

Quality Progress

February 2004 • [Table of Contents](#)

STANDARDS

Can TL 9000 Contribute To Telecom's Turnaround?

by Bob Clancy

In 50 Words Or Less

- TL 9000 provides a single quality management standard for the entire telecommunications industry supply chain.
- The standard's use has been diminished by the industry's downturn in recent years.
- Evidence the standard can lower costs and improve profits must be communicated to top management.

Since TL 9000's inception near the end of the 20th century, managers and executives have harbored significant skepticism toward the quality management standard for the telecommunications industry.

The telecommunications industry has labored through arguably the worst downturn in its history since the Quality Excellence for Suppliers of Telecommunications (QuEST) Forum, developer of TL 9000, first envisioned a single standard based on ISO 9000 (see "[What Is the QuEST Forum?](#)" p. 43). This downturn forced many executives to stop all nonessential spending just to keep their ailing firms alive. How then should we view TL 9000? Are there sufficient benefits to warrant implementation? If so, how can we best help companies move forward?

As quality professionals, we need to realize there are benefits that can be easily overlooked or misunderstood. Consequently, the benefits need to be clearly communicated to management. If executives understand these benefits and pave the way to cultural change, TL 9000 will be a very worthwhile endeavor. But, if management views TL 9000 as a mandate and simply applies it as window dressing, the system will be of little benefit.

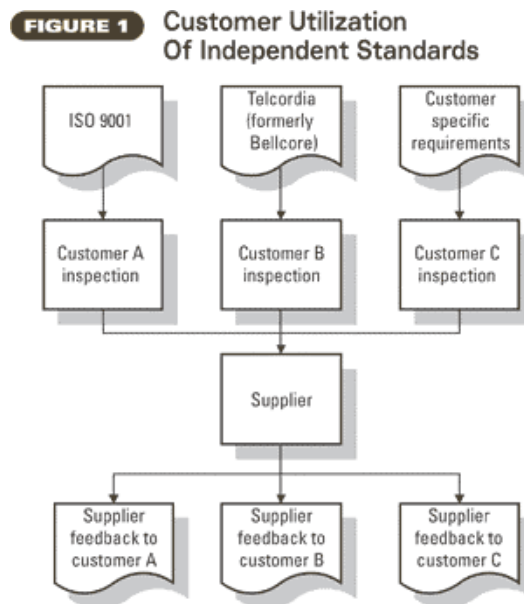
Do TL 9000's benefits make it worth embracing as a company's quality management system (QMS)? Decide for yourself after considering what I believe to be the key benefits:

- Reduced cost of quality through a single quality standard.
- Improved customer retention.
- Cost reduction and improved profitability.

Reduced Cost of Quality

A subtle benefit of TL 9000 is the possibility of a single standard's defining quality for an entire industry. The QuEST Forum's vision is to replace numerous quality standards with a single one. In part, this single standard reduces the costs borne by member companies to monitor supplier quality.

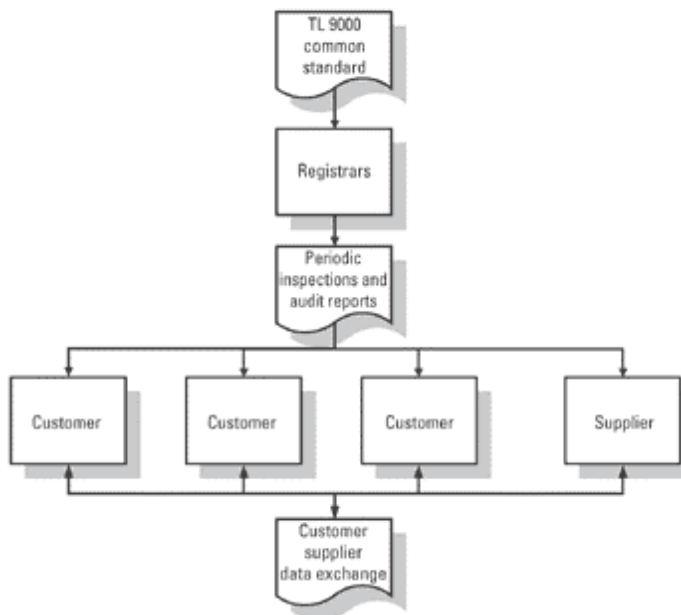
Additionally, suppliers can benefit through a consistent, solid definition of quality and with fewer inspections conducted by customers using different standards. Prior to 1998, however, most telecommunications companies monitored supplier quality using independently developed quality process analyses and supplier report cards (see Figure 1).



This model was costly and ineffective, creating a burden on customers and suppliers alike. Customers employed additional staff to develop and maintain standards, develop report cards, audit suppliers and monitor supplier improvement. Meanwhile, suppliers had to respond differently to each standard. Furthermore, multiple inspection schedules often overlapped, causing redundancy and inefficiency. Suppliers were required to report corrective actions back to individual customers.

The TL 9000 model envisions a common quality language, supplier responsibility for its own quality and independent audits by Registrar Accreditation Board accredited registrars. In this way, major telecom service providers such as SBC and Verizon can eliminate individual supplier compliance inspections, as shown in Figure 2.

FIGURE 2 A Common Standard



TL 9000 registration benefits the entire supply chain by significantly reducing inspection costs driven by multiple quality inspections. In an interview for this article, Tom Yohe, quality metrics manager for Alcatel, reported outside audits were reduced from one per month to two per year, significantly reducing audit costs.

Improved Customer Retention

Although TL 9000 is in its relatively early stages, a second measurable benefit likely to be improved is customer retention. TL 9000 requires compliance in two related areas: customer relationship development and communication and demonstrated active involvement of top management in customer relationships.

The company must document processes for sharing expectations and resolving issues with key customers. The standard also requires a documented quality improvement program to improve customer satisfaction.

There are two ways quality professionals can demonstrate the financial benefits of retaining customers to management:

1. Help management consider the lifetime value of a customer and what is lost to the company in hard dollars every time a customer walks out the door. I believe the lifetime of a telecommunications customer could easily be multimillions of dollars. You can easily determine your company's dollar value by analyzing the price of products, upgrades and services multiplied by the number of purchases, multiplied by the average lifespan of your customer.¹
2. Discuss the cost of acquiring new customers vs. retaining current ones. Experts estimate it costs three to five times more to acquire a new customer than to keep a current one. A recent study by the Gartner Group estimates the cost of acquiring a new customer at \$280, five times more than the \$57 to retain an old one.²

Improved Profitability

I am sure you realize the main focus of most owners and top executives is cost. Since the telecommunications crash, this concern has only increased. Over the past two years, I have observed small and medium telecommunications business owners become increasingly cost conscious to the point where today, eliminating cost is their single most important objective, even above attracting new opportunities. Therefore, implementing TL 9000 is seen as an increased cost to be avoided, especially without a corresponding increase in business.

Our task as quality professionals, daunting though it may seem, is to help business owners and managers understand that properly deploying TL 9000, even with its implementation costs, can result in reduced quality and operational costs and increased profitability.

Be honest and present the fact that implementing TL 9000 will cost money. But note that experts agree a company's cost of poor quality can be as high as 15 to 30% of its total operating expenses, while most companies spend less than 3% of total operating expenses on preventing poor quality.³

The costs of implementing and sustaining TL 9000 are preventive and can be quickly offset by the resulting reduction in the cost of poor quality and a company's overall operating costs.

TL 9000 is in only its fourth full year of implementation, making performance data sparse. However, because TL 9000 is ISO 9000 based, we can draw positive conclusions from studies of similar standards.

Quality Digest reports a 1997-1998 survey conducted by ASQ's Automotive Division shows a 3:1 return for all costs (internal and external) and a 17:1 return on out-of-pocket registration costs for QS-9000 registered companies.⁴

A balanced discussion must consider other factors that affect the bottom line, such as market share and revenue.

Implementing TL 9000 will not necessarily increase sales directly, but a comprehensive study of the effects of implementing ISO 9000 performed by Corbett, Montes and Kirsch strongly suggests a direct correlation between certification and improved return on assets, sales and productivity in years $t + 2$ and $t + 3$ (certification plus two years and certification plus three years).⁵

But, before you go to management, quantify the cost of poor quality and total operating costs in your company and the effect reducing these costs would have on profits, given no increase in revenue.

Benefits Above ISO 9001

The QuEST Forum requires registered organizations, depending on what they produce, to track performance based on standard metrics and submit quarterly summaries to a central repository. Table 1 shows the standard categories on the left and the organizational applicability across the top.

TABLE 1 Summary of TL 9000 Metrics Requirements

	Common (Applicable to hardware, software and services)	Hardware and software common (Applicable to both hardware and software)	Software only	Services
On time delivery	X			
Problem reports	X			
Problem report fix response time	X			
Overdue problem report fix responsiveness	X			
Downtime performance		X		
Outage frequency		X		
Return rate		X		
Corrective patch quality			X	
Feature patch quality			X	
Software update quality			X	
Release application aborts			X	
Service quality				X

The system calls for all organizations to maintain common metrics. From there, the products and services an organization produces determine the required metrics. This system extends beyond ISO 9000 requirements, helping companies perform trended performance analysis and benchmark against their industry peers.

The QuEST Forum's vision is to provide benchmarking data for companies through its database maintained by the University of Texas at Dallas.

EF&I Service Corp., a company supplying central office installation services to major telecommunications customers, began using TL 9000 installation service quality metrics (number of conforming audits vs. total audits) in an effort to comply with TL 9000 in September 2002. In an interview, Don Norwood, regional general manager, said his organization has seen significant continuous improvement in conforming installation audits over the past six quarters.

TABLE 2 Summary of Differences Between ISO 9001 and TL 9000

Area	ISO 9001	TL 9000	Key benefit
General	Intended for general use by many industries	Telecommunications industry specific	Deals with telecommunications specific supply chain issues
	Standards developed by workgroups from many industries	Standards enhanced and maintained by representatives of telecommunications suppliers	Ensures consensus regarding specific telecommunications requirements
Metrics	General in-process and process output metrics required	Standard industry related metrics are required	Drives specific telecommunications industry supply chain improvements
	Internal metrics required	Internal metrics required plus quarterly submission to a central repository	Benchmarking among industry peers
Requirements	Requirements intended for use by all industries	81 enhancements dealing specifically with telecommunications related issues	Drives specific telecommunications industry supply chain improvements
Important adders	6.2.2 Competence, awareness and training	6.2.2.C.4 Electrostatic discharge (ESD) training	Ensures specific training requirements for personnel who handle ESD sensitive devices
	7.2.3 Customer communication	7.2.3.C.1 Notification about problems 7.2.3.C.2 Problem severity (classification)	Ensures the organization develops and follows specific process to notify customers about problems; provides a common definition of problem severity
	8.2.1 Monitoring and measurement	8.2.1.C.1 Customer satisfaction data	Ensures the organization collects, tracks, analyzes and responds to customer satisfaction data

Table 2 depicts key benefits and some of the key differences between ISO 9001 and TL 9000. Many of the differences are contained in the telecom standard's 81 additional requirements or enhancements, called adders.

Keys to Success

What then are the most important considerations to help managers ensure the success of TL 9000 implementation? Here are some:

- **Management commitment.** Management must decide TL 9000 adds value for the business. Then it must effectively articulate the need to employees by documenting and communicating the company's quality vision and strategic quality objectives. TL 9000 requires these be documented in a quality policy issued by top management.
- **A system of interrelated processes.** Management must ensure all processes necessary to conform to customer requirements are documented, implemented and measured. These include all processes in the customer supplier value chain from requirements (such as requests for quotations and contract and order management) through design, development, delivery, support and billing.
- **Management review and metrics.** Management must establish a systematic review of process metrics to determine necessary actions. While TL 9000 requires annual management review of the QMS, I suggest monthly reviews as the QMS matures and quarterly thereafter. Such frequency will provide adequate review of customer satisfaction data, defect trends and the effectiveness of the QMS and key processes. Management and employees alike can then quickly facilitate improvement based on the data.
- **Customer feedback.** Understanding how customers perceive your products or services is key to a company's success. There are plentiful excellent sources that provide helpful information regarding ways to obtain customer feedback. Regardless of the means, TL 9000 requires you to benchmark the opinions of major customers, monitor satisfaction trends and address problems quickly. Routinely seeking customer feedback and acting on it effectively not only improve the quality of products and services, but also demonstrate your sincerity and commitment to quality to customers.
- **Employee training and communication.** TL 9000 requires companies to document the planning and delivery of employee skills training and regularly share quality results with employees. Why is this necessary? Most employees will work hard to accomplish the company's objectives if they know them and know what results are being achieved. Furthermore, documenting processes equips employees to respond properly to customers and do their jobs right every time.

Implementation Tips

Once you are convinced TL 9000 makes sense for your company, what comes next? Here is a simple approach to implementing TL 9000:

- **Order a copy of the *TL 9000 Standard and Metrics Handbook*** and familiarize yourself with its contents. It is available for purchase at <http://qualitypress.asq.org>.
- **Decide on an implementation strategy** to document and deploy your quality policy, quality manual and key processes. Determine whether you have the resources internally to understand and implement TL 9000. If not, consider hiring a consultant to help. Whether you decide on a consultant or attempt registration internally, someone will need to facilitate the project. Among his or her responsibilities will be planning, advising top management and department heads, organizing meetings, and coordinating inputs and activities.
- **Develop a project plan** based on key tasks, including initial assessment and gap analysis, brainstorming and writing the quality policy, writing the quality manual, writing key processes, determining metrics, gathering metrics, evaluating and selecting a registrar, performing management review and the internal audit cycle, contacting the registrar, scheduling a preregistration audit (optional), scheduling the audit, completing corrective actions and being awarded the certificate.
- **Write an effective quality manual.** Document key customer processes that drive quote response, contract approval, order entry, product development, equipment and service delivery and customer/supplier input.
- **Understand what QuEST Forum metrics are required** for the scope of your registration. Plan any additional metrics to measure the effectiveness of key processes. You will need to assemble and document 90 days of metrics before submitting your application.
- **Contact the QuEST Forum** via its website at <http://questforum.asq.org>, and submit your registration application . Contact registrars from the list provided on the QuEST Forum website to obtain quotes. To ensure schedule availability, contact your registrar to begin the approval process four to six months ahead of registration.
- **Conduct a formal management review and internal audit cycle** before scheduling registration to demonstrate evidence the QMS is implemented. Document your management reviews, and develop an official action register to show progress in preventive and corrective actions.
- **Participate actively during the registrar's audit**, and take corrective actions quickly.
- **Involve employees** by communicating results and enlisting their help in problem solving. Once registered, stay actively involved through management review, assignment of action items, customer contact and employee communication to sustain the QMS and protect your investment in quality improvement.

Management's Role

Because TL 9000 is what you make of it, management's attitude will have much to do with its success. If taken seriously, it will help managers and employees internalize the importance of quality and customer satisfaction necessary to the success of the company.

It will help employees understand what management expects of them. Further, it will provide a system of interrelated processes that allows everyone in the customer supplier value chain to speak the same language and work toward meeting customer requirements with a common set of goals and objectives.

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BOB CLANCY is vice president of Bizphyx Inc., a company specializing in preparing companies for TL 9000 registration as well as providing process consulting, training and documentation services exclusively to the telecommunications industry. Previously he was an ISO 9001 and TL 9000 management representative and internal consultant with DSC Communications and Alcatel. Clancy earned a bachelor's degree in psychology from the University of Kansas and is a member of ASQ.

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