

## **Company: Federal Emergency Management Agency (FEMA)**

### **Defining the Problem**

#### **What do you understand to be the problem(s)?**

1. inconsistent and inadequate funding
2. Unprecedented natural disasters
3. disjointed operational logistics
4. lack of adequate data management processes
5. Track payments and understand how money is being spent
6. Avoid false insurance claims

- They don't enough fundings to implement technology all at once.

#### What are the requirements for any solution we propose?

- Infrastructure damage and flooding
- Fraud management and detection
- Data management tools
- Get more money (maximize budget or generate more revenue)

### **Questions & Additional Research**

*Research questions in addition to questions in the packet*

#### **What else do we know or can we find out about the company?**

ie. What does FEMA's Resources go towards

- Rescuing people
- Rebuilding houses
- Food, clothing and resource distribution
- Insurance payouts

#### **What is its current annual budget?**

What is its current management structure?

How did FEMA handle the recent Hurricane emergency?

Can we look at the way other countries/governments deal with natural disaster emergencies and take notes from that?

## **Financial Allocation:**

What factors adversely affect the process of distributing relief funds and insurance claims to hurricane and flood victims?

- Inconstant management
- Lack of standardization
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What is the effect of limited financial transparency to both FEMA and federal Taxpayers?

What are potential risk

s implementing a new technology, such as Blockchain in financial government processes? How might these risks be mitigated?

## **Logistics: Problems**

How can FEMA use modern technologies to ensure established inspection response processes and procedures are optimized and scalable?

How can FEMA use modern technologies to better track the transportation of resources from their distribution centers to disaster relief locations?

What approval process are in place to ensure implemented solutions are compatible with partner resource tracking technologies?

How do state relief approval and resource estimation processes affect FEMA's ability to distribute resources to the proper locations?

## **Data Management:**

How can FEMA utilize information collected from various social media platforms to perform robust data analysis?

How can FEMA validate data collected from multiple sources?

What factors should FEMA considering to evaluate partnership opportunities

with third party organizations?

What are the benefits and challenges to both developing the technical solution in-house and outsourcing the solution development?

### **Possible Solutions**

#### **Things to consider with any possible solution:**

Some important points and questions.

- a. How can FEMA **validate** collected data when it comes in from **multiple stream**?
  - b. How should FEMA **store** these **large datasets** for efficient extraction and analysis?
  - c. What metrics should FEMA focus their analysis on to get actionable results from the data analysis?
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7. Solution focused: technology design and development in **fraud system, infrastructure inspections and flooding, budget and resource allocation, data collection**
  8. Innovative technology development focus such as **Drones, Sensors, Digital Social Platforms, Mobile Technology**
  9. Social media focus: **verification tool such as property damage reimbursements and flood insurance payouts.**

Solution #1

Solution #2

Solution #3

Hire local insurance agencies to perform insurance claim checks  
Local agencies must follow FEMA Guidelines for inspection and claim approval

Risk: Transparency and Unfair Bias

FEMA app

- Local News feed that connects people within same vicinity on FEMA APP
- Provides up to date flood updates
- Can us

Using current weather data and environmental/climate trends to determine how much to fund FEMA.

Incentivizing states to use Logistical Assessment Tool.

the insurance payouts to flood victims.

Guidelines:

- Solution should address client problem and requirements and should be technologically feasible.
- Not limited to materials in the packet.
- Designate a team member to be in charge of navigating through the solution deck during the presentation.
- Bring 5 hard copies and allocate equal time to each team member.

What is FEMA's mission & vision? (6)

What is FEMA's goal? (6)

What are the challenges we seek to solve?

- FEMA struggling to meet its mission because of unprecedented natural disasters that are putting a strain on its resources. (6)
- Internal issues like; (6)
  - Inconsistent funding
  - Disjointed operational logistics
  - Ad-hoc data management

What is FEMA focusing on? (6)

- New technologies/ technological solutions to address;
  - Data management
  - Financial allocation
  - Logistics

Expected solutions should yield; (6)

- Actionable results after disasters have occurred and anticipate and prepare for potential disasters in the future
- Focus on infrastructure damage and flooding
- Ability to learn and prepare for natural disaster responses

- Optimize resource allocation

What are FEMA's priorities? (7)

- Human and technology-centric
- Situational awareness, communication and decision making

\*\*\* We must incorporate A in our solution \*\*\*

- Focus on reaching local officials before and during disasters
- Connect communities to create unified partnerships
- Strengthen organizational foundation through;
  - Improving their workforce
  - Utilizing advanced-analytics
  - Transparency in decision making
  - Aligning their strategy, resources and performance outcomes

Tasks:

Recommend innovative technical solution (7-8)

\*\*\* See 7-8 for solution guidelines \*\*\*

Research Questions:

- What are the risks of implementing technology like blockchain on government finances?
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