



## Driving Continuous Quality: QuEST Forum Executes for 2020+

**D**uring the last three decades the telecommunications industry has undergone radical changes—the splitting up and privatization of national telephone monopolies, the entry of multiple new competitive service providers and suppliers, the exponential growth of the Internet, coupled with the vast expansion of wireless network—each of these changes had the potential for a profoundly disruptive impact on the quality and reliability of communications around the world. To meet this challenge a unique partnership of Communications Industry Service Providers and Suppliers came together to operate in a collaborative environment to avoid the high cost of poor quality that would result from conflicting inefficient operating practices and standards. Quality Excellence Service Providers/Suppliers of Telecommunications (QuEST) Forum embarked on the creation of a consistent set of quality system requirements that would apply to the global communications industry. The resulting TL 9000 quality management system was quickly embraced by supply chains globally as the key quality management system to be used throughout the communications industry. The results so far have enabled explosive network and services growth while supporting common global user experiences and providing remarkably dependable quality service levels, which touch each of us at a very personal level.

Constant innovation – new technology, better features, improved services, and lower prices – requires increasing levels of quality throughout the supply chain. The strong user expectation that data, video, voice, and social media will be available at the user’s discretion instantaneously and seamlessly—any place, any time, any device, and even, from one device to another device — highlights the need for strong industry collaboration and is key to realizing continuous superior global quality.

QuEST Forum introduced its TL 9000 quality management system designed specifically for the telecommunications industry in 1999, and over time has expanded to cover the communications technology industry. Based on the ISO 9001 Quality Management System, TL 9000 contains all of the ISO standard’s requirements plus 90 additional requirements specific to the telecommunications sector. TL 9000 uniquely provides quality measurements covering hardware, software, and services performance. These TL 9000 performance measurements or “quality measures” as they are referred to, allow benchmarking within the many segments of the communications supply chain. Additionally, TL 9000 works in conjunction with other quality systems/tools such as Six Sigma, Lean, Baldrige, and others in its implementation.

To maintain its global focus, the QuEST Forum has established active hubs in the Americas, Asia Pacific (APAC- including China, India, Japan, Korea, and others) and Europe Middle East, Africa (EMEA). This ensures there is grassroots level involvement with

### By the Numbers . . .

- 70% of the world’s population has a phone in 2010 compared to 17% in 1999
- Annual growth rate for global telecom is projected at 9% compared to 3% for the US economy
- “Anywhere” technology will grow worldwide from \$2.2 trillion in 2010 to \$4 trillion by 2016 as Enterprise IT transforms into Anywhere IT
- IP traffic is expected to grow from 4 exabytes in 2010 to 41 exabytes in 2013 and 425 exabytes by 2018
- Total video usage on mobile devices will increase from 50% in 2009 to 90% in 2014

regulatory bodies and “strategic initiatives” undertaken are sensitive to customer experience in a variety of communication markets. Some of the current strategic initiatives include the development of standard benchmark measures for network operation centers, continued improvement of the breadth and quality of the existing TL 9000 measures and the development measures for the new generation network. The benefits of TL 9000 measurements are summarized in the table below:

QuEST Forum has compiled data and published a series of industry reports that show companies globally using TL 9000 have improved their overall quality performance. The studies show that a common set of measures used in the communications industry from different parts of the world, drives down the cost by strengthening processes, and improving overall performance and time to market.

Now in its second decade, QuEST Forum is executing today for 2020+ and charged with keeping the global TL 9000 standards and measures current and relevant to the changing technologies. It does so

<b>Benefits of TL 9000 Measurements</b>			
	<b>To Suppliers</b>	<b>To Service Providers</b>	<b>To End Users</b>
<b>Number of Problem Reports (NPR)</b>	<ul style="list-style-type: none"> <li>• Reduced support cost</li> <li>• Faster deployment</li> <li>• Improved customer satisfaction</li> </ul>	<ul style="list-style-type: none"> <li>• Reduced qualification &amp; support costs</li> <li>• Faster new feature rollout</li> <li>• Easier to have ubiquitous network</li> <li>• Improved customer satisfaction</li> </ul>	<ul style="list-style-type: none"> <li>• Faster access to new features</li> <li>• Reduced costs/ increased productivity</li> <li>• Improved satisfaction</li> </ul>
<b>Fix Response Time (FRT) &amp; Overdue Fix Responsiveness (OFR)</b>	<ul style="list-style-type: none"> <li>• Faster qualification</li> <li>• Reduced sustaining workload</li> <li>• Improved customer satisfaction</li> </ul>	<ul style="list-style-type: none"> <li>• Faster new feature rollout</li> <li>• Improved customer satisfaction</li> </ul>	<ul style="list-style-type: none"> <li>• Faster access to new features</li> <li>• Reduced costs/ increased productivity</li> <li>• Improved satisfaction</li> </ul>
<b>On Time Delivery (OTD)</b>	<ul style="list-style-type: none"> <li>• Faster order to cash</li> <li>• Reduced inventory costs</li> </ul>	<ul style="list-style-type: none"> <li>• Faster new feature rollout</li> <li>• Reduced planning cycle time</li> </ul>	<ul style="list-style-type: none"> <li>• Faster access to new features</li> </ul>
<b>Outage Frequency and Duration (SO/SONE)</b>	<ul style="list-style-type: none"> <li>• Greatly improved customer satisfaction</li> <li>• Reduced support cost</li> <li>• Marketing - key procurement decision factor</li> </ul>	<ul style="list-style-type: none"> <li>• Reduced support costs</li> <li>• Improved reliability rating with regulating bodies</li> <li>• Improved customer satisfaction</li> </ul>	<ul style="list-style-type: none"> <li>• Improved service availability</li> <li>• Avoids need to switch providers</li> </ul>
<b>Return Rates (ERI/YRR/LTR)</b>	<ul style="list-style-type: none"> <li>• Reduced support cost</li> <li>• Reduced inventory costs</li> <li>• Faster qualification</li> </ul>	<ul style="list-style-type: none"> <li>• Reduced support costs</li> <li>• Reduced spares inventory costs</li> <li>• Improved customer satisfaction</li> </ul>	<ul style="list-style-type: none"> <li>• Less service disruption</li> <li>• Improved satisfaction</li> </ul>
<b>Service Quality (SQ)</b>	<ul style="list-style-type: none"> <li>• Reduced costs</li> <li>• Improved customer satisfaction</li> </ul>	<ul style="list-style-type: none"> <li>• Reduced costs</li> <li>• Shorter time to market</li> </ul>	<ul style="list-style-type: none"> <li>• Improved customer service</li> </ul>

## Top Technology Trends

- 3G, 4G and LTE
- IPv6 (Internet Protocol Version 6)
- Cloud Computing
- Voice over Internet Protocol (VoIP)
- Machine-to-Machine (M2M)
- Security and Privacy
- Fiber Optics
- Virtualization

through strong volunteer expert participation from member companies in the creation of new measures that emerging technologies dictate. Today, QuEST Forum has 8 cross functional teams dedicated to such technologies. The communications technology industry continues to experience enormous transformation and QuEST Forum is at the forefront of these changes, establishing standard industry measurements with common definitions. Using these measures makes it possible for communications technology companies to benchmark performance, identify areas needing improvement, quantify the benefits gained and assess progress in quality maturity.

QuEST Forum has demonstrated that the use of TL 9000 measurements can improve service by reducing the multiplicity of complex and conflicting programs. The collaborative use of the TL 9000 measurements as a scoring tool enhances the customer-supplier relationship through consistent communications and measurement definitions. Most importantly, it improves quality across

the global supply chain and reduces cost over and above what is conceivable through the procurement process.

QuEST Forum has become the voice of customer quality as the communication technology industry strives to create a flawless user experience through the relevant common and timely quality measures. To learn more visit [www.QuESTForum.org](http://www.QuESTForum.org).

## Driving Forces in Communication Industry

## QuEST Forum and TL 9000 Executes for the Future

<b>Change</b>	Evolving industry needs are integrated into TL 9000 through ongoing updates
<b>Consistency</b>	Provides a vehicle to assess performance against best-in-class global measurements and drives uniform quality
<b>Competition</b>	Benchmarking measures offer timely data on best in class and industry average performance by product category
<b>Convergence</b>	Introduces new product categories reflecting convergent areas like IP networking as they appear in the network
<b>Consolidation</b>	QMS and measurements help efficiently manage the impact of mergers and acquisitions by providing a common language and framework for processes
<b>Globalization</b>	QuEST Forum has grown to over 170 members around the world with regional teams established to ensure that both global and local needs are accommodated