

The “Busy Bureaucrat’s” Guide to Earned Value Management in WorkLenz

Introduction

The purpose of this brief guide is to provide the simplest and easiest mechanism for creating and maintaining earned value management (EVM) data in WorkLenz. This document assumes that:

- The investment/project has only one licensed WorkLenz user and this user has a WorkLenz account;
- The licensed user has had WorkLenz training and can use WorkLenz reasonably well¹;
- The investment/project manager already has some type of project plan set up in WorkLenz;
- This is a project with only three levels: project, phase, and task. No “nested phases” have been created;
- The investment/project has a task-level project budget;
- All FTE/staff costs will be entered as expenses (not in the hourly timesheet); and
- The WorkLenz user can record actual costs as they are paid (“cash basis”) or as the expenses are incurred (“accrual basis”).

Prerequisites for Computing EVM

Before computing EVM measurements the following key elements are required:

- A project plan,
- Schedule and completion data, and
- Budget and cost data.

If you do not have this information, use the table below for guidance on how to get this into WorkLenz:

If you need to enter in WorkLenz . . .	Then . . .
A Project Plan	<p><u>Either</u></p> <ol style="list-style-type: none"> 1. Create a project plan with Phases and Tasks per the guidance in this document, <p><u>Or</u></p> <ol style="list-style-type: none"> 2. Enter into WorkLenz your existing project plan that resides in another tool. Very detailed plans should be summarized before entering into WorkLenz. (For assistance, please call Metier at (202) 965-9500 or toll free at (877) 965-9501.)

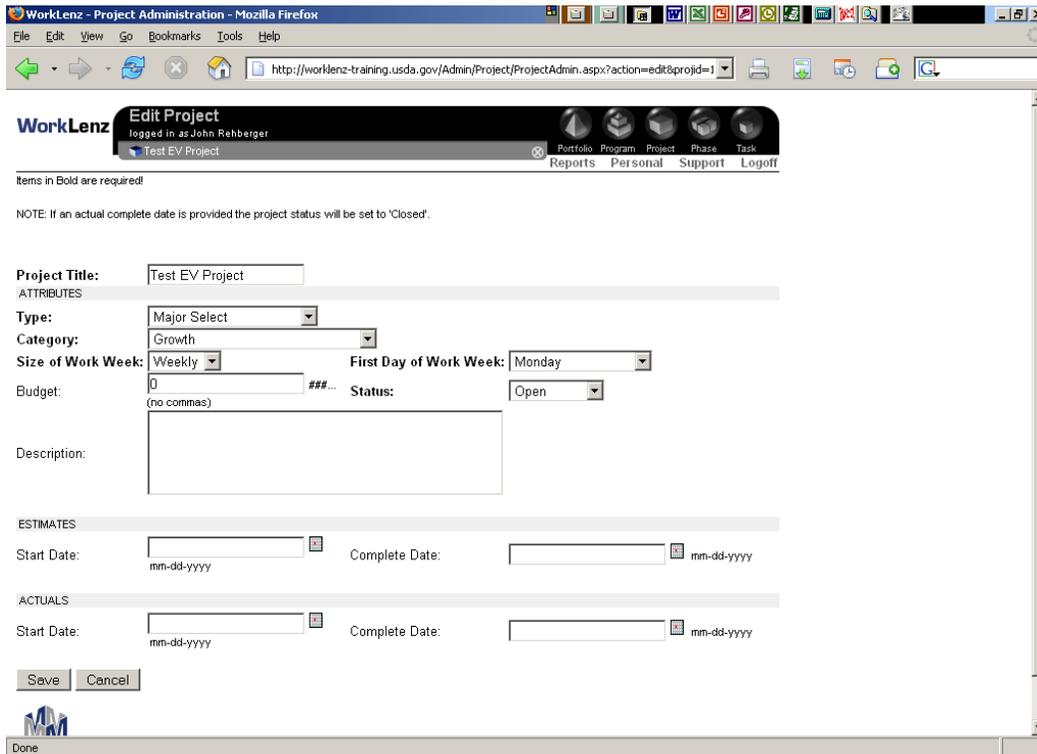
¹If you have had the WorkLenz training, but have not used it in a while you may want to review the WorkLenz training guide at http://www.ocio.usda.gov/cpic/doc/WorkLenzv45_TrainingGuide2004Ver1.pdf

Schedule and Completion Data	Once you have Phases and Tasks identified, follow the guidance in this document to create your initial data for these elements (see p. 4)
Budget and Cost Data	Once you have Phases and Tasks identified, follow the guidance in this document to create your initial data for these elements (see p. 4)

Importance of Task Level Data
 WorkLenz EVM computations are derived from data entered at the Task level in WorkLenz. Most of the entry boxes at the Phase- and Project-level are not used and can be left blank.

Editing the Project Plan

To start, locate your investment/project in the WorkLenz hierarchy. If you want to, edit the project-level project data (see the screen shot below). In the “Edit Project” screen, you only have to fill out the items in **bold**. You can leave the other items blank. “Save” this screen when you are done.



Editing a Phase

Create a new project phase or edit an existing phase. In either case, in the “Edit Phase” screen you only have to fill out the required items in **bold**. You can leave the other items blank. “Save” this screen when you are done.

WorkLenz - Phase Administration - Mozilla Firefox

http://worklenz-training.usda.gov/Admin/Phase/PhaseAdmin.aspx?action=edit&phasid=12

WorkLenz Edit Phase
logged in as John Rehberger

Phase 1

Portfolio Program Project Phase Task
Reports Personal Support Logoff

Items in Bold are required!

Phase Title: Phase 1

Parent Phase: -Select A Parent Phase-

Type: Alternative Analysis

Status: Open

Percent of Project: 5%

Budget: 0 ###... (no commas)

Milestone Date: mm-dd-yyyy

Description:

ESTIMATES

Start Date: mm-dd-yyyy Complete Date: mm-dd-yyyy

ACTUALS

Start Date: mm-dd-yyyy Complete Date: mm-dd-yyyy

Save Cancel

Read worklenz-training.usda.gov

Adding Multiple Phases or Tasks

It is possible in WorkLenz to quickly add multiple new Phases or Tasks. For more information, see pages 28 and 33 of the WorkLenz v4.5 Training Guide at http://www.ocio.usda.gov/cpic/doc/WorkLenzv45_TrainingGuide2004Ver1.pdf.

Adding Task-level Schedule Data

Within a phase, create a new task or edit an existing task. In either case, fill out the **bold** items in the Edit Task screen. Then fill in the Actual Start Date, the Actual Complete Date, and the Percent Complete as is applicable. Leave the "Duration" at "0:00"

You will have to update this screen as the task proceeds until you 1) enter an Actual Complete Date, 2) change the Percent Complete to "100%", or 3) change the Status of the Task to "Closed".

"Save" this screen when you are done.

WorkLenz Edit Task
logged in as John Rehberger
Phase 1 Task 1

Items in Bold are required!
NOTE: If an actual complete date is provided the task status will be set to 'Completed'.

Task ID: 70839
Task Title: Phase 1 Task 1
Assigned To: Rehberger, John (Generic Role on team: EV Team) Assign To Team

ATTRIBUTES

Project Phase: Phase 1
Task Type: Work Activity
Billable: Yes
Priority: 1 Deadline Date: mm-dd-yyyy
Churnable: Yes
Expected: Yes
Labor Cost Category: D/M/E SS

Description:

STATUS
Status: Open **Percent Complete:** 50%

ESTIMATES
Start Date: 10-01-2004 mm-dd-yyyy **Complete Date:** 12-01-2004 mm-dd-yyyy Duration: 0:00 hours

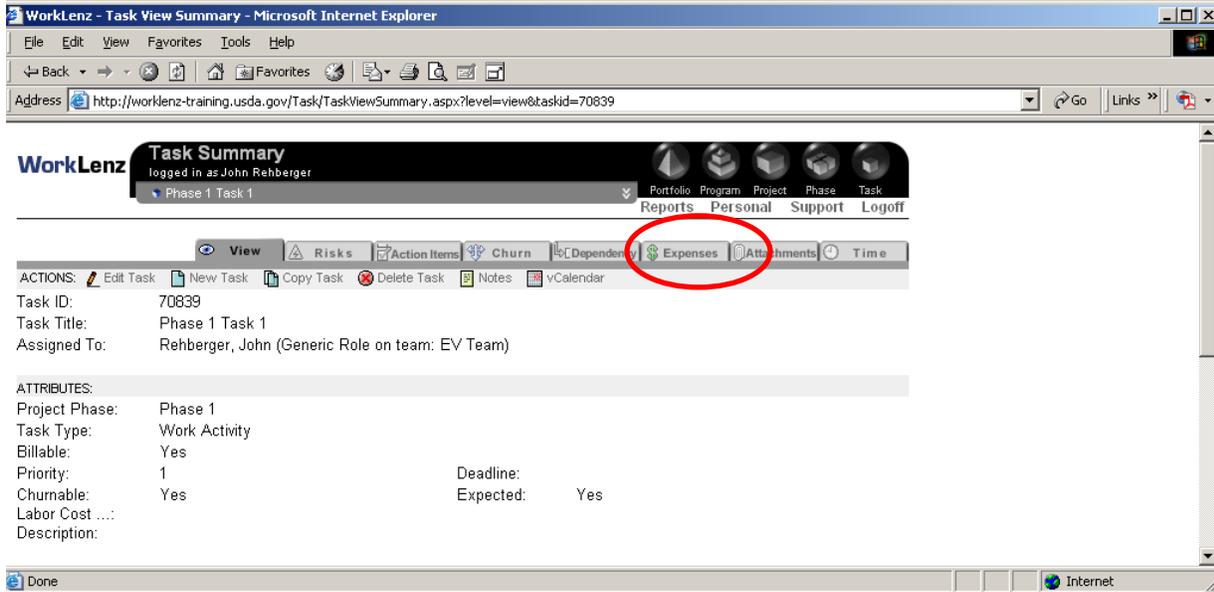
ACTUALS
Start Date: 10-10-2004 mm-dd-yyyy **Complete Date:** mm-dd-yyyy Duration: 0:00 hours

Save Cancel

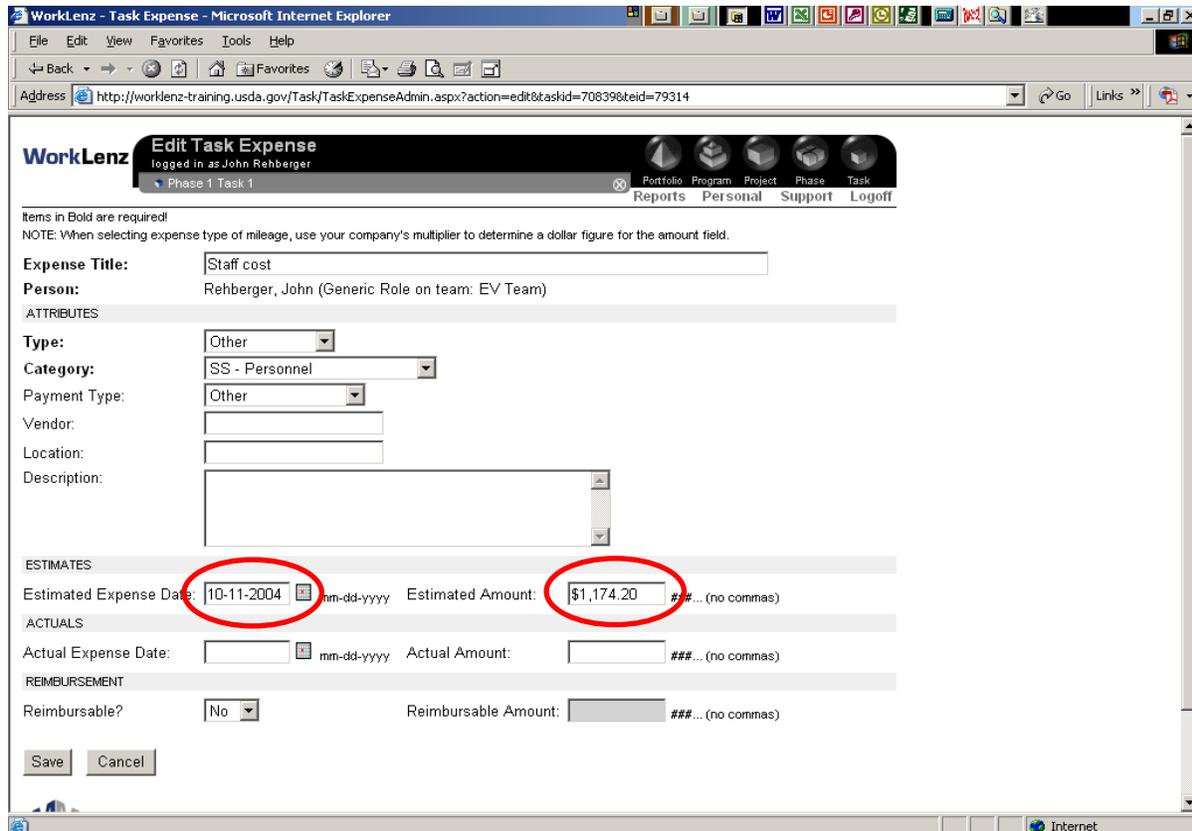
Continue to create or edit Phases and Tasks until they are all in WorkLenz. After the Phases and Tasks are all in WorkLenz and have the relevant schedule data loaded in with them, you will then have to enter the planned budget and the actual costs for each of the tasks.

Adding Task-level Budget and Cost Data

Go to one of the tasks that have a budget. Since all of the project costs in this example will be entered as expenses, click on the Expenses tab in the Task Summary.



To add the budgeted amount for this task, create a new expense. In the Task Expense screen, enter the task budget by filling out the **bold** items and adding the “Estimated Expense Date” and the budgeted “Estimated Amount”. “Save” when done.



As the project proceeds, you will have to add or update the expenses in the tasks. To do so, in the Task Expense screen add the “Actual Expense Date” and the “Actual Amount” as the expenses for this task are incurred. This applies to both external expenses (e.g., contractors or purchased services) and internal expenses (e.g., FTE staff costs). “Save” this screen when done.

WorkLenz - Task Expense - Microsoft Internet Explorer

Address: http://worklenz-training.usda.gov/Task/TaskExpenseAdmin.aspx?action=edit&taskId=70839&teid=79314

WorkLenz Edit Task Expense
logged in as John Rehberger
Phase 1 Task 1

Items in Bold are required!
NOTE: When selecting expense type of mileage, use your company's multiplier to determine a dollar figure for the amount field.

Expense Title: Staff cost
Person: Rehberger, John (Generic Role on team: EV Team)

ATTRIBUTES

Type: Other
Category: SS - Personnel
Payment Type: Other
Vendor:
Location:
Description:

ESTIMATES

Estimated Expense Date: 10-11-2004 mm-dd-yyyy Estimated Amount: \$1,174.20 ###... (no commas)

ACTUALS

Actual Expense Date: mm-dd-yyyy Actual Amount: ###... (no commas)

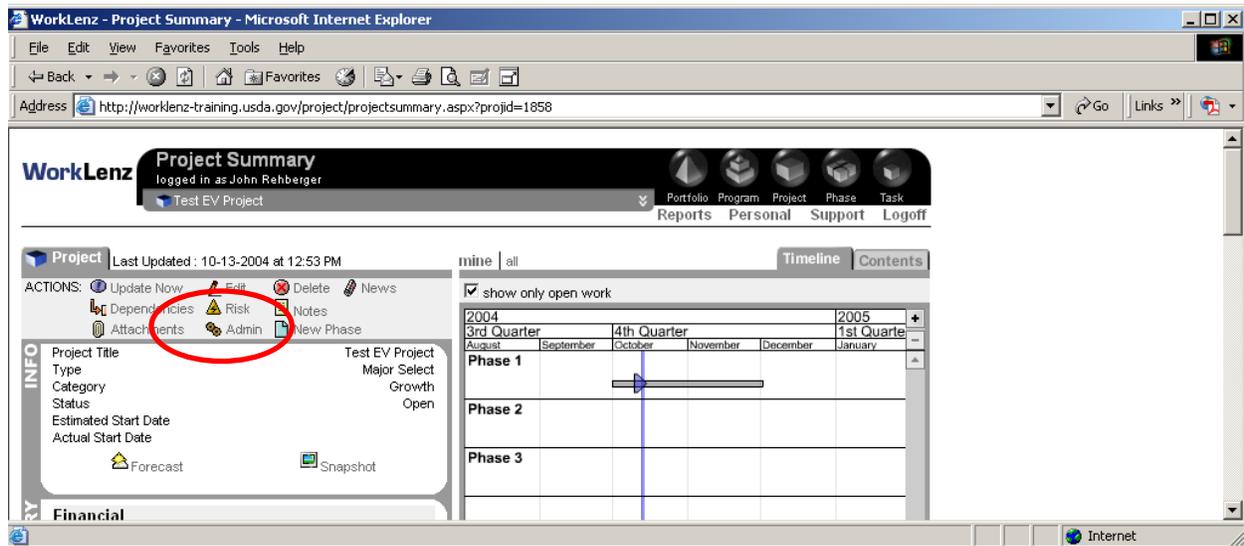
REIMBURSEMENT

Reimbursable? No Reimbursable Amount: ###... (no commas)

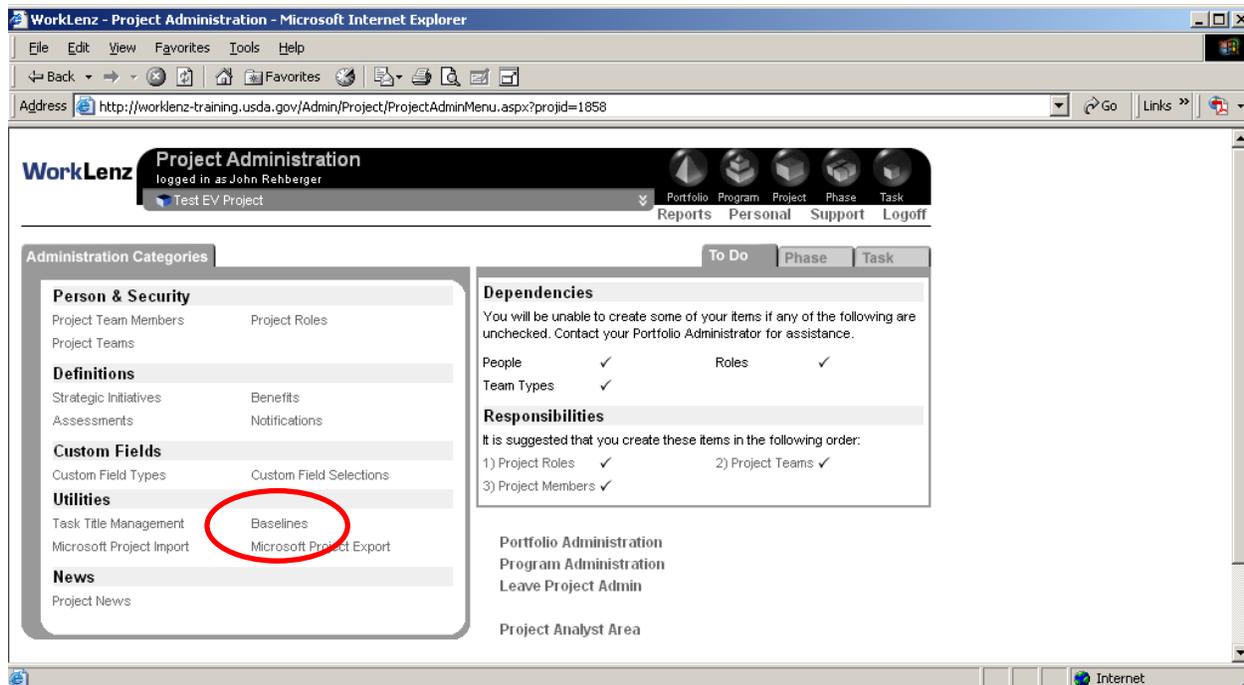
Save Cancel

Computing the EVM SPI and CPI Indices

To create the Schedule Performance Index (SPI) and Cost Performance Index (CPI) indices, you have to “baseline” the investment/project². To do so, go back to the Project Summary screen and click on the “Admin” button.

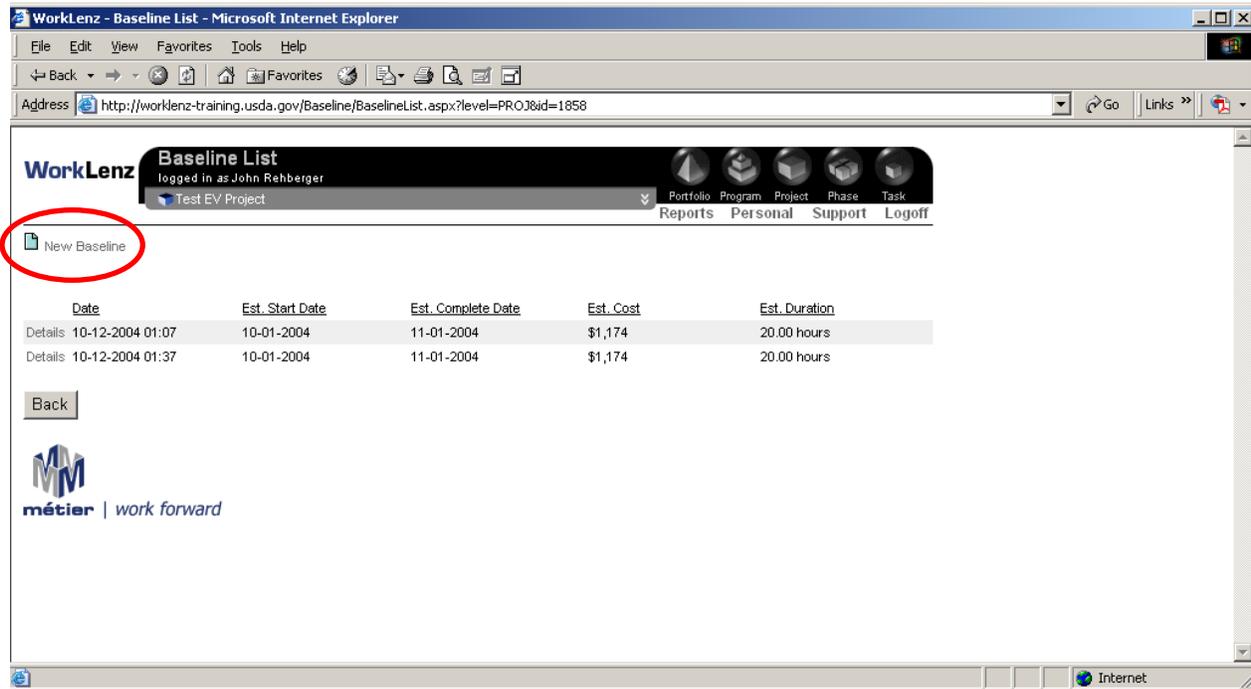


Then click on “Baselines” to create an EV baseline.

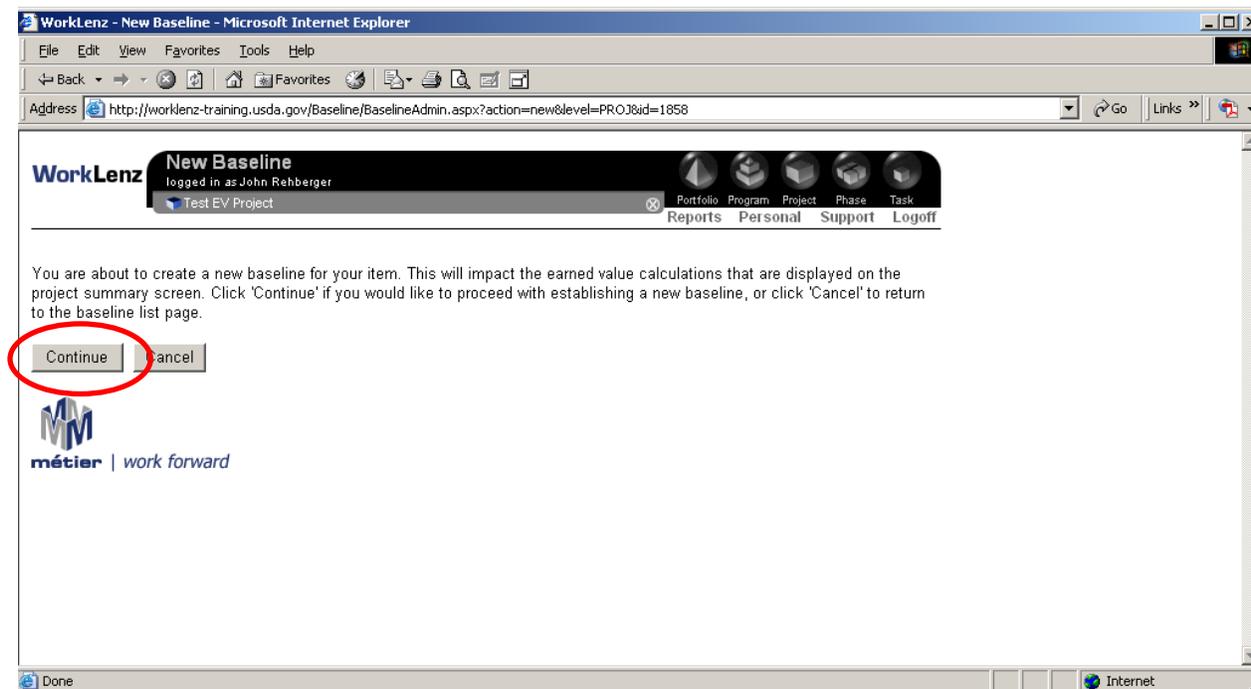


² A baseline represents the established schedule, budget, and estimated costs associated with a project plan. A baseline establishes the initial schedule and budget from which earned value metrics are calculated.

If a baseline does not yet exist, create a “New Baseline”.



Click “Continue” to create a new baseline. A new baseline will be created for this project/investment.



Once the project/investment has been baselined, the SPI and CPI are computed automatically each night and shown on the Project Summary screen (see the screen shot below).

To see how the SPI and CPI are immediately modified when you make task-level changes, go back to the Project Summary screen and click on the “Update Now” button on the Project Summary screen to re-calculate the SPI and CPI. The CPI and SPI figures should change as a result of the re-calculation.

WorkLenz Project Summary
logged in as John Rehberger
Test EV Project

Portfolio Program Project Phase Task
Reports Personal Support Logoff

Project: Test EV Project
Last Updated: 10-13-2004 at 11:47 AM

ACTIONS: **Update Now** Edit Delete News
Dependencies Risk Notes
Attachments Admin New Phase

INFO
Project Title: Test EV Project
Type: Major Select
Category: Growth
Status: Open
Estimated Start Date
Actual Start Date
Forecast Snapshot

SUMMARY

Financial	
Current Total Estimated Labor Cost	\$0.00
Actual Labor Cost to Date	\$0.00
Projected Labor Cost Remaining	\$0.00
D/M/E - Equipment Expense To Date	\$0.00
D/M/E - Software Expense To Date	\$0.00
D/M/E - Services Expense To Date	\$0.00
D/M/E - Support Services Expense T...	\$0.00
D/M/E - Supplies Expense To Date	\$0.00
D/M/E - Personnel Expense To Date	\$0.00
D/M/E - Other - DOD ONLY Expense T...	\$0.00
D/M/E - Intra-Govs Payments Expen...	\$0.00
D/M/E - Intra-Govs Collections Expe...	\$0.00
Planning Expense To Date	\$0.00
SS - Equipment Expense To Date	\$0.00
SS - Software Expense To Date	\$0.00
SS - Services Expense To Date	\$0.00
SS - Support Services Expense To Date	\$0.00
SS - Supplies Expense To Date	\$0.00
SS - Personnel Expense To Date	\$1,174.20
SS - Other - DOD ONLY Expense To D...	\$0.00
SS - Intra-Govs Payments Expense T...	\$0.00
SS - Intra-Govs Collections Expense ...	\$0.00
Total Expense To Date	\$1,174.20
Total Labor and Expense To Date	\$1,174.20

Earned Value

Cost Performance Index	1.35
Schedule Performance Index	1.07

Effort

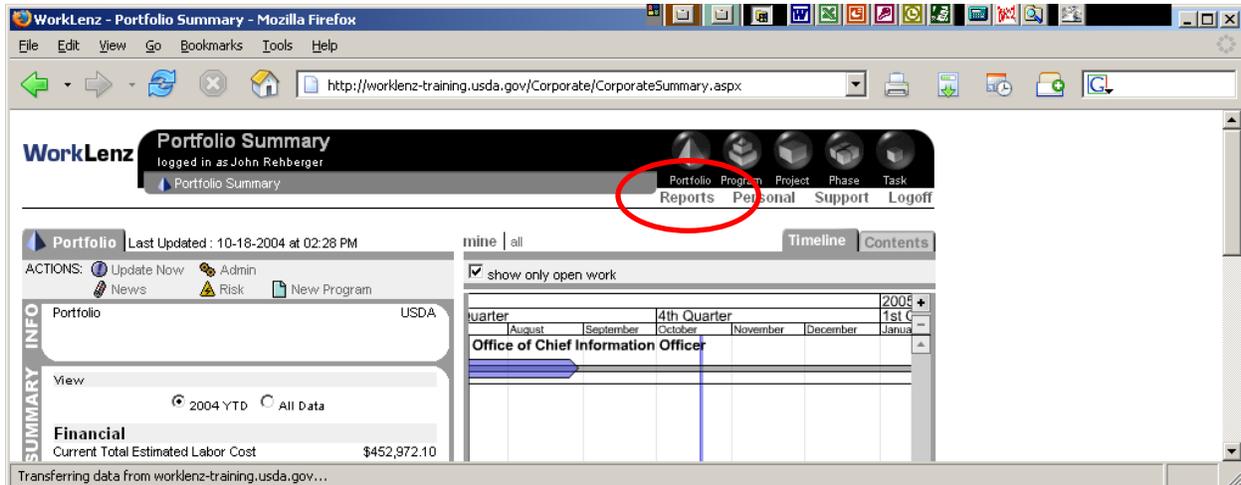
Timeline Contents
mine | all
 show only open work

2004	4th Quarter				2005
3rd Quarter	September	October	November	December	1st Quarter
Phase 1					
Phase 2					
Phase 3					

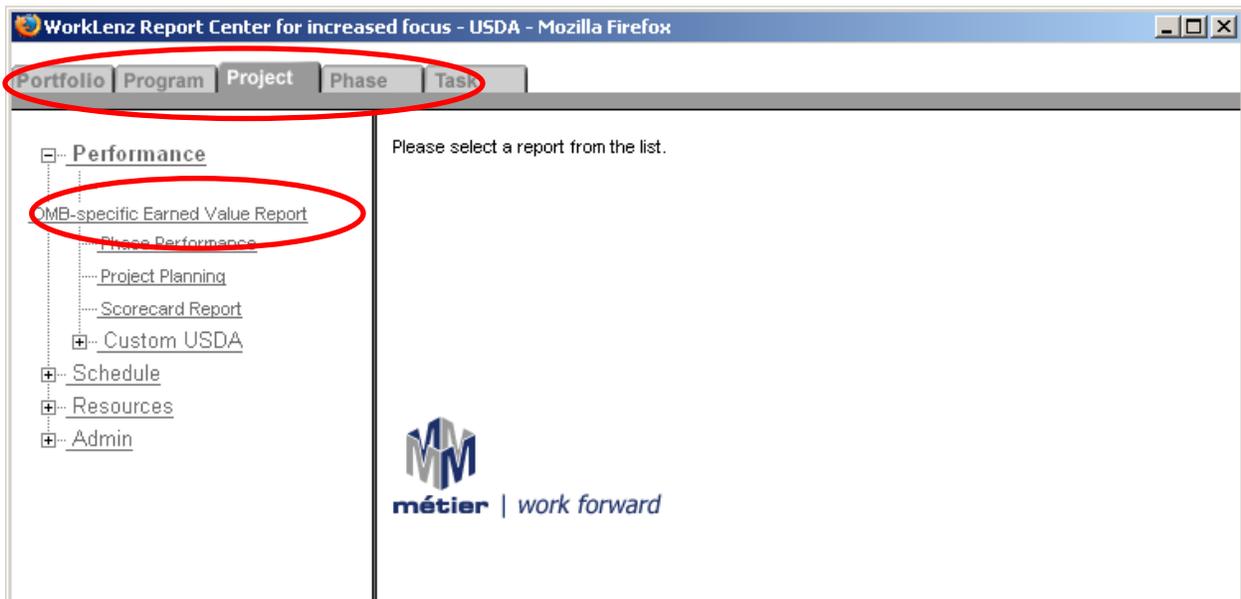
Clicking on a timeline slot will populate this box with its details.
The plus and the minus buttons zoom in and out of finer date detail respectively
The target button centers the timeline on today's date.

Comprehensive EV Report

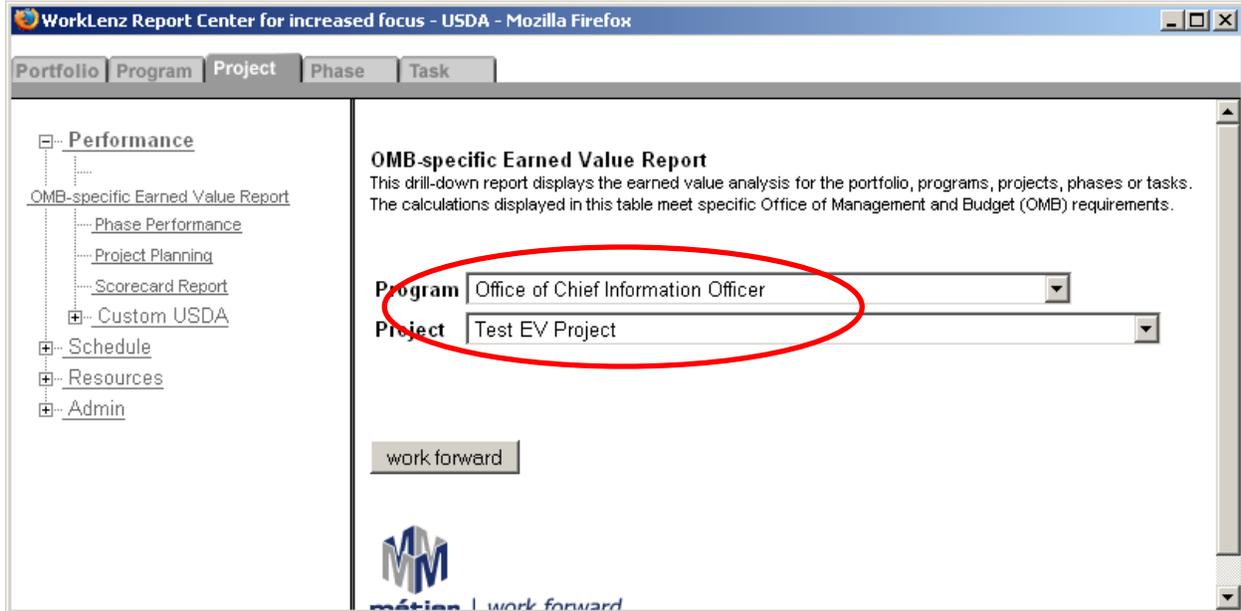
WorkLenz also provides a more comprehensive EVM report. To access it, click on “Reports” at the top of the screen



Then click on one of the tabs on top of the pop-up screen. For example, to get a Project-level EVM report, click on the “Project” tab. Then click on the box next to the “Performance” menu item until the “OMB-specific Earned Value Report” menu item shows up. Then click on this menu item.



Click on the relevant “Program” and “Project” level from the drop-down boxes.



Then click on the “Work Forward” button to create the comprehensive EVM report that includes various EV computations (e.g., BAC, ACWP, BCWP, BCWS).

The screenshot shows the 'OMB-specific Earned Value Report' for 'Project Test EV Project'. The report is titled 'OMB-specific Earned Value Report' and 'Project Test EV Project'. It contains two main sections: 'Earned value' and 'Phases'.

Earned value

	Value
Baseline Date	10-12-2004
Budget At Complete (BAC)	\$2174.20
Actual Cost of Work Performed (ACWP)	\$1174.20
Budgeted Cost of Work Performed (BCWP)	\$1587.10
Budgeted Cost of Work Scheduled (BCWS)	\$1693.85
Cost Variance (CV)	\$412.90
Cost Variance Percent (CV%)	26.02%
Cost Performance Index (CPI)	1.35
Schedule Variance (SV)	-\$106.75
Schedule Variance Percent (SV%)	-6.30%
Schedule Performance Index (SPI)	0.94
Estimate At Complete Best (EAC1)	\$1608.56
Estimate At Complete Worst (EAC2)	\$1637.77
Variance At Complete Best (VAC1)	\$565.64
Variance At Complete Worst (VAC2)	\$536.43
Variance At Complete Percent Best (VAC1%)	26.02%
Variance At Complete Percent Worst (VAC2%)	24.67%
Expected Completion Amount Average (ECAa)	\$448.97

Phases

	BAC	CPI	SPI	Baseline Date
Phase 1	\$2174.20	1.35	0.94	10-12-2004
Phase 2	\$0.00			Not Baselined
Phase 3	\$0.00			Not Baselined

Observations

Below are a few key observations about using WorkLenz for EV management:

Task Management and Expenses

- You have to return to the Tasks in WorkLenz to add and modify the schedule and expense data as the project and tasks proceed.
- If you are going to use the “treat-staff-costs-as-expenses” approach as described above, the Task-level “Percent Complete” drop-down list has no influence over the reported SPI and CPI figures.
- Also, if you are going to use the “treat-staff-costs-as-expenses” approach as described above, avoid putting in staff hour estimates in the Task-level “Duration” boxes. If you enter staff hour Durations:
 - You must use the Timesheet to expense the hourly costs, and
 - The Task-level “Percent Complete” drop-down list will subsequently have a big influence over the reported SPI and CPI figures.

CPI Calculation

- The task-level expense “Estimated Amount” and “Actual Amount” items have a significant influence over the reported CPI figure. The closer these items are to being the same, the closer the CPI will be to 1.0. An Actual Amount that is greater than the Estimated Amount will cause the CPI to go down.

Updating WorkLenz

- USDA/OCIO is currently requesting monthly updates of the project-level EVM data in WorkLenz. As such, you may need to put long-term expenses for a task into monthly "buckets" so as not to skew the monthly CPI and SPI figures. For example, you have a single task that spans 3 months and you pay for the task at the end of the 3 months. In this case, you might need to create 3 expenses for that task, one for each month and divide the final cost into the 3 months so that the CPI and SPI figures are correct for each month along the way.