

A Forrester Total Economic Impact™ Study Prepared For Microsoft

# The Total Economic Impact Of Microsoft Lync Server 2010

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**FORRESTER**

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## Executive Summary

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Microsoft Lync 2010 delivers new capabilities and features that improve and expand unified communications capability for businesses that are eager to change the way they communicate and collaborate -- even the way their employees work. Enabling rapid access to experts, peers, and decision makers via the most optimal communications method allows business to accelerate business process completion by significantly reducing human latency. Delivering Unified Communications (UC) and collaboration capabilities in a software-based approach enables IT managers to rapidly upgrade existing Microsoft Office Communications Server (OCS) environments, or replace non-Microsoft infrastructure, and offer communications and collaboration capabilities to their users within familiar Microsoft environments like Office, SharePoint, and Exchange. Lync 2010 delivers benefits for both IT professionals and information workers. Benefits for the IT organization include reducing the cost and complexity of UC platform implementation and management. Businesses will derive greater benefits as the Lync solution is brought into more general use throughout an organization -- allowing more interaction with the right people -- and doing so within a single familiar Microsoft application client environment with which knowledge workers are already familiar and comfortable -- accelerating adoption and improving satisfaction. Many companies are upgrading from OCS 2007, taking advantage of the ease of upgrade and configuration when the latest versions of Microsoft Lync, SharePoint and Exchange are interconnected. This single vendor solution can reduce the complexity, uncertainty, and cost of IT and telephony operations and management, while supporting new advances in employee productivity leading to greater business value.

To understand the financial impact of investing in Lync Server 2010, Forrester conducted in-depth interviews with 12 Microsoft customers that have started using the product and compiled their results and forward-looking expectations into a composite case study of an organization with 5,000 information workers.

### **Lync 2010 Brings Enterprise Voice, Better Collaboration Functionality, And Improved System Stability**

The focus of this study was organizations that have already implemented Microsoft UC products and are now upgrading to Lync Server 2010, typically from the OCS and Live Meeting dual-client environment. These customers expect large benefits from the integration of these products for end users and for IT administrators. In particular, we found that a composite organization, based on the companies we interviewed collectively, could achieve benefits over and above the value accruing from its existing UC capabilities. One of the IT leaders interviewed for this study, the director of the workplace architecture team for a global electronics manufacturer, appraised Lync Server 2010, in terms echoed by many of the interviewees, by telling us, "Lync is the next level of integration [and interoperability] with Microsoft applications and back-end apps and SharePoint apps. . . . Lync does better than previous versions."

Forrester's one-on-one interviews with 12 existing customers and subsequent financial analysis found that a composite organization based on these customer companies we interviewed can expect to experience the risk-adjusted ROI, costs, and benefits shown in Table 1. See Appendix A for a description of the composite organization.

**Table 1**

Composite Organization Three-Year Risk-Adjusted ROI

ROI	Payback period	Total benefits (PV)	Total costs (PV)	Net present value
337%	12 months	\$12,911,605	(\$2,954,797)	\$9,956,808

Source: Forrester Research, Inc.

- **Benefits.** The composite company can be expected to experience the following benefits that represent those described to Forrester by the interviewed companies:
  - **Replacing private branch exchange (PBX) telephone systems**, valued at nearly \$500,000 over three years.
  - **Direct cost savings from Web- and teleconferencing**, amounting to \$1 million over three years.
  - **Reduced IT and telephony labor cost**, estimated at nearly \$1 million.
  - **Fewer calls to the help desk**, valued at a labor cost saving of more than \$190,000.
  - **Increased user productivity**, conservatively assessed at more than \$12 million over three years.
  - **Modest travel cost savings (and carbon footprint improvement)**, over and above the travel cost savings already gained from earlier UC investments, of \$3.8 million.
- **Costs.** Forrester assumes that the composite organization will incur the following costs:
  - **Software licenses and software assurance costs:** \$1.2 million over three years.
  - **Server hardware:** less than \$60,000.
  - **Voice terminal equipment:** approximately \$364,000.
  - **Internal labor for pilot and testing:** \$24,000.
  - **Internal training labor opportunity cost:** \$1.3 million.

### Factors Affecting Benefits And Costs

Table 1 illustrates the risk-adjusted financial results that can be expected to be achieved by the composite organization. The risk-adjusted values take into account any potential uncertainty or variance that exists in estimating the costs and benefits, which produces more conservative estimates. The following factors may affect the financial results that an organization may experience:

- The timing and extent of the rollout of Lync Server 2010.

- The scale of the benefits previously generated by earlier investments in the Microsoft UC products.
- Users' willingness and ability to adopt tools in the performance of their daily responsibilities.
- The roles and culture of users — and their geographic proximity, i.e., the faster the required speed of business, the more collaborative the standard processes and/or the more distributed the work teams, the higher the potential benefits.
- Network configurations to optimize savings, i.e., session initiation protocol (SIP) trunking via multiprotocol label switching (MPLS) networks.
- The utilization and expertise developed from previous UC investments.

## Disclosures

The reader should be aware of the following:

- The study is commissioned by Microsoft and delivered by the Forrester Consulting group.
- Forrester makes no assumptions as to the potential return on investment that other organizations will receive. Forrester strongly advises that readers should use their own estimates within the framework provided in the report to determine the appropriateness of an investment in Microsoft Lync 2010.
- Microsoft reviewed and provided feedback to Forrester, but Forrester maintains editorial control over the study and its findings and does not accept changes to the study that contradict Forrester's findings or obscure the meaning of the study.
- The customers for the interviews were provided by Microsoft.

## Unified Communications Prologue

The Microsoft customers that participated in this Forrester Total Economic Impact™ (TEI) case study are in the process of upgrading to Lync Server 2010 from their previous unified communications environments for instant messaging (IM), presence, Live Meeting for Web conferencing, and some previous integration of voice over IP (VoIP) telephony. Based on previous Forrester research and case study projects (see the 2007 Forrester case study, “The Total Economic Impact Of Microsoft Unified Communications Products And Services”), we describe below the study participants’ UC “before” state.

### *Presence Information*

Presence information provides user status information (e.g., online, away, busy, in a meeting/call, do not disturb). People publish their availability so others know how best to reach them. Using Office Communications Server’s integration with Microsoft Exchange calendaring and, in some cases, the PBX or IP telephone system, additional state information can also be automatically published — for example, “in a meeting,” “on the phone,” “out of the office,” or “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, early adopters of this technology could click and call another from the desktop. With the upgrade to Lync Server 2010, more organizations will discover and activate click-to-communicate capability.

### *Instant Messaging*

IM was introduced to the enterprise to provide the capability to send and receive text messages in real time over the corporate network. Enterprise IM maintained this capability within and even beyond the corporate network, often replacing email chains. Depending on the context and need, parties to an IM conversation could complete their communication with IM, escalate the conversation to a phone call, or launch a collaborative session with Live Meeting. OCS 2007 made 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. As UC capabilities proliferate, federation is becoming increasingly common and expected, encompassing voice, video, conferencing and desktop sharing between other companies using Lync, and connecting with public IM systems like Windows Live Messenger.

### *Web And Videoconferencing*

Ad hoc Web and videoconferencing made some improvements in efficiency in real-time decision-making by providing links to presence management and point-and-click conference launches. The ability to easily share desktop content in real time, and optionally to add videoconferencing, reduced travel costs by replacing business travel for online meetings. Companies could use Microsoft Live Meeting to hold ad hoc workgroup sessions with colleagues in different regions, countries, and time zones. They could also use Live Meeting to extend their organizations’ services to customers, partners, and suppliers as the cost of video hardware dropped to a point where PC-to-PC video could be deployed for ad hoc situations. More complex devices like Microsoft RoundTable could be used for more complex and critical contexts. Video capabilities had been implemented by few users within the UC adopter companies; although, adoption was hampered by multiple client complexities, including interoperability concerns with other video and Web conferencing solutions, bandwidth management, security concerns, and user desire/ability to use video solutions. Lync

2010 reduces or eliminates these complexities by making the “share desktop” feature available in a single unified client, spurring greater, faster user adoption.

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

VoIP made it possible to communicate via telephone over an IP network using SIP protocol instead of over traditional time-division multiplexing (TDM) voice networks via PBX telephony infrastructure. Voice communications could more easily 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. Further, VoIP held out the promise of significantly reducing the cost of telephone communications. Companies interviewed for earlier TEI studies 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. Today, the voice functionality of Lync Server 2010 is being embraced more aggressively by Lync Server 2010 adopters, due to the rich set of enterprise capabilities that are now available.

#### *One-Click Communication*

Early UC adopter companies looked to the prospect of having all of the means of contacting individuals immediately available using only their name. This capability rests on 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 was expected to become faster, and determining his/her availability and communicating via a preferred, context-dependent medium would be smoothed when presence became integrated into Microsoft Office applications. Also, organizations would integrate presence into their own line-of-business applications more frequently; users can “click to communicate” from within the applications. Lync Server 2010 now makes one-click communication more robust and easier to use than the previous generation of Communications Server.

#### *Mobility*

For the past several years, a minority of users carried mobile devices that could be integrated into the UC platform. For some organizations, mobility was an important part of their UC goals, while for others, it is an adjunct set of capabilities for select users. Today, more enterprises see mobility as a key part of their communications road map. Although mobile email has been around for years, today, more mobile devices can run the mobile client for Lync 2010, thus integrating the smartphone device with the individual’s presence, IM, and email. In a recent Forrester survey, more than half of telecom and network buyers (based on 444 North American and European enterprise and SMB telecom and networks decision-makers responsible for unified communications at firms with 20 or more employees) say that getting business telephony features on mobile devices is an important part of their unified communications solution.<sup>1</sup>

Reflecting back on his company’s UC journey, one group communications and collaboration manager told us: “Suddenly [OCS] was very popular and a real tool for worldwide communication. It reduced costs worldwide, but cost is not the [main] driver. It’s about efficiency and business opportunities.” The Microsoft Lync 2010 Rapid Deployment Program (RDP) customers interviewed for this study have all embarked on the subsequent phases of their UC strategies by making the investment in Lync Server 2010 in order to achieve the next level of cost savings, user and IT productivity, and business value.

## TEI Framework And Methodology

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### *Introduction*

From the information provided in the case study interviews, Forrester has constructed a TEI framework for those organizations considering implementing Microsoft Lync Server 2010. The objective of the framework is to identify the cost, benefit, flexibility, and risk factors that affect the investment decision.

### *Approach And Methodology*

Forrester took a multistep approach to evaluate the impact that Microsoft Lync 2010 can have on an organization. Specifically, we:

- Interviewed Microsoft product marketing and management personnel and Forrester analysts to gather data relative to Lync Server 2010 and the marketplace for unified communications.
- Interviewed 12 organizations currently using Microsoft Lync Server 2010 to obtain data with respect to costs, benefits, and risks. These organizations are all piloting the product or have begun early stages of deployment.
- Designed a composite organization based on characteristics of the interviewed organizations (see Appendix A).
- Constructed a financial model representative of the interviews using the TEI methodology. The financial model is populated with the cost and benefit data obtained from the interviews as applied to the composite organization.

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**Figure 1**

TEI Approach



Source: Forrester Research, Inc.

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Forrester employed four fundamental elements of TEI in modeling Microsoft Lync Server 2010's service:

1. Costs.
2. Benefits to the entire organization.
3. Flexibility.
4. Risk.

Given the increasing sophistication that enterprises have regarding ROI analyses related to IT investments, Forrester's TEI methodology serves the purpose of providing a complete picture of the total economic impact of purchase decisions. Please see Appendix B for additional information on the TEI methodology.

## Analysis

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### Interview Highlights

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

1. Multinational pharmaceutical company.
2. US telecommunications company with nearly 50 million customers.
3. Electronics manufacturing and design company with 14 sales and engineering support offices around the world, including: Brazil, China, Estonia, France, Germany, India, Japan, Mexico, Spain, Sweden, and the US.
4. Multinational security services firm delivering solutions for secure storage and site protection.
5. Leading provider of enterprise content translation and localization services employing more than 4,000 staff in 50 offices in 26 countries.
6. Leading reseller of computer hardware, software, and supplies and a top reseller of Microsoft products and services.
7. Major energy company, based in Europe, operating oil and gas, electricity, petrochemicals, and oilfield services businesses in more than 70 countries with a staff of more than 70,000 employees.
8. National telecommunications provider in Europe, providing a host of voice and data services, with more than 30,000 employees.
9. Multinational electronics manufacturing services (EMS) provider of start-to-finish manufacturing and supply chain solutions in the various industries with more than 2,000 employees.
10. Europe-based engineering conglomerate working in industry, energy, and healthcare sectors, with several hundred thousand employees.
11. Tier one telecommunications carrier providing computer networking services worldwide, with 5,000 knowledge workers using unified communications capabilities.
12. US investment management firm providing retail brokerage and investment banking services to individuals and institutions, with 3,600 Lync Server 2010 users.

These 12 customer interviews uncovered a number of salient insights:

- Microsoft customers and partners interviewed for this study are in early stages of implementing Lync Server 2010; yet, nearly all of the companies participating in this study have extensive experience and investments in unified communications.
- All of the companies are upgrading their Communications Server environments from earlier versions of Microsoft Communications Server product(s) to Lync Server 2010.
- Key drivers behind the upgrade investment decisions most often cited include:
  - To obtain the value inherent in the Lync 2010 *single integrated client*. Technology decision-makers told us that the new client is easier to deploy, use, and maintain.
  - To exploit the improvements in voice capability, audio quality, and stability in Lync Server 2010; it offers the voice platform strength required to roll out a telephone system to replace PBXs, extend enterprise voice capability to overseas offices, add smart devices, and to extend Lync functionality on mobile devices in the near future.
  - To provide greater support for increasingly mobile workers, with less reliance on VPN, and building a platform for value from smart devices.
  - To unlock even more user and IT productivity and cost savings compared to their existing OCS environments, enabling a greater percentage of their employees to use unified communications, and capitalizing on search and social features, location services, and improvements in collaboration capabilities, mobility, and federation.
  - To gain advantage from what customers called the next level of feature interoperability, e.g., using click-to-communicate from MS Office applications. Customers cited “better together” scenarios in the 2010 series of Microsoft products, which is expected to provide a positive return in speeding up processes and reduce communication friction and human-factor delays. Increased use of conferencing and whiteboarding is envisaged, in connection with MS Office applications, integrated voice functionality, and unified messaging.
  - To continue to reduce costs by using the Internet to communicate and collaborate instead of the public switched telephone network (PSTN).
  - To achieve better collaboration with partners and customers by expanding federation and to exploit federation by taking advantage of audio and video communication across company borders *in addition to* federated IM and presence.
  - To develop initial projects for integration with the organization’s current business processes and line-of-business applications using the product’s open APIs.
  - From earlier investments in Communications Server and Microsoft Unified Communications products, these enterprises have *already* seen ROI from:

- Travel cost savings.
- Cost reductions from some hosted or on-premise pay-per-minute-per-user teleconferencing services, resulting in significant direct cost savings and vendor consolidation benefits.
- User and IT productivity increases.
- Reduced international/long-distance telephone charges.

### *Composite Organization*

Based on the interviews with these early adopter Lync Server 2010 customers, Forrester constructed a TEI framework, a composite company, and an associated ROI analysis that illustrates the areas affected financially. The composite organization that Forrester synthesized from these results is described by the following characteristics:

- 5,000 information workers in 20 locations in five countries; \$900 million in revenue.
- The company has been investing in Microsoft unified communications products since 2006.
- OCS 2007 R2 was deployed to the majority of users in 2009.
- The company is in the process of deploying Windows 7, Exchange 2010, SharePoint 2010, and Office 2010 across the enterprise. Operating systems in use are principally Windows XP and some Vista, with a growing contingent of Windows 7 machines.

Like the organizations we interviewed, the reasons for the composite company's investment in Lync Server 2010 are largely oriented toward the value of the single client and improved voice capabilities that now make a switch from PBX telephony systems to integrated voice capabilities easier, cheaper, and more reliable. Additional investment drivers mirror the actual study customers' rationale — even stronger collaboration, improved mobile and remote user functionality and support, and high expectations for API-based business process integration.

### *Framework Assumptions*

The discount rate used in the PV and NPV calculations is 10%, and the time horizon used for the financial modeling is three years. Organizations typically use discount rates between 8% and 16% based on their current environment. Readers are urged to consult with their respective company's finance department to determine the most appropriate discount rate to use within their own organizations.

## **Costs**

The cost assumptions associated with the deployment and management of Lync Server 2010 for the composite company are based on aggregated findings from the customers in the TEI study and the other customers in the Microsoft Lync Server 2010 Rapid Deployment Program (RDP). 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, and technical and business needs.

There are six main cost categories for the Lync Server 2010 UC solution. These include:

1. Server software license costs.
2. User software license costs.
3. Hardware costs (for servers and user devices).
4. Professional services from system integrators to design and deploy the system.
5. Internal IT administration costs for ongoing management and support.
6. End user training costs.

#### *Client Software*

The composite company has an existing Microsoft Enterprise Agreement, which includes Microsoft Office Professional Plus 2010. Office Professional Plus includes client licenses of the Microsoft Lync 2010 client application, Microsoft Windows Desktop Licenses, and Windows Server Client Access Licenses (CAL). Additional software license and maintenance costs that are required for the Lync Server 2010 deployment include the following:

#### *Server Software Licenses*

The composite organization will require Windows Servers, Lync Servers, and Exchange Servers at a cost of \$31,000, plus Software Assurance costing \$6,400 in Years 1 through 3.

- Windows Server Enterprise (nine) for all servers.
- Lync Server Enterprise Edition (three) for front-end and edge servers.
- Exchange 2010 Standard Server Editions (two).
- SQL Server Standard Edition/CAL license (two) for back-end servers (user data, monitoring, archiving tabs).

#### *User Software Licenses*

The requisite user software includes CALs for Lync Server and Exchange for 5,000 users amounting to \$646,695 plus \$163,000 annually for software assurance:

- Lync Server Standard CAL.
- Lync Server Enterprise.
- Lync Server Plus CAL (including enterprise voice features).
- Exchange Enterprise CAL.

### *Systems Management Software*

At no additional license cost, the company will deploy the following system tools and management software:

- Lync Server Systems Center Operations Manager management pack.
- Lync Server built-in reports.
- Lync Server PowerShell and other interfaces.

### *Hardware*

- **Server hardware.** Additional server hardware is acquired at a total cost of \$56,000 in the initial deployment phase. This includes standard servers (seven), database servers (two), standard PSTN gateways PRI card for PBX integration (two), and Survivable Branch Appliance (SBA) (two). Annual hardware maintenance fee is \$950.
- **Additional hardware.** IP-enabled phones were purchased for all 5,000 users at a cost of \$364,000. Based on an assessment of the user needs and preferences, the company will deploy a mix of middle-grade IP-enabled phones (for 10% of users), lower-end desktop IP devices (10% of users), and standalone PC soft phone with USB headset for 4,000 users. These costs sum to \$364,000 for desktop sets costing less than \$200 and headsets for less than \$50.

### *Professional Services*

The composite organization requires the assistance of professional services from a third-party Microsoft partner firm for installation costing \$90,000.

### *Internal Labor For Pilot, Testing*

Like the companies interviewed for this study, the composite enterprise will require time from internal IT professionals for the upgrade to Lync Server 2010. Two staff (or the equivalent of 2 FTEs) will be engaged in the planning, setup, testing, and coordination with the external consultants. Based on RDP customer feedback, Forrester's assumption is for 160 hours for each IT staff, at a fully loaded hourly compensation rate of \$75.00, for a total of \$24,000 for this internal effort.

### *Training*

Training for the majority of users in the organization will be delivered via online tutorial and some on-site informal lunch-and-learn type events. This amount is calculated to be \$1.3 million, which is the average loaded compensation rate of \$65.00 times 4 hours for 5,000 knowledge workers. Note that training requirements are expected to be lower than with earlier UC deployments. "If we took away their phones and other communication tools, especially the Millennial, they would still figure out a way to communicate using Lync," explained a manager of network engineering for a telecom company. He further explained that the capabilities are more in sync with tools that users employ outside of work and that voice and now email are less important than they used to be, due to the emergence of social tools. "Kids will find another way to communicate. People start with IM then go to voice, then follow up with email. Further, this is an opportunity cost category and not an actual expenditure."

### Total Costs

Total costs for this implementation of Lync Server 2010 are shown in the table below.

**Table 2**

Total Costs — Non-Risk Adjusted

Costs	Initial	Year 1	Year 2	Year 3	Total
Software licenses and software assurance	\$677,695	\$169,424	\$169,424	\$169,424	\$1,185,967
Hardware and maintenance	56,000	945	945	945	58,835
Voice terminal equipment	364,000				364,000
Pilot and testing: internal labor	24,000				24,000
Implementation costs: third-party services provided	90,000				90,000
Training cost — internal labor	1,300,000				1,300,000
<b>Total</b>	<b>\$2,511,695</b>	<b>\$170,369</b>	<b>\$170,369</b>	<b>\$170,369</b>	<b>\$3,022,802</b>

Source: Forrester Research, Inc.

### Benefits

*Lync is the next level of integration with Microsoft applications and back-end apps and SharePoint apps. . . . This is a cultural change not just technology. Getting the right people in attendance, doing rework in real time, cutting time to project completion. It used to take three meeting[s] to get a decision; now we are down to one. The easy stuff is done in email, and the hard stuff is done in meetings, and all the right people can now be at the meeting. We're able to truly collaborate during the meeting, actually doing the work in the meeting because the tools are integrated. It's business at the speed of thought. Doing the work at the time it's needed, bringing in people in ad hoc. It's so much more effective and motivating.* (Director, collaboration technology, global engineering conglomerate)

In interviews with Microsoft customers, Forrester identified the following key benefits of upgrading to Microsoft Lync Server 2010: 1) replacing PBX telephone hardware (and its associated maintenance) with enterprise voice software; 2) cost reductions in teleconferencing services; 3) cost reductions in Web conferencing via third-party providers; 4) IT and telephone engineering workload reductions; 5) help desk call volume reductions; and 6) continuing enhancement of user productivity by communicating more efficiently and faster.

#### Replacing Telephone Hardware With Software

"Lync Server 2010 was a way to: 1) deliver better collaboration to the business, and 2) mitigate the risk of aging phone systems, over 10 years old, and put Lync in front of the phone system. We can now replace the phone system in a

building where there's a failure. So now we have equipment in five of 10 US and Mexico sites," noted one Lync customer with a view shared by other customers in the study. Like this customer, others interviewed for this study reported to Forrester that they are in the process of replacing or planning to replace PBX hardware with the voice capabilities in Lync Server 2010. Companies that are not planning for immediate PBX replacement will provide voice functionality on users' PCs and thus reduce reliance on the telephone. This is a way to "seed" Lync's voice capability and gauge adoption before committing to PBX removal. "We want to get out from under obsolete PBX systems," noted one interviewee. "With different voice systems and support (or lack of it) all over the map, we face lots of risk from those 10- and 15-year old systems. Lync brings us under one umbrella and up-to-date technology. We will save on labor costs and the hassle factor of 10 PBXs."

Replacing telephone hardware and dedicated PRI lines was possible with earlier versions of Communications Server but with Lync Server 2010, these initiatives are accelerating. Another interviewee articulated a trend that was commonly expressed during the study: "The stability and troubleshooting capabilities [of Lync Server 2010] mean we will be able to migrate more of our offices off PBX systems and 100% onto Lync. We still have about 40 PBXs [out of about 100 originally] that we can eliminate. We have been going slow, moving the offices off [PBX] if their PBX stopped working or if we relocated the office. But now we can move faster." This theme was heard throughout the study interviews, and one company made the connection between underutilized telephony systems and potential changes in real estate requirements:

*We started replacing PBXs in 2006, and we had 490 PBXs scattered around the US. That model did not work for us anymore in terms of the way our users are working. We've become very mobile. The people in our industry are very mobile. They work from home, in coffee shops, in meeting rooms. So you end up with this phone that's sitting in a cubicle costing a lot of money for a company, and it is underutilized. In some of our studies with our real estate partners, [we see office space] underutilized by 50% to 60%. So economic impact is the machine, recurring monthly PRI costs, and the physical footprint. . . . Most knowledge workers are not there half the time. They are in training, with customers, in team meetings, at home, on vacation. . . . They are doing everything except working in a cubicle. That started the process in 2006. We wanted to get centralized. We wanted to go from a decentralized TDM PBX shop to what we thought was just a simple VoIP centralized shop. We looked at three different business cases, all requiring rip and replace of TDM with a VoIP handset. Those [scenarios] did not make sense. The business case was \$25 million for a rip and replace. ROI was five years. Most of that was carrier charges, move add change, and upgrades. How do we do more soft clients and handsets? So we evolved from IM to LCS to OCS to Lync. This is all about how do we do more with less and how we drive cost out of the business.*

In Table 3 below, Forrester presents the cost savings calculations for the composite company, based on numbers shared by study participants. The enterprise will take a total of 10 PBX systems out of service over the three-year period, thus saving on system upgrades, one PRI circuit per system, and a conservative assumptions for labor cost savings related to MAC (move/add/change) maintenance work. "We want to get out of the move/add/change business," noted a director of infrastructure, who reported a 27% headcount reduction on telephony engineers since his company began implementing Communication Server in 2007. For the composite company, these cost savings sum to nearly half a million dollars by the end of the three years, as shown below.

**Table 3**

Cost Savings From PBXs Eliminated Or Avoided

Ref	Metric	Calculation	Year 1	Year 2	Year 3	Total
K1	Number of PBXs eliminated (cumulative)		4	8	10	
K2	Annual license upgrades avoided	\$5,000 per PBX	\$5,000			
K3	PRI circuits eliminated	\$800 per month	\$9,600			
K4	Labor avoided for move/add/change	15 per month at 30 min*\$75/hour	\$6,750			
Kt	Direct cost avoidance — PBXs eliminated or avoided	$K1 * K2 * K3 * K4$	\$85,400	\$170,800	\$213,500	\$469,700

Source: Forrester Research, Inc.

“Generally, Lync provides savings on voice and video,” noted one IT leader. “The cost is zero when we have Lync in place. We already reduced the use of other voice and videoconferencing solutions. That’s a big advantage.” And the head of the workplace architecture team for a global electronics manufacturer summarized much of the *financial* value of Lync Server 2010 to his company in these terms:

*We’ve reached a new paradigm with enterprise voice deployments. With the new Lync 2010 technology, we no longer have to think about the need for classic PBX equipment in new facilities. This new approach to voice communications improves the planning process while eliminating PBX equipment, reducing floor space, and reducing environmental costs like HVAC, power, and maintenance. Overall, the capital and incremental operating cost models are much more favorable to the business.*

#### Cost Savings From Reductions In Teleconferencing Services

The early adopter organizations in this study described the voice functionality of Lync Server 2010 as robust enough to continue and indeed to accelerate the substitution of pay-per-minute teleconferencing that started with earlier versions of Communications Server. And customer organizations can use the reporting server to measure the ROI contribution from savings on conferencing minutes over time; they can see how many minutes and the resultant savings compared to their current vendor-provided conference bridges. The table below shows a conservatively calculated \$324,000 in savings over three years.

**Table 4**

## Cost Savings From Teleconferencing Services

Ref.	Metric	Calculation	Year 1	Year 2	Year 3	Total
J1	Cost per minute		\$0.12			
J2	Average annual use per person (min)	4 hours (240 min)	240			
J3	Number of users		5,000			
J4	Adoption/rollout percentage		50%	75%	100%	
Jt	Direct cost avoidance — teleconferencing	$J1 * J2 * J3 * J4$	\$72,000	\$108,000	\$144,000	\$324,000

Source: Forrester Research, Inc.

*Savings On Web Conferencing*

In a trend that began with earlier versions of Communications Server, users will consume fewer minutes of third-party Web conferencing in favor of integrated, simplified multimodal communications. Lync is easier to use, so users will rely on it more. What used to be a conference call can remain a voice-only gathering, or participants can elevate to much more immersive meetings, with video, shared Office documents, and whiteboarding within a single interface. One benefit of this immersive experience, the hard cost savings, is lower costs of third-party Web conferencing. Table 5 presents the calculations that sum to \$675,000 by the end of Year 3 for the composite company.

**Table 5**

## Cost Savings From Web Conferencing Services

Ref.	Metric	Calculation	Per period	Year 2	Year 3	Total
I1	Annual hosting charges		\$300,000			
I2	Replacement/rollout schedule		50%	75%	100%	
It	Direct cost avoidance — Web conferencing	$I1 * I2$	\$150,000	\$225,000	\$300,000	\$675,000

Source: Forrester Research, Inc.

*Savings On IT And Telephony Labor*

“Especially when you start to exploit the voice capabilities in Lync, compared to [other VoIP vendors] and together with PowerShell scripting and the other tools, Lync will free up tech staff over time to do more and higher value-add

work — two to three FTEs for day-to-day administration for us,” according to the senior VP of messaging and collaboration for a 3,600-user financial services firm. Users of associated tools like System Center Operations Manager (SCOM) and its monitoring and alerting capabilities will see even more IT resources freed. “SCOM is huge for us,” noted one interviewee. “It’s a very good tool for making dashboards for our CIO, and we also get a deep dive into servers or services. SLAs are met. It helps us keep our Exchange environment very robust, and we can customize it to our enterprise. That’s worth a few FTEs. You can now take those two guys who would just be monitoring systems. . . . They can now enhance feature sets and be on hand [for more value-add projects].”

Features of the new Lync Server 2010 environment that customers cited as contributing to IT labor savings and higher-performing IT teams include:

- **Call admission control (CAC).** This feature aids WAN bandwidth management, routing voice over WAN and video over Internet. In previous versions, OCS shipped with limited CAC capability, and as a result, businesses incurred significantly higher help desk volumes during times when high network utilization could interrupt or impede voice communications. Call access control makes it obvious to IT pros and system monitors that a call is not being handled, thus reducing IT involvement and help desk calls.
- **PowerShell scripting.** Microsoft’s task automation framework for deployment and management, including a command-line shell and associated scripting language.
- **Lync’s Web-based control panel.** A simple Web-based user interface for performing many administration and management tasks, enabling organizations to manage their systems from anywhere on the corporate network without specialized management software.
- **SBA.** As organizations decommission PBXs at branch offices, they can buy gateways and SBAs from multiple vendors instead of being captive to a PBX supplier. More importantly, an SBA can bring added assurance of branch office voice connections, keeping the office up and running and able to withstand outages, and save telephony engineers’ time.

Overall, IT respondents in this study attested to the understanding that centralized planning and deployment in Lync Server 2010 provide tools that simplify the deployment and management of the platform compared to earlier versions of OCS. The table below calculates the value of four IT staff freed for reassignment over the three-year period as a result of the capabilities described above, as well as from efficiencies created by the single Lync client replacing the previous dual-client OCS architecture.

**Table 6**

## Cost Savings — IT And Telephony Labor

Ref.	Metric	Calculation	Year 1	Year 2	Year 3	Total
L1	Number of FTEs to be reassigned		4			
L2	Fully loaded annual compensation		\$135,000			
L3	Rollout/adoption percentage		25%	50%	100%	
Lt	Internal labor cost avoidance — IT and telephony	$L1 * L2 * L3$	\$135,000	\$270,000	\$540,000	\$945,000

Source: Forrester Research, Inc.

*Fewer Help Desk Calls*

The same ease of use and management simplification in Lync Server 2010, compared to the dual client (Live Meeting client and Office Communicator) that it replaces, are expected to bring lighter workload to the help desk. Early customer experience tells us that while installing and using the Live Meeting client in concert with Office Communicator functionality was tricky for many users (and IT staff), the new single-client advantages are already evident among the early adopters of Lync. Further, in-call diagnostics features of the Lync client indicate to users which end of a communication is experiencing difficulty, making a fix possible without help desk assistance. Forrester conservatively assumes that each of the 5,000 knowledge workers in the composite organization will avoid two calls for help annually. In the first year of deployment, however, a jump of 20% is assumed, given an unfamiliar client and users asking, “Where is my Live Meeting?” This benefit sums to nearly \$200,000 after the initial minor questions are addressed.

**Table 7****Cost Savings — Help Desk Call Reduction**

Ref.	Metric	Calculation	Year 1	Year 2	Year 3	Total
M1	Number of calls avoided	2 per knowledge worker	10,000			
M2	Hours per call	20 min per call	\$0.33			
M3	Hourly rate per help desk rep		\$45.00			
M4	Rollout/adoption percentage	Note: increase in Year 1	-20%	50%	100%	
Mt	Help desk call reduction	$M1 \times M2 \times M3 \times M4$	(\$29,700)	\$74,250	\$148,500	\$193,050

Source: Forrester Research, Inc.

*Increased User Productivity*

We asked the study participants to describe and estimate the incremental productivity benefits of Lync 2010 compared to their previous communications environment. As we noted, all of the companies in the study had made early forays into unified communications and were in the process of upgrading to Lync Server 2010. The productivity benefits described below are those that can be attributed to Lync 2010, over and above the productivity boosts gained from earlier UC deployments.

All of these customer organizations expect a positive return on their investment, if only in terms of productivity — speeding up processes, and positively affecting the human factors that are slowing down processes — like missed calls, voicemail or email, or if somebody is not available with no designate to step in. Having IM and presence in the enterprise has already helped in these areas. Lync 2010 and the unified Lync client make click-to-communicate and other advantages much easier to operationalize for more people in the organization. Customers cited a host of new functionality in Lync 2010 that will: a) increase the value of the communications platform, and b) increase user adoption and drive usage more broadly within the organization. Principal among these features are:

- **Rich contact card.** “This is huge for us,” noted one respondent. “People are already adding their photos; it’s like Facebook-type communication where you can see the person and know more about the person. Knowing whom you expect on the call, their skills, location, etc., gives you the confidence that you called the right person. Time saved might be 30 minutes per week. Nevertheless, having a happy worker with a smiling face is always better than a frustrated employee. Sometimes, the cost of calling is more than just the calling time; it’s not necessarily measured in minutes.”
- **Skill search.** Based on profiles stored in SharePoint, context data can include organizational/department information, current job responsibilities, mailing list membership, user-entered skills, etc. This is a tool for

finding an “expert” inside the enterprise. For a large, geographically dispersed, knowledge-intensive enterprise, the ability to search on skills can speed processes, reduce frustration, and promote ad hoc collaboration.

Respondents estimated this functionality, along with the rich contact card, could add 20 to 30 minutes per week in user productivity.

- **Activity feed.** The ability of employees to post details of their jobs and interests adds context and fun to the communications platform. While not yet seen as a major productivity enhancer, some study participants noted that this element and corporate microblogging are not just fun, but they can also bring together employees, who might not otherwise cross paths, for sharing job-related matters. “It’s a good feeling when you can socialize around the world, not just on your floor. It’s extending your environment,” explained one study participant.
- **Whiteboard.** Rich conferencing capabilities have been improved in Lync Server 2010 to the point where more users will engage in whiteboarding, enabling more pairs and teams that are not in the same room to have virtual “whiteboarding” sessions to draw and explain things to one another. Respondents estimate this is worth 20 to 30 minutes per week for many users. “That is a significant change in how people view the ‘phone system’ today,” explained the director of architecture and new technologies for a big pharma company. “We now escalate to whatever kind of meeting we want. That’s huge here. In terms of higher productivity, at this point, we don’t even have a concern. This was pushed from the CEO down. In the early days of OCS, he wanted all direct reports to have it. Now we all have it.”
- **Click to communicate.** This functionality enables users to make more effective communications choices whether email, voice, IM or conference, or scheduling, directly from Outlook or another Office application. “When you can see the subject coming across before answering a call, you can jump into conversation faster,” noted a study participant. “I never dial a phone anymore. In Outlook, I just right-click. For some of us, our only office phone is Lync.” As organizations roll out Office 2010 and SharePoint 2010, this in-context communication from Microsoft applications will expand and produce even greater fundamental collaboration advantages, which further support an organization’s ability to move away from third-party tools, such as Web conferencing and conference bridges. On the topic of interoperability between Lync, Office, and SharePoint, a respondent commented, “The integration of Lync to other Microsoft applications . . . we can get all that [functionality] with other tools, but if we stick with Microsoft suite, that is really giving you an easier way to work all day, and it will save money on third-party [license and hosting costs].”
- **Immersive meetings and application sharing.** Respondents report that the Lync 2010 single client has made meetings easier to start and richer, especially for users who were not expert in the previous dual-client environment. More meetings become a near face-to-face meeting. Users can join conferences, upload PowerPoint slides, and transfer files, all within a single interface. Users gain productivity by not having to deal with multiple client applications. The new unified conferencing experience is superior to Live Meeting, so broader adoption is expected. “It will not reduce travel *any further*,” noted the director of architecture and new technologies for a company that provides UC functionality to 24,000 users. “We still require two face meetings per year, but team members around the globe can start ad hoc meetings and share desktops within these applications. This absolutely increases productivity. Working together as a global team, Lync removes dead ends. One person can write a ‘big story’ but s/he cannot invent something that can be sold around the world. You need a global team to make sure the new product fits global needs. This is really increasing productivity.”

Respondents estimate these capabilities — whiteboarding, click to communicate and immersive meetings, and application sharing — are worth between 20 and 30 minutes per week in increased productivity for users on average.

There are a host of new and updated features in Lync Server 2010. One IT vice president with more than 10 years of experience in unified communications and the Microsoft product set summed it up as follows:

*Rich contact card is definitely going to be a big, big positive impact; people are already adding photos, so that's definitely a huge improvement. I think there is significant simplified usage in the new client, the fact that you have one client for everything. We kind of liked Live Meeting, but it was kind of challenging for new users. Now there is much more functionality directly in the client. You have this activity tracker where you can see what has been going on over the [past] few days. I think there is a wide variety of things that end users will like. One thing end users will like is much more simplified audio configuration setup, the ability to test their audio, instant feedback if there are issues, you can see who is causing issues.*

Yet the simple cost savings described above probably don't tell the whole story. "This is about top-line benefits, not just saving money," according to one IT leader in this study. "We get a lot of value beyond cost savings. Lync addresses saving time more than saving money. It's harder to create time, so it's more important than money. Lync allows you to take a new idea and bring it to reality in half the time." And when asked if the one-click-to-join feature will save time, one IT vice president responded: "Yes, and it can save my life, too. I have 15 telemeetings a week from which I do three or four from my car. The ability to find colleagues from my cell phone and join conference calls with one click from Communicator Mobile is really good. That can save me the hassle and 10 minutes per week searching for the dial-in."

Table 8 summarizes the productivity benefits, as described by the Lync adopters in this study, that the composite organization can gain as a result of the Lync Server 2010 implementation. This conservative calculation accrues to more than \$12 million over the three-year period, even when a discount factor of 50% is applied.

**Table 8**

Enhanced User Productivity

Ref.	Metric	Calculation	Year 1	Year 2	Year 3	Total
G1	Number of workers		5,000			
G2	Hourly rate per worker		\$48.00			
G3	Number of hours (saved) per week	70 min per week	1.17			
G4	Weeks		50			
G5	Percent captured		50%			
G6	Rollout of Lync		25%	50%	100%	
Gt	Incremental output per worker	$G1 \times G2 \times G3 \times G4 \times G5 \times G6$	\$1,700,000	\$3,500,000	\$7,000,000	\$12,250,000

Source: Forrester Research, Inc.

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**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, and lower for workers in knowledge-intensive roles.

#### *Travel Cost Savings Continue To Accrue*

Nearly every company interviewed by Forrester for this study cited travel cost reductions as one of the early and most significant benefits of their Microsoft UC investments. “We don’t fly from Stockholm to Paris for a 2-hour meeting anymore,” noted a manager of communications and collaboration. Web and videoconferencing, as well as other UC modalities, connect participants with “events” or meetings where they do not need to be physically present. 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 Lync Server 2010, Forrester assumes that the composite company *has already experienced significant cost savings* from earlier investment in UC capabilities. As one manager explained, his organization was running at about 10% of the amount of travel compared to several years ago, before the deployment of OCS 2007 R2. “Travel [cost reduction] is done for us,” he said. “UC reduced travel for those who were allowed to travel, but now, travel is not a ticket to attend. All the right people can attend [without traveling].” Nevertheless, Forrester includes a calculation of modest incremental travel reduction as more users adopt more of the UC capabilities. Table 9 shows how the composite company can eliminate an additional 2.5% of business trips per year in Year 1, increasing to 5% in Years 2 and 3 as the Lync 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 \$4 million over three years, as shown here.

**Table 9**

## Travel Cost Savings

Ref.	Metric	Calculation	Year 1	Year 2	Year 3	Total
Tt1	Number of knowledge workers		5,000			
Tt2	Percentage of employees who travel for internal meetings		50%			
Tt3	Average number of trips per year		8			
Tt4	Average cost per trip		\$1,500.00			
Tt5	Percentage of trips avoided via online meeting collaboration, videoconferencing, etc.		2.5%	5%	5%	
Ttt	Travel cost avoidance	$T1 \times T2 \times T3 \times T4 \times T5$	\$750,000	\$1,500,000	\$1,500,000	\$3,750,000

Source: Forrester Research, Inc.

Table 10 shows the metric calculation for the corresponding improvement in the company's carbon footprint, an important input for sustainability and corporate social responsibility reporting.<sup>2</sup>

**Table 10**

## Carbon Footprint Improvement

Ref.	Metric	Calculation	Year 1	Year 2	Year 3	Total
Cf1	Number of air travel trips avoided		500	1,000	1,000	
Cf2	Average distance (kilometers)		1,500			
Cf3	Passenger kilometers avoided	$Cf1 * Cf2$	750,000	1,500,000	1,500,000	
Cf4	CO2 emissions reduction (kg)	10 kg CO2 per passenger air km	0.18	0.18	0.18	
Cft	Carbon footprint improvement: Kg CO2	$Cf3 * Cf4$	135,000	270,000	270,000	675,000

Source: Forrester Research, Inc.

*Total Benefits*

One interviewee summed up the benefits to his company this way: “If the CFO asked us to explain the value of this investment, one way I respond is to say, ‘Five years from now, not having these kinds of communications could stop us from working *at all* and that’s why we invest now. The value is in the millions, billions, but can you see that on a bank account? It is really hard to measure it directly.’”

Table 11 summarizes the quantified benefits described above.

**Table 11**

Total Benefits — Non-Risk Adjusted

Benefits	Year 1	Year 2	Year 3	Total
Direct cost avoidance — PBXs eliminated or avoided	85,400	170,800	213,500	469,700
Direct cost avoidance — Web conferencing	150,000	225,000	300,000	675,000
Direct cost avoidance — teleconferencing	72,000	108,000	144,000	324,000
Internal labor cost avoidance — IT and telephony	135,000	270,000	540,000	945,000
Help desk call reduction	(29,700)	74,250	148,500	193,050
Improved worker productivity	1,700,000	3,500,000	7,000,000	12,250,000
Travel cost avoidance	750,000	1,500,000	1,500,000	3,750,000
<b>Total</b>	<b>\$2,912,700</b>	<b>\$5,848,050</b>	<b>\$9,846,000</b>	<b>\$18,606,750</b>

Source: Forrester Research, Inc.

## Flexibility

Flexibility, as defined by the TEI methodology, represents an investment in additional capacity or capability that could be turned into business benefit for some future additional investment. 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 Lync Server 2010 and later realize additional uses and business opportunities. By adding mobile phone support, for example, the customer derives even greater value from the original investment for only modest additional cost.

One customer, speaking of the current state and the future potential of the Lync investment product, indicated the flexibility options encompassing increased mobility value and expanded federation:

*I don't think there is a single feature that is a killer feature. Yet. The full capabilities that we have seen in mockups to be released can become the killing feature . . . if they get added to iPhone and BlackBerrys and Windows phones. And I think the Web client can also become such a killer feature because of how you communicate and work with people outside the organization with such a client. But with the things that are included today, it's such a significant incremental improvement; there's so many changes, so much new stuff that people cannot pinpoint just one simple area.*

These real options and several others have been described to Forrester by study participants who outlined possible new routes on their technology road maps and some likely directions and next steps for their organizations. Although data for calculating the value of these flexibility options was insufficient when this study was conducted, our interviews

identified several areas that will produce flexibility options, based on next-stage real options that have been described by study participants:

#### *Embedding Communications Into Line-Of-Business Applications*

One of the biggest advantages of having a software-based communications infrastructure is that businesses can embed communications capabilities into existing line-of-business applications and use communications and workflow capabilities to automate business processes, which saves money, saves time, and improves customer service. Lync Server 2010 provides an extensible communications platform that works with an organization's existing messaging and telephony infrastructure and can adapt to changing business needs.

One experienced observer noted, "This [collaboration and communications capability] is just the foundation today. We will drive the tools back into the business processes, like billing. The app dev guys will be key to this work. We are changing the way we communicate today, changing the way we collaborate, but we haven't seen the full reach and impact of what happens when we change the way our business tools work."

"We see [embedding Lync functionality] in our future, after we get the foundation work done," explained a manager of network engineering, expressing future value from the platform. "Lync is changing the way we communicate today, but it will change the way our business tools work in the future."

Integrating UC capabilities with enterprise applications offers options for transforming or simplifying 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 integrating Lync Server 2010 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, using Lync Server's standalone APIs.

For a few customer organizations, this is not "future speak," but it actually relates to projects that are underway or in production now. Speaking of the new and improved APIs for Lync Server 2010, a senior VP of Messaging and Collaboration told us of his company's kiosk for receiving serving visitors. Visitors enter their information using a keypad on the kiosk when they arrive at the company offices. A built-in camera allows the employee to see the visitor on video and authorize the kiosk to print out a visitor badge. The system is more reliable than a receptionist, for whom there is no more need. He explained that the code to create this system in Lync has been greatly simplified, so they need less time to develop new applications, thus freeing developers to create another Lync-based application to troubleshoot code via a mobile phone, handle the trouble ticket, make minor changes, or expose the app to the Internet. And another customer, with extensive UC experience, told us that his company is very good on internal collaboration but that one of their next objectives is to extend presence and collaboration capability externally, to customers, contractors, and mixed organization virtual teams.

#### *Wider Federation, Expanding Links Across Company Borders*

Federation is an area of high expected future value as more organizations invest in UC capabilities and business leaders agree to enhance connections, with partners, customers, and suppliers, through federation. IM with colleagues in other companies and showing one's presence information beyond the firewall have been possible for several years. New

powers of federation now allow enterprises to integrate UC capabilities within the firm's enterprise applications and make data, processes, and services available outside their own firewalls. For example, clients could view billing information on a secure extranet site *and* engage representatives from their account team using presence, collaborating on a shared application. Federation and UC-enabled business applications can break down technology silos and extend those applications to provide collaboration and knowledge assets to new collaborators, those who never imagined having access. "We expect that contact with customers and partners will be much better," explained a group Communications and Collaboration manager for a services company employing 5,000 workers around the world. "We can now write apps that interact with customers. We can even build a kind of virtual, decentralized contact center [deploying Automatic Call Distribution, also known as RGS, Response Group Service] and integrate business systems with it for use in ordering, selling, and delivery. Today, we are federated with Microsoft, a few other companies, and my kids, but there's a revolution going on here."

### *Enhanced Mobility*

For many information workers, the mobile phone is effectively their only phone or at least their only handset (if they use Lync voice capabilities from a laptop). Mobile client for Lync is the mobile client that works with Microsoft Lync Server 2010 and Microsoft Exchange Server to extend rich presence, audioconferencing, and access to multiple communication modes from a single mobile application, reducing the need to deploy and manage disparate technologies. Mobile information workers can view their colleagues' availability and communicate back accurate availability status when using their mobile devices. They can join conferences in a single click without having to dial long conference numbers and pass codes. A single telephone number can be used for desk phone, PC, and mobile phone. Outbound calls from mobile devices can use the same single identity and improve the ability to recognize caller by colleagues.

These capabilities are being used today, although typically in a test environment for a small number of users in the organization. The prospect for expanded use was expressed by case study participants, who told us things like: "We are looking at the mobility aspect and the possibility of using iPhones, Androids, BlackBerry, and Windows Mobile to get more connectivity for more users. Nobody wants to walk around with their laptop all the time."

The device-agnostic element is an important driver of mobility. One user told us: "We expect [that] more non-Windows devices out there like iPad, netbooks, etc., are being used for things like online conferencing. If we did not have [a broad choice of devices], it could be a problem. We will leverage that a lot."

### *More Synergy As Functionality Lines Overlap*

One study participant from a financial services firm spoke of the value of all of these future option areas in a melded sense:

*Mobility is value No. 1 [for us], and we are just starting to capitalize on it. We've had VPN for a chosen few, but these collaboration technologies will start to transform the work; the personal experience will change. We will extend applications from the desktop both internally and externally. How many of my clients are online? I have the chance to see that now with IM. Our trading floor uses federation, and we are part of Financial Services Instant Messaging Association (FIMA; [www.financialim.org](http://www.financialim.org)). Now we are trying to push Lync's video, voice, and apps . . . onto an airplane to up the game. That helps retention, too, when people are excited about coming to work.*

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 of the options described above exist in addition to risk-adjusted benefits described in this case study analysis; Forrester does not include option values in the ROI calculations.

## Risk

Forrester defines two types of risk associated with this analysis: implementation risk and impact risk. “Implementation risk” is the risk that a proposed investment in Lync Server 2010 may deviate from the original or expected requirements, resulting in higher costs than anticipated. “Impact risk” refers to the risk that the business or technology needs of the organization may not be met by the investment in Lync 2010, resulting in lower overall total benefits. The greater the uncertainty, the wider the potential range of outcomes for cost and benefit estimates.

Quantitatively capturing investment and impact risk by directly adjusting the financial estimates provides more meaningful and accurate estimates and a more rigorous projection of the ROI. In general, risks affect costs by raising the original estimates, and they affect benefits by reducing the original estimates. The risk-adjusted numbers should be taken as “realistic” expectations, as they represent the expected values considering risk.

The following implementation risks that affect costs are identified as part of this analysis:

- The level of effort and time for pilot and testing may exceed initial estimates.
- The time required for employees to learn the new functionality and user interface may be greater than first estimates.

The following impact risks that affect benefits are identified as part of the analysis:

- The timing and financial savings from taking PBX systems out of service in favor of Lync voice capabilities may not coincide with forecast timelines and cost-saving estimates.
- User adoption of Lync’s conferencing functionality over third-party conferencing may not meet forecasts.
- User adoption of voice connectivity may not supplant third-party teleconferencing services as anticipated.
- Help desk call loads may increase instead of decrease if implementation challenges create user obstacles to smooth migration.
- The expected boost to user productivity might not be as prompt or as comprehensive as anticipated.

Table 12 shows the values used to adjust for risk and uncertainty in the cost and benefit estimates. 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 the distribution of those points. Readers are urged to apply their own risk ranges based on their specific degree of confidence in the cost and benefit estimates.

**Table 12**

## Cost And Benefit Risk Adjustment Factors

Costs	Most			
	Low	likely	High	Mean
Software licenses and software assurance	100%	100%	100%	100%
Hardware and maintenance	100%	100%	100%	100%
Voice terminal equipment	100%	100%	100%	100%
Pilot and testing: internal labor	100%	100%	125%	108%
Implementation costs: third-party services provided	100%	100%	115%	105%
Training cost — internal labor	98%	100%	105%	101%
Benefits	Most			
	Low	likely	High	Mean
Direct cost avoidance — PBXs eliminated or avoided	50%	100%	100%	83%
Direct cost avoidance — Web conferencing	80%	100%	103%	94%
Direct cost avoidance — teleconferencing	80%	100%	103%	94%
Internal labor cost avoidance — IT and telephony	50%	100%	100%	83%
Help desk call reduction	80%	100%	103%	94%
Incremental output per worker	80%	100%	103%	83%

Source: Forrester Research, Inc.

## Financial Summary

The financial results calculated in the Costs and Benefits sections can be used to determine the return on investment, net present value, and payback period for the organization's investment in Lync Server 2010. Table 13 below shows the risk-adjusted ROI, NPV, and payback period values. These values are determined by applying the risk-adjustment values from Table 12 in the Risk section to the cost and benefits numbers in Tables 2 and 11. The financial analysis provided in this study illustrates how an organization can evaluate the value proposition of Microsoft's Lync Server 2010 product. Based on information collected from interviews with 12 Microsoft customers, Forrester calculated a three-year risk-adjusted ROI of 332% for the composite company. All final estimates are risk-adjusted to incorporate potential uncertainty in the calculation of costs and benefits.

**Table 13**

Cash Flow — Risk-Adjusted

Cash flow — Risk-adjusted estimates						
	Initial	Year 1	Year 2	Year 3	Total	Present value
Costs	(\$2,531,115)	(\$170,369)	(\$170,369)	(\$170,369)	(\$3,042,222)	(\$2,954,797)
Benefits		\$2,551,194	\$5,123,679	\$8,462,355	\$16,137,228	\$12,911,605
Net benefits	(\$2,531,115)	\$2,380,825	\$4,953,310	\$8,291,986	\$13,095,006	\$9,956,808
ROI	337%					
Payback period	12.4 months					

Source: Forrester Research, Inc.

Forrester's in-depth interviews with Microsoft Lync Server 2010 customers yielded important observations on the business value of the Lync 201 investment. Forrester found that organizations can realize benefits in the form of:

- Replacing PBX telephone systems with Lync Server 2010 software.
- Cost reductions for Web- and teleconferencing charges.
- IT and help desk labor cost savings.
- Enhanced individual and workgroup productivity.
- Travel cost savings.

Further, although not quantified for this case study, Forrester recommends that prospective Lync Server 2010 implementers examine potential future options for these categories as well:

- Embedding enhanced communications into line-of-business applications, changing the way these tools serve the enterprise.
- Extending unified communication beyond the enterprise, to partners, customers, and suppliers, through federation.
- Extending rich presence, audioconferencing, and access to multiple communication capabilities to mobile workers.

Forrester believes that Lync Server 2010 offers the promise of significant competitive advantage in making employee, customer, and supplier/partner relationships stronger for firms that adopt these collaboration technologies.

Based on these findings, companies looking to implement Lync Server 2010 can expect cost savings and productivity benefits. Using the TEI framework, many companies may find the potential for a compelling business case to make such an investment.

## Microsoft Lync Server 2010: Overview

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According to Microsoft, Lync Server 2010 delivers presence, instant messaging, conferencing, and enterprise voice capabilities through a single, easy-to-use interface that is consistent across PC, browser, and mobile device. Administrators benefit from a single, consistent management infrastructure, new capabilities to increase availability, stability, and interoperability with existing systems.

Capabilities of the product that deliver value to organizations include:

### *Unified Experience*

- Easy access via a single interface, to presence, instant messaging, voice, and audio, video, and Web conferencing.
- One set of contacts across Microsoft Lync 2010 and Office applications.
- Communication with context from within the applications used most, including Microsoft Outlook, Word, Excel, PowerPoint, and Microsoft SharePoint.
- Access to presence, instant messaging, and other capabilities for mobile workers via PCs, browsers, and mobile phones.

### *Connect And Collaborate*

- Find the right people, make connections, and communicate more effectively with new rich presence features, including pictures and location.
- Leverage internal expertise more effectively with Microsoft SharePoint-based skill search.

### *Conferencing*

- Collaborate more effectively with built-in desktop and application sharing, PowerPoint upload, and rich whiteboarding, including the ability to copy and paste images and other content.
- Schedule and join meetings with a single click in Microsoft Outlook or the meeting reminder.
- Place attendees in a virtual lobby for greater security and control over who can attend.

### *Enterprise Voice Features*

- The ability to connect and work with others from the office, from home, or on the road.
- A wide range of IP and USB devices that allow customers to cost-effectively meet the unique needs of different user groups.
- Full set of traditional calling features for users and management features for administrators.
- High availability using data center resiliency and survivable branch appliances.

- Managed bandwidth utilization and increased Quality of Experience with Call Admission Control, QoS markings, and an adaptive media stack that works well even on unmanaged networks like the Internet.
- North American regulatory requirements met with flexible Enhanced 9-1-1 capability.

#### *Deployment And Management Tools*

- A PowerShell-based foundation for administration consistent with Exchange Server, Active Directory, and other Microsoft server products.
- Management tasks consolidated in one location with dramatically improved navigation through the new Silverlight-based, scenario-driven unified graphical management tool.
- Improved security and administrative productivity with role-based access control (RBAC) with built-in and customer-defined roles.
- Support for server virtualization of most Lync Server roles.
- Real-time monitoring to notify administrators of any degradation in end-to-end communications, whether caused by network, hardware, software, or other factors.

#### *Extensibility*

- Embed Microsoft Lync UI elements into applications, building a custom client experience in .NET with open and documented APIs, and enhance contextual collaboration by launching applications right from Microsoft Lync.
- Platform support for sophisticated contact center and help desk scenarios enable access to all UC-enabled services from any phone, and state-of-the-art speech technology in 26 languages.
- Simplified deployment, operations, and interoperability with added features that improve provisioning, load balancing, failover, and draining.

## Appendix A: Composite Organization Description

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For this TEI study, Forrester has created a composite organization to illustrate the quantifiable costs and benefits of [implementing Lync Server 2010]. The composite organization that Forrester synthesized from these results is described by the following characteristics:

### Organization Size And Dimensions

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- 5,000 information workers in 20 locations in five countries; \$750 million in revenue.

### Environment Prior To Lync Investment

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- Ongoing investment in Microsoft unified communications products since 2006; Communication Server 2007 R2 deployed to the majority of users in 2008.
- In the process of deploying Windows 7, Exchange 2010, SharePoint 2010, and Office 2010 across the enterprise. Operating systems in use are principally Windows XP and, increasingly, Windows 7.

### Reasons For Investment In Lync

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- For the single integrated client, which is easier to deploy, use, and maintain and will unlock more productivity and cost savings value in the organization; gaining advantage from the next level of integration, e.g., using “click to communicate” from MS Office applications.
- To exploit the improvement in voice capability and audio quality/stability in Lync, test and roll out a telephone replacement system to replace PBXs, extend enterprise voice capability to overseas offices, add smart devices, and extend Lync functionality on iPhone and Android devices in time.
- Improved integration into the 2010 series of Microsoft products, which is expected to provide a positive return in speeding up processes by reducing communication friction and human factor delays. Increased use of conferencing and whiteboarding, in connection with MS Office applications and voice and unified messaging. Workers using familiar tools will adopt Lync features from inside Lync or Office applications.
- For business continuity and the possibility to implement high availability and SBA. Deploying Lync in a distributed or a virtualized architecture could offer survivability for the whole enterprise.
- To adopt the new technology quickly and build on the OCS investments the company has made since 2006/7 by capitalizing on search and social features, location services, and the advantages of the single client.
- Initial projects for integration with the organization’s current business processes and applications using standalone APIs.
- Greater support for increasingly mobile workers; less reliance on VPN, platform for value from smart devices.
- Robust federation, to achieve better collaboration with partners and customers.

## Appendix B: Total Economic Impact™ Overview

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Total Economic Impact is a methodology developed by Forrester Research 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.

### *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: 1) the likelihood that the cost and benefit estimates will meet the original projections, and 2) 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 enterprisewide 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 C: Glossary

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**Discount rate:** The interest rate used in cash flow analysis to take into account the time value of money. Although the Federal Reserve Bank sets a discount rate, companies often set a discount rate based on their business and investment environment. 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 respective 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. 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's 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 through 3 are discounted using the discount rate (shown in Framework Assumptions section) 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.

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**Table [Example]**

Example Table

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

Source: Forrester Research, Inc.

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<sup>1</sup> Source: Enterprise And SMB Networks And Telecommunications Survey, North America And Europe, Q1 2010, Forrester Research, Inc.

<sup>2</sup> CO<sub>2</sub> emissions in air travel vary by length of flight--ranging from .24 kg CO<sub>2</sub> per passenger mile for short flights down to .18 kg CO<sub>2</sub> per passenger mile for long flights. Source: Emissions factor based on 2006 data collected in the United Kingdom available from the The World Resources Institute.