

Category 7:  
Measuring Effectiveness

## Category 7

# Measuring Effectiveness

## 7C1 – Data collection and availability

Prior to the development of the Office of Institutional Research and Information Management, Eastern Michigan University utilized a mostly decentralized approach to information management. Figure 7.1 depicts current sources and availability of information.

Recent efforts at EMU have addressed many of the previous data shortcomings. A key development involves the Office of Institutional Research and Information Management (IRIM), where collected data are entered or scanned and stored in a centralized online transaction database. For reporting and analysis purposes, data are extracted from

Figure 7.1: Sources and Availability of Information

Focus	Resource	Location
Strategic-Planning Operations	University Master Plan State & Federal Reports University Organization Chart University Archives	Web site IRIM web site President's web site Library
Academic & Research Operations	Course-Scheduling Reports Faculty Course Assignment Faculty Profile College Annual Reports CIRP, YFCY, NSSE Enrollment Reports ORD Annual Reports Academic Program Review Student Credit-Hour Production Library Usage Tracking	Banner IRIM web site IRIM web site College web sites IRIM web site IRIM my.emich reports tab ORD web site AA web site My.emich reports tab Library web site
Student Operations	Student Information Reports Housing & Dining Survey Student Progress & Retention Admissions Financial Aid Reports Athletic Affairs Annual Reports SLE Summaries Student Judicial Actions Student Profile	Banner IRIM web site Banner Student Banner Student Financial Aid Annual Publication IRIM web site Office of Student Judicial Services IRIM web site
Engagement & Advancement Operations	Foundation Reports Alumni Association Reports Market-Research Reports Graduate Employment	Web site Web site University Marketing Career Services
Business Operations	Finance Reports E-Print Reports Operating Budget Work-Order status Employee Survey Pay & Benefits Time Reporting DPS Campus Safety Reports Collective-Bargaining Contracts	My.emich Reports page Banner Banner Finance TMA web site IRIM web site Banner my.emich Banner finance DPS Web site HR web site

their primary source, integrated, and stored in a centralized data-warehouse system managed by IRIM. The Office of IRIM initiates and conducts studies and analyses in support of strategic planning and continuous improvement; academic program review; accreditation/reaccreditations; student-support services; enrollment management; budgeting and financial control; and other academic and academic-support initiatives.

A second effort is associated with the AQIP Balanced Scorecard action projects. The first Balanced Scorecard Initiation action project team identified 81 key performance indicators that were collected and used in various units at EMU. These indicators were categorized under the following headings: financial, internal processes, students and stakeholders, and staff. The Balanced Scorecard Implementation Team will be distilling these 81 into a manageable vital few indicators.

### 7C2 – Key institutional measures for tracking effectiveness

Key institutional measures are student credit-hour (SCH) generation, headcount, retention data, grant productivity, gifts, housing-occupancy rates, student satisfaction, and employee satisfaction. The second Balanced Scorecard Implementation Action Project aims to improve EMU’s capacity to determine the overall health of the institution at any given time. This project has an anticipated implementation date of December 2008.

### 7P1 – Selection, management, and use of information

The mission of EMU, which includes maximizing educational opportunities for students, requires that information about its most important stakeholder group, its students, be collected, managed, and accessible. The Provost’s office and other administrators work with DoIT, IRIM, and the academic departments to develop reports needed by academic units.

The University has established a system that allows the campus community to access and use information from University records, and from such standardized surveys as the Student Satisfaction Inventory (SSI), the National Student Survey of Engagement (NSSE),

and the Cooperative Institutional Research Program’s Freshman Survey (CIRP). The measures currently being used at EMU are shown in Figure 7.2.

Figure 7.2: Identified Measures

Category	Current Measures
Student Learning	SSI Licensure Rates Faculty/Student Ratio NSSE Grade Distribution Graduate School Placement Job Placement Various Program-Review Data Various Accreditation Data Dean’s List Retention Rates Peer Reviews of Teaching Admission/Recruitment Analysis Graduation Rates CIRP
Other Institutional Objectives	Fundraising Efforts Outreach Faculty-Student Partnerships
Continuous Improvement	Process Participation Training Impacts and Outcomes
Institutional Operations	Facilities Planning Information Scheduling Information Communication and Technology Management Intercollegiate Athletics Budget Performance Space Utilization

### 7P2 – Determining information needs

Various external entities and groups determine the need for information and data collection, storage, and accessibility. These include program, departmental and college accrediting bodies, advisory committees, statutes, governmental agencies, regulatory bodies, and prospective students. Internal demands include the needs of departments, other units, and students.

These needs are met by departments creating data-collection storage and access capability, obtaining information from such internal data repositories as the data warehouse and from such external repositories as the Integrated Post-Secondary Education Data System (IPEDS).

### 7P3 – Determining needs for comparative data

Sources of such comparative information as national survey data, specialized accreditation criteria, and peer institution data are utilized according to need. Needs may include collective bargaining, academic program improvement, personnel actions, and strategic planning.

### 7P4 – Analyzing and sharing data at institutional level

State and federal reports and assessments are completed as required. Institutional performance assessment is done by divisional work centers in support of internal processes, i.e., budget development and justification. The Balanced Scorecard Implementation Action Project will help the University to better maintain and use measures of overall performance.

Institutional-level assessments and analyses are typically posted on the IRIM or other work-center web pages. Significant outside-contractor reports are presented to senior administrators at centrally scheduled meetings. Enrollment reports are regularly distributed to multiple campus staff members. A wide range of reports and data are available to employees through EMU's intranet.

### 7P5 – Alignment of data with institutional goals

The General Education Assessment Action Project promises to align the goals of general education with assessments. The Academic Program Review Process (8P5) requires the alignment of departmental goals with the HLC criteria and overall institutional directions.

### 7P6 – Ensuring effectiveness of information systems and processes

The Department of Information Technology (DoIT) uses an integrated Enterprise-wide Resource and Planning (ERP) system called Banner to support the administrative departments, including finance, human resources, accounts receivable, student records, financial aid, and advancement. Access to Banner data is provided through application forms and Web

pages. Internet access is controlled with a Banner user ID and password. Form access is granted via a *least information needed* protocol. The Banner Functional Security Team (FST) establishes and maintains security models using best practices. The FST consists of members from each administrative department. The Data Standards Committee regularly meets to create and update standards for entering and processing data to facilitate the integration of departmental data sets within Banner.

All modifications (including vendor upgrades) are evaluated to determine the best implementation timeframe based on the Business Operations Team recommendations and the operation schedules of the University. Testing of system modifications includes unit, system, and quality-assurance testing by both technical and end users of the system.

Processes, such as scheduling jobs, entering control values, and output distribution, are distributed across the responsible departments. Each department's specific domain allows it to best ensure the integrity of its data and to establish its own policies for running the system and performing checks and balances within system operations.

Retrieving data from the system is accomplished by: 1) direct access to the ERP data (upon approval of the FST) with an ODBC-compliant report-writing tool such as Access or Crystal Reports, 2) filing a Request for Service with the DoIT, and 3) requesting an "Official Report" from the University Data Warehouse, which is maintained by IRIM. Reports maintained by the DoIT and IRIM are available as hardcopy and on-line via user ID and password.

System infrastructure and operating systems are maintained on a three-year replacement cycle. EMU's network security is protected by firewalls, Virtual Private Networks (VPN), network-analysis software, intrusion-detection measures, configuration monitoring, anti-virus, and Spam filtering. Mirrored data storage is implemented to prevent corruption or loss of data. An Incident Response Team responds to reported information incidents.

All production hardware is housed in a secure facility. Production data is routinely backed up, and those tapes are rotated to an off-site location. The DoIT's disaster-recovery teams meet regularly to maintain

and update procedures and perform table-top exercises to validate its processes.

### 7P7 – Measures of the effectiveness

Measures of effectiveness may take at least six dimensions: timeliness, usefulness, accuracy, reliability, meaningfulness, and accessibility. The CIO along with the Technology Advisory Committee reviews the impacts of DoIT measures that address several of these dimensions. The annual student and faculty surveys are reviewed and modifications in processes and procedures are made based on the analyses and comparisons with previous survey results. The help-desk satisfaction data are reviewed, and the data collection mechanism and help-desk capacity are modified based on these results. The results from such measures as the NSSE and EduCause surveys are reviewed annually to help identify appropriate interventions and process modifications. Response rates and the quality of the information provided from each of the measures are frequent topics at advisory and leadership meetings. The vital few measures being identified by the Balanced Scorecard Implementation Action Project team will help address at least a portion of this need.

### 7R1 – Results of systems for measuring effectiveness

The University has established a successful record for meeting the needs of governmental and non-governmental regulatory and accrediting agencies. Data reports to state and federal oversight agencies are timely and accurate. Similarly, the University has successfully maintained institutional accreditation with the North Central Association's Higher Learning Commission since 1917. The University also successfully maintains academic- and service-program accreditation and compliance. Following the NCA accreditation in 2001, EMU decided to move to the AQIP institutional-accreditation process. The University leadership felt that the AQIP emphasis on evidence-based decision-making and continuous improvement would facilitate a campus cultural shift to a broader and stronger array of process-effectiveness measures. A macro array of KPIs is being actively pursued in the University's Balanced Scorecard Implementation project.

### 7R2 – Results comparison

Additional data must be collected before comparisons can be made.

### 7I1 – Improvement of current systems and processes

Various means are used to improve existing processes, including process-improvement teams, AQIP Action Projects, strategic planning, and academic-program review. The Balanced Scorecard Implementation Action Project will promote comparisons in each of the major groups of KPIs. The comparisons will help identify areas for improvement.

### 7I2 – Setting targets for improvement

Targets will be set in each of the four categories of KPIs including students and stakeholders, financial, internal processes, and staff, based on benchmarking. The final result will be a Balanced Scorecard driven by internal and external comparisons. Future systems-portfolio updates will provide more details.