

# Lawrence Livermore National Laboratory

## Process Improvements With Project Costing Implementation

April 15, 2009



**Chuck Abell & Debbie Payne**

Lawrence Livermore National Laboratory, P. O. Box 808, Livermore, CA 94551  
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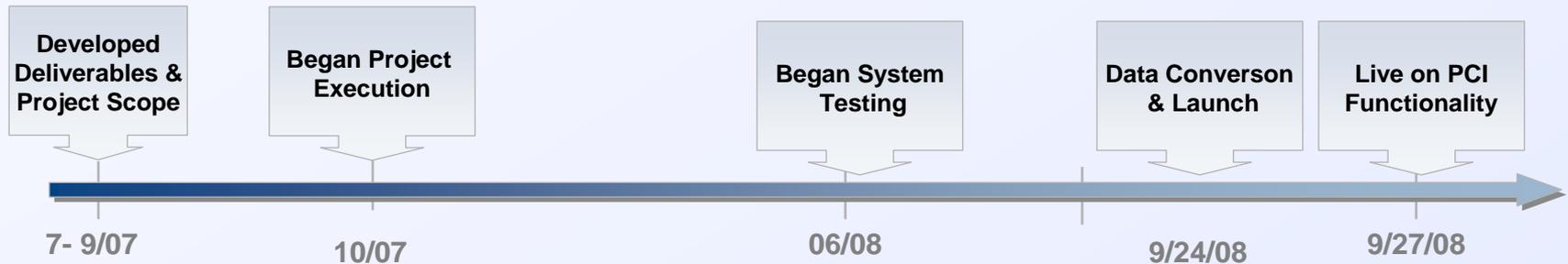
LLNL-PRES-411907

# Topics

- Project Costing Implementation (PCI) Timeline and Major Control Accounts
- Augmenting Projects User Interface with More4Apps Wizards
- Capturing high value service center metadata
- Surfacing WBS and improved metadata in LLNL's data warehouse
- Making cost and commitment transfers and accrual entry easier.



# PCI Timeline and Control Accounts



- Utilized monthly EVMS reporting
- Major Control Accounts were:

Financial Systems	Infrastructure	Change Management
Supply Chain Systems	Institutional Reporting	Conversion & Implemntn
Other Service Centers	Integration Testing	Project Oversight



# User Interface (UI) and More4Apps

Mass changes easy, feedback on correctness, off-line preparation, short learning curve

- LLNL found the Projects UI complex and time consuming
- LLNL already had a significant spreadsheet culture
- More4Apps Wizards provided 2-way spreadsheet interface via Oracle application programming interface (API's) including data validation
- Wizards include Project/Task Work Breakdown Structure (WBS), Budget and Transaction interfaces



# Project Wizard

Create or update projects, tasks, transaction controls, assets, user-defined attributes using Excel



TEMPLATE		UPLOAD RESULTS		PROJECT HEADER															
Template	Upload Status	Upload Error	Project Number	Project Name	Long Project Name	Project Description	Project Organization	Customer Number	Customer Name	Distribution Rule	Priority	Public Sector	Project Status	Project Start Date	Project Completion Date	Probability	Opportunity		
T-CAPITAL	Updated		33082	IUDA TEST PROJ	IUDA TEST PROJ		DIR-CIO IT-CIO IT S	SRVICES				N	Proposed	10/1/2007					

CLASSIFICATIONS			KEY MEMBERS				TASKS				TRANSACTION CONTROLS										
Class Category	Class Code	Code Percentage	Role	Key Member	Role Start Date	Role End Date	Task Status	Task Error	Parent Task	Task Number	Task Attribute10	ASSET1_NAME	ASSET1 EST IN SERVICE	TC Status	TC Error	TC RowID	Level	Expenditure Category	Expenditure Type	Non Labor Resource	
BURDEN RULE	CAP CON	WWFO FEE-09	LLNL ADR	SHAUGHNE	6/1/2008		Updated			1.3.4.3.1											
			LLNL PAD	SHAUGHNE	6/1/2008		Updated		1.3.4.3.1	1.3.4.3.1.1	<19909900>										
			LLNL PRIN	DUNCAN, K	10/1/2007		Updated		1.3.4.3.1	1.3.4.3.1.10		TEST ASSET1B	11/1/2008					P	PROCURED MATER	UNICARD MATERIALS	
			LLNL RES	BODAN, ALB	10/1/2008		Updated		1.3.4.3.1	1.3.4.3.1.11											
			LLNL SEC	SHAUGHNE	10/1/2007		Updated		1.3.4.3.1	1.3.4.3.1.12											
			Project Mgr	SHAUGHNE	10/1/2007	10/31/2007	Updated		1.3.4.3.1	1.3.4.3.1.13											



# Budget Wizard

UPLOAD RESULTS			PLAN TYPES				Cost Plan Settings			PROJECT	
Upload Ok	Line Ok	Upload Error	Plan Type	Plan Setup	Cost Level	Cost Time Phasing	Cost Resource List	Project Number	Project Name		
Uploaded 10 tasks for each plan type with budget amounts											
Ok	Ok		CARRYOVER FUNDING	Cost Only	Lowest Task	None	None	32906	PCI Conversion Suspense - DIR		
	Ok										
	Ok										
	Ok										
	Ok										
	Ok										
	Ok										
	Ok										
	Ok										

BUDGET LINE DETAILS				BUDGET & PLAN TYPES		
Task Number	Task Name	Amount Type	Amount	Version Name	Description	Change Reason
ACCURALS	SUSPENSE - ACCURALS	Raw Cost	5	SLA-10-30-08	update for new fu	Multiple
EOS	SUSPENSE - EOS	Raw Cost	5			
EPAY	SUSPENSE - EPAY	Raw Cost	5			
EQUIPLOAN	SUSPENSE - EQUIPLOAN	Raw Cost	5			
FLEET	SUSPENSE - FLEET	Raw Cost	5			
IMDOC	SUSPENSE - IMDOC	Raw Cost	5			
LINCS	SUSPENSE - LINCS	Raw Cost	5			
PEWORK	SUSPENSE - PEWORK	Raw Cost	5			
TID	SUSPENSE - TID	Raw Cost	5			
VPMA	SUSPENSE - VPMA	Raw Cost	5			
			50			



# Transaction Wizard

Displaced most uses of ADI as means of entering miscellaneous cost transactions

More4Apps Transaction Wizard											
Batch Source	Batch Name	Wk Ending Date	Employee	Business Gro	Organization						
FDR STORES	STORES-090608-01	6-Sep-08			OB-SUPPLY DIST-SUPPLY, DISTRIBUTION						
Processing Status			Required Columns - All Transaction Types							Other Optional Columns	Miscellaneous (Request or OUN)
Interface Line ID	Transaction Status	Rejection Reason	Item Date	Project Number	Tark Number	Expenditure Type	Quantity	Line Comment			
			4-Sep-08	32281	15001	STORES ISSUES	100.00	Item2	brown33		
			4-Sep-08	32282	86101	STORES ISSUES	100.00	Item3	brown33		
			4-Sep-08	32283	801	STORES ISSUES	100.00	Item4	brown33		
			4-Sep-08	32284	197201	STORES ISSUES	100.00	Item5	brown33		
			4-Sep-08	32285	735001	STORES ISSUES	100.00	Item6	brown33		
			4-Sep-08	32286	894001	STORES ISSUES	100.00	Item7	brown33		
			4-Sep-08	32287	899201	STORES ISSUES	100.00	Item8	brown33		
			4-Sep-08	32288	372301	STORES ISSUES	100.00	Item9	brown33		
			4-Sep-08	32289	300101	STORES ISSUES	100.00	Item10	brown33		
			4-Sep-08	32290	577101	STORES ISSUES	100.00	Item11	brown33		
		Project Number '32292' in column	4-Sep-08	32292	300102	STORES ISSUES	100.00	Item12	brown33		
		Project Number '32294' in column	4-Sep-08	32294	86401	STORES ISSUES	100.00	Item13	brown33		
			4-Sep-08	32295	503720	STORES ISSUES	100.00	Item14	brown33		



# Service Center Metadata

- Service centers were required to send:
  - Requestor
  - Source Transaction ID
  - Description of Work/Service
  - Other service center-specific metadata
  - Other standard cost transaction details
- Service centers included:

Publications (TID)	Fleet Management	Non-PO Payments
Equipment Loan	Training	Facilities Management
Information Mgmt.	Travel	Engineering Fabrication

**Service Center metadata in Project Costing make it less likely staff will need to go to System of Record**



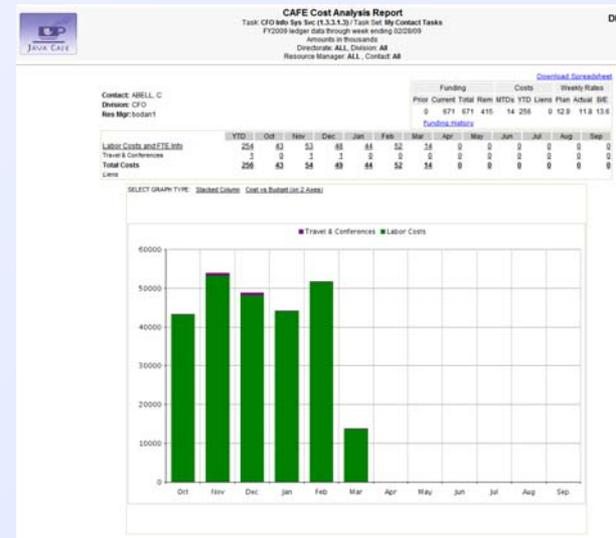
# Institutional Reporting

- PCI changed the basis of reporting from account number to project & task, laying the foundation for implementation of an institutional earned value management system
- PCI reporting surfaced the new service center metadata and provided drill paths into details and reference ID's back to source systems, when needed
- Delivered major upgrade to custom organizational and WBS reporting tools

**CAFE Task Status**  
 PAD DIRECTORS GROUP; Task Set: CFO/CO SYS Maint & PCI FY2009 ledger data through week ending 02/28/08  
 Amounts in thousands

User: Charles M Abell (RA)

Proj No	Dir	Dir	Proj Rpt	Contact	Funding	Total	Rem	MTD	Costs	Liens	Plan	Actual	Wkly Rate	B/E
<b>Total</b>						-2373	62	1763	590		82.6	-77.6		
<b>CO/CO Systems</b>						-2373	62	1763	590		82.6	-77.6		
<b>32467</b>						-453	39	393	60		18.2	-14.8		
<b>CO</b>						-453	39	393	60		18.2	-14.8		
1.3.3.1.1	CFD	U	U	U		-453	39	393	60		18.2	-14.8		
1.3.3.1.1.1	Miss Fin Sys Maint	32467	OO	CO F	munca3	munca3	-13	1	13		5.8	-4.4		
1.3.3.1.1.2	Payroll Maint	32467	OO	CO F	munca3	munca3	-72	5	72		33	-24		
1.3.3.1.1.3	HRG All Maint	32467	OO	CO F	munca3	munca3	-11	2	11		6.3	-3.3		
1.3.3.1.1.4	AP Maint	32467	OO	CO F	munca3	munca3	-13	3	13		8.6	-4.4		
1.3.3.1.1.5	Disbursement Maint	32467	OO	CO F	munca3	munca3	-19	1	19		8.9	-2.6		
1.3.3.1.1.6	FBS Maint	32467	OO	CO F	munca3	munca3	-4	8	8		5.3	-2.2		
1.3.3.1.1.7	Label Cost Maint	32467	OO	CO F	munca3	munca3	-8	1	8		6.2	-2.2		
1.3.3.1.1.8	STARS Maint	32467	OO	CO F	munca3	munca3	-3	3	3		6.2	-2.1		
1.3.3.1.1.9	Print Control Svcs	32467	OO	CO F	munca3	munca3	-27	3	27		3.6	-2.9		
1.3.3.1.1.10	Print Control Maint	32467	OO	CO F	munca3	munca3	-144	18	84	68	2.9	-4.7		
1.3.3.1.1.11	PS Production	32467	OO	CO F	munca3	munca3	-12	1	12		6.8	-4.4		
1.3.3.1.1.12	Java Carls Maint	32467	OO	CO F	munca3	munca3	-17	1	17		6.8	-4.4		
1.3.3.1.1.13	EGPSP Sys Maint	32467	OO	CO F	munca3	munca3	-7	7	7		6.3	-2.9		
1.3.3.1.1.14	SGA Service Svc	32467	OO	CO F	munca3	munca3	-24	3	24		1.1	-8.9		
1.3.3.1.1.15	LTR Maint	32467	OO	CO F	munca3	munca3	-30	2	30		1.4	-1.8		
<b>CO/PCI Maint On Line</b>						-1820	22	1390	530		64.3	-62.7		
<b>32468</b>						-1820	22	1390	530		64.3	-62.7		
<b>CO</b>						-1820	22	1390	530		64.3	-62.7		
1.3.3.2.2.1	Overnight	32468	OO	CO F	munca3	munca3	-43	3	43		2.0	-1.4		
1.3.3.2.2.2	Deliver Plans	32468	OO	CO F	munca3	munca3	-289	1	289	4	16.4	-11.7		
1.3.3.2.2.3	WH's Loan Support	32468	OO	CO F	munca3	munca3	-180	9	90	2	4.5	-3.3		
1.3.3.2.2.4	Master's Loan Optima	32468	OO	CO F	munca3	munca3	-46	8	42	5	2.0	-1.8		
1.3.3.2.2.5	Help Desk Support	32468	OO	CO F	munca3	munca3	-488	2	491	67	16.6	-15.3		
1.3.3.2.2.6	Key Bank's Inv	32468	OO	CO F	munca3	munca3	-2	2	2		8.1	-8.1		
1.3.3.2.2.7	SECID Del on Loan	32468	OO	CO F	munca3	munca3	-2	2	2		19.0	-4.8		
1.3.3.2.2.8	Infrastructure	32468	OO	CO F	munca3	munca3	-150	10	150		7.2	-1.1		
1.3.3.2.2.9	Real Reporting	32468	OO	CO F	munca3	munca3	-228	5	228		10.6	-7.5		
1.3.3.2.2.10	Deliver Plans	32468	OO	CO F	munca3	munca3	-6	6	6		6.2	-2.2		
1.3.3.2.2.11	Info Global Loan	32468	OO	CO F	munca3	munca3	-4		-4		6.1			
1.3.3.2.2.12	Plan	32468	OO	CO F	munca3	munca3	-4	4	4		8.2	-1.1		



# Transfer System Functionality

- Created custom cost transfer application that LLNL felt was an improvement over out-of-the-box functionality
- Users can query cost, commitments, and accruals based upon a wide range of criteria
- Users select the records to be transferred, define new target location, and initiate approval work flow
- Includes extensive notifications for approvals



TO



# Sample Transfer Query

Query by Resource Analyst (RA), Work Order, Purchase Order (PO), or Cost Type are additional to standard functions.

Transaction Inquiry Form

Initiating RA	<input type="text" value="VANDERBEEK, KRISTINE M"/>		
Project Number	<input type="text" value="32651"/>	Task Number	<input type="text"/>
Work Order Number	<input type="text"/>	PO Number	<input type="text"/>
Expenditure Item Id	<input type="text"/>		
Employee Name	<input type="text"/>	Cost Type	<input type="text"/>
Expenditure Category	<input type="text"/>	Expenditure Organization	<input type="text"/>
Expenditure Type	<input type="text"/>	Non Labor Resource	<input type="text"/>
Expenditure Item Date From(DD-MON-YY)	<input type="text"/>	Expenditure Item Date To(DD-MON-YY)	<input type="text"/>
PA Period	<input type="text"/>	Cost Transfer Number	<input type="text"/>
Expenditure Batch	<input type="text"/>	Show Posted Transfer	<input type="checkbox"/>
Show Only Transferrable	<input type="checkbox"/>	Show Raw Cost with Burden	<input type="checkbox"/>
<input type="button" value="CLEAR"/>		<input type="button" value="FIND"/>	







# Cost Transfer – Submitted Transfer

Expenditure Items
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Select All
De-Select All

From
Approvals

Cost Type	Project Number	Task Number	Work Order Number	Expenditure Type	Employee Name	ID/PO ist Id	Cost Transfer Number	Initiating RA	Initiation Approved	Receiving RA	Ret App
<input type="checkbox"/>	LABOR	32651	PC.1		LLNL LABOR	PHILLIPS, LEE R	28809267	VANDERBEEK, KRISTINE M	N	SIVARAMAKRISHNAN, SELVASEKAR	N
<input type="checkbox"/>	LABOR	32651	PC.2		LLNL LABOR	PHILLIPS, LEE R	28650792	VANDERBEEK, KRISTINE M	N	SIVARAMAKRISHNAN, SELVASEKAR	N
<input type="checkbox"/>	LABOR	32651	PC.2		LLNL LABOR	PHILLIPS, LEE R	28889522	VANDERBEEK, KRISTINE M	N	SIVARAMAKRISHNAN, SELVASEKAR	N
<input type="checkbox"/>	LABOR	32651	PC.2		LLNL LABOR	PHILLIPS, LEE R	28887206				
<input type="checkbox"/>	LABOR	32651	PC.2		LLNL LABOR	PHILLIPS, LEE R	29023769				
<input type="checkbox"/>	LABOR	32651	PC.2		LLNL LABOR	PHILLIPS, LEE R	29126072				
<input type="checkbox"/>	LABOR	32651	PC.2		LLNL LABOR	PHILLIPS, LEE R	29213419				
<input type="checkbox"/>	LABOR	32651	PC.2		LLNL LABOR	PHILLIPS, LEE R	29274901				
<input type="checkbox"/>	LABOR	32651	PC.2		LLNL LABOR	PHILLIPS, LEE R	29350912				
<input type="checkbox"/>	LABOR	32651	PC.2		LLNL LABOR	PHILLIPS, LEE R	29425593				
<input type="checkbox"/>											
<input type="checkbox"/>											
<input type="checkbox"/>											
<input type="checkbox"/>											
<input type="checkbox"/>											
<input type="checkbox"/>											
<input type="checkbox"/>											

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Transfer Category Code ERRORS

Transfer To Expenditure Item Id

Transfer Status

Approval Workflow Status PENDING

Transfer Creation Date

Transfer Post Date

Transfer PA Period

Transfer/Accrual Initiator KRISTINE M VANDERBEEK

Transfer/Accrual Entered By SELVASEKAR SIVARAMAKRISHNAN

Transfer Justification Use correct Task

Go To Inquiry Screen
Submit
Add Split Line



# Cost Transfer–Email approval request to Initiating Resource Analyst

From: Workflow Mailer TESTING-EBSDEV1 [LLNL-CFO-Workflow@lists.llnl.gov] Sent: Wed 3/4/2009 2:54 PM  
 To: VANDERBEEK, KRISTINE M  
 Cc: SIVARAMAKRISHNAN1@llnl.gov  
 Subject: Action Required: Notification ID:2688082 From Project: 32651 To Project: 32771 Transfer Amount: 1137.76 Requested by: KRISTINE M VANDERBEEK

Message | Notification Detail.html (494 B)

To: VANDERBEEK, KRISTINE M  
 Sent: 04-MAR-09 14:53:05  
 Due: 05-MAR-09 14:53:05  
 ID: 2688082

A transfer has been entered listing you as the Initiating RA. As the Initiating RA, you need to approve the transfer first before it is sent out to receiving RA to approve it.

EID/PO DSTRB ID	EI Date	PA Period	Init. RA	Entering RA	Entry Dt	Employee	Emp ID	From Project No	From Task No	From WO No	PO No	Exp Type	NLR	Xfer Qty	Transfer Amount	To Project No	To Task No	To WO No	Xfer Reason	Xfer Cmt
28809267	05-SEP-08		KRISTINE M VANDERBEEK	SELVASEKAR SIVARAMAKRISHNAN	04-MAR-09	PHILLIPS, LEE R	701644	32651	PC. 1			LLNL LABOR		8	447.04	32771	015562		ERRORS	Use correct Task
28650792	02-OCT-08		KRISTINE M VANDERBEEK	SELVASEKAR SIVARAMAKRISHNAN	04-MAR-09	PHILLIPS, LEE R	701644	32651	PC. 2			LLNL LABOR		4	230.24	32771	015562		ERRORS	Use correct Task
28889522	09-OCT-08		KRISTINE M VANDERBEEK	SELVASEKAR SIVARAMAKRISHNAN	04-MAR-09	PHILLIPS, LEE R	701644	32651	PC. 2			LLNL LABOR		8	460.48	32771	015562		ERRORS	Use correct Task

I certify that I am authorized to approve this transfer of costs and that to the best of my knowledge, it is appropriate, accurate and conforms to LLNL Financial Policy.

**Action History**

Num	Action Date	Action	From	To	Details
1	04-MAR-09 14:53:05	Submit	SIVARAMAKRISHNAN, SELVASEKAR	VANDERBEEK, KRISTINE M	

[Please click here to Respond](#)



# Cost Transfer – Email approval request to Receiving Resource Analyst

From: Workflow Mailer TESTING-EBSDEV1 [LLNL-CFO-Workflow@lists.llnl.gov] Sent: Wed 3/4/2009 3:12 PM  
 To: SIVARAMAKRISHNAN, SELVASEKAR  
 Cc: SIVARAMAKRISHNAN1@llnl.gov  
 Subject: Action Required: Notification ID:2688083 From Project: 32651 To Project: 32771 Transfer Amount: 1137.76 Requested by: KRISTINE M VANDERBEEK

Message | Notification Detail.html (500 B)

To: SIVARAMAKRISHNAN, SELVASEKAR  
 Sent: 04-MAR-09 15:09:54  
 Due: 05-MAR-09 15:09:54  
 ID: 2688083

A transfer has been entered listing you as the Receiving RA. The transfer has been approved by the Initiating RA and is submitting to you for approval.

EID/PO DSTRB ID	EI Date	PA Period	Init. RA	Entering RA	Entry Dt	Employee	Emp ID	From Project No	From Task No	From WO No	PO No	Exp Type	NLR	Xfer Qty	Transfer Amount	To Project No	To Task No	To WO No	Xfer Reason	Xfer Cmt
28809267	05-SEP-08		KRISTINE M VANDERBEEK	SELVASEKAR SIVARAMAKRISHNAN	04-MAR-09	PHILLIPS, LEE R	701644	32651	PC.1			LLNL LABOR		8	447.04	32771	015562		ERRORS	Use correct Task
28650792	02-OCT-08		KRISTINE M VANDERBEEK	SELVASEKAR SIVARAMAKRISHNAN	04-MAR-09	PHILLIPS, LEE R	701644	32651	PC.2			LLNL LABOR		4	230.24	32771	015562		ERRORS	Use correct Task
28889522	09-OCT-08		KRISTINE M VANDERBEEK	SELVASEKAR SIVARAMAKRISHNAN	04-MAR-09	PHILLIPS, LEE R	701644	32651	PC.2			LLNL LABOR		8	460.48	32771	015562		ERRORS	Use correct Task

I certify that I am authorized to approve this transfer of costs and that to the best of my knowledge, it is appropriate, accurate and conforms to LLNL Financial Policy.

#### Action History

Num	Action Date	Action	From	To	Details
1	04-MAR-09 15:09:54	Submit	CHANG, XIANJUAN JANE	SIVARAMAKRISHNAN, SELVASEKAR	

[Please click here to Respond](#)



# Cost Transfer – Approval Action

ORACLE

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Notification ID:2688083 From Project: 32651 To Project: 32771 Transfer Amount: 1137.76 Requested by: KRISTINE M VANDERBEEK

To **SIVARAMAKRISHNAN, SELVASEKAR**  
 Sent **04-Mar-2009 15:09:54**  
 Due **05-Mar-2009 15:09:54**  
 ID **2688083**

A transfer has been entered listing you as the Receiving RA. The transfer has been approved by the Initiating RA and is submitting to you for approval.

EID/PO DSTRB ID	EI Date	PA Period	Init. RA	Entering RA	Entry Dt	Employee	Emp ID	From Project No	From Task No	From WO No	PO No	Exp Type	NLR	Xfer Qty	Transfer Amount	To Project No	To Task No	To WO No	Xfer Reason	Xfer Cmt
28809267	05-SEP-2008		KRISTINE M VANDERBEEK	SELVASEKAR SIVARAMAKRISHNAN	04-MAR-2009	PHILLIPS, LEE R	701644	32651	PC.1			LLNL LABOR		8	447.04	32771	015562		ERRORS	Use correc Task
28650792	02-OCT-2008		KRISTINE M VANDERBEEK	SELVASEKAR SIVARAMAKRISHNAN	04-MAR-2009	PHILLIPS, LEE R	701644	32651	PC.2			LLNL LABOR		4	230.24	32771	015562		ERRORS	Use correc Task
28889522	09-OCT-2008		KRISTINE M VANDERBEEK	SELVASEKAR SIVARAMAKRISHNAN	04-MAR-2009	PHILLIPS, LEE R	701644	32651	PC.2			LLNL LABOR		8	460.48	32771	015562		ERRORS	Use correc Task

I certify that I am authorized to approve this transfer of costs and that to the best of my knowledge, it is appropriate, accurate and conforms to LLNL Financial Policy.

**Action History**

Num	Action Date	Action	From	To	Details
1	04-MAR-2009 15:09:54	Submit	CHANG, XIANJUAN JANE	SIVARAMAKRISHNAN, SELVASEKAR	

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# Summary of Efficiencies

- Used Out of the Box – Avoid Customization – Fill Gaps
- Re-engineered processes
- Retired two custom legacy systems
- Enabled unlimited WBS structure
- Overcame Oracle user interface issues
- Instituted more efficient and better controlled transfers
- Provided access to new data through data warehouse

Cultural transformation, providing enough training close enough to implementation, making the transition preparation real enough to get traction, and transitioning in-process business were some of our biggest challenges!

