

# Profit-maximizing multi-period agent allocation in different types of inbound call centers

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## **Abstract**

The management of an inbound call center has to make agent staffing decisions in order to deal with highly dynamic rates of incoming calls. A common approach in practice is to determine the smallest number of agents per 30-minute interval in isolation such that some measure of the caller's waiting time does not exceed a given limit. In this talk we follow a profit-maximizing approach and study the problem to allocate the total agent capacity over a longer planning horizon to minimize costs in the presence of an aggregate service constraint for a support call center and to maximize profits for both a sales and a service call center. The analysis of the numerical results indicates that in a profit-maximizing solution the service quality is time-dependent.