

A Method for Planning Warehouse Capacity Based on the Analysis of the Goods Flow Movement Dynamics

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Abstract: The methodology for planning the development of warehouse premises is considered through the analysis of the movement of goods flows by assortment groups, taking into account receipts and consumer demand. The assessment of the current distribution center capacity is presented. A forecast for five years of cargo flow through the warehouse logistics complex of a retail trade enterprise was completed. Based on a statistical analysis of turnover and the enterprise development plan, coefficients were determined for calculating the storage volume of inventory. An algorithm for solving the problem has been developed, which is necessary for the design of an innovative warehouse distribution center based on a comparison of options for investment costs, payback period and operating costs. The presented evaluation criteria can be used by enterprises when designing warehouse complexes.
