

**THE INFORMATION SYSTEMS
BALANCING ACT: BUILDING
PARTNERSHIPS AND INFRASTRUCTURE**

**Carol V. Brown
Jeanne W. Ross**

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Center for Information Systems Research
Sloan School of Management
Massachusetts Institute of Technology
77 Massachusetts Avenue, E40-193
Cambridge, MA 02139-4307

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Abstract

Information systems (IS) units require organizational structures that both facilitate partnerships with business unit clients and enable tight coordination of computing platforms to strengthen the technology infrastructure. For years, IS executives have recognized that the structure that best supports each objective is counterproductive for the other objective. Thus, they have periodically undertaken major restructuring, which has the effect of alternating between the objectives rather than addressing them simultaneously. Today's IS executives, however, are increasingly attempting to achieve partnership and infrastructure development simultaneously by implementing *balancing mechanisms*: structural overlays and process enhancements that leverage the strengths of an existing organizational structure while compensating for its limitations. Balancing mechanisms enable the IS function to work towards those dual IS management goals simultaneously, as well as to more quickly respond to today's competitive environment. This paper describes both individual balancing mechanisms used in Fortune 500 firms and a strategy for implementing suites of mechanisms to achieve IS management goals.

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Traditionally, organizational structure has served as the primary tool for focusing organizational resources on strategic priorities. Firms have relied on organizational structure to define communication patterns and the location of decision making responsibilities.¹ As strategic priorities changed, management restructured the organization in order to coalign strategy, structure and other organizational characteristics.²

Today's competitive environment requires frequent strategic adjustments, but frequent restructuring can become a cumbersome and disruptive response to strategic redirections. Structural reconfigurations have been likened to a "blunt and sometimes brutal instrument of change".³ Consequently, some firms are relying less on formal structures to define communication patterns and processes. Instead, these organizations are employing a variety of *balancing mechanisms* to accomplish the goals normally associated with organizational structures. These mechanisms consists of individual and group roles (structural overlays) and process enhancements.

When new organizational structures and processes are introduced, an organization's individual members attempt to incorporate them into their established routines and their own cognitive frameworks for tasks and objectives. Since it is difficult for individuals to understand processes outside their own work domains, the new structure or process may or may not have the intended outcome.⁴ Balancing mechanisms can be implemented and then redesigned as needed to achieve the original intended outcomes or to quickly respond to new cross-functional needs.

Like the organizations they serve, IT units need to react dynamically to changing competitive and organizational requirements. Balancing mechanisms, such as account managers, cross-functional standard-setting committees, and negotiated service contracts, provide them with the needed agility. These mechanisms have a *balancing* effect because they reduce the pressure for formal restructuring by exploiting the strengths and minimizing the weaknesses of the current IS organization structure.

Most of these mechanisms are not new. Some have been touted for a decade or more as useful for addressing specific managerial concerns. What is new is the way they are being used as a substitute

for structural reorganizations. In some firms, suites of balancing mechanisms have become key to developing the adaptive and dynamic environments that enable IS units to meet the changing requirements of their business partners.

This paper describes how IS units are currently applying balancing mechanisms to help them address the limitations of organizational structure. It draws upon examples from twelve large (Fortune 500-sized) corporations from multiple industries where we have conducted interviews on IS management practices. In each firm, we conducted multiple interviews with IS heads and business unit managers to identify how the unit was employing balancing mechanisms. We also talked with IS heads in more than twelve other firms to supplement our data.

Organization Structures and IS Goals

Historically, many IS organizations resembled a pendulum, oscillating between centralized and decentralized structures. When cost pressures dominated concerns, firms centralized IS staff and technology in order to build standardized, cost-effective infrastructures. Conversely, when business units clamored for more value from information technology, IS staff were decentralized to bring them closer to their customers. An increased emphasis on fast response to the marketplace has quickened the pace at which priorities change. As a result, IS units must either significantly accelerate the pendulum swings or find ways to respond to these needs simultaneously.

A strong information technology (IT) infrastructure provides two important strategic capabilities. First, infrastructures enable data sharing across functions and divisions, which supports cross-functional decision making and allows organizations to act more globally. Second, they provide a base for faster development of business applications due to standardized platforms and common applications. Indeed, some firms are finding a well-managed infrastructure to be a source of competitive advantage.⁵

IS-business unit partnership, on the other hand, is important for identifying and delivering systems that meet strategic business needs. Partnering involves frequent communication between IS and business units, which promotes shared understanding of IT capabilities and business unit needs. This shared understanding results in systems that are more targeted to customer needs and easier to implement.⁶

Understandably, most IS organizations would like to pursue both a strong IT infrastructure and close IS-business unit partnerships. The dilemma for organizations is that centralized structures support the development of a strong infrastructure, but decentralized structures foster partnerships, and these two structures are at opposite ends of the organizational structure continuum. Figure 1 illustrates the tradeoff between alternative IS structures.

Despite the contradictory structures that enable them, infrastructure and partnership development are complementary IS goals and mutually reinforcing. Not only are organizations reluctant to sacrifice one objective in order to achieve the other, they also are finding that one is not possible without the other. The flexible data access, cost effective operations and faster cycle times fostered by centralized IT infrastructure stewardship build confidence in IS management, thereby facilitating IS-business partnerships. Yet the frequent formal and informal IS-business unit communication characteristic of decentralized IS units is important for winning commitment to infrastructure investments. Moreover, applications developed within business units today constrain tomorrow's infrastructure choices, while the existing IT infrastructure defines the realm of possibility for new business applications.

The limitations of wholly centralized or decentralized IS organization structures are readily apparent to most organizations. In recent years, many have looked for structural solutions to address these limitations — often adopting a hybrid structure. The most common of the hybrid structures has been a federal form which centralizes responsibility for much of the IT infrastructure, such as data centers, networks, and infrastructure planning and standards, while distributing to business units responsibility for much of the application planning, development, and maintenance. Through this hybrid structure, firms attempt to gain the benefits offered by both centralization and decentralization — touted as “the best of both worlds”.⁷

But hybrid structures have their own limitations. As IS units move away from monolithic centralized and decentralized structures, they start to realize the benefits of the alternative structure, but they encounter the disadvantages as well. A hybrid structure introduces new divisions of labor — often between decentralized development teams and centralized infrastructure support teams — that require a great deal of coordination to generate the intended benefits. For example, a formerly centralized IS unit that decentralizes application development staff typically finds that relationships with business

management improve, but the price is more difficult coordination of development platforms and methodologies.

An investment banking firm recently decentralized some IS staff to business units to better understand the needs of business partners and improve systems delivery. The decentralized teams provide local development and support, but rely on centralized IS for the development of networks and data administration. Early experiences with the new structure suggest that the decentralized teams have partnered tightly with business unit staff. In fact, some centralized staff feel that the decentralized IS staff have been "co-opted" by their business partners to the extent that they ignore corporate standards and fail to fully avail themselves of the capabilities the centralized IS staff could provide. The CIO has observed that the decentralized staff have become so focused on the needs of their business partners that they are even less tolerant of delays than business partners had been in the past.

As this example illustrates, structure alone cannot adequately address the IS goals of infrastructure and partnership. Rather, formal structure serves as a starting point, on which to layer additional roles and processes. Carefully planned balancing mechanisms are needed to simultaneously achieve the dual goals of infrastructure development and partnership for centralized, decentralized, or hybrid IS units. Moreover, balancing mechanisms enable flexibility and adaptability in quickly changing organizational environments, thereby helping IS units maintain strategic alignment.

What are Balancing Mechanisms and How Do They Work?

Balancing mechanisms take the form of horizontal *structural overlays* (such as individual liaison roles and cross-functional teams) and *process enhancements* (such as new or improved planning processes and incentive systems). Their implementation is both dynamic and evolutionary in nature. In some cases, these mechanisms are introduced to address a specific objective for the short-term only. We use the term *balancing mechanisms* because their purpose is to maintain a balance between the pressures for the opposing centralized and decentralized structures. A few examples below illustrate how they work.

Structural Overlay: Individual Roles — In an effort to increase partnership with business managers in an organization with primarily centralized IS responsibilities, the CIO of Carrier Corporation, a global manufacturing company, implemented account manager roles in its North American divisions. These high-level IS managers function as part of the management team of the business units, reporting to the general manager of the division, and are also structurally linked with the central IS organization. The specific goal of the mechanism is to increase business unit awareness of the capabilities of IT and offer better support of business priorities of the units. The account managers, called Business Unit IS Managers, directly supervise all IS staff based within the unit, and serve on the Management Council of Corporate IS. The account managers have input into the development of corporate IS strategy and full responsibility for planning, prioritization and implementation of IT strategy and services for the business unit.

Structural Overlay: Group Roles — Corporate management at AT&T, which has a hybrid IS organization structure and a culture of highly autonomous business units, recently concluded that the proliferation of IT operating platforms to support business unit initiatives had become suboptimal. Operational economies of scale were not being achieved, and both systems and application programmers could not be easily transferred from one workteam to another. A task force of IS officers from the major operating groups was charged with developing a "foundation architecture" (standard operating environment) to be adhered to for new systems initiatives.

Process Enhancements — Corning Incorporated has a hybrid IS structure: application development is a business unit responsibility, but a central IS unit provides computer operations and telecommunications support. A process that calls for negotiated service level agreements between the CIO and business unit heads has allowed business unit managers to specify the services they want. The central IS budget is based on real purchases of IS services by business units, and business unit managers have the option of seeking services externally. Negotiating service contracts requires clear explanations of IS services so that business managers can make informed service-level decisions. This process requires that IS and business managers share expertise to determine what computer and network arrangements work best for each business unit.

Balancing mechanisms bolster a firm's ability to achieve both partnership and IT infrastructure objectives. They can supplement centralized, decentralized, or hybrid structures to facilitate communication, coordination and decision-making across intraorganizational boundaries. They do so by creating formal and informal linkages that the IS organization structure itself does not support.⁸ Our research shows that the proactive implementation of suites of balancing mechanisms can conquer the limitations of a chosen organizational structure at a given point in time.

Balancing Mechanisms that Build IS-Business Unit Partnership

Balancing mechanisms introduced to build partnership focus on improved collaboration between IS and business managers. They usually are directed at improving the performance of three IS functions: (1) operations support, (2) systems delivery, and (3) IT-business unit education. These functions rely on IS-business partnerships for effectiveness and sustain these partnerships as they are pursued. Table 1 categorizes examples of structural overlays and process enhancements that advance partnership. In firms with centralized IS organization structures, these mechanisms address the tendency of centralized IS staff to be isolated from daily business concerns. However, it should be noted that firms with hybrid or decentralized structures also use these mechanisms. In these situations, the mechanisms are used to retain linkages between the central IS unit and the dispersed IS units.

Operations Support — In the past, central IS units were often a monopoly supplier of operations support. In many firms, this monopoly position resulted in poor relationships with internal customers. However, in today's environment where business units are increasingly being empowered to choose their suppliers, good customer relationships are a key to effective operations support. As one manager in a major division of a telecommunications firm reported, "I want [central IS] to act as a supplier who treats me like I'm the only act in town." Satisfied customers have confidence that central IS units can address their business problems and are more likely to seek out their expertise to help them deliver IT solutions. Balancing mechanisms that firms employ to generate customer satisfaction and build partnership through operations support include structural overlays such as account managers and co-located IS staff, and process enhancements such as negotiated service contracts and business unit involvement in IS evaluations.

At Baxter Healthcare Corporation, central IS staff were reorganized into self-managed work

teams and assigned to business units to address the particular needs of each unit. Because the teams still reported to central IS, the firm retained the ability to direct individual teams toward organizational goals, but the teams were empowered to resolve business unit problems with little direct oversight by central IS management. This permitted greater responsiveness to their customers. Accompanying this team initiative was a performance evaluation process that captures input from business partners. This process change helped motivate team members to focus on business solutions rather than technology. It also engaged business managers in thinking about their priorities for IS services. Both the IS and business sides of the firm therefore are actively engaged in partnership-enhancing activities.

Systems Delivery — The effective development and implementation of new systems increasingly demands business unit ownership of systems projects. However, business managers can be reluctant to accept ownership when they do not have an ongoing pattern of working closely with IS. And it can be difficult to move toward partnership when IS applications staff are physically distanced from business staff. Balancing mechanisms can be especially useful in these situations. Structural overlays such as user project managers and joint project management, and process enhancements such as business unit authority for system prioritization and budgeting, JAD, and timeboxes⁹ can help develop closer working relationships.

Paul Revere Insurance Group, which has a centralized IS unit, is reengineering its business acquisition process. The project team is headed by a business unit manager who works with users, IS, and consultants to detail the process redesign, specify system requirements, and build and implement the system. To maintain enthusiasm over the five-year projected life cycle, he has focused on quick hits — delivering components of the larger system within a year of their initial design. He believes that incremental implementation will smooth the organizational change process and help manage risk. The project manager reports to an executive vice president who has budget responsibility for both internal and external funding of the system development effort. Partly as a result of his financial investment in the system, the vice president has observed, “We’ve taken charge of the project, we know what we want built. We’ve got to have some partnerships, because [IS] might not want to take as many risks.” Taking responsibility for both funding and managing the project has encouraged business leaders to work closely with IS to better understand the infrastructure requirements

and project risks.

IT-Business Education — Both effective operations support and systems that are responsive to changing business needs are dependent on a cooperative environment characterized by mutual understanding, appreciation, and trust between IS and business units. Gaining trust is a challenge regardless of organizational structure, but balancing mechanisms can help IS and business unit staffs to get to know one another better and learn each other's responsibilities and competencies. Firms are relying on structural overlays such as top management advisory committees and matrix reporting relationships, and process enhancements such as cross-functional job transfers, to provide opportunities for mutual education and enhanced partnership relationships.

An international pharmaceutical firm, which has a new hybrid IS organization structure, utilized an advisory committee to improve communications between senior business managers and the central IS unit head, as well as to educate senior business managers on IT management issues. The committee was chaired by the CIO's direct report, and members included operating group V.P.'s, the CFO, and other key V.P.'s. One group V.P. reported that the input he received from these periodic meetings helped him "to guide the IS people" he was newly responsible for. This committee was also the forum for gaining company-wide consensus for elevating decentralized IS unit heads to a director level so that they would be formally recognized as part of their division's management team.

Balancing Mechanisms that Build Responsive IT Infrastructures

As IS staff develop close partnership with individual business units, they create two obstacles to effective infrastructure development. First, business units tend to perceive themselves as owning IS resources that are allocated to them. Thus, they are slow to relinquish IS staff that might be better applied to strategic efforts in other parts of the firm. Second, IS staff that are focused on the needs of a single business unit may be persuaded to develop systems using nonstandard technologies. While in some cases a decision to adopt a nonstandard platform is merited, in other cases their adoption suboptimizes IT infrastructure goals.

Balancing mechanisms within IS can help firms articulate and enact an over-arching vision for infrastructure investments. Table 2 lists some of the balancing mechanisms that firms employ to help achieve IT infrastructure goals. These balancing mechanisms are directed at three IS functions that are critical to coordinated IT infrastructure development: (1) strategic IT planning, (2) IT standard setting, and (3) the development and maintenance of a pool of IT expertise.

Strategic IT Planning — Although business management is responsible for determining strategic priorities, IS management is increasingly accepting responsibility for exploiting IT for the benefit of not only business units but also the firm as a whole. Structural overlays such as committees with division representation and account manager positions, and planning processes that tie IT planning to strategic planning, are utilized to align IT investments with a firm's strategic priorities. These mechanisms are important for both identifying how IT can support a firm's strategies as well as determining how to best allocate IS resources to address strategic needs.

At a national insurance company, a variety of balancing mechanisms and some recentralization have accompanied a new enterprise-wide emphasis on strategic IT planning. Each operating unit now has an IS steering committee, chaired by a systems manager, to approve and prioritize systems projects. The committee cannot meet if the president of the operating unit is not present. The CIO chairs a new executive steering committee which includes the chairman of the board, president, and chief administration officer. This committee meets quarterly to review the firm's overall IT architecture investments and to consider systems initiatives for the whole corporation. The executive committee does not review operating unit initiatives on a project-by-project basis, but relies instead on the processes established for decisions at the division level. The systems managers who report to the CIO are viewed as information officers for the operating units they support and regularly participate in management meetings. They also regularly communicate any new strategic initiatives to the CIO and the other systems managers in order to address potential impacts for IT architecture and personnel decisions. According to the CIO, the company's new success in strategic IT planning is to a large extent due to "spending a lot of time thinking about what we really want to build."

IT Standard Setting — An increasingly important goal of IS units is to provide sharable data and

compatible platforms that facilitate cross-functional process redesign and access to enterprise data for decision-making. The firm-wide coordination and commitment required for adherence to IT standards is particularly difficult when IS resources are distributed throughout the organization. Firms in our study used structural overlays such as standard-setting committees and matrix reporting relationships, and process enhancements such as those that identify common applications to move toward more standard environments.

The Gillette Company, a consumer products firm with a largely decentralized IS organization, created an advisory board of divisional IS managers to reach consensus on technical standards for the Corporation in order to strengthen its IT infrastructure. This advisory board specified the hardware, systems software, databases, and communications protocols that have become the technical specifications for IT purchases. After a year of development and reviews, the advisory board ratified a document articulating a technical vision for the Corporation. A smaller group of key divisional IS executives continues to meet four times a year to evolve and enforce standards. Initial reported outcomes of the standard-setting efforts include increased acceptance of common applications across divisions, which IS executives feel is key to achieving economies of scale and improved access to managerial data. The advisory board has also resulted in increased communication across the dispersed IS managers: the members still meet annually to discuss IT issues of interest across business units.

IT Expertise Development — A continuing concern of IS management is how to determine technical skill requirements, provide training opportunities, and maintain technical expertise. As IS staffs work with less mature technologies in open systems environments, and in increasingly dispersed workgroups, these concerns for technical expertise are escalating. Balancing mechanisms targeted at building an adequate pool of IT expertise include structural overlays such as mentoring or internship arrangements and centers of excellence, and process enhancements such as job transfers between central and divisional IS units.

Travelers Insurance has built a strong pool of IT expertise through selective recruiting, intensive training, and frequent transfers within and across central and divisional IS units. Some members of IS are recruited for a special five-year internship program in which they participate in a variety of projects to build their base of experience. Later, as individuals

acquire new technical and business skills, IS management looks for opportunities to reuse skills on related projects in other areas. A former CIO described the approach to project assignments as one of transitory teams: "We're trying to put together teams whose composition could change every day, depending on the need. So you could bring in an expert for two or three days, and he or she would be part of the team just like everybody else. But then when they were done, they would go away." IS staff members note that the transitory team concept acquaints individual staff members with the breadth of talents available in the department. As a result, they know who to call on when they confront a new technical challenge. This familiarity helps divisional and central IS work together to define a solid support environment for new systems as they are being developed.

Assessing the Need for Balancing Mechanisms

As with TQM, BPR and other management strategies, implementing an appropriate suite of balancing mechanisms requires a great deal of management attention. Ultimately, the goal is to have IS-business partnership and IT infrastructure development thinking so enmeshed in the organization's culture as to be self-sustaining, regardless of the IS organization structure.¹⁰ Our research suggests that many IS units today are implementing balancing mechanisms in an attempt to move toward cultural absorption of these IS goals. For most firms, however, the chasm between its existing state and a culture that nurtures partnership and infrastructure development, presents a considerable challenge.

Table 3 depicts two extreme states in partnership and infrastructure goal attainment. At one end of the continuum, firms relying on their existing IS organization structures exhibit minimal partnering and uncoordinated approaches to infrastructure development. At the other end of the continuum, IS goals have been incorporated into the firm's culture. Partnership building and infrastructure development activities are embedded in the related IS functions.

IS units that rely heavily on existing structures, particularly those with centralized IS organization structures, are often characterized by IS-determined service levels, limited user involvement in systems delivery, and occasional presentations on the use of IT in business. Balancing mechanisms that are dependent on IS-business unit communications to establish appropriate service levels can move a firm closer to a culture of IS-business partnership. Similarly, balancing mechanisms that

increase business partner ownership of the systems development process can lead to an environment of shared goals. Finally, balancing mechanisms that foster ongoing formal and informal communication and education processes can lead to a culture of mutual understanding of IS and business roles.

With regard to infrastructure, reliance on existing structures, particularly for decentralized and hybrid organizations, can result in individual project justification, unintegrated technology platforms, and outdated staff skills. Balancing mechanisms that enable coordination across business units can move a firm toward IT planning that is an integral part of the firm's strategic planning process. Balancing mechanisms that establish and enforce technology standards can lead to a well-integrated technology infrastructure. And mechanisms that encourage professional growth and teamwork across IS units can lead to a high-performing, learning organization.

Table 3 can be used as a self-assessment tool for IS organizations to determine their need for balancing mechanisms. IS management, ideally with business unit management, can map its current state for each of the six dimensions. In doing so, management will identify where balancing mechanisms are most needed to supplement, or counteract, the effects of existing structures. Appropriate mechanisms from Tables 1 and 2, or recommendations by organization members, can then be selected for implementation.

Conclusion: Implementing Balancing Mechanisms

Individuals in organizations can usually master their own routines, but it is much more difficult for them to see the impacts of their routines on other parts of the organizations. Distributed systems developers that are responding to the strategic IT needs of a business unit may see less clearly the organization-wide benefits of a standardized architecture--or the costs of noncompliance. Similarly, central infrastructure support staff who fully subscribe to infrastructure standards may not fully comprehend the effects of a given standard on business processes. Balancing mechanisms provide the opportunity to regularly change organizational contexts in order to refocus management attention and recalibrate individual understanding of organizational and business unit needs. Because balancing mechanisms are easier to change than formal organizational structures, IS management can observe the outcomes of their efforts and frequently adjust their suite of mechanisms.

Each of the IS organizations we have studied has introduced multiple balancing mechanisms to achieve goals that are not fully addressed by their IS organization structure. Although not all of the senior IS executives in these firms deliberately implemented their in-place mechanisms as a way to balance the pressures toward more centralized or decentralized organizational structures, we believe it would be useful to do so. By taking the portfolio approach recommended here — analyzing the strengths and weaknesses of a firm’s current IS organization structure and then analyzing how the balancing mechanisms currently in place reinforce the strengths and offset the limitations of that structure — managers can more effectively design a suite of structural and process mechanisms.

Not all mechanisms require the same investment. Several organization theorists have described the organizational costs of various structural overlays.¹¹ Integrative roles such as account manager positions, for example, are viewed as less costly than matrix structural overlays, but more costly than liaison roles. The advantage of planning a suite of mechanisms is that it allows IS managers to assess the total cost of their efforts to achieve partnership and infrastructure objectives and to consider what the organization can absorb at any given time.

Effective implementation of balancing mechanisms requires not only careful planning, but also close monitoring. The impacts of these new roles, teams, and processes will vary across organizations and within organizations over time. Based on our research, we can offer the following specific recommendations for designing and implementing balancing mechanisms.

1. Most IS organization structure changes are made to better align the IS organization with overall characteristics of the firm. Because even properly aligned IS organization structures have inherent limitations, balancing mechanisms should be initiated to enrich or offset the impacts of the current IS organization structure.
2. Like structure, a single balancing mechanism cannot address all IS objectives. Thus, a strategy for introducing balancing mechanisms should focus on incremental development of a suite of mechanisms that together exploit the benefits and minimize the weaknesses of the firm’s IS organization structure.
3. Balancing mechanisms should be viewed as dynamic. They should be introduced when

needed, modified as needed, and abandoned when no longer needed.

4. IS executives alone should not be expected to identify all potentially useful balancing mechanisms. Rather, business management and other IS managers should be encouraged to identify structural overlays and processes that could potentially improve the performance of the IS functions at different levels within the organization.

Balancing mechanisms can offer immediate benefits to firms that successfully implement them. Through the proactive design, implementation, monitoring, adaptation, and re-evaluation of balancing mechanisms, firms can improve their ability to deliver on their IS objectives under any IS organization structure. Since these mechanisms help IS units respond to the pressures for IS organization pendulum swings, their proactive implementation could also help a firm avoid turbulent restructurings driven by IS performance deficiencies. Balancing mechanisms are therefore a management tool which can help organizations avoid future crises by achieving continuous improvements in IS performance.

Just as important, balancing mechanisms offer long-term benefits. Despite the current enthusiasm for empowerment, most firms still have many hierarchical design elements. Because balancing mechanisms can facilitate more open communications, more consensual processes, and more dynamic linkages than typically exist in hierarchies, we believe that firms that effectively implement balancing mechanisms will be in a better position to adapt to more collaborative, self-managed environments and more agile, dynamic forms in the future. As balancing mechanisms help IS units work towards the seemingly contradictory but highly interdependent goals of partnership and infrastructure, they can also be instrumental in gradually transforming organizations from a hierarchical to a networked mode of organization.

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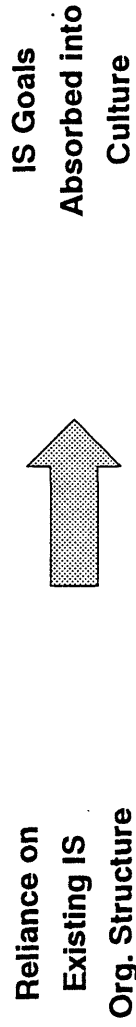
Table 1
Balancing Mechanisms Supporting IS - Business Partnership

Balancing Mechanisms	
<i>Targeted Partnership Activity</i>	Structural Overlays
	Process Enhancements
Operations Support	Account managers Co-located IS staff Self-managed work teams
Systems Delivery	User champion/project manager Joint project management
IT-Business Education	Top management advisory committees
	Negotiated service contracts Business unit involvement in IS evaluations
	JAD techniques Business unit control over IS budget Timebox
	Cross-functional job transfers Informal partnerships

Table 2
Balancing Mechanisms Supporting
IT Infrastructure Development

<i>Targeted Infrastructure Activity</i>	Balancing Mechanisms	
	Structural Overlays	Process Enhancements
Strategic IT Planning	Standing committee of IS division heads CIO with strategic review authority	Formal planning processes that tie IT planning to strategic planning Informal communication processes
IT Standards Setting	Standard-setting committee Matrix reporting relationships	Implementing common applications and platforms Informal influence processes
IT Expertise Development	Mentors Internships Centers of excellence Personnel committees	Job transfers between central and divisional IS Attention to IS career planning

Table 3
States of IS Goal Attainment



		S u i t e s o f B a l a n c i n g M e c h a n i s m s		
PARTNERSHIP	Operations Support	IS determines service levels	Constant negotiation to determine effective level of support	
	Systems Delivery	User "involvement" mostly in requirements stage	Shared goals for new systems	
	IT-Business Education	Formal classes and communications paths	Mutual understanding of each other's roles	
INFRASTRUCTURE	Strategic IT Planning	Individual project ROI justification	IT planning incorporated into strategic planning	
	IT Standards Setting	Multiple standards; building bridges in piecemeal fashion	Firm-wide commitment to infrastructure that increases flexibility and decreases cycle time	
	IT Expertise Development	Pockets of IT expertise	Leveraging technical expertise; learning organization within IS	