We invite you...

QuEST Forum’s membership of service providers, suppliers, quality bodies and liaison organizations is truly representative of the Information and Communications Technology (ICT) industry. Members not only derive significant benefits from QuEST Forum but also have a unique opportunity to be actively involved and impact the direction of the organization. Members learn and share best practices with ICT professionals, gain insight to ICT tools and information, earn continuing education units (CEU), and discover first-hand insights on benchmarking and measurements. QuEST Forum provides thought-provoking research, collaborative meetings, tools, best practices, and hands-on events. Be a speaker at one of our international conferences, attend a QuEST Forum Academy webinar, or lead a work group that creates standards and best practices! Connect with us at www.questforum.org or via

About QuEST FORUM

QuEST Forum is a unique organization in that we create a collaborative environment for service providers and suppliers, who are often times competitors, to come together for the development of innovative solutions to globally relevant industry issues. QuEST Forum unifies the ICT community through the implementation of TL 9000 (an ICT specific quality management system that is built on ISO 9001:2015), performance benchmarking, and a broad array of common metrics that support rapid industry adoption of new technologies and consistent quality of communication networks around the world.

Our Vision

Be the global force for improving quality of products and services delivered to customers of ICT.

QuEST Forum 2020 Value Proposition

QuEST Forum is a global association of companies dedicated to impacting the quality and sustainability of products and services in the ICT industry. Our data and insights are used to de-risk technology introduction, improve business performance and customer satisfaction. As the voice of the industry, QuEST Forum provides forward-thinking companies a collaborative environment to positively impact business results and customer experience through: Tools that simultaneously improve speed to market and ensure quality, benchmarking data to make informed purchase decisions and improve performance, best practice sharing, networking and education.

Acknowledgements

Our members power the success of QuEST Forum and we would like to thank the many volunteers and industry leaders for contributing their invaluable time, experience and advocacy in 2015.
MESSAGE FROM THE CHAIRS

As a direct result of the tireless work of our volunteers, staff and CEO, it has been a fantastic year for QuEST Forum. In 2015, numerous cutting-edge technologies have been introduced, from machine-to-machine intelligent communications to new mega-scale desalination technology – all are driving opportunities for better living and new environmental efficiencies. With technology shifting toward an intelligent virtualized world, QuEST Forum took this year to consciously focus on next-generation networks and environmental sustainability. This new direction on virtualization reflects our focus on driving efficiencies and delivering a vision for the future of the Information and Communications Technology (ICT) industry. The momentum we have built in these areas is critical to our continued success in 2016.

This year, QuEST Forum enhanced the CEO’s vision of “Quality is Cool” by engaging high school and college students through internships and engagement with industry leaders and non-profit organizations. We were able to provide those “millennial” students with a strong knowledge base in quality analysis to aid their success as they enter the workforce.

The demarcation between the ICT industry and other technology industries is becoming blurry. A virtualized ICT industry is fueling revenue, improving efficiencies and reducing operational expenses in several crucial vertical market segments, including finance and medicine. Infrastructure as a Service is now available on demand to help kick-start small businesses and allow large enterprises to accommodate periodic increases and decreases in network traffic to allow better management of network resources. Virtualization initiatives launched in 2015 will prepare the ICT industry to measure and monitor progress toward greater adoption more effectively.

QuEST Forum contributed significantly in the area of conserving natural resources through numerous avenues. Our sustainability initiative and TL 9000 quality measures, including TL 9000’s safety best practices, all reflect our commitment to care for the well-being and safety of the ICT industry. Using our annual conferences in EMEA, APAC and America, QuEST Forum continues to promote global innovation in the areas of automation, intelligent networks, performance and operational metrics and customer experience analytics.

Despite industry bureaucracy, we’ve continued to see worldwide growth of the QuEST Forum brand. This year we expanded through collaboration with The Shenzhen Quality Association to formally launch QuEST Forum Shenzhen, a new, fully operational branch of QuEST Forum located in China. This newly-developed extension of QuEST Forum’s anonymized benchmarking measurement practices has bred a model that can be replicated anywhere in the world. In addition, the launch of our Cost of Poor Quality initiative has resulted in rapid engagement and quick results that will be beneficial in all facets of business operations. We also began work with a new partner in Europe to develop the high-value network performance benchmarking that service providers globally have been asking for.

By expanding our global presence, serving diverse market segments, collaborating with other organizations and formulating a solid vision towards QuEST Forum 2020, we remain strong and more committed than ever to our mission of delivering quality measurements to the industry. As we elevate ICT to the virtualized world, collaboration and sharing of best practices is going to be ever more critical as we continue our development of high-quality products and the delivery of a superior customer experience.

We want to thank you all for your hard work, determination and support. The future of QuEST Forum has never been brighter. Given the way we are quickly responding to this ever-changing industry and the needs of our members, we will, without a doubt, continue to illuminate the path forward for our industry.

Sincerely,

Steve Pickett
21st Century Towers
2015 Chair

Sankaran “Ram” Ramanathan
Verizon
2016 Chair
For QuEST Forum, our 2015 strategy was driven by our need to stay relevant in a rapidly changing industry. This included enhancing and promoting our value, improving operational efficiency and growing our global membership footprint. Thanks to the hard work and dedication of our member-company volunteers, 2015 was a year full of growth and accomplishments.

2015 Activities and Achievements

- Strengthened our presence in the industry with our strategy to use social media and collaboration with other organizations and associations
  - Participated in events with a QuEST Forum booth and speaking engagements
  - Executed several collaboration agreements to co-market our activities
- Finalized our agreement to form QuEST Forum Shenzhen Branch and held a successful conference in Shenzhen in September. There were more than 150 attendees and a team of very high-quality speakers
- Held three successful global conferences sharing a view of the future with Social Internet of Things, Best Practice sharing, and addressed the challenges facing the industry. The combined survey scores of these conferences was a world-class 4.52 out of 5 rating
- Enhanced the Sustainability Initiative and awarded the first annual QuEST Forum Sustainability Awards for “Most Improved” and “Best Overall”
- Managed staff turnover while maintaining continuity, knowledge, and productivity
- Successfully launched a new public website that works with all forms of multi-media devices
- Reintroduced the QuEST Forum newsletter
- Engaged in a strategic Plan for QuEST Forum for the next five years. The “2020 Vision” was planned over the summer and presented to the Executive Board in the September strategic planning session. As we move into 2016, we will be completing the action plans for the strategy

2015 QuEST Forum Membership

QuEST Forum continues to attract new members and has been able to implement a special “Think Tank” activity at our regional conferences to invite potential members to participate. This has allowed us to engage these potential members, expose them to our activities, and recruit them as members. We continue to strive to recruit service providers as members. There is a special initiative that is working with service providers to determine their specific needs and build a value proposition that will justify their participation and lead them to membership.

- At the start of 2015 there were 210 members. This accounted for mergers, acquisitions and withdrawals. During 2015 we have added 18 new members which brought our total to 228 members. As we account for additional mergers, acquisitions and withdrawals during 2015, our net gain will be more than 210
- We have reached across the industry to gain reciprocal memberships with leading associations and governmental groups
- We have launched a benchmarking study targeted to Tier II and Tier III service providers. The goal of this study is to attract new members from this group
2015 Financial Highlights

As the 2015 QuEST Forum budget was presented and approved, the industry seemed to be on a continued growth path. It was recognized that in order to execute our plans for increased growth and exposure, there would be additional revenue requirements to maintain our planned activities. QuEST Forum operates on a high percentage of fixed costs and low variable costs. In order to obtain reasonable costs for our scheduled activities, they are planned and agreed upon up to two years in advance. To help our revenue growth, QuEST Forum implemented a new member category for very large companies with a membership dues increase and a smaller increase for those members in the large category. The dues for the small member companies was unchanged. In the past, we have seen an increased number of sponsorships to fund our conferences and our budget planned on this to continue. However, the industry as a whole has struggled economically and as a result we have had several members drop their membership, and the sponsorships so necessary to support our conferences have declined.

Each time a company receives its first TL 9000 certification they are awarded a special TL 9000 pyramid. During 2015 there were 33 pyramids awarded.

Over the past few years, we have seen a reduction in new TL 9000 certifications and a drop in overall company registrations. Much of this decline is a result of amalgamation due to mergers with some decline due to financial difficulties. Throughout this, TL 9000 certifications remain strong with over 780 certified companies, and almost 2,000 certified locations worldwide.

As we move into 2016 we have addressed the economic conditions and built our budget accordingly. There will be several changes to the activities as we work to reduce the expenses associated with our conferences to match the sponsorships available. Rest assured we will continue to host world-class events.

We are doing many things to increase the value proposition of QuEST Forum to attract and keep members. We believe that our future continues to be bright and with our engaged executive board, dedicated volunteers, and professional staff we will be able to continue to add to QuEST Forum’s financial strength.

TL 9000 Certifications

The enhancement and maintenance of TL 9000 is the main product of QuEST Forum. TL 9000 is built upon ISO 9001 and this year ISO launched the latest version ISO 9001:2015. QuEST Forum is busy matching our requirements to coincide with ISO and we are planning to launch the new Requirements Handbook by mid-year.

As part of our strategic planning for 2020 there is a special initiative to review TL 9000 and ensure that it is keeping pace with the rapidly changing industry. This team is tasked with making proposals that will make TL 9000 more attractive and relevant to companies as we migrate the industry into a more software-oriented network and smart applications.

TL 9000 registrations are charged a fee for each product category registered. This fee ($444) was implemented in 2008. During 2016 this fee will be raised to $575 to cover the increased expense to administer TL 9000.

2016 BUDGET

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**AMERICAS**

The Americas region seeks to advance QuEST Forum’s strategic objectives, services and products in the United States, Canada, Central America, South America and the Caribbean. We continually promote participation in QuEST Forum Work Groups and Strategic Initiatives.

### 2015 Accomplishments
- Conducted the Americas Best Practices Conference in San Diego, California, September 2015
- Provided a forum for members to stay abreast of QuEST Forum workgroup activities and strategic initiatives
- Worked with QuEST Forum staff to automate member participation reporting
- Worked with NTCA–The Rural Broadband Association on network reliability benchmarking study for small rural service providers
- Strengthened new member participation in targeted work groups and sub-teams
- Focused on growing membership in the Caribbean and South America by leveraging member relationships

### 2016 Initiatives
- Partner with TIA to plan speaker content for joint conference in Dallas in June 2016
- Support QuEST Forum staff to plan Service Provider Summit in Nashville in September
- Provide forum for QuEST Forum members in Americas to stay abreast of workgroup activities, strategic initiatives and QFA training opportunities
- Strengthen new member participation in targeted work groups and sub-teams
- Grow membership in the Caribbean and South America by leveraging CANTO partnership
- Incorporate Member Value Survey data into improvements for increased regional value

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**EMEA**

QuEST Forum’s EMEA regional team works to facilitate activity and engagement in Europe, the Middle East, and Africa. This regional team delivers distinctive value by connecting the TL 9000 implementation and QuEST Forum value proposition to its business environments.

### 2015 Accomplishments
- Obtained final approval to include defined Managed Services KPI (Incident Restore Rate) in TL 9000
- Updated End-user experience Application Quality (AQ)-KPI Whitepaper Measurement Framework
- Listed KPIs for video and web browsing
- Defined and approved AQ-KPIs in updated KPI document
- 1st in ICT Industry to achieve fully user oriented and technology independent CEI metrics
- Conducted the EMEA Regional Conference in Munich, Germany, 15-17 June 2015

### 2016 Initiatives
- Promote QuEST Forum to attract more Operators and grow the EMEA member base
- Strengthen liaisons with strategic partners
- Pursue the EMEA KPI team’s top priorities
- Managed Services KPIs in TL 9000
- Continue existing Managed Services Benchmarking and consider adding financial dimension
- Amend TL 9000 Measurement Handbook – update product categories based on findings
- Update KPI framework/white paper
- Conduct EMEA Regional Conference in Barcelona, Spain, 20-22 June 2016

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**Leadership**

**Ed Bryan**
ADTRAN Co-Chair

**Ben Jernigan**
NOKIA Co-Chair

**Beth Ford**
AT&T Americas Secretary

**Rodolfo Stecco**
QA - Quality Austria Latin America Secretary

**Jason Becker**
Verizon Americas Conference Chair

**Helena O’Malley**
Xilinx Chair

**Michaela Feiertag**
NOKIA EMEA Regional Conference Chair

**Alan Rutterford**
Excel Partnership UK Secretary
APAC
QuEST Forum’s Asia-Pacific region continues to support rapid regional growth with operational hubs in Greater China, India, and Japan, as well as participation in Korea and other countries in the Association of Southeast Asian Nations.

**CHINA**
2015 Accomplishments
- Successfully held QuEST Forum Shenzhen Conference with 150+ attendees
- Established QuEST Forum Shenzhen Founding Members: Huawei, SAQ, WIT, HKQAA, ZTE, HKQAA, SGS, Viavi Solutions, ASQ China, WIT Assessment and Shenzhen Association for Quality
- Hosted four QuEST Forum Shenzhen membership recruitment meetings
- Recruited our first QuEST Forum Shenzhen Member-ChitWing
- Appointed first full-time QuEST Forum Shenzhen Executive Director, Stephanie Xu

2016 Initiatives
- Host the 2016 QuEST Forum APAC Regional Conference in Shenzhen in April 2016
- Host three Membership Recruitment meetings
- Host two TL 9000 Measurement Workshops
- Build the QuEST Forum Shenzhen organization governance and structure

**INDIA**
2015 Accomplishments
- Meeting with BSI, DOT, TCIL, ESSEL GROUP, VODAFONE, NASCOM by QuEST Forum board members to share benefits of the Forum and TL 9000
- Face-to-Face meeting and conclave hosted by Ericsson at Delhi in March
- Face-to-Face meeting and conclave hosted by Cognizant at Chennai in November
- TL 9000 awareness training program conducted for HP, TEJAS, E&Y, Vodafone Mobility

2016 Initiatives
- Continued focus on benefits of TL 9000
- Participate in KPI and sustainability initiatives being managed at international level
- Conduct more webinars and training sessions for education on TL 9000
- Conduct measurements session specific to industry like NOC, voice services, data services, software development
- Encourage usage of benchmarking facility

**JAPAN**
2015 Accomplishments
- Held a successful APAC Best Practices Conference in Tokyo with a record attendance of 200+ participants in April
- Held four face-to-face hub meetings
- Held two successful TL 9000 seminars in June and November
- Followed up the translation of Alerts and QuEST Forum Newsletters

2016 Initiatives
- Hold two TL 9000 seminars
- Hold five face-to-face hub meetings
- Complete Japanese translation of TL 9000 Requirement Handbook R6.0
- Support APAC Regional Conference
- Engage additional Service Providers and Suppliers
- Follow up the translation of Alerts and QuEST Forum Newsletters
OVERSIGHT WORK GROUP

The charter of the Oversight Work Group (OSWG) is to ensure the integrity of the TL 9000 certification program and the effectiveness of QuEST Forum operations, communications, and member services.

2015 Accomplishments

- Continued to define and implement actions from the Validation Audit (VA) Project including improvements to the 3rd-party certification process (e.g. released Code of Practice update, Measurements Handbook Audit Checklists, launched product category validation process, and 3rd-party Effectiveness Verification Program 3P-EVP)
- 3P-EVP – Developed and approved a data driven process to monitor Accreditation and Certification Bodies and trigger investigations/actions to improve 3rd-party effectiveness
- Managed strategic relationships with IAF, ISO CASCO STAR and ISO/TC 176 including:
  - Submitted vetted comments on ISO 9001:2015 FDIS
  - TL 9000 Requirements Handbook R6 promoted in ISOfocus Magazine and ISO CASCO Newsletter
  - Presented at ISO IEC/ITU conformity assessment workshop at the UN in Geneva
- Training – Developed RFPs for the creation of TL 9000 Requirements Handbook R6, and Mandatory Auditor E-learning training (released)
- Recognition – Continued to manage vetting for “QuEST Forum Fellows Award”
- Website - launched new QuEST Forum public facing website, including making it mobile-friendly. Established infrastructure for maintaining/updating site information
- Continued to manage By-laws, Member and TL 9000 surveys, “Jump Start”, Peer Guides, UTD scorecard, Alerts (7 in 2015) and translations

2016 Initiatives

- 3P-EVP – Implement 3P-EVP process approved in 2015, including quarterly data reporting and investigation/action status
- TL 9000 Requirements Handbook R6 – manage the production of this new handbook that also incorporates ISO 9001:2015
- Training – develop and launch TL 9000 Requirements Handbook R6 training
- AB/CB team - Improve the 3rd-party certification process through continued “change idea” implementation from previous validation audits
- Continue to manage Strategic Relationships (IAF, ISO CASCO STAR, ISO/TC 176) to ensure ICT members’ needs are championed
- Launch new “Individual Recognition Award”
- Continue “business as usual” responsibilities (e.g. surveys, translations, alerts, “Jump Start”, by-laws review, scorecard, peer guide, website)
Global Business Excellence

The Global Business Excellence Work Group facilitates the evolution of the QuEST Forum regions and hubs, and establishes QuEST Forum as the recognized global industry leader for business excellence and best practices information.

2015 Accomplishments

- Supported Best Practice Conference planning with staff and regional leadership
- Facilitated executive visits to China and India
- Supported various strategic initiative project teams and global aspects of working committee activities
- Promoted communications between QuEST Forum working committees and regional hubs
- Supported successful establishment of QuEST Forum Shenzhen branch

2016 Initiatives

- Support QuEST Forum’s 2020 Vision strategic stream initiatives
- Facilitate the effective maintenance, growth and operational maturity of the regions and hubs
- Facilitate and support working committee and regional hub strategic initiative activities
- Promote effective regional participation in QuEST Forum Leadership Council, Executive Board, and working committees in order to achieve QuEST Forum strategic goals, initiatives and objectives
- Facilitate and support world-class regional Conferences and related executive visits
- Work with QuEST Forum staff, working committees and strategic initiative teams to address regional needs
- Facilitate engagements with government organizations, regulatory bodies and industry organizations
- Represent the regions at face-to-face meetings as necessary
- Facilitate ongoing effort to execute China Strategy and further enable the success of the QuEST Forum Shenzhen NGO
- Facilitate Regional training and TL 9000 implementation support efforts
- Conduct regular conference calls with each region as necessary
- Promote Best Practices and Business Excellence sharing and benchmarking
IGQ WORK GROUP

Integrated Global Quality
QuEST Forum’s Integrated Global Quality Work Group works to harmonize global industry quality system requirements and measurements, ensuring that TL 9000 handbooks keep pace with changes in products, solutions, technology, services, and supply chain.

2015 Accomplishments
- Drafted TL 9000 Requirements Handbook 6.0, including ISO 9001:2015 Standard and suggestions supporting QuEST Forum strategic focus areas
- Completed new IRT measurements per the addendum process, for future Measurements Handbook update
- Published Release 5.3 of the Product Category Table
- Supported the TL 9000 Growth Initiative through meetings and webinars with service providers promoting the use of TL 9000 in the supply chain

2016 Initiatives
- Publish TL 9000 Requirements Handbook 6.0
- Complete new measurements from sub-teams per the addendum process for future Measurements Handbook update
- Support the QuEST Forum value-stream’s 2020 strategic goals
- Continue to drive the IGQ charter through sub-team, regional, and strategic initiative support

NSPRC WORK GROUP

Network Service Provider Reliability Council
The purpose of the NSPRC working committee is to ensure reliable and cost effective communications service for all end users by identifying service performance and product quality concerns that can be addressed within the TL 9000 standard. The NSPRC working committee provides a forum for active voluntary participation in the resolution of common reliability and/or public safety problems identified in the operation and maintenance of equipment within the communications service provider network.

2015 Accomplishments
- Added two new members with IP responsibility
- Added one new IP Supplier
- Identified 22 and cleared 11 technical issues with seven major suppliers that improved network reliability
- Added two product categories to review with suppliers

2016 Initiatives
- Continue to increase the focus on IP in both membership and vendor issues
- Continue to seek new member companies and representatives
- Continue to identify and work with suppliers on technical issues to improve network reliability
- Bring in wireless representation
2015 STRATEGIC INITIATIVES

QuEST Forum’s strategic initiatives use the skills and resources of the executive board to champion and guide projects designed to achieve the organization’s strategic goals.

Sustainability Initiative

At QuEST Forum, we are in our third year of developing a TL 9000 sustainability measurement model that allows a company to measure and improve the effectiveness and maturity of its sustainability program.

2015 Accomplishments

- Developed actionable sustainability measurements as a strategic priority
- Mapped model elements to the global community of best practice organizations
- Issued the QuEST Forum First Annual Sustainability Awards
- Held webinars on how to benefit from measuring sustainability
- Launched a sustainability webpage at http://www.questforum.org/ict-initiatives/sustainability/
- Benchmarked baseline sustainability data with member companies and UTD

2016-2017 Objectives

- Advance the model and assessment tool using quantifiable measurements that elevate the holistic understanding and practice of sustainability
- Share best practices throughout the industry
- Establish a level playing field and common language for sustainability
- Dialog and align with industry standards organizations
- Accelerate the development of quantified metrics
- Accelerate benchmarking, scoring and award levels
- Develop and implement more training and webinars
- Market, promote and recognize sustainability successes
- Encourage more companies to join this initiative

Sustainability Awards:

In 2015, QuEST Forum created the Sustainability Awards to promote, encourage and honor the efforts of those serving as role models in the field of Sustainability. Entrants in the competition used their performance against the QuEST Forum model to share their progress to-date.

The winners of the 2015 QuEST Forum Sustainability Awards are:

Best Overall Performance
GENBAND

GENBAND is a leading developer of real time communications software solutions recognized for overall achievement in Sustainability Best Practices.

Most Improved
ADVA Optical Networking

ADVA Optical Networking creates new opportunities for tomorrow’s networks and a new vision for a connected world. Their intelligent telecommunications hardware, software and services have been deployed by several hundred service providers and thousands of enterprises.
Performance Data Reports

The Performance Data Reports (PDRs) Strategic Initiative is tasked with improving member satisfaction and confidence with TL 9000 performance data and PDRs.

2015 Accomplishments

- **Industry Reports**
  - Published 10th Industry Report focusing on Network Field Maintenance demonstrating improvements in problem reports, fix response time (approaching 95%), on-time service delivery (>95%), defective service requests (<0.5%) and service caused outages
  - Published 11th Industry Report showing the impact of PDR Team actions to improve data accuracy. Using the router categories as an example, team efforts to contact companies in these categories to ensure they were in the right category improved accuracy of PDR annual report normalization units and measurements such as software problem reports

- **Data Anomaly Investigations** - Proactively assessed registrants in product categories where data anomalies were identified:
  - 75 Investigation letters sent for 1.2.9.3 (Access Routers), 3.3.2.1/3.3.2.2. (Basic/Advanced BTS), 3.2.2.1.2.1 (Optical Transport Systems) to address high SFQ WIC, 0 field return BIC for extended time periods, high FR WIC. Resulted in eight data correction submissions, and five suspensions
  - Commenced further investigations to explain situations where BIC is perfect for extended time periods and will consider changes to advisors and calculation methods

- **New Product Category Approval Process** - In partnership with AB/CB team, and OSWG launched a new process and tool requiring Forum approval of Product Category Selections. As of November 3, 2015, 32 requests have been processed. New product categories were recommended compared to the category originally requested

- **Advisors to improve data quality** - Added eight advisors additions to check outage data using “high availability” as a trigger (i.e. > 7 nines). Deleted NPRs=SOs advisor as it was not adding value. Added advisor to alert when the normalization unit is 95% or greater than the range limit

- **White Papers** - Updated the “How to Use TL 9000 PDRs” white paper as a counter measure to our analysis of QuEST Forum member value survey data that indicated increased education and awareness of using the PDRs could have a major impact on PDR user satisfaction

- **Expanding PDR availability** - Continued to address low participation product categories where PDRs are not available. Identified and communicated similar product categories for those registrants in categories that do not have PDRs
Network Function Virtualization (NFV)

The NFV strategic initiative assesses the needs and quality requirements of organizations developing, offering and implementing NFV services. The team examines the possible impact on the TL 9000 standard, but more importantly collaborates with other Standards Development Organizations (SDOs) (e.g. ETSI, TM Forum, NIST) to ensure a comprehensive approach in addressing NFV challenges across the ICT industry.

2015 Accomplishments

- Forged Relationships With Key NFV SDOs
  - ETSI - Accepted QuEST Forum Work Item to complete the ‘NFV Quality Accountability Framework’ (QAF) started by the NFV team
  - TM Forum - QuEST Forum invited to participate in TM Forum sponsored Multi-SDO NFV Procurement Metric initiative which includes ETSI and NIST (United States National Institute of Standards and Technology)
  - NIST - Working with Cloud Metrics Public Work Group
  - Established a regularly scheduled working meeting to align and jointly work on common interests
  - Introduced Leading indicator performance measure to ETSI and the multi-SDO group which are currently being worked
  - Received agreement to launch early deployment NFV Network Benchmarking program to accelerate Network Reliability Maturity

- Impacted TL 9000 In Less Than Eight Months
  - ‘Quality Measurement of Automated Life Cycle Management Actions’ approved and included in the TL 9000 Supplemental Measures Library and referenced in ETSI QAF
  - TL 9000 “Network Element” definition changed for NFV by removing the “collocation” requirement for NE component
  - Started working with key NFV SDOs for QuEST Forum to drive creation of mature virtual machine failure metrics, based on high level ETSI NFV Service Quality Metrics

- Expanded Membership Engagement
  - 52 members across 22 companies
  - NFV “Education” during team “forming/storming” phases
  - NFV presentations/workshops at all 2015 Best Practices Conferences

2016 Objectives

- Continue to collaborate with other SDOs (e.g. ETSI, NIST, TM Forum, cross-SDO NFV initiatives)
  - Lead the development of detailed NFV performance measurements and publish them in the TL 9000 Supplemental Measurements Library
  - Agree on measurements to benchmark early and help decrease the NFV technology reliability maturity curve
  - Consider opportunities to identify real-time data to proactively identify network degradation and define outage data collection points
  - Continue to evolve the TL 9000 Handbooks to address NFV
  - Continue workshops, conference participation, and consider publications to highlight NFV and increase service provider engagement
  - Begin collecting NFV Network Performance metrics as a part of the network benchmarking project
**Small Business Initiative**

Small Business’s Charter is to serve as a global forum for small businesses to mature, grow and innovate as an integral part of the ICT industry supply chain.

The mission of QuEST Forum’s Small Business initiative is to collaboratively develop and share solutions, best practices and insight for small business issues by leveraging QuEST Forum’s member companies’ Subject Matter Experts (SMEs) and the framework of the TL 9000 quality management system.

The Vision of QuEST Forum’s Small Business initiative is to serve as a global forum for small businesses to continue to mature, grow and innovate as an integral part of the ICT industry supply chain.

**2015 Accomplishments:**

- Added Service Provider representative from AT&T to the small business leadership team
- Increased average attendance to Small Business Lecture Series by 279%
- Developed Small Business Luncheon, Workshop and Networking Event at the Americas Best Practices Conference (BPC) and increased attendance with a 4.92 out of 5 satisfaction survey rating
- Participation by several Service Providers and Equipment Manufacturers for Networking session at BPC with excellent results for both the corporations and the suppliers
- Small Business participated in speaker engagement for overall Americas BPC bringing in speakers from Apple and Pandora
- Added eight new members

**NTCA Benchmarking**

Only active since August of 2015, this initiative has made great strides. In initiating this study, we set out to define, develop, and benchmark measures useful in evaluating and improving the network operational performance of NTCA members (rural service providers). The appeal of this initiative is continuously growing as the news of its benefit spreads throughout the membership of NTCA.

While we are currently collecting data for only one measure, the study group plans to expand the list to accommodate the needs of the participants as the group grows.

**2015 Accomplishments**

- Successfully recruited nine service providers and members of NTCA to participate in the study
- Developed a pair of measures based on the TL 9000 Mean Time to Restore Service (MTRS) measure split into data for residential and enterprise/business customers
- Began to successfully receive data submissions from participants

**2016 Objectives**

- Continue to grow the initiative by recruiting more participants and adding measures
- Foster the relationship between NTCA and QuEST Forum to enable greater collaborations
- Translate the success of this study into new QuEST Forum memberships and TL 9000 certifications
QuEST Forum Academy

QuEST Forum Academy (QFA) was launched in 2014 to attract new QuEST Forum members and to provide knowledge, training, and education on hot topics in ICT. Led by industry experts from around the world, the Academy's programs deliver timely information about current needs and future trends in various areas, such as standards, measurements, risk management, and sustainability.

QFA's inaugural year included five webinars that supported QuEST Forum’s strategic initiatives including the Validation Audit Project, Sustainability and the update of the TL 9000 R6.0 Requirements Handbook. Webinars were offered in multiple time zones to accommodate QuEST Forum’s global membership and were well attended and highly successful, resulting in at least two new QuEST Forum members.

2015 Accomplishments

- During 2014 and 2015, QFA ran an internship program for high-performing High School students from across the US. The focus was individuals heading into STEM disciplines with the objective to introduce the concept of Quality and Quality Management Systems, like QuEST Forum’s TL 9000, early in their learning journeys. In 2015 we put four such individuals through the program with excellent results

- QFA began delivering webinars to support QuEST Forum’s Small Business team which resulted in almost twice as many webinars delivered than the inaugural year. QFA not only saw significant growth, but expanded beyond the ICT industry. The academy featured webinars that updated members and non-members on the aerospace management system standard and actions the aerospace industry has taken to assure the integrity of their 3rd-party certifications.

2016 Objectives

- QFA evolving beyond webinar delivery including training offered to support current members as they transition to QuEST Forum’s TL 9000 R6.0 Requirements Handbook and additional multi-time zone and multi-language webinars

Webinars

2015 Accomplishments

- Delivered webinars to support QuEST Forum membership including a panel discussion in Mandarin to support the Sustainability initiative and webinars to support the Small Business Work Group, which resulted in two times as many webinars delivered than the inaugural year

- Delivered first fee-based series on “Risk”

- Conducted a follow-up ISO 9001:2015 webinar which resulted in our highest number of registrations to date at 450, including 137 non-member company registrations

- Engaged industries beyond the ICT industry, including an update on the aerospace management system standard and actions the aerospace industry has taken to assure the integrity of their 3rd-party certifications

- Completed process maps of all QuEST Forum Academy Sub-team processes

- QuEST Forum Academy Platform now supporting OSWG and other QuEST Forum member meetings

2016 Objectives

- Refresh and revitalize the Pipeline to identify new topics and opportunities in support of the 2020 Vision

- Engage ICT “thought-leaders”; promote QuEST Forum Academy to engage younger potential ICT participants including interns

- Continue to deliver free webinars and initiate “sponsored” webinar delivery in support of TL 9000 and QuEST Forum initiatives, including Work/Regional Groups, in support of the value proposition and the 2020 Vision

- Deploy fee-based VILT/electronic learning (Phase 2) and investigate feasibility of Blended Learning/Instructor-led Learning (Phase 3); Create agreements for e-Learning, VILT and live classroom training to be offered by QuEST Forum Academy
Cost of Poor Quality (CoPQ)

The CoPQ strategic initiative was launched under the leadership of NOKIA's Deepti Arora in late 2014, and the extended team was in place by early 2015.

2015 Accomplishments

- Formed Cross Functional Team (20 organizations participating)
- Surveyed QuEST Forum membership for areas of interest (Q1)
- Analyzed survey results and formed focus groups for: Customer Reported Defect Hardware Repairs, Scrap Penalties Software Defects
- Developed Measurement Definitions and Counting Rules (Q2)
- Documents approved by CoPQ Team (Q3)
- Request for Sandbox invitation initiated (Q3)
- Initial participants identified (Q4 - 9 volunteer organizations)

2016 Objectives

- Secure additional Sandbox participants
- Test Sandbox process (Q4, 2015 Data Submission)
- Initiate Sandbox data collection by UTD (begin Q1, 2016 data)
- Collect data quarterly throughout the year
- Administer UTD Reports and share with participants
- Report progress to CoPQ Committee
- Update documents as appropriate
- Submit finalized metrics to IGQ for Supplemental Library

Wireless Handsets

The wireless handsets strategic initiative standardizes the measurements used to monitor wireless handset performance, providing the basis for benchmarking quality improvements. By creating standard definitions for performance terms such as “dead on arrival (DOA)”, “buyer’s remorse exchange (BRE)”, “warranty defect rate (WDR)”, “bounce rate (BON)” and “no trouble found (NTF)”, this initiative lays the foundation for reliable industry wide benchmarking of handset performance.

2015 Accomplishments

- The team refined and completed the measurement documents for five wireless handset measurements: DOA, BRE, WDR, BON and NTF
- The wireless handset benchmark study was launched for DOA, WDR and BRE with participating organizations submitting 12 months of data to the University of Texas at Dallas TL 9000 benchmark data repository

2016 Objectives

- Analyze wireless handset benchmark results, make adjustments to measurements if needed and determine next steps
- Expand benchmark study to include global participation and benchmark remaining measurements
- Continue sub team work to complete a Return Device Testing Guide (RDTG) to be used as guidance during the triage process
- Launch a new measurement initiative and benchmark study to include smart devices such as tablets and wearables. 2016 discussions to include connected vs standalone, new areas for Bluetooth accessories, and reliability measurements
Congratulations to all of the organizations that obtained TL 9000 certification in 2015! QuEST Forum would like to recognize the respective Certification Bodies that helped these companies establish quality management systems in their organizations. Thank you also to the University of Texas at Dallas for serving as the Systems Administrator for TL 9000.

## AMERICAS

<table>
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## EMEA

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340 CLUB

QuEst Forum appreciates the support of these highly involved companies through generous sponsorships, investments in time and contributions to work groups, sub teams, and regions. Each members’ 2015 cumulative participation total meets or exceeds 340 points.

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2015 LEGENDS AWARD

The *Legends Lifetime Achievement Award* is QuEST Forum’s highest award. Recipients are individuals with over 20 years of strong commitment to quality service to customers of ICT and have made significant contributions to the success of QuEST Forum.

*Satoshi Ikeuchi* received the Legends Lifetime Achievement Award for his outstanding dedication to customers in ICT and his achievements over the span of his more than 40 years in the business. Ikeuchi-san has succeeded in multiple facets of the ICT industry and is an excellent example of commitment to the continued growth of ICT.

2015 QUEST FORUM FELLOWS

QuEST Forum Fellows are recognized for their more than 10 years of outstanding contributions and dedication to QuEST Forum in the pursuit of ICT quality and performance excellence.

Ed Bryan  
Bob Clancy  
Ashok Dandekar  
Sheronda Jeffries  
Jack Pompeo  
Karen Rawson  
Dave Sanicola  
Jennifer Simcox  
John Wronka
Thank you to our 2015 Executive Board!

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Bridging Technologies.
Building Value.