

**PA2: SUSTAINABILITY PLANNING  
WELLBEING & WORK**

**Initiative 4.1 : Increase the capability and diversity of the workforce to achieve high performance characterized by an engaged and satisfied faculty and staff**

<b>Action Project 4.1 – 1 : Develop a greater understanding of diversity and inclusion</b>	
<b>Description of Action Project</b>	<p>With a goal to educate faculty and staff regarding the extent to which Delta College values differences, strengthen faculty and staff understanding of the aspects of our value of diversity at Delta College by:</p> <ol style="list-style-type: none"> <li>1. Establishing a Diversity Council that is appointed by the President and has a rotating membership.</li> <li>2. The Council will: <ul style="list-style-type: none"> <li>• Identify appropriate paths for sharing information regarding diversity on the website and on the student and employee portal.</li> <li>• Serve as a resource to assist the President’s Scholar in attainment of goals set forth by the program guidelines.</li> <li>• Recommend appropriate policies and procedures (as needed) in relation to diversity on campus.</li> <li>• Work with the President to establish benchmarks and measurements relating to diversity of students, faculty, and staff.</li> <li>• Engage College Community in meaningful discussions about diversity through activities such as brown bag lunches, learning cafes, and summits.</li> </ul> </li> </ol>
<b>Champion(s)</b>	Margaret Mosqueda, Scott Lewless, Loyce Brown, Dr. Reva Curry, Kristy Nelson
<b>Champion’s Approach for Implementation</b>	Cross-Functional Team
<b>Resources</b>	Human Resources Staff, Center for Organizational Success Staff, Faculty and Staff
<b>Short-term or long-term?</b>	Long-term - more than 1 year to implement

	<b>Baseline</b>	<b>Measures of Success</b>
<b>Outcome Measures</b>	<ol style="list-style-type: none"> <li>1. Current Diversity DVD</li> <li>2. Current Diversity Website</li> <li>3. Current Diversity Definition</li> </ol>	<ol style="list-style-type: none"> <li>1. You-Tube videos relating to various diversity topics will be created and published to appropriate audience paths (through use of web and portal sites) by June of 2017.</li> <li>2. College-wide definition of diversity will be reviewed and</li> </ol>

<b>Action Project 4.1 – 2 : Implement a structured, long-term plan for the College which focuses on improving faculty and staff satisfaction, engagement, and overall morale.</b>		
<b>Description of Action Project</b>	Design and implement a measureable plan for faculty and staff which focuses on improving staff satisfaction, engagement and overall morale.	
<b>Champion(s)</b>	Dr. Jean Goodnow, Loyce Brown, Andrea Ursuy	
<b>Champion's Approach for Implementation</b>	Cross-Functional Team	
<b>Resources</b>	United to Lead Teams, Human Relations Committee, Leadership from SSEC, ECAPs, and FEC, Center for Organizational Success (COS) Staff, Human Resources Staff	
<b>Short-term or long-term?</b>	Long-term - more than 1 year to implement	
<b>Outcome Measures</b>	<b>Baseline</b>	<b>Measures of Success</b>
	1. No plan in place	1. Plan in place and communicated to the College Community during Learning Days 2016 which may include any/all of the following components: <ul style="list-style-type: none"> <li>- Shared Governance</li> <li>- Best practices from business and industry (and ways in which we can apply them at Delta College)</li> <li>- An ambassadors program</li> <li>- Conflict resolution training</li> <li>- A summit</li> </ul>

<b>Action Project 4.1 – 2 : Implement professional development plans for A/P and Support Staff</b>		
<b>Description of Action Project</b>	Design and implement a plan for A/P and Support Staff professional development based on the strategic focus areas of the College	
<b>Champion(s)</b>	Loyce Brown, Wendy Childs, Mary Gmeiner, Andrea Ursuy	
<b>Champion's Approach for Implementation</b>	Cross-Functional Team	
<b>Resources</b>	Center for Organizational Success (COS) Staff, Human Resources Staff, Faculty and Staff	
<b>Short-term or long-term?</b>	Short-term - 1 year	
<b>Outcome Measures</b>	<b>Baseline</b>	<b>Measures of Success</b>
	1. No plan in place	1. Plan in place and communicated to the College Community by June 30, 2016

<b>Strategic Focus Area</b>	<b>People Focus</b>	
<b>Initiative 4.1</b>	Recruit, support, and retain a diverse and talented workforce.	
<b>Strategy for Action</b>	Diversity	
<b>Action Plan</b>	Develop a strategy to increase and plan the diversity of qualified faculty applicants. Use data collected throughout the application process to better understand how the pools narrow. Use findings to redefine the process for academic hire.	
<b>Champion(s)</b>	Mary Gmeiner	
<b>Resources</b>	Human Resources, Equity Office, Faculty and Staff	
<b>Outcome Measures</b>	<b>Baseline</b>	<b>Outcome Measures</b>
	Current diversity profile information.	Reflect the community that we serve in terms of the diversity of our faculty, staff, and students.
<b>Strategy for Action</b>	Professional Development Plans	
<b>Action Plan</b>	Design and implement a plan for Administrative/Professional and Support Staff professional development based on the strategic focus areas of the College.	
<b>Champion(s)</b>	Loyce Brown, Wendy Childs, Mary Gmeiner, and Andrea Ursuy	
<b>Resources</b>	Human Resources and Center for Organizational Success (COS)	
<b>Outcome Measures</b>	<b>Baseline</b>	<b>Outcome Measures</b>
	No formal planning process in place  2014 PACE Survey Results	<ul style="list-style-type: none"> <li>Formal planning process in place by the conclusion of Winter 2015</li> <li>Improve PACE Survey Results in a minimum of one category.</li> </ul>

PA2: SUSTAINABILITY PLANNING  
 DIVERSITY & AFFORDABILITY

**Initiative 2.2 : Utilize Delta College's Off-Campus Centers to meet the educational needs of the community**

**Action Project 2.2 – 1 : Construct and implement a new Saginaw Center to meet the educational needs of the largest service county**

<b>Description of Action Project</b>	<ul style="list-style-type: none"> <li>• Strategic evaluation of Learning Center sites, criteria for the new Saginaw Center building, selection of Downtown Zone and site selection criteria completed.</li> <li>• Matching funds to be awarded from the State and/or other sources.</li> <li>• Site to be identified.</li> <li>• Construction plan and timeline initiated.</li> </ul>
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	<ul style="list-style-type: none"> <li>• Resource allocation for new Center reflected in College budget.</li> <li>• Programs identified for the new Saginaw Center and are complimentary to programs at University, Bay City, and Midland Centers.</li> <li>• Increase Academic Scheduling Efficiency</li> <li>• Develop appropriate Faculty, A/P, and support staffing to ensure success</li> <li>• Engage the Community</li> <li>• Create Center Branding</li> <li>• Opening semester identified.</li> </ul>	
<b>Champion(s)</b>	Dr. Jean Goodnow, Dr. Reva Curry, Deb Lutz, Margaret Mosqueda	
<b>Champion's Approach for Implementation</b>	Cross-Functional Team	
<b>Resources</b>	Centers Team	
<b>Short-term or long-term?</b>	Long-term - more than 1 year to implement	
<b>Outcome Measures</b>	<b>Baseline</b>	<b>Measures of Success</b>
	<ol style="list-style-type: none"> <li>1. Matching funds awarded</li> <li>2. Site identified</li> <li>3. Project Designed and Construction Timeline Established</li> </ol>	<ol style="list-style-type: none"> <li>1. Project included in State Appropriations Act</li> <li>2. Recommendation made and Board Approved</li> <li>3. State Approval of Schematic Design, Final Design and Bids Awarded</li> </ol>

<b>Action Project 2.3 – 2 : Determine needs of adult learners and dual enrollment students</b>	
<b>Description of Action Project</b>	<ul style="list-style-type: none"> <li>A. Scheduling efficiency (at main campus and centers)               <ul style="list-style-type: none"> <li>1. Examine course taking patterns, including high demand courses with wait lists, section frequency which may split students into class sizes that are too small.</li> <li>2. Examine classroom and building utilization patterns to identify ways to improve scheduling efficiency.</li> </ul> </li> <li>B. Program delivery               <ul style="list-style-type: none"> <li>1. Identify programs that can be transitioned into online delivery through converting one-three courses.</li> </ul> </li> </ul>

	<ul style="list-style-type: none"> <li>2. Develop effective online orientation strategies that improve persistence in online courses.</li> <li>3. Identify Learning Center pathways where students have the option to complete certificates or degrees at a Learning Center through a combination of face to face and online courses.</li> <li>C. Create specialized workshops that focus on the needs of adults               <ul style="list-style-type: none"> <li>1. Collaborate with Michigan Works, social service agencies, community groups, area churches, and Delta advisory boards to identify adult demographics for comprehensive outreach.</li> <li>2. Convene open houses at University Center and one Learning Center each year as part of adult outreach strategy.</li> </ul> </li> </ul>	
<b>Champion(s)</b>	Dr. Reva Curry, Margaret Mosqueda, Dr. Russell Curley	
<b>Champion's Approach for Implementation</b>	Cross-Functional Team	
<b>Resources</b>	Division Chairs, Director of Admissions, Director of Learning Center, Director of Counseling and Advising	
<b>Short-term or long-term?</b>	Long-term – more than 1 year to implement	
<b>Outcome Measures</b>	<b>Baseline</b>	<b>Measures of Success</b>
	<ul style="list-style-type: none"> <li>1. The current number of cancelled courses at University, Saginaw, Bay and Midland Centers.</li> <li>2. Age 25-45 student population at University Center, Saginaw, Bay and Midland Centers</li> <li>3. Online certificate (4) and associate programs (9)</li> </ul>	<ul style="list-style-type: none"> <li>1. Cancelled courses reduced by 25% from AY2015-16 compared with AY2014-2015</li> <li>2. Increase 25-45 student population by 5% from Fall to Fall</li> <li>3. Increase number of fully online programs by 2 each year.</li> </ul>

<b>Strategic Focus Area</b>	<b>Community Focus</b>	
<b>Initiative 2.1</b>	Increase community involvement to foster college readiness in the Great Lakes Bay Region.	
<b>Strategy for Action</b>	Possible Dream Program Outreach	
<b>Action Plan</b>	<ul style="list-style-type: none"> <li>Administer COMPASS testing to high school juniors who are members of the Possible Dream Program to assess college readiness.</li> <li>Work with them to deliver programs to prepare them for college readiness throughout their senior year.</li> </ul>	
<b>Champion(s)</b>	Reva Curry, Teresa Stitt, and Dorian Phelps	
<b>Resources</b>	Math Division, English Division, Science Division, and Pam Clark	
<b>Outcome Measures</b>	<b>Baseline</b>	<b>Outcome Measures</b>
	Baseline data collection on the number of Possible Dream students coming to Delta College out of high school or for dual enrollment began in July 2013  COMPASS or ACT score in junior year	<ul style="list-style-type: none"> <li>Following establishment of baseline, increase number of Possible Dream students who are coming to Delta College out of high school or as dual enrolled students</li> <li>Increase scores in ACT or COMPASS following intervention for students who aren't college ready at conclusion of senior year</li> </ul>
<b>Strategy for Action</b>	The Delta Project	
<b>Action Plan</b>	<ul style="list-style-type: none"> <li>Expand participation in the program to include one new cohort of students in each county; Bay, Midland, and Saginaw.</li> <li>The Delta Project currently provides college readiness and exposure activities to over 120 high school students. And has provided college planning and admissions process support to over 40 high school graduates.</li> </ul>	
<b>Champion(s)</b>	Marcie Carter and Douglas Freed	
<b>Resources</b>	Staff time to coordinate, cooperation and assistance from college offices such as: Academic Testing Center, LLIC, Room Scheduling, Food Services, and Career and Employment Services	
<b>Outcome Measures</b>	<b>Baseline</b>	<b>Outcome Measures</b>
	Current Cohorts: Saginaw 7 (92 students) Bay 4 (40 students) Midland 2 (23 students)	<ul style="list-style-type: none"> <li>Increase Cohorts*: Saginaw 8 Bay 5 Midland 3</li> </ul>
		<ul style="list-style-type: none"> <li>Increase student participant applications to Delta to 50.</li> </ul> <p>*Each cohort consists of 15-30 Special Education High School students who have demonstrated a desire and potential for college success. New cohorts will add between 30-50 new students to the program.</p>



<b>Strategy for Action</b>	<b>Enhance educational opportunities for African American and Hispanic males through the Kresge Foundation Men of Color Student Success Initiative</b>	
<b>Action Plan</b>	<ul style="list-style-type: none"> <li>• Develop and implement a mentorship program to increase academic success and retention.</li> <li>• Develop and implement cultural training for faculty and staff that includes: <ul style="list-style-type: none"> <li>• Information on diverse learning styles</li> <li>• Information on internal and external factors that contribute to success in and out of the classroom</li> </ul> </li> </ul>	
<b>Champion(s)</b>	Multicultural Advisor, Joe Hernandez, Karen Wilson, and Teresa Stitt	
<b>Resources</b>	Center for Organizational Success (COS), Loyce Brown	
<b>Outcome Measures</b>	<b>Baseline</b>	<b>Outcome Measures</b>
	<p>Current semester to semester retention of African American (76.8%) and Hispanic (70%) male students</p> <p>Current course completion rate (C or better):</p> <ul style="list-style-type: none"> <li>• 50% - African American</li> <li>• 67% - Hispanic</li> </ul> <p>Current GPA of those participating in mentorship program</p> <p>Current number of participants on academic probation or caution</p> <p>No training for faculty and staff in place</p>	<p><i>For those participating in mentorship program:</i></p> <ul style="list-style-type: none"> <li>• Increase semester to semester retention by 5% for both African American and Hispanic black males participating in mentoring program</li> <li>• Decrease number of students on academic probation or caution</li> <li>• Increase GPA overall</li> <li>• Increase completion rates</li> <li>• Training designed and implemented for faculty and staff</li> </ul>

## **OTHER IMPACT AREAS**

TECHNOLOGY – The original report, Delta College Data Center Life Cycle Management Plan, is password protected. Relevant sections are cut and pasted below.

### **Data Center Facilities**

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The data center is the focal point of all computer resources. It should be designed as a secure, isolated and protected area. The data center should have limited access with the appropriate access control systems installed. Access Control systems should record all entrance and exit activity.

Addressing the costs associated with heating and cooling the data center is a good way to lower overall operating costs. The implementation of a well thought out HVAC design could potentially save thousands of dollars each year.

An air management strategy for data centers entails all the design and configuration details that go into minimizing or eliminating the mixing of the chilled air supplied to equipment and the hot air returned by the equipment. Effective air management implementation minimizes the bypass of cooling air around rack intakes and the recirculation of heat exhaust back into rack intakes. When designed correctly, an air management system can reduce operating costs, reduce first cost equipment investment, increase the data center's power density (Watts/ square foot), and reduce heat related processing interruptions or failures. (Federal Energy Management Program, Best Practices Guide for Energy-Efficient Data Center Design, March 2011)

The Telecommunications Industry Association (TIA) recommends a row-based arrangement of cabinets in a data center, with the fronts of equipment racks facing each other in one row (cold aisle with perforated tiles) and the backs facing each other in both adjacent rows (hot aisles with non-perforated tiles). Similarly, cold air enters from the front of the cabinets in the cold aisles and exits from the back of the cabinets in the hot aisles. Air circulation can be passive or forced (e.g., using fans to pull in cold air or expel hot air). (Belden Data Center Design Guide, 2007)

### **Unified Storage and Enterprise Class Servers**

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#### **Overview of Technology**

The implementation of VMware vSphere 6.x has allowed for the more efficient use of existing VMWare technologies. These technologies will allow for data center personnel to respond quickly to situations that require the relocation of virtualized resources due to scheduled maintenance or equipment failure. Through the use of VMWare's High Availability (HA), Distributed Resource Scheduling (DRS) and vMotion, it is possible for the system to automatically respond to system requirements without human intervention. By using these technologies properly, IT Staff are able to plan for and mitigate situations that previously would have led to costly downtime and system unavailability.

The implementation of a central data storage repository provides many benefits and more than a few challenges. The central data storage array allows for multiple computers to access the data contained within its storage arrays. This sharing of data will facilitate rapid recovery in the event of a server failure and with the implementation of VMWare's High Availability architecture the students and faculty will experience a minimum of downtime when issues arise. The biggest challenge is that the large capacity of the storage array makes backing up the data a long process. The recent move to a disk-based backup strategy has greatly reduced the consistency of backups and the time window required for them to finish.

By slowly migrating away from an individual server environment to a clustered server environment the College has been able to achieve considerable economic savings. The capabilities of Enterprise Class Servers allow two servers to handle the requirements of several older model servers, typically in the 1:2 and frequently in the 1:3 range of equipment replacements. By minimizing the total number of physical servers within the environment, you can reduce costs associated with power consumption, heating and cooling requirements, per "CPU" licensing costs and potentially other support costs. The Enterprise Class Servers are also capable of monitoring usage on individual servers and automatically migrating loads between servers, even powering on or off servers as demand warrants.

The long term data storage requirements associated with storage arrays require a robust and flexible backup strategy. By using Symantec's Backup Exec software, it will be possible to perform routine backup and recovery operations in a timely manner. This Return to Operations (RTO) time frame is critical for maintaining customer satisfaction.



## Current Challenges

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### A. Data Center Physical Infrastructure

The current configuration of the data center does not recognize the requirements of the network equipment, servers, storage arrays, network switches and associated equipment required to support Delta's future data center needs. While there is adequate heating and cooling within the data center, from a CQI perspective this could be enhanced so the heating and cooling is contained within the data center. The existing partial wall between the data center and the OIT office space only acts as a physical barrier to the data center. It does not adequately provide for equipment security (it is open at the top) and does not retain the cooling that is required for all the equipment in the data center. A determined individual could defeat the door alarms and video surveillance of the datacenter by scaling the  $\frac{3}{4}$  wall in an area not well covered by cameras.

This wall also does little to prevent the equipment noise from compromising the working office environment of the staff. It is recommended that the existing wall be replaced by a new wall (full height) which will fully contain the data center environment. The datacenter has three (3) ingress/egress points. It is recommended that two access points be restricted as emergency exit only.

It is suggested that an HVAC specialist be consulted to determine if the airflow within the data center meets the requirements for the equipment. At the present time, the data center airflow seems to be inadequate. The area between the server racks is currently being cooled by a

cooling duct, which is of a temporary arrangement. This temporary arrangement has been in place since early 2012.

### D. Site Utility Power

An estimation of Power Usage and Heat Generation is show below. This information was derived from manufacturer's datasheets for each device in the datacenter and compiled on an "end of fiscal year" basis to show a trend.

Fiscal Year	Power (Watts)	Heat (Btu/Hr)
12/13	51,583	176,008
13/14	38,358	130,882
14/15	35,983	122,779
15/16	36,798	125,559
16/17	39,061	133,381
20/21	30,393	103,705

The current datacenter configuration consumes about 39,061 watts of power. With virtual server consolidation strategy and migrating of mature services to the cloud, the data center power consumption will be reduced to approximately 30,393 watts of power by 20/21. This will ease the load on the power subsystem and reduce the head load generated by the datacenter equipment.