

# Office of Major Projects



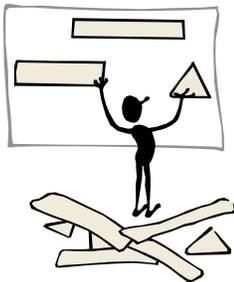
**Vision:** Provide consistent quality leadership in project management using industry best practices. Enhance the acceptance of cultural and technological change to maximize the benefits of major projects.

## Enterprise Project Management (EPM)

Lynn Hersey-Miller, CPO

### Highlights . . . .

- EPM
- Project Management
- Quality Management
- eGovernment Program
- Enterprise Architecture
- Change Management
- ERP Service Delivery
- Application Delivery
- Systems Engineering
- Recognition
- Projects

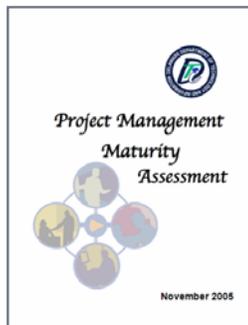


Please excuse the length of this news-  
letter article but its length is directly  
related to its importance! By now you  
have all received the FACT Sheet for  
the EPM project and you've been  
invited to attend some information  
sessions and/or training on this Micro-  
soft product. But the bigger questions  
may still be: Why are we implementing  
this product? What long term goals are  
we trying to accomplish?

### Why are we implementing Enterprise Project Management?

Implementing an Enterprise Project  
Management toolset needs to be  
considered in light of an organization's  
project management maturity and the  
methodologies, processes, and gov-  
ernance structures that are in place.

As you know, one of DTI's strategic  
goals is "Enhanced Project Manage-  
ment". In support of that goal, we pre-  
viously completed  
an initiative to  
determine DTI's  
level of project  
management  
maturity (July-  
November 2005).  
As part of that  
initiative, a tactical  
plan was devel-  
oped in order to raise our overall level  
of maturity and one of the projects  
identified was the implementation of  
Microsoft Project Server.



The implementation of this product will  
help DTI address many project areas,  
some of which are listed below:

- **Spot problems early** when they are easier to fix.
- **React quickly to shifting priorities.**
- Establish checkpoints to **measure progress.**
- Alert management of **over-allocation of resources.**
- **Control project scope** so it doesn't drift or expand.
- Foster **common project management language** across DTI.
- Focus on **measured outcomes.**
- Provide **accountability for results – not just activity.**
- Provide tools and techniques for **viewing and reporting project status information** in both summary and detail format for:
  - Executive Sponsors
  - Project Managers
  - Team Members

The implementation includes a com-  
bination of detailed requirements  
gathering, hardware and software  
installation, configuration, operating  
procedure creation, training in the use  
of the tool and deployment. What are  
the critical success factors for having a  
successful deployment of Enterprise  
Project Management?

*(Continue on page 2)*

### Mission Statement:

"In synergy with DTI's mission, provide Diligent, Measurable and Practicable technology solutions for the State of Delaware. Under guidelines of the CIO, the Office of Major Projects builds economical and efficient technology solutions that enable the State of Delaware to serve, protect, and communicate effectively with its citizens."

Enterprise Project Management (Continued from page 1)

1. **Cultural change management** – Implementing an Enterprise Project Management System is a significant effort which requires determination and stamina to maintain momentum. Inclusion of the general project management community and buy-in to the goals of the initiative are important. Inclusion of Organizational Change Management activities and an effective communication plan will make the cultural change that much smoother.



2. **Executive sponsorship** – Continued executive sponsorship is a critical requirement, particularly in the context of maintaining the momentum as mentioned above. Visible interest in the outcomes and deliverables of EPM such as support for decisions, statistics, and use of system views of data is a key method of demonstrating ongoing sponsorship.



Secretary Jarrett and the senior team continue to support the EPM project.

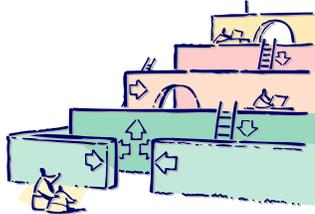
3. **Project manager expertise** – Project manager expertise is very important for the success of this initiative. Intelligent use of the tools and processes applied to real world projects are at the core of Enterprise Project Management. Expertise will be developed and enhanced through training and that training is currently under development at DTI.



4. **Methodology and processes** – Our current project management processes are a very good starting point for configuring the system.

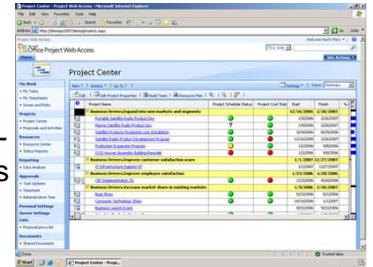


5. **Technology infrastructure** – The technology infrastructure is a key component of this project. Early tasks include setting up the infrastructure and integrating the technology with existing infrastructure components to adhere to our security standards.

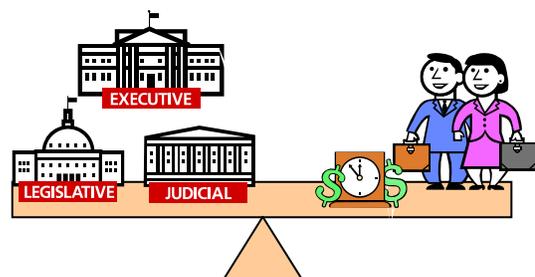


What long term goals are we trying to accomplish with the implementation of Enterprise Project Management?

Enterprise Project Management is a necessary step towards the long-term goal of *Project Portfolio Management (PPM)*. PPM promotes better technology and business alignment. In the information technology industry, a significant benefit of PPM is that it gives senior management a high-level view of a myriad of projects. This in turn allows them to monitor IT investments and eliminates redundancies. Additionally, resource management across the portfolio of projects becomes much more effective. It can highlight early indicators for competing projects and allow for enhanced risk management.



PPM will be more challenging than EPM in state government due to the funding process for IT projects, politics, individual philosophies on project management, etc. However, we welcome the challenge to improve the dialogue between IT and business executives that could eventually create a better balance between government demands and the availability of resources!



# Project Management

Submitted by Pn Narayanan

## PROJECT QUALITY MANAGEMENT

Like any computer user, I ignore warnings. Only *error messages* attract my attention. Hence, when I read this warning –

*“Warning, dates in the calendar are closer than you think”;*

– as usual, I brush it aside with a chuckle.



Now the dates are flying by with a *SWOOSHING* sound to take us to our second annual Quality Month celebration. There are other articles on this topic in this newsletter to cover Quality Month in detail.

Meanwhile, I thought I would share something I learned over a long time and that you all know about software quality predicaments.

In general, the IT industry follows one of the following four approaches:

- The Fix It Quality Approach
- The Inspect In Approach
- The Built In Approach
- The Design In Approach

### Fix It Quality Approach:



Everyone of us is very familiar with this one. Here we save time by not focusing on requirements and planning, but hope to ‘fix it’ whenever we come across a ‘bug’. Then we blame it on the poor user by

forgetting the old saying; “A user will tell you anything you ask about, but nothing more.”

### Inspect In Approach:

This is better than the ‘Fix It’ approach because we hope to catch the problem by inspecting it more vigorously than waiting until the end.



The Quality Assurance (QA) Team uses tools, charts, and test scripts to control the number of bugs that end up in production. Unit testing, system testing, integration testing, and user

acceptance testing are a few of the processes we follow to ensure the success of Inspect In Approach.

### Built In Approach:

Now we shift gears and move closer to the core of the issues – ‘the developers’. In this approach, the coders build the code in a structured and standard way to ensure a quality product. Creating helpful remarks makes easier debugging and correction for everyone who touches the product. It also makes everyone responsible who touches the code for spotting and correcting the defects.



### Design In Approach:

Here we strive for Nirvana by addressing the origin of defects. Usually the defect is conceived very early in the process of project management, sometimes even at the idea/conceptual stage.



This approach uses intense end-user and project team interaction to achieve a more thorough understanding and buy-in of the specification and requirements. Emphasis is more on processes than on people to ensure a better quality product from the very beginning. TQM, ISO 9000, Six Sigma are all ways to follow the Design In Approach.

It also reinforces the thought, “The sooner you begin coding, the later you finish.”

Samuel Johnson once said, “Change is not made without inconvenience, even from worse to better.” True then, true now...



***Better quality comes with inconvenience as well as with irrefutable rewards.***

# Quality Management

## QUALITY AWARENESS MONTH

Expanded this year to include the entire CPO Team, Quality Awareness Month will be celebrated in October to recognize quality achievements and promote quality awareness through various scheduled events. The planning committee was formed in late July with the following committee members:

Quality Management:	Kathy Donovan
Project Management:	Richelle Edwards
Change Management:	Joe Shockley
Enterprise Architecture:	Lillian Schaube
DTI ERP:	Rao Isukapalli
Application Delivery:	Karen Esposito
Systems Engineering:	Steve Bailey

### Quality Awareness Month Mission:

***“Promoting quality awareness through the recognition of CPO achievements”***

The Quality Awareness Month Logo Contest is completed. Congratulations to our 2007 winner, Clayton Wilson, ERP Team! Underway are the Quality of Life Fitness Challenge and Slogan Contest. Planning is in progress for other events, which include a Kick-Off Celebration, presentations, activities, and Closing Celebration.



Quality Awareness Month Events		
AUGUST		
8/9	Announcement	Quality Awareness Month Announcement
8/10	Quality Logo Contest	Contest begins
8/31	Quality Logo Contest Closes	All entries due
9/7	Quality Logo Contest Winner Announced	Congratulations to Clayton Wilson!
SEPTEMBER		
9/4	Quality of Life Fitness Challenge	Individual & team challenge begins
9/17	Quality Slogan Contest	Contest begins
9/28	Quality Slogan Contest Closes	All entries due
OCTOBER		
10/4	Quality Awareness Month Kickoff	Celebration and Showcase
10/4	Quality Slogan Contest Winner	Official Announcement of Winner
10/10	Quality Presentation	Kathy Donovan, Don Christmas
10/17	Quality Presentation	Baljinder 'Boskey' Kamboj
10/23	Quality Activity and Showcase	At CPO All-Team Meeting
10/29	Quality of Life Fitness Challenge Concludes	Individual & team challenge concludes
10/31	Quality Awareness Month "Closing"	Secretary Jarrett Closing Remarks Recognition of achievements Closing celebration

## eGovernment Program

### VIOLENCE AGAINST WOMEN ACT (VAWA)

The VAWA application was moved into production on August 31, 2007 after more than two and a half years of planning and many hurdles. The application contains data ranging from that which can be viewed by the advocates of victims of abuse, to searching respondent's compliance to Protection From Abuse (PFA), through data entered from treatment providers throughout all three counties.



Through simple end-user usability, the application provides complex communication between the DELJIS mainframe through a web service to the application that resides at DTI (in line with EA's SOA standards). This application also incorporates the enterprise-wide Identity Access Management (IAM) application for authentication of the users. Training was provided by DELJIS to all the advocates and treatment providers with great success.

Facing a finite deadline against the potential loss of federal funding, the project team worked very diligently for the past three months to make it a reality.

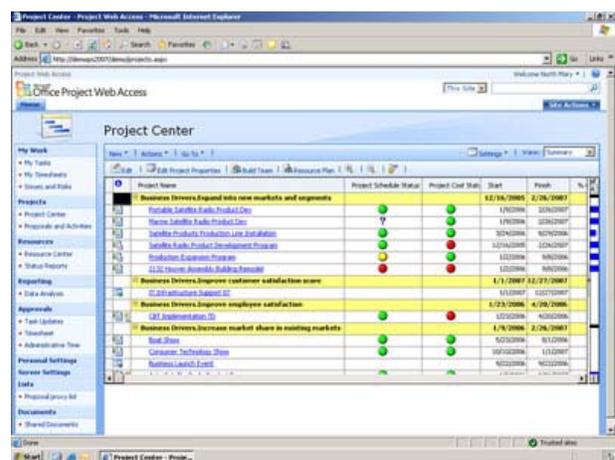
The collaboration between DELJIS, CJC, DTI, the Advocacy Centers, and the Treatment providers throughout all three counties proves that with teamwork, anything can be accomplished. This application has already been identified for future growth and further collaboration of other public and private entities.

### ENTERPRISE PROJECT MANAGEMENT (EPM)

EPM 2003 has been used by the Program Management Office (PMO) for the past year. After a successful Proof of Concept, EPM 2007 will now be implemented for use by all the teams.

EPM 2007 will offer the following benefits:

- Single repository for all project documentation.
- Time entry for all project resources to better utilize project resource time.
- Time entry for all employees (including contractors and casual/seasonal) that work on SLAs and projects. This will allow PHRST to return the Time and Labor application to vanilla.
- Exception time reporting (vacation, sick, etc.) will be handled by the administrative specialist for each team.
- Workload allocation and reporting for resource managers and senior management.
- Project IDs and SLAs will automatically be populated on each employee's timesheet for time entry (no more searching for that project ID or SLA).
- Will provide a billing interface and eliminate the Lotus Notes contractor application.



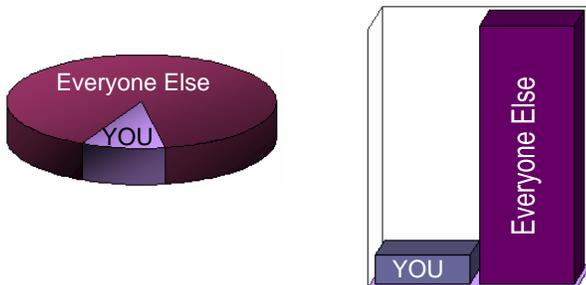
The project team is currently working on the training schedule and the infrastructure. Once they are completed, you will receive additional information about the training and roll-out.

# Enterprise Architecture Program



## ENTERPRISE ARCHITECTURE AND MODELING

When trying to understand a situation or concept, often it is very helpful to have a visual aid or a graphic representation. Imagine being told your operational budget will be reduced to some small percent of the organization's total. *Reading* this sentence is not nearly as impressive as seeing the fact represented by a pie chart or bar graph.



The notion that a graphic representation helps us understand our organization better is the basis for creating an Enterprise Architectural Model. Within this model, specific modeling objects and the relationships between them are used to represent IT entities such as operating systems, servers, and applications; as well as business concepts such as lines of business, budgets, goals, and trends. An ideal enterprise architecture represents both the IT

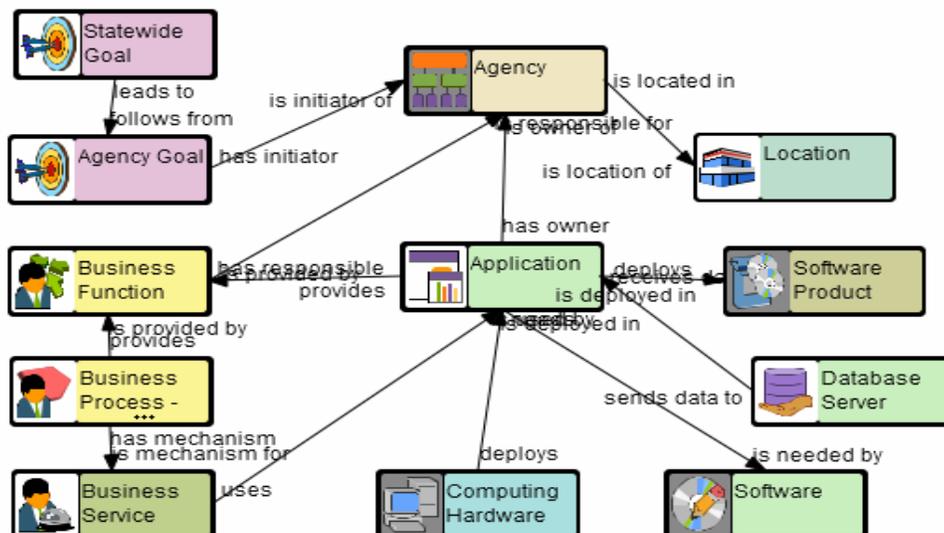
and business aspects of the organization and demonstrates all the existing relationships. Every agency in the state has a vision, a mission and a set of goals and strategies.

Agencies participate in certain lines of business and perform certain business functions. The applications owned and used by an agency carry out its business activities and lead to the fulfillment of its mission, vision, and goals, which ultimately supports Delaware's *statewide* mission and vision statement.

With modeling, we can show the interdependence of software and hardware and how the IT structure supports the business goals of the organization. Critical questions regarding redundancy, efficient use of resources and the effect of current trends on the enterprise can be answered using the model. Understanding the organization today and planning where it should be three or five years from now are facilitated by examining the enterprise model. A world of information can be made available on many levels, from discovering the far-reaching effects of changing an existing system to seeing how statewide goals are achieved through the existing architecture.

If you have any questions, comments, or concerns about DEAL, please email [DTI\\_DEAL\\_CMT@state.de.us](mailto:DTI_DEAL_CMT@state.de.us).

### An example of objects and relationships:



# Organizational Change Management

## WHAT IS CHANGE COMPETENCY?



Change competency is an attitude and approach. Employees in a change-competent organization value their ability to accommodate change as one of the skills in their skills “tool belt”. They understand that the only constant is change. They expect change, and continue to perform at a high level during change.

## HOW IS IT DIFFERENT THAN CHANGE MANAGEMENT?

Change competency is similar to change management, but there are several key distinctions.

At DTI, we are familiar with the processes, tools, and activities of organizational change management, which are used to manage the people-side of change. Change competency is not a specific activity; it is an organization’s ability to react to and manage change over and over again. Change competency is the organization-wide capability to apply organizational change management practices successfully and routinely.

Organizational change management can be taught and learned, but change competency requires a fundamental shift in culture and values. The philosophy of change must become part of day-to-day operations and cannot be picked up during training or by reading instructional material. Instead, change competency must penetrate every facet and level of the organization.

Change-competent organizations have the following attributes:

- Executives define the vision, searching for ways to improve profitability and growth by recognizing marketplace changes and opportunities.
- Executives work to ensure that business changes are implemented and realized to their full potential through effective leadership and change sponsorship.

- Managers recognize their ability to coach employees. They provide direction and steering for professional development and encourage sponsorship.
- Staff performs successfully in the current environment, during the transition, and in the future state. They possess the tools and processes to effectively manage any change.

To help build change competency at DTI, the Organizational Change Management (OCM) Team is attempting to equip everyone with the understanding, perspectives, tools, and techniques to make change easier. Our efforts have led us to branch out beyond simply helping on projects.

## Delaware Information Security Policy (DISP):



Earlier this summer, a FACT sheet was distributed for the enterprise-wide Delaware Information Security Policy (DISP). The release of this FACT sheet was a result of a partnership between the OCM Team and the Chief Security Officer’s (CSO) Team. This is the first time the OCM Team has worked to aid the distribution of a policy, and this effort is intended to help DTI enhance customer service. In the past, policies have been quietly announced and posted to a website. Customers have questioned exactly when and how a policy was released and have not been pleased that they were supposed to comply with policies of which they were not aware. Starting in March, the CSO’s Team and the OCM Team started meeting to discuss how best to communicate this policy. There is a comprehensive plan in place to thoroughly communicate the policy, to educate our customers about the policy, and to engage our customers in tasks designed to aid them on their “journey to compliance” with the policy. For more information about DISP:

State Organizations –

<http://extranet.dti.state.de.us/pdf/StateOfDelawareEnterpriseInformationSecurityPolicy.pdf>

K12 –

<http://k12extranet.dti.delaware.gov/pdf/StateOfDelawareEnterpriseInformationSecurityPolicy.pdf>

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*Change Competency (Continued from page 7)*

## Delaware Enterprise Architecture Lifecycle (DEAL):

The Organizational Change Management (OCM) Team is also involved in the Delaware Enterprise Architecture Lifecycle (DEAL) initiative to help them communicate their activities. Not a project, per se, DEAL provides an enterprise view of IT, promotes collaboration between business and IT, and minimizes duplication of IT related costs/efforts. DEAL is currently involved in analyzing the multiple systems, servers, and projects found throughout the state, as well as looking at opportunities for economies of scale. They are also partnering frequently with the CSO's Office doing "road-shows". They focus on security, enterprise-wide standards and policies, technology directions, and the information sharing architecture. For more information about DEAL:

[http://extranet.dti.state.de.us/information/dtie\\_information\\_deal.shtml](http://extranet.dti.state.de.us/information/dtie_information_deal.shtml)

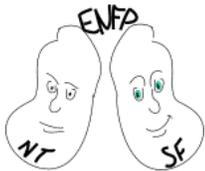
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[http://k12extranet.dti.delaware.gov/information/dtie\\_information\\_deal.shtml](http://k12extranet.dti.delaware.gov/information/dtie_information_deal.shtml)



## Myers-Briggs Type Indicator (MBTI):



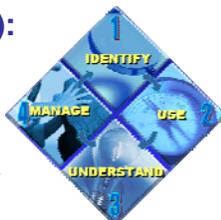
As you know, some members of the Organizational Change Management Team are MBTI qualified. This means we can administer the Myers-Briggs Type Indicator to our employees.

Many teams have already gone through this. As we hire new employees, we are offering to provide the MBTI to them and are scheduling a MBTI session for the new employees to explore the fascinating world of type in greater detail. If you or anyone on your team would like to pursue the MBTI, please contact Pam Waters. For more MBTI information:

[http://dti.delaware.gov/majorproi/pdf/newsletter/news\\_jun05.pdf](http://dti.delaware.gov/majorproi/pdf/newsletter/news_jun05.pdf)

## Mayer Salovey-Caruso Emotional Intelligence Test (MSCEIT™):

Members of the Organizational Change Management staff are qualified to administer the MSCEIT™ and provide feedback sessions. Emotional Intelligence (EI) is "the ability to monitor ones own and other's feelings and emotions, to



discriminate among them, and to use this information to guide one's thinking and action." (Mayer & Salovey, 1997). The MSCEIT™ test, report, feedback tools, and processes are used in coaching, training facilitation, and leadership/team-building. If you are interested in learning more, contact Nancy Erwin or Stacey Sowers.

## MOVING TOWARDS A MORE CHANGE COMPETENT ENVIRONMENT

As you can see, the OCM Team is involved in much more than just projects. Weaving organizational change management throughout the fabric of the department is key to moving towards a more change competent environment. The ability to readily adapt to change will help all our employees to be more productive and less stressful in their day-to-day job functions while at the same time, help move our department up the maturity ladder.



## New staff joins the CPO Teams in the 3<sup>rd</sup> quarter 2007.

### Application Delivery Team:

- Madhu Reddy
- Charlie Hong

### Enterprise Architecture Team

- Pat Murphy

### Organizational Change Management Team

- Lynette Maxwell

### Project Management/ERP Teams

- Russ Holloway
- Carrie Landsnes
- Robinson Williams

### Systems Engineering Team

- June Lawton
- Tom Steele
- Deb Bialecki

# Enterprise Resource Planning (ERP) Service Delivery

## SIGNIFICANT MILESTONES:

### Standard Operating Practices (SOP):

Since the Standard Operating Practices Committee (SOPC) was formed in April 2007, the members have completed several templates and dictionaries for use by the DTI ERP Team. The QA Design Procedure and the QA Technical Standards Checklist are completed and the QA Checkpoints in the STAT Implementation Workflow Procedure have been refined. These procedures are currently being used for QA reviews for the ERP project.

### PHRST (HCM 8.9) Upgrade:

Currently underway is the first Test Move to Production. In this process, the most recent upgrade changes are combined with the most recent PHRST data.

## OTHER MILESTONES:

As always, ERP Service Delivery, working closely with many other DTI Teams, reached several milestones for PHRST, First State Financials (FSF), and Delaware Transit Corporation (DTC) production.

- Upgrade of PeopleTools version 8.48 to DTC FMS development and production.

Other DTI teams – DC&O, Systems Engineering, and Telecom – made significant contributions to these efforts and others. They continually assist in creating, improving performance, and maintaining the environment. DC&O continues to provide excellent support to the PHRST Batch Schedule and monitoring the schedule. The Change Control Management Team helps the ERP Team stay abreast of changes that may impact the PHRST application.



## PHRST PRODUCTION HIGHLIGHTS:

### PHRST Fiscal Year Closeout and Startup:

This multi-faceted endeavor was completed successfully and cleanly, including legislative approved salary increases for state employees and school employees. The annual quadrupling and un-quadrupling of the Benefit Deductions for 22-pay employees completed successfully in production.

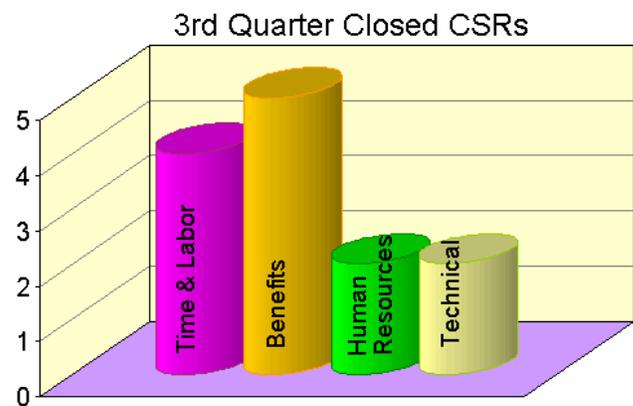
## Participation in Audits:

Our Security Administrator, Cheryl Wright, with the help of the PeopleSoft Admins and other ERP Team members, responded to two separate audits. One was performed for the PHRST system and the other for DTI Security. The procedures in place for PHRST security and the use of the STAT version control tool enabled the team to be able to provide good information for these audits.



## Production Support:

In addition to completing the many annual tasks that occurred during the last quarter, the ERP Team continues to work on requests to support PHRST production. PeopleSoft Bundles and Fixes have been applied to the development database.



## Next Quarter:

The ERP Team will be applying additional Tax Updates; providing support to PHRST for their Disaster Recovery Drill; and supporting preparations for calendar year-end and start-up processing.

## ERP PROJECT HIGHLIGHTS:

### Mercury Test Director:

The ERP Project is currently planning to use this application as a repository and reporting tool for test scripts.

### PHRST Upgrade:

The PHRST Upgrade is on target and going well. The Upgrade Team recently completed the upgrade of 400+ batch objects. Currently under-

*(Continue on page 10)*

**ERP Service Delivery** (Continued from page 9)

way is the first “Test Move to Production”. In this process, the most recent upgrade changes are combined with the most recent PHRST data. In addition, any recently posted Oracle/PeopleSoft Tax Updates and Bundles are applied to the upgraded database. Included with this Test Move to Production is a de-customization effort. The Upgrade Team is removing customizations or replacing them with delivered functionality. When this process is completed, the Functional Team will test the latest upgrade changes, the de-customizations, and the 400+ batch objects with the most current PHRST data.

Following the first Test Move to Production for the Upgrade will be the Chart of Account integration between EPR Financials (FMS) and PHRST (HCM) and the retrofit of Time and Labor.

**FSF and Integration Team:**

The Integration Team has been busy configuring services as requested by the HCM and FSF areas. To date, 61 integration points have been configured. In addition, the Integration Team is working hard to figure out the idiosyncrasies of Integration Broker and PeopleSoft’s thinking on how it should be used.

The team has reviewed the conversions/interfaces that were identified in the Statement Of Work (SOW) and also gathered information on the conversions and interfaces that were identified during Fit/Gap sessions. The Document Requests/Work Requests were opened and some requirements were gathered.

A few modifications were identified in the SOW for modifications/customizations/reports.

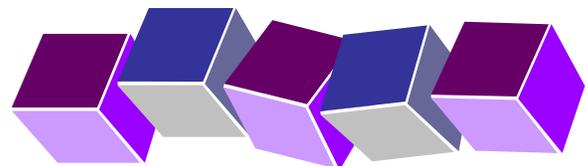
- The largest modification identified is the department level security. The functional, high-level requirements are gathered.
- The IV bolt-on customization has started. Requirements have been gathered and research has begun.
- A reports matrix was compiled to determine whether there is a need to develop new reports or use PeopleSoft delivered reports.

**DTC Highlights:**

PeopleTools 8.48 Upgrade was successfully implemented.

**QUALITY ASSURANCE:****Standard Operating Practices Committee (SOPC):**

Debbie Odle completed a STAT Access Request form on SharePoint which will be deployed shortly. Further, a Security Policy, Document Standards, QA Development Standards, QA Development Procedure, Technical Design Approval Procedure, additional templates, and an automated workflow through SharePoint for submitting and tracking standard operating practices is under development.

**We appreciate the ongoing teamwork!****Newsletter Contributors:**

Kathy Dahl  
 Kathy Donovan  
 Nancy Erwin  
 Lynn Hersey-Miller  
 LiWen Lin  
 Mike Malik  
 Pn Narayanan  
 Lillian Schaub  
 Kamlesh Sheth  
 Pam Waters

# Application Delivery

## IT'S NOT YOUR FATHER'S CYBER SECURITY WORLD ANYMORE...

Cross-site scripting, injection flaws, malicious file execution, insecure direct object reference, unrestricted URL access...remember when these issues were ones that Telecom would worry about for us? We didn't even have to know what they meant. We aren't talking ancient history here – up until re-



cently, we were all pretty comfortable letting our Telecom colleagues protect us from all those cyber bad guys and the application developers could worry about business, user interface, and performance issues. Well, times and technologies have changed, and it's not your father's cyber security world anymore, my friends. Today's cyber bandits are more creative, more savvy, and harder than ever to keep up with; and we can no longer afford to put all our protection eggs in one basket. No longer can firewalls and DMZs be expected to fully protect information assets.



For these reasons, Application Delivery and Telecom are working together on a number of initiatives involving the security of our systems – you've heard of the XML Firewalls and Identity Access Management – those are the two big ones. We are now



teaming up to learn about what developers can do to ensure the security of their own applications and to prevent their application from opening doors to the network and its systems.

Telecom and Application Delivery will be brainstorming with some experts and hearing about how others have dealt with these issues. And, with the CSO Team, we are evaluating vendors who are offering training in application security principles and concepts and hope to be scheduling several classes for mid-to-late October. Although these classes are applications oriented, Telecom will be attending as well, so that we all have a common understanding of what we, as developers, can bring to the table in terms of addressing cyber threats and augmenting the secure network that is built and maintained so well by our Telecom colleagues.

These issues mentioned are some of the OWASP Top Ten security flaws for 2007 and will be addressed in the training classes. OWASP stands for 'Open Web Application Security Project' and is a global community dedicated to finding and fighting the causes of insecure software, educating developers and architects on the consequences of vulnerabilities, and providing guidance on how to protect against them. And don't think for a minute that this excludes the mainframe developers. Even though the mainframe environment is mature and the mainframe security products are robust, remember that we are embarking on efforts to modernize and extend the mainframe via web services, among other technology solutions. With this in mind, we will need to consider security issues related to the mainframe in a whole new way as well.



### Bottom Line:

By being proactive with regard to web application security, and applying the techniques and practices that address the top ten and beyond; we knew we can provide an enhanced level of security in the web transactions used by citizens and agencies alike.



<http://dti.delaware.gov/information/cybersecurity.shtml>

# Systems Engineering

## MAINFRAME SOFTWARE LIFE-CYCLE



Our Enterprise Servers (commonly referred to as “mainframes”) run the State’s most critical applications. These applications serve public safety, health and social services, corporations, and the collection of revenue (taxes).

Ensuring that these systems are up and running is one of DTI’s most important functions.

It is essential to the health of the mainframe and its mission critical applications that we keep the operating system and software current. Upgrades to the operating system and key software products require that upgrades be tested before they are moved into production.

Our mainframes have 107 unique software packages installed from 28 vendors. The applications that run on the mainframe are owned by over a dozen state agencies. So coordinating software upgrades and testing would be nearly impossible if we didn’t start with a simple and reasonable software life-cycle plan.

Software Type	Life Cycle
Operating System (z/OS)	Every other release, every two years, odd numbered years, between July and December, after the release has been in service for one year.
Databases (DB2 & Adabas)	A minimum of six months after a new release has been in service, between January and June.
All other Software	Every other year, even numbered years, between July and December.
Patches (PTFs)	Applied once a quarter.

This table shows that every six months, we will be performing a significant upgrade that will involve testing by all agency users.

Mainframe software has, until recently, been out of the life cycle plan for both mainframes. The Systems

Engineering Team has worked hard to catch up and now we are operating within the life-cycle plan.

- We are currently upgrading the operating system to z/OS 1.8 on both mainframes.
- DB2 version 9 will be implemented in the first half of 2008.
- All other software will be upgraded in the second half of 2008.
- We plan on upgrading to z/OS 1.10 in the second half of 2009.

## VIRTUAL INFRASTRUCTURE UPGRADE

Recently, DTI completed a major upgrade to its virtual infrastructure. The virtual infrastructure brings significant benefits to DTI and all state agencies that have DTI managed systems. Presently, DTI is running over 200 virtual servers on only 35 physical machines. This represents a physical hardware cost savings of over \$500,000 – not to mention the savings in power, cooling, and floor space requirements in the data center.



The upgrade of the infrastructure from VMware version 2 to version 3 brings even more benefits to the forefront. VMware version 3 now supports clustering natively. This means that if a physical server was to die, the virtual machines that were running there would automatically start up again on a different physical server. Now, even the smallest servers we have can get the benefits of some of our highest end power systems. In addition to that, VMware version 3 also has a feature called Dynamic Resource Scheduling (DRS). During those busy parts of the year, when load on a server goes up for a few days or weeks, DRS will dynamically allocate more CPU and memory to servers as they need it; thus allowing for more efficient use of computing resources.

**Our Team: Recognition**



CPO Division Employee of the 2<sup>nd</sup> Quarter  
(April – June 2007)

- **Chocks Subramanian**  
Systems Engineering Team



CPO Division Team of the 2<sup>nd</sup> Quarter  
(April – June 2007)

**LPAR Team**

- *Systems Engineering:* **Anne Adams, Brenda Rookard, Catherine Williams, Ken Droddy, Pat Turner**
- *DC&O:* **Carmen Grinnell, Jane Nickle, Mark Homiller, Reta McCray, Larry Conover**
- *Telecom:* **Dave Russel**
- *Security/DR:* **Mark Bailey, Peggy Sue Cole**
- *Fiscal/Controller's Office:* **Lillian Nugent**



Team Leader Employee of the Month

**June 2007**

- **Madhu Karanam**  
Application Delivery Team
- **Charles Campbell-King**  
Change Management Team
- **Vince Tirpak**  
Project Management Team
- **Catherine Williams**  
Systems Engineering Team



**July 2007**

- **Donna Nowell**  
Change Management Team
- **Chintalapati Sudhindra**  
Project Management Team
- **Brett Williams**  
Systems Engineering Team



**August 2007**

- **Alison Walls**  
Application Delivery Team
- **Nancy Erwin**  
Change Management Team
- **Don Christmas**  
Project Management Team
- **Ken Droddy**  
Systems Engineering Team



**KUDOS**

**June 2007:**

Pat Turner, Crystal Norman, Cindy Bray, Kamlesh Sheth, Heidi Dukes, Rose Schroeder, Rao Isukapalli, Debbie Odle, Michelle Duffy, Satish Thummala Sairium, Hemanth Mukkamala, Holly Powell, LiWen Lin, Terry Wright, Tony Collins, Charles Campbell-King



**July 2007:**

Prakash Danduprolu, Brad Dukes, Madhu Karanam, Paul Kanich, Michelle Duffy, Charles Campbell-King

**August 2007:**

Pari Viswanth, Mary Wagner, Rajni Varkol, Tricia Ann Saunders, Julie Moran, Pn Narayanan, Jitendra Rawal



**June 2007**

Charles Campbell-King, Madhu Karanam, Percy Navarro, Arlene Urian, Jim Salb, Paulette Bowe, Richelle Edwards, Lillian Schaub



**July 2007**

LiWen Lin, Anne Adams, Brenda Rookard, Ken Droddy, Pat Turner, Mary Wagner, Glenn Camaclang, Joan Domingo, Robby Khanal

**August 2007**

Tony Marge, Joe Shockley, Jitendra Rawal, James Roe, George Washington, Debbie Abbott, Sharon Seifert, Anne Adams, Ken Droddy, Robby Khanal, Nancy Erwin, Alison Walls



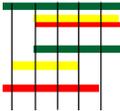
## The Office of Major Projects is involved in a wide range of initiatives:



**Delaware ERP Project:** The statewide ERP project will not only upgrade the Human Capital Management modules (Human Resources, Benefits Administration, Payroll, Time and Labor, etc.) but will also allow for a statewide implementation to replace and consolidate the current mainframe accounting systems. Business Process Analysis sessions and Fit Gap sessions have been completed. A consolidated project plan is currently under review and will be finalized by the end of September 2007.



**Integrated Corporate Information System (ICIS):** The Department of State, Division of Corporations is replacing the current mainframe legacy system – Delaware Corporate Information System (DCIS). DTI teams have reviewed a new draft RFP and comments have been sent back to the project manager.



**eGovernment:** The Violence Against Women Act (VAWA) application was deployed into production August 31. This initiative of the VAWA committee was aimed at assisting victims of domestic violence. The application will allow Advocates for the victims to track the compliance of court ordered treatment for the offenders and report that information back to the victim. DELJIS, CJC and DTI collaborated to successfully deliver an application that will serve the greater good. A proclamation signing with Governor Minner is scheduled for October 1.



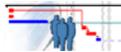
**Courts Organized to Serve (COTS):** This is an initiative of the Delaware Judiciary aimed at acquiring a new, integrated automated case management system for use by the Courts and several partner agencies. This is a multi-year project that will be implemented in eight phases. Phase II implementation for JP courts 9, 13, and 16 occurred on August 1<sup>st</sup> and was a great success! An Interim e-Filing solution went “live” in the JP Courts on July 2<sup>nd</sup>.



**Server Infrastructure Cleanup Program:** The server clean-up program has been split into three different efforts: 1) Sunset Legacy Development Sites, 2) Migrate Intranet sites to Agencies, and 3) Web Application Facility (WAF) Migrations. Over 50% of legacy development sites have been “sun-setted” with full completion set for November 1, 2007. A decision about intranet sites has been made and efforts are underway to begin migrations. Due to customer constraints, the project end date is expected by the end of fiscal year 2008. WAF migrations have begun – two of the four environments are almost complete and ready for application migrations with a completion date by the end of fiscal year 2008.



**800MHz Next Generation:** In-street and in-building coverage measurements for Kent County are complete and data evaluation is underway. Preliminary indications are that in-building coverage exceeds the specification. New Castle County's OC-3 ring is now operational, and all sites will be turned up and on the ring by the end of the year. Sussex County's sites will also be completed with the dual OC-3s up and sites turned on by the end of the calendar year; however, in-street and in-building coverage testing for both counties will begin in the spring during full foliage conditions.



**Enterprise Project Management (EPM):** The project to install and deploy the 2007 version of Microsoft Project is well underway. The integration vendor is onsite at DTI to work on the configurations and customizations specific to our department. Training will be held in the months of October and November for the rest of DTI. More information regarding this initiative will be forthcoming in the weeks ahead.



**Program Management Office (PMO) Process Revision and Training:** Course development for a Basic Course continues with the requirement that the Basic Training be delivered this fall. Intermediate and Advanced Course development has also been initiated.



**Motor Carrier Safety Improvement Act (MCSIA):** Delaware has passed the rigid structured test required for MCSIA certification and as a result, the Federal Motor Carrier Safety Administration has certified Delaware as MCSIA compliant, meaning that the State's Federal Highway funds are no longer in jeopardy. Our production implementation occurred on September 14<sup>th</sup> and included:

- 162 new Natural objects,
- 197 modified Natural objects,
- 4 new COBOL objects,
- 20 modified COBOL objects,
- New fields and descriptors added to five files,
- Addition of two new AAMVA required files,
- 306 new rules table entries,
- Major modifications to one other rules table.



**New Data Center Facility:** The Requirements Document (design specification) has been completed and is being validated by the architect (EYP). The State has signed the contract with EYP to take us to the 20% design point, enough to generate reasonably accurate cost estimates for the building by November. Contract review activities with the landowner has been initiated. Groundbreaking is still planned for the April 2008 timeframe.

The Office of Major Projects is involved in a wide range of initiatives:



**VXML Transition:** DTI now has a new Voice Service Provider (VSP) providing us with the ability to deploy multi-lingual voice solutions. Our conversion to VOXEO from BeVocal was completed at the beginning of July and with the testing expertise of VXML customers, the conversion went very smoothly. We are currently working on a couple of new applications for several agencies and anticipate rolling this functionality out this fall. You can get further information on VXML and how we build and deploy it by attending our presentation at the upcoming Technology Conference in October.



**Enterprise GIS:** The Enterprise Geographic Information Systems (eGIS) project has recently made some significant progress. We have established a Charter and prepared the ROM/Business Case. We have secured enterprise licensing for the State and have drafted a cost structure that will save agencies' money on GIS deployments. On the technical side, we have met and brainstormed with ESRI regarding what the GIS architecture would look like in order to integrate with Identity Access Management and securely meet the needs of the State. The team has distributed a FACT Sheet, enhancing statewide awareness of the eGIS project. Look for the Enterprise GIS (eGIS) website in late fall, where you will be able to find relevant content and project information.

Just for Fun!

Figure out which NFL Team each phrase represents and name their city.



Phrase	Team Name	Team City
Pope's Men		
Range Riders		
Winged Patriots		
The Moving Crew		
Winter Sleepers		
Heaven's League		
Seven Squared		
Debits		
Iron Workers		
Visa Experts		
Third Letter Bird of Prey		

