

University of Wales Trinity Saint David

Service logistic

Assignment 2

Critically evaluate based on a case study the application of lean management tools in logistics and supply chain management.

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Abstract

This report will deal with the implementation of lean management in companies and associations. In a first part, lean management is presented, the history of it, and the different tools that can be use in lean management. Then the application of the 5S method is analysed in a territorial delegation of the French Red Cross. Finally, the possible issues that can occur within the volunteer world are identified and presented.

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1) Introduction

With globalization, companies tend to grow more and more everywhere, which also means having more and more employees. But as employees are human, improvement comes with the duty to manage these workers. Because with humans comes conflict and difference of opinions, it's important to give them a common goal to go in the same direction. Team management in a company is very important, it allows workers and co-workers to be on the same page and have the same objective. It allows also a good communication in the company as well as identifying problems and resolve conflicts within a team.

Lean management has been developed to improve organisation and management within a company. This method intended to improve the quality and make profitable the production of a company by avoiding waste as much as possible. Lean manufacturing is the concept which takes into consideration high levels of production with half amount of effort. It allows to reduce wastes of time, energy and resources. Lean manufacturing tries to produce just enough of product that the customer wants, like that, the company does not store useless product.

In a humanitarian association, it's more complicated than that. Most of the workers are volunteers and don't want to be too managed. They want to be able to innovate by their own and achieve some of their own ideas. Furthermore, the goal of humanitarian association is to be able to help at every moment in case of crises. It is, therefore, necessary to stock products to be able to react the fastest possible. So, which lean management tools can help humanitarian associations become more productive?

2) Lean management

a) Definition

Lean management has three main principles: deliver value from the customer's perspective, eliminate waste and have a continuous improvement. The main purpose of lean management is to optimize the resources and create a workflow based on real customers' demands to produce value for the customer. For that they try to eliminate any waste of time, effort or money that is not essential. Lean management trusts the people who are doing the job to say how it should be done. The production in lean management is customer driven and the manufacturing is based on stable production volumes but with a great capacity of flexibility. The organisation is most of the time horizontally oriented instead of vertically which means that every workers have the same importance and develop more autonomy.

The main lean management tools are:

- Kaizen method, it's a process who aims to the continuous improvement of companies without having to invest a lot of money. It consists of bringing small changes every day to improve the productivity.
- SMED method, Single Minute Exchange of Dies, optimise tool change time
- Six Sigma, use in approach to reducing variability in production processes.
- 5S method, optimise working conditions and hours.

The tools for inventory management are:

- Kanban method, use to establish constant and orderly operational flows.
- Just In Time, it's the act of producing and acquired just a few hours/days before being used to reduce the unnecessary stocks.

b) History

In 1913, the first person to truly integrate an entire production process was Henri Ford, he created the flow production. He implements some of the lean concepts, like standardization, reduction of wastes and just in time. But the main problem of this process was the impossibility of the machines to produce various different products, machines were able to produce only one model of product in one colour.

Lean processes became really effective in auto industry, more precisely in Toyota plants in Japan. In early 1950s, Toyota developed lean production as an alternative to mass production which was becomes inappropriate. The purpose of the alternative was to be able to make a greater variety of vehicles to match with the Japanese demand, reduce set-up and changeover times at individual processes. In accordance with that, Toyota started to stop building cars in advance and converted it in a customer driven system.

But the term “lean” appears first in 1991 and different principles have been grouped under this term, like:

- Define the value
- Identify the value flow
- Create flow
- Pull the flows
- Seeking perfection

c) Competitive advantages

What differentiate winners from losers is their ability to consistently provide products and services that are competitive. To stay competitive, they need to take into consideration the quality (better), the price (cheaper), the time (faster) and the response change (agile). These are the principal advantages to lean production.

To make things better, lean firms use group technology, good condition and proper placement of equipment, smaller manufacturing units and improvement-focused employees' team.

To make things cheaper, they do whatever they can to achieve low cost, they redesign and simplify processes and products. They standardize products and try to reduce cycle times.

To make things faster, lean firms seek the reduction of lead times and setup times, equipment maintenance and try to enlarge workers' jobs.

To make things more agile, they consider agility as an integral part of quality ad delivery capacity.

d) 5S

As the lean philosophy was created in Japan, this method is called the 5S and the 5 steps are 5 Japanese words: Seiri, Seiton, Seiso, Seiketsu, Shitsuke. The 5S tool is the five successive phases of work organization.

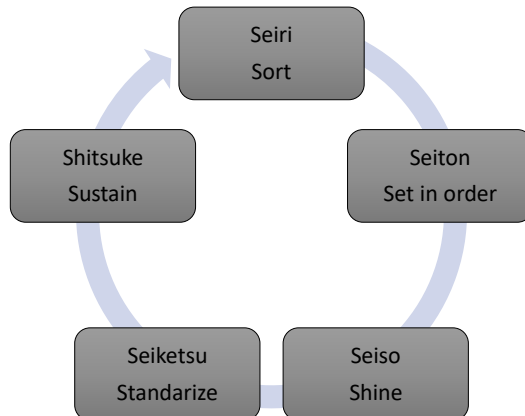


Figure 1 – 5S cycle (Author's own)

i) Seiri

Seiri means « get rid of ». The idea is to get rid of all the superfluous things in the workspace. What is not use regularly is classified depending on their frequency of use.

ii) Seiton

Seiton means « tidy ». Seiton is use to allows people working on a post to gain time thanks to a well organised and visual storage. The visual help need to be clear and understandable by everyone to save time and energy.

iii) Seiso

Seiso means « shine ». Once the worker has a well organised environment without useless thinks bulky the post, it's important to keep it clear from useless objects. The post needs to be clean and stay clean to be able to find any errors that can occur.

iv) Seiketsu

Seiketsu means « standardize ». It means that after cleaning and storing everything it's important to make this a standard. It permits to have a framework.

v) Shitsuke

Shitsuke means « sustain ». This last step is the most important step, the goal is to gain workers' hearts and mind to install a sustainable change and good work habits.

3) Case study: French Red Cross

The next case study is based on the internship that I did from April to June 2019 in the territorial delegation of the French Red Cross situated in Brest.

a) French Red Cross

The French Red Cross is an association of public utility whose purpose is to carry out the mission of auxiliary of the public authorities in the fields of social action and emergency first aid, by carrying out actions of protection, prevention and training.

The French Red Cross has a dual identity: association and company. To carry out its missions, this not-for-profit business association relies on its network of volunteers and employees who act every day according to a major principle: solidarity, giving priority to local actions that provide concrete and lasting responses.

The French Red Cross is 5 fundamental actions:

- Emergency and first aid;
- Social action;
- Training;
- Health;
- International action.

In a few figures, the French Red Cross is:

- + 90 million volunteers worldwide;
- + 59,857 volunteers in France;
- 17,217 employees in France;
- + 1,000 local units in France;
- + 100 territorial delegations in France.

b) Territorial delegation of the Finistère

I did my internship within a territorial delegation of the French Red Cross situated in Brest. This territorial delegation allows the French Red Cross to be divided by department. There is 101 department in France and every one of them have a territorial delegation. It allows to manage all the local units of each department. There is 10 local units distributed in all the Finistère.

As in territorial delegation and local units all the workers are volunteers, it is sometimes difficult to have an organise work space and to keep it like that.

c) 5S

The Territorial Delegation of Finistère is located in an old building donated by the Town Hall and is for rent. As a result of this donation, the space is not necessarily adapted to the activities of the Red Cross. The offices of the territorial delegation are therefore located on the first floor but do not meet the standards of reception of a public institution which must be accessible by wheelchair.

The ground floor is therefore used for training as well as for storage.

The Red Cross does not have its own budgets to make small improvements in their premises. My mission was therefore even more restrictive.

The territorial delegation has only one employee, who is the secretary. All other people are only volunteers, so they are not always present and do not necessarily have the time and sometimes the desire to do the "thankless" tasks. This led to a stockpiling of donations and orders on the ground floor.

My mission during this internship was to implement a 5S method in the stockage area of the territorial delegation to allow them to see clearly what they have, what they need and how to keep it clear. As a humanitarian association, everything I did needed to be simple to use for everyone, easy to implement somewhere else and without budget.

In the order to respect the method of the 5S, the first step was "Seiri", to get rid of everything that was superfluous, clean and tidy everything else. Follow, you will find pictures of the before and after this step.

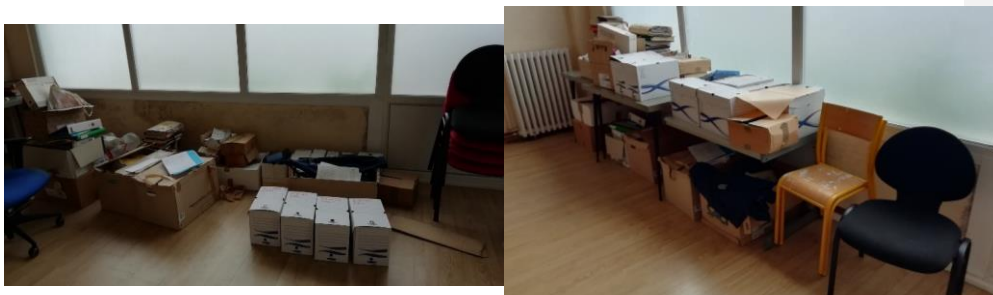


Figure 2 - Before/after part 1 (Author's own)



Figure 4 - Before/after part 2 (Author's own)



Figure 3 - Before/after part 3 (Author's own)



Figure 5 - Before/after part 4 (Author's own)



Figure 6 - Before/after part 5 (Author's own)



Figure 7 - Before/after part 6 (Author's own)

After cleaning and tidy up every storage space. We can see more clearly everything that the territorial delegation possesses.

The second step was “Seiton”, the stockage space needed to be tidy well organised and visual storage. The visual help need to be clear and understandable by everyone to save time and energy. For this step, I created posters to clearly indicate where everything was stock.

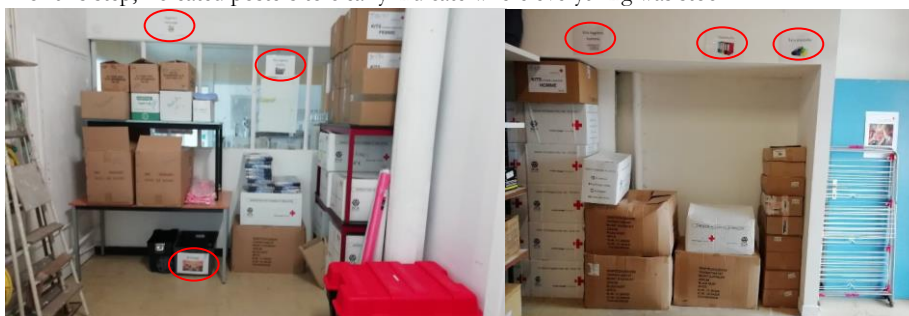


Figure 8 – Posters (Author's own)

The third step is “Seiso”. Now that everything is clean and clear, the environment needs to stay well organised. At this point, I did an inventory and created an Excel table to keep all the data.

Produits	Unités	Stock initial	06/05/2019	07/05/2019														En stock
Allaises jetables		27																27
Autocollant "Croix-Rouge"		2																2
Boîtes de mouchoirs		38																38
Brosses à dents	Paquets de 6	25																25
Burin		1																1
Calculatrice lycée		2																2
Capotes	x3	12																12
Chaises		9																9
Chariot de ménage		3																3
Chocolat en poudre	Paquets	10																10
Ciseaux		1																1
Classeurs		74																74
Clés outils		2																2
Couches 2-5 kg	Paquet de 28	1																1
Couches 3-6 kg	Paquet de 64	1																1
Couches 4-9 kg	Paquet de 38	1																1

Figure 9 – Inventory (Author's own)

Commenté [IN1]: If possible please translate the Produits / products in

The next step was “Seiketsu” or standardize. To make that a standard, I created entry and exit vouchers and I also did an explanation of how the Excel table works for future users to be easy for them to use it.

ENTRY VOUCHER

Date :

Local	Products	Quantities

EXIT VOUCHER

Date :

Local	Products	Quantities

Figure 10 - Entry voucher (Author's own)

Figure 11 - Exit voucher (Author's own)

The 5th, and last step, is “Shitsuke” or sustain. To make sure that everything I created and implemented stay in time, I made an explanation of the tools. The explanations needed to be very clear and detailed for everyone to be able to use them. I also created flyers to find someone that can be able to use the tools and keep thing as they are, I finished my internship before distributing these.

On this flyer, you can find some pick up lines and just an invitation to come help an good cause by keeping update an Excel table.

DEVENEZ BÉNÉVOLE

**Délégation Territoriale du
Finistère**



croix-rouge française
PARTOUT OÙ VOUS AVEZ BESOIN DE NOUS

Vous avez un peu de temps libre et vous voulez faire partie d'une noble cause ?

Vous avez un minimum de connaissances en informatique ou vous n'êtes pas contre le fait d'apprendre ?

Rejoignez-nous au sein de la Croix-Rouge !

Nous cherchons une personne pouvant tenir à jour un tableau informatisé pour suivre les stocks de produits que nous possédons.

Délégation Territoriale du Finistère
4 rue du Conquet – 29 200 Brest
Tel : 02 98 05 06 08



4) Possible issues

The possible issues of the implementation of 5S in this association is mainly linked with the volunteer's world. As I said before, in the territorial delegation there is only one employee all others are volunteers, they all have responsibilities within the association and they do it on their spare time. They don't have time to do much more than what they already do so they don't have time to continue what I began and really implement it as an habits in the association. Volunteers as many people in companies, have difficulties with change. They are used to do some kind of things and some kind of actions and they don't want to feel obligate to do new things and don't want to change the way they do things.

Furthermore, volunteers change all the times, they like to change activities every week. SO sometimes some volunteers are going to come and it will be necessary to explain to them what is new and how it works now. And the week after it will be new volunteers, and it will be necessary to explain again. It will be very long before every volunteer from every local unit knows how everything work.

5) Conclusion

To conclude, to answer to the question: which lean management tools can help humanitarian associations become more productive? Lean management came with team management and stay something very important in every company. Lean management allows companies to become more productive with less wastes. It also allows companies to match with the development of sustainable companies around the world.

Humanitarian association, as companies, need logistics and lean management in their organisation. In the red cross, with the hierarchy they created since the beginning and with all these unities working at different ladder, it's very difficult to bring new stuffs and want to improve things. Anyway, they still some improvement to be able to become more productive and be able to help more and more people.

The easier lean management tool that humanitarian association can use is the 5S method. It allows to give better habits to the association and to work more effectively. I learned that during my internship, you just need to find motivated people who are ready to change and improve themselves for the better of everyone.

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