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## Understanding Excellence: Imperative for Performance Sustainability

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### Abstract:

What does it take to have a truly excellent organization that is able to sustain a high level of performance as compared to its peers? Aristotle declared that excellence comes from habit. For organizations this means a disciplined way of working; a habit that comes from following processes and procedures to the point of excellent control. But, some claim organizations can come into a state of over-control where it is no longer innovative or flexible and are no longer able to agilely respond to change. This also happened to the dinosaurs as they lacked the ability to rapidly fit new circumstances which caused them to become extinct. Truly, any organization can change into a rigid structure that is not responsive to competitive market forces and then it will lose its customers over time as more aligned competitors advance into the market. What is required to keep such a state of rigor mortis from happening?

To achieve excellence, organizations must master two processes. First breakthrough change that creates new products, applications of products, services, or technologies that improve the way customers can do their work. This is the innovative side of management. However, it is also an imperative that organizations manage quality and consistency in its current offerings to control outcomes so they remain predictable, correct problems that occur in production, delivery, installation, and maintenance process, enhancing performance and cost-efficiency of deliverables through continual efforts at improvement. This requires management review and control. Excellent organizations sustain performance capability despite dynamic change in their environment, judged by market competitiveness, and must learn to master both the innovative and control dimensions of the process of management.

This expands the theory of statistical control, originally developed by Walter A. Shewhart. It addresses the achievement of excellence where excellence is defined as sustained results as

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## What is quality?

- Quality is both the **content** of a deliverable to customers as well as a **process** for preparing that content so that it meets the **value** proposition expected by customers in the content of that experience.
- Levels of quality delivery are defined using the Kano Model as: '**must be**' (basic) quality, '**one-dimensional**' (competitive) quality; and '**attractive**' (innovative) quality.
- Steps in the process model for delivering quality include the process of learning '**what the customer wants**' followed by defining '**what the customer is promised**' and evaluating the outcome of '**what the customer gets**' – three aspects of the execution of quality activities to deliver quality content.
- All **judgments regarding quality** must be made using a **point of view for the targeted customer** of the deliverable content for the product or service.

## Noriaki Kano: Theory of Attractive Quality



\* Kano, N.; Seraku, N.; Takahashi, F.; and Tsuji S. (1984), Attractive quality and must-be quality, Quality, Journal of Japanese Society for Quality Control, 14:2, pp. 39–48.

## What drives “attractiveness” for customers?

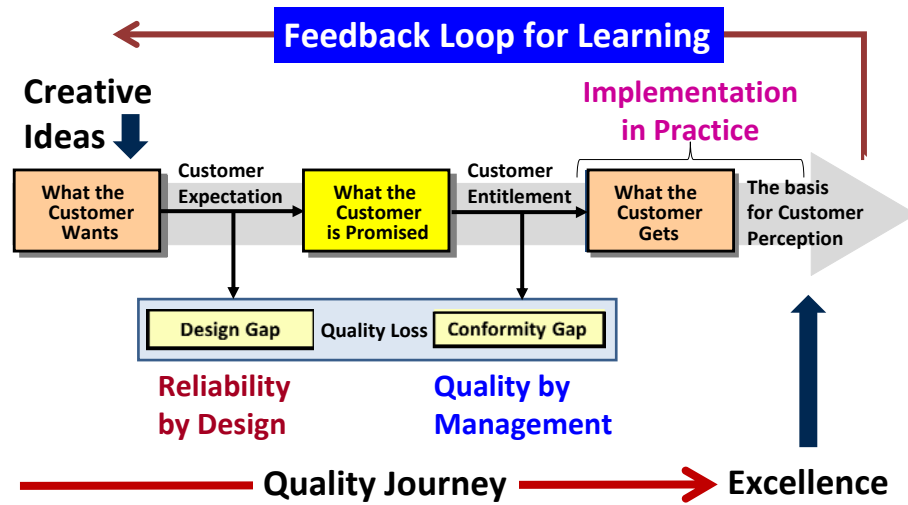
### Seeking advantage from eight dimensions of attractive quality:

- **Utility**: usefulness or suitability for the user’s application.
- **Capability**: range of performance available for functionality.
- **Aesthetics**: style and form as opposed to functionality.
- **Innovation**: practical or technical originality or novelty.
- **Accessibility**: ease of use and friendliness of human interfaces.
- **Portability**: ability to use in a wide variety of applications.
- **Esteem**: worth implied by the recognition of a product brand.
- **Reliability**: durability of a product in its intended environment.

## What is excellence?

- **Excellence is a moving milestone in the quality improvement journey. *The target for excellence shifts because customers have ever-increasing expectations for delivery of performance and processes have an ever-increasing erosion in capability to perform while technology has an ever-intensifying ability to invent.*** These counter-trends create dynamic shifts in ability to consistently deliver exceptional results.
- As Taiichi Ohno said: “everyone makes mistakes” and it is the job of management to assure that inadvertent errors do not reach customers. This is how the process control system in the continuous improvement activity must work. Ohno also said: “we eliminate waste...by preventing the recurrence of defects, mistakes, and accidents...which is possible because of the inconspicuous standard work sheet.” It assures standard work.
- ***Excellence is the result of habitually flawless design execution followed by disciplined work performance to deliver consistent outcomes in the customer’s experience with process outcomes so that attractive quality dominates customer perception.***

## Gregory H. Watson: Quality Delivery Model\*



\* Tito Conti, Yoshio Kondo, and Gregory H. Watson, "Competitive Quality," *Quality into the 21<sup>st</sup> Century* (ASQ Quality Press, 2003).

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## Excellence is a milestone on the quality journey!

### How does quality differ from "Excellence"?

Excellence is result of habit – the habit comes from doing the right things in the right way at the right time which is a consequence of thinking and doing quality at every step in the process by which the content is delivered.

Quality matures into a mindset that prevails in organizations, individuals, and teams. A pervasive organization-wide quality mindset motivates action to apply the principles, methods and tools of quality sciences to deliver the "right work outcomes" as judged by the customers of the organization.

**Quality includes everyone!**

### How does quality differ from "Reliability"?

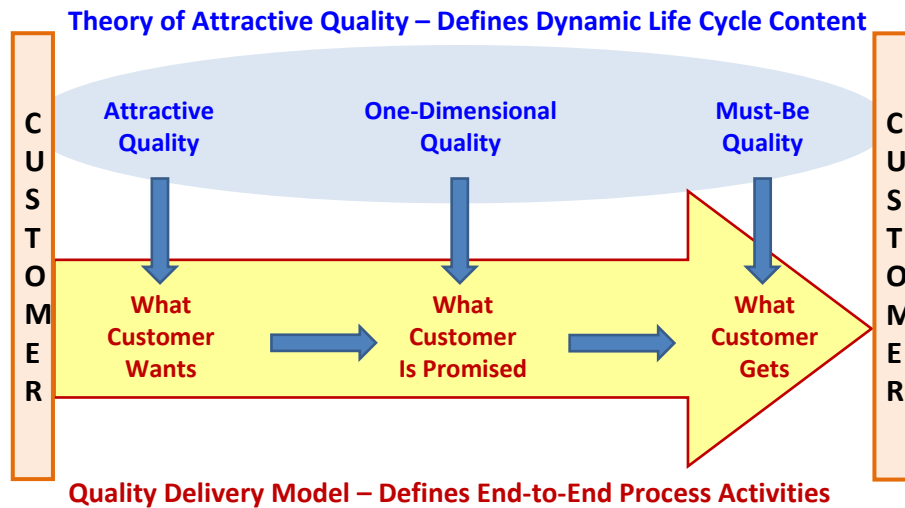
Reliability is an ability to consistently deliver a useful level of excellence in quality of performance over a sustained period of time in the operational environment of the customer – it helps customers to get their jobs done. It is reliability, not over-exaggerated promises of great performance, that matters most for generating long-term customer confidence. **Reliability is sustainable, quality that lasts – designed with a capacity to endure.**

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## Aligning these complimentary models of quality:

### The Process of Managing for Quality:



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## Statistics provide the basis for establishing control:



### “Theory of Control”

Walter A. Shewhart (1891-1967)

*The Economic Control of Quality of Manufactured Product (1931)*

“The fundamental difference between engineering with and without statistics boils down to the difference between the use of a scientific method based upon the concept of laws of nature that do not allow for chance or uncertainty and a scientific method based on the laws of probability as an attribute of nature.”

~ Walter A. Shewhart

“To indicate the relationship which the **theory of control** bears to exact science, it is interesting to consider six stages in the development of better ways and means of making use of past experience. They are:

- “1. Belief that the future cannot be predicted in terms of the past.
- “2. Belief that the future is pre-ordained.
- “3. Inefficient use of past experience in the sense that experiences are not systematized into laws.
- “4. **Control within limits.** } **Statistical Process Control**
- “5. Maximum control. } **Engineering Process Control**
- “6. Knowledge of all laws of nature – exact science.”

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## Excellence occurs from managed response to change:

- Shewhart's levels of change begin with fatalism, and moves through religious predestination and judgments based on past experience to reach applications of statistical process control, engineering process control and the fundamental laws of nature – the rules that govern the action and interaction of matter in the universe.
- In Shewhart's scheme, control is increased as the results of a process become more and more predictable or the feedback of data permits correcting a process to maintain homeostasis.
- The shift in control can be seen as an increase in certainty of the probability of results in the system as it moves from total uncertainty ( $p = 0$ ) to complete certainty ( $p = 1.0$ ).
- Stability of the system performance, despite external change, is the dominant characteristic of a system that operates under a state of control.

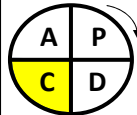
## Sustainable performance comes from reliable control:

- Achievement of a state of control requires management adjust process performance to maintain the requirement for its content quality.
- Thus, ***the act of achieving control is dynamic*** and changes as a function of deviation in process externalities as well as natural process variation.
- Sustainable excellence occurs when a process is able to obtain the level of quality that delivers competitive advantage and maintain this capacity despite the effects of variation.
- The ***effect of sustainable performance on the customer experience*** is to create ***a consistency in performance capability that customers expect and associate with the brand of the product or service.***
- Thus, when management develops a program to persist in the delivery of attractive quality over the long-term, it must design a system to assure reliable control over process variables that contemplates the impact of sources of variation, both controllable and uncontrollable, and is able to maintain a consistent, robust quality of deliverable despite changes in the process variables.

## Necessity of structured innovation and control:

- The objective of a **Hoshin Kanri Management System** is to deliver breakthrough change by conducting projects that will significantly advance the process performance capability of the daily management practices or provide a significant leap in the capability of the product or its service performance. To conduct these projects revolutionary thinking is required as is innovative insight into the customer's application.
- The objective of a **Daily Management System** is to maintain a control discipline for performance of routine work so that the standard work outcomes achieve continual improvement by the conduct of a planned sequence of small experiments that increase the reliability of process performance and quality of the process content or reduce the cost of transactions in the process, thereby permitting more fiduciary freedom in setting prices and obtaining profitability through evolutionary change.

## Continual improvement requires rational review:



**Who is responsible for quality?** <sup>management</sup>

- Authority is delegated by an organization's governance board to its operational level. This authority consists of decision-making rights and financial capacity.
- Peter F. Drucker, W. Edwards Deming and Joseph M. Juran all agree responsibility is assumed at lower organization levels, if and only if, three conditions are met:
  - Clearly defined objectives and performance targets are mutually agreed.
  - Resources, training, and measurements required for action are provided.
  - Decision rights are delegated to permit self-regulation of activity by workers.
- Typically, responsibility for quality is delegated as follows:
  - Workers are responsible for assuring the quality of their workmanship.
  - Supervisors are responsible for facilitating worker training and motivation.
  - Managers are responsible to organize resources to accomplish the outcome.
- However, management remains responsible for assurance of quality through its **Has management created control mechanisms that assure quality?**



***Thank you! Any questions?***

## Career Summary – Gregory H. Watson



Gregory H. Watson is the Senior Vice President, International and a Fellow of the Institute for Industrial Engineers (IIE). He is also a past-President and Honorary Member of the International Academy for Quality (IAQ) and past-President and Fellow of the American Society for Quality (ASQ). Mr. Watson holds advanced degrees in engineering, law and management and is a registered European Engineer (EUIng) in both systems and industrial engineering. He is President of Business Excellence Solutions, Ltd., a Finland-based management consulting company and he has previously held executive positions with Xerox Corporation, Compaq Computer Corporation and the Hewlett-Packard Company. He is the author of ten books. ***Strategic Benchmarking*** (John Wiley, 1993) was chosen by ***Fortune Magazine*** as a Book-of-the-Month selection and named by ***Library Journal*** as one of the twelve best business books of 1993. Among the awards he has received, Mr. Watson is the first non-Japanese recipient of the Deming Medal from the Union of Japanese Scientists and Engineers. He also received the Distinguished Service Medal from ASQ, the Founders Medal from IAQ, the Magnolia Quality Contribution Award from the Shanghai Association for Quality and the Gold Medal of the Finnish Society for Quality.