500,000	\$2,000,000	\$2,500,000	\$6,000,000
F3	Content Managers		\$1,125,000	\$1,575,000	\$2,025,000	\$4,725,000
F4	Infrastructure Workers		\$1,687,500	\$2,362,500	\$3,037,500	\$7,087,500
Ft	Total	F1+F2+F3+F4	\$4,800,000	\$6,612,500	\$8,312,500	\$19,725,000

Source: Forrester Research, Inc.

**Note on productivity benefit calculations:** The value of incremental output is unique to each organization and the willingness and ability to measure or estimate its value varies from company to company. Note that if the benefits described above are not included in the financial framework, the ROI for this analysis would be 338%, which remains a compelling indicator for the success of a UC implementation.

## 2. Travel Cost Savings

Nearly every company interviewed by Forrester for this study cited travel cost reductions as one of the early and most significant benefits of UC. Web and videoconferencing, as well as other UC modalities, connect participants with “events” or meetings where they do not need to be physically present. Pre-sales work, training, and staff performance reviews were cited as types of activities that now require less travel. The cost savings are substantial, yet they do not reflect the full benefit. “Beyond the dollars saved,” an interviewee explained to Forrester, “there are also the health and safety aspects of travel — and the fatigue. We are aware of the implications of effectiveness and retention of upper level executives, and we are trying to reduce the stress on personal lives. UC plays a key part.” Note also that the calculation below does not include a value for employees’ time that is lost during travel. Even with mobility tools, time is lost in transit to and from airports, security check-in, getting to the terminal, and transit to offices and hotels.

In calculating the cost savings from business travel that can be avoided using UC products, Forrester assumes that Intercontinental Marketing can eliminate 10% of business trips per year in Year 1, increasing to 30% in Year 3 as the UC capabilities are more fully deployed and users change behaviors. At an average cost of \$1,500 per trip, this results in a total cost savings of nearly \$15 million over three years, as shown in Table 10.

**Table 10: Travel Cost Savings**

Ref.	Metric	Calculation	Year 1	Year 2	Year 3	Total
G1	Number of users		2,600	4,000	4,000	
G2	Percent of employees who travel for internal meetings	50%				
G3	Average number of trips per year	8				
G4	Average cost per trip	\$1,500				
G5	Percent of trips avoided via online meeting collaboration, videoconferencing, etc.		10%	25%	30%	
Gt	Travel costs avoided	G1*G2*G3*G4*G5	\$1,560,000	\$6,000,000	\$7,200,000	\$14,760,000

Source: Forrester Research, Inc.

### *3. Reducing The Time To Complete Projects*

Improved communication within project teams improves efficiency and reduces completion time, as does the ability to reach out to subject matter experts beyond the project team, allowing teams to complete more projects. These capabilities can also bring the same benefits to product development time, resulting in decreased time to market for new products. For projects based on billable hours, the metric can be keeping the project on schedule (and therefore profitable) and reducing the negative impact that extra hours place on employees' lives, and maintaining or increasing customer satisfaction.

There are more benefits to the ability to reach out to subject matter experts without the latency that has been characteristic of work processes before the introduction of UC. "If you hire our firm, you hire all of those experts [throughout the organization, regardless of geography or time zone]," Forrester was told. "We look like geniuses when we can ping a subject matter expert (SME) [in our company or a partner, via federation] and get an immediate answer." Further, clients do not get frustrated because the SMEs working on projects at the client's site leave for business development or are pulled away to address their own company's or other clients' needs.

The calculation of this benefit begins with the revenue and gross margin rate for the average project, along with the average time to complete the project in the absence of UC. Forrester conservatively estimates that 10% of project time can be compressed due to improved real-time collaboration. As in the incremental output calculations above, however, assume that not all of the recaptured time will be channeled back into productive efforts, thus the result is multiplied by the 75% capture rate. Finally, the full benefit is not anticipated at the outset of UC deployment, so an adoption rate of 50% / 75% / 100% is applied in the same manner as the calculations for improved productivity above.

**Table 11: Reduced Time To Complete Projects**

Ref.	Metric	Calculation	Year 1	Year 2	Year 3	Total
H1	Net revenue per project (average)	\$750,000				
H2	Gross margin %	40%				
H3	Project per year	300				
H4	Percent of project time %reduced due to improved collaboration	10%				
H5	Percent of time saved that could be applied to other projects	75%				
H6	Adoption rate		50%	75%	100%	
Ht	Reduced time to complete projects	(H1*H2*H3)*(H4*H5)*H6	\$3,375,000	\$5,062,500	\$6,750,000	\$15,187,500

Source: Forrester Research, Inc.

### 3. Shortened Sales Cycle

With improved collaboration — faster, more effective access to subject matter experts, the ability to contact others right from familiar applications and on premise conferencing capabilities — all augmented by presence awareness, the time required to develop sales proposals can be reduced, thus increasing the number of proposals completed and won. Interviewees told Forrester that UC products help to raise the quality of proposals as latency among experts is brought closer to zero.

"This benefit is huge for us," noted one interviewee. "It reduces the time [to create proposals], raises quality, and cuts travel. It makes us look like we have our act together." And as another interviewee stated, "Being knowledgeable buys more client loyalty."

SMEs don't have to leave the project they are working on or even leave their desks to contribute to pre-sales work. And for proposal delivery, "the experts can stay where they are because they can show up by Webcast." And as Microsoft RoundTable comes into greater usage, the experts can attend or even deliver an all-day workshop, without being in one location, because the experience is richer than even the high-end video and Web conferencing tools currently in use.

The calculation of this benefit starts with average length of a sales proposal development and delivery process for Intercontinental Marketing, the sales team size, the average revenue associated with a sale, the profit margin associated with a sale, the percentage of sales proposals that result in actual sales (75% win rate), and the improvement expected in the sales process (20%). These inputs are used to calculate the increase in sales proposals produced, the actual sale increase, and the associated increase in profit, as shown in Table 12. As with other benefit calculations, a ramp rate of 50% / 75% / 100% is assumed for Years 1 through 3, respectively.

**Table 12: Shortened Sales Cycle**

Ref.	Metric	Calculation	Year 1	Year 2	Year 3	Total
I1	Length of average sales cycle (days)		20			
I2	Number of salespersons or SMEs engaged		3.5			
I3	Sales engagements per year		40			
I4	Percent of time saved through more effective internal communication, reducing delays in the proposal process		20%			
I5	Shortened sales cycle (days)	$I1*I2*I3*I4$	560			
I6	Additional sales cycles available	$(I1*I2*I3)*(1-I4)$	10.0			
I7	Win rate		75%			
I8	Average revenue per sale		\$750,000			
I9	Gross margin %		40%			
I10	Adoption rate		50%	75%	100%	
It	Shortened sales cycle (gross margin)	$I6*I7*I8*I9*I10$	\$1,125,000	\$1,687,500	\$2,250,000	\$5,062,500

Source: Forrester Research, Inc.

#### 4. Cost Reduction: Dial-In Conferencing

The composite company, like Microsoft customers interviewed for this study, will see significant reductions in the amounts paid for dial-in meeting services purchased from teleconferencing vendors as these services are replaced with on-premise Live Meeting conferencing or OCS capabilities. The reduction percentage shown in the table below are conservative, based on conversations with customers who have begun to deploy the new tools, and greater reductions can indeed occur sooner than shown in Table 13.

**Table 13: Cost Reduction: Dial-In Conferencing**

Ref.	Metric	Calculation	Year 1	Year 2	Year 3	Total
J1	Annual spending on dial-in conferencing		\$400,000			
J2	% reduction via unified communications		30%	40%	80%	
Jt	Reduced pay-per-minute dial-in conferencing	J1*J2	\$120,000	\$160,000	\$320,000	\$600,000

Source: Forrester Research, Inc.

### 5. Cost Reduction: Telephone Calling Charges

Presence awareness and UC products result in fewer telephone calls as callers can see the availability of intended recipients and as recipients can determine rules for how they wish to be reached. In many cases, a desktop phone is the last choice of communications for recipients. Preferable modalities typically are an instant message, email, or voice message forwarded to email and listened to from one's laptop. Noted one interviewee, "I have shifted 85% of my voice calls to originate through OCS. It will ring my home office phone or mobile phone, if I choose, and it replaces an international call with a local one, so telco savings are very substantial." For the composite organization, with offices and clients in a host of countries and across several continents, the potential for reducing the costs of traditional landline calling charges is large.

**Table 14: Cost Reduction: Telephone Calling Charges**

Ref.	Metric	Calculation	Year 1	Year 2	Year 3	Total
K1	Annual spending on toll calling		\$1,000,000			
K2	Percent reduction via unified communications		30%	40%	50%	
Kt	Reduced international and long-distance telephone charges	K1*K2	\$300,000	\$400,000	\$500,000	\$1,200,000

Source: Forrester Research, Inc.

### Total Benefits

One interviewee summed up the benefits to her company this way: "If the CFO asked us to demonstrate that our investment in unified communications was a good thing, we would point out the cost savings on just travel, conferencing, and telephones justify our investment, and the we would explain that after those benefits, all of the other benefits are already paid for or 'free'."

Table 15 summarizes the benefits of increases in productivity, travel cost savings, and benefits calculated for reduced time to complete projects, shortened sales cycle, and teleconference and telephone cost savings.

**Table 15: Total Benefits**

Benefits	Year 1	Year 2	Year 3	Total
Incremental output: Rainmakers, Senior Executives	487,500	675,000	750,000	1,912,500
Incremental output: Cognoscenti	1,500,000	2,000,000	2,500,000	6,000,000
Incremental output: Content Managers	1,125,000	1,575,000	2,025,000	4,725,000
Incremental output: Infrastructure workers	1,687,500	2,362,500	3,037,500	7,087,500
Travel costs avoided	1,560,000	6,000,000	7,200,000	14,760,000
Reduced time to complete projects	3,375,000	5,062,500	6,750,000	15,187,500
Shortened sales cycle (gross margin)	1,125,000	1,687,500	2,250,000	5,062,500
Reduced pay-per-minute dial-in conferencing	120,000	160,000	320,000	600,000
Reduced international/long-distance telephone charges	300,000	400,000	500,000	1,200,000
<b>Total</b>	<b>\$11,280,000</b>	<b>\$19,922,500</b>	<b>\$25,332,500</b>	<b>\$56,535,000</b>

Source: Forrester Research, Inc.

### *Customer-Centricity Benefit Calculation Method*

Calculating productivity benefits based on compensation costs, above, is a commonly used, conservative method. Forrester recommends that readers of this study also consider calculating the value of UC using one or both of the methods described below.

**The value of winning a new client:** On average, each of Intercontinental's 30 clients contributes \$30 million in revenue (\$18 million in pass-through revenue and \$12 million in fee revenue), which produces \$2 million in operating income annually. Every 1% increase in the probability of winning (or losing) a client is valued at \$300,000 in annual revenue and \$20,000 in operating income.

Moreover, if Intercontinental were to win one new client, worth \$30 million in gross revenue and \$2 million in operating income, multiplied by the appropriate equity sector price/sales ratio of 1.75, shareholders might expect a reward of an additional \$52 million in market value of the firm.

**The value of losing an existing client:** During its quarterly earnings announcement, a publicly traded company similar to Intercontinental Marketing announced the loss of three of its clients — admittedly due to poor customer service. The gross revenue impact of the client defections was estimated at just over \$57 million. The firm's stock price immediately dropped by nearly one third as analysts downgraded the stock, even though earnings had been above analysts' estimates for that quarter. Forrester calculated a loss of over \$100 million in shareholder value per lost client and approximately \$7 million in market value for each \$1 million in lost sales. Every 1% increase in the probability of retaining an average-sized client could be valued at \$1 million or more in shareholder value.

Comparing the two scenarios above, it would seem that the market punishes failure to a greater degree than it rewards success. These opportunity and risk scenarios are not included in the ROI calculations of this study, although readers of this study are encouraged to create similar models for their organizations.

Forrester believes that UC offers the promise of significant competitive advantage in making customer relationships stronger for firms that adopt these collaboration technologies. Greater customer advocacy, based on immediate responses to customer needs, is achievable for firms that can organize effectively around the changing nature of work.

### *Other Benefits Of Unified Communications*

Companies interviewed for this study described numerous categories of benefits from UC. To ascribe financial benefit for Intercontinental Marketing, Forrester included only the categories of benefit that a) are applicable to a services company like Intercontinental Marketing and b) were most compellingly articulated and most certain to be realized by interviewed Microsoft customers. In related research, and in working with Microsoft and its customers, Forrester has identified more benefit areas that many prospective UC customers may recognize and realize. These benefit categories follow.

#### **IT Department Benefits**

Simplifying the provisioning of IT services and applications by managing single identities using Active Directory provides security benefits. The organization can ensure that users are quickly and completely blocked from corporate data, applications, and networks upon dismissal. Further, Active Directory provides compliance benefits. Some organizations face strict rules regarding which communications and information must be retained and for how long. To comply with government regulations, public companies, financial services companies, government agencies, and others must retain at least some of their email messages.

IT staff need the ability to manage IM in similar ways that they manage email for compliance and to be able to archive email and IM messages and any other form of communication. For organizations that allow employees to use public IM networks, there is risk of leaking mission-critical trade secrets, sensitive information, or inappropriate messages. Organizations need a secure, managed IM infrastructure to provide secure communications with compliance control.

As IP-based voice communication proliferates, being able to use this same identity infrastructure to store information about call paths, call plans, and phone numbers creates even greater benefit and control for the organization.

#### **Reduced Total Cost Of Ownership**

Breaking current technology silos through an integrated UC platform can result in a lower cost to the organization in areas including voice, conferencing, IT management, and support. In calculating the benefit from reduced total cost of ownership of various technologies, cost avoidance is calculated using the following factors.

**Table 16: Cost Avoidance Benefit Categories**

Savings through reductions in the numbers of :

- Fax machines
- Desktop telephone sets
- PBX equipment
- Unified Messaging systems
- Antivirus, Antispam solutions

<ul style="list-style-type: none"> <li>• Compliance solution</li> <li>• Tape back-ups</li> </ul>
Savings from improved administration: <ul style="list-style-type: none"> <li>• Centralized telephony management</li> <li>• Simplified directory maintenance</li> </ul>
Savings from telephony charge <ul style="list-style-type: none"> <li>• Savings in calling card/long-distance charges for <i>mobile</i> employees</li> <li>• Telephony toll charge, long-distance, and trunking savings</li> </ul>
Savings from telephony administration <ul style="list-style-type: none"> <li>• Savings with respect to telephony moves, adds, and changes from IP phones</li> <li>• Cabling savings at new sites through IP telephony</li> </ul>

### Reduced Real-Estate Costs Through Remote Business Support And Expansion

Using collaborative technologies such as presence awareness and soft telephony client and videoconferencing, some organizations can expand operations and geographic reach without incurring the costs of additional office infrastructure. This savings can also include the avoidance of office expansion due to increased numbers of home workers. “Pricey commercial space in Toronto and Calgary prompted our teleworker initiative,” reported one organization in this study. “UC tools give more functionality at home and for road warriors, too. It also affects work-life balance, daycare, and nanny costs. We’re seeing the benefits today in hard dollars, but we don’t know how much yet. We have been able to reduce the office space while bringing in new employees; we have subleased an entire floor in [a building in] Calgary while adding employees. It will be a great conversation a year from now.”

### Improved Ability To Attract And Retain Quality Employees

UC capabilities including unified messaging, directory functionality, and remote and mobile support capabilities provide an improved work experience, reducing turnover and costs associated with hiring. Further, being able to provide the latest tools can have a positive effect on attracting new talent.

### Reduced Training Expense

Using UC products to deliver training to employees through their desktops provides savings in areas of travel, specific training costs, and productivity, as employees can train on their own time rather than at set times.

### Improved Resolution Of Customer Issues

Enhanced communication between customer service and subject matter experts through presence awareness, call forwarding, and other tools, means customer issues can be resolved more quickly, reducing the cost required to field calls and handle customer interactions.

### Improved Customer Experience And Retention

Improved communication between customer service and subject matter experts, through presence awareness, call forwarding, and other capabilities, allows customer issues to be resolved more quickly, improving customer retention and increasing revenue per customer. In a 2005 survey of North American IT decision-makers, increased customer satisfaction was found to be one of the top four benefits of real-time connectivity<sup>4</sup>. This leads directly to lower customer turnover, as faster response times to critical issues provide competitive advantage. Please see page 26 for more comprehensive treatment of this benefit area.

### Additional benefits from Enterprise CAL Suite

When a customer chooses to acquire UC products through the Enterprise CAL suite software, the customer can expect additional benefits from non-UC products included in Enterprise CAL suite.

## Risk

Risk is the third major component within the TEI model; it is used as a filter to capture the uncertainty surrounding different cost and benefit estimates. If a risk-adjusted ROI still demonstrates a compelling business case, it raises confidence that the investment is likely to succeed because the risks that threaten the project have been taken into consideration and quantified. The risk-adjusted numbers should be considered as the “pressure-tested” expectations since they represent the expected values considering risk. In general, risks impact costs by raising the original estimates and impact benefits by reducing the original estimates.

For the purpose of this analysis, Forrester risk-adjusts the benefit estimates to better reflect the level of uncertainty that exists for each estimate. The TEI model uses a triangular distribution method to calculate risk-adjusted values. To construct the distribution, it is necessary to first estimate the low, most likely, and high values that could occur within the current environment. The risk-adjusted value is the mean of those points. Cost estimates can be risk-adjusted in the same way; in this case, however, Forrester assumes that most cost amounts, with the exception described below, will have been determined by contract, so no risk adjustment is applied.

In the case of the professional services required to implement UC at Intercontinental Marketing, 30 days of consulting services for the initial deployment used in this analysis (see below) can be considered the “most likely” or expected value, with 30 days and 45 days set as the low and high estimates, respectively. The risk-adjusted amount is the mean of these three values, or 35 person-days of consulting services. Professional services of this nature vary based on a number of anticipated factors as well as unforeseen events and discoveries. The variability represents a risk that is captured as part of this study. For the deployment to an additional 2,220 users in Year 1, Forrester uses a risk factor of 66 consulting person-days on the high end, 44 person days as the most likely, and 44 days on the low end. The amounts applied to Year 2, when deployment is extended to 1,400 more users are 28, 28, and 42 days for the low, most likely and high estimate, respectively. This has the effect of increasing the cost estimate to take into account the fact that original cost estimates are more likely to be revised upward than downward. Forrester applies the mean (35, 51 and 32 days, for Initial, Year 1 and year 2, respectively) to the cost per day of \$2,000 arrive at risk adjusted total value of \$238,000 compared to the original estimate of \$204,000 total for the three periods.

The following implementation and impact risks are identified as part of this analysis:

- Installation and testing could demand more days of consulting services.
- Rate of adoption could be slower than projected.
- Incremental output per worker in each worker group could be less than estimates.
- Amount of travel cost savings could be less than envisaged.
- The estimates of benefits amounts for reduced time to complete projects, shortened sales cycle, and cost avoidance for conferencing and telephone charges could be less than estimated in this case.

Conversely, the actual value in these areas could be greater than the most likely expected values; Forrester has made the ROI calculations very conservative insofar as the high values are typically set equal to the most likely amounts, thus capping “upside bias.”

### **Benefits Risk Adjustment**

The following assumptions have been used to calculate the low, most likely, high, and mean benefits amounts in shown in Table 18:

#### ***Incremental Output: Rainmakers, Senior Executives***

The low, most likely, and high estimates for the amount of time per year freed for this group of workers are set at 50, 100, and 100 hours, respectively, producing a mean of 83 1/3 hours. As described in the Benefits section above, these 100 workers earn \$150 per hour (including benefits and non-salary compensation). The adoption rate is assumed to be 70%, 90%, and 100% for Years 1 through 3, inclusive. The benefit is discounted by 50%, however, as we assume that time freed by productivity tools will be only partly realized by the organization. The risk-adjusted formula for this group is:

$$100 \text{ workers} \times \$150 \text{ per hour} \times \text{adoption rate [65%, 90%, 100%]} \times 50\% \times 83.3 \text{ hours}$$

The corresponding calculations for each worker group are shown below.

#### ***Incremental Output: Cognoscenti***

The low, most likely, and high estimates for the amount of time per year freed for this group of workers are set at 50, 100, and 100 hours, respectively, producing a mean of 83 1/3 hours.

$$400 \text{ workers} \times \$125 \text{ per hour} \times \text{adoption rate [60%, 80%, 100%]} \times 50\% \times 83.3 \text{ hours}$$

#### ***Incremental Output: Content Managers***

The low, most likely, and high estimates for the amount of time per year freed for this group of workers are set at 30, 60, and 60 hours, respectively, producing a mean of 50 hours.

$$1,000 \text{ workers} \times \$75 \text{ per hour} \times \text{adoption rate [50%, 70%, 90%]} \times 50\% \times 50 \text{ hours}$$

#### ***Incremental Output: Infrastructure Workers***

The low, most likely, and high estimates for the amount of time per year freed for this group of workers are set at 20, 40, and 40 hours, respectively, producing a mean of 33 1/3 hours.

The productivity capture rate for this group is assumed to be 75%, as these workers are more closely engaged in task/process work.

$$2,500 \text{ workers} \times \$55 \text{ per hour} \times \text{adoption rate [50%, 70%, 90%]} \times 75\% \times 33.3 \text{ hours}$$

The results of these calculations are summarized in Table 17.

**Table 17: Risk Adjustment: Incremental Output By Worker Group**

Risk adjustment: incremental output	Year 1	Year 2	Year 3	Total
Incremental output: Rainmakers	406,250	562,500	625,000	1,593,750

Incremental output: Cognoscenti	1,250,000	1,666,667	2,083,333	5,000,000
Incremental output: Content Managers	937,500	1,312,500	1,687,500	3,937,500
Incremental output: Infrastructure Workers	1,406,250	1,968,750	2,531,250	5,906,250
Total	\$4,000,000	\$5,510,417	\$6,927,083	\$16,437,500

Source: Forrester Research, Inc.

### ***Business Travel Costs Avoided***

The financial framework includes a number of assumptions about the number of business trips that can be avoided for each worker group as Intercontinental Marketing increasingly adopts Web conferencing via Live Meeting to confer meetings faster than in-person meeting can be arranged. These assumptions are summarized in Table 18. The low, most likely, and high have been set by multiplying the original estimate (number of employee users x 50% who travel x 8 trips average per year x \$1,500 average cost per trip x 10%, 25%, 30% of trips avoided via online meeting collaboration, videoconferencing, etc.) by 80% to determine the low figure and by 103% to determine the high amount. The mean is thus 94.3%.

**Table 18: Risk-Adjustment Of Travel Costs Avoided**

Risk adjustment: business travel costs avoided	Year 1	Year 2	Year 3	Total
Low	1,248,000	4,800,000	5,760,000	11,808,000
Most likely	1,560,000	6,000,000	7,200,000	14,760,000
High	1,606,800	6,180,000	7,416,000	15,202,800
Mean/risk-adjusted	\$1,471,600	\$5,660,000	\$6,792,000	\$13,923,600

Source: Forrester Research, Inc.

The other benefit categories, which include: a) reduced time to complete projects; b) shortened sales cycle; c) reduced pay-per-minute dial-in conferencing; d) reduced international/long-distance telephone charges, are given similar risk adjustment treatment as described above. The risk-adjustment factors used for these benefit categories are shown in Table 19.

**Table 19: Risk-Adjustment Factors**

Risk adjustment: benefit category	Low	Most likely	High	Mean/risk-adjusted %
Reduced time to complete projects	50%	100%	100%	83.3%
Shortened sales cycle	50%	100%	100%	83.3%
Reduced dial-in conferencing	80%	100%	103%	94.3%

Reduced int'l/long-distance telephone charges	50%	100%	100%	83.3%
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Source: Forrester Research, Inc.

The risk adjusted amounts for the benefit categories are summarized in Table 20 below.

**Table 20: Total Risk-Adjusted Benefits**

Benefits	Year 1	Year 2	Year 3	Total
Incremental output: Rainmakers, Senior Executives	\$406,250	\$562,500	\$625,000	\$1,593,750
Incremental output: Cognoscenti	1,250,000	1,666,667	2,083,333	5,000,000
Incremental output: Content Managers	937,500	1,312,500	1,687,500	3,937,500
Incremental output: Infrastructure Workers	1,406,250	1,968,750	2,531,250	5,906,250
Travel costs avoided	1,471,600	5,660,000	6,792,000	13,923,600
Reduced time to complete projects	2,812,500	4,218,750	5,625,000	12,656,250
Shortened sales cycle	937,500	1,406,250	1,875,000	4,218,750
Reduced pay-per-minute dial-in conferencing	113,200	150,933	301,867	566,000
Reduced international/long-distance telephone charges	250,000	333,333	416,667	1,000,000
<b>Total</b>	<b>\$9,584,800</b>	<b>\$17,279,683</b>	<b>\$21,937,617</b>	<b>\$48,802,100</b>

Source: Forrester Research, Inc.

## Flexibility

Flexibility, as defined by Forrester's TEI methodology, represents an investment in additional capacity or agility today that can be turned into future business benefits at some additional cost. This provides an organization with the "right" or the ability to engage in future initiatives but not the obligation to do so. There are multiple scenarios in which a customer might choose to implement UC for general communication purposes and later realize additional uses and business opportunities. By adding desktop call control or mobile phone support, for example, the customer derives even greater value from the original investment for only modest additional cost.

The flexibility to subsequently deploy UC in other business areas and/or create additional value from the original investment has quantifiable value. This section presents an example of one such option in which Intercontinental Marketing can achieve tangible benefits by reducing communication obstacles caused by a distributed workforce and respond more quickly to customers and time-critical situations.

For Intercontinental Marketing, the initial investment in UC products created an “option” to cost-effectively build expanded international account service capabilities. Intercontinental would like to aggressively pursue a new account, a company based in China, that has extensive marketing activity in Europe, Asia, and the Middle East. Intercontinental does not have adequate staff in its Shanghai office to create the pitch, although staff in China is critical to success. Intercontinental cannot hope to succeed without dedicating six key employees from the Boston, London, and San Francisco offices on a near full-time basis. Without UC, Intercontinental will decline the opportunity to pursue this new business; the talent needed to win the account is just too dispersed, and attempts to compel these key employees to spend long periods of time away from home and on airplanes raises the risk of them quitting. If the account is won, staff in multiple time zones will be called upon to service the new business, at least until decisions are made around additional hires in China. Using UC, however, raises the prospect of success enough that Intercontinental decides to assemble a pitch team, pulling them from other important work for the four months required to prepare the pitch.

The cost of this option is principally the compensation of a total of 10 employees (four in London, six in North America) and some travel costs, totaling \$750,000. The new account is estimated to be worth \$30 million in annual revenue (\$18 million in pass-through revenue and \$12 million in fee revenue), which produces \$2 million in operating income annually.

The flexibility component of TEI captures that value using either the financial industry standard Black-Scholes or the binomial option pricing models. Forrester values the above flexibility option at more than \$1.25 million.

**Table 21: Flexibility: China Option**

Metric	Calculation	Value
Asset value (benefit)		\$2,000,000
Cost to acquire		\$750,000
Expiration (time to expire, in years)		0.25
Flexibility	Black-Scholes option pricing model	\$1,255,651

Source: Forrester Research, Inc.

Reducing telephony hardware and administration costs is another example of a flexibility option where the company has the opportunity but not the obligation to generate more value from the UC platform. In this example, the company can choose to eliminate the voicemail system for a savings of \$150,000 in maintenance charges and administration. Next the firm can eliminate traditional desk phones for some of its more mobile staff, for a benefit value of \$994,741 (present value of 400 units x \$1,000 per year x 3 years). All of this is accomplished at an incremental cost of \$50,000 in internal labor and produces a value of more than \$1 million.

**Table 22: Flexibility: Telecom Rationalization Option**

Metric	Calculation	Value
Eliminate voicemail system	License/maintenance fee, administration	\$150,000
Remove desk phones	+ PV (400 units * \$1,000 per year * 3 years)	\$994,741
Asset value (benefit)	=	\$1,144,741
Cost to acquire	Internal labor estimate	\$50,000
Expiration (time to expire, in years)		2.0
Flexibility: telecom cost savings	Black-Scholes option pricing model	\$1,097,656

Source: Forrester Research, Inc.

Giving more staff mobile capabilities has been a major productivity boost for several companies interviewed for this study. Applying some of the benefit estimates to Intercontinental Marketing in this case, and applying Forrester's conservator factors (50% capture rate), the option value of giving mobile communications, integrated with the enterprise UC platform, can boost staff productivity by 3 hours per week. Working through calculations similar to those above, with assumptions described in the case study, produces a value of more than \$3 million.

**Table 23: Flexibility: Mobility Option**

Metric	Calculation	Value
Additional mobile staff		300
Productivity improvement per worker	\$150 * 3 hours per week * 50 weeks	\$22,500
% captured	x	50%
Asset value (benefit)	=	\$3,375,000
Cost of mobile devices	Mobile devices @ \$500	\$150,000
Integration and administration/support	+ internal labor est.	\$100,000
Cost to acquire	=	\$250,000
Expiration (time to expire, in years)		1.5
Flexibility: mobile support for additional staff	Black-Scholes option pricing model	\$3,136,025

Source: Forrester Research, Inc.

These are only three illustrations of flexibility options. The foundation or platform for more such options was created when Intercontinental Marketing implemented UC, including these examples:

- Federation: the option to build enhanced customer self-service through federation — to integrate UC capabilities within the firm's enterprise applications. For example, clients could view billing information on a secure extranet site *and* engage Intercontinental staff from their account team using presence, collaborating on a shared application. UC can break down technology silos and integrate applications to provide collaboration and richer functionality for existing enterprise and communication applications.
- Integrating UC capabilities and enterprise applications: the option to transform or streamline business processes from *within* core applications. Some organizations are becoming sensitive to errors and exceptions that occur when employees take their eyes off of what they are doing and shift their attention outside of the process in order to communicate. By "inserting" UC capabilities into an organization's ERP, CRM, and custom applications, workers can be more productive when they can reach the right person at the right time without leaving the application, thus unifying the work with the communication channels. This kind of capability is not available "out of the box" and must be built, yet it is especially powerful when combined with federation so that parties outside the corporate firewall can be engaged.
- Dynamic sourcing of talent: the option to build or expand a more dynamic workforce that includes contractors for pieces of projects requiring rare skills or to ramp up for specific client challenges or seasonal work. Intercontinental can expand its supplier/partner ecosystem by finding talent where it resides, to include contingent staff who cannot be utilized full-time, or those who do not wish to relocate.
- Merger or acquisition: increasing the attractiveness of the firm in the event of entering negotiations for being acquired by, for example, a global holding company of advertising and specialized marketing services firms. Intercontinental's valuation should increase with its ability to demonstrate how UC capabilities have a) enhanced client service, retention and fee income, and b) created a platform for faster, more powerful integration with the holding company's other assets through collaboration and especially the promise of federation. Likewise, when acquiring another company, as occurred with at least one company interviewed for this study, the staff at the acquired company will be assimilated faster, and will feel like part of the team as soon as the UC connections are switched on, thus positively influencing retention. In the case of a cross-border corporate combination, language challenges are more easily overcome with multimodal communications and presence.

The value of flexibility is unique to each organization, and the willingness to measure its value varies from company to company. Please note that the values calculated above exist in addition to risk-adjusted benefits described in this case study analysis; Forrester has not included the option value in the ROI calculations.

## TEI Framework: Summary

The results of the costs, benefits, flexibility, and risk sections above are used to determine a return on investment, net present value, and payback period.

Tables 24 and 25 shows the risk-adjusted values after applying the risk adjustment method indicated in the Risk section to the values in Tables 3 and 15.

It is important to note that values used throughout the TEI Framework are based on in-depth interviews with five organizations and the resulting composite organization built by Forrester. Forrester makes no assumptions as to the potential return that other organizations will receive within their own environment. Forrester strongly advises that readers use their own estimates within

the framework provided in this study to determine the expected financial impact of implementing UC.

**Table 24: Risk-Adjusted Costs**

Costs: Risk-adjusted	Initial	Year 1	Year 2	Year 3	Total	Present Value
Client software licensing cost	415,600	567,400	595,000	543,000	2,121,000	1,831,118
Server software licensing cost	29,500	130,000	130,000	113,000	402,500	340,018
Hardware costs (servers & user devices)	384,400	1,537,400	613,400	91,400	2,626,600	2,357,649
Professional services: implementation	70,000	102,667	65,333	0	238,000	217,328
End user training costs	39,000	222,000	84,000	0	345,000	310,240
Internal administration / maintenance	0	360,000	360,000	360,000	1,080,000	895,267
<b>Total</b>	<b>\$938,500</b>	<b>\$2,919,467</b>	<b>\$1,847,733</b>	<b>\$1,107,400</b>	<b>\$6,813,100</b>	<b>\$5,951,619</b>

Source: Forrester Research, Inc.

**Table 25: Risk-Adjusted Benefits**

Benefits: risk-adjusted	Year 1	Year 2	Year 3	Total	Present value
Incremental output: Rainmakers, Senior Executives	406,250	562,500	625,000	1,593,750	1,303,766
Incremental output: Cognoscenti	1,250,000	1,666,667	2,083,333	5,000,000	4,079,013
Incremental output: Content Managers	937,500	1,312,500	1,687,500	3,937,500	3,204,827
Incremental output: Infrastructure Workers	1,406,250	1,968,750	2,531,250	5,906,250	4,807,241
Travel costs avoided	1,471,600	5,660,000	6,792,000	13,923,600	11,118,434
Reduced time to complete projects	2,812,500	4,218,750	5,625,000	12,656,250	10,269,534
Shortened sales cycle (gross margin)	937,500	1,406,250	1,875,000	4,218,750	3,423,178
Reduced pay-per-minute dial-in conferencing	113,200	150,933	301,867	566,000	454,444

## The TEI™ of Microsoft Unified Communications

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Reduced international/long-distance telephone charges	250,000	333,333	416,667	1,000,000	815,803
Total	\$9,584,800	\$17,279,683	\$21,937,617	\$48,802,100	\$39,476,241

Source: Forrester Research, Inc.

## Study Conclusions

Forrester's in-depth interviews with Microsoft UC customers yielded important observations on the business value of the UC products. Forrester found that organizations can realize benefits in the form of:

- Individual and workgroup productivity.
- Travel cost savings.
- Reducing the time to complete projects.
- Shortened sales cycles.
- Cost reductions for dial-in conferencing and telephone charges.
- Improved customer retention.

Further, although not quantified for this case study, Forrester recommends that prospective UC implementers examine potential benefits in these categories as well:

- Reduced total cost of ownership of telephony a) equipment; b) management; and c) administration (moves/adds/changes), directory maintenance, charges to employees for mobile phone usage, and conferencing.
- Reduced real-estate and physical office costs, such as leases, leasehold improvements, fixtures, office equipment, and IT/administrative support.
- Reduced training expenses.
- Improved ability to attract and retain quality employees.
- Faster, better resolution of customer service issues.

Forrester believes that unified communications offers the promise of significant competitive advantage in making customer and supplier/partner relationships stronger for firms that adopt these collaboration technologies.

The financial analysis provided in this study illustrates how an organization can evaluate the value proposition of Microsoft's UC products. Based on information collected from interviews with 15 UC customers, Forrester calculated a three-year risk-adjusted ROI of 563% for the composite company. All final estimates are risk-adjusted to incorporate potential uncertainty in the calculation of costs and benefits.

Note that if the productivity benefits (described above in the context of the four role types) are not included in the financial framework, the ROI for this analysis would be 338%, which remains a compelling indicator for the success of a UC implementation.

Based on these findings, companies looking to implement UC can expect productivity benefits and cost savings. Using the TEI framework, many companies may find the potential for a compelling business case to make such an investment.

**Table 1: ROI, Original And Risk-Adjusted**

Summary financial results	Original estimate	Risk-adjusted
ROI	673%	563%
Total costs (present value)	(\$5,920,572)	(\$5,951,619)
Total benefits (present value)	\$45,752,104	\$39,476,241
Total (net present value)	\$39,831,532	\$33,524,622

Source: Forrester Research, Inc.

## Appendix A: Total Economic Impact™ Overview

Total Economic Impact™ is a methodology developed by Forrester Research, Inc. that enhances a company's technology decision-making processes and assists vendors in communicating the value proposition of their products and services to clients. The TEI methodology helps companies demonstrate, justify, and realize the tangible value of IT initiatives to both senior management and other key business stakeholders.

The TEI methodology consists of four components to evaluate investment value: benefits, costs, risks, and flexibility. For the purpose of this analysis, the impact of flexibility was not quantified.

### Benefits

Benefits represent the value delivered to the user organization — IT and/or business units — by the proposed product or project. Often product or project justification exercises focus just on IT cost and cost reduction, leaving little room to analyze the effect of the technology on the entire organization. The TEI methodology and the resulting financial model place equal weight on the measure of benefits and the measure of costs, allowing for a full examination of the effect of the technology on the entire organization. Calculation of benefit estimates involves a clear dialogue with the user organization to understand the specific value that is created. In addition, Forrester also requires that there be a clear line of accountability established between the measurement and justification of benefit estimates after the project has been completed. This ensures that benefit estimates tie back directly to the bottom line.

### Costs

Costs represent the investment necessary to capture the value, or benefits, of the proposed project. IT or the business units may incur costs in the forms of fully burdened labor, subcontractors, or materials. Costs consider all the investments and expenses necessary to deliver the proposed value. In addition, the cost category within TEI captures any incremental costs over the existing environment for ongoing costs associated with the solution. All costs must be tied to the benefits that are created.

### Risk

Risk measures the uncertainty of benefit and cost estimates contained within the investment. Uncertainty is measured in two ways: the likelihood that the cost and benefit estimates will meet the original projections and the likelihood that the estimates will be measured and tracked over time. TEI applies a probability density function known as "triangular distribution" to the values entered. At a minimum, three values are calculated to estimate the underlying range around each cost and benefit.

### Flexibility

Within the TEI methodology, direct benefits represent one part of the investment value. While direct benefits can typically be the primary way to justify a project, Forrester believes that organizations should be able to measure the strategic value of an investment. Flexibility represents the value that can be obtained for some future additional investment building on top of the initial investment already made. For instance, an investment in an enterprise-wide upgrade of an office productivity suite can potentially increase standardization (to increase efficiency) and reduce licensing costs. However, an embedded collaboration feature may translate to greater worker productivity if activated. The collaboration can only be used with additional investment in training at some future point in time. However, having the ability to capture that benefit has a present value that can be estimated. The flexibility component of TEI captures that value.

## Appendix B: Glossary

**Discount rate:** The interest rate used in cash flow analysis to take into account the time value of money. Companies often set a discount rate based on their business and investment environment and cost of capital. Forrester assumes a yearly discount rate of 10% for this analysis. Organizations typically use discount rates between 8% and 16% based on their current environment. Readers are urged to consult their organization to determine the most appropriate discount rate to use in their own environment.

**Net present value (NPV):** The present or current value of (discounted) future net cash flows given an interest rate (the discount rate). A positive project NPV normally indicates that the investment should be made, unless other projects have higher NPVs.

**Present value (PV):** The present or current value of (discounted) cost and benefit estimates given at an interest rate (the discount rate). The PV of costs and benefits feed into the total net present value of cash flows.

**Payback period:** The breakeven point for an investment. This is the point in time at which net benefits (benefits minus costs) equal initial investment or cost.

**Return on investment (ROI):** A measure of a project expected return in percentage terms. ROI is calculated by dividing net benefits (benefits minus costs) by costs.

### A Note On Cash Flow Tables

The following is a note on the cash flow tables used in this study (see the Example Table below). The initial investment column contains costs incurred at “time 0” or at the beginning of Year 1. Those costs are not discounted. All other cash flows in Years 1 — 3 are discounted using the discount rate shown in Table 2 at the end of the year. Present value (PV) calculations are calculated for each total cost and benefit estimate. Net present value (NPV) calculations are not calculated until the summary tables and are the sum of the initial investment and the discounted cash flows in each year.

### Example Table

Ref.	Category	Calculation	Initial cost	Year 1	Year 2	Year 3	Total

Source: Forrester Research, Inc.

## Appendix C: About The Project Manager

### Jeffrey North, Senior Consultant



Jeffrey North is a senior consultant with Forrester's Total Economic Impact (TEI) consulting practice. The TEI methodology focuses on measuring and communicating the value of IT and business decisions and solutions, as well as providing an ROI business case based on the costs, benefits, risk, and flexibility of investments.

Jeff came to Forrester with consulting and operating experience, notably working with fast-growth companies. He was a founding member of the digital strategy practice at Cambridge Technology Partners, where he specialized in business value justification of technology investments and customer advocacy. As a director in the international and catalog business units at Staples, Jeff built and managed metrics and reporting programs in North America and Europe as the company experienced significant growth. He has also consulted in a business-IT capacity to retailers and life sciences companies.

Jeff holds a B.A. from St. Lawrence University and an M.B.A. with a concentration in international management and finance from Thunderbird, the Garvin School of International Management.

## Appendix D: Supplemental Material

### Related Forrester Research

August 24, 2007, "Are You Ready For Unified Communications?"

August 13, 2007, "Videoconferencing: You Need An Enterprise Strategy"

July 27, 2007, "Information Workplace Trends 2007"

June 26, 2007, "For Enterprise Collaboration, Focus On Information Workplace Platforms, Not ECM Specialists"

June 20, 2007, "Information Should Be Front And Center In Information Workplace Strategies"

June 8, 2007, Teleconference: "How To Determine If Unified Communications Is Right For Your Business"

April 12, 2007, "How To Create A Knockout Collaboration Strategy Document"

February 2, 2007, "Unified Communications Merges With IP Telephony In 2007"

November 9, 2006, "Unified Communications: What You Need To Know"

June 9, 2006, "Enterprise Unified Messaging Plans For 2006"

March 9, 2006, "Sarbanes-Oxley Compliance 2006: Taking Internal Controls To The Next Level"

February 28, 2006, "How To Justify IP Communications Costs"

January 25, 2006, "Unified Messaging Is On The Rebound"

June 1, 2005, "The Information Workplace Will Redefine The World Of Work — At Last!"

April 27, 2005, "Integrated Communications: A Business Necessity"

### Online Resources

More information about unified communications is available at [www.microsoft.com/uc](http://www.microsoft.com/uc).

## Appendix E: Endnotes

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<sup>1</sup> April 27, 2005, "Integrated Communications: A Business Necessity" report.

<sup>2</sup> April 27, 2005, "Integrated Communications: A Business Necessity" report.

<sup>3</sup> June 1, 2005, "The Information Workplace Will Redefine The World Of Work — At Last!" report.

<sup>4</sup> April 27, 2005, "Integrated Communications: A Business Necessity" report.