

# Rio bravo iv – operations management case study

[Business](#)



Is a leader in power and signal product distribution in the United States.

They thought they could do the same thing outside of the US so they opened a plant in Cuernavaca, Mexico to manufacture harnesses for US and other foreign customers. At the beginning, however their results were very poor. Probably, the most important issue was that none of the management had the necessary experience needed for their managerial positions and hardly anyone spoke Spanish.

Also, the factory was very poorly equipped that could not compete with the lofty requirement of ANNUM – Packard's immediate customer. Packard was known for their high quality products but Mummies expectations were too high to satisfy.

The first shipment was based on a 200-piece order for prototype vehicles. Packard put together their best employees, every part was carefully checked, and was packaged in perfect order. However, ANNUM and Toyota decided that the products had poor quality design and they were unhappy with the products.

Later Packard hired Simoom Willing for their expertise in methods of producing outstanding quality and precision. They taught Packard but at the end of a six-month program, their shipment was rejected.

After all that trouble Packard decided to implement elements of JIT and TTS, such as Kamikaze, reduction of lead times, quick die changes, Kanata, and Visual management (Snobbery, Nod, 1997). Packard Electric Corp.. Has successfully implemented several JIT and TTS programs.

However, they could enhance the efficiency of operations in several sectors, such as automation of human/machine work, involvement of third parties to work on quality, flexibility, and service, and an adequate layout to decrease operations' wastage. Problem Definition: Packard Electric Corp.

. Does not seem to have problems with implementing CIT and TTS. The task might be, however, that what more the plant could do to improve the efficiency of their operations. Analysis: At the moment Packard Electric seems to meet their goals to be a company that envisions continuous Improvement, Just-in-time and TTS approaches.

They experienced lack of expertise at the first place because the management came from places with different background than the position they jumped into. They could not respond on the level of Mummies quality requirements.

The reason why It happened could be that Packard did not really understand the difference between their quality Ana Mum's quality. Packard snout a nave implemental some Kina AT a customer contact to find out the specification of Mummies word of quality.

Packard, however underestimated the need to be customer oriented at the first place and, therefore the result was a reject of the shipment (Snobbery, Nod, 1997). Moreover, when Packard did not seem to handle the 'reject' situation, they outsourced Summit's Wiring to help Packard to gain the expertise in continuous improvement process. This step could be viewed as a very positive one because they actually used one of the principles of

operations management (continuous investment in human resources – training, mastery of multiple skills).

However, because of the nature of continuous improvement, there are areas that can be improved.

Also, lead time reduction was probably done in a functional layout where the products were idle and thus created operational ‘waste’ (by waiting to be processed). It has to be said that Packard significantly reduced lead times but the functional layout also generates non-value adding activity that could be eliminated by cellular layout (Snobbery, Nod, 1997). Finally, the variability of harnesses was a big problem for Packard after the rejection of the shipment.

This could have occurred for two reasons: faulty production or by too much variation of the product. If it was a faulty product, then Packard would have to implement technology to spot the defected product and eject it from the line.

Alternative Solutions: 1. In the effort of continuous improvement process encourage “Kodak” – automation of human versus machine work 2. Create and train cross-departmental/organizational teams that would cooperate with each other to increase quality, flexibility, and service that support TTS and CIT 3.

Implement cellular “U” shaped manufacturing layout to speed up the manufacturing process  
Evaluation of Alternatives: Strengths: Could improve productivity, quality, and safety  
Could expand multi-process handling  
The

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company could maintain low-cost automation ( weaknesses: Initial implementation could be expensive It would require an outside expertise (costly) It would probably require reorganization that might be time consuming and costly 2. Encouraged communication would increase the speed of response time Involvement of a third party (supplier, customer, logistics, etc.

.. Would significantly improve the quality of service and Just-in-time processing Cellular teams would encourage positive (enhanced) communication that would result in positive – intrinsic motivation and would broaden their skills and abilities The product can be standardized and thus more effective manufacturing Weaknesses: If one department dominates other departments lose their motivation and their effort towards continuous improvement would be very low Teamwork can sometimes be stressful and can create conflict that would ‘ damage’ reductive relationship between the departments Competition amongst individual departments (between supplier and manufacturer, or logistics, or customer) would minimize the positive effect of mutual cooperation 3.

Adopting the “ U” shaped layout the organization would minimize inefficiency of human, machine, and material usage Could speed up the response time Short time changeover would significantly increase the manufacturing capacity of the plant Reorganizing the layout can be more expensive to implement Recommendation: The best possible solution for successful long term reduction of ‘ waste’ in operations loud be the combination of all three (however, they do not have to be implemented at the same time). At first, the Japanese term Jados’ represents an intelligent <https://assignbuster.com/rio-bravo-iv-operations-management-case-study/>

automation of machines by a human ' touch', which means " A corporation's objectives should be to deliver products of a quality, price, and within a timeshare defined by the customer.

KODAK is the concept of adding an element of human Judgment to automated equipment. In doing this, the equipment becomes capable of discriminating against unacceptable quality, and the automated process becomes more reliable" (Harriman, 2000) (Gamma research, 2003).

In other words, Kodak implements 7 steps of low-cost automation, whose result will be separation of human and machine activity and it can automatically detect errors (Gamma research, 2003). For example, when Packard is manufacturing the harnesses, the current automation produces products without any stop or delay. The production may seem to be continuing well but at the end of the day one supervisor takes a look at the result and he/she sees that 30% of harnesses have a small mm hole in the fabric.

This would have to be put back for rework on the next day and, consequently, the company loud lose one day in their production. If there was a person assigned to particular machines to control the quality, they would have stopped the machine before faulty products went through.

In order to decrease the defect of the products, Packard needs to implement safety equipment (a stopper) that would identify the faulty product and stop the manufacturing (E-TTS college, n. D. ). This is a self-error- detecting approach and would reduce the possibility of manufacturing a faulty product.

Also, Packard already possesses technology that automates the process of manufacturing (Miller, 2004). Therefore, with this Kodak approach they can save on cost on salaries for employees (they will not be needed anymore) who supervised the machines before and they can operate several machine at the same time with a 'start and walk away' approach. The result would be a total elimination of faulty products.

Eventually, the production process would work so that when a faulty product tries to pass the control, it is ejected and removed from the line to be dumped or reworked. Secondly, close collaboration with third parties like customer, supplier, logistics and other would be beneficial for all involved parties.

Especially, this would be true for Packard Electric since they would be able to produce the product that they would know would not be rejected, the shipment would be on time, and loyalty would be established with their suppliers. Packard should create a team of customer service where they would try to discuss the requirements of ANNUM and find out their expectation about the quality, design (package).

Also, this would require ANNUM to be a part of the process to eliminate any possible delays with reworking of the product then malign not 'eke' now It is wrapped. Inconsequently, Packard Electric, Dates on t knowledge can standardize the production and deliver only-once-made-perfectly products without delay. By teaming up with supplier(s), Packard could gain long-term benefits. If Packard (as it partially did) create partnership with its supplier(s),

they could gain an advantage of on time, quick, and dependable transportation of materials.

With reliable partner (supplier) the company could enter longer contracts that would benefit both sides; supplier has its sale and the purchaser does not need to spend time finding a new supplier that might not be suitable.

The idea of a team would be that a Packard would send its team on a condiment to get to know their counterparts (and vice versa). They would learn the way the supplier run its business and would work on projects how to increase the effectiveness of using, processing, and delivering the materials. Moreover, if Packard wants to be more efficient, it needs to encourage teams from within as well. Different departments should be involved in teamwork that would concentrate on flaws in each department and how to minimize them. The teams should include front-line associates as well and encourage all types of immunization to find out how the new implementation works.

If a company decides to outsource the expertise (for example required for Kodak) from a company with competitive advantage in, Packard and the 'expert' firm should team up and decide on how to facilitate the training process amongst the departments and front-line associates. This would be viewed as a step towards improving the quality of production, service, and flexibility that are parts of a continuous improvement process (Strategies, n. D. A) (Snobbery, Nod, 1997). Finally, reducing changeover and choosing an appropriate form of layout could significantly increase the speed of continuous improvement efforts.



At the moment it seems that Packard uses functional layout that is good but not as efficient as cellular.

In a functional layout the processes are assigned to similarity in nature. Also, as the product goes through the individual processes, it has to go to individual department and it sits there in a queue waiting to be processed. This means that this functional layout very often create non-value activity and slows down the overall production operations. On the other hand, cellular layout is created on the basis of the mix of arduous and processes. That means that the cell contain all the necessary machines, people, and resources needed to process similar products (it has to be said that the ideal situation would be that a cell manufactures tight range of similar products).

In other words, the cell is able to process the product from within that definitely speeds up the manufacturing process (and operations management). In addition, cellular layouts can significantly decrease the number of moves, shorten the distance, and due to efficient simple-routing the company can save (money, time, resources, etc... ) Strategies, n.

D. B). Synopsis: Finally, fortunately for Packard Electric they realized the importance of CIT, TTS, and continuous Improvement processes. I nee eliminate a lot AT problems AT operational idleness or waste. They managed to implement pure continuous improvement processes and their overall efficiency improved by approximately 80%.

However, if they implement cellular layout into manufacturing processes, their efficiency could be between 90% or slightly more overall.

A cellular layout means that each section in the manufacturing process would be divided into cells that would contain all accessory equipment, resources, and employees to complete their section without any delays (prepare, make, check and then move the product on). The U shape would be good to logically follow the manufacturing process (from the material to the completion of the product). Also, encouraging cross departmental teams would significantly improve the relationships between Packard's customer (ANNUM), supplier, and logistics (if any).