

Demand and fleet management for on-demand delivery services

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Abstract

On-demand delivery systems operate in a very uncertain and dynamic environment. Customers request service spontaneously at any time and place in the city and expect a high service availability as well as fast, cost-efficient, and high-quality service. Service providers control a fleet of delivery vehicles in real time in reaction to the new orders and in anticipation of future demand. Further, they can control demand in terms of service availability, prices, and the offered service itself to stay flexible for future demand. In this talk, we discuss selected means of fleet and demand management for on-demand services and their impact on service providers, customers, and drivers. We will set a special focus on instant delivery, restaurant meal delivery, and crowdsourced delivery concepts.