Taylor Sullivan

Project Biography

      This project began out of a discussion with my former employer, New Hampshire Homeland Security and Emergency Management (NH HSEM), specifically the training and exercise unit. After multiple discussions via Teams with the Exercise and Training Coordinator as well as the Chief of Response and Recovery, it was decided that the unit needed a product to help them with grant reimbursements. The training and exercise unit is responsible for disbursing federal and state grant dollars to various municipalities around the state in response to the municipalities coordinating training sessions for various units. These trainings range from active shooter simulations to weather preparedness to pandemic response and more. It is the legal duty of the NH HSEM Training and Exercise Unit to log the reimbursements and ensure that the money is accounted for. In a discussion with the head of the Training and Exercise Unit, I was given details of the project they wanted me to work on which involved revamping their existing reimbursement application process.

      The current process for this involved a manual checklist and a non-comprehensive application process that resulted in numerous calls to the Exercise Training officers about where to find the information and how to submit each of the required files. The goal for this project was to make this process more coherent for the consumers, the municipalities, and provide the training and exercise unit with a more comprehensive platform to track the files. Further, we decided to add in a second tool with the goal of it being attached to the resource center to assist people in knowing what forms they needed to have ready based upon specific needs.

      The solution mentioned in the previous sentence, to provide a list of resources was done through QnA markup. This was the easier of the two products and didn't require much for research to decide that QnA was the correct tool. Using the series of questions that would normally be asked over email, phone or directed to manually, I was able to create a flow chart to emulate what I would later put into the QnA program. I then put together a QnA assistant that provides lists based on how the user answers the questions asked. This will ideally be placed on the NH HSEM resource center, a website regularly visited by various municipalities for information. Further, the plan is to eventually add this program to WebEOC an online interface used by the New Hampshire state and local governments for communication. The QnA markup program also provides links to a few of the forms that have specified templates in order to facilitate the user experience by giving them access to the forms straight from the program rather than the current method which forces the user to find it on their own (leading to many calls to the exercise training officers).

      After discussing potential solutions to the issue regarding the issue with the full reimbursement application, I initially decided that based on the need, either AfterPattern, Machine Learning for Kids, or DocAssemble would be suitable. I began conducting research on the three programs. I did some research on the three programs by looking at each website and the features attached. I ultimately ruled out Machine Learning for Kids because the file upload feature was not available and it was important to me, and my partner, that we create a document that the user can store for their records. I then took to looking into the remaining two options. I discussed in class with classmates and professor, and listened to others' concerns and balancing with either program. I then discussed the two programs with my partner in a Teams meeting to make a final decision on what program would be suitable. Based on a couple of factors, such as the fact that this document stands alone rather than as a portfolio or a scheme, there is a potential for a more private approach, some billing considerations, and close proximity to their current

program, WordPress, which makes future use easier, AfterPattern seemed like the appropriate choice. After a mutual decision to continue with AfterPattern, I was able to move forward with assembling a very basic model.

After the first round of assembling the model, I had a basic app to show how the program worked and receive initial feedback. I met with my partner via Teams where I walked through the program and we discussed what further detail, and/or questions should be added. I was able to request more information to put into the document as well. I followed the Teams meeting up with a request for more documentation that we had discussed in the meeting so that I was able to add more detail and links for references that users could access. For documents that were given to me, I was able to add them to a Github page that I made for NH HSEM which allowed me to create links to access the documents. It is important to note that Github was an appropriate solution because each of the forms provided were publicly available template and informational documents so there was no issue with using an open site.

I spent the next few weeks working on adjustments and going through blocks here and there with the file upload process. After watching tutorials I was able to link the app to a database so that I could store all of the files uploaded in a table that can be revisited by NH HSEM exercise training officers. This took some time but the comprehensive table has become a workable tool that will be helpful for tracking down applications and entries. Once the product was up and running and the database was complete, I made a duplicate and activated the duplicate to allow the testers to access it and me to still make edits to the original. I tested a few times myself to ensure that I could get through the entirety of the form and produce a product and was successful.

Once both the QnA and the AfterPattern products were done, I sent the links to a group of four individuals willing to test the product. After receiving feedback via email with changes, I began executing the list of suggestions to the best of my ability. I worked on the overall organization of the products and formatting of the database. I had a few questions along the way and a couple of suggestions that weren't possible with the program used so I sent an email to the partner explaining the work I had done and communicating my last couple of questions. The partner responded with some answers for me to which I was able to work on fixing and successfully completed.

This automated project will work to replace tasks normally handled by phone calls to exercise training officers. The process, which currently involved a lot of hands on explanation to municipalities regarding required documents and the reimbursement process, can now be handled for the most part by the products I have created. The questions that normally get asked over the phone about what documents are needed is handled by the QnA which directs individuals to the correct places. As NH HSEM creates more templates for documents, they will be able to make even more of the bullet points linked. Further, the application process provides a more user friendly structure which will decrease the amount of questions asked about the process significantly. Another key feature is the fact that the municipality will get a copy of a document with their answers. This is important because I major time consuming task has been answering questions from municipalities who forget their responses or say they put something up for reimbursement when they didn't. The AfterPattern app provides a check on the system where both NH HSEM and the user will have copies to match up and serve as a reminder. In addition, the ability to keep files in an easy to read table will aid in tracking down files for any questions that are still asked. This will significantly decrease the amount of time spent on the phone with municipalities and searching for old emails with files in them.

Overall, the process was challenging but resulted in a product that more comprehensively processes the reimbursement applications for consumers. I have not hooked up the app to their email at this time because the email they will eventually use could not be inundated with test results from both mine and the testers run throughs of the product. However, as soon as the test process is complete (including the test runs use in the grading of this project) I will be able to pass this on through a duplicate on an AfterPattern account that belongs to NH HSEM. That said, the app is active and on the marketplace, working to the fullest capacity, simply sending to my email. Both products I have created are expected to continue to live on at NH HSEM. The agency has an in house coder who takes care of WebEOC their main web interface. I have spoken with him throughout this process and discussed the programs used. The plan is that he will continue running the product and implementing this in real life scenarios after I take a hands off approach. He will also maintain the updating process should anything on the forms change. I have also offered to be available for any questions that should come up. I continue to have a [great relationship](#) with the agency and have enjoyed creating a product that would've helped me when I was working there had it existed.

Helpful Links	
First Email with Partner about Project	https://tayloresullivan.github.io/ctlfinal/project_commencement.pdf
Initial Feedback from Partner	https://tayloresullivan.github.io/ctlfinal/initial_feedback.pdf
Requested Files From Partner based on initial feedback	https://tayloresullivan.github.io/ctlfinal/files.pdf
QnA Flowchart	https://tayloresullivan.github.io/ctlfinal/flow_chart.pdf
QnA Markup Assistant	https://tayloresullivan.github.io/ctlfinal/question_bot.html
AfterPattern Reimbursement Form	https://afterpattern.com/cl/tayloresullivan/ctl-final-project---hsem
Tester Feedback	https://tayloresullivan.github.io/ctlfinal/feedback.pdf
Final Questions and Feedback	https://tayloresullivan.github.io/ctlfinal/final_feedback.pdf
Final Letter From Partner	https://tayloresullivan.github.io/ctlfinal/final_letter.pdf