Overview

In 2007, UC Berkeley launched the Institutional Data Management and Governance (IDMG) initiative with the goal of making “institutional data easily accessible, reliable, consistent and secure to support informed planning, decision-making, and communications by campus leaders.” The IDMG roadmap illustrates the steps that move us closer to achieving that goal, which includes improving the “presentation of information to decision makers.”

Edward Tufte Seminar - Presenting Data and Information

In November 2009, Learning + Organizational Development (L+OD) and Erin Gore, Associate Vice Chancellor for Budget & Resource Planning and Co-Chair of the Institutional Data Council, targeted that IDMG recommendation, as well as the campus competency related to communication, by sending 34 UC Berkeley staff to Yale Professor Edward Tufte’s one-day training course in San Francisco on the visual display of information. In addition to attending this course and receiving his materials, UC Berkeley Tufte course participants met on two occasions after this session to discuss how this training could and has been implemented in the workforce. These sessions provided our Tufte participants a way to discuss how this training could be applied on campus and resulted in a cohort of colleagues that have supported one another in our collective effort of presenting information better.

At one session, two campus staff presented ways they had integrated Tufte’s principles into their work. Linda Moran, Campus Budget Office, shared a supergraphic she produced to present the campus revenues, as Erin Gore shared how this new style of presentation was well-received across the campus. Greg Dubrow, Office of Undergraduate Admissions, shared how he used a word cloud to summarize survey results to illustrate the primary reasons students admitted to the campus didn’t attend. Since that meeting, other campus staff have incorporated Tufte’s principles into presentations to the Undergraduate Enrollment Task Force, a handout for a campus visit by Office of the President Provost Larry Pitts, and a new report describing the US News and World Report rankings and methodology.
IDMG Summer Series

The Tufte follow-up sessions proved so successful that participants recommended expanding these “how to” training sessions to others on campus. Erin Gore enlisted her Office of Planning and Analysis staff to work with campus organizations – Cal Assessment Network (CAN), Business Process and Analysis Working Group (BPAWG), and Policy Analysts Roundtable – to produce a summer training series that shared tips, tools and techniques on how to present information better. The tree map below illustrates the breadth of campus coverage of in-class participants and the table above provides overall attendance counts, including those who viewed on-line or through archived sessions.

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A survey of IDMG Summer Series participants, 46 respondents, reported high satisfaction with the overall series and the individual sessions. As one respondent summarized, “This was a fantastic series! Just the chance to get together and see what other people are doing was worth the time, but they also presented some great tools and new ways of doing things. Outstanding!”
When asked what the single most valuable thing participants learned from the IDMG Summer Series, responses fell into the following categories with representative comments:

- **Tools:** “The variety of free tools available to us to assist us in presenting data.”
- **Translating Data into Information:** “The variety of ways to present data and getting your message across in a clear and effective manner.”
- **Community:** “We’re all in this together. I love the whole idea that there are multiple ways of turning data into information. It is great to know who else is doing this work, so we can continue to form communities of practice.”
- **Practical Applications:** “I learned about the various kinds of work people are doing with data and how they use that information when communicating with the public and the campus constituency.”
- **Resources:** “IDMG webpage link to resources.”

When asked for examples of how participants planned to implement what they learned from the IDMG Summer Series into their work, we received the following kind of responses:

- **My Overall Approach to Developing Presentations:**
  - “Data representation in methods that non-data users can better understand. Also, the question: What do you want to accomplish? Starting with the end in mind to help steer the presentations of data to get things done!”
  - “I need to present some basic financial information early in the fall – I’ll keep it clean, simple, and use at least three of the tools we discussed this summer.”
- “I hope to apply what I've learned to better present data on our web page and in reports to outside funding agencies.”

- **Supergraphics**: “To present the required funds during the first 6 months of this fiscal year, I needed to present different allocations for projects for various units and had multiple scenarios to present. With the help of supergraphics, I converted the data into one page information to help our CFO make decision about cash levels.”

- **Infographics**: “I am considering using some of the tools, maybe a large infographic, to help my supervisor present some data on the course evaluations process to campus.”

- **No More ChartJunk**: “As a result of this series, I am focusing much more on the presentation of my data, rather than just the content. I am much more aware of “chart junk” than I used to be.”

- **Support for Trying Something Different**: “That a campus-wide effort was key (I think) in getting everyone involved, interested, and on board with the idea of raising the bar in information presentation. It is exciting to get away from standard memos and stagnant graphic formats, and administrators have embraced rather than balked at the output so far.”

### Stephen Few Seminar - Information Dashboard Design

Stephen Few is a lecturer at UC Berkeley’s Haas School of Business where his current research focuses on data visualization, dashboard design and visual narratives (i.e., telling stories with a mix of quantitative information with a mix of graphics and text). Stephen Few has published three books: *Show Me the Numbers: Table and Graph Design*, *Information Dashboard Design*, and *Now You See It: Visual Data Analysis*.

COrWE is sponsoring an Information Dashboard Design course on September 14th for 60 participants who were selected based on their involvement with the Enterprise Data Warehouse, Operational Excellence, or other IDMG efforts and management initiatives where staff need to present information and metrics to campus leaders. As with the Edward Tufte seminar, Erin Gore will host post-seminar sessions where participants can come together to share what they learned and how they implemented or are trying to implement it in the workplace.

As Stephen Few describes the importance of this course, “Dashboards have become a popular means to present critical business information at a glance, but few do so effectively. Huge investments are made in Information Technology to produce actionable information, only to have it robbed of meaning at the very last stage of the process: the presentation of insights to those responsible for making decisions. When designed well, dashboards engage the power of visual perception to communicate a dense collection of information in an instant with exceptional clarity. This can only be achieved, however, by applying visual design skills that address the unique design challenges of dashboards. These skills are not intuitive; they must be learned.”

Stephen Few’s timely training will provide campus staff with the skills and common language to consider how to design:

- Dashboards for strategic purposes (e.g., executive dashboards) that monitor the health and opportunities of an organization and provide high-level measure of performance for campus initiatives, including Operational Excellence or Equity and Inclusion.
- Dashboards for analytical purposes which provide deeper comparisons, support greater context and provide more extensive history and they allow for drill down capability to answer additional questions, functionality that will be available in our OBIEE Enterprise Data Warehouse campus reporting tool.
- Dashboards for operational purposes that allow you to monitor operations in a more dynamic and immediate nature that could be applied to campus operations, like Berkeley Financial System’s “buy to pay” process or tracking common good course offerings and enrollments for registration purposes.

While there are different dashboard designs, there are commonalities that span all dashboards, including the common goal of identifying a handful of metrics we need to monitor over time. By having campus leadership engaged in this discussion on the appropriate metrics and/or the primary questions we need to answer, campus staff will better be able to focus their analytical efforts and determine the best way to present that information in a dashboard. Furthermore, we can better prioritize efforts to build an Enterprise Data Warehouse that has both the data and reporting tools needed to support these dashboards.