



SIP Trunking Services: The Foundation of UC

Lisa Pierce
Strategic Networks Group
lpierce@strategicnw.com
(941) 539 6670

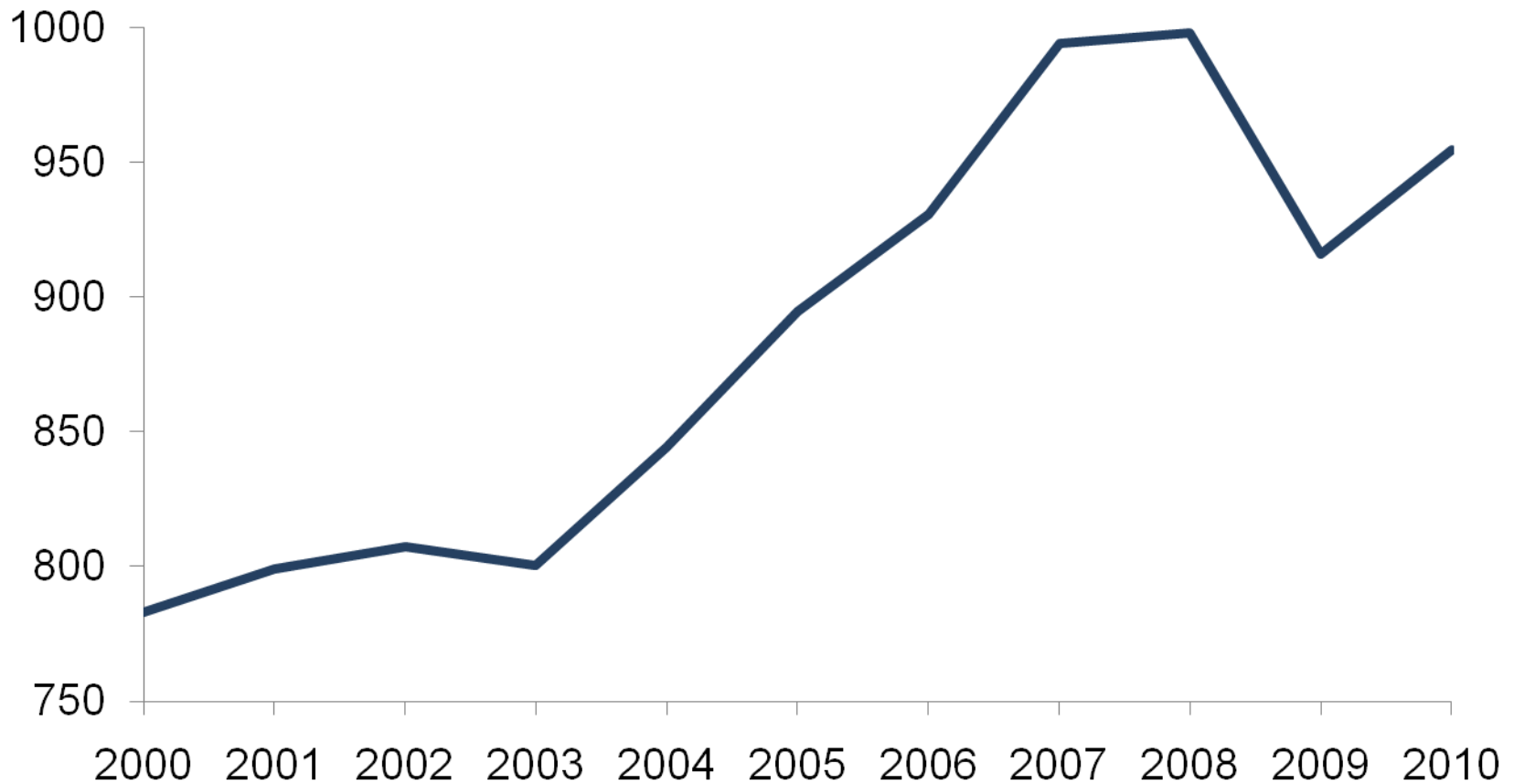
About.....

- Strategic Networks Group
 - Emerging enterprise-class network services
 - SIP/UC, 3G, 4G, FMC, Ethernet services, telco cloud
 - Improving the enterprise customer experience
 - Mobility, SIP/UC
- Lisa Pierce, prior experience
 - 11 years Forrester/Giga VP and Research Fellow
 - 4 years signaling protocol research and consulting
 - 8 years ATT Business Services new product research, development and management

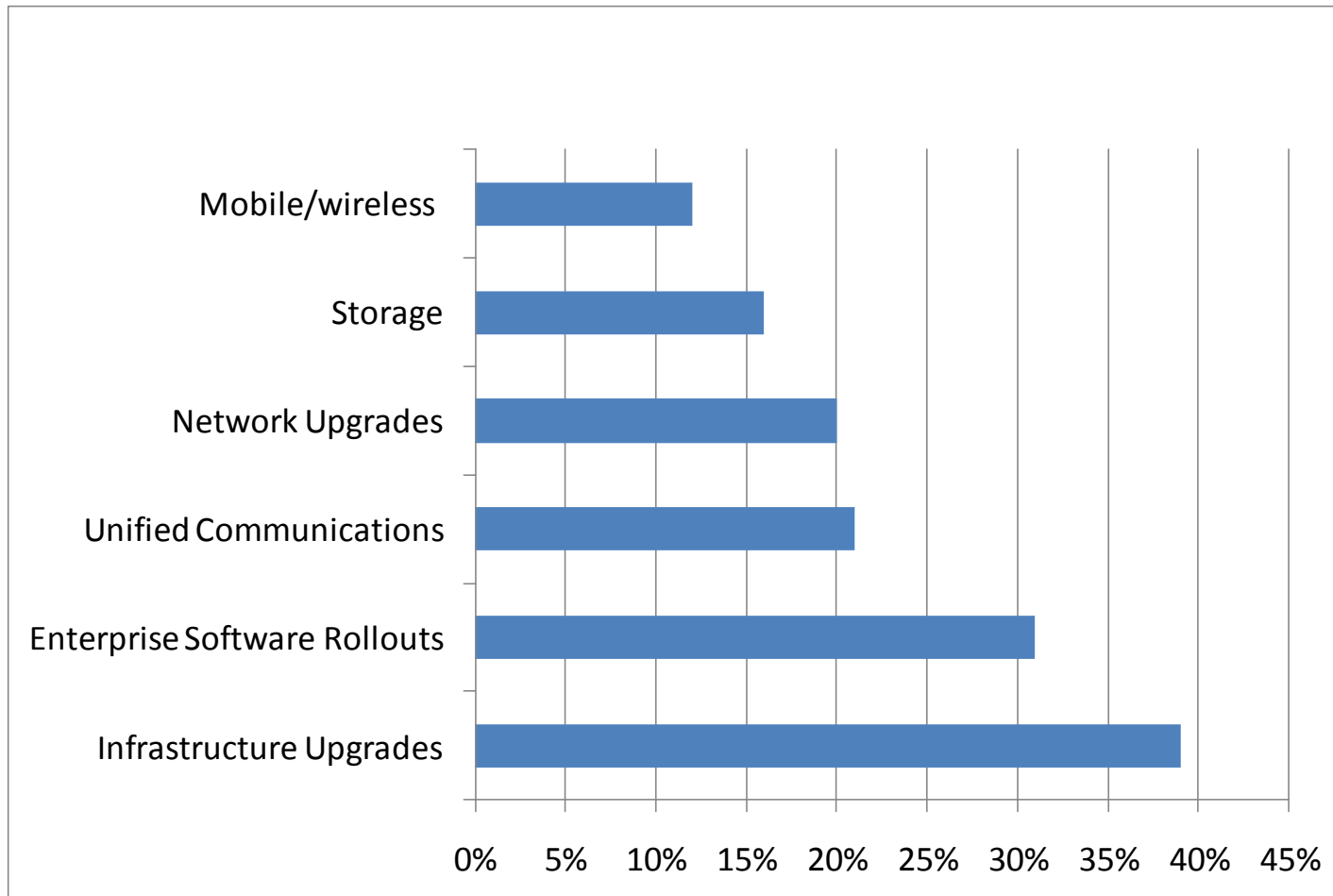
Agenda

- **Important trends**
- **The business benefits of collaboration**
- **The benefits of SIP Trunks**
- **Evaluating SIP Trunk services and providers**
- **Looking ahead**

US IT Spending, 2000-2010 (\$B)

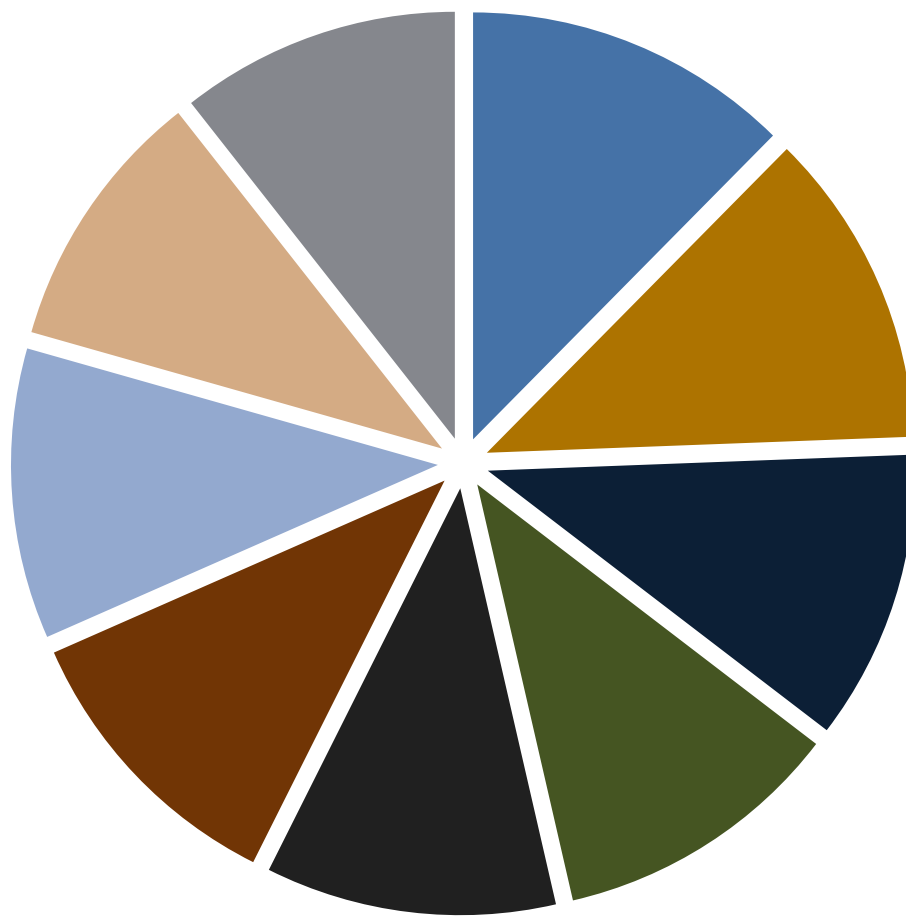


Percent of CIOs Who Cancelled or Delayed Projects in 2009 Due to the Economy



Source: CIO Magazine

Critical Challenges Facing US Businesses



- Improve efficiency/reduce costs
- Increase employee productivity
- Collaborate across employees, partners and suppliers
- Become more nimble and flexible
- Optimize business model/processes
- Improve customer service
- Obtain new customers
- Sell more to existing customers
- Improve ability to predict market trends

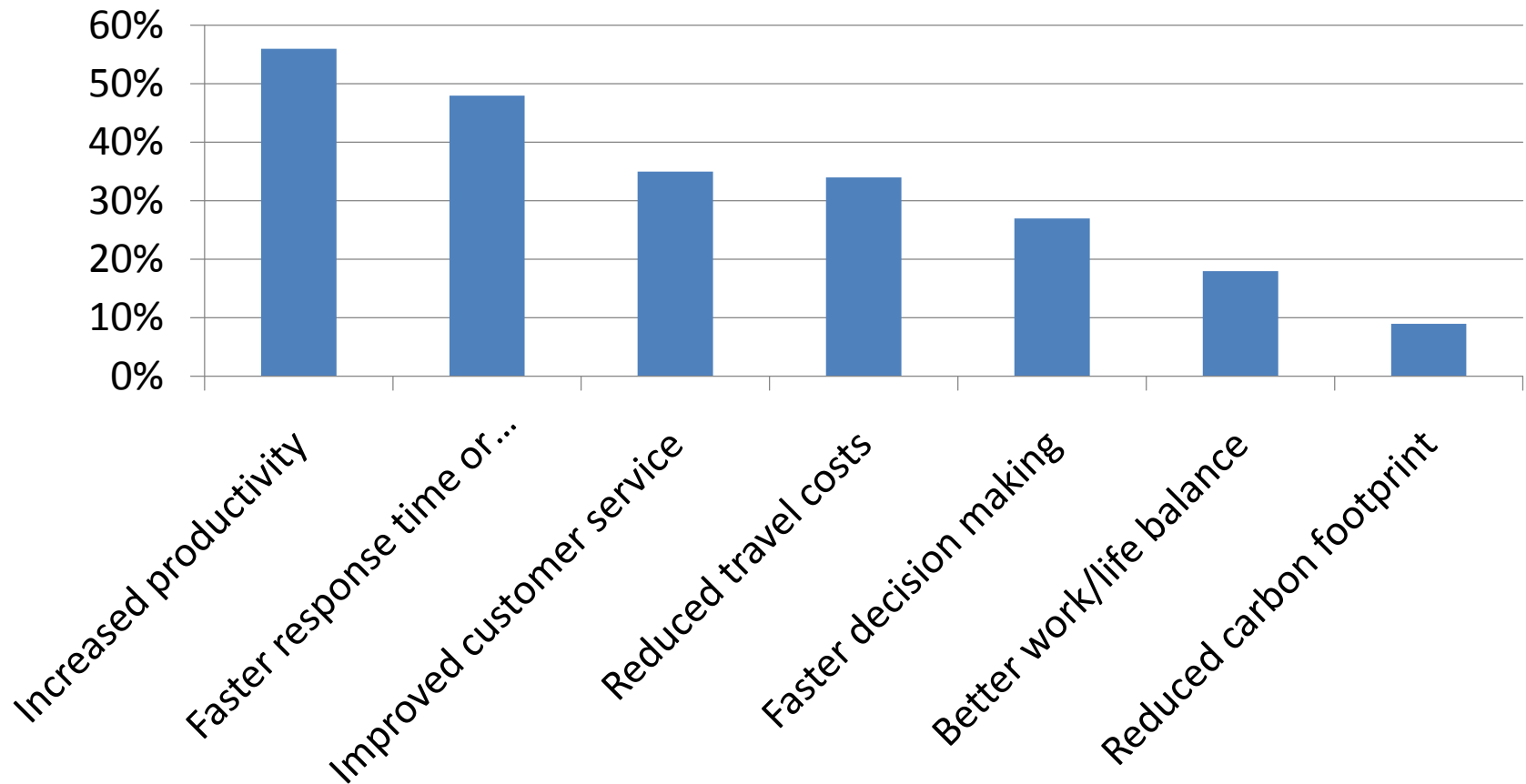
Data is normalized. Source: Opinion Research Corporation, "Inside the Midmarket: A 2009 Perspective". Study commissioned by IBM

CIOs Perceive IT's Role is Focusing More on Improving Business Functions

Expected IT Contributions to the Firm	2010	2009
Improve end-user/workforce productivity	63%	49%
Decrease company's operating costs	58%	39%
Re-engineer core business processes	53%	41%
Improve quality of products and/or processes	53%	35%
Provide innovative new market offerings or business practices	39%	38%
Improve security and risk management	34%	26%
Manage customer relationships	34%	18%
Acquire and retain customers	25%	18%
Support global expansion	19%	23%
Enable regulatory compliance	18%	12%

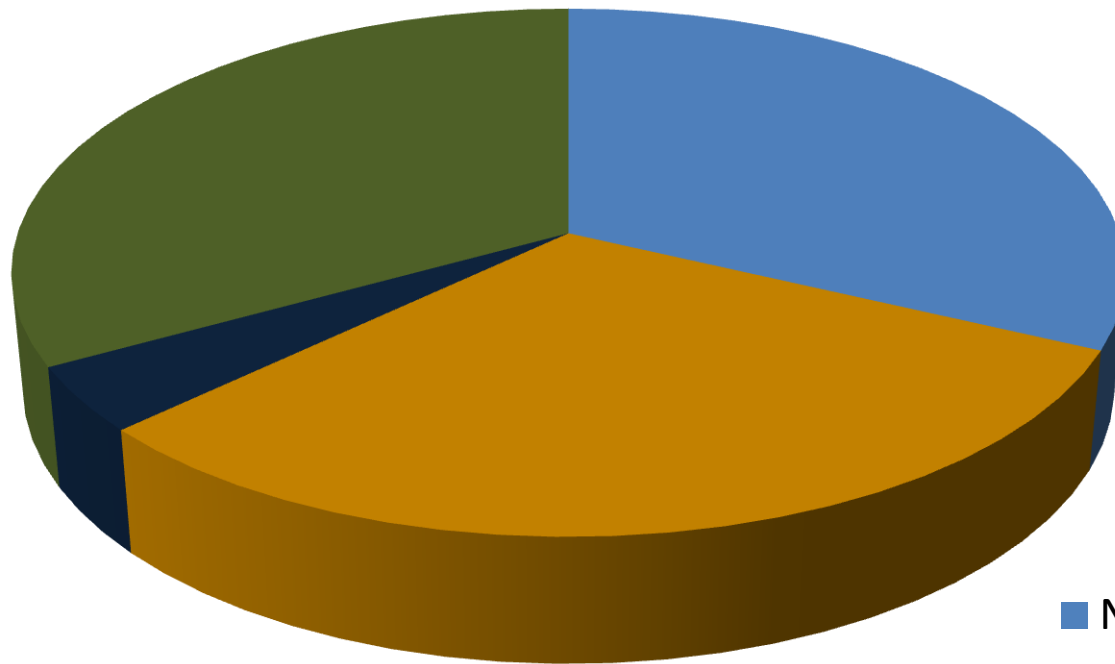
Source: CIO Magazine

Unified Communications (UC) Provide the IT Tools to Support Many Key Objectives



Source: CIO Magazine

2009 U.S. Business Customer UC Deployments



32% now use UC

- Now using UC
- Plan to use in 1-3 years
- Plan to use within 5 years
- No plans/not sure

Source: CIO Magazine

Select UC Benefits Cited by Key Business Functions

Department	Percent Respondents Who Cited	Metric
R&D	44	Shorter product development cycle
R&D	42	Product better suited to market requirements
R&D	44	Higher product quality
Sales	45	Improve sales success rate
Sales	41	Reduce cost of sales
Sales	42	Reduces sales cycle time

Source: Frost and Sullivan, "Meetings Around the World II" survey, for Verizon, October 2009

Examples of UC Applications

Category	Description
<i>IP-Based Collaboration and Conferencing</i>	Point-point and multipoint HD videoconferencing (desktop, room/telepresence), web/data conferencing or whiteboarding augmented by audio
<i>Find Me/Follow Me</i>	Enabled by presence engines, often included in Fixed Mobile Services like consecutive ring or single number service
<i>Unified Messaging</i>	Unified inbox/outbox (single message box that handles email, IM, fax, landline and mobile phone messages) often augmented by text-to speech and speech-to text capabilities
<i>Contact Center</i>	Presence is used to optimize call/session handling; other common UC applications used in contact center applications include click to chat, click to call and speech recognition
<i>Communications-Enabled Business Processes</i>	Communications features are embedded in applications that historically don't include communications, like CRM or ERP. For instance, 'Click to call' or IM are embedded in a salesforce.com app.

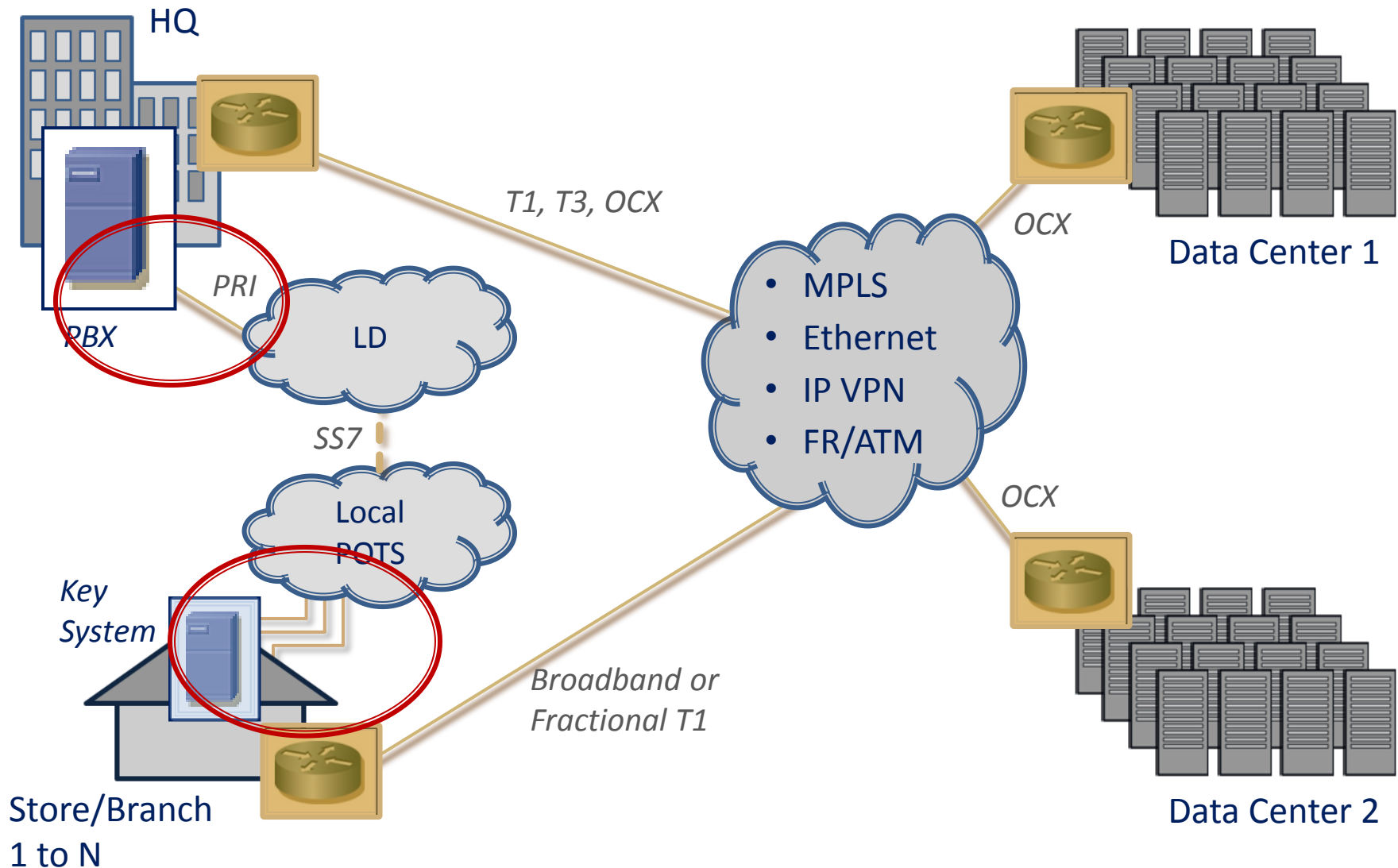
Important SIP Trunk Benefits Include Connecting UC 'Islands'

Function	Example
<i>Support for multi-site UC Applications</i>	Especially important to cost-effectively extend UC to mobile users, small/remote sites, telecommuters, and to external customers and partners (eg. extranets/federated models...)
<i>Decreased Telecommunications Expenses</i>	Increased flexibility vs. PRI or TDM Reduce the number of service-specific access lines and trunks on either a local or long distance basis, frequently also decreasing the effective price of on-net calls, local calls or DID blocks.
<i>Simplified Architectures</i>	Companies that implement UC and SIP Trunks often make heavy use of strategically-placed data centers. This often results in drastically simplified IT/network architectures., with associated reduced costs.
<i>Future Migration</i>	Paves the way for future migration to use services like Ethernet VPLS, or cloud/SaaS-based solutions.

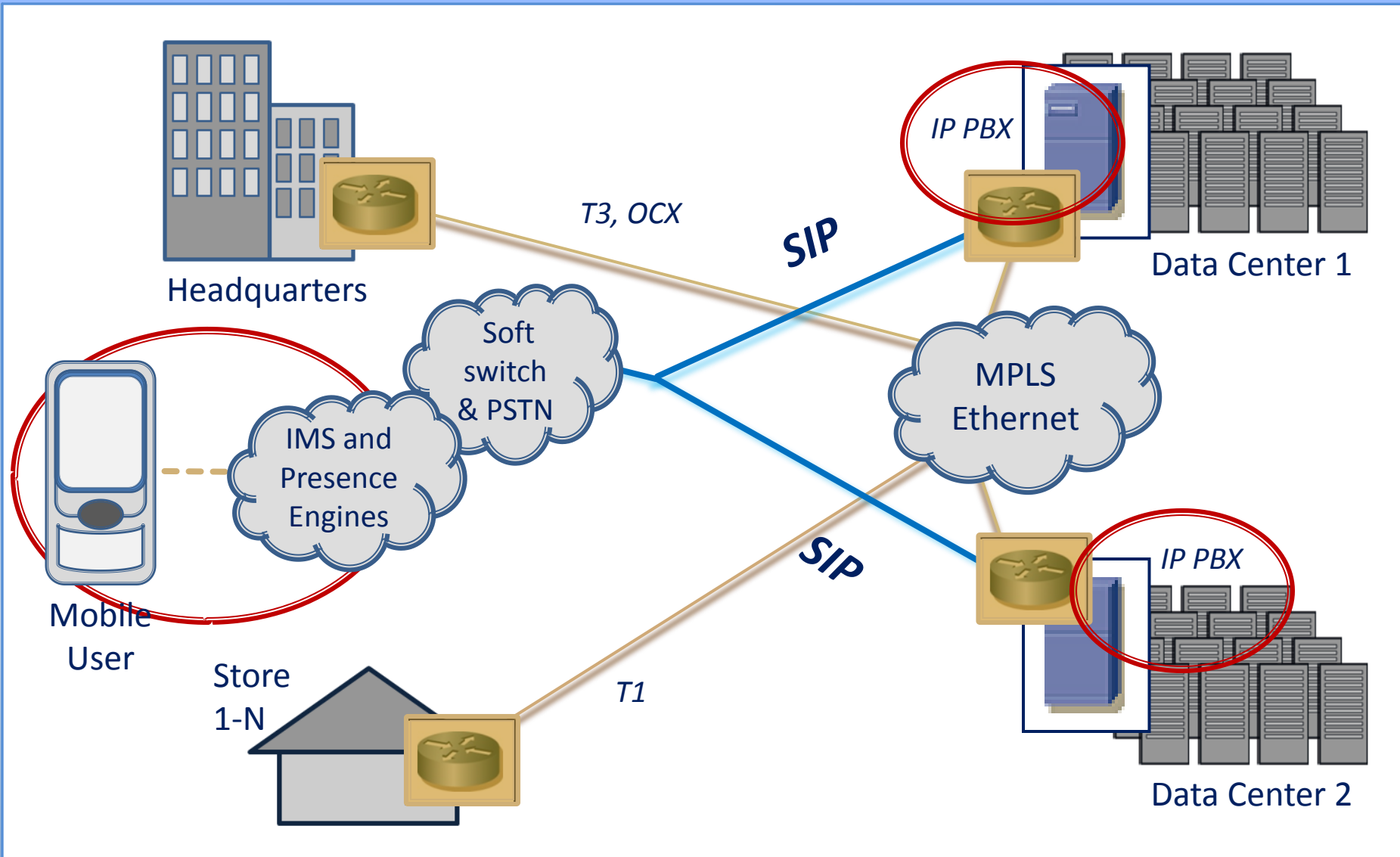
Public SIP Trunk Service Functions

- **SIP signaling can be used privately (intra-WAN) *and publicly***
- **TDM (In-band, SS7 and ISDN) signaling migrates to SIP and SIP-based functions (e.g., SIMPLE)**
 - **User-to-carrier/Service Provider network**
 - **Intra-carrier/Service Provider network**
 - **Inter-carrier/Service Provider network**
- **Call/session control signaling to carrier/SP-based functions**
 - **Offnet to and from PSTN (historically 75+% of call volumes)**
 - **Inter-carrier/Service Provider SIP signaling Interconnect**
 - **On-net signaling to/from carrier platforms like IP IVR, IP ACD; hosted VOIP/UC; IP audio, IP web, IP videoconferencing services**
 - **Future SIP-based Platform as Service offers like Location or Presence (as a Service), select OSS/BSS functions as a Service**
- **First goal: Replicate existing TDM signaling functions and reliability**
- **Second goal: Provide session control for IP-only features and services**

Many SIP Trunk Architectures Appear Only to *Replace* Existing Carrier Trunks



But to *Maximize* Enterprise Benefits, WAN Should be Re-Architected



The Three Most Critical SIP Trunk Service Considerations

Enterprises should always inquire about providers' current and planned SIP Trunk Service:

- **Features/Functions**
- **Provider- Vendor Compatibility**
- **Performance and Resiliency**

1. Verify SIP Trunk Features/Functions

- **Definitions of 'on-net'**
- **Portfolio/Service connectivity (MPLS, Internet, IP Toll Free, etc.)**
- **Calling features (PSTN equivalents)**
- **UC features (Fixed Mobile Convergence, Presence, Virtual Telephone Numbers, etc.)**
- **(Voice) Dynamic Bandwidth Allocation**
- **Use of broadband access for smaller sites (DSL, cable...)**
- **Access to Operator Services, N11, Directory Assistance, Call Detail Records**

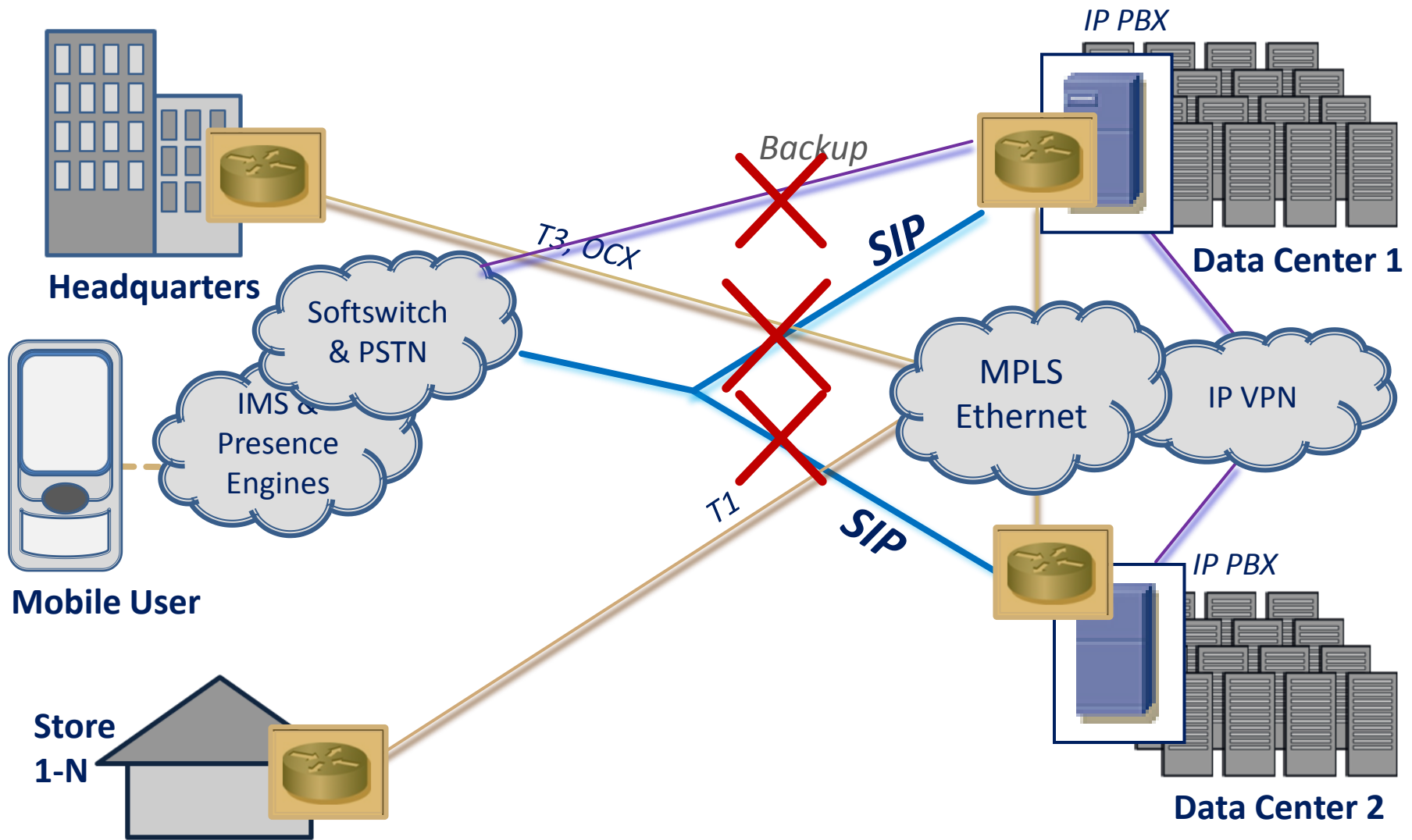
2. Verify Provider - CPE Vendor Interoperability

- **Standards exist, but aren't enough.**
 - **SIP Trunk services have limited compression options compared to CPE (most SIP Trunk services only support G.711, G.729 a/b)**
- **Most providers have their own CPE certification processes.**
 - **IP PBXs, Stand-alone SBCs, Gateways, IADs....**
- **Verify provider-vendor interoperability for each specific service, function, feature**
- **When moving to SIP, also evaluate premises-based SBC functionality requirements**

3. Verify Performance and Resiliency

- **Customer business continuity — SIP Trunk backup/overflow to SIP, PRI, Inband Trunks**
- **Day 1 (design, order, install) processes vary by provider**
- **Day 2 (monitoring, remediation, ongoing support processes) vary by provider**
- **SLAs for installs, repair, performance vary by provider**
 - **Definition of covered metrics varies**
 - **Insight into performance history varies by provider**
- **Portal functionality varies by provider**
- **SIP Trunk - specific security functions vary by provider**

Some Cloud-based FMC Offers Can Survive SIP Trunk and Backup Outages



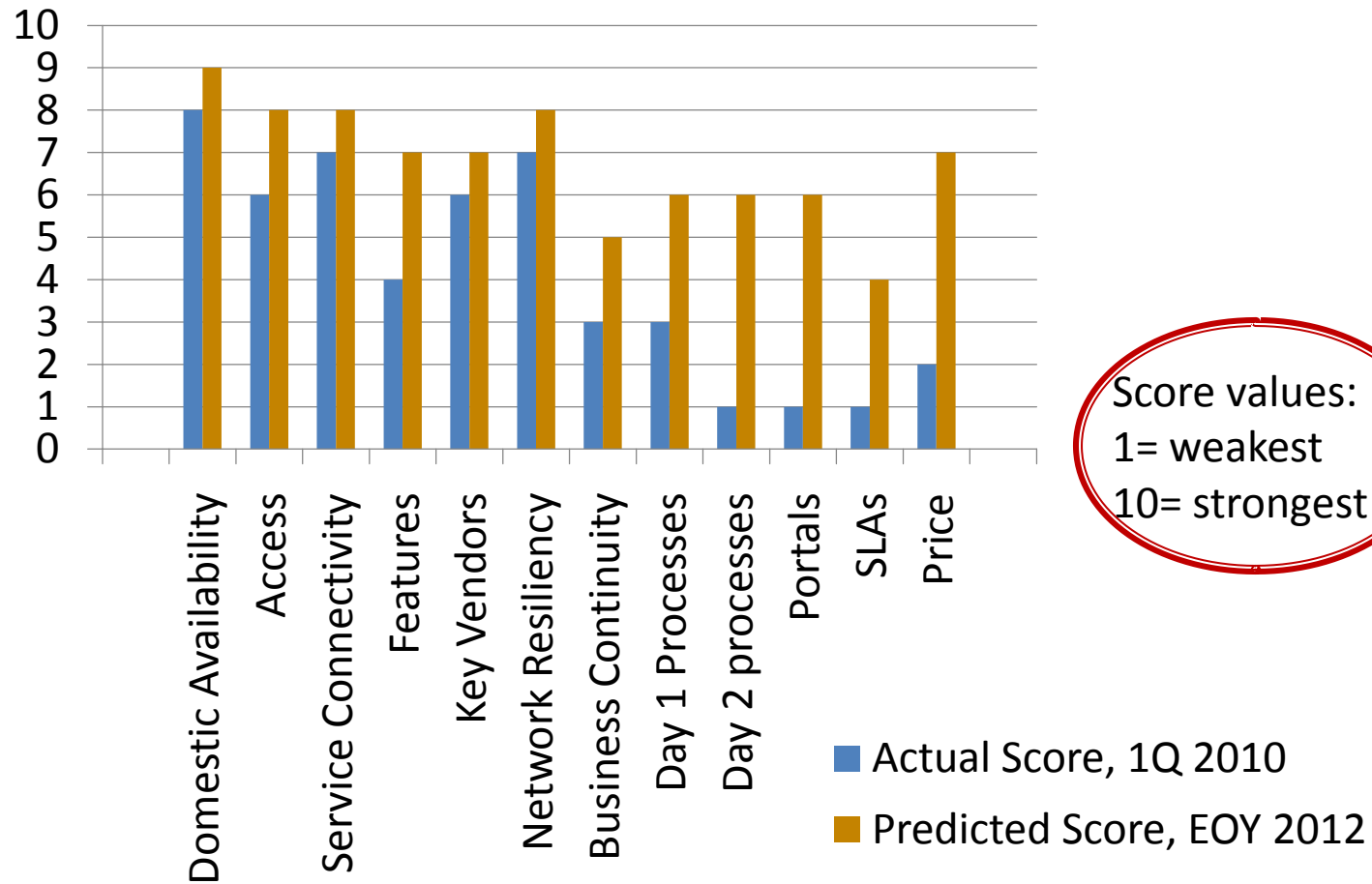
Secondary SIP Trunk Services and Provider Selection Criteria

- **Service price**
- **Service geographic availability**
- **Service volume/ramp up**
- **Relevant recent SIP Trunk customer references**

- **Provider's broader service portfolio**
- **Provider's relationship with key external partners**
- **Cultural 'fit' between service provider and your company**
- **Provider's flexibility**
- **Provider's viability**

U.S. SIP Trunk Services on Fast Maturation Track

(Average rating across 10 participating providers)

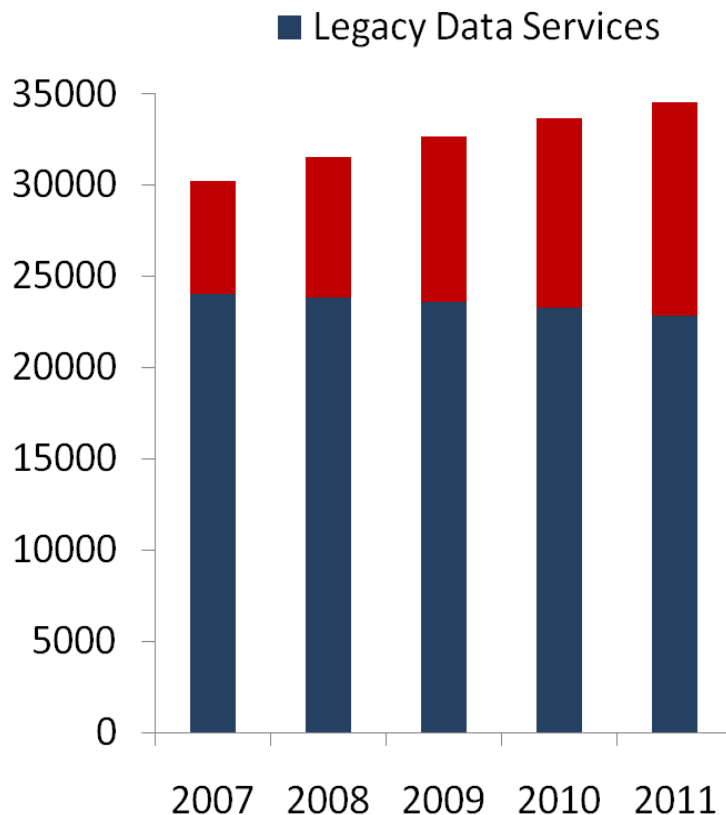


Some Recent and Near-Term SIP Trunk Service Improvements

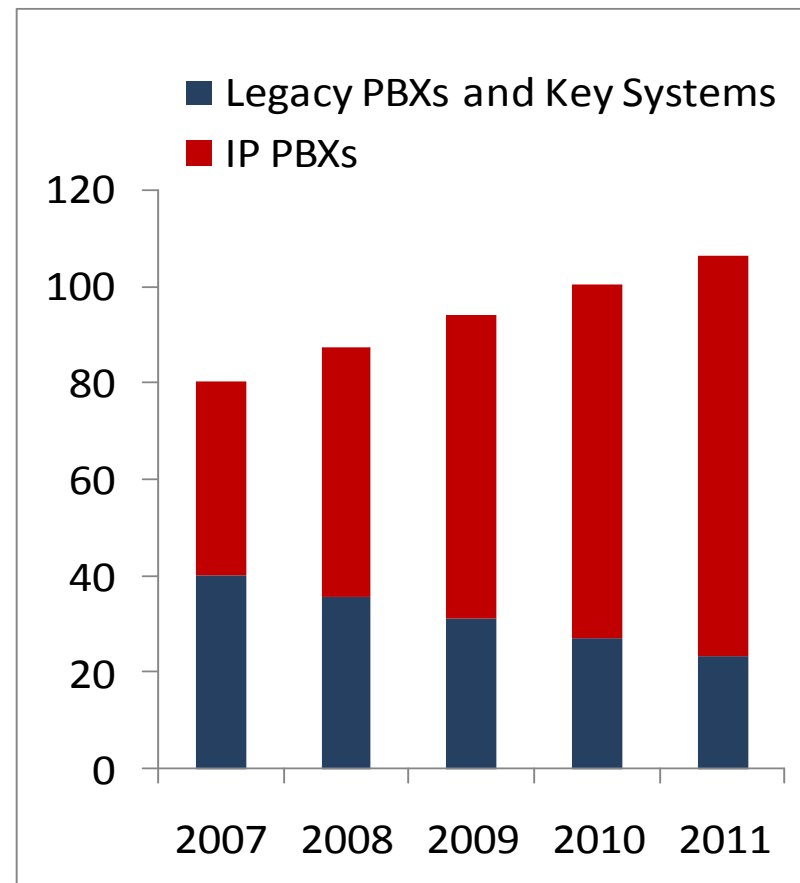
- **Portal Enhancements**
 - Enhanced reports
 - Improved ordering, MACDs for existing customers
- **OSS/BSS for scaling --- and eventually, SLAs**
 - Default service configurations
 - Flow through/order-to-installation automation
- **New/Expanded Features**
 - Cloud-based VoIP, on-net UC and collaboration services
 - 'On-net' expansion
 - QoS over Internet Services
 - Network overflow and re-routing, per-call re-routing and bursting
- **Portfolio and CPE Interoperability Enhancements**
 - Microsoft Lyncs

IP Continues to Replace Legacy Network Technology

US Enterprise Data Services Revenue (\$ Million)



US PBX Installed Base (Millions of Lines)



Source: TIA, Market Review and Forecast



Thank You!

Lisa Pierce
President
Strategic Networks Group
lpierce@strategicnw.com
(941) 539 6670