

A3/BUSINESS CASE

Proposal to implement hoshin kanri at the health environment

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ABSTRACT

The lean approach has been applied on different environments beyond manufacturing, as on healthcare, however it is still noticeable that most part of the papers refers to operational tools applications, what does not guarantee that lean thinking would be sustainable neither perennial on the organization. This paper aims to propose an implementation model that minimizes the risks through the initial process and assure the system is maintained independently of the health organizations' size and its specialized actuation processes by involving top management on the lean approach and structure it to be deployed, followed up and reviewed continuously.

Keywords: Hoshin Kanri. Health. Management.

1. BACKGROUND

Lean success is based on a strategy that mixes methods, tools and quality improvement, substantiated by people and organization comprehension and motivation in addition to learning (LIKER; MEIER, 2007). Its application must be driven by the five principles proposed by Womack and Jones (1996): value, value stream, flow, pull, and perfection.

Toyota understood that to increase the returns on its processes, its optic should be the same as the client, as many activities made did not increased the value of the products neither were necessary to its controls or processes. Only after this perception the focus became eliminate or maximize the reduction of activities that did not added value to the products based on what the customers considered as valuable. According to Hines and Taylor (2000), all activities on the boundaries of an organization can be classified as value added activities, necessary non-value added activities and non-value added activities.

As on the manufacturing, lean on the healthcare environment must focus on the reduction of processes that do not aggregate value to the client, for example: register the patient on multiple formats and platforms, unnecessary patient movements to the hospital room before the bed is available, excessive patient movement due to lack of controls, excessive waiting lines caused by the processes (and not by the procedures) and processes that – when accumulated – lead to a hospitalization time longer than actually needed (ROBINSON et al, 2012).

These benefits end reflecting a low satisfaction rate of the healthcare system users in Brazil. A research has asked users to evaluate the service delivered on a scale from excellent (A) to poor (E) (figure 1) (CALADO, 2013).

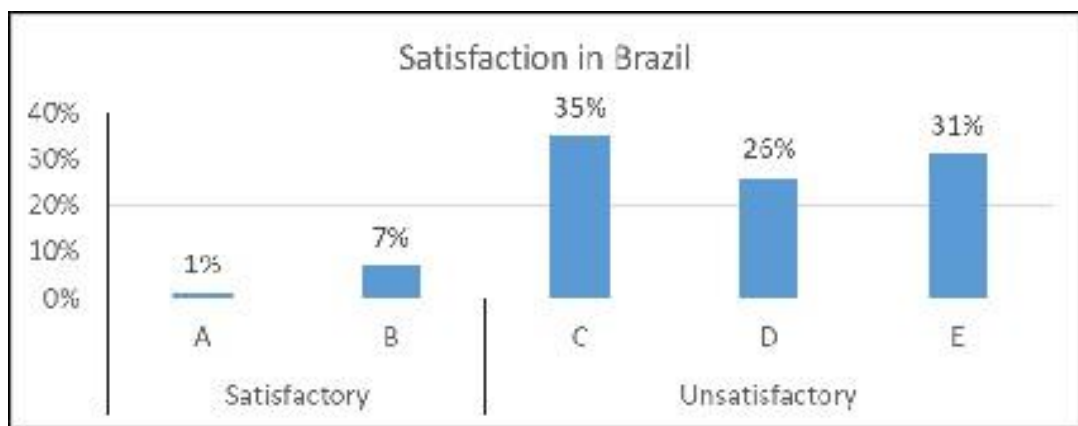


Figure 1. Satisfaction survey on the healthcare system in Brazil

In the two cases, manufacturing and healthcare, the organization shall structure its internal activities in a way that both product to be delivered and the processes by which it goes through are aligned to the clients' needs (BUZZI; PLYIUK, 2011).

Womack et al. (2005) synthetize this approach:

[...] Lean management is not a new concept, but it is relatively new to health care. While skeptics are right when they say, “Patients are not cars,” medical care is, in fact, delivered in extraordinarily complex organizations, with thousands of interacting processes, much like the manufacturing industry. Many aspects of the Toyota Production System and other lean tools therefore can and do apply to the processes of delivering care.

Lean Thinking has brought a perspective of applications that boosted its use on healthcare systems, as the implementation methodology can be suited to it. The vision from Womack et al. (2007) can be summarized in seven steps: define the client; define what value is; map the value stream; optimize the value stream; implement a pull system; improve continuously; always innovate.

The sequence proposed by Womack et al. (2007), despite broadly spread, is not the only existing one. Bertani (2012), for example, stablishes nines steps that streamline the seven proposed before, aiming increase the chances of success and sustainability. They are: define the client; structure the implementation; stablish objectives and goals; involve people; train; map the current situation and develop the future situation; implement improvements; sustain the improvements implemented; improve continuously.

The approach proposed by Bertani (2019) focus on assuring a better sustainability on lean healthcare implementation. On the other side, Womack et al. (2007) defend, besides the common ground, the need to have a pull system, as was required since the beginning of Toyota Production System; however in some hospital scenarios this characteristic is not fully applicable due to the criticality or the type of treatment offered to the patient. Both proposals are aligned with the structure from figure 2 summarized by Witcher (2002), despite not guaranteeing the deployment to the bottom levels of the organization.

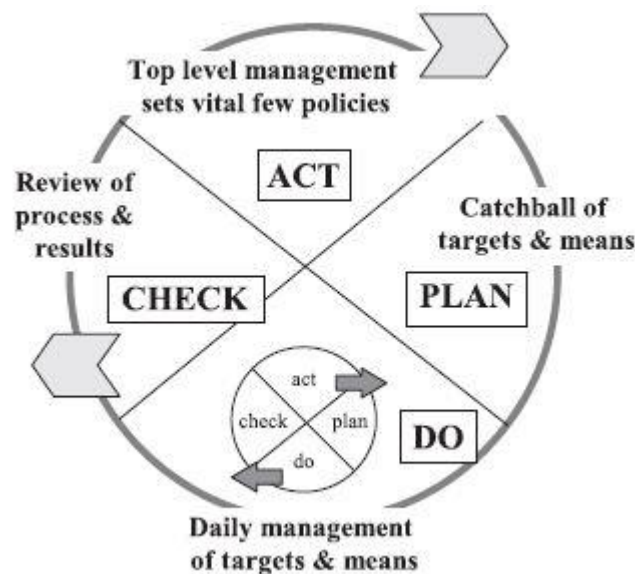


Figure 2. PDCA and hoshin kanri

2. PROPOSAL

It is known that different strategic planning methodologies have different pros and cons, as well as a variety of success rates (MULLIGAN et al. 1996). Thus, in alignment to the assessment model proposed by Calado (2013), the present paper proposes the lean implementation on healthcare environments to be done to assure the actions taken on the tactical and operational levels are aligned to the organizations’ strategic view and, consequentially, they can support the achieving of the global objectives.

Table 1 compares the implementation sequences proposed by Womack et al (2007) and Bertani (2012) to the present paper.

Table 1. Comparison of the implementation methods

Womack et al. (2007)	Bertani (2012)	Proposal
1. Define the client	1. Define the cliente	1. Diagnose the organization
2. Define what value is	-	2. Define what value is
3. Map the value stream	-	3. Map the value stream
-	-	4. Plan hoshin’s long-term view
-	2. Structure the implementation	5. Align objectives to hoshin’s long-term plan
-	3. Stablish objectives and goals	6. Stablish mid- and short-term objectives and goals
-	-	7. Plan <i>hoshin</i> implementation
-	4. Involve people	8. Engage stakeholders
-	5. Train	
-	6. Map the current situation and develop the future situation	9. Define the future situation
4. Optimize the value stream	-	-
5. Implement a pull system	7. Implement improvements	10. Implement improvements
-	8. Sustain the improvements implemented	11. Sustain the improvements implemented
6. Improve continuously	9. Improve continuously	12. Improve continuously
7. Always innovate	-	-
-	-	13. Review hoshin implementation

Source: [Author (2017)]

To assure the lean healthcare implementation has a high maturity level, it is necessary to obey some stages with the involvement of the strategic and tactic organisational levels to ensure the process is sustainable, with the organization’s commitment:

1. Diagnose the organization: the organization defines its maturity level compared to the lean best practices and the results it has been reaching.
2. Define what value is: in hospital environments, value added activities may exist to different shareholders, as health insurances, government, staff, maintainer entities, relatives and, mainly, patients.
3. Map the value stream: the correct value stream mapping leads to the creation of more robust basis to the following steps.
4. Plan hoshin's long-term view: with focus on the next 5 years, this long-term vision (or policy) must translate "what" the organization wants to be at the end of this period. It is a declaration of intent.
5. Align objectives to hoshin's long-term plan: once determined "what" will guide the organization, a strategy must be defined to show "how" the long-term view will be concretized.
6. Stablish mid- and short-term objectives and goals: these objectives and goals must be specific, measurable, attainable, relevant and time-bounded.
7. Plan hoshin implementation: a master plan must be developed detailing due dates, actions, deliverables, roles and responsibilities to the activities that must be implemented on the following 12 months as a deployment of the hoshin strategy.
8. Engage stakeholders: before start lean's implementation phase, it is required that stakeholders know the previous steps – including their aims and results – to understand they are part of "something bigger".
9. Define the future situation: with the current VSM defined, it is needed to draw the future VSM, which will be the optimum condition to be achieved.
10. Implement improvements: as a result of the future situation, lean tools are used to achieve the expected results by eliminating detected wastes.
11. Sustain the improvements implemented: when there is no or few strategical and tactical support, it is possible that the improvements made get lost on time.
12. Improve continuously: based on Toyota Production System's principles, one must continuously improve the results already obtained.
13. Review hoshin implementation: it is recommended to annually review steps 1 to 12 to adapt the purposes, objectives, strategies and plans to the changes on the scenario that may occur.

Figure 3 groups the proposed 14 steps into four main landmarks of the implementation process: annual hoshin review; engage top management; implementation and sustainability.

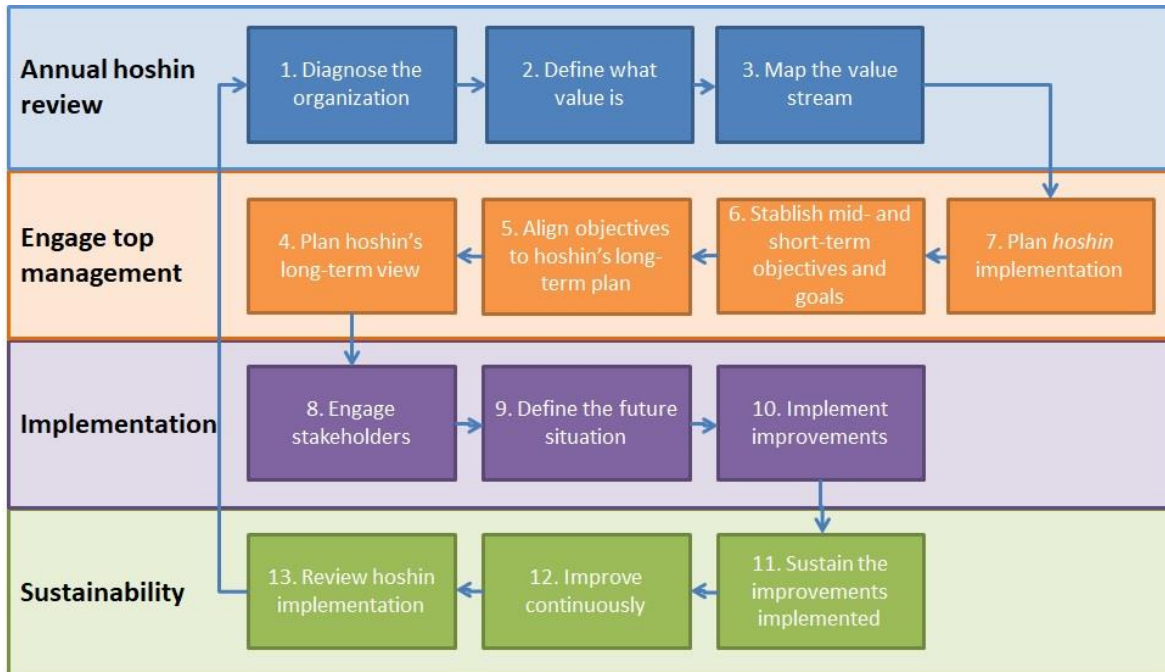


Figure 3. Hoshin kanri implementation method proposed.

4. CONCLUSIONS

Many tools may be used to implement processes' improvements, but the most commonly used indicate that the clients' satisfaction is predominantly low. The usual implementation processes do not assure lean's sustainability neither the adherence to all the organizations' levels, which may lead to the poor value perceived by the clients.

On this proposal, the first step to implement lean on healthcare environments is to define to whom, by who and to where the organization will guide its efforts, defining who is the client, creating an implementation structure and stablishing objectives and goals. Then one must engage people, involving and training them, as they are keys to apply and use the tools. In the end, on the longest and more complex phase, the improvements are identified, implemented and maintained. By following this route, the focus on the client

is assured and the people involved so they are able to work to reduce wastes while the organization achieve its strategic goals.

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