

Executive Summary

To address the current problem with the IT resolution process I applied the DMAIC process and used the following tools: Project Charter, Process Flow Chart, CTCQ Tree Diagram, Trend Chart, 5-Why Analysis, 2 Means t-Test, Corrective Action Matrix, Standard Work, Lessons Learned, and the Project Closeout. As a result of the analyses conducted, I was ultimately able to identify the true root cause of the problem; there is no organized system in place for Jose (IT) to monitor all active reported issues. After identifying the root cause of the problem, I was able to propose an appropriate solution, identify the characteristics the solution should have, and create documentation for the implementation and maintenance of the solution. The implementation of an organizational/ticketing system should address the current problem and help achieve the initial project goals to improve IT resolution productivity and transparency.

DEFINE

Tool 1:

PROJECT CHARTER

Project Name: (IT Support Productivity Improvement)

Business Location: (Infiniti of Thousand Oaks, CA)

Client: (Jose Luis Huerta Martinez Jr.)

Project Description: (IT Support Productivity Improvement)

Objectives: (To increase productivity regarding the turn-time of issues reported to the IT department at the initial of Thousand Oaks describing)

Problem Statement: (The initial of Thousand Oaks described have been complaining about the delay they have been experiencing regarding issues they have reported to Jose (IT department). End-users have been complaining about the long turn-around times for issues to be resolved. Jose (IT) has been noticing that some issues are not being taken as long as they have been. They also complain about the lack of communication and transparency between the IT department and the end-user during the resolution process, claiming they would like to know what's going on keeping their notifications and how it's progressing as to why it's taking so long at all)

Deliverables: (IT Support Productivity Improvement)

Scope: (Improving the current IT process. Infiniti of Thousand Oaks IT department)

Project Scope (to IT): (Improves the time it takes to resolve all IT issues reported from Infiniti of Thousand Oaks employees. Understands existing IT processes, identifies potential improvements, and provides recommendations to IT.

Project Scope (to End-User): (Improves the time it takes to resolve all IT issues reported from Infiniti of Thousand Oaks - Employees, Infiniti of Thousand Oaks - Customers)

Milestones: (10)

Completion Dates: (10)

Measure: (Faster reduction turn-times for issues, 1 business day avg. turn-around, keep users in the loop)

Impact: (Improved business productivity, improved customer satisfaction)

Project Completion: (3/14/19)

Expected Business Benefits: (10)

Quantity: (1-TIME)

Timeline: (1-YEAR)

Explanation: (Businesses improve resolution turn-around time and transparency for issues submitted to the IT department, increasing their productivity. By having a formal method for tracking issues are having their issues resolved faster and in-turn will increase overall employee productivity throughout the year)

Team Members: (10)

Project Manager: (Alex Huerta, Jose Luis Huerta, John Rendell)

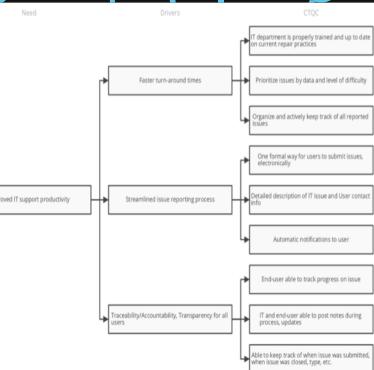
Expected Resource Needs (Internal/External): (10)

Impact: (No impact to my cost. Improving the current IT process could involve a complete re-design of the current structure and end-users (employees) may have trouble adjusting to new process and guidelines.)

Prepared By: (0)

Date (Last Revision): (2/27/19)

Revised By: (0)



ANALYSE

Tool 5: 5-Why, 1-How

Why Tool Selected: The 5-Why analysis is used to move past potential indicators and comprehend the true root cause of a problem. According to Lean Six Sigma practices, by asking "Why?" five times, successively, you should be able to dive into a problem deeply enough to understand the ultimate root cause. After identifying the weak points in the current process with the Process Flow chart and CTCQ diagram, I decided to conduct the 5-Why analysis to uncover the true root cause.

Failure Mode: End-users' issues reported to the IT department are taking too long to resolve.

Department or Area	
IT Support	Equipment

5-Why Analysis

Why #1: In IT, some issues take longer to resolve than others. At times Jose doesn't prioritize issues by difficulty, which could be useful and improve his turn-around times. End-users typically wait some time for Jose to address their needs.

Why #2: A sufficient amount of time is wasted trying to contact the IT department and making sure the issue is in their radar.

Why #3: The lack of communication between Jose (IT) and the end-user can often cause Jose to forget about issues mentioned to him and fall off his radar.

Why #4: There is no organized way to submit issues, which makes it harder to contact IT, relay the issue at hand, and provide status updates to the user during the process.

Why #5: There is no organized system in place for the Jose (IT) to monitor all active reported issues.

Conclusion: At the 5% level, do not reject the null hypothesis. The mean of 'Ticketing Queue' is less than or equal to the mean of 'Regular'.

Null Hypothesis: The mean of 'Ticketing Queue' is less than or equal to the mean of 'Regular'.

Alternative Hypothesis: The mean of 'Ticketing Queue' is greater than the mean of 'Regular'.

Hypothesis Test:

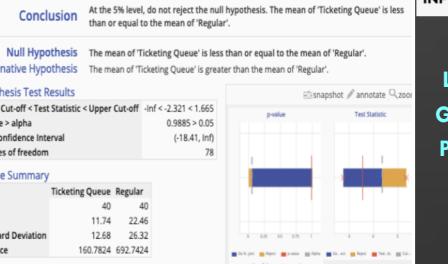
Lower Cut-off: Test Statistic < Upper Cut-off
 $t = -2.321 < 1.665$
 $p-value > \alpha$
 $0.9885 > 0.05$
(-18.41, Inf)
95% Confidence Interval
Degrees of freedom
78

Sample Summary:

Ticketing Queue	Regular
Count	40
Mean	11.74
Standard Deviation	12.68
Variance	160.7824

Tool 6: 2 Means t-Test

Why Tool Selected: As a result of the 5-Why analysis, I found out that there is no organized system in place for Jose (IT) to keep track of all active reported issues. In order to find out if the implementation of an organizational/ticketing system will increase productivity regarding turnaround times for issues submitted I decided to conduct a 2 Means t-Test. Calculating the average turn-around time of all issues recently reported, then by adjusting the time for issues that could have been resolved quickly by an organizational/ticketing system, and comparing it to the new average, I should be able to see if it will decrease the turnaround time.



Interpretation: Using the same data collected for the trend chart, Jose provided me with the accurate closing times of each issue, which he had to manually record. After Jose closed all the tickets, he collaborated with me to identify how much time he could have saved on specific issues, had there been an organizational/ticketing system in place. After collaborating, I had two sets of data, the "Regular" turnaround times, and the "Ticketing Queue" turnaround times (represents turnaround times if there is a system in place). At first glance, we saw that the average turn-around times and standard deviations for "Ticketing Queue" were significantly lower than "Regular", roughly 50%. To confirm our initial suspicion that the implementation of an organizational/ticketing system will increase productivity, I conducted the hypothesis test above for the two means. With a P-value of 0.9885, at the 5% level, we do not reject the null hypothesis. The mean of "Ticketing Queue" is less than or equal to the mean of "Regular". Given the results, it would be in the best interest of Infiniti of Thousand Oaks to implement an inexpensive organizational/ticketing system.

Tool 8: Standard Work



INFINITI

INFINITI OF THOUSAND OAKS

LEAN SIX SIGMA GREEN BELT MINI-PROJECT FOR ITP

303
IT SUPPORT
PRODUCTIVITY
IMPROVEMENT
PREPARED BY ALEX
HUERTA
3/14/19



IT Support Ticket Queue

IT monitors and updates issue(s) DAILY, keeping users up-to-date.



Tool 10: Project Closeout

Why Tool Selected: The Project Closeout is the process of confirming with the customer of the project that their requirements have been met and no further development processes are necessary. I chose to use this tool last in my project because it's one of the best ways to end a project, leaving instructions on how to maintain and service the new process.

Signature Block

Project Manager: Alex Huerta

Date: 3/15/19

Customer Representative: Jose Luis Huerta Martinez

Customer Contact: Infiniti of Thousand Oaks

Phone: (866)278-9955

Target: Value Date

Requirement: Continue to ensure that end-users adhere to the new IT support system process and abandon all behaviors from the outdated system.

Issue Description: Fully describe issue, please include what process you were doing at the time issue occurred.

Fix It

-----ONLY CLICK ONCE-----

Thank you for your cooperation.

Task List:

- Fix IT
- ONLY CLICK ONCE-----
- Thank you for your cooperation.
- Send Us



Tool 4: Trend Chart

Why Tool Selected: To better understand the performance of a process, it is first necessary to examine data from that process. Displaying data over time is one of the better ways to do so. Trend charts are used to show trends in data over time, particularly during the measure phase of the DMAIC cycle. I chose to use this tool to measure how many issues are reported to the IT department to understand the magnitude of the work load the current process faces, in order to recommend an appropriate solution later on.

Interpretation: I partnered with Jose (IT department) to manually record all of the issues that were reported over a two-week period (2/13 – 3/1). The trend chart shows that there was a total of 40 issues reported, the chart also displays how many issues were reported each day in the two-week period. After analyzing the data, Jose and I determined that the IT department doesn't face a relatively high workload. There were a few days where no issues were reported at all and there were never more than 6 issues reported in a day. The workload Jose faces would be described as minimal in the industry, however, when you are just one person it can be a lot. As far as recommending potential solutions, there should be no need for expensive software/hardware, as the current workload does not merit it.

Interpretation: The two components above are the main practices that need to be followed by the IT department and end-users. Jose (IT) will need to ensure that he monitors and updates all issues, DAILY, keeping users up-to-date by providing notes and status updates. On the other side of the IT support process all end-users must submit issues to the IT department by filling out the electronic tickets that will be sent to the ticket queue, providing contact info, an issue description, and urgency level. The last task is for Jose (IT) to periodically check the average turn-around time for issues, via the ticket queue, to ensure compliance with process goals.