

Call Center Queuing Theory Applied; the Erlang-C Method Explained

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Abstract. The Erlang-C mathematical methodology call centers use for queuing theory type estimates for staffing levels, total telephone port/lines needed and increased resource usage . Labor is a call centers biggest expense; in excess of percent of total costs. The mathematical formula is from 1912, but still in use today in call center software packages for use and management review.

The paper reviews the formula and usages of the approach while attempting to look at possible additions and relevant changes as applied to the call center industry among small to medium size enterprises.