



# LAYOUT PROPOSALS AND ITS RESPECTIVE SIMULATION OF STORAGE AND DISPATCH PROCESSES

## PROBLEM

The warehouse of a hardware company begins to have storage problems, because the current area is very small, for which it wants to invest in a new layout for a larger warehouse.

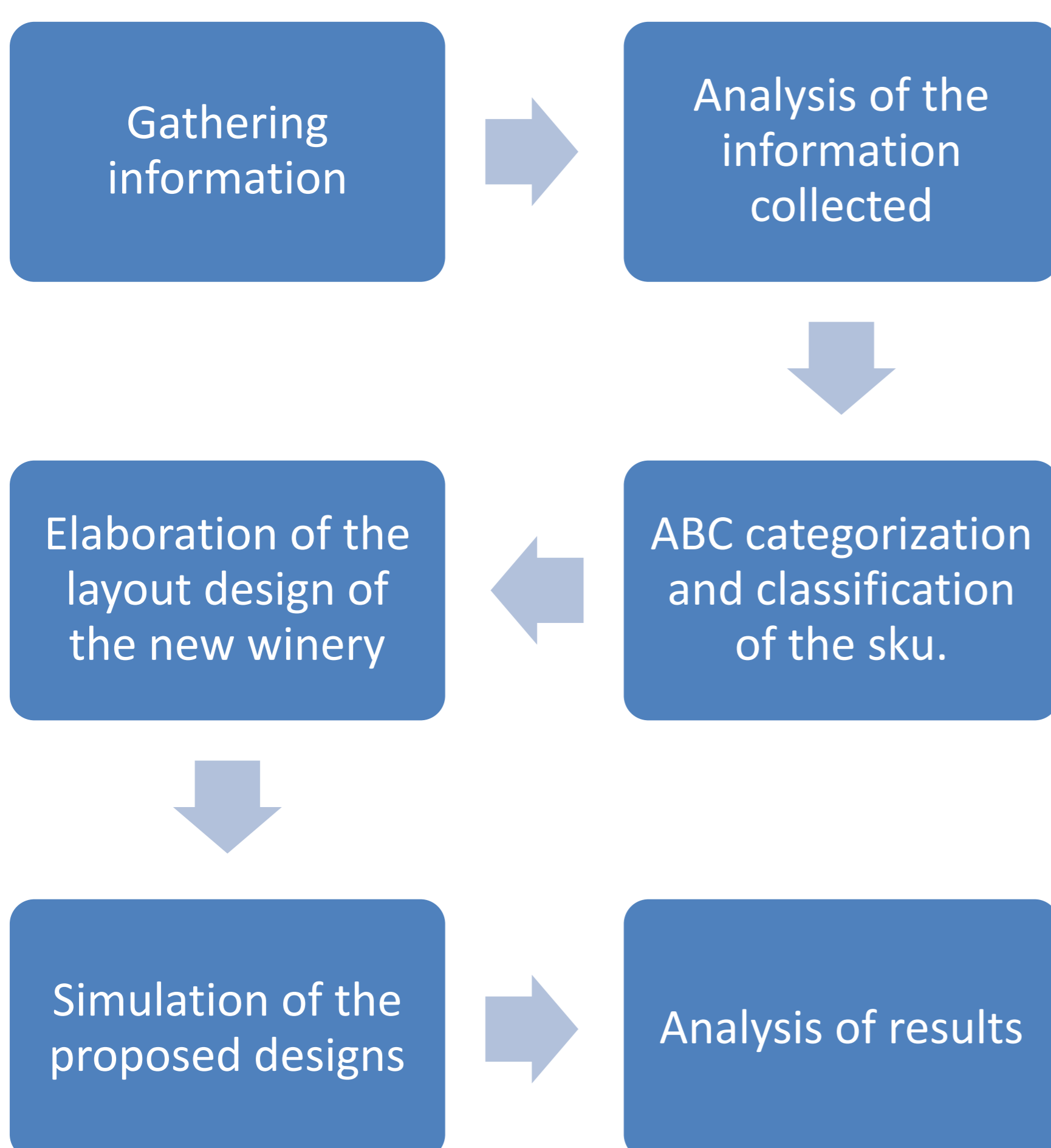


## GENERAL OBJECTIVE

Design two layout proposals for a hardware company and carry out their simulations to measure the distances traveled for receiving and dispatching orders.

## PROPUESTA

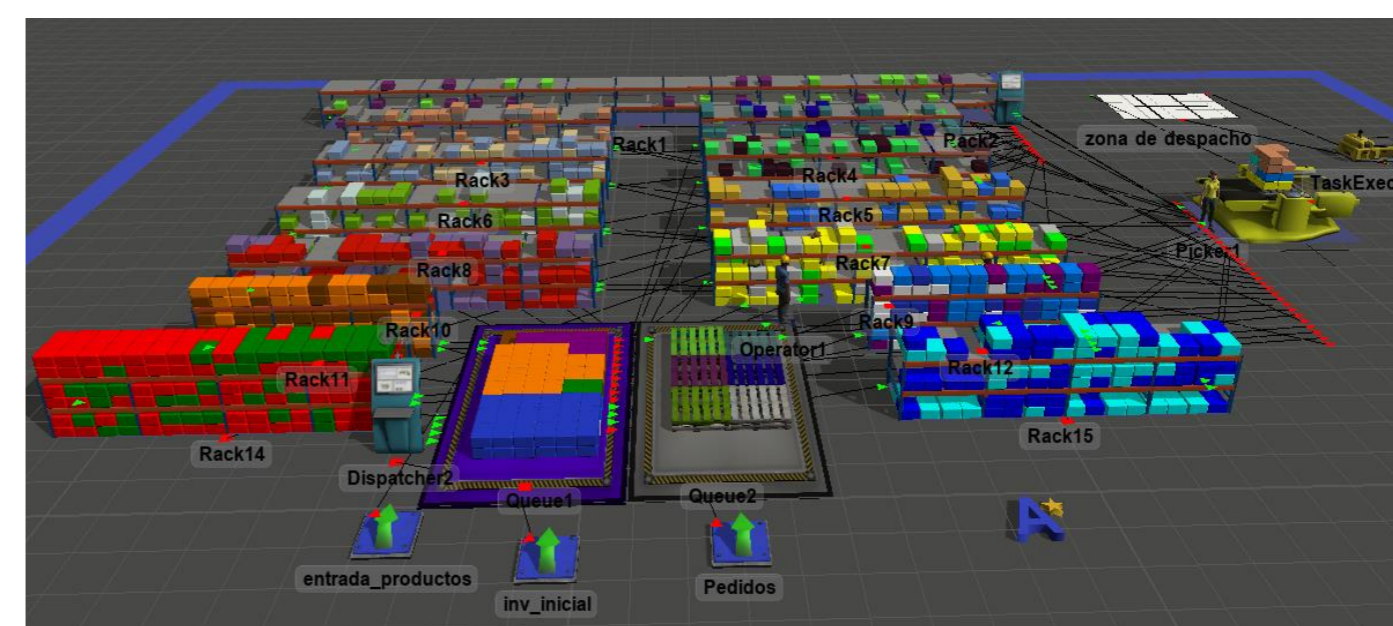
### Methodology



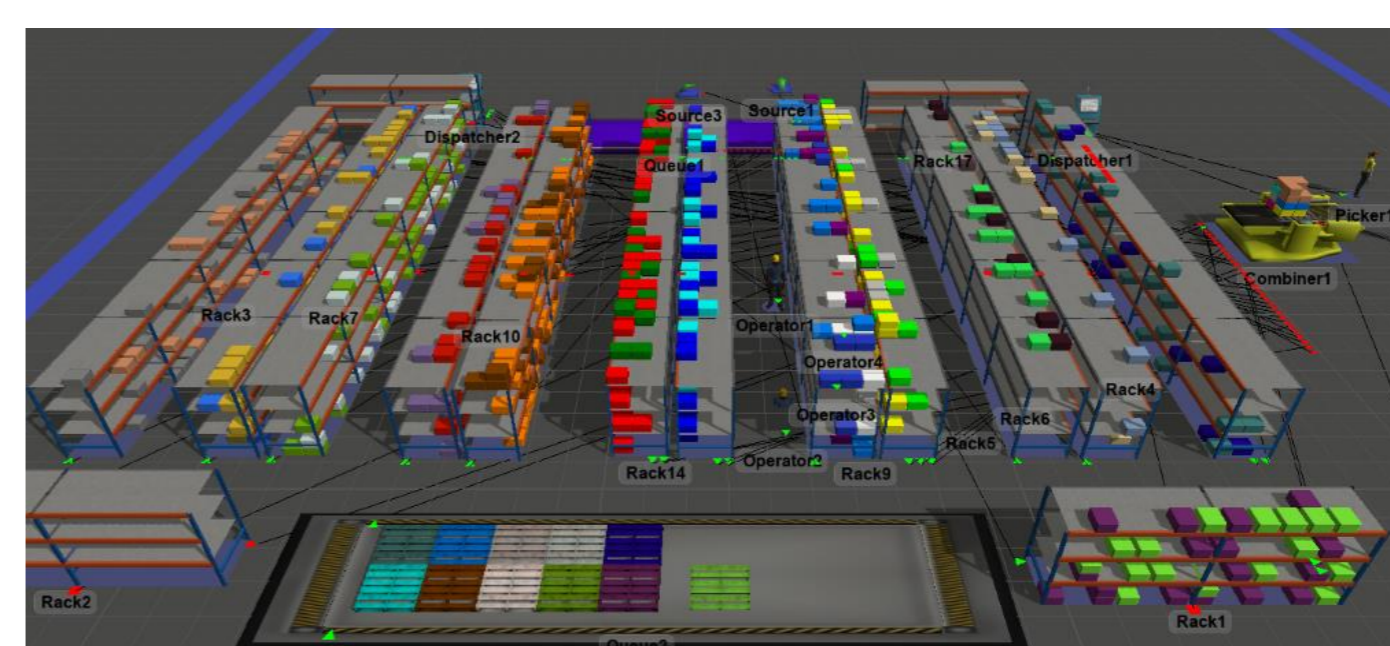
### ABC Classification

Category	Rotation	Inventory
A	High	80%
B	Medium	15%
C	Low	5%

### Layout I

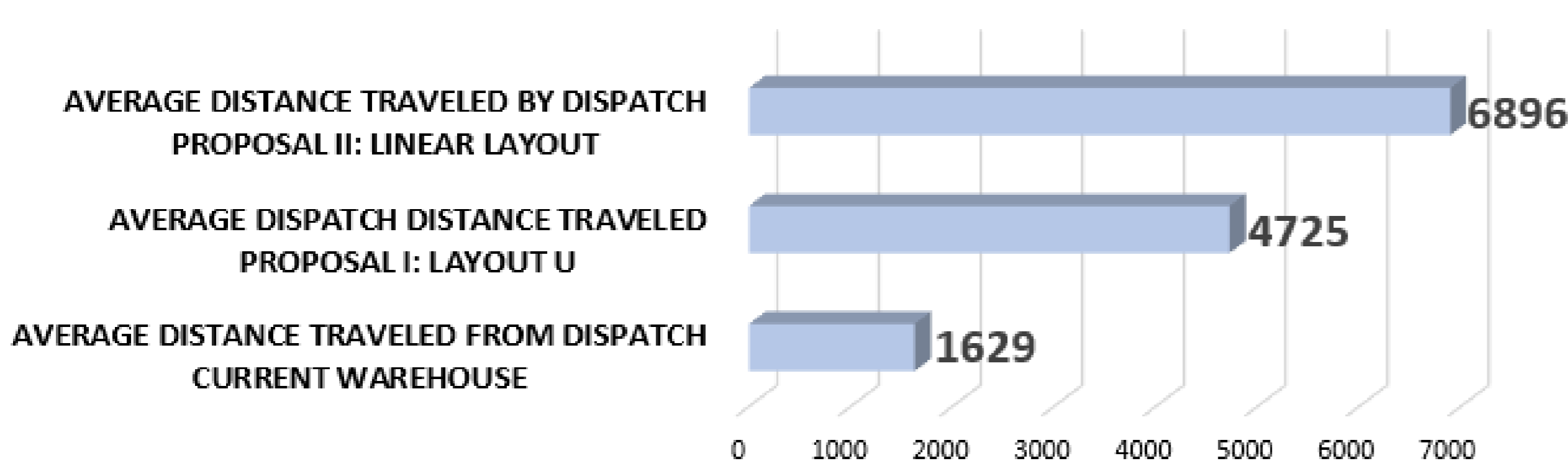


### Layout II

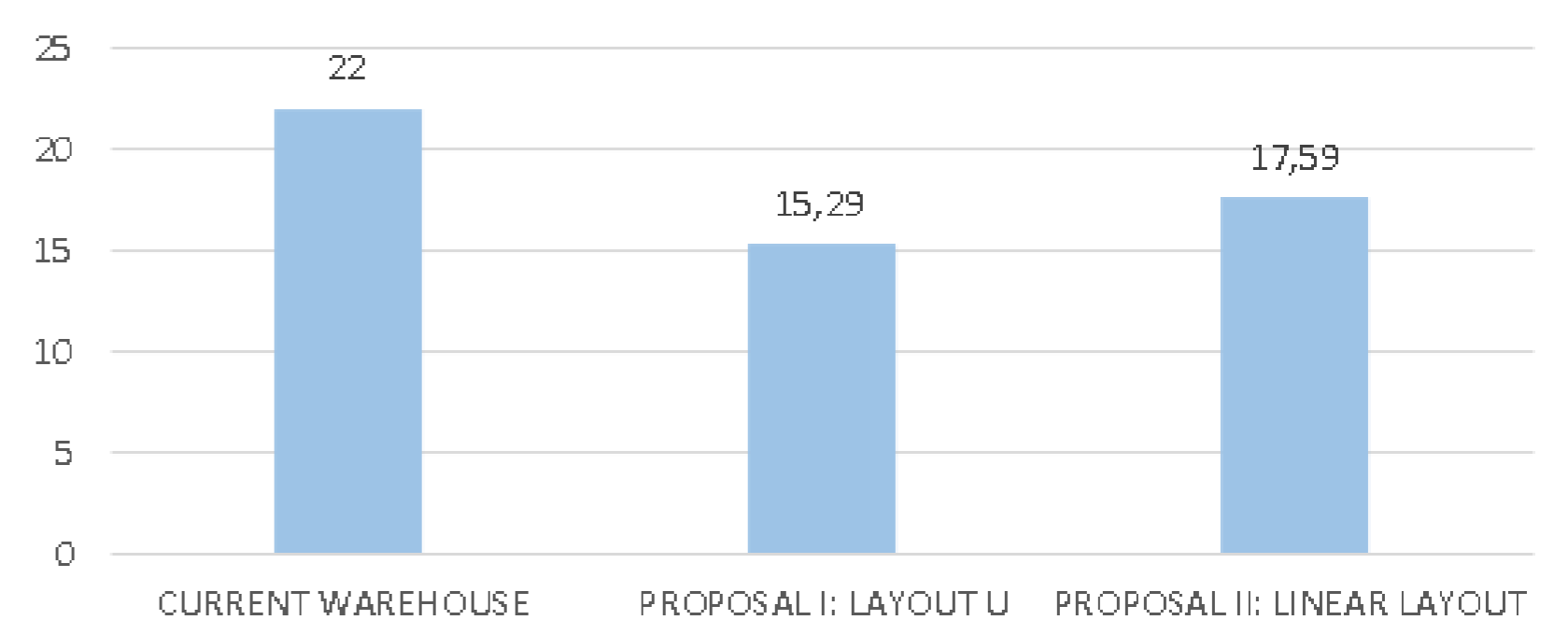


## RESULTADOS

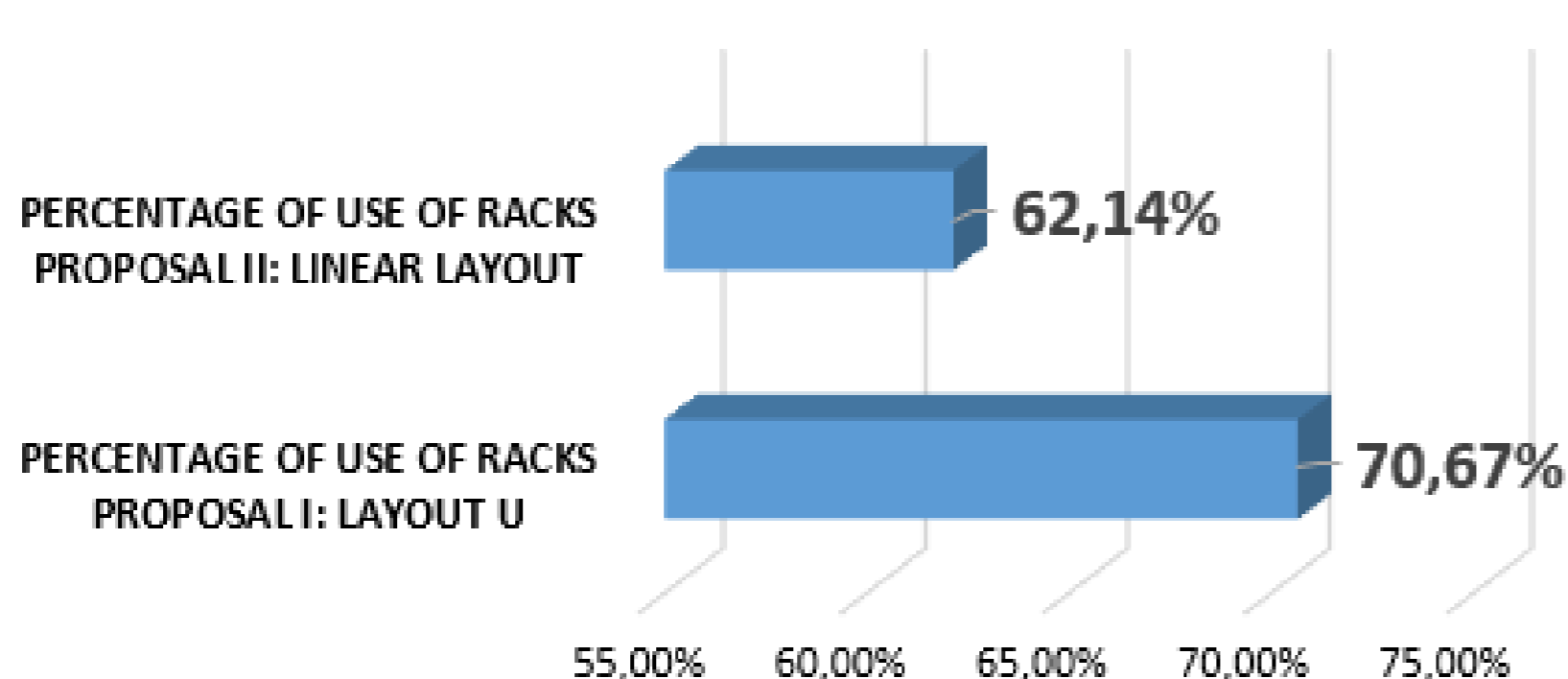
### AVERAGE DISPATCH DISTANCE TRAVELED



### AVERAGE TIME TO COMPLETE AND DELIVER ORDERS ( minutes)



### PERCENTAGE OF USE OF RACKS



### Financial analysis

	Investment	Cost-Benefit
Proposal I	\$186.677,00	1,05
Proposal II	\$187.942,00	1,04

When we obtain a value greater than 1 in the Cost-Benefit relationship, the investment is accepted. The Project is viable to recover the investment in the next 5 years.

## CONCLUSION

- The problems of the current warehouse are caused by the lack of space, por classification an distribution of its products.
- When comparing the layouts of proposal I with proposal II, it was obtained that proposal II has greater storage capacity but its reception and dispatch distances are greater.
- Proposal I has a lower investment cost than proposal II.