

2010 SCoPM Performance Excellence Award Application Cover Sheet

Team Name	Maryland State Highway Administration Office of Highway Development University
Date Team Operating from	start date June 2009 to end date June 2010
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The following information is an overview of the project and, if selected for recognition, will be used for publicity. This part of the application is not scored; however, the narrative is used as background information for the application. By submitting this application, the organization agrees to publication of award winning applications.

Team Purpose:

The Office of Highway Development University (OHDU) Team was created to develop a structured in-house training program for new OHD engineers and technicians. The primary goal of our team is to teach and guide new OHD engineers and technicians technical and project management skills that are necessary to do their jobs efficiently and effectively. A secondary goal was to improve employee retention. Feedback from staff indicated that some engineers felt overwhelmed and undertrained and sought opportunities elsewhere in the organization or left SHA for employment elsewhere.

The OHDU Mission Statement is to effectively and uniformly educate OHD engineers and engineering technicians on the SHA policies, design standards, and effective communication techniques necessary to be a successful designer and project manager. The OHDU mission helps to provide OHD with competent designers and project managers who are able to contribute to, and lead, several project teams throughout the organization. This has helped, and will continue to help, OHD to improve communications with internal and external customers. OHDU is also viewed as a knowledge management initiative that allows expert staff the opportunity to communicate institutional knowledge to OHD employees. The OHDU Program also enables students to acquire other skills that are necessary to advance their career.

Impact of Team's Improvement(s):

The OHDU Team sees direct effects of the OHDU Program on a daily basis. The in-house training program is a grass roots curriculum. Members of the Team are team leaders and experienced engineers in our office who work beside and manage the new engineers on a daily basis. The Team sees direct benefits of the OHDU Program. Many routine tasks and design elements that the newer engineers produce are results of the OHDU Program and the materials they learned in the training classes. When the engineers are on-key in their work and producing high quality projects on time and on budget, the OHDU Program is effective and achieving its Business Plan goals and objectives.

Category 1 - Customer Focus

- 1.1. List the key customers of the team
 - 1.1.a. New OHD engineers
 - 1.1.b. New OHD engineering technicians
 - 1.1.c. Experienced OHD engineers and project managers

1.2. Explain why you determined that these were key customers

1.2.a. New OHD engineers have been the focus of the OHDU Program since its inception. They are the primary students around which the curriculum is centered. It is critical to provide consistent and specific training to new engineers within their first two years to ensure they all have the correct tools to successfully do their job and achieve work and personal development goals.

1.2.b. New OHD engineering technicians were hired in the last three years. They benefit from the OHDU Program to gain an overall knowledge of OHD and its operations. It provides a more consistent foundation upon which to plan their knowledge base for the job and develop their personal career goals, while ensuring their ability to complete their current job responsibilities.

1.2.c. Experienced OHD engineers and project managers benefit from the OHDU Program to obtain a refresher on the course material and learn new processes as they are updated. This is particularly important as new policies or techniques are developed, and help to ensure professional development for all employees, but especially our engineers who will ultimately be required to receive continuing education credits to maintain professional licensure

1.3. Explain how the team listened to and collected information from the key customers.

1.3.a. New OHD engineers are asked to complete post-course evaluations after every class. The team gathers valuable feedback about the class, including what to maintain and what to improve for the next class. The engineers are also evaluated quarterly by their immediate supervisors. If any consistent gaps in knowledge or delivery of knowledge are identified through this process, it is shared with the Team coordinators.

1.3.b. New OHD engineer technicians are asked to complete post-course evaluations after every class. The Team gathers valuable feedback about the class, including what to maintain and what to improve for the next class. Technicians receive quarterly reviews within their first year as well. Should any gaps or feedback regarding the efficacy of the training be received, it is shared back with the team.

1.3.c. Experienced OHD engineers and project managers are asked to complete post-course evaluations after every class. The Team gathers valuable feedback about the class, including what to maintain and what to improve for the next class. Feedback was provided through forum's such as team leaders meetings and manager staff meetings as well.

1.4 Explain how the team turned information collected from the customers into requirements

1.4.a. Post-course evaluations completed by the new OHD engineers revealed that they enjoy activities or exercises as part of the training classes. In the 2009-2010 academic year, the Team reviewed all classes and added activities to engage the students and reinforce the material. Feedback from team leader meetings and managers has led to changes in course curriculum as well as new courses being created to cover additional material that is deemed necessary.

1.4.b. Post-course evaluations completed by the new OHD engineering technicians revealed that the connection between the classes and the project development process could be improved. The Team reviewed all the classes to ensure the proper connections were being made.

1.4.c. Post-course evaluations completed by the experienced OHD engineers and project managers. They recommended to add a break or clarify a presentation. From these recommendations, each class was evaluated and revised to improve quality across the board.

1.5. Explain **how** the team determined both customer satisfaction and dissatisfaction

1.5.a. Post-course evaluations are used to determine the satisfaction and dissatisfaction of the new OHD engineers for each OHDU class. The evaluations for each class include a series of seven questions. A few of the questions include: “Was the class interesting? Explain”, “Was the class valuable? Explain.” and “What could be improved for the next class?” The Team reviews the responses for each question and each class and determines if any improvements are necessary. Adjustments include any revision to the class materials and length of class in order to maintain a high level of satisfaction and reduce dissatisfaction.

1.5.b. Post-course evaluations are used to determine the satisfaction and dissatisfaction of the new OHD engineering technicians. The evaluations for each class include a series of seven questions. A few of the questions included: “Was the class interesting? Explain”, “Was the class valuable? Explain.” and “What could be improved for the next class?” The Team reviews the responses for each question and determines if improvements are necessary.

1.5.c. Post-course evaluations are used to determine the satisfaction and dissatisfaction of the experienced OHD engineers and project managers. In addition, feedback from team leaders, managers and general comments from the employee appraisals (details of course were kept confidential) were generally received in a manner that conveyed satisfaction or dissatisfaction. The feedback that certain skills were now consistently apparent during the evaluations was an indication that the courses were meeting specific needs and knowledge gaps.

Prior to the current OHDU structure, retention was an issue with vacancy rates generally running about 8 to 12% for the office. Currently the vacancy rate is less than 4%, with current vacancies actually the result of retirements. There have been no moves by engineers, during this period, to other parts of the organization as well. Engineers who know their job are much more likely to succeed and stay with their job.

Category 2 - Process Management

2.1. List the process(es) applicable to the team purpose and performance expectations

2.1.a. A key process for this initiative is the project development process. The OHDU Team requires that the classes are based around elements of the project development process including all the project management and technical roadway design features. This process was an original intent and focus of the program when it was formed and continues to be a primary mission and goal of the program. Making the connection between class material and the process that is used everyday is vital for engineers to understand their work and be successful. This understand and satisfaction contributes to retention of the office’s employees.

2.1.b. Monitor and maintain the standards of the OHDU Program

2.1.c. Review the OHDU Program budget

2.2. Describe the steps taken to achieve the purpose of the team

2.2.a. The OHDU Team monitors the standards of the OHDU Program to ensure the quality and expectations are maintained. The Team reviews the class materials and updates whatever project development processes and content is necessary. The office’s processes change and it is important that the participants, who are our new engineers, understand the current and proper processes and policies of our office. Meet with the Director and Deputy Directors to review course listings, structure, and proposed changes.

2.2.b. The Team cross references class material to reiterate relevant material across multiple classes where it is necessary to reinforce the material and project development features. The Team also ensures that material that is repeated in another course to some degree is kept to a

mention of the topic and avoids outright duplication of presentations from class to class. This could jeopardize the integrity of the program as a whole.

2.1.c. The OHDU Team reviews the OHDU Program budget annually to effectively manage the resources. In recent years, the office's training budget has been reduced. The Team reviews the classes in the Program and the need of the participants. The budget is reviewed with the Director and Deputy Director for approval.

2.3. Explain how the steps taken to achieve the purpose of the team affected efficiency, effectiveness, quality, and/or customer satisfaction attributes

2.1.a. Monitoring the standards of the OHDU Program ensures the Program's mission is met in the most effective and efficient manner while still maintaining a high level of quality. This includes reviewing feedback with subject matter experts, reviewing policy and technical changes, and keeping abreast of changes in the industry through training, reading, or on-the-job experience to ensure that the most pertinent, up-to-date items are presented in the course curriculum. We also invite recent graduates to join the team to keep the interest fresh and to translate the enthusiasm and knowledge gained through the Program back into the Program in the form of new material, changes, or direction.

2.1.b. Reviewing the OHDU Program budget periodically ensures that resources are used efficiently. The length of the classes is reviewed with the amount of class material. The length of the classes vary based on the amount of material, a ten minute break every one and a half hours, and an interactive exercise and/or discussion of the class material. Balancing these elements to define a reasonable timeframe improves the quality of the class and customer service attributes. The team leaders in our office are our secondary customers since they manage the new engineers. They see the results of the OHDU Program instruction through their new engineers on a daily basis. The team leaders know what the new engineers are being taught and how well they understand when they are instructing the new engineers to complete a task.

2.4. Explain how the team gathered data, analyzed it, and the tools used to make decisions

2.4.a. Explain how you gathered the data and how you analyzed it.

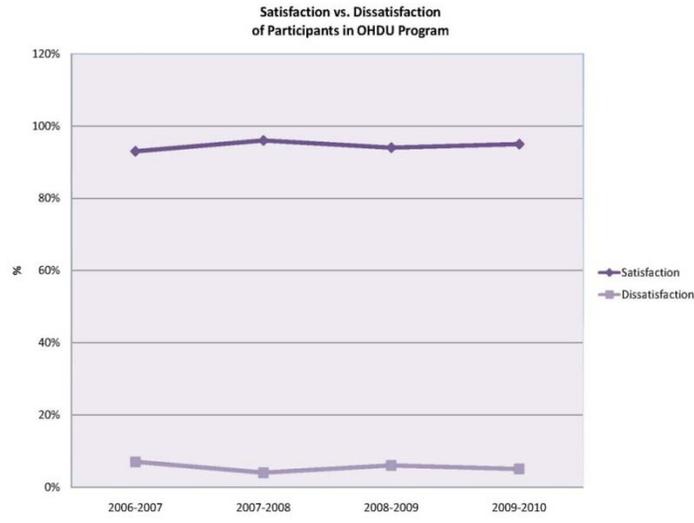
The Team used the post-course evaluations and face-to-face meeting discussions at the OHDU Team Meetings to discuss the data. The Team also used sign-in sheets for each class that recorded which Program participants attended each class. In addition, informal discussions are used to gather feedback from team leaders, managers and the participants themselves.

2.4.b. Identify the tools you used from this list: Pareto Chart, Flowchart, Cause and Effect Analysis, Check Sheet, Control Chart, Histogram, and Scatter Diagram

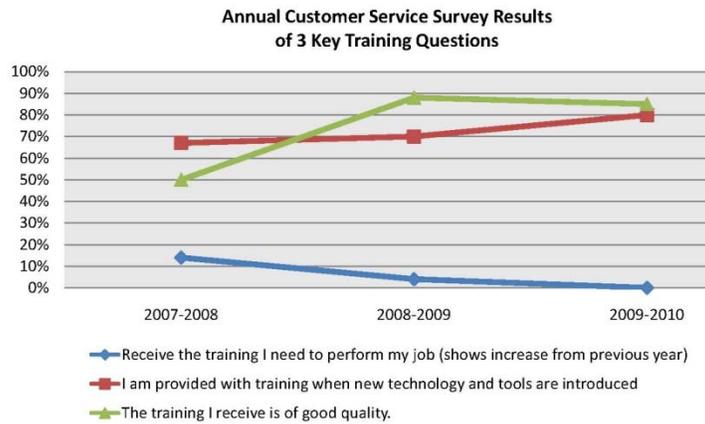
The Team used the cause and effect analysis for the improvements made to the individual OHDU Program classes. Usually when several participants make the same or similar recommendations, the effect of making the change benefits the entire class the next time the class is taught. Management used a spreadsheet to monitor the retention rate. The Team also used a spreadsheet to monitor the program participants and the classes they have completed and those they still need to complete in the next academic year.

Category 3 – Results (this section is worth 450 of 1000 point total) Provide one page of graphical results

3.1. Provide current levels and trends for customer satisfaction and dissatisfaction



3.2. Provide current levels and trends in key measures or indicators for the process(es) listed in Category 2 above



3.3. Provide current levels and trends in key measures or indicators of effectiveness, efficiency, and/or quality.

