

Applying the Lean Process to a Bi-Yearly Alumni Survey

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Abstract

Alumni surveys are a critical tool for colleges and universities in determining student satisfaction and educational effectiveness of the university's undergraduate and graduate programs. The Planning, Assessment, Research and Quality office conducts a bi-yearly Alumni Follow-Up survey to obtain this needed information from alumni and employers. The office was using commonly accepted survey practices, including sending pre-notification postcards to alumni, mailing the actual paper surveys to alumni and employers, and making multiple contacts with nonrespondents. All of these survey practices were time consuming and costly to the department. The PARQ office was interested in reviewing the current process and procedures for opportunities to reduce process lead time, better define customer requirements, and identify potential technological solutions.

The solution utilized was applying a business model focus (lean) to an institutional research practice. Currently, there is limited evidence of lean being applied in this type of setting. The lean process identified an action plan to reduce the time spent working on this project, increase accuracy, and save money.

The lean process can easily be generalized to other projects and the action plan developed for the Alumni Follow-Up can be used at other institutions as well. It did not cost any extra money to implement and involved working as a team to come up with better, more efficient, solutions through mapping out the entire Alumni Follow-Up process. Because of the success of the techniques implemented in 2010, the same process was used in the 2012 survey process with continued positive results.

Introduction of the Organization

The University of Wisconsin - Stout is considered Wisconsin's Polytechnic University, with the focus being innovation and applied learning. The university strives to provide career-focused programs utilizing scientific theory and research so that students can solve real-world problems and serve society. Although students attend UW-Stout for various reasons, they all benefit from our active, innovative, and technology-rich environment. UW-Stout was the first university to receive the Malcolm Baldrige National Quality Award, which was in recognition for our long history of performance excellence in higher education. We constantly adapt to the new demands of business, industry, and society to ensure graduates have the skills needed for the workplace. We consistently have over 90% of our graduates employed a year after graduation, with most working in related-to-major positions.

UW-Stout is unique in the types of programs that are offered. Currently, more than half of our programs are only offered at our university. We also offer unique services to enhance the student's learning experience. For example, new undergraduate students are provided a laptop computer, which is replaced every two years. We see this component as essential to a student's educational experience. UW-Stout is known for its digital environment and all classrooms are equipped with the most modern technology and media capabilities.

In 2012, enrollment at UW-Stout exceeded 9,000 students, with almost 1,000 of those being graduate students. We have 1,421 employees, with a student/faculty ratio of 19:1.

The office of Planning, Assessment, Research and Quality is responsible for strategic planning and accountability, institutional research and assessment, the Applied Research Center, quality initiatives and university policies. The PARQ office staff consists of the Assistant

Chancellor, Institutional Research (IR) team, Applied Research Center (ARC) staff, and student workers (graduate and undergraduate).

The IR team in the PARQ office at UW-Stout is responsible for providing faculty, staff and students with the skills to conduct high quality research, providing the university with systems to manage data and identify what's important and facilitating the use of data for decision-making. Projects include the alumni follow-up, survey clearinghouse, information portal, university-wide surveys, data summaries, and assistance with discipline-specific accreditation.

Statement (Restatement) of the Problem/Initiative

Alumni surveys are a critical tool for colleges and universities in determining student satisfaction and educational effectiveness of the university's undergraduate and graduate programs. The Planning, Assessment, Research and Quality office conducts a bi-yearly Alumni Follow-Up survey to obtain this needed information from alumni and employers. The office was using commonly accepted survey practices, including sending pre-notification postcards to alumni, mailing the actual paper surveys to alumni and employers, and making multiple contacts with nonrespondents. All of these survey practices were time consuming and costly to the department. The PARQ office was interested in reviewing the current process and procedures for opportunities to reduce process lead time, better define customer requirements, and identify potential technological solutions.

Design

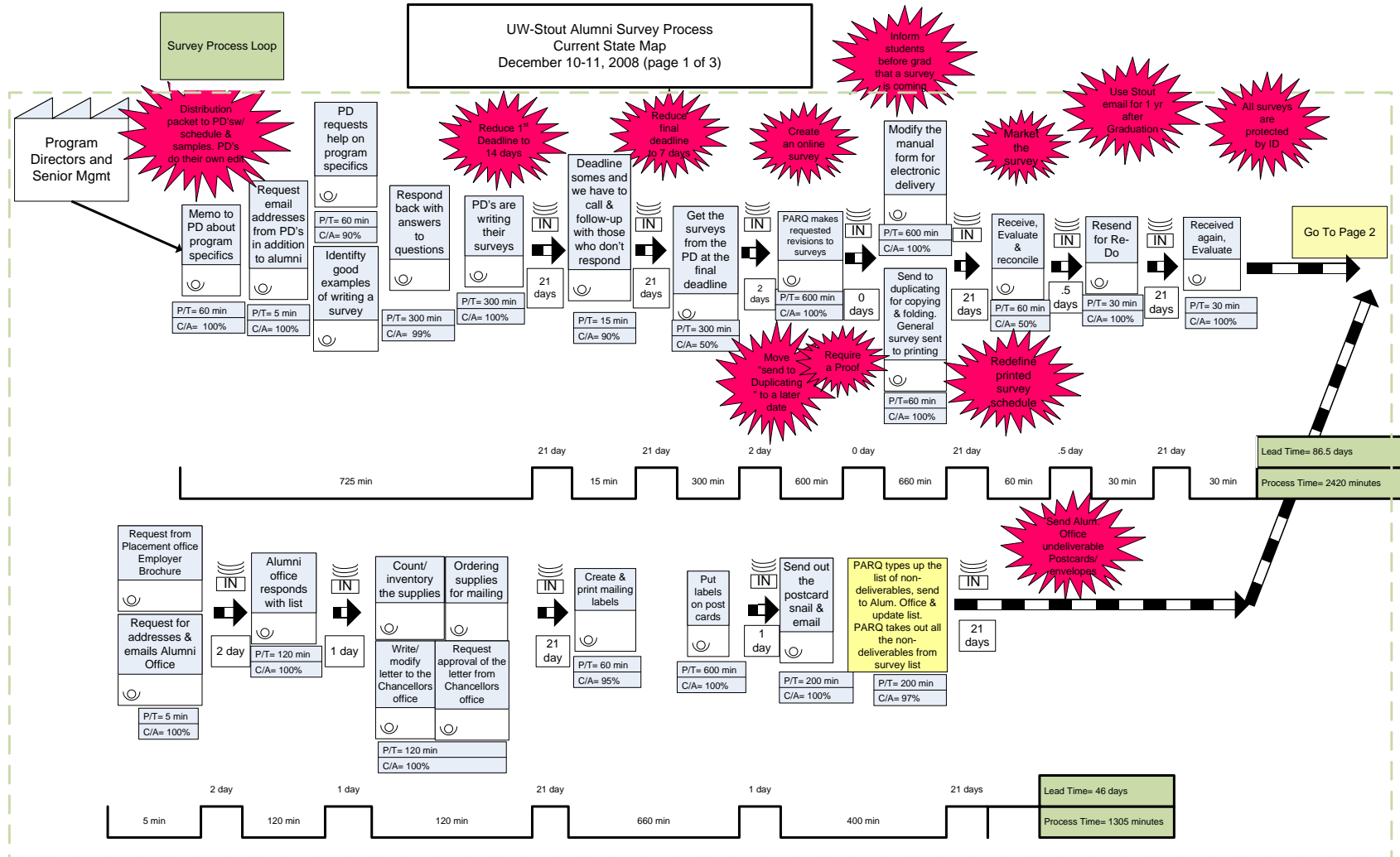
In December of 2008, the PARQ Office decided to review the Alumni Follow-Up survey process using the “lean” principles (a systematic approach to identify and eliminate waste). An outside consultant from the Northwest Wisconsin Manufacturing Outreach Center assisted PARQ to improve the process used for the survey. Currently, there is limited evidence of lean being applied in this type of setting.

The goals of utilizing the lean process to restructure the Alumni Follow-Up were to:

- Reduce process lead time
- Better determine end user due dates
- Better defined customer requirements
- Understand how better to schedule work to meet due dates
- Identify potential technological solutions (automation)

The initial step in applying the lean process was to learn the concepts of administrative lean and identify how to create a current state process map. A committee of six employees from the university was formed to be a part of this project and head the restructuring process. The committee included a program director, a student, and staff from the PARQ Office, Mail Services, and the Alumni Office. They mapped the current state of the Alumni Survey Process from the beginning to the point of report out to upper management (see Figure A).

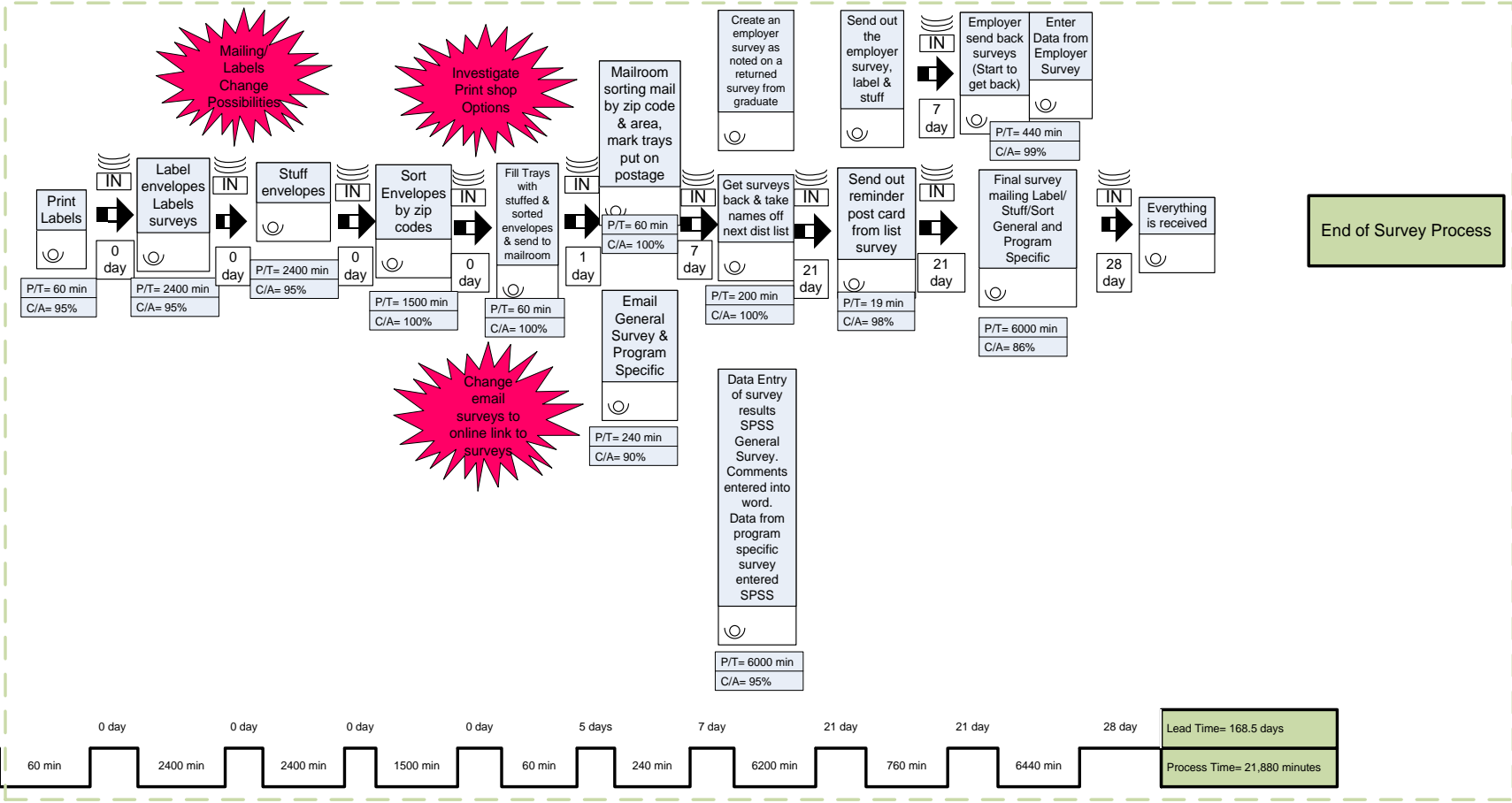
Figure A. Current State Map Example: Part 1 of 3 – Current State Map



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Survey Process Loop

UW-Stout Alumni Survey Process
Current State Map
October 23, 2008 (page 2 of 3)



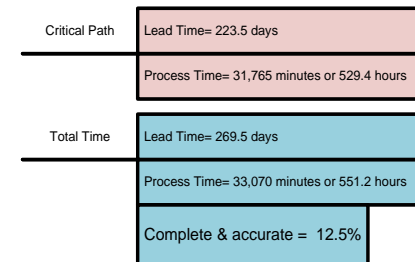
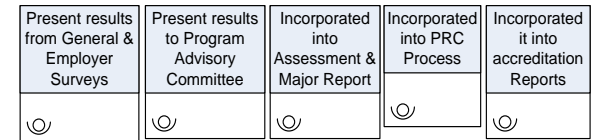
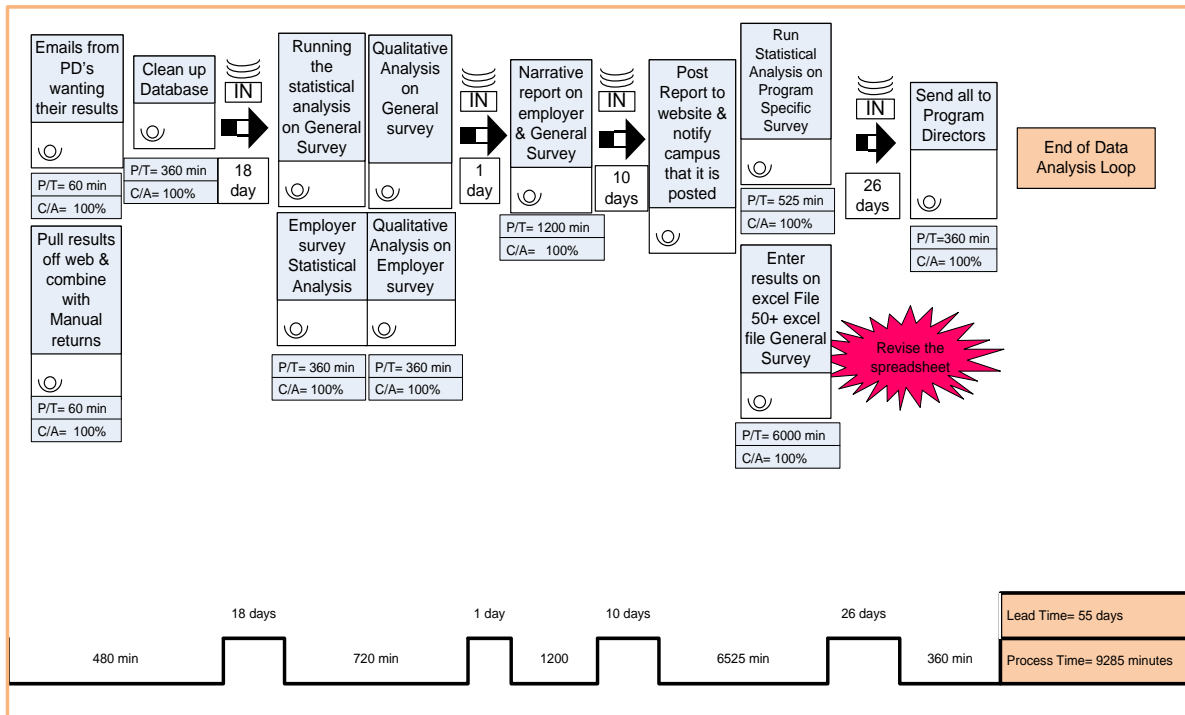
End of Survey Process

Go To Page 3

UW Stout Alumni Survey Process
Current State Map
December 10-11, 2008 (page 3 of 3)

Continued from page 2

Data Analysis Loop

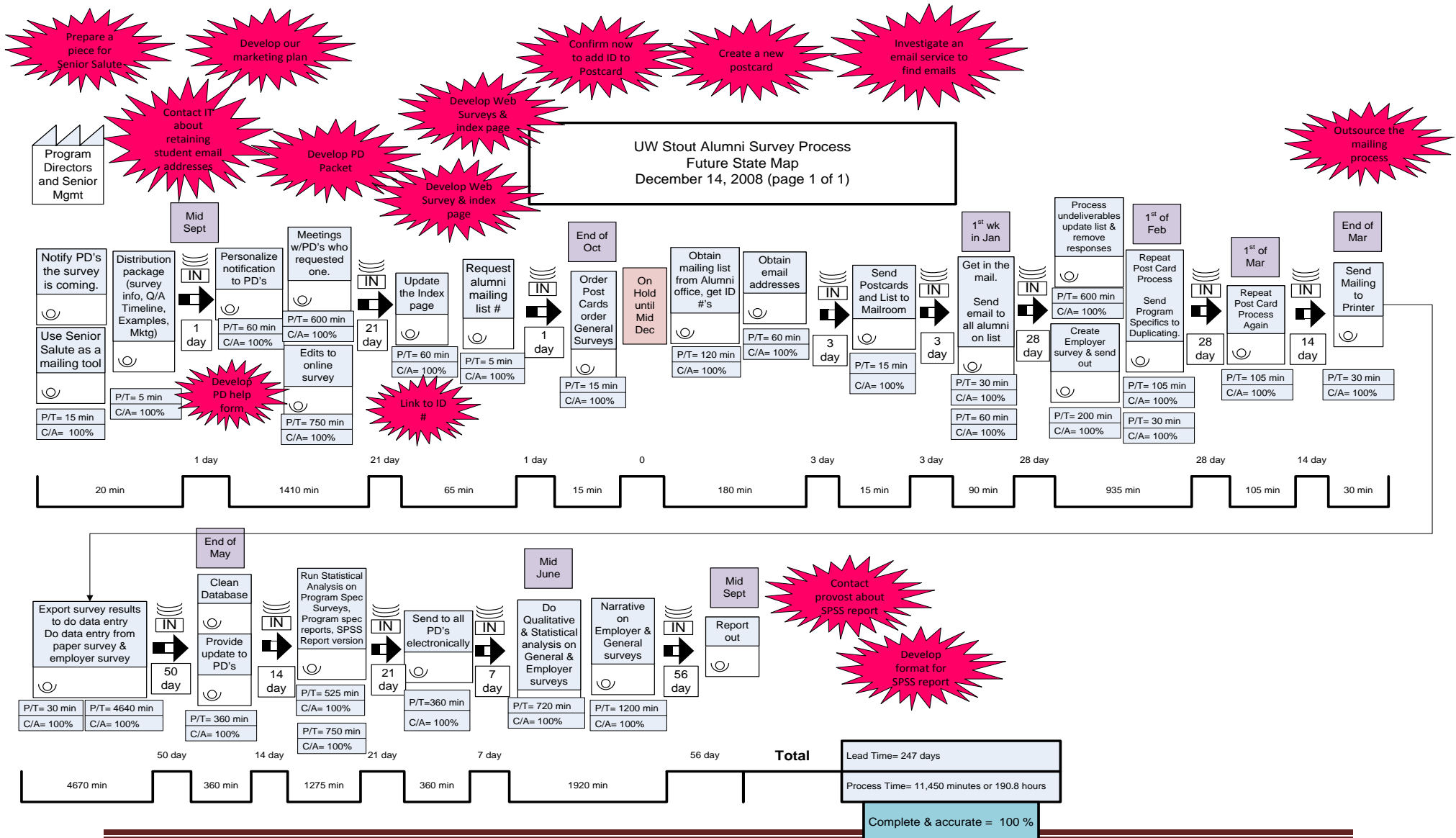


After the current process was mapped, there was discussion of where time and money could be reduced. The following areas were determined as being tangible time and cost saving goals.

- Reduce Process Time by 60% or 20,000 minutes
- Convert paper surveys to electronic
- Reduce the number of copies needed
- Potential cost reduction for assembly of mailing
- Better connect Alumni with Stout
- Program specific results available in a more timely fashion
- Including program directors in process
- More time available to write the final report
- Potential to eliminate the mailing if online response rate is high enough.

The last step was to create a future state map in order to have a well-documented plan for the new process (see Figure B). This highlighted the areas in which improvements and changes could be made.

Figure B. Future State Map Example



Once this final map was created, the office was able to identify opportunity areas within the current process where time and costs could be reduced and accuracy increased. Key areas that were identified included developing a “gateway” for the electronic surveys; developing a packet of information for program directors to include them in the survey process; creating a survey flow line (Kanban system) to efficiently label, sort and mail the final paper survey to nonrespondents; and developing a marketing plan to inform alumni of the importance of the alumni follow-up survey.

Gateway for Electronic Surveys

A problem analysis was conducted to develop a web-based survey process with gateway which ensures the graduate completes the appropriate surveys (undergraduate or graduate survey and correct program specific survey) for research statistics to be analyzed. The current process was manual in nature and very time consuming. Various options were discussed. The UW-Stout IT department was ultimately contacted to develop the gateway. Alumni were sent a postcard and an email which provided the gateway website. Once at the site the alumnus would enter his/her name and any names in the survey database that were similar were displayed along with degree year and program name. The alumnus would then select the correct name. If he/she graduated from an undergraduate program, it would take them to the undergraduate general survey; if graduated from a graduate program, it would take them to the graduate general survey. The appropriate program specific survey would directly follow the general survey.

Packet of Information for Program Directors

The committee determined that including the program directors in the survey process as much as possible would provide positive benefits to the entire process. A packet of information for program directors was developed to assist them with the creation of their program specific

survey and increase their awareness of the timeline and entire survey process. Periodic emails were sent to program directors to update them on the process and to request current emails of their alumni to increase accuracy of email addresses.

Survey Flow Line (Kanban System) for Survey Mailing

Alumni were sent a postcard and an email with the gateway website on three separate occasions. If the alumnus did not respond, a survey packet was mailed to the individual. The current method of mailing the surveys was time intensive because of the program specific survey. Each alumnus needed to receive the correct general survey (undergraduate or graduate) and the correct program specific survey which were labeled along with an envelope to identify the alumnus and his/her program. The possibility of grabbing the wrong survey or using incorrect labels when the packets were put together was high.

A survey flow line was developed to efficiently label, sort and mail the final paper survey which eliminated wasted time and increased accuracy. The entire process was broken down into four work stations (steps) using the Kanban system. Through this system workers at each station could concentrate on one task of the process along with double checking the packet completed so far. The verification at each station was very important to the integrity of the process. If an error was detected, the line stopped until it was resolved.

Marketing Plan to Inform Alumni

One aspect of the alumni follow-up survey is the importance of collecting data from our alumni to improve our programs. A marketing plan was developed to help ensure that alumni were aware of the importance of their response to the surveys. To help market the alumni survey, postings asking alumni to watch for the survey were listed on UW-Stout's Facebook page on four different occasions. This occurred each time an email/postcard or paper survey was

sent to the graduates. In addition, a flier was distributed to graduates as they picked up their diploma and tickets for graduation letting them know they might receive a survey in the future and the importance of completing the survey. A similar item was placed in the campus UW-Stout Today asking faculty and staff to inform any alumni they might have contact with and a flyer was included in the Career Conference packet to employers. Program directors were also contacted directly to inform current and former students the importance of completing the survey and to ask them to contact any of their alumni that had not responded to the survey.

Implementation

In October 2010, mail and email addresses available for all graduate and undergraduate program students who graduated in 2008 (one-year graduates) and 2004 (five-year graduates) were obtained from the Alumni Office. These lists were then sent to program directors for any updates or additional emails for these alumni. An alumni finder organization was also used to find additional/updated email addresses. This, however, did not produce very many accurate emails.

To help market the alumni survey, postings asking alumni to watch for the survey were listed on UW-Stout's Facebook page, a flier was distributed to graduates as they picked up their diploma and tickets for graduation, an item was placed in the campus UW-Stout Today daily email asking faculty and staff to inform any alumni they might have contact with, and a flyer was included in the Career Conference packet to employers.

In January 2011 each graduate was sent an email and also a postcard asking them to complete the survey and included the web address to access the survey. The website included a gateway page where the graduate entered his/her name and the student was identified, asked for verification, and given the correct surveys for the program in which the graduate received his/her degree. The surveys included a general survey and a program-specific survey. The general survey was either an undergraduate survey for alumni who graduated with a bachelor's degree or a graduate survey for alumni who graduated with a master's or educational specialist degree. Subsequent second and third emails were sent to all nonrespondents in February and March.

In April 2011 a final paper request was mailed to any alumni who did not respond after the three emails. It included a letter from the Chancellor, the four-page general survey, the program-specific survey (if there was one for the program) and a return envelope. Both general

surveys included the web address where participants could fill out the online survey instead of using the paper copy. The general survey asked alumni for their employers' names and email addresses and approval to send their employers a survey. If approval was given, employers were sent an email with the web address to access the employer survey.

In June 2011 data analysis began and by July 1 program specific results were sent to all program directors with a final overall report submitted to the Chancellor's Advisory Council in September.

Benefits

The changes we implemented helped us to maximize efficiency and accuracy of task completion without any reduction in response rates for the surveys. The success of these techniques is evidenced in the following project metrics:

- In 2010, the lead time of the Alumni Follow-Up project was 247 days. This was a decrease of nine percent from 270 days in 2008.
- Processing time for the project was reduced from 68 days (2008) to 24 days (2010), a 65 percent decrease in the number of days.
- The number of actual process steps was reduced from 32 to 20.
- Increased completeness and accuracy of entire project to 95%.
- Because of the survey flow line (Kanban) that was developed, accuracy and completeness of the final paper mailing was increased from 12.4 percent in 2008 to 85 percent in 2010.
- A marketing plan was developed which informed alumni of the importance of completing the survey.
- Program directors were kept informed of the process and utilized to access more accurate email addresses of alumni.

Because of the success of the techniques implemented in 2010, the same process was used in the 2012 survey process with continued positive results.

Retrospect

One of the techniques implemented in 2010 was using an alumni finder organization to obtain current email addresses for alumni. Because of the low number of accurate emails obtained from the organization, we did not use this service in the 2012 survey.