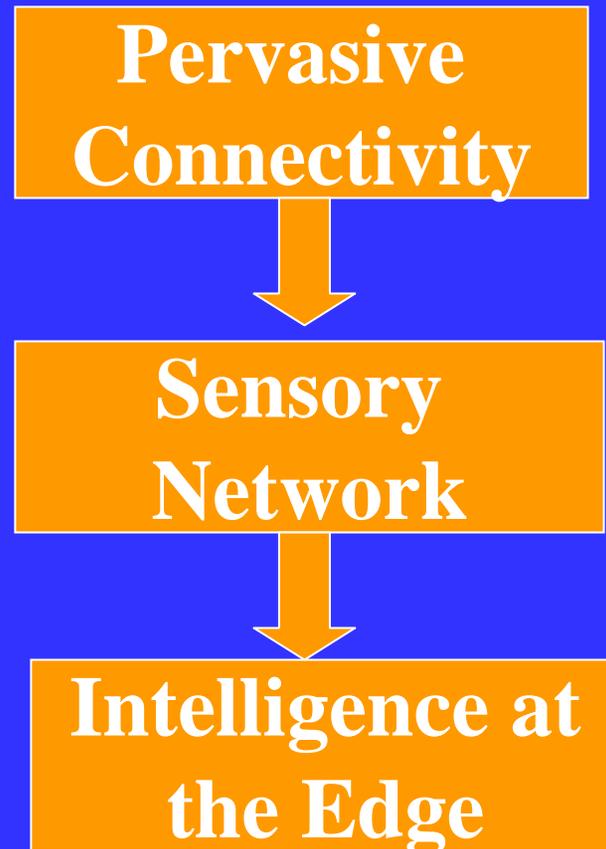


IT Strategy in a Network Economy

John C. Henderson

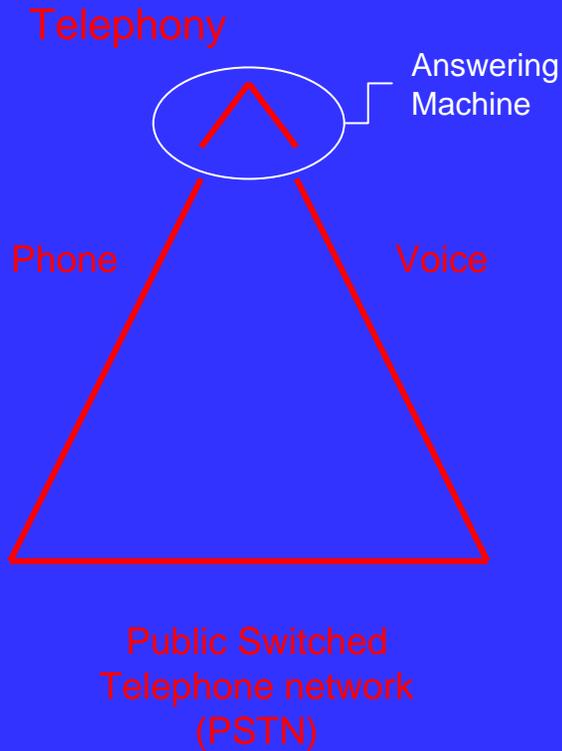
Graduate School of Management
Boston University

The Disruption: Intelligence at the Edge

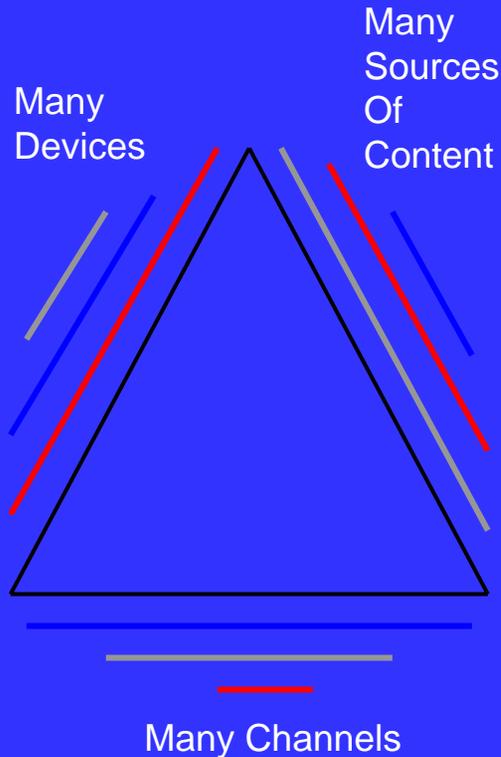


Convergence

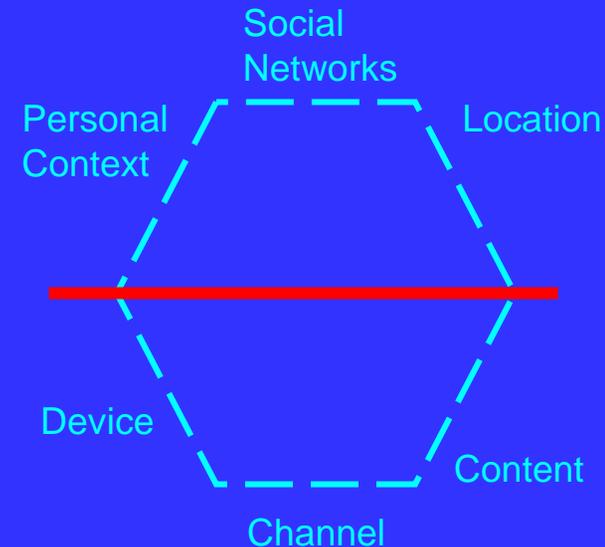
Triples → Mix and Match → *individualization*



Historically, communications systems are inflexible, forming linear chains of content, channel, and device.



Inspired by the Internet, communications systems are now more flexible.



Flexibility gives rise to new dimensions of communication, giving more and more power to the end user.

Sensor Networks

- **An emerging reality of Mote or Smart Dust**
 - **1-5 mm square chip**
 - **Includes radio, computer, antenna and sensor**
 - **Communication 100-500 feet**
 - **Self organizing network (reader,router,analytic)**
 - **Senses movement,light,temp,sound,impact,etc.**
 - **1-3 dollars per mote at mass production**

NEXT: Nano nets

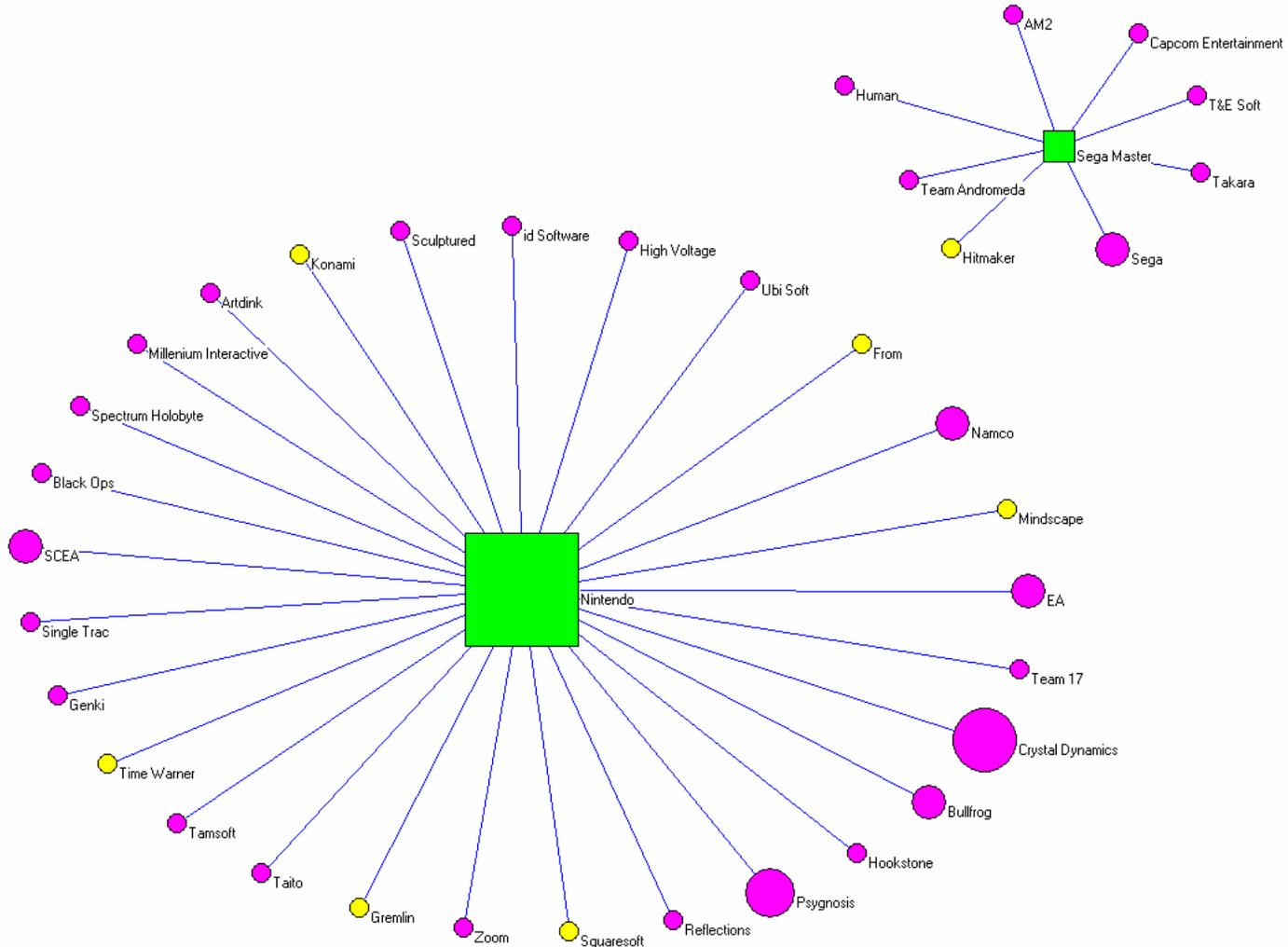
Intelligence at the Edge

- A shift in decision rights to the edge
- Exploits peer to peer
- Leverages coordination and synchronization

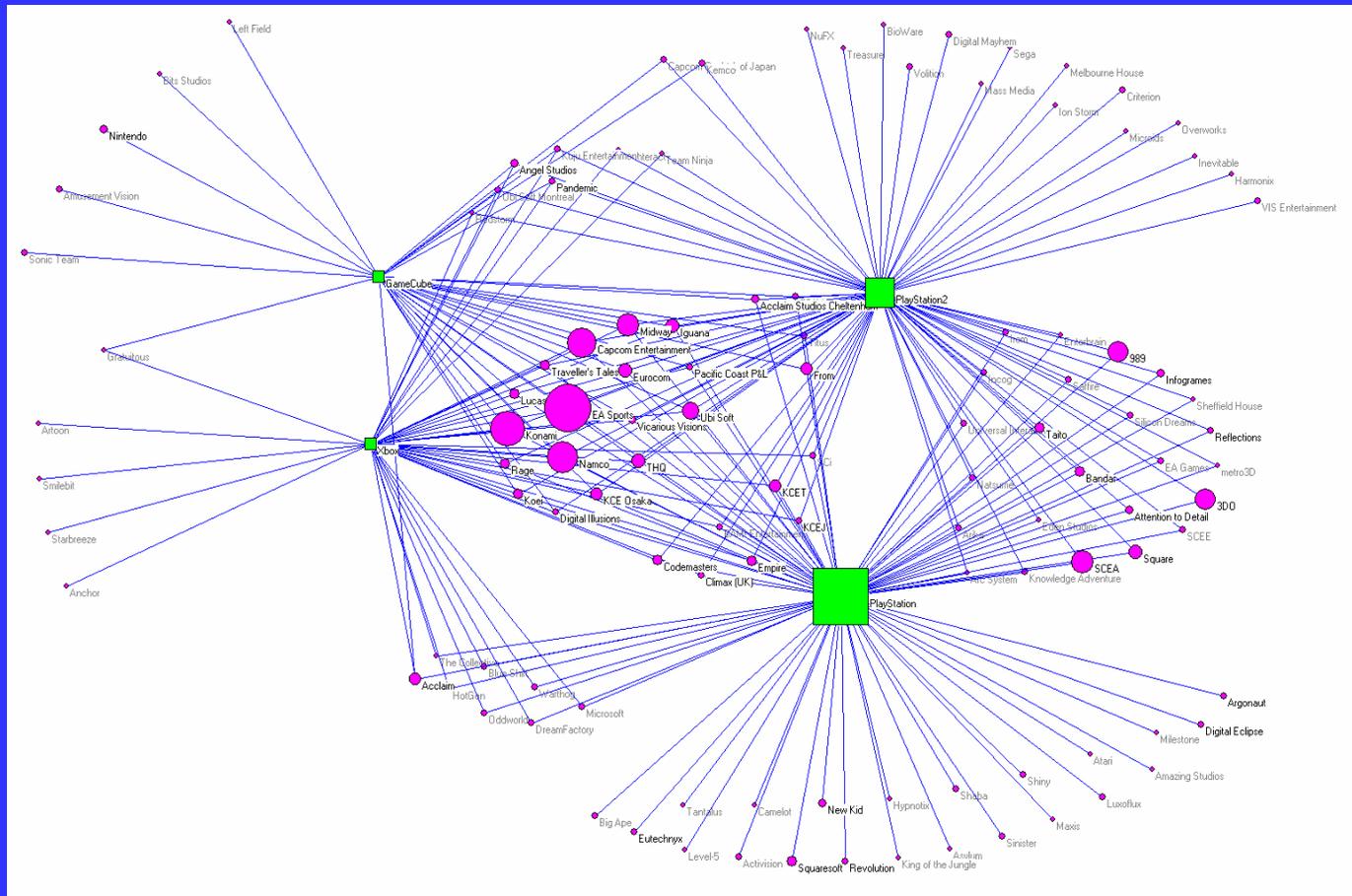
Implications for IT Strategy

1. Strategy from a network perspective
2. The new alignment challenge
3. Value creation
4. IT Leadership issues

Video Game Industry: 1988



Video game industry 2002



Reshape Business Network



Software will be the single most important force in digital entertainment over the next decade. XNA underscores Microsoft's commitment to the game industry and our desire to work with partners to take the industry to the next level."

*- **Bill Gates**, founder and chief software architect of Microsoft*

Leverage Ecosystem

- Move from Firm Centric to Network Centric
- Understand your portfolio of relationships
- Maximize the portfolio
 - pooled risk
 - performance synergy

The New Alignment Challenge

- Tradition of Process Integration via Product/Technology Platforms



Moving to the Edge:

Creating a Business Platform

Business Platform

- A set of capabilities in a business network that
 - **Creates Network Effects**
 - **Has “options” value (agility)**
 - **Has architecture control**

Platform: The Role of Onstar



Car platform



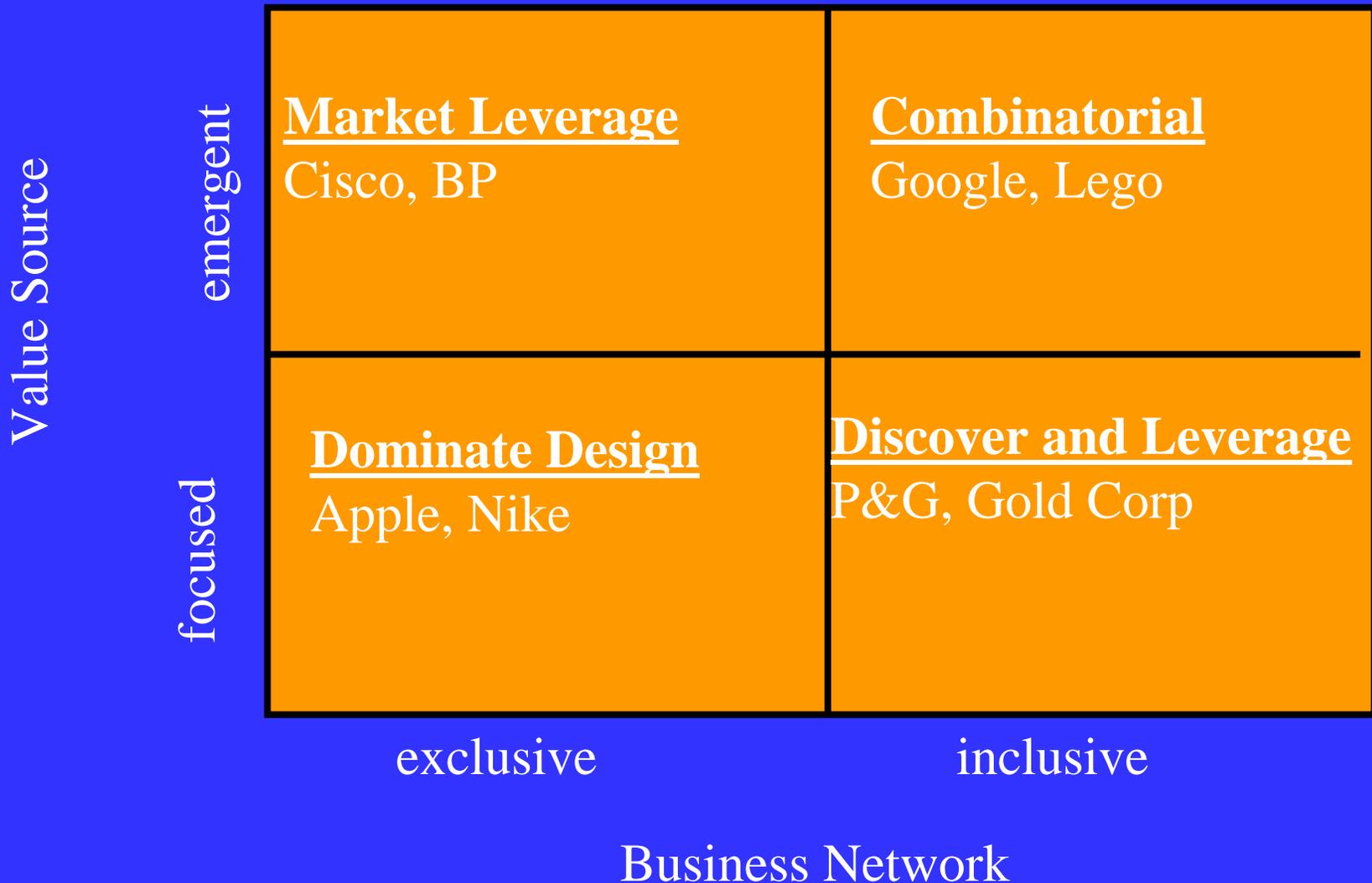
Connected Health: A Business Platform for Healthcare Delivery

- Move to the edge , i.e., redefine role of patient
- Partners Healthcare
 - Wound management
 - EMC pilot
- Four components
 - Telemedicine
 - Physician community
 - Patient/care giver community
 - Administrative support and monitoring

Value Creation: Leveraging Networks to Drive Growth

- **Where is the Edge of your Organization**
 - Where value is created, consumed or captured
 - Topology of Edge- the jagged edge
 - Geographical
 - Social
 - Transaction
 - Legal
 - Value drivers
 - Performance in execution
 - Innovation

Value Creation: Innovation at the Edge

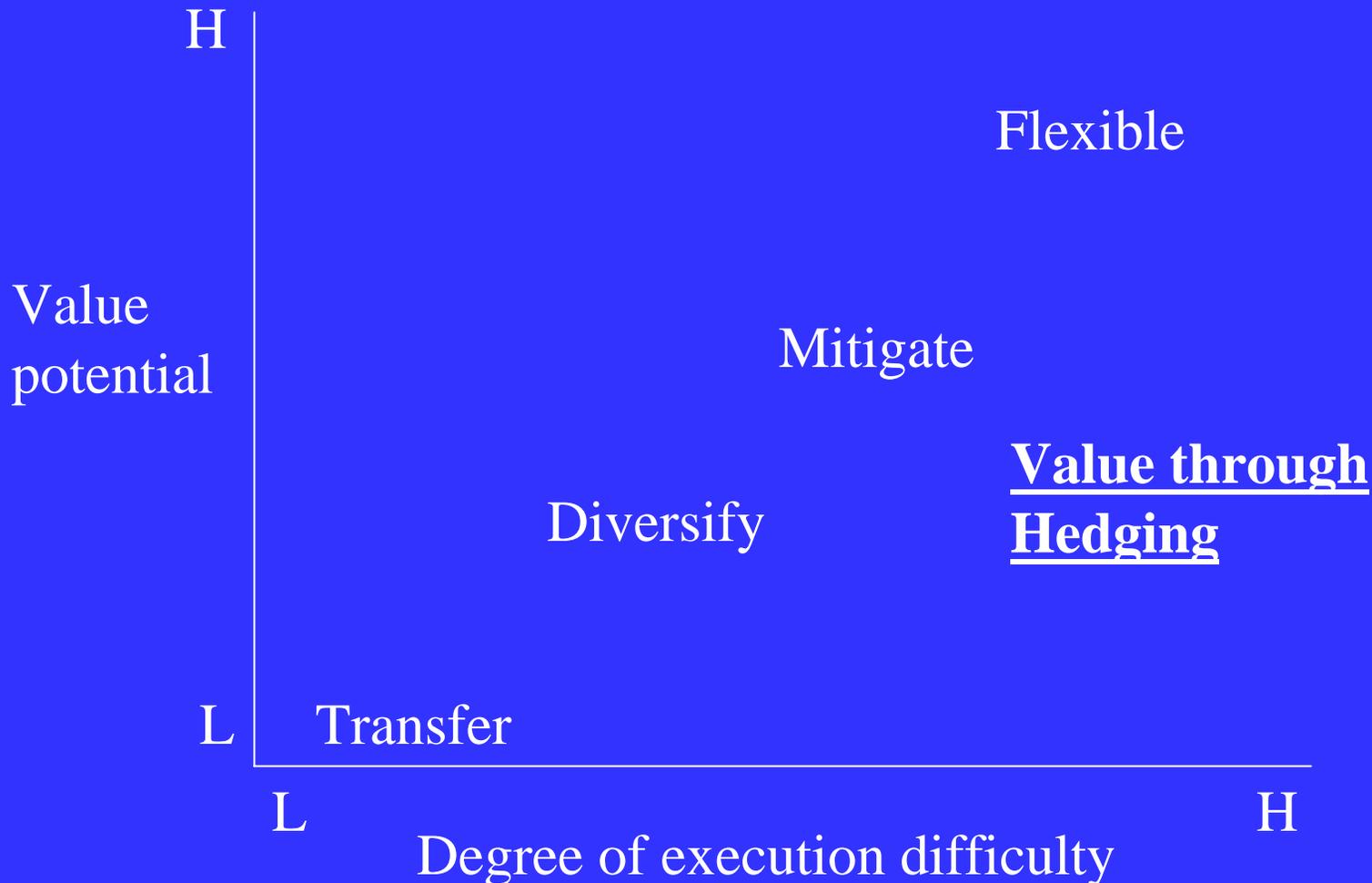


IT Strategy Issues

- Operational platform
- Architectural Control
- Emergent requirements
- IP management

Economics of platforms:

A performance & risk perspective



Leadership: Leading Edge Organizations

Assume:

1. Pervasive connectivity (peer to peer)
2. Sensory networks (context)
3. Intelligences at the edge (distributed decision rights)

Early Examples

- US Army
 - Afghanistan
- Open Source
- First responders

IT Leadership Issues

- (1) Creating Shared Strategic Intent
- (2) Design and deployment of Business Platforms
- (3) Self Synchronization & situational awareness
(Peer to peer)
- (4) Fast Cycle
- (5) Strong central control over “core” and
distributed control at the edge (not a community
of practice)
 - Neither Centralized or Decentralized organizations