

Call center optimization

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A research report in the current issue of the *International Journal of Engineering Systems Modeling and Simulation* suggests that help desks can be optimized by adding very few extra staff.

"Your call is very valuable to us please stay on the line until one of our busy advisors becomes available to take your call". An all-too familiar initiation to the world of helpdesks and customer support. Now, researchers in Kuwait have discovered that adding just one more representative to a telephone call center for employee technical support was enough to cut queuing time and costs. Their findings might be extrapolated to the general case for call centers across the globe.

Writing in the *International Journal of Engineering Systems Modelling and Simulation*, Fawaz Abdulmalek and Ali Allahverdi of the Department of Industrial and Management Systems Engineering, at Kuwait University, explain that one of the big problems facing many companies is the excessive waiting time to fix a personal computer or address software-related problems through the company's internal IT support. The team points out that currently an employee waits, on average, three and a half hours until a PC problem is resolved.

The researchers have investigated how well a [telecommunications company](#) in Kuwait with more than 800 employees handles its IT support. The study allowed them to build a [computer model](#) that could simulate response times and support queues.

The imagined five different scenarios, the first of which represents the

current company setup with six technicians providing IT support for employees. In each of the other four scenarios, the number of technicians is incremented by one in order to find the optimum number of technicians. Two performance measures are used for comparison, namely waiting times and service cost. These measures are converted into monetary terms so that the comparison is made easier.

The team has now used their model to optimize the number of support technicians needed at the company while minimizing total cost by taking into account the idle time of employees, while they have computer problems addressed and the wages of the technicians. The simulation results indicated that the total cost can be reduced significantly by just hiring one more technician, which cuts waiting time from three and a half hours to just half an hour.

The time saved compared with increased cost for adding two, three, or four technicians to the current team of six, is much lower, although additional time savings can be made. With two additional technicians cutting idle time to about ten minutes, and three to about four minutes. Four additional technicians or more is unlikely to offer much of a time saving but will be an added salary cost nevertheless.

More information: "Optimising a help desk performance at a telecommunication company" in *Int. J. Engineering Systems Modelling and Simulation*, 2009, 1, 160-164; [inderscience.metapress.com/link...?id=x157082137272h73](https://www.inderscience.com/link.do?id=x157082137272h73)

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