

# Quality info

**Volume 18, Issue 11***Fortnightly, Free soft copy***1<sup>st</sup> September 2016**

## **Deming's 14 Points: Innovation as An Outcome**

In a rapidly changing business environment, it's sometimes hard just to keep up with everyday demands—never mind having time to develop new and better approaches to changing requirements, needs, or markets. Staying ahead of the curve sounds as if it might demand working longer hours, hiring more people, or cloning oneself, none of which seem likely in the short term. So how does one manage to innovate in this environment?

The word “innovation” itself summons images of new products, or dramatically new approaches to customer needs, or a new version of a product or a new application of technology. According to Henry Ford's car and Jeff Bezos' Amazon, “the factor that made these companies great wasn't primarily technology; it was organization.”

By developing a mindset that continually asks, “How can this process be better?” organizations will find that innovation comes naturally. Fostering such a mindset lies at the heart of improvement as well as innovation.

It may be time to recall W. Edwards Deming and his 14 Points for Management that he outlined in chapter two of “Out of the crisis” (MIT Press, 2000). Generally seen as keys to product and process improvement, they also reflect the process for innovation. Perhaps we can see these tried-and-true management principles in a new light.

1. **“Create constancy of purpose toward improvement of products and services, allocating resources, with the aim to become competitive, to stay in business, and to provide jobs.”** Deming's point No.1 calls for looking ahead; this in itself represents a “new and better approach” to changing markets and environments. Anticipating that fossil fuel demand will diminish over the long term, for example, has elicited plans to invest in other endeavors (such as Uber, for Saudi Arabian state-owned oil companies). If that legendary buggy whip manufacturer had been watching carefully, he might have seen that cars were rapidly replacing horses for transportation. Meeting long-term needs sometimes means letting go of an iron grip on what is produced, how it's produced, and who its customers are. Innovation demands that organizations that know how to meet customer needs respond to changing requirements. This kind of constancy of purpose may seem paradoxical—giving up on traditional ways to try new ones—but the customer needs remain at the heart of the organization's mission.
2. **“Adopt the new philosophy.... We are in a new economic age. Western management must awaken to the challenge, learn their responsibilities, and**

**take on leadership for change.**” Innovation? Say no more: Adopting new attitudes about managing processes represents a “new and better approach to changing requirements.” Point No. 2 addresses innovative management at its heart.

3. **“Cease dependence on inspection to achieve quality. Eliminate the need for inspection on a mass basis by building quality into the product in the first place.”** Depending on detecting defective products rather than improving quality by focusing on the process of *producing* goods and services is a backward-looking approach. When a process is monitored at every stage, not only are defects prevented, but opportunities to innovate the process also ensue.
4. **“End the practice of awarding business on the basis of price tag. Instead, minimize total cost. Move toward a single supplier for any one item, on a long-term relationship of loyalty and trust.”** Cutting corners by utilizing only suppliers who offer the lowest bid means that attention will need to be diverted to fixing problems rather than innovating processes. Working collaboratively with suppliers develops an atmosphere of trust and an interest in new ways of working together.
5. **“Improve constantly and forever the system of production and service, to improve quality and productivity, and thus constantly decrease costs.”** The “constantly and forever” part of this means that the culture of an organization must recognize the kind of thinking that focuses on improvement. Production processes will not improve on their own; they require constant vigilance to innovate and improve them—not once, but constantly.
6. **“Institute training on the job.”** Going beyond training for the tasks at hand represents “route learning” rather than “map learning,” to use terms from the neuroscience of learning. Understanding only the steps required to perform a task is insufficient for organizational improvement. Employees must have continual support for learning about process monitoring and improvement, and for understanding the larger system of which they are a part and to which they contribute.
7. **“Institute leadership (see point 12 and chapter 8, *Out of the Crisis*). The aim of supervision should be to help people and machines and gadgets to do a better job. Supervision of management is in need of overhaul, as well as supervision of production workers.”** Helping those throughout the organization to think about their jobs invites them to summon new ways of doing things or understanding processes.
8. **“Drive out fear, so that everyone may work effectively for the company (see chapter 3).”** Research demonstrates that emotions such as fear have a negative impact on reasoning skills. Innovation won’t happen if people can’t really think freely. Fear of reprisals, including recrimination and even firing, doesn’t provide an atmosphere for thinking about improvement and innovation.
9. **“Break down barriers between departments. People in research, design, sales, and production must work as a team, to foresee problems of production and in use that may be encountered with the product or service.”** Cross-fertilization of ideas and approaches generates new thinking and innovative processes.

10. **“Eliminate slogans, exhortations, and targets for the work force asking for zero defects and new levels of productivity.”** Deming exhorts managers to reduce competition among employees, and instead encourage collaboration and teamwork rather than quotas or targets.
11. **“Remove barriers that rob the hourly worker of his right to pride of workmanship.”** When the measure of productivity becomes one of quantity rather than quality, employees will continue to pursue processes in the same old way, without taking risks to improve them.
12. **“Remove barriers that rob people in management and in engineering of their right to pride of workmanship.”** Deming pointed out ways that traditional evaluations undermine managers’ sense of responsibility in their positions as well as incentives for improvement.
13. **“Institute a vigorous program of education and self-improvement.” (See point 6.)** Training can go beyond simply learning necessary steps for a specific task, but should engage the employee in ongoing learning opportunities.
14. **“Put everybody in the company to work to accomplish the transformation. The transformation is everybody’s job.”** Clearly, a sense of collaboration and teamwork is preferable to Lone Ranger-style approaches to improvement. Knowing that colleagues and suppliers support opportunities for improvement of products and services inspires workers to develop the same approach.

“One of the keys to any successful business is being able to come up with new ideas to keep operations, products, and services fresh”. If a business is to be successful, pursuing Deming’s 14 Points for Managers will undoubtedly lead to a culture where new ideas are implemented and celebrated. Innovation, of course, is only one of many benefits that can accrue from such a culture.

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Edited by Hari Taneja, Mumbai and  
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