

The Higher Learning Commission Action Project Directory

Moraine Park Technical College

Project Details			
Title	Using Data to Enhance Decision Making through Business Intelligence	Status	DRAFT UPDATE
Category	7-Measuring Effectiveness	Updated	
Timeline		Reviewed	
Planned Project Kickoff	01-04-2011	Created	11-01-2011
Target Completion	01-06-2015	Version	2

1: Project Goal

A: *We have been live in our administrative software system, Banner, for approximately, two ½ years and have been able to collect a lot of data. However, at this point, we have only been collecting it and not leveraging the data to make informed decisions. As the education system is evolving, it is more critical than ever to gather data to present information in an easy to read format that is at the hand of the decision maker at the time it is needed. In addition, it is critical for decision makers to have predictive analysis to forecast when making decisions for the future. Information is power.*

2: Reasons For Project

A: *As stated, MPTC recently implemented new administrative software, Banner, and is now at the point to leverage the data. We have focused up to this point on the processes and inputting the transactions into Banner. The College staff have had limited data to make informed decisions. It is critical for the College staff to have information as information is power. The College is looking to meet enrollment goals, maximize funding opportunities, and increase student success. To achieve these outcomes, staff needs to have the information to make the right decisions which will better support the students and the community it is serving. The College has purchased various reporting tools, Argos and Cognos, to support the Business Intelligence directive. The College has also purchased Operational Data Store (ODS) as the reporting database which will allow us to quickly put into action report development. The College is at the point to focus on incorporating these technology resources as we have a good data set from the past two ½ years for trend reporting as well as for predictive analysis.*

3: Organizational Areas Affected

A: *Institutional Research within the Strategic Advancement System will be the area most accountable for the implementation of this Action Project. In addition, Information Technology will also support the project as the staff will build additional reporting tables and structures to meet the reporting requirements. In addition, all other systems will be impacted and will benefit from Business Intelligence.*
Academics as a system will be an area directly affected by the project as they will have improved reporting to make better decisions to support Student Success. Additionally, strategic planning, Human Resources, and Finance will be involved with report specification.

4: Key Organizational Process(es)

A: *The report request process will be implemented through this Action Project. This will allow for the documentation of existing reports for users to review when in need of information as well as a request system if the user has a new need that is not met through an existing report. In addition, the program viability process is expected to improve as the Deans and Vice President of Academics will have timely and accurate information to make informed program decisions.*

5: Project Time Frame Rationale

A: *The first year of this Action Project will be to focus on processes and the improvement of data integrity. The College needs to ensure processes are followed and there are mechanisms to ensure the data is accurate. This may involve the creation of edit and/or audit reports. In addition, the College will focus upon key processes to support initial report demands. An example of such process definitions is the enrollment funnel report. Throughout the initial first year of the project, it is planned to create strategic reports/cubes to provide enrollment, headcount, FTE, and retention information. The second year, the College will incorporate additional strategic reports as well as provide more trend/historical data. The third year will focus on predictive analysis so that based on institutional data, as well as other internal/external factors, the College will have information to make more informed strategic decisions. The approach of moving towards Business Intelligence requires a buildup from initial data gathering to the predictive analytics. In addition, an objective of this project is to assist the staff learning how to use and analyze the data. Obviously, information will be presented in graphics and/or charts which will accelerate the use and understanding of the data.*

6: Project Success Monitoring

A: *The focus of this Action Project is also incorporated into the strategic goals of the College. Therefore, the progress for this project will be assessed and reported to the constituents of the College at mid-year and end-of-the-year. In addition, there is a Data Team that has been organized to work through data integrity, data analysis while providing guidance to meet state and federal reporting requirements. This team consists of members from each of the systems of the College and each member will be responsible for sharing information from the Data Team to their respective system as well as sharing information from their respective system to the Data Team.*

7: Project Outcome Measures

Goal/Metric	Objective	FY 2011-2012	FY 2012-2013	FY 2013-2014	FY 2014-2015
GOAL: Provide single source, actionable information and reports to support organizational decision making					
	Provide actionable, strategic information	minimum of 3 strategic requests	minimum of 3 strategic requests	minimum of 3 strategic requests	minimum of 3 strategic requests
	Manage College data and reporting processes	Develop data and reporting standards. Operationalize Data Team and Banner Operational team	Develop audit processes	Continue development of audit reports and reduce errors	Continue development of audit reports and reduce errors
	Develop the data warehouse structure.	Build out the data warehouse for two areas	Build out the data warehouse for two areas	Build out the data warehouse for two areas	Build out the data warehouse for two areas

Implement predictive analytics.

N/A

N/A

Develop three predictive analysis reports

Develop three predictive analysis reports

Project Update

1: Project Accomplishments and Status

A: Institutional Research and IT meet regularly to review status of report needs requested by users, as well as status of data warehouse builds to meet new demands. Through the TRIC system, a plan is being implemented to measure the progress of reports being built based on the time requested to the time the user has the report. Lastly, a Data Team was formed this past year to discuss process changes and data integrity, ultimately making improvements which will lead to better data and improved decision-making. The Data Team consists of a member from each functional area of the College to include: Academics, Student Affairs, Human Resources, Financial Aid, Finance, Institutional Research, Recruitment, Admissions, Registration, Student Records, Organizational Development, Strategic Advancement, Grants, and Information Technology. The following are the purpose statements of the Data Team:

1. Ensure awareness and understanding among staff regarding major state and federal reporting requirements, rules, and regulations regarding data for their departments, and own/maintain how that data affects and/or is integrated with the functions of other areas.
2. Create and document definitions of data elements and/or processes to ensure comparability and consistency across the College. Promote effective use of data consistent with a collaborative environment focused on quality and accurate results.
3. Monitor state and federal delivered report cards and research discrepancies and/or data issues. Work with appropriate staff to develop recommendations to improve results. Collaborate with Banner Operational Team in redefining/defining business processes to capture and process data.
4. Review and facilitate the timeliness and accuracy of data by correcting and resolving errors as they occur, especially during the fall, spring, and year-end state reporting generation processes. When errors are identified, manage immediate error correction.
5. Provide guidance on the development of reports. Provide the prioritization and definitions for the delivery of reports and dashboards. Identify and provide guidance on training.

The accomplishments for 2012-13 were the following:

- Institutional Research has maintained a collaborative relationship with the IT department to map, define, and build out the data warehouse to increase the accessibility of data to support data driven decision making. Increased availability of data in the warehouse has allowed staff to utilize Cognos reporting and pull data on demand.
- The use of Cognos reporting has been highly emphasized as a source for staff to retrieve data on demand based on report parameters and filters. Reports previously built using other reporting tools have been rebuilt in Cognos for end-users to run on demand.
- Developed Cognos edit reports under defined parameters and filters to identify data errors in the system. Functional staff has access to run edit reports on demand to identify data errors and correct errors in the system to support data integrity. Examples include student term of graduation not falling under the correct year of graduation, students enrolled in a program and courses and missing a social security number, and students with multiple high schools of graduation.
- Developed Cognos operational reports to support the effective operations of functional areas. Examples include program advisor list reports that identify student and student contact information by advisor, diversity relations list reports that identify minority students enrolled in courses and their contact information, and non-traditional occupation (NTO) list reports that identify NTO students and their contact information. These Cognos reports provide functional areas with operational data that can be run on demand and supplied in a report format.
- Developed Cognos strategic reports to support the continued effectiveness and success of the college. Examples include course enrollment capacity reports that identify the number of students enrolled in courses compared to capacity and provides management with insight into combining courses to best utilize college resources, recruitment reports that identify high school students with Career Prep credit that will count towards a Moraine Park degree and no Moraine Park program application on file, and enrollment funnel reports that identify the number of applications received by program, the number of applications accepted, and the number of students who enrolled in courses.
- Evaluated and redeveloped the college Environmental Scanning document to assess the college's district population, political trends, technology trends, education trends, and business and industry trends and their impact on college operations and planning. The report is to be used in college strategic planning.

2: Institution Involvement

A: College functional staff has been highly involved in the BI action project over the past year by working collaboratively with Institutional Research staff in defining their data and reporting needs. Feedback and needs communication from functional staff to Institutional Research has prompted the expansion of the data warehouse and the development of Cognos reports. College functional staff and technical staff have collaborated to identify data errors in the system, develop edit reports to support data integrity, and define business processes to support the capture of accurate data in the system. This involvement has been continuous and will be ongoing to meet college demands.

3: Next Steps

- A:
- Build a Program Effectiveness model that assesses the viability of each offered program. Measures include but are not limited to FTE by program, number of applications by program, program headcount and graduates, successful course completion in program specific core and academic courses, program graduate job placement, program student semester-to-semester retention, and program staff costs.
 - Develop predictive analytic models that identify college best practices in enhancing semester-to-semester student retention and student course completion success. Research will also be conducted to develop a predictive analytic model for college FTE
 - Collaborate with college functional areas who maintain shadow databases and assist in finding alternatives to capturing data either in Banner ERP or the data warehouse.
 - Leverage the newly developed WTCS OLAP cubes for accessing WTCS wide college data that can be used for comparison and benchmarking purposes.
 - Continue to map, define, and design data warehouse expansions based on college functional area needs.
 - Continue to collaborate with functional users to redefine business processes to improve data integrity.

4: Resulting Effective Practices

A: The effective practices that resulted from work on this project include the development of data definitions so all staff have the same definition and having a centralized area for reporting so that reporting is standardized. This strengthens trust in the data given there is one official source for obtaining the data, thus eliminating discrepancies when staff are sharing data from two different sources or definitions. The TRIC system provides a workflow to not only obtain the requests in a centralized location, but also develop a Report Library for users to determine if an existing report is available to meet their needs. The practice of building reports with multiple parameters can expand functionality to multiple purposes. This will eliminate the need to create duplicate reports for similar needs. Lastly, the Institutional Research staff was selected to lead and manage the reporting process. This not only frees IT resources for other technical needs, but also capitalizes on Institutional Research's understanding of the data, allowing them to validate the data, ensure that the data is accurate, and provide more astute reporting.

5: Project Challenges

A: 1. The challenge with this project is to prioritize all the needs of users in building out the reports and warehouse. There are many needs of users for attaining data to make decisions. However, due to the limited resources to meet all the needs, there is a need to prioritize the development of reports. Another challenge is the need to revisit the business process when the data does not exist or there is a lack of data integrity due to the business process being inconsistent. Future phases will improve data alignment between business processes and reporting. However, due to the functional areas needing to define or redefine business process to allow for the data to be reported accurately, this will take time and resources. In addition, the effort will facilitate expanding staff's knowledge of data analysis to allow them to effectively leverage data for decision-making.