TN Department of Finance & Administration | Strategic Technology Solutions

Maximizing Edison

Introduction

- Chad Rue
  - HCM Business Intelligence Module Lead
- David Case
  - Time and Labor Module Lead

Learning Objectives

1. Gain an understanding of some of the reporting features in Edison, which includes:
   a) Ad hoc reporting and analysis
   b) Dashboards
   c) Automated alerts
2. Learn about tools available to help you:
   a) Analyze data to track trends
   b) Recognize opportunities for business process improvement
3. Understand how to schedule queries and available delivery options

Understanding Business Intelligence (BI) &

Leveraging BI Analytics

TN®

Chad Rue

HCM Business Intelligence

HCM Business Intelligence

HCM Business Intelligence Agenda

- Query versus Analytics
  - Edison Query versus BI Analytics
  - Analytical Sample Questions
- Business Intelligence (BI)
  - What is Business Intelligence
  - Why Organizations Deploy BI Solutions
  - Objective of BI
- How Edison BI Works
  - BI Overview
  - Security
  - BI Navigation
  - Subject Areas
  - Self-service analytics
  - BI Answers
  - Dashboards
  - Automated alerts
  - Catalog

Queries versus Analytics

Queries

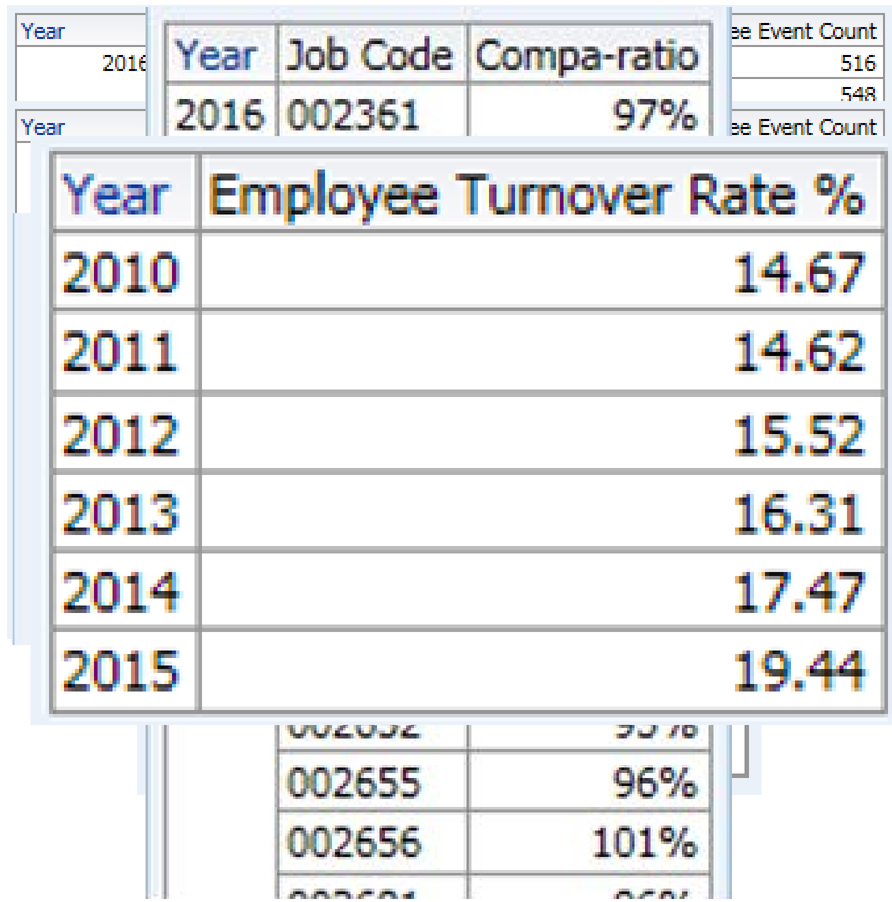
- Used for the day-to-day operations
- Request detailed transactional data from Edison
- Ensure transactional data is complete and accurate
- Focus on reviewing raw data

Analytics

- Used for planning, monitoring performance, and strategic decision making
- Discover meaningful patterns in data
- Focus on improving business process performance
- Understand historical trends and predict future outcomes

Analytical Questions

- How many employees are hired each month, quarter, or year?
- How many employees separated last month, quarter, or year?
- How are annual total gross wages trending in relation to employee headcount?
- What percentage of full-time, non-seasonal employees separate within one year of the last hire date?
- Are employees in a job series paid above or below midpoint?
- What is the total employee turnover trend for the last five years?



Year	Employee Turnover Rate %
2010	14.67
2011	14.62
2012	15.52
2013	16.31
2014	17.47
2015	19.44

What is Business Intelligence?

- **Business intelligence** (BI) is a technology-driven solution used to analyze data and present actionable information to help executive leadership, management and other end users make more informed business decisions that ultimately improve the performance of an organization

- ***BI*** provides users with a set of tools that allow an organization to create ad hoc analyses and visual analytics, monitor key performance metrics, and receive automated alerts per a schedule or conditional event

- Business intelligence leads to actionable insight, which is a course of action taken in response to the data

Why Organizations Deploy BI Solutions?

According to Dresner Advisory Services' flagship *Wisdom of Crowds Business Intelligence Market Study* the top five reasons why businesses deploy business intelligence are[1]:

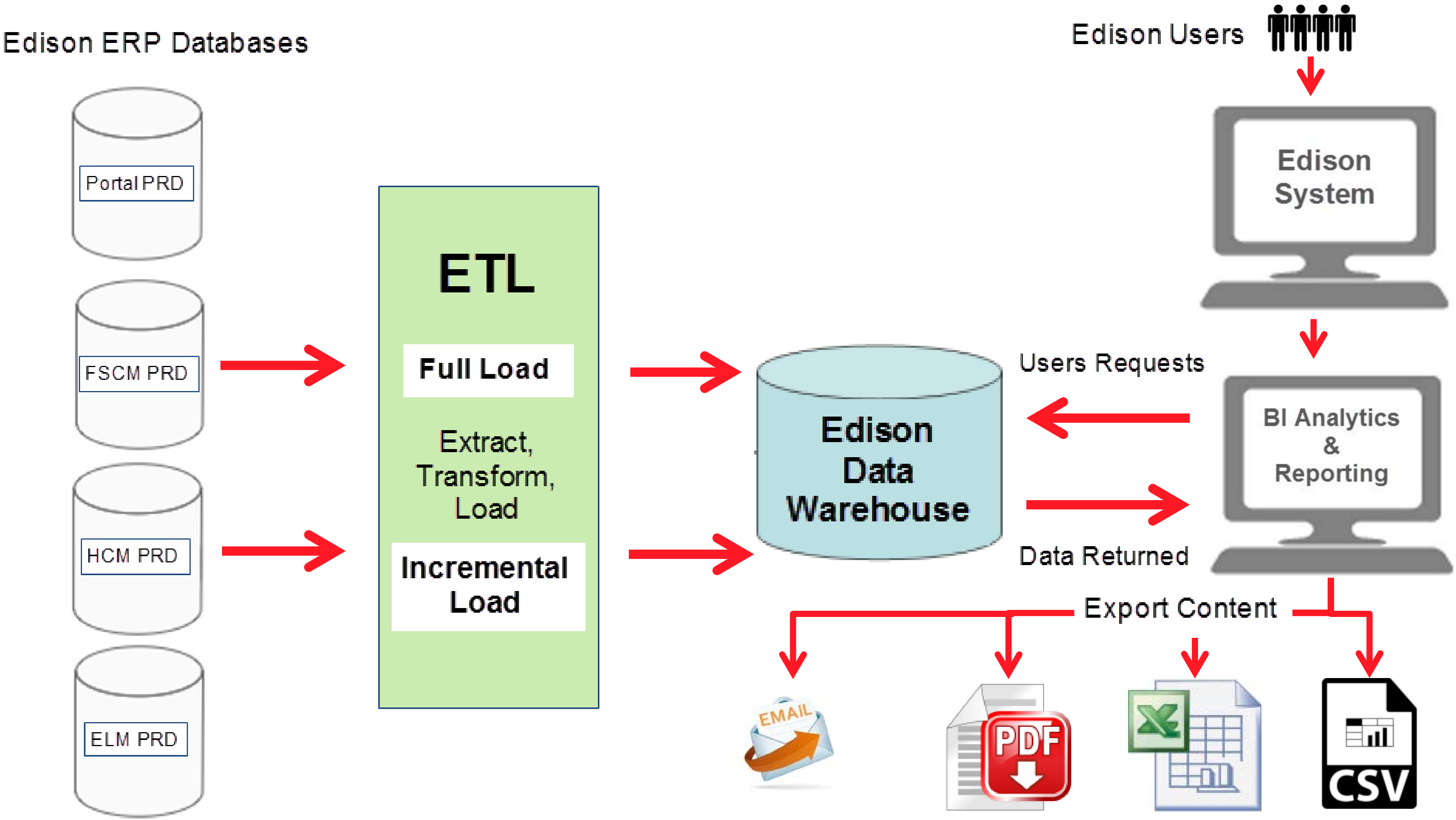
1) Better decision-making
2) Improved operational efficiency
3) Growth in Revenues
4) Increased competitive advantage
5) Enhanced customer service

[1] https://www.yellowfinbi.com/YFCommunityNews-Why-you-should-implement-Business-Intelligence-141076

Objective of Business Intelligence

- In summary, business intelligence should improve decision making, increase performance measured by key metrics that lead to success, and help an organization achieve strategic business objectives

How Edison BI Works: Overview



BI Security

BI Security

- Access to BI Application
- Available Subject Areas
  - Data Marts
  - e.g. payroll data mart
- Access to Folders and its Content
  - Read only versus Read/Write
- Data-Level Security
  - Users granted access to all data in business unit
  - Business unit access determine by Edison security trees
- Functionality
  - Controls the actions a user can perform
  - e.g. create analyses, dashboards, or other content

HCM BI Security Roles

Two Agency Specific Roles

- *HCM Agency BI roles*
  - HCM Author Role (Read/Edit/Create)
  - HCM Consumer Role (Read Only)

- *Edison Security Form*
  - FA-1015 Agency User Security Authorization form

Business Intelligence Access

***Consumer roles DO NOT require a signature*

Edison Business Intelligence		
☐ Agency FIN Author	☐ Agency FIN Consumer	☐ Agency SCM Author
☐ Agency SCM Consumer	☐ Agency HCM Author	☐ Agency HCM Consumer

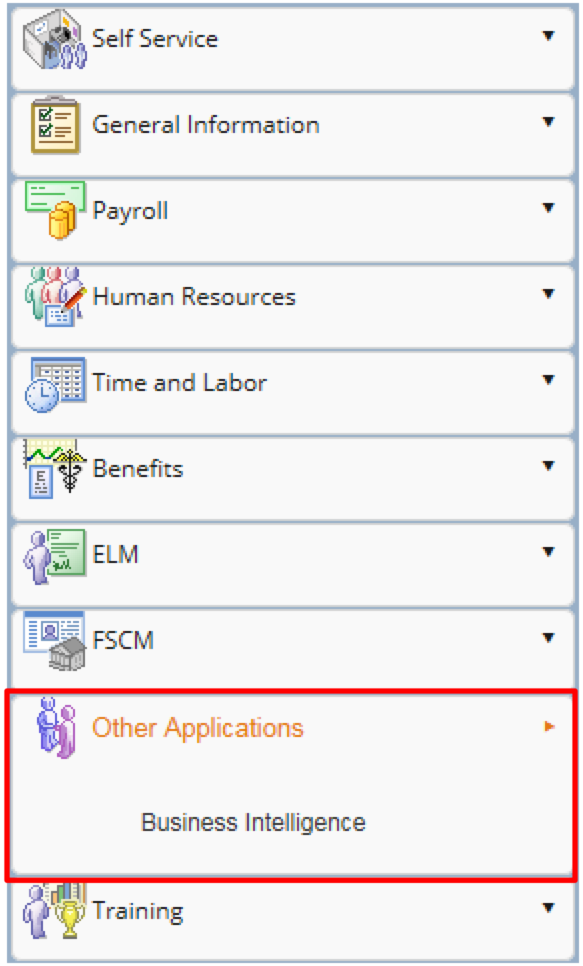
Navigating to BI

Navigate through Edison

- Single Sign-on
  - No Password Reentry

Breadcrumb Navigation

WorkCenter Navigation



Subject Areas

HCM BI currently has 3 subject areas available

- *Subject areas contain the data used to build reports*
- *Typically represents data produced by a business process*

1) Human Resources – Workforce Profile

– Data: Personal & Employee Attributes and HR Events

2) Human Resources – Compensation Data

– Data: Salary/Comp rates from Job Data

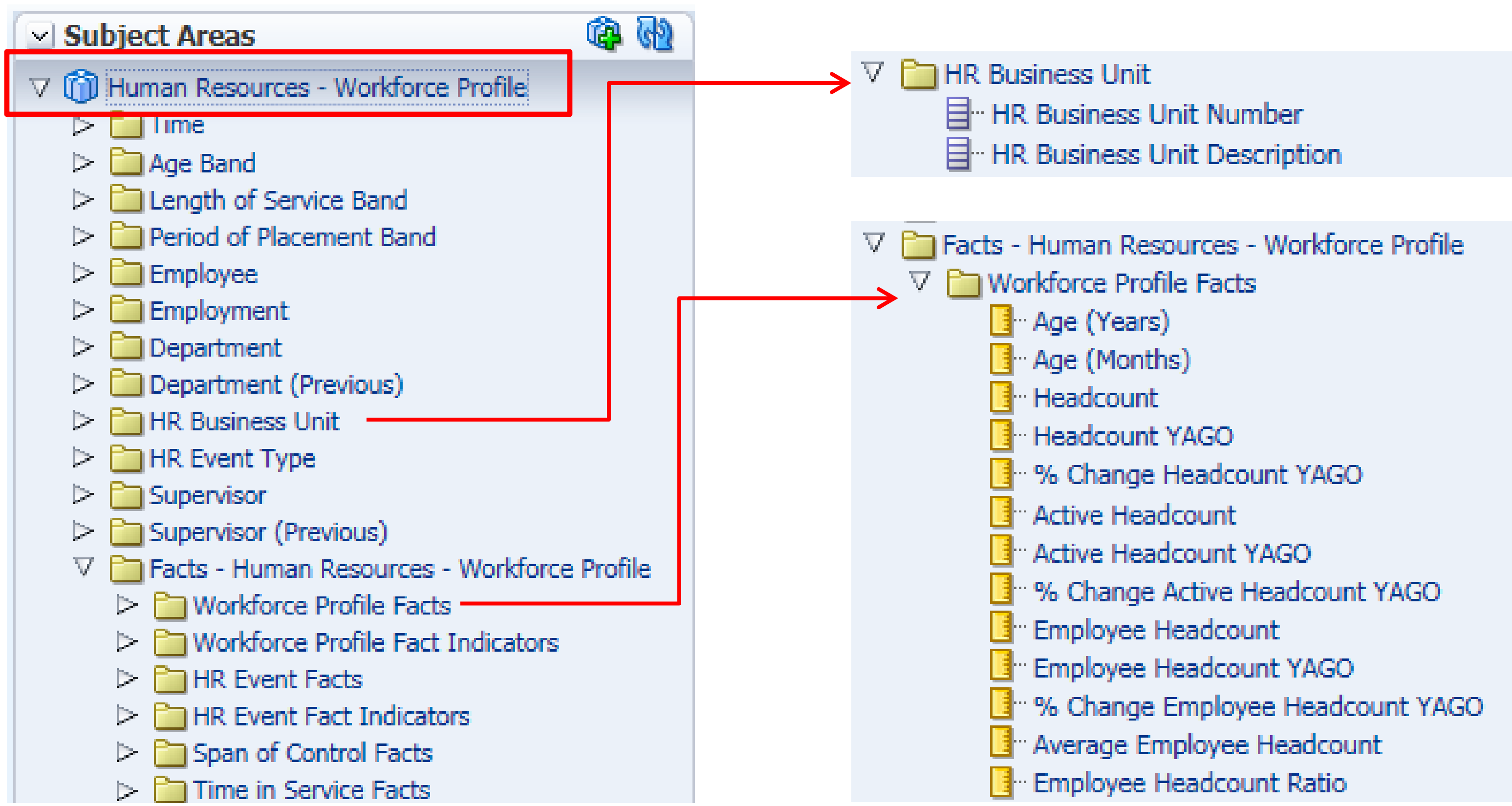
3) Human Resources – Payroll Data

– Data: Confirmed Payroll Processing Transactions

Subject Area Example

Human Resources – Workforce Profile

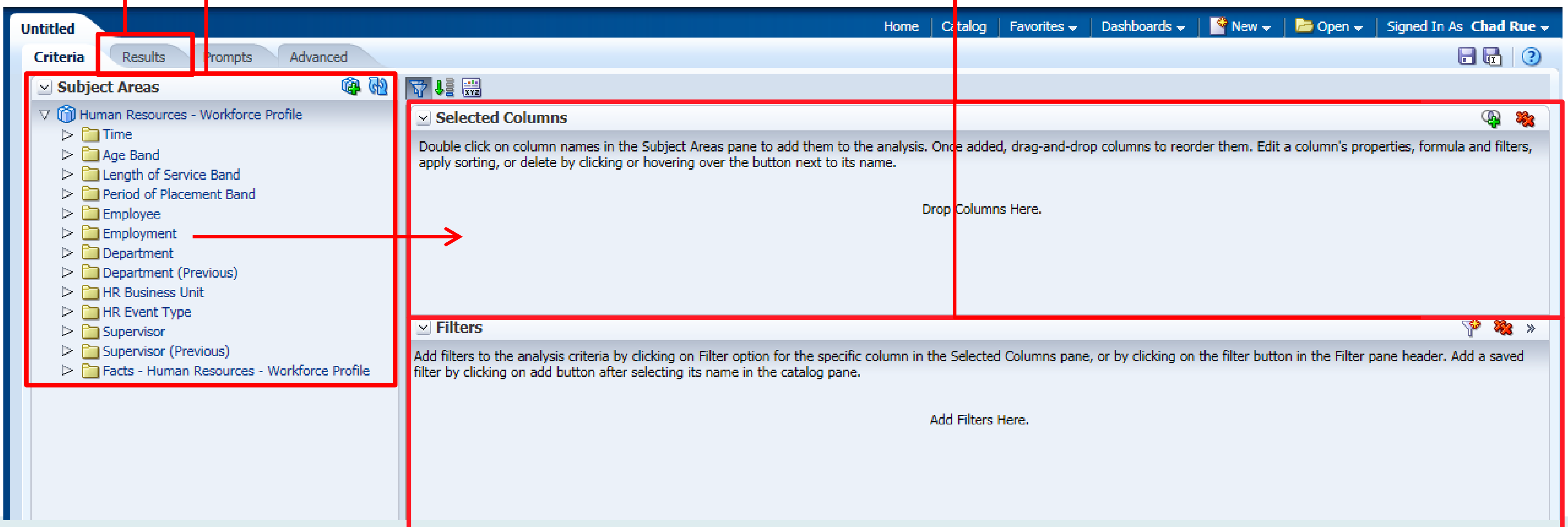
- Data: Personal & Employee Attributes and HR Events



Self-Service Analytics

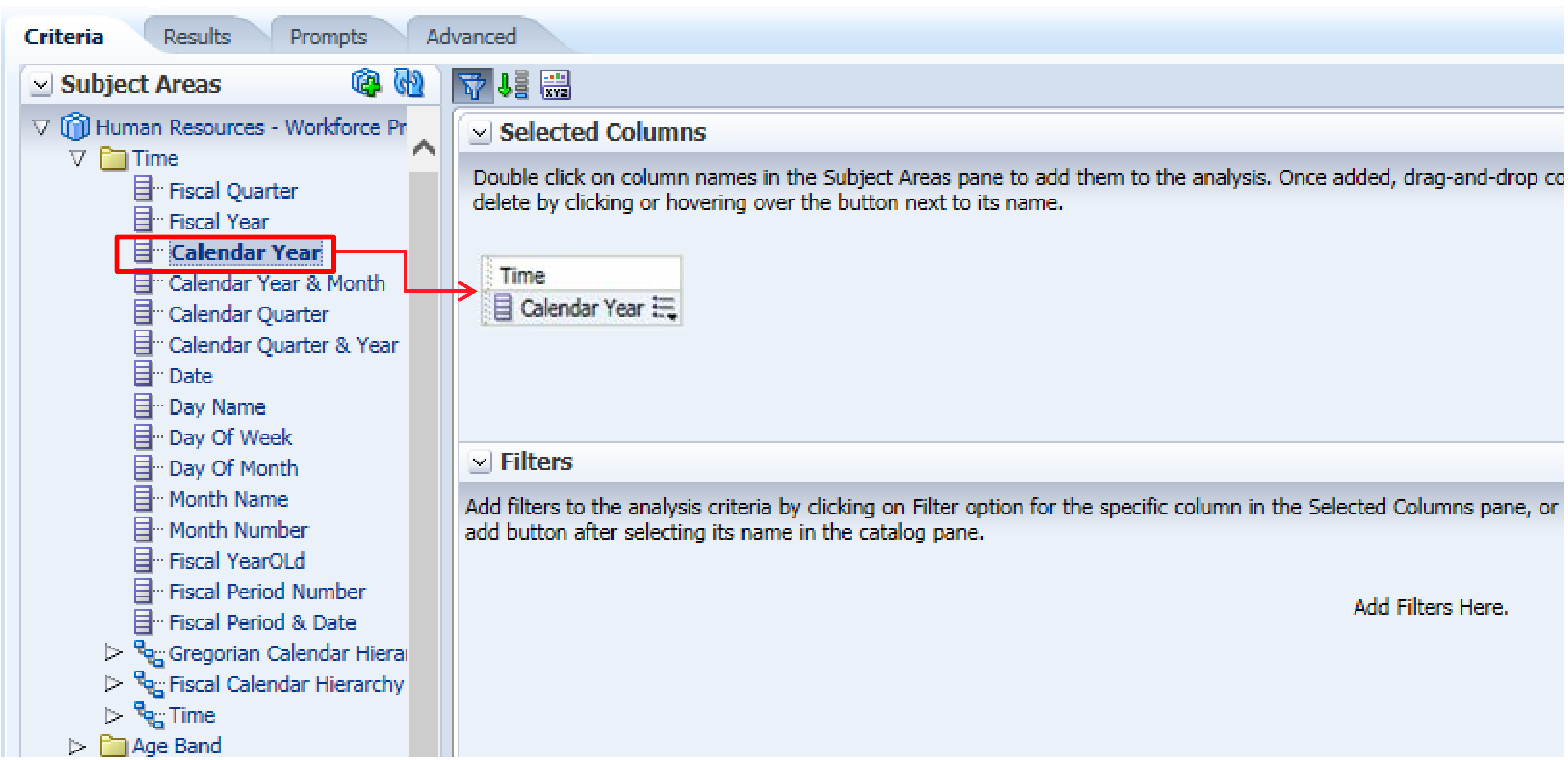
Analysis Editor

- Subject Area Content
- Click and Drag Functionality
- Selected Columns
- Filter Criteria
- Results



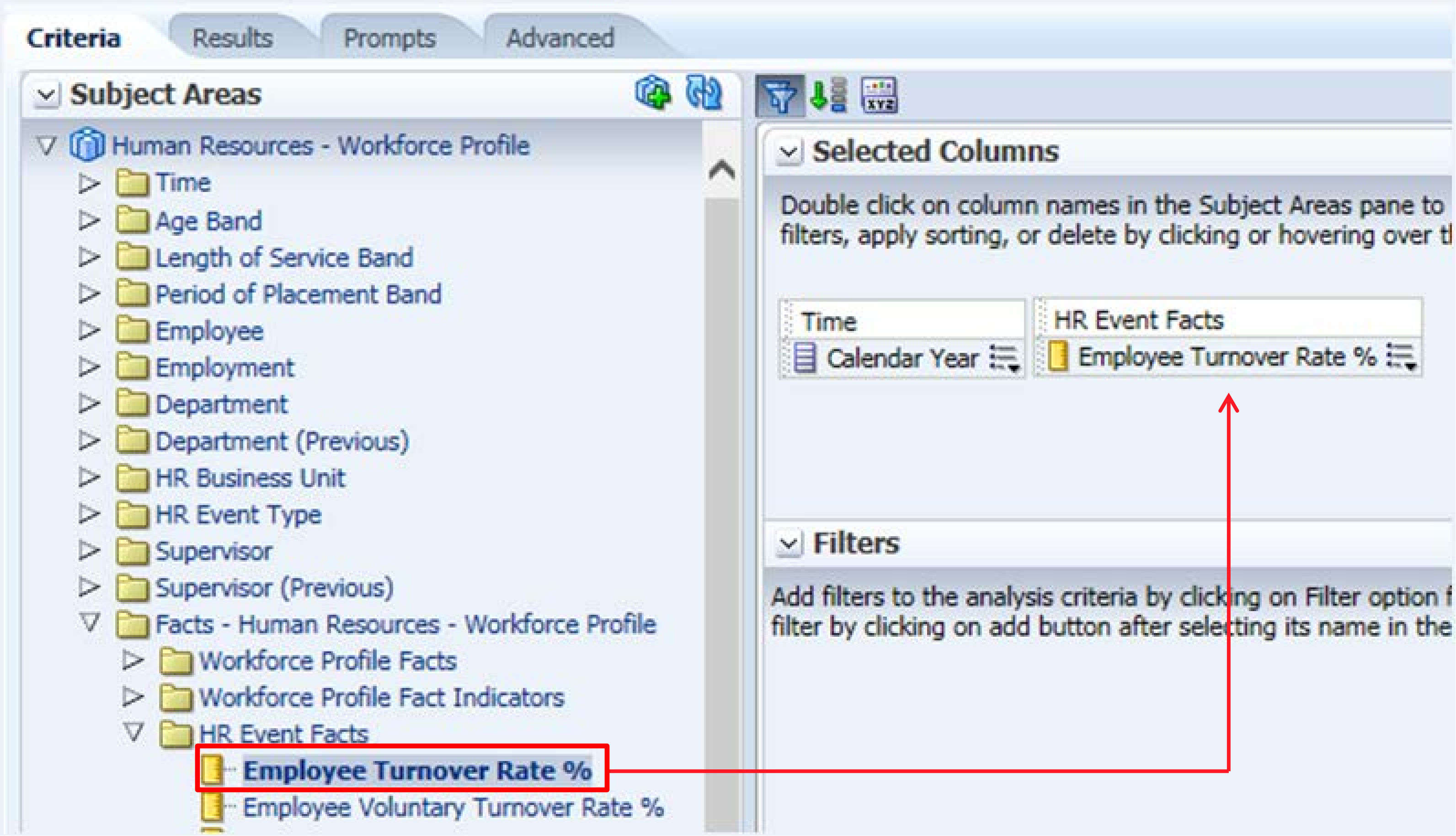
Sample Analysis: Statewide Turnover Trend

Step 1: Add Calendar Year Column



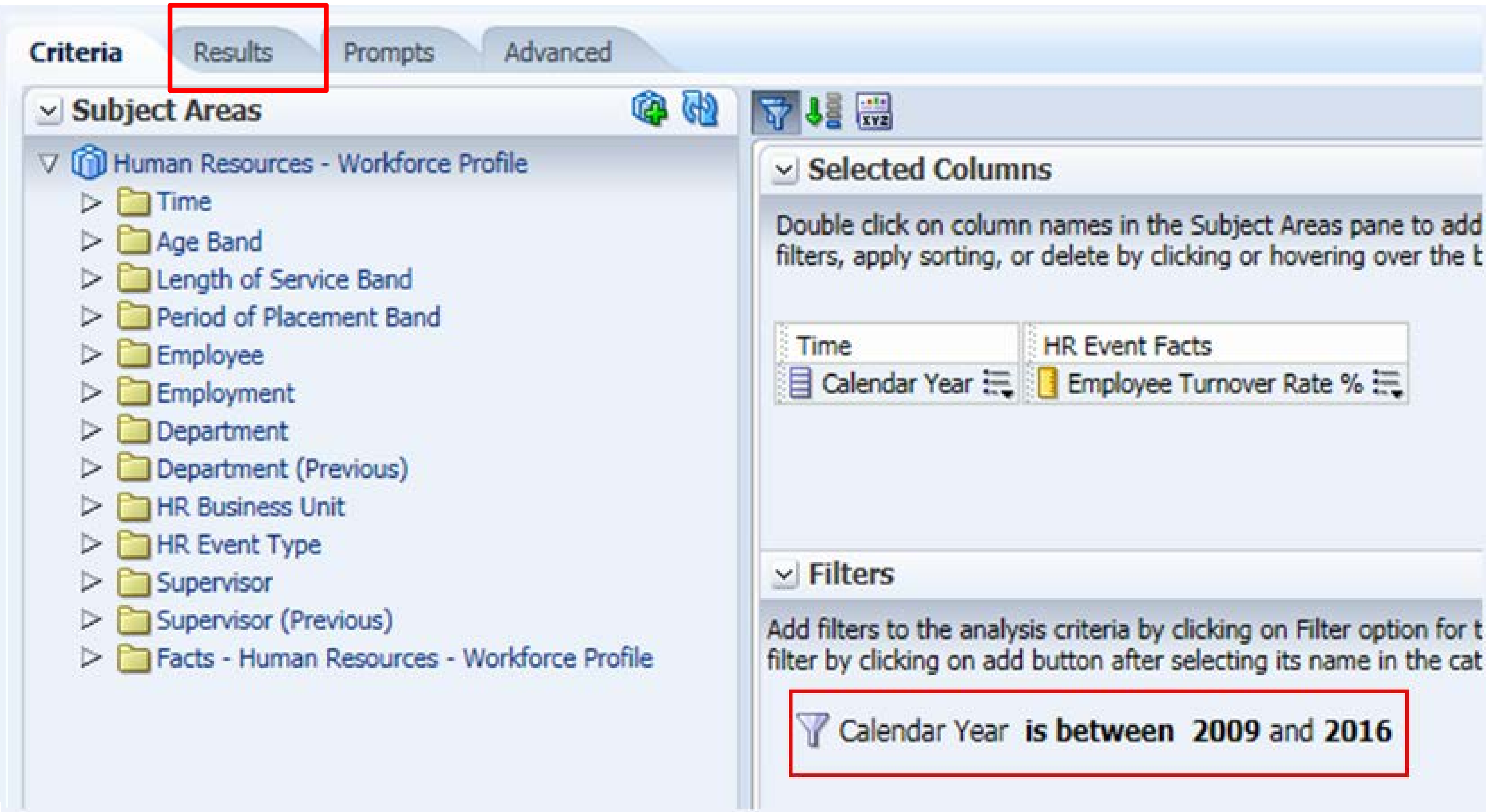
Sample Analysis: Statewide Turnover Trend

Step 2: Add Employee Turnover % Column



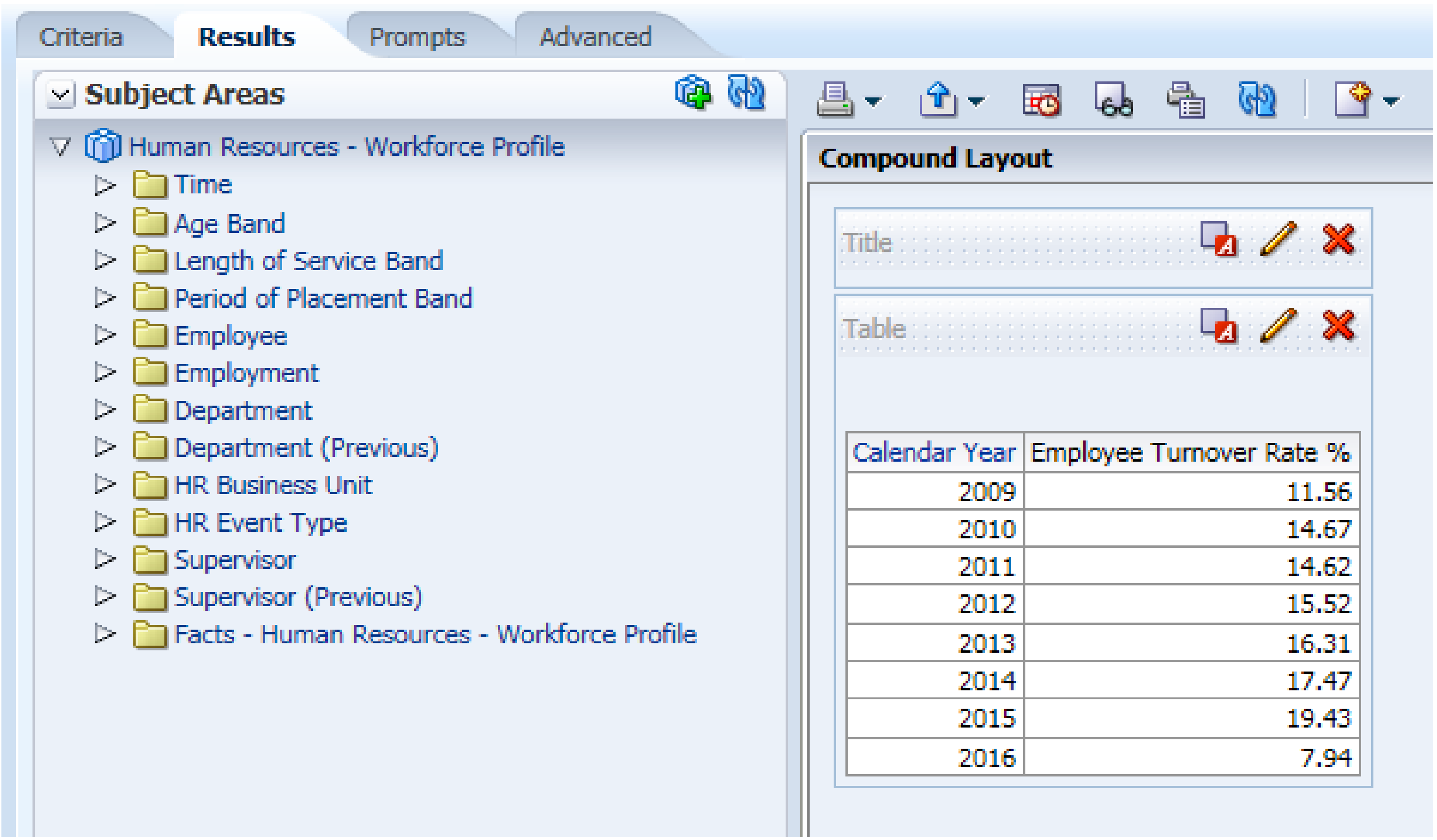
Sample Analysis: Statewide Turnover Trend

Step 3: Add Filter Criteria to Calendar Year



Sample Analysis: Statewide Turnover Trend

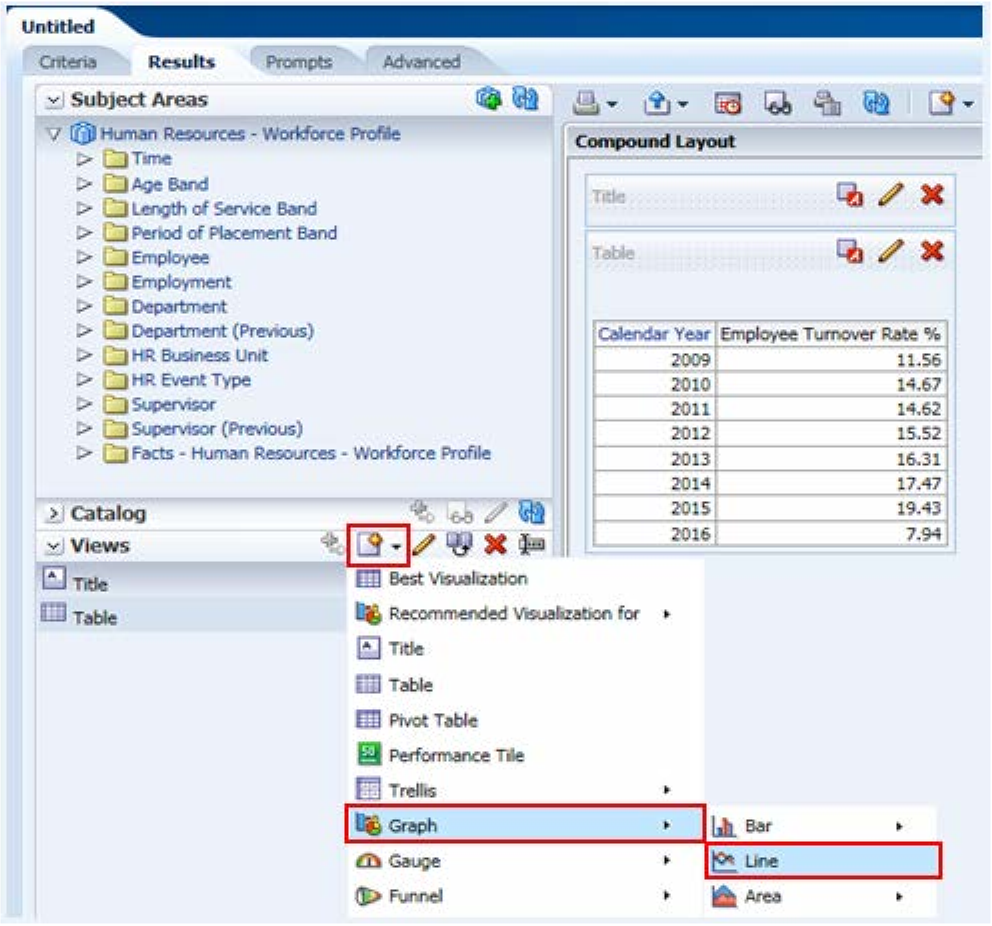
Step 4: Click Results Tab



Calendar Year	Employee Turnover Rate %
2009	11.56
2010	14.67
2011	14.62
2012	15.52
2013	16.31
2014	17.47
2015	19.43
2016	7.94

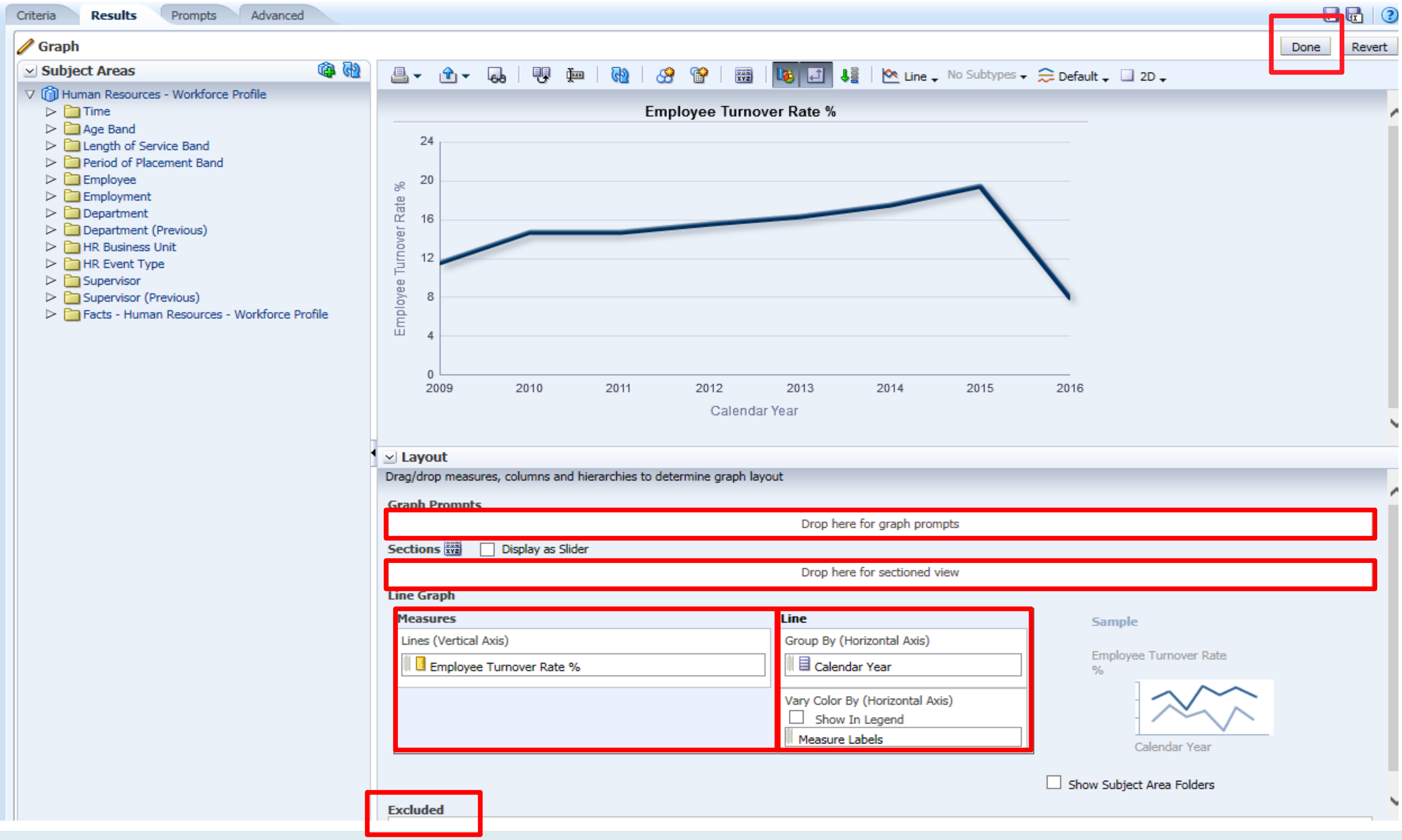
Sample Analysis: Statewide Turnover Trend

Step 5: Create a Graph - Click Create View > Graph > Line



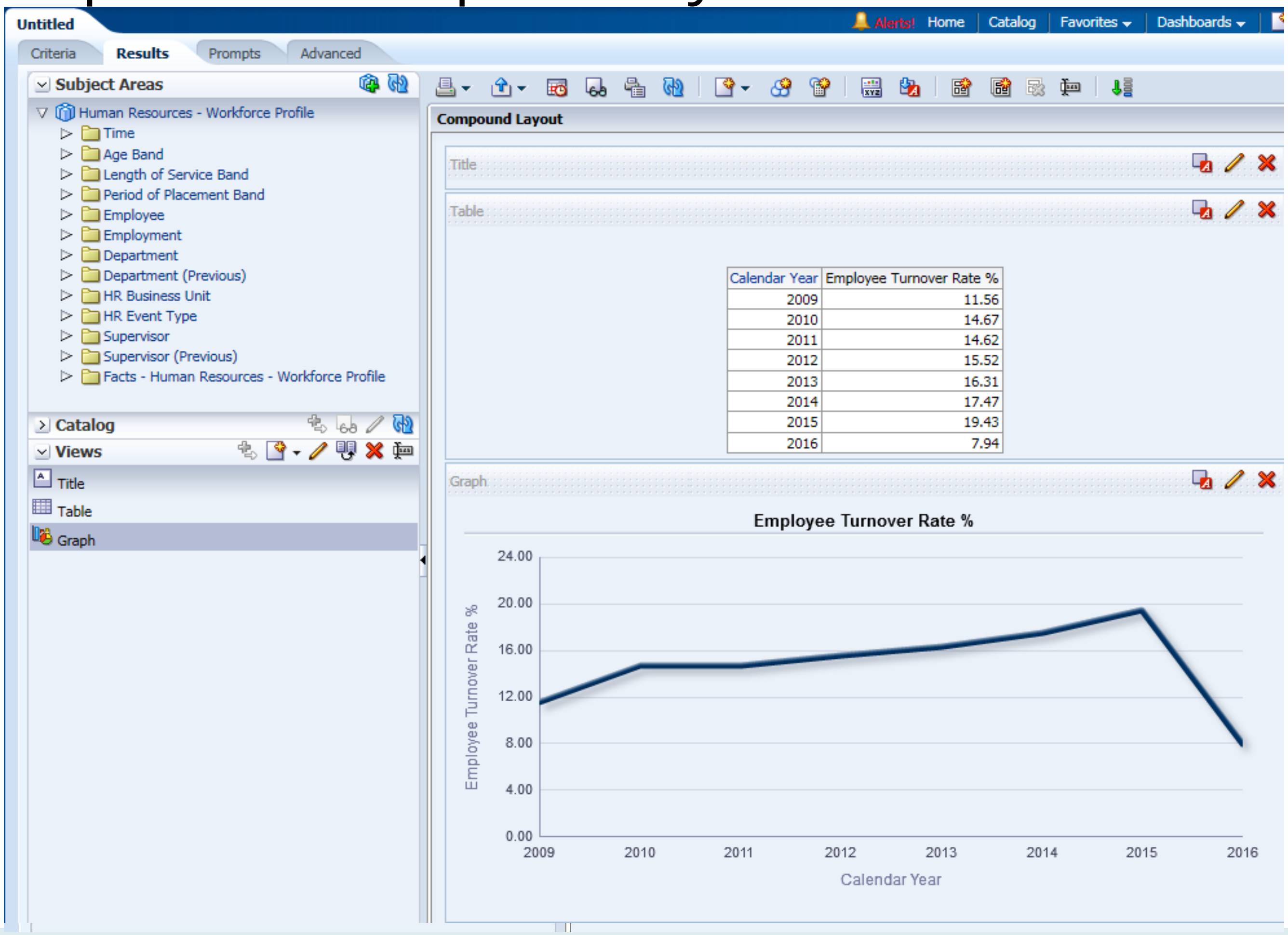
Sample Analysis: Statewide Turnover Trend

Step 6: Review Graph and Edit



Sample Analysis: Statewide Turnover Trend

Step 7: Add Graph to Layout



Sample Analysis: Statewide Turnover Trend

Step 8: Analyze Results

- What story is this graph telling, *ignoring 2016 data*?

BI Answers

Enables end users to answer questions quickly

- How many active statewide employees?

Employee Headcount
43,287

- Per Business Unit?

HR Business Unit Number	Employee Headcount
30101	440
30150	14
30227	656
30301	270
30410	1,152

- Per Department?

HR Business Unit Number	Department Number	Employee Headcount
30101	3010100001	9
	3010100002	9
	3010100003	31
	3010100004	1
	3010700001	100

- Per Job Code?

Job Code	Employee Headcount
002149	321
002184	50
002320	56
002322	14
002340	4
002350	169
002360	178
002361	43
002362	23
002363	13

BI Answers

Enables end users to answer questions quickly

- What is the statewide employee turnover rate for 2015?

Employee Turnover Rate %
19.43

- Per Business Unit?

HR Business Unit Number	Employee Turnover Rate %
30101	23.83
30150	24.00
30227	9.58
30301	13.41
30410	7.59

- Per Department?

HR Business Unit Number	Department Number	Employee Turnover Rate %
30101	3010100001	23.53
	3010100002	47.06
	3010100003	84.38
	3010100004	0.00
	3010700001	7.88

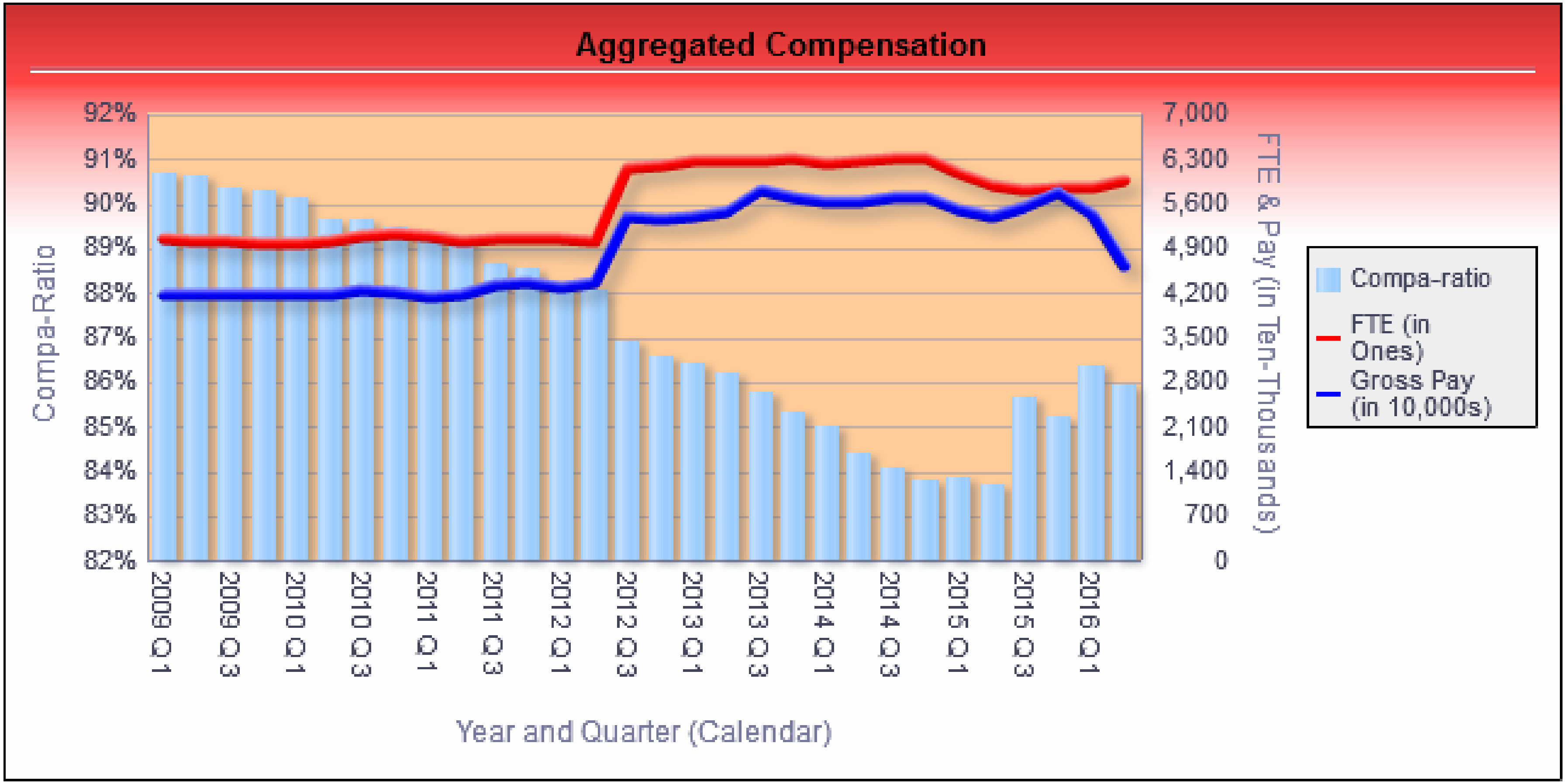
- Per Job Code?

Job Code	Employee Turnover Rate %
002149	15.43%
002184	22.64%
002320	822.22%
002322	1200.00%
002350	17.93%
002360	8.67%
002361	11.63%
002362	4.35%
002363	15.38%

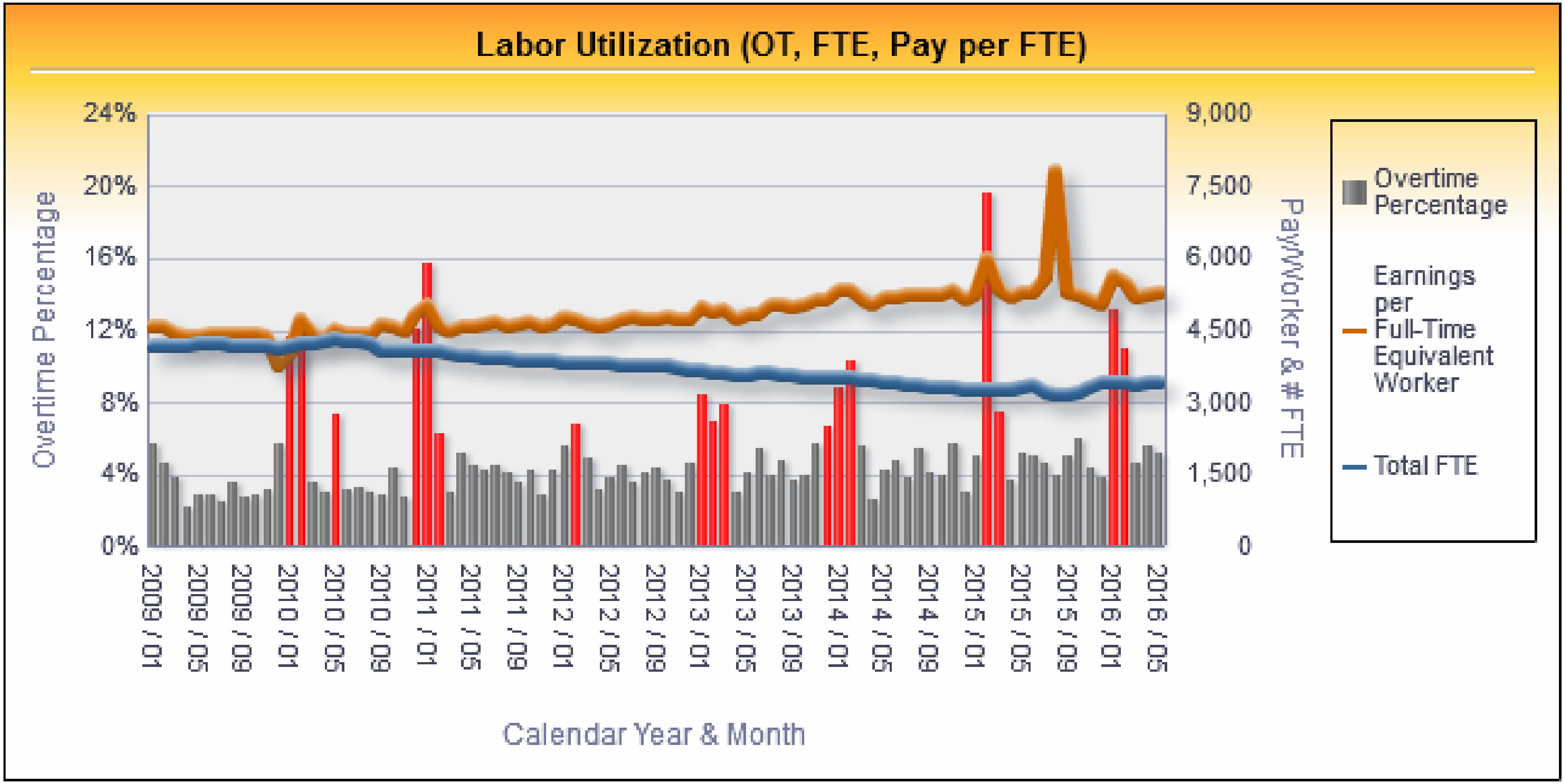
BI Analytics & Visualizations

End users gain insight into data and see the “story”

Story #1: The Merger



Story #2: Climate Change



Dashboards

Content arranged into logical groupings per user's requirements

HCM Demo Dashboard

Alerts! Home | Catalog | Favorites | Dashboards | New | Open | Signed In As Chad Ru

Turnover | Headcount | Business Intelligence: Three Stories | KPI Watchlist

State of Tennessee's Current Year Turnover Rates as of Today

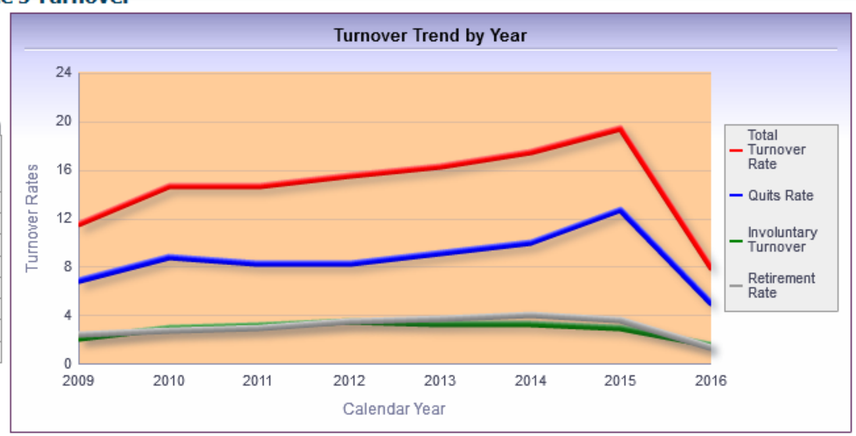
Total Turnover	**Quits Rate**	Retirement Rate	Involuntary Rate
7.9%	**5.0%**	1.3%	1.5%

Components of Total Turnover

Total Turnover Rate = **Quits Rate** + Retirement Rate + Involuntary Turnover Rate

Historical Trend of State of Tennessee's Turnover

Calendar Year	Total Turnover Rate	Quits Rate	Retirement Rate	Involuntary Turnover
2009	11.6%	6.8%	2.4%	2.1%
2010	14.7%	8.8%	2.7%	3.0%
2011	14.6%	8.2%	3.0%	3.2%
2012	15.5%	8.3%	3.5%	3.5%
2013	16.3%	9.1%	3.7%	3.2%
2014	17.5%	10.0%	4.0%	3.3%
2015	19.4%	12.7%	3.6%	2.9%
2016	7.9%	5.0%	1.3%	1.5%

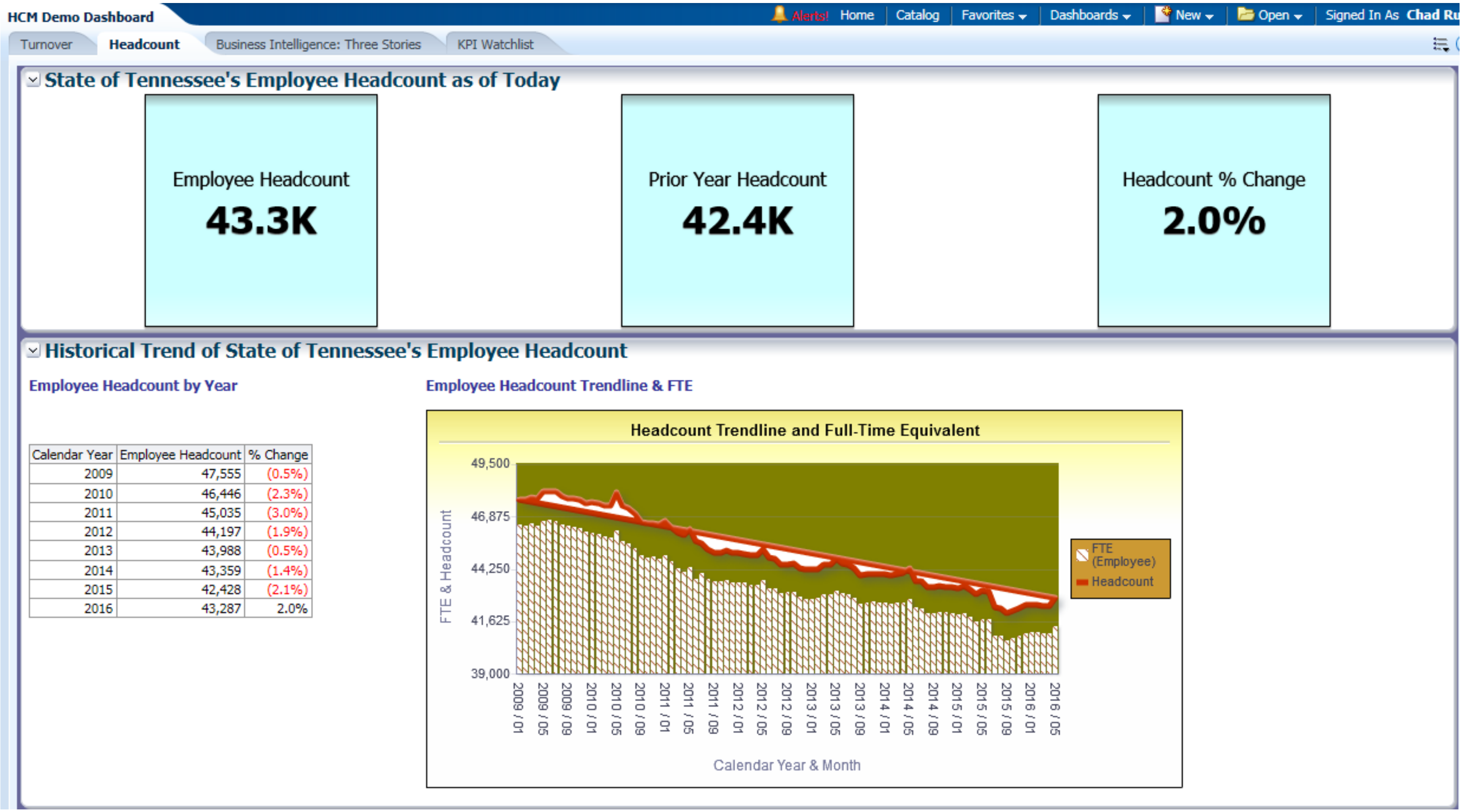


BLS

Click Logo to Get Comparison Data from the Bureau of Labor Statistics (Opens a New Window)

Dashboards

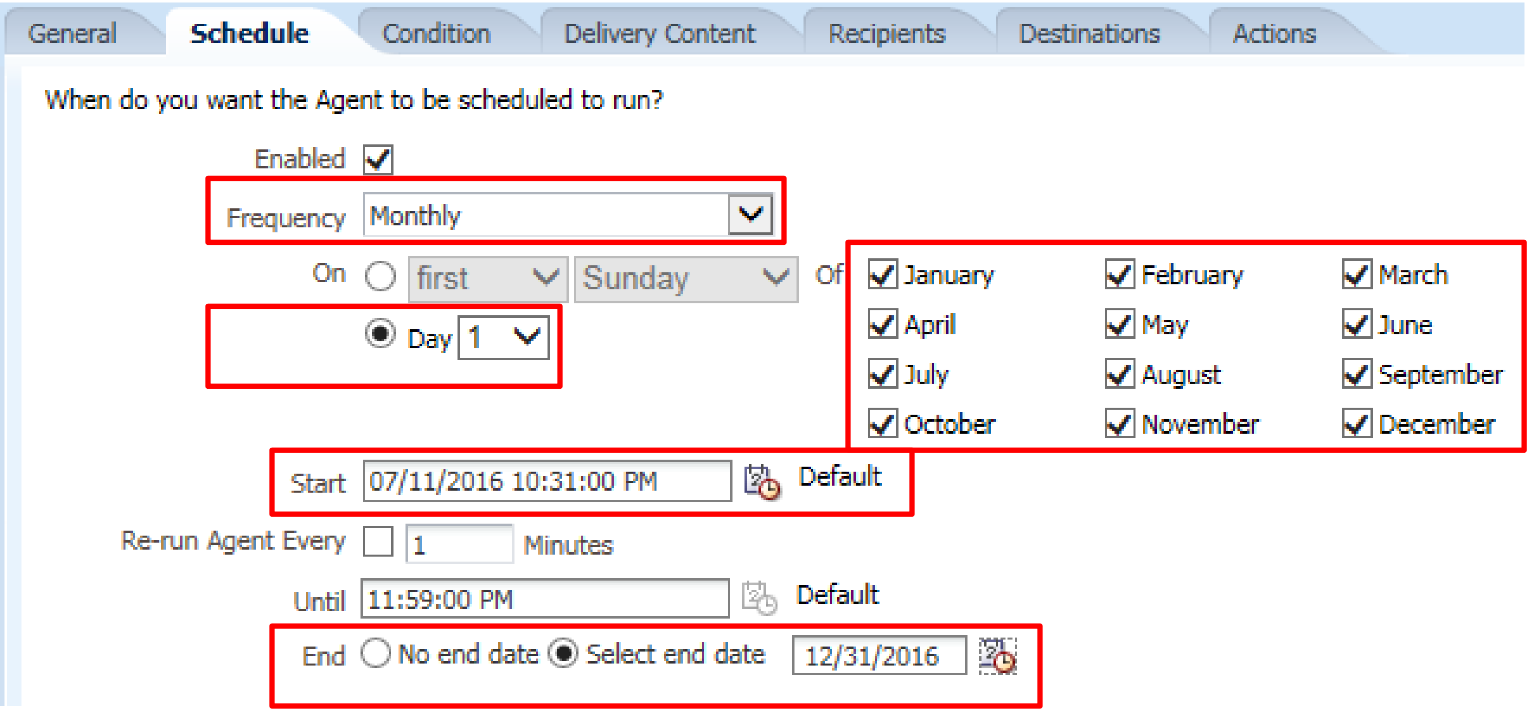
Content structure remains and data updated when accessed



Automated Alerts > Agents

Schedule the Agent

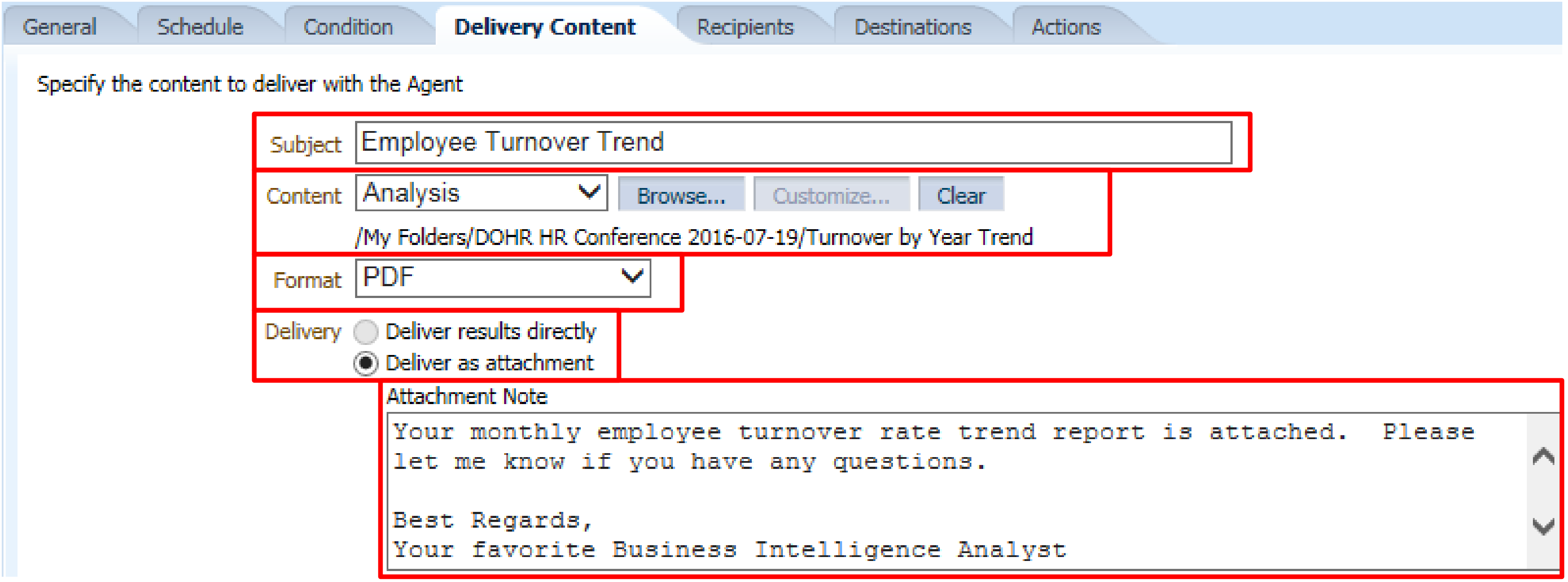
- BI has the ability to send automated alerts based on a schedule or condition
- This example uses a schedule rather than a condition



Automated Alerts > Agents

Select Delivery Content

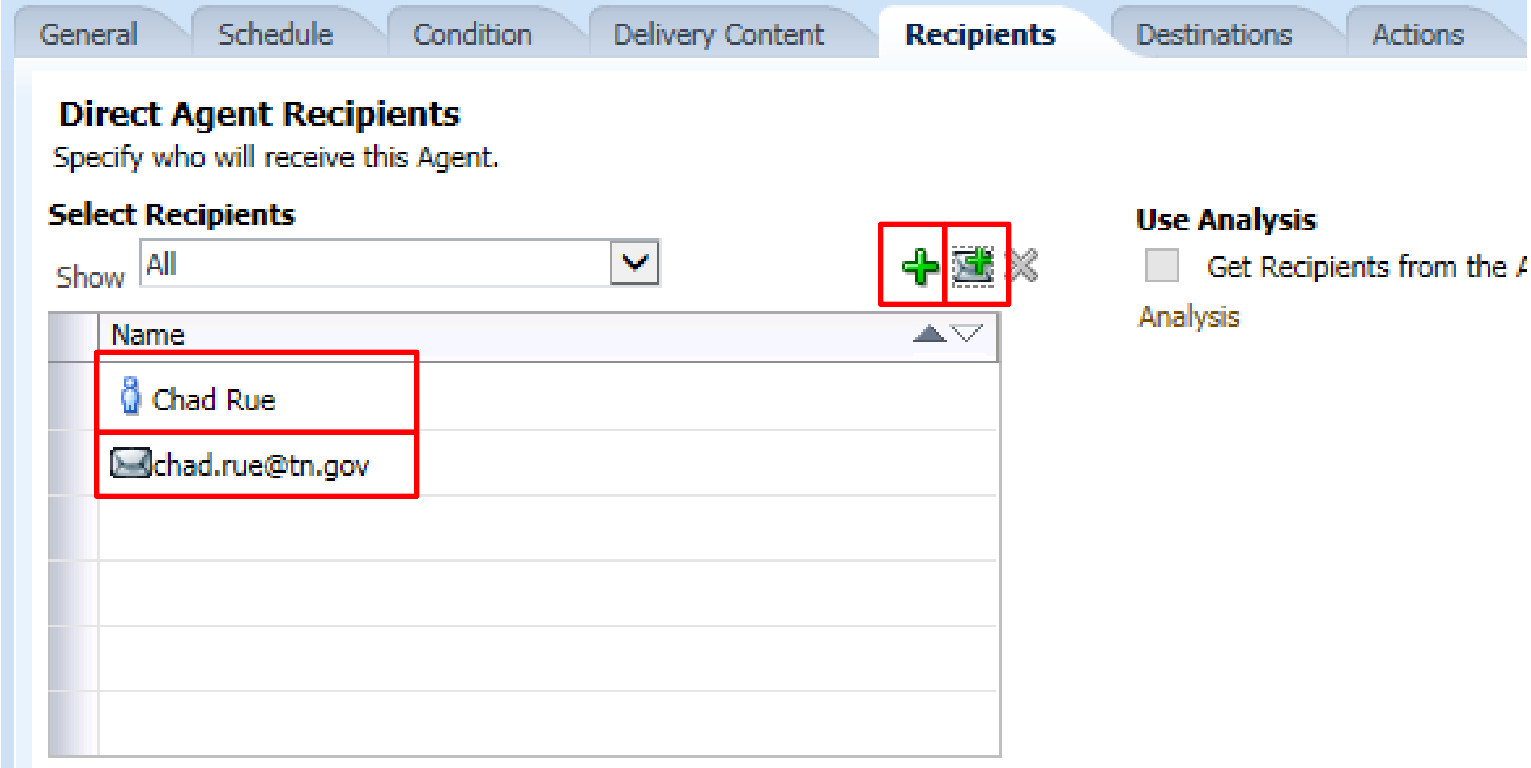
- Deliver to body of email or as an attachment with note



Automated Alerts > Agents

Choose Recipients

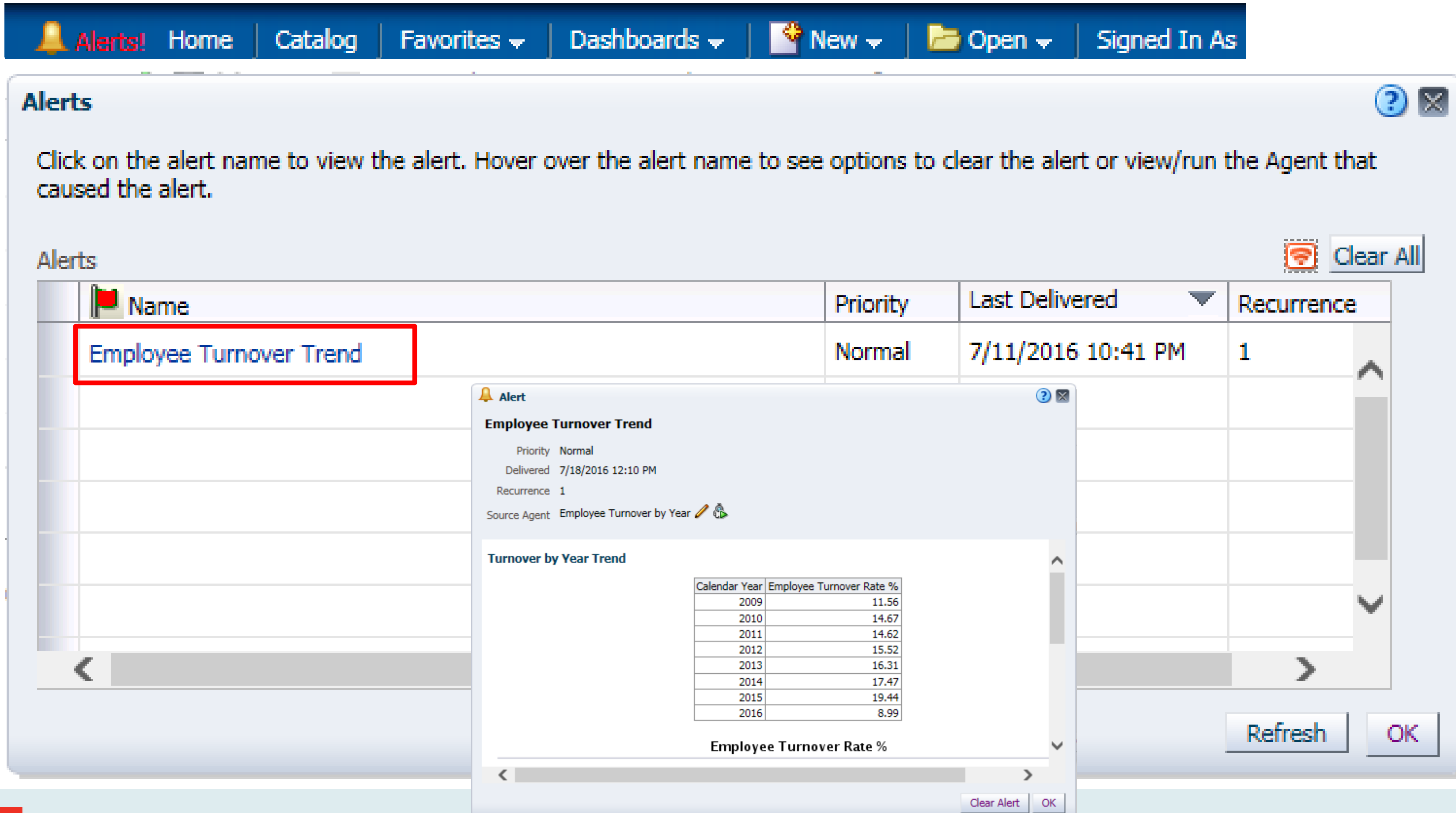
- Send content to a BI user or email address



Automated Alerts > Agents

BI Alert

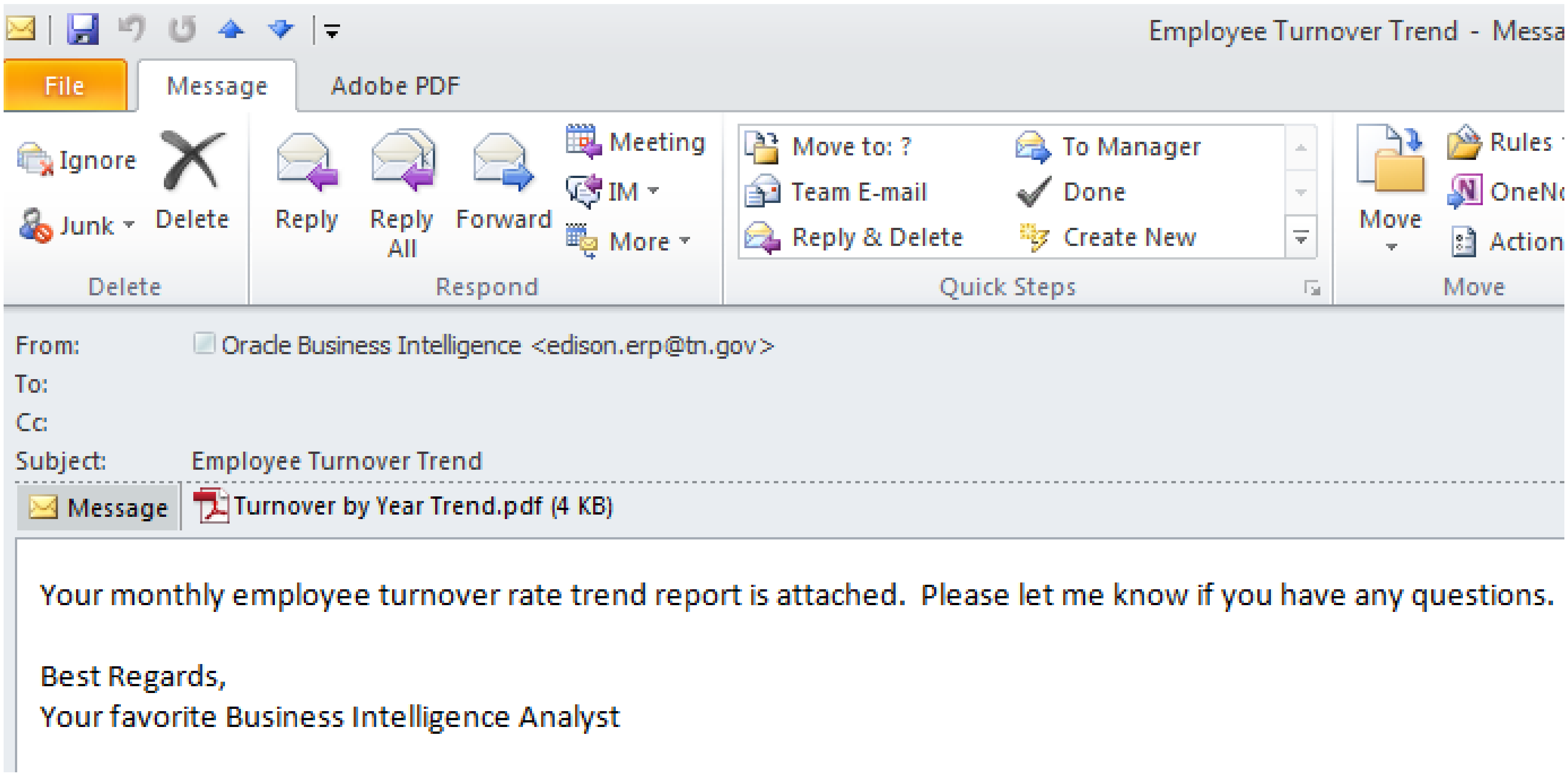
- Content delivered to BI user and accessed within BI application



Automated Alerts > Agents

Email Delivery

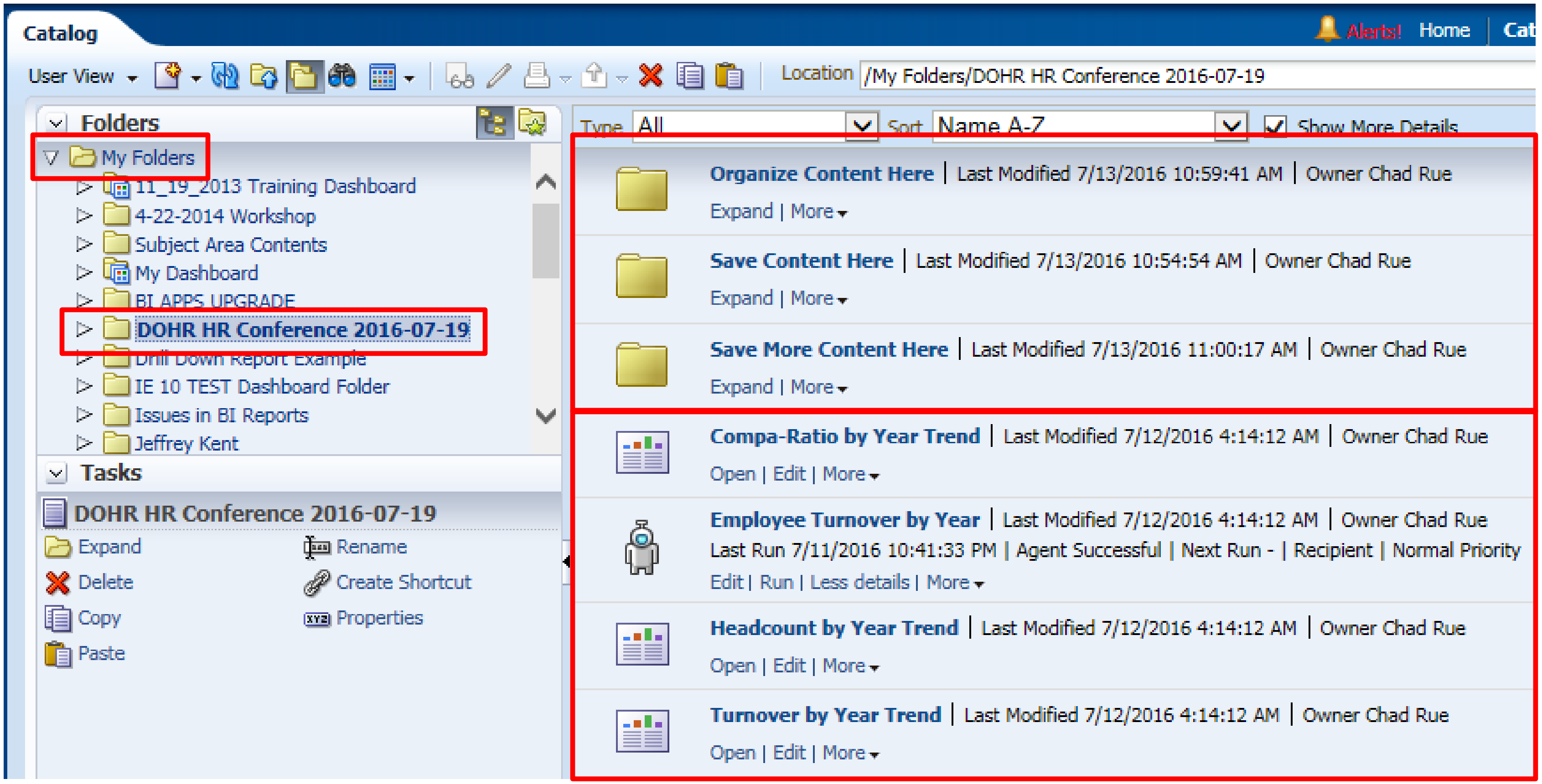
- Content delivered to recipient's email address



Catalog

BI catalog enables users to store created content

- Each user has a My Folder for personal storage use



Analytical versus Transactional

Analytical

- How many employees are hired each month, quarter, or year?
- How many employees separated last month, quarter, or year?
- How are annual total gross wages trending in relation to employee headcount?
- What percentage of employees separate within one year of the last hire date?
- Are employees in this job series paid above or below midpoint?
- What is the total employee turnover trend for the last five years?

Transactional

- Has the hire transaction been approved?
- Is the employee active or separated?
- Was an employee paid correctly for the pay period?
- Has all time been entered for the pay period?
- Has all payable time been approved?
- Does the potential new hire have any prior job history with the State?
- What is an employee's current home address, email address, or phone number?

Understanding How to Schedule Queries & Delivery Options

TN ®

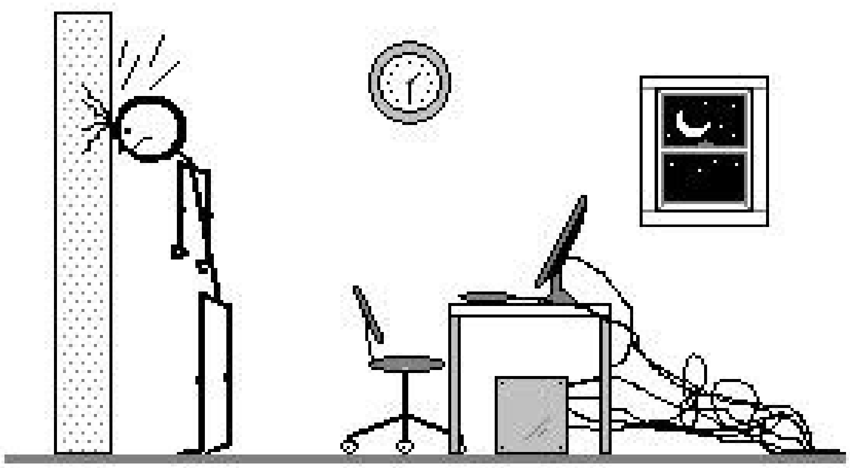
David Case

Does this look Familiar?

Process Monitor Screen:

Process List — Personalize | Find | View All | | First 1-50 of 84 Last

Select	Instance	Seq.	Process Type	Process Name	User	Run Date/Time	Run Status	Distribution Status	Details
☐	5671340		Application Engine	PSQUERY	willd0103002	07/19/2016 9:25:00AM CDT	Queued	N/A	Details
☐	5671338		Application Engine	PSQUERY	willd0103002	07/19/2016 9:25:48AM CDT	Queued	N/A	Details
☐	5671337		Application Engine	PSQUERY	willd0103002	07/19/2016 9:27:15AM CDT	Queued	N/A	Details
☐	5671335		Application Engine	PSQUERY	willd0103002	07/19/2016 9:28:46AM CDT	Queued	N/A	Details



Running the Same Query Multiple Times

Process Monitor Screen:

Process List — Personalize | Find | View All | First 1-50 of 84 Last

Select	Instance	Seq.	Process Type	Process Name	User	Run Date/Time	Run Status	Distribution Status	Details
☐	5671340		Application Engine	PSQUERY	willd0103002	07/19/2016 9:25:00AM CDT	Queued	N/A	Details
☐	5671338		Application Engine	PSQUERY	willd0103002	07/19/2016 9:25:48AM CDT	Queued	N/A	Details
☐	5671337		Application Engine	PSQUERY	willd0103002	07/19/2016 9:27:15AM CDT	Queued	N/A	Details
☐	5671335		Application Engine	PSQUERY	willd0103002	07/19/2016 9:28:46AM CDT	Queued	N/A	Details

Process Monitor = Traffic Cop:

- If query is "Queued", no need to run again
- Queries run in sequential order
- Next query in queue will not run until the previous query finishes
- Stacking up the queue can cause system latency!

Using Same Run Control for Different Queries

Process Monitor Screen:

Process List — Personalize | Find | View All | First 1-50 of 84 Last

Select	Instance	Seq.	Process Type	Process Name	User	Run Date/Time	Run Status	Distribution Status	Details
☐	5671340		Application Engine	PSQUERY	willd0103002	07/19/2016 9:25:00AM CDT	Queued	N/A	Details
☐	5671338		Application Engine	PSQUERY	willd0103002	07/19/2016 9:25:48AM CDT	Queued	N/A	Details
☐	5671337		Application Engine	PSQUERY	willd0103002	07/19/2016 9:27:15AM CDT	Queued	N/A	Details
☐	5671335		Application Engine	PSQUERY	willd0103002	07/19/2016 9:28:46AM CDT	Queued	N/A	Details

Using the same Run Control for multiple queries can produce unexpected results.

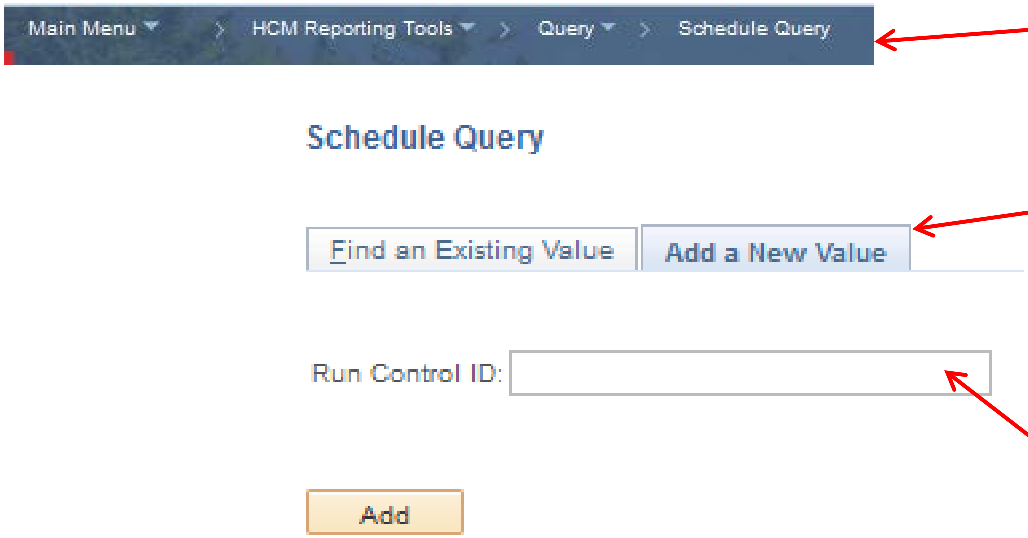
If you plan to schedule multiple queries at the same time, use a unique Run Control ID.

Run Control ID

What is a Run Control ID?

- Unique Identifier which allows you to:
  - Define the query/report
  - Set the parameters/prompts
  - Select a format
  - Schedule run time/date
- Required when running a query/report

How to Set Up a Run Control ID



Navigation

Click Add a New Value

Enter new Run Control ID

Tips for creating a Run Control ID:
- No Spaces (use _)
- No Special Characters (%, @, &, $)
- Can not be deleted

Recommendations:
- Description of query
- Actual query name

Test Run Control IDs

Schedule Query

Enter any information you have and click Search. Leave fields blank for a list of all values.

Find an Existing Value | Add a New Value

Search Criteria

Search by: Run Control ID begins with q

Case Sensitive

Search | Advanced Search

Search Results

View All First 1-2 of 2 Last

Run Control ID	Description	Query Name
query	Payable Time - No Reports To	TN_TL03B_PAYABLE_TIME_APPRV_BU
query2	Exceptions - No Reports To	TN_TL04B_TL_EXCEPTIONS_BU

How to Set Up a Run Control ID (continued)

Search for Query:

Schedule Query

Run Control ID: query3

Report Manager Process Monitor Run

Query Name: TN_TL03 Search

*Description:

Save Add Update/Display

Search Button

Query Name

Results

Scheduled Query Search Page

*Query Type: Queries

Query: TN_TL03 Search

Query — Personalize | Find | View All | First 1-6 of 6 Last

TN_TL03B_PAYABLE_TIME_APPRV	Payable time - No reports to	Public
TN_TL03B_PAYABLE_TIME_APPRV_BU	Payable Time - No Reports To	Public
TN_TL03B_PAYABLE_TIME_APPRV_GP	Pble Time Needing Appr-All BUs	Public
TN_TL03B_PAYABLE_TIME_APPR_GRP	Payable Time - No Reports To	Public
TN_TL03_PAYABLE_TIME_APPRV_BU	Pyble Time-Includes Reports To	Public
TN_TL03_PAYABLE_TIME_APPRV_GRP	Pyble time-Includes Reports To	Public

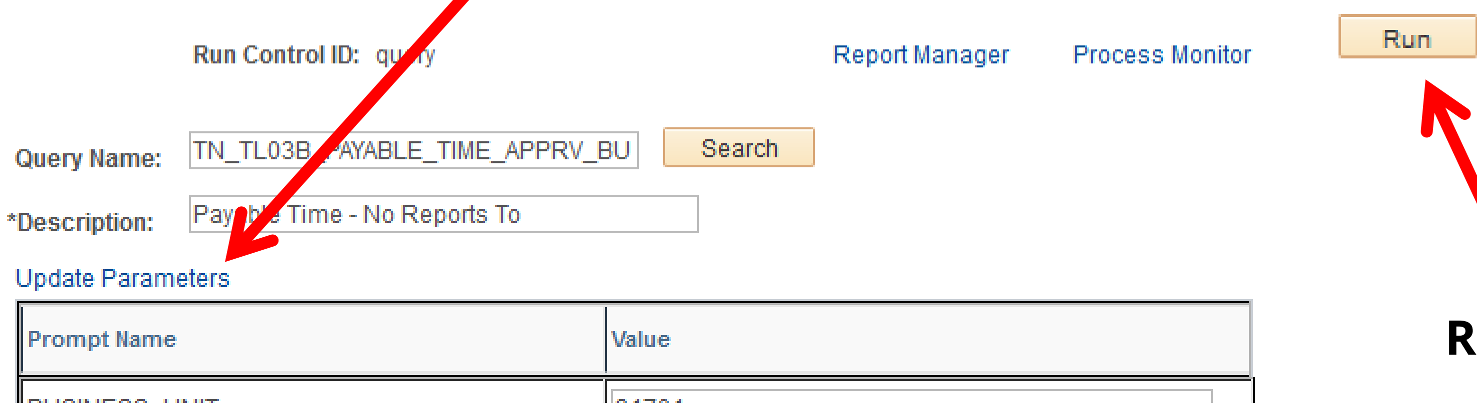
Return

Naming Convention:

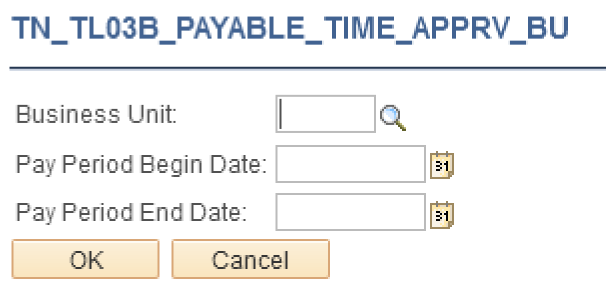
TN_TL = Time & Labor
TN_HR = Human Resources
TN_BA = Benefits
TN_PY = Payroll
TN_AM = Absence Mgmt

Update Parameters

Use Update Parameters Link



Run Button



Before you click OK, you have OPTIONS!

Process Scheduler Request

User ID willd0103002 | **Run Control ID** query

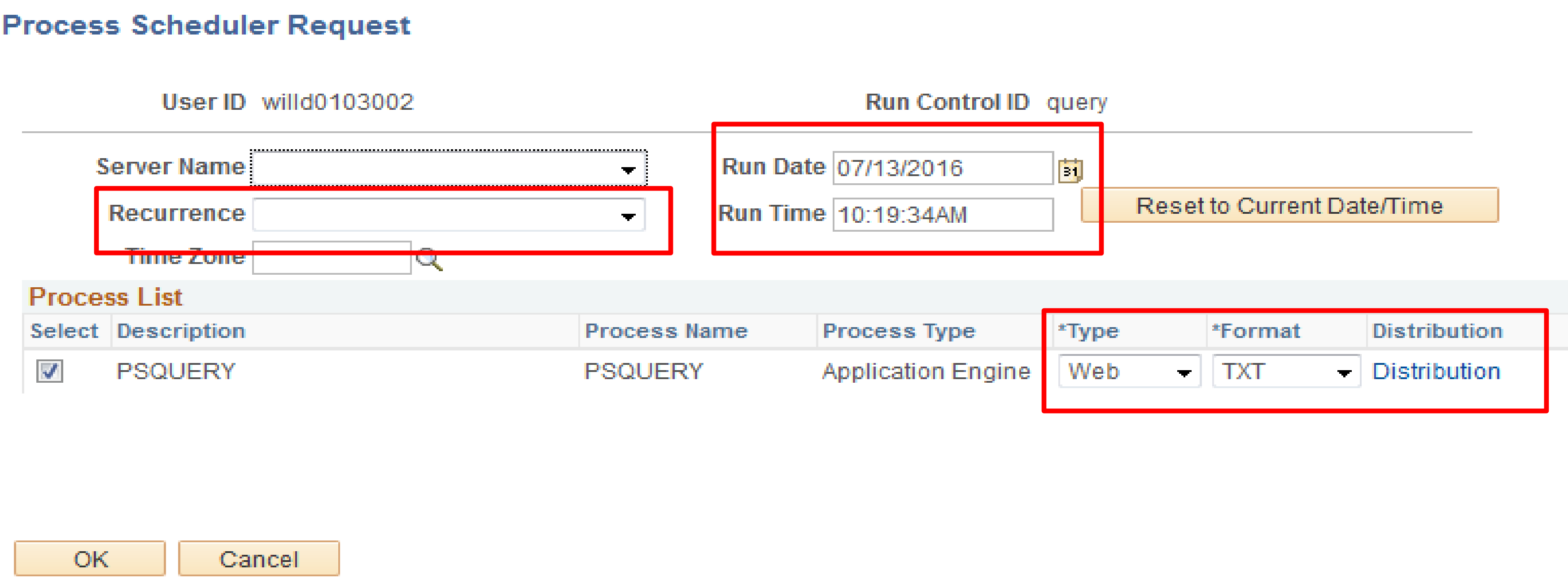
Server Name
Run Date 07/13/2016
Recurrence
Run Time 10:19:34AM
Reset to Current Date/Time
Time Zone

Process List

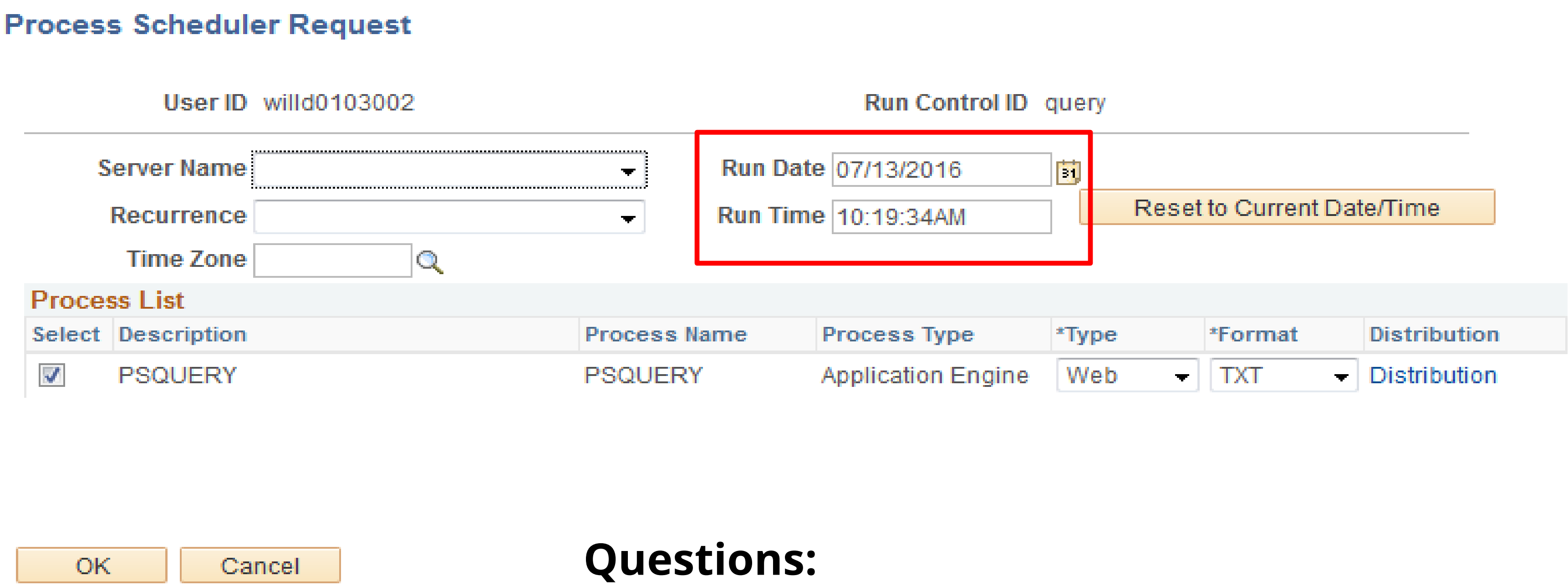
Select	Description	Process Name	Process Type	*Type	*Format	Distribution
☑	PSQUERY	PSQUERY	Application Engine	Web	TXT	Distribution

OK | Cancel

Options....


Process Scheduler Request
User ID willd0103002
Run Control ID query
Server Name
Recurrence
Time Zone
Run Date 07/13/2016
Run Time 10:19:34AM
Reset to Current Date/Time
Process List
Select
Description
Process Name
Process Type
*Type
*Format
Distribution
PSQUERY
PSQUERY
Application Engine
Web
TXT
Distribution
OK
Cancel

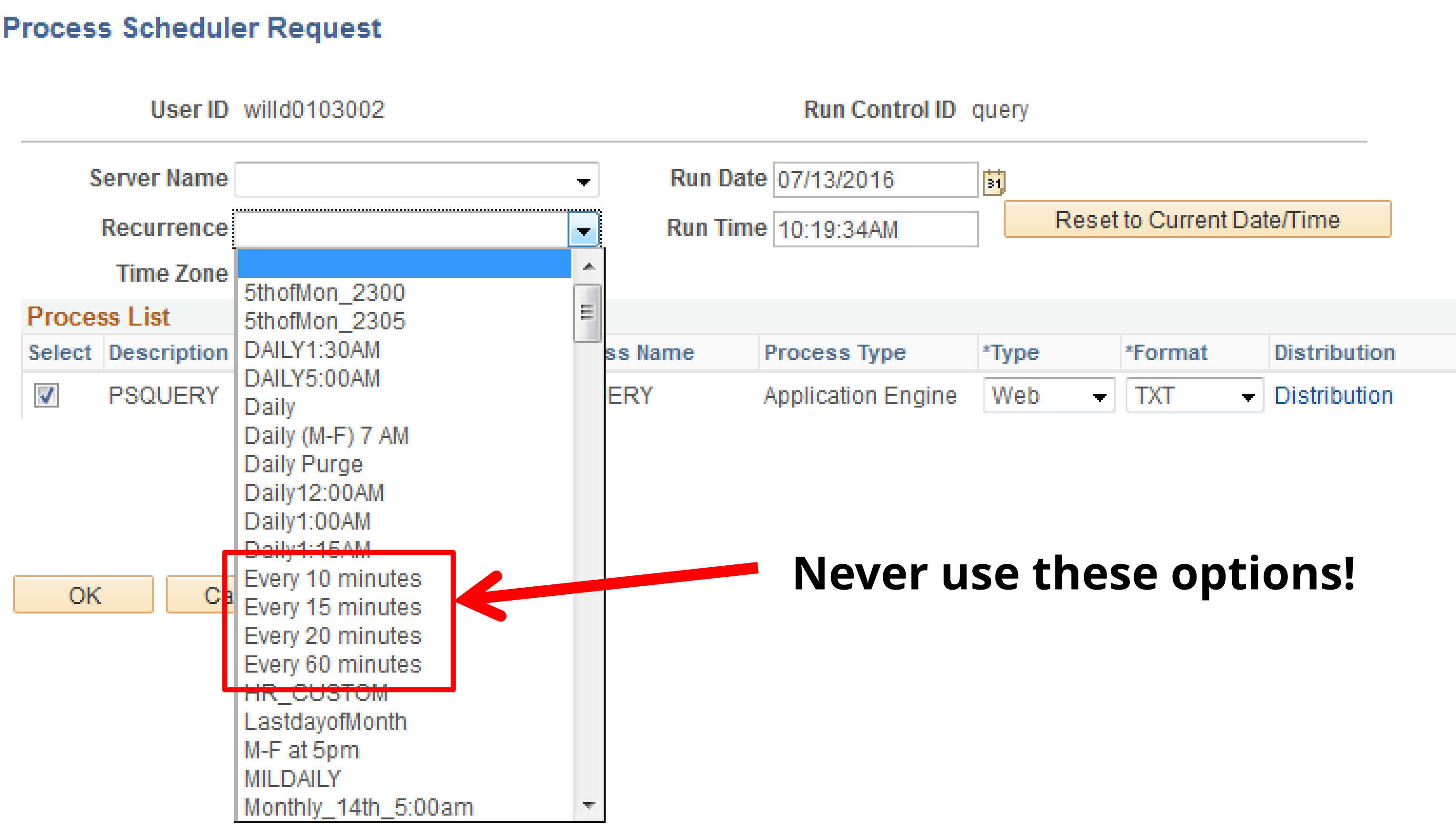
Run Date/Time



Questions:

- When do I need the results?
- How large is the expected output?
- What else is happening in the system?

Recurrence


Process Scheduler Request
User ID willd0103002
Run Control ID query
Server Name
Run Date 07/13/2016
Recurrence
Run Time 10:19:34AM
Reset to Current Date/Time
Time Zone
Process List
Select
Description
PSQUERY
ss Name
ERY
Process Type
Application Engine
*Type
Web
*Format
TXT
Distribution
Distribution
OK
5thofMon_2300
5thofMon_2305
DAILY1:30AM
DAILY5:00AM
Daily
Daily (M-F) 7 AM
Daily Purge
Daily12:00AM
Daily1:00AM
Daily1:15AM
Every 10 minutes
Every 15 minutes
Every 20 minutes
Every 60 minutes
HR_CUSTOM
LastdayofMonth
M-F at 5pm
MILDAILY
Monthly_14th_5:00am
Never use these options!

What Does a Recurrence Look Like?

Notice the Recurrence Symbol

Process List — Personalize | Find | View All | | First 1-50 of 75 Last

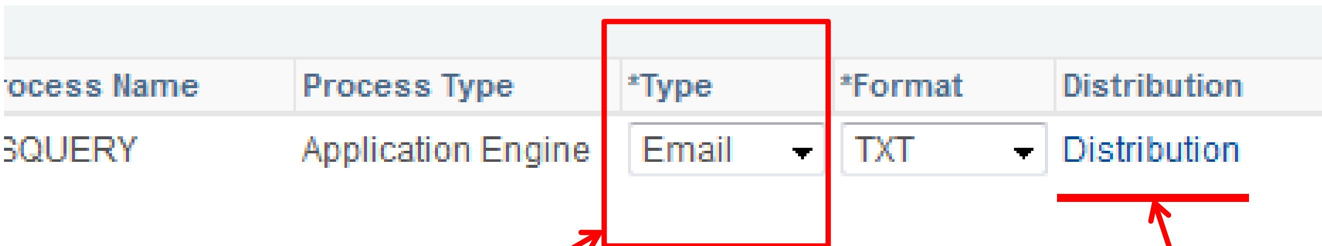
Select	Instance	Seq.	Process Type	Process Name		User	Run Date/Time	Run Status	Distribution Status	Details
☐	5671335		Application Engine	PSQUERY		WILLD0103002	07/13/2016 2:15:00PM CDT	Queued	N/A	Details
☐	5671020		Application Engine	PSQUERY		WILLD0103002	07/14/2016 7:00:00AM CDT	Queued	N/A	Details
☐	5671019		Application Engine	PSQUERY		WILLD0103002	07/14/2016 7:00:00AM CDT	Queued	N/A	Details
☐	5671018		Application Engine	PSQUERY		WILLD0103002	07/14/2016 7:00:00AM CDT	Queued	N/A	Details

Query Delivery Options

1) Email
   - Will send email to User IDs listed in the Distribution List
   - Will not have results in Process Monitor, only in email

2) Web (Default)
   - Results are posted in Process Monitor
   - User can be notified by email when query is complete

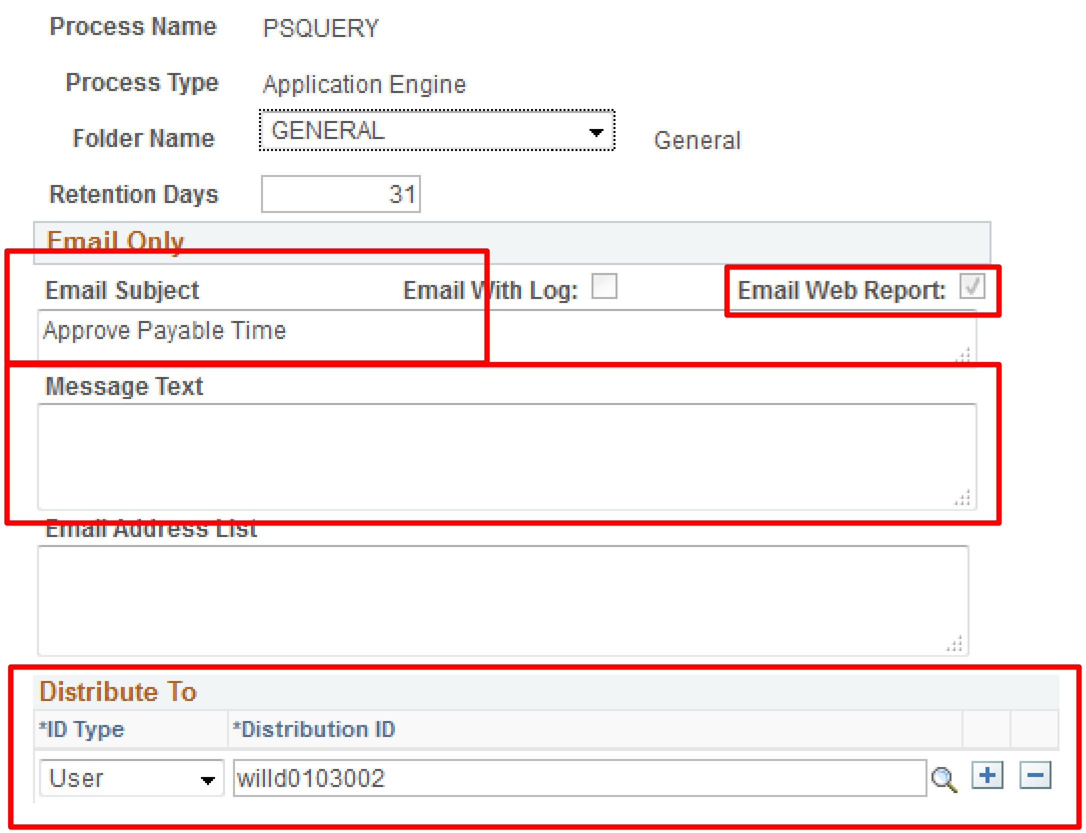
Email Type



Select Email Type

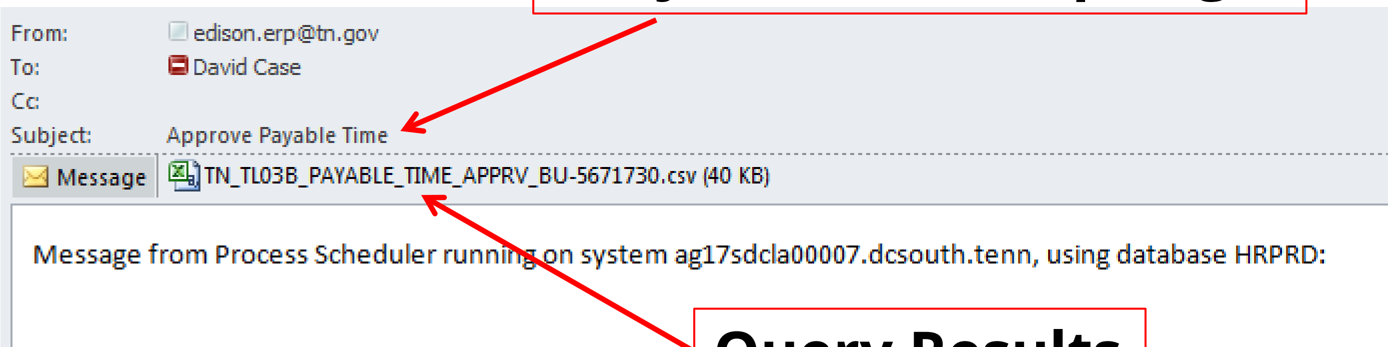
Update the Distribution

Distribution Options



Email Results

Subject from Setup Page



Query Results

NOTE: View Log/Trace in Process Monitor will not have a copy of the query results, only a .log file will appear.

File List

Name	File Size (bytes)	D
AE_PSQUERY_5671784.log	60,772	0

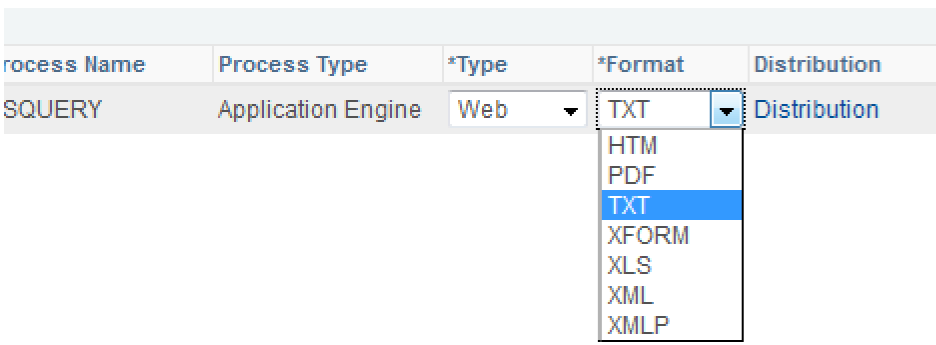
Distribute To

Distribution ID Type	*Distribution ID
User	willd0103002

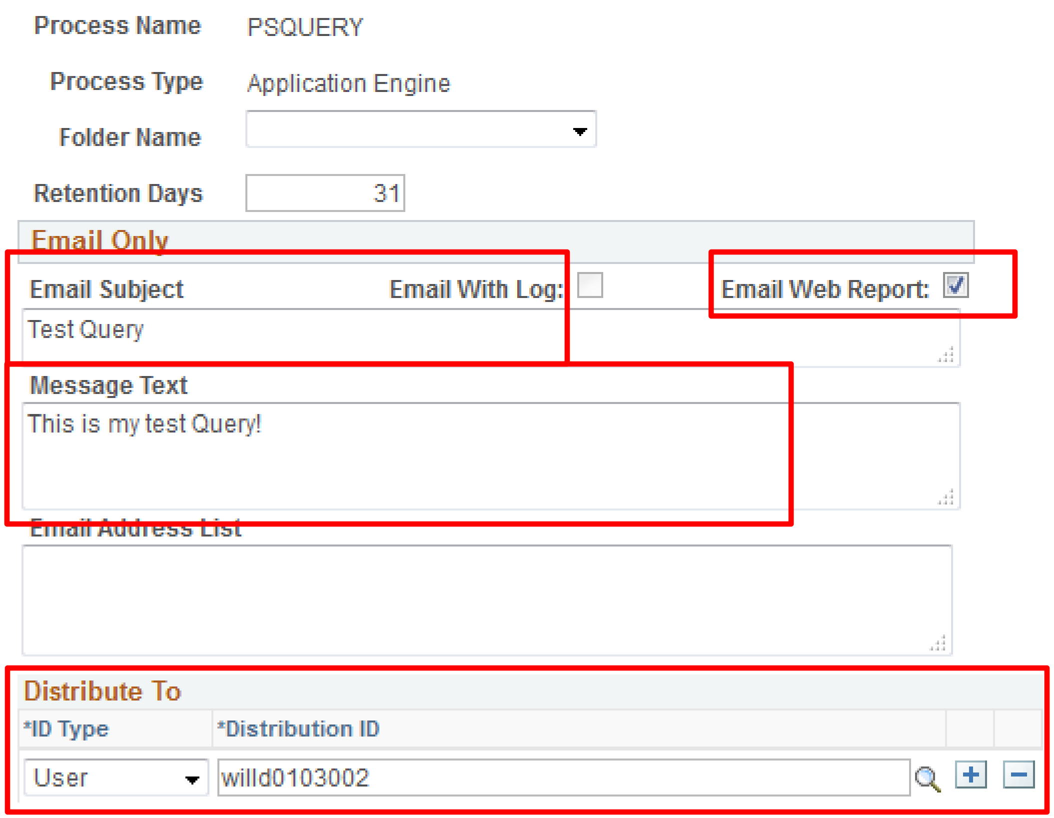
Web Type

Format – Generates:	
HTM	HTML Page
PDF	PDF Document
TXT	CSV file
XLS	XLSX file
XML	XML file
XMLP	XML file

Most Commonly Used Formats



Web TXT Distribution



Results

Process Monitor Screen:

File List

Name	File Size (bytes)
AE_PSQUERY_5672767.log	166
TN_TL04B_TL_EXCEPTIONS_BU-5672767.csv	508

TXT format generates CSV file

Distribute To

Distribution ID Type	*Distribution ID
User	willd0103002

Distributed to my User ID

From: edison.erp@tn.gov
To: David Case
Cc:
Subject: Test Query

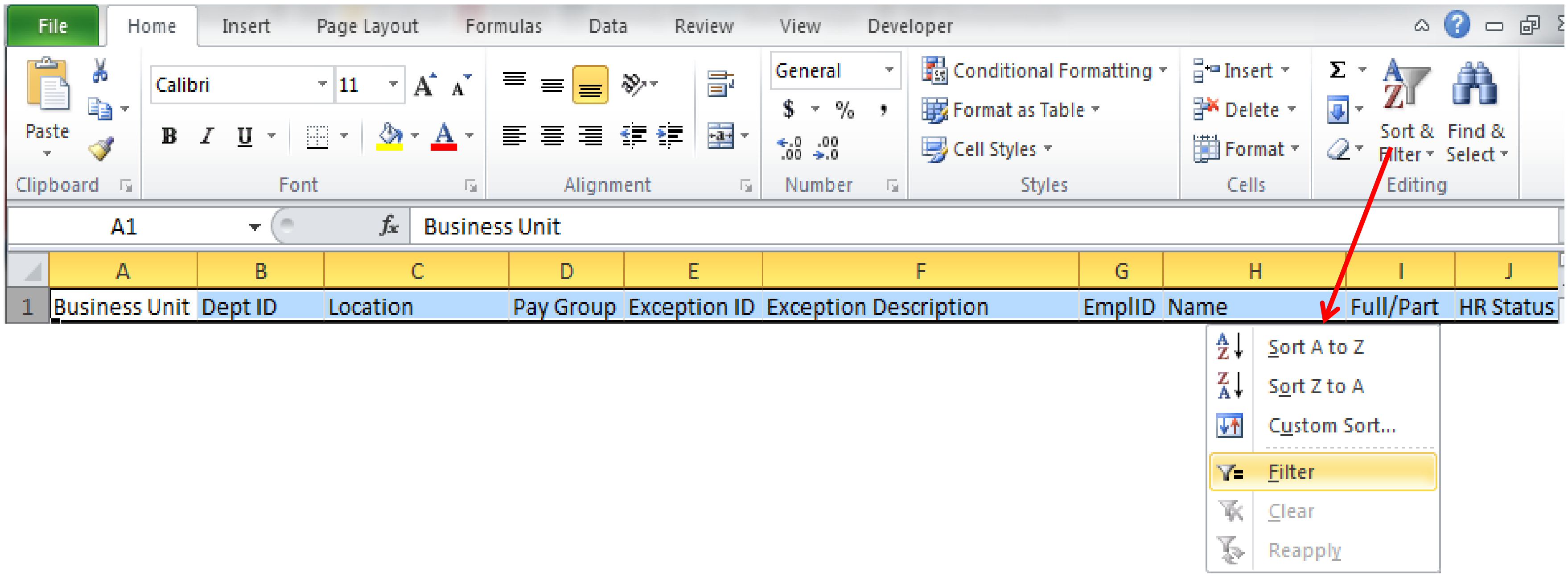
This is my test Query!

https://sso.edison.tn.gov/psc/hrprd/EMPLOYEE/HRMS/c/CDM_RPT.CDM_RPT.GBL?Page=CDM_

Message Text

Hyperlink

Working with the Results



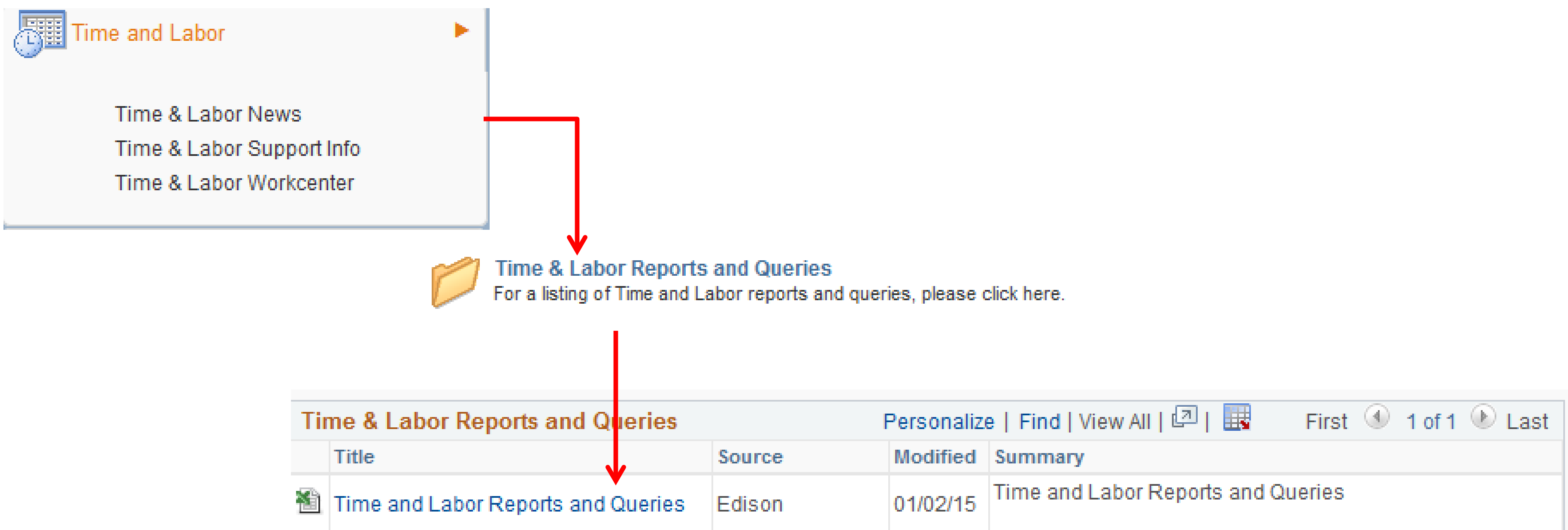
Drop Down Menus

List of Useful Queries

Human Resources: TN_HR01_HR_QUERY_LIST

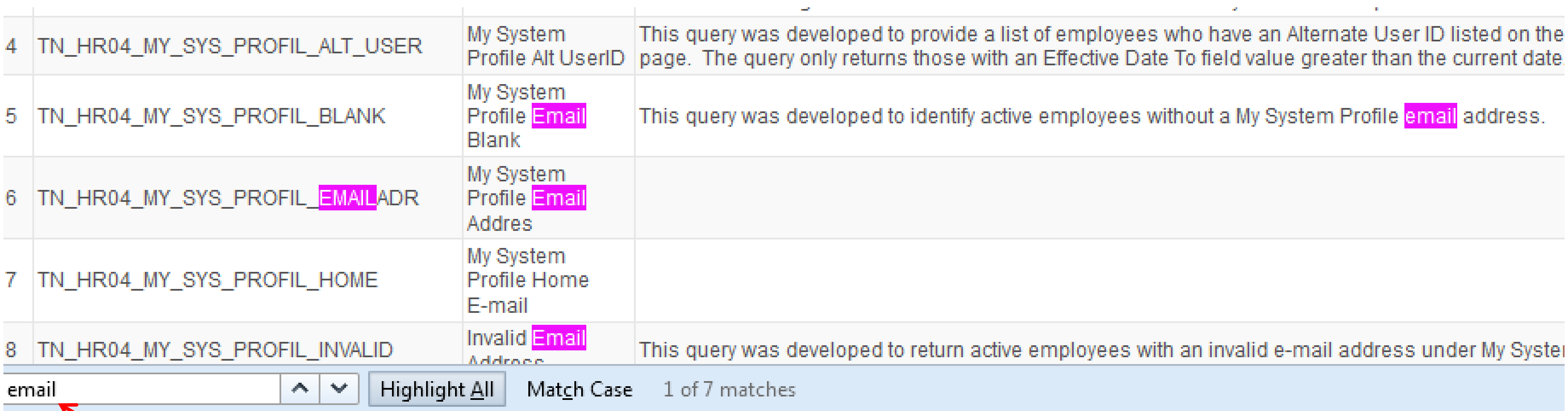
Time & Labor, Payroll, Benefits, & Enterprise Learning Management:

- Listed in each module work center navigation



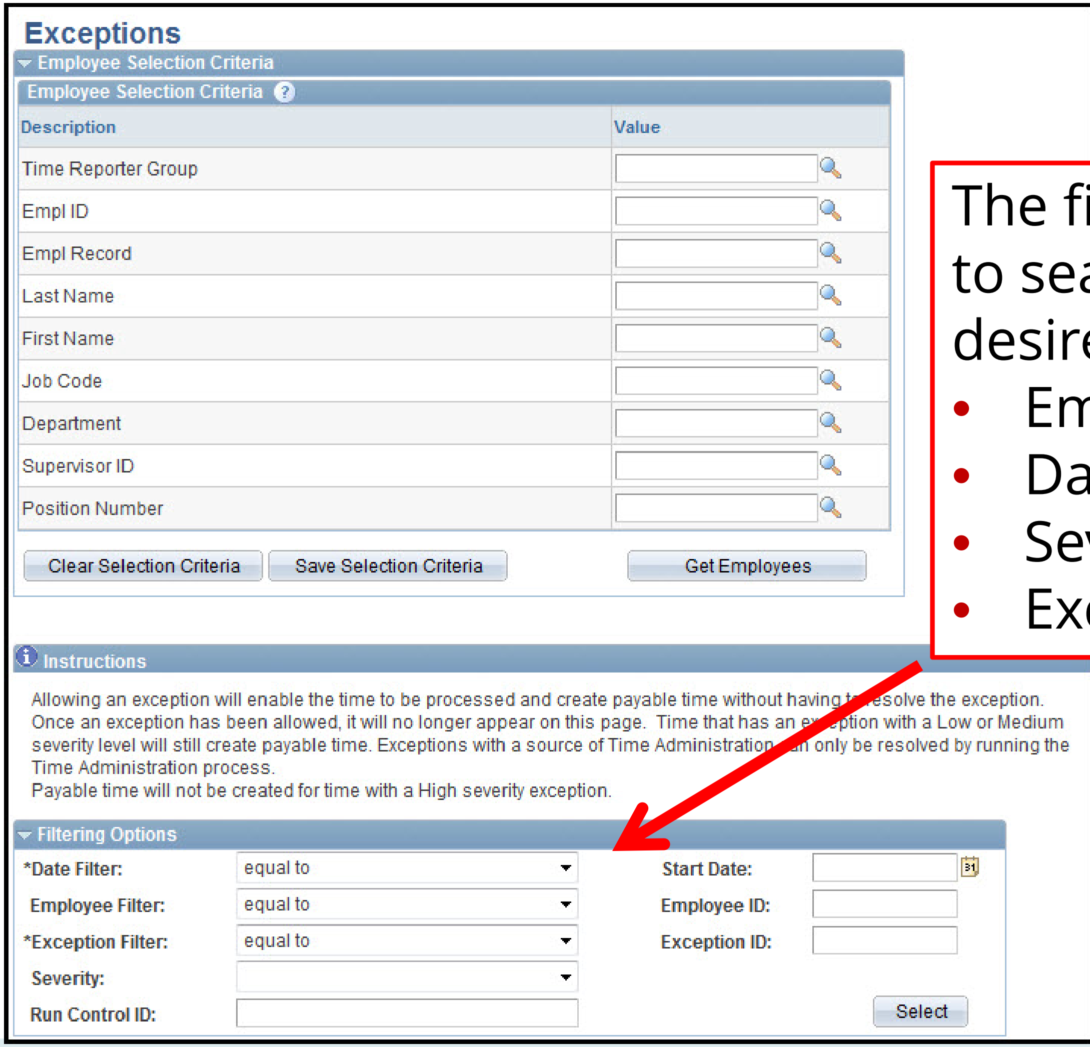
Finding the Right Query

Use Control and F keys to Search Criteria



Type in key word to use in search

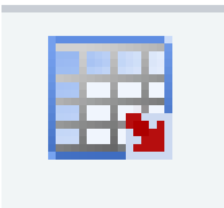
Filter Option

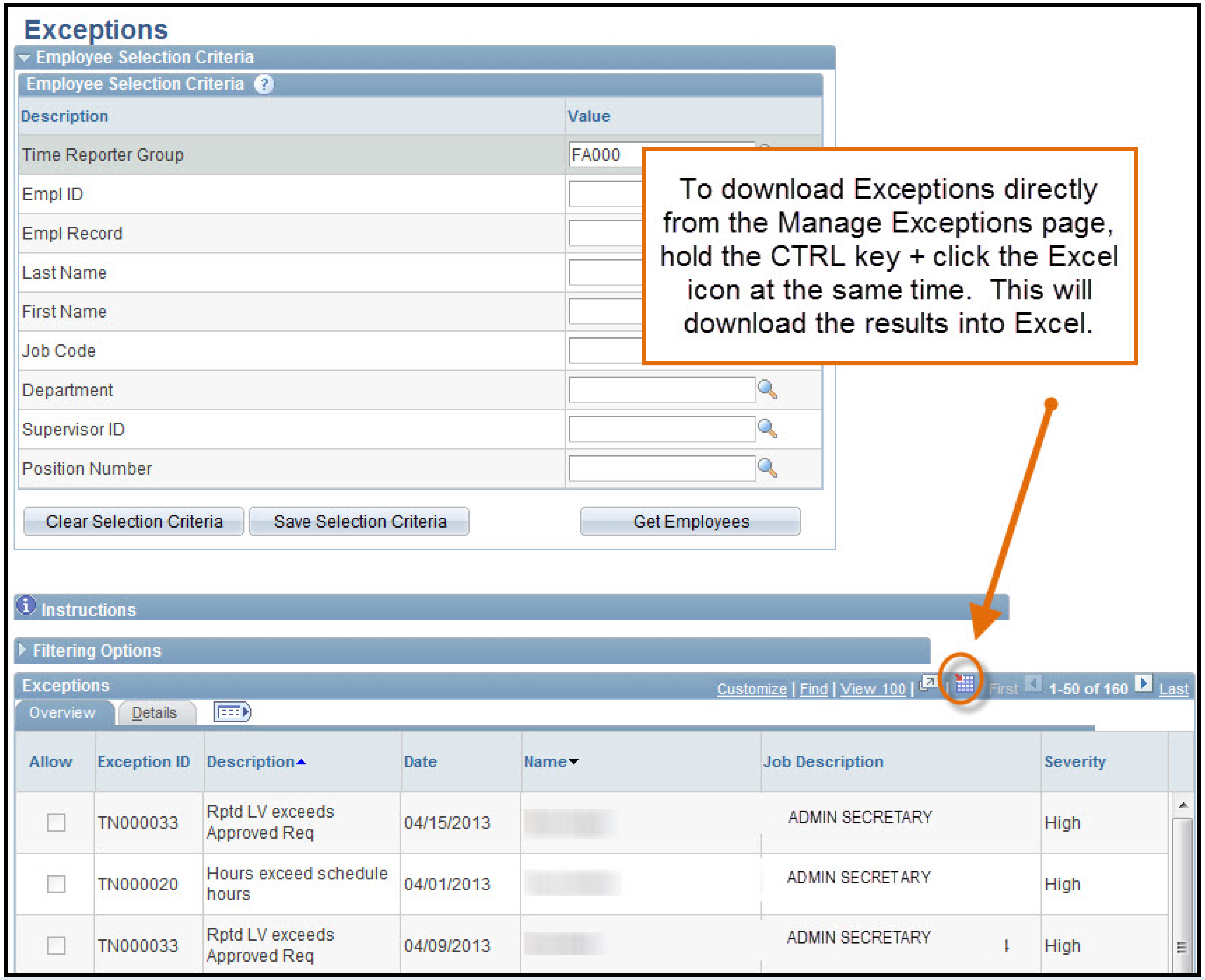


The filter option allows you to search specifically for desired results including:

- Empl ID
- Date
- Severity
- Exception ID

Excel Button





To download Exceptions directly from the Manage Exceptions page, hold the CTRL key + click the Excel icon at the same time. This will download the results into Excel.

Results

Online Page

Overview | Details

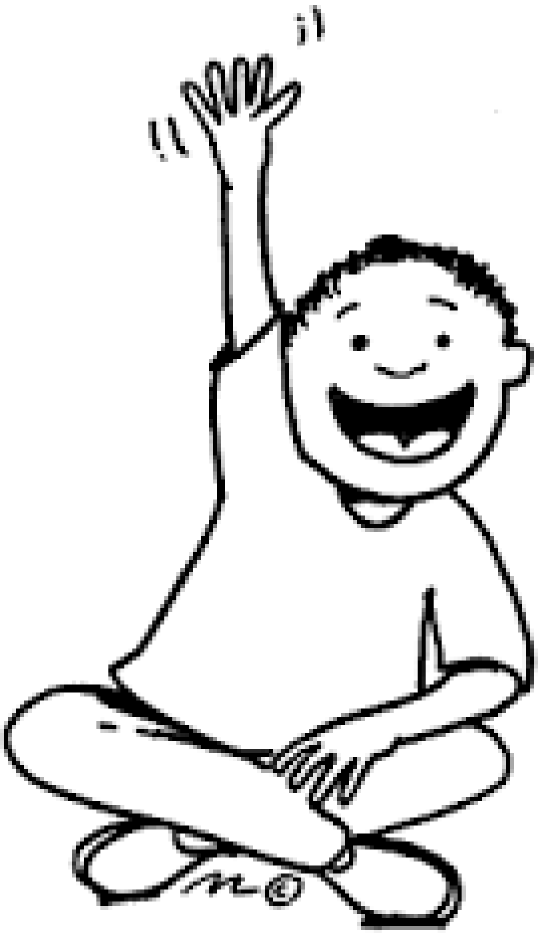
Allow	Exception ID	Description	Date	Name	Job Description	Severity
☐	TN000033	Rptd LV exceeds Approved Req	04/15/2013		ADMIN SECRETARY	High
☐	TN000020	Hours exceed schedule hours	04/01/2013		ADMIN SECRETARY	High
☐	TN000033	Rptd LV exceeds Approved Req	04/09/2013		ADMIN SECRETARY	High

Results from the Online Page

A3 *fx*

	A	B	C	D	E	F	G
1	Allow	Exception ID	Description	Date	Name	Job Description	Severity
2		TN000033	Rptd LV exceeds Approved Req	4/15/2013	EMPLOYEE NAME	ADMIN SECRETARY	High
3		TN000020	Hours exceed schedule hours	4/1/2013	EMPLOYEE NAME	ADMIN SECRETARY	High
4		TN000033	Rptd LV exceeds Approved Req	4/9/2013	EMPLOYEE NAME	ADMIN SECRETARY	High

Questions?



TN Department of Finance & Administration | Strategic Technology Solutions

THANK YOU!