

# PUBLIC SECTOR

BERRY. DUNN. MCNEIL & PARKER

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Welcome to Berry, Dunn, McNeil & Parker's first edition of the Public Sector Consulting newsletter insert. The articles in this inaugural edition focus on information technology and address important topics including:

- ◆ Developing a strategic information technology plan for your organization
- ◆ How Independent Verification and Validation (IV&V) services can help to protect investments in large-scale information technology projects
- ◆ The critical role of user acceptance testing in vendor-based software development projects

Successful managers, whether in the public sector or private enterprise, need to understand current trends and issues. Public sector organizations must maximize taxpayer funding for business and IT initiatives more than ever before given the current fiscal environment.

In our role as advisors, we bring technology, business, and industry expertise to bear. We do not sell computer hardware or software. Our mission is to provide objective and independent consulting services to help our clients achieve their business objectives. The articles in this newsletter have been written by the staff in our Consulting Group. The information and perspective is relevant and timely. I encourage you to contact us with any questions. We would be pleased to discuss these and other technology and management matters you may have.

Tim Masse, Principal  
Berry, Dunn, McNeil & Parker  
Public Sector Practice Leader

## PROTECT YOUR IT INVESTMENT: INDEPENDENT VERIFICATION AND VALIDATION

By Charlie Leadbetter

Those responsible for costly software development projects cannot afford the luxury of "hoping" to get a system produced correctly. Many system development projects fail due to a lack of sufficient planning, risk identification, and timely correction of system defects. Even projects that produce the desired software or database can run significantly over budget and can fall behind schedule. An Independent Verification and Validation (IV&V) provider can help achieve the desired outcome, while focusing on the need to deliver the product on-time and on-budget.

Incorporating IV&V services as part of a large vendor-based software development project is becoming increasingly popular in

the public sector. An IV&V service provider monitors the work of both the vendor and the client to help ensure the project achieves its objectives. A strong IV&V team is composed of individuals with strong interpersonal skills, in-depth technical expertise, and planning and project management experience. Some key reasons why you should include an IV&V program in your next software development project include:

*A well-planned IV&V program will bring the developers and sponsors together to proactively identify risks.*

### 1. Risk Analysis & Mitigation Planning:

Risk analysis must begin early in the project lifecycle and be continually reviewed throughout the analysis, design, development, and implementation phases of the project. A well-planned IV&V program will bring the developers and sponsors together to proactively identify risks. Recommendations for risk mitigation can then be developed and communicated through regular status reports written by the IV&V team.

### 2. Early Discovery of Software Defects:

By providing an impartial review and viewpoint, the IV&V team can facilitate the

early discovery of defects in the system design based on specified business and technical requirements. A defect often represents a requirement that is either not addressed by the proposed design, or one that is addressed in a way that does not sufficiently meet the identified system requirements. IV&V programs are designed to proactively recognize these types of defects. Our experience has proven that early identification of defects can significantly reduce total project costs and increase the likelihood of project success.

### 3. Improved Software & System Performance:

The primary goal of an IV&V program is to produce the best product possible given the budget, schedule and software requirements. A well-planned IV&V program will not only uncover flaws, but make recommendations to improve the design, development, and testing of the software and system.

Project sponsors must be assured that the systems will perform as expected when called upon, without glitches that might be triggered under stressful or unplanned conditions. IV&V is a proven project management approach to help identify these types of development challenges, provide a plan for mitigating risks, and to assist the project team in achieving expected results.

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*Protect Your IT Investment, cont'd.*

BDMP consultants provide Independent Verification and Validation projects for a variety of clients. Call (207) 775-2387 for more information. ■

## MAXIMIZE IT FUNDS WITH A STRATEGIC TECHNOLOGY PLAN

By Michael Galeucia



Tight budgets and high expectations of how technology can reduce costs have left public sector leaders facing daunting challenges. With the start of a new fiscal year arriving for many governments, carefully identifying and prioritizing projects is essential to ensure that taxpayer funds are spent most effectively. The best way to begin is by developing a creative strategic information technology (IT) plan that establishes a clear roadmap for IT projects that support your organization's goals and objectives.

IT plans come in many forms, from a simple list of goals and timelines covering the next few months to an action-oriented report on acquiring, installing and funding IT systems for the next three to five years. Regardless of size or complexity, much of the value comes from the process of technology planning.

### PARTICIPATION:

Technology planning can be undertaken for an entire city, county or state, or for a single department. Participation from key individuals and groups is needed to develop consensus for your IT strategy. A few ideas on obtaining participation include:

- 1) Meet with employees to identify the core functions and needs for each department.
- 2) Check with technology users who may have already implemented technology systems that could be easily deployed to, or shared with, others. Focus your meeting on identifying improvements or new technologies that the staff truly needs to work more effectively.
- 3) Get participation and feedback from your constituents: your community's electorate, citizens and businesses.

Collecting this information proactively will ensure that future IT projects address the infrastructure you need to serve your clients. For instance, learning that the planning office just approved four new large, multi-home residential development projects may draw your attention to deficiencies in your utility billing or property tax assessing software. Similarly,

new federal rules regulating how Medicaid costs are reported could force a "future" data warehousing initiative to become a top, short-term priority.

With an understanding of what your internal and external users would like to accomplish, the challenge becomes finding technologies that can facilitate the necessary improvements. Keep in mind that users can identify their needs, but that it will be up to you to find answers to meet those needs. Gathering data on standards and best practices within and outside your industry is a crucial next step in the process. Researching technology options, historical trends, and the expected return on investment of future projects will enable you to make an informed decision on whether a new technology or application fits within your objectives.

### SETTING PRIORITIES:

Having completed the investigation, assemble the list of projects and review it with the department and agency leaders, the

*A strategic information technology plan establishes a clear roadmap to support your organization's goals and objectives.*

managers, and the elected officials to begin developing buy-in. Develop estimates of the costs and duration of each project, and create a timeline that considers other day-to-day operating responsibilities. Determine which initiatives are mission-critical and which ones are of a lower priority. The resulting prioritized list should then be reviewed to identify the necessary resources, the needed skills, and the expected duration of each project. For example, a project that will restructure reports from a data warehouse may not require purchasing equipment, but it may require effort from your programming specialists.

Carefully reviewing needs, identifying well-defined projects, and weighing options to develop a strategic technology plan will help you achieve the greatest return on your limited IT dollars.

*To discuss your IT planning process, call one of our consultants at (207) 775-2387. ■*

## INCREASING THE EFFECTIVENESS OF USER ACCEPTANCE TESTING

By Laurel Harris



Not sure how consumers will REALLY use the website? Unclear whether the instructions are clear enough for end-users to understand? User Acceptance Testing (UAT) can be critical to the success of any product or process. User Acceptance Testing can also be one of the most unpredictable and stressful phases of an IT project for a variety of reasons.

In the public sector, vendor contracts often tie the largest payment to user acceptance of the system. The UAT phase of the project provides system owners and users an opportunity to influence the system before implementation and the beginning of the often lower-staffed warranty period of the vendor contract.

If users have not tested the system requirements and design, previously unidentified or conflicting requirements are likely to crop up, requiring extensive re-working of the application. Frequently, organizations view UAT testing as a formality or a "rubber stamp" and accept prior testing performed by the vendor before an information system is released for production. Many organizations simply do not have the necessary experience to plan and conduct an effective acceptance test. They rely on the system's developers, who lack independence and objectivity, to perform all phases of testing rather than include end-users or independent testers.

The following points will help to avoid the more common pitfalls associated with UAT testing:

- ◆ Require user involvement in the definition of business needs and system requirements.
- ◆ Clearly define expectations for UAT testing as part of an overall project Quality Assurance Plan.
- ◆ Ensure the testing process is conducted by an objective party that works to achieve the organization's business objectives.

Don't let one of the last, but most important steps in the development process get overlooked.

*For more information about User Acceptance Testing, contact one of our consultants at (207) 775-2387. ■*