

**UC Tech Awards 2023 Candidate**

**Category:** Operational Excellence
**Name:** Melt Rate & Enrollment Targets Project
**Number of people**: (4)
**Location:** UC Berkeley

1. **Person submitting the application/nomination**
	1. Olufemi Ogundele, Associate Vice Chancellor of Enrollment & Dean of Admissions, Division of Student Affairs, UC Berkeley (staff)
	2. Russ Acker, Associate Director, Office of Planning & Analysis, UC Berkeley (staff)
	3. **Email address:** racker@berkeley.edu
	4. **The name of your organization:** UC Berkeley
2. **Award category:** Operational Excellence
3. **Name of person, name of the team, or name of the project to receive the award** Melt Rate & Enrollment Targets project
4. **All project team members**
	1. Sanghamithra Bandi, Data Architect, Campus Applications and Data - Data Solutions, UC Berkeley (staff), sbandi@berkeley.edu
	2. Geo Corney, Project Policy Analyst, Enrollment Management - Office of Undergraduate Admissions, UC Berkeley (staff), gcorney@berkeley.edu
	3. Doaa Hussein, Business Systems Analyst, Enrollment Management - Office of Undergraduate Admissions, UC Berkeley (staff), doaa@berkeley.edu
	4. Radha Karichedu, Data Engineer, Campus Applications and Data - Data Solutions, UC Berkeley (staff), rkarichedu@berkeley.edu
5. **Which location was affected by the work?** UC Berkeley
6. **Summary**

The Melt Rate & Enrollment Targets (MRET) tracking initiative arose from the need for campus leaders to have more timely, actionable insight into incoming undergraduate enrollment. In order to provide such information, UC Berkeley’s Data Solutions team and Enrollment Management unit designed and created Tableau Server data sources that simplify several highly complex data structures and update automatically at specified time points throughout each admissions cycle.

1. **Narrative**

As the pandemic radically altered expected enrollment trends, UC Berkeley’s Enrollment Management unit and the Office of Planning & Analysis (OPA) recognized the need to track incoming undergraduate enrollment in a more flexible way than shared spreadsheets. Utilizing the campus Tableau Server, OPA created an executive dashboard based partially on those spreadsheets, but immediately encountered difficulties with the onerous, extremely time-consuming manual update process that they required on a weekly basis. Following discussions in summer 2021, Enrollment Management, OPA, and Campus Applications and Data - Data Solutions formed a small team to design and implement automated Tableau Server data sources for use by this executive dashboard. The dashboard allows campus leaders to track both summer “melt” (incoming students who cancel their statement of intent to register) and progress to enrollment targets. Both metrics are vital to understanding both how closely the campus will be able to adhere to UCOP and state enrollment requirements, and whether a variety of possible interventions might be necessary.

The project began with several design meetings in which Enrollment Management analysts and the Data Solutions team collaborated to identify how to obtain each of the data elements needed for the executive dashboard. Because senior leaders use this dashboard from the point at which undergraduate admissions decisions are released through the fall student census, there were several complications for which the team had to find solutions. One of the most difficult issues was that, until mid-July, all of the data would come from the campus admissions system, Slate. In mid-July, however, incoming undergraduates begin enrolling in classes, so the data would need to incorporate actual enrollment information, where available, from the campus Student Information System (SIS). In addition, the original spreadsheets included several highly complex custom fields that would be difficult to calculate correctly solely in Tableau.

After a thorough analysis, Data Solutions determined that simply having two Tableau Server data sources, one pre-aggregated to allow for necessary calculations, and one with record-level detail, would be the most effective approach. With expert advice from Enrollment Management analysts, they then utilized Informatica workflows to pull the needed information from Berkeley’s Slate and SIS databases on a weekly basis, combining it in a view that could then feed both Tableau Server data sources. The Data Solutions team was able to automate this process entirely, with scheduled Informatica workflows, followed by scheduled extracts to the Tableau Server data sources. The executive dashboard, using a live connection, can then pick up new data with no manual intervention required. The team overcame significant technical challenges to achieve these results, including integrating data across disparate systems; reconciling detailed and aggregate data grains; merging historical and ongoing data; and pushing complexity of data manipulation from the reporting layer down to the ETL (extract, transform, load) and database layers. Despite the challenges, they were able to implement this new process well ahead of its early spring 2022 deadline.

The new Melt Rate and Enrollment Targets process that Enrollment Management and Data Solutions designed and created yields numerous benefits. It is more reliable and far less prone to error than the previous approach, since it eliminates any manual manipulation of the data. It is considerably faster, making data available in a few minutes that previously took an OPA analyst a couple of hours to compile. Finally, the entirely automated process has freed up at least four hours of total analyst time per week, over a 32-week long cycle that repeats every year.

The information produced by this process enables senior campus leaders to make timely, high-impact decisions regarding summer melt and progress to fall enrollment targets, while it’s still possible to influence the final results. In summer 2022, for instance, the executive dashboard incorporating this data gave early warnings of possible enrollment issues in some programs, which the campus was then able to take steps to address. By almost any measure of operational excellence, the Melt Rate and Enrollment Targets project has been a resounding success, and one that will yield continued benefits for years to come.