

Logistics Project Management Online Session

Topic: Warehouse Design and Impact

Exercise

DISTW is a French Company specialized in warehousing (located in Strasbourg). 3 sites (warehouses) exist in France.

To reduce the inventory costs, DISTW asked the warehouse project manager to perform the task of closing one warehouse. In Table 1 is the summary of the historical data regarding the same product of the 3 main customers in each area of the 3 sites during 5 years.

Suppose, the manager bases his decision on this data only:

- a. What is the main role(s) of the warehouse project manager?
- b. Give the optimal site to close (location). Give argumentation for you choice.
- c. Suppose the warehouse project manager makes his decision without studying the historical data, what could be the impacts of his decision?

Location	Customer ID	Yearly orders (number of items)					Average*	Standard deviation*
		2013	2014	2015	2016	2017		
Strasbourg	Customer X	13 453	54 678	12 435	43 980	43 500	33 609	19 390
Lille	Customer Y	43 090	32 456	23 090	24 656	5 004	25 659	14 002
Nice	Customer Z	10 980	24 098	32 409	45 769	43 509	31 353	14 356

Table 1. Historical Data of the 3 main customers in the 3 sites of DISTW (5 years)

* Reminder:

Average: is a measure of the mean value of the data set.

Standard deviation: is a measure to quantify the amount of dispersion of a set of data from the mean.

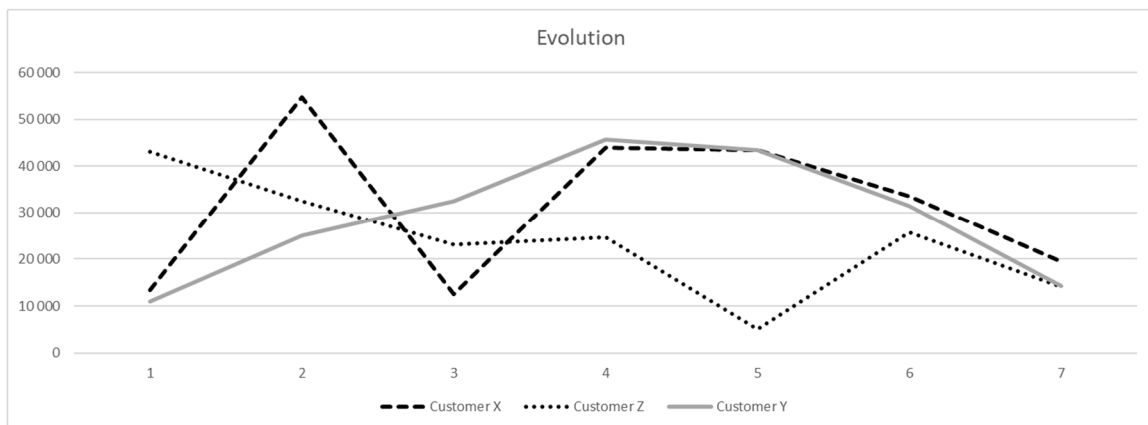
Solution

- d. The role of the warehouse manager (mainly):
 - Keeping control of all the operation in the warehouse: distribution, receiving, delivering, coordinating, and planning.
 - Management of material handling requirements in the trucks and inside the warehouse
 - Analysing and estimating risks
 - Controlling the inventory levels,
 - Controlling and keeping under control the conditions of storage of materials,
 - Leading teams

- Communicating to customers and management,
- Planning all operations,
- Management of the staff (recruiting, training, etc.).
- Risk management and recovery planning
- Monitoring all operations
- Meetings and communication support

e. The optimal site to close (location) with argumentation.

Location	Customer ID	Yearly orders (number of items)					Average*	Standard deviation*
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The lowest average is the site of Lille (Customer Y), but in the trend shows that orders were increasing until the year 2017 (last year) and the variation is quite low (14 002). And as we know a low standard deviation means regularity and less risk for the future.

Therefore: If the company prefers less risk and more regularity, it will keep Lille opened. The additional decision would be requesting an audit analysis to face the reason of the last decrease (maybe a local issue in Lille). But if the company prefers not referring to regularity and risk, it will close Lille.

The highest average is the site of Strasbourg (Customer X), but the trend shows that orders are strongly irregular with big collapse in the year 2015 (12 435) in addition the standard deviation is the highest one, this means high irregularity and high risk in the future.

Therefore, if the company prefers less risk and more regularity, it will close Strasbourg. But if the company prefers not referring to the regularity and risk, it will keep Strasbourg opened.

As we see, the decision depends on the policy and strategy of the company. There is no one accurate decision. Management is not an accurate science!

- f. Suppose the warehouse project manager makes his decision without studying the historical data, what could be the impacts of his decision?

A good manager never make decision without analyzing the situation and communicating with the customers and the direction. Therefore, if the manager does not refer to the historical data and the analysis, catastrophic decision may be taken!