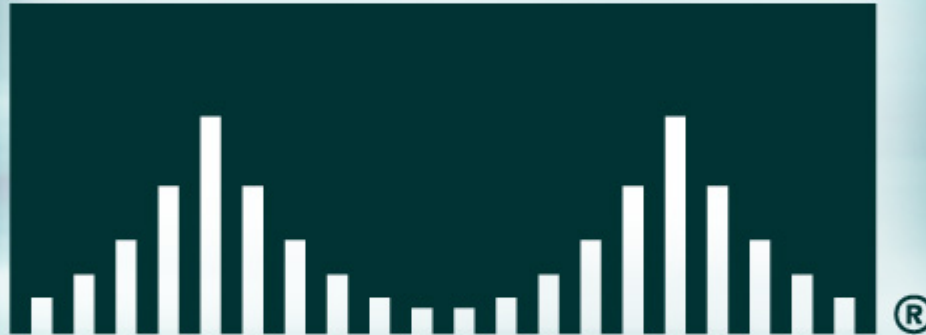


CISCO SYSTEMS



ROI for IP Communications

Jason Hurlbut
IP Communications Sales Specialist
Cisco Systems
jahurlbu@cisco.com

September 23, 2003

Business Drivers for IP Telephony Applications: The Vital Few

Cisco.com

Goal is to Impact Key Initiatives, Business
Processes and Business Results



Productivity
Resilience
Mobility

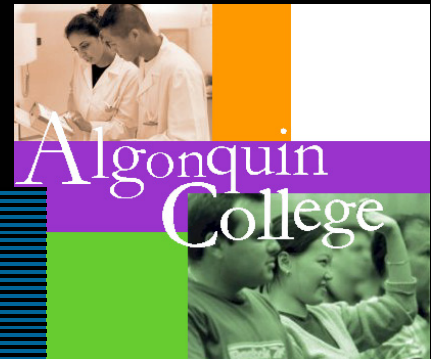
- Empower employees
- Competitive advantage
- Customer satisfaction
- Employee satisfaction
- Revenue generation
- Cost controls/reductions

Our goal is to help clients discover ways that IP Telephony
Applications and Services can impact these
'Vital Few' Areas in their business

Market Trends and Current State

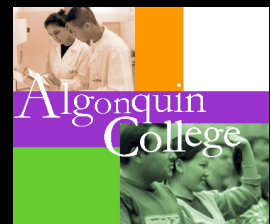
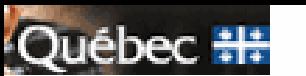
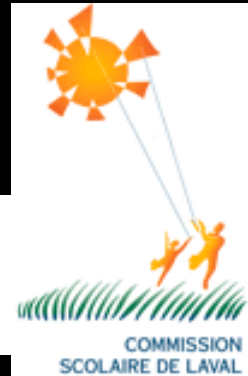
Cisco.com

- Cisco has shipped over 2 Million IP phones, 13 Million Powered Ports, 1.6 Million Unity Ports, 520 Thousand Contact Seats, 10,000+ Customers
- Cisco Canada has Shipped over 200,000 IP phones
- 32% YOY Growth for 2002-2006 (Info Tech)
- 64% YOY Growth for Services for 2002-2006 (InfoTech)



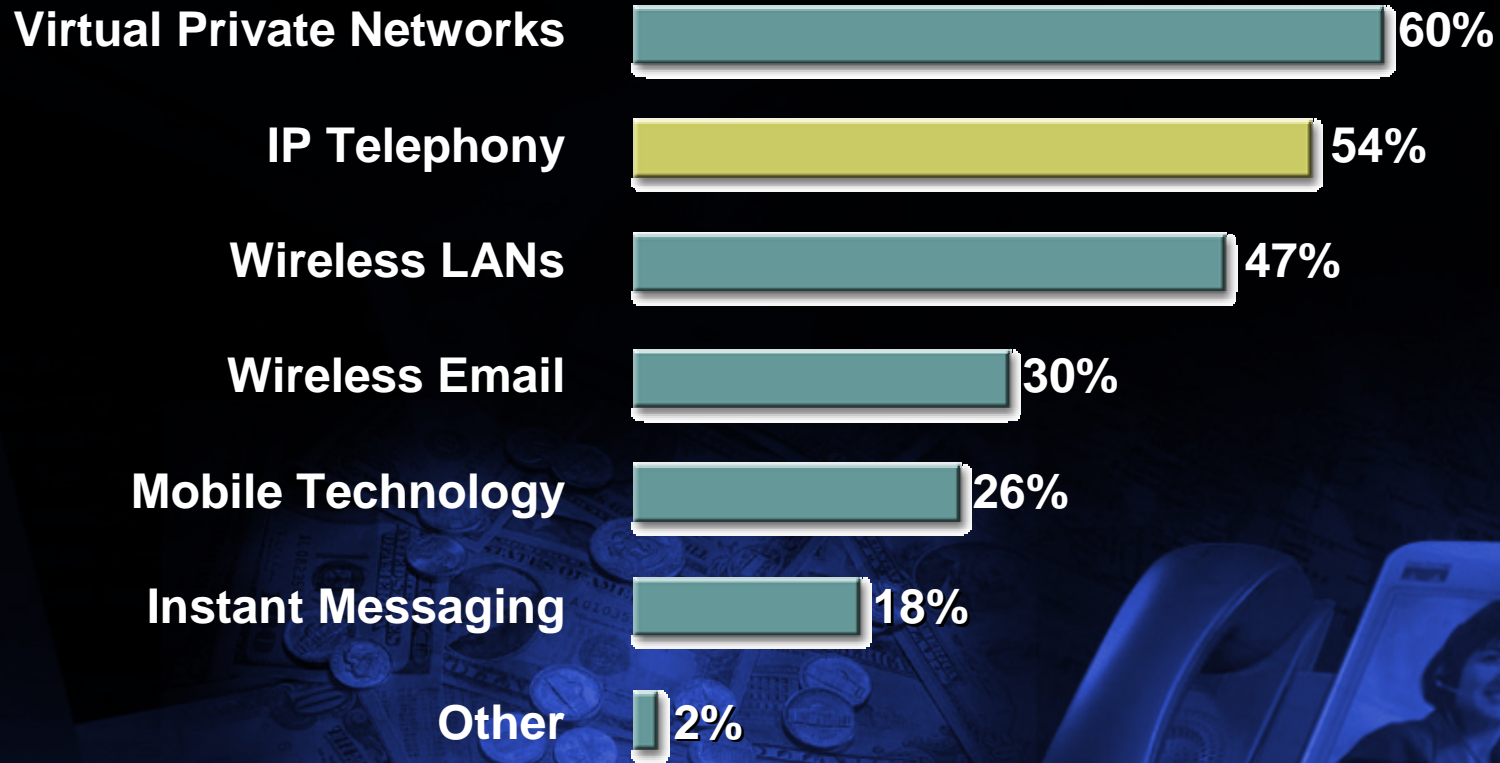
Canadian Customers with over 1000 Cisco IP phones !

Cisco.com



Which Technologies Will Drive Employee Productivity?

Cisco.com



IP Telephony Ranked Second on List of Technologies Associated with Improved Employee Productivity

Source: Sage Research, January 2003

Realized Productivity

Cisco.com

“the extent to which our survey respondents said productivity benefits drive IPT adoption was totally unexpected,”

**Kathryn Korostoff,
president of Sage
Research, Inc.**



- **cost savings was cited as an IPT deployment driver by 75% of those surveyed**
- **productivity savings was cited by more than 60%**
- **productivity benefits were felt by both IT and non-IT workers**
- **66% of the respondents said they perceive IPT deployment as giving them a competitive advantage**

Measuring IT Staff Benefits

Realized IT Benefit	Percent of Population Receiving the Benefit	Average Benefit Level Experienced
Faster moves, adds, or changes	72%	1.5 hrs per move
New office opening completed quicker	55%	3.8 weeks per new office opening
Improved productivity within the IT dept.	45%	5.4 hrs/wk, or 35 days per year
IT staff time saved as end users can use telephony features without help	43%	5.5 hrs/wk/IT employee involved with phone support
Reduced need for IT staff to travel	42%	13 hrs/mo/IT employee, or 19 days per year

- **For example, 72% report that IPT has resulted in faster MACs. Of these customers, the average benefit is 1.5 hour saved per event.**

Measuring Non-IT User Benefits

Cisco.com

Realized Non-IT Benefit	Percent of Population Receiving the Benefit	Average Benefit Level Experienced
Easier move, add, or change process allows employees to move workspaces more often	71%	3 more moves per year
Improved corporate headquarters employee productivity	51%	Saves 4 hrs per HQ employee per week, or 26 days a year
Less telephone tag for all employees	50%	3.9 hours week per employee, or 25 days per year
Improved remote office employee productivity	48%	4.3 hours per remote office employee per week, or 28 days per year
Improved telecommuter productivity	47%	5 hrs per week, or 33 days per year

The ROI for IP Communications

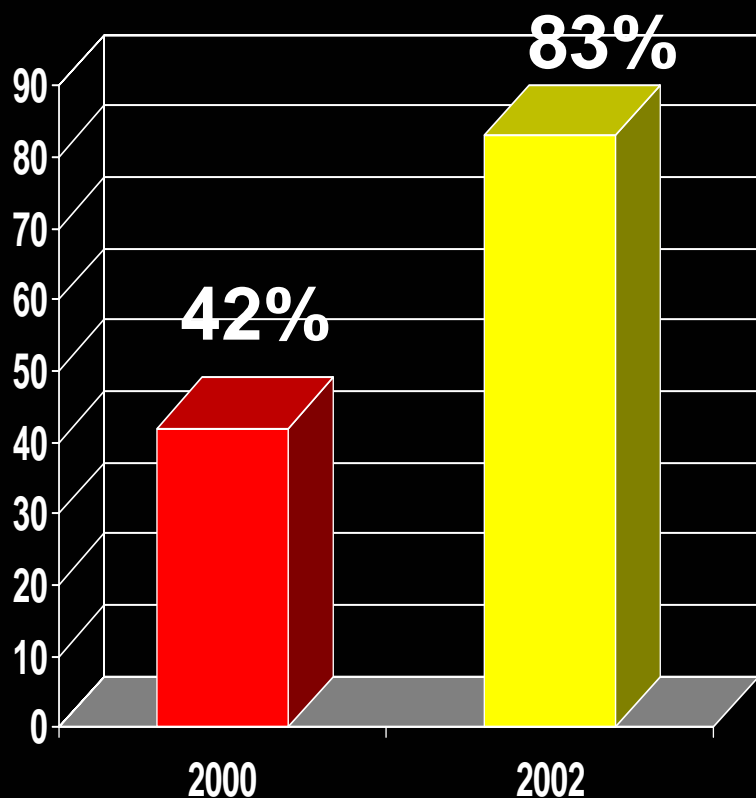
Business Trends Driving the Focus on ROI

- Failures of previous IT investments to produce expected returns
- Focus on Cost Containment/Reduction
- Greater involvement of business managers in technology decisions
- IT now accounts for 46% of all capital expenditures
- Continued struggles of the global economy keep IT spending tight
- Re-introduction of back to basics methodologies for capital investments

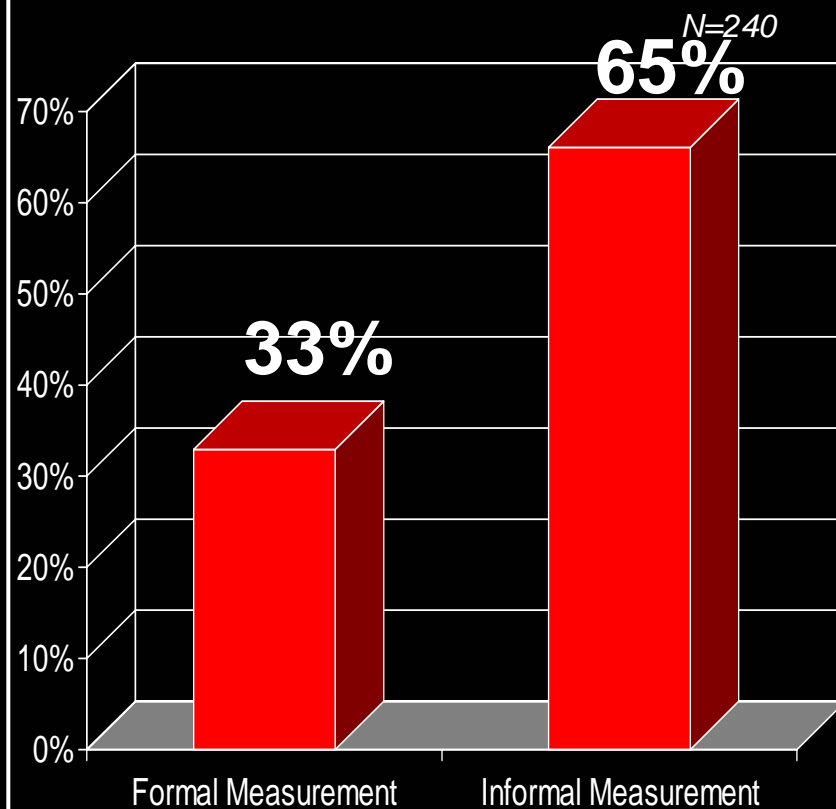
IT is Feeling the Heat

Yet, Companies Lack Formal Metrics

% of customers that require ROI Documentation



Source: Darwin Magazine



What is CNIC? (Cisco Network Investment Calculator)

Cisco.com

- **A web-based ROI/TCO calculator designed to simplify the business case development process**
- **A tool that allows the calculation of ROI for multiple Cisco solutions, including IPT, Contact Center, Unified Messaging, Conferencing, Storage, Wireless and upgrades to the data network**
- **A rich ROI database with thousands of analyses that provides industry and scenario trends**



Cisco Network Investment Calculator

CNIC Main

General Inputs +

Data Network Upgrade +

IP Telephony +

Unified Messaging +

Conference Connection +

Storage Network +

Contact Center +

Mobility +

Results +

Welcome Jason Hurlbut!

This page allows you to create a new ROI analysis or select an existing analysis from the drop down list. The "My Analysis" list displays all the analyses that you have previously created and the "All Analysis" drop down list for analyses that you have access to. You can also search for existing analyses by analysis name, customer name or creator name.

Create a New ROI Analysis

[Access ROI Snapshots](#) - gives you the ability to create a "pre-populated" competitive ROI analysis based on industry standards, competitive information and other general "default" input values for the various deployment scenarios available in CNIC. [Information](#)

[Create New ROI Analysis](#) - click here to create a new ROI analysis. [Information](#)

My Analysis (Click on the drop down box to see all the analyses that have been previously created by you)

Select One

All Analysis (Click on the drop down box to see all the analyses that you have access to.)

Select One

Search An Existing ROI Analysis (To search for an existing ROI analysis by entering full or partial name for any one of the following)

By Analysis Name

By Customer Name

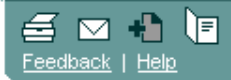
By Creator Name

First Name AND OR Last Name



Close Window

Toolkit: Roll over tools below



Cisco Network Investment Calculator

Proposal Map

- CNIC Main
- General Inputs
- Module Selection
- Buy/Lease/Depreciation
- Length of Analysis/WACC
- IP Telephony +
- Contact Center +
- Data Network Upgrade +
- Results

Module Selection

Which of these Cisco IP Solutions do you want to evaluate for this analysis?

IP Communications

- IP Telephony [Information](#)
- Older PBX Replacement [Information](#)
- Unity Messaging [Information](#)
- Conference Connection [Information](#)
- Contact Center [Information](#)
- Cisco Computer Telephony Integration (CTI) [Information](#)
- Cisco Intelligent Contact Manager (ICM) [Information](#)
- Cisco IP Integrated Contact Distribution (IP ICD) [Information](#)

Next

Data Network Upgrade

- Data Network Upgrade [Information](#)
- WAN [Information](#)
- LAN [Information](#)

Storage Networking

- Storage Networking [Information](#)

Mobility

- Mobility [Information](#)

This report is provided to you by Cisco for your planning purposes only. It is an estimate and is based upon certain financial assumptions and the quality of provided inputs.

Close Window

IP Telephony

Telephony & equipment Maintenance Main

Telephony Equipment Profile	Central Site
PBX System Lease Cost	Central Site
PBX Installation, Training & maintenance Cost	Central Site
PBX Upgrade and Expansion Costs	Central Site
IPT Technology Purchase Cost	Central Site
IPT Maintenance & installation Costs	Central Site
IPT Expansion/Replacement Costs	Central Site

Network Administration & operation Main

Voice & it Staff Costs	Central Site
Voice Network MACs	Central Site
Annual Voice and Data Outsourcing Contract Costs	Central Site
Internal Voice and Data Help Desk Staff	Central Site

Contact Center

ICM Main	Central Site
Contact Center General Inputs	Central Site
Annual Cost Savings	Central Site
ICM Incremental Costs	Central Site
ICM Installation, Training & maintenance Costs	Central Site
ICM Expansion Costs	Central Site

Data Network Upgrade

Data Network Upgrade Main	Central Site
WAN Upgrade Main	Central Site
Voice & data Line Data	Central Site
WAN Equipment Purchase Cost	Central Site
WAN Ownership Cost	Central Site
WAN Expansion Cost	Central Site
LAN Upgrade Main	Central Site
LAN Equipment Purchase Cost	Central Site



Close Window

Toolkit: Roll over tools below



Cisco Network Investment Calculator

Proposal Map

- CNIC Main
- General Inputs +
- IP Telephony
- Site Management
- Central Site Telephony
- Equipment & Maintenance
- Central Site Network
- Administration & Operations
- Contact Center +
- Data Network Upgrade +
- Results

[Voice & Data IT Staff](#) | [Voice Network MACs](#) | [Annual Voice & Data Outsourcing Contract Costs](#) | [Internal Voice and Data Helpdesk Staff](#)

Site Environment : Central Site

This page calculates the reduced costs of moves, adds, and changes (MACs) in an IP telephony system vs. a PBX.

Quick Tip: You can click on the Proposal Map tab to view and access all the input pages included in this ROI analysis.

Number of MAC's per Year (#)	<input type="text" value="500"/>	Information
Annual % Increase(+)/Decrease(-) in # of MACs (%)	<input type="text" value="5"/>	Information
Cost per Hard MAC (requires on-site work) (\$)	<input type="text" value="50"/>	Information
Cost per Soft MAC (requires software change only) (\$)	<input type="text" value="20"/>	Information
Percentage of Hard MAC's (%)	<input type="text" value="40"/>	Information
Percentage of Soft MAC's (%)	<input type="text" value="20"/>	Information
Percentage of MAC Costs eliminated by IP Telephony (%)	<input type="text" value="70"/>	

This report is provided to you by Cisco for your planning purposes only. It is an estimate and is based upon certain financial assumptions and the quality of provided inputs.

Close Window

- UNIC main
- General Inputs +
- IP Telephony +
- Contact Center +
- Data Network Upgrade +
- Results**

Results

This cash flow schedule provides a detailed list of one-time and annual cost savings and incremental costs over the length of the investment analysis. It also includes key investment decision values such as internal rate of return (IRR), break-even (BE), and net present value (NPV). Click on the links under in the Investment Decision Values section to get site-specific NPV, BE and TCO values (applicable to multi-site analyses only).

Quick Tip: You can click on the Proposal Map tab to view and access all the input pages included in this ROI analysis.

Investment Decision Values		
Period (Years) Information	3	
Weight Average Cost of Capital (WACC) (%) Information	12	
Marginal Income Tax Rate (%)	40	
Net Present Value (NPV) (\$) Information	83,601	NPV Graph
Internal Rate of Return (IRR) (%) Information	19	
Return on Investment (ROI) (%) Information	16.21	
Break-Even/Payback Period (Years) Information	2.617	Break Even Graph
TCO per user by Site Profile (\$)		TCO Graph

Cashflow Information					
Expand All					
Period (Year)	0	1	2	3	Total
One-Time Cost Savings					
▷ IP Telephony	10	0	0	0	10
▷ Data Network Upgrade	0	0	0	0	0
Total One-Time Cost Savings	10	0	0	0	10
Annual Cost Savings Annual Cost Savings Graph					
▷ IP Telephony	0	6,872	8,570	9,479	24,921
▷ Contact Center	0	446,510	535,350	642,586	1,624,446
▷ Data Network Upgrade	0	0	0	0	0

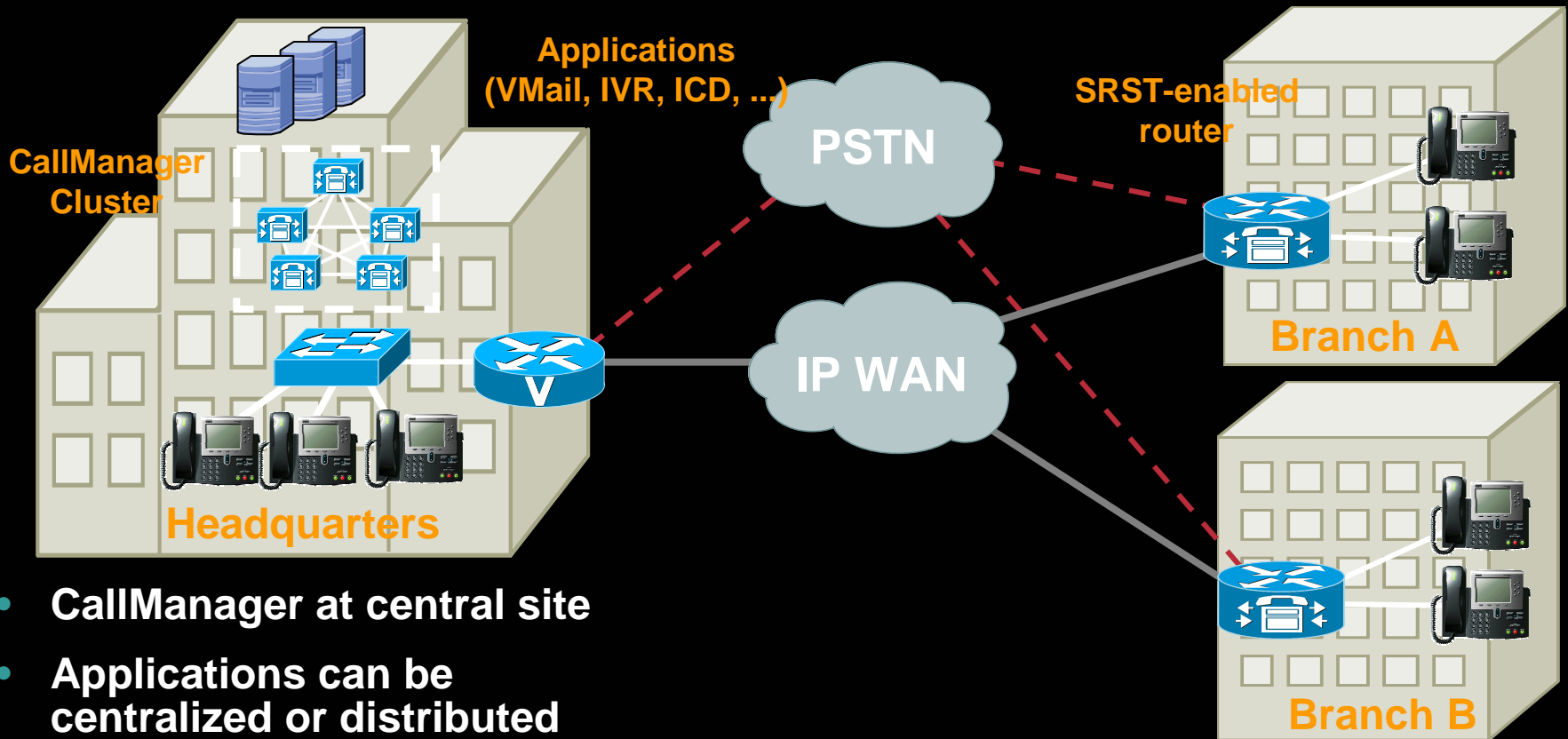
Areas of Hard Cost Savings By Deployment Scenario

Areas of Return	Green Field	TDM Centrex Replacement	Multi-site CCP	Older PBX Replacement	Newer PBX Replacement
Reduced Infrastructure Costs	X		X	X	
Reduced Expansion/Upgrade			X	X	X
Reduced Cabling Costs	X				
Increased Productivity of Support Staff	X		X	X	X
Moves, Adds, Changes	X		X	X	X
Reduction in Outsourced Costs		X		X	X
Toll-Bypass	X		X	X	X
Voice Circuit Consolidation	X		X	X	X

Deployment Models

Centralized Call Processing

Cisco.com



- **CallManager at central site**
- **Applications can be centralized or distributed**
- **Supports up to 10,000 IP Phones per cluster**
- **Call Admission Control (limit number of calls per site)**
- **Survivable Remote Site Telephony for remote branches**

Hard Cost Savings - Equipment

Cisco.com

- **Reduction in cabling costs for new facilities**
- **Reduction in infrastructure cost at remote sites via centralized call processing**
- **Increased utilization of core networking assets**
- **Consolidation of message store/back-up systems**
- **Reduction in PBX upgrade/expansion costs**

Hard Cost Savings - Network Administration

Cisco.com

- **Improved productivity of network support staff**

 - Elimination of certain PBX related tasks

 - Consolidation of skill sets

 - Centralized application and network management

- **Reduction in the costs of Moves, Adds and Changes (MAC's)**

- **Reduction in remote site management costs**

- **Reduction in ongoing maintenance costs**

Hard Cost Savings

Integrated Access/Toll Bypass

Cisco.com

- **Toll-Bypass savings for intra-company traffic**

Domestic: Material if call volume is substantial to offset declining toll rates in neighborhood of 2-5 cents or if organization lacks size to negotiate prime rates with carriers

International: Still significant with average toll-rates of 12-15cents

- **Consolidation of voice and data access**

- Reduction in number of dedicated voice lines

- More efficient use of existing bandwidth

Examples of Business Benefits

Cisco.com

•Real Estate Savings

Better utilization of real estate by leveraging extension mobility to increase worker to workspace ratio from 1to1 to X to 1

Significant savings in high-rent areas

•Platform for New Applications

Unified Messaging – Improved productivity per user by 25-40 minutes per day

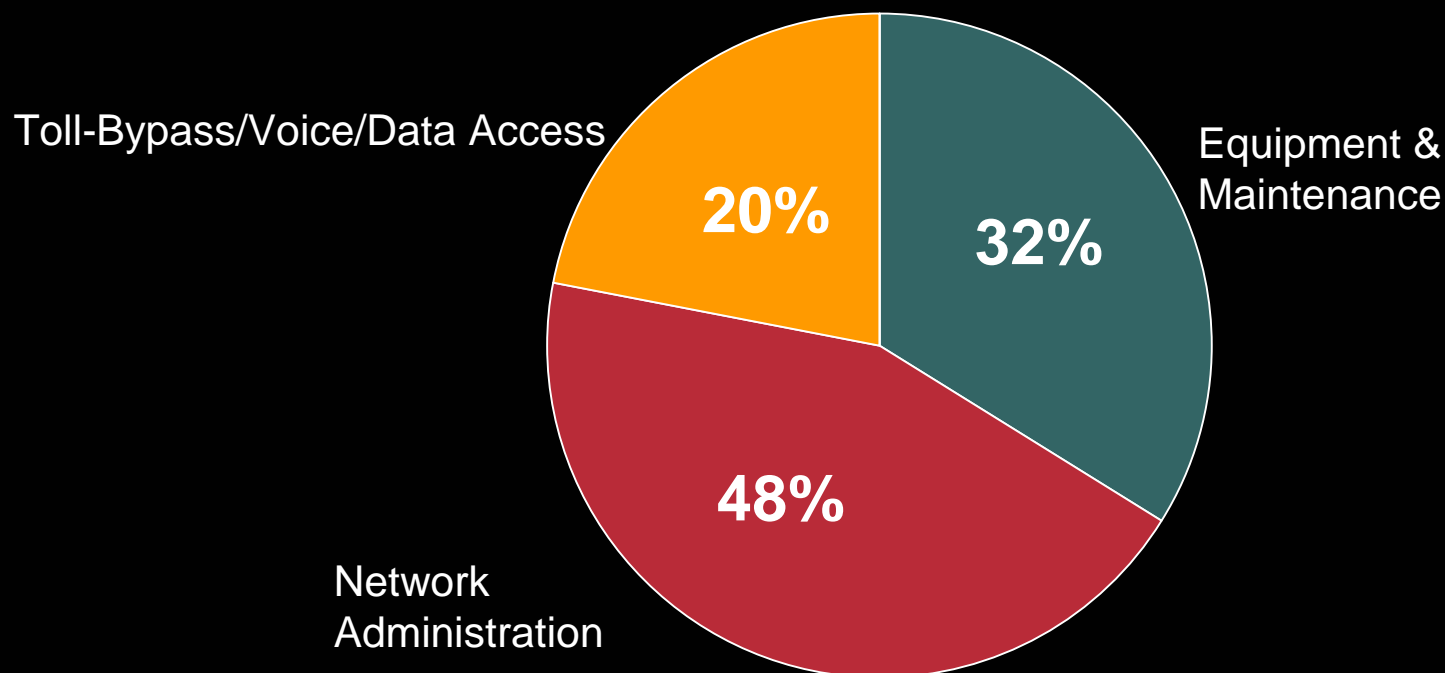
Audio Conferencing – Ability to offload SP provided minutes (8-12 cents/minute) for smaller conference calls to internal service offering

•Ability to standardize infrastructure and extend corporate capabilities to branch offices

Summary of ROI Findings

- Positive Net Present Value 70% of the time
- Average payback of 16-18 months
- Average annual savings per user of \$334
- Average # of phones in analysis = 600 phones

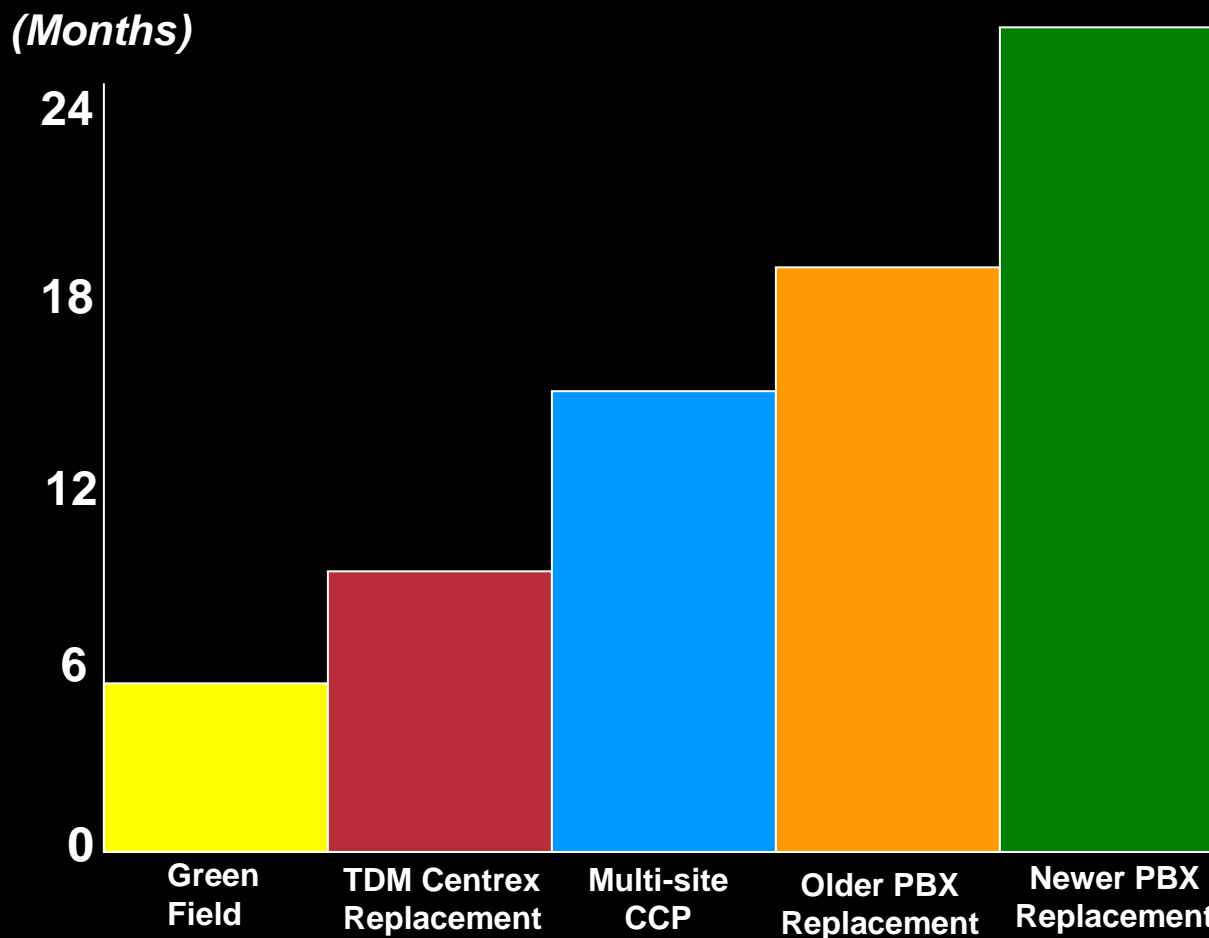
Avg. % Contribution to Cost Savings



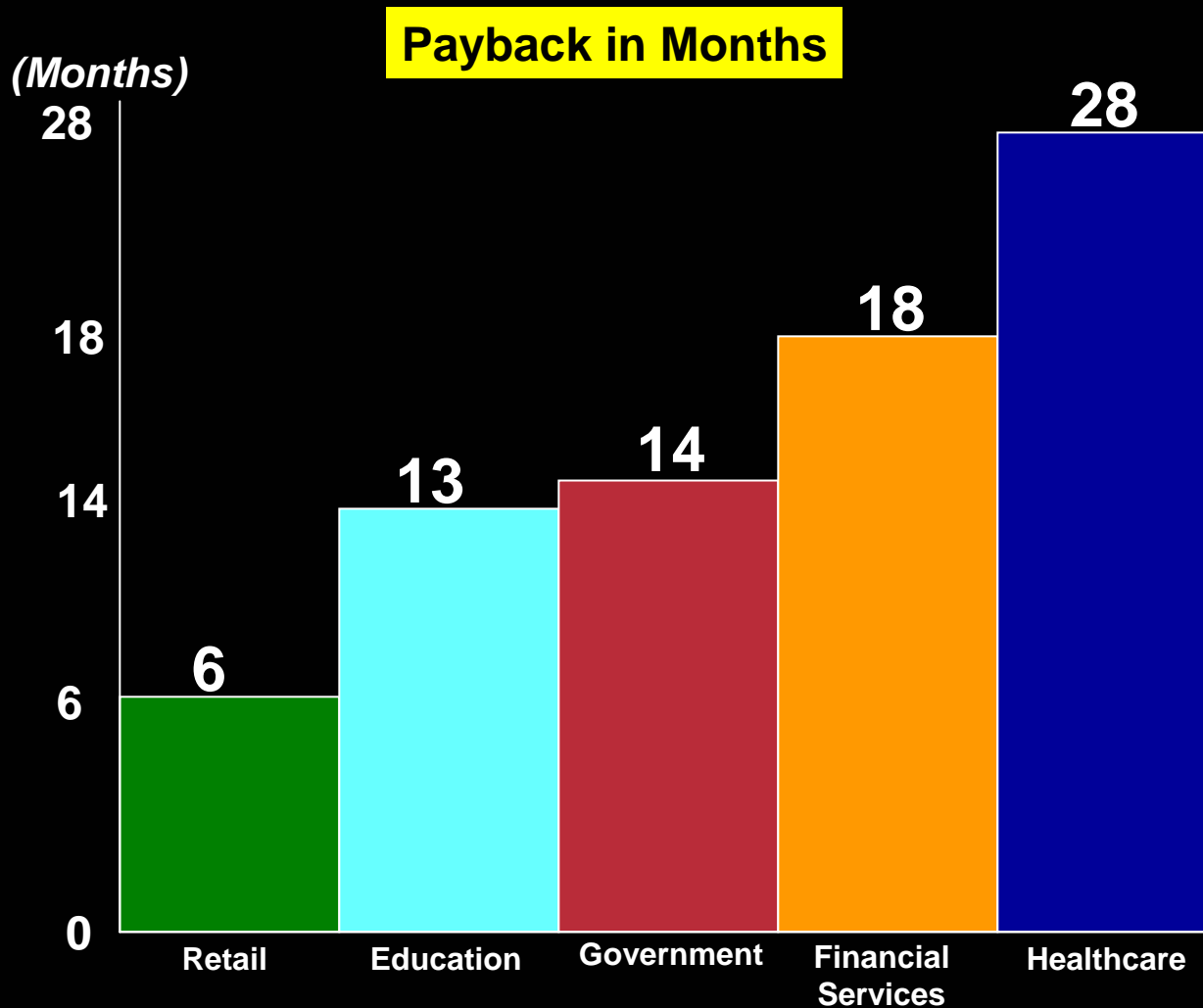
Summary of ROI Findings - Deployment Scenarios

Cisco.com

- *Paybacks vary based upon deployment scenario, with green fields producing the most rapid payback*



ROI Findings – By Vertical



Cisco Conference Connection

Cisco.com

Cisco Conference Connection Help About Logout Info CISCO SYSTEMS

Conferences In Progress

Scheduled Conferences

Past Conferences

Add a Conference

If there was an urgent administrator message, it would appear here.

Add a Conference

Conference Name:

Description: (Optional)

Start Time (hh:mm): : (Time on server. Server timezone is PDT)

Duration: hour(s) mins

Start Date: [Calendar](#)

Number of Participants: (No more participants will be added once this limit is reached)

Repeat Options: Single Weekly Monthly

Hidden Conference? (If checked, this conference is only visible to the Owner and the Administrator)

Override Conference ID with (Optional)



- Audio conference server with web-based scheduler
- Dial in to single number
- Cisco IP phone services conference entry
- User accounts synchronized with CallManager LDAP directory profiles
- Supports up to 180 ports

- Conferences In Progress**
- Scheduled Conferences**
- Past Conferences**
- Add a Conference**

Free CCC Access
8) 211-9065 or Voice
or IP 8-217-7005

➤ Add a Conference

Conference Name

Description (Optional)

Start Time (hh:mm) : (Time on server. Server timezone is EDT)

Duration hour(s) mins

Start Date [Calendar](#)

Number of Participants (No more participants will be added once this limit is reached)

Repeat Options Single Weekly Monthly

Hidden Conference? (If checked, this conference is only visible to the Owner and the Administrator)

Set Meeting Password to (Optional - 4 to 10 digits long)

Override Conference ID with (Optional)

Related Business Cases: Scheduled IP Audio Conferencing

Cisco.com

- Cisco Toronto formerly used Global Crossing: average \$38.32 per conference call (conference minutes plus toll free)
- Implemented Cisco Conference Connection in Q1'03
- Cisco Toronto office now saves \$40,000 per quarter – average cost per conference less than \$2 (cost of CCC and toll free)
- Ease of web scheduling led to rise in monthly conferences from 250 to 600

Result: Significant Savings and a more collaborative agile workforce

Large Centrex Migration Case Study:

Cisco.com

City of Mississauga migrated 2400 Centrex phones across 70 site MAN to IP phones in 4 months

Now migrating 19 Contact Centres to Cisco IPCC



http://biz.yahoo.com/bw/030122/220120_1.html

"It's exciting that we can provide our employees with state-of-the-art technology, while saving our taxpayers money at the same time," said Jack Lawrence, director of information technology at the City of Mississauga. "The project has been a tremendous success. Despite the size and complexity of the project, the implementation went smoothly and the transition was seamless to employees and the general public."

Environment before IP Telephony Deployment

- over 70 sites including City Hall, Transit, Parks, Firehalls, Community Centres
- **2400 Centrex lines plus 44 Key Systems, PBXs, and voicemail platforms**
- Cisco data network using switched 10Mbps to desk with no QoS using combination of fibre, wireless and ISDN
- **Limited diversity on data network (single homed LAN switches)**
- Centrex costs of moves, adds & changes
- **Dissimilar unlinked voicemail systems**
- High percentage of low feature analog phones
- **Slow to wait for new features on Centrex**
- **Bell Centrex Tariff Increases (3–7%)**

Benefits to the City

- **Significant On-going Cost Savings - \$700,000 annually**
- **Single converged network for Voice, Video and Data**
- **Single IT group (merged telecom & IT), no additional staff, existing staff refocused**
- **Leverage City primary and DR data centres to host voice servers and applications centrally**
- **Universal phone and end-user support to all public sector**
- **Introduced Enhanced 911 to Canada**
- **Investment protection – software upgradeable voice platform and phone sets**
- **Coordinated 4 digit dialing & voicemail between all locations (One network, One government)**
- **Improved Data Network (QoS, switched 10/100 to desk)**
- **Infrastructure for new application & feature development**

Key Drivers of Positive ROI

- **A compelling event is driving the decision**
 - New facility
 - End of useful life of PBX/Expiration of lease
 - Planned upgrade of data infrastructure
- **Adoption of applications enabled by IP Telephony**
- **Phased approach to deployment starting with the most financially viable sites**
- **Ability to leverage centralized call processing**
 - Deployment has number of remote sites that can leverage CCP
- **Dynamic organization with substantial employee movement**

Key Drivers of Negative ROI

- In some cases, a significant data network upgrade is necessary to provide the foundation for reliable voice
- Difficult to justify on hard cost savings alone the replacement of a relatively new PBX at a single site
- Delays in the deployment of the technology delay the realization of benefits
- Failure to take advantage of key value producing features of the technology
- Aggressive pricing from traditional PBX vendors

Real Benefits of Cisco IP Telephony

Hard-dollar cost savings

Single Network

- Maintenance, Cabling, Administration, Support, Power, Moves/Adds/Changes (MAC's), Staff

• *Voice Business Continuity*

- Integral component to an effective voice business continuity plan
- Can be compared against other less effective plans
- Voice message backup/restore

• *Real Estate*

- Space Utilisation, Reduced Operational Costs, Flexibility

• *Reduced Call Costs*

- Reduced mobile phone usage
- Extension Portability Campus Roaming, Home Office, Other Location
- Outbound Call Management
- Unified Messaging
- Audio Conferencing

• *Small Branch Office*

- Centralised Call Processing
- Elimination of voice trunks
- IP Toll Bypass
- No on-site PBX

Reporting, Billing, Cost Management

- Cross-Enterprise telecom reporting
- Cross-Enterprise call cost management
- Predictability of telecom bills

• *Reduced PC Costs*

- IP phone can replace a web-enabled PC or laptop in certain environments

Productivity increases that can be safely quantified

Employee Productivity

• *End User Applications*

- Audio Conferencing
- Unified Messaging
- Personal Assistant
- Web Access
- Computer Telephony Integration

• *IT Operations*

• *Facilities Mgmt Ops*

Benefits that are very real, but difficult to quantify

Cultural Enhancement

- Customer Satisfaction
- Employee Retention
- Geographic Flexibility
- Competitive Positioning
- Faster Application Deployment
- Voice Business Continuity
- Difficult-to-Quantify Productivity via Converged Applications

Final Thoughts

- **The keys to building the ROI analysis are to understand the primary value propositions of IP Communications and to set an appropriate scope for the analysis**
- **Cisco has a set of tools and best practices that can facilitate the ROI analysis process**

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EMPOWERING THE
INTERNET GENERATION