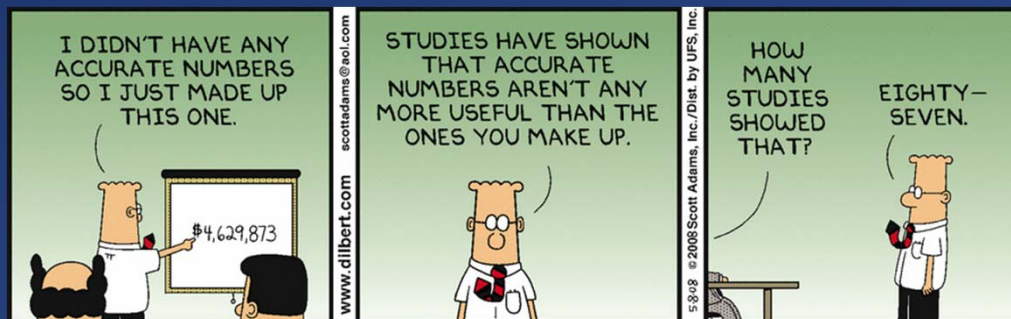


Oracle Business Intelligence (OBIEE 12c)

Tips & Tricks for Developers and Power Users



Presenters

- Robert Flum
 - Director, Information Systems & Reporting
 - University of Wisconsin-Platteville
- Andy Cunningham
 - Manager, Business Intelligence & Reporting Enterprise Systems
 - University of Wisconsin-Madison
- Zac Palet
 - Higher Education EPM Solution Lead
 - Huron Consulting Group



Overview

- University of Wisconsin System - Background & Current State
- Tips & Tricks
 - RPD Development Tasks
 - Reports & Dashboards
 - Other Tips
- Design Considerations
- Q&A

University of Wisconsin System Background & Current Status



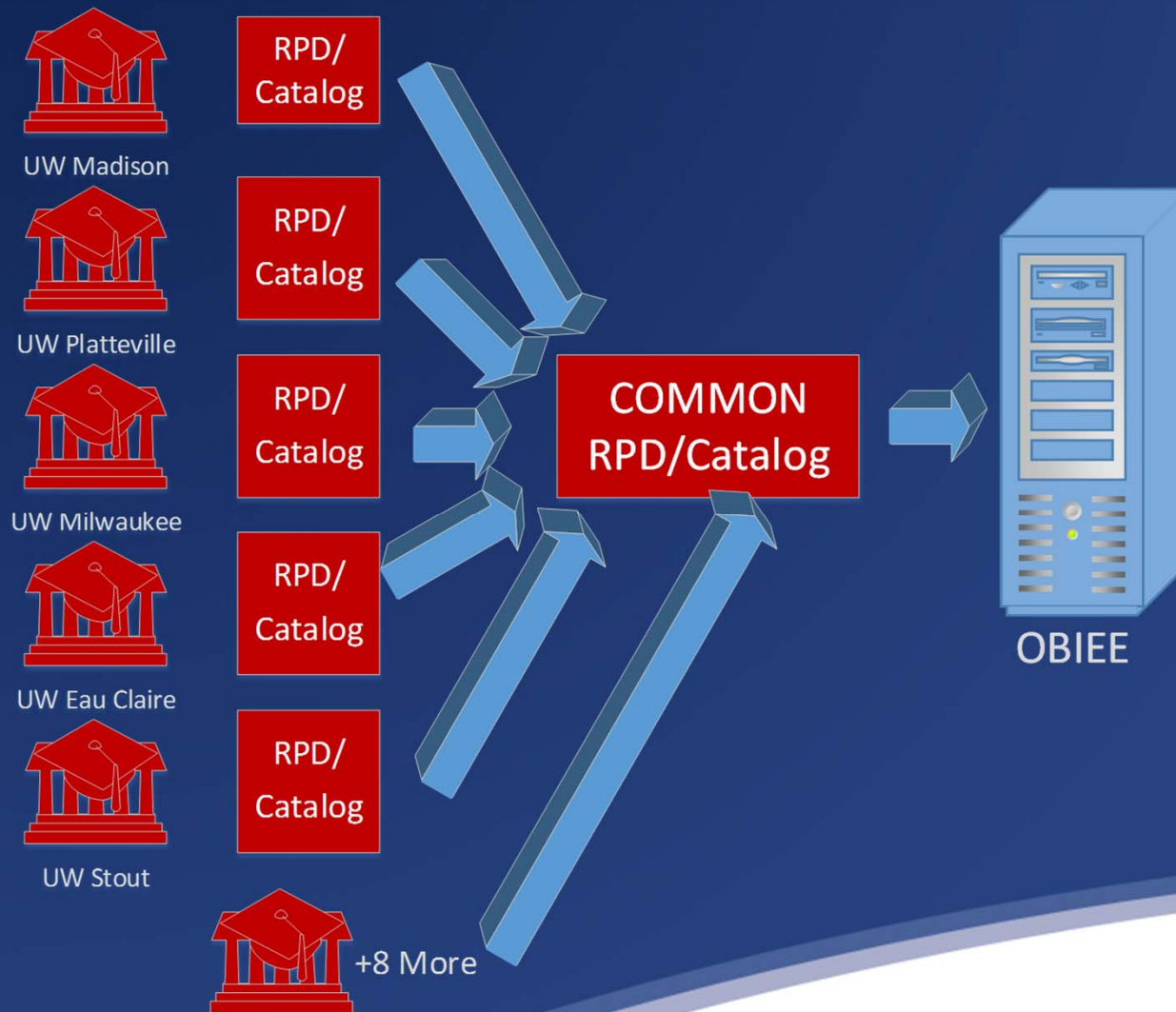
University of Wisconsin System

The UW System is one of the largest systems of public higher education in the country.

- Approximately 180,000 students
- 39,000 faculty and staff
- 13 four-year universities
- 13 freshman-sophomore UW Colleges campuses
- Statewide UW-Extension



University or Wisconsin OBIEE



Tips & Tricks

RPD Development Tasks

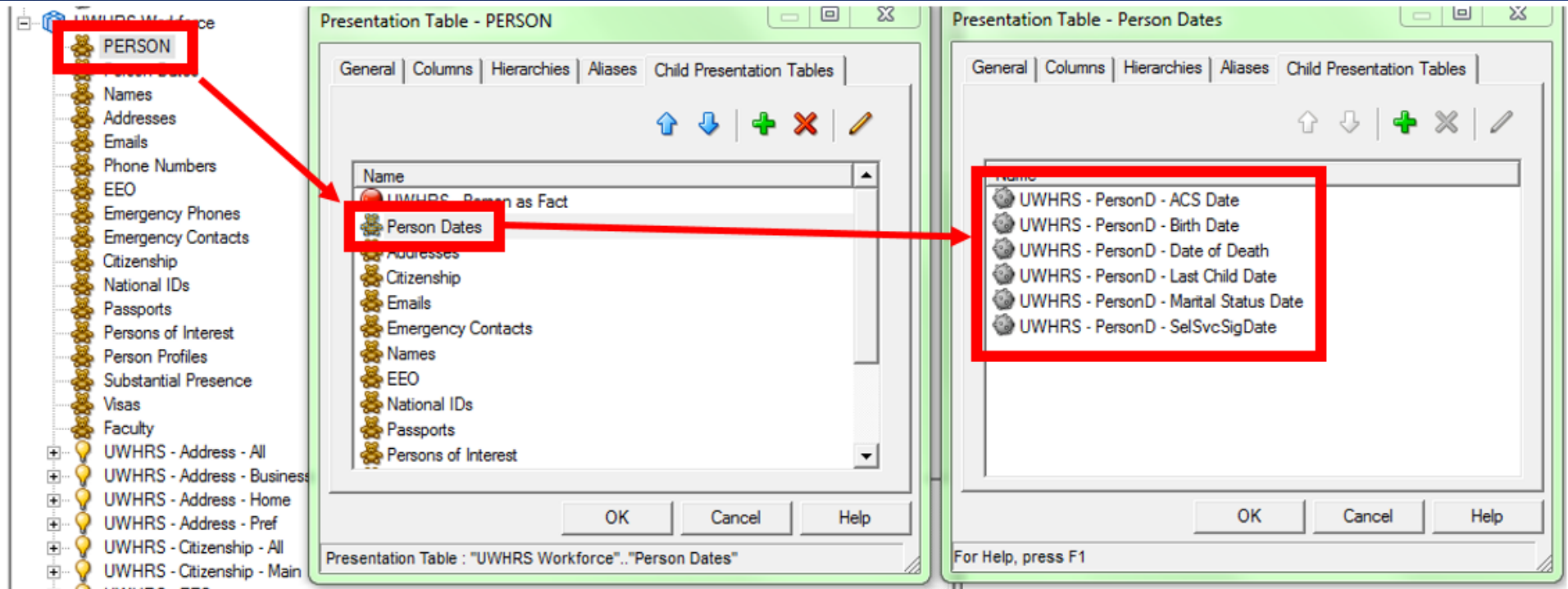
Presentation Layer

Remove any field that won't be used. Could possibly be:

- IDs (if you are just using descrs)
- Duplicates
- Surrogate and foreign keys

Organize the presentation columns:

- Child presentation tables
- Commonly used tables



Renaming Process

Method 1 – initial pass

- Import Metadata and run Repository Documentation Utility and provide the results to report developers to mark up

Logical Table	Logical Column		Physical Table	Alias	Physical Column
UWHRIS - Dim - Date - VisaD - All - Status Date	Date	<-----	D_DAY	_UWHRIS_Dim_D_DAY_VisaD_Status_Date	CALENDAR_DATE
UWHRIS - Dim - Date - VisaD - All - Status Date	Day of Month	<-----	D_DAY	_UWHRIS_Dim_D_DAY_VisaD_Status_Date	DAY_OF_MONTH
UWHRIS - Dim - Date - VisaD - All - Status Date	Month	<-----	D_DAY	_UWHRIS_Dim_D_DAY_VisaD_Status_Date	MONTH_NAME
UWHRIS - Dim - Date - VisaD - All - Status Date	Month#	<-----	D_DAY	_UWHRIS_Dim_D_DAY_VisaD_Status_Date	MONTH_NUMBER
UWHRIS - Dim - Date - VisaD - All - Status Date	Year-Qtr	<-----	D_DAY	_UWHRIS_Dim_D_DAY_VisaD_Status_Date	QUARTER_NAME
UWHRIS - Dim - Date - VisaD - All - Status Date	Qtr#	<-----	D_DAY	_UWHRIS_Dim_D_DAY_VisaD_Status_Date	QUARTER_NUMBER
UWHRIS - Dim - Date - VisaD - All - Status Date	Year	<-----	D_DAY	_UWHRIS_Dim_D_DAY_VisaD_Status_Date	YEAR_NUMBER
UWHRIS - Dim - Date - VisaD - Main - Effective Date	Date	<-----	D_DAY	_UWHRIS_Dim_D_DAY_VisaD_Effective_Date	CALENDAR_DATE
UWHRIS - Dim - Date - VisaD - Main - Effective Date	Day of Month	<-----	D_DAY	_UWHRIS_Dim_D_DAY_VisaD_Effective_Date	DAY_OF_MONTH

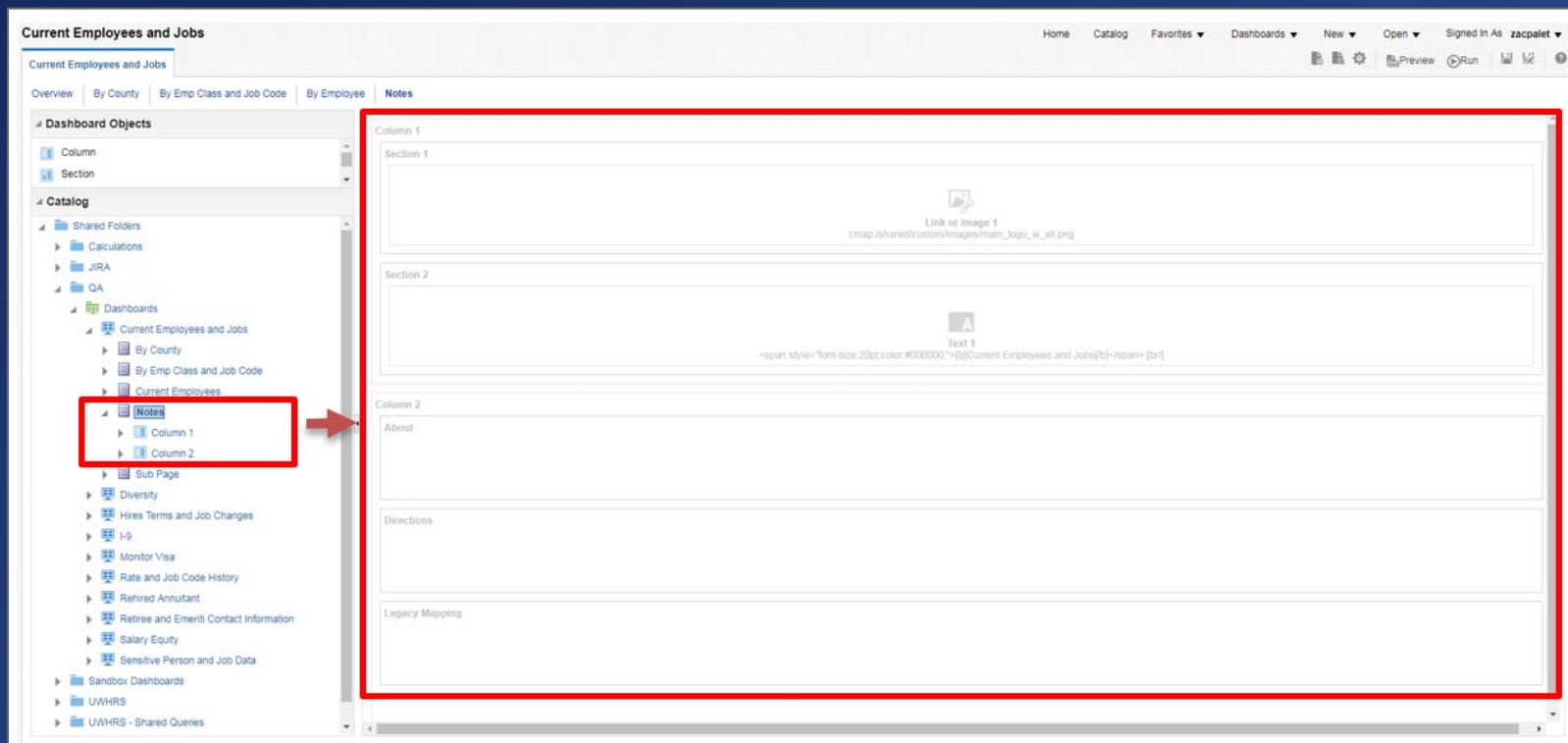
Method 2 – to finalize if method 1 is not sufficient

- Do it real time in the RPD with report developers in the room

Tips & Tricks Reports & Dashboards

Use Templates from Dashboard Catalog

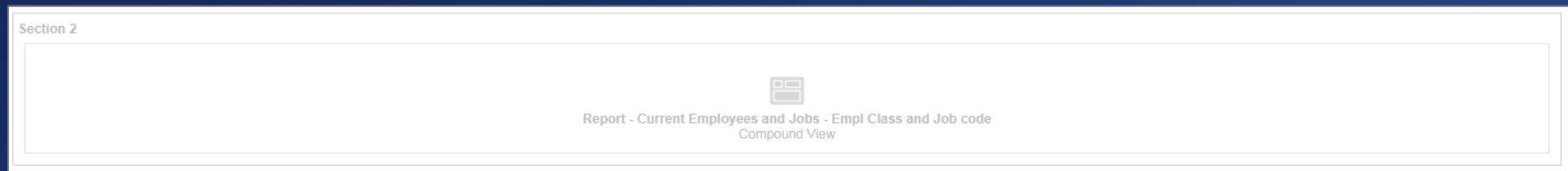
- Re-usable content speeds up development
- Ensures consistent formatting
- Helps to move pages to subpages and vice versa



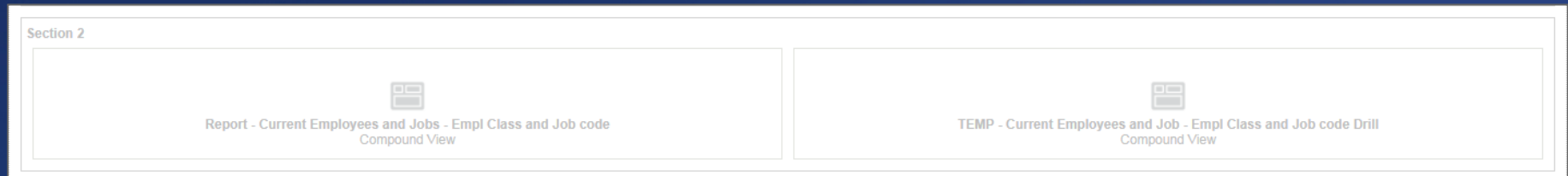
Minimize the amount of Catalog objects

- when presenting a table and graph together:

- **Use:** 2 views in 1 analysis

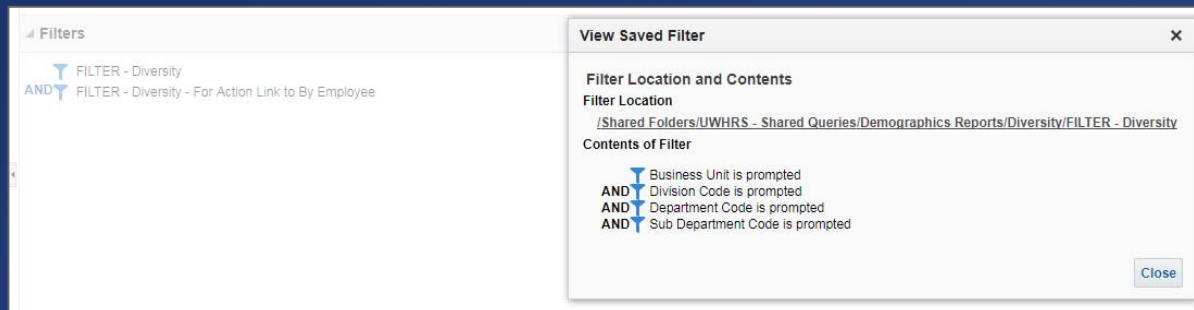
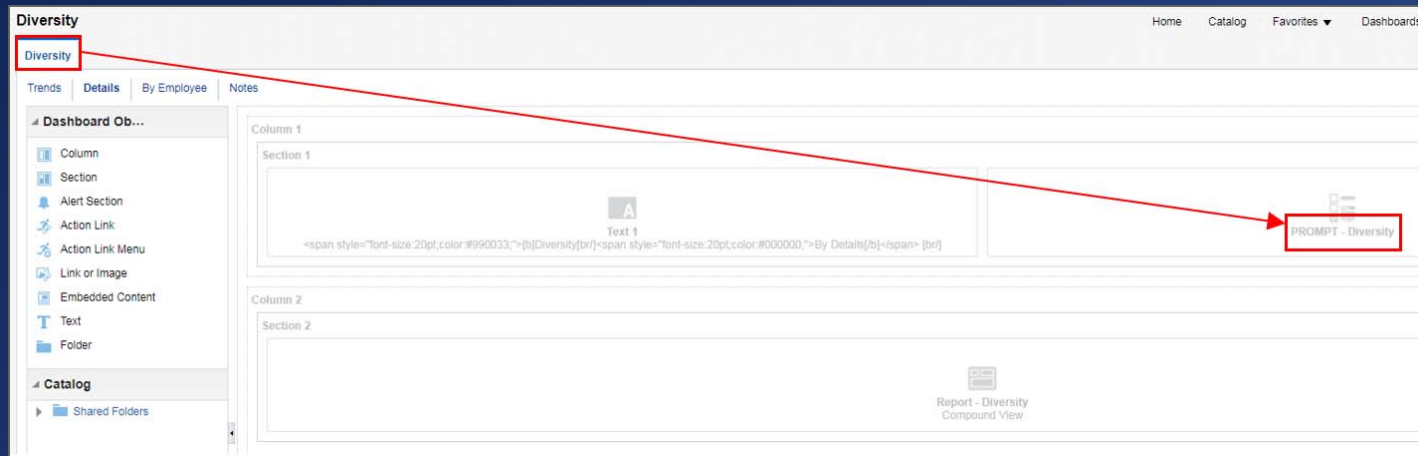


- **Don't Use:** 1 view each in 2 analyses



Create matrix in excel to identify area for consolidation

Create common prompts and filters



Options: Hiding Content

- Prompt before Opening
 - Simple
 - Helps performance

⚠ Opening this dashboard page may take a while. Select prompt values and click Continue if you want to open this page. Continue

I-9 Overview

Business Unit	Division	Department	Sub-Department	Empl Class	Job Code	FTE	Emplid	
(All Column Values)	(All Column Values)	(All Column Values)	(All Column Values)	CJ,CP,AS,FA,LI	--Select Value--	FTE = >0	--Select Value--	Reset

Performance Tile - All



Performance Tile 2

Performance Tile - Keep



Performance Tile 2

Performance Tile - Remove



Performance Tile 1

- Use variables and conditions to hide the analysis before selecting prompts
 - Put a Condition on the dashboard section
 - Filter on presentation variables rather than “is prompted”
- Neither
 - Use session variables and default members where necessary
 - If performance is a problem, use one of the above

Drill through

Use an Action Link as the primary interaction on tables to drill to the detail

Filters:

- Must be exactly the same between analyses
- Fields from table must be “is prompted”

Empl Status is equal to **Active**, **Leave With Pay**, **Leave of Absence**
and Job FTE is greater than 0
and HR Status is equal to / is in **Active**
and Pay Basis is not equal to / is not in **L, S, V**
and Annualized F-T Rate is greater than 0
and Current Row is equal to / is in **C**

Business Unit	Ethnicity	Head Count
UW Eau Claire	-	10,833
UW Eau Claire	WHITE	3,463
UW Eau Claire	ASIAN	216
UW Eau Claire	HISPA	77
UW Eau Claire	BLACK	54
UW Eau Claire	AMIND	37
UW Eau Claire	2 OR MORE RACES	30
UW Eau Claire	PACIF	3

Business Unit	Division	Department	Sub Department	Name	Emplid
UW Eau Claire	VICE CHANC FOR STD AFFAIRS	DEPT-C0305	STU AFF/DEAN OF STUDENTS		00791854
UW Eau Claire	COLLEGE OF ARTS & SCIENCES	DEPT-C0640	LANGUAGE		00702620
UW Eau Claire	VICE CHANC FOR STD AFFAIRS	DEPT-C0305	STU AFF/DEAN OF STUDENTS		00702620
UW Eau Claire	VICE CHANC FOR STD AFFAIRS	DEPT-C0335	PRINTING SERVICES		00702620
UW Eau Claire	COLLEGE OF BUSINESS	DEPT-C0802	BUSINESS, COLLEGE OF		00852066
UW Eau Claire	COLLEGE OF BUSINESS	DEPT-C0802	BUSINESS, COLLEGE OF		00852066

Use Filter Views

- This helps end users know what was exported
- Make every Analysis on the dashboard a compound view
- You can make multiple compound views

JobCode	Job Title	# of Employees	Annualized Salary				
			Minimum	Average	Maximum	Median	Std Dev
00120	FINANCIAL SPEC PRG SU	7	\$48,152	\$60,953	\$71,635	\$62,587	\$62,587
00160	ACCOUNTANT	44	\$41,600	\$52,762	\$70,824	\$52,239	\$52,239
00161	FINANCIAL SPECIALIST	72	\$32,074	\$35,986	\$47,694	\$35,277	\$35,277
00162	FINANCIAL SPECIALIST SENIOR	341	\$37,502	\$42,519	\$57,346	\$41,392	\$41,392
00163	FINANCIAL SPECIALIST ADVANCED	33	\$43,846	\$49,507	\$60,320	\$48,235	\$48,235
00203	AUDITOR - JOURNEY	1	\$54,683	\$54,683	\$54,683	\$54,683	\$54,683
00204	AUDITOR - SENIOR	6	\$60,611	\$67,285	\$69,243	\$68,754	\$68,754
00205	AUDITOR - ADVANCED	4	\$67,704	\$79,446	\$97,698	\$76,190	\$76,190
00212	ACCOUNTANT SENIOR CONF	1	\$72,862	\$72,862	\$72,862	\$72,862	\$72,862
00263	ACCOUNTANT - JOURNEY	53	\$50,814	\$66,144	\$98,093	\$61,942	\$61,942
00264	ACCOUNTANT - SENIOR	42	\$59,550	\$75,118	\$91,707	\$71,791	\$71,791
00265	ACCOUNTANT - ADVANCED	16	\$67,954	\$82,334	\$114,275	\$77,490	\$77,490
00270	AUDITOR	3	\$51,272	\$54,524	\$60,486	\$51,813	\$51,813
00320	FINANCIAL SPEC SUPV	5	\$48,402	\$54,126	\$58,614	\$56,264	\$56,264
00530	FINANCIAL MGMT SUPV	4	\$88,421	\$93,813	\$96,616	\$95,108	\$95,108
00580	FINANCIAL PROG SUPV	26	\$60,986	\$75,012	\$102,149	\$71,989	\$71,989
00602	ACAD DEPT SUPV NON-EXEMPT	1	\$59,197	\$59,197	\$59,197	\$59,197	\$59,197
03462	REAL ESTATE SPEC SEN	2	\$62,400	\$69,389	\$76,378	\$69,389	\$69,389
04161	COLLECTIONS SPEC	7	\$38,002	\$43,326	\$48,922	\$38,480	\$38,480
04320	RISK MANAGEMENT OFFR	3	\$65,624	\$71,261	\$74,422	\$73,736	\$73,736
04361	RISK MGT SPEC	6	\$45,843	\$52,585	\$59,363	\$56,576	\$56,576
04362	RISK MGT SPEC SENR	11	\$49,858	\$59,120	\$67,933	\$60,528	\$60,528
04371	CONTRACTS SPEC	1	\$41,683	\$41,683	\$41,683	\$41,683	\$41,683
04372	CONTRACTS SPEC SENR	1	\$36,275	\$36,275	\$36,275	\$36,275	\$36,275
04380	RISK MANAGEMENT MGR	2	\$84,677	\$86,039	\$87,402	\$86,039	\$86,039

Rows 1 - 25

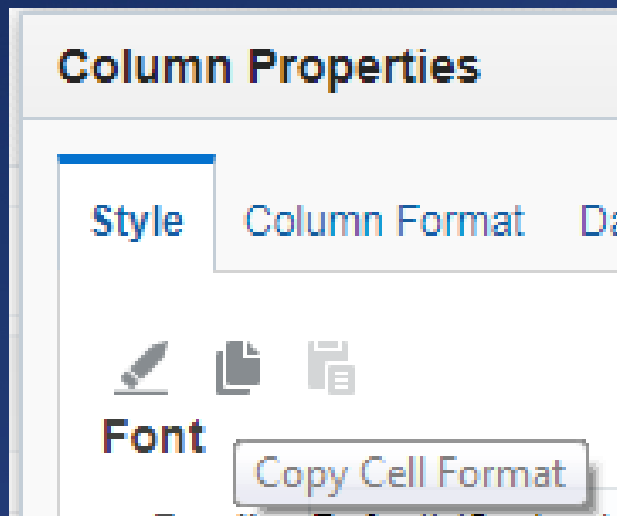
Empl Status is equal to **Active**, Leave With Pay, Leave of Absence
 and Job FTE is greater than 0
 and HR Status is equal to / is in **Active**
 and Pay Basis is not equal to / is not in **L S V**
 and Annualized F-T Rate is greater than 0
 and Current Row is equal to / is in **C**

[Edit](#) - [Print](#) - [Export](#) - [Copy](#)

Other Tips

Copy and paste formatting

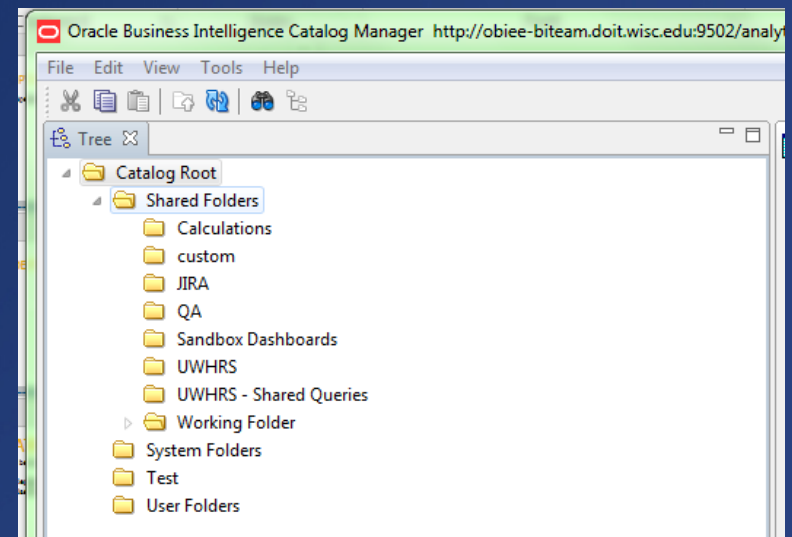
- Speeds up any formatting



Mass Changes in the Catalog using XML

Open Catalog Manager
*(it comes with the RPD
admin tool download)*

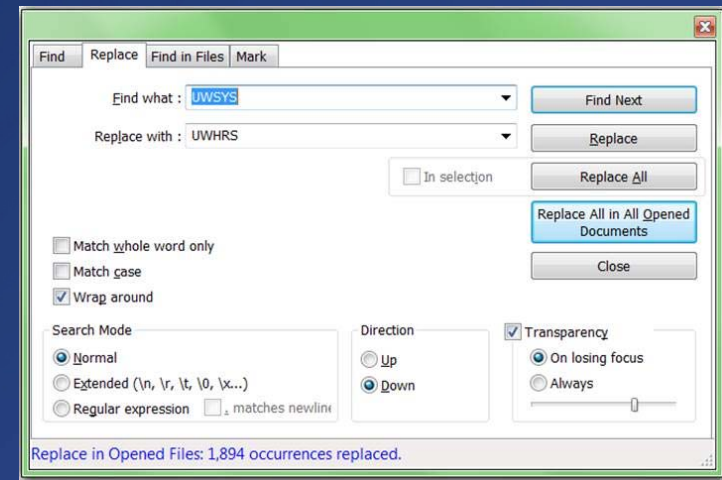
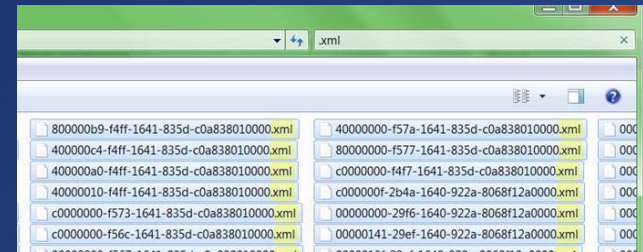
https://docs.oracle.com/cd/E23943_01/bi.1111/e10541/prescatadmin.htm#BIESG339



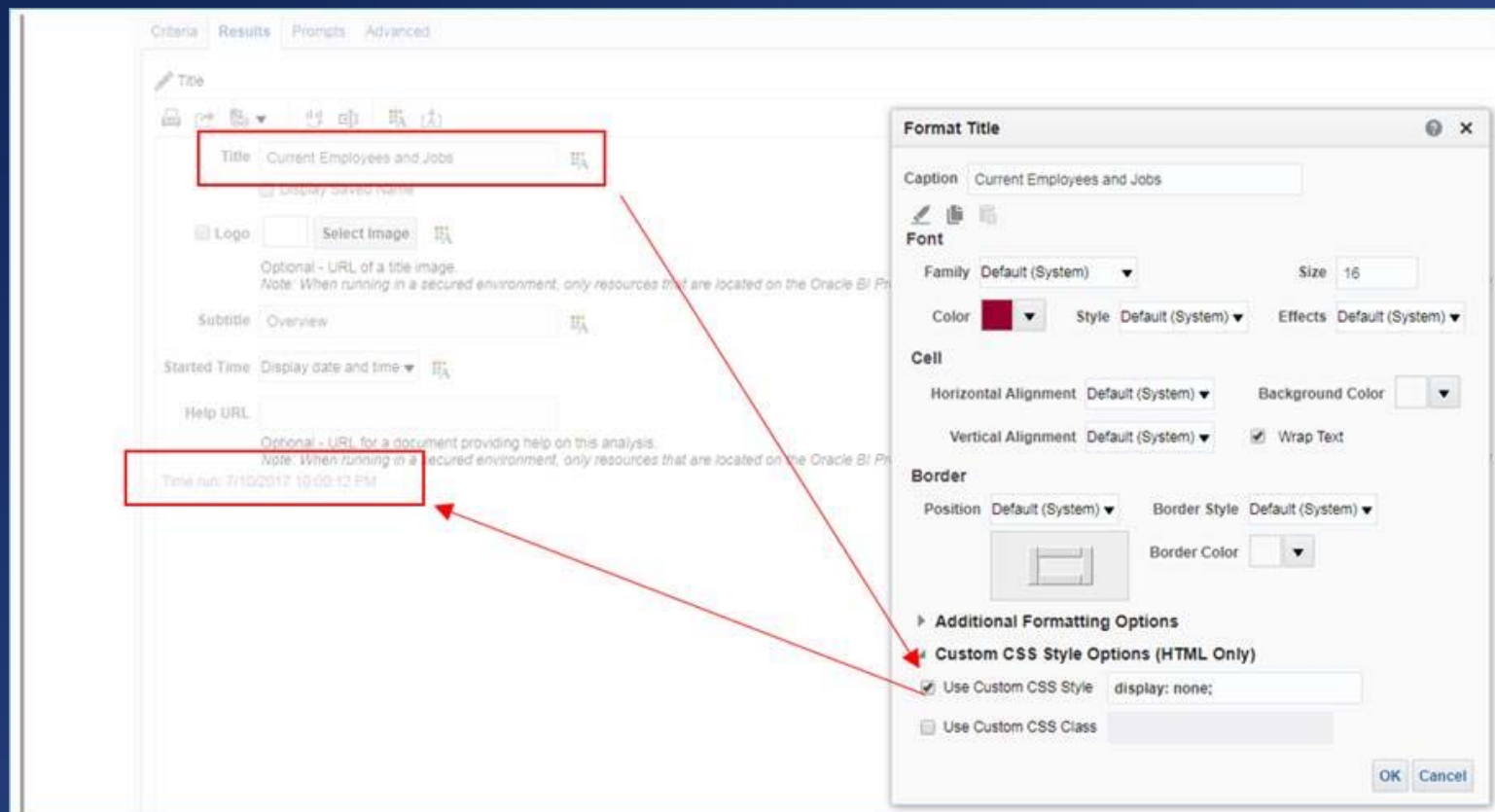
Mass Changes in the RPD using XML

How to:

1. Open the RPD, and Save As MDS XML Documents
2. Search for .xml files in the saved folder, and select all using CTRL-A. Drag all files into notepad++
3. Find and Replace All using CTRL + H, and save all
4. Open the RPD again using MDS XML





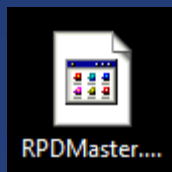
Hide Titles or Notes on a Dashboard



Double click to open the RPD

- Search Default Programs from the Start Menu....
- Click **Associate a file type** or protocol with a program.
- Double click .rpd and browse for the path for the admintool.cmd
 - Path for the admin tool on my comp (may be different on depending on install location):
C:\ProgramData\Microsoft\Windows\Start Menu\Programs\Oracle Business Intelligence Client\biclient_home1
 - If you don't find it there, just right click on the admin tool from how you normally find it, and select Copy UNC path

Name	Description	Current Default
 .rmi	MIDI Sequence	Windows Media Player
 .rpd	RPD File	admintool.cmd



...and much more...
Use what works for you.



Design Considerations

Drive BI Adoption

- Data consumers are used to data, not information
- Example report is hundreds of pages of data!

[illegible]

ORACLE

Business Intelligence

Demographics

[Home](#)
[Diversity \(570\)](#)

[DV - Trends](#)
[DV - Summary *](#)
[DV - Details *](#)
[DV - Notes](#)

[UVD'S Home Page](#)
[Demographics](#)

Diversity Trends

Business Unit

Division

Department

Sub-Department

Apply

Reset

UW Madison

(All Column Values)

(All Column Values)

(All Column Values)

Headcount by EEO Category

Time run: 10/4/2017 3:52:08 PM

Headcount by EEO Category and Age Band

searching...

To cancel, click here.

select view type: EEO Graph

Year	Technicians	Full EEO-1 Reporting	Service Workers	Promotable Level Officials	Administrative Support Workers	Total
2012	10760	2125	7603	2419	7603	2419
2013	10445	2034	7508	2319	7508	2319
2014	10013	1945	7406	2235	7406	2235
2015	9816	1856	7304	2150	7304	2150
2016	11065	2016	7332	2041	7332	2041

2012

2013

2014

2015

2016

Technicians

Full EEO-1 Reporting

Service Workers

Promotable Level Officials

Administrative Support Workers

Edit - Export

Headcount by EEO Category and Ethnicity

Time run: 10/4/2017 3:52:08 PM

Headcount by EEO Category and Gender

Time run: 10/4/2017 3:52:08 PM

select view type: Ethnicity Graph

EEO 1 Category: Craft Workers

Year	LOR	NONE	BLACK	ASIAN	HISPANIC	WHITE	Others	Total
2012	377	377	377	377	377	377	377	377
2013	342	342	342	342	342	342	342	342
2014	333	333	333	333	333	333	333	333
2015	323	323	323	323	323	323	323	323
2016	337	337	337	337	337	337	337	337

2012

2013

2014

2015

2016

LOR

NONE

BLACK

ASIAN

HISPANIC

WHITE

Others

Edit - Export

select view type: Gender Graph

EEO 1 Category: Administrative Support Workers

Year	Female	Male	Other	Total
2012	1868	1868	1868	1868
2013	1778	1778	1778	1778
2014	1727	1727	1727	1727
2015	1602	1602	1602	1602
2016	1688	1688	1688	1688

2012

2013

2014

2015

2016

Female

Male

Other

Edit - Export

EXTRACT YEAR FROM JOB POST: CV Data is between 2012 and 2016

and Craft Code is not equal to 1 is not in KN

and Pay Band is equal to A, C, H

and Business Unit is equal to UW Madison

and Program Code is not equal to 1 is not in KN

Edit - Export

Make BI Easy to Use

ORACLE Business Intelligence

Search All Advanced Administration Help Sign Out







UWBI Landing Page Home Catalog Favorites Dashboards New Open Signed In As accunningham@wisc.edu

UNIVERSITY OF WISCONSIN SYSTEM

University of Wisconsin Analytics
This home page provides links to all dashboards and analyses available to University of Wisconsin users. To access the dashboards and analyses available for a specific campus or enterprise group, please select the appropriate logo.

Announcements
No announcements at this time.

Available Dashboards

UW Eau Claire 	Human Resources and Finance 	UW Madison 
UW Platteville 	UW Milwaukee 	UW Stout 

Helpful Resources

Additional Resources
Oracle BI Documentation Knowledge Base Division of Information Technology

UW-Platteville



UNIVERSITY OF WISCONSIN-PLATTEVILLE

ENROLLMENT HOMEPAGE

Available Dashboards

College Enrollment Profile

[View Dashboard](#)

Summarized college enrollment, diversity, incoming ACT, retention and degree information. This information is used in the college brochure. .

This dashboard includes the following reports:

Total student enrollment by college.

Print Based

[View Dashboard](#)

Definition developed between Institutional Research and the Distance Learning Center December 2016

Tenth Day Enrollment Reports

[View Dashboard](#)

This UWP Tenth day enrollment report shows total headcount enrollment, undergraduate enrollment, and retention rates as of the tenth day of the semester.

Leads to Enterprise Systems Dashboard

The screenshot displays the 'UWSYS Home Page' for the University of Wisconsin System. The page is structured with a top navigation bar, a main content area with multiple dashboard tiles, and a footer with additional resources.

Navigation Bar: Includes 'Search All', 'Advanced', 'Administration', 'Help', 'Sign Out', and a user profile 'Signed In As acunningham'.

Main Content Area:

- Human Resources and Finance Analytics:** A summary tile stating 'This HR and Finance home page provides links to all Human Resources and Finance dashboards.'
- Information Status:** A summary tile stating 'Add in information regarding last data updated etc. Need a table to query to determine this information.'
- Available Dashboards:** A section containing several tiles:
 - Absence and Accrual Analyses:** 'This dashboard provides employee absence and accrual information. View Dashboard'
 - Compensation Analyses:** 'This dashboard provides current employee salary information including:
 - Salary equityView Dashboard'
 - Demographic Analyses:** 'This dashboard provides demographic information regarding our workforce including:
 - Employee diversity
 - Sensitive and non-sensitive employee contact and job information. Appropriate permissions must be obtained to access sensitive information
 - IS information
 - Work visa information including expired visas
 - Retiree and Emeriti contact informationView Dashboard'
 - Payroll Analyses:** 'This dashboard provides payroll information including:
 - Employee hours and earnings
 - Payroll and deductions
 - A Payroll history extract
 - Weekly and monthly payroll edit checksheets
 - Payroll and deduction history reportView Dashboard'
 - Workforce Health Analyses:** 'This dashboard dashboard provides reports regarding workforce health including:
 - Hires and job changes
 - Rate and job code history
 - Rate history
 - Rehired annuitantsView Dashboard'
- Helpful Resources:** A section with a table:

Purpose	Contact
Additional Resources	
Oracle BI Documentation	Knowledge Base
Division of Information Technology	
- Where are my Shared Query Reports?:** 'This page provides information on which dashboard and report, within the dashboard, to use to access the information previously provided by a Interactive Reporting shared query. Go to page'

Footer: 'Workforce Health: Workforce Health Homepage > UWSYS Home Page: Homepage'

Leads to a subject specific Dashboard

ORACLE Business Intelligence

Search All Advanced Administration Help Sign Out

Home Catalog Favorites Dashboards New Open Signed In As acunningham

Demographics

Homepage Overview Diversity Personnel Data Retiree and Emeriti I9 Information Employment Visas

UNIVERSITY OF WISCONSIN SYSTEM

Return to HR and Finance Homepage

Demographics Analytics

This subject area provides demographic information regarding our workforce including:

- Employee diversity
- Sensitive and non-sensitive employee contact and job information. Appropriate permissions must be obtained to access sensitive information
- I9 information
- Work visa information including expired visas
- Retiree and Emeriti contact information

Overview Page

The overview page provides key metrics regarding demographics (Future).

[View Report](#)

Personnel Data

This report provides personal data and emergency contact information. Appropriate permissions must be obtained for sensitive information to be displayed in the report.

What business question(s) will this report answer?

- Where can I find a report that lists all current employees in my department and their birthdates?
- Where can I find a report that lists all current employees in my department with their ethnicity and gender?
- Where can I find a report that produces a "Directory-like" look for current employees in my division which also includes their email address?
- Where can I find a report that lists all current employees in my department, including sensitive data elements such as birthdate, along with their emergency contact information?
- Where can I find a report that produces "directory-like" look for current employees in my department, along with their email address?

[View report](#)

I9 Information

This report provides details to assist departments in the timing of removing/destroying paper I-9 forms. To remove an I-9 from your files, the following conditions must be met:

- The employee has terminated all jobs with your Dept.
- The employee's hire/rehire date must be more than 3 years from today's date.
- The employee's termination date must be more than 1 year from today's date.

Business Questions Answered:

Questions answered by this query include:

- Where can I find a query that provides details of jobs held by employees in my Deptid, their job status, the number of years their jobs have been inactive that coincide with the removal of their paper I-9?
- Where can I find a query that provides details of all jobs held by employees in my Deptid, their job status, the number of years they have been active/inactive in their jobs that coincide with having their paper I-9 removed?

Diversity

This report provides information on diversity trends, diversity by employee, and individual employee diversity related information (Appropriate permissions must be obtained to access sensitive employee level information).

[View report](#)

Retiree and Emeriti Contact

This report provides retiree and emeriti contact information.

[View report](#)

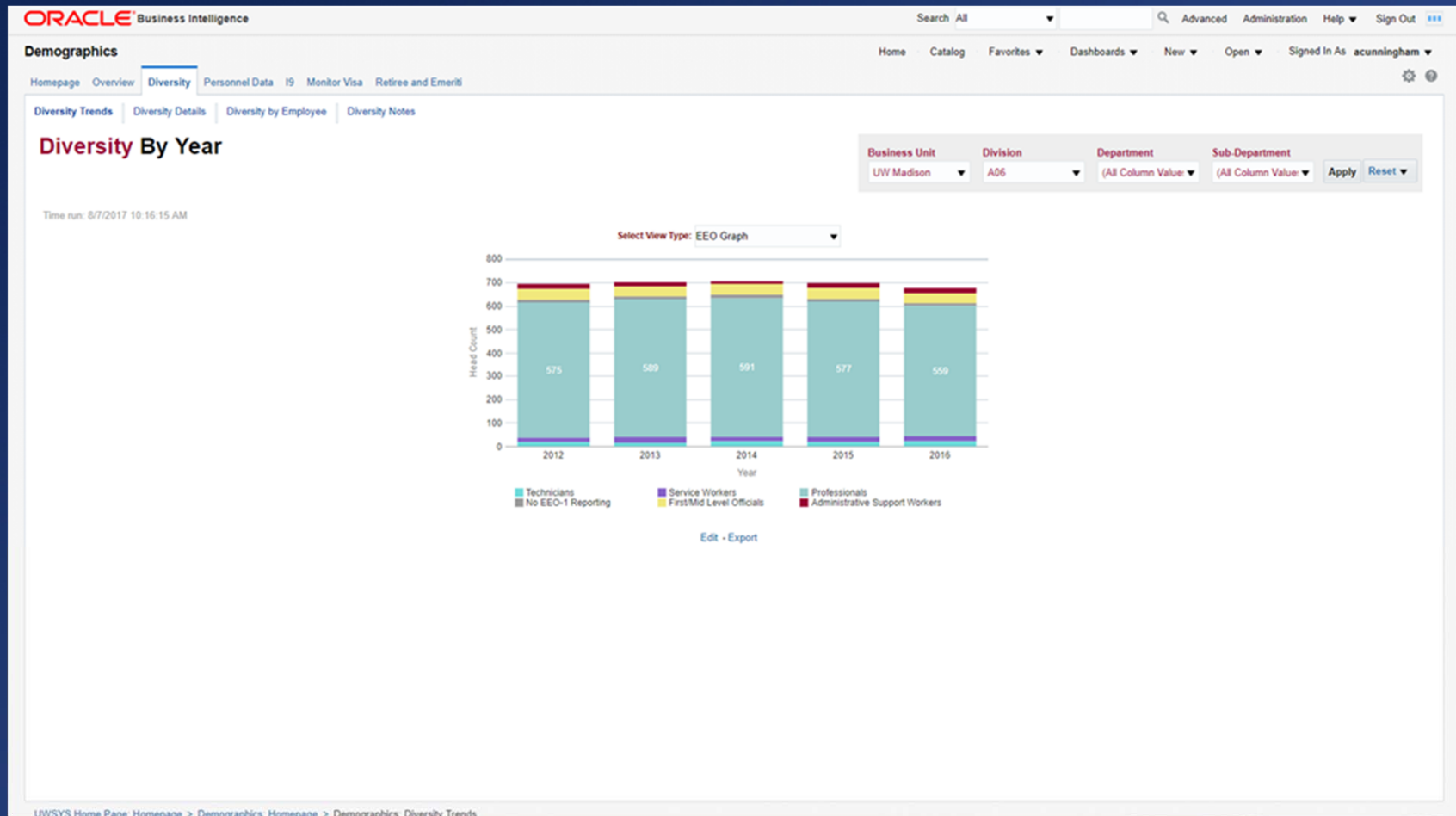
Employment Visa Information

This report provides information on employee work visas.

[View report](#)

Workforce: Workforce Homepage > UWSYS Home Page: Homepage > Demographics: Homepage

Leads to Analyses



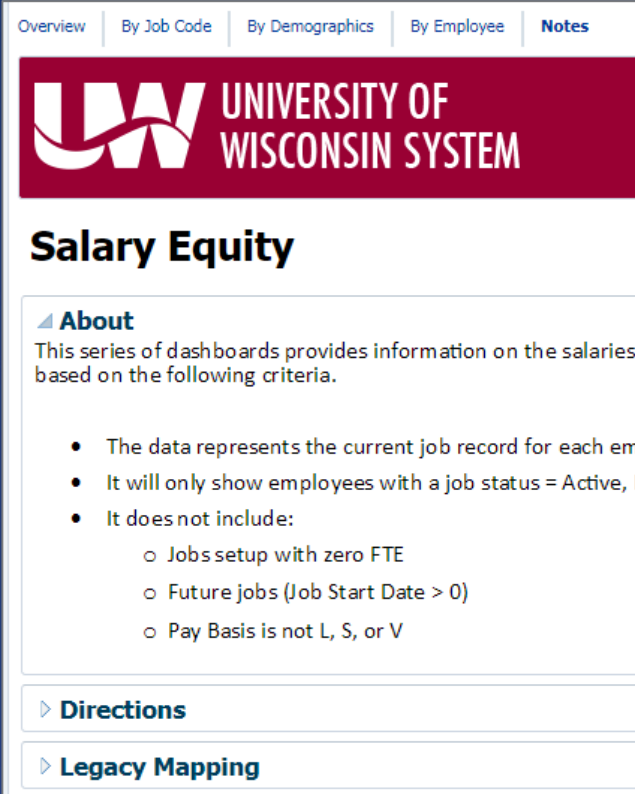
Notes page

Sections:

1. **About:** An overview of the information available on the page. Be sure to explain parts that may be confusing
2. **Directions:** How to run and interact with the dashboard page (prompts, action links, etc.)
3. **Legacy Mapping:** The BQY to OBIEE mapping and model documentation

How to:

1. Create a word document for the notes sub page
2. Save the word doc as "Web Page, Filtered"
3. Open the document in an internet browser
4. Right click and view page source (Ctrl + U)
5. Copy and Paste Page source into the notes



Overview | By Job Code | By Demographics | By Employee | **Notes**

UNIVERSITY OF WISCONSIN SYSTEM

Salary Equity

About

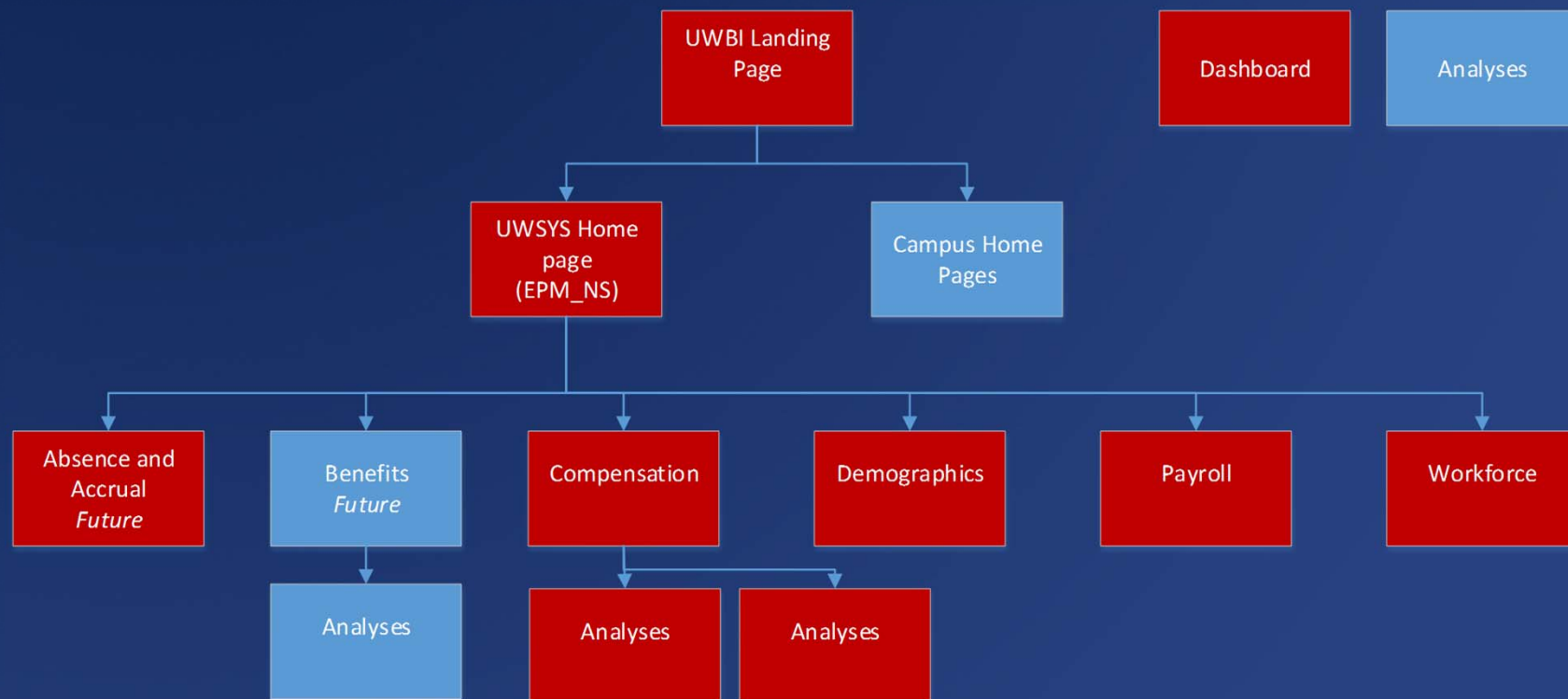
This series of dashboards provides information on the salaries based on the following criteria.

- The data represents the current job record for each em
- It will only show employees with a job status = Active, L
- It does not include:
 - Jobs setup with zero FTE
 - Future Jobs (Job Start Date > 0)
 - Pay Basis is not L, S, or V

Directions

Legacy Mapping

Site Map



Minimize Reporting Footprint

- Create General purpose reports
- Use filters (ideally scoped to a dashboard with pages) to combine reports
- Use column filtering based on user roles to hide columns dependent on a user's function

Column Filtering

ORACLE Business Intelligence

Search All Advanced Administration Help

Workforce

Home Current Employees & Jobs (CE) Directories (DR) Employment Visas (EV) **HR Data (HR)** HRS Transactions (HT) I9 Disposition (I9) Rate & Jobcode History (RJ) Rehired Annuitants (RA) Retirees and Emeriti (RE)

HR - Job Details * HR - Employee Details * HR - Emergency Contacts * HR - Notes* HR - Benefit Participation *

HR Data
Employee Details
Sensitive

Business Unit Division Department Sub-Department
UW Madison A06 (All Column Value: (All Column Value:)

Emplid Name
00743047 contains any (All Column Value:)

Apply Reset

Time run: 10/10/2017 12:29:58 PM

Columns hidden depending on Security Role

Name	Emplid	Business Unit	Sub Department Code	Birth Date	Age (Years)	Gender	Ethnicity	Disabled Vet	Wartime Vet	Non Wartime Vet	Military Status	Disability Status	Spouse of 70% Disabled Vet	Spouse of Deceased Vet	Pct Wartime Disability	Marital Status
CUNNINGHAM, ANDREW C						Male	WHITE		N	N			N	N	0.00	Married

HR Status is equal to / is in Active
and Current Row is equal to / is in C
and Business Unit is equal to UW Madison
and Division Code is equal to A06
and Emplid is equal to 00743047

Edit - Export

QUESTIONS?



Contacts

- Robert Flum
 - Director, Information Systems & Reporting
 - University of Wisconsin-Platteville
 - E-mail: flumr@uwplatt.edu
- Andy Cunningham
 - Manager, Business Intelligence & Reporting Enterprise Systems
 - University of Wisconsin-Madison
 - E-mail: andrew.cunningham@wisc.edu
- Zac Palet
 - Higher Education EPM Solution Lead
 - Huron Consulting Group
 - zpalet@huronconsultinggroup.com



This presentation are
available for download from
the Conference site at
[https://www.heug.org/page
/us-alliance-conference-files](https://www.heug.org/page/us-alliance-conference-files)

Note: Sessions from previous HEUG
conferences are also available.

