Dear CEO of HELP, Inc.:

Our team have designed a DroneGo disaster response system to support the Puerto Rico hurricane disaster scenario.

Considering the severe damage caused by hurricane, we plan to provide two months of medicine packages supply to the five cities in disaster area.

As up to three locations can be chosen as transportation point, we recommend Jajardo, Bayamon, Arecib as the best three positions to transport cargo containers. The reason why we choose Arecib is that, it is too far from the other cities that none of the potential drone can deliver medicine package to it. As for the rest four locations, we prefer to choose a combination which has the lowest delivery cost and can cover largest scouting area. Applying the principles above, we find Jajardo and Bayamon is optimal.

Since the situation varies, the packing configuration of each container is quite different. We properly arrange the number of drones and medicine packages to ensure that all work can be carried out smoothly and efficiently. Specifically, we evaluate the performance of each candidate drone type, and select the best transport and reconnaissance drones. We optimize the configuration of each container transported to minimize unused space. The configuration of each container is shown as below:

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We believe our system is able to conduct both medical supply delivery and video reconnaissance of road networks.