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Industry Defined Problems- GE

Problem Statement 1

Your team is given the opportunity to put together a plan to treat the oil spillage similar to what happened near Mumbai. With two recent accidents, the Gulf of Mexico oil spillage and Mumbai ship collision leading to oil spillage, there is serious concern about finding a way to treat the spilled oil and minimize the harm caused to the environment and bio-diversity. We cannot always prevent such accidents, but we can be prepared for the worst-case scenarios!

Currently, several methods are available to control and treat the spilled oil such as booms, skimmers, mops, pumps, chemicals, etc. Thus, the challenge is to come up with a methodology to: a) restrict the spread of the spill so that it is contained to as minimal an area as possible. b) Treat or remove the spilled oil in a reasonable amount of time to minimize ecological damage. Your solution should consider effective implementation in India taking into account the cost parameters, speed of action, infrastructure facilities, accessibility constraints and labor availability.

Suggest a solution that can effectively manage the Mumbai-like oil spill crisis. Your solution should have:

1. Mechanisms to monitor the extent of oil spillage and identify critical areas that require faster response and control.
2. Methods to deploy your solution in a reasonable time. For sake of this problem, you can assume you will operate in geographical region similar to the Mumbai area for your solution.
3. Your solution is amenable for practical implementation in India. Think of how you would have deployed your solution in Mumbai. Ease of deployment plays a major role in India, as long as we control the spread of spillage! To what extent did the response time matter in the Mumbai spill?
4. Ensure your solution is viable. Also, identify the specific gaps in your solution for which we need further action.
5. Bonus points will be given if a) you provide a complete solution b) your solution could have been applied to Mumbai spill effectively.