INFORMATION TECHNOLOGY MANAGERS ACADEMY

Class XI

Presents

Lessons Learned

What Worked...

What Didn't...

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ITMA XI Lessons Learned - What Worked…What Didn't

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Overview

The Information Technology Managers Academy XI (ITMA XI) presents "Lessons Learned, What Worked…What Didn't". The class based this project on the objective, "to improve communication and information sharing within the State IT community". Class members surveyed information technology (IT) projects (completed or near completion) to highlight and share valuable lessons within government agencies.

This document provides IT managers with a resource document that reflects the State of California's business environment. We encourage Managers to draw from these experiences in order to avoid or reduce redundant mistakes and to benefit from progressive outcomes. The Executive Summary outlines the survey process and reveals recurring trends, challenges and successes. The project summaries provide a quick reference guide to the business drivers and technologies of the surveyed projects. The ITMA web site (www.itma.ca.gov) and CDs distributed at the Government Technology Conference (GTC) in May 2004 contain contact information and the detailed project survey responses. We invite interested IT managers and staff to use these resources to seek additional information on projects of interest.

As a final thought, the ITMA XI class documented its own "lessons learned" on completing its class project. The document provides numerous insights for future ITMA class participants and managers. The "ITMA XI Lessons Learned" is the first project listed in the Project Survey Summary section.

Executive Summary

Purpose

The Information Technology Managers Academy XI (ITMA XI) identified a need for increased knowledge regarding information technology projects among agencies and departments in order to create opportunities to optimize successes, leverage resources, and avoid common mistakes. ITMA class members elected to gather information about IT project activities in State agencies and to share that information with members of the State's IT community.

Objectives

The ITMA XI class project sought, "to improve communication and information sharing within the State IT community". The ITMA XI class wanted to collect a valid representation of the State of California Agencies and Departments of various sizes and technological development. We wanted to encourage IT networking by sharing the lessons learned, resources, and promoting stronger communication among the IT community.

Approach

To accomplish our goal, the class determined that we needed to survey agencies regarding their projects and the stories behind their success. The team developed and tested a survey tool with 15 questions that provided interviewees an opportunity to share lessons learned. The team used the resulting tool in conjunction with in-person interviews. We encouraged those interviewed to tell their stories regarding lessons learned, to share the tools utilized, and inquired as to their willingness to be available for future contact by others reading this report. All participants agreed to be available to interested State IT managers and staff regarding their surveyed projects.

Conclusions

State IT projects provide many opportunities to learn and improve our business practices and proper implementation of technology. The seventeen (17) surveys conducted by the ITMA XI project revealed that, in general, State Agencies and Departments focus on the right business drivers, use good standards, communicate well at times, and pay close attention to the use of staff and consultant resources. Project managers examined skill sets and tasks to ensure a good match. Strong project teams developed when appropriate executive sponsorship, the correct mix of business and technical staff, and collaboration existed. Yet the need for improvements was brought to the forefront; the need to manage resources strategically; a need to communicate better and more consistently; and the need to govern our IT architecture with more vigilance.

When ITMA XI examined "What Worked?" in State projects, the group found that many projects described in the surveys are driven by good and appropriate business needs and follow sound project management practices. Though the limited sample size may have skewed the findings, the consistency was evident and encouraging. When we examined "What Didn't Work?" we discovered that some project teams did not function very efficiently or make good use of resources such as consultants. Often, highly technical staff did not possess the soft skills needed to effectively manage people. As the team took a step back and considered the survey results, they developed the concepts highlighted under the section "What Would We Do Differently?" What we discovered was a refinement of known issues. We need to govern our IT infrastructure. We need to standardize and match what we have to do with where we are going. We have to better utilize skill sets. Our ability to assess people and match them to the work must improve. Finally, we must strive to communicate better. It's not enough to have a few meetings and go away and work independently. We must focus our efforts in partnering with customers and demonstrate to them the value of working interdependently. We need to recognize the value of partnership.

Top Ten Ways to a Successful IT Project

1. Allow business requirements to drive IT solutions.
2. Focus and manage an enterprise view of IT architecture and governance.
3. Apply standards, tools and a project management methodology.
4. Even after you think you understand the customer's needs, ask more questions.
5. Communicate, Communicate, Communicate.
6. Realistically assess your talent pool and resources.
7. Use consultants prudently.
8. Deploy Project Teams with clear roles, responsibilities and direction.
9. Build staff skill sets with timely and quality training programs.
10. Check the ITMA website for more lessons learned.

The next portion of the document lists the most common findings in the surveys in relation to "What Worked, What Didn't and What Would You Do Differently".

What Worked?

Business Drivers

Two significant business drivers noted in the projects reviewed were customer service and increased efficiency. Specifically, Customer service, support and technological improvements were the main business driver trends. The fact that business drivers surfaced in the "what worked" section seems logical since it's deemed appropriate to drive IT projects. Attuning to customer needs and cost reduction continue to drive projects in the foreseeable future.

Customer Service and Support:

Several surveys revealed a focus on improvements for the customer, both internal and external. Many opportunities surfaced for business improvements, including the following:

- Expand access to existing systems to optimize a department's use of established and consistent tools.
- Track and gather information as a means to measure performance and make continuous improvements.
- Share data with internal and external customers to increase communication and business responsiveness.
- Establish standardized procedures and processes. It is critical to develop repeatable processes for consistent products and reduced rework.
- Increase the use of Internet services in compliance with the e-Government initiative to expand methods of providing service.

Technology Improvements:

- Consolidation of repositories and databases results in less IT overhead (reduced costs) and provides access to more information in one location.
- Migration to newer technology and industry standards provides easier maintenance, standardization across the network and workstations, improves responsiveness, and better service.

Standards

Established business tools and methodologies facilitated successful project management and support. Successful projects did not waste time reinventing the wheel.

- Standardized methodologies like the Project Management Body of Knowledge (PMBOK) and the Institute of Electrical and Electronics Engineers (IEEE) provide standard procedures for repeatable work and consistent products.
- Metric usage resulted in quality projects.
- A strong communication plan for a continuous sharing of project status proved vital.

Communication
Consistent in all projects was a need to communicate well and keep stakeholders up to date and fully informed. Effective communication practices included:

- Project Management practices with executive support and sponsorship.
- Dynamic healthy project teams that practiced teambuilding.
- User group face-to-face meetings.
- Good knowledge transfer and documentation.
- Effective Organizational Change Management to help customers and IT staff transition and embrace new technology or business environments.

Skills
A project's success depends in part on effective assessment and matching of skills to appropriate project activities and tasks, as well as the availability of the staff resources. Surveys revealed a for projects to:

- Assign skilled people at the right place and the right time.
- Employ managers and staff who possess 'soft skills' such as, culture change management, effective communication, and teamwork.

Consultants
The surveys indicate that consultants are hired for specialized assistance. Resource limitations or lack of required skill precluded use of in-house staff. Use of consultants was effective when:

- Knowledge transfer occurred.
- Consultants worked side by side with team members.
- Staff and consultants worked well as a team.
- Consultants were highly skilled and competent.

Project Team
The surveys also captured the importance of the project team as a resource. The team composition requires a strong project lead, business subject matter experts, technical staff, and consultants when applicable. Successful project teams had:

- Good customer participation and solid sponsorships.
- Buy-in and participation of the entire team from project initiation through implementation.
- Dynamics that allowed for strong collaboration and communication.
- Consistent skill sets that include analytical, communication, team players, subject matter experts (business and technical), ability to learn new skills to support the system, and strong project management to manage scope and support cross-functional teams.
- Celebrations of accomplishments and recognition of achievements.

What Didn't?

Consultants

Many organizations stated the need for a balance between technical expertise and ability to get along with staff. A few survey contacts specifically stated a wariness of strong personality and a need to conduct sufficient background and reference checks. In one case a project was at risk because of the "strong" personality of a consultant. Our contact advised that "nobody is that valuable" and that an organization should not "hope things get better," but be proactive in addressing concerns early. Once the value a consultant brings is diminished, it is time to take action. From the surveys:

- There were a few instances where an increased risk developed due to a consultant "fit" with the project team.
- Some project leads failed to take an assertive stance in managing consultants at the first sign of a problem.

Project Teams

The team discovered that project teams often present cause for concern due to inconsistent practices. It is important to do more than just assemble a group of people and say, "go". The following reflects project team concerns:

- Problems with training - lack of training prior to the project to understand the new technology as well as staff not adequately trained in order to maintain the system.
- Staff unavailable due to other project priorities.
- Canceling customer focus group meetings.
- Lack of technical expertise.

Communication

Effective communication was hindered by:

- Lack of sharing communication across projects.
- Inadequate time allocated in project plan.

What Would We Do Differently?

Better Architecture Governance

Focus on and manage an enterprise view of information technology architecture. Project selection (portfolio management) decisions should:

- Assess that a project's proposed infrastructure fits with the current architecture.
- Assess how the proposed infrastructure might be changed to facilitate more effective and efficient interaction between the various layers of the architecture.
- Demonstrate a link between the project, the strategic vision of tomorrow's environment, and the tactical objectives that lead to a cohesive, manageable, and cost effective enterprise architecture.

Communication

Follow through with stakeholder interaction. It is critical to keep stakeholders informed. To eliminate barriers that hinder communication, interviewers advised the following:

- Ensure Executive support and sponsorship early, often and throughout the project
- Ensure project team dynamics are healthy – do not tolerate "Lone Rangers" or strong personalities that distract from project focus.
- Conduct face-to-face meetings and maintain professionalism.
- Acknowledge that organizational Change Management is an ongoing process.
- Use Project Management to assist in communicating risk.

Skills

Match skill sets to appropriate activities and tasks in a project.

- Build internal capacity through quality and timely employee training.
- Screen carefully and hire for "good fit" as well as competence.
- Focus on manager and employee 'soft skills', such as culture change management, effective communication, and teamwork.

Project Survey Summaries

The following paragraphs provide an overview of all projects included with the ITMA XI lessons learned repository. At the outset of the effort, all members of the Lessons Learned Survey Team canvassed ITMA XI class participants and previous ITMA graduates for candidate projects to include in the lessons learned repository. The Survey Team applied the following criteria.

- The Department representatives were able to share the outcome of the project; success or failure was not a consideration. We were looking for a variety of projects.
- The Department could supply at least one contact person for the project, who would be available should our target audience wish to pursue additional information.
- The Department representatives would be available to participate in the survey process in the timeframe needed.
- The Department would be able to approve the draft summaries upon completion by the Survey Team representatives and make them available for publication by the ITMA XI project deadlines.

Once these criteria were satisfied, the project and its lessons learned were added to the repository and prepared for incorporation in the final deliverable. During the survey process, the team encountered obstacles in gaining participation from State Departments for this effort; obstacles included conflicting priorities of workload within the Departments, a reluctance to divulge information, and difficulty in gaining approval of the draft surveys, and timeliness issues. In spite of those obstacles, ITMA XI successfully presents lessons learned from a cross-section of State Departments, ranging from consolidated data centers to small IT shops. These lessons learned reflect multiple IT disciplines.

ITMA XI Class Project Lessons Learned

This represents the summation of class managers and members' input regarding activities that worked well or areas of improvement during the completion of the ITMA XI class project. It is intended to provide future ITMA classes and managers a basis from which to leverage this year's class experience.

DMV - Internet On-Line Self Service Appointment System

The project enabled DMV customers to schedule their own vehicle registration (VR) and driver license (DL) appointments in any DMV field office defined in the appointment database. This helped reduce field office visit wait times and improve customer satisfaction.

The project won the Outstanding Systems Award at the 2001 Executive Leadership Conference.

Teale - Service Delivery Plan

Teale Data Center recognizes the importance of an effective IT Service Management infrastructure that provides an enterprise-wide system for integrating Helpdesk, Change Management and Asset Management systems. The Service Delivery Plan (SDP Remedy) integration will provide staff with immediate access to current and comprehensive information on its assets, to document events that disrupt service delivery, to troubleshoot the correct components by understanding the dependencies between them and to document changes to them. The SDP integration will allow Teale Data Center the ability to better manage and secure its complex and growing computing environment.

EDD - IT Project Management Methodology

The EDD's existing Information Technology Branch (ITB) Project Management Framework was originally developed and published in 1997. Since then the Project Management Institute's "Guide to the Project Management Body of Knowledge" (PMBOK Guide®) has become the preeminent industry standard for project management. In addition Department of Finance has issued the IT Project Management Oversight Framework. To bring ITB project management processes in line with industry best practices and standards and DOF requirements, the EDD is developing the "ITB Project Management Methodology" to replace its current ITB Project Management Framework.

Lottery - Information Technology XP Infrastructure Rollout

The IT XP Infrastructure Rollout migrated the Lottery's network-operating environment to Windows XP and email services to Exchange 2000. It established a separate high speed Administrative LAN/WAN. A 2-year project, it developed infrastructure standards. The project planned, designed and implemented a Microsoft Active Directory Infrastructure with Exchange 2000 Messaging Services, leveraging Windows 2000 on the servers and

Windows 2000 on the desktop. It eliminated other software no longer needed at HQ and District Offices.

PIA - Email Deployment

The Prison Industry Authority (PIA) has 22 enterprises throughout the state, with the central office located in Folsom. PIA technology was limited to Manufacturing and Accounting systems. All communication between headquarters and field offices was via telephone, fax or U.S. Mail. The business objective was to provide email access to all field prison administrators and prison industry managers. Deploying mail to field administrators would improve communication and reduce costs.

EDD - Tax Engineering and Modernization

The TEAM project re-engineered and streamlined tax return and payment processes. It reduced the flow of paper through the Tax Processing and Accounting "pipeline", improved efficiency and timeliness in processing tax documents, increased electronic filing options, reduced costs, and improved responsiveness to the Employer community within the context of Tax Branch's strategic re-engineering efforts.

EDD - Resource Management Framework

The project created a resource management process framework for the information technology organization. The results produced a high-level process model of resource management activities that could be detailed in a subsequent project and automated using an existing Customer-Off-The-Shelf (COTS) tool set.

DMV - Customer Queuing System

One of DMV's prime concerns is the efficiency of customer service in the field offices. This project is in response to the department's goal of improving and managing field office wait times. The system compiles customer service information into a relational database. Information is used by management for field office window staffing, numbers of customers in a wait queue by type of service, longest wait time by type of service, and staff resources currently available.

The project team received the DMV Silver Star award for outstanding achievement, a well-deserved recognition.

EDD - eApply4UI

The eApply4UI system allows claimants to complete and submit Unemployment Insurance claim forms over the Internet. Claimants have the opportunity to complete their UI applications at home, at One-Stop Career Centers, or at any other location, which provides Internet access.

Managed Health Care - HMO Help Center

The HMO Help Center Project was implemented to effectively support the HMO Help Center in performing customer service functions and to gather necessary information to identify and correct systemic problems in the health care system.

The system provides information to all DMHC program areas related to the types of assistance requested by the public and the resolution of these requests. In addition, the system collects data that meets legislative and administrative requirements. Consumers benefit from this application by more thorough and timely processing of inquiries and complaints.

Teale - Operational Recovery

Teale established an Operational Recovery Service for an offsite location that would enable continuous processing for customers in the event of a disaster.

EDD - Unemployment Insurance Personal Computer Rollout

The UI PC Rollout deployed a new network infrastructure (cabling, switches, data circuits, LAN/WAN, servers and network appliances). This included replacement of 3,000 workstations (90% mainframe terminals and 10% older personal computers) with new PCs, replacement of mainframe printers with PC printers, training of staff on the use of the systems, and retirement of the old equipment. Additionally, maintenance of the records related to the procurement and asset inventory of the new systems.

CalPERS - Records Retention Workflow

CalPERS successfully implemented an enterprise wide digital records management system that eliminated paper-based member files, lowered business operational and transactional costs, reduced transaction and inquiry processing time, and increased customer service.

In October 2003, CalPERS received the "Industry Innovation Award for Best Mission – Critical Application Solution". This award is given to the company who has developed and deployed a business driven solution that allows the company to improve their daily operations through the effective utilization of business process management, automated workflow/imaging technology, and smart integration of information systems.

CalPERS won the award for its efforts related to the deployment of the Document Imaging, Retirement Process and Service Credit Process workflow application, as well as the Customer Relationship Environment business process and application. CalPERS is the first government agency to win this prestigious award.

CDI - Fraud Integrated Database

The CDI developed an integrated database with a user-friendly interface to support the investigative and administrative needs of its Fraud Division. The new system is a long-term, enterprise-wide solution that utilizes CDI's existing hardware and software infrastructure for optimum use of information technology according to CDI and statewide standards.

The development of a fraud integrated database and case management system provides the Fraud Division the ability to process Suspected Fraudulent Claims (SFCs), conduct investigations more efficiently, and resolve the problems associated with their existing systems.

HHSDC - Statewide Fingerprint Imaging System

The California Health and Human Services Agency Data Center (HHSDC) in conjunction with the California Department of Social Services (CDSS) developed the Statewide Fingerprint Imaging System (SFIS). The system applies state-of-the-art fingerprint imaging technology to eliminate duplicate aid in the State's public assistance programs.

The Los Angeles Automated Finger Image Report and Match (AFIRM) system is the first finger imaging system to be used for a welfare application in California. Based upon the success of AFIRM, the California Legislature enacted the SFIS. The SFIS system currently runs on 350-375 workstations at 275 sites statewide. Over 3000 county workers have captured fingerprints.

Corrections - Parole Law Enforcement Automation Data System

The Department of Corrections (CDC) developed the Parole LEADS system that enables local law enforcement agencies to directly access current parole information over the Internet. The system aids law enforcement by providing them a crime analysis and investigation tool.

FTB- Child Support Replacement

The Consolidated Debt Collection system (CDC) was developed in 1992 using Microsoft FoxPro for its database management and end-user tool. The Child Support Replacement Project moved the child support application to a MS SQL 2000 platform and re-wrote the batch processes using a more flexible programming language. This was an 18-month project with a combined state and contractor team. Since its inception in 1993, the Child Support Collection program has collected over $700 million dollars, with over $41 million from July 2003 through January 2004.

Acronym Dictionary

BOE	Board of Equalization
CalPERS	California Personnel Retirement System
CDC	California Department of Corrections
CDI	California Department of Insurance
CYA	California Youth Authority
DGS	Department of General Services
DMHC	Department of Managed Health Care
DMV	Department of Motor Vehicles
DOF	Department of Finance
DOJ	Department of Justice
DSS	Department of Social Services
EDD	Employment Development Department
FTB	Franchise Tax Board
HHSDC	Health and Human Services Data Center
HMO	Health Management Organization
IT	Information Technology
ITMA	Information Technology Managers Academy
Lottery	California Lottery Commission
PIA	Prison Industry Authority
SCO	State Controller's Office
TDC	Stephen P. Teale Data Center
UI	Unemployment Insurance

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Project Surveys/Details

This list represents the projects and tools contained in the detailed project survey section published on the website www.ITMA.ca.gov and CDs only

1. ITMA XI Class Project Lessons Learned
2. DMV - Internet On-Line Self Service Appointment System
   - Lessons Learned
3. TDC - Service Delivery Plan
4. EDD - IT Project Management Methodology
   - Project Charter
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5. Lottery - IT XP Infrastructure Rollout
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17. CDC - Parole Law Enforcement Automation Data Systems (LEADS)
18. FTB – Child Support Replacement