Reengineering Justice Processes:
Identifying and Overcoming Barriers to Change

by

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Acknowledgments

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This paper is, perhaps, one of the most important recent contributions to serious thinking about barriers to technology implementation and business process reengineering in criminal justice. It addresses some of the most sobering questions influencing how criminal justice technologies may be effectively implemented. How, for example, is the adoption of new technologies affected by power relationships, informal communication patterns, organizational structures and cultures in criminal justice organizations? How might a vision of business process reengineering be effectively “sold” to practitioners vested in the status quo? Also, how might justice practitioners address these influences upon success in the agencies they help manage?

Dr. Geerken argues that the real value of information technology in justice systems lies in its capacity to rework ways of doing business in such a way as to advance performance related to justice agencies’ core missions. The business case often made by technology advocates typically appeals to mission-based organizational values by arguing that information technology integration is a cost efficient way to achieve the organization’s goals. According to Geerken, however, this appeal is often “filtered” by other considerations. Social relationship structures, for example, are essential to consider in the design and reengineering of justice processes. Also important are ties among individuals and informal groups based on race, assignment, years of service and other factors. Important as well, are how particular group loyalties and power relationships within the organization often conflict with official bureaucratic systems of policymaking and control. Geerken’s view of criminal justice culture, power structures and informal exchange provides an essential map for information integration specialists seeking to innovate within their agencies.

Why is this perspective important for anyone considering the implementation of new criminal justice information technologies? The paper seeks to help integration specialists and managers reflect upon both ends and means in achieving organizational change. This paper suggests that any meaningful organizational change requires articulation of values
beyond the province of technology. In terms of techniques useful in achieving change, it proposes that successful efforts to alter criminal justice organizations through technology must consider the complex social organization of the criminal justice world including both formal and informal systems. In this framework of ends and means, Geerken’s paper is important to consider as it challenges conventional thinking about business process reengineering and technology integration initiatives. This paper argues against myths such as the following:

- Technology is a silver bullet that will in itself have a transforming impact upon a criminal justice agency
- Objections and resistance to new technology are rooted in a “lack of knowledge”
- A sound technological vision is more important than management vision in effecting organizational change through technology implementation

The paper I believe has enormous importance for policy makers and technology leaders in arguing that the divide between technology thinking and criminal justice operational realities needs to be closed if a greater number of projects are to be successful. Gaining more than nominal support from operational leaders is an essential ingredient for successful projects. The ability to define and overcome obstacles to implementation and employ strategies of collaborative leadership are critical skills if new technologies are to be deployed effectively.

Geerken’s paper is meant to be challenging as well as informative. It begs to be discussed and even debated. Whatever your view of his perspective, his is one that will ultimately need to be considered if achieving more efficient criminal justice systems is to be a reality.

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INTRODUCTION
The principal use of computer technology in justice systems to date has been the automation of manual work.¹ Physical filing systems are replaced by, or supplemented with, computer databases. Electronic movement of data replaces paper or telephone-based information transfer and retrieval. But the real value of technology in justice systems lies in the opportunity it provides to reengineer ways of doing business to achieve much more than time and cost efficiency. Information technology makes possible fundamental improvements in justice agencies’ performance of their core missions.

There are many ways to use information technology in government agencies, and many ways to apply the technology in efforts to change the way business is done. It can be used, for example, to “atomize” a task into it simplest components, much as early assembly lines were designed. The discretion required of each worker is minimized and the software makes most of the decisions. The computer monitors, directs, and corrects their work. IT is used to eliminate redundant labor and reduce the time and effort spent in maintaining and moving paper, and to keep work processes moving in channels defined through official policy. Management is done through rigid command and control hierarchies where managers ensure that subordinates comply with roles and rules. Computer systems enable that command and control to function more precisely and comprehensively.

Information technology, however, can also be used to facilitate an entirely different approach to management and as a basis for fundamental change in the way business is done. The term “business process reengineering” is often used to describe this approach. As developed by its guru, Michael Hammer², the term is more specific than others such as “business process change” or “improvement” or even “restructuring”—it refers to a particular type of change. It is characterized by the combination of formerly separate tasks into one, increases in worker responsibility and autonomy, “process orientation,” a flattening of organizational structure, and a reduction of checks, controls, and

² See Hammer and Champy (2001)
reconciliation. By defining a “business process” as a chain of activities that delivers value to the customer, it seeks to reorient change efforts toward satisfaction of the customer’s needs. It refers to revolutionary change driven by new uses of information technology. In fact, Hammer asserts that such change can only be achieved through IT: “without reengineering, information technology delivers little payoff; without information technology, little reengineering can be done.”

The classic example of a business process in Hammer’s work is filling a customer’s order. In criminal justice, one might view arrest, booking, and initial court appearance, for example, as a single process involving many separate tasks, handoffs between individuals, and involvement of multiple agencies. Likewise, a “crime response” process could be defined as all activities from report of a crime to final disposition of the perpetrators, where the customer is either the victim or the public as a whole. A law enforcement business process might be the resolution of a public disorder or crime “hot spot” that is generating crimes and citizen complaints, which might require the involvement of multiple public agencies. A “justice process” can cut across multiple departments and functions of an agency or multiple agencies.

Defined in this way, the type of business process change described by Hammer is increasingly the goal of government, including justice agencies, and represents the current wisdom of justice system reformers. Problem-oriented policing, community policing, police-corrections and community-corrections partnerships, problem-solving courts, the increasing use of cross-jurisdictional task forces, and a variety of other new approaches to justice management all point to the emergence of a new way of thinking about social control. Many of these approaches apply reengineering principles. For example, justice agency-community partnerships both identify and solve neighborhood crime and disorder problems – a customer orientation. Justice processes are reconceived

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4 One might define a process in justice as any chain of activities that serves individuals other than justice employees: the public, suspects, victims or complainants, or that serves agencies other than justice agencies.
5 Reengineering principles applied to government are sometimes referred to as the “New Public Management”. See, for example, Jones and Thompson (1999). The “reinventing government” movement borrows many of these same principles.
as involving multiple agency partnerships through “horizontal” collaboration among local agencies and “vertical” collaboration across local, state, and federal levels – a process orientation. Line workers, such as patrolmen and probation officers, are granted greater discretion and responsibility for studying and crafting customized solutions to social problems, thereby “flattening” the organization through team problem solving.

These trends of the last decade emphasizing inter-justice agency collaboration, coupled with the issue of justice agency information sharing emerging after 9/11, has led to an emphasis on the importance of integration of justice information systems. IT-based reengineering for justice often involves not only the redesign or implementation of new information systems but also the tying together of agencies’ existing systems or the integration of different systems in different departments of the same agency.

Many of the technical problems of integrating disparate information systems have been solved or mitigated by trends in the computer industry and by national efforts at standardization. The availability and ubiquitous use of the TCP/IP protocol and other open Internet standards and the ability of virtually all systems, even many older systems, to communicate via these methods, mean that linking different types of computers and operating systems is no longer the challenge it once was.6 The availability of the Internet itself and methods of secure encrypted communications across it, the GLOBAL Justice XML standards for data representation and transmission7, and the emergence of the web services model, for example, all make the process of complex data exchange among justice agency computer systems much easier.8 The widespread literacy of workers with the Windows-type GUI and with standard web browsers makes the process of training users much easier.9 Also, the costs of hardware and software continue to decline. Thus, technology is no longer the most daunting obstacle for IT-based justice process reengineering: the challenges lie instead at the human level.

6 Admittedly, many older justice legacy systems still need conversion to these standards, but a range of tools exist to make such conversions easier.
7 Technically referred to as the Global Justice Extensible Markup Language Data Model, developed by the Office of Justice Programs of the Department of Justice and a consortium of federal, state, local, tribal, and international justice associations. There is also an ongoing effort by OJP and the International Association of Chiefs of Police to establish standards for law enforcement records management and computer-aided dispatch systems, call the Law Enforcement Information Technology Standards Council.
8 See the discussion in NASIRE (2004)
9 Training technology itself is advancing rapidly. See Piskurich (1993).
Given the widespread belief that change is necessary coupled with the removal of many of the technical and cost barriers that once existed, why doesn’t fundamental, IT-driven business process change in and across justice agencies happen more often? This paper will argue that many of the reasons have little to do with technology or even the cost of technology. It explores some of the reasons processes in justice may be so difficult to reengineer and offers some suggestions to make fundamental change more successful.
BARRIERS TO EFFECTIVE DESIGN

Users’ guides to the use of information technology in justice often assume that technological ignorance on the part of decision-makers is the most important barrier to effective adoption of technology. Many decision-makers, it is argued, understand neither the technology nor the “business case” for it. This mix of “low-end technological expertise without authority but high-end technological ignorance with authority”\(^\text{10}\) has prevented progress.

It is not only the technological ignorance of decision-makers that is a problem. Implementation of fundamental change in justice processes through IT requires much more than simply understanding technology. It requires a comprehensive understanding of the business as well as how technology can address the core functions of the justice system. Technologists, by themselves, are usually ill-equipped to design change in justice processes because they lack that understanding.

The solution to this “ignorance problem” lies, of course, in cooperation and education: technology education for executives and managers and justice operations education for technologists during a team-based design process. Once a team is assembled to design and implement change, education takes place in a group process where executives, operations experts (line managers and more experienced employees), and technology experts teach each other in the context of designing new justice processes.

**Design Team Challenges**

Assembling the talent and range of perspective needed for design is difficult. An effective design team requires a wide range of authority, knowledge, perspective, and skills, including:

1) Executive authority with commitment to change and to the design and implementation process,
2) Agency management skill - an understanding of what can be done and how to do it,
3) Technical knowledge of existing systems, new technology, and how it can be used,
4) Justice process knowledge,
5) Team and project management knowledge and skill.

The design team members, however, exchange much more than technical, operational, and project management knowledge. They also exchange values. How a process is to be reengineered depends on its purpose. Alternative solutions cannot be evaluated, and a business case cannot be made for change, unless goals are articulated and shared. The means to achieve those goals involve values about what is appropriate and what is important. The means to radical change will involve financial costs, destruction of existing ways of operation and sometimes of careers, issues involving privacy and other civil rights, and a reshuffling of priorities. The design team is therefore called upon to creatively manage values as well as knowledge in order to come to a common understanding of what the new system should and will look like.

Knowledge and values go beyond understanding of justice processes and social values. They also involve assumptions about the purpose of information technology in a justice environment. For example, should it be used primarily to limit the discretion of the justice worker, to control and monitor the worker’s behavior, to strictly enforce agency policy? Or is its purpose to facilitate the discretion of the officer, judge, prosecutor, or probation officer by providing just the information needed when it is needed, but leaving the final decision and the way the information is used up to the user? Such fundamental questions logically precede the team’s redesign of a justice process and present a significant barrier to consensus.

**The Intellectual Challenge: Vision and Invention**

In addition to shared knowledge and values, the design team needs vision, which is the application of imagination to that knowledge and those values. In part, vision thrives in a social process where the rules of team interaction allow a free fire zone of ideas and a
sense of play with lines of authority relaxed by mutual consent. Achieving this is difficult, especially in rigid bureaucratic environments where the questioning of authority is punished.

Vision in the team is also a product of the personalities chosen. Reengineering calls for radical redesign of processes, something more akin to invention rather than routine problem solving. Historical research on invention identifies a variety of personality characteristics found in successful inventors:

... resourcefulness, resilience, a commitment to practical action, nonconformity, passion for the work, unquenchable optimism, high persistence, high tolerance for complexity and ambiguity, willingness to delay gratification, and a critical stance toward their own work. They are able to embrace failure as a learning experience. Successful inventors are self-critical of their own work. They learn to abandon knowledge that may be too constraining, and they embrace failure as a learning experience. They show an alertness to practical problems and opportunities and an ability to match their talents with the problem using a tool kit of effective ways to conceptualize and break down the problems. Characteristically, inventors are deeply knowledgeable about their areas of endeavor, on both a theoretical and “hands-on” basis, while they are also comfortable working on the margins of established knowledge.

In addition to all these traits, inventors are boundary transgressors. Boundary transgression refers to “mental moves that cross the boundaries of convention...redefining not only means but the problem itself, and challenging entrenched beliefs about the limits of the possible.”

Individuals with the characteristics of inventors are not often found in bureaucratic organizations (though Einstein was a patent clerk) and certainly not in positions of authority. They are not often placed on important teams where careers and authority may be at stake. If they are, they may have axes to grind because of past

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11 See Committee for the Study of Invention, Lemelson-MIT Program and the National Science Foundation, (1994)
12 Op. cit., p. 15. Interestingly, this list of inventor traits matches closely the collection of traits Hammer and others see as necessary for reengineering efforts.
rejection by the system or lack the social skills to work in a team environment. Yet ensuring their presence and full participation on the team is essential for the exploration of innovative solutions.

One of the characteristics of inventors is their ability to see a problem from a fresh perspective. The ability of team members to view current operations from an “alien” viewpoint, suspending preconceived notions about the necessity of each part of the current system, is key to reengineering design. For experienced managers to ask seemingly naïve questions about *why* things are done the way they are takes self-confidence and courage, and a team environment where such questioning is encouraged. Serious consideration of radical and seemingly silly ideas takes the same kind of courage and support from the team. A team with inventor characteristics has such an atmosphere of open enquiry.
BARRIERS TO EFFECTIVE TEAMWORK

Team Dynamics
The establishment of the governance structure, roles, and rules of design and implementation teams is more art than science. There is no one right way. Research on some of the most challenging collaborative efforts – such as juvenile detention reform - shows that the right model for collaboration, coordination and staffing depends heavily on site specific idiosyncrasies, history, culture, and politics. The abilities and orientation of key leaders, the presence of a transformational leader, and a range of environmental and cultural variables make each situation special.14

Virtually every choice has some negative consequences: each is a tradeoff, a balancing act. Many have the look of “Catch-22” situations.

Some examples:

1) A team of sufficient diversity may be too large to reach decisions. Many experts feel that effective teams must stay in the single digits. But many justice processes, especially those involving multiple agencies, involve many significant functions, and the range of knowledge, perspective, and experience needed will not be available from such a limited number of players.

2) In cross-agency justice processes, it is the “traditional” actors – the major justice agencies – who have the resources, the data sources, the official authority, and the political power to effect significant change. “Outsiders” – business and community groups, universities, non-justice government agencies, citizen representatives – may have a better grasp of the true “big picture” and, perhaps, are more likely to have an unbiased perspective and develop fresh ideas. The dilemma is that change cannot happen without the traditional actors’ active participation, but traditional actors will probably arrive at traditional solutions.

3) It is important that governance issues be worked out at the beginning of a reengineering project, in part to avoid confusion about team members’ roles and in part to provide a built-in mechanism for resolving disputes. But energy

14 See Feely (2000)
spent in formalizing the project team’s governance structure may dissipate the
group’s momentum, and fights over who’s in charge (officers, committee
assignments and structure) and other technical details of group procedures
(charter, bylaws, etc.) may shatter the team before a common sense of purpose
and an atmosphere of cordiality and trust are established.

4) Team members may bring a history of resentments from past failed change
efforts or past day-to-day issues with other team members. If time is allowed
for members to vent these resentments at the beginning of the team building
process and “clear the air”, it may lead to better relationships later. Or it may
destroy the project at the start.

5) During team discussions, issues may reach the point of a “rough” consensus
or an “agree to disagree” status. Issues left at this point may come back to
haunt the team later. But pushed too far, they may destroy the atmosphere of
comity or lead to a sense of hopelessness when true, detailed consensus
cannot be achieved at the start.

Whether the design team involves multiple agencies or only members from a single
organization, the range of power, skill, and perspective needed sets up certain dynamics
in the way members interact. Influence on the process of designing new justice processes
depends both on official authority and specialized technical and operational knowledge.
Detailed knowledge will tend to be inversely related to official power. Agency managers
may have a good understanding of their processes, especially if they came up through the
ranks, or they may have only a limited understanding of day-to-day operations.\textsuperscript{15} The
technology experts will know their field and have some understanding of the processes,
but often will be unaware of all the small workarounds, informal rules of thumb, and
minor policy violations that are found in the day-to-day work of the agency. Only the
agency line worker or experienced line manager will know these processes completely
and intimately, but they will often lack understanding of how their functions fit in with

\textsuperscript{15} In large, military style organizations, especially in law enforcement or corrections, management
positions, even technical services divisions or computer intensive functions such as records, are
commanded by career commissioned officers that rotate from command to command. They are expected to
learn the substance of each operation as they manage it. This produces better-rounded officers for top
executive positions. But it means that managers with little technical knowledge may direct highly technical
divisions.
the overall agency operation. This will be even more the case when cross-agency processes are involved.

Justice process redesign is a negotiation process as well as a creative one. During that process participants will, consciously or unconsciously, use both their official power and their specialized knowledge to influence design decisions. Design team members will try to preserve or increase their own autonomy and that of their group. Each will try to maximize authority while minimizing oversight and responsibility for failure. The two kinds of power – official authority and specialized knowledge – will vie for dominance.

Those team members furthest from the day-to-day action of operations and from direct dealings with line personnel – executives or technical specialists who have not come up through the ranks – will often be the most ambitious about change. The line worker or manager with long experience in operations will see change as much more difficult. This is because these workers have a better understanding of the complexity of criminal justice processes and a better understanding of the forces of resistance and inertia. They know that manual processes have evolved with many special exception workarounds, many of which are not written down, and they realize that an automated process, by its very nature, cannot easily handle these special situations. Automation will resurface each exception, which will present a new problem to be solved, either by continual tinkering with the new computer application or creating a new manual workaround. Also, those who supervise line personnel and those ordained to manage the new process will carry the primary burden of implementation and often bear the brunt of punishment if it fails. Their vision of what is possible is therefore likely to be much less ambitious than those more removed from the day-to-day action of operations.

In multi-agency teams, members represent and – unless they are agency chief executives – report back to their agency. In single agency reengineering projects, members report back to their departments or associates. The dynamics of team interaction, therefore, includes exchanges of each member with his or her boss, peers, or subordinates who are not present. In these “background” interactions team members must explain what’s going on in the project team sessions. They must educate superiors and peers on the
importance and impact of the project. They must receive instructions on their agency or departments’ agenda and the limits of their own discretion, and defend themselves on their own performance as agency/departmental representative. Members must negotiate their autonomy not only with other members of the team but also with their agency or reference group. This means that the struggle for consensus on the goals of the project and the design of the new justice process takes place in some part, sometimes in large part, outside the arena of team interaction. Since this struggle is largely hidden from the team, it is much harder for the team to deal with it. Teams where most members have no real power to negotiate but must check all positions and decisions with absent bosses are usually doomed to fail.

The most important determinant of the team’s effectiveness is the level of trust among the members. Trust includes assumptions about the motives, competence, and dependability of other members, and expectations of their fairness, respect, and collegiality. Trust allows commitment and concessions without formal quid-quo-pro. It means statements about facts and values can be accepted at face value. It allows closure of issues once a verbal consensus is reached, so that once mission, goals, and a plan of action are agreed upon all members can rely on them as a basis for their own plans and actions.

A career in criminal justice does not inspire a positive view of human nature. Police, prosecutors, judges, and correctional officers all learn to distrust the motives and the accounts of complainants, suspects, witnesses, inmates, and, sometimes, each other. Though law enforcement culture places a high value on teamwork and reliability – especially in dangerous situations – the culture of solidarity and isolation leads to distrust of other justice agencies’ managers and line workers, and of a schism between line officers and managers within their agencies. Local agencies will have long histories of daily interactions with each other, and those histories will include numerous interagency conflicts that will be recounted and embellished over the years. Many of these inter-agency relationships will have accumulated a crust of wariness on both sides that will be reinforced as each agency’s culture is retransmitted to new recruits.

16 See Ferguson and Stoutland (1999)
17 See Harrison (1998)
“Vertical” agency relationships will be characterized by some distrust because of these same dynamics. But there are power and respect differentials as well. Federal and state level agencies often view local agencies as less competent, less reliable, and potentially more corrupt. Local agencies sometimes view state and federal agencies as overweening, arrogant, and lacking in basic understanding about the challenges of local criminal justice. Partly this is because state and federal agencies must deal with many local agencies and must impose rules and standards on these interactions, in part to control the discretion of their own workers and in part to husband their own resources.\textsuperscript{18} This lack of flexibility is perceived by some local agencies as arrogance and disrespect. When local agencies are dependent on state or federal level agencies for funding or other assistance, the higher-level agencies expect gratitude but what they sometimes get is resentment. That “dependency breeds resentment” is indeed one of the ironies of charity. These relationship dynamics form barriers to the establishment of trust in reengineering project teams.

The Role of the Technologist

It is the most technology-knowledgeable employees of justice agencies who often first suggest IT-based solutions to problems: often those who operate the agencies’ existing information systems. They have faith in technology as a tool to solve human problems and can best envision new uses in their own agencies. Reengineering efforts sometimes start as informal meetings of likeminded technology enthusiasts who then begin to lobby more enlightened managers about applying technology to solve agency problems.

Though they are absolutely essential members of reengineering teams, technologists are usually not the best leaders for such efforts. First, they tend not to have sophisticated political and relationship-building skills. Though there are many exceptions, those who gravitate toward careers as programmers and other technical specialists may not have the

\textsuperscript{18} Northrop, et. al. (1995) provide a good example of this for state and national RAP sheet systems. Most of these systems were paid for by state and federal funds. They were designed not to facilitate the working styles of local law enforcement, but to tie together the information systems of numerous agencies and to make that information available to all contributors. Wide deployment required standardization, aimed at the lowest common denominator of users. Local agencies can’t change the systems and cutbacks in funding makes them unable to be improved.
skills to manage a diverse team. They like the precision and certainty of code and hardware (either it works or it doesn’t – there are rarely gray areas) and are often impatient with those who have difficulty understanding their field.

Second, their preference for rational order often leads technologists to a Wilsonian view of public administration: that it should be based on a science of management completely separate from partisan politics. Politics is for making broad policy only. Implementation should be the province of the expert. They, like many academic researchers, also view organizational politics as “illegitimate activity”. In criminal justice this translates into a disdain for and a reluctance to educate, lobby, and build relationships with the “good ol’ boys” that may run key agencies or departments.  

Third, getting the technology right is often the easiest part of justice process reengineering. The tough part is achieving the changes in human behavior and attitudes – that is, overcoming the barriers that are the focus of this paper. The redesign of process must deal with likely human reactions, abilities, and resistance. Technologists are usually not the best judges of how “user friendly” a computer program or a new work role is, because it all seems like child’s play to them. They tend to badly misjudge how much training, support, handholding, education, and time workers will need to adjust to new technologies or new uses of technology. They become quickly frustrated by the inability of managers and line workers to see the benefits of the new way. This impatience and disdain will soon be detected by other team members and result in counteractions that will damage bonds of trust and the atmosphere of comity the team needs.

The relationship of the technologist to other workers and managers in the agency and on the project team will depend not only on his or her perceived attitude but on past career path. Especially in law enforcement agencies, programmers and other technical personnel may have come up through the ranks as line workers and later been selected for

19 See Page and Dyer, 1990. P.114
20 This reluctance also stems from a fear of leaving one’s sphere of competence, self-esteem, and safety and a “jocks vs. geeks” clash of cultures.
training for technical divisions. As long as these technicians “don’t forget where they came from” and retain a sympathy for the challenges of line personnel they may be more readily accepted than a “college boy” by operations workers. These individuals are invaluable for conveying the perspective of the line worker to the team.21

Technologists’ best strategy for promoting project success is often to link up with senior managers, the chief executive, or other team members who have the political and leadership skills the technologist may lack. They should find ways to bring them along – one on one – to a better understanding of the technology in a language they can understand. Though some justice leaders seem to take a kind of pride in their technical ignorance, most will want to appear more knowledgeable in team meetings and in public and may welcome an opportunity to be privately educated. This is far better than correcting their errors and misunderstandings in a public forum.

In team interaction, technologists should also make clear their own weaknesses – lack of experience with operations, for example – and seek guidance from members that are weak in technological knowledge. In short, honestly given expressions of humility may go a long way to smoothing over natural “clash of culture” differences.

**Technology Vendors and the RFP process**

A majority of large-scale IT reengineering efforts will involve software vendors, technology or project consultants, contract programmers, or other for-profit solution providers. Software and management companies, of course, have different goals than the reengineering team. They are in business to make a profit. However, these companies often have much greater experience in project management and greater technical skills than the technical experts in justice agencies. From the view of the agency, the trick is to extract the value of that knowledge and experience without being “captured” by the company or sold something that isn’t needed. In reengineering efforts companies would prefer that the team modify the design to work with their existing software, or with

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21 They are also usually the most effective at introducing the new process to line workers and training them in its use.
applications they can assemble easily from preexisting modules. The team would rather produce a design optimal for their process, and make the company rework its products to fit. The more customized the software application, the least attractive to the company (because it cannot be resold), and the more expensive to the customer.

The role of the private vendor/contractor is a complex one in government projects and acquisitions. Technology vendors may have ties to elected officials through political support or may establish relationships with public employees in a variety of ways. They may have provided – and are paid to maintain – a proprietary application still in use by the agency. In part to regulate this influence and advantage and in part to ensure cost-effective management, ethics rules and complex regulations at the federal, state, and local level govern the requirement and procedures for public bidding. Administrative legal processes – and the availability of ordinary civil legal action – exist to handle problems with the implementation of these rules.

Usually vendors and contractors for large IT-based reengineering projects are selected via a Request for Proposal (RFP). The design team will often draft the RFP with technical help from government procurement or other administrative experts. After soliciting, accepting, and evaluating bids, a contract is negotiated and signed with the vendor. Discussion of the details of the RFP process and the associated legal issues is outside the scope of this paper, but certain features of that process create barriers both for the design and implementation of reengineering projects and present dilemmas for the vendors themselves.

It is often only when drafting an RFP that a design team comes to grips with many of the details of the system they want, because they must specify in detail what they want the company to do. The RFP is a formal document that will govern many subsequent disputes, including disputes that may end as lawsuits. The document must unambiguously describe what is wanted and the process by which the vendor will be chosen: how cost will enter into the calculations, how vendor qualifications, quality of design, implementation plan, etc, will be scored and weighted. The design team must think like attorneys: how might a sentence or phrase be interpreted in ways contrary to the team’s
intentions, whether there are conflicts between one part of the document and another, and whether all requirements are defensible in terms of project goals. The team is often caught between ensuring that the successful vendor meets project needs and not excluding innovative solutions by the inclusion of trivial requirements. Even if the team already knows what product or vendor they want, for ethical, legal, and political reasons the RFP has to be “fair” – not “wired” for a particular company. Of course if different vendors have political champions with representatives on the team, drafting the RFP becomes the arena in which these power struggles occur. These issues are added to the already difficult process of producing a clean RFP.

This process, and the management of disputes arising out of it, is often tortuous and lengthy. Not only does it sap the energy and momentum of the project, it often robs it of flexibility. In an era of rapidly advancing technology and emerging IT standards for justice, a long RFP process can result in purchasing obsolete technology or solutions not meeting the latest standards. Also, design and implementation should be an iterative process, where lessons learned in early stages of implementation lead to constant adjustments in the design of the reengineered process. By the time a contract is signed with a vendor at the end of an RFP process, variables affecting the solution may have changed and better ideas may have emerged. Even in private businesses, of course, the necessity of a contract limits future flexibility to a degree. But the government process makes continuous, iterative change much more difficult.

The vendors themselves face a number of dilemmas. The more experienced with IT projects they are, the more they know the rocky road the effort will face. They have a basic understanding of many of the implementation barriers described in this paper, though they might not articulate them in the same way. They also often know things the reengineering teams do not: the challenge of training managers and workers in technological innovations and subsequent necessity of a heavy investment in training, the likelihood of conflicts and misunderstandings among stakeholders as the project progresses, the likelihood of “scope creep” in the design specifications, and many other problems they have experienced first-hand. Their business depends on their reputation. Their reputation depends on the successes of their projects. Experienced vendors put all
kinds of caveats into their bids and contracts and many have formal procedures for handling specification changes and time delays. But they face a fundamental dilemma concerning the honesty of what the say in their written bids and other communications with the team.

If they are truly honest about what the project will eventually cost, how long it will take, how much training and handholding will be needed and how many delays are likely, their bid may not be competitive with those who pretend otherwise. Vendors who assume that users will learn the new systems quickly and accept it enthusiastically will propose an attractively – and unrealistically – short timeline for completion. If the design itself is flawed – either technically or operationally – the vendor must choose either to bid the RFP as literally written, hoping that it will be allowed to make changes after the bid award, or to bid a design and implementation approach that the RFP should have required. Some vendors try the second, more honest approach, but usually do not succeed because competitors can successfully challenge a bid not technically responsive to the RFP as written. At best their effort may lead the team to see the light, reject all bids, and start over.

Once a vendor is awarded a contract, the project may still fail for reasons described in this report, despite the vendor’s best efforts. Of course, some vendors do fail to execute their responsibilities properly, or are dishonest about the abilities and reliability of their software. But the complexities of IT projects mean even the best companies will make mistakes, or fail to meet every deadline and requirement.

Public officials often treat technology as a silver bullet, able to solve personnel and organizational problems. In short, technology is seen as an alternative to the hard work of reengineering rather than as only one part of a solution. It is often easiest for public officials to blame the vendor for a failed effort, rather than take the political risks of blaming each other or themselves. The vendor has little practical recourse, and its competitors will gleefully spread the official story.
ORGANIZATIONAL BARRIERS TO IMPLEMENTATION

Many of the barriers to justice process reengineering through IT involve neither the intellectual challenge of design nor the failure to achieve consensus on the need and strategy for change. Instead, the barriers lie in the resistance of individuals and informal social relationship structures during implementation. Opposition by the justice executive, middle manager, or line worker to technology-driven innovation may actually be a rational response on their part, because they see the changes as a threat to them and to their existing relationships. The reason for their apprehension lies in the potential impact of IT-based reengineering on their personal career survival and on certain sets of social relationships in the agency. They will often have a better appreciation of all the potential affects of proposed changes than will the IT experts suggesting them.

How reengineering threatens individual careers

Business process reengineering changes the nature of jobs in an organization. Both the types and qualifications of individuals needed to do those jobs, therefore, may change as well, and individuals comfortable with old ways of doing things may feel threatened. Specifically, the creation of a “process-oriented” organization calls for the obliteration of “outdated” rules, assumptions, and processes. More specifically, reengineering attacks the traditional division of labor where jobs are relatively simple and specialized, and replaces those jobs with ones oriented around outcomes rather than tasks. IT enables business process engineering because it makes unnecessary the divisions of labor formerly made necessary by space and time separation of tasks, and allows jobs to be designed around outcomes. Such separations are no longer necessary when IT networks, both within and across organizations, can gather, transmit, and aggregate information necessary for a function almost instantaneously.

What this means is that a single person will perform more of the steps in a process and “own” the outcome. Jobs are then bigger and more complex, more important, and more difficult. This is because workers have to learn to use the technology and because they must learn a whole set of tasks rather than just one or two. They must make much more complex decisions about how to achieve a desired outcome: the “decision-tree” must be in the employee’s head. In one sense employees have more freedom because they have
more autonomy, but they also have much more responsibility. With its simultaneous emphasis on measurement of processes and results, reengineering holds employees much more accountable. There will be shifts in the locus of decision-making and changes in the qualities needed for individual success and advancement.

In justice system reengineering, workers, whether they are street patrolmen, probation officers, judges, or correctional officers, are often expected to become “problem solvers” where they analyze the causes of a problem, then craft and execute a customized solution. Some are expected to work with other members of the justice system, other government agencies, and members of the community to develop solutions. This implies a much more extensive knowledge of what other agencies do and how to access their help, and requires greater social skills as well.

Reengineering calls for more intelligent, flexible, workers with a wider range of skills, including the interpersonal skills needed to function in a new team-based environment. Inevitably fear and resistance will accompany these changes. It is estimated that only 20% of employees will embrace the changes at the outset, in part because some workers will fear they do not possess the new skills or motivation and in part because of the ambiguity about what they must do to succeed. Some resistance will have the character of a classic self-fulfilling prophesy: workers who resist change for fear of losing their jobs lose their jobs because they resist change. Other workers may then resist the new way of doing business because they misinterpret the reason the resisters lost their jobs.

Occupational specialization has grown up around traditional divisions of labor in most industries, including justice. These specializations are becoming more knowledge-intensive over time and are supported by educational programs and state prescribed training programs and certifications serving that occupational niche. In reengineering the collective knowledge of the team has a tendency to replace that individual specialist knowledge and the related capacity for problem solving. In this evolving world social skills become as important as technical skills. Workers on traditional career paths with traditional training may feel threatened and perhaps cheated. Employment security and

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22 Hammer and Champy, op cit.
advancement paths are put at risk. The “psychological contract” of worker with management is violated.\textsuperscript{23} Not only will employees resist, but since justice education and certification will continue to produce workers for traditional occupational niches, the agency will bear a heavy retraining burden for both new and old workers. In fact, these occupational niches may limit the ability of management to redesign processes.

The nature of management also changes. Before reengineering it was relatively easy to monitor individuals because their tasks were simple. Management meant enforcing uniform rules of behavior, monitoring simple tasks, and ensuring that handoffs between tasks occurred. Deviations from the narrow, strictly designed series of steps because of problems, special situations, or special clients required the manager’s direction and approval. The manager executed a set of procedures designed by others. After reengineering, the worker’s task is more complex and his or her autonomy is greater. Though workers “own” the process, managers “own” the outcome. For some processes the manager does monitor a pre-designed sequence of tasks, but must creatively select tasks and adjust their sequence to ensure the best outcome for the particular case. More work is team-based and related to problem-solving rather than rote activity. The manager is a teacher, mentor and facilitator. This places much greater demands on the manager’s social skills—especially leadership skills. In fact, the manager needs greater technical, conceptual, and interpersonal skills. Many managers will resist this new role for the same reasons line workers will resist their new roles.

Managers may view the new delegation of authority as a career threat. Developing sets of skills in subordinates that were formerly management’s responsibility might make the manager view the worker as a threat to replace the manager or, at minimum, reduce the manager’s special and privileged status. This often is not an irrational view. Reengineering, by combining tasks and “flattening” the organizational structure does make it possible for motivated, capable workers to shine. Old style managers may fade in comparison. Managers may also resist the new responsibility and autonomy of line workers if they feel the workers are incapable and the manager will be blamed for their blunders. Managers may also resist because they feel sympathy for workers – including

\textsuperscript{23} See Harry Scarborough (1996)
friends and acquaintances of many years – that they know will not be able to adapt and will suffer the consequences.

The increased intellectual demands placed both on managers and line workers may cause reengineering designers to cringe. The new need for daily teamwork by workers with difficult personalities will cause grave doubts. In short, operations personnel involved in the design process, especially if they are or were experienced line managers, may believe existing personnel cannot adapt to new ways of doing things and that removing recalcitrant or incapable workers will be difficult, especially in a civil service environment. Their impulse may be to design around expected incompetence or resistance, but they realize the more this is done the less rational and efficient the new process will be.

During implementation of the design, these personnel barriers will assert themselves with full force. There will be some surprises. Seemingly hopeless employees will shine. Some seemingly capable employees will disappoint, either by openly resisting change or by secretly undermining it. The reasons for this resistance often lie is the structures of informal social relationships in the justice organization.

**Reengineering as a threat to bureaucracy**

Criminal justice agencies are formally structured as bureaucracies: systems of organization based on rational values where managers exercise impersonal official obligations through a hierarchy of authority. The values serve organizational goals and objectives. People obey authority inherent in an office rather than an individual. A sphere of competence is related to a sphere of obligations to perform functions allocated in a division of labor. A person’s position in the hierarchy is a function of his or her competence in performing the function of the position.

Bureaucracies are formal frameworks of authority that are outlined precisely and in detail. They are characterized by specialization and are designed to eliminate ambiguities of authority and responsibility. By requiring workers to operate according to strict, fixed rules and procedures nearly all decision-making can be routinized. Rewards and
punishments for employees are based on their adherence to these rules rather than on their contributions toward attaining the agency’s goals.

Advocates of reengineering argue that the typical hierarchical bureaucracy, organized around highly specialized tasks in which many processes require multiple handoffs between workers, is highly inefficient and error-prone. None of the individuals performing the elements of a process is responsible for the outcome or understands how their functions contribute to it. In modern government bureaucracies, officials who are hired on the basis of educational credentials and written tests, promoted by seniority, and protected by civil service are largely insulated from the responsibilities of the external consequences of their actions as long as they do not depart from standard operating procedures.

A move to a “process-oriented” structure of work cuts across lines of bureaucratic authority and responsibility. Inevitably, such a change threatens those comfortable with the old, unambiguous structure of work, power, and responsibility. They see their authority and status threatened and their careers less secure.\textsuperscript{24} There may even be anxiety at the potential confusion of social rules of interaction as lines of authority become more ambiguous. Many supervisors do not want more autonomy for their subordinates. Many workers do not crave more autonomy in their jobs at the price of unclear performance expectations and the loss of insulation strict rules provide. Many employees, especially those comfortable in government agency bureaucracies, are comfortable with the predictability and safety the structure of their work provides. Many people prefer to be led.

Finally, bureaucracy evolved and spread during and after the Industrial Revolution because it was a more stable, efficient, and productive form of organization – both in government and business – than any other existing at the time. It still has great

\textsuperscript{24} Charles Heckscher argues that reengineering threatens not only the formal structures of bureaucracy but the informal ones as well. In order for many bureaucracies to be flexible enough to function, managers rely on informal information networks and cooperation outside the chain of command. These relationships depend on trust relationships that are threatened by restructuring, and workers are then more likely to insist on formal requirements and protect their turf. See Hecksher (1995).
advantages as a way to rationally organize, direct, and monitor the efforts of large groups of people. Some resistance to change within bureaucracies come from those who honestly believe the advantages of applying reengineering principles are outweighed by the loss of order, control, precision, protection from risk, and coordination of work bureaucracies provide. The more radical the innovation, the more these advantages are threatened, particularly the containment of risk.\textsuperscript{25} These advantages are most likely to be understood by those with the most experience: they will know why things are set up as they are. Their resistance may not be based not on self-interest but on concern for the organization.

\textbf{The effect of informal social relationships}

No organizations, including justice agencies, are in fact pure bureaucracies. If they were, once an executive accepted the business case for IT-driven reengineering, processes would be redesigned, orders would go down the chain of command, and implementation would be carried out. Bureaucracy is instead an “ideal type” never fully realized in practice, though often IT implementation plans assume that bureaucratic social relationships are the only ones of any importance. In fact, other social relationship structures are equally important in the design and implementation of reengineered justice processes through IT, because the changes threaten those relationships as well as formal bureaucratic ones. They will therefore explain a significant part of the resistance to change and are in part effective in defeating change because they are hidden or unacknowledged.

This paper focuses on three of these types of relationships: 1) the tribal or feudal power relationships, 2) the favor market, and 3) electoral politics and media relations. All of these are relationships that, in large part, fall outside of the formal bureaucratic, knowledge-based, rule-based, hierarchical power system serving official justice goals and objectives. As shorthand, I will refer to these as “alternative power structures.”

\textsuperscript{25} See Page and Dyer (1990): “to foster radical innovation one must deliberately loosen managerial control systems designed to contain risk”. (100)
**Tribal and feudal power structures**

In justice agencies, as in all organizations, there are ties among individuals and informal groups based on race and ethnicity, years and type of experience, gender, political alliances, religious beliefs, location of assignment, family, neighborhood, and many other factors. When groups formed on the basis of some of these elements act in the groups’ interest rather than the organization’s interest, “tribal” power relationships interfere with official bureaucratic systems of policymaking and control.

“Feudal” or “traditional” (in Max Weber’s terminology) forms of organization also coexist with bureaucratic forms in justice agencies. In feudal structures power is arbitrary because it adheres in an individual rather than an office, and control is exercised though bonds of loyalty and favoritism based on personal interest. Justice organizations vary widely in the extent to which these informal relationships control departmental policy by trumping regular chain of command decision-making, and in the extent to which official departmental goals are replaced by objectives that serve a particular group or individual.\(^{26}\)

There is some conflict between bureaucratic and feudal power structures in all organizations. At the extreme lie agencies characterized by two or more cliques where most important decision-making is a Byzantine political process in which the groups vie for greater power. Meritocracy exists only within groups, where merit is based on service to the needs of the group rather than the organization. To the extent that loyalty to the group rather than the organization determines behavior, reengineering may be resisted.

Both tribal and feudal relationships provide bases for cooperation and structures of decision-making at odds with a bureaucratic form rationally related to organizational goals. These relationships can defeat initiatives “from the top” when those initiatives conflict with the interests of the informal groups or their leaders. But how they affect the organization and business process change depends on how those informal structures are related to the formal structures. For example, a feudal structure is often roughly

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\(^{26}\) Tribal and feudal relationships can be, and often are, mixed. A group based on some characteristic, such as race, can coalesce around a leader who, by his or her service to the group, can accrue what can become personal loyalty over time. That leader then maintains control through both tribal and feudal bonds.
correlated with the bureaucratic structure—where the “lords” are also department heads of functional units. This is partly because their official power allows them to dispense favors and partly because their personal power helped them attain their official position. In such cases the feudal relationships will simply reinforce the rigidity of the formal structure. In particular, cooperation and information sharing across functional departments will be rare, and the inherent rigidity of strict chain-of-command will be magnified. If the lords are not (or not all) functional unit heads, or if the feudal relationships compete with tribal relationships based, for example, on race, then reengineering projects become a minefield of competing interests.

Perhaps the most important reason tribal and feudal groups resist reengineering lies in the individual qualities required of their members. The coin of the realm in feudal structures is personal loyalty, and in tribal structures, group loyalty. Advancement is made through sponsorship of those in power after suitable loyalty is demonstrated. Behavior is judged by its value to an individual leader or group rather than to the organization as a whole or its goals. For leaders to be able to reward loyalty in this system, there must be positions that require only minimal competence. This is because people with significant skills and/or credentials tend to seek out environments where advancement is based on merit. Those without such advantages must rely on “who they know” to get ahead. As a result the most blindly loyal of a feudal leader’s adherents tend to be the least skilled. Since reengineered business processes require employees with a wider range of skills, the number of positions that can be filled based primarily on loyalty are reduced. Also, since reengineering demands workers and managers oriented toward agency outcomes and focused on fulfilling organizational goals, individuals oriented to personal and group loyalties may have difficulty adjusting or may subvert the purposes of reengineering.

The most important groups influencing IT-based reengineering are those based on specialized knowledge of technology. Often such knowledge is held by those without much official authority. Managers supervise people who know much more than the managers do about technical tasks and sometimes even how those tasks are related to other processes in the organization. The manager ends up depending on the specialist to make decisions about the work the manager supervises. The specialist exercises control
over his or her supervisor by structuring the supervisor’s view of both the specialist’s job and the supervisor’s job. If the supervisor of a computer programmer does not understand programming in depth, the supervisor’s vision of what is possible is dependent on how the programmer wants to do his or her job. The programmer can resist unwanted change by making that change seem impossible because it is too costly, risky, or not technically feasible.

The technology specialist also exerts power over the manager because he or she can make the manager look like a success or failure in many subtle ways. The specialist can either continually present the manager with problems the manager is unable to solve or can resolve those problems himself. Smart managers realize this and negotiate a kind of power-sharing relationship based on their mutual interests. The manager protects the specialist from outside interference and the enforcement of minor rules and the specialist makes the manager look good and warns the manager of land mines to avoid.

Technical specialists will tend to form social networks with other technical specialists. Through the Internet, specialists can participate in “virtual groups” with others in various departments, agencies, cities, or even countries, and evolve a group culture almost completely out of management’s sight or knowledge. If technologists as a group determine that a reengineering project is ill conceived, they usually have the ability to destroy it.

The favor market
Another important informal process with great relevance to implementation of new information systems is the “favor market”. A favor in this context is any action performed by an individual at the request of another individual that falls outside a routine, official duty. Favors are done and “saved” in the memory of each to be redeemed by a reciprocal favor later. A big favor may be exchanged for many small ones, or vice-versa. Having favors owed to one gives one power beyond official power and is gained by performing services outside—and often in direct violation of—official policy. Indeed the value of a favor is enhanced if it is in blatant violation of policy and therefore more dangerous to the doer.
In justice systems, which are somewhat secretive by nature, many favors involve the exchange of information. The information may be for personal use or to make one’s official function easier to perform. Agencies often try to erect barriers around departments or the agency itself to control the release of information that might damage the agency or individuals within it. But the barriers often leak because the favor market encourages exchange of scarce and desired commodities such as embargoed information. If the information cannot be traced back to a single individual it is almost impossible to control because it is in the interest of both sides of the transaction to keep the exchange confidential.

But information is only a valuable commodity in the favor market if it is hard to get. The market therefore encourages the restriction of information valued by others in the system. This motivation forms part of the resistance to change when change involves making heretofore restricted information available without the action of an individual. When IT makes information instantly and easily available to anyone who needs it, the economy of information-based favors is destroyed along with the power of former information brokers. These brokers may not just include individuals with key files in manual systems, but could include IT personnel in older non-integrated stovepipe systems who can access information not available to others, either because of specialized skills needed for access or because of security restrictions.

**Electoral politics and media relations**

Commercial businesses measure their success in the long term by the financial bottom line. Justice agencies are run either by elected officials or executives appointed by elected officials. Electoral politics, therefore, will always be involved in justice agency operations and will inevitably come into play during justice process reengineering efforts. The most important measure of executive success in these agencies is their being reelected or, by their actions, to show that the appointing authority made a good choice. Those achievements are largely a function of their political resources and public image. The first is a function of patronage and campaign finance, and the second of their agency’s interaction with the public and the media.
Politics affects the power structures of agencies in a variety of ways. Political relationships are essentially feudal. Each elected official has a coterie of friends and family who worked to get the official into office and campaign contributors who financed the campaign. Some want jobs and some of the contributors want contracts or access to the official to influence policy or obtain favors. Some of those who need to be rewarded are friends of other political figures who endorsed or helped the candidate. Where political parties are important, important party members may want influence in selecting workers for jobs. The official will need to somehow reward those who have worked in or financed the campaign to ensure the relationship continues.

Where civil service or union contracts limit the ability to hire on patronage alone, political support can still be rewarded through choice assignments, promotion, or other benefits. This need for the capacity for patronage requires employment positions for workers and managers that can be filled by the non-specialist, average person—just as non-politician feudal leaders need them. Since the holders of these jobs maintain their positions by political loyalty, they will resist substantial changes in the job requirements and the need to acquire new skills. It will be difficult for the chief executive to force change on them. The executive will be reluctant to fire them since that would affect the executive’s own career survival. IT contractors who are campaign contributors may be difficult to manage for the same reason.

In some cities, tribes or feudal units within the justice agency are subsets of larger groups that vie for control of the local government, and departmental politics is simply an extension of city or county politics. These relationships interfere with communication and cooperation, and make information about agency operations a closely guarded commodity. Information becomes a weapon to be used in political wars rather than a resource to be shared to achieve organizational goals. Since reengineering demands close teamwork and widespread availability of operational information, both for tasks and for monitoring work, a politicized environment can defeat change efforts.
In multi-agency reengineering projects, the interactions of the agency representatives are bound up with the political calculations of their chief executives. Collaboration on a project changes the political calculus from that of a single agency initiative: it dilutes both the credit for success and the blame for failure of any effort. Resources devoted to the project threaten to diminish other single agency initiatives that might confer clear political credit to the agency chief executive. Highly complex or technical joint initiatives might be difficult to explain to voters. Projects may take years – past the next election cycle – to demonstrate benefits.

The political relationships of the chief executives are also key to a successful effort. Political animosity will almost certainly carry over into a business relationship where close collaboration and risk-taking are involved. Persistence in the face of failures is often necessary for significant organizational change. There must be confidence that mistakes by one agency during implementation will not be made political fodder by the elected leader of another. Where there is a history of public criticism of one official by another – for example, a prosecutor who attacks judges or criticizes police, or vice-versa – the low level of trust on the team may wreck any collaborative effort.

In routine day-to-day interactions between justice agencies, there are typically signoffs or other certifications that document the transaction and serve to assign blame in case of a blunder. Reengineering often eliminates such protections since multi-agency teams manage key parts of a justice process and assigning blame to one agency is difficult. This means that collaboration involves a willingness to accept some political fallout for a failure even if one’s own employees may not be directly at fault. Public finger-pointing to avoid short-term public relations damage may ruin efforts to establish long-term cooperation.

The public and the media

Reengineering defines a business process as a set of activities that delivers value to the “customer”. Reengineering efforts for government agencies wrestle with the issue of defining the “customer” beyond the obvious definition as the “public”. In criminal justice agencies in particular, some members of the public are targets of arrest,
prosecution, or incarceration, others are touched directly, and others are served indirectly through reduction in risk of criminal victimization, improving order in public places, reducing insurance rates, etc.

The public often has a poor understanding of what the justice system does that actually affects their safety. Research shows that citizen evaluation of police effectiveness is based both on direct experience of themselves or acquaintances with policemen—their civility, fairness, concern, and responsiveness—and on the citizens’ sense of public safety and order. The sense of public order is based more on the frequency of noise, graffiti, panhandling, loitering, open market drug sales, street harassment, and public intoxication, than on published rates of FBI Index crimes. Reengineering may require a reorientation toward what this “customer” finds important. This challenge and the different set of skills needed by managers and workers will mean resistance from those successful under the old law enforcement model.

The media often has a different set of emphases entirely. Though they will report a new technology initiative and generally treat such change in a positive way, dramatic change requiring months or years of effort is just another one-day story. A gruesome murder, a single incident of corruption, a prison escape, a judicial system blunder, an instance of abuse caught on videotape, or an interagency squabble will get more attention. Elected officials are particularly sensitive to reported incidents that make an agency look bad, so tasks may be inserted into processes—double and triple checking work, for example—to close one barn door after another to ensure they are not stung by individual incidents. Redesigning processes will often call for eliminating this “belt-and-suspender” work as redundant and unnecessary. But it will require a great leap of faith and some courage on the part of the chief executive to throw out this protective work on the promise of a new design. This will be a source of great resistance to change.

27 See the series of papers on what matters to the public and what should matter to justice agencies in Langworthy (1999)
The top executives may also be wary of opening opportunities for corruption, which may expose them to media criticism. Many of the bureaucratic limitations on the sphere of action of workers in criminal justice agencies is aimed at reducing opportunities for corruption. Reengineering often gives line workers more authority and autonomy. Some will use it wisely; some will abuse that trust. Just as with resistance based on fear of error that might yield a bad public image, resistance to perceived new opportunities for corruption will be another important factor creating doubts about radical change.
Leading Design and Implementation Teams

Single agency reengineering teams may be appointed by a chief executive or senior manager or they may be assembled based on self-selection. Multi-agency team members are generally selected or at least approved by their superiors, but may start as informal self-selected groups who meet to share common interests or address specific problems. Support from management can range from sufferance to active and enthusiastic.

A group may be formal, even established by law and funded, or it may be informal. It may have a written governance structure, bylaws, mission and scope statements, or it may simply be a periodic meeting of likeminded individuals committed to improvement of their agency or agencies. There are almost infinite combinations of levels of power and authority, purpose, size, diversity, structure, formality, and method of operation. What research there is does not indicate that any one way of assembling and managing reengineering teams is a formula for success. Instead, it suggests some general themes and principles regarding the nature of teams, team processes, and the characteristics of individuals who bring them together and lead them.

Whether a team is appointed or has volunteered, whether they have a well-defined, detailed mandate or are self-driven, the members have to be engaged in the effort for there to be any chance of success. They have to be committed broadly to its purpose and specifically to the process of getting there. If they all start as true believers and have the authority and skills to make their dreams come true, success is much more likely. But that is very rarely the case. The diversity of knowledge, experience, perspective, power, and values necessary for redesign of important justice processes will, for many of the reasons outlined in this paper, mean that some team members will be doubtful about the need for change, cynical about the prospects for success, or fearful of the results of the attempt. Or sometimes all three.

This implies that successful team efforts need to be managed in such a way as to overcome the doubts, fears, and ignorance of some or most of the team’s members, and to
infuse a sense of commitment to the project’s goals. In short, skillful leadership is needed to make a team work: to create the chemistry for success. In multi-agency projects involving several elected officials, even where leadership is granted by legislative statute or resolution to the office holder of a particular office (such as a chief justice, or mayor), the type of leadership needed will be collaborative. Even in single agency reengineering projects led by a chief executive or the executive’s appointee, where authority may be unquestioned, power – the ability to make people do what you want – is not absolute. Even these leaders need the qualities of collaborative leaders to succeed.

*Collaborative leadership* is “leading as a peer, not a superior.”28 It includes skills of persuasion, political smarts, managing relationships, and technical competence. Such leaders have many of the characteristics of successful salesmen, know how to manage interpersonal conflict, and have the ability to demonstrate to each member how his or her own interests are served by the project team’s goals. They spend time and effort on building the relationships with and among the members and their identification with the project. They lobby for the project in the agency or agencies involved. They understand the planning process and the need for structured group decision-making, but allow full participation by every member. For example, they know how to bring endless, repetitive discussion to a fruitful conclusion without offending the discussants.

Many of the personal qualities of effective leaders are similar to some of the qualities of successful inventors: optimism, persistence, energy, risk-tolerance, flexibility, and vision. They must also be able to lead by example, be trustworthy, and have interpersonal and organizational skills in abundance.

If an executive with authority over the team members leads the team, the leader must wield power like a scalpel. Both power and authority are only the potential to enforce one’s will on others. To get full, productive participation of all the talent the team represents, the leader must often play the role of a peer. Team members must see that their ideas are taken seriously, that they have a fair chance to affect the outcome of

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28 Crislip and Larson (1994)
deliberations. The same is the case when a large project has a multiple-committee structure. Steering committees must treat the work of subordinate committees with the utmost respect to ensure their continued commitment to the enterprise.

In multi-agency projects where there are large differentials in the size, power, authority, and resources of the agencies involved, the smaller, weaker agencies will often be those most committed to the joint enterprise. More powerful agencies will be tempted to extract deference and compliance for their participation, especially if the joint project will draw mostly on their resources. In projects dependent on information sharing, those agencies that create or hold the information will have more power than those who need to receive it. When the project relies on grant funds, the agency that receives the award and controls the funds has the power to control the project. More powerful agencies often have the best trained and experienced IT staff as well as other resources, and will be tempted to dictate what they believe is the best technical solution, giving short shrift to the objections of the uninitiated, and having little patience for providing basic education.29 These agencies often in effect have absolute veto power over the project – if they withdraw, the project dies. Because they control many essential resources and have that veto, the project’s success is dependent on their leadership.

Both for the leader of a single-agency project and the lead agency in a multi-agency effort, however, it is the judicious use of this power that is key to successful collaboration. Ceding power to others, granting deference to weaker members, listening seriously – even to seemingly dumb ideas – is essential to building and maintaining the bonds of the project team. Failures, conflicts, and personnel changes will continually threaten many teams during their lifetime. Only conscious effort – especially by the more powerful members – will build relationships strong enough to weather these storms.

**Managing the Background Relationships of the Team**

In multi-agency reengineering efforts, team members represent not only different functions but different legal entities. In justice, goals in the broadest terms – such as the maintenance of a safe and civil society – are the same for each agency, but their stance

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29 Another reason larger agencies try to dictate the technical aspect of the solution is that they are more likely to operate large, complex, legacy information systems that are too costly to abandon or change significantly.
vis-à-vis the law, the defendant, and the community differ and are intended to be at odds. Courts, for example, are not an extension of law enforcement’s offender apprehension function but are neutral arbiters of cases presented by the prosecutor. Corrections carries out sentences of the court without imposing its own judgment of the appropriateness of those sentences. Prosecutors make their own judgments of appropriate charges and case seriousness without reference to the opinions of the police.

The team’s negotiation process, therefore, not only involves issues of “turf”, but also involves the working out of conflicting traditional mandates of each agency, many of which have a constitutional or statutory basis. Given these built-in variations in agency missions, the reengineering work of multi-agency teams is often to coordinate the actions of justice agencies to avoid consequences none of them want, but not to develop shared goals. Rather the team seeks to develop a solution that will enhance (or at least not damage) the performance of each agency’s goals – some of which are in conflict with each other. This is a challenging task.30

Even in single-agency efforts, team members report back to and take instruction from superiors who are department heads or “feudal” leaders to which the team member may owe loyalty. This means that team members’ interaction with their superiors or peers in their own agencies or departments is based on sets of assumptions about common goals different from those that govern the team. They must speak two languages. They must justify their decisions to their superiors and peers in different terms than they justify them to other team members. These “background” relationships with superiors/peers can be decisive in the success of the project. How should the team deal with them?

The first issue is whether attempts should be made to bring the substance of these communications to the table. Only if all relevant assumptions and motives are visible can they be negotiated, altered by education, and compromised. But background players usually want their team members to keep their communications confidential. They stay

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30 One seemingly minor issue related to this difference in agency goals that causes constant IT problems in interagency justice projects is the different numbering systems agencies use for key entities. Individual, incident, arrest, case, and custody event identifier differences lead to endless confusion in the handoff of information from one agency to another. Difficulties in accurately identifying individuals, and the different approaches different agencies take to this problem, add to the confusion.
in the background in part to preserve their own freedom of action. They can direct their
delgate to take a hard negotiating position and feign ignorance of it later. They can take
positions they don’t have to explain, especially when those positions are based on self-
interested motives or any other motives not in accord with project goals. They can take
time to consider their response to a proposal without the pressure of having to answer on
the spot. If a team leader pressures a team member to reveal these communications, the
member is placed in the position of choosing between the project’s goals and his or her
job. It will have the effect of alienating part of the team and damaging essential trust
relationships.

A better approach is to create a structure and an atmosphere where trust relationships and
commitment to project goals build among team members over time. As a member grows
to trust his or her teammates and becomes more committed to the project, trust will also
grow that revelations about what’s really important to the member’s superiors will be
kept confidential. Even if the member doesn’t share the information with the entire team,
he or she may confide in a trusted team leader, who can then better craft compromises
that take account of these hidden motives and assumptions.

The second issue is whether team leaders should lobby the background players directly.
Leaders equal or nearly equal in power to the member’s superior are the best lobbyists.
But such lobbying requires a very delicate touch and requires sophisticated political
skills. The trick is to enhance the superior’s support of the project through education and
other forms of influence while not undermining the team member or violating the
member’s confidences.

Many occasions requiring compromise in reengineering negotiations require the
surrendering of short-term advantage or resources for the long-term prospect of
improvement. They require the decision to accept risk for a department or agency or
politician to achieve a goal that may benefit everyone involved. This requires risk
tolerance, courage, faith, and altruism. Depending on the structure and culture of the
agency, officials at the top may owe their advancement and survival to risk avoidance.
They certainly owe their positions to devotion to the goals of the agency’s leadership –
especially including protection of the agency’s resources and power. Team leaders can help by giving their members the ammunition – facts, arguments, and public recognition for the agency or department – to protect themselves in dealing with their peers and superiors. Team members should be taught and encouraged to repeatedly assure their superiors and peers that they have not abandoned their devotion to their agency or department, while nudging them cautiously to see the “big picture”. Even when the chief or high level executive serves on the team, the executive must, for reasons of morale and to maintain respect, assure their subordinates that the agency or department’s interests are not being abandoned. These subordinates need to be brought to see the big picture as well.

In single-agency teams interaction takes place in the context of the agency’s culture and its authority structure. Members don’t just provide knowledge and ideas but carry their authority with them into the team. Since a successful design process requires individuals with a depth and breadth of technical, operational, and administrative knowledge, there will be a wide range of levels and types of authority involved.

It is therefore essential that there be a chairman or facilitator who has the power to set and enforce rules for team interaction and has the full support of the chief executive in doing so. The rules should allow an “idea free-fire zone,” allow passion without personal confrontation, require a continual, critical reexamination of assumptions and decisions, and allow sufficient time but with a deadline. The team’s mandate should make clear that the task of the team is not to decide whether there should be reengineering but only how reengineering should be executed.

Any attempt to insist on an idea by reference to formal authority in the organization must be squelched immediately by the facilitator. Explicit or implied threats of retaliation should be dealt with by outside higher authority if not a member of the team. The question of whether the chief executive should be a member of the team is complex. The executive’s presence will lend an atmosphere of utmost importance to the proceedings.

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31 This chairman/facilitator should probably report directly to the chief executive not just during the reengineering effort but afterwards as well. Otherwise the individual may hesitate to exercise his or her temporary authority on managers they may have to answer to.
and will deter power plays by other members, but it may tend to suppress presentation of radical ideas and especially, criticism of the current way of doing business that the executive may have established.

One way to avoid the limitations of the agency’s authority structure may be to include knowledgeable outsiders, such as retired managers, on the team. Not only will they be unaffected by the power structure, they will also not have to fight the battles of implementation. In general, the team should not be too dominated by those who will have to implement the planned changes, or by IT people, or by executives. Ideally, the final design should be a consensus of the entire team. If consensus cannot be reached, at least a supermajority should be required to finalize a design to be approved by the chief executive. Dissenters should be required to file a written minority report. They must, however, propose an alternate design, not just criticize the majority’s version.

**Dealing with Implementation Barriers**

Career survival fears and alternative power structures are barriers both to reengineering design and reengineering implementation. Whether the design, implementation, and measurement of results are viewed as an iterative process of endless change and improvement as in Total Quality Management, or whether change comes in great leaps, as Business Process Reengineering advocates propose, the design and implementation process is seen as a continuous one. Those who implement and will manage the new system (which often means those who manage the old) must be part of the team that designs the new system. Lessons learned in implementation will feed back to the design process. Failures of implementation will often be interpreted as problems of design, and vice-versa.

*Dealing with career survival fears*

Managers apply, either consciously or unconsciously, their own theories of worker motivation. Some managers assume all workers will try to avoid work and respond only to coercion and the threat of job loss, and will despair of their ability to implement process-oriented designs. Some believe all employees can be motivated to willingly take responsibility and work to accomplish organizational goals. Many experienced managers
realize that the relative importance of salary, benefits, job security, power, social relationships, approval from superiors, self-esteem, and personal growth is different for each employee. Some will never accept—or are incapable of—the new challenges and responsibilities of reengineered roles, while others will enthusiastically adopt the new roles from the beginning. Many will accept the new duties and responsibilities if they are given the training, responsibility, and respect necessary.

Implementation of reengineering is a painful process of separating recalcitrant or incapable workers from those who are willing and able, eliminating or reassigning the former, and training, reorienting, and motivating the latter. Though good guesses about where a worker will end up can often be made from past experience, everyone should be given an honest chance both because there will be a few surprises and because part of the reengineering approach is to apply a just desserts ethos to management. Rewards and punishments should be based on worker performance.\textsuperscript{32} Giving everyone a chance—both managers and other employees—sends an important message that everyone is capable of functioning in the new process (even if it’s not true) and that present, not past, performance is what counts. This helps to create an overall atmosphere of equity. Such an atmosphere is important to workers’ morale as they struggle to accommodate themselves to radical change.

Resistance to reengineering because of career survival fears must be met with gentle determination at first, as well as a heavy investment in reeducation, skills training, and mentoring by managers. Research shows that training, user support, allowing time to experiment, praise from supervisors, and even financial incentives are associated with successful implementation of technological innovations.\textsuperscript{33} The investment in retraining will send the message that management believes the worker can succeed.

The ultimate goal, of course, is not to achieve grudging compliance, but what psychologists term “internalization” of the values that drive the reengineering effort.

\textsuperscript{32} The natural tendency will be to base some rewards on effort rather than solely on performance. At an early point, however, management needs to make it clear that effort is not enough. Though people will be given time to learn and adjust, that time, unfortunately, has an identified limit.

\textsuperscript{33} Klein and Sorra (1996) and Klein and Ralls (1995) provide good summaries of this innovation research.
This means that training should include not only technical and operational aspects of the worker’s or manager’s new responsibilities, but the reasons behind the changes: why the new approach is better, how it helps the agency to reach its goals, and why those goals are important to the community.

Finally, explicit deadlines for cooperation must then be set and enforced in the face of continued resistance and delay. Once the deadline has passed, the worker must be terminated or sent to a less desirable assignment. A hard line with recalcitrant employees will send the message that cooperation means something: people’s belief in the principle of equity implies not only that performance is rewarded but that failure to cooperate be recognized and punished.

It is vital that the “resistance self-fulfilling prophecy” be avoided. If an employee believes that reengineering is simply a fad or an experiment in his agency, the employee may resist, especially passively, and wait to see how serious everyone really is. This resistance may lead to the worker being identified as a problem and a self-fulfilling prophecy is set up: the worker’s career is threatened because he felt that reengineering would threaten his career and resisted. It is therefore vital that all levels of management emphasize that reengineering is not an experiment or a test and it will happen, regardless of resistance or attempts at delay: in short, that resistance is futile.

Dealing with alternative power structures

Despite efforts to encourage a cooperative agency-wide effort, a reengineering initiative, both in the design phase and in the implementation phase, will form a new arena in which struggles between groups and power centers will be played out. Failure of a new system or approach, as long as the perpetrator can avoid identification or responsibility, can be a strategy by one tribe or feudal group against another. This implies that it is essential that expectations are very explicitly and concretely defined, and responsibility for problems can be clearly assessed. But in general there are four possible strategies for dealing with alternative power structures.
1) Attack or destroy them
This is not only difficult but usually unwise. Tribes give a sense of identity and inclusion to employees: this is part of the reason they exist. Feudal structures, especially when roughly aligned with functional units, tend to give employees a sense of loyalty not only to the leader but to the function as well. The favor market has established a set of trust relationships over time across departments that have helped the bureaucracy to function. Though IT-based reengineering may ruin the market for information-based favors, the history of cooperation still exists and can form the basis of new types of cooperation consistent with the reengineered justice process.

2) Co-opt them
To co-opt here means to explicitly or implicitly recognize the alternative power structures and somehow redesign processes with or around them. One approach might be to set up power-sharing arrangements inside key processes and make each group responsible for an important part. Another might be to set up competitive processes where the competition among groups is based on their achieving organizational goals.

The problem in both cases is that it is difficult to prevent one group from trying to succeed by helping the other group to fail. Struggles for power and resources tend to be a zero-sum game in criminal justice agencies since they have fixed budgets and reengineering rarely generates new revenues. At its extreme, the already difficult challenge of radical business process change must be made worse by United Nations-like negotiations and horse trading between unofficial power groups.

Finally, attempting to co-opt these structures requires officially recognizing them in some sense. This recognition must necessarily increase their legitimacy and, especially, their influence in the operations of the agency.

3) Enforce a DMZ
In this approach the chief executive sends a “hands-off” message to the informal groups in the agency, that the new process is sacrosanct and is not an arena for their competition
or attacks. There are two problems with this approach. The first is that, like co-optation, it explicitly recognizes and helps to legitimize the alternative power structures.

The second and more important problem is that this approach paints a target on the back of every design team member and manager involved. By definition, the new process will cut across functional lines and need the active cooperation of managers who still control parts of those functions. There will be many subtle ways to cripple the new process without leaving fingerprints, and starting it off surrounded by powerful people with resentments is not a recipe for success.

4) Ignore them
In a way, this approach is a combination of all of the above, without any recognition of power structures other than that based on the chief executive’s official authority. IT-based reengineering aims to rationalize justice processes in terms of organizational goals. New demands are made on workers and rewards are based on their performance. That performance requires not only technical skill, but ability and willingness to cooperate, communicate, and problem solve. If these criteria are strictly applied, and workers are, in fact, rewarded for performance in the new way of doing business, their ties to the alternative power structures will gradually weaken.

Top executives sometimes act as if process reengineering and its associated changes in management style is something that happens to everyone else – but not to them. Often, a continuation of their former management style – especially rewarding personal loyalty over competence and loyalty to agency goals – will send the signal that the new standards for workers and managers will not be taken seriously. They too must change attitudes and behavior to effect the cultural changes reengineering requires.

If the chief executive sees to it that new criteria are applied to recognition, advancement, reward, and punishment as the reengineering process requires, and that cooperation from other managers and workers is simply expected regardless of workers’ other affiliations, the old relationships will weaken without being explicitly attacked. To some extent these old relationships will fade in importance as the new form of organization provides the
sense of belonging, responsibility, achievement, and security that formed part of their attraction.

Dealing with politics, the public, and the media

Since there are political costs to reengineering, including its interference with patronage and potential risks from bad publicity, dealing with the political equation is crucial to a successful reengineering effort. Risks and trouble may be seen to outweigh the benefits, as the public and media may not be aware of the improvements that implementation of the new design brings, yet will be aware and critical of errors, especially errors threatening public safety or indicating corruption.

It is better to make an effort, then, to publicize the initiative, even if in doing so the inefficiency of the old system is exposed. The media and public will generally be supportive of new initiatives involving technology, because it promises greater efficiency and better public service. It is much easier to admit the shortcomings of the past in the context of a major effort to improve. This good publicity will balance the risk of future public relations problems if the new process develops problems. It has a variety of other advantages as well:

1) It sends the message to everyone in the agency, as well as the public, that the initiative is serious, and it will not be allowed to fail, since now the chief executive’s political image is on the line. Thus cooperation becomes a matter of political and personal loyalty as well as official duty.

2) It offers the opportunity to enlist local business leaders, universities, and good government groups as advisors in the design process, thus sharpening the executive’s credentials as a reformer.

3) It offers some cover if future problems develop, since problems can be presented as “growing pains” or transition problems in the process of being ironed out.

4) It will energize everyone involved in the design and implementation process by reflecting directly on the importance of his or her work.
CONCLUSION

Alternate power structures, resistance stemming from fear, misunderstanding, self-interest, and the intellectual challenge involved in questioning long-held assumptions and developing both a breadth and depth of knowledge are common to all justice reengineering projects. This paper has outlined these challenges not to dissuade justice agencies from embarking on reengineering efforts, but to identify potential problems so that they can be avoided or dealt with.

Reengineering is so difficult because it requires not only resources—time, people, money—but a change in organizational cultures as well. This is not easily done. An agency’s culture is much more than its rules, policies, and chain of command. It includes widely held beliefs about the agency, its managers, and its chief executive. It includes the trust, mutual understandings, and shared values among its employees, and is often resistant to change.

The nature of the reengineering challenge will be different for each agency. Some agency cultures require only minor modifications—what is lacking is technical knowledge and resources. Other agencies have all the technical know-how and money they need, but they find it impossible to create the focus on organizational goals and cooperation necessary to implement a process-oriented business. Reengineering projects that involve multiple justice agencies must manage conflicts among these cultures.

Addressing the challenges described in this report takes courage, imagination, faith, and persistence. Organizational culture affects reengineering efforts. But a successful reengineering effort has the potential to introduce valuable change into the organizational culture. A successful multi-agency effort can improve the capacity of an entire justice system for change.
RESOURCES

The following organizations’ web sites offer a rich variety of literature, tools, references, and links related to justice process reengineering, information sharing, and project management.

Bureau of Justice Assistance at www.ojp.usdoj.gov/BJA/
Center for Law, Society, and Justice at www.cslj.net
Integrated Justice Information Systems Institute at www.ijis.org
National Association for Justice Information Systems (NAJIS) at www.najis.org
National Association of State Chief Information Officers (NASCIO) at www.nascio.org
National Consortium for Justice Information and Statistics (SEARCH), at www.search.org


Available at http://www.maccoby.com/Checkscher/Articles/LimitsPartMgmt.html


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