Lean Facilities Management Concept: Possible Wastes and Mitigation Action

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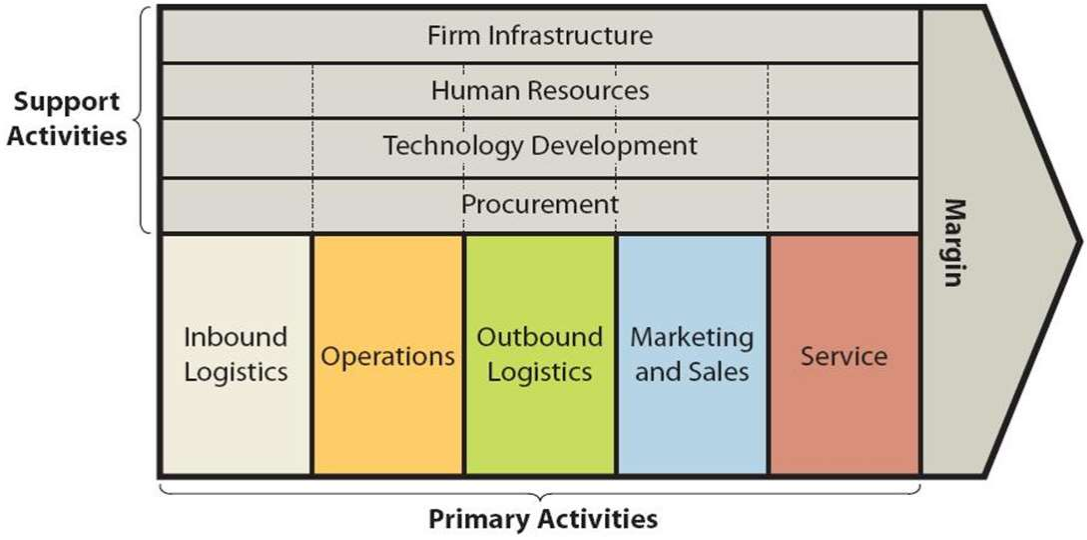
Lean is an operational excellence strategy which allows change in an organisation. The concept is applied in order to manage processes through the application of a continuous improvement philosophy to attain the elimination of operational and organisational waste. Lean thinking lies in the ability to understand the philosophy which is to continuously seek for a way to reduce waste throughout application of Lean tools and technique for customer satisfaction. There are five (5) basic principles of Lean thinking, which are Value, Value Stream, Flow, Pull and Perfection.

"The Toyota Way" written by Jeffrey K. Liker (2004) described Toyota's unique approach to achieve Lean Management. The approach consists of fourteen (14) management principles that are divided into a 4P model, namely Philosophy, Process, People & Partners and Problem Solving. Implementation of the model leads to the elimination of waste ("*Muda*"), unevenness ("*Mura*") and overburden ("*Muri*").

In general, there are seven (7) types of waste;

1. Transportation
2. Inventory
3. Motion
4. Waiting
5. Over production
6. Over processing
7. Defect

Nowadays, the eighth waste, which is underutilization of human potential has been introduced in order to represent human capital. The underutilized human potential is often related to losing time, ideas, skills, improvements, and learning opportunities by not engaging or listening to employees.



By referring to the Porter's Generic Value Chain, examples of unnecessary wastes of a typical Integrated Facilities Management Service are outlined in Table 1.

Table 1: Possible Wastes and Mitigation Action

Value Chain	Activities	Possible Waste	Danger Signal	Mitigation Action
SUPPORT ACTIVITIES				
Infrastructure	Invoicing to client	Waiting (late invoicing)	No rolling returns	Immediately invoice after completing work
Human Resource Management	Employees management and welfare	Waiting (slow action)	Late processing	Implement time based KPI
	Training and development	Overproduction (unrequired training)	Training offered doesn't relate to company's core business	Get recommendation and approval from immediate supervisor
Technology Development	New service introduction	Overproduction (service not required by client)	The newly introduced service is not required by client	Conduct market analysis and requirement study
	Enhancement of maintenance technology	Overproduction (technology too advanced)	Technology invested is not required at current level	Conduct market analysis and requirement study
Procurement	Acquiring resources	• Waiting (slow process and late delivery) • Inventory (over purchased)	• No spare parts and consumables for operation and maintenance work. • Too much inventory in storage.	• Implement just-in-time method. • Frequently monitor inventory record.
	Sub-contracting	• Waiting (long awarding process) • Overproduction (acquire unrequired service)	• No sub-contractor to perform specialize work. • Service offered by subcontractor beyond scope of work.	• Implement time based KPI • Refer scope of work

Table 1: Possible Wastes and Mitigation Action *(&Continued)*

Value Chain	Activities	Possible Waste	Danger Signal	Mitigation Action
PRIMARY ACTIVITIES				
Inbound Logistics	Purchasing of parts and consumables	Waiting (late delivery)	No spare parts and consumables for operation and maintenance work	• Create partnership with supplier • Design appropriate KPI
	Sub-contractor's support	Waiting (slow response)	• Late work response • Long downtime	• Design appropriate KPI
Operations	Facilities engineering and maintenance services	• Defect (work performed was not expected) • Over processing (rework)	Equipment breakdown after service	• Create standard work instruction • Monitor work performed
	Soft services	• Defect (work performed was not expected) • Over processing (rework)	Receive complaints from client	• Create standard work instruction • Monitor work performed
Outbound Logistics	Support from HQ	• Overproduction (unnecessary support e.g.: energy audit, green building index etc.)	Support offered not required by client	Ensure that the support services provided are required by client
Marketing and Sales	Sales and business development	Overproduction (service offered beyond client's need)	No contract awarded	• Perform market analysis • Offer service according to client's requirement
Service and Support	Helpdesk support	Waiting (slow response)	Receive complaints from client	Provide appropriate training

Managing waste and improving organisation could be realized by embracing Toyota's 4P model:

i. Philosophy

   This is the most fundamental level of the model where Hoshin Kanri (*strategy deployment*, *strategic planning*) concept can be nurtured into every personnel in the organisation. Employees shall be kept reminded on the company's vision and mission to ensure that every action taken is in-line with the targeted goal.

ii. Process

   Having the right processes will lead to the right results. Right processes will reduce and eliminate unnecessary wastes in the tasks performed. Application of Kaizen (*continuous improvement*) can help to identify more wastes and further improve the process flow.

iii. People & Partners

   Development of people and partners are important to ensure that the organisation have necessary resources and competencies.

iv. Problem Solving

   Application of Genchi Genbutsu (*go and see for yourself*), Hansei (*self-reflection*) and Kaizen (*continuous improvement*) to create a learning culture in the organisation.

Effective management will give positive impact to the organisation. A Lean organisation will create a learning culture where improvement processes perpetuate. This culture will help to reduce turnover and position the organisation at par or ahead of the competition thus safeguarding market sustainability. Without unnecessary wastes, the work delivered will be of high quality, thereby increasing competitive advantage.

References

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