AQIP Action Project CHARTER
Commitment Declaration

Institution: Black Hawk College

Planned Project Kick off Date	March 2010
Target Project completion date	June 2011
Actual Project completion date	
A. What is your short identifier (10 words or fewer) for this challenge (or opportunity or problem) that you would like to address with an Action Project?	Develop and implement academic analytic tools to support decision making and student academic success

B. Describe the Action Project's goal in 100 words or fewer

To support a culture of data informed decision making the College will complete the first of five phases to developing a culture of deploying academic analytics. (Capture, report, predict, act, and refine.) This first project will focus on capturing data from multiple sources and in multiple formats; extracting data and migration to a data warehouse, and integrating those data to make them available for analysis.

C. Identify the single AQIP Category that the Action Project will most affect or impact.

Measuring Effectiveness

D. Describe briefly your institutions reasons for taking on this Action Project now

BHC is under heightened scrutiny as governments, accrediting agencies, staff, students and parents hold the College accountable for new ways of improving student success and monitoring and reporting progress on these accountabilities. At the same time assessment, accreditation, ICCB regulation and increased competition are all driving the need for more information and analysis.

The College uses SunGard Banner administrative system to support student, financial aid, finance and other functional transactions. However, the College lacks a central data repository dedicated to reporting and academic analytics. Operational units have downloaded their own data and manipulate it to create the reports they need. This data is often limited by the fact that it is data that relates solely to events and transactions. Additionally data is stored in multiple locations and is not easily integrated to support decision making.

A current challenge to BHC is that while the College collects a great deal of data that can potentially assist in addressing challenges such as student retention and attrition, the data is not adequately converted into meaningful information that supports critical decision making at all levels of the College in an environment that allows for robust analysis.

E. List the organization areas- institutional departments, programs, divisions, or units most affected by or involved in this Action Project

Planning and Institutional Effectiveness, Information Technology, Presidents Cabinet, all internal stakeholders including faculty, staff, deans and administrators that make decisions on college issues

F. Name and describe briefly the key organizational process (es) that you expect this Action Project to change or improve.

Internal decision making, continuous quality improvement processes, state reporting, student support services, WEAVEonline Unit Plans. Strategic Plan monitoring and College wide Dashboards

G. Explain the rationale for the length of time planned for this Action Project (from kickoff to target completion)

Integrating College operations, policies, practices data and information technology to support student success is a very complex and multidimensional project which will require a long term strategy.   This action project will focus specifically on the initial foundational phase of building the capability and capacity of the internal workforce to understand academic analytics, business intelligence as it applies to higher education in order to build appropriate practices for capturing data storing and organizing that data in a way that provides meaningful information to internal stakeholders. This will require the hiring of a dedicated staff person to shepherd the project, internal training, goal setting, conducting a data audit, purchasing appropriate hardware and software. The first phase is anticipated to be completed by June 2011.

H. Describe how you plan to monitor how successfully your efforts on this Action Project are progressing.

The Action Project Academic Analytic Team will meet monthly and report monthly to Presidents cabinet it s progress. Additionally documentation regarding the project will be posted to the College AQIP web page.

I. Describe the overall "outcome" measures or indicators that will tell you whether this Action Project has been a success or failure in achieving its goals.

The College will use the following metrics to measure progress towards achieving its goal:

- define the College current culture and readiness,
- determine key College personnel who have a vested interest in academic analytics,
- as a result of a data audit produce a strategy for capturing the data,
- determine ways in which to address risk and security issues,
- design the plan to store and integrate data from multiple sources and
- ultimately prepare the college to move to the next stage of *reporting* thru the use of analysis tools that perform queries, examine information, and identify trends, patterns, and exceptions in the data. .

J. Other information (e.g. publicity, sponsor or champion, external partners, etc)

K. Project Leader and contact person (First name, Middle Initial, Last name, Title, Email, Telephone)

Kathy Malcolm, Director of Planning and Institutional Effectiveness
malcolmk@bhc.edu
309-796-5038

AQIP Project Update:

Due to Kathy Malcolm by September 10, 2010.
(AQIP requires that the College upload this update no later than September 13th.

Title	Data Warehouse	Status	ACTIVE
Category		Updated	
Timeline		Reviewed	
Planned Project Kickoff		Created	05-11-2010
Target Completion		Last Modified	05-14-2010

Please answer the following five questions in detail and submit this word document to Kathy Malcolm no later than 09/10/2010. This update will be reviewed by AQIP with potential feedback provide to the College.

Describe the past year's accomplishments and the current status of this Action Project:
The goal of this project is to support a culture of data informed decision making the College will complete the first of five phases to developing a culture of deploying academic analytics. (Capture, report, predict, act, and refine.) This first project will focus on capturing data from multiple sources and in multiple formats; extracting data and migration to a data warehouse, and integrating those data to make them available for analysis. As the College began its assessment of the current culture and readiness to deploy academic analytics through the implementation of a data warehouse it became quickly known that the current personnel lacked the technical data warehouse/academic analytic skills necessary to make a true assessment. So the Project first focused on building that specific knowledge base through training in two content areas: 1) Academic Intelligence Fundamentals: From Data Warehousing to Academic Impact and 2) Data Warehousing; Concepts and Principles: An Introduction to the field of Data Warehousing.

Describe how the institution involved people in work on this Action Project:
The two training components were provided to a broad range of Black Hawk College personnel including student services personnel, Banner Enterprise/Student Module, Finance Module and Financial Aid Module content experts, Human Resource personnel, IT staff and personnel from the Planning and Institutional Effectiveness office. A subset of these individuals then created an Academic Analyst (Data Warehouse) job description which was approved by Presidents Cabinet, funded by Title III grant funds and currently is in the hiring process.

Describe your planned next steps for this Action Project:
Once the position of the Academic Analyst (Data Warehouse) is hired the team will reconvene under the new hires leadership to address the following:
- Assess the readiness of the college to pursue a data warehouse and academic analytic culture
- Conduct a data audit and design a strategy for improving current data and capturing new data,
- Design a plan to store and integrate data from multiple sources and ultimately prepare the college to move to the next stage of *reporting* thru the use of analysis tools that perform queries, examine information, and identify trends, patterns, and exceptions in the data.

Describe any "effective practice(s)" that resulted from your work on this Action Project:
Utilizing and external provider such as The Data Warehouse Institute to providing excellent training and to bring the diverse team to a common set of definitions and understandings enabled the team to identify its strategies for implementation.

What challenges, if any, are you still facing in regards to this Action Project?

The key challenge for the College was understanding that the concept, principles and academic analytics fundamentals were so vast and that there was no common understanding of these terms within the College . To address this challenge the College trained key stakeholders in the organization and assessed its current workforce makeup to determine the need to hire from the external community someone to lead this Project. The learning curve for both the College and the new hire will also be a challenge

AQIP
Annual Update & Feedback

Title Academic Analytic Tools & Environment to Support Decision Making & Student Success	Status	REVIEWED
Category 7-Measuring Effectiveness	Updated	09-13-2011
Timeline Planned Project Kickoff 04-27-2010 Target Completion 06-01-2011	Reviewed	09-18-2011
(The text below is the executive summary submitted by the College and the AQIP Reviewers feedback comments. The full College Report can be located on the Black Hawk College AQIP Website)	Created	05-14-2010
	Last Modified	09-18-2011

Project Accomplishments and Status

BLACK HAWK COLLEGE: The goal is to develop and implement academic analytic tools to heightened scrutiny as governments, accrediting agencies, staff, students, and parents hold the College accountable for new ways of improving student success and monitoring and reporting progress on these accountabilities. Initial interviews were conducted with staff and administrative leaders for the purpose of gathering requirements that will shape the warehouse environment. The current environment has been defined and the architecture for the future environment will require that data be integrated into subject oriented models, along with metadata about each piece of data, providing for an easy to use data environment with history for changing data.

Student Success has been defined as the first phase of this project. The first set of data to be populated in the data warehouse will be Student data from the SunGard Banner Student tables. Currently only 162 tables (from 1183 total student tables) are being used for reporting. This will be followed with other increments to include Financial Aid, AR Finance, Contracts, HR, Payroll, Snapshots, and Adult Learning.

The architecture will be designed to utilize design techniques for presenting data and providing an environment for self-service reporting, querying and mining of the data. A query tool will be acquired to provide an interface to the Academic community for easy and understandable access to information.

AQIP REVIEWER: The team is to be commended for tackling such a complex and critical project. The project aligns well with AQIP Categories 8 (Planning Continuous Improvement) and 6 (Supporting Institutional Operations), as the system you are creating seems likely to advance these efforts in a big way.

As originally defined, this project includes the following elements: 1) building the capability and capacity of the college workforce to build appropriate practices for collecting, storing, and analyzing data; 2) hiring a staff person to guide the project (training, goal setting, data audit); and 3) purchasing necessary hardware and software. The project is becoming more clearly focused and seems to be gaining momentum.

The team has made "significant progress" in all three elements. You have provided campus constituents with information about the benefits and possibilities of the project, held discussions to help constituents understand how it could work, and have outlined the focus of the first phase – Student Success (identifying current data sets that will be moved into the new system; identifying additional data to be added incrementally (financial aid, finance, etc.); and identifying the need for a query tool for users to access

information). The team has made significant progress toward hiring the data manager, and has made many decisions toward selecting appropriate hardware/software.

Although the original project deadline has passed, the team seems to be making progress toward project completion. The team recognized early on that the project required much more advance work than originally realized, and has worked to build that foundation of knowledge and support before moving forward. The institution has advanced the project through broad-based involvement, fact-based information gathering, and promoting collaboration, practices that demonstrate principles of high-performing organizations.

Institution Involvement

BLACK HAWK COLLEGE: Interviews were conducted with the President's Cabinet, Academic Deans, ITS staff and staff of the Planning and Institutional Effectiveness office to gather information concerning data and reporting needs. Student success was defined by multiple departments, reporting needs were identified and scaled into 49 different themes, and individual departments analyzed the most common and frequently accessed data and identified the SQL queries and Banner SunGard tables from which they pull data. This information will be most useful in ensuring the data warehouse solution purchased has the capacity to extract and hold these required data.

AQIP REVIEWER: The team has done a nice job of gathering input from a variety of constituents across the campus. Multiple perspectives have helped guide the development of the project, by proving information about current and anticipated data and reporting needs.

Next Steps

BLACK HAWK COLLEGE:
1. Hire a Data Warehouse Project Manager
2. Develop final requirements for the new reporting environment
3. Conduct RFP process:
   a. Functional Requirements - software provides information in a manner that meets requirements, easy to learn and use for technical and academic users - metadata (descriptions) provided
   b. Documentation – a complete set of documentation provided
   c. Mapping diagrams - clear descriptions provided to map data to the standard structure
   d. Expandability - tool can be expanded to add data from non-vendor sources, db structures, spreadsheets, flat files
   e. Hardware requirements - clear explanation of hardware required along with data volume constraints
   f. Software requirements - clear explanation of software required, clarification on how often vendor releases enhancements and upgrades and do customers have to move with them at the same time - how long does the vendor support an older release
   g. Training - ensure there is a complete set of training available
4. Work with vendor to design and implement the BHC configuration of the off-the-shelf-package
   a. Develop a rollout plan where the departments use of this new environment is rolled out

      b.   Develop a support plan for the College department to support and maintain new environment - ensuring a Help Desk is available after training

AQIP REVIEWER: Next steps have been clearly articulated for the new data manager position, and for new data management software. The team has identified many of the decisions that will have to be made, and information that will have to be provided in order to make software and hardware selections. The team should be congratulated for this work - this advance work seems likely to make the purchase and implementation processes go much more smoothly.

Resulting Effective Practices

BLACK HAWK COLLEGE: The first set of data to be populated in the data warehouse was identified as the Student data from the SunGard Banner Student tables. Currently there are only 162 tables (from the 1183 total student tables) that are being used for reporting. This information along with the other reporting requirements will guide the College id purchasing the most appropriate tool for the College environment.

AQIP REVIEW: The team has identified the current data sets used for reporting, and has discussed data and reporting needs with campus constituents. Helping users understand how current practices can be improved by new capabilities is an important step in the change process.

Project Challenges

BLACK HAWK COLLEGE: While BHC collects a great deal of data that can potentially assist in addressing challenges, such as student retention and attrition, the data is not adequately converted into meaningful information that supports critical decision making at all levels of the College in an environment that allows for robust analysis.

BHC uses SunGard Banner administrative system to support student, financial aid, finance and other functional transactions. BHC lacks a central data repository dedicated to reporting and academic analytics. Operational units have downloaded their own data and manipulate it to create the reports they need. This data is often limited by the fact that it is data that relates solely to events and transactions.

Additionally data is stored in multiple locations for other systems, such as contracts, and is not easily integrated to support decision making.

Furthermore and most importantly hiring appropriate staff to lead this initiative has been most challenging. The College has redefined its staffing expectations twice narrowing the scope of work each time. Currently it is seeking a Data Warehouse Project Manager to guide the process of scanning the higher education environment related to data warehouse solutions, serves as the liaison with perspective venders, schedule solution demonstrations, develop an RFP and product evaluation criteria, facilitate team decision making and IT infrastructure needs .

AQIP REVIEWER: This project addresses concerns shared by many campuses – the difficulty of collecting multiple kinds of data, storing it securely, accessing it easily, analyzing it effectively and using it to inform improvements. The team is to be commended for tacking such a complex and important project. Although the team had to take a few steps back before beginning to make real progress and then to gain momentum, the project seems to be on track to put the essential pieces into place.

Black Hawk College

Project Details

Title	Academic Analytic Tools & Environment to Support Decision Making & Student Success	**Status**	REVIEWED BY AQIP 09/2014
Category	7-Measuring Effectiveness		
Timeline			

1: CURRENT PROJECT STATUS SUMMARY

BHC Response: It is anticipated that this project will be closed after this review and a new project focusing on training and developing dashboards for academic deans will be opened.

AQIP Review Comment: A description of the current status of the project is not available at this time. The list of accomplishments presented in item 3 would appear to represent good progress.

2: ORIGINAL PROJECT GOALS AND DELIVERABLES

BHC Response: To support a culture of data informed decision making the College will complete the first of five phases to developing a culture of deploying academic analytics. (Capture, report, predict, act, and refine.) This first project will focus on capturing data from multiple sources and in multiple formats; extracting data and migration to a data warehouse, and integrating those data to make them available for analysis.
The College will use the following metrics to measure progress towards achieving its goal:

- define the College current culture and readiness,
- determine key College personnel who have a vested interest in academic analytics,
- as a result of a data audit produce a strategy for capturing the data,
- determine ways in which to address risk and security issues,
- design the plan to store and integrate data from multiple sources and ultimately prepare the college to move to the next stage of *reporting* thru the use of analysis tools that perform queries, examine information, and identify trends, patterns, and exceptions in the data.

AQIP Review Comment: Project goals, deliverables, and associated metrics are presented. Defining the current college culture and readiness may be a challenging metric to assess. However, information on the breadth and depth of institutional participation in training, as well as level of campus of engagement in various phases of the current project, could provide useful data in such direction. It may be worthwhile to identify some form of metric specifically focused on the degree to which data has been made available for analysis. In light of the variety of desired unit-level analyses, this will necessarily incorporate a users' point of view of data availability and thus connect with key points in the Action Project rationale.

3: ACCOMPLISHMENTS OVER THE PAST YEAR

BHC Response: The Data Warehouse Student Navigator was made available for access by Student Services and Institutional Research. Student information tables were loaded from Ellucian and departmental sources and data integrity was verified. A test environment was created in order to review customizations prior to production installation.

The following Data Warehouse customizations were completed and made available:

- Data Dictionary for the ASNM (Advising Student Navigator Module)
- Criteria for Student Alerts and NSC (National Student Clearing House)
- Data warnings to assist with data verification
- Dashboards were created for
- NewSTARS student prior to scheduled sessions of orientation and enrollment
- Annual Report of TRiO Students for the Department of Education
- Templates, Alerts, and Open Reports were created for "Active Student Holds" and "Students Identified as Early Alert".
- Additional Criteria, Filters, and Reports were developed based on user requests for information.

Basic Advisor Training was developed and delivered to the Student Services Advising and Student Services Center staffs. Appropriate staff members were also instructed regarding how to import non-Ellucian data (i.e., Excel) into the Data Warehouse, when needed.

Student Advisors use the Student Navigator on a daily basis and report significant time savings and ease of access to more complete information over the previous methodology.

- Advisors are able to easily identify and contact groups of students requiring changes to their academic plan
- Report data is used to populate NewSTARS forms removing the need for manual entry
- The need for Student Support Services to generate daily reports for Advising has been eliminated
- An unexpected advantage is knowing when a record does not contain a picture the student does not yet have a BHC ID card. The Advisor can then discuss the associated benefits of obtaining an ID and accessing Financial Aid funds.

In addition to gather information for the DOE Annual Report, the Student Success Center will use the TRiO Dashboard to streamline the process for producing progress reports for faculty on a regular basis. SSC staff uses the Data Warehouse to support processing of new applicants to gather intake information and ensure students are matched to the appropriate program.

Access to in-house documentation and training was made available through links in the Data Warehouse Help section and on myBlackHawk.

AQIP Review Comment: The college appears to be making good progress, however, see related comments in item 1. Much effort has been devoted to customizing the Data Warehouse to fit specific Student Services needs. The items listed are representative of areas of high impact in Category 1 Helping Students Learn. It may be helpful to consider also listing the resources and organizational adaptations, e.g., new work groups, committees, unit structures, directed

specifically to the project in bringing about the reported accomplishments. This could provide a more complete view of the range of project accomplishments over the past year.

4: INSTITUTIONAL INVOLVEMENT

BHC Response: Personnel from Student Services, Planning and Institutional Effectiveness (PIE), and Information Technology (IT) participated in various project activities. Student Services and PIE staff participated in loading departmental data and the overall data verification process, and were consulted regarding the development of custom criteria and reports. ITS supported the installation and maintenance of the Zogotech software and required access activities for users. Student Advisors and TRiO staff members attended the Data Warehouse training.

AQIP Review Comment: There is a good range of institutional involvement represented. Looking ahead to future expansion of the Data Warehouse, per original project vision, it may be worthwhile to invite leaders from administration, faculty, and other service units to participate and/or learn more about the Student Services implementation. Next phases of the project could benefit from having these interested colleagues already engaged in existing operational phases. This would also be very much in the spirit of Category 3 Valuing Employees.

5: EFFECTIVE PRACTICES

BHC Response:
Practice: Advising Support
The Data Warehouse provides Student Advisors with quick and easy access to all pertinent current and historical information about each student being advised, including demographics, enrollment, registration, grades, and alerts.
Practice: User Submission and Tracking of Ad-hoc Requests
A web-accessible form is available within the Data Warehouse for requesting the development of criteria and/or reports. The submitted request is added to the Institutional Data and Support Request Smartsheet and a notification email is sent to the designated Data Warehouse Administrator. Activities and request resolution information is maintained in the Smartsheet and can be reviewed and reported on request.

AQIP Review Comment: The extensive college experiences with the Data Warehouse to provide effective advising support, including related follow-up data on impacts, would be of interest to other universities faced with data culture challenges similar to those articulated in the original Action Project rationale. The college is encouraged to present their results in available national presentation or reporting venues. The user submission and data request tracking system leads nicely into future planned expansion of Data Warehouse deployment to all organizational units. These experiences and related data on impact would similarly be of interest to available national presentation/reporting venues.

6: ANTICIPATED CHALLENGES TO PROJECT SUCCESS

BHC Response: There are no outstanding challenges within the scope of this AQIP Project.

AQIP Review Comment: It may be a valuable exercise at this point to articulate anticipated challenges relevant to future phases of the project, which bear some similarity to those encountered throughout the course of the current project phase. Anticipating challenges for maintaining, promoting, and tracking effective, continued use of implemented Data Warehouse functions could also provide useful information as the future phases are planned and implemented. The information may promote increased success in future phases and, additionally, assist institutional assessment of progress toward a culture of data informed decision making.

7: PLANNED NEXT STEPS AND TIME LINE

BHC Response: Open availability of the Data Warehouse to Academic Deans and Financial Aid.

- Add Enterprise Reports and Analytic Templates to user's available toolset.
- Develop and deliver Advanced User Training for Criteria and Templates.
- Complete the development and testing of the "add-on" functionality to load data from the SARS Database.
- Refine the following processes:
  - Needs Analysis
  - Data Integrity and Rules Verification
  - Functionality Testing
  - Software / Servers Installation and Maintenance

AQIP Review Comment: The planned next steps follow logically from current progress and original Action Project rationale/goals. As the steps presented appear likely to contain layers of complexity and challenges similar to the current project, it may be a good idea to reflect on the actual timelines and milestones just completed and draw upon the experience to construct a realistic timeline with milestones for these planned next steps. In preparation for doing so, it may also be helpful to conduct an overall evaluation of the current project.

8: ADDITIONAL INFORMATION, QUESTIONS, OR CONCERNS

BHC Response: It is anticipated that this project will be closed after this review and a new project focusing on training and developing dashboards for academic deans will be opened.

AQIP Review Comment: None