

Training Process Standardization in the Configuration of a Mobile Marketing Tool using PDCA Methodology

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Abstract — *For the last few years, mobile marketing has become a very powerful tool to improve business revenues. This is an extension of internet marketing, with more people spending time on their mobile devices and less in their own computers. There are a few different approaches to mobile marketing but the most common is via text message promoting people rich content that they are willing to pay or get noticed. In this project will be implemented a Standard Operating Procedure using PDCA Methodology (Plan Do Check Act) to ensure every employee in some country that works in the company perform the same task in the best way to do it in the less time possible. That way, company will have a better personnel performance and less time and money spend in training for new employees. This project will help to obtain better performance metrics and also new quality standards.*

Key Terms — *Mobile Marketing, PDCA Methodology, Standard Operating Procedure, Work Standardization.*

COMPANY BACKGROUND

XYZ Company turned mobile home screen marketing into a commercial success. Bellwether products LiveScreen and Active LockScreen are deployed by over 50 mobile operators worldwide, used by 140 million subscribers and enable billions of transactions annually, closing the loop between mobile marketing and mobile commerce driving the transactions for virtual to physical goods. The company partner with operators and enable fully managed services that enable an interactive communication channel with consumers on their mobile devices. The system is a disruptive

innovation that has helped us in making this vision into reality and provides consumers with interesting content, services and products that are made visible on the mobile home screen at the right time based on their location and their personal choice.

Research Description

XYZ Company is multinational which means there is a lot of diversity: customs, traditions, and also languages. One of the main problems is when recruiting new employees since the main offices are located in Israel. The training begins with two weeks in the headquarters and subsequently the employee continues learning from home by online assistance. The team continues to assist the new employees while learning to use the local tool called Media Manager until it is fully understood.

Research Objectives

The objectives for this project are:

- Reduce training costs by 35 %;
- Reduce the training time by 50%;
- Define processes and guidelines;
- New Training for the employees.

Research Contributions

With the project implementation, the company will obtain for employees, more clearly definition of what they need to perform, improvement of the actual performance, training for the new standard operating procedure, comply on time for all the configurations and reduction of training.

LITERATURE REVIEW

As mentioned the procedure for PDCA begins in 1994 [1], the PDSA (Plan-Do-Study-Act) cycle was accompanied by three questions to aid in the

planning step of the PDSA Cycle. In 1996 and 2009 publications, the PDSA cycle was broadened to include strategies and methods to develop, test, and implement changes that would result in improvement. This version was called the “Model for Improvement”. As an introduction to a framework for improvement, the model for improvement has been found to support improvement efforts in a full range from the very informal to the most complex.

The resulting PDCA cycle has four steps cycle for problem solving includes planning (definition of a problem and a hypothesis about possible causes and solutions), doing (implementing), checking (evaluating the results), and action (back to plan if the results are unsatisfactory or standardization if the results are satisfactory). The PDCA cycle emphasized the prevention of error recurrence by establishing standards and the ongoing modification of those standards. Even before the PDCA cycle is employed, it is essential that the current standards be stabilized. The process of stabilization is often called the SDCA (standardize-do-check-action) cycle. Ishikawa [2] stated: “If standards and regulations are not revised in six months, it is proof that no one is seriously using them.”

The Procedures for the PDCA [3] are described as follows:

- Plan
 1. Defining the problem or issue that requires redress;
 2. Defining the ideal or desired state;
 3. Data collection to determine the problem in terms of deviance from the ideal state;
 4. Ascertaining the root cause for the problem or issue;
 5. Evaluating the various possible interventions to solve the problem and their possible outcomes;
 6. Selecting the best possible intervention;
 7. Scheduling the corrective process by planning for resources, determining people responsible for the corrective action;
 8. Mapping the corrective process through flowcharts, control charts, and other tools.
- The “Do” phase of PDCA for quality management concerns with implementation of the selected solution to reduce the deviation or solve the issue. The implementation of the selected solution is initially on a small scale to check its effectiveness. Successful implementation results in across-the-board implementation. This phase also covers training the employees for the adopted quality intervention.
- In traditional quality management schemes, the “Check” of PDCA became synonymous with quality inspection. The methodology entails defining workmanship standards such as upper specification limit (USL) and lower specification limit (LSL) and then comparing the product specifications against such standards. The inspection would weed out unacceptable products.
- It is time to standardize the process improvement and implement it across your business practices. During this final phase of the PDCA cycle, you will want to:
 1. Identifying any training needs for full implementation of the improvement;
 2. Fully adopt the solution for process improvement;
 3. Continue to monitor the solution;
 4. Improving the solution through further implementations;
 5. Finding other opportunities for improvement.

PDCA improvement methodology, like Total Quality Management (TQM), is a continuous method. That means that don't stop working through the PDCA cycle once a goal it was achieved. Instead, the user "lather, rinse, repeat" and continually finds ways to improve products, services, and processes over time. This is why is very important to always think in seek perfection in the process.

METHODOLOGY

Using the PDCA cycle as a methodology is the best way to have a process with continuous improvement. Standardizing the actual process for this is recommended to build a Standard Operating Procedure (SOP). This type of standardization converts a process that, when done correctly, humanizes the workplace, eliminates overly hard work, and teaches people how to perform experiments on their work using the scientific method and how to learn to spot and eliminate waste in business processes.

Other techniques used in conjunction with PDCA includes [4] 5-Whys, which is a form of root cause analysis in which the user asks "why" to a problem and finds an answer five consecutive times. During this chapter, it will be explained in more detail how to standardize an operation to be in a continuous improvement and an explanation of how it can be use 5 whys to determine what is the real problem in the actual process.

Standard Operating Procedure (SOP)

A SOP [5] is a set of written instructions that documents a routine or repetitive activity followed by an organization. The development and use of SOPs are an integral part of a successful quality system as it provides individuals with the information to perform a job properly, and facilitates consistency in the quality and integrity of a product or end-result. The term "SOP" may not always be appropriate and terms such as protocols, instructions, worksheets, and laboratory operating procedures may also be used.

SOPs detail the regularly recurring work processes that are to be conducted or followed within an organization. They facilitate consistent conformance to technical and quality system requirements and to support data quality. SOPs are intended to be specific to the organization or facility whose activities are described and assist that organization to maintain their quality control and quality assurance processes and ensure compliance with governmental regulations.

The development and use of SOPs minimizes variation and promotes quality through consistent implementation of a process or procedure within the organization, even if there are temporary or permanent personnel changes. SOPs can indicate compliance with organizational and governmental requirements and can be used as a part of a personnel training program, since they should provide detailed work instructions. It minimizes opportunities for miscommunication and can address safety concerns. When historical data are being evaluated for current use, SOPs can also be valuable for reconstructing project activities when no other references are available. In addition, SOPs are frequently used as checklists by inspectors when auditing procedures. Ultimately, the benefits of a valid SOP are reduced work effort, along with improved comparability, credibility, and legal defensibility.

RESULTS AND DISCUSSION

This section presents the problem analysis and improvement results using Standard Operation Procedure.

5 Why's Technique

The 5 Whys is a technique used in the Analyze phase of the Six Sigma DMAIC (Define, Measure, Analyze, Improve, Control) methodology. It is a great Six Sigma tool that does not involve data segmentation, hypothesis testing, regression or other advanced statistical tools, and in many cases can be completed without a data collection plan. This project was started thinking in what can be the problem for having different ways to configure in Media Manager. Figure 1 shows that lack of standardize process is the problem root cause.

Current Process Analysis

A survey performed shown in Figure 2 with all people in charge of configuring in the Media Manager for Latin America and the results obtained by format were presented.

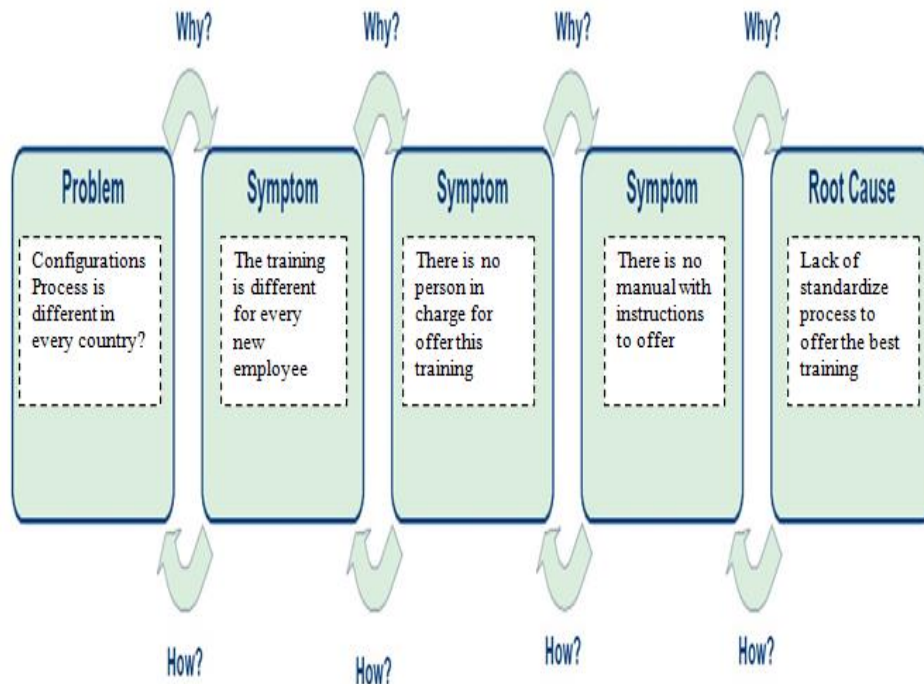


Figure 1
5 Why's Root Cause Determination

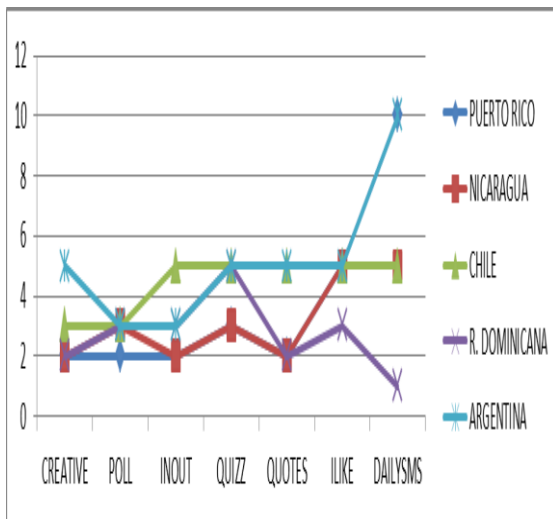


Figure 2
Employee Survey

At this moment, the company shows a big variation of processes in format configuring. These formats are configurable the same way in any country. It is just a matter of the employee knowing the correct way of configuration in order to be able to use their working hours to its maximum. After analyzing the previous data, it

was shown that Nicaragua is the country that does not show an extensive variation in configuration. The Nicaragua experience can be used for the defining and development of a format template. This way, it will take less time in uploading the new content into the new platform.

Format Templates

To accelerate the learning process for all employees a format template in Table 1, 2, 3, 4 was created to ensure quality in content plus reducing time in configurations.

Table 1
Example of Creative Content

Nr.	Teaser	length	Menu 1	length	Message	length
1		0		0		0
2		0		0		0
3		0		0		0

Table 2
Example of Poll Content

Nr.	Teaser	length	Menu 1	length	Menu 2	length	Menu 3	length
1		0		0		0		0
2		0		0		0		0
3		0		0		0		0

Table 3
Example of InOut Content

No.	Teaser	Length	Menu 1	Length	Menu 2	Length
1		0		0		0
2		0		0		0
3		0		0		0

Table 4
Example of Quiz Content

Nr.	Teaser	length	Menu 1	length	Menu 2	length	Menu 3	length	correct answer
1		0		0		0		0	
2		0		0		0		0	
3		0		0		0		0	

Standard Operating Procedure

Once the content is prepared by format explained previously is time to start the configurations in the Media Manages. But, before that is important to be connected in the Virtual Private Network (VPN) correctly that will help to be log in the carrier server.

In this server is necessary to have the access codes to established direct connection to the promotions configurations tool. With this steps completed successfully the user can start to make all the programming for the content transmissions.

Secondly, it is important to save in the media manager a notepad the XML created before with the final content review and approve by the copywriter.

Creation of the plug will have inside those contents for transmission with the charging short code if the content deserves some charging to the user, if not, the short code will be free. To create

the pattern of delivering those contents is necessary that the program created after the plug has established the hours of delivering for the day.

These are some of the basic terms used in mobile marketing:

- **Short code:** numeric numbers (typically 4-6 digits) to which text messages can be sent from a mobile phone. Wireless subscribers send text messages to common short codes with relevant keywords to access a wide variety of mobile content.
- **SMS (Short Message Service):** A standard for telephony messaging systems that allow sending messages between mobile devices that consist of short messages, normally with text only content (Text Message).
- **Keyword:** A word or name used to distinguish a targeted message within a Short Code Service.

In order to have all steps written in a document for future employees that will have to learn how to configure in the Media Manager an operational explanation is provide in this project and is also approve by the company for internal use (Figure 3).

CONCLUSIONS

PDCA tool provides a structured way for business improvement with a road map for solutions. This technique allows the identification, evaluation and categorization of opportunities under their impact and difficultly.

After a deep analysis performed, to the structure way of configuring in the Media Manager obtain a cost reduction of 50%. It shows a higher cost reduction in comparison with the initial estimate of two weeks in training. In addition, the implementation achieves the elimination of non-added value and standardized work, never compromises the quality and compliance.

To keep a successful implementation of the Standard Work, it requires training and monitoring program that the company accept to take care. Due a successful project implementation, this achievement will be extended to all other services.

STANDARD OPERATING PROCEDURE

Operation: Media Manager Configuration				
Equipment: Media Manager Tool			Note: To start Configuring is necessary to complete the following steps: Login to Citrix, Remote Desktop Connection and select Media Manager for your country.	
Element Number	Formats	Process Configuration	Additional Tools	Avg. Time for Configuration
1	Creative	<p>Plug Tab → Select Type of Folder for Content → Year=2013 → Type of Content → Month → Right Click Create New Plug. Fill all the form and press OK. Then, right click on the created plug and Upload Content.</p> <p>Program Tab → Find the Automatic Program that is created after the creation of the plug and move it to the folder that is configuring to be live for Creative Content.</p> <p>After that step will be broadcasted.</p>		1 Minutes
2	Poll	<p>Message → Application → Polls → Select Folder → New Poll Message → Create → Ok.</p> <p>After that step will be broadcasted.</p>		1 Minutes
3	Inout	<p>Plug Tab → Select Type of Folder for Content → Year=2013 → Type of Content → Month → Right Click Create New Plug. Fill all the form and press OK. Then, right click on the created plug and Upload Content.</p> <p>Program Tab → Find the Automatic Program that is created after the creation of the plug and move it to the folder that is configuring to be live for Creative Content.</p> <p>After that step will be broadcasted.</p>		1 Minutes
4	Quiz	<p>Plug Tab → Select Type of Folder for Content → Year=2013 → Type of Content → Month → Right Click Create New Plug. Fill all the form and press OK. Then, right click on the created plug and Upload Content.</p> <p>Program Tab → Find the Automatic Program that is created after the creation of the plug and move it to the folder that is configuring to be live for Creative Content.</p> <p>After that step will be broadcasted.</p>		1 Minutes
			Total Avg Time	4 minutes/ 1 content in all formats
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Figure 3
Developed Standard Operational Procedure (SOP)

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