

# **Optimization of logistic concepts in Bangladesh by using Automated Guided Vehicle (AGV) to enhance efficiency, productivity and security in Warehouse Management System (WMS)**

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## **Abstract**

In the recent time, the automated guided vehicles (AGV) are becoming more common sights in the manufacturing industries and the large warehouses for the purposes of logistic supports and in many other

spects. But in case of third world developing countries like Bangladesh, the idea of implementing of the automation technologies like Automated Guided Vehicle (AGV) is not so much popular among the investors due to high initial setup cost, low human labor cost and some other facts. In this paper, we are trying to build up a model i.e. a line follower robot (LFR) with a carrier at its top which is following both straight and curly paths having some obstacles, carrying specific amount of loads and unloading them in specified position in the laboratory. Hence by performing this experiment for several times we are trying to prove to enhance the efficiency, productivity and security in the warehouse management system. We are trying to use local raw materials and available technologies to construct an automated guided vehicle (AGV) locally and hence are trying to reduce the initial setup cost to encourage the investors for setting up the automated guided vehicle system for improved productivity, security and efficiency in the manufacturing industries especially in warehouse management system (WMS) in Bangladesh.

**Keywords**

AGV, WMS, Efficiency, Productivity, Security, Bangladesh, Logistics.