

WarmWind

The Cloud team has been working on a method to deliver supplies to those in need in a quick and efficient manner, while also minimizing the risk of collection personnel being infected. The pandemic is a threat not just because of the risk of infection itself, but also because logistical disruptions cause delays in the delivery of medical supplies and essentials, which can lead to further casualties and social unrest. When COVID-19 started ravaging the world at the end of 2019, the lack of medical supplies (masks, ventilators, etc.) and living essentials (food, daily items) in various regions lead to higher infection rates, more deaths, and instability.

Current pandemic response policies have led many countries to establish a POD (Point of Distribution) system to ensure safe delivery and distribution of critical supplies. Relying on subjective human calculations to position PODs is far from the most optimal solution. Locations that were previously not located in high-risk zones may become so with the worsening of the pandemic situation. If POD locations are not adjusted, collection personnel will be subject to higher risk of infection; if POD locations are adjusted, overall costs will be increased. It's of utmost importance that we find a solution that allows those in need to retrieve critical supplies efficiently and safely.

The WarmWind solution analyzes historical pandemic data by region, local government policy, and pandemic projections with an AI algorithm [Related IBM Cloud Services](#). The solution also collects and provides updates on local weather conditions, traffic conditions, public opinion, and policy data in real-time. After applicants enter their information (location, phone number, request supplies, etc.), the system will use applicant distribution, supply situation, and provided locations to calculate the most optimal POD positioning. It then plans an optimal route through big data analysis of provided locations, POD locations, pandemic situation, traffic conditions, weather conditions, government policy, and public opinion. The optimal route is then sent to applicant's app accounts, allowing them to navigate safely and efficiently to a POD to retrieve critical supplies.

WarmWind feeds applicant information, pandemic data, weather forecasts, public opinion, and policy data into a big data AI algorithm capable of selecting optimal locations and routes to the POD. It improves efficiency in the distribution of critical supplies, while also greatly reduced the infection risk during the retrieval process.