

Operating a mixed fleet

Most companies find that operating a mixed transportation fleet is cost efficient and provides operational flexibility. This means using drivers and trucks from several origins:

- Organic fleet (actually part of the “fleet”)
- Long-term contractors
- On-demand contractors

This is most obvious when the work load and geographic spread vary during the week or affected by holidays and seasonality. The boundary which defines a company’s “fleet” extends beyond the drivers it employs and trucks it owns, and should flex with workload and cost changes.

Urbana’s automated and optimized planning can set this boundary on a daily or even hourly basis to enable reliable task execution at the lowest cost.

Several considerations apply when operating a mixed fleet:

- Guarantee capacity necessary to serve all transportation tasks on time
- Utilize the most efficient or best-priced trucks/drivers first.
- Ensure that tasks that require certain skills or truck configurations are accounted for
- Balance the workload between drivers, and ensure fairness between different drivers and between different suppliers.

Urbana’s AI planning quickly creates detailed transportation plans, and is directed by rules in several functional and financial dimensions. Urbana’s planning integrates trucks from all three origins and allocates them to guarantee execution and minimize cost.

Planning is directed by the policies and rules that are configured in Urbana by the fleet operator.

Balance and fairness considerations may affect calculated efficiency but are necessary in real-life, especially considering driver shortage.

To support this, Urbana models the trucks in several aspects:

- Truck carrying capacity for weight, volume and other aspects.
- Truck operating cost as **function** of time/distance, or cost provided **explicitly** by price lists and spot-prices.
- Location of truck start points, end points, and current locations for dynamic planning.
- Truck basic configuration and special-purpose equipment (E.g. hydraulic ramp, crane).

Specifically, Urbana loads detailed price lists per vehicle type, per mile/km, per loading at depot/plant, per drop, and based-on destination area. This further allows to calculate and present exact costs, post-planning.

These factors affect planning decisions regarding which truck of which origin is allocated to each task, at what time and at what cost.

Urbana also characterizes the drivers, in conjunction with driver and truck association. This is most important for employee or long-term contractor drivers:

- Availability to work on certain days and during certain hours
- Regulation and personal-preferences regarding work hours and work cycles.
- Qualifications, approvals and preferences to serve certain tasks or customers
- Driver skills and 'soft-skills' (* to be highlighted in a future info sheet)

These factors affect which driver and truck are required for each task, in compliance with availability and regulation, and meeting driver preferences whenever possible.

Urbana's automated planning ensures the organic fleet is fully utilized (when exits) and optimally allocates trucks from other origins, for reliable task execution at the lowest cost.

If you have refreshing insights on this matter, please share with us: [Urbana.Tech](https://urbana.tech)