Flexible mobility on demand (FMOD)

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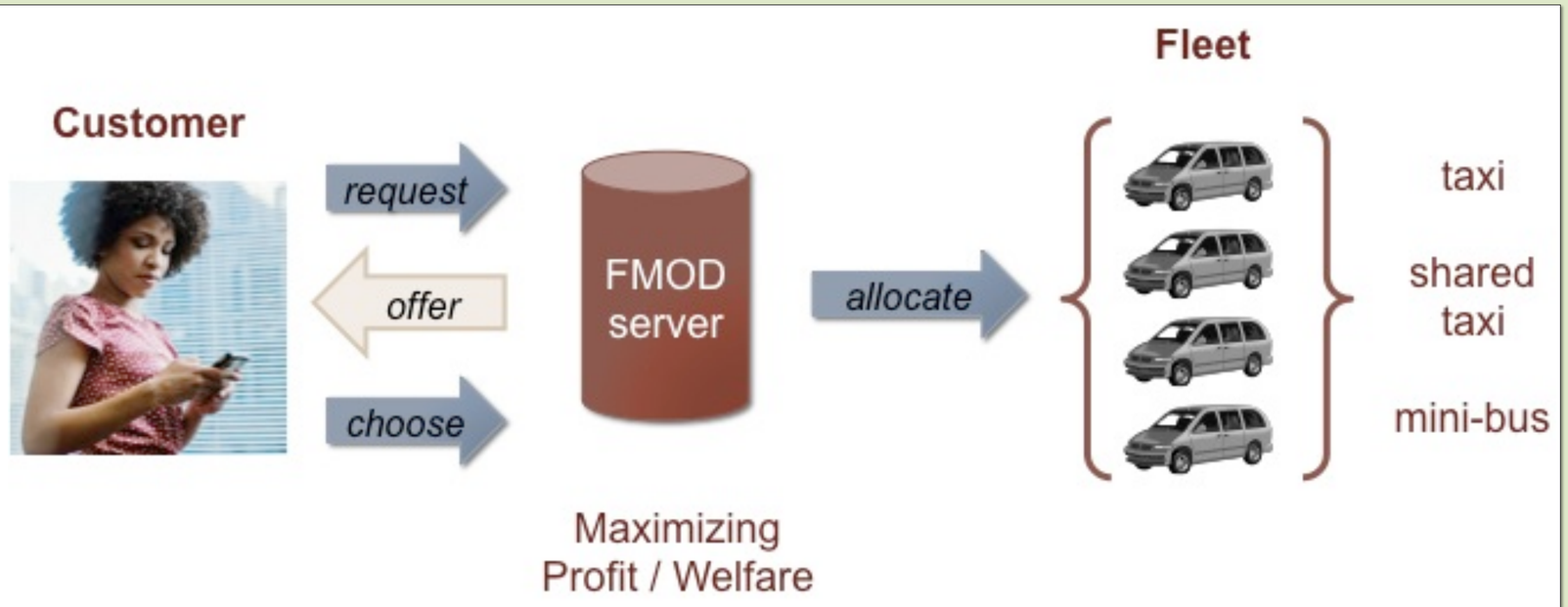
- Innovative solutions are needed for **sustainability** of transportation systems
- FMOD provides **a menu of options** to travelers based on their preferences



Phase1. Feasible product set generation
- Set of feasible products to be offered to the customer
  – Scheduling and capacity constraints

Phase 2. Assortment optimization
- Optimized list of products to be offered to the customer
  – Maximize profit/welfare based on a choice model

Optimization framework for FMOD

- **Novelty of FMOD:** the list of options is optimized based on a choice model
- An **assortment optimization model** is developed and formulated as an LP
- Utility of each option is defined by the price, travel time and schedule delay
- Simulation experiments are conducted for a city in Tokyo with promising results

- FMOD is expected to improve the **convenience** for travelers and **profitability** for transport operators
- Extensions of the system include the integration of real-time network information, future demand for services, learning the behavior of travelers through repeated visits