CherryRoad technologies

Business Process Optimization in the Public Sector

Ten Rules for Maximizing ERP System Impact

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Executive Summary

An ERP project is a business transformation, not simply an IT project; and there is a direct correlation between success and how much it is viewed as a transformational initiative.

Public sector entities are feeling heightened pressure to do more with less as competition increases for fewer federal, state, and local government dollars, and as they strive for Sarbanes-Oxley-like financial transparency. Our recent experience has been that public sector organizations are choosing to not customize expensive ERP systems, thereby reducing the cost of implementations and future upgrades.

Many are opting instead to modify business processes in order to minimize software customizations, thus taking advantage of "best practice" processes embedded in the software. The *plain vanilla* ERP implementation is becoming more the rule than the exception in the public sector, and as a result implementation and ongoing support and upgrade costs are being contained.

The ERP portfolio carries within it business transformation, and for that to be successful requires not only executive sponsorship, but *visible leadership* from the executive suite.

This white paper puts forward ten rules for improving business processes' effectiveness, and maximizing IT spend during ERP implementations.

Declining Expectations

Business Process Optimization (BPO) is a structured approach to redesigning processes to achieve improved efficiencies within the context of an ERP implementation. BPO maximizes the ability of business processes to take advantage of the capabilities of an ERP system. Process changes are targeted to enable the adoption and utilization of a specific best practice or functionality that is delivered by the software.

Many public sector organizations are moving away from application customization and toward plain vanilla implementations. Organizations increasingly recognize that ERP technology provides the support necessary for efficient business processes, and only when these processes are designed to accommodate the software's functionality are the capabilities of the technology realized.

ERP systems can produce positive ROI and capitalize on high profile delivered functionality such as automated workflow and employee self-service when implemented as part of a comprehensive BPO program that includes:

- *A realistic strategic plan that clearly defines the future state*
- *Project goals aligned with those of the organization*
- *A mandate, and sufficient time to develop and implement processes that are efficient and designed to take advantage of delivered software functionality*
- *Management of the resulting change to the organization and its people*

When examining ERP projects that have failed to meet expectations, it becomes evident that many organizations share a similar experience. It's characterized as a cycle of declining expectations.

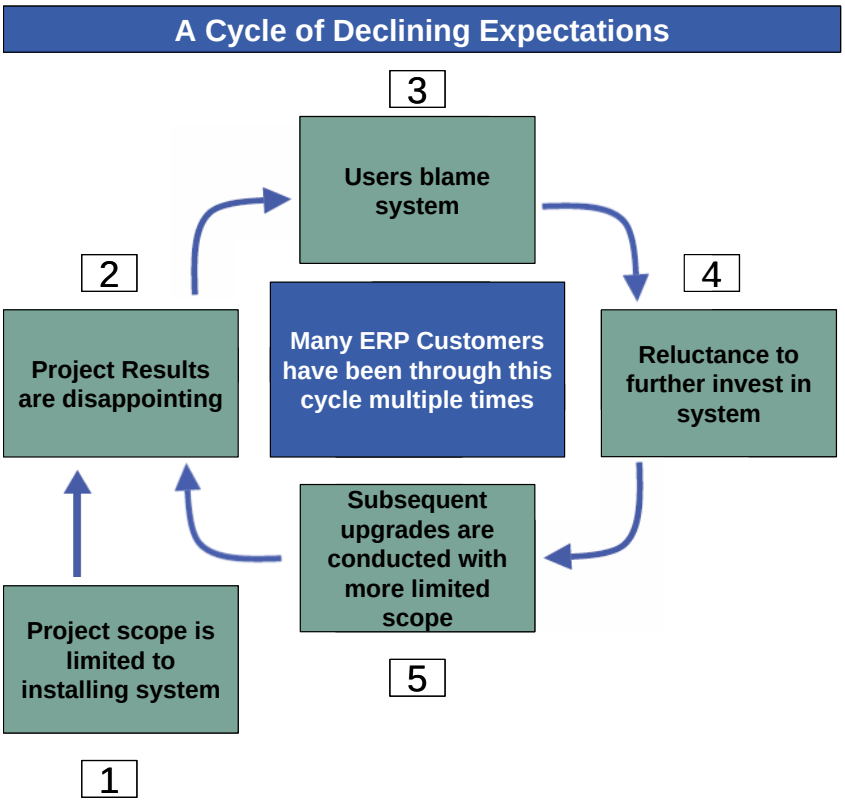

Figure 1: Cycle of Declining Expectations

When users remain silent on disappointing outcomes, they become resigned to accepting ERP systems as a disappointing but necessary cost of doing business.

To break this cycle, an organization must develop and execute a plan that addresses the entire scope of project objectives, and manages the impact on the organization's human capital. Organizations can realize the benefits anticipated from an ERP system if they abide by the following ten rules in executing their ERP projects:

1. Develop a Strategic Vision

Keeping in mind that implementing an ERP system means taking on business transformation, the first step in avoiding the re-implementation of existing business conditions is to develop a strategic vision.

The following graphic illustrates the strategic vision developed at a public school system for its payroll process. It identifies the desired characteristics of the process, and the underlying technology needed to enable them.

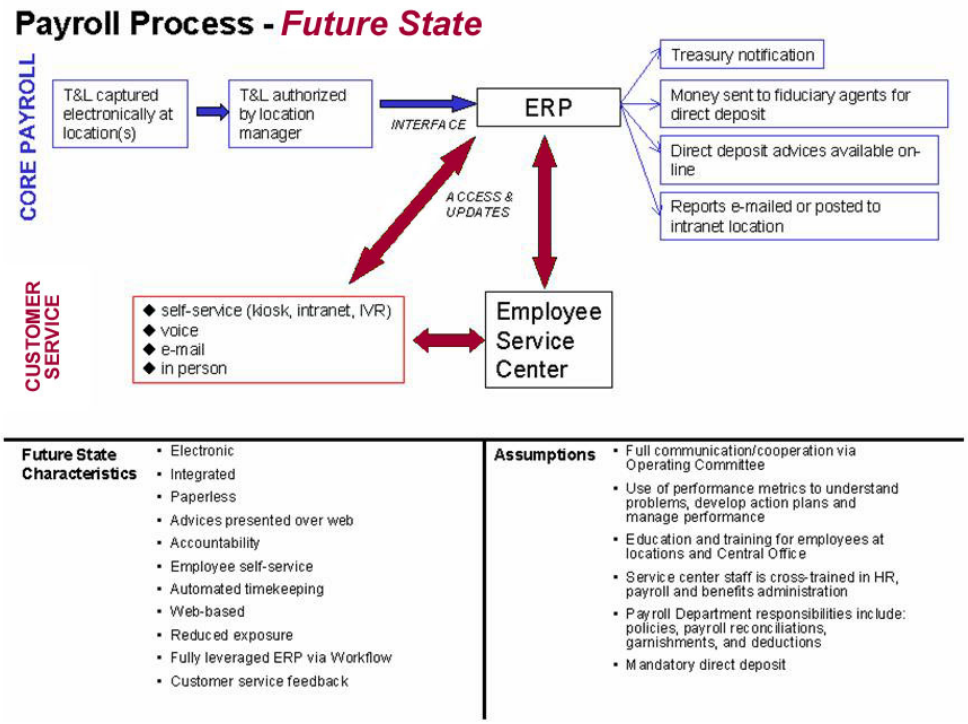

Figure 2: Strategic Planning Blueprint

This design was developed during a series of structured brainstorming sessions with stakeholders, process owners, and managerial decision makers. It allowed the organization to articulate its vision for the future and develop a high-level roadmap to achieve it. The visioning process stayed grounded to achievable outcomes by including both process and technology experts in the discussions.

Strategic planning clarified the organization's vision for its payroll process, and provided a high-level, but realistic blueprint for using its ERP system to achieve it.

2. Align Project Goals to Organization Goals

It's important for all stakeholder groups to reach consensus on the project's success criteria. While the project outcome might not achieve every stakeholder's individual objective, the overall project goals will have been identified and agreed to, upfront.

Generally, information technology's primary objective is to 'get the system up and running quickly and efficiently' But ERP projects are not IT projects; they are business transformations with goals that can include: improving business processes, reducing costs, improving service levels, and minimizing operational impact.

The challenge becomes how to align projects team members' goals with those of the organization. Before the start of a project these can be widely disparate objectives that, if left unexplored and out of sync, will result in dissatisfaction with the project outcome for at least some portion of the team. Aligning goals before the project begins sets everyone's expectations at the same level.

Goal Alignment is the critical element to mitigating the risks existent when project objectives are not identified and delineated. Through this activity, clear project goals can be developed, articulated, and used to drive project decision-making, and ultimately measure project success.

3. Establish Realistic Timelines

A successful, integrated ERP implementation relies on a realistic project timeline. Gathering requirements, designing and configuring the applications, testing, training, and acceptance are standard activities of a technology implementation. The optimization of business processes requires comparable project activities, and time must be built into the project plan to accomplish them.

Placing business process assessment and design at the front end of the project means the timeline needs to accommodate this additional effort. When developing an integrated project plan, *allow sufficient time in the plan for the development of process improvement recommendations, and the organizational approval process necessary for their adoption.*

The following offers an example of how overlooking these activities can create pressure on a project timeline.

When the words “self-service” are included in a system requirements document, they generally refer to the automation of a paper-based process. Begin by asking, “Where is the data that will be needed by this process?” Since it probably exists on paper, the format used to communicate that information in the future will need to be factored into the process redesign. Perhaps the data will need to be entered into the application from a paper document, or perhaps the document itself will need to be scanned and uploaded to the application. Since “self-service” implies decentralized data entry, the design might bypass the entire paper document creation process, eliminate a centralized data entry activity, and, replace it with a centralized data validation activity.

Any of these opportunities for adopting self-service (functionality or capabilities) require redesigning existing business processes. That takes time; and that time – along with the time required develop and present a business case to change the process – needs to occur before system design and configuration. And then, add time at the back end of the project plan to validate and test the new process and educate and train employees on its use, and you’ll understand the importance realistic timelines have in ensuring project success and minimizing project risk.

4. Staff Your Project with the Right Resources

Five years ago installing an ERP system yielded such striking improvements over disparate, non-integrated applications that the idea of actually addressing process issues in concert with software implementation seemed superfluous.

An ERP project team was typically staffed with ***Application Specialists*** that are experienced implementers of specific products. They develop specifications, code reports, load tables, train users, and perform system testing. Their primary responsibilities include providing assistance with application analysis, design, and development.

But in order for public sector organizations to meet the ever-broadening demand for cost containment, and increased efficiency, and successfully undertake the challenge of business transformation, Business Process Resources need to be included on ERP implementation teams.

It's the ***Business Process Resources*** that are expert in the assessment, analysis, and redesign of business processes, and experienced in the areas of strategic process design and business change. As effective agents of change, they focus on the dynamics at play when people are confronted with changes to their work environments.

The introduction of business process resources as a complement to application specialists creates a synergy that can finally achieve the long promised gains of ERP systems. The risk of not including process experts on the project team is the under-utilization of capabilities of the ERP system due to the migration of inefficient business processes from the legacy system to the new environment.

5. Organize Resources as a Joint Project Team

The traditional ERP project team's objective is implementing software. When business process resources are added to a project, process improvement also becomes an objective. Collectively, the focus becomes business transformation and the project plan should establish milestones and deliverables so each of these objectives is reached in a coordinated manner. This is best accomplished by having one project manager to whom application specialists and business process resources report.

When gathering requirements for each functional area, it's important to partner application specialists with process experts. This will dramatically improve the effectiveness of the sessions. Not only are the time demands placed on the user community reduced, but the questions asked by one resource type will lead to more insightful questions and deeper understanding by the other.

Finally, while proximity aids team unity, it also fosters a better understanding of day-to-day issues that project status meetings alone cannot provide. Having all project resources working together in the same physical space encourages application and process resources to leverage each other's subject matter expertise to develop creative solutions that are less likely to evolve when team members are compartmentalized.

A Case Study

Industry – Public Transportation
Project – ERP implementation
Objective – Increased financial transparency
Mandate – Change the process, not the software

This client engaged CherryRoad to implement a suite of financial and HR software solutions that would increase the transparency into its financial processes. They were aware that modification to the software would translate into higher implementations costs as well as more difficult and more costly upgrades. As a result they insisted that there would be no customizations except when required to meet a regulation or law. In all other cases they would change their business processes instead of the software.

Using Cross-Functional Teams to Establish Inter-Departmental Collaboration and Drive Process Improvement

The organization structure was siloed departmental units that historically operated independently. CherryRoad recommended they establish an HR Cross-Functional Team comprised of decisions makers from the HR, Benefits, Payroll, and IT units to help them adopt a continuous improvement model as part of their organizational culture. The objectives of this group were to establish a BPO mindset within the organization, and drive continuous improvement in key business processes, thereby enhancing the organization's ability to compete for public dollars.

Each team member's individual responsibility was to become expert in all business processes within their respective functional area. Bolstered by this domain expertise, the team would collectively redesign the businesses processes within the HR framework to best leverage the capability of the new technology.

We facilitated the work of establishing domain expertise by leading process mapping activities to identify key technology integration points. This provided a frame of reference for each team member's understanding of the up and down stream impact system data had as it crossed departmental boundaries. A key bi-product was establishing the inter-department communication channel needed to develop creative solutions within a continuous improvement model.

We wanted to be sure our client would continue to be successful when our consultants departed, so the team's immersion in BPO included scheduled, weekly classroom training sessions. The lesson plans and training manual was based on five topic areas:

1. Understanding BPO Context
2. BPO Methodology
3. Change Management
4. Measurement
5. Presentation Skills

Over a six-month period this group:

- Successfully completed 26 improvement initiatives including writing detailed standard operating procedures for three operational areas
- Engineered the merger of two independent payroll units
- Streamlined the new hire requisition and recruit to hire processes by eliminating eight redundant approvals
- Reduced the number of personnel action forms from six to two
- Moved the organization to exception based time reporting that saved the organization over 3,000 work hours each year

6. Utilize Cross-Functional Teams

Business processes often cut across functional or traditional departmental lines, so it isn't surprising that solutions to process problems do not completely reside within one department. The most successful and effective process improvement teams are those with representatives from all functional areas of the process. This Cross-Functional Team (CFT) approach brings together people with the specific knowledge, skills, objectivity, and often times the fresh perspectives necessary to achieve desired improvements.

Because the business processes that ERP systems support cut across traditional department lines, public sector entities without effective channels of inter-departmental communication are at a disadvantage before an ERP implementation even begins.

The most successful and effective process improvement teams are those comprised of representatives from all functional areas of the process. Cross-Functional Teams bring together people with the specific knowledge, skills, and objectivity necessary to develop creative solutions to business problems.

Leveraging Technology and Process Optimization to Achieve Productivity Improvement

Our client's general accounting unit was predominately transaction focused due to the absence of an interface between the Accounts Payable and the G/L databases. Implementing an ERP suite integrating AP and G/L would substantially reduce the number of manual posting entries they would need to process each month.

As our consultants measured the details behind their journal entries, they noticed many were corrective entries. A root cause analysis traced the source of the errors to the Procurement unit that, as it turned out, was using incorrect account codes on requisitions and purchase orders. These errors were blindly passed from Procurement to AP and then to the G/L, and only discovered as they came to the attention of the department whose budget was unintentionally, but negatively impacted.

The Accounting unit employees were aware there were numerous account code errors. But, instead of trying to understand and then correct the source of the problem, they simply posted corrective journal entries. Not only did this substitute process ignore the presenting problem, but it also added to their workload.

Further analysis also revealed a high turnover rate in the Procurement unit coupled with an absence of standard operating procedures, both of which contributed to a steady decline in its accounting accuracy.

We assisted the client in developing standard operating procedures, and provided training and job aides to the procurement and departmental staff as decentralized requisitioning was rolled out. This ensured correct account codes were entered at the front end of the acquisition cycle.

This was a perfect example of the synergistic value BPO can bring to an ERP engagement. Implementing an integrated system reduced the number of manual transactions. And the root cause of an ongoing accounting workload problem was eliminated, something the implementation of software alone would not have achieved.

In the end, our client saw an **80% reduction in the number of journal entries** processed; reduced journal entry research, preparation, and data entry time; and minimized correcting and reclassification entries. These improvements freed up accounting staff hours for value-added analytic work. And because we were also able to standardize their accounting and closing process, they realized a **25% reduction in the time to close their books**, on top of improving the accuracy and overall reliability of the accounting figures.

7. Let Process Drive System

ERP implementations aren't simply technical implementations of software. They are transformations that invariably impact business process and organizational design.[1]

When public sector organizations experience declining expectations toward their ERP systems, they invariably haven't included process optimization in their projects, and instead have assumed their current processes would be revitalized simply by introducing new technology. Without modifying the organization's business processes to take advantage of this technology, the expectations placed on the software are generally overreaching.

BPO offers its greatest value when it precedes ERP system implementation, thereby letting process drive system design. Under ideal circumstance, business requirements (such as the introduction of self-service as previously described) have been delineated, and the process modifications required to achieve them have been identified and approved before system design has begun.

Once ERP system development begins, process improvement initiatives need to be restricted to those already approved, or those identified as gaps during the system fit/gap analysis. This latter group must be further limited to those that can be addressed by process modifications that do not impinge on system design.

The Cross-Functional Team, as a permanent organization resource, can address unmet business needs and inefficiencies that become evident in the post-implementation environment. In these instances, there is likely to be a mix of opportunities where process drives technology and technology drives process.

[1] A Study of a Change Management Instrument for use by Corporate Trainers to Facilitate Technology, Adoption and Achieve Business Results, by Gary Sadavage.

8. Eliminate Substitute Processes

Substitute processes come into being because something within the primary process is broken. For example, as mentioned in the Case Study, coding errors being repeatedly made by Purchasing forced the Accounting unit to make numerous correcting journal entries. This substitute process was used to overcome a broken piece of the primary process, in this case the Purchasing unit's knowledge gap.

Eliminating these maverick processes cannot be accomplished without first identifying and then removing their cause. A Cause/Effect, or "Fishbone" diagram can be used to deconstruct the problem until the true cause is determined.

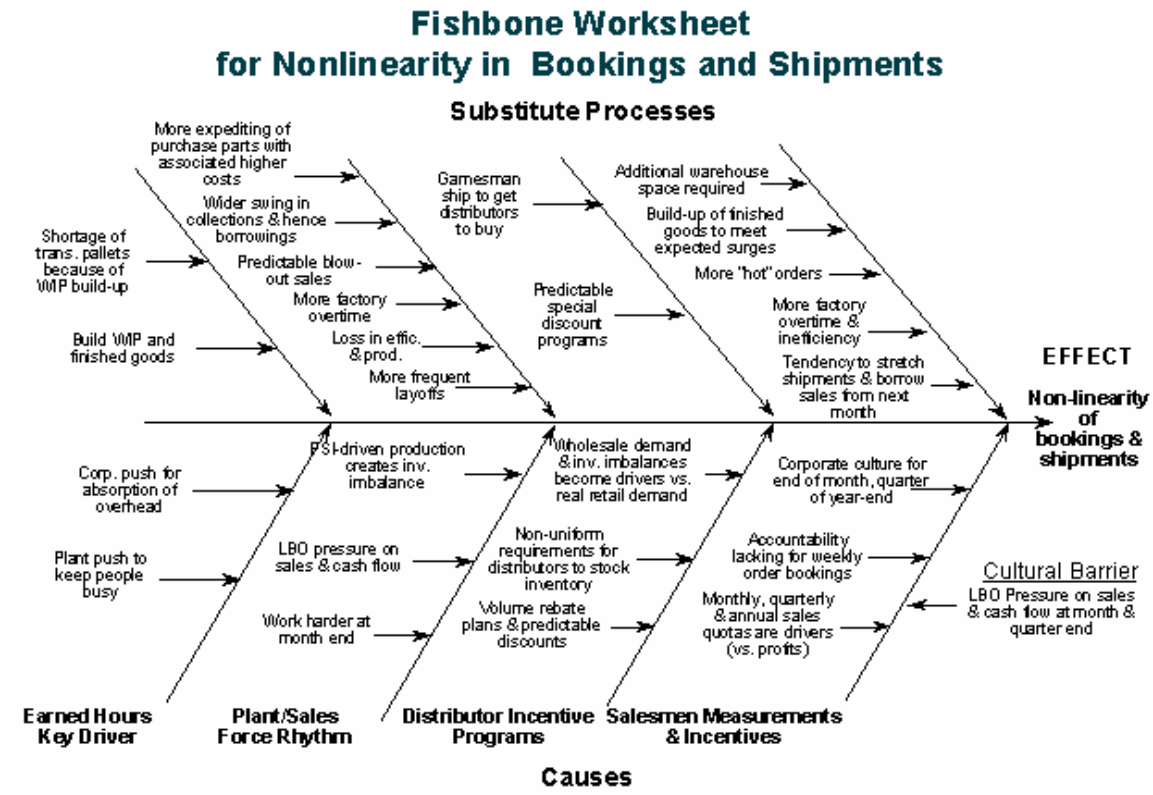

Figure 3: Example of Fishbone Diagram

Once causes are identified, a plan can be constructed to eliminate the substitute process. In the example offered, the organization recognized the need for supplemental training and job aids for the procurement staff to assist them in coding requisitions and purchase orders correctly.

When the ERP system itself is seen as the solution to all organizational ills, ineffective processes can still limit the organization's ability to achieve the maximum return on its ERP investment.

9. Use Metrics to Measure Success

The success of an ERP project can't be judged on the basis of anecdotal evidence. Measuring its effectiveness and the improvement it has provided establishes ROI, justifies costs, and lays the foundation for a continuous improvement model. But the goal of measurement is not to measure; rather, it is to improve performance. And processes are the point at which this can be best accomplished.

The contemporary state of measurement has been described as:

- A proliferation of measures that are hard to interpret
- An unreasonable amount of effort for data collection
- Fraught with long delays
- Yielding little correlation between goals and measures
- Emphasizing financial measures unrelated to operational realities

The results of a recent study underscored the proposition that ERP systems support business processes, and the measurable success of these systems is dependent on the continuous examination and improvement of those processes. Metrics are the evidence upon which success can best be judged.

For a metric to be of any use to an organization, it needs to measure one of three different aspects of a process: Cycle Time, Cost, or First Pass Yield (the percent of acceptable products produced during one cycle). All three metrics types are required to provide balanced improvement to a process.

Metrics must also demonstrate all of the following characteristics, without which they are apt to be dismissed, or worse, perpetuate a disinclination to evaluate performance:

1. Accurately expresses the phenomenon being measured
2. Objective and not subject to dispute
3. Comprehensible, readily communicated and understood
4. Inexpensive and convenient to compute
5. Timely with data sources readily available
6. Harmless, not inducing inappropriate behavior

10. Manage the Change

A Change Management program is designed to manage the impact of organizational change, in this case change resulting from an enterprise solution implementation. But, it is generally the most overlooked and undervalued aspect of technology initiatives because its objectives and approach appear to be entirely self-evident: educate, prepare and motivate those impacted by change so they can adapt to and succeed in the new environment.

An effective Change Management program needs to be comprehensive, spanning the needs of multiple audiences, and addressing a wide variety of challenges related to people, processes, systems, technology, and organizational leadership. Its multi-disciplinary framework relies on a variety of mechanisms to achieve a successful adoption of change. Chief among these are training, organizational feedback, communications strategy, planning, delivery, development, and performance management.

Change is difficult in any organization, and if middle managers view the ERP effort (implementation or upgrade) as a Flavor of the Month, they can readily quash it with passive-aggressive behavior. They need to see committed leadership from top to bottom and not just Leadership by Memo.

As part of an effective change management program, process and operational improvements must be clearly communicated to the organization. Educational efforts must be undertaken to prepare individuals for success in the future state, and risks and resistance to the impending change must be understood and overcome.

As a recent study reported, companies that fail to address change in a coordinated manner risk losing up to 74% of their business case benefits. Recognizing the need to control change through the establishment of an effective Change Management program will measurably reduce this risk.

A Final Word

Public Sector organizations have always been called upon to do more with less, and being judicious with today's technology dollars plays an increasingly important role in achieving that objective.

ERP implementations and upgrades are opportunities to transform the organization. They require vision, and active top down leadership, to maximize their impact.

Applying these ten rules to technology projects will greatly improve an organization's ability to maximize its IT spend, while at the same time minimizing software customizations, and increasing business process effectiveness.

About the Author

Robert Pitney is Manager of the Management Consulting group at CherryRoad Technologies. He has nearly thirty years' experience advising organizations in the design of business processes that leverage their IT spend.

His public sector work is comprised of federal, state, county, city, and agency level entities including:

U.S. Army
Metropolitan Transportation Authority
State of Delaware
Council of the Great City Schools
City of San Diego
Philadelphia Housing Authority
Newark Public Schools
District of Columbia Public Schools
Napa County

His writings on this topic have been published by ICFAI Press as a chapter in the 2004 edition of "**ERP - New Insights**", a compendium of professional discourse on ERP technology. His work has also appeared on numerous distribution networks including Forbes.com, Businessweek.com, ebizq.com, zdnet.com, and cnet.com.

He holds two graduate degrees from Columbia University.

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