Category 4 – Measurement, Analysis and Knowledge Management

4.1 Measurement, Analysis and Improvement of Organizational Performance

a. Performance Measurement

4.1a(1) The College selects data and information to track based on priority measures appearing on the Minnesota State Colleges and Universities Accountability Dashboard. A second basis for selection is to track measures that are part of the presidential evaluation process by the Office of the Chancellor. The third basis for selection is to track core measures of performance that align with College strategic goals.

The College's Balanced Scorecard (BSC) is composed of a family of dashboards at the College, division, and department level. The College's strategic dashboard includes 41 core measures aligned to thirteen strategic goals **(Figure 4.1-1).** Each goal has associated core measures. Strategic goals are aligned with four Balanced Scorecard (BSC) perspectives: learning and growth, internal processes, students and stakeholders and resources **(Figure 2.1-3)**. BSC dashboard measures are selected based on the three methods noted above. The BSC initiative was an AQIP "Vital Few" project to better use data and information to make improvements and manage institutional effectiveness. The entire BSC family of dashboards is available for public viewing on the web by all stakeholders.

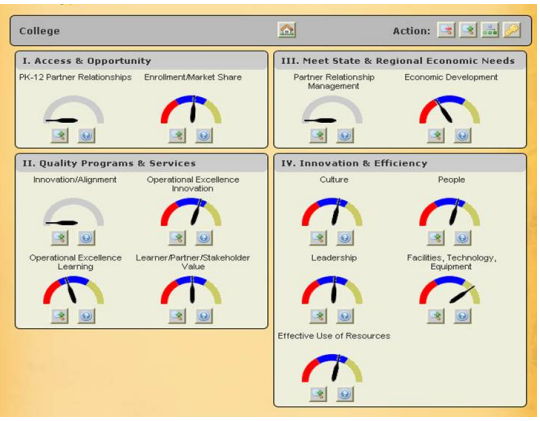

Figure 4.1-1 – RCTC Strategic Dashboard

Division dashboards include a mix of College core measures and others that are unique to the division and that align with Level 2 processes. These processes are part of the Student Learning System (SLS) Level 1, 2 and 3 processes of the College. Department dashboards include some division core measures and other measures unique to their Level 3 processes.

The College's strategic dashboard uses a color coded system to indicate the progress being made toward the strategic goals. Measures exceeding performance expectations are coded as gold, those meeting expectations as blue, and those need of immediate attention as red. At division and department levels the color-coding reflects the overall performance for that core measure.

Figure 4.1-2 Three Perspectives on Dashboard

Each measure is evaluated on three perspectives. The first is the trend in the data for that measure. The second perspective is performance against a comparative benchmark. The third perspective is performance to a target set for the measure. Measures have set tolerances that establish a basis for performance. Such tolerances may also be viewed as an error margin or standard deviation. The established tolerance is what causes the dials on the dashboard to move. Each measure has a dial for trend, comparative and target. The performance for each is mathematically calculated based on tolerances set **(Figure 4.1-3)**.

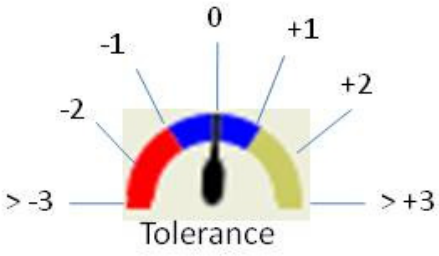

Figure 4.1-3 Tolerance Setting

For example, if a measure has a tolerance of 3 percent, then one standard deviation or +/-3 percent improvement moves the dial to +/-1 (one deviation). Performance equal to 6 percent improvement moves the dial to +2 or vice versa. Each perspective **(Figure 4.1-2)** trend, comparison and target, is calculated in a similar way. The value for each is added up to produce an overall level of performance, then displayed by a dial placement and corresponding color. Each measure is then added with another for all measures associated with a goal to produce and overall color for the goal. The same process is used for division and department dashboards to produce scores and colors for each measure

which then are averaged to create an overall numerical value and subsequent dial placement and color. This allows for immediate identification of which measures are meeting, exceeding, or not meeting expectations. Those underperforming are cause for improvement via PDCA-based approaches.

4.1a(2) The BSC for each measure on the dashboards includes comparative data. A core measure may include a primary comparative for which performance and dial colors are determined, additionally, each core measure may have other comparative data points that further inform the overall view of performance.

Principal comparative methods include comparisons to the Minnesota State Colleges and Universities system, National Community College Benchmarking Project (NCCBP), national averages, and defined cohorts and Minnesota consortia data. The NCCBP includes 210 two-year colleges from across the nation. This provides a source of information to compare RCTC scores to national percentiles for institutions using similar surveys and metrics. The College can also compare itself to cohorts from the Integrated Postsecondary Education Data System (IPEDS), and through vendors providing nationally-normed surveys. For example, the Community College Survey of Student Engagement (CCSSE), Priorities Survey of Online Learners (PSOL) and Student Satisfaction Survey (SSI) provide benchmark reports comparing College performance with all institutions that are members or subgroups like other Minnesota colleges who are participants. RCTC has identified several peer groups or consortia for purposes of tracking and sharing comparative data.

4.1a(3) The success of a dashboard system requires stability so measures are not continuously changing and so trends for performance can be evaluated without ongoing changes. Each year, as part of the IPP, all measures are reaffirmed. If changes are required, dashboards are edited. The Office of the Chancellor and MnSCU Board of Trustees influence changes to core measures. Changes in system level dashboards, presidential evaluation measures or other factors influence the College's dashboard.

b. Performance Analysis and Review

4.1b(1) The College uses a variety of performance review processes **(Figure 4.1-4).** The College also tracks findings reported in feedback reports from The Higher Learning Commission/AQIP, Malcolm Baldrige or the Minnesota Quality Award Feedback Reports.

Another approach used to support performance review and improvement activities is the Continuous Improvement website where all research studies, research executive summaries, quality assessments and feedback reports are made available to internal and external stakeholders. RCTC has also used at-a-glance, one- to two-page research summaries detailing major findings. These executive summaries highlight gaps between expectations of key student and stakeholder populations and levels of satisfaction. These reports provide a means for focusing the College on issues of high importance to students. Copies of these research summaries are distributed to College personnel as attachments to the weekly campus online newsletter *College Crossings*.

Review Approach	Participants	Frequency
Landscape Analysis (Design Documents, etc.)	Strategic Planning Committee, Leadership Council	Periodic
MN Quality Award or Malcolm Baldrige Applications	Leadership Cabinet/Council, All College Committees and Sub-committees	Frequent
Academic Quality Improvement Program (AQIP) Annual Updates	Strategic Operations Committee, Institutional Effectiveness Sub-committee and Leadership Council	Annual
Academic Program Development and Review (APR)	Academic Leadership, Program Leaders and Division Coordinators	Annual
Integrated Planning Process (IPP) - APR - Nonacademic Department Self-Assessments - Continuous Improvement Plans - Operational Budgeting	Program Leaders and Division Coordinators, Department Leaders and Teams and Leadership Cabinet/Council	Annual
Integrated Planning Process Reviews	Program/Department Leaders and Leadership Cabinet/Council	Mid- and End-of-Year
Balanced Scorecard (Dashboards)	Leadership Cabinet and Council, All Staff	Continuous
Leadership Cabinet/Council Shared Governance Meetings	Diverse participants	Weekly and Monthly
Listening and Learning Approaches and Findings	Diverse Student and Stakeholders	Ongoing
Level 1, 2 and 3 Process Reviews	Process Owners	Ongoing
The Collaborative	C3 Committees	Six Month Process
MnSCU Review of RCTC President	Internal and External Constituents	Annual
Senior Leaders 360 Degree Performance Evaluations	Internal and External Constituents	Annual

Figure 4.1-4 – Performance Reviews

Because not all issues to be addressed can be foreseen, the College has also made use of Task Forces or "Rapid Response" Teams, also known as "Solve & Dissolve" committees. These teams form around a specific problem or

improvement area and strategize on short- and long-term solutions. New this year, is "The Collaborative " process to address more systemic or larger challenges or opportunities.

RCTC is represented on the Planning Advisory Committee of the Office of the Chancellor. This group addresses topics like system work plans, presidential evaluation processes, and accountability dashboards. RCTC also actively participates in meetings several times each year with institutional research representatives from other MnSCU institutions.

Various analyses are done to support reviews including level- and trend-reviews via the Balanced Scorecard; gap analysis comparing importance to satisfaction levels; performance-to-target; performance compared to system averages for like institutions, services, or programs; and comparisons to national norms or comparative measures. Data from theses analyses flow into the Strategic Planning Process (SPP) and Integrated Planning Processes (IPP).

RCTC has adopted a Plan-Do-Check-Act Cycle (PDCA) (**Figure 4.1-5**) that guides continuous improvement activities. This year, "The Collaborative" process has added additional steps to this approach by integrating the concepts of the Toyota problem solving method known as "A3." These added steps to the PDCA process help deepen teams understanding of the true problem before following the traditional PDCA steps.

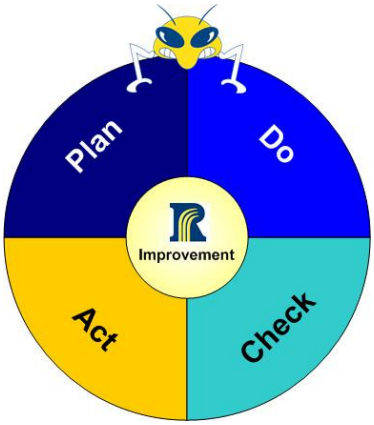

Figure 4.1-5 – Plan-Do-Check-Act Cycle

The results of performance analyses and reviews are communicated in a variety of ways to faculty, staff, students and other stakeholders. Findings of research and other analyses are shared through the organizational leadership/shared governance system as information items.

The weekly newsletter *College Crossings* features "Weekly Market Facts" and "Supalla's Scribblings." Because faculty and staff are often confronted with an overwhelming amount of data from multiple sources, "Supalla's Scribblings" is a weekly column by the president informing faculty and staff of timely news, information, data, and other happenings. Additionally, two-page executive summaries or "Data Briefs" of college research studies as well as minutes from bargaining unit and faculty shared governance meetings are included as attachments. Data and information are also available through the College intranet site. Email, Staff Development Day, "State of the College" presentations, open forums, and Chat with the President are some other sharing approaches. Data and information on College performance are shared by College leadership at College and program advisory committees, department and team meetings, and in publications like the monthly student newspaper *The Echo*. Data and information are currently made available through content embedded in the IPP, the MnSCU ITS Data Management site, and the Balanced Scorecard and dashboards.

4.1c Performance Improvement

The IPP is the primary means of translating review findings into action. The IPP process considers all data and information used in the establishment of division strategies that then guides the setting of department strategies. Additionally, the College conducts a fall (October) and mid-year (January) IPP review to consider new data, analyze marketplace changes, incorporate emerging initiatives and determine the need to reprioritize resources. As noted, other efforts like "The Collaborative" use review findings from research and dashboard performance to trigger more in-depth problem solving, improvement and innovation.

4.2 Management of Information, Knowledge and Information Technology

a. Data, Information and Knowledge Management

4.2a(1) All faculty and staff have access to the College intranet site where data and information is located. Workstations are available for each faculty and staff member giving them access to college websites and electronic publications. Faculty and staff can use MnSCU Information Technology Services (ITS) websites allowing them to generate college-level reports for a wide range of categories. Faculty and staff can also request customized reports from staff members who have access privileges to the Integrated Student Records System (ISRS) and the replicated data at regional data warehouses. Furthermore, the RCTC Balanced Scorecard and other survey data are available for public viewing through the Continuous Improvement website.

4.2a(2) The College has established work station standards that ensure hardware and software is reliable and current. Nearly 100% of all full-time faculty and staff are at standard desktop imaged.

Network Passwords. Network passwords expire every 90 days. Faculty and staff are warned to change their password when six logins remain. They are also sent emails to remind them of the deadline on a countdown basis starting at 30

days. This coincides with the general MnSCU timeline for changing passwords.

Workstation Security. A screen saver is activated after a system is idle for 15 minutes. Network passwords are required to deactivate the screen saver. This is a preventative measure limiting access by non-users if faculty and staff are away from their workstation. The screensaver can be manually activated by a user for immediate security.

Virus Protection. All computers connected to the Network must have current virus protection installed and activated. Workstations with the standard image automatically receive virus software (Kaspersky) updates as they become available, usually on a weekly basis. This software is available to employees for home and other use.

SPAM Protection. All email coming into the campus goes through several SPAM filtering processes. There is a hardware-based solution that processes messages, as well as software (Mailwatch). Faculty and students have access to the filter controls as well as the quarantined messages , and are issued nightly reports.

Network Availability. Faculty and staff have password-protected access to email and their profile (personal preference and file storage) from remote locations on a 24-7 basis. Students also have email access at any time as well as application access for some academic programs through Remote Terminal Services.

File/Document Management. Files/documents stored on the local hard drive are the sole responsibility of the user. Users are expected to back up files stored on the local computer themselves. All users have a home directory on the network that will not be deleted during upgrades or transfers. The files in the home directory are backed up daily to an off-site location on a weekly basis. This helps ensure efficiency and integrity even in the unlikely event of an emergency. Email information is stored on the College server so this information will not be affected by changes made during an upgrade or replacement process. In addition, there are several networked drives available for campus wide and department level use.

Redundancy. Redundant equipment for key network components, servers, and data storage are maintained at a secondary campus location (Heintz Center). All components are active and available for immediate failover if there is a failure of the primary equipment.

User Support. The Technology Support Center provides faculty and staff with a support mechanism to report and fix errors. These include telephone, front desk, email, website and instant messaging interfaces to the TSC staff. An eight-step process has been established to assist staff and ensure responsiveness to problems and includes notification of case-closure and a satisfaction survey on how their request or problem was handled. Cases are entered into SupportSuite systems to assign numbers and track progress. Faculty and staff are surveyed each year in the Campus Quality Survey and asked to rate hardware and software user friendliness. Since 2001, ratings of user-friendliness have increased significantly. A MnSCU initiative in 2007 requires that all faculty and staff be trained in information security online. RCTC's online education system (D2L) will be used to track compliance

4.2a(3) RCTC has adopted workstation and software standards for keeping the technology infrastructure current with educational service needs and directions. Common software packages are updated on cycles linked to software releases (i.e., Microsoft Office, Windows, Outlook, etc.). Faculty make recommendations and requests for software upgrades as warranted by their academic needs. The College has an established procedure for the installation of new software. Only software tested and approved by ITS will be installed to ensure network compatibility and security. Any software program that is not approved and does not have a license on file with ITS department will be removed. To get software on the "approved" list, faculty and staff must provide ITS with a copy of the software, license information, and purchase information. Upon receipt of these items the software is tested to ensure it does not conflict with network applications or other software installed on college systems. Special requests can be accommodated by Virtual Machine solutions in specific computer labs.

b. Management of Information Resources and Technology

4.2b The College is in the process of creating a Knowledge Management System (KMS) that will identify multiple repositories of data and determining ways in which they can be linked to provide easier access to data and information that facilitate improvement, sharing of knowledge and highlighting best practices. This is being done in conjunction with implementation of a HR Strategic Plan at RCTC (**Figure 2.1-1**).

The Center for Teaching and Learning (CTL) is another mechanism whereby faculty can come together for the purposes of attending educational workshops and the sharing of teaching and learning practices. RCTC faculty also take part in the UCR Faculty Lecture Series, showcasing RCTC and UCR faculty research.

Institutional research data is managed by RCTC's Director of Institutional Research. Institution-wide survey administration and dissemination of results are handled through this office. The results from these surveys and other surveys administered throughout the year are shared with faculty and staff through "Data Briefs" attached to the weekly *College Crossings*. Significant findings are highlighted in "Weekly Market Facts." A full copy of results is made available through the online Balanced Scorecard and dashboards. Faculty and staff are encouraged to cite specific data from these and other surveys and data sources in their continuous improvement plans.

c. Data, Information and Knowledge Quality

4.2c Consistency in data extraction and calculation is accomplished through the use of MnSCU's ITS Data Management web pages, where 51 standard RCTC and

system-wide reports are accessible for multiple fiscal years. RCTC's Director of Institutional Research has also been working to standardize data extraction queries across campus so that data can be counted on as being accurate and consistent. One-click reports such as enrollment by program-area or major are now available for those with student data security privileges.

Timeliness of data is ensured by uploads to ISRS and the data warehouse in regional computing centers. Data is nearly real-time with only a short period of time lapsing between entry and access to current information. Security privileges are assigned based on the work performed and need basis. Reliability and accuracy is managed via adherence to data integrity standards set by the MnSCU System Office of Information Technology and Office of Research.

Identification, sharing, and implementation of best practices are accomplished through a variety of methods including monthly meetings of MnSCU Directors of Institutional Research, MnQIP, the Institutional Research listserv, and other regional and national conferences (e.g., AIRUM, HLC, Learning College Summit).

Data, information, and organizational knowledge properties are ensured through a combination of approaches. Integrity is maintained by controlling the level of access privileges of faculty and staff. Access is given to those individuals with functional responsibilities for data entry or managing key systems and processes at the College. Accepted procedures and standards are adhered to in the entry and use of data and information systems.