Quality in Agility and Agility in Quality

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Introduction:

Both TQM and Agile practitioners advocate customer focus and continuous improvements as a principle belief to achieve quality of a product or service that comes as a collaboration in a team of people driven by excellence as a purpose. However, there are some principle differences between the approaches that are taken by both blocks to achieve the same goal. In this paper, I will try to look into what are the similarities in the core belief and values and where are the differences.

Quality in Agility & Agility in Quality

While the quality professionals blame the agile team for not documenting enough, the agile team nag on over planning, micro management and too much documentation to quality teams working with traditional approaches. If we dive into the details, both the blocks are using the similar principle guidance to realize their own purpose. If so, where does the difference? I will try to address the question.

Agile Manifesto:

The Agile Manifesto is a document that identifies four key values and 12 principles that its authors believe software developers should use to guide their work. Formally called the

Manifesto for Agile Software Development, it was produced by 17 developers during an outing in Feb 2001.[Details: https://agilemanifesto.org]

We are uncovering better ways of developing software by doing it and helping others do it. Through this work we have come to value:

1. Individuals & interactions over processes and tools
2. Working software over comprehensive documentation
3. Customer collaboration over contract negotiation
4. Responding to change over following a plan

That is, while there is value in the items on the right, we value the items on the left more.

While the agile manifesto is guiding values, following are the core principles that all agile practitioners thrive to realize to be in business.

Agile Principles and Deming 14 Points with nearest affinity in a row

Agile Principles	**Deming 14 Points**
Our highest priority is to satisfy the customer through early and continuous delivery of valuable software.	Create constancy of purpose for improving products and services.
Welcome changing requirements, even late in development. Agile processes harness change for the customer's competitive advantage.	Adopt the new philosophy.

Deliver working software frequently, from a couple of weeks to a couple of months, with a preference to the shorter timescale.	Remove barriers that rob people of pride of workmanship, and eliminate the annual rating or merit system.
Agile processes promote sustainable development. The sponsors, developers, and users should be able to maintain a constant pace indefinitely	End the practice of awarding business on price alone; instead, minimize total cost by working with a single supplier.
Build projects around motivated individuals. Give them the environment and support they need, and trust them to get the job done.	Cease dependence on inspection to achieve quality.
Business people and developers must work together daily throughout the project.	1. Adopt and institute leadership. 2. Put everybody in the company to work accomplishing the transformation.
The most efficient and effective method of conveying information to and within a development team is face-to-face conversation	Institute a vigorous program of education and self-improvement for everyone.

Working software is the primary measure of progress	Eliminate numerical quotas for the workforce and numerical goals for management.
Continuous attention to technical excellence and good design enhances agility.	Improve constantly and forever every process for planning, production and service.
Simplicity--the art of maximizing the amount of work not done--is essential.	Eliminate slogans, exhortations and targets for the workforce.
The best architectures, requirements, and designs emerge from self-organizing teams	Institute training on the job.
At regular intervals, the team reflects on how to become more effective, then tunes and adjusts its behavior accordingly.	1. Break down barriers between staff areas. 2. Drive out fear.

Quality Management in any Organizations:

Total quality management (TQM) consists of organization-wide efforts to "install and make permanent a climate where employees continuously improve their ability to provide on demand products and services that customers will find of particular value." "Total" emphasizes that departments like production, sales and marketing, accounting and finance, engineering and

design are obligated to improve their operations; "management" emphasizes that executives are obligated to actively manage quality through funding, training, staffing, and goal setting. While there is no widely agreed-upon approach, TQM efforts typically draw heavily on the previously developed tools and techniques of quality control, assurance and improvements.

There is no widespread agreement as to what TQM is and what actions it requires of organizations, however a review of many sources on TQM studies points to following findings:

"Quality is defined by customers' requirements."

"Top management has direct responsibility for quality improvement."

"Increased quality comes from systematic analysis and improvement of work processes."

"Quality improvement is a continuous effort and conducted throughout the organization."

Following tools and techniques have been in action in many TQM implemented Organizations:

1. The PDCA cycle to drive issues to resolution
2. Cross-functional teams or QC responsible to address immediate process issues
3. Cross-functional teams responsible for the improvement of processes over the long term
4. Active management participation through steering committees
5. Use of the Seven Basic Tools of Quality to analyze quality-related issues

Reflection on Deming's 14 points

Deming's 14 Points on Quality Management, or the Deming Model of Quality Management, a core concept on implementing total quality management (TQM), is a set of management practices to help companies increase their quality and productivity.

These total quality management principles can be put into place by any organization to more effectively implement total quality management. As a total quality management philosophy, Dr. Deming's work is foundational to TQM and its successor, quality management systems.

W. Edwards Deming's 14 points are the basis for transformation of industry. Adoption and action on the 14 points are a signal that the management intends to stay in business. aim to protect investors and jobs. These points apply anywhere, to small organisations as well as to large ones, to the service industry as well as to manufacturing. They equally apply to any division within a company and to its suppliers. These points are not a menu you can pick and choose from. Deming intended you use all. They are part of one single philosophy.

Agile, SCRUM & Total Quality Management (TQM)

As SCRUM is one of the most popular frameworks of Agile, We will look into Agility based on the SCRUM framework. SCRUM Team work on iterative sprints in a team to realize common objectives of the company. Thus, the core definition of TQM describes a management approach for long-term success through user satisfaction. At TQM all members take one SCRUM team to participate in the improvement of processes, products, services and the culture in which they work.

TQM is a combined effort from both top management and the SCRUM team to prepare effective strategies. The goal is to provide high-quality products quality to deliver. These should not only lead to user satisfaction, but even exceed user expectations.

Traditional Waterfall method was focused on quality

All activities of one waterfall development method are focused on quality. A lot of documentation is made to guarantee quality and to prevent errors in the future. At SCRUM there

is less attention for this. That is where the focus is on user satisfaction. Quality Assurance in an Agile environment adds something directly delivered to the end customer. By adding TQM to our sprinter activities, quality gets more attention during the process of delivery.

Total Quality Management makes team members excel.TQM allows team members to focus more on quality rather than quantity. It does everything to excel in what they do. According to the Total Quality Management philosophy, user feedback and their expectations are essential. Ultimately, it is about formulating and implementing new strategies to deliver superior products. Ultimately it is about generating higher income and profit for the company. There are many models for Total Quality Management and every one SCRUM environment can select and implement its own model to achieve the higher excellence.

The 8 primary elements of TQM and Relation with SCRUM Team

We can summarize Total Quality Management as a management system for a user-oriented SCRUM team. A team that involves all team members in continuous improvement. The SCRUM team uses strategy, data and effective communication for this. In this way we can integrate quality discipline into the culture and activities. Many of these concepts have been incorporated into modern quality management systems, the successor to TQM. Here are the 8 principles of Total Quality Management. These elements are so defining for many SCRUM teams that they have been adopted as core values and principles within the team.

User oriented

The Product Owner ultimately determines the quality level. No matter what a SCRUM team does to promote quality improvement - training team members, integrating quality into the design

process or upgrading products or services - the Product Owner determines whether the efforts are worth the effort.

Total involvement of team members

All team members participate in working towards common goals. We can achieve overall team involvement if:

1. There is no fear within a team.
2. If empowerment has taken place.
3. If the management has created the right environment.
4. There are high-quality tools that continuously integrate improvement efforts.
5. Self-managing SCRUM teams are a form of empowerment.

Continuous improvement as a culture

An important aspect of TQM is continuous process improvement. Continuous improvement forces us to be both analytical and creative in finding ways to become more competitive. We must be more effective in meeting the expectations of stakeholders.

Integrated system

A SCRUM team often consists of many different specialists. It is the horizontal SCRUM processes that connect these specialists with each other and that are central to TQM. Micro-processes together form the larger processes. All processes together form the primary SCRUM processes that are necessary for the implementation of a Sprint. Everyone must share the vision, mission and guiding principles. Just like the quality policy, objectives and critical processes of the SCRUM team. Team performance must be continuously monitored and communicated.

Every SCRUM team has a unique team culture. It is almost impossible to achieve excellence without a continual improvement as a culture. An integrated system therefore connects elements for team improvement. The goal is to constantly improve and exceed the expectations of users, team members and other stakeholders.

The process is central purpose

A fundamental part of TQM is the focus on process thinking. A process is a series of steps that take over input from suppliers internal/external and convert it into outputs that are delivered to users internal/external. The steps required to execute the process are fixed. We can continuously check whether they are unexpected variations by means of performance measurements.

Strategic and systematic approach to working

A crucial part of quality management is the strategic and systematic approach to achieving the vision, mission and goals of any SCRUM team. We call this process strategic planning or strategic management. It includes the formulation of a strategic plan that integrates quality as a core component.

Communication to collaborate

In times of organizational change, but also during day-to-day work, effective communication plays a major role in motivating team members and aligning them to the core purpose. Communication relates to strategies, method and timeliness. Within SCRUM these are the Daily Stand-up and the Review and Retrospective meetings to communicate on a regular basis.

Review of Agile & Quality Practices

Users and their feedback form the basis of every Total Quality Management model. Simply put: Total Quality Management starts with understanding users, their needs and what they expect

from the SCRUM team. Design flawless processes and systems to collect user stories. Such activities not only help you understand your target audience, but also predict the content of the Product Backlog, User Stories and the Sprint Backlog.

The Total Quality Management model requires careful planning and research. Every total model for quality management integrates user feedback with relevant information. It has effective strategies for building high-quality products or services.

Traditionally, SCRUM operates as a Product Owner as a client in the process. S/He also acts as a channel for users and the team. In many cases, the Product Owner is the only "user" the team has contact with. Teams where TQM is implemented will naturally have more interactions with the end users. This does not alter the fact that the Product Owner retains ultimate responsibility for the quality and approval of the product or services. The consequence of this is that he has to stay informed about what is happening between the team and the end users. The overall user experience with the SCRUM team should be so pleasant that they will ask for the same SCRUM team next time.

Retrospect and Challenges:

One of the challenges that lies in mixing these two similar concepts are some technical terms and value differences that both schools of thoughts are derived from. While the TQM practices focus on tremendous amounts of data, information and records with meticulous planning before doing the work much like in the waterfall model.

Agile school of thoughts works on customer interaction from day one and builds both knowledge as a living document and focuses on short iterative cycles. The value differences sometimes only

wrong understanding and assumptions and cultural difference, bring conflicts and confusion to early practitioners.

Total Quality Management brings more strategy to Agility

We need to evaluate and revise strategies formulated to deliver better quality products from time to time. Users are only satisfied when the products meet their expectations and needs. The product or services must be worth the investment.

Continuous improvement and adaptation of existing processes to user expectations are necessary to achieve better results. Therefore, processes cannot always remain the same. If a user has complaints about certain products or services, you have to look for the cause of the problem. Implement necessary models for Total Quality Management to solve the problem, replace the defective product and services with something of the best quality. Such an effort should be quick, iterative and continually improving in small sprints as a team collaboration working together to realize the best performing organization.

Thus, we can say that both Agility and Quality compliments each other to bring the best in both cultural domains while making a best organization for customers, employees and investors alike

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