A Project/Quality Manager's Responsibility is Not Turning "Quality" To Be A Very Expensive Paper Weight

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Abstract: Now a day's, Pressure to relinquish the software is superseding the software testing. A project or product is being relinquished without concentrating on testing. This is transpiring to capture the market from the competitors. Hence its often a best practice across different organizations QA is verbalized to be a supplemental or overhead to the organization. No matter whatever the stake holder's defining the QA, it's the project manager or the Quality manager's job not to make it a very extravagant paper weight. In general, QA is not a sumptuous area being one of the phases in Software Project management. QA turns extravagant only if it is neglected or ignored. This paper discusses about different techniques, how better they could be taken care w.r.to Quality. These methods avail a Project or Quality manager to work on QA for not making it as a very sumptuous paper weight.

Keywords— Project/Quality manager, Project management life cycle, Quality

I. INTRODUCTION

What is Quality? Why individuals worry about Quality?
Quality is the only one single or puissant word which decides the worth of a product or accommodation provided to a terminus customer.

Let's take a general example; we are orchestrating to purchase a Television. Then what's our next step and for what we would be probing for afore a purchase?

We/you would be going for the following

- What are the fortified features and how they function?
- How better the picture is visible?
- Does the sound output is pellucid?
- How it performs when is perpetually visually examined for long time?

The above cognate questions can be answered orally by the manufacturer if it's not passed thru Quality. A manufacturer cannot substantiate or authenticate the information (s) he is providing to the customer. This ends up in higher customer dissatisfaction and leads to immensely colossal encumbrance for the manufacturer. If the manufacturer has undergone the QA cycle in the respective manufacturing cycle (s) he can provide authenticated or convincing information to the cessation customer by comparing the other competitor products additionally. This avails in gaining the cessation utilizer or customer confidence on the product.

Homogeneous way, Software project management has to undergo an efficacious QA cycle under the development phase. This is to ascertain that the product is exhaustively tested for the following
- Functionality.
- Performance.
- Security.

Working out on the above mentioned process or procedures prosperously lead to lower the encumbrance to the company on Quality.

II. ROLE AND RESPONSIBILITY

A Project/Quality Manager w.r.to Quality management is to consummate the respective role require the clear understanding of the discipline of the testing. Quality Manager has to efficaciously implement the test process in parallel to the traditional leadership or managerial role.

Here this denotes, a Quality Manager has to do
- Manage
- Implement and maintain efficacious test process.
- To achieve the primarily addressed two points a quality manager require to engender the following
- Infrastructure

- Cost-efficacious test framework
- The test Infrastructure designates fortifying robust communication.

Key Responsibilities

Quality manager is the person who holds the responsibilities for

- Defining the QA role and implementation.
- Defining the scope of testing per release cycle.
- Deployment of test framework and managing it.
- Implementation of felicitous metrics.
- Orchestrating, Scheduling and Managing the test effort.
- As a QA manager, managing the resources like Team members, Implements and Test process.
- Retaining adept personnel.

Figure – 1 Responsibilities of a Quality Manager

In other words, a QA manager must limpidly define the testing role and need in the organization. This could be achieved by perpetually monitoring the test mandate like, in a particular release analyze the defects, manage them after recording and obviate them. This is to be carried out for each and every relinquishment, which avails in amended understanding of the QA in the organization.

It's the time for the Scope: Manager has to communicate and implement efficacious managerial and testing techniques. Teams and Superior's as well peer's prospects need to be set accordingly in the relinquishment timeframe. The respective prospects are to be defined in terms of functional modules deemed to be in scope or out of the scope.

When defining scope the Quality manager's responsibility is to maintain all the peer teams and others in Sync that they get pellucid understanding of what is being tested and what is not in that respective release.

Manager is additionally responsible to employ opportune testing framework or test architecture by meeting the stake holders and organizational requisites.

Responsibility in obviating defects:

Haplessly, the construal of QA is interpreted differently by several organizations. It's like the testing should be executed afore the product is development or getting to be consummated, withal at the same time the respective tests can be performed after the product is developed and is yare for deployment.

Test before the Product is developed:

In continuation to the aversion of defects occurring, quality manager has to ascertain the test is to be conducted prior to the product is consummately developed. A quality manager can work out in different ways out of which the reviews are most potent and efficacious approaches. This additionally leads to the cost-efficacious. Out of different software development life cycles as a component of project or product, the testing team can be provided with enough deliverables for the review process to be in place. And the Quality manager can take care of the reviews in formal methods like technical and peer reviews.

In the Software development life cycle, the following are the enough deliverables are supplied, which are

1. Product/Project Requirements
2. Function specification which consists of Design details.

Quality department is the one which can be actively involved from the requisites designations review process. This avails in building or constructing defined test methodologies and at times the defects are found, which ameliorates Quality in the requisites and design phase.

With the Proposed method, we can involve Quality right from the requisite phase and this avails in finding the defects right from the requisites phase. This approach leads to the best utilization of the test organization always.

Figure – 2 Phases Vs Life cycles

The two blocks of the Coding refers to, first one is for the genuine code development of the product or project. The second block refers to the bug fine-tunes which are found as a component of the test cycle. Quality manager once after completion of bug fine-tunes he/she runs a regression or lucidity tests concentrating the area of bug fine-tune.

In the proposed method, the following are performed predicated on the maturity levels of the product..

- Requirements Review
- Design Review
- Unit testing
- Integration testing
- Functional testing
- System testing
- Final acceptance testing

1.   Requirements Review:

This is the best phase for the development team to get involved right from this phase. The development phase can analyze the requisites. As a component of analysis, Project/Quality manager ascertain that the requisites are congruously attended. The quality team has to test whether the requisites are pellucidly defined and are not having any contradictions between each. Each requisite has to be maintained in single instead clubbing all the cognate ones.

And once the requisites are concurred upon, they require to be opportunely mapped to the subsisting/legacy test cases. If there are no cognate test cases for the requisites, the Quality manager has to work on developing the incipient test cases to match the requisites.

2.   Design Review:
In this phase the Quality team has to check the design of each modules and the major part of the code flow. This avails in developing incipient test cases as per the code flow. The pseudo code definition of the design team avails the quality team to find/engender the test cases such that the testing is done vigorously on the proposed functionality.
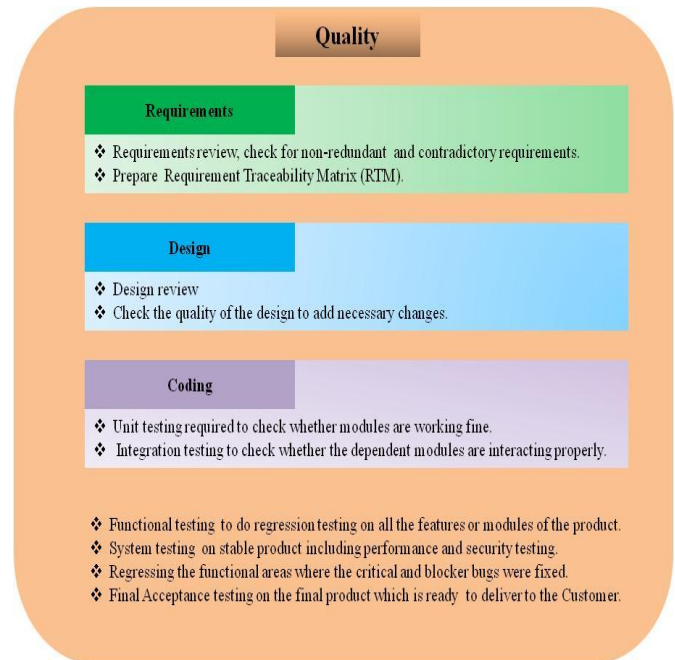

Figure – 3 detailed approach on proposed method

3.   Coding

Unit testing and Integration testing are the key phases of Quality management. These tests methodologies avail in assuring that the minimum things are not broken and the product is stable to go for the Functional and system testing phases.

4.   Quality Assurance

In this phase the Quality team will have full-fledged engagement in testing the code and the product. Here in this phase the Quality manager has to care certain things like, the blockers and critical bugs are not gating the tester. Functional verification of the product refers to the major functionalities are congruously tested. System testing, this fixates on permeate the entire system and the inter connectivity between each modules. The cognate system tests are performance and security.

III.   EXPENSIVE PAPER WEIGHT

Below mentioned are the two different quandaries or challenges for a Project or Quality manager which would be over encumbering him/her as a component of Project management. Both of them might resemble the same but with minor differences.

A. Tester becoming a more expensive paper weight:

A Quality manger has to ambulate around all the test engineers. Are they authentically working? Running the software, making plans and updating them or doing something else?

This else is the major killer!

This might be working on some other applications or troubleshooting the current product or waiting for the build, waiting for some implements. Additionally sometimes there may be a chance like, waiting for a decision maker to decide "What is Right?" to go ahead on testing. These things end up in resulting to manifest lot of time in spending at Emails, Hanging out at cafeteria or at some buddy's cubicle and plenty of web surfing.
Here, we can verbally express the tester is blocked.

This might be working on some other applications or troubleshooting the A project/Quality manger is the one who has to pre-empt in analyzing what are the things which are blocking the tester. Estimate opportunely the reasons for the slow-down of the project.

Most of the times, quandary is systemic. Quality manager sometimes have to realize that many of its people are sitting around, waiting for work. This leads to increment in costs and expenses which end up in layoffs.

Who is responsible for this? How to show that it's not the cost of Quality department?

A Quality manager is the one who is to take care in finding the systematic blockage and fine-tune it. Manager has to work with tester/quality department to decipher to knock down the obstruction or bring the quandary into everyone's attention. And has to bring out this is not being mislabelled as a test cost. At the same time make the tester to do something which is more actionable.

At least three strikes can make a quality manager make him/her not out. A tester can always influence outcome of the project, even if the system forces keep them down. Conventionally it is possible to make some progress with a vigorous and can-do culture
The second aspect of culture is some folks might not be blocked. They just don't want to work that hard. If the manager just walk with them around and ascertain that same people or not working ever and ascertain they are not blocked. Identify the low performers then corrective action can be taken.

Removing Barriers for high performance:-

The barriers are like most of the testers who are not making authentic progress and not making the software to run are to be identified. Then the manager has to ascertain all are doing genuine testing, running experiments to check if software will work, and they are doing other things? And break the work into major categories, like including testing set of documentation status meetings and leading tasks. With this the manager can take care of software not getting blocked.

Most of the times, it is unconventional that 80% of test team time is being spent besides testing. A quality manager has to bring it down to, to a good percentage just taking a diminutive chunk of it. With this the productivity increases after habituating incipient methodologies as well as technologies and adaptive techniques.

These artifices are to finding the waste and eliminating them. Of course this required some will power as well decisiveness.

B. If QA is blocked/Progress is staled:

A quality or project manager can work out on the following techniques to restart the staled program.

1. QA Culture:

Work proximately with the tester to decipher or knock down the impediment. Else redirect the tester work on more actionable items, which are more consequential tasks. Incentivize the tester to develop like, "I CAN DO" and find the possible ways to make an obligatory progress.
Sometimes few folks in the team might not be blocked but they are habituated and just find ways to elude and are lackadaisical to work that hard. Quality or Project manager has to identify them as Low performers and need to take the corrective action.

2. Only Testing

Identify the testers who are doing other things and not the testing. The other things can be, Meetings, documentation, establishing test environments. Of course these are not essential at hand. A quality manager has to ameliorate the testing time by lower other tasks and highering the testing. Work on status reports for task break down and identify or check for the time taken on authentic testing. If the tester is consistent on other things its more or less leading to non-subsidiary work and the Project or Quality manager has to have some will power in taking the decisions.

3. Pace up the test process

Check for the testers, whether they are
- Trying to narrow down or reproducing the bug.
- Running behind the issue/bug.

- Working hard on explaining or narrating the bug.
- Writing a bug report.

The above all exist only if a bug exist. These might kill the actual testing time. A quality or project manager has to work on getting the better quality and stable builds when testing is in critical or peak stage.

4. Cost control

Work closely in maintaining the required and proper QA infrastructure. Involve actively in preparing tests. Conducting or performing reviews.

5. Coach and Mentor the team

A project or quality manger has to always develop a high value people in the team. Coach each and every team member to achieve the prosperity. Always have a close relationship with the team by conducting one-on-one meetings. Define and provide a clear vocation path. Always plan the work congruously and assign the ample work at any single time. A QA manager has to understand the overall QA capacity. Most consequential is to work on People management in more.

IV. SIX DIMENSIONAL QUALITY PERSPECTIVE

Six dimensional quality perspectives is the one which verbalizes about the Discussion, Accumulating, Positives, Negatives, Ingenious, and Replications.

X, Y, Z are the positive perspectives and the good things which are achieved and X', Y' and Z' are the amendments or suggestions to carry further from the edifications of the past. Below are the concise explications of each perspective.

About Discussion, it's clear that a project or Quality manager has to concentrate in finding the objectives of the last project execution. Like, what worked well for us? What didn't work well for us?

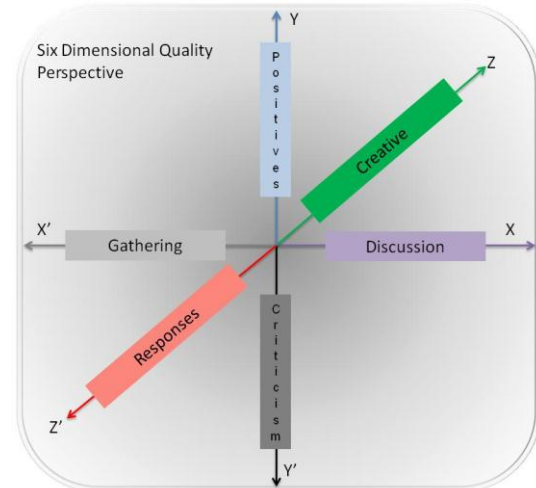Accumulating is a kind of accumulating information from the precedent executions.

Figure – 4 Six Dimensional Quality perspectives

Positives are mostly accumulating the Good information. This is homogeneous to, a certain team of members or a Quality or project manager verbalizing about the good things of past.

Reprehension is nothing but a Project or Quality manager or certain team members verbalizing about the deplorable things transpired in the anterior executions. And it's withal like pointing to the bottle necks by bringing up the potential quandaries.

Ingenious is like solving the potential quandaries. Actions are to be taken for improvising the process going further or forward.

Replications are emotional. This is a kind of sharing the emotional replications that could turn into action items. And always keep the things simple.

V. COST CONTROL METHODS

Cost of Poor Quality is incurred when are where a defect comes into light. This is a prevalent transpiring during the Project life cycle and withal post release.

Failure costs might go over extravagant predicated on the defects. And these are additionally in different forms. They are mentioned below.

1. Developer efforts on diagnosing the defects and design or code reworks to correct them.
2. Schedule slippage, because of testing/QA not covering the defects which require re-work and re-testing.
3. The final and important one is Loss of Customer reputation in the market.

To surmount the above failures a Project or Quality manager has to work on the other feasible techniques to control the failure costs.

Below mentioned are the feasible techniques which cost less than the above failure costs.

- Conducting peer reviews (informal)
- Structured personal reviews
- Bug review meetings.
- Acceptance testing.
- System and Beta Testing.
- Walk Through the team.

With this logical conclusion a project or Quality manager could find themselves in a safer zone which shifts the Quality cost to the incremental approach cost.

Hence the Quality cost which is becoming over extravagant gets reduced significantly and the incremental approach cost would be more prognosticable and manageable.

Quality costs can be utilized as an implement which is utilizable for a Project or Quality manager to control the projects and assure the overall prosperity!!!

VI. CONCLUSION

I have discussed four different techniques, which are
1. Test before the product is developed
2. Tested becoming an expensive Paper weight
3. Six dimensional Quality perspective
4. Cost Control methods.

A questionnaire with the above mentioned techniques was circulated among Software teams in different organizations. The result of commixed replications integrated more confidence in going ahead with the four techniques to control the quality cost and make the Quality as a non-sumptuous paper weight.

Rigorous testing is to be conducted in the relinquishment time and QA is to be involved right from the scoping or Requisites phase.QA team is to be managed differently in finding the ways to reduce the nonessential work, work on blockages, and invest more time in authentic and potential testing. With the avail of six dimensional quality perspective project or Quality manager has to concentrate on the past releases, Good and Deplorable things transpired and amend the latest and successive plans. Cost control methods are more efficacious comparatively as the Project or Quality manager were concentrating more on building Quality infrastructure which integrates worth and reduces the final overburdens.

With this a Project or Quality manager can turn the Quality as a non-extravagant paper weight without blocking the software distribution.

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Certificates & Achievements under Quality Assurance

- ISTQB - Advanced Level Functional Tester, Reference: ITB-CTAL-000107
- ISTQB - Foundation Level Certificate, Reference: ITB-CTFL-002840
- HP - QTP Certification for Automation Tesitng
- HP - QC Certification for Test Management tool.
- Certified Scrum Master(CSM) certification from GAQM, Reference: Cert # 87754
- Out Standing Performance Appreciation CoE certificate received from FARMERs Insurance – CLIENT

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