



CT- STARS

State Analytical Reporting System

OBI- STARS Project Analytics

Facts & Dimensions Job Aid Document



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1. Introduction

The purpose of this job aid is to provide an explanation of dimensional data modeling and the use of dimensions and facts to build analyses within the Project Analytics Subject Areas.

Dimensional Data Model:

The dimensional model is comprised of a fact table and many dimensional tables used for calculating summarized data. Since Business Intelligence reports are used in measuring the facts (aggregates) across various dimensions, dimensional data modeling is the preferred modeling technique in a BI environment.

STARS - OBI data model is based on Dimensional Modeling. The underlying database tables separated as Fact Tables and Dimension Tables. The dimension tables joined to fact tables with specific keys. This data model usually called Star Schema.

The star schema separates business process data into facts, which hold the measurable, quantitative data about the business, and dimensions which are descriptive attributes related to fact data.

Examples of fact data include Budget Amount, Estimate Amount, Cost, and Revenue Amount, etc.

Related dimension attribute examples include Purchase Details, Vendor Details, department, fund, SID, time etc.

Fact Tables:

Fact tables record measurements or metrics for a specific event. Fact tables consist of numeric values and foreign keys to dimensional data where descriptive information is kept. Fact tables are designed to a low level of uniform detail (referred to as "granularity" or "grain"), meaning facts can record events at a very atomic level. This can result in the accumulation of a large number of records in a fact table over time. Fact tables are assigned a surrogate key in ensuring each row uniquely identified.

Dimension Tables:

Dimension tables have a relatively small number of records compared to fact tables, but each record may have a very large number of attributes to describe the fact data. Dimensions can define a wide variety of characteristics, but some of the most common attributes defined by dimension tables include.

- Time
- Department
- Business Unit

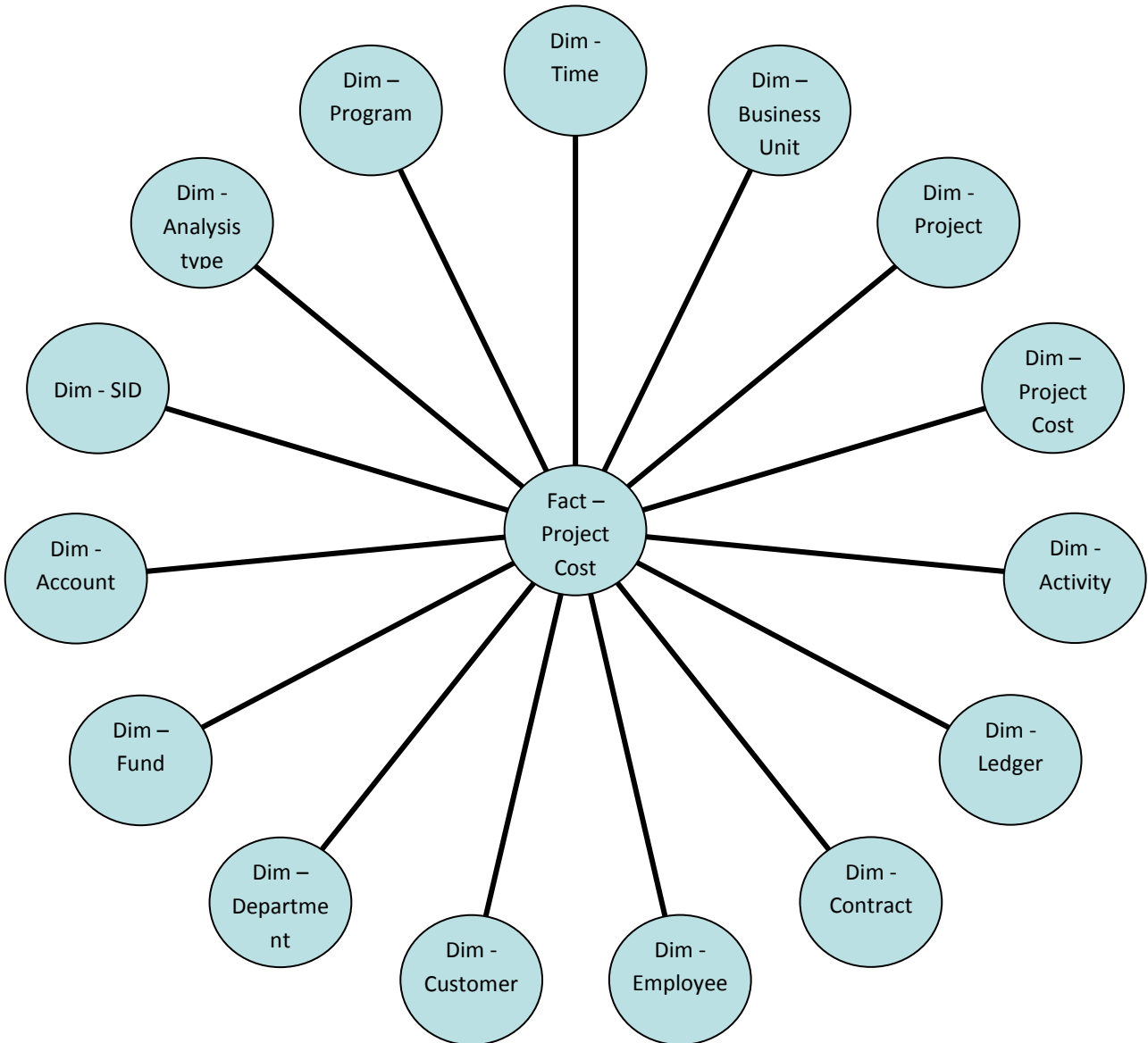
Dimension tables are assigned a surrogate primary key, usually a single-column integer data type, mapped to the combination of dimension attributes that form the natural key.

Star Schema:

Star schemas are optimized for querying large data sets and are used in data warehouses and data marts to support OLAP cubes, business intelligence analytic applications, and ad hoc queries.



Within the data warehouse or data mart, a dimension table is associated with a fact table by using a foreign key relationship. The dimension table has a single primary key that uniquely identifies each member record (row). The fact table contains the primary key of each associated dimension table as a foreign key. Combined, these foreign keys form a multi-part composite primary key that uniquely identifies each member record in the fact table.



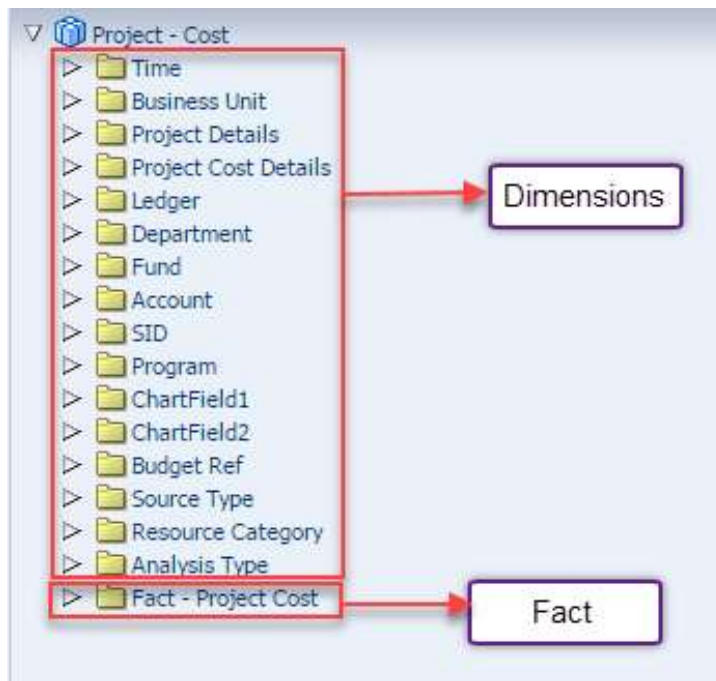
The Fact Table name in **STARS - OBI** Subject Areas is usually preceded with the name **FACT**. This is done to distinguish the Fact tables from the Dimension Tables.

In the example provided below, the underlying Dimension Tables in this Subject Area are joined to the Fact table to form the star schema.



Subject Area:

A subject area contains folders; attribute columns (Dimensions) and measure columns (Facts) that represent information about the areas of an organization's business or about groups of users within an organization. Subject areas usually have names that correspond to the types of information that they contain, such as Project Budget & Estimate, Project Commitment, Project Contract, Project Cost etc... There are common **Dimensions Tables** across Financial Subject Areas such as Time, Business Unit, Ledger and Chartfields (Segments). These common Dimensions are followed by Subject Area Specific Dimensions such as Project Cost Details, Project Revenue Details, Project Contract Details and GL Details etc... There are **FACT Tables** across each Subject Areas.



Crossfunctional Drilldown capability from Projects to Other Subject Areas:

When implementing Project Analytics, it has been noticed that it is a common requirement to enable navigation from Projects to sub-ledgers reports/Subject Areas to obtain information on specific transactions using a Linkage key column. One of the main reasons for this is to reconcile Projects to individual subject Areas like GL, AP, PO and Requisitions etc. Crossfunctional drill from project to other subject areas are at detail transaction level.

Linkage Key Column: The purpose of the Linkage columns is to navigate from one Subject area to others, which stores the primary key or unique identifier of a record in the People soft source table. Its often a concatenation of keys

Ex: *GL Transaction ID:* **STATE~AP01520707~20160816~0~150~MOD_ACCRL**

It's a concatenation of BUSINESS_UNIT_GL || '~' || JOURNAL_ID || '~' || JOURNAL_DATE || '~' || UNPOST_SEQ || '~' || JOURNAL_LINE || '~' || LEDGER



2. Project Analytics Subject Areas

The Project Analytics is a comprehensive analytics solution that delivers insight into project-based data so all team members can seamlessly track the lifecycle of a project with complete, timely information. Project Analytics provides robust analysis of important project-based data that includes Estimates, budgets, cost, revenue, commitments and Contracts. In addition, Project Analytics is a modular component of integrated to drill cross-functional analysis accounts payables, receivables, and procurement subject areas.

Project Analytics delivers visibility into project performance over the entire lifecycle of a project as well as across projects. As a result all employees, given their level of security can be able to access Project Analytics subject areas.

There are six subject Areas in STARS that represents Project Analytics module in CORE-CT.

- [Project - Budget & Estimate](#) Subject Area
- [Project - Commitment](#) Subject Area
- [Project - Cost](#) Subject Area
- [Project - Revenue](#) Subject Area
- [Project - Performance](#) Subject Area
- [Project - Contract](#) Subject Area

Project - Budget & Estimate: This is a detailed subject area that provides the ability to report on Project Budget and Estimates for the past and current periods including inception-to-date, year-to-date comparisons across project details and Activity along with all related Chartfields. The Analysis types included in this Subject Area are: BD1, HSB and EST.

Drilldown capabilities have been added to Budget

Project - Commitment: This is a detailed subject area that provides the ability to report on Project Commitment (Encumbrances and Pre-Encumbrances) across project details and Activity along with all related Chartfields and other attributes like Vendor, Purchase Order details and Requisition details. The Analysis types included in this Subject Area are: CCA, COM, CRV, REQ and RRV.

Drilldown capabilities have been added to PO and Requisitions.

Project - Cost: This is a detailed subject area that provides the ability to report on Cost/Expenditure for the past and current periods including inception-to-date, year-to-date comparisons across project details and Activity along with all related Chartfields and other attributes like Employee, Vendor, Customer, General Ledger details, Account Payables details, Purchase Order details, Time and Labor details and Payroll details.

The Analysis types included in this Subject Area are: ACT, ADD, ADM, APC, BEN, FSP, GLE, HSC, HSE, ICF, ICS, IKE, MSA, SP, PAY and SSP.

Drilldown capabilities have been added to GL, AP, PO, Time & Labor and Payroll.

Project Analytics Facts & Dimensions Job Aid

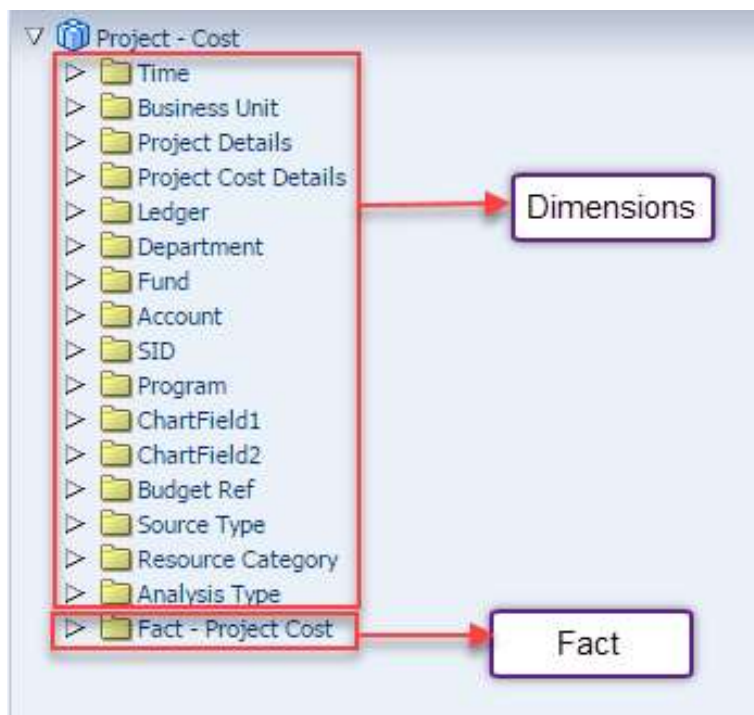
Project - Revenue: This is a detailed subject area that provides the ability to report on Project Revenue (Billed and Billable) for the past and current periods including inception-to-date, year-to-date comparisons across project details and Activity along with all related Chartfields and other attributes like Employee, Customer, Account Payables details, Purchase Order details, Time and Labor details and Payroll details. The Analysis types included in this Subject Area are: BAJ, BIL, BLD, OLT, UAJ and UTL.

Drilldown capabilities have been added to AP, PO, Time & Labor and Payroll.

Project - Performance: This subject area combines relevant metrics and dimensions from the Budget & Estimate, Cost, Commitments, Revenue subject areas to facilitate creating reports that track Project performance across periods, projects, Activity and various Chartfields.

Project - Contract: This is a detailed subject area that provides the ability to track Awarded Base Amount, Contract Limit Amount, Processed Amount and Excess Amount. You can drill down from Contracts to Project Revenue.

Using Dimensions and Facts to create an analysis:



The objects in the left pane are based on database tables in the backend, and the data model behind these subject area tables is dimensional modeling.

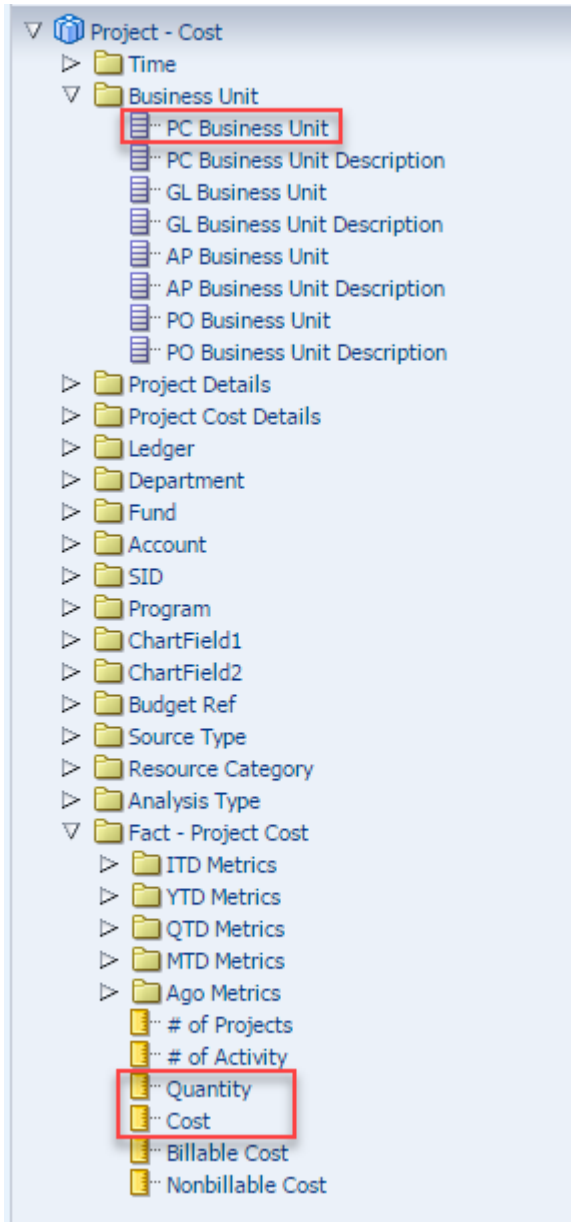
The tables listed from Time, Business Unit, Project Cost Details and Analysis Type, etc. are a few of the **Dimension Tables** in this subject area.

There is one Fact table for this Subject Area called **Facts – Project Cost**. The Fact Table name in STARS subject areas is usually preceded with the name **FACT**. This is done to distinguish the Fact tables from the Dimension Tables.

Project Analytics Facts & Dimensions Job Aid

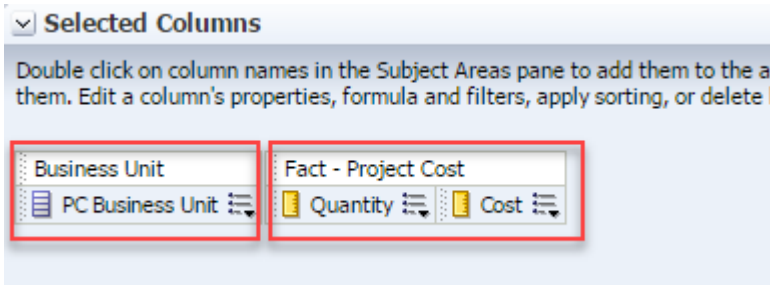


Here is an example of a **Project – Cost** Subject Area analysis:



Criteria Tab

Selected Columns





Selected Filters

Filters

Add filters to the analysis criteria by clicking on Filter option for the specific column in the Select filter button in the Filter pane header. Add a saved filter by clicking on add button after selecting

Calendar Id++ is equal to / is in State
AND Fiscal Year is equal to / is in 2017

Results Tab

Criteria **Results** Prompts Advanced

Subject Areas

- Project - Cost
 - Time
 - Business Unit
 - Project Details
 - Project Cost Details
 - Ledger
 - Department
 - Fund
 - Account
 - SID
 - Program
 - ChartField1
 - ChartField2
 - Budget Ref
 - Source Type
 - Resource Category
 - Analysis Type
 - Fact - Project Cost

Compound Layout

Title [edit] [delete]

Table [edit] [delete]

PC Business Unit	Quantity	Cost
APTM1	264,745.73	9,696,759.22
CSCM1	1,205.39	96,113.83
DASM1	22,336.23	95,238,688.55
DDSM1	115.00	867,430.90
DEPM1	328,392.13	111,609,082.21
DOTM1	55,932,967.73	804,824,865.76
DPHM1	1,016,668.71	56,350,060.98

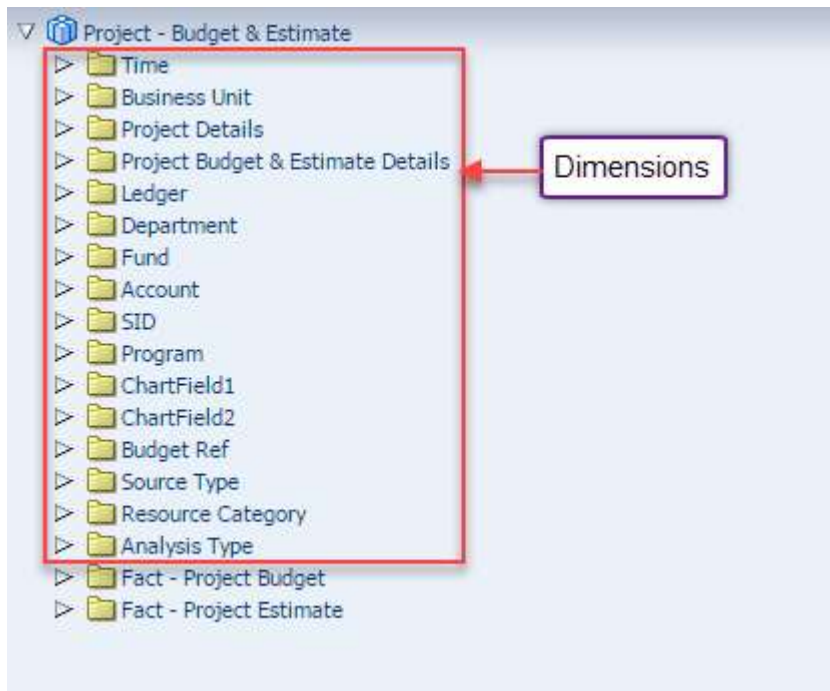


3. Project - Budget & Estimate Subject Area:

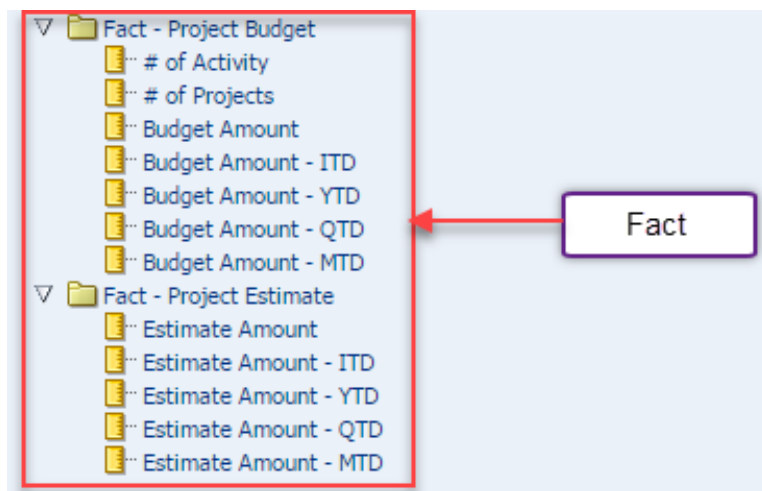
The Project – Budget & Estimate is a detailed subject area that provides the ability to report on Project Budget and Estimates for the past and current periods including inception-to-date, year-to-date comparisons across project details and Activity along with all related Chartfields. The Analysis types included in this Subject Area are: BD1, HSB and EST.

Drilldown capabilities have been added to Budget

Project – Budget & Estimate Subject Area Dimensions



Project – Budget & Estimate Subject Area Facts





3.1. Fact - Measure Definitions:

Fact – Project Budget:

- **# of Activity:** Number of Distinct Project with Activities.
- **# of Projects:** Number of Distinct Projects with Budgets.
- **Budget Amount:** Its RESOURCE_AMOUNT from PS_PROJ_RESOURCE with Analysis Type IN ('BD1', HSB')
- **Budget Amount - ITD:** Its Inception to date of Budget Amount
- **Budget Amount - YTD:** Its Month to date of Budget Amount
- **Budget Amount - QTD:** Its Quarter to date of Budget Amount
- **Budget Amount - MTD:** Its Year to date of Budget Amount

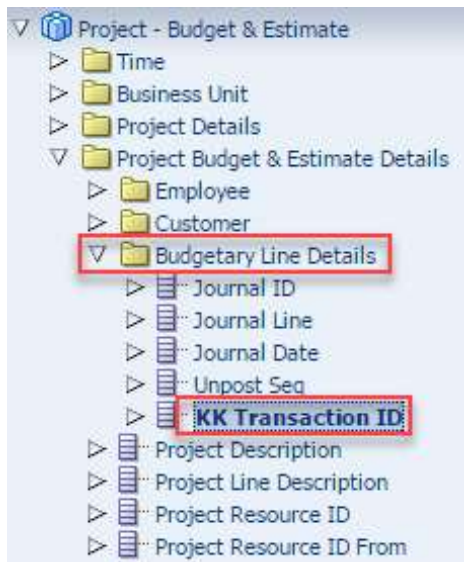
Fact – Project Estimate:

- **Estimate Amount:** Its RESOURCE_AMOUNT from PS_PROJ_RESOURCE with Analysis Type is 'EST'
- **Estimate Amount - ITD:** Its Inception to date of Estimate Amount
- **Estimate Amount - YTD:** Its Month to date of Estimate Amount
- **Estimate Amount - QTD:** Its Quarter to date of Estimate Amount
- **Estimate Amount - MTD:** Its Year to date of Estimate Amount

When building reports based on Budget & Estimate metrics units such as Budget Amount, Estimate Amt and Budget Amount ITD etc.. by PC Business Unit, use the Project – Budget & Estimate Subject area.

3.2. Crossfunctional Drilldown capability from Project – Budget & Estimate Subject Area:

Drilldown capabilities have been added from *Project – Budget & Estimate* Subject Area to *Financials - Budgetary Control - Detail Transactions* Subject Area using a linkage column *KK Transaction ID*. This Linkage column is in Budgetary Line Details folder under Project Budget & Estimate Details presentation table as shown below.



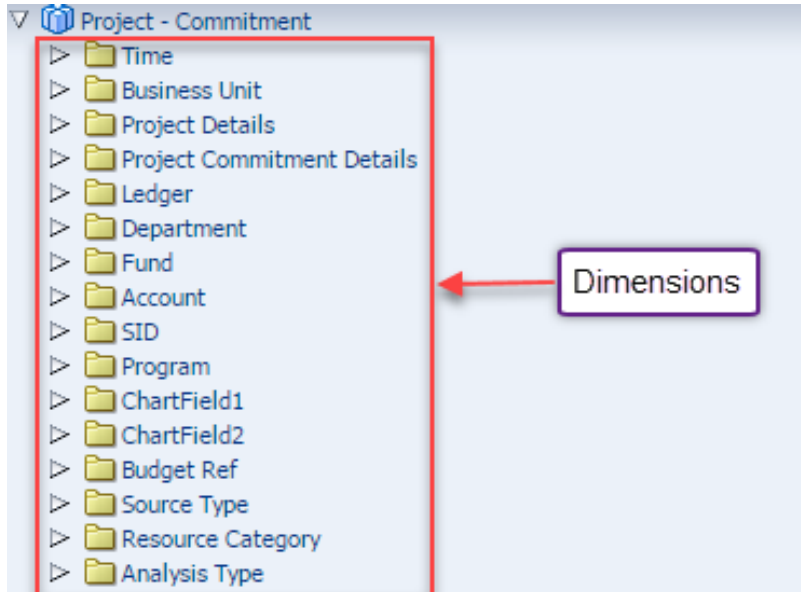


4. Project - Commitment Subject Area:

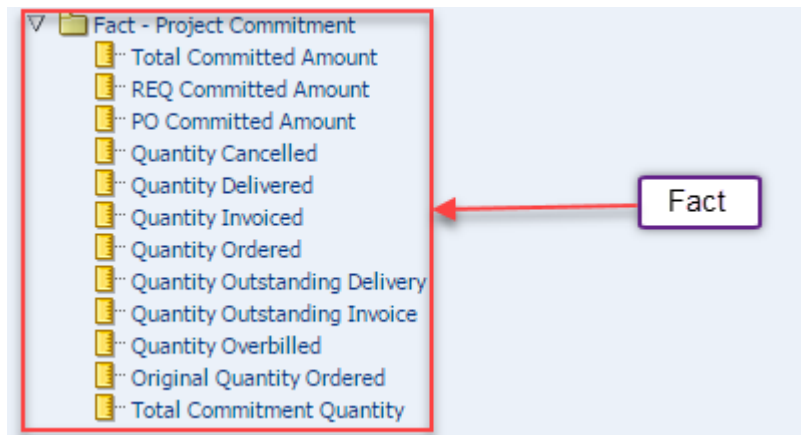
This is a detailed subject area that provides the ability to report on Project Commitment (Encumbrances and Pre-Encumbrances) across project details and Activity along with all related Chartfields and other dimensions like Vendor, Purchase Order details and Requisition details. The Analysis types included in this Subject Area are: CCA, COM, CRV, REQ and RRV.

Drilldown capabilities have been added to Purchase Orders and Requisitions.

Project – Commitment Subject Area Dimensions:



Project – Commitment Subject Area Fact:



4.1. Fact - Measure Definitions:

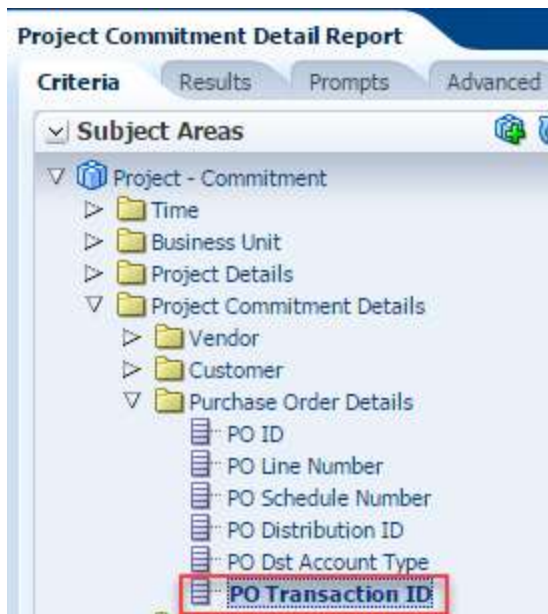
- **Total Commitment Quantity:** Total number of units committed. For example, hours of labor committed in a purchase order, purchase requisition

Project Analytics Facts & Dimensions Job Aid

- **Total Commitment Amount:** The sum of commitments from purchase requisitions, purchase orders. Its RESOURCE_AMOUNT from PS_PROJ_RESOURCE table with analysis group IN ('CTENC','CTPRE')
- **REQ Committed Amount:** Purchase requisition commitment cost, and its Commitment Amount USING Commitment Type is 'P'
- **PO Committed Amount:** Its Purchase order commitment cost, and its Commitment Amount USING Commitment Type is 'R'
- **Quantity Cancelled:** Total number of units committed that have been cancelled
- **Quantity Delivered:** Total number of units committed that have been delivered
- **Quantity Invoiced:** Total number of units committed that have been Invoiced
- **Quantity Ordered:** Total number of units committed that have been Ordered
- **Quantity Outstanding Delivery:** Total number of units committed that have not been delivered
- **Quantity Outstanding Invoice:** Total number of units committed that have not been invoiced
- **Quantity Overbilled:** Total number of units committed that have been overbilled
- **Original Quantity Ordered:** Total number of units that have been ordered and are committed

4.2. Crossfunctional Drilldown capability from Project – Commitment Subject Area:

Drilldown capabilities have been added from *Project – Commitment* Subject Area to *PO* Subject Area using a linkage column *PO Transaction ID*. This Linkage column is present in Purchase Order Details folder under Project Commitment Details presentation table as shown below.



Example:

Navigate from Dashboards > Projects on the global header. From the Project Commitment Dashboard page drill on Project ID on any transaction which drills to the Project Commitment Detail Report

Project Analytics Facts & Dimensions Job Aid



Projects

Project Performance Contract Performance Project Payroll Costs Project Budget Project Estimate Project Cost Project Revenue **Project Commitment** Project Contract Details

* Calendar Id++ Fiscal Year Accounting Period Accounting Date
 State --Select Value-- --Select Value-- Between: [] []

* PC Business Unit * Project ID Activity ID Project Status Project Type
 DOTM1 --Select Value-- DOT00040111CN --Select Value-- --Select Value-- --Select Value-- --Select Value--

Project Location Project Manager Fund SID Analysis Type
 --Select Value-- --Select Value-- --Select Value-- --Select Value-- --Select Value--

Apply Reset

Project Commitment Report

PC Business Unit	Project ID	Project Name	Project Type	Project Manager	Project Status	Project Status Description	Activity ID	Activity Description	Analysis Type	Total Commitment Quantity	Total Committed Amount
DOTM1	DOT00040111CN	AVON REHAB BR #155850	DOTCN	Bhardwaj,Prm S	D	OPEN	CT0000	CONTRACTOR	CCA	(1.00)	(505,480.00)
DOTM1	DOT00040111CN	AVON REHAB BR #155850	DOTCN	Bhardwaj,Prm S	D	OPEN	CT0000	CONTRACTOR	CDM	2.00	1,010,960.00
DOTM1	DOT00040111CN	AVON REHAB BR #155850	DOTCN	Bhardwaj,Prm S	D	OPEN	CT0000	CONTRACTOR	CRV	(1.00)	(494,202.33)
DOTM1	DOT00040111CN	AVON REHAB BR #155850	DOTCN	Bhardwaj,Prm S	D	OPEN	IN0000	INCIDENTALS	CCA	(1.00)	(183,120.00)
DOTM1	DOT00040111CN	AVON REHAB BR #155850	DOTCN	Bhardwaj,Prm S	D	OPEN	IN0000	INCIDENTALS	CDM	4.00	333,120.00
DOTM1	DOT00040111CN	AVON REHAB BR #155850	DOTCN	Bhardwaj,Prm S	D	OPEN	IN0000	INCIDENTALS	CRV	(2.00)	(84,954.40)
Grand Total										1.00	126,323.18

Project Commitment Detail Report

Account	SID	Program	ChartField1	ChartField2	Budget Ref	Source Type	Category	Commitment Type Description	Total Committed Amount	PO Transaction ID	PO ID	Requisition ID	REQ Transaction ID
8850	22108	34001			2016			Purchase orders	505,480.00	DOTM1~0000166088~1~1~DST~1	0000166088	0	0
8850	22108	34001						Purchase orders	505,480.00	DOTM1~0000166088~1~1~DST~2	0000166088	0	0
									1,010,960.00				

Now click on PO Transaction ID which will navigate from *Project – Commitment* subject area to PO Link Report, which is built using *Procurement and Spend – Purchase Orders* Subject area

PO Link Report

Accounting Year	Accounting Period	PO Business Unit	REQ Business Unit	PO ID	PO Transaction ID	Requisition ID	Vendor ID	Ledger Name	Dept ID	Fund	Account	SID	PO Quantity	PO Amount
2017	Period 1 - 2016-07-01	DOTM1		0000166088	DOTM1~0000166088~1~1~DST~2		0000000004	Unspecified	DOT37171	12062	35850	22108	1.00	\$505,480.00

Return - Analyze - Edit - Refresh - Print - Export - Create Bookmark Link

Click on the [Analyze](#) link to view the *Procurement and Spend – Purchase Orders* subject area

PO Link Report

Criteria Results Prompts Advanced

Subject Areas

- Procurement and Spend - Purchase Orders
 - Accounting Date
 - Business Unit
 - Purchase Order Details
 - Procurement Contract Details
 - PO KK Exception Details
 - Requisition Details
 - GL Details
 - Vendor Details
 - Ledger
 - Agreement Leverage Type
 - Department
 - Fund
 - Account
 - SID
 - Program
 - ChartField1
 - ChartField2
 - Budget Ref
 - Project
 - Project Activity
 - Source Type
 - Resource Category
 - Fact - Purchase Orders

Selected Columns

Double click on column names in the Subject Areas pane to add them to the analysis. Once added, drag them to the Selected Columns pane.

Accounting Date Business Unit
 Accounting Year Accounting Period PO Business Unit REQ Business Unit

Filters

Add filters to the analysis criteria by clicking on Filter option for the specific column in the Selected Columns pane.

PO Transaction ID is equal to / is in DOTM1~0000166088~1~1~DST~2



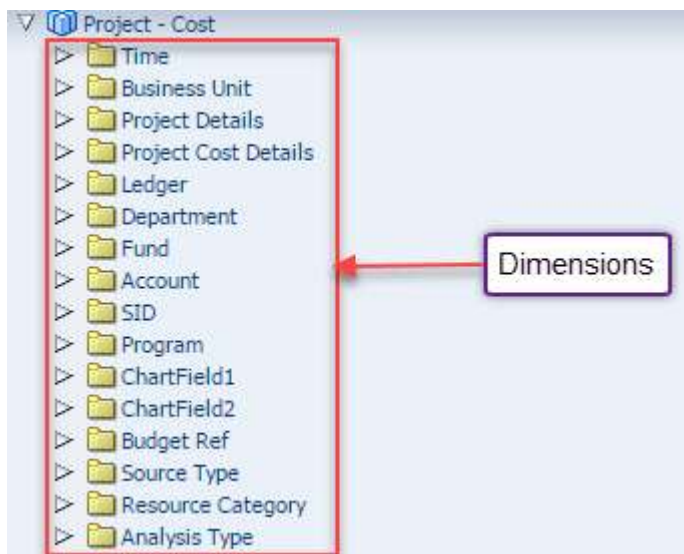
5. Project - Cost Subject Area:

This detailed subject area that provides the ability to report on Cost/Expenditure for the past and current periods including inception-to-date, year-to-date comparisons across project details and Activity along with all related Chartfields and other attributes like Employee, Vendor, Customer, General Ledger details, Account Payables details, Purchase Order details, Time and Labor details and Payroll details.

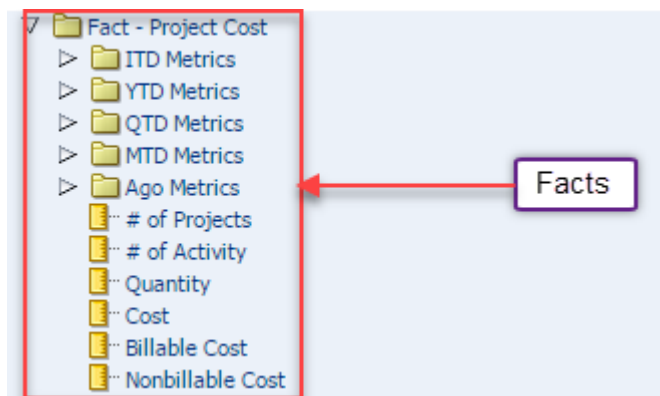
The Analysis types included in this Subject Area are: ACT, ADD, ADM, APC, BEN, FSP, GLE, HSC, HSE, ICF, ICS, IKE, MSA, SP, PAY and SSP.

Drilldown capabilities have been added to GL, AP, PO, Time & Labor and Payroll.

Project – Cost Subject Area Dimensions:



Project – Cost Subject Area Facts:



5.1. Fact - Measure Definitions:

- **# of Projects:** Number of distinct Projects with Cost associated
- **# of Activity:** Number of distinct Activities with Cost associated



- **Quantity:** Quantity of time (example: hours) booked that becomes basis to calculate cost that is directly attributed to work performed
- **Cost:** Its RESOURCE_AMOUNT from PS_PROJ_RESOURCE table with analysis group is 'ACT'
- **Billable Cost:** Total cost flagged as billable as they result from transactions that are chargeable and activity denoted as billable
- **Nonbillable Cost:** Total cost not flagged as billable because the transactions are not chargeable or the activity where they were performed are not denoted as billable
- **ITD Metrics:** This table contains inception-to-date (ITD) accumulated cost metrics
- **YTD Metrics:** This table contains year-to-date (YTD) accumulated cost metrics
- **QTD Metrics:** This table contains Quarter-to-date (QTD) accumulated cost metrics
- **MTD Metrics:** This table contains month-to-date (MTD) accumulated cost metrics

5.2. Crossfunctional Drilldown capability from Project – Cost Subject Area:

Drilldown capabilities have been added to *Project – Cost* Subject Area using these linkage columns *GL Transaction ID*, *AP Transaction ID*, *PO Transaction ID* and *TL Transaction ID*. This respective Linkage columns are present in the following folders under Project Cost Details as shown below.





Project Analytics Facts & Dimensions Job Aid

The above shown Linkage columns that allow users to drill down from *Project – Cost* Subject Area to *Financials - GL Detail Transactions* Subject Area, *Financials - AP Voucher Line Distrib Details* Subject Area, *Procurement and Spend - Purchase Orders* Subject Area and *Human Resources - Time and Labor* Subject Area.

Note: Drill down from *Project – Cost* Subject Area to *Human Resources - Time and Labor* Subject Area is possible only for the records with Analysis Type equal to 'PAY'

Example:

Compound Layout:

Compound Layout view allows us to assemble different views for display on a dashboard.

In this example, we displayed the Title and Table views.

Project Cost Report

Criteria Results Prompts Advanced

Subject Areas

- Project - Cost
- Time
- Business Unit
- Project Details
- Project Cost Details
- Ledger
- Department
- Fund
- Account
- SID
- Program
- ChartField1
- ChartField2
- Budget Ref
- Source Type
- Resource Category
- Analysis Type
- Fact - Project Cost

Compound Layout

Title: Project Cost Report

Table:

PC Business Unit	Project ID	Project Name	Project Manager	Project Type	Project City	Project Status	Project Status Description
DOTM1	DOT00040131CN	AVON: REHAB BR #05850	Bhardwaj,Priti S	DOTCN	NOT_APPLICABLE	O	OPEN
DOTM1	DOT00040131CN	AVON: REHAB BR #05850	Bhardwaj,Priti S	DOTCN	NOT_APPLICABLE	O	OPEN
DOTM1	DOT00040131CN	AVON: REHAB BR #05850	Bhardwaj,Priti S	DOTCN	NOT_APPLICABLE	O	OPEN
DOTM1	DOT00040131CN	AVON: REHAB BR #05850	Bhardwaj,Priti S	DOTCN	NOT_APPLICABLE	O	OPEN
DOTM1	DOT00040131CN	AVON: REHAB BR #05850	Bhardwaj,Priti S	DOTCN	NOT_APPLICABLE	O	OPEN
DOTM1	DOT00040131CN	AVON: REHAB BR #05850	Bhardwaj,Priti S	DOTCN	NOT_APPLICABLE	O	OPEN
DOTM1	DOT00040131CN	AVON: REHAB BR #05850	Bhardwaj,Priti S	DOTCN	NOT_APPLICABLE	O	OPEN
DOTM1	DOT00040131CN	AVON: REHAB BR #05850	Bhardwaj,Priti S	DOTCN	NOT_APPLICABLE	O	OPEN
Grand Total							

Filters:

PC Business Unit is equal to **DOTM1**
and Calendar Id++ is equal to **State**
and Project ID is equal to **DOT00040131CN**

Dashboard View:

Project Cost Report

Project Performance Current Performance Project Fiscal Data Project Budget Project Details **Project Cost** Project Revenue Project Commitments Project Contract Details

* Calendar Id++: State
* Fiscal Year: [Select Value]
* Accounting Period: [Select Value]
* Accounting Date: [Between]

* PC Business Unit: DOTM1
* Project ID: DOT00040131CN
* Activity ID: [Select Value]
* Project Status: [Select Value]
* Project Type: [Select Value]

Project Location: [Select Value]
Project Manager: [Select Value]
Fund: [Select Value]
SID: [Select Value]
Analysis Type: [Select Value]

Project Cost Report

PC Business Unit	Project ID	Project Name	Project Manager	Project Type	Project City	Project Status	Project Status Description	Activity ID	Activity Description	Analysis Type	Analysis Type Description	Cost	Quantity
DOTM1	DOT00040131CN	AVON: REHAB BR #05850	Bhardwaj,Priti S	DOTCN	NOT_APPLICABLE	O	OPEN	CT0000	CONTRACTOR	ACT	Actual Cost	469,200.50	5.00
DOTM1	DOT00040131CN	AVON: REHAB BR #05850	Bhardwaj,Priti S	DOTCN	NOT_APPLICABLE	O	OPEN	CT0000	CONTRACTOR	INE	In Hand Expenses	116,090.58	5.00
DOTM1	DOT00040131CN	AVON: REHAB BR #05850	Bhardwaj,Priti S	DOTCN	NOT_APPLICABLE	O	OPEN	IN0000	INCIDENTALS	ACT	Actual Cost	86,994.49	6.00
DOTM1	DOT00040131CN	AVON: REHAB BR #05850	Bhardwaj,Priti S	DOTCN	NOT_APPLICABLE	O	OPEN	IN0000	INCIDENTALS	ADD	System Use Only - DOT Address	11,670.30	0.00
DOTM1	DOT00040131CN	AVON: REHAB BR #05850	Bhardwaj,Priti S	DOTCN	NOT_APPLICABLE	O	OPEN	IN0000	INCIDENTALS	FSR	Federal Split	(12,570.31)	0.00
DOTM1	DOT00040131CN	AVON: REHAB BR #05850	Bhardwaj,Priti S	DOTCN	NOT_APPLICABLE	O	OPEN	IN0000	INCIDENTALS	INE	In Hand Expenses	21,738.63	6.00
DOTM1	DOT00040131CN	AVON: REHAB BR #05850	Bhardwaj,Priti S	DOTCN	NOT_APPLICABLE	O	OPEN	IN0000	INCIDENTALS	OSP	Other/Local Split	12,572.31	0.00
DOTM1	DOT00040131CN	AVON: REHAB BR #05850	Bhardwaj,Priti S	DOTCN	NOT_APPLICABLE	O	OPEN	IN0000	INCIDENTALS	FKY	Time and Labor Actual	51,177.08	2,370.88
Grand Total												749,295.44	2,252.89

Filters:

PC Business Unit is equal to **DOTM1**
and Calendar Id++ is equal to **State**
and Project ID is equal to **DOT00040131CN**

Click on any Project ID with Analysis Type equal to 'PAY' in order to drill to the Project Cost Detail Report

Project Analytics Facts & Dimensions Job Aid



Voucher ID	Journal ID	Journal Date	Journal Line	PO ID	AP Business Unit	Vendor Number	Vendor Name	AP Transaction ID	PO Transaction ID	TL Transaction ID	GL Transaction ID
0	0		0.00	0	0	Unspecified	Unspecified	0	0	283945~0~03-MAR-16~REG	0
0	0		0.00	0	0	Unspecified	Unspecified	0	0	415950~0~03-MAR-16~REG	0
0	0		0.00	0	0	Unspecified	Unspecified	0	0	283945~0~03-MAR-16~OVT	0
0	0		0.00	0	0	Unspecified	Unspecified	0	0	415950~0~03-MAR-16~FD140	0
0	0		0.00	0	0	Unspecified	Unspecified	0	0	283945~0~03-MAR-16~FD016	0
0	0		0.00	0	0	Unspecified	Unspecified	0	0	283945~0~03-MAR-16~FD043	0
0	0		0.00	0	0	Unspecified	Unspecified	0	0	283945~0~03-MAR-16~FD479	0
0	0		0.00	0	0	Unspecified	Unspecified	0	0	415950~0~03-MAR-16~FD016	0
0	0		0.00	0	0	Unspecified	Unspecified	0	0	415950~0~03-MAR-16~FD043	0
0	0		0.00	0	0	Unspecified	Unspecified	0	0	415950~0~03-MAR-16~FD471	0
0	0		0.00	0	0	Unspecified	Unspecified	0	0	283945~0~03-MAR-16~FD139	0
0	0		0.00	0	0	Unspecified	Unspecified	0	0	415950~0~03-MAR-16~FD139	0
0	0		0.00	0	0	Unspecified	Unspecified	0	0	283945~0~03-MAR-16~FT001	0
0	0		0.00	0	0	Unspecified	Unspecified	0	0	415950~0~03-MAR-16~FT001	0

Click on any TL Transaction ID to navigate to the TL Link Report

TL Link Report

Frozen Date	Empl ID	Employee ID	Department	Department ID	Position Number	Position Description	Job Code	Job Name	Time Reporting Code (TRC)	TRC Description	Processed Quantity	Processed Hours	Processed Time	Estimated Gross Cost Amount
3/3/2016	283945	31810038	283945	Bureau/Engineering&Construction	00787200	30031977	TranspEng 313C	6774PE	TdrgJCE	REG	7.00	7.00		361.89
3/3/2016	283945	31221016	283945	Bureau/Engineering&Construction	00787200	30031977	TranspEng 313C	6774PE	TdrgJCE	REG	8.00	8.00		447.87
3/3/2016	283945	31231016	283945	Bureau/Engineering&Construction	00787200	30031977	TranspEng 313C	6774PE	TdrgJCE	REG	8.00	8.00		447.87
3/3/2016	283945	31241016	283945	Bureau/Engineering&Construction	00787200	30031977	TranspEng 313C	6774PE	TdrgJCE	REG	8.00	8.00		447.87
3/3/2016	283945	31251016	283945	Bureau/Engineering&Construction	00787200	30031977	TranspEng 313C	6774PE	TdrgJCE	REG	8.00	8.00		447.87
3/3/2016	283945	31261016	283945	Bureau/Engineering&Construction	00787200	30031977	TranspEng 313C	6774PE	TdrgJCE	REG	8.00	8.00		447.87
3/3/2016	283945	31110018	283945	Bureau/Engineering&Construction	00787200	30031977	TranspEng 313C	6774PE	TdrgJCE	REG	8.00	8.00		447.87
3/3/2016	283945	31210018	283945	Bureau/Engineering&Construction	00787200	30031977	TranspEng 313C	6774PE	TdrgJCE	REG	8.00	8.00		447.87
3/3/2016	283945	31210018	283945	Bureau/Engineering&Construction	00787200	30031977	TranspEng 313C	6774PE	TdrgJCE	REG	8.00	8.00		447.87
Grand Total											71.00	71.00		3,974.81

Click the [Analyze](#) link to view the *Human Resources - Time and Labor* Subject Area

TL Link Report

Criteria
Results
Prompts
Advanced

Subject Areas

- Human Resources - Time and Labor
 - Time
 - Department
 - Worker Attributes
 - Timecard Information
 - Processed Time Information
 - Project Information
 - Facts - Human Resources - Reported Timecards
 - Facts - Human Resources - Processed Timecards

Selected Columns

Double click on column names in the Subject Areas pane to add them to the analysis. Once added

TLB Details	Calendar	Basic Information
Frozen Date	Empl ID	TL Transaction ID
DUR	Employee ID	

Filters

Add filters to the analysis criteria by clicking on Filter option for the specific column in the Selected Columns pane.

TL Transaction ID is equal to / is in 283945~0~03-MAR-16~REG

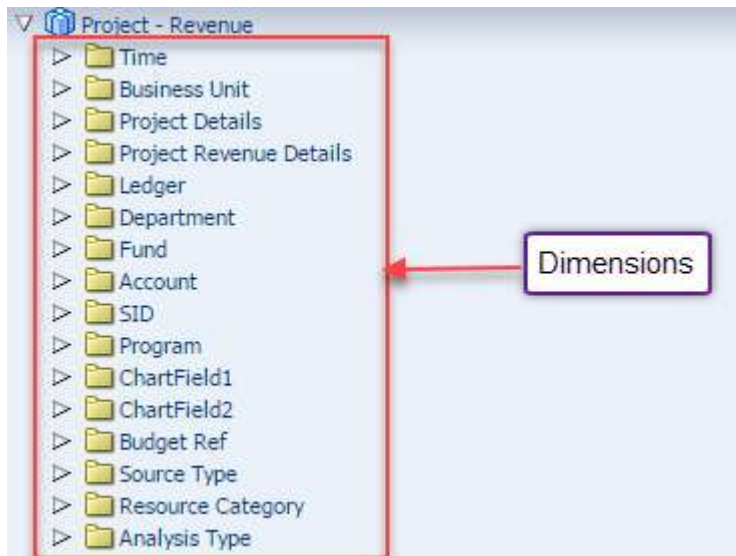


6. Project - Revenue Subject Area:

This is a detailed subject area that provides the ability to report on Project Revenue (Billed and Billable) for the past and current periods including inception-to-date, year-to-date comparisons across project details and Activity along with all related Chartfields and other dimensions like Employee, Customer, Account Payables details, Purchase Order details, Time and Labor details and Payroll details. The Analysis types included in this Subject Area are: BAJ, BIL, BLD, OLT, UAJ and UTL.

Drilldown capabilities have been added to AP, PO, Time & Labor and Payroll.

Project – Revenue Subject Area Dimensions:



Project – Revenue Subject Area Facts:



6.1. Fact - Measure Definitions:

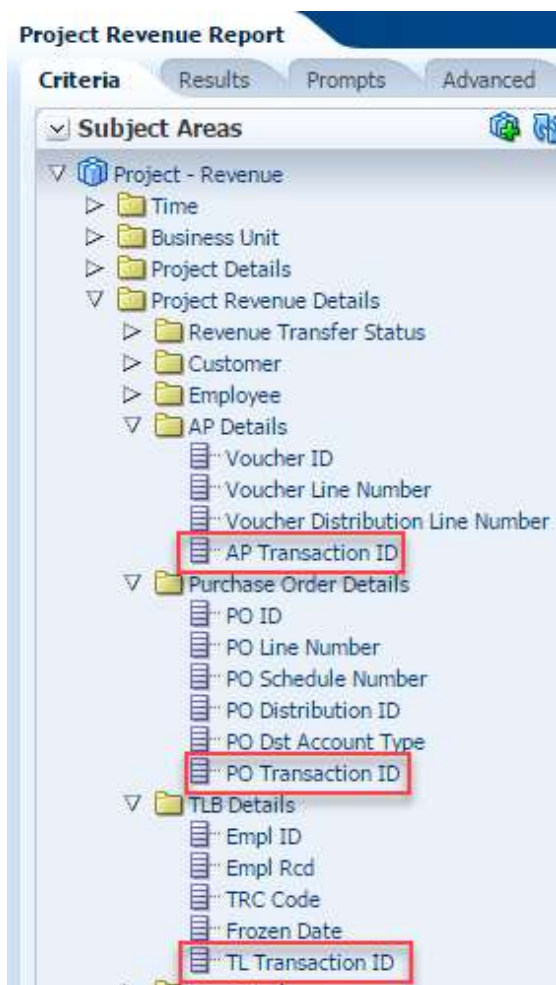
- **# of Projects:** Number of distinct Projects with a Revenue Distribution Line associated.
- **# of Activity:** Number of distinct Activities with a Revenue Distribution Line associated
- **Revenue Quantity:** Number of Units (of Material or Hours) used for this Revenue Distribution Line
- **Revenue Amount:** Its RESOURCE_AMOUNT from PS_PROJ_RESOURCE table with analysis group is 'PSREV'

Project Analytics Facts & Dimensions Job Aid

- **Active Contracts Revenue Amount:** Revenue of contract lines with status "Active"
- **ITD Metrics:** This table contains inception-to-date (ITD) accumulated revenue metrics
- **YTD Metrics:** This table contains year-to-date (YTD) accumulated revenue metrics
- **QTD Metrics:** This table contains Quarter-to-date (QTD) accumulated revenue metrics
- **MTD Metrics:** This table contains month-to-date (MTD) accumulated revenue metrics
- **Aggo Metrics:** This table contains metrics with values for previous periods, such as Month ago (MAGO), quarter ago (QAGO) and Year ago (YAGO)

6.2. Crossfunctional Drilldown capability from Project – Revenue Subject Area:

Drilldown capabilities have been added to *Project – Revenue* Subject Area using these linkage columns *AP Transaction ID*, *PO Transaction ID* and *TL Transaction ID*. These respective Linkage columns are present in the following folders under Project Revenue Details as shown below.



The Linkage columns shown above allow users to drill down from *Project – Cost* Subject Area to the *Financials - AP Voucher Line Distrib Details* Subject Area, *Procurement and Spend - Purchase Orders* Subject Area and *Human Resources - Time and Labor* Subject Area respectively.

Project Analytics Facts & Dimensions Job Aid

Example:

Compound Layout:

Compound Layout view allows us to assemble different views for display on a dashboard.

In this example, we displayed the Title and Table views.

The screenshot shows the 'Project Revenue Report' interface. On the left, a tree view under 'Subject Areas' has 'Project - Revenue' selected. On the right, the 'Compound Layout' view displays a title 'Project Revenue Report' and a table with the following data:

PC Business Unit	Project ID	Project Name	Project Manager	Project Type
DOTM1	DOT00040131CN	AVON: REHAB BR #05850	Bhardwaj,Pri S	DOTCN
DOTM1	DOT00040131CN	AVON: REHAB BR #05850	Bhardwaj,Pri S	DOTCN
Grand Total				

Dashboard View:

The screenshot shows the 'Project Revenue Report' dashboard. It includes several filter sections:

- Calendar Id:** State
- Fiscal Year:** --Select Value--
- Accounting Period:** --Select Value--
- Accounting Date:** Between
- PC Business Unit:** DOTM1
- Project ID:** DOT00040131CN
- Activity ID:** --Select Value--
- Project Status:** --Select Value--
- Project Type:** --Select Value--
- Project Location:** --Select Value--
- Project Manager:** --Select Value--
- Fund:** --Select Value--
- SID:** --Select Value--
- Analysis Type:** --Select Value--

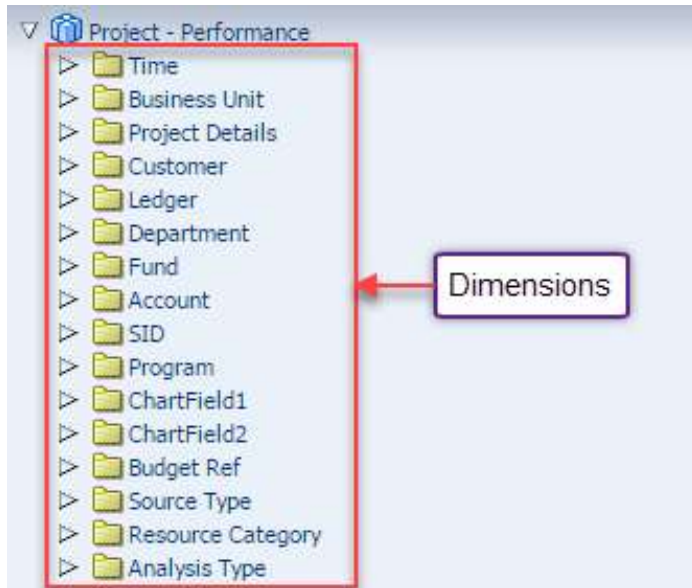
 Below the filters is a table titled 'Project Revenue Report' with the following data:

PC Business Unit	Project ID	Project Name	Project Manager	Project Type	Project City	Project Status	Project Status Description	Activity ID	Activity Description	Analysis Type	Analysis Type Description	Revenue Quantity	Revenue Amount
DOTM1	DOT00040131CN	AVON: REHAB BR #05850	Bhardwaj,Pri S	DOTCN	_NOT_APPLICABLE_	0	OPEN	CT0000	CONTRACTOR	BLD	Billed Amount	10.00	464,202.33
DOTM1	DOT00040131CN	AVON: REHAB BR #05850	Bhardwaj,Pri S	DOTCN	_NOT_APPLICABLE_	0	OPEN	IN0000	INCIDENTALS	BLD	Billed Amount	2,292.89	135,234.09
Grand Total												2,292.89	599,436.42

7. Project - Performance Subject Area:

This is a detailed subject area that combines relevant metrics and dimensions from the Budget & Estimate, Cost, Commitments, Revenue subject areas to facilitate creating reports that track Project performance across periods, projects, Activity and various Chartfields.

Project – Performance Subject Area Dimensions:



Project – Performance Subject Area Facts:



7.1. Fact - Measure Definitions:

- **Fact – Project Budget:** This table contains metrics for Project Budget and it contains the same metrics that are in Fact – Project Estimate of Project – Budget & Estimate Subject Area.
- **Fact – Project Estimate:** This table contains metrics for Project Estimates and it contains the same metrics that are in Fact – Project Estimate of Project – Budget & Estimate Subject Area.
- **Fact – Project Cost:** This table contains metrics to analyze the actual cost and it contains the same metrics that are in Project – Cost Subject Area
- **Fact – Project Revenue:** This table contains metrics to analyze the amount, status and sources of revenue and It contains the same metrics that are in Project – Revenue Subject Area
- **Fact – Project Commitment:** This table contains the metrics used to report on commitments and it contains the same metrics that are in Project – Commitment Subject Area

Project Analytics Facts & Dimensions Job Aid

Example:

Compound Layout:

Compound Layout view allows us to assemble different views for display on a dashboard.

In this example, we displayed the Title and Table views.

The screenshot shows the 'Project Performance Report' in a 'Compound Layout' view. The left sidebar contains a tree view of 'Subject Areas' with 'Fact - Project Commitment' selected. The main area displays a table with the following data:

PC Business Unit	Project ID	Project Name	Estimate Amount	Budget Amount	Cost	Committed Amount	Balance Amount	Revenue Amount
DOTM1	DOT00010090CN	ROUTE 6 RECONSTRUCTION	0.00					
DOTM1	DOT00010090MS	ROUTE 6 RECONSTRUCTION		(113.64)				
DOTM1	DOT00010090PE	ROUTE 6 RECONSTRUCTION	7,698,067.69	7,705,499.45	7,698,067.69	0.00	7,431.76	6,534,098.60
DOTM1	DOT00010090RW	ROUTE 6 RECONSTRUCTION	2,507,286.00	2,507,286.00	2,506,445.66	0.00	840.34	0.00
DOTM1	DOT00010093RW	RECONSTRUCT US 6 AT CT 316 INT	19,186.00	19,185.96	19,185.96			
DOTM1	DOT00010097PE	COMPUTER PARKING LOT 50 +/- SP	119,870.89	119,870.89	119,870.89			
DOTM1	DOT00010097RW	COMPUTER PARKING LOT 50 +/- SP	95,122.51	95,122.51	95,122.51			
DOTM1	DOT00010099CN	RTE&S SAFETY IMPR	4,962,965.17	4,962,965.17	4,968,774.97	0.00	(5,809.80)	4,173,694.92
DOTM1	DOT00010099PE	RTE&S SAFETY IMPR	475,206.89	472,937.74	475,206.89			
DOTM1	DOT00010099RW	RTE&S SAFETY IMPR	110,680.50	110,680.50	110,680.50			93,500.00
DOTM1	DOT00010100CN	RTE&S SAFETY IM-	6,070,055.72	6,070,055.72	6,070,055.72	0.00	0.00	5,100,279.23
DOTM1	DOT00010100PE	RTE&S SAFETY IM-	761,125.41	761,125.41	726,829.92			
DOTM1	DOT00010100RW	RTE&S SAFETY IM-	60,195.86	60,195.86	60,195.86			51,186.48

Dashboard View:

The screenshot shows the 'Project Performance Report' in a 'Dashboard View'. It features a filter section with dropdown menus for 'Calendar Id++', 'Fiscal Year', 'Accounting Period', 'Accounting Date', 'PC Business Unit', 'Project ID', 'Activity ID', 'Project Status', 'Project Type', 'Project Location', 'Project Manager', 'Fund', 'STD', and 'Analysis Type'. Below the filters is a 'Project Summary Report' table and a 'Project Performance Report' table.

Project Summary Report

PC Business Unit	Estimate Amount	Budget Amount	Cost	Committed Amount	Balance Amount	Revenue Amount
DOTM1	31,636,786,125.83	26,952,486,887.87	23,940,839,749.44	1,574,591,855.07	3,437,055,263.36	10,201,671,671.03

Project Performance Report

PC Business Unit	Project ID	Project Name	Estimate Amount	Budget Amount	Cost	Committed Amount	Balance Amount	Revenue Amount
DOTM1	DOT00010090CN	ROUTE 6 RECONSTRUCTION	0.00					
DOTM1	DOT00010090MS	ROUTE 6 RECONSTRUCTION		(113.64)				
DOTM1	DOT00010090PE	ROUTE 6 RECONSTRUCTION	7,698,067.69	7,705,499.45	7,698,067.69	0.00	7,431.76	6,534,098.60
DOTM1	DOT00010090RW	ROUTE 6 RECONSTRUCTION	2,507,286.00	2,507,286.00	2,506,445.66	0.00	840.34	0.00
DOTM1	DOT00010093RW	RECONSTRUCT US 6 AT CT 316 INT	19,186.00	19,185.96	19,185.96			
DOTM1	DOT00010097PE	COMPUTER PARKING LOT 50 +/- SP	119,870.89	119,870.89	119,870.89			



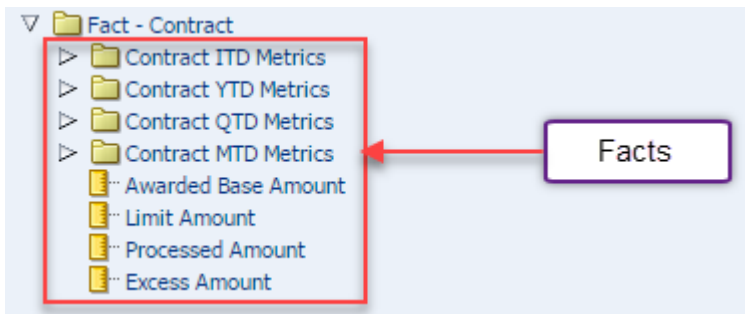
8. Project - Contract Subject Area:

This is a detailed subject area that provides the ability to track Awarded Base Amount, Contract Limit Amount, Processed Amount and Excess Amount. You can drill down from Contracts to Project Revenue.

Project - Contract Subject Area – Dimensions:



Project - Contract Subject Area - Facts:



8.1. Fact - Measure Definitions:

- Awarded Base Amount:** Its union of
 AWARDED_BASE_AMT from CA_LMT_FEE_DTL table
 and
 LIMIT_AMT_TXN CA_LMT_TXN table
- Limit Amount:** Its union of
 LIMIT_AMT_BIL from CA_LMT_FEE_DTL table
 and
 LIMIT_AMT_TXN from CA_LMT_TXN table
- Processed Amount:** Its union of
 LMT_PROC_AMT_B from CA_LMT_FEE_DTL table
 and
 LMT_PROC_AMT_B from CA_LMT_TXN table
- Excess Amount:** Its union of
 LMT_EXCESS_AMT_B from CA_LMT_FEE_DTL
 and
 LMT_EXCESS_AMT_B from CA_LMT_TXN
- Contract ITD Metrics:** This presentation table contains inception-to-date (ITD) accumulated Contract metrics

Project Analytics Facts & Dimensions Job Aid

- **Contract YTD Metrics:** This presentation table contains year-to-date (YTD) accumulated Contract metrics
- **Contract QTD Metrics:** This presentation table contains quarter-to-date (QTD) accumulated Contract metrics
- **Contract MTD Metrics:** This presentation table contains month-to-date (MTD) accumulated Contract metrics

Example:

Compound Layout: Compound Layout view allows us to assemble different views for display on a dashboard.

In this example, we displayed the Title and Table views.

The screenshot shows the 'Project Contract Performance' Compound Layout view. It features a 'Subject Areas' tree on the left with 'Project - Contract' and 'Fact - Contract' selected. The main area displays a table with the following data:

Contract Year	CA Business Unit	Contract Number	Contract Line Number	Transaction Identifier	Awarded Base Amount	Limit Amount	Processed Amount	Excess Amount
2000	DOTM1	0001(222)	1	0H760	0.00	0.00	0.00	0.00
2000	DOTM1	0001(222)	1	0Q760	5,268,741.14	5,268,741.14	5,268,741.14	0.00
2000	DOTM1	0001(242)	1	0Q210	10,527.72	10,527.72	10,527.72	0.00
2000	DOTM1	0001(247)	1	0Q760	987,514.43	987,514.43	987,514.43	0.00
2000	DOTM1	0001(261)	1	033A0	63,900.00	63,900.00	63,900.00	0.00
2000	DOTM1	0001(261)	1	0Q210	207,194.14	207,194.14	207,194.14	0.00
2000	DOTM1	00012(119)	1	0Q290	2,000,000.00	2,000,000.00	0.00	0.00
2000	DOTM1	0003(084)	1	0Q560	400,000.00	400,000.00	376,193.71	0.00
2000	DOTM1	0006(104)	1	0H770	0.00	0.00	0.00	0.00
2000	DOTM1	0006(104)	1	0Q760	291,867.83	291,867.83	291,867.83	0.00
2000	DOTM1	0006(104)	1	0Q770	5,724,753.22	5,724,753.22	5,724,753.22	0.00
2000	DOTM1	000R(006)	1	03200	90,000.00	90,000.00	90,000.00	0.00
2000	DOTM1	000R(006)	1	0Q400	4,883,162.54	4,883,162.54	4,883,162.54	0.00
2000	DOTM1	000R(008)	1	0Q330	14,025.24	14,025.24	14,025.24	0.00
2000	DOTM1	006R(014)	1	0Q240	112,144.44	112,144.44	112,144.44	0.00

Dashboard View:

The screenshot shows the 'Project Contract Performance' Dashboard View. It includes a filter section for CA Business Unit (DOTM1), Contract Year (2000), Contract Number (0001(222)), and Contract Customer ID (0001(222)). The table below displays the same data as the Compound Layout view:

Contract Year	CA Business Unit	Contract Number	Contract Line Number	Transaction Identifier	Awarded Base Amount	Limit Amount	Processed Amount	Excess Amount
2000	DOTM1	0001(222)	1	0H760	0.00	0.00	0.00	0.00
2000	DOTM1	0001(222)	1	0Q760	5,268,741.14	5,268,741.14	5,268,741.14	0.00
2000	DOTM1	0001(242)	1	0Q210	10,527.72	10,527.72	10,527.72	0.00
2000	DOTM1	0001(247)	1	0Q760	987,514.43	987,514.43	987,514.43	0.00
2000	DOTM1	0001(261)	1	033A0	63,900.00	63,900.00	63,900.00	0.00
2000	DOTM1	0001(261)	1	0Q210	207,194.14	207,194.14	207,194.14	0.00
2000	DOTM1	00012(119)	1	0Q290	2,000,000.00	2,000,000.00	0.00	0.00
2000	DOTM1	0003(084)	1	0Q560	400,000.00	400,000.00	376,193.71	0.00
2000	DOTM1	0006(104)	1	0H770	0.00	0.00	0.00	0.00
2000	DOTM1	0006(104)	1	0Q760	291,867.83	291,867.83	291,867.83	0.00

Project Analytics Facts & Dimensions Job Aid



Projects

Home Catalog Favorites Dashboard New Open Signout

Project Performance Contract Performance Project Fiscal Costs Project Budget Project Estimate Project Cost Project Revenue Project Governance **Project Contract Details**

* CA Business Unit Contract Year Contract Number Contract Customer ID
 DOT48 [x] 2009 00011222 00011222 00011222

Project Contract details report

Contract Year	CA Business Unit	Contract Customer ID	Contract Customer Name	Contract Number	Contract Description	Contract Type	Contract Status	Contract Start Date	Contract End Date	Contract Line Number	Contract Line
2009	DOTHS	FED003	Federal Highway Administration (FHWA)	00011222	Pearle US1 in vicin. of S-85	Government	FINAL VOUCHER SUBMITTED	6/14/2009	12/31/2009	1	DOT - Federal
2009	DOTHS	FED003	Federal Highway Administration (FHWA)	00011222	Pearle US1 in vicin. of S-85	Government	FINAL VOUCHER SUBMITTED	6/14/2009	12/31/2009	1	DOT - Federal
2009	DOTHS	FED005	Federal Highway Administration (FHWA)	00011242	PARIS US1 at westside overpass	Government	FINAL VOUCHER SUBMITTED	4/20/2009	1/29/2010	1	DOT - Federal
2009	DOTHS	FED005	Federal Highway Administration (FHWA)	00011247	Orange US2 at barbert rd	Government	FINAL VOUCHER SUBMITTED	5/21/2009	7/7/2010	1	DOT - Federal
2009	DOTHS	FED005	Federal Highway Administration (FHWA)	00011261	Orange US1 @ cherry hill rd	Government	FINAL VOUCHER SUBMITTED	6/11/2009	8/14/2011	1	DOT - Federal
2009	DOTHS	FED003	Federal Highway Administration (FHWA)	00011261	Orange US1 @ cherry hill rd	Government	FINAL VOUCHER SUBMITTED	6/11/2009	8/14/2011	1	DOT - Federal
2009	DOTHS	FED003	Federal Highway Administration (FHWA)	00011118	HARRINGTON CT 4 @ HARRISWY #EL	Government	Closed	5/18/2009	5/18/2009	1	DOT - Federal