

Diversity and Workforce Planning Analytics at UC Berkeley

2018 Sautter Award Nomination

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Project Team

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The Challenge

Improve departments' ability to track and analyze UC Berkeley's workforce and diversity. A lack of robust, intuitive reporting solutions has prevented departments from being able to undertake strategic efforts relating to workforce management, equity & inclusion initiatives, succession planning and trend analysis.

Overview

Utilizing the functionality of Cal Answers, UC Berkeley's enterprise reporting platform built on OBIEE (Oracle Business Intelligence Enterprise Edition), the HR Analytics team and Data Warehouse team on this project created two new dashboards: *Staff Retirement Metrics* and *At a Glance*. The objective of the dashboards was to present a simple, intuitive and informative interface that could be quickly adopted by staff with little or no technical knowledge, leaving them to focus on the strategic efforts supported by the data.

The HR Analytics team collected the most common questions they had been receiving from campus managers, and used them to develop metrics that would be most useful for workforce planning. They then worked with the Data Warehouse specialists to match these metrics to the data available in Cal Answers. This became the foundation for the requirements and specifications for this project, and resulted in two dashboards - one focused on succession planning (*Staff Retirement Metrics*) and the other on providing a bird's eye view of the unit's demographics data (*At a Glance*). User feedback was obtained at the several points of the design and development process to ensure that the solutions would fit real needs while maintaining a simple and intuitive interface.

A. The Dashboards

I. Staff Retirement Metrics

The Goal

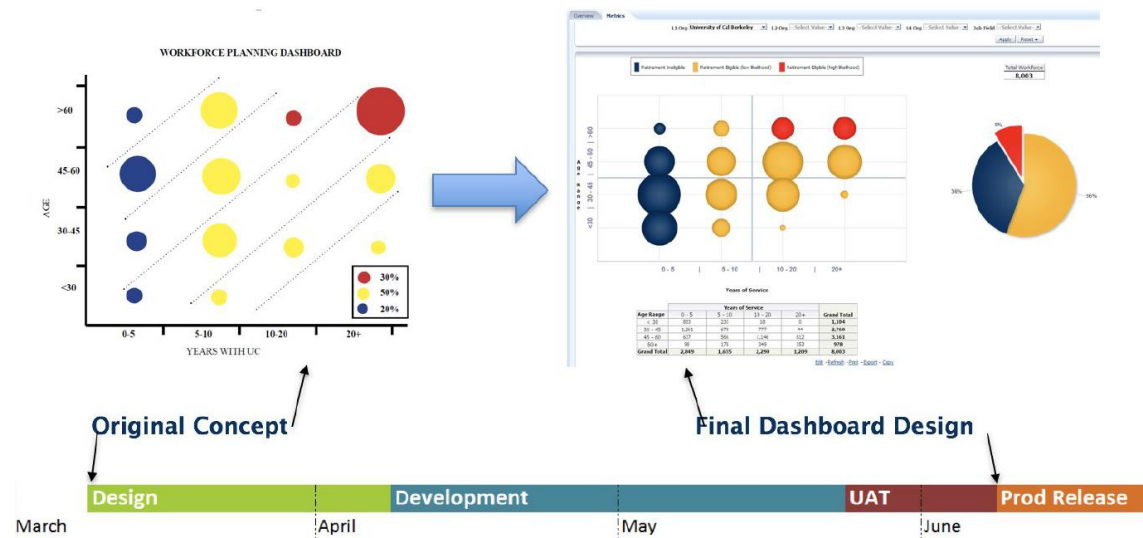
Put a powerful visualization tool in the hands of decision makers, allowing them to understand their staff employee composition and assess the risk of employee attrition through retirement.

The Process

Indu Tandon, the Analytics Program Manager, began by researching the best potential predictors of retirement. She found that past analysis on staff retirements yielded age and years of service as the two key determinants; a combination of 60+ years and 10+ years of service was seen as the tipping point for high retirement likelihood.

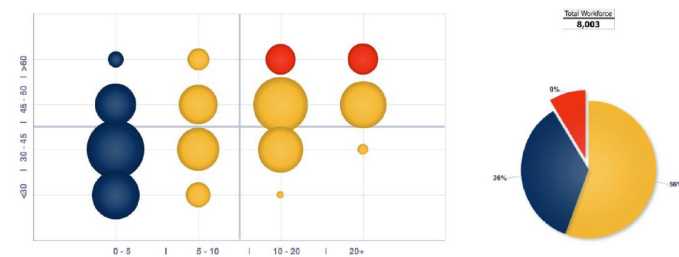
Based on this, it became clear that creating a series of buckets for age and years of service would provide a framework for determining retirement risks for each employee. The next challenge was to develop a way to present the data that was intuitive and engaging. Tandon drew up an initial mock up for the dashboard, which was unlike any dashboard created up to that point in Cal Answers. Translating this visualization to reality required an expert understanding of Data Warehousing and Business Intelligence capabilities, as well as close collaboration between the project team members.

An agile approach was taken for the rollout of this dashboard, with daily scrums and close collaboration between functional and technical resources. The team was able to deliver the project on time (within 4 months of conception), and the final dashboard stayed remarkably true to the initial mockup!



The Result

This dashboard features an easy to use interface and compelling visualizations



Users can easily zoom in on different employee segments via the Job and organization drop-down filters. The interface not only indicates the high retirement likelihood, but also provides a pipeline view for better succession planning

L1 Org **University of Cal Berkeley** L2 Org --Select Value-- L3 Org --Select Value-- L4 Org --Select Value--

Job Field --Select Value--

Apply Reset

II. At a Glance

The Goal

Make it easier for the campus community to obtain user friendly demographic metrics to measure and manage diversity, equity and inclusion.

The Process

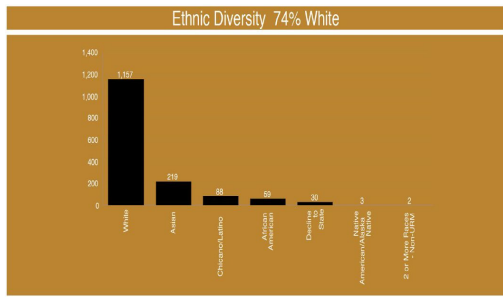
Although this data was available in Cal Answers before this dashboard was launched, a high level of technical knowledge was needed in order to navigate multiple tabs, filters and hidden data variables to obtain this information. By applying good UI design principles in several brainstorming sessions, the team created an initial mockup which was presented to potential users for additional feedback. An agile design methodology was used to iterate through several versions of this mockup. The team learned firsthand that building an easy to use dashboard can be surprisingly hard. The payoff for all this initial effort was improved customer satisfaction, with no need for further investment in user training.

The Result

An interactive interface allows users to choose a snapshot date, and then segment the data by various demographic attributes via a dynamically generated employee type listing.



The graphics generated by this dashboard can be exported via pdf for use in presentations and reports.

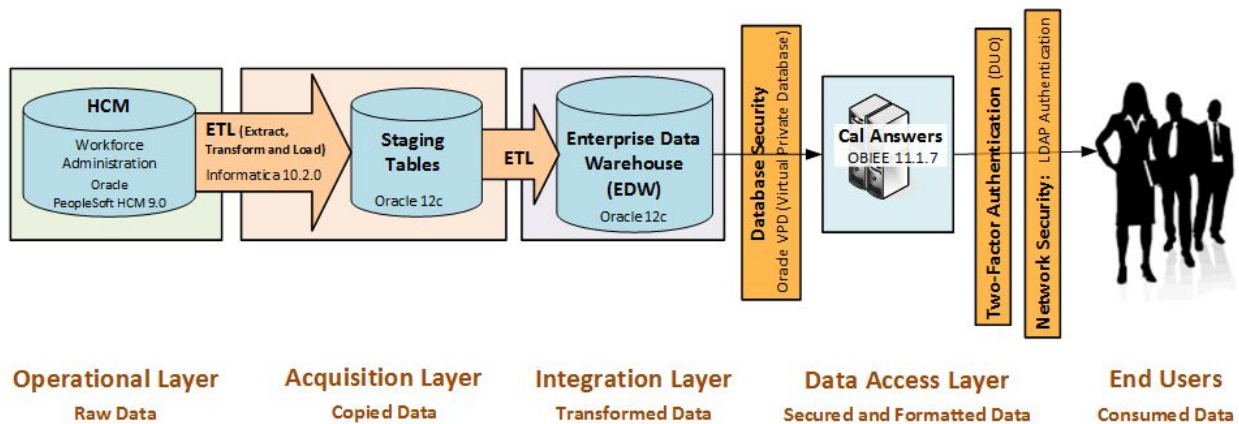


B. The Power of Design Thinking and Collaboration

The success of these two data visualization tools was due to close collaboration between subject area experts in the domains of Human Resources, Data Warehousing, Business Intelligence, User Interface Design and Communications. The cross-functional project team was led by the Analytics Program Manager, who also served as the project manager.

C. Technology

The data used for these visualizations is extracted on a nightly basis from UC Berkeley’s Oracle PeopleSoft HCM (Human Capital Management) instance. The data is first copied into a staging area, and from there it is cleansed and organized before being loaded into the reporting tables contained in the Enterprise Data Warehouse (EDW). End users access this data via the Cal Answers reporting platform. Three security layers (LDAP authentication, two-factor authentication, and Oracle’s Virtual Private Database (VPD) security ensure that users can access only the data which they have permission to view.



D. Measuring Impact

The “At a Glance” dashboard is currently the third most visited dashboard on Cal Answers, having been accessed over 43,000 times since it was launched in March 2017. As units focus on their strategic plan to increase diversity such as Women in Technology, they have been turning to the statistics easily available on “At a Glance”. The “Staff

Retirement Metrics” dashboard is also one of the most visited dashboards in Cal Answers, with over 25,000 visits to date.

Feedback on these dashboards and insights gained from them has been overwhelmingly positive. Some quotes from users are listed below:

“This tool is a really big step in helping to understand more specifically what kind of changes we will be facing in the next few years. It’s a huge win”

- HR Director

“It’s very intuitive and the visualization immediately made sense to me.”

-Director of Strategic Initiatives

“I had a chance this morning to briefly play around with the dashboard and it’s awesome! Thanks so much for developing this easy to use tool, I love it!”

- Assistant Dean, Graduate School of Public Policy

“You have moved the needle on HR’s value to the campus”.

-Assistant Vice Chancellor, Human Resources

“It will be a huge help to me as I prepare units for future succession scenarios and budget/program planning:”

-Chief Administrative Officer, School of Law

This influence of this project at UC Berkeley was felt beyond the confines of HR reporting. The project team presented their work at the campuswide Cal Assessment Network - a campus forum focussed on data and assessment topics - and the design and execution principles utilized in this project have been successfully implemented in visualization enhancements for other Cal Answers subject areas, including Student Curriculum and General Ledger/Finance reporting.