

NetworkWorld

SEMINARS&EVENTS



Getting the Most From Your IP Telephony Deployment: Best Practices

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Agenda

◆ Anatomy of A Rollout

- Project Plans & Timing
- Organizational Issues & Best Practices
- Vendor/Carrier Management Best Practices
- Effective Benchmarking
- Negotiating with VARS and Service Providers

◆ Investing to Make the Most of Your IP Telephony Solution

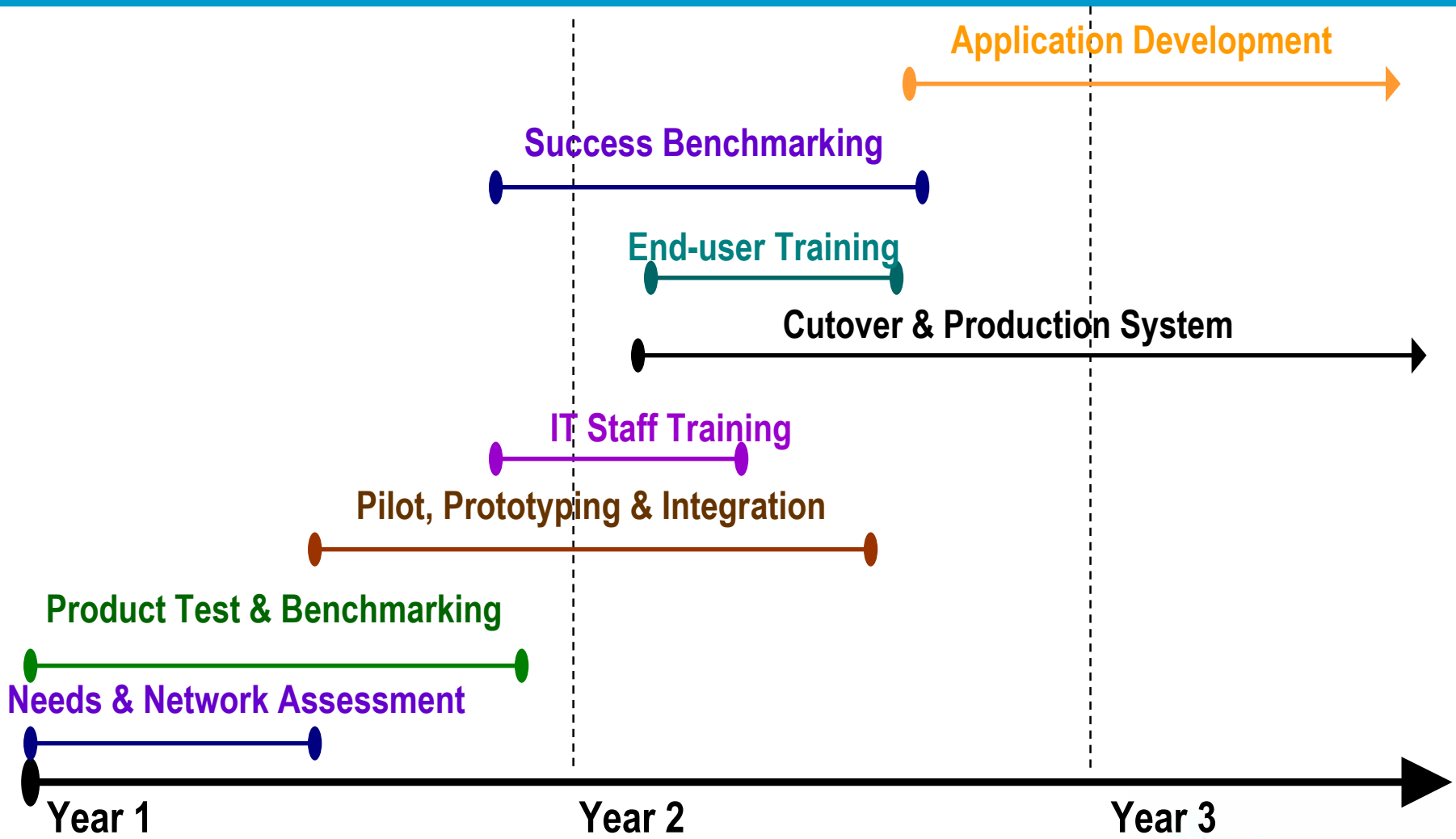
- Ongoing Management, Training
- Application Development & Integration
- Messaging and Presence

◆ Conclusions & Bottom Lines

Project Plans & Timing

Project Component	Recommended Timing	Comments
Requirements & needs assessment	6 weeks to 6 months	More for very large companies; include feature set and current functionality audit
Product assessment, baseline benchmark, & test	9 months	Very important not to underestimate timeframe!
Pilot	3 months to 2 years	Varies by company size & legacy infrastructure
IT staff training	1-2 weeks per individual	Assumes initial technical competence
End user training	1-2 hours per user	May not be required but is highly recommended
Integration with legacy systems	5 months to 2 years	Varies
Rollout/switchover	Highly variable	Can be seamless & instantaneous with proper preparation

Project Plans & Timing



Don't Overlook "Next Step" Issues Early On!

- ◆ **Can I leverage VOIP for my call center?**
- ◆ **What are my ISDN-based videoconferencing costs, and how much can I save by putting that traffic on a converged network?**
- ◆ **What are my audioconferencing costs?**
- ◆ **What applications do vendors/carriers offer for my industry?**
- ◆ **How will VOIP help reduce costs and management of remote workers?**
- ◆ **Will a VOIP solution combining carrier services and vendor gear benefit my company?**

Organizational Issues & Best Practices

- ◆ **Converge staff**
- ◆ **Enlist both voice and data teams in “product bakeoffs.”**
- ◆ **Enhanced training for both voice and data teams**
 - **Reposition voice folks as applications specialists (programming, GUI, and human-interaction skills)**
 - **Enhance data roles with infrastructure training (security, wireless)**
- ◆ **Make sure responsibility for VOIP security is clearly allocated.**
- ◆ **Invest in user “show & tell” training.**
 - **Don’t force features. *Optional* works better than *mandatory*.**
- ◆ **Engage messaging, email, directory, CRM/ERP, and presence personnel for joint applications development**

Vendor Selection and Management Best Practices

- ◆ **Cast a wide net. Don't automatically select incumbent vendor.**
- ◆ **Assess their ability to advise on requirements/upgrades.**
- ◆ **Identify the experts from your vendor, service provider, and VAR teams.**
- ◆ **Define clear escalation policies within your and the vendors' teams.**
- ◆ **Clarify terms and conditions of service and support (who, what, when, where, under what conditions, and how much).**
- ◆ **Be careful of "extra" charges (maintenance, installation, troubleshooting)**
- ◆ **Intangibles count. Volunteer to be a case study, reference account.**
- ◆ **Arrange for regular briefings to stay current on product directions.**
- ◆ **Assess training options. Not all vendors are created equal.**

Effective Benchmarking

At beginning and end of deployment, benchmark key metrics:

- ◆ **Physical infrastructure**
 - Power (especially from a DR perspective)
 - Cabling (especially at beginning)
 - Facilities
- ◆ **Infrastructure capacities (how many more users/services can infrastructure support?)**
- ◆ **QoS capabilities**
- ◆ **WAN latency (if WAN architecture has or will change)**
- ◆ **MOS/voice quality**
- ◆ **Feature set/functionality. What can the voice system do? What features are users actually using?**
- ◆ **Availability, reliability, redundancy. What is your DR preparedness?**
- ◆ **Overall satisfaction with system**

Are You Working With A VAR or SI?

No
36%

Yes
64%

Top Challenges With VARS & SIs

- ◆ **Inexperience**
 - Carefully check their references & track records
- ◆ **Personnel bait & switch**
 - **Validate bios of individuals working on your project. Look for:**
 - Voice expertise (not certifications)
 - Data certifications & vendor training
 - Recent experience in similar projects
- ◆ **Service & support uneven-ness**
 - Require a dedicated named support rep.
- ◆ **Lack of linkage to vendor**
 - Confirm that VAR is “high on vendor’s radar screen”
- ◆ **Do your own product research, with VAR recommendation just one part of a larger evaluation.**

Negotiating With VARs and Service Providers

- ◆ **Set clear expectations in terms of delivery time, response time, and repair time. The best penalty? You walk away from the deal with no financial commitment.**
- ◆ **Clarify management responsibilities. Who's responsible for:**
 - Phone management (hard and soft)
 - PBX management
 - Applications management
- ◆ **Explore an integrated architecture, but keep a close eye on costs. Integrating voice, video, and data can save 10%-30% over existing costs—while delivering superior performance—but only if all the details are taken into account.**
- ◆ **Demand a single point of contact for support—and enhance it with real-time, online, moves-adds-changes capabilities.**

Network Challenges



- ◆ **Bandwidth expected to grow, on average, 50% to 100% year over year.**
 - **Drivers? Web services (43%); more remote workers (24%)**
 - **2004 Priorities: VOIP implementation/apps (58%); broadband to SOHO (20%); data-center consolidation/centralize apps (15%).**
 - **IT staffs are increasingly extending corporate applications (ERP, CRM, etc.) over the WAN and deploying Web-based interfaces.**

◆ A growing number of people are working remotely. Only 13% work at headquarters building or campus.

◆ MPLS makes sense for companies that want to run a single network for all traffic types and applications.

Addressing Network Complexity

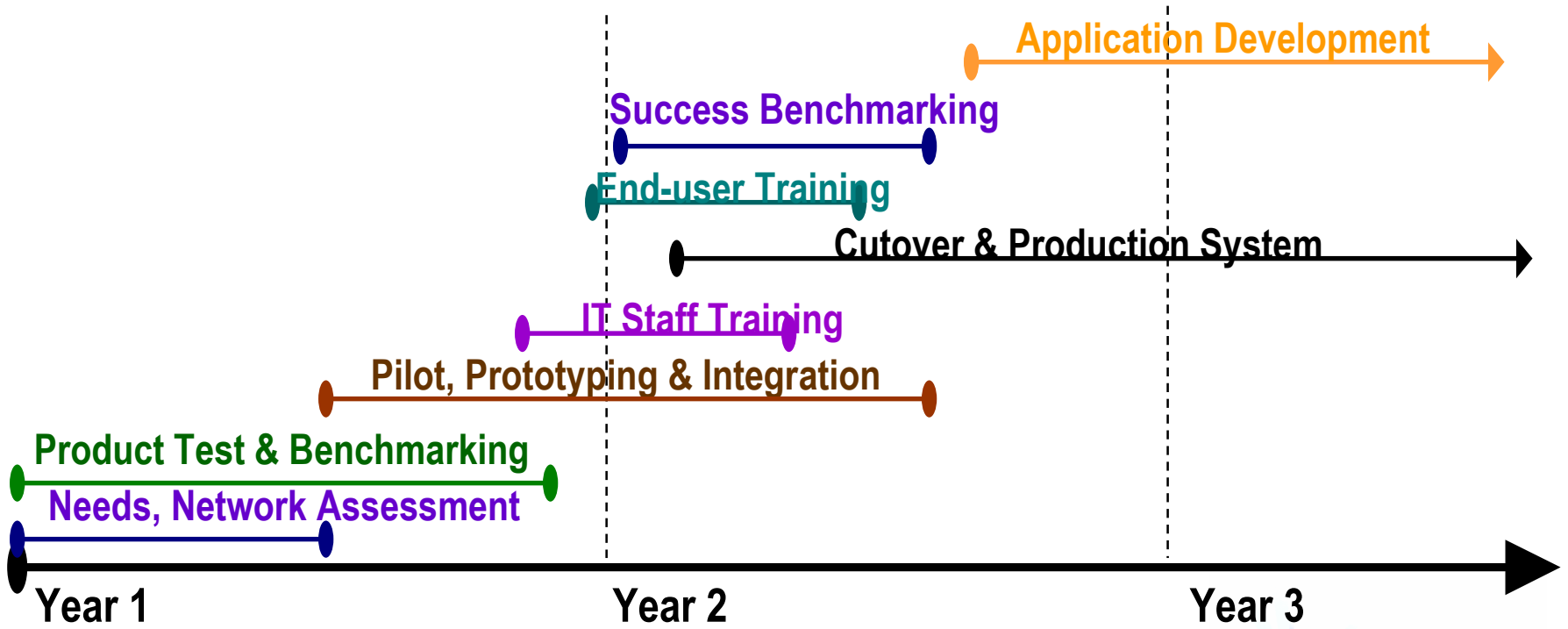
- ◆ Companies typically run 100-300 applications, some up to 1,000.
- ◆ Multiple networks, some networks handle a single application.
- ◆ Application Quality Management (AQM) key framework to running a predictable, efficient network with multiple apps, priorities, policies.
 1. Identify network issues; optimize network
 2. Identify all network applications, and set priorities
 3. Select tools from appropriate “buckets:” application performance, integration between applications, network performance.
- ◆ VOIP complexity requires all of the above.

Where Management Fits

Benchmarking & Capacity Planning

Ongoing infrastructure performance, fault monitoring, and troubleshooting

(Voice-enabled) AQM



Application Development

◆ Look for ways to “voice-enable” or “video-enable” key applications

- Timesheets
- Database access, order-entry, inventory
- Messaging (email & IM)
- CRM, ERP

Assess integration with other emerging technologies

- Wireless
 - New end devices
- ## ◆ Pay close attention to presence, collaboration, and scheduling

Messaging & Presence

- ◆ **User-availability tracking**
- ◆ **Contextual integration**
 - **Joining conference calls with context**
- ◆ **Alternative form factors & display formats**
 - **Soft phones**
 - **Hands-free “bracelet” or “necklace” phones**
 - **Integration with PDAs**
- ◆ **Video & camera shots**
- ◆ **Directories, directory assistance, and “lightweight call centers” (using virtual agents)**

Cost Increases to Consider

◆ Key Costs of VOIP Implementations

- **Phones**

- \$200-\$450 each

- **Network, equipment upgrades**

- Average increase to data network is 30%

- **Baseline network assessment & Training**

- \$15,000-\$20,000

- Training: \$2,000 per IT staff member; 30 minutes per end user

- **Troubleshooting and management**

- Troubleshooting costly without baseline assessment

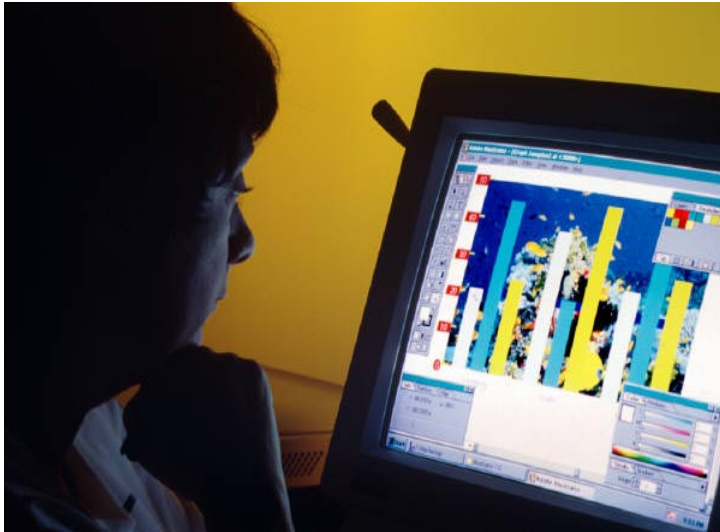
- Management becomes particularly costly for remote locations

- Management tools: \$50,000 (midsize) - \$100,000 + (large)

- 87% of employees work remotely, on average

Operational Savings

◆ Moves, Adds, Changes (MACs)



- More than 2/3 of IT executives have analyzed their MAC costs
- **Average annual cost: \$346,000**
- Average MAC cost (external): \$119
- Average MACs: 0.87 per employee

Operational Savings: Internal MACs

- ◆ Average loaded salary for IT staff: \$95,682
- ◆ \$46 per one-hour MAC; \$92 per two-hour MAC
- ◆ **MACs costs drop with IP PBXs.**
 - 10-minute MAC vs. 1 hour
 - Costs drop to \$7.60 per MAC



Personnel Savings

◆ IT/networking staff

- Average company saves 1-2 FTE-equivalent
- Increasing number say it's "avoidance" rather than elimination

◆ Administrative staff

- Primary savings comes from the "automated attendant" feature on IP telephony systems.
 - Single receptionist can handle calls for multiple offices and route between them.

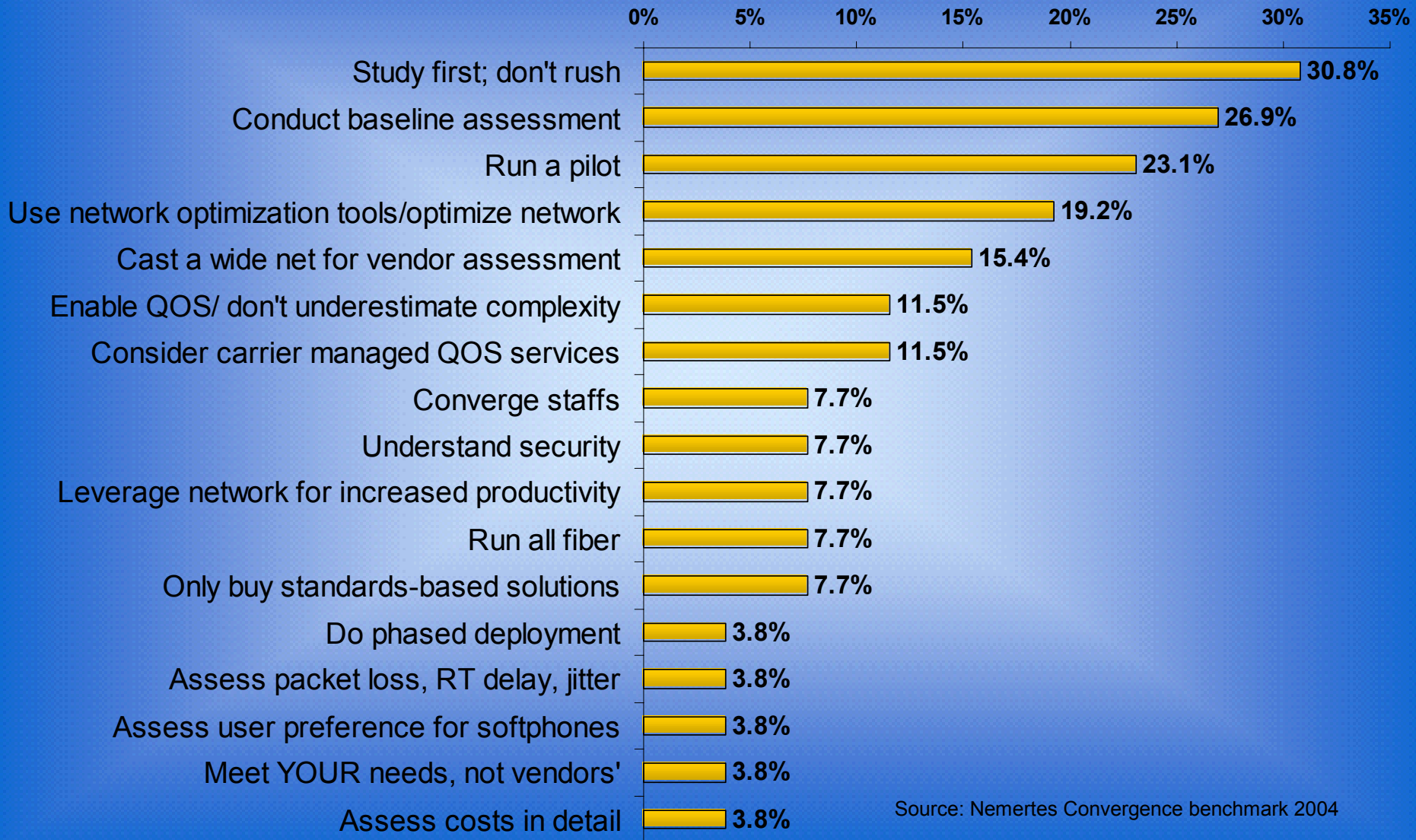
Circuit Costs

- ◆ **Bandwidth requirements increasing**
 - **37% plan to double or triple network bandwidth this year**
 - **BUT, average network utilization about 30%--spare capacity exists!**
 - **Network-optimization tools help to better utilize and manage spare capacity**
 - **We don't need *bigger* networks, we need *smarter* networks**

Circuit Costs, cont.

- ◆ **Long-distance savings**
 - Within U.S., increasingly paltry
 - Internationally, still important ROI
 - Savings range from 20% to 50%
- ◆ **On-net vs. off-net savings**
 - Varies depending on company—range of on-net is 20% to 40% of total traffic.
- ◆ **Local loops**
 - Savings primarily apply to large companies
- ◆ **Audioconferencing, videoconferencing**
 - Audio: 8 cents to 15 cents per minute for traditional services. Typical payback is 6-12 months
 - Videoconferencing: 25 cents-\$1 per minute for traditional services
- ◆ **Remote offices**
 - Virtual Call Centers
 - Managed services

What do you recommend to your peers?



Source: Nemertes Convergence benchmark 2004

Conclusions & Bottom Lines

- ◆ **Plan to take longer than you think for an end-to-end rollout.**
- ◆ **Assess your organizational structure and change as needed.**
- ◆ **Providing incremental tangible benefits can justify investment as well as overwhelming cost models (but be sure to document the benefits).**
- ◆ **Don't underestimate complexities involved with cost analysis.**
- ◆ **Rollout doesn't stop once deployment of the production system is complete. Now is the time to invest in applications that justify the cost and leverage the network. Enlist internal developers, business units, and the support of your VARs and vendors!**
- ◆ **VOIP is part of a broader network convergence effort; develop appropriate management framework.**

Thank You!

Questions?

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