

QUALITY MANAGEMENT

Quality's Six Life Cycle Stages

by **Denis Leonard and Rodney McAdam**

A tool referred to as the “quality life cycle” provides a strategic mechanism to chart and sustain quality while proactively countering shortcomings of its implementation, such as stagnation and limited application, which can ultimately result in failure.

The quality life cycle allows characterization and visualization of the various complex stages and dynamics of quality. It allows charting of not only

the current status of quality in an organization but also its historical development or life cycle. The historical data provide an aid for learning based on past strategic decisions and the resulting impacts.

In addition, the quality life cycle can be used to develop scenario planning to assist in determining the most effective course of action for future strategies. In this regard the quality life cycle promotes strategic thinking and aids in the strategic decision making process.

Strategic decision making is achieved by using a timeline to identify six key stages of quality system application (such as the implementation of new initiatives), the methods or systems used (such as ISO 9000) and their success. Each stage is then represented by a quality life cycle element, as defined in the following:

1. **Adoption:** the implementation stage of a new quality initiative.
2. **Regeneration:** when a new quality initiative is used in conjunction with an existing one to generate new energy and impact.
3. **Energizing:** when an existing quality initiative is refocused and given new resources.
4. **Maturation:** when quality is strategically aligned and deployed across the organization.
5. **Limitation or stagnation:** when quality has not been strategically driven or aligned.
6. **Decline:** When a quality management system (QMS) has had a limited impact, initiatives are failing and the QMS is awaiting termination.

In 50 Words Or Less

- **Understanding quality's life cycle stages—adoption, regeneration, energizing, maturation, limitation or stagnation, and decline—provides a strategic mechanism to sustain quality.**
- **The life cycle tool allows you to chart quality's complex stages and dynamics.**
- **It counters common quality implementation shortcomings through continuing regeneration and energizing cycles.**

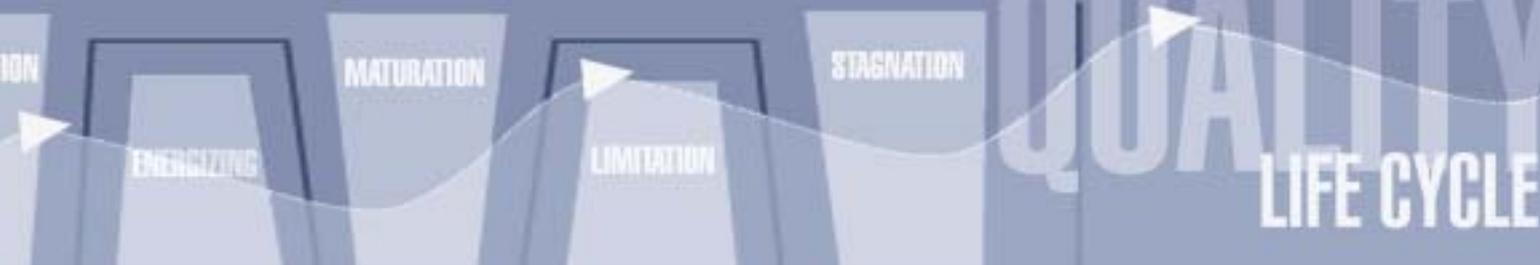


Figure 1 shows a generic graphical representation of how each of these elements may appear in the quality life cycle. There is no set sequential format for these elements, as this is not a prescriptive model.

Nor does the quality life cycle dictate the type of quality management tools or techniques to be applied. Each case should be based on the most appropriate tool for a particular organization, depending on its history, culture, needs and capabilities.

Existing Models

Some claim existing quality models such as the Malcolm Baldrige National Quality Award (MBNQA) and the European Business Excellence Model (BEM) allow organizations to structure, measure and develop their quality efforts.¹

But the emergence of critical writings on quality management has raised some fundamental questions in relation to existing quality models.² These include static evaluations, which do not consider the complex dynamics of quality management likely to be present,³ and shaping the future development of quality in the organization.

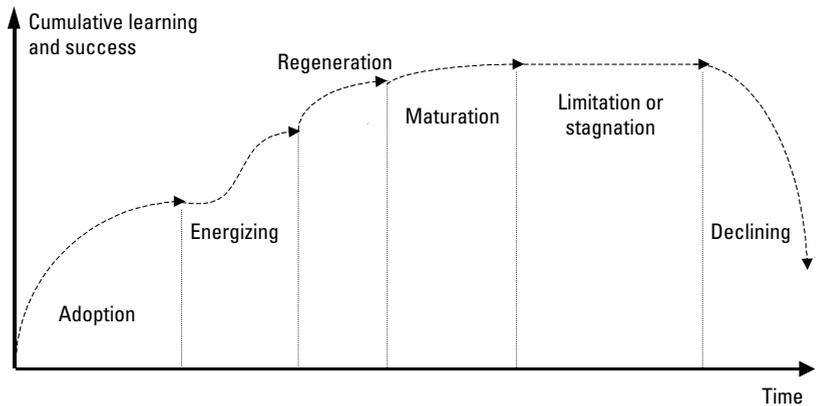
Based on the work of Burgoyne and Reynolds,⁴ a perspective questioning assumptions or investigating power relationships raises key issues, including quality's relationship to organizational strategy and quality's dynamics within the organization and its environs.⁵

The quality life cycle is one of a suite of strategic and dynamic tools^{6,7,8} that recognize quality dynamics are continuously changing and complex and cannot be easily represented in a sequential or linear manner as in current models.

Separate quality life cycles described in the following examples may be created to represent different aspects of quality management, including individual initiatives such as ISO 9000, ISO 14000 or Six Sigma.

Alternatively, an all-inclusive quality life cycle may be produced to provide a more

FIGURE 1 Elements of the Quality Life Cycle



strategic overview of the combined quality life cycle—that is, the combined effect of all tools, techniques and methods incorporated and coordinated under quality management.

Example One

The first example illustrates combining quality life cycles of Company E's quality journey. Company E began adopting quality by introducing team building and establishing problem solving teams. However, after four years the quality management initiative failed.

Initial training had been limited, and implementation was unfocused and not directly related to the strategic objectives of the organization. As a result, the new teamwork approach came as a culture shock to the company, and its quality initiative began a decline.

Company E was determined to continue with quality management and subsequently adopted a second initiative. This involved new companywide training and teams provided with improvement kits based on problem solving tools and techniques.

In addition, senior management focused on the coordination of improvement efforts with strong links to the organization's strategic goals. Structured performance assessments monitored progress. The quality manager cited "management commitment and leadership from the top" as the key to Company E's successful second quality initiative.

The quality life cycle not only provides the ability to monitor and assess quality's historical and current progress, but also offers lessons that can be used to improve strategic decision making for quality.

The quality life cycle of this second initiative reflects its progress from adoption to maturity. This approach created strong quality dynamics, which achieved strategic alignment and companywide deployment.

While different quality life cycles can be used to chart the independent progress of separate initiatives, a single combined quality life cycle can reflect the entire quality journey. This combined quality life cycle provides a historical account of the application of quality while reflecting the impact various initiatives had on one another.

By combining the quality life cycles of the first and second initiatives this way, we can understand the energizing impact of the second initiative on the overall success of quality management at Company E. The combined quality life cycle changes the depiction of the second initiative from adoption to a continuation or energizing of the first initiative. The combined quality life cycle for Company E is presented in Figure 2.

The combined quality life cycle illuminates the critical elements of quality application.

1. Awareness that separate initiatives create a cumulative impact leads to an appreciation that selection of new quality initiatives must be based on where an organization is in the quality life cycle.
2. Understanding that the quality life cycle elements enable an organization to apply energizing or regenerating actions proactively to successfully sustain its quality journey.

An awareness of such impacts on the dynamics of quality, in particular on the characteristics of the quality life cycle, provides the capability to sustain successful quality management by strategically adopting responses based on energizing and regenerating elements.

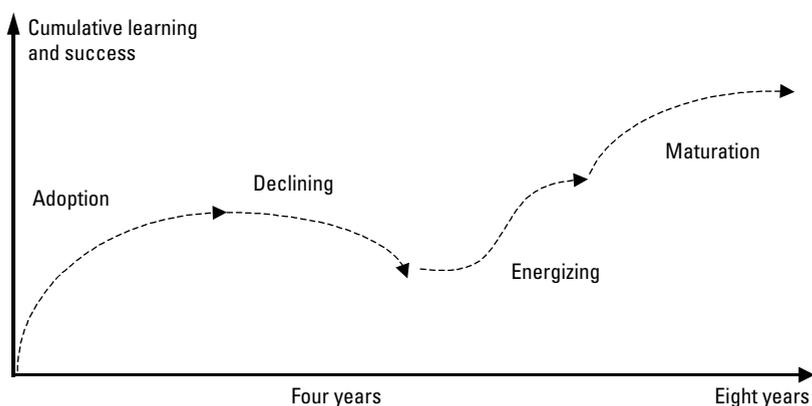
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Example Two

Some of the most commonly recurring quality life cycles can be derived from several companies that have applied quality management for six to 20 years. These quality life cycles form a portfolio of various approaches to quality implementation and their impact, and highlight the nonsequential nature of the quality life cycle elements.

Company SO adopted and then continued to apply quality management to a limited extent. Company SO adopted quality through its implementation of ISO

FIGURE 2 Combined Quality Life Cycle: Company E





9001. But with limited senior management level support and no continuous improvement or expansion of quality beyond the requirements of ISO 9001, stagnation resulted.

In the following years Company SO maintained ISO 9001 certification but made no further attempts to strive for quality. This stagnant quality life cycle is a common outcome of limited senior management involvement and the limited strategic consideration of quality management.

The stagnation that occurred in Company SO can lead directly to the decline of quality effort and, ultimately its being discontinued.

Example Three

Company PR made the mistake of not creating sufficient energy and continual change within quality management over time. The company introduced quality to its employees, as many organizations do, through customer focused and problem solving training. However, no infrastructure was created through a QMS, ISO 9001 or a quality model such as the MBNQA criteria to manage its adoption.

More critically, the company failed to make any links between its quality management goals and those set at the strategic level of the organization. Finally, improvements were only focused at the operational level. The culmination of these shortcomings led to stagnation. With limited bottom-line impact, quality management quickly transitioned into a decline.

Example Four

A major benefit of the quality life cycle is that stagnation and even decline can actually be avoided by monitoring the life cycle and taking proactive energizing steps, as exemplified by Company N, which began its quality journey by adopting ISO 9001 and creating a focus on key customers and suppliers.

Within a few years Company N had integrated its quality management approach successfully across the organization with positive results. But management began to

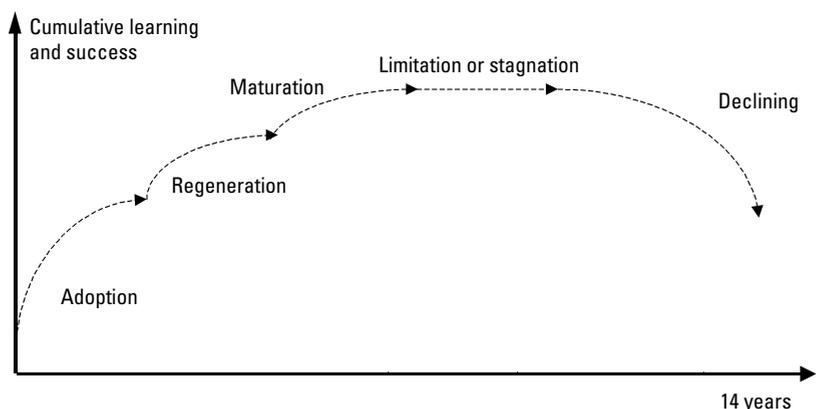
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realize quality was not continuing to develop.

As a result, management took proactive steps to further raise the awareness and enthusiasm toward quality to avoid stagnation and potential decline. This opportunity was used to widen the application and impact of quality. Management achieved this by introducing the Baldrige model to widening the quality focus across the organization and as a mechanism for self-assessment.

In conjunction, the ISO 14000 environmental management system was implemented, and management increased the focus on strategic planning. Company N's quality manager believed the company's new mind-set of continuous learning and innovation created a continuous willingness to accept change. This engendered a significant companywide effort, which energized quality to a new level.

FIGURE 3 Regenerated Quality Life Cycle: Company S



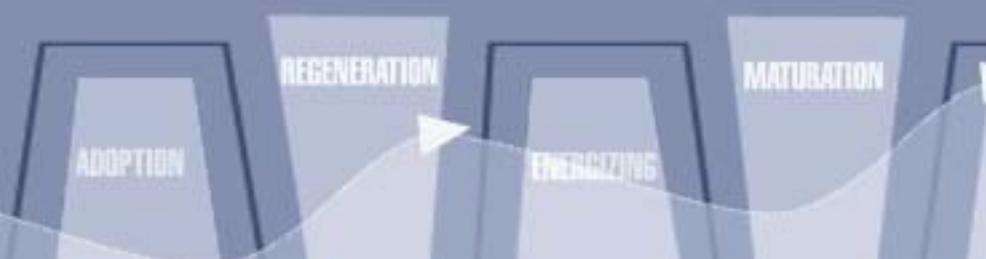
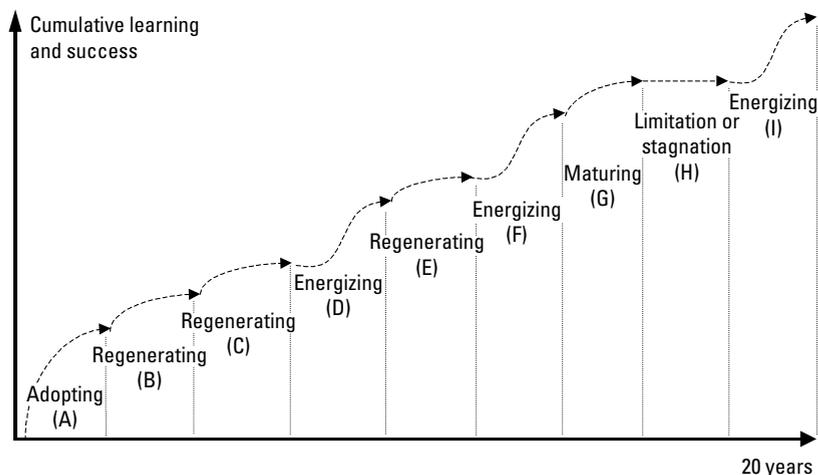


FIGURE 4 Energizing and Regenerating Quality Life Cycle: Company CM



Example Five

As shown in Figure 3 (p. 53), Company S used another method, regeneration, to sustain quality. At the beginning of its quality journey, it introduced or adopted quality through training that sought to increase customer awareness within the organization. This training expanded to include team based problem solving projects and a focus on the teachings of Joseph M. Juran.

Four years later the company sought to regenerate quality by adopting a structured approach with independent support mechanisms. In this case, it adopted ISO 9001 and integrated all ongoing initiatives using the Baldrige model as a guiding framework. The company reached a mature stage of quality management and attained some local and national level awards.

This state of maturity became stagnant, however, when no further stretch goals were set or achieved. At this point, focus on quality waned and senior management support fell away, leading to a decline of quality activity and an eventual disjoint of quality from the strategic and operational objectives.

The quality manager said, “When only lip service is paid and the focus is off quality, things can revert to what was always done, leading to a decline of quality activity and leadership.” The quality manager was aware of the need for re-

talization of the QMS, but with a lack of senior management involvement, there was an attitude of apathy to its future.

These examples show charting the quality life cycle can provide an awareness of the current status of quality and encourage strategic thinking and planning to sustain quality.

Example Six

The example of Company CM (Figure 4) demonstrates that by continually combining the energizing and regenerating elements, an organization can create an ongoing effort to sustain and develop quality—the optimum quality life cycle.

Company CM’s adoption (A) of a QMS began with an increased internal and external customer focus emphasizing communication. This was regenerated (B) when CM formed quality circles to develop teams and to initiate problem solving projects.

The organization further regenerated (C) its quality activities by developing an internal QMS to take advantage of the improvements made and to create a structured system. In the midst of this regeneration, the decision was made to attain ISO 9001 certification.

At this point, Company CM had several years’ experience and had made significant process improvements. However, management wanted to expand improvement beyond the operational level and so initiated an attempt to achieve a total quality program. This decision constituted a major increase or energizing (D) to expand quality management companywide and involved a concerted effort to align quality with strategic goals, monitoring the impact through key metrics.

Later, the use of quality award models, such as Baldrige, provided a structured approach to organizational self-assessment, a heightened awareness of the strategic import of quality and networking, benchmarking, training, assessment and other resources through local and national quality award organizations.

This provided one of the most significant regeneration (E) periods in CM’s quality history, during



which CM success was recognized through several national and international awards.

CM continued its dynamic approach to quality by energizing (F) once again, this time by embracing the concepts of knowledge management. This led to a period of maturity (G), during which the company was widely accepted as a world-class role model.

A dangerous period of resting on its laurels followed and resulted in a relative hiatus of quality activity. Management addressed this limitation and stagnation (H) with further energizing (I).

That energizing focused on innovation across all aspects of the organization including concepts of the learning organization, new technologies, organizational reengineering and refreshed performance assessment including models such as the balanced scorecard.

Company CM is an excellent example of true continuous improvement—the realization quality must be continually energized and regenerated to be successful.

Dynamic and Strategic Perspectives

The findings demonstrate the quality life cycle can be used by organizations to show both the dynamic and strategic perspectives of quality. By applying the quality life cycle as a strategic decision making tool, an organization can establish a comprehensive picture of the past, present and potential future states of quality initiatives and can analyze and guide the overall direction of quality management.

Critically, some exemplary organizations have developed a sustained and progressive quality dynamic by deploying new QMS elements and methods when other elements of their programs reached maturity and declined. The effectiveness of such dynamics has been due to the continuing application of approaches to regenerate and energize quality.

Quality management is complex and more dynamic and nonsequential in nature than is suggested by many existing QMS frameworks. Quality management enables the strategic, tactical and operational roles of quality to be more fully understood so the quality life cycle can be adopted as a proactive strategic mapping mechanism to successfully chart and sustain quality.

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