Defining a Business Enabling IT Organization

Strategic Interop
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Goals

- Goal of the Conference:
  - To describe how the attendees can deploy a Business Enabling Network Function
- Goals of this Session:
  - To exemplify what is meant by a Business Enabling Network Function
  - To describe the changing role of the networking professional
  - To describe the changing enterprise WAN infrastructure
  - To identify conference sessions that will examine these trends in greater detail

Jim Metzler's Premise #1

- In order to successfully run a Business Enabling Network Organization, IT professionals must do two things. They are:
  - Operate as an effective utility. By utility is meant a network infrastructure which has a low unit cost, is highly reliable, widely available, and which offers an appropriate level of functionality.
  - Identify opportunities in which an investment in IT will help your company better compete in the marketplace.

Agenda

- Industry Trends
- What does it mean to be a Business Enabling Network Organization
- The Changing Role of the Networking professional
- The Changing WAN Infrastructure
- Pulling it Together

Where We Came From - The Requirements

- The pace of business change was relatively slow
- Few companies did significant networking outside of their country's borders
- Data communications used to stay virtually 100% within a company's boundary
- Teleworkers were the exception
- Major new applications took 18+ months to develop and deploy
- Data communications consisted largely of inquiry/response types of applications along with moderate sized file transfers

Where We Came From - The Network

- Separate voice and data networks in the mid 1980s gave way to integrated (a.k.a., *Private*) T1/TDM networks in the early to mid 1990s.
- In the mid 1990s, the networks separated again, with voice going to Software Defined Networks (SDNs) and data to Frame Relay
- Voice ran over a circuit switched network
- LANs were almost always built on shared media
- There was a huge gap between the network organization and the Business Unit Managers
- Few people seriously thought that networking was strategic

Where We Are Today - The Requirements

- The pace of business change is relentless
- Many companies do significant networking outside of their company's borders
- Data communications flows without boundaries
- Teleworkers are the norm
- New applications, and sources of content, can come online virtually overnight
- Data communications still consists of traditional voice and data, but other forms of content are also common

Where We Are Today - the Network

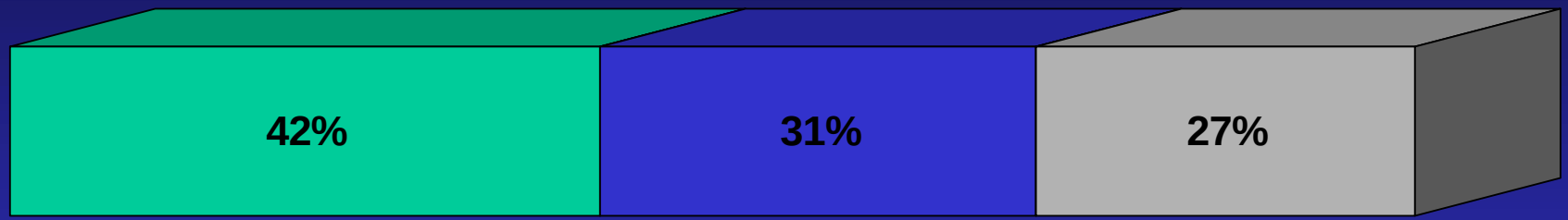
- LANs: We have widely deployed Layer 2 and Layer 3 switching and are beginning to deploy switching at layers 4 – 7.
- Remote access: Dial up VPNs are rapidly replacing POTS and 800 numbers as the transmission service of choice
- WANs: Fundamental shifts are potentially underway
- Voice still runs primarily over a circuit switched network, but there is growing interest in VoIP
- There is still a gap between the network organization and the Business Unit Managers, but it is closing
- In many companies, the network is indeed strategic

Where we are Heading: Fundamental Business Changes

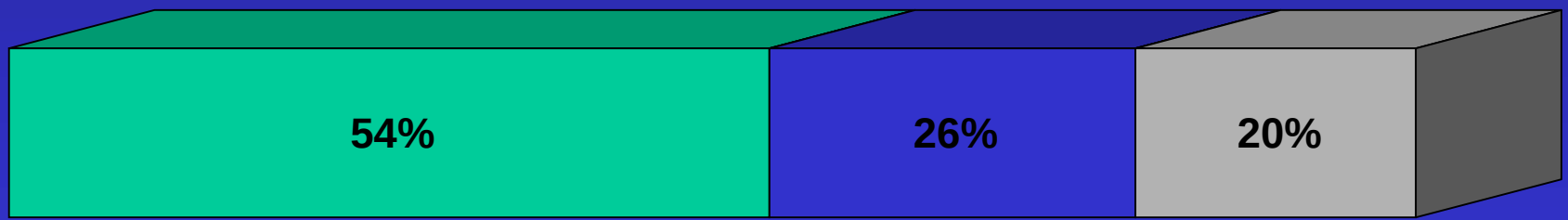
- The way we conduct business is steadily and irreversibly changing. For example:
  - Companies in general, and IT organizations in particular, will continue to make more use of selective sourcing.
  - Companies will increasingly “bet their business” on their IT infrastructure.
  - IT will become increasingly strategic to companies of all sizes, and in most industry segments.
- Yet currently there are tremendous cost pressures being felt by most IT organizations.

Movement to eBusiness

Movement Already Made

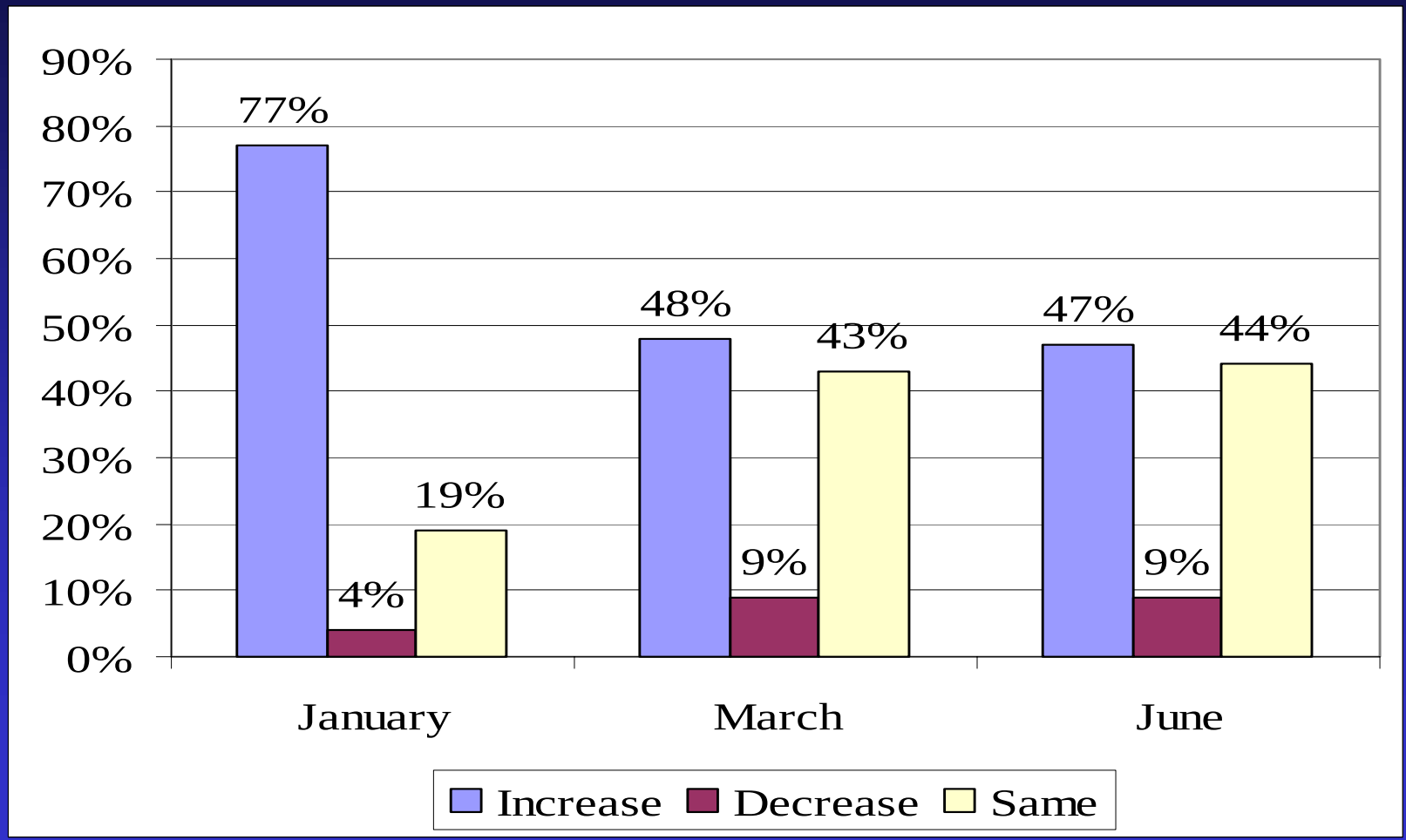


Movement Over Next 12 Months



Source: Ashton, Metzler & Associates and Key3Media

Spending on Internet and eBusiness Initiatives in 2001 vs 2000



Source: InternetWeek

Agenda

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Percentage of Customer Service Calls Handled Electronically Without Intervention

Financial Services	40%
Banking	34%
Media and Entertainment	25%
Utilities	23%
Insurance	21%
General Merchandising	19%
Health Care and Medical	17%
Chemicals	9%
Energy	8%
Industry Average	21%

Source: Information Week

Jim Metzler's Premise #2

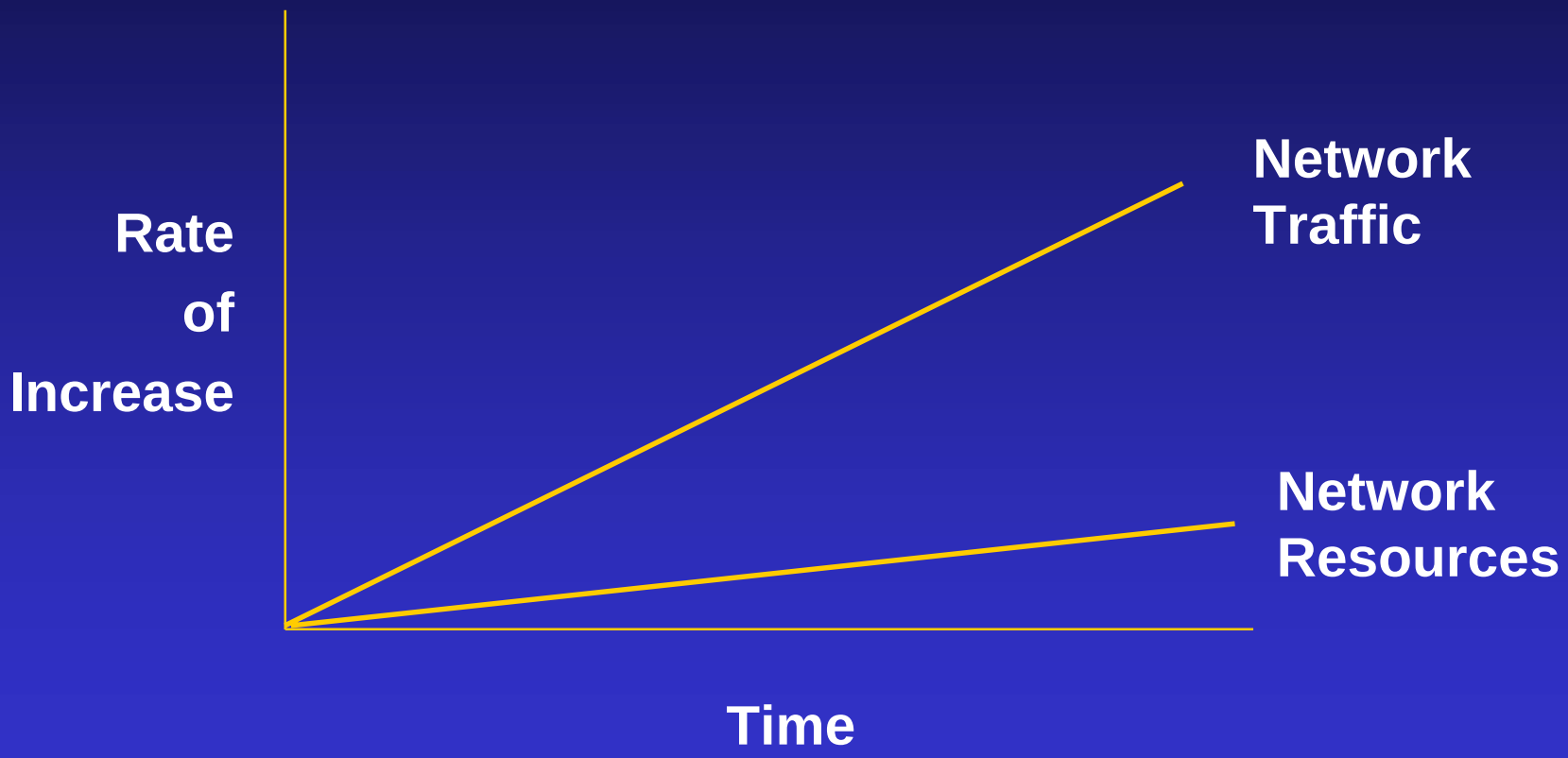
- In order to successfully run a Business Enabling Network Organization, IT organizations must:
  - Identify the factors it can influence, if not control
  - Market away certain other factors

Example of Premise #2

Total Cost of Networking =

The Unit Cost	X	The Number of Units

Growth in Network Traffic vs. Network Resources



Jim Metzler's Premise #3

- In order to *successfully* run a Business Enabling Network Organization, IT organizations must continually:
  - Evaluate and deploy new technologies and external service offerings
  - Change their approach to delivering services

Background on Acme, Inc.

- Professional services organization
- 500 employees, 400 of whom are consultants
- One headquarters site that houses 100 employees
- Ten branch offices that house 40 employees on the average
- On the average, Acme charges $200/hour for their consultants
- On the average, the consultants are billable 65% of the (mythical) 40 hour week

How can Acme's IT Department become a Business Enabling IT Organization?

- Directly Drive Revenue
  - Drive up the billable hours of the average consultant
    - Make them more effective doing projects and responding to RFPs while they are traveling
      - Wireless communications
      - Unified Messaging
  - Drive up the billable rate of the average consultant
    - Effective access to information in general, and training in particular
      - Content Delivery Networking

How can Acme's IT Department become a Business Enabling IT Organization?

- Indirectly Drive Revenue:
  - Make it easier to attract and retain consultants by making their jobs easier and more fulfilling
    - Automated T&E
    - Easier time reporting
    - Access to technical information and Training
      - Content Deliver Networking
      - Security

How can Acme's IT Department become a Business Enabling IT Organization?

- Reduce Cost:
  - Drive down the unit cost of IT
    - VPNs
    - Outsourcing
    - MAN Services
    - VoIP???
  - Facilitate hotelling
- Enable B2B communications
  - Applications Management
  - VPNs

IT Budget as a Percentage of Projected Revenue

Financial Services	14%
Banking	8%
Insurance	6%
Specialty Merchandising	6%
Consulting & Business Services	4%
Health Care and Medical	3%
Utilities	3%
Food & Beverage Processing	1%
Industry Average:	4%

Source: Information Week

How can Acme's IT Department become a Business Enabling IT Organization?

- Improve the deployment of new services, both within Acme, and between Acme and its business partners
  - Service Management
  - Outsourcing

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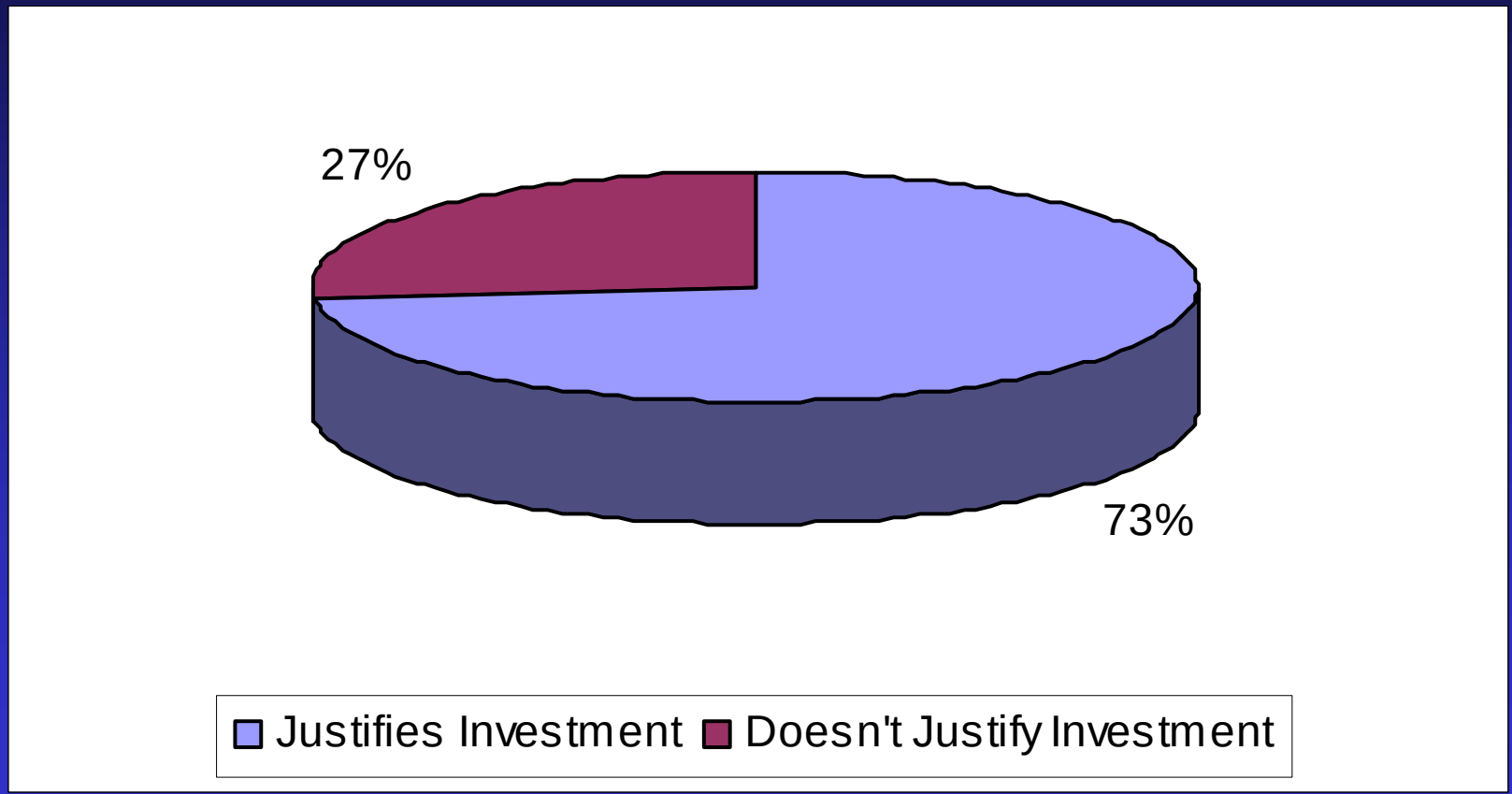
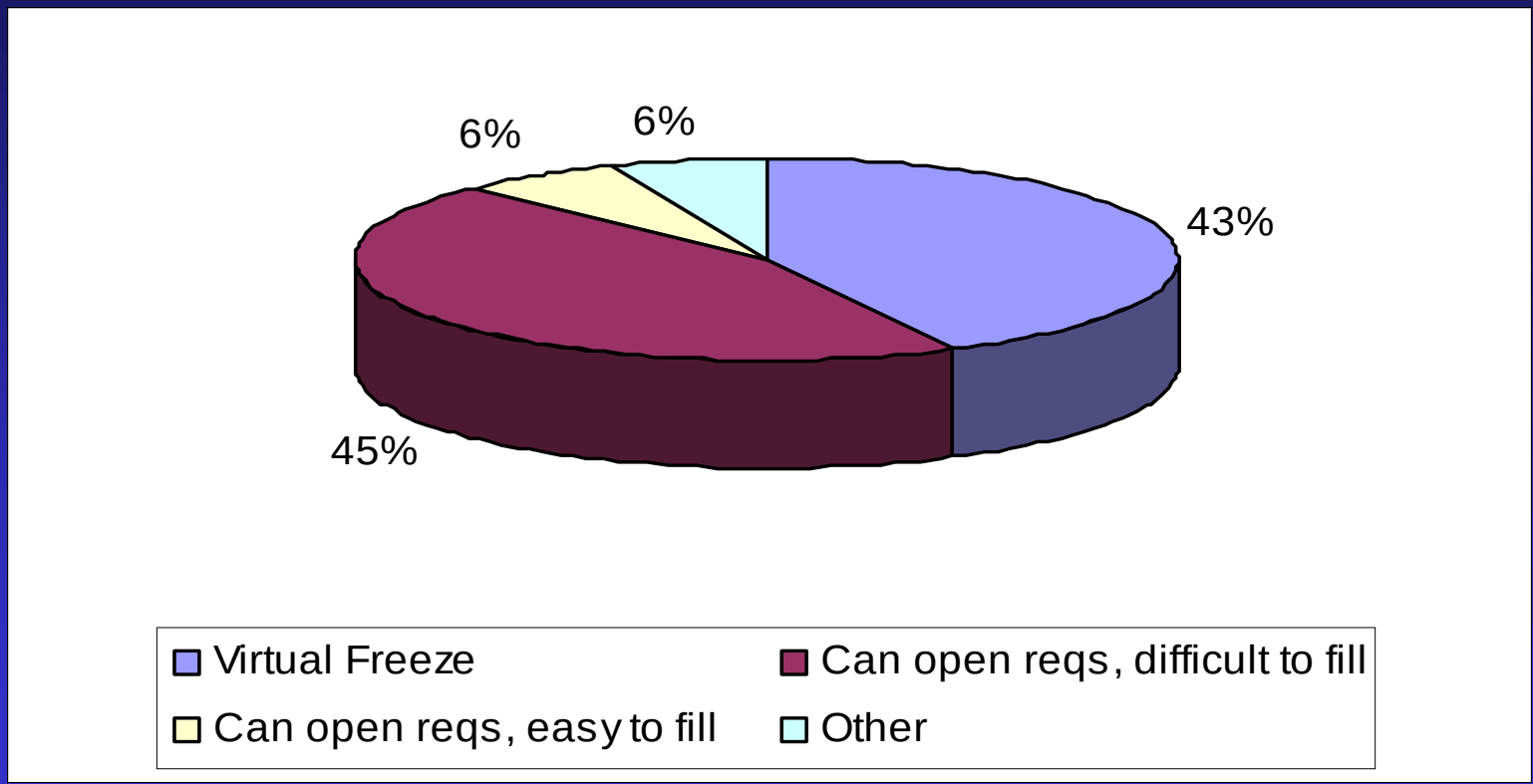
Position of Networking within your Company



Source: Ashton, Metzler & Associates and Key3Media

Ability to add headcount



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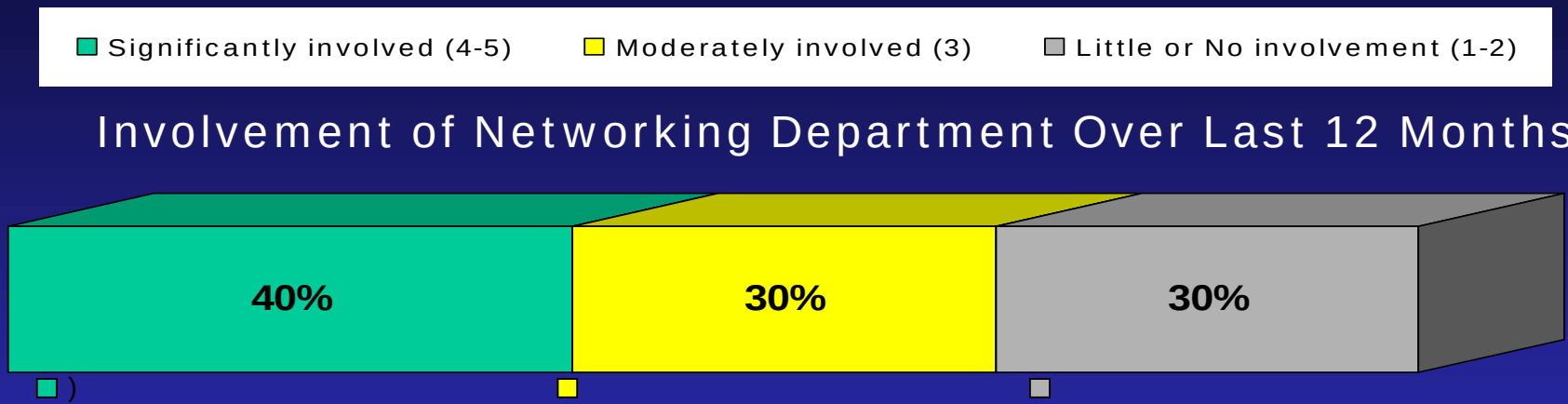
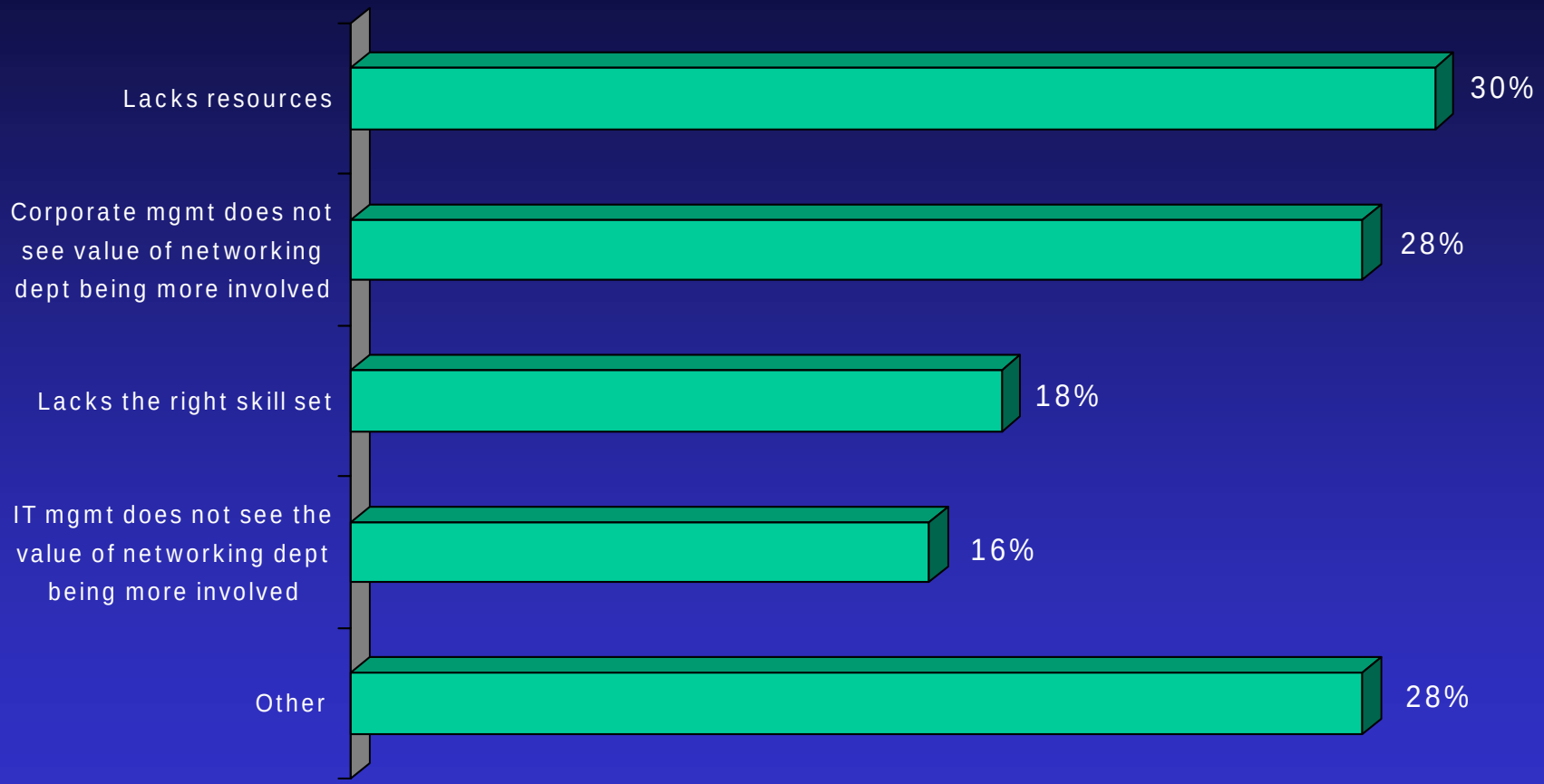
Involvement of Networking Department in eBusiness



Source: Ashton, Metzler & Associates and Key3Media

Reasons Networking Department is Not More Involved



Source: Ashton, Metzler & Associates and Key3Media

How has the movement to eBusiness affected the jobs of Networking professionals?

Created more opportunities for me	48%
No affect	40%
Made my job better	6%
Left me with fewer opportunities	4%
Made my job worse	2%
Threatened my job	1%

Source: Ashton, Metzler & Associates and Key3Media

Where we are Heading: The Changing Role of the Networking Professional

- The role of the networking professional is steadily and irreversibly changing. For example, networking professionals are increasingly:
  - Spending more of their time with the senior management of their companies
  - Spending more of their time managing their vendors
  - Focused on technologies at all layers of the OSI protocol stack

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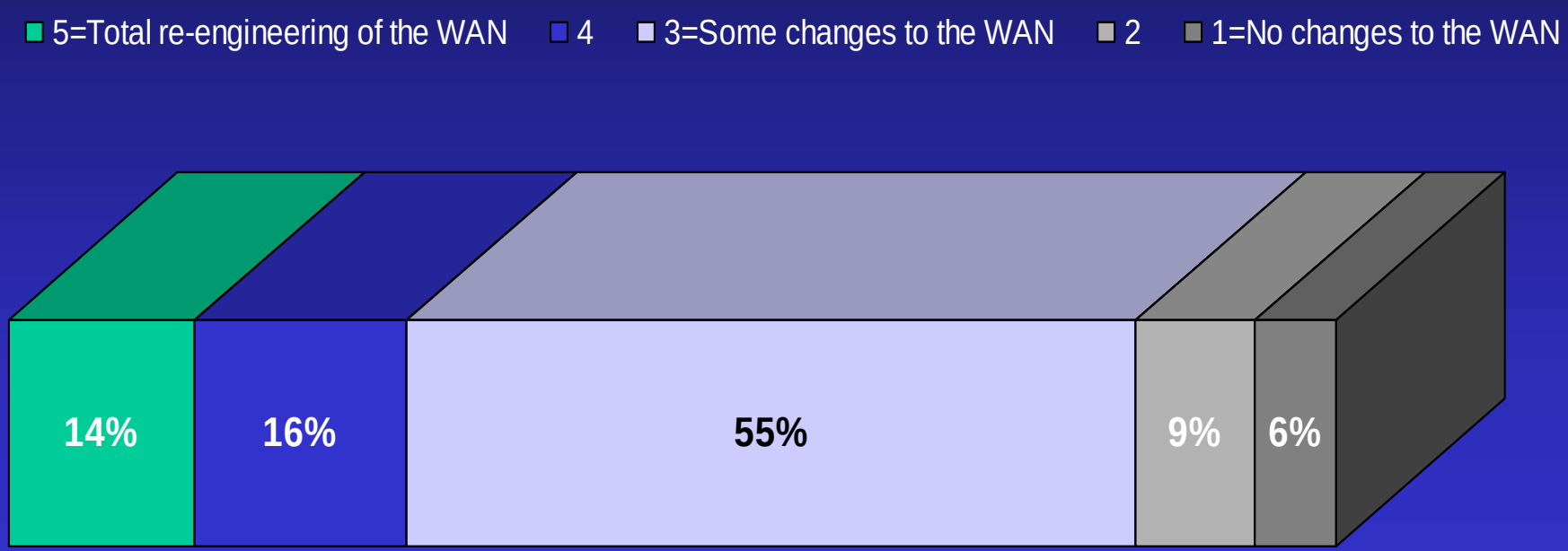
Change to WAN Infrastructure

85% report their company plans on making at least some changes to their WAN infrastructure over the next year

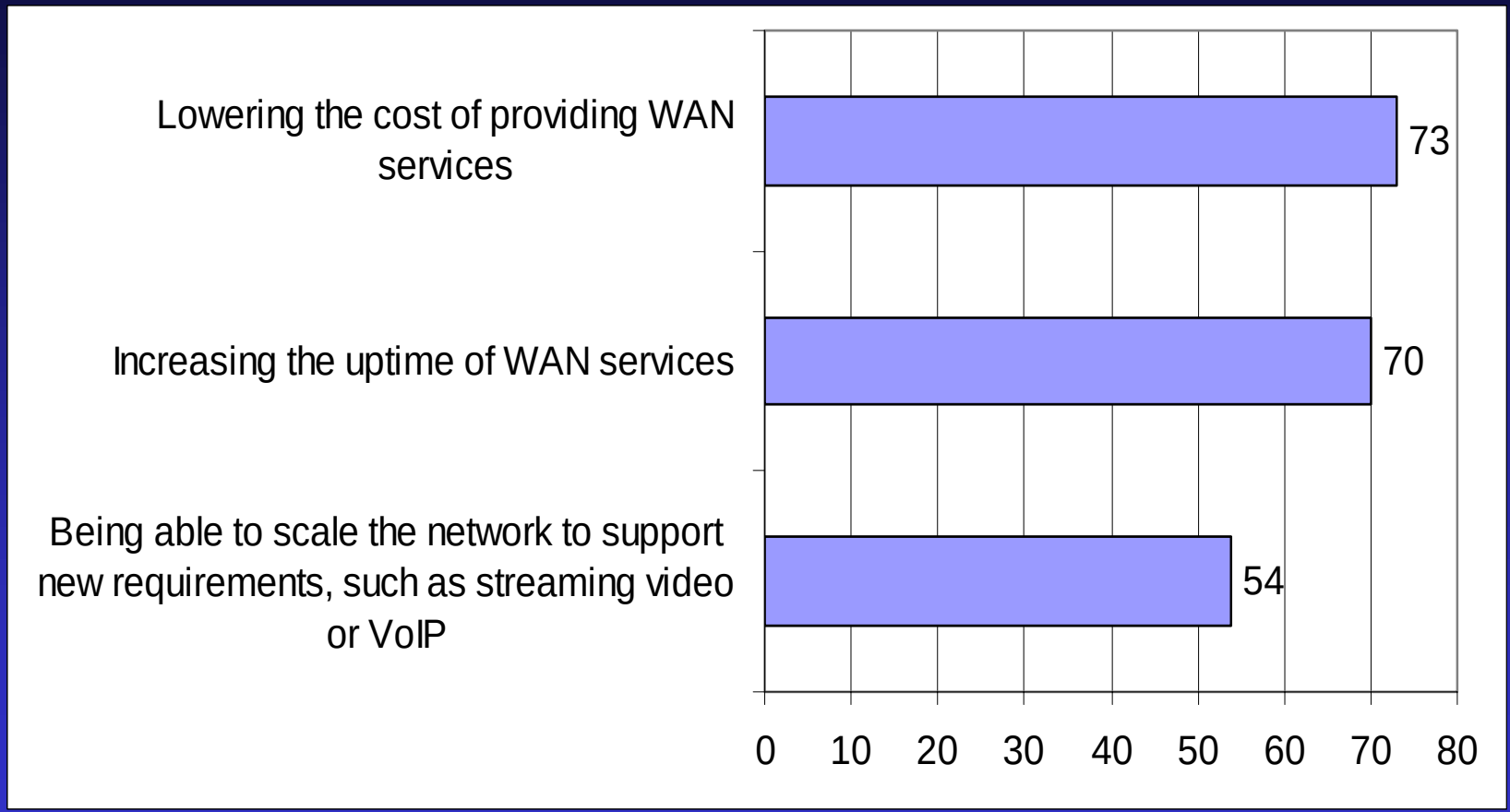


Source: Ashton, Metzler & Associates and Key3Media

Observation

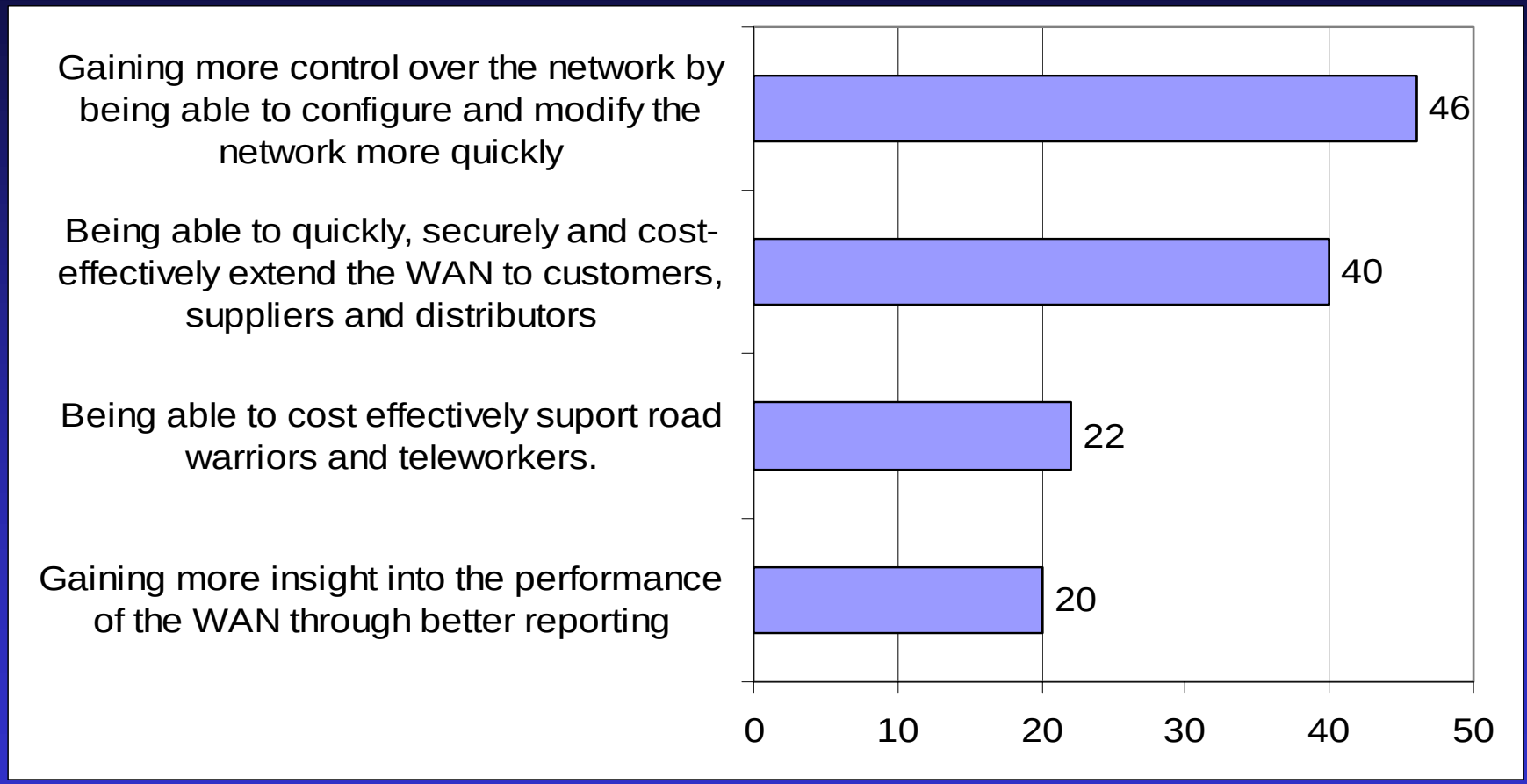
- When the survey respondents were asked how much of a given technology, such as Frame Relay or ATM, they currently had in their network, typically around 10% answered “Don’t Know”.
- However, when asked how much of those technologies they would be using a year from now, the percentage of “Don’t Know” jumped to between twenty and thirty percent.

Most Important Issue Driving the Updating of WAN Infrastructure (1 of 2)



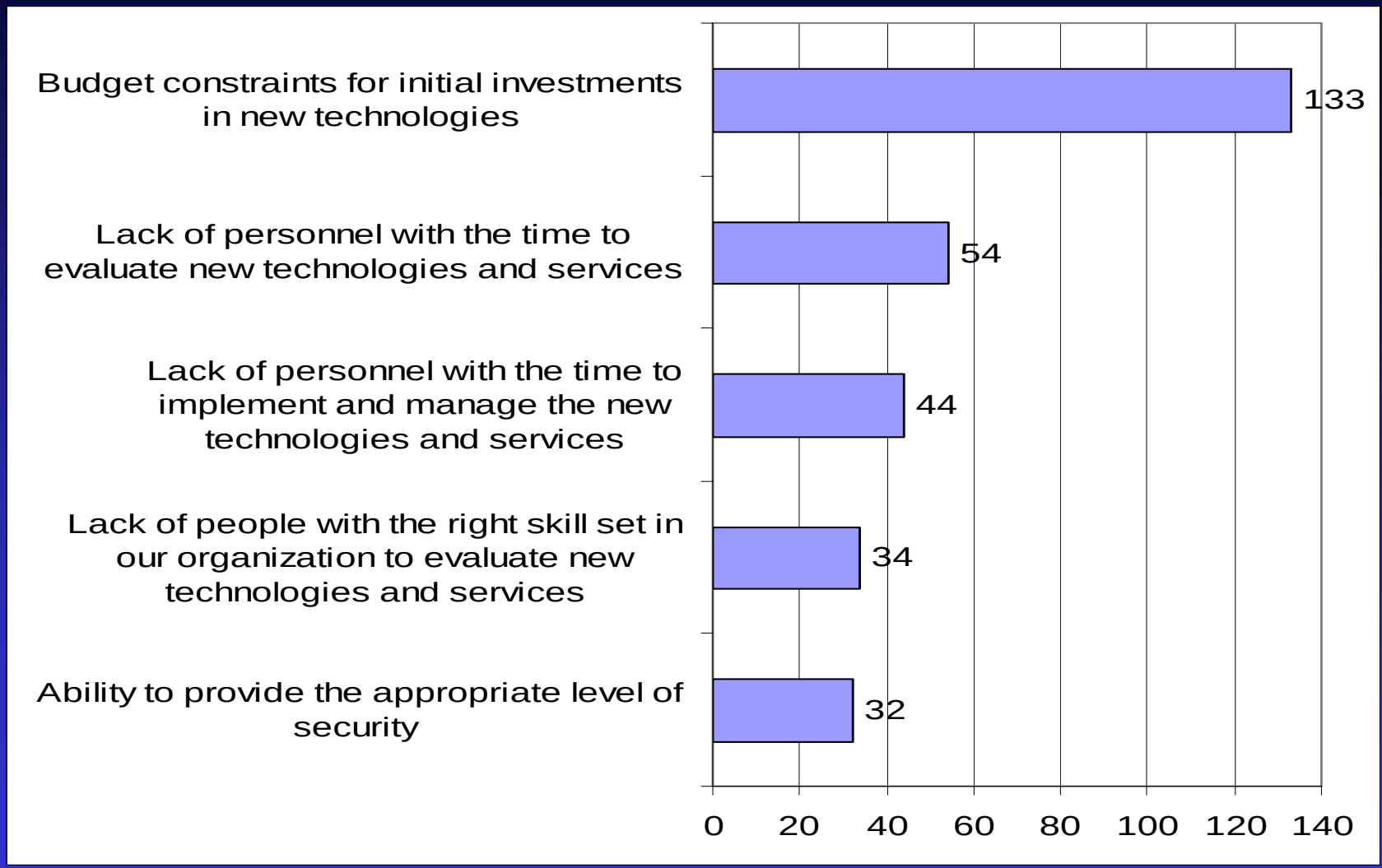
Source: Ashton, Metzler & Associates and Key3Media

Most Important Issue Driving the Updating of WAN Infrastructure (2 of 2)



Source: Ashton, Metzler & Associates and Key3Media

Most Important Barrier to Efforts to Update WAN Infrastructure (1 of 2)



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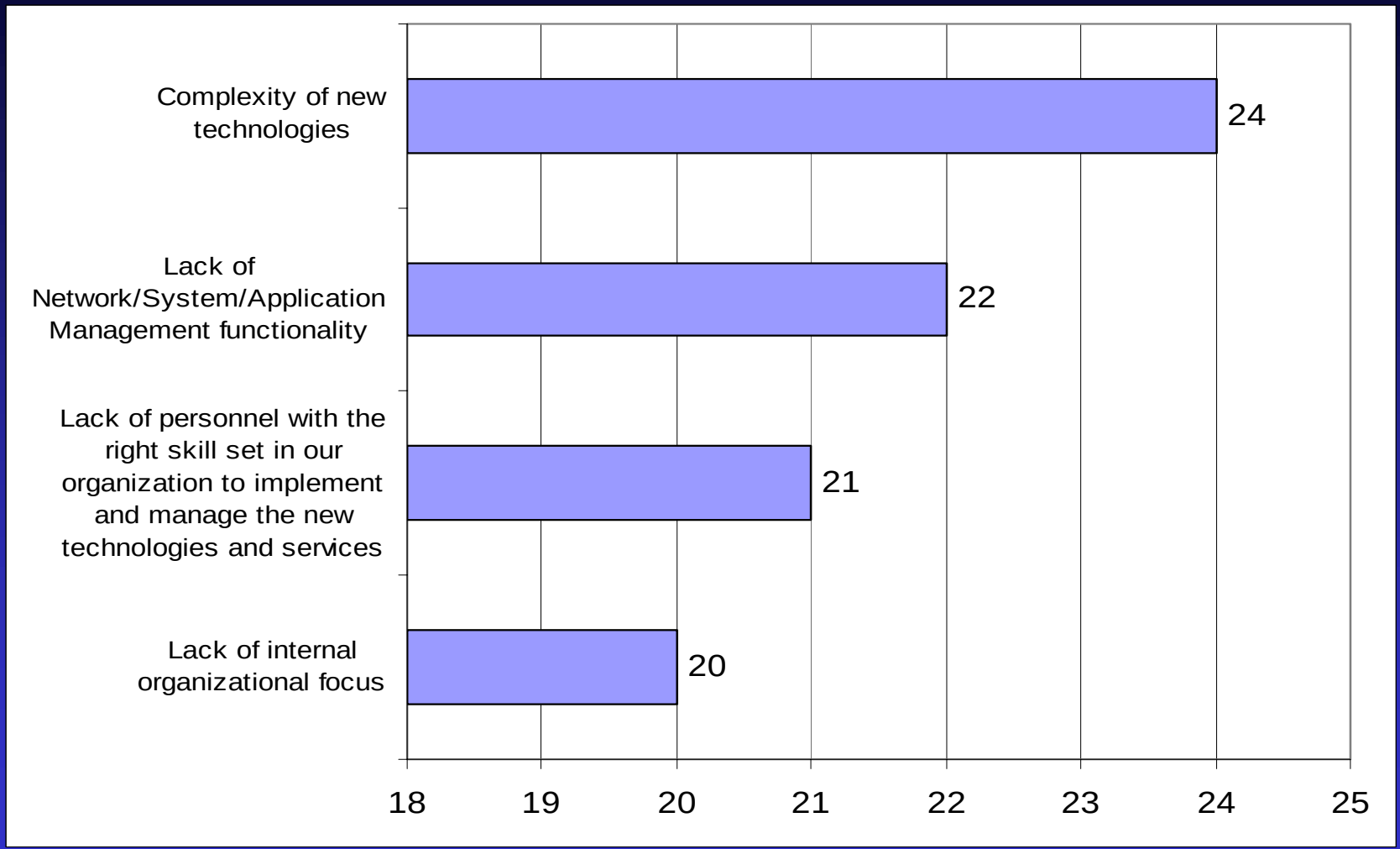
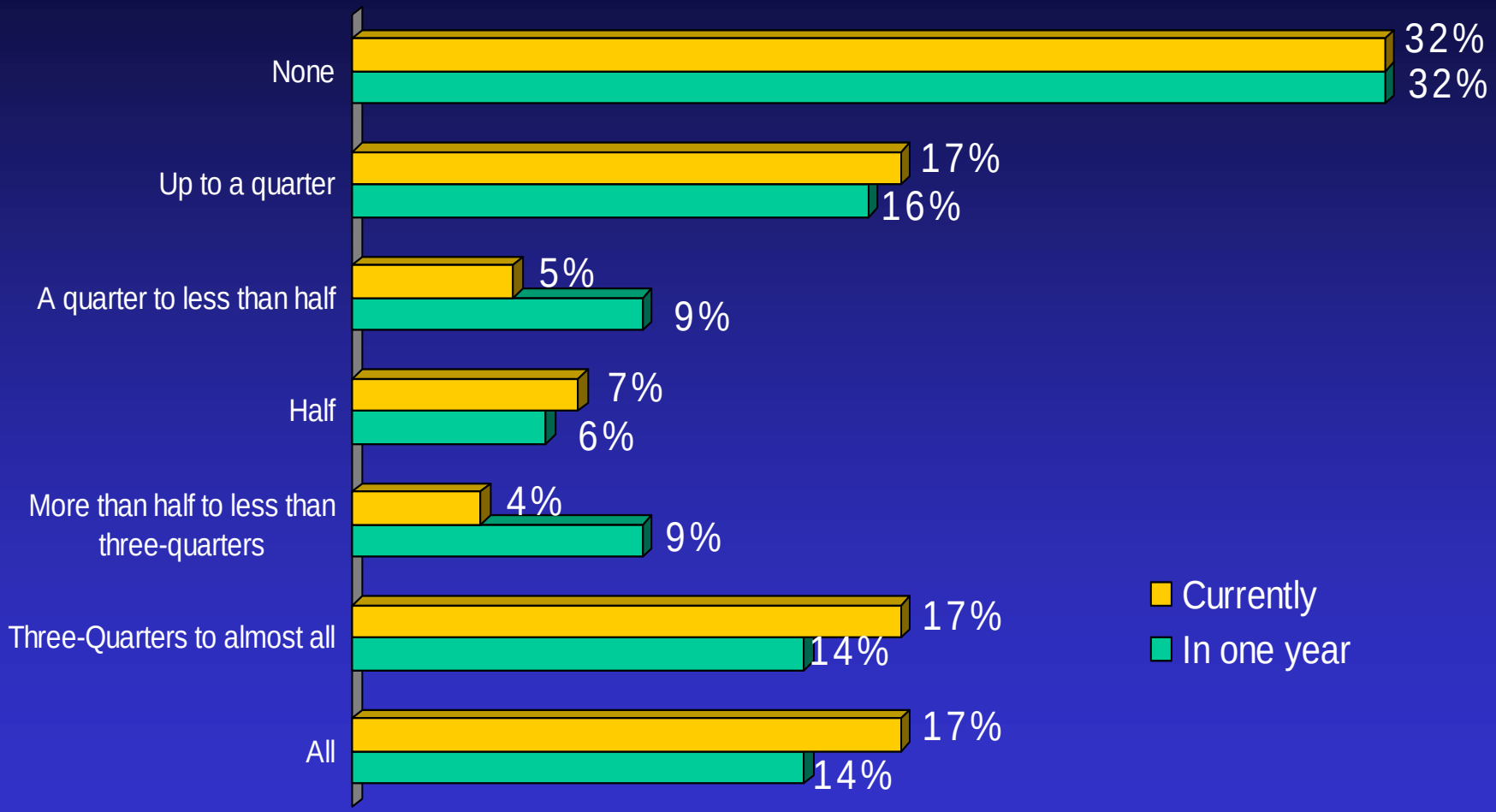
Most Important Barrier to Efforts to Update WAN Infrastructure (2 of 2)



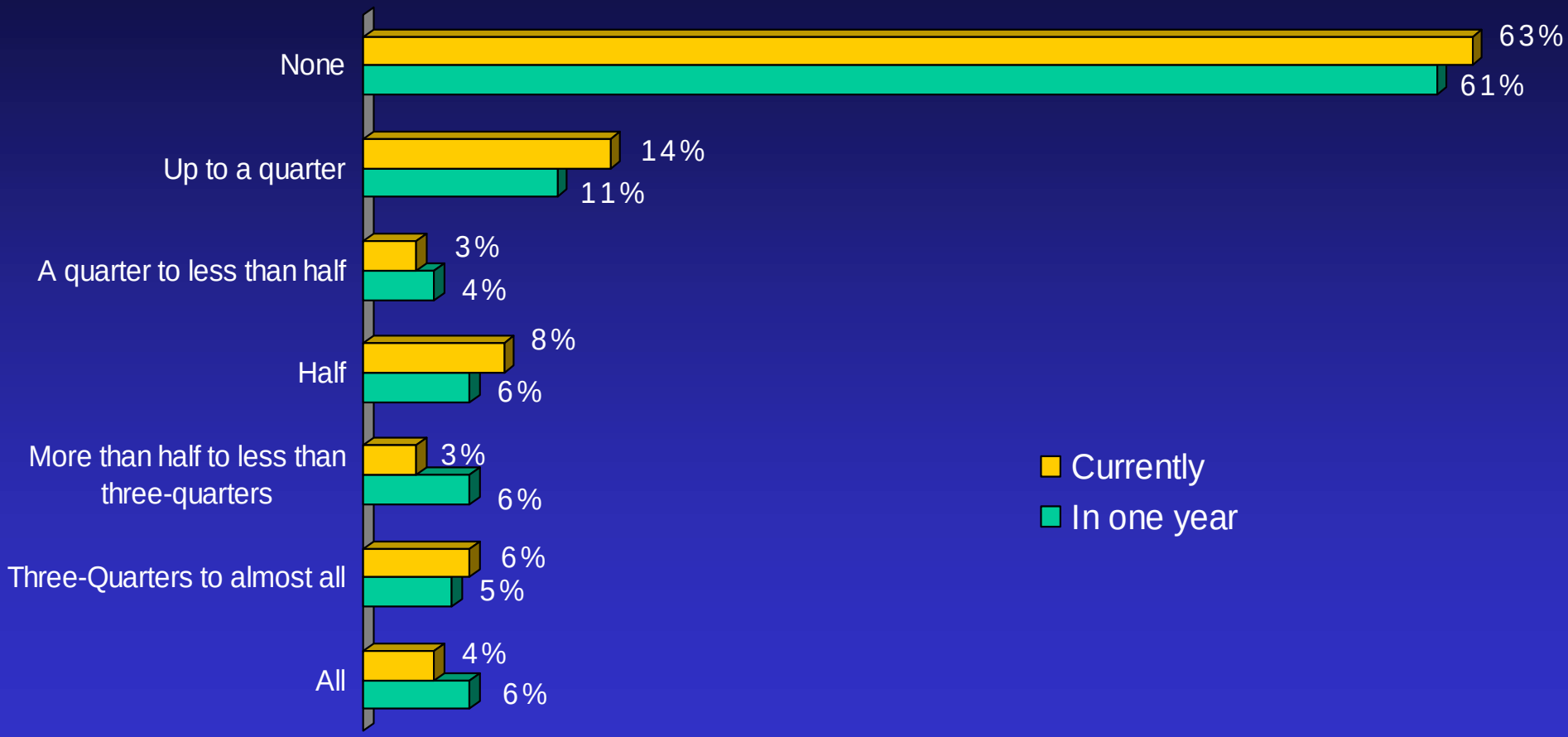
Source: Ashton, Metzler & Associates and Key3Media

Amount of Backbone WAN Provided by Frame Relay



Source: Ashton, Metzler & Associates and Key3Media

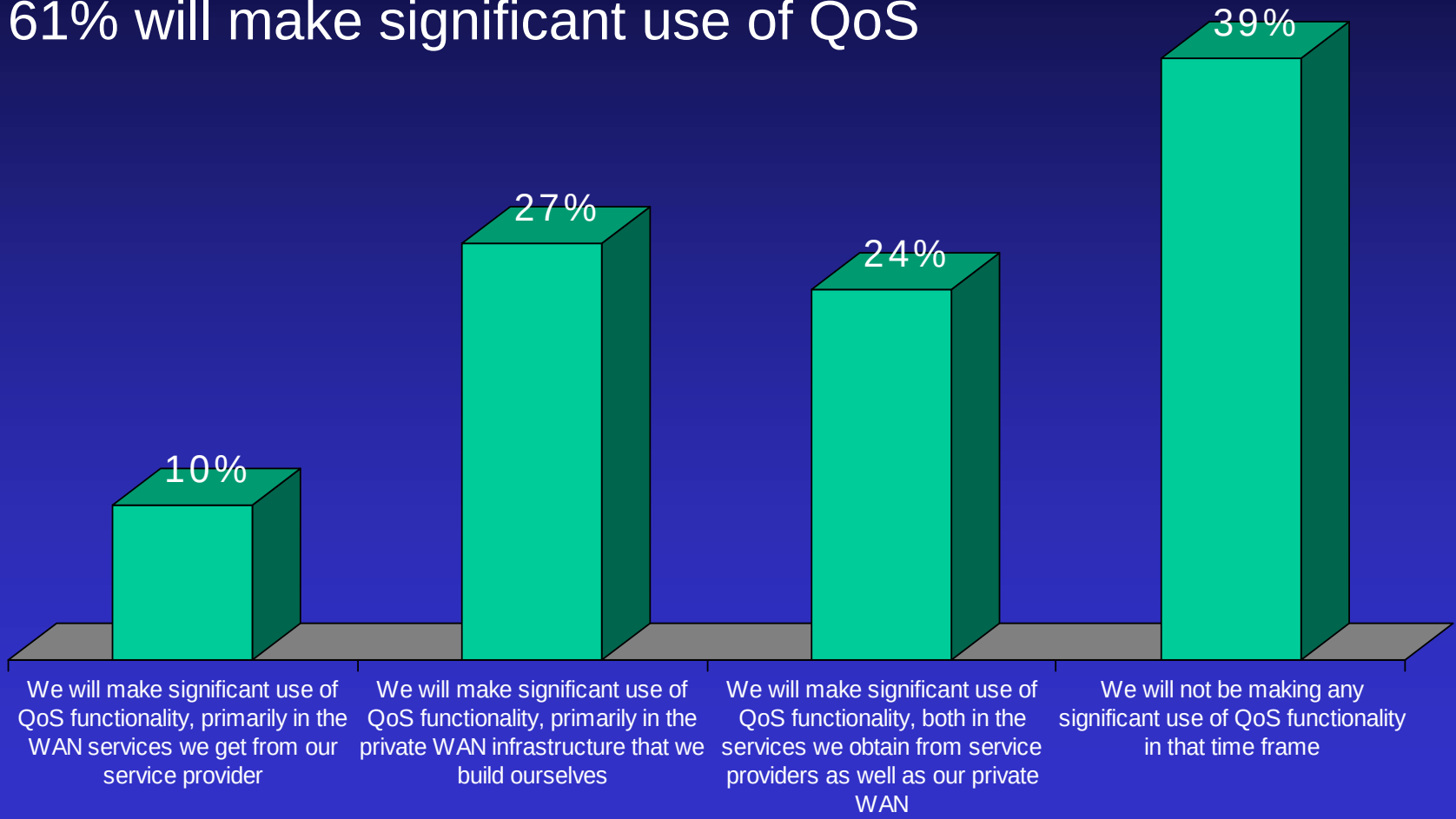
Amount of Backbone WAN Provided by ATM



Source: Ashton, Metzler & Associates and Key3Media

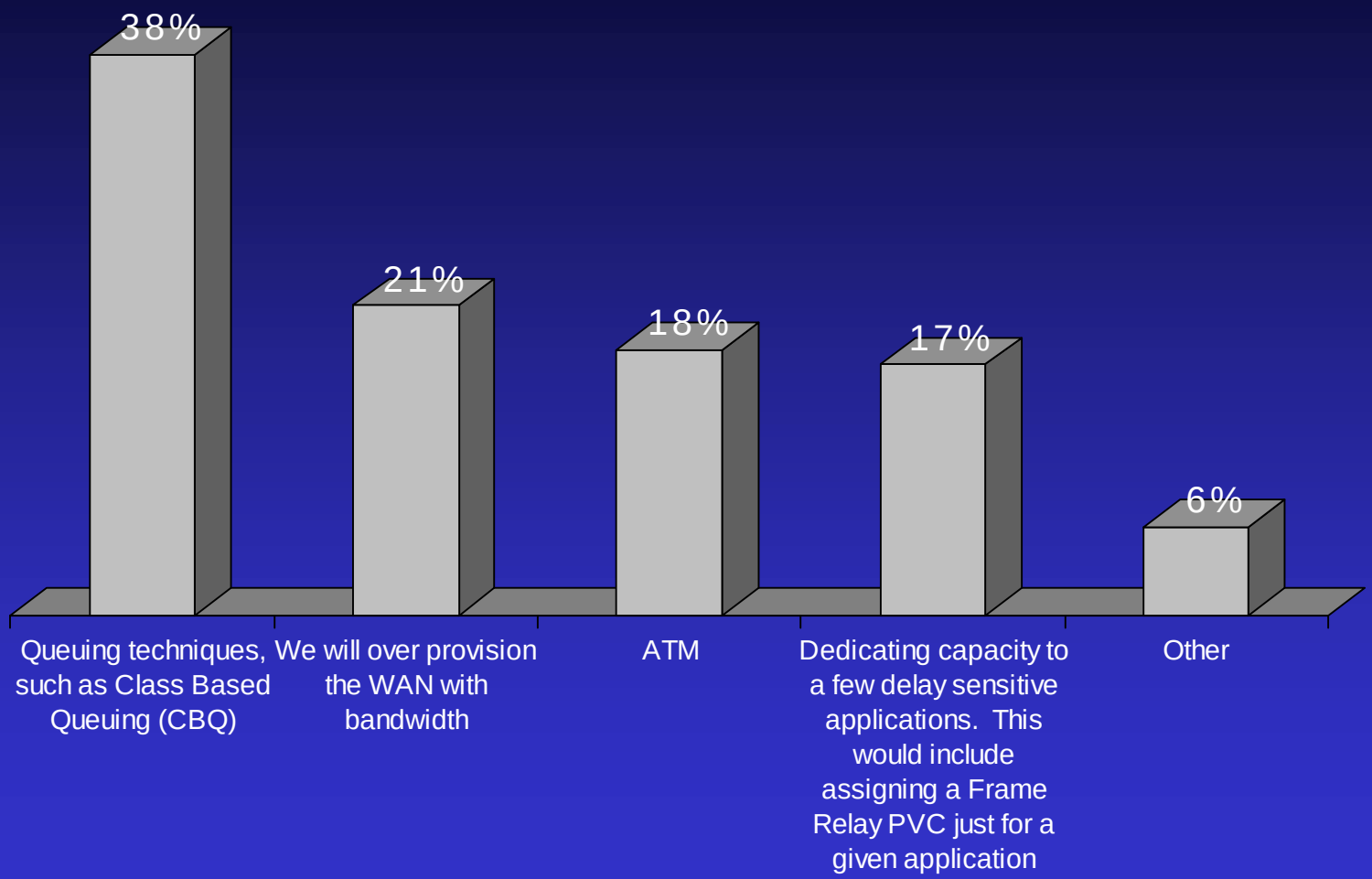
Use of QoS Functionality a Year From Now

61% will make significant use of QoS



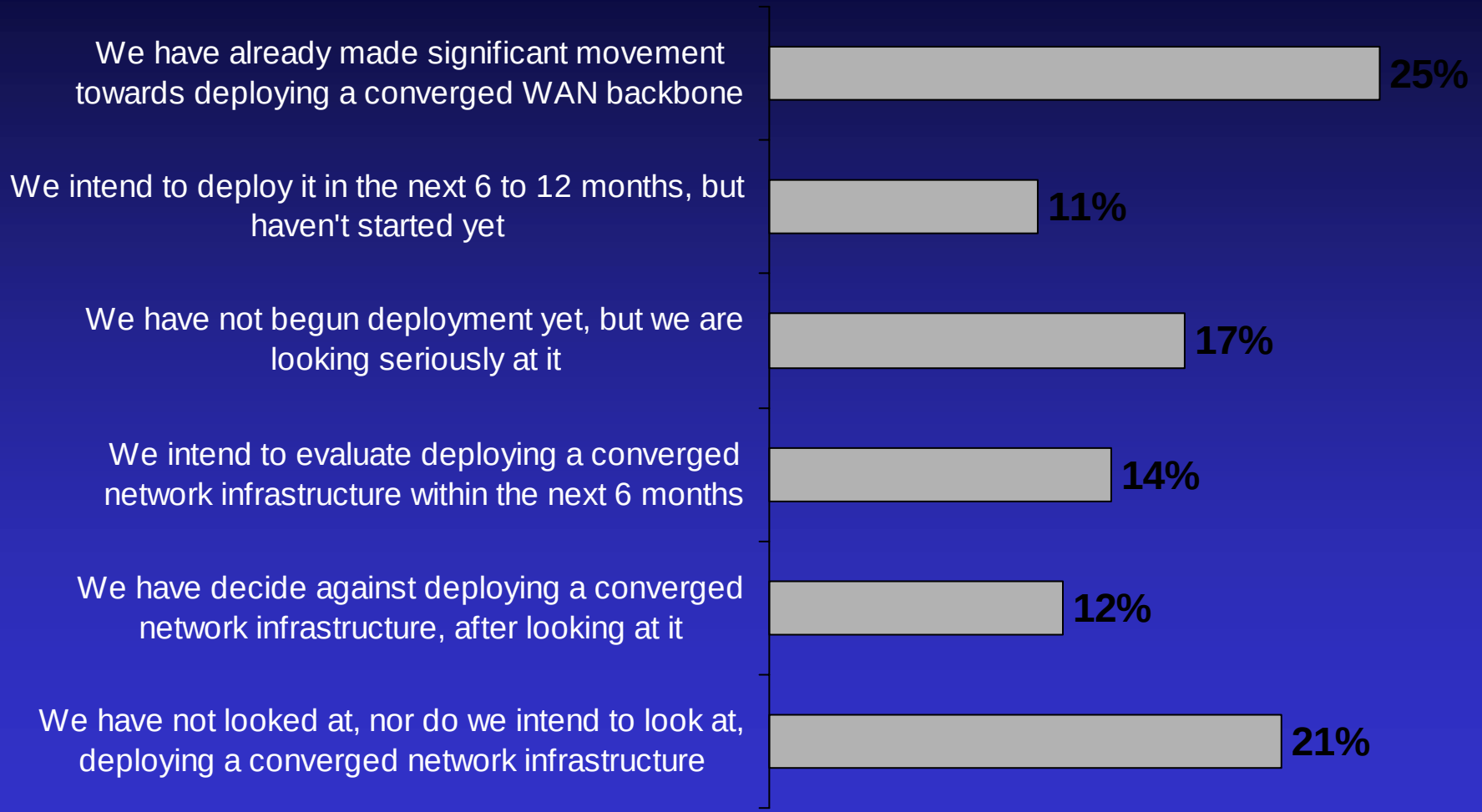
Source: Ashton, Metzler & Associates and Key3Media

Deploying QoS Functionality



Source: Ashton, Metzler & Associates and Key3Media

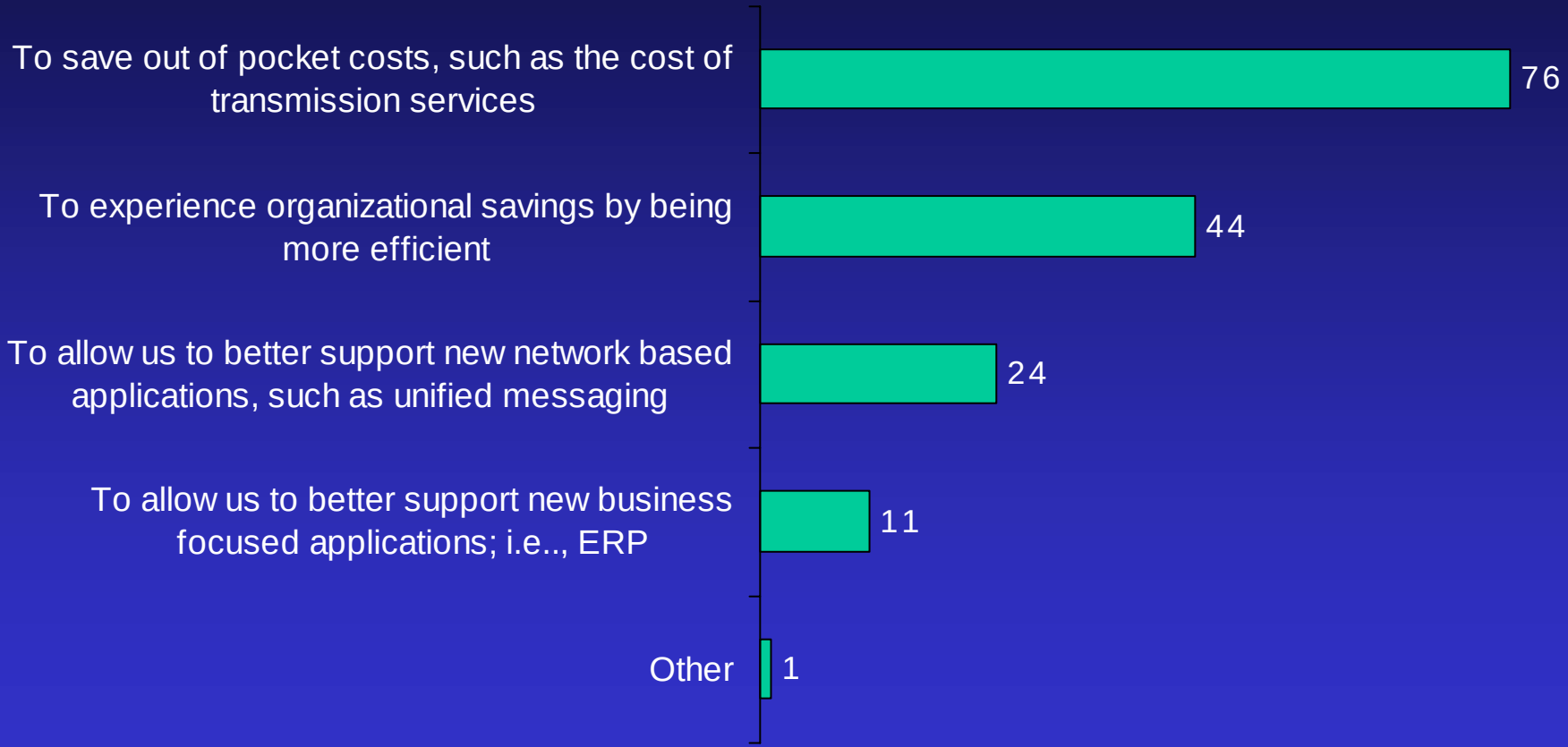
Deployment of Converged WAN Backbone



Source: Ashton, Metzler & Associates and Key3Media

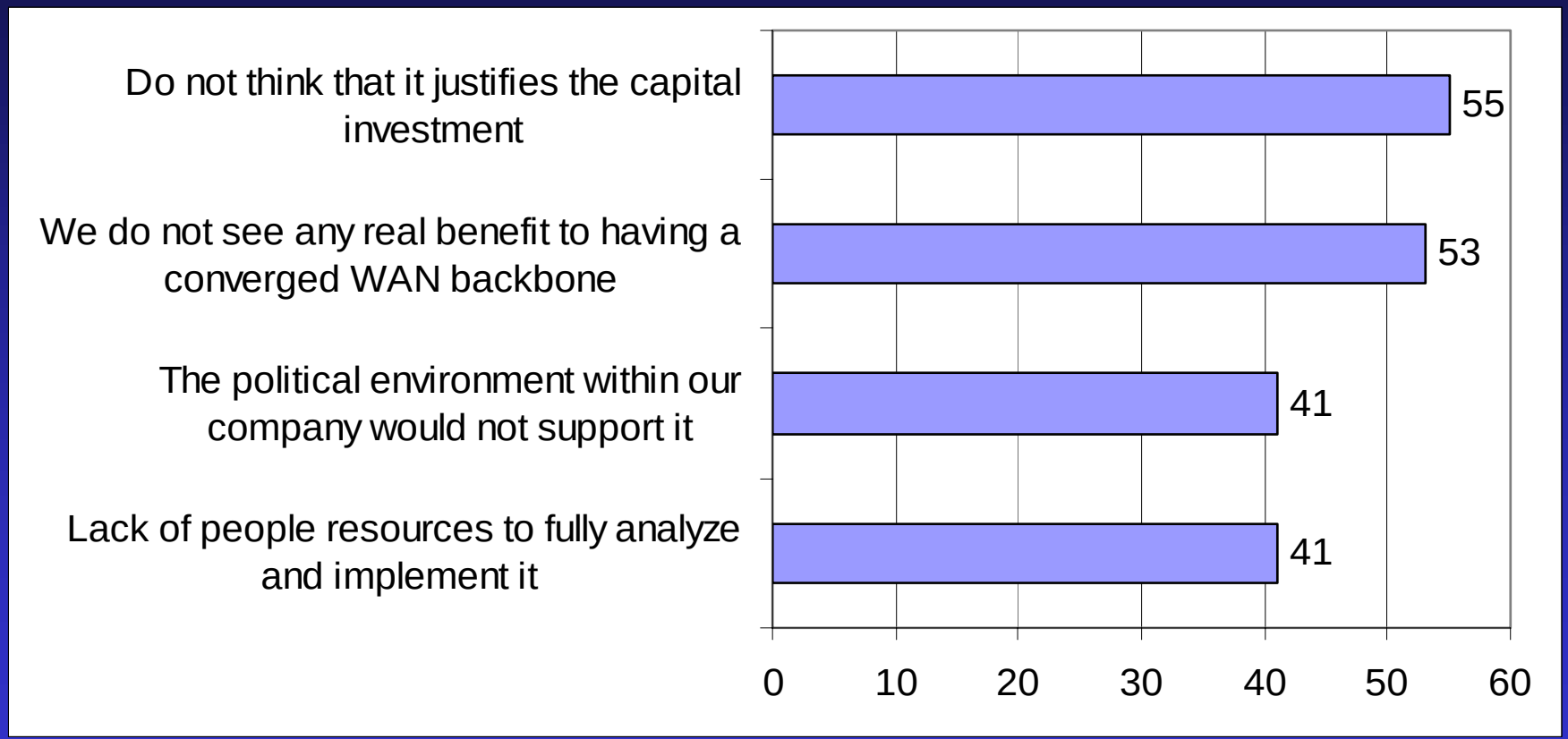
Most Important Issue Driving Deployment of Converged WAN Backbone

67% are deploying, planning to deploy, looking at deploying or evaluating deploying a converged WAN backbone. Of those…



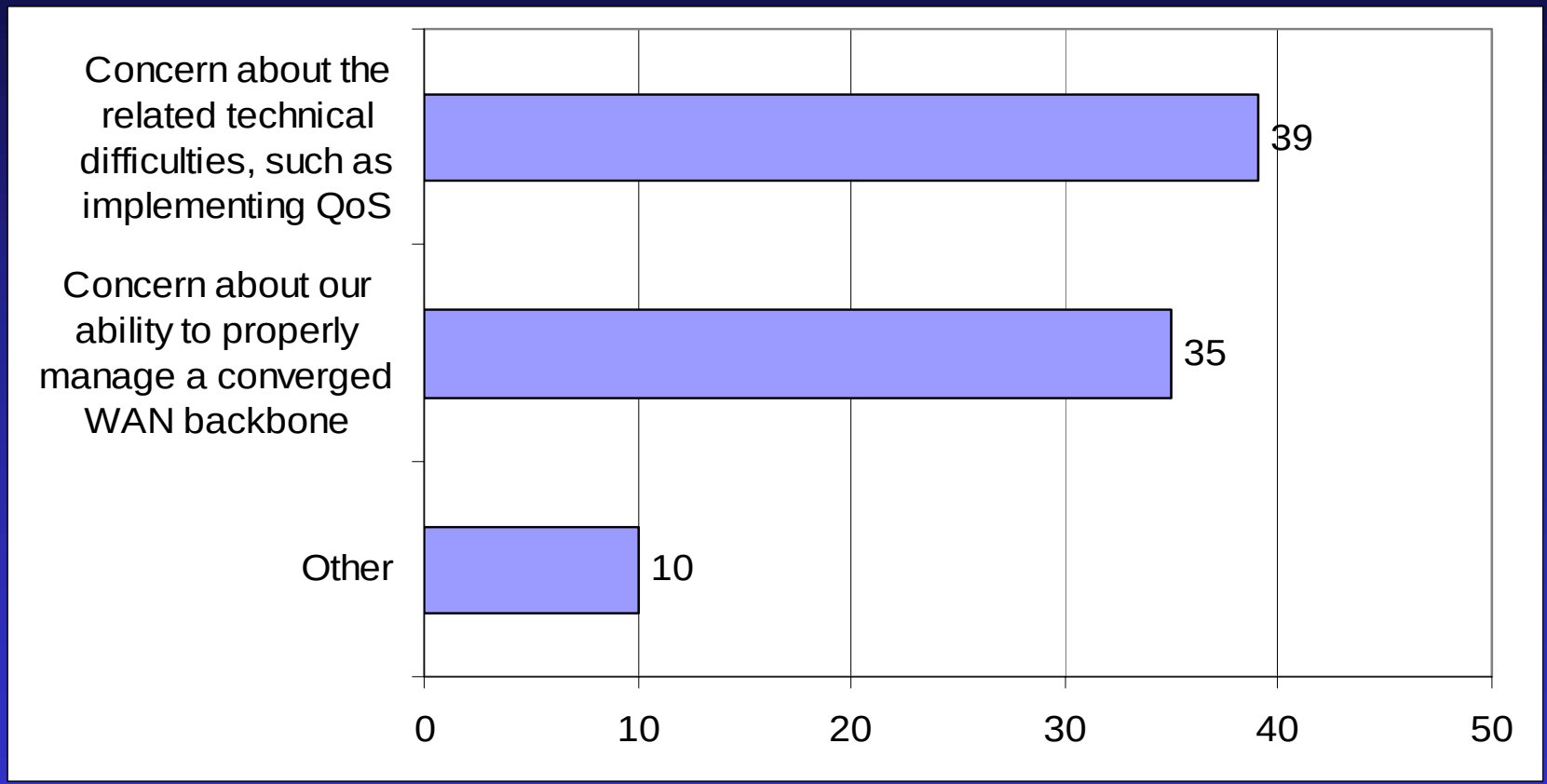
Source: Ashton, Metzler & Associates and Key3Media

Most Important Barrier to Efforts to Deploy a Converged WAN Backbone (1 of 2)



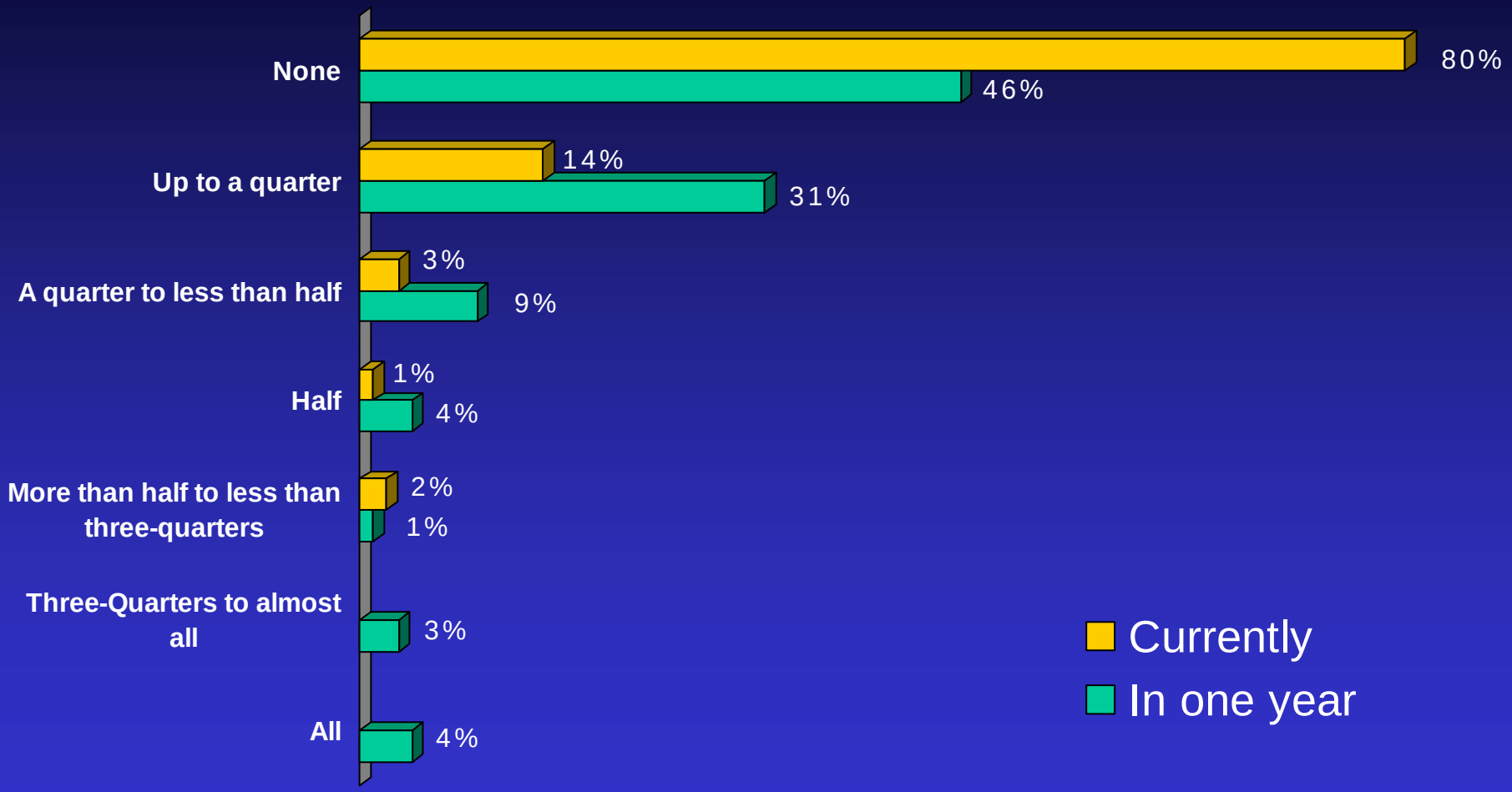
Source: Ashton, Metzler & Associates and Key3Media

Most Important Barrier to Efforts to Deploy a Converged WAN Backbone (2 of 2)



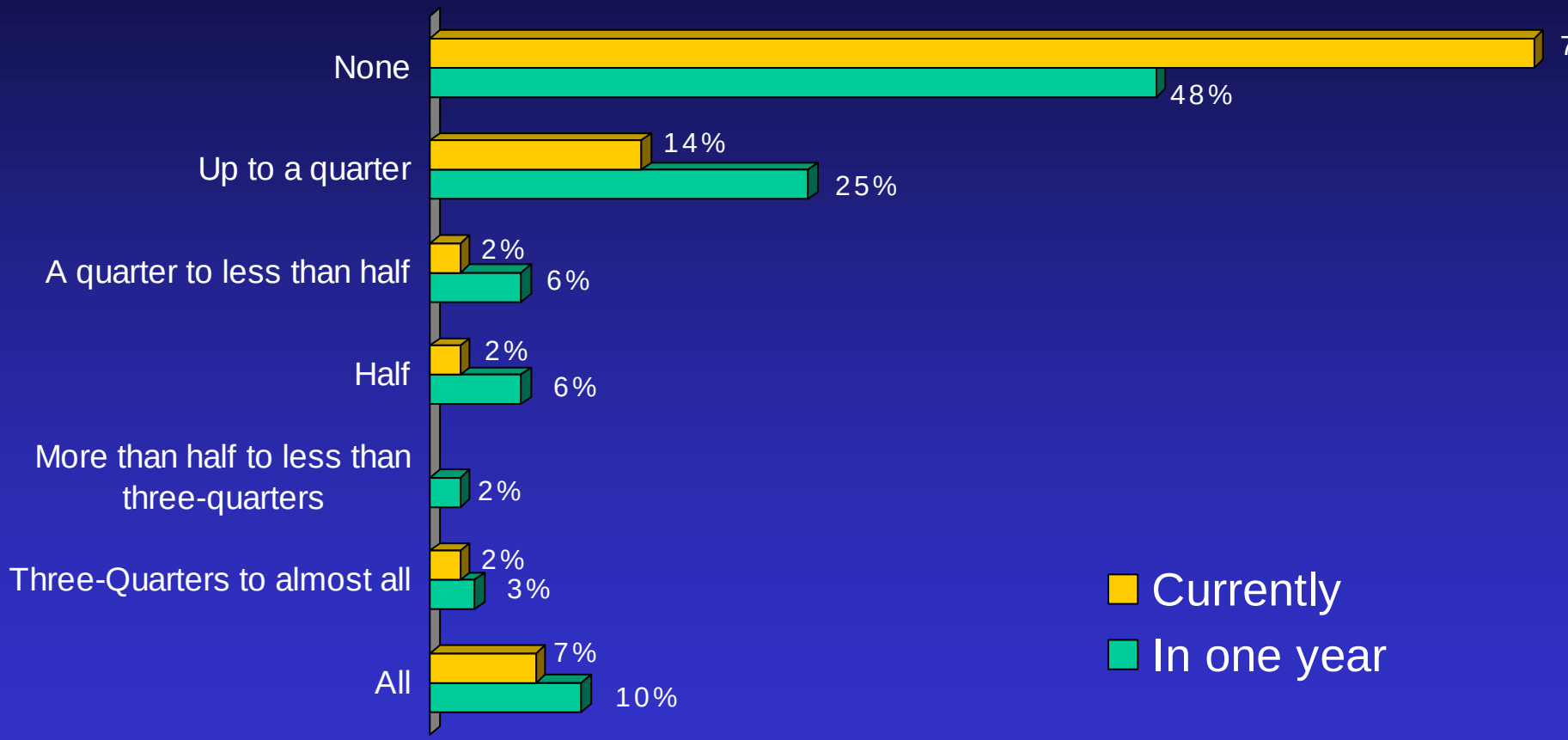
Source: Ashton, Metzler & Associates and Key3Media

Amount of Voice Traffic Carried Using VoIP Technologies



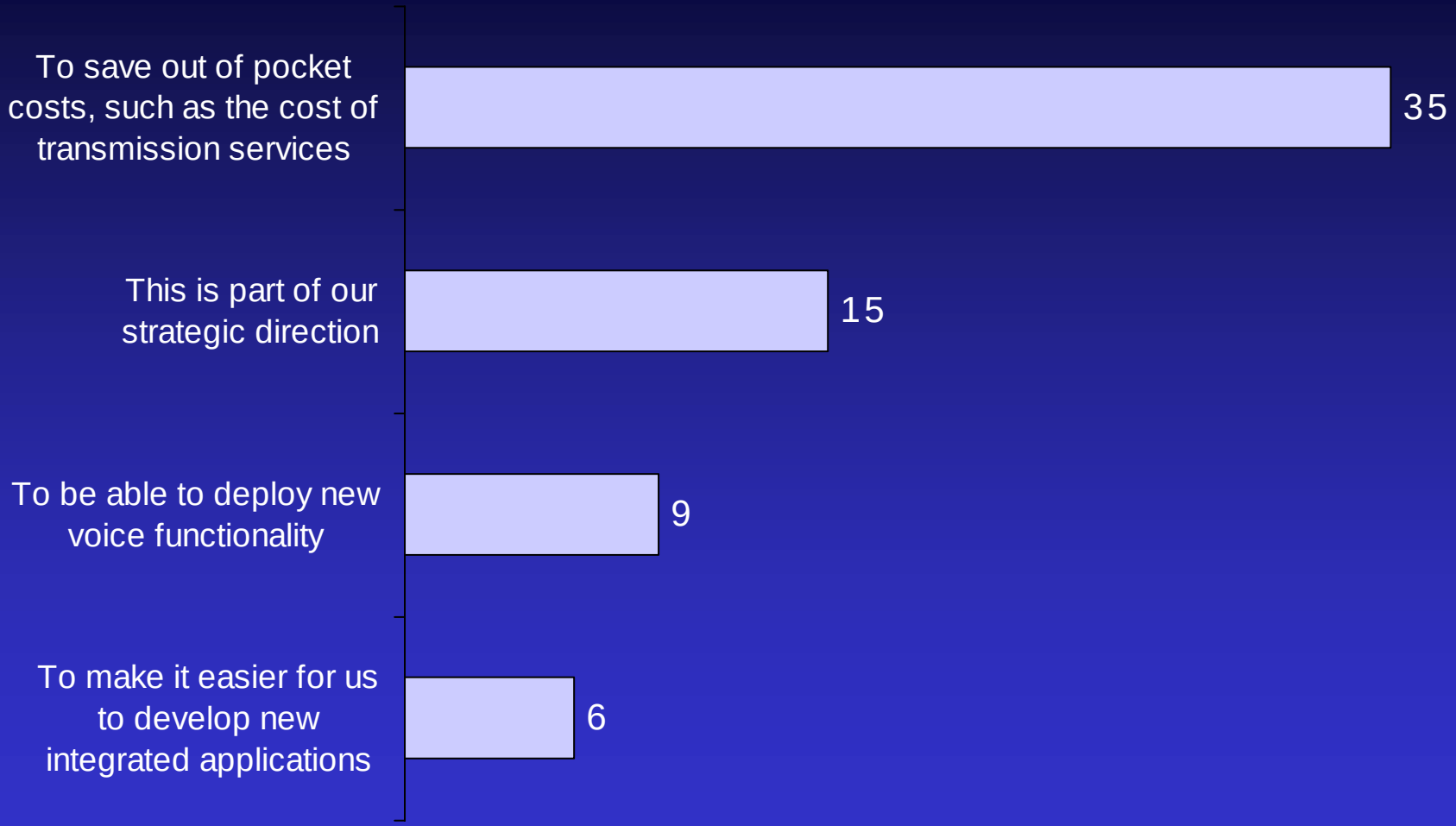
Source: Ashton, Metzler & Associates and Key3Media

Amount of Voice Traffic Using VoIP Run Over Private IP Network



Source: Ashton, Metzler & Associates and Key3Media

Most Important Issues Driving Deployment of VoIP



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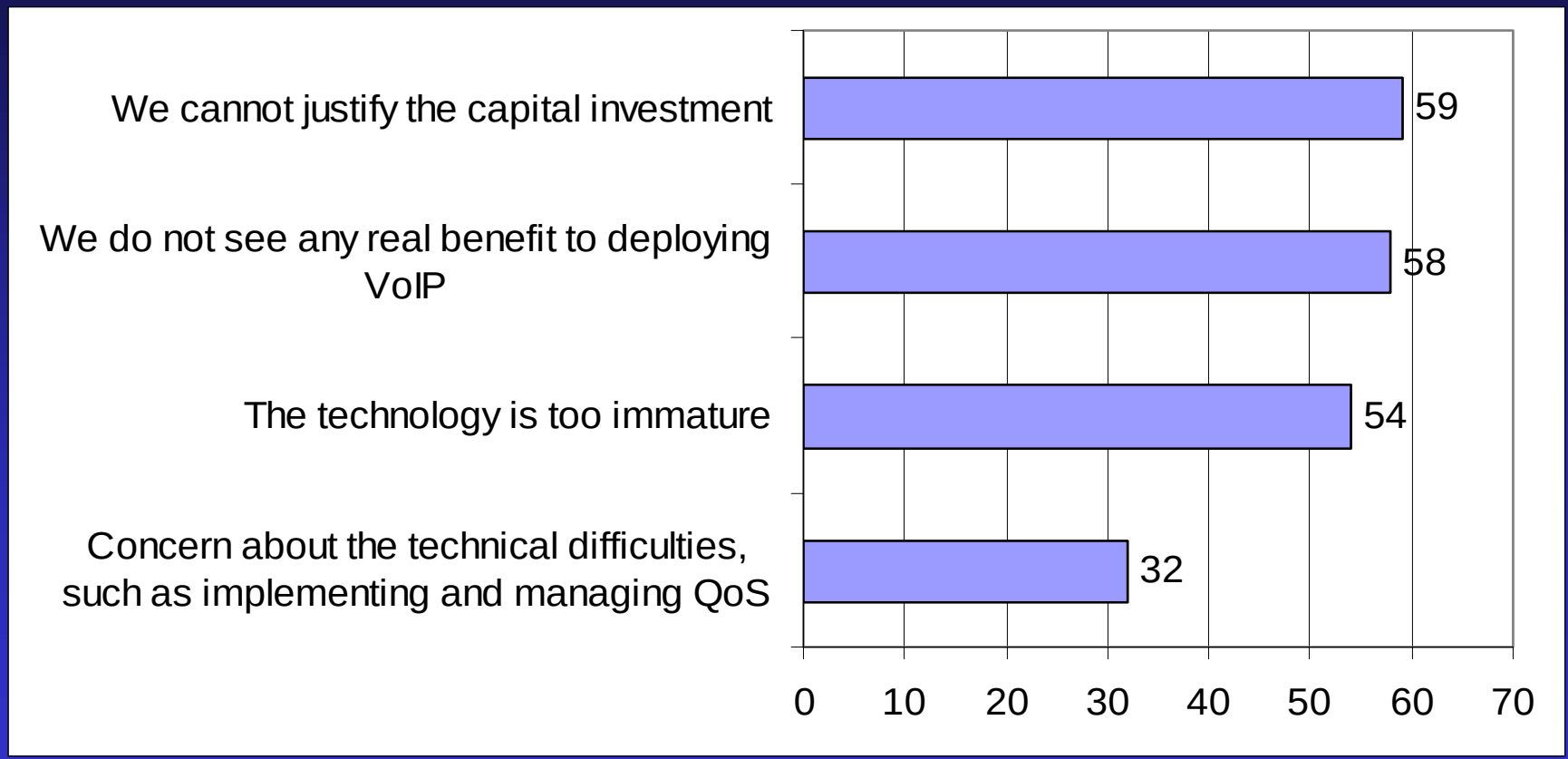
Most Important Barrier to Efforts to Deploy VoIP (1 of 2)



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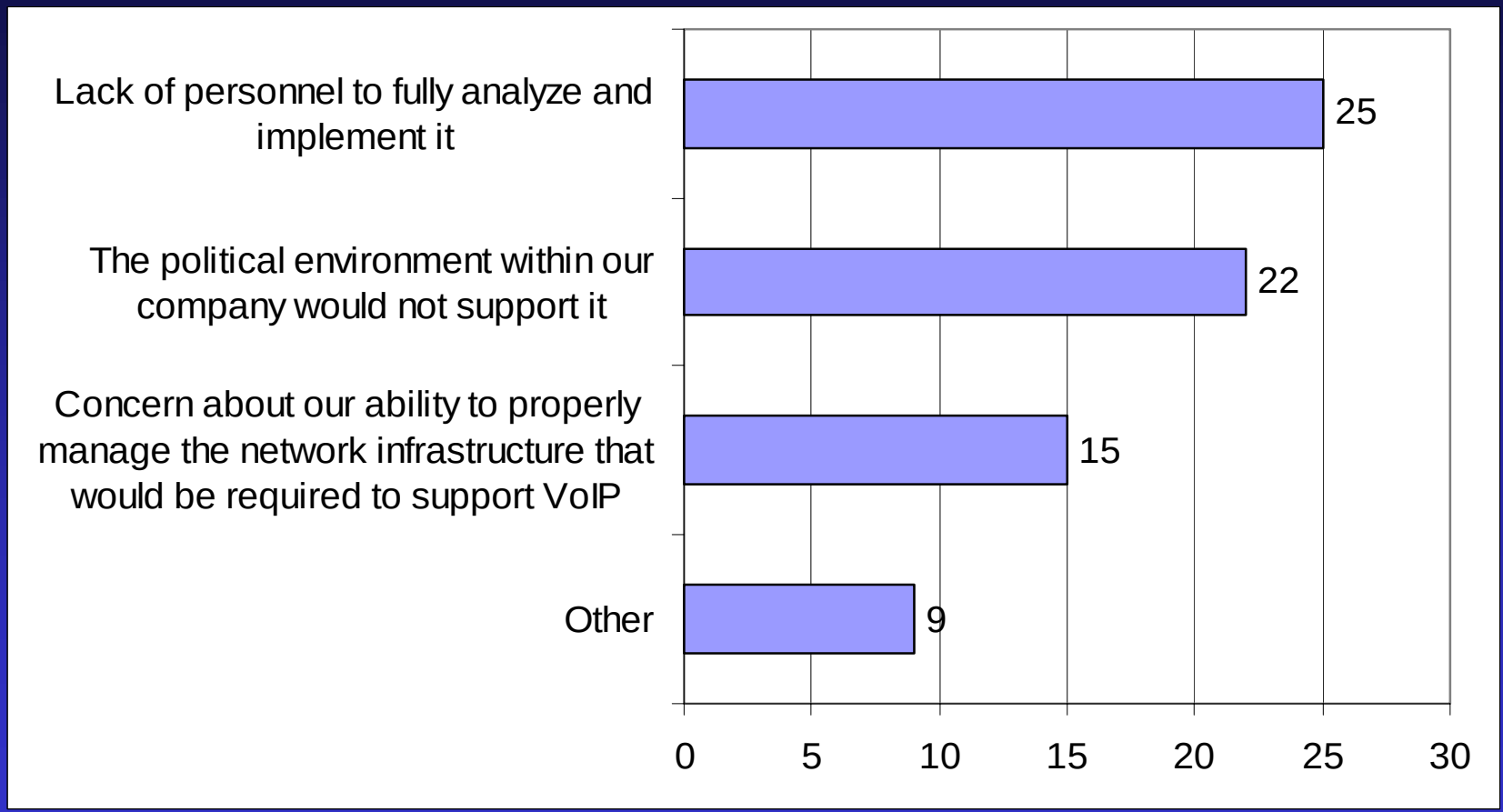
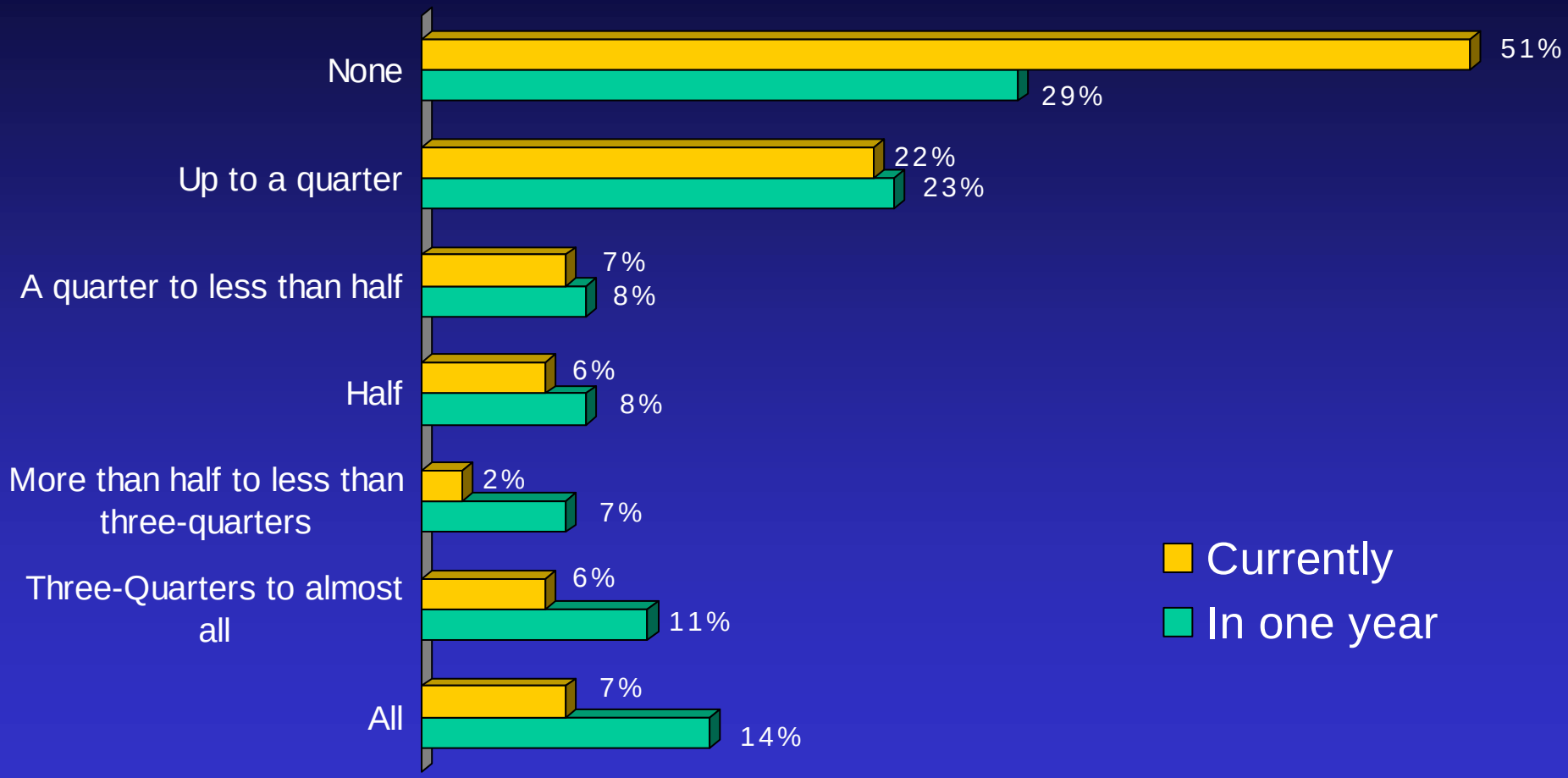
Most Important Barrier to Efforts to Deploy VoIP (2 of 2)



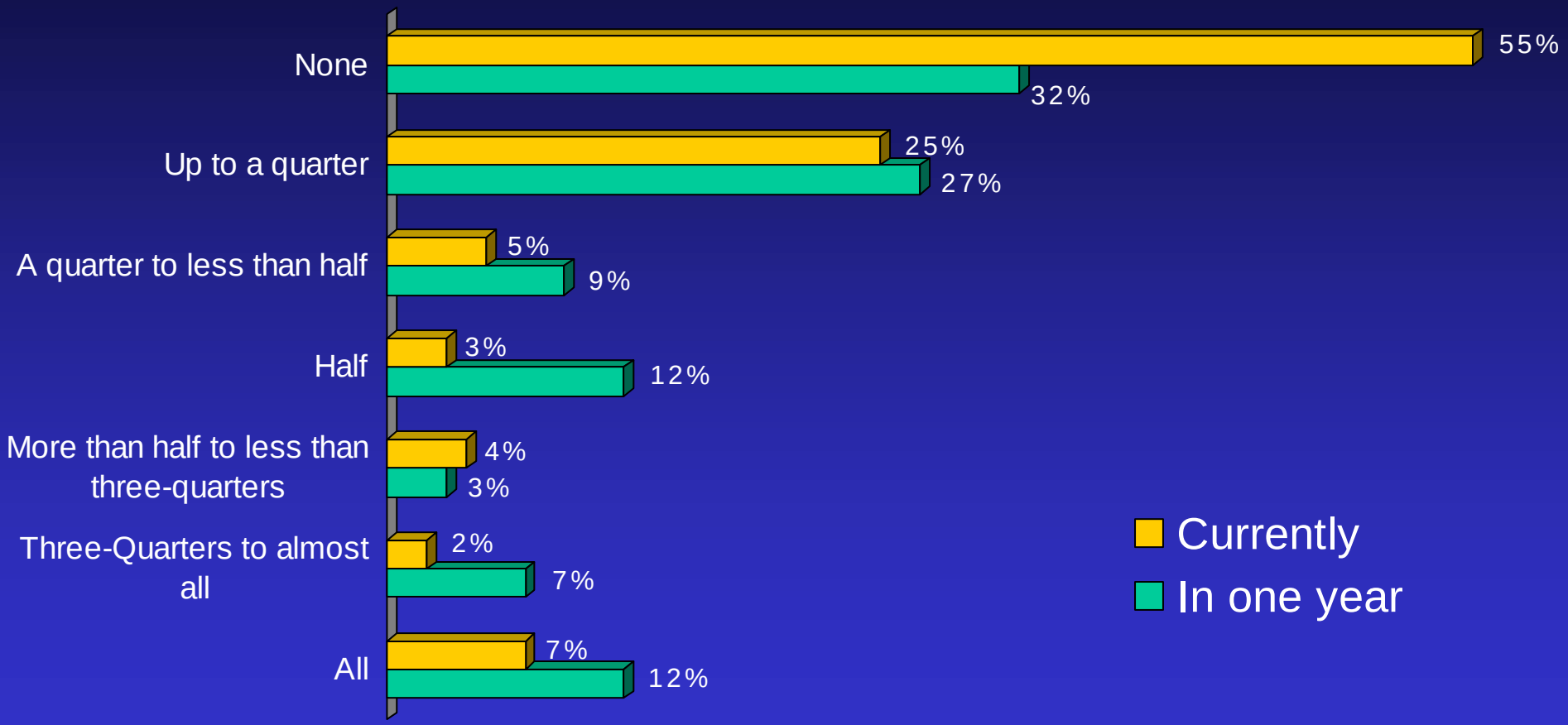
Source: Ashton, Metzler & Associates and Key3Media

Amount of Dial-Up Remote Access Requirements Being Met by VPN



Source: Ashton, Metzler & Associates and Key3Media

Amount of Site-to-site connectivity Requirements Being Met by IP-based VPN



Source: Ashton, Metzler & Associates and Key3Media

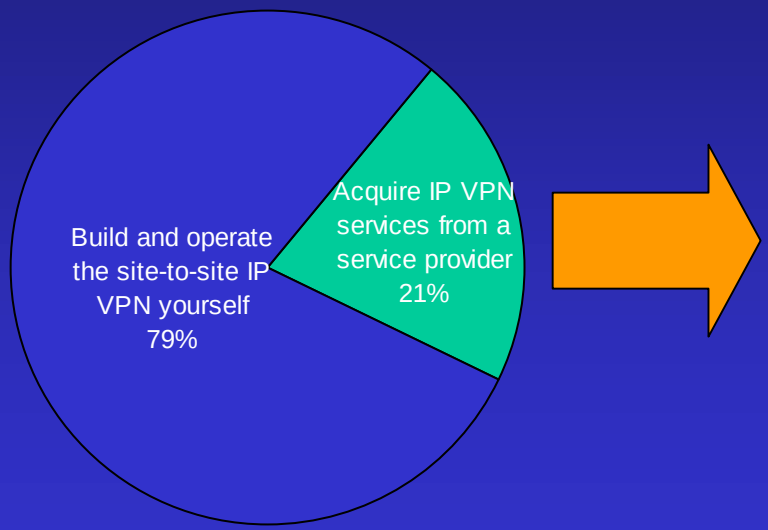
Site-to-site IP Based VPNs A Year From Now

Site-to-site IP VPN will be…

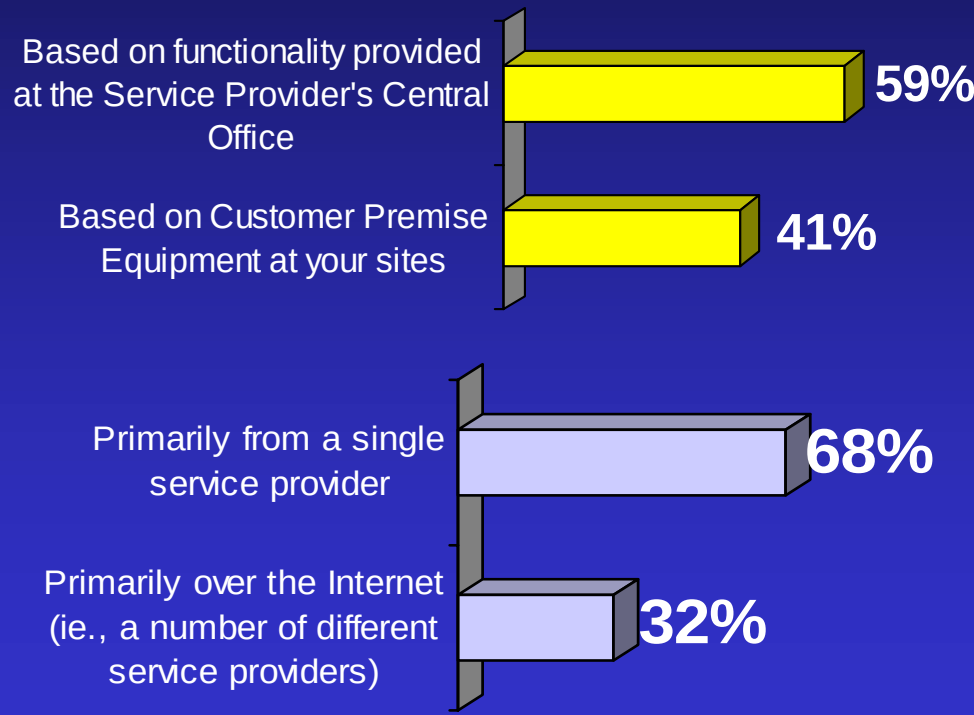
Based on Ipsec = 90%

Based on MPLS = 10%

Is your organization more likely to…

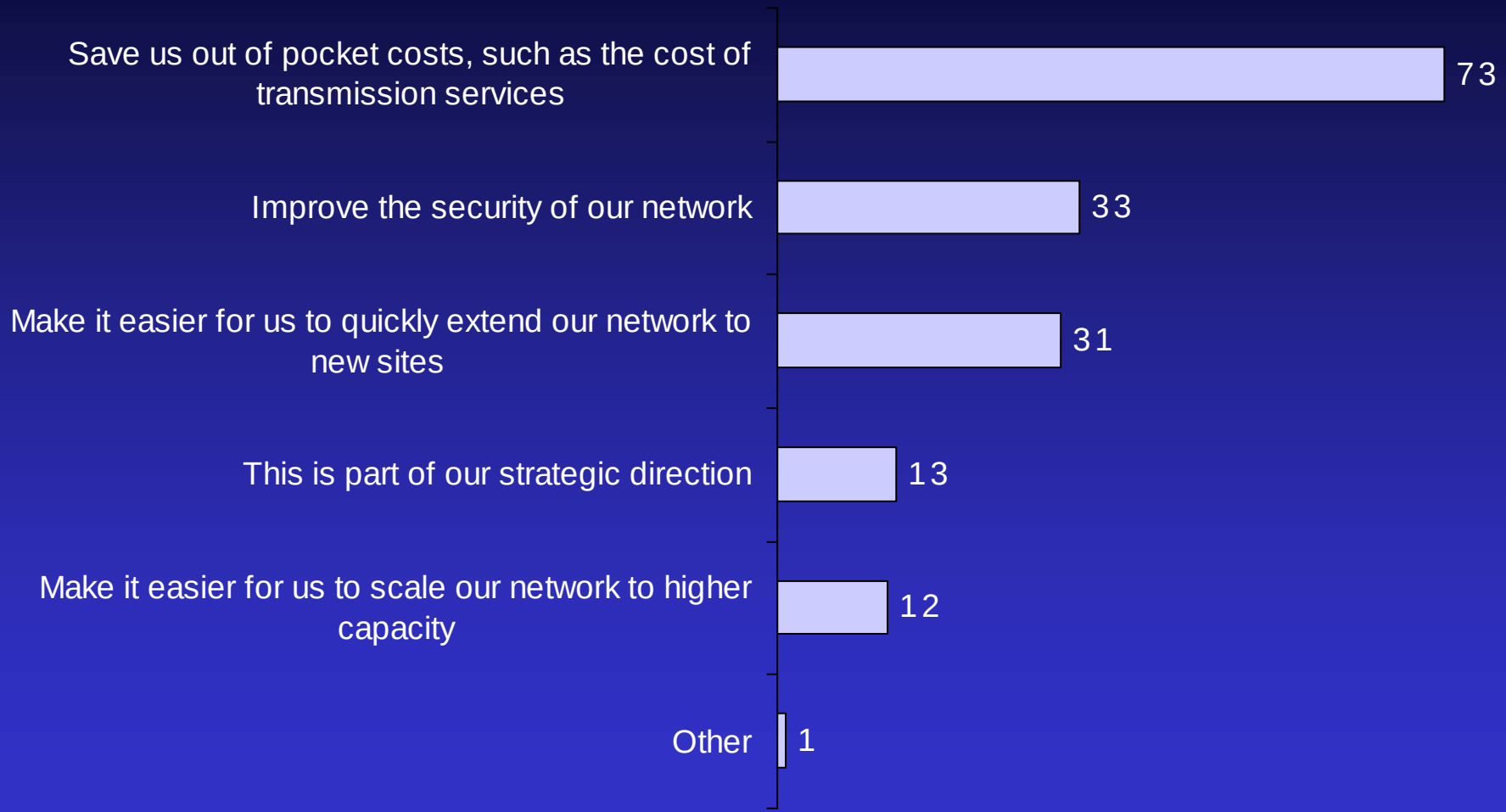


Of those who will acquire IP VPN services from a service provider, are those services more likely to be…*



Source: Ashton, Metzler & Associates and Key3Media

Most Important Issue Driving Deployment of IP Based VPNs



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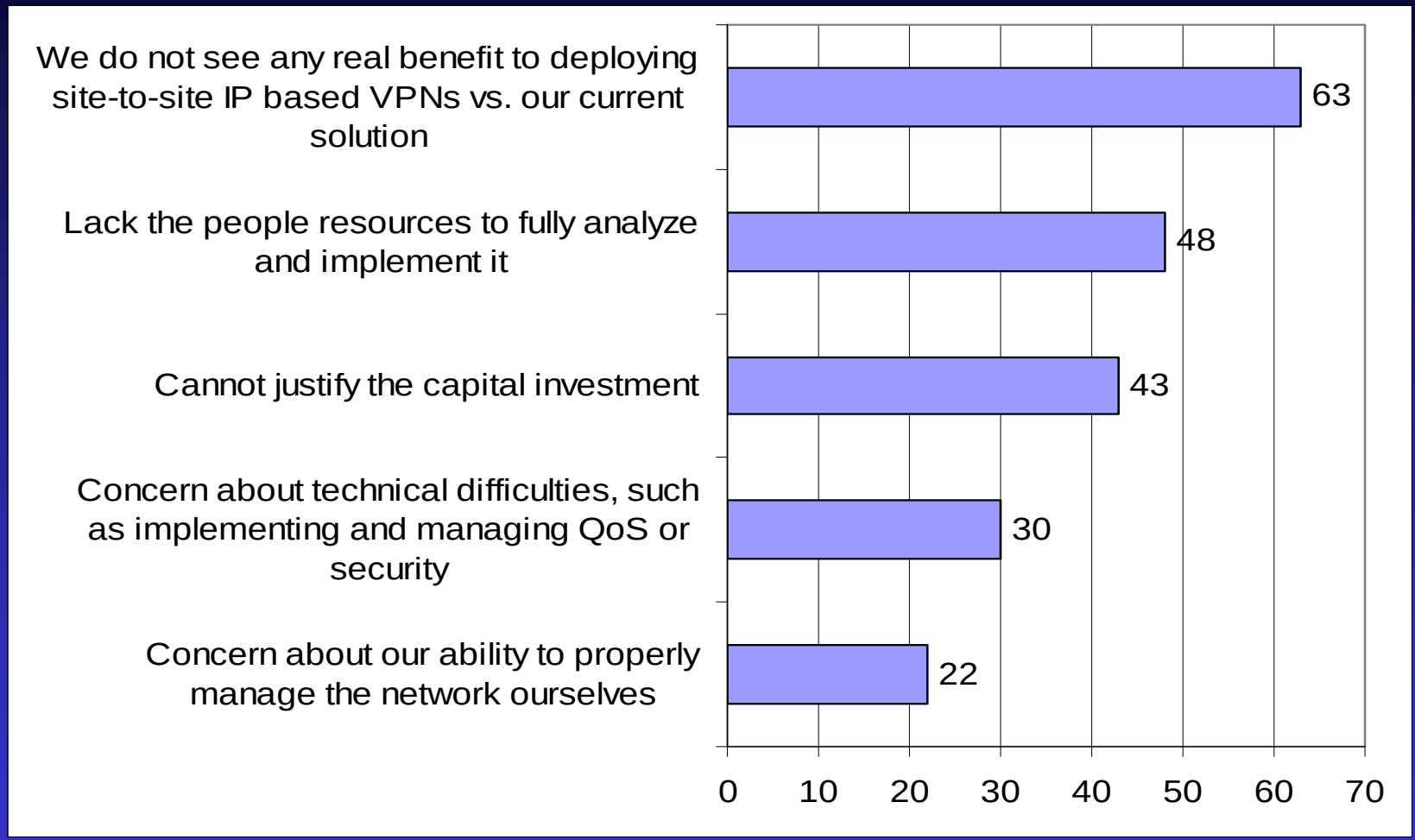
Most Important Barriers to Efforts to Deploy IP Based VPNs for Site-to-site Connectivity (1 of 2)



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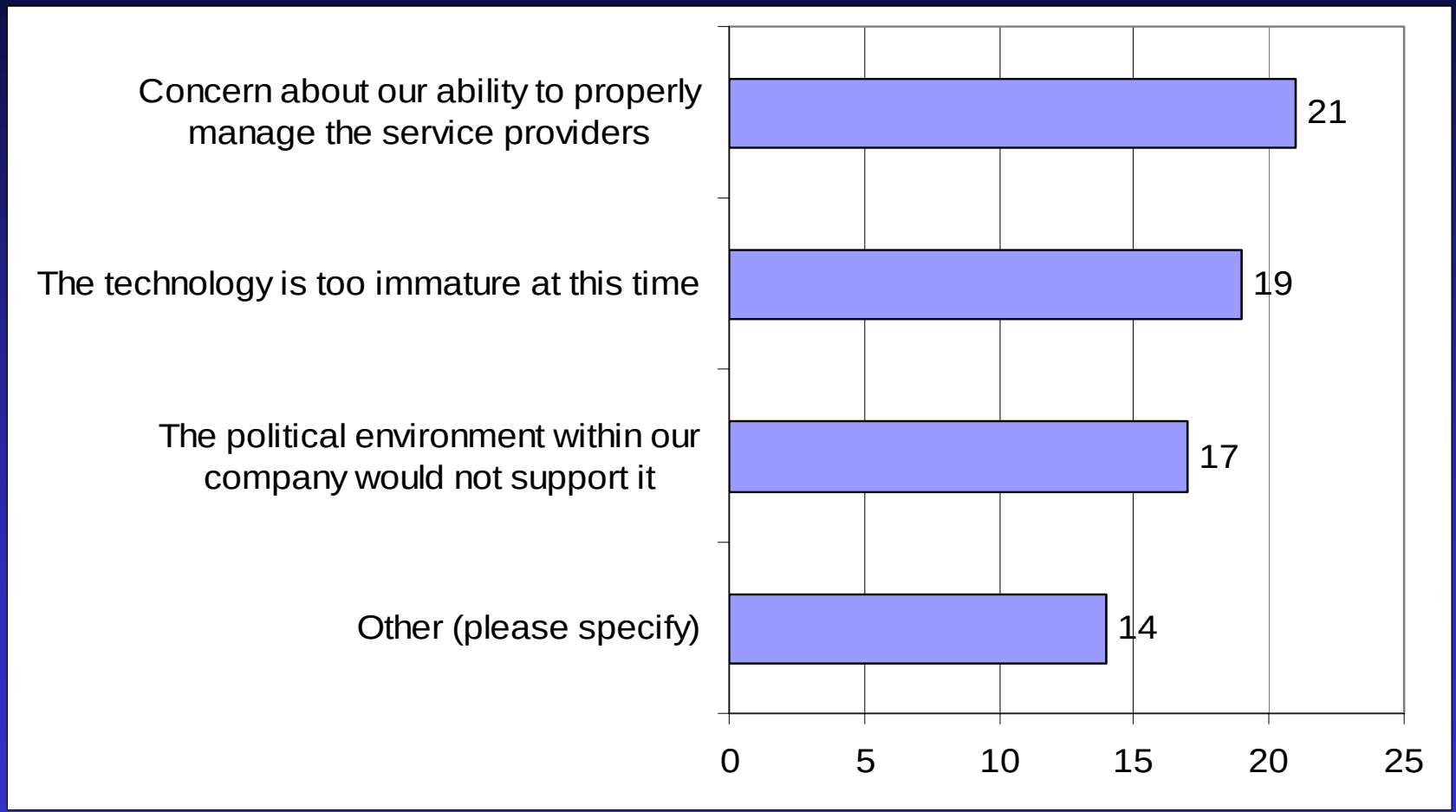
Most Important Barriers to Efforts to Deploy IP Based VPNs for Site-to-site Connectivity (2 of 2)



Source: Ashton, Metzler & Associates and Key3Media

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- What does it mean to be a Business Enabling Network Organization
- The Changing Role of the Networking professional
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Networking Challenges for a Business Enabling Network Organization

- Lower unit cost
- Higher reliability, as appropriate
- Enhanced Security
- Greater Scalability
- Greater extensibility
- Improved Provisioning of Service

Jim Metzler's Premise #4

- In order successfully deploy a Business Enabling Networking Function, Networking Professionals must do a good job at managing:
  - The expectations of their stakeholders (Stakeholder Management)
  - Their human resources – both internal and external (Human Resources Management)
  - A spectrum or networking technologies and services (Technology Management)

Monday's Program

- Stakeholder Management:
  - Running a Business Enabling IT Organization
    9:30 to 10:30
  - The Global Network
    4:30 to 5:30
- Technology Management
  - Security
    10:45 to 11:45

Monday's Program

- Technology Management:
  - Wireless
    1:00 to 2:00
  - New Aged MAN
    2:00 to 2:45
  - Applications Management
    3:00 to 3:45
  - Voice Over IP
    3:45 to 4:30

Thank You!