Accountability Planning
As a Strategic Tool
For Change

By Simone Himbeault Taylor, Kerin McQuaid Borland, and Eric L. Dey

One of the signatures of effective leadership is to manage by fact. At minimum, credible data can be used for internal planning, accountability assessment, and strategic purposes.

To obtain more-telling information about its clients—and the services they use—the career planning and placement department (CP&P) at the University of Michigan—Ann Arbor spearheaded an ambitious project: the development of a data management system to facilitate service delivery.

This article recounts the development of the system, providing the context for data management and describing the issues associated with building and implementing a data model, the anticipated—and unexpected—outcomes of the project, and the lessons derived from the experience.
In short, what began as an effort to improve data collection resulted in a thorough overhauling of the way CP&P conducts business.

Institutionally, several components made this project an appropriate and timely task.

- In the mid-1980s, the division of student affairs measured organizational efficiency by quantity of services used. Previous systems served CP&P well for this purpose. In the early 1990s, however, a divisional shift emphasizing school/college relations required that staff respond to the more complex question of number and type of services used by student profile, such as school/college affiliation, grade level, and various demographics.
- During the 1980s and 1990s, aggressive technological advancements occurred on campus, including the introduction of the “smart chip,” a scannable student identification card. In addition, the advent of total quality management (TQM) and the “value-added” fiscal models placed greater emphasis on managing by fact and accountability.
- During the 1990s, the division of student affairs adopted a strong posture to have “students at the center” drive service delivery.

These developments set the stage for the data reengineering project.

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Taking a Systems Theory Approach

Systems theory considers the relationship of the components of input, processes, output, and outcomes. Using this approach, CP&P’s senior staff reexamined and defined the department’s mission, strategic plan, and goals: Thus, there was an understanding of input and processes. To fully gauge the impact of CP&P services on students’ learning and development—and the degree of student satisfaction with services—the staff needed to develop a greater understanding of output, that is, who is served and in what ways. The intention was to improve outcomes—to shift from a model of tally marks, head counts, and cumbersome forms to a more efficient system for collecting data.

Building the Model

Process Modeling: Letting Form Follow Function

Process modeling was the first step in developing the data management system. This is perhaps the most important and most often overlooked step in such endeavors; the greatest potential for effecting organizational change occurs at this stage.

Central to gathering data on core services was determining what represented CP&P’s most important functions.

This meant broadly defining key areas that represent the department’s work and using these areas as a framework for defining operations. The value of this process is that it ensured that each service was justified as mission critical. If changes in direction or mission cause some services to be deemed peripheral to the organization, then they may no longer have a place in the function or budget. Thus, the process also offers a rational approach for decision making.

To facilitate process modeling, CP&P senior staff engaged colleagues, students, representatives of the university at large, and employer stakeholders in a two-day discussion. The result was creating a framework of broad categorical CP&P functions:

- Assisting individuals with career exploration and decision-making processes;
- Assisting students in testing their skills and interest;
- Linking students to employers or graduate and professional schools to implement their career plans;
- Collecting information on student outcomes.

CP&P staff then linked individual services and programs to these functions and evaluated their relevance to the department’s mission. As a result of this process, critical decisions were made to reallocate human and financial resources. For example, broad alumni service efforts were redirected toward serving current students and recent graduates (one year out of school) and a fee structure was introduced to serve more experienced alumni and community members.

Data Modeling

Process modeling and the subsequent realignment of services laid the groundwork for logical data modeling, a method of defining what data needed to be gathered. A data model is a blueprint for building and accessing the physical data base.

In considering how best to design and build the data model, the most critical issue to address was what questions the data were expected to answer. The goal was to focus on collecting data that could be used in a number of ways to answer many questions. At the same time, it was important to challenge the need for data by determining how the information would be used. This approach brought into focus the data requirements most directly relevant to CP&P’s overarching goals. The decision of what data to gather may be thought of as a series of trade-offs with data, design, and customer service issues. For example, the staff had to weigh and resolve differences between:

- Obtaining exhaustive data and frustrating clients;

Simone Himbeault Taylor is the director of career planning and placement, Division of Student Affairs, at the University of Michigan-Ann Arbor. She also serves as an adjunct assistant professor in the Center for the Study of Higher and Postsecondary Education, School of Education, University of Michigan-Ann Arbor, where she earned her Ph.D. in higher education administration.

Kerin McQuaid Borland is the senior associate director of career planning and placement, Division of Student Affairs, at the University of Michigan-Ann Arbor. She received her master’s degree in college and university administration and her bachelor’s degree in communication from Michigan State University.

Eric L. Dey is associate professor in the Center for the Study of Higher and Postsecondary Education at the University of Michigan School of Education-Ann Arbor. His research focuses on the ways that colleges and universities shape the experiences and lives of students and faculty. He served as the faculty consultant on the CP&P data project. Dey earned his Ph.D. in higher education from UCLA, where he also served as associate director of the UCLA Higher Education Research Institute.

34/JOURNAL
• Obtaining complete data and over-extending staff;
• Relying on existing internal data systems and developing new ones;
• Collecting redundant information and linking to external data sources.

In this instance, the staff retained only essential data points that satisfied specific criteria, e.g., answering questions that would improve the management and operation of the department itself, providing accountability and service information to external audiences, and creating a foundation for research.

In short, the data modeling task is to identify what data are associated with each aspect of every service and client. Each piece of data then becomes part of the physical model and folds into a table. Tables can be analyzed separately or jointly, leading to comprehensive information on clients and/or services. A data model for data management purposes is presented in Figure 1.

After identifying essential data (called “data entities”), the staff determined how to collect this information. Some data were available through other data bases, including GPA or declared major from the registrar data base. Other data had to be gathered directly from the student, e.g., career interest, or indirectly through analysis such as how often the student used a service.

Implementing The Model

There are many ways in which this type of project could be undertaken: the choice may depend on size of the department, organizational culture, and/or approach to decision making. For CP&P senior staff, the question wasn’t if but when and how other staff should be involved. Engaging staff in the process of determining, through process modeling, the very nature of career planning and placement would positively influence the outcomes of the project. Capitalizing on staff expertise ultimately resulted in a stronger end product.

To effectively implement the data model, two important components needed to be addressed concurrently:

1) the conceptual design of the data model, supported by available technology; and
2) the integration of the new system into existing service delivery.

These responsibilities were distributed among three committees with the following charges:

• The model development team included senior staff and a systems analyst to work on “high level” tasks, such as determining the types of information to collect and creating definitions of services and

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related data. Short of the glamour the term may connote, “high level” refers to the vantage point of conceptualizing the project and not to the status of the various tasks undertaken, which were alternately detailed, difficult, and absolutely essential.

- The customer service team translated the goals of the model development team into possible modes of implementation, with a keen eye on gathering the best data possible without alienating clients. This team served as a constant reminder that students are at the center of CP&P’s work.

- The validation team served as the objective “checks and balances” group to evaluate the models proposed by the two other teams. This team ensured that the models met established goals and that methods for collecting information did not compromise service to clients.

The chairpersons of both the customer service and validation teams also served on the model development team and thus possessed a solid understanding of the global, conceptual issues as they worked with their respective committees.

Involving appropriate people at the appropriate time was key to successful implementation. To that end, CP&P senior staff engaged university IT consultants to assist with model development and a faculty member from the university’s Center for the Study of Higher and Postsecondary Education to ensure that the model development team was employing legitimate standards to the work, leading to credible data and reports.

Anticipated and Unexpected Outcomes

Perhaps the most exciting aspect of the project was analyzing the outcomes, particular those that seemed to emerge serendipitously. Sometimes these unexpected results helped put setbacks into perspective as well.
Gathering Credible Data

One of the primary objectives of data management reengineering was the development of reports for internal and external audiences. Despite occasional difficulty with relational data bases, once data were merged they yielded meaningful and user friendly reports. Figure 2 illustrates a sample table that combines separate statistical reports on client information by school/college and transaction distribution. The combined report tells a valuable story about clients and their use of services. Imagine now the array of data collected or available through other data bases and the manner in which they may be combined to enhance this story through standard reports or ad hoc inquiries. Data management is, of course, an iterative process and the system continues to be finessed for reporting accuracy and ease.

Doing Business Differently

The process of creating and introducing a new data management system has influenced the way CP&P conducts business. Because it required a reconceptualization of how business is done, it ensured that the system would represent an improvement for students. As a result, the CP&P department replaced a full-page registration form completed by students at each office visit with an annual registration form complemented by quick, card scanning for each service provided. Streamlining systems for data collection also improved service delivery time and increased the likelihood of gathering quality data.

Enhancing Customer Service

Moving to a computerized system brought with it the challenge of remaining mission—not data—driven.
It was important to find the balance between having students scan their ID cards for each office visit and not making them feel like “numbers.” The CP&P staff now use data collection as an opportunity to introduce a greater degree of personalized services through student greeters. The greeters welcome clients into the office, explain the new system, and ensure that clients complete the necessary steps. They also augment professional staff in situations where electronic tracking is not feasible by compiling ID numbers on paper. The intention is to remain true to the goal of collecting information on at least 90 percent of clients without compromising service delivery as a result of delayed starts or long registration lines.

It goes without saying that these operational advancements, including modifications to the physical environment, required budgetary considerations. One-time dollars needed to be set aside to develop the model and implement the new system. Although there are long-term gains to be achieved through modernizing data management mechanisms, the reality is that a certain initial infusion is required to introduce the change.

Empowering Staff

From a change management perspective, staff empowerment may represent the most profound outcome of all. As a result of broad involvement in this process, CP&P staff gained greater exposure to the organizational values of “managing by fact” and continuous improvement. By having the opportunity to practice these skills through the planning process, staff more actively engage in this approach to problem solving. At the most fundamental and sophisticated levels, staff recognize the relationship between knowing students and offering services that are meaningful to them. This applies to the department at large and within individual areas of responsibility e.g., internships. It is a shift from simply knowing what to do to knowing why to do it. continued
Figure 2

Distribution of clients and transactions
By selected school/college  (hypothetical data)

<table>
<thead>
<tr>
<th>School / College</th>
<th>Number of Clients</th>
<th>Number of Transactions</th>
<th>Percentage of Clients</th>
<th>Percentage of Transactions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Literature, Science, and Arts</td>
<td>8,471</td>
<td>18,419</td>
<td>73.3</td>
<td>70.8</td>
</tr>
<tr>
<td>Undeclared</td>
<td>1,397</td>
<td>4,315</td>
<td>12.1</td>
<td>16.6</td>
</tr>
<tr>
<td>Engineering</td>
<td>520</td>
<td>1,079</td>
<td>4.5</td>
<td>4.1</td>
</tr>
<tr>
<td>Education</td>
<td>269</td>
<td>418</td>
<td>2.3</td>
<td>1.6</td>
</tr>
<tr>
<td>Music</td>
<td>265</td>
<td>687</td>
<td>2.3</td>
<td>2.6</td>
</tr>
<tr>
<td>Nursing</td>
<td>190</td>
<td>286</td>
<td>1.6</td>
<td>1.1</td>
</tr>
<tr>
<td>Natural Resources and Environment</td>
<td>105</td>
<td>185</td>
<td>0.9</td>
<td>0.7</td>
</tr>
<tr>
<td>Art</td>
<td>90</td>
<td>202</td>
<td>0.8</td>
<td>0.8</td>
</tr>
<tr>
<td>Information</td>
<td>73</td>
<td>109</td>
<td>0.6</td>
<td>0.4</td>
</tr>
<tr>
<td>Social Work</td>
<td>65</td>
<td>70</td>
<td>0.6</td>
<td>0.3</td>
</tr>
<tr>
<td>Architecture/Urban Planning</td>
<td>39</td>
<td>73</td>
<td>0.3</td>
<td>0.3</td>
</tr>
<tr>
<td>Public Policy</td>
<td>39</td>
<td>75</td>
<td>0.3</td>
<td>0.3</td>
</tr>
<tr>
<td>Business Admin</td>
<td>24</td>
<td>31</td>
<td>0.2</td>
<td>0.1</td>
</tr>
<tr>
<td>Law</td>
<td>17</td>
<td>49</td>
<td>0.1</td>
<td>0.2</td>
</tr>
<tr>
<td>Dentistry</td>
<td>10</td>
<td>17</td>
<td>0.1</td>
<td>0.1</td>
</tr>
</tbody>
</table>

Lessons Learned

CP&P staff derived a number of important lessons from the data management project. Among them:

- Make the hard decisions up front. Decide on what data to collect and when (continuous vs. periodic). Invest time in building the process and physical models and the rest will follow.
- More isn’t always better. Do not over-burden students or staff with data collection. Over-surveying may even lead to a backlash and result in an increase of incomplete information. Limit collection to what will be used.
- Technology is not a panacea. It won’t guarantee that things will be easier, but it will create different operations that are likely to be better.
- Be realistic about the time, resources, and creativity needed. Don’t underestimate the time it takes to define data collection categories and create the physical model. Just because you know what you do doesn’t mean that defining the data needs will be easy. At minimum, it takes time to 1) identify data categories; 2) work out any problems; and 3) get everyone (staff) on the same page.
You need creative thinkers, committed to this task, to see past the occasional dreariness of the process.

- Expect staff resistance. The desire to “buy in” conceptually may not always translate into wholehearted execution. Inform staff of “what’s in it for them,” demonstrate how it will not impede serving students, and provide examples of the “value added” to the department. Most of all, involve staff: You need their expertise and support.
- Validate. What sounds good in concept might be a big mistake when put into operation.
- Document, document, document. This process is a series of tradeoffs. There is no one “right” answer in the process. Don’t over- or underestimate achievements. While you don’t want the “data tail to wag the mission dog,” one of the most important residual effects of undertaking this type of project is that it may cause you to reevaluate what your business is and how to go about it. Many positive things may occur e.g., important organizational changes, even if you do not feel like you are making progress and even before (or after) the data are in hand. In fact, the CP&P staff experienced positive impacts along procedural, physical, financial, and staff dimensions.

Concluding Thoughts

If there was an ultimate lesson derived from this experience, it is that the genuine benefits to this process revealed themselves in ways beyond good, hard data. At times, the process was complex, time consuming, and frustrating. It also was replete with positive consequences. While a revised data management system, and the enhanced accountability that travels with it, was one tangible outcome of the process, this could well be the least of the benefits of the endeavor. The more profound outcomes included sharpening CP&P’s purpose of offering mission critical service; modifying systems toward greater effectiveness, efficiency, and customer service; and developing a more sophisticated staff with regard to data analysis and evaluation.

With managing by fact no longer solely in the purview of administration, shared values, goals, and skills are in place to leverage greater change. This alone has made the process indispensable and well worth the effort.