

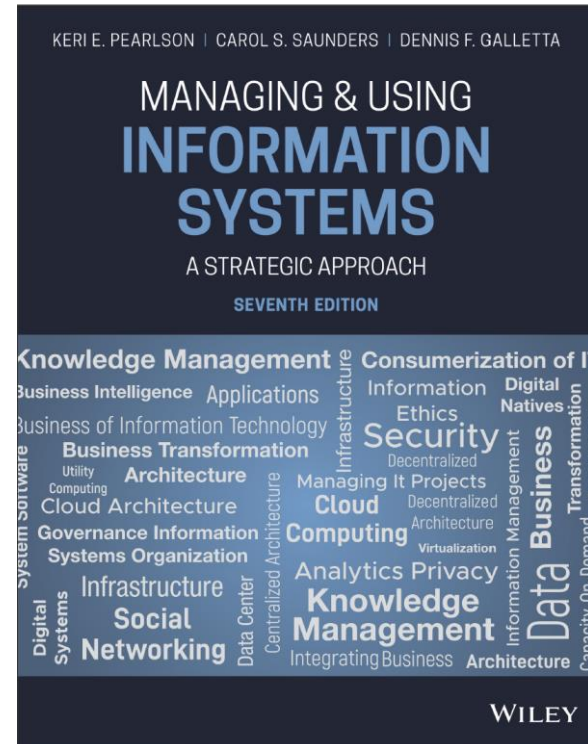
Managing and Using Information Systems: A Strategic Approach – Seventh Edition

**Keri Pearlson, Carol Saunders,
and Dennis Galletta**

Chapter 1 The Information Systems Strategy Triangle



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Chapter 1

The Information Systems Strategy Triangle



KAISER PERMANENTE

سلامت بهتر
با هزینه های پایین تر





KAISER PERMANENTE

- 9.5 million members
- invested in numerous information systems (IS) projects aimed at streamlining operations, offering new services, and meeting government obligations.
- **Doctors** particularly **liked** this because their **annual bonuses** were based, in part, on improvements in **patient health metrics such as lower blood pressure, reduced blood sugar levels if at risk for diabetes, and improvement in cholesterol scores** rather than on the number of tests they ordered or the total billing they brought in.
- The organization invested heavily in **video conferencing technology, mobile apps, and analytics** as they finished implementing a \$4 billion electronic health records system, **KP HealthConnect**.



KAISER PERMANENTE

- KP HealthConnect began in **2003**,
- by **2008**, all members had online **access** to their **health records**;
- by **2010**, all system services were available at **all medical offices and hospitals in the system**;
- and by **2012**, all members had access to their health records on **mobile devices**.
- As one of the **first** health-care organizations to experiment with **chat** rooms, secure **messaging**, and **private e-mail** correspondence **between patients, physicians, and care providers**,
- Kaiser Permanente has been a regular **innovator in the use of technologies**. The new system connects each member to all caregivers and services available at Kaiser Permanente. Further, it enables **patients to participate** in the health care **they receive at a new level and** access **information directly** from the system.

- The organizational design supports **the business strategy of better health care at lower costs.**
- At the core of this strategy was **a shift from a “fix-me system”** with which patients seek health care when something is broken and needs repair to a system that is truly **proactive and focused on promoting health.**
- Under the “fix-me system,” health care was **expensive** and often **sought too late** to fix the problem.
- Instead, the Kaiser Permanente strategy now focuses on **promoting** health and enabling **identification** of problems **before** they become serious issues. For example, those in need of more **exercise** may receive a prescription to take a walk and an e-mail reminder from health-care providers **to reinforce the new behavior.**
- **Staff incentive** systems are **aligned with this behavior,** too. **Physicians** are all **paid a flat salary and end-of-year bonuses** if their **patients achieve better health.** All caregivers are rewarded for guiding people into **making behavioral choices** that are likely to keep them well.

- Kaiser Permanente has reported **higher quality of care and fewer malpractice** cases as a result of HealthConnect. Kaiser reported that HealthConnect is the **largest civilian health information system in the United States**. The clinical information system is highly integrated, including clinical information appointments, services, registration, and billing.
- Before HealthConnect, **patients seldom were able to find chart information** by phone or in the emergency room. Even by visiting, only 40–70% could find that information. But **now 100% is available** through all of those mechanisms. New features include integrated video visits, express check-in, web-accessible **lab** results, electronic notifications of room and **prescription** availability, a mobile app, tablet entry of outpatient information into a **mobile-enabled “dashboard,”** and other features, which assist both clinicians and patients. In total, **61% of transactions on the website are accomplished via mobile devices**. Perhaps most importantly, **users of the portal are 2.6 times** more likely to remain **loyal** to Kaiser Permanente than nonusers.
- In **2014**, Kaiser Permanente’s cloud-based Generation 2 Platform was launched to support the development of clinical and operational services. **Within two years**, more **than 1,000 systems had been delivered** with the help of the platform—all within a day of their request.

Between 2014 and the beginning of 2019 :

Kaiser Permanente had grown **from 9.5 million to 12.2 million health plan members**, and total operating revenue had grown from **\$56.4 billion to \$79.7 billion**.

This growth provides **some confidence that the new system has been successful and meets the needs of patients, clinicians, and management**.

Given the material in this chapter, the reader is likely to assume that we will claim that the success at Kaiser Permanente was achieved in **part because of the alignment between its business strategy, its IS strategy, and its organization design**.

Kaiser actually did that for us, by stating that they credit their success to the **clarity of its mission statement, alignment of the organization's structure and incentives, and the integrated information technology**.

Physicians were part of the decision-making processes. Managers were involved in the design and implementation of the IS. The decision to move from a “fix-me system” to a “proactive health system” was not made in isolation from the organization or the IS.

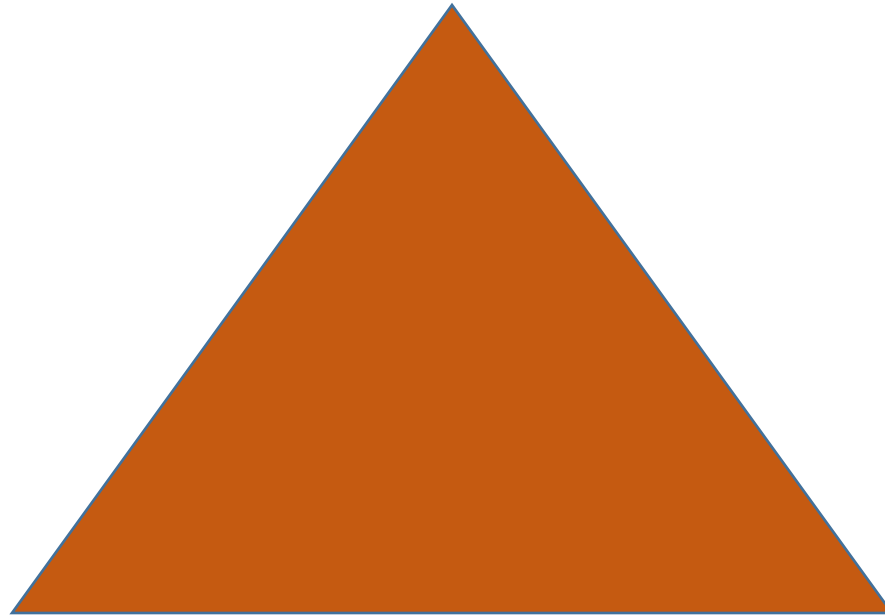
The IS department is not an **island** within a firm. Rather, IS manages an **infrastructure** that is essential to the firm's functioning. Further, the Kaiser Permanente case illustrates that a firm's IS must be aligned with the **way it manages its employees and processes**. For Kaiser Permanente, it was clear that **not only did the physicians need a fast, inexpensive, and useful way to communicate with patients** outside of regular in-person appointments but also **incentive systems and patient service processes had to be updated**. IS provided a solution in conjunction with new **operational and control** processes.

Kaiser Permanente (KP) Opening Case

1. What was KP's business strategy in 2015?
2. On what were bonuses to doctors based under the "fix me" system?
3. What would the new idea be called instead of a "fix me" system?
4. What is the new basis for end-of-year bonuses?
5. What goal alignment has helped KP's success?
6. What IS components are part of this?
7. Could only the IS components be changed to achieve their success?
8. Could only the strategy be changed to achieve their success?
9. Have they been successful through 2019?

The Information Systems Strategy Triangle

Business Strategy

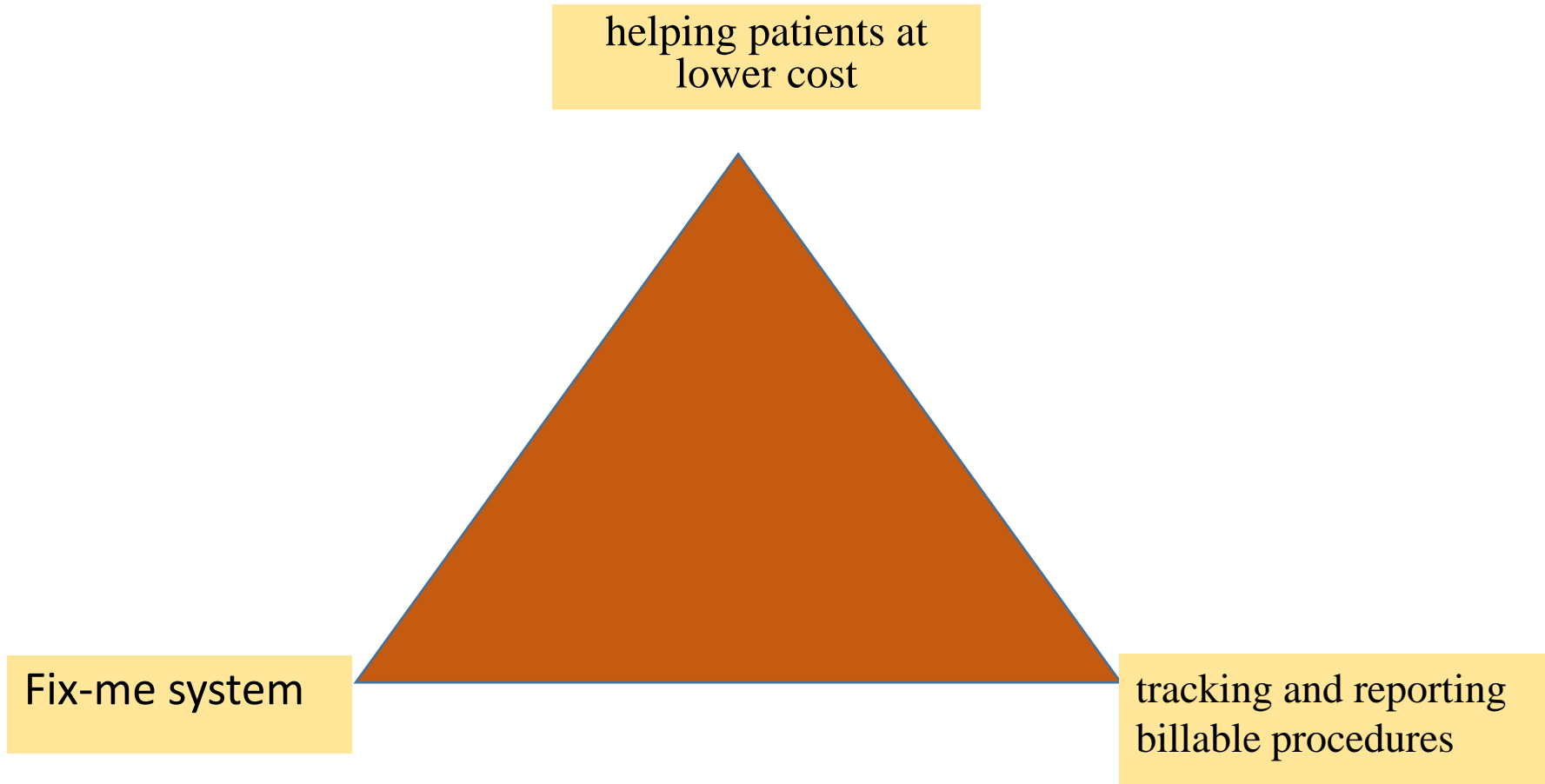


Organizational Strategy

Information System Strategy

These need to be balanced.

The Information Systems Strategy Triangle



What is a “Strategy?”

- Coordinated set of actions to fulfill objectives, purposes, or goals
- It sets limits on what the organization seeks to accomplish
- Starts with a vision.

Company	Mission Statement
Zappos	To provide the best customer service possible . Internally we call this our WOW philosophy.
Amazon	To be Earth’s most customer-centric company , where customers can find and discover anything they might want to buy online, and endeavors to offer its customers the lowest possible prices. . . (recognizing the importance of). . . Consumers, Sellers, Content Creators, and Developers & Enterprises.
L.L. Bean	Being outside brings out the best in us. That’s why we design products that make it easier to take longer walks, have deeper talks and never worry about the weather.

Business Strategy

What is a business strategy?

- It is **where** a business seeks to go and **how** it expects to get there.
- It is not a business model, although it includes business models as one component of a business strategy.
- Business models include subscriptions, advertising, licenses, etc.
- Business models do not include where the business seeks to go, and **only the revenue portion** of **how** it expects to get there.
- Management constructs this plan in response **to market forces, customer demands, and organizational capabilities**



- Dell's business strategy was to sell personal computers **directly** to the customer without going through an intermediary
- Reaching customers in this way was less expensive and more responsive than selling the computers in retail stores
- Dell's ordering system was integrated with its production system and shared information automatically with each supplier of PC components. This IS enabled the assembly of the most current computers without the expense of storing large inventories, and inventory uncertainties were pushed back to the vendors.
- why is Dell now also selling its computers at major retail outlets such as Walmart, Staples, and Best Buy?

Generic Strategies Framework

- Michael Porter: How businesses can build a competitive advantage
 - *fundamental basis of above-average performance in the long run is sustainable competitive advantage.*
- Three primary strategies for achieving competitive advantage:
 - Cost leadership – lowest-cost producer.
 - Differentiation – product is unique.
 - Focus – limited scope – can accomplish this via cost leadership or differentiation *within the segment*

Three Strategies for Achieving Competitive Advantage

	Strategic Advantage		
Strategic Target		Uniqueness Perceived by Customer	Low Cost Position
	Industry Wide	Differentiation	Cost Leadership
	Particular Segment Only	Focus	

Three Strategies for Achieving Competitive Advantage

Examples

	Strategic Advantage		
Strategic Target		Uniqueness Perceived by Customer	Low Cost Position
	Industry Wide	Differentiation Progressive; Apple	Cost Leadership Wal-Mart
	Particular Segment Only	Focus Marriott Ritz Carlton	

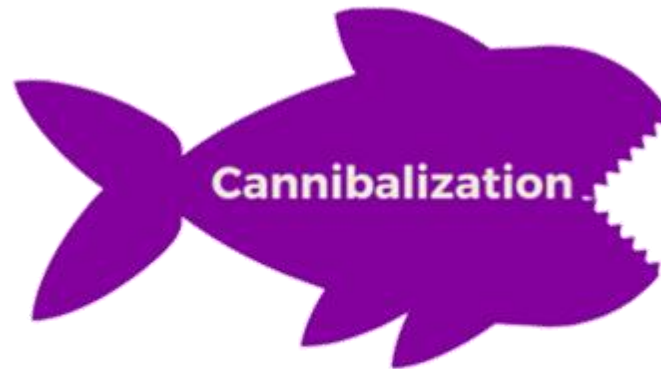
Dynamic Strategies



- Beware of Hypercompetition
 - Can lead to a “red ocean” environment
 - Cutthroat competition – zero sum game
 - Every advantage is eroded—becoming a cost.
 - Sustaining an advantage can be a deadly distraction from creating new ones.
 - Goal of advantage should be disruption, not sustainability
 - Initiatives are achieved through series of small steps. **Get new advantage before old one erodes.**
 - Better to adopt a “blue ocean” strategy
 - Change the industry; create new segments/products
 - Firm specific routines , built in , not imitated easily by rivals

Creative Destruction

- Steve Jobs at Apple:
 - Stated that if a firm does not cannibalize its own products, competitors would do it for them.
 - The iPod was cannibalized by the iPhone and iPad while it was selling extremely well!
- Thusly it worked out for Apple to do so.



Blue Ocean Strategy

- a **blue ocean strategy** in which they create new demand in untapped marketspaces where they have the “water” to themselves
- When applying the blue ocean strategy, the goal is not to beat the competition but to make it irrelevant.
- This is what Dell did when it challenged current industry logic by changing the computer purchasing and delivery experiences of its customers. “With its direct sales to customers, Dell was able to sell its PCs for 40 percent less than IBM dealers while still making money.”²⁵ Dell also introduced into uncharted seas an unprecedented delivery process that allowed buyers to receive customized new computers within four days of ordering them as compared to the traditional processes, which typically required 10 weeks.

Digital Strategy

- a business strategy inspired by the **capabilities of powerful, readily accessible digital technologies** (like **social media, analytics, cloud, and Internet of Things**), intent on delivering unique, integrated business capabilities in ways that are responsive to constantly changing market conditions”²⁶ (p. 198).
- This can be done by customer loyalty and trust with excellent personalized and integrated customer experiences (**customer engagement**) or
- by integrating data, services, and products to create digital solutions (**digitized solutions strategy**).
- A digital strategy performance requires a close alignment with the IS strategy. In order to execute a digital strategy, a company must have an
 - *operational backbone* (or the technology and business capability to deliver efficient and reliable core operations) and
 - *a digital service platform* (or the technology and business capability to pave the way
 - Ex: HealthConnect

Summary

Strategic Approach	Key Idea	Application to Information Systems
Porter's generic strategies	Firms achieve competitive advantage through cost leadership, differentiation, or focus.	Understanding which strategy is chosen by a firm is critical to choosing IS to complement the strategy.
Dynamic environment strategies	Speed, agility, and aggressive moves and countermoves by a firm create competitive advantage.	The speed of change is too fast for manual response making IS critical to achieving business goals.

Organizational Strategy

Organizational Strategy

- What is organizational strategy?
 - Organizational design and
 - Choices about work processes
- How do you manage organizational, control, and cultural variables?
 - Managerial Levers
- The organizational strategy is a plan that answers the question: **“How will the company organize to achieve its goals and implement its business strategy?”**

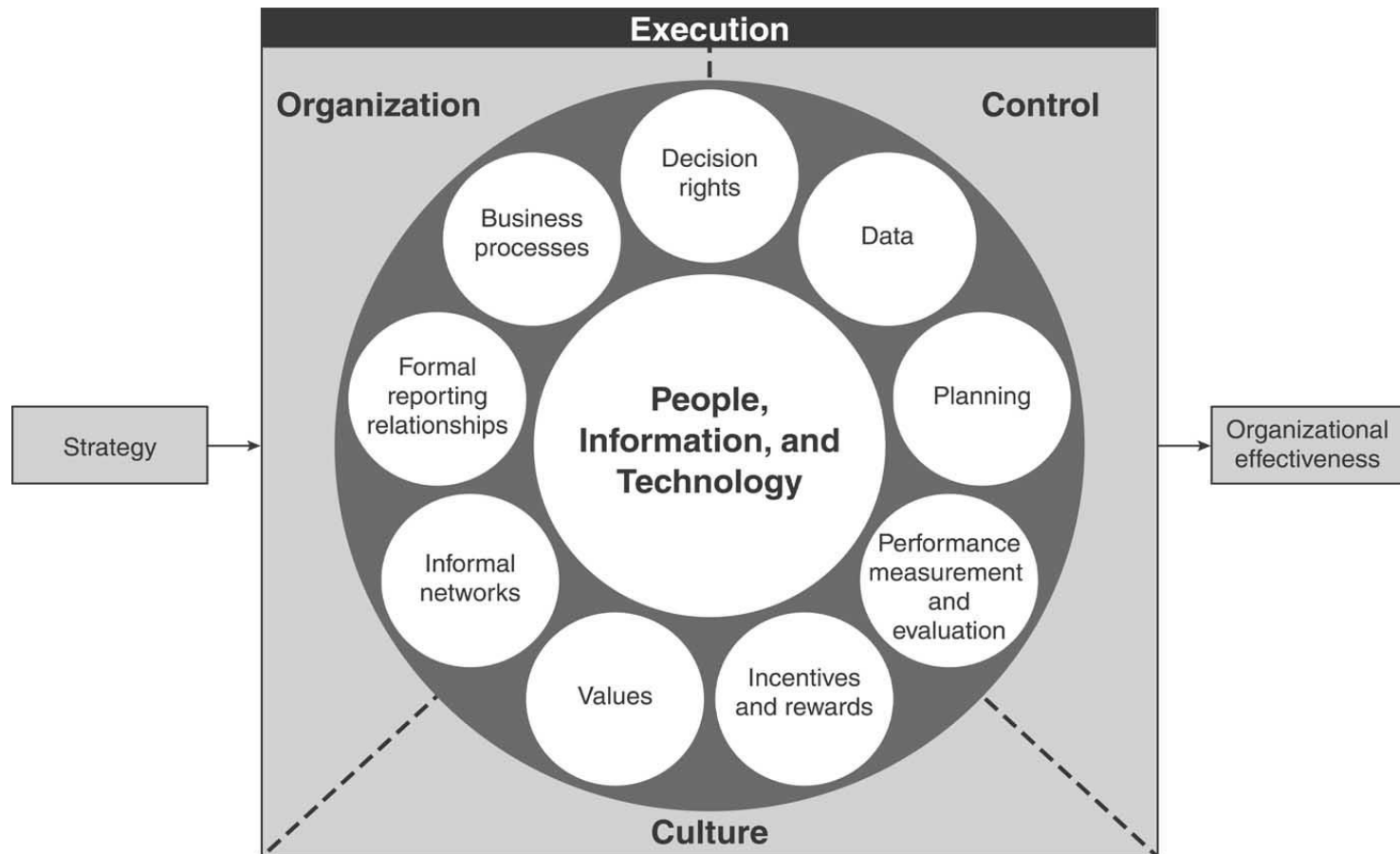


Figure 1.5 Managerial Levers model

Managerial Levers

- This framework suggests that the successful execution of a company's organizational strategy comprises the best combination of **organizational, control, and cultural variables**.
- **Organizational variables** include decision rights, business processes, formal reporting relationships, and informal networks.
- **Control variables** include the availability of data, nature and quality of planning, effectiveness of performance measurement and evaluation systems, and incentives to do good work.
- **Cultural variables** comprise the **values** of the organization.
- These organizational, control, and cultural variables are **managerial levers** used by decision makers to effect changes in their organizations. These managerial levers are discussed in detail in Chapter 3.
- Our objective is to give the manager a **framework** to use in evaluating various aspects of organizational design. In this way, the manager can review the current organization and **assess which components may be missing and what future options are available**.

Understanding organizational design means answering the following questions:

- 1. What are the **important structures and reporting relationships** within the organization?
- 2. Who holds the **decision** rights to critical decisions?
- 3. What are the important people-based networks (**social and informational**), and how can we use them to get work done **better**?
- 4. What control systems (management and measurement systems) are in place?
- 5. What are the **culture**, values, and beliefs of the organization?
- 6. **What is the work** that is performed in organizations, **who** performs it, and **where** and **when** is it performed?
- 7. What are the key business processes?

Information Systems Strategy

IS Strategy

- What is an IS Strategy?
 - The plan an organization uses in providing information services.

JetBlue's former Vice President for People explained it nicely: "We define what the business needs and then go find the technology to support that."

- Business Strategy is a function of (competition+ positioning + **capabilities**)
- Four key IS infrastructure components

Information systems strategy matrix.

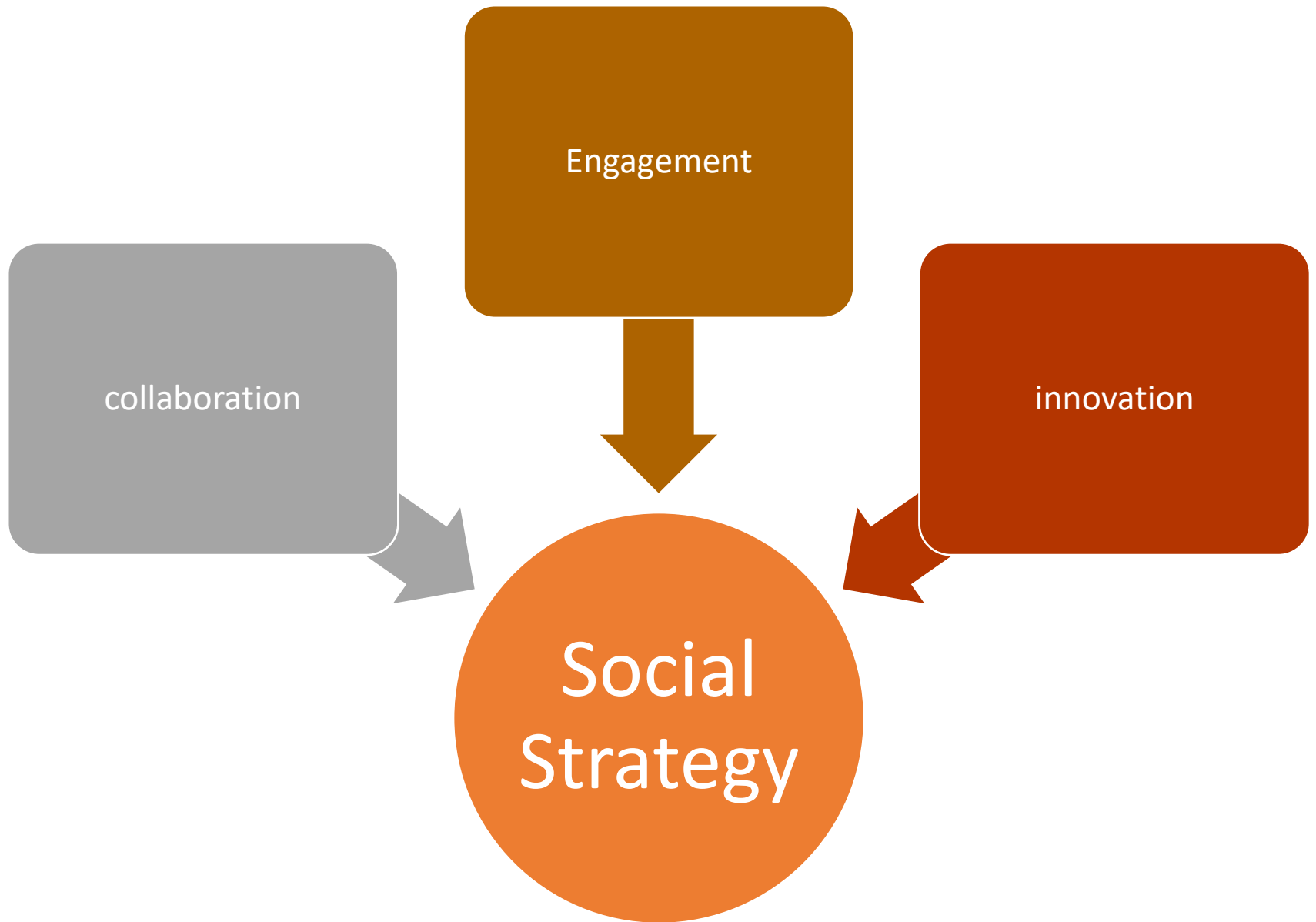
	What	Who	Where
Hardware	The physical devices of the system	System users and managers	Physical location of devices (cloud, datacenter, etc.)
Software	The programs, applications, and utilities	System users and managers	The hardware it resides on and physical location of that hardware
Networking	The way hardware is connected to other hardware, to the Internet and to other outside networks.	System users and managers; company that provides the service	Where the nodes, wires, and other transport media are located
Data	Bits of information stored in the system	Owners of data; data administrators	Where the information resides

Illustration in a Consulting Firm

	What	Who	Where
Hardware	Laptops, servers to store info and back up laptops	Consultants have laptops, managed by the IS Dept.	Laptops are mobile; servers are centralized
Software	Office suite; collaboration tools	Software is on consultants' laptops but managed centrally	Much resides on laptops; some only resides on servers
Networking	Internet; hard wired connections in office; remote lines from home, satellite, or client offices	ISP offers service; Internal IS group provides servers and access	Global access is needed; Nodes are managed by ISPs
Data	Work done for clients; personnel data	Data owned by firm but made available to consultants as needed	Resides on cloud and copies "pulled" into laptops as needed.

One IS Strategy: Social Strategy

- Collaboration
 - Extend the reach of stakeholders to find and connect with one-another
- Engagement
 - Involve stakeholders in the business via blogs; communities
- Innovation
 - Identify, describe, prioritize new ideas



تمرین

- Consider a traditional manufacturing company that wants to build a social business strategy. What might be a **reasonable business strategy**, and how would **organization and IS strategy need to change**? How would this differ for a restaurant chain?

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