

# **VEHICLE ROUTE OPTIMIZATION** USING **EVOLUTIONARY ALGORITHMS**

#### GOAL:

To construct optimal routes for specified number of vehicles with separate starting locations and capacity, delivery and I oading time constraints.

### DATASET:

Experiments were performed on a historical data set on freight transportation in Europe. The data set consists of:

- freight pickup and delivery locations
  - cargo dimensions
  - transportation revenue

#### **METHOD:**

Genetic algorithm is heuristic optimization method based on C. Darwin theory on evolution by natural selection. Genetic algorithm parameters (with population size set to 100 per generation):

• Crossover – in this experiment order crossover operator was chosen with crossover probability  $p_c = 0.8$ 









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## CARD

CENTRE FOR APPLIED RESEARCH DEVELOPMENT