

# **PENERAPAN MODEL *MAXIMUM COVERING LOCATION PROBLEM* DALAM PEMILIHAN JUMLAH DAN LOKASI *STOCK POINT* DISTRIBUTOR AQUA UNIT JAWA TIMUR**

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## **ABSTRAK**

Aqua galon merupakan produk yang unik, karena pada operasionalnya terdapat proses *reverse logistics*. Pada kondisi eksisting, terdapat pola terhambatnya distribusi Aqua galon, yakni pada weekend dan senin pagi karena adanya *travel banned* dan perbedaan jam buka distributor. Hal tersebut menyebabkan Aqua kehilangan peluang untuk memperoleh pendapatan, dan efek jangka panjang yang dihasilkan adalah menurunnya pendapatan. Diperlukan *stock point* untuk menampung produk khususnya saat akhir pekan dan senin pagi. Untuk menentukan jumlah dan lokasi *stock point* untuk maksimasi *demand* yang *discover*, dapat dilakukan dengan metode *maximum location covering problem (MLCP)* serta menentukan biaya investasi dan biaya transportasi pada distributor Aqua unit Jawa Timur. Hasil penelitian menunjukkan bahwa terdapat 7 titik lokasi yang dapat menjadi titik *stock point*. Biaya investasi dalam penelitian ini hanya biaya tanah dan bangunan. Aqua dapat menghemat biaya transportasi hingga 50-76,1% dibandingkan biaya transportasi saat ini.

**Kata Kunci: Aqua Galon, Max Location Covering Problem, Jumlah Stock point, Biaya Investasi, Biaya Transportasi**

***APPLICATION OF MAXIMUM COVERING LOCATION  
PROBLEM FOR SELECTING TOTAL AND STOCK POINT  
LOCATION IN AQUA DISTRIBUTOR UNIT EAST JAVA***

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**ABSTRACT**

*Aqua gallon is a unique product, because on its operational there is reverse logistics proceed. In current condition, there is a pattern that blocked Aqua gallon distribution, it is on the weekend and Monday morning, because of travel banned and they have different operational time on each distributor. It is leads Aqua lost their opportunity to generate income, and in long term it will cause bigger problem, it will decrease company profit. Aqua East Java Unit needs stock points to accommodate the product especially on the weekend and Monday morning. To determine number and location of the stock point for maximization demand covered using maximum location covering problem (MLCP) and also to determine investment cost and transportation cost on Aqua distributor unit east java. Result of this research show that there are 7 possible location points to make a stock. Investment cost in this research are only consist of land cost and building cost. Aqua can also save transportation cost up to 50-76,1 % from current transportation cost.*

***Keyword: Aqua Gallon, Max Location Covering Problem, Number of Stock point, Investment cost, Transportation Cost***