Navigating Turbulent Waters

The Next Wave for Service Providers

September 2009

Agenda

1. An industry in transition
2. Mapping the future
3. New value, new competition
4. Service provider implications
5. Strategies for success
6. Charting a path to the future

Executive Concerns and Opportunities Today

Over-the-Top Providers (OTTs)

Industry Consolidation

Prosumer

Next-Generation Services

Job Uncertainty

Employee Morale

Legacy Networks

Role of SP

Velocity of Partnerships

Retaining Talent

Productivity

Network Traffic Growth

Technology Choices

Pace of Innovation

Cost Containment

Green Infrastructure

Open Platform

Privacy and Security

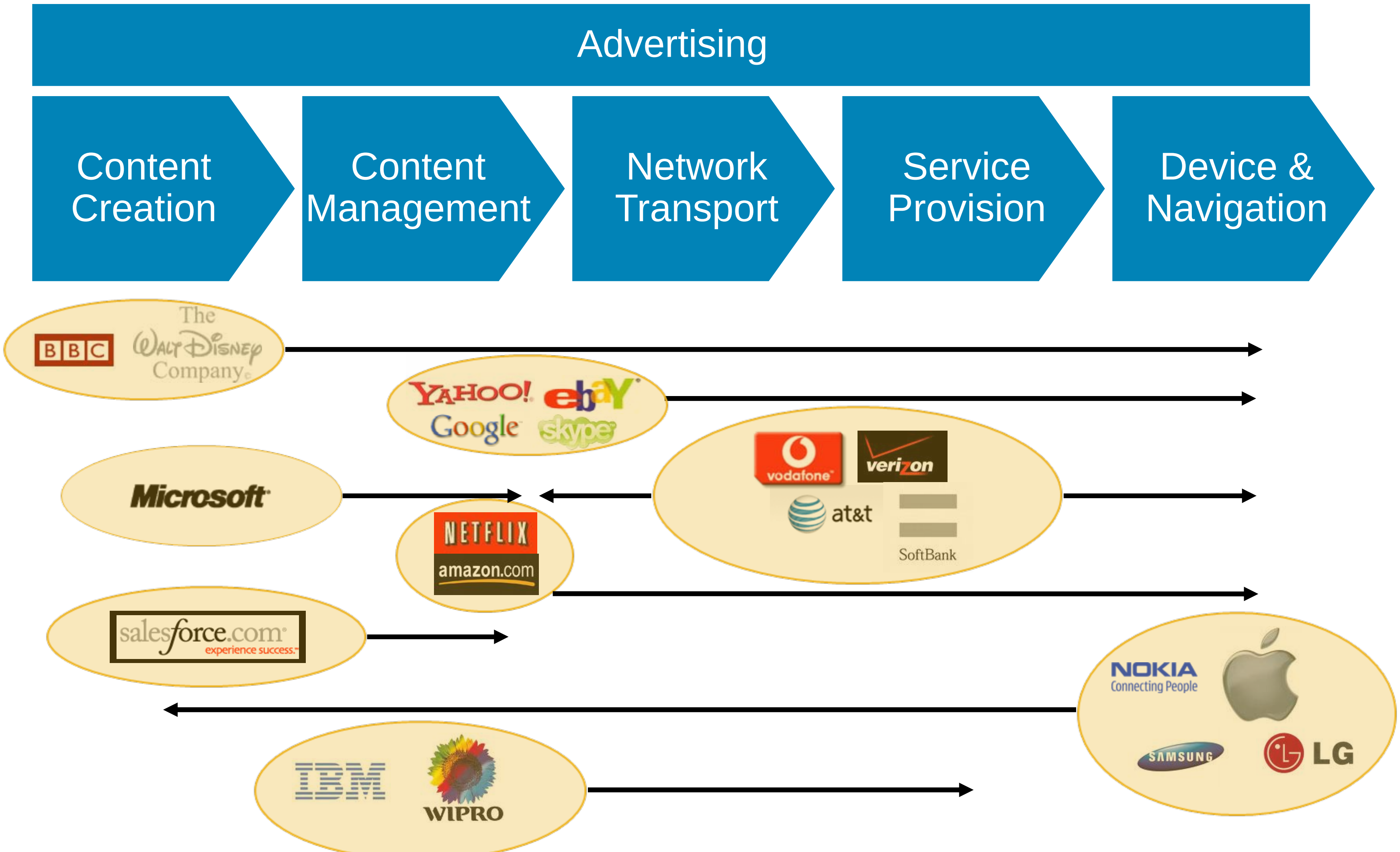
Source: Cisco IBSG, 2009

10 Market Transitions Shaping the Service Provider Industry

1. Economic uncertainty
2. Network traffic growth
3. Broadband and mobile reality
4. Web-delivered digital media
5. Broadband as an economic platform
6. Rise of emerging markets
7. Cloud-delivered services
8. Device-centricity
9. Business and technology openness
10. Green

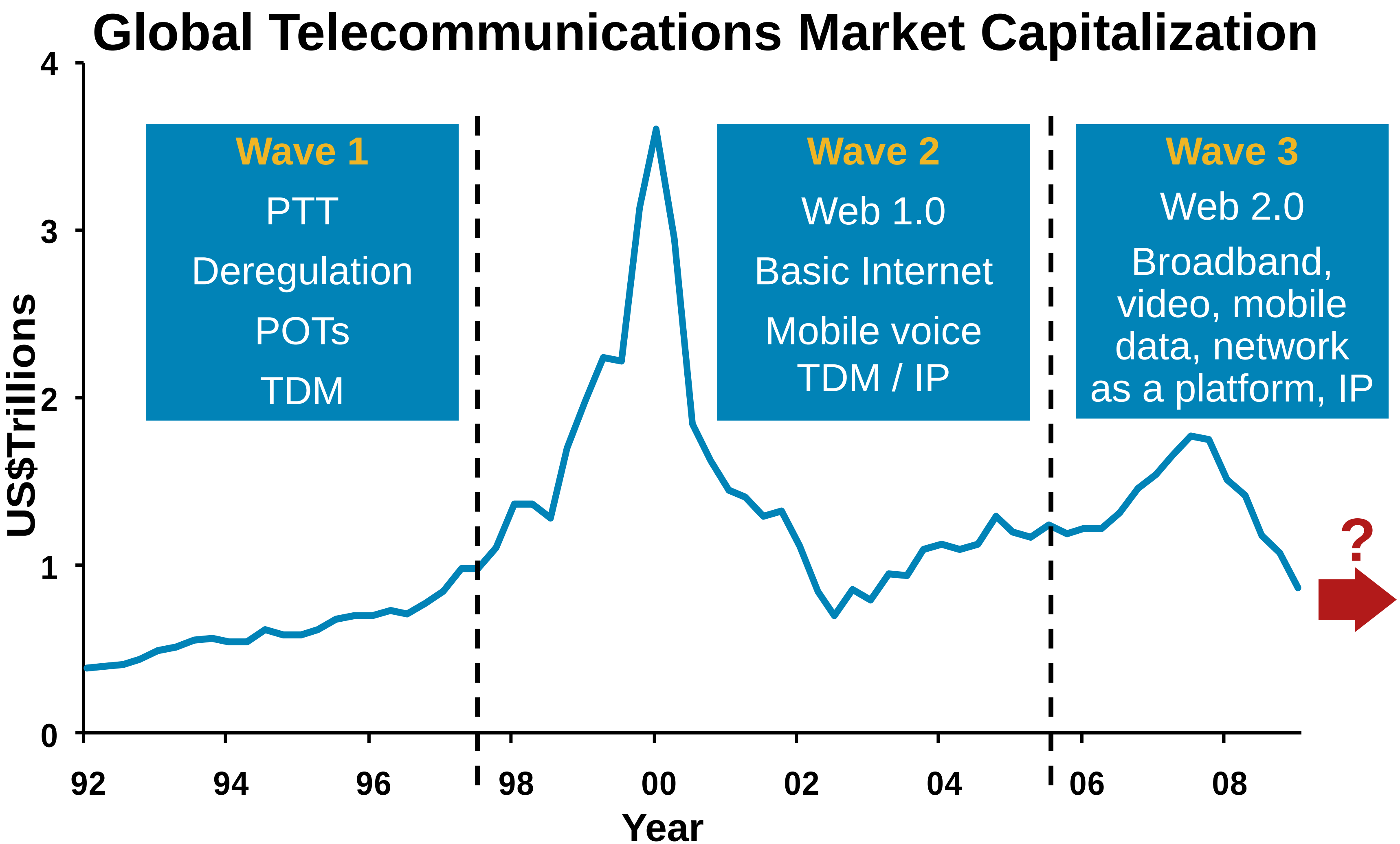
Source: Cisco IBSG, 2009

Increasing Competition as Multiple Players Fight for New Sources of Value



Source: Cisco IBSG, 2009

Industry in Transition: Riding the Wave



Source: Dow Jones Global Telecoms Index, to June 3, 2009; Cisco IBSG, 2009

What Does the Future Hold?

What will the industry look like in five years?

- What is the structure of both the industry and the value chain?
- What is the timing?
- How will it evolve differently in different parts of the world?

Which opportunities will exist in five years?

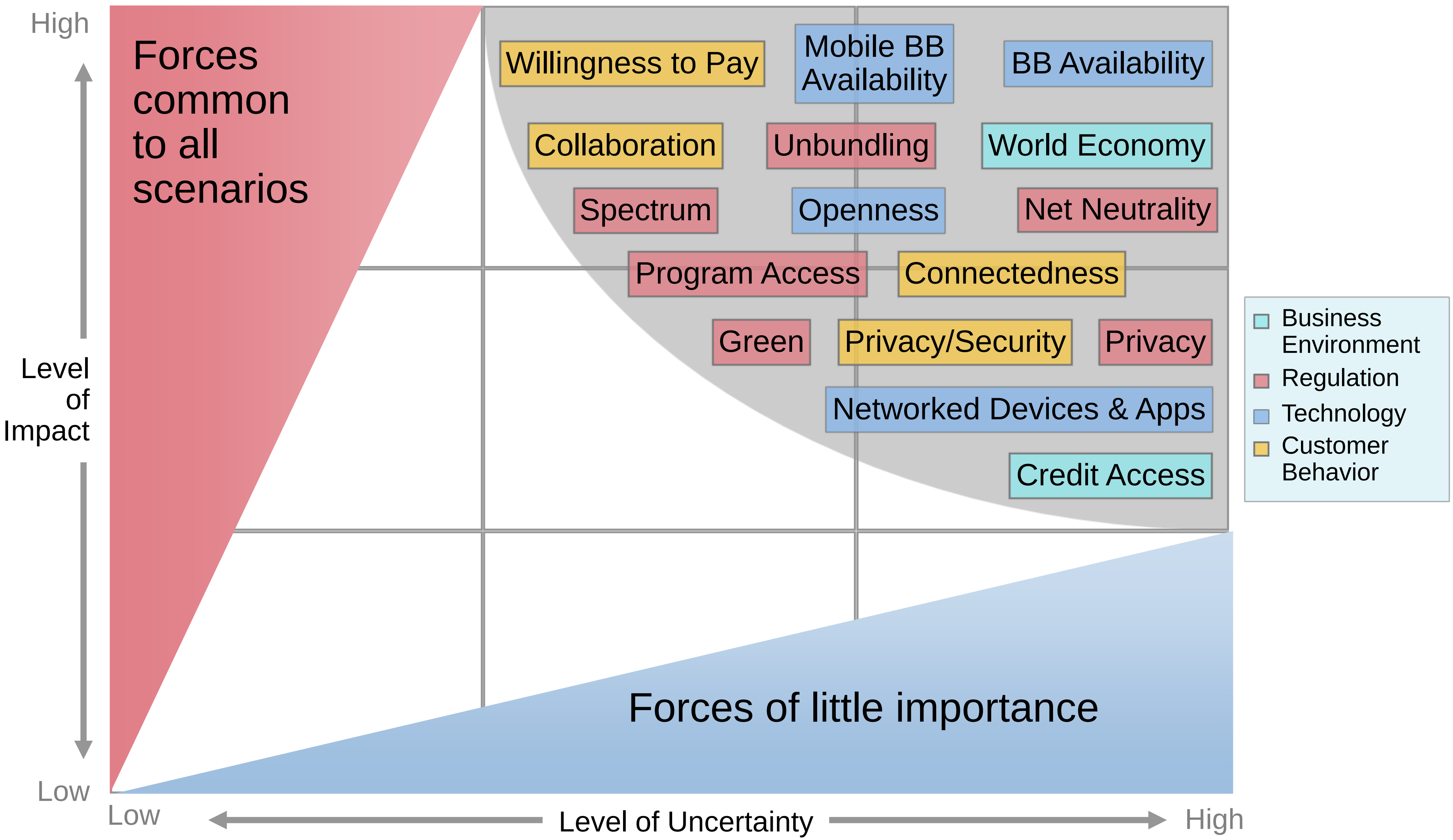
- Where are the sources of value?
- Who are the winners and losers?

What can SPs do to position themselves for the future?

- How can they effectively shape their future?
- How can they best take advantage of potential opportunities?

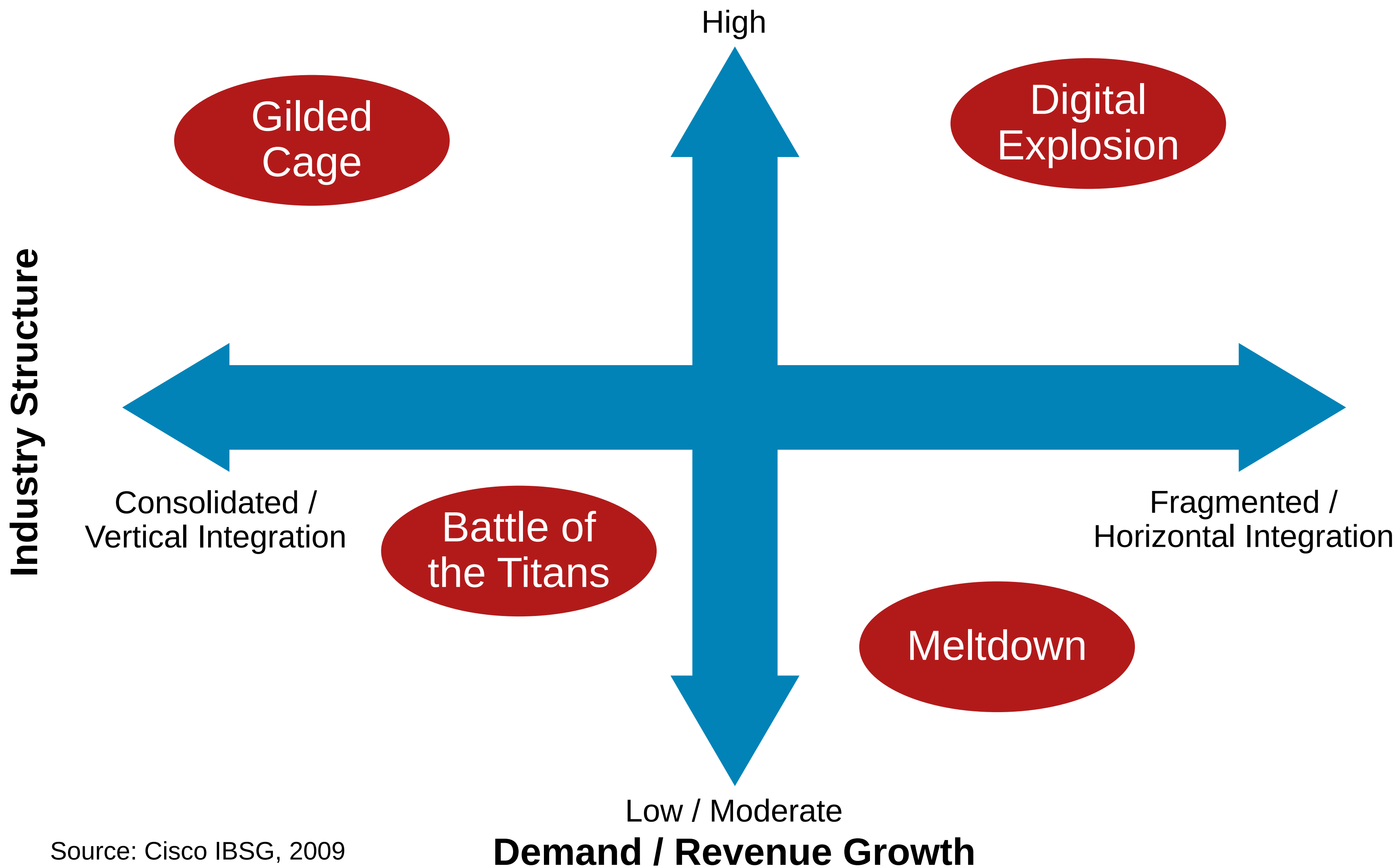
Source: Cisco IBSG, 2009

Major Drivers Shaping the Future of the Industry



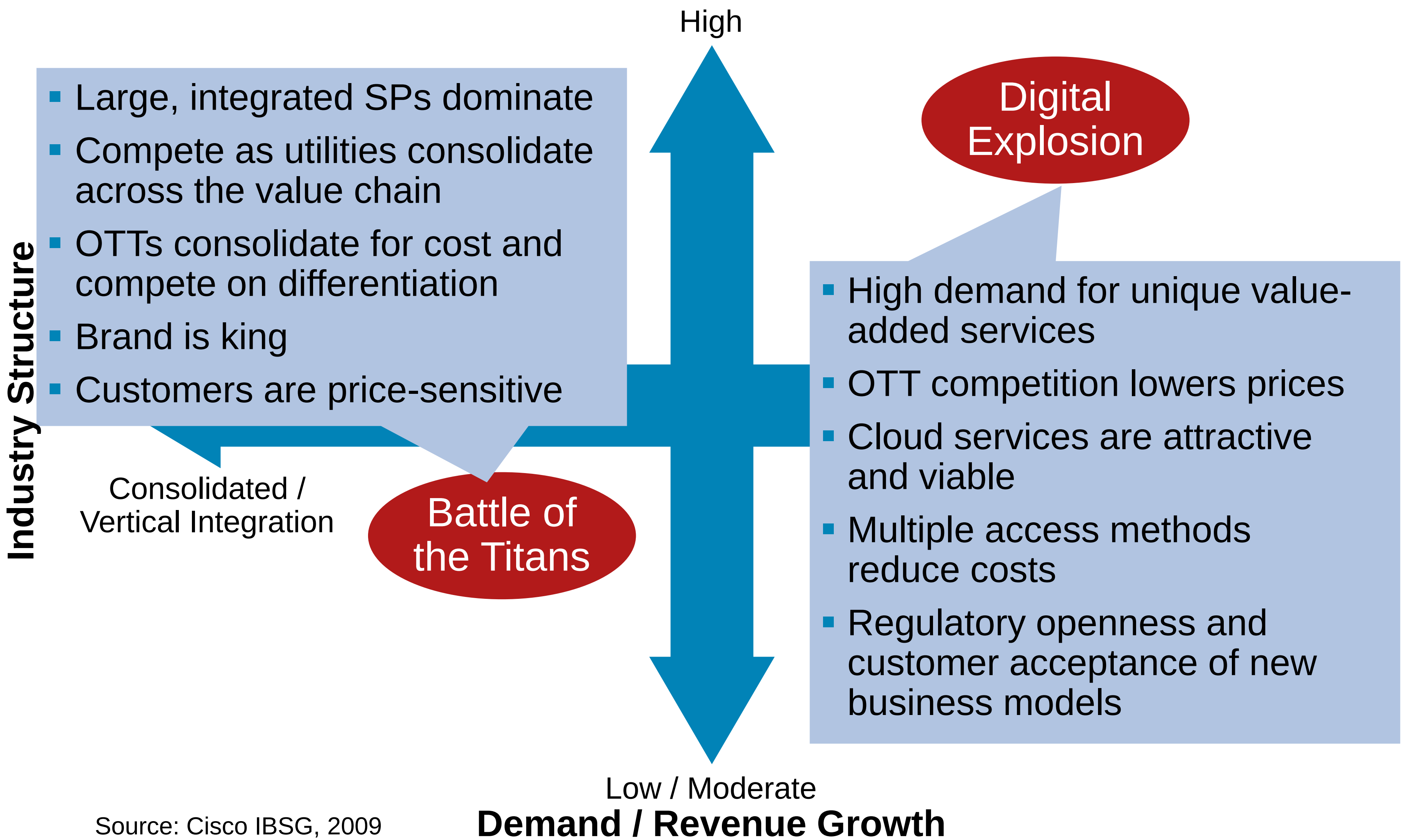
Source: Cisco IBSG, 2009

Scenarios for the Future



Source: Cisco IBSG, 2009

Scenarios for the Future



Source: Cisco IBSG, 2009

Scenarios for the Future

High

Industry Structure

Gilded Cage

- Large, integrated SPs / OTTs dominate
- High demand in closed environment
- Network development is increased given attractive ROIs
- "Walled gardens"
- Each link of value chain consolidates
- Growth through access to new markets
- Slower rates of product innovation

- OTTs challenged with customer adoption and revenue sources
- Cheap bandwidth, devices, applications, and content
- Security concerns and low customer interest in innovative services
- Limited investment, increased bankruptcies, and rapid consolidation

Horizontal Integration

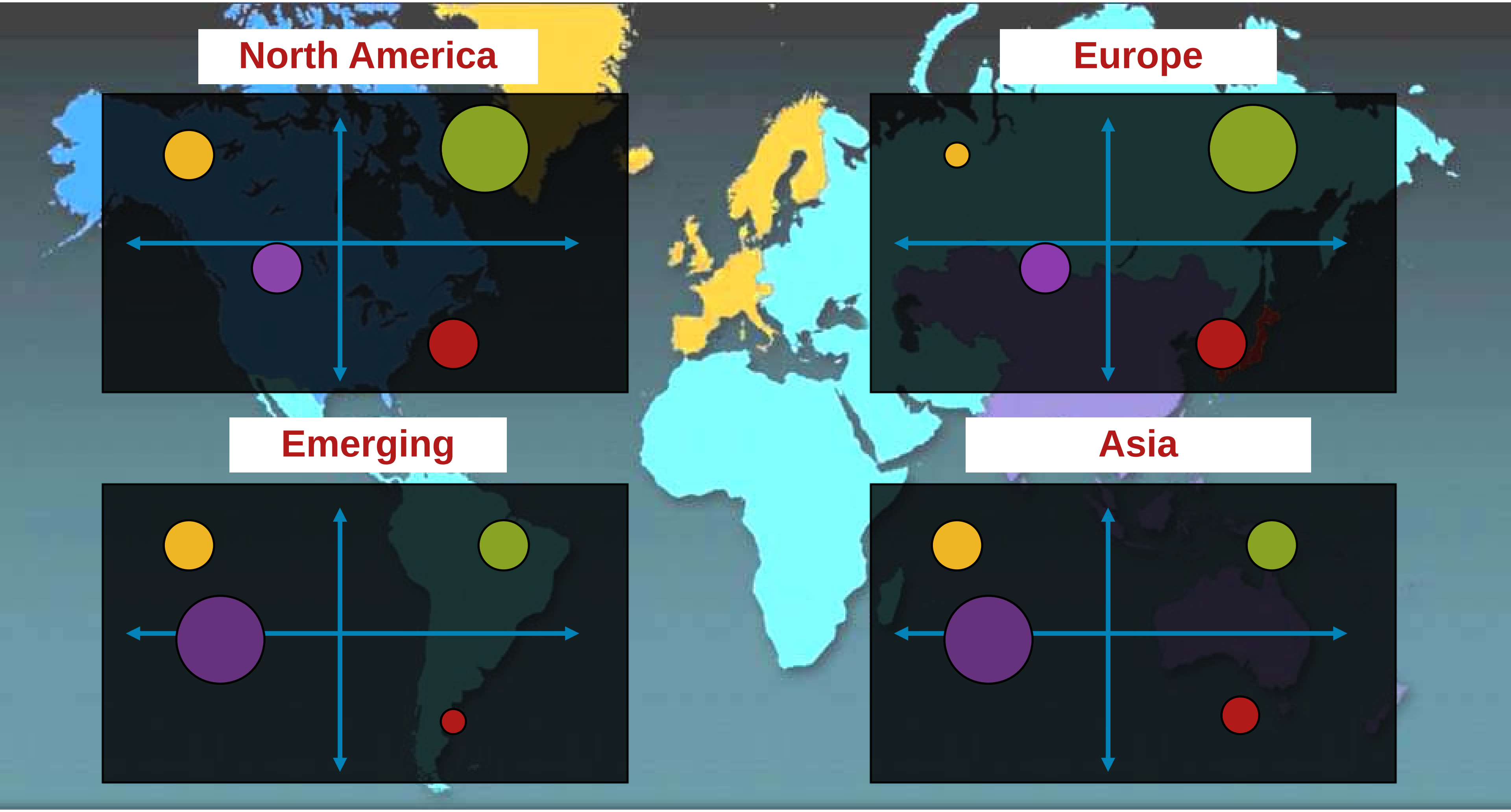
Meltdown

/ Moderate

Revenue Growth

Source: Cisco IBSG, 2009

Regional Variations



Digital Explosion | Gilded Cage | Battle of the Titans | Meltdown

Source: Cisco IBSG, 2009

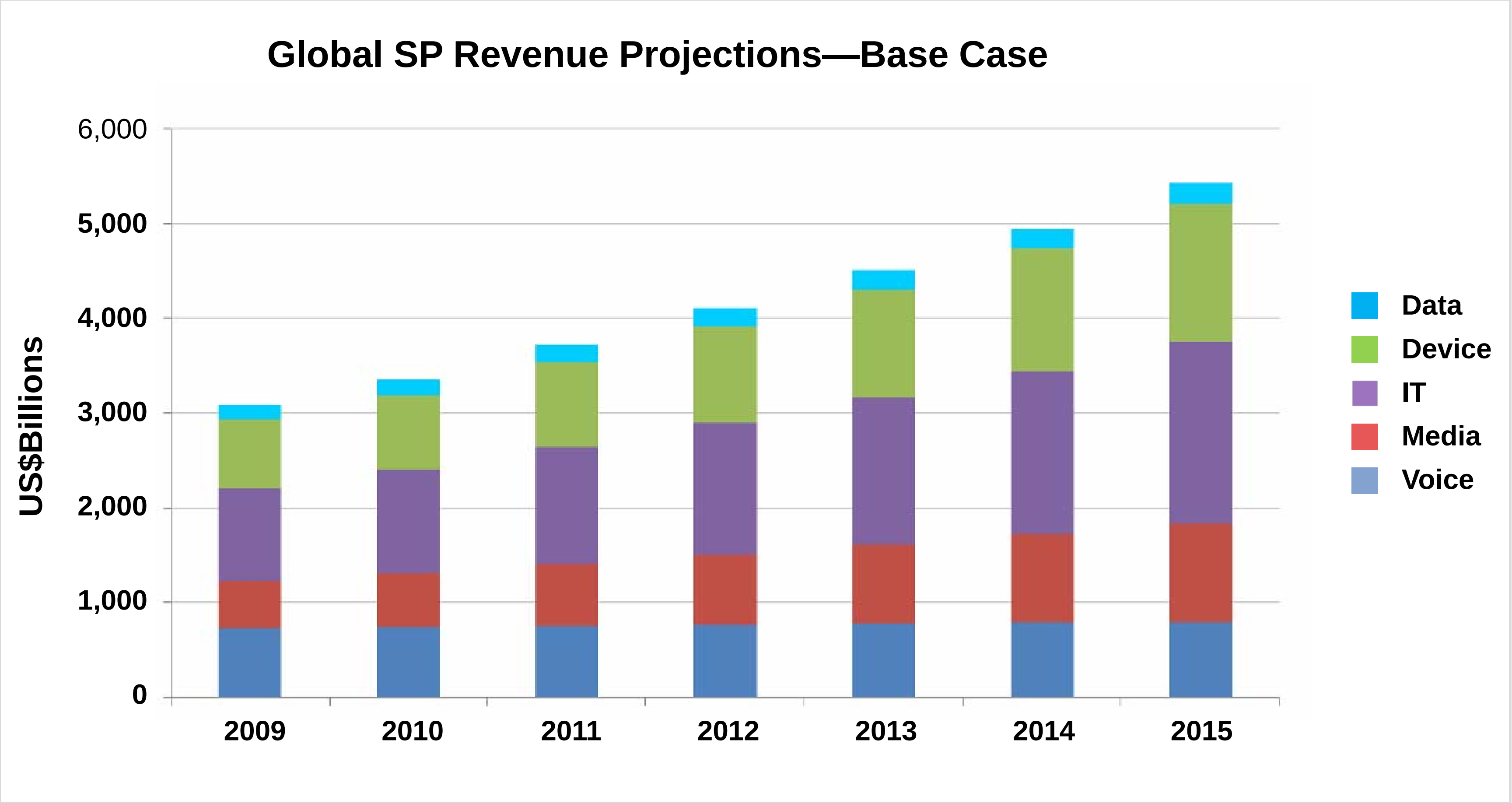
Note: Size of bubble represents expected "probability"

New Value, New Competition

	Digital Explosion	Gilded Cage	Battle of the Titans	Meltdown
Value Migration	▪ Value increases across the chain ▪ Lower prices, especially for basic transport ▪ Value migrates to unique solutions and advertising	▪ Value increases across large, semimonopolistic providers ▪ Healthy margins ▪ Advertising and device revenues suffer	▪ Less value is shared among a few large, vertically integrated providers ▪ Value migrates to a few large, trusted brands	▪ All segments of value chain suffer ▪ Pricing bloodbath destroys margins ▪ Unique content and advertising maintain some value
Nature of Competition	▪ Differentiation: innovation and value-add ▪ Innovative brand ▪ Fight to “own” customer ▪ New business models	▪ Market power enables healthy pricing ▪ Coopetition” among SPs, OTTs, content providers ▪ Geographic expansion	▪ Price for “basic” services ▪ Value brand ▪ Low-cost, scale economies ▪ Geographic expansion	▪ Aggressive pricing wins customers ▪ Cost reductions increase ▪ Unique propositions are promoted

Source: Cisco IBSG, 2009

Estimated Global Economic Impact of Scenarios on the SP Industry



Source: PWC Global Forecast, Ovum, ABI Research; reprofiled and forecasted by Cisco IBSG Service Provider Practice, with additional IBSG analysis.

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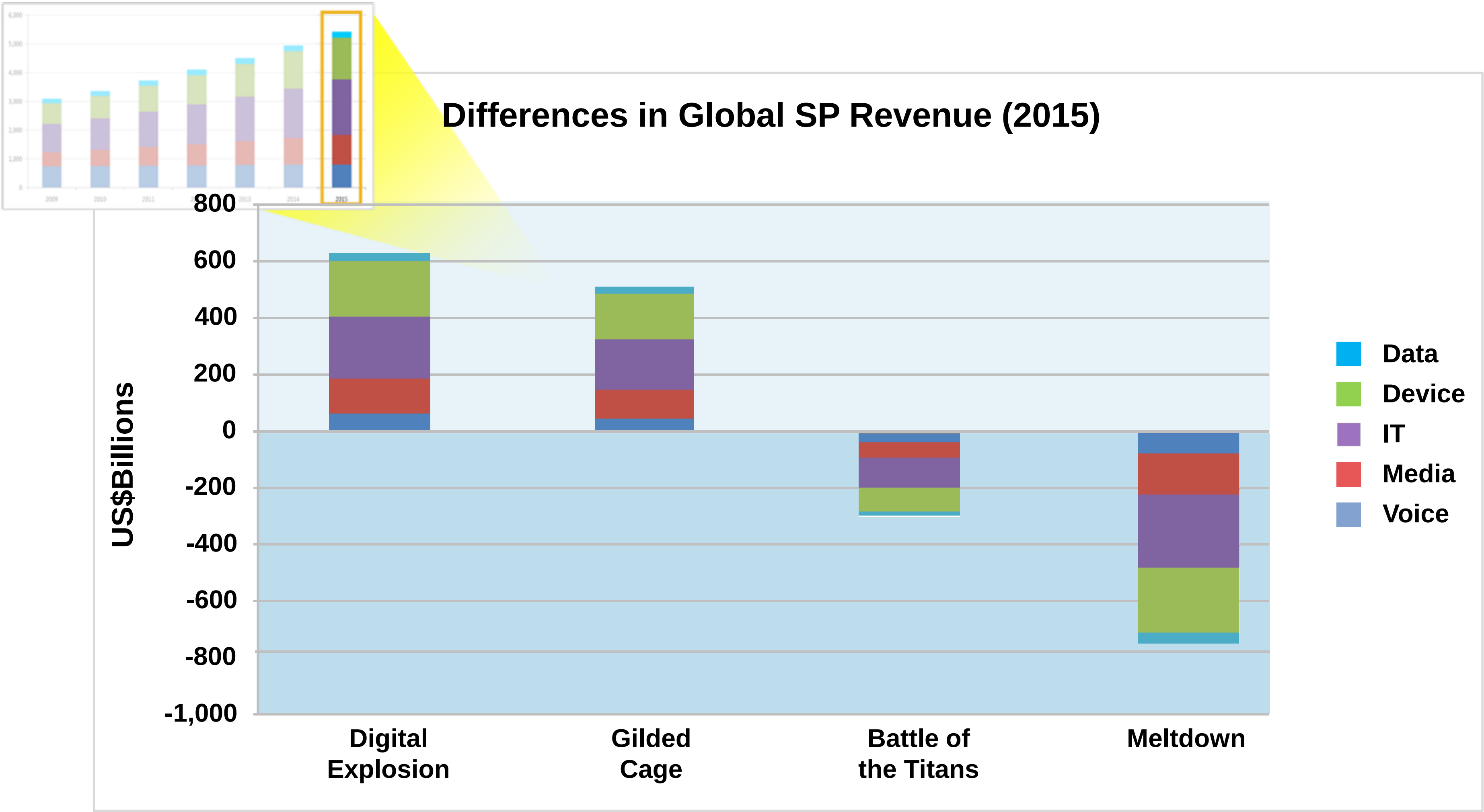
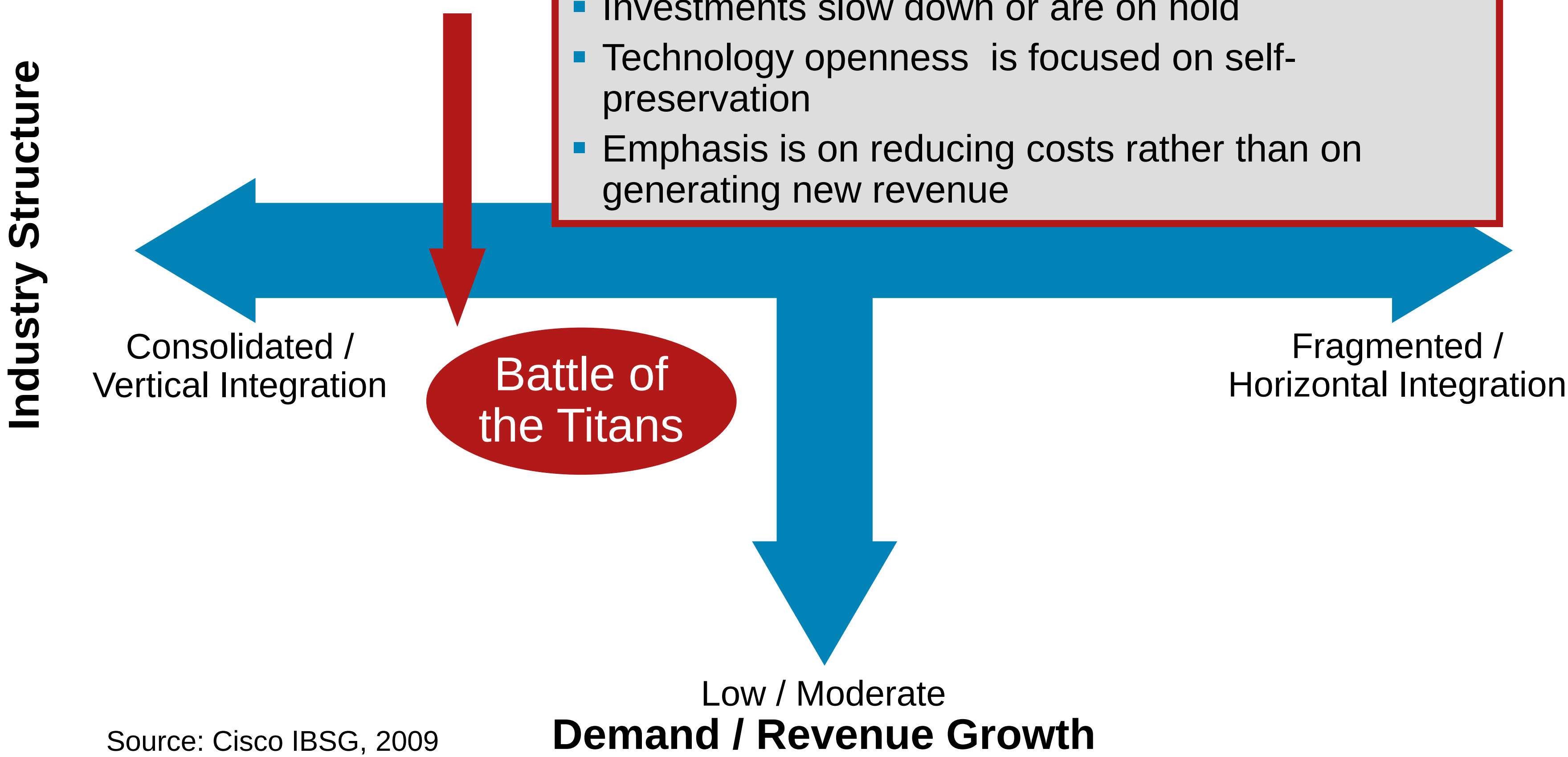


Source: PWC Global Forecast, Ovum, ABI Research; reprofiled and forecasted by Cisco IBSG Service Provider Practice, with additional IBSG analysis.

Anticipated Scenario Evolution Over Next One to Two Years

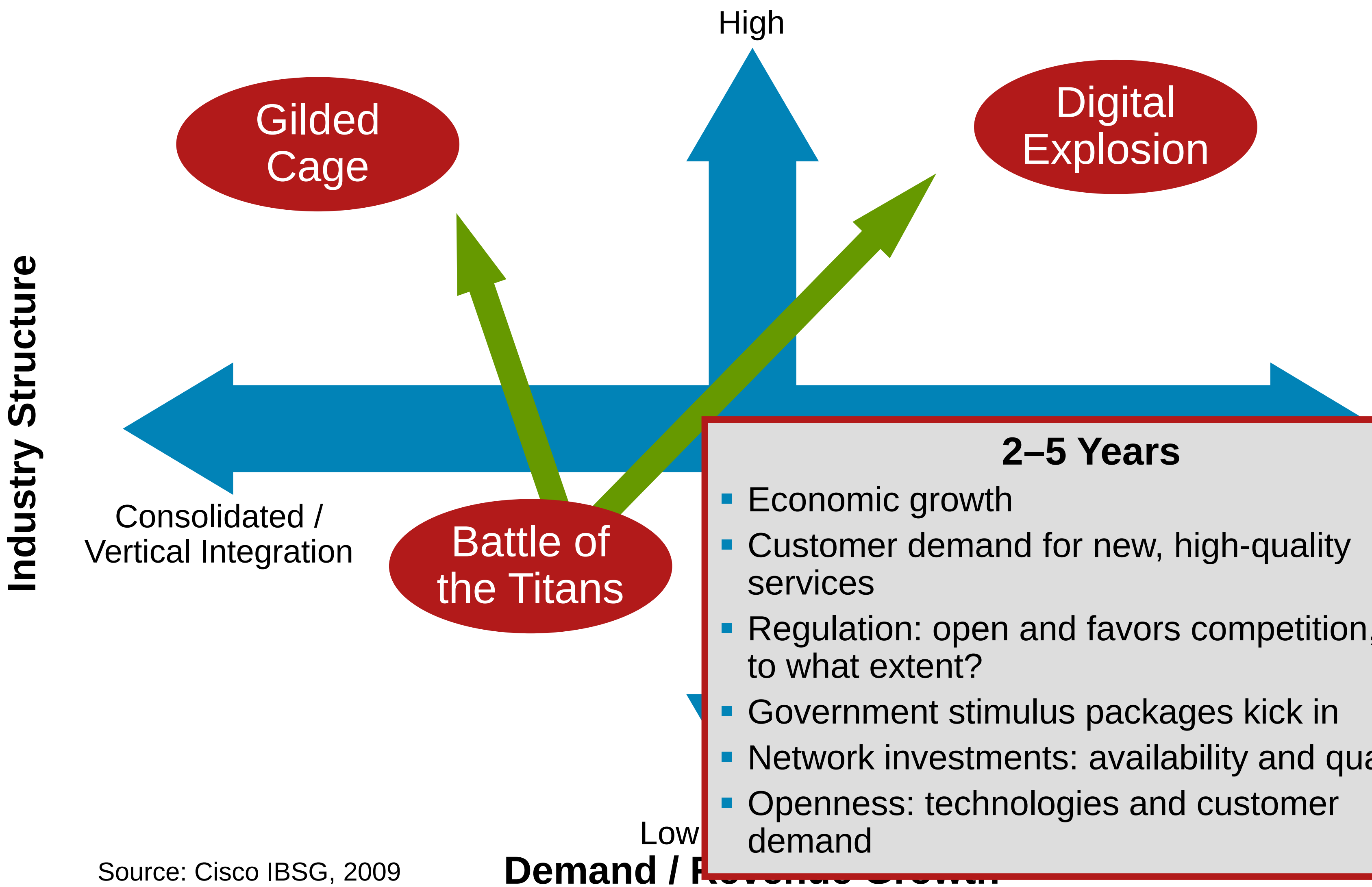
Now–2 Years

- Economic uncertainty
- Weakening customer demand and desire
- Regulations tighten/support large incumbents
- Investments slow down or are on hold
- Technology openness is focused on self-preservation
- Emphasis is on reducing costs rather than on generating new revenue



Source: Cisco IBSG, 2009

Anticipated Scenario Evolution in Two to Five Years



2–5 Years

- Economic growth
- Customer demand for new, high-quality services
- Regulation: open and favors competition, but to what extent?
- Government stimulus packages kick in
- Network investments: availability and quality
- Openness: technologies and customer demand

Source: Cisco IBSG, 2009

Signposts on the Way to Operating Under Different Scenarios

Digital Explosion

- Regulations require that SPs unbundle network elements for resale
- Regulations restrict and control discrimination of network traffic
- Regulations prohibit and limit the use and resale of personal information
- More than 60% of available broadband is >20 Mbps

Gilded Cage

- 25%–30% of the consumer population is using collaboration applications regularly
- 60%–70% of the business population is using collaboration applications regularly
- 30%–40% of consumers are connected nearly 100% of the time
- 70%–80% of business users are connected nearly 100% of the time

Battle of the Titans

- GDP shows negative or 0%–2% growth for two or more years
- Consumer spending on SP products declines by 2%-3% per year
- Business spending on ICT declines by 2%-3% per year

Meltdown

- Customers cite security as the major concern for not adopting new services
- VCs shift more than 25% of their funds to other industries
- Major providers announce unspecified delays in new network build-outs

Source: Cisco IBSG, 2009

Winners and Losers Under Different Industry Scenarios

	Digital Explosion	Gilded Cage	Battle of the Titans	Meltdown
Integrated Incumbent	◕	●	◑	◔
Cable	◑	●	◑	◔
Mobile	◑	●	◑	◑
Challengers	●	◔	○	○
Media	◕	●	◑	◔
Broadcasters	◑	◕	◔	◑
Satellite	◑	◕	◔	◔
OTT/XaaS	●	◕	◑	◔

● Strongly Positioned ○ Weakly Positioned

Source: Cisco IBSG, 2009

Implications of a New Future

	Traditional SPs and Cable Operators	OTTs and Media
Similarities Across Scenarios	▪ Importance of mobility ▪ Collaboration with OTTs / content providers ▪ Cost control ▪ Outsourcing, network-retail separation for costs or flexibility ▪ Customer “ownership” and experience ▪ Content management and distribution	▪ Customer “ownership” and experience ▪ Standardized, IP-based architectures ▪ Alliances and collaboration with SPs ▪ Uniqueness and perceived value of content and services
Key Differences Across Scenarios	▪ Openness: degree of integration / interoperability ▪ Consolidation: within / across chain ▪ Network intelligence: importance and speed of migration ▪ New monetization models: need, ability to deliver ▪ DCs and networks: convergence in network-IT intelligence	▪ Openness: degree of integration / interoperability ▪ Consolidation: within or across value chain ▪ New monetization models: ability to deliver ▪ Extent of collaboration: exclusivity, “walled gardens”

Source: Cisco IBSG, 2009

Strategic Decisions Facing Service Providers

- Should I invest in 4G? If so, when?
- How quickly should I migrate my network from legacy to IP?
- How should I interact with OTTs?
- What is my role in delivering “cloud” services? Which investments should I make?
- How can I implement advertising and alternative business models?
- What are some new sources of revenue? Where should I invest?
- What is my role in content creation, distribution, and management?
- How do I monetize the large growth in network traffic?

Source: Cisco IBSG, 2009

Strategies for Success: Incumbent, Mobile, and Cable Operators

Strategic Positioning

Position for **Gilded Cage** through network quality and value-added services. Hedge against the **Digital Explosion** through interoperability and relationships with OTTs.

Create Options

Bets

- Lobby regulators / standards bodies
- Create scale through consolidation
- Establish exclusive partnerships with other parts of the value chain
- Create new services that exploit end-to-end control and network-IT convergence
- Own the "Connected Home"

Hedges

- "Own" the customer experience
- Collaborate with OTTs
- Move to NetCo-ServeCo model
- Build out cloud delivery models and content distribution
- Monitor and control network traffic
- Build capabilities to take advantage of customer behavior / insights

Table Stakes

- Ensure mobility and interoperable network capabilities
- Optimize cost
- Upgrade to an all-IP network to lower costs and improve competitive position
- Ensure organizational flexibility and agility

Source: Cisco IBSG, 2009

Strategies for Success: OTTs and XaaS

Strategic Positioning

Position for **Digital Explosion / Gilded Cage** through openness, innovation, and compelling offers using the network as the platform. Hedge against **Battle of the Titans** through collaboration with SPs and other channels.

Create Options

Bets

- Create new and compelling offers that are innovative, provide value, and quicken time to market
- Invest in R&D for innovation
- Maximize reach and distribution
- Create flexible monetization models, including targeted advertising

Hedges

- Create strong brand and experience
- Target SMBs/underserved segments
- Build alliances/collaborate with SPs
- Capture data on customers & usage
- Drive down customer acquisition and support costs
- Seek scale and breadth through acquiring other OTTs / XaaS

Table Stakes

- Lobby regulators / standards bodies to promote openness and broadband
- Create low-cost delivery models employing IP and cloud architectures
- Tie-in and collaborate with key SPs
- Support openness / interoperability
- Focus on innovation and customer responsiveness

Source: Cisco IBSG, 2009

Charting a Path to the Future

- Validate / refine these scenarios to reflect market drivers
- Encourage cross-company dialogue to understand what your business would look like under these different scenarios:

  How will you make money?

  How will you compete?

  What are your strengths and weaknesses?

- Refine scenario insights into a comprehensive strategy for future success

"All of our knowledge is about the past, but all of our decisions are about the future."

— Anonymous

Source: Cisco IBSG, 2009

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