

## Truck Scheduling in the Forestry Industry

### Enterprise

FPIInnovations

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### Abstract

In order to transport logs from a forest to a plant, one uses so-called *elementary trips*, i.e., round trips of the form plant-forest-plant. When several forests provide several plants with several products, one can reduce the total deadhead time by building so-called *efficient schedules*, i.e., schedules combining several product deliveries in a single trip.

Given a set of efficient and elementary trips for a given time period, one must assign trips to a fixed number of trucks (a fleet) so as to maximize the total time during which the trucks are used. One must then build a schedule for each truck in the fleet; situations where several trucks are at the same forest loading station or plant unloading station must be avoided. The schedules must include the deadhead times incurred when one combines trips starting at different plants. The number of trips and the volumes of logs exceed the demands of plants for the period considered.

In order to solve this problem, we will provide you with a complete data set, and you will use the data to satisfy the demands of the plants. Your solution may include fewer trucks than anticipated to deliver logs to the plants within the period considered. There are no monetary data for this problem.