15.571 Generating Business Value from Information Technology
Spring 2009

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Generating Business Value From Information Technology

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Agenda

- Definition of IT Governance
- Designing Governance
  - **Five key decisions**
  - **Mechanisms for making those decisions**
  - **USAA example**
- Implementing Governance
  - **6 key stakeholders make IT decisions**
  - **Southwest Airlines example**
- IT Investment Decisions
  - **Thinking of IT investments as a portfolio**
  - **Recognizing the different risk-return profiles of 4 asset classes**

What Is IT Governance?

Framework for decision rights and accountability to promote desirable behavior in the management and use of IT.

Key elements of governance:

- Desired behavior (target of governance)
  - Operating model and strategic objectives
- Governance mechanisms (how governance is implemented)
  - e.g. IT council, business process teams, architecture process, SLAs, CapEx process, business IT relationship managers
- Accountability (how governance works)
- Clarification of who is responsible and how they will be assessed

Source: *IT Governance: How Top Performers Manage IT Decision Rights for Superior Results,* P. Weill & J. Ross, Harvard Business School Press, 2004.

Five Key IT Decisions Need To Be Governed

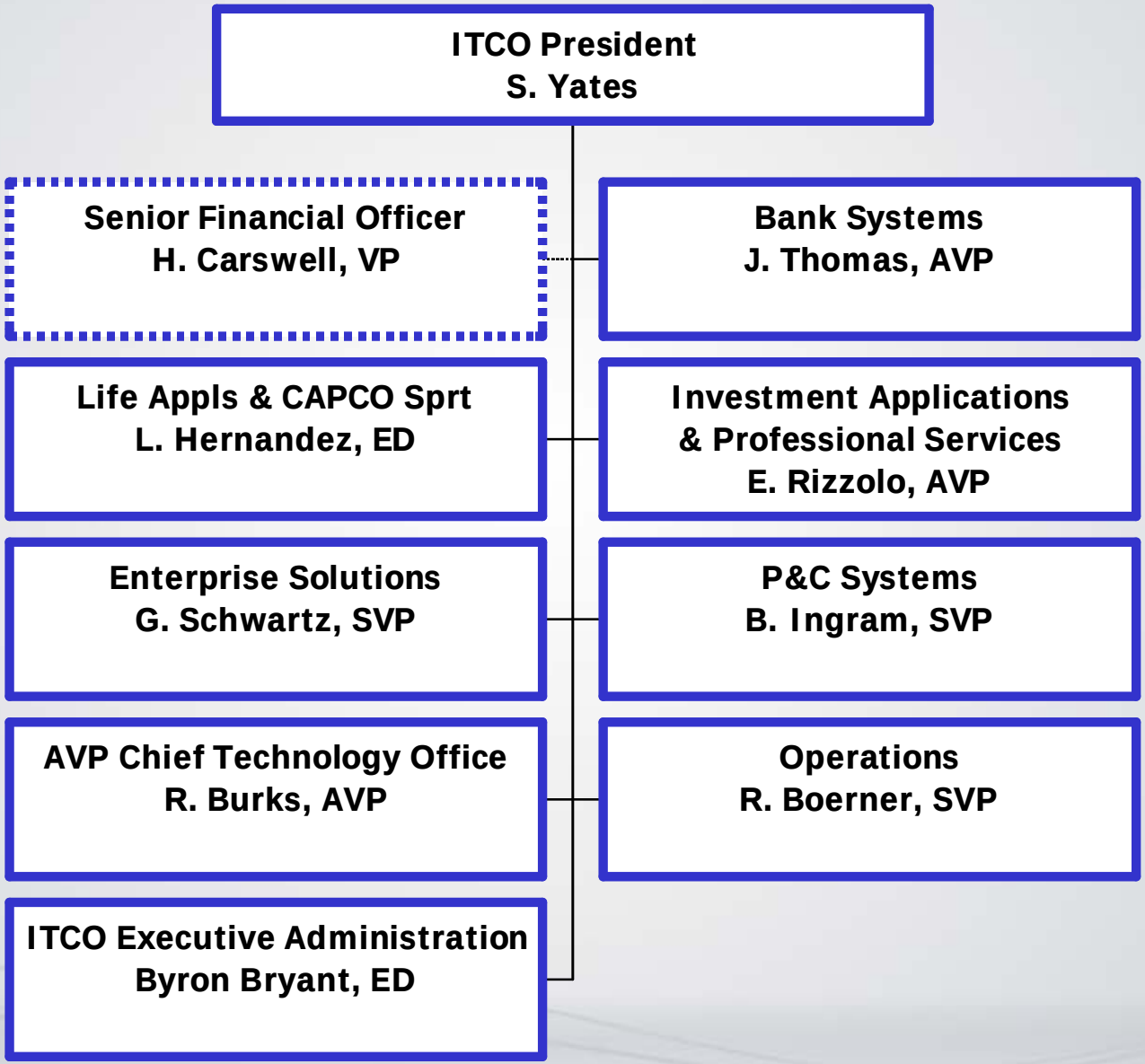
Principles for Digitization	High level statements about how IT is to be used. Driven by business principles (e.g., operating model)
Enterprise Architecture	Organizing logic for data, applications, and infrastructure captured in a set of policies, relationships, and technical choices to achieve desired business and technical standardization and integration
IT Infrastructure Strategies	Strategies for shared IT capability (both technical and human) delivered as reliable services (e.g., network, help desk, shared data)
Business Needs and Project Outcomes	Specifying project ownership from development of the business case, through specification of requirements, to driving the benefits
IT Investment and Prioritization	Decisions about how much and where to invest in IT including project approvals and justification techniques

Source: *IT Governance: How Top Performers Manage IT Decision Rights for Superior Results*, P. Weill & J. Ross, Harvard Business School Press, 2004. For key issues in each decision area, see Figure 2-6, pp. 54–55.

IT Governance at USAA

- The company: diversified financial services company serving the U.S. military; 5 major businesses (life insurance, property and casualty insurance, personal bank, investment management company, and personal services)
- The desired behavior: present a single face to customer but retain business expertise
- The major initiative: a customer relationship management system and single call center to support improved customer service
- The mechanisms: created ITCO—a single IT company supporting all the businesses; created Enterprise Business Operations—a business function with 240 people responsible for enterprise applications and operations

USAA's Information Technology Company



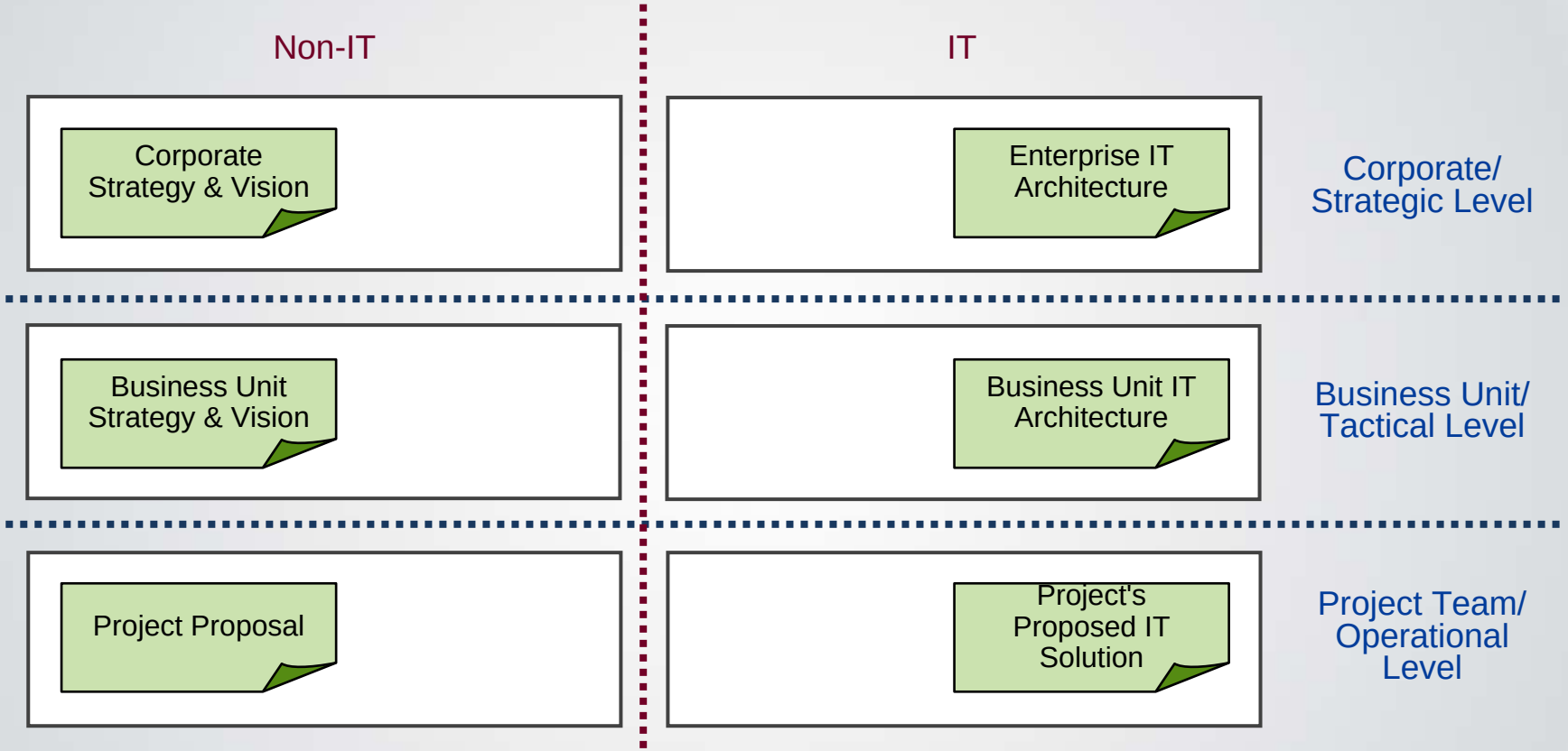
IT Governance at USAA

Principles for Digitization	Executive Committee of CEO, CIO, Executive Vice President of Enterprise Business Operations, 5 operating company presidents
Enterprise Architecture	Architecture Committee of 15 Senior technologists headed by CTO
IT Infrastructure Strategies	ITCO Senior Management Team
Business Needs and Project Outcomes	Enterprise Business Operations unit for enterprise systems; Business unit leaders for local systems
IT Investment and Prioritization	Integration Steering Committee of 9 senior managers, including IT, headed by EVP of Enterprise Business Operations

Other governance mechanisms include: Green Book specifying project methodology; architects on project teams; monthly project reviews, and a bonus program encouraging enterprise synergies.

Source: *IT Governance: How Top Performers Manage IT Decision Rights for Superior Results*, P. Weill & J. Ross, Harvard Business School Press, 2004. For key issues in each decision area, see Figure 2-6, pp. 54–55.

Governance is challenging to implement because IT decisions are made at multiple organizational levels

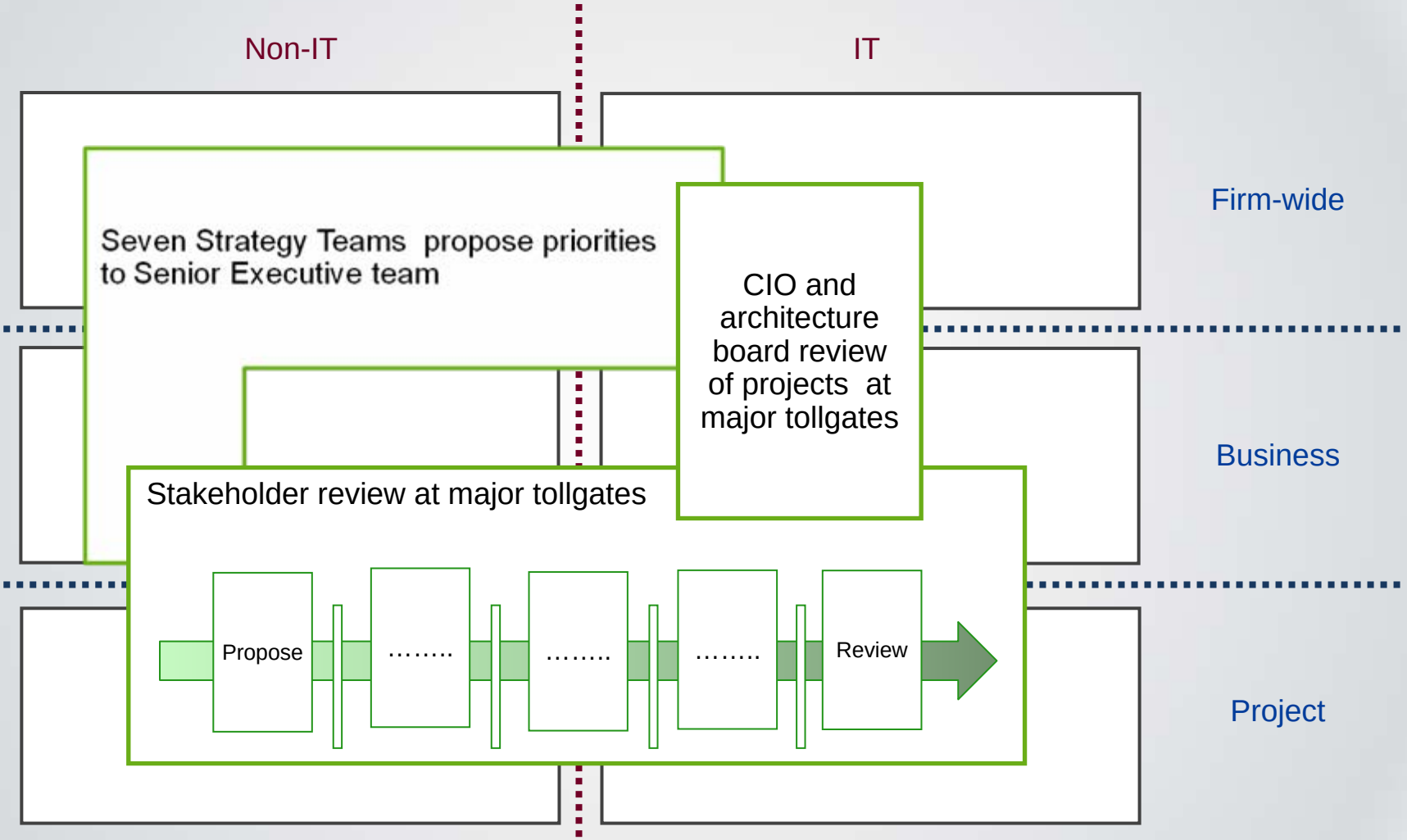


Source: N. Fonstad and D. Robertson, "Linking Mechanisms at TD Banknorth," MIT Sloan CISR Research Briefing, Vol. VI, No. 1D, March 2006.

Southwest Airlines

- The company: $9 billion U.S. airline flying low fare, no frills flights within the continental U.S. Founded in 1971; has been profitable 34 straight years
- The desirable behavior: operational excellence from standardized and integrated processes
- The major initiative: rebuild systems to enhance "sacred transactions"
- The mechanisms
  - **Strategy teams: engage 30 top managers in defining information needs of the business**
  - **Executive committee: makes critical investment and principles decisions**
  - **Architecture review boards: protect architecture**
  - **Project tollgates: monitor project decisions to ensure desired impacts**

Governance processes at Southwest Airlines



[1] Firms without these mechanisms had lower governance performance (which is significantly correlated to several multi-year measures of firm performance (e.g., ROE)). Diagram: Nils Fonstad and Peter Weill.

Key Findings on IT Governance

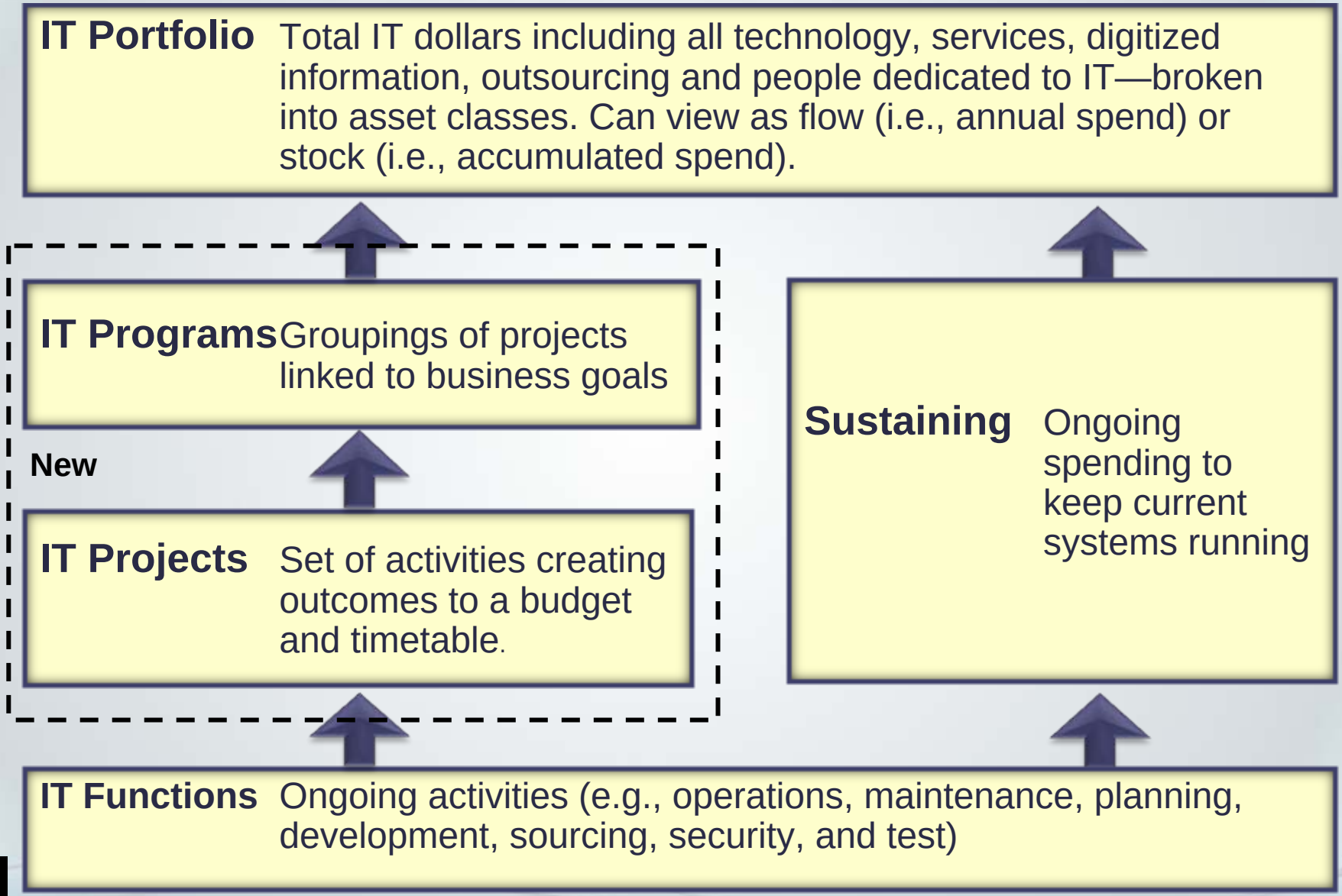
- Above all else effective governance depends on transparency.
- Governance will differ significantly by operating model.
- Firms with effective IT governance have, on average, 20% higher profits than their competitors.
- IT governance should link to the governance of other key assets (capital budgeting processes, executive committees, etc.)
- Effective governance empowers people throughout the firm by clarifying decision making rules.
- IT investment decisions are senior management's greatest IT concern. They want a portfolio that appropriately balances risk and return.

Rethinking IT Investments as IT Portfolio

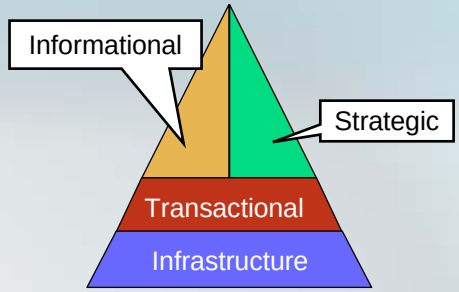
Based on proven and familiar principles of financial portfolio management

- Distinguishes the multiple management objectives for investing in IT
- Creates an IT portfolio with distinct asset classes
- Each asset class has different risk return profiles
- The role of senior management is to align the IT portfolio to strategy and balance for risk and return

What's In the IT Portfolio



Firms Have an IT Portfolio with Four Asset Classes



Transactional IT: automates processes, cuts costs or increases the volume of business a firm can conduct per unit cost, e.g., order processing, bank cash withdrawal, billing, accounting and other repetitive transaction processing functions

Informational IT: provides information for managing, accounting, reporting and communicating internally and with customers, suppliers and regulators, e.g., decision support, accounting, planning, control, sales analysis, customer relationship and Sarbanes-Oxley reporting systems

Strategic IT: supports entry into a new market, development of new products or capabilities, and innovative implementations of IT. Example: ATMs

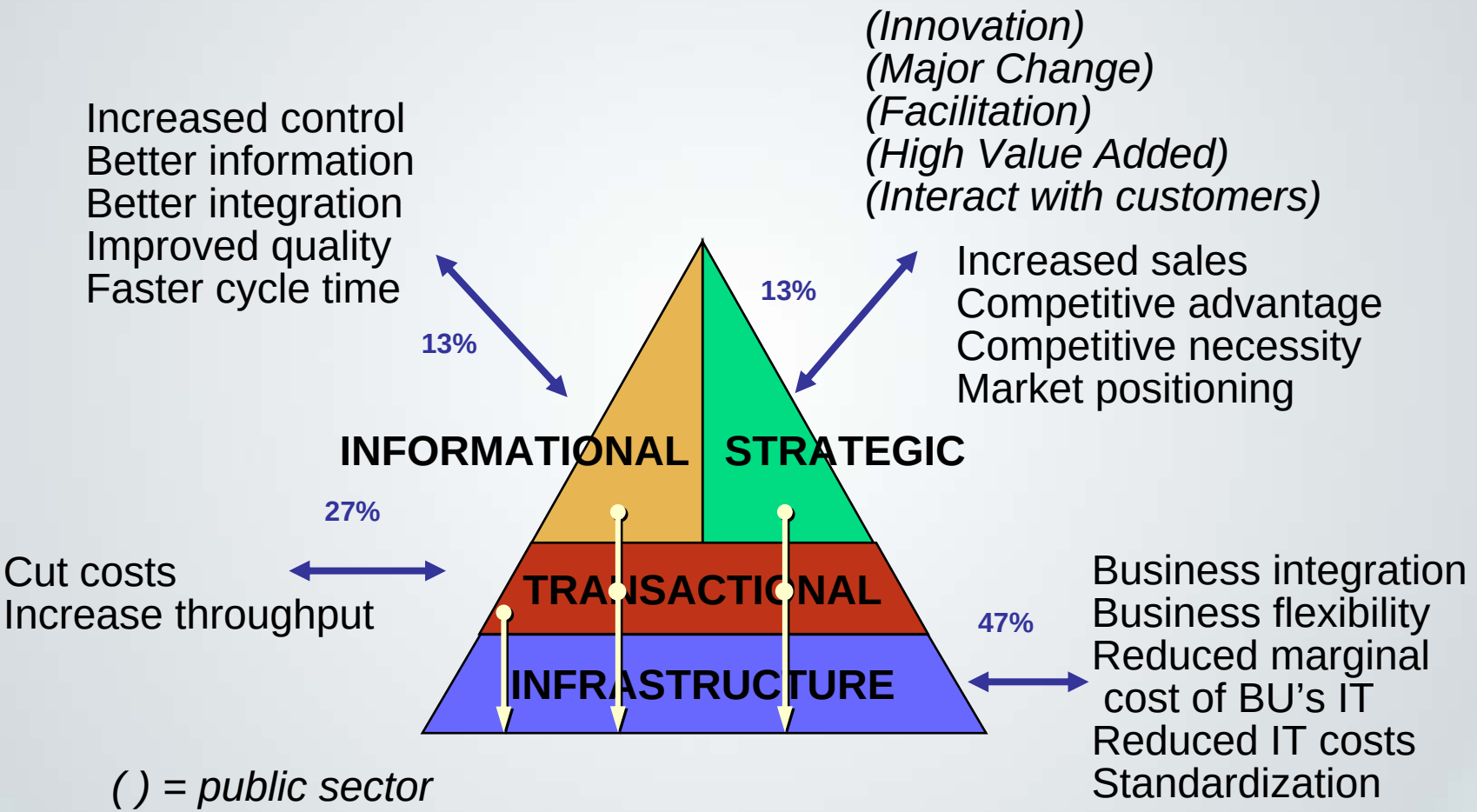
Infrastructure IT: provides the foundation of shared IT services (both technical and human) used by multiple applications, e.g., servers, networks, laptops, shared customer databases, help desk, application development

A project may be any combination of all four.

Source: P. Weill & S. Aral,"Generating Premium Returns on Your IT Investments," *MIT Sloan Management Review,* Vol. 47, No.2, Winter 2006.

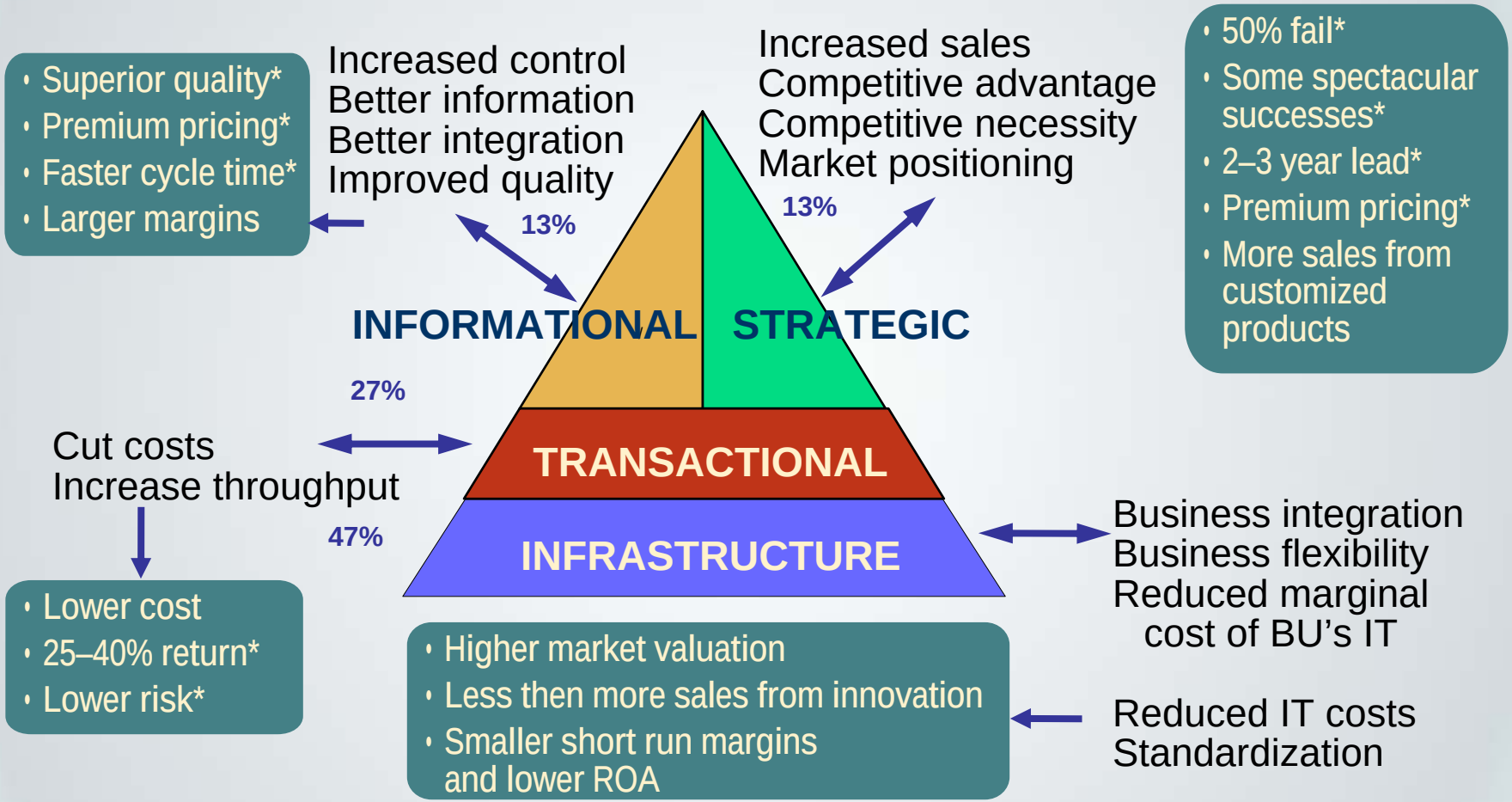
Rethinking IT as an Investment Portfolio

— Four Different Asset Classes



Source: Framework from P. Weill & M. Broadbent, *Leveraging the New Infrastructure: How market leaders capitalize on IT*, Harvard Business School Press, 1998. Data: Percentages are 2007 total $IT spending (operations+ depreciation) from 1113 firms, from MIT CISR Survey.

The Four IT Asset Classes Have Different Risk Return Profiles



Source: MIT CISR study by P. Weill & S. Aral using 1999–2002 data for 147 firms and *Leveraging the New Infrastructure: How market leaders capitalize on IT*, P. Weill & M. Broadbent, Harvard Business School Press, June 1998. All relationships are statistically significant. (*= 1994–1998 data). Percentages are 2007 total $IT investments from 1113 firms.