

Disaster Relief Simulation

DATA 604: Simulation & Modeling

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1 Abstract

2 Keywords

3 Literature Review

4 Methodology

4.1 Structure

4.1.1 Supply Chain Partner

We included a Supply Chain Partner which reliably provided Relief Supplies. The following variables (Referenced Properties) were created to facilitate the study:

- The time to deliver a shipment of supplies: *SupplierTravelTimeToWarehouse*.
- The maximum number of relief supplies which the supplier will provide: *SupplierMaximumArrivals*

The delivery vehicle, *PartnerVehicle*, was set to require a full load prior to departing for the Warehouse.

4.1.2 Warehouse

A warehouse was added to store disaster relief supplies in preparation for a disaster.

The delivery vehicle, *WarehouseVehicle*, was set to require a full load prior to departing for the distribution site.

Selection Weight on the Paths from the Warehouse to the Distribution Sites was set to dynamically adjust based on the number of Disaster Victims waiting for Relief Supplies.

4.1.3 Disaster Victims

Initially, the “Disaster” is set to begin 6 hours (0.25 days) into the simulation. This gives some time to prime the pump and prestage relief supplies through the warehouse.

TBD We may need to adjust this...

5 Results

6 Summary

7 Appendix: Raw Code