Managing and Ensuring the Integrity of Community College District Data

Timely, accurate and complete data is required to fully understand the fiscal environment in which a community college district operates and the student composition that it serves. Districts are required by Title 5 Section 58311 (8) to "have an adequate management information system that provides timely, accurate and reliable fiscal information to appropriate staff for planning, decision making, and budgetary control." Once this quality data is known, decision making can be optimized to better serve the students and the community. Although this alert focuses on student data, the basic principles apply to all data processes and elements in a community college district, including financial data.

Uses of Collected Data

Data collected for the apportionment process using the CCFS-320 financial report has been part of the annual financial audit for many years at community colleges. A greater desire for accuracy has resulted in increased scrutiny of the data, which is the driving force in many of the changes discussed here. For several years, the data collected through management information system (MIS) reporting was used only for local research at districts or for special requests. MIS is still used for these purposes (see the chart on the following page titled District Sources of Student Centered Funding Formula [SCFF] Elements for data types submitted through MIS). However, in recent years the data has been increasingly used for funding allocations and reporting to the Legislature. Beginning in the 2017-18 fiscal year, the SCFF added two major areas of financial allocation to serve low-income students and to help ensure successful outcomes. With the exception of Assembly Bill (AB) 540 headcounts, the data from these two new areas is provided primarily through MIS reporting. In January of each year, the Californa Community Colleges Chancellor's Office (CCCCO) works with each district to validate MIS counts prior to certifying the headcounts. Enrollment data continues to be provided through CCFS-320 reports for data submitted to the CCCCO.

District Sources of SCFF Elements

- Enrollment
  - Credit – MIS Student Enrollment data (SX)
  - Non-credit – MIS Student Enrollment data (SX)
  - Special admit – MIS Student Demographics data (SB)
  - Inmate education – MIS Special Population data (SG)
- Serving low-income students
  - Pell grants – MIS Financial Aid data (SF/FA)
  - Promise grants – MIS Financial Aid data (SF/FA)
  - AB 540 students – MIS Financial Aid data (SF/FA)
- Successful Outcomes
  - Transfer – MIS Student Enrollment data (SX) and National Student Clearinghouse and/or CSU/UC enrollment data
  - Completion
    - Degrees and Certificates – MIS Program Award data (SP)
    - Completion of CTE units – MIS Student Enrollment data (SX) and MIS Course Basic data (CB)
    - Completion of transfer level Math and English – MIS Student Enrollment data (SX) and MIS Course Basic data (SX)
    - Attainment of living wage – National Student Clearinghouse, EDD Database, Insight Center for Community Economic Development

The chart on the following page identifies how the district's data is reported to the California Community Colleges Chancellor's Office. Enrollment weekly student contact hours (WSCH) and AB 540 student headcount data are maintained at the district level and are reported using the 320 reports. The remaining SCFF headcounts are submitted using periodic MIS submissions directly to the Chancellor's Office. For living wage and transfer headcounts, additional information is used to determine awards. In some cases, such as living wage awards, the districts do not have access to those additional databases. Unlike data submitted via the 320 reports, SCFF metrics submitted directly via the MIS are district level and are not separated by college in multicollege districts. Multicollege districts will need to develop reports to identify which college produced the outcome.

Reporting Mechanisms to the California Community Colleges Chancellor's Office

- Enrollment
    - Credit – 320 Reports
    - Non-credit – 320 Reports
    - Special admit – 320 Reports
    - Inmate education – 320 Reports
- Serving low-income students
    - Pell grants – MIS Financial Aid data (SF/FA)
    - Promise grants – MIS Financial Aid data (SF/FA)
    - AB 540 students – 320 Reports
- Successful Outcomes
    - Transfer – MIS Student Enrollment data (SX) and National Student Clearinghouse and/or CSU/UC enrollment data
    - Completion
        - Degrees and Certificates – MIS Program Award data (SP)
        - Completion of CTE units – MIS Student Enrollment data (SX) and MIS Course Basic data (CB)
        - Completion of transfer level Math and English – MIS Student Enrollment data (SX) and MIS Course Basic data (SX)
        - Attainment of living wage – National Student Clearinghouse, EDD Database, Insight Center for Community Economic Development

Fiscal Health Risk Assessment for Community Colleges

As of January 1, 2019, audit procedures are required for MIS data, per Education Code Section 84750.4 (m)(4)(C), and guidance is provided in the Contracted District Audit Manual.[1] Review of information systems and data management is now a component of the Fiscal Crisis and Management Assistance Team's (FCMAT's) Fiscal Health Risk Analysis (FHRA) for Community Colleges.[2] All these requirements indicate the need for data integrity and timely availability of data.

Four Keys to Success in Providing Quality Data

Data inaccuracy is often thought to be caused by problems with the technology and systems used to handle and report data. However, this is rarely the case. The following four best practices should be followed for optimal data collection and reporting.

1. **Policy**

    Clear and comprehensive data collection, storage and reporting policies help ensure data integrity. Policies help a community college district develop a
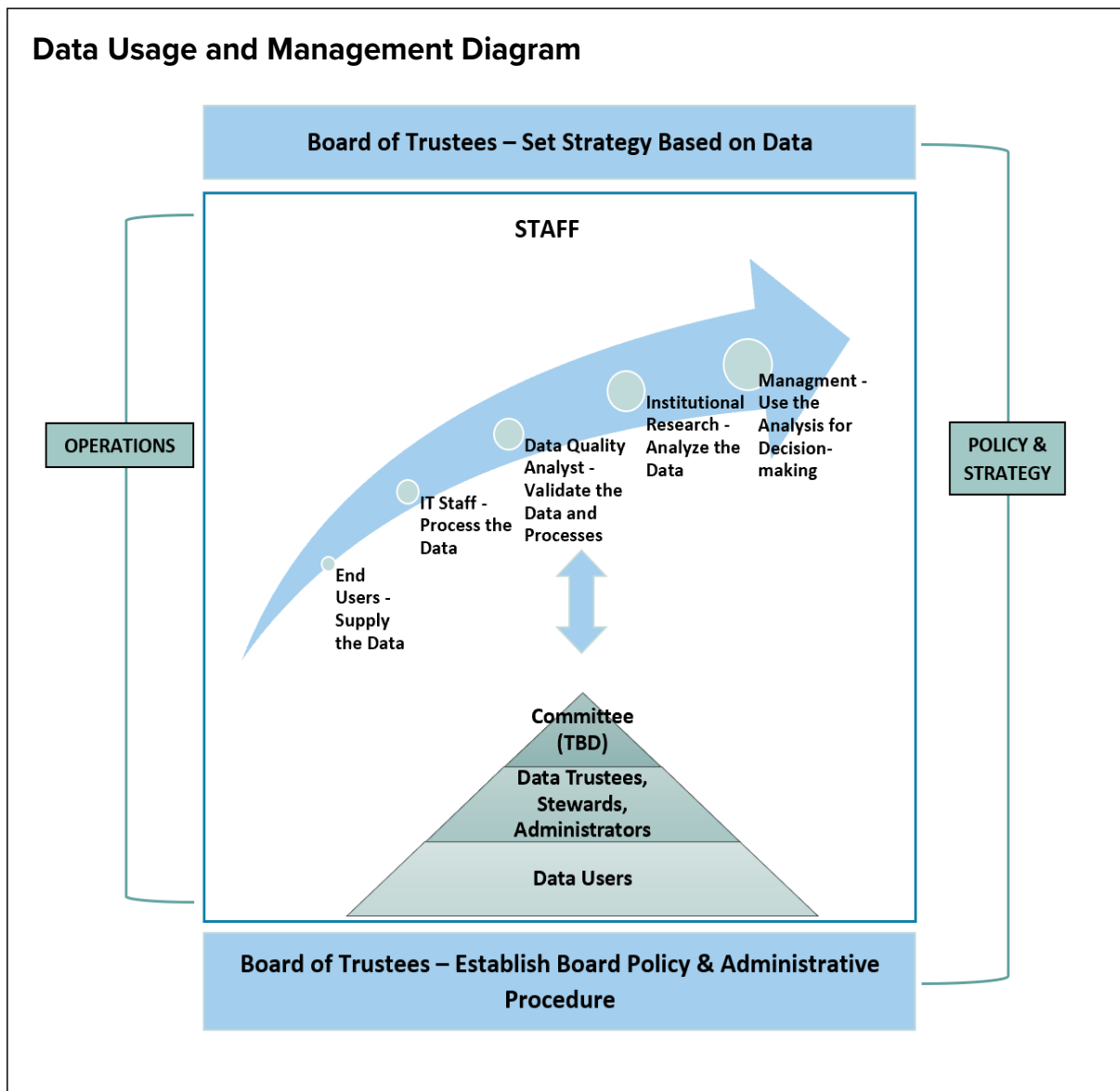
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1 California Community Colleges Contracted District Audit Manual Procedure 411-SCFF Data Management Control Environment FAQ
2 Fiscal Crisis and Management Assistance Team, Fiscal Health Risk Analysis for Community Colleges

culture of stewardship for data and reinforce the importance of quality data used in decision making. Districts must have data governance policies that define the proper collection, storage and handling of data. In addition, districts need a designated committee, much like an institutional review board, that recommends policies to the board of trustees and adjudicates data use requests and policy interpretation. This committee relies on data stewards, data administrators, data trustees and data users to perform good data management. Board policies establish the foundation needed for data quality.

2. **Organizational Structure**

   Roles and responsibilities for collection, storage, validation, interpretation, and use of data for decision making should be clearly articulated throughout a community college district. The Data Usage and Management Diagram,

Data Usage and Management Diagram

Board of Trustees – Set Strategy Based on Data

STAFF

OPERATIONS

POLICY & STRATEGY

End Users - Supply the Data

IT Staff - Process the Data

Data Quality Analyst - Validate the Data and Processes

Institutional Research - Analyze the Data

Managment - Use the Analysis for Decision-making

Committee (TBD)

Data Trustees, Stewards, Administrators

Data Users

Board of Trustees – Establish Board Policy & Administrative Procedure
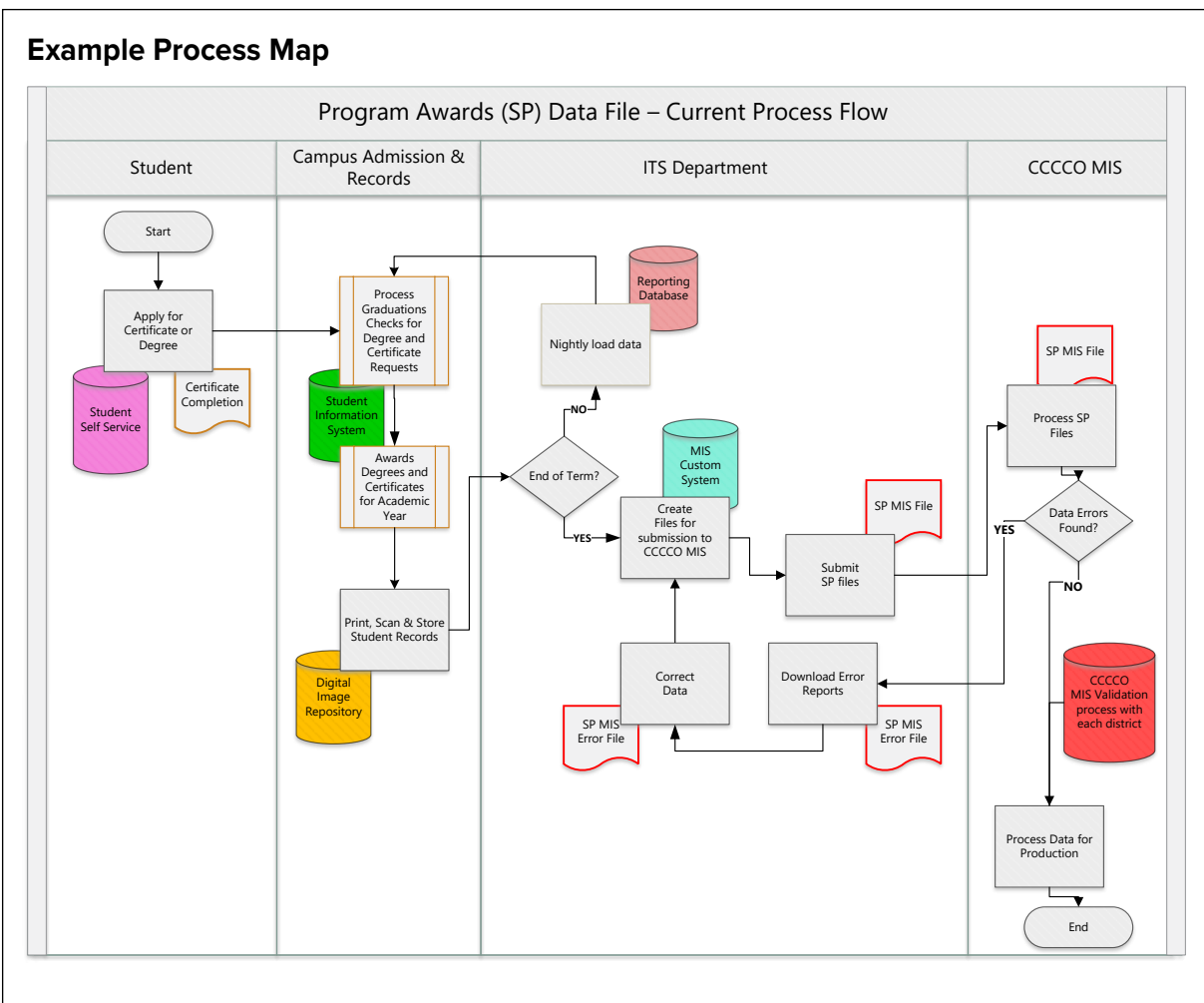
developed by Cambridge West Partnership, presents a best practice for organizational structure.

The board of trustees establishes the foundation with policies and procedures and uses data to set strategy for the district. Staff operate to properly supply, store, validate, analyze and use data, under the guidance of policies and procedures set by the board of trustees. Users (including staff and students), who supply the data, need to be trained in the importance of the data and proper collection processes. Information technology staff act as the custodians of the data and are responsible for storage and processing but do not have the expertise to determine accuracy. The most effective community college districts have a designated individual or group that is responsible for validating data once collected and stored (this role is called a data quality analyst in the diagram). Research departments analyze and prepare the data for use by management. Management uses the data analysis to make decisions. A district that does not have all these components in place and clearly defined risks poor data quality.

3. **Collection Processes**

   Data collection processes need to be comprehensive, complete and streamlined to meet data needs. If the processes used to collect data are not reviewed

Example Process Map

Program Awards (SP) Data File – Current Process Flow

regularly and updated, data collected and used based on those processes will be incomplete, inaccurate, or both. The Example Process Map, created by Cambridge West Partnership, for collecting MIS program award data, demonstrates the use of a tool for continual improvement of data quality. Data collection and use processes should be reviewed at least annually and any time there are policy changes or system upgrades. A process map identifies the parties involved, the steps in the process, and the location(s) of stored data and reports used in data collection. This process map can then be reviewed regularly to assess the effect of potential changes, and be used to train staff and analyze and streamline processes over time.

4. **Ownership and Responsibility**

   Data is everyone's responsibility. Data governance policies should clearly identify ownership responsibility and expectations. Consulting staff on collection processes regularly and training staff in the importance of data collection and quality are necessary for a community college district to best serve its students and maximize funding opportunities.

The four keys to success provide a framework to ensure data quality over time, which in turn allows for trend analysis and confidence in the data because of trust and investment in the process. A district that adopts these best practices will be successful in generating and reporting timely, accurate and complete data. This in turn will help a district maximize funding, make better decisions, and serve students and the community more responsibly.

How to Get Started on the Journey to Quality Data

The steps to ensuring quality data are:

1. A district's board of trustees will need to use established processes to develop and/or update data governance policies and procedures that emphasize the importance of proper data collection, storage and use. In addition, requiring data for use in board decision making will reinforce the importance of quality data.

2. Make the organizational changes required to ensure that the operational components noted in the Data Usage and Management Diagram are implemented and well understood at the district. The most important of these is the data quality analyst function and the committee and associated staff to regularly review and monitor data quality.

3. Review and document processes to identity any changes needed, and work to implement them. Use a tool such as the Example Process Map to accomplish this task for all data collected. At least annually, review and update processes to ensure continual improvement.

4. Through regular discussion and review, communicate, train and reinforce the concept that quality data is everyone's responsibility. Implementing the first three steps above will be a good start in bringing awareness about data quality to the institution, and with continued focus this will become part of the institutional culture.

The time to ensure that your community college district is producing and using quality data is now. The principles in this alert focus on student data but can be applied to all data processes and elements in a district, including financial data. To make the best possible decisions for fiscal

health and student success, community college districts must create a culture of stewardship of data. The results will help a district achieve data quality, which is essential to good decision making and student success.

FCMAT extends thanks to Cambridge West Partnership, LLC for its major contributions to this alert.