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Dat 530

7/14/24

**Final Project**

**Background & Audience Analysis**

The primary goal of this project is to provide the state with clearly expressed information regarding where they should allocate their resources for storm protection. If the data is correct and these resources are allocated correctly, we can track damage response and how well these efforts mitigate the damage from severe weather events. The next goal would be to ensure that the EMA has access to accurate information for risk assessment and to report to the media inquiries concerning damage estimates. We want to ensure that that the EMA’s information for the media is correct as incorrect information could make the state look uninformed and shake public confidence in the state’s ability to respond in these events. The third goal is to build a pamplet that will keep the public informed about precautions they can take to protect themselves in severe weather events. We want the public to understand the hazards of their specific locations and the actions they can take to better prepare themselves. So, we have three separate audiences, the state, the EMA, and the public.

I believe the available data is sufficient to answer to the state and the EMA but we don’t have any available data for preventative measures for the public. In this case, we would have to do some outside research. We’re going to take three different approaches when considering our audiences. When dealing with the state budget management team, we’re going to be looking at monetary values foremost. We will examine where the money currently resides and what areas experience the most damage in terms of fatalities and property. For the EMA, we will be examining the intricacies of the severe weather events themselves. What causes these events, how likely they are to happen in each area, and how long they last. If the EMA is well versed in the cause of these events they can better monitor when they’re about to happen and respond accordingly. The message for the public website will mostly contain information regarding the types of weather events that can happen in their area and how to prepare for them to keep themselves safe.

The state budgetary office will understand the data from a financial standpoint. This audience is most likely to be highly educated so they will have a good understanding of how the allocation of resources will impact certain areas. The EMA will most likely have the best knowledge of the data. They work firsthand with these disasters frequently and see them on the ground level. The public would most likely be the most unfamiliar with the data as the average person doesn’t think about these issues frequently.

The presentation methods are appropriate for each audience because they conform to the specific goals of each audience. The state budgetary office will not be looking into an interactive dashboard about weather because they’re most likely tied down with other obligations. We’ll most likely get one opportunity to inform them, and a power-point presentation would be the best way to keep them engaged as well as deepen their understanding. We want to be doing the explaining and we want to be present for any of their questions because they won’t be as well versed on the subject matter as the EMA. We want to broaden their understanding in a succinct manner and use only the information that is necessary to influence their decision. We don’t want to fill the power-point with information that will make them lose interest. This type of audience needs a narrator to explain what areas most at risk are and why.

The interactive dashboard would be the best for the EMA as they have live information whenever they need it. They also understand how to interpret the data and trends to prepare for upcoming weather events and plan accordingly. The dashboard will also contain graphs on damage estimates for specific regions for the state so the EMA can do side by side comparison of what regions take the biggest hits. The pamphlet is the best option for the public because anyone in the state can get one at a local gas station or shop. It will provide some statistics regarding the type of storms that can occur in their specific region. The pamphlet will also include some methods of preparation for the storm event types specific to Florida

**Visualization Strategy**

To inform the Florida state budget office as to what locations in the state are experiencing the most severe storms, it was decided that a power-point presentation would be the best method of delivery. The goal of this power-point is to convince our audience to establish a monetary reserve and allocate resources to where they are needed most within the state. We can best describe the state budget office as uninformed and it’s our job to create easily digestible visuals in the power-point to keep them engaged. This is a formal audience, and a power-point is one of the most professional ways to convey this information. The power-point will act as a visual aid as we go through our ideas in what can be considered a “sales-pitch” to encourage the state to allocate their resources to the most vulnerable parts of the state.

The approach for Florida’s EMA is going to differ because our audience is going to be more educated and experienced when it comes to storms and natural disasters. Our primary source of data for them will be an interactive dashboard using Tableau so they can get an idea of what areas are at risk as well as damage estimates. The dashboard will allow real time updates so the EMA can prepare for a potential disaster and respond accordingly. The dashboard will be in their control, and they can view the visualizations as they see fit.

When it comes to the public, our goal is to keep them informed of the actions they can take to be prepared in the event of a storm. Each state experiences different events so keeping Floridians informed about the events most likely to occur in their state or locality is paramount. A pamphlet detailing the types of storms likely to happen in that area and some measures they can take to protect themselves would be the best path in this scenario. Some information regarding when these events are likely to occur can give the public the time to prepare or evacuate.

For the power-point presentation, I believe starting off with a spatial map of Florida that depicts property damage in a county color coded by amount would be beneficial to the budgetary office. We can’t allocate resources based off just damage so building a visualization to show direct deaths is paramount as well. I would like to create a graph to showcase the differences in damages between the two years as well to discern if the storm events were unexpected or not.

I believe the most pertinent information for the dashboard display would be data that shows signs of an oncoming storm. The source metric on the spreadsheet could provide live updates on the location, magnitude, type, and direction of the storm. This will give the emergency response team the time as well as information they need to start preparing for a disaster. Included will be a drill through special map of Florida with bubble plots color coded by event type and sized by magnitude. Responders can drill through the bubble, and it will take them to a second dashboard with information specific to that county. The pamphlet would consist mostly of quick facts informing the reader of storm events specific to their location. A pie chart showing the most dangerous months would be beneficial as it will inform the readers as to when they should prepare.

**Implementation**

The power-point presentation for the state budget office will be using mid to high sophistication of data showcasing property and crop damage. The visualizations will primarily highlight the financial impact of storm activity and what areas are most likely to experience a heavy financial burden in the event of the storm based on past data. The data will be presented in bar and pie charts using a medium granularity as to not distract from the message at hand. We can most likely stick with the default coloring of the graphs or make a subtle change, but we want to remain clean and professional. I would also like to develop a spatial graph of the state of Florida broken down by county. The counties will be colored from light to dark blue based on the severity of financial cost of storm events. We will be answering any questions at the end of the presentation as well as providing a short questionnaire/survey for the audience.

An interactive dashboard will be made for the state’s emergency department using Tableau. The purpose of the dashboard is to best predict the likelihood of a storm hitting a certain area of the state so they can prepare a response team. Out of all three audiences the EMA would require their data to be the most granular but easy to read and interpret because it will be used in times of an impending emergency. The data will primarily showcase the months and dates of storm events. If we analyze the past data, we can have an idea of what months experience the worst storms as well as what types of storms they are. Again, I would like to use a spatial graph of the state but more interactive so users can pull up a specific county and see the data. The dashboard will be worked on and updated continuously so any improvements suggested to us by the EMA will be taken into consideration. The primary source of feedback will be a phone number for technical issues or inquiries on the dashboard.

The purpose of the pamphlet is to inform the Florida public when, where, and what types of storm events could happen to them. We want to inform them of precautions they can take to prepare themselves if they get caught in a severe whether emergency. The visualizations will not be sophisticated or granular. We just want some quick statistics that are informative and easy to digest for people who may not have much knowledge on the subject matter. We also want to design our visualizations to be enjoyable and grab the public’s attention as they have the least incentive out of all three groups to stay engaged. There will be contact information such as an email or phone number for the public to use if they have any questions regarding storm preparedness.

**Florida Storm Event Power-Point**

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**EMA Dashboard**

(Main Dashboard)

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(Drill through dashboard) A screenshot of a computer

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**Dashboard Instructional Guide**

* Magnitude and event type detailed in real time spatial graph
* Pie chart representing most severe months for storms to better prepare for harsh summer months
* Tracker for frequency of event types to prepare and respond to specific storm events
* Drill into a county on spatial map to view damage and event magnitude specific to that county
* For technical issues or suggestions email us at [FloridaDisasterResponse@gmail.com](mailto:FloridaDisasterResponse@gmail.com)

**Public Safety Pamphlet**

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