Americas Virtual Webinar
August 27, 2014
• Today’s presentation will be recorded
• Due to the large number of attendees, all attendees have been muted

For questions, please Chat
“Host, Presenter & Panelists”
To ensure that your attendance is captured, if you did not access this webinar via the internet directly using WebEx, please remain on the line after the webinar ends and we will capture your name.

For questions, Chat “Host, Presenter & Panelists”

To make Full Screen

Phone icon identifies speaker
Globe icon identifies presenter

For POLLING, expand here or may auto-expand

To SHARE or for CALLBACK

IMMEDIATE GRATIFICATION IS NOT FAST ENOUGH
UPCOMING WEBINARS

Opportunities for Engagement – December 4 2014
The webinar recordings will be accessible from the QuEST Forum website under Americas Webinars.
Recording will begin NOW!
Education on Initiatives

✓ Understand the Executive Board supported initiatives
✓ Awareness of activities & needs within each initiative
✓ Identify where your organization may be interested in contributing
✓ Determine the appropriate representation within your organization
Executive Board Sub teams

Members Area >> Executive Board

Executive Board

Leaders

Chair
Steven Pickett
WesTower Communications

Vice Chair & Chair Emeritus
Tim Harden
AT&T Inc.
Executive Board Sub teams

Sub-Teams

- Alternates
- Assistants
- Compensation
- EB #4 Marketing Outreach
  - ILEC Marketing Team
- EB #9 Next Generation Network Measurements
  - EB #9 Security
  - EB#9 Software Sub Team
  - IT Operations
  - Wireless Infrastructure
- Finance Committee
- Governance
- Nomination Committee
- Operational Efficiencies
- Product Development Committee (PDC)
- SI - Cloud Computing
- SI New Products P2P
  - QFA
  - SI Sustainability
Modern Networks Measurements

Beth Ford – AT&T
Charter – Modern Networks

Keep pace with technology introductions in wireless, wired networks, cloud-based services and software defined applications & services to effectively address converged, next generation, IP-based communications networks
EB9 Project Team & Sub Teams

Modern Network Measurements
Executive Sponsor – Tim Harden, AT&T
Project Lead – Beth Ford, AT&T

Wireless Infrastructure
Lead
Bently Rolf, TELUS

Software
Lead
Art Morrical, ALU

Cloud
Lead
Vinny Arrigali, Cisco Systems

IT Operations
Lead
Raegan Paul, TELUS

Security
Lead
Nancy Lee, Ericsson
Objectives & Status

Wireless Infrastructure

Objective 2014:
Select Phase 1 (existing) and Phase 2 (new) measurements to define and benchmark. From that list, select 1 or 2 measurements to fully define and benchmark in 2014.

Metrics in progress:
Voice Drop Call Rate (Measurement completion Sept 2014, Benchmark completion Dec 2014)

Status August 2014:
The Wireless Infrastructure team has selected Voice Drop Call Rate to benchmark. The team has nearly completed the measurement document, topic guide and benchmark invitation. More Service Provider / Operator participation is needed!
Objectives & Status

Software

Objective 2014: Revise Software Fix Quality measurement definitions and conduct a benchmark study.

Metrics in progress: Revised Software Fix Quality (measurement complete, benchmarking to begin August 2014)

Status August 2014: Revised SFQ measurement is complete, the UTD sandbox is complete, benchmarking study to begin August 2014

<table>
<thead>
<tr>
<th>Identifier</th>
<th>Title</th>
<th>Formula</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>SFQ</td>
<td>Software Fix Quality</td>
<td>100 x Afactor x (DFc / Fc)</td>
<td>% Defective per month</td>
</tr>
</tbody>
</table>
Objectives & Status

**Cloud**

**Objective 2014:**
Finalize evaluation of existing metrics, identify and finalize new product categories relevant to cloud, data center & collaboration, identify other industry organizations evaluating metrics in this area and investigate potential new TL metrics.

- Develop two new metrics of availability and customer experience
- Investigate if ‘density’ and elastic scale’ can be normalized to allow creation of a TL 9000 measurement
- Discuss longer term membership recruitment of cloud companies and associated benchmarking opportunities

**Status August 2014:**
- Team has identified application classes, validating adequacy of existing product categories, and looking at need for additional product categories and metrics
- Determined that existing product categories should be used for present however it may become necessary to define specific categories for SAAS and PAAS outside of the 9.6 category.
- Determined that for PAAS, density and elastic scale are critical for individual cloud providers but it may not be possible to develop an industry metric.
- Determined that for SAAS two new metrics should be investigated/developed for:
  - Availability with a normalization unit of ‘user minutes’
  - Customer experience
Proposals for Existing and New Cloud Related Product Categories

Based on being a consumer or provider of one of the 3 layers, the Orchestration Engine is the intra-layer “glue” that makes the existing product definitions “XaaS” capable.
Metric Discussion

Cloud Computing

SAAS
- Performance
- Availability
- Customer Satisfaction
- Risk
- Security
- Cost
- Mobility

PAAS
- Performance
- Availability
- Customer Satisfaction
- Risk
- Security
- Cost
- Mobility

IAAS
- Performance
- Availability
- Customer Satisfaction
- Risk
- Security
- Cost
- Mobility

Orchestration
Automation
Management
Security
Metric Discussion (continued)

- Mobility
- Scalability
- Custom-ability

- Tenant Density
- Environment Utilization
- Scale Time Lag
- Self-Service Efficiency

- Power
- Cooling
- E-Waste
- Facilities

- Compute
- Storage
- Network
- Virtualization

- SLA
- Utilization
- Service Catalog
- Procurement
- Management

- Latency
- Historical Performance
- Distribution
- Security
- Availability

- Problem Reports
- Fix Response Time
- On Time Delivery
- Outage – Frequency & Duration
- HW / SW Metrics

Business

- Customer Acquisition Cost (CAC)
- Lifetime Value (3x CAC)
- Customer retention
- Attrition
- Average reoccurring revenue
- Average cost of service
Objectives & Status

Security

• **Objective 2014:** Monitor rapidly evolving security requirements and practices to identify any necessary changes to TL 9000 requirements, or additional sources of guidance, measurements, or best practices.

• **Status August 2014:**
  - Arranged for NIST to provide a speaker at the Americas BPC, topic is the newly released Cybersecurity Framework (for owners/operators of critical infrastructure)
Objectives & Status

IT Operations

• **Objective 2014:** Evaluate and define requirements and measurements applicable to IT Operations specifically focusing on Infrastructure Performance, Process Maturity, Application Impacts and Utilization and Application and Service Performance.

• **Status August 2014:** New Sub Team in 2014. Draft Charter and Scope were completed. Invitations to join were sent by QuEST Forum. Kick off meeting was held August 22\textsuperscript{nd}.

• **Notes:** The team is looking for IT Operations SMEs to join the team! Next meeting is September 15\textsuperscript{th} at 9am CT. To join the team, log into the QF portal and click Executive Board then IT Operations.
• Sub Teams meet biweekly, monthly or as needed to meet team objectives.

• The Project Team meet monthly to readout sub team progress

• Wireless Infrastructure, IT Operations and Cloud teams are seeking additional SME participation in order to reach their 2014 goals.

• Please contact Beth Ford at ef2124@att.com if you are interested in participating on the Modern Networks team!
Software Fix Quality
Software Team

Art Morrical – Alcatel Lucent
Problem statement for SFQ

• Numerator-denominator timing mismatch
  – Defective fixes are counted in numerator when no fixes are counted in denominator creating 1/0 monthly number

• Any single month the numerator can exceed the denominator so valid measurements can be greater than 100%

• Only smoothed averages can be used for SFQ
Analysis

• The same problem of SFQ would exist with Field Returns if FR measurements were like SFQ and simply took the number of units returned in a month and divided by the number shipped that same month

• Aggregating the denominator for a longer period of time (like Field Returns) solves this problem
Solution for SFQ

• Modify the SFQ measurement to follow the same methodology that Field Return measurements have used for years.
• Count 12 months of fixes in the monthly denominator modeling Field Return measurements
• Change look back for defective fixes from 6 to 12 months to match timing
# New SFQ Calculation

<table>
<thead>
<tr>
<th>Identifier</th>
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</tr>
</thead>
<tbody>
<tr>
<td>SFQ</td>
<td>Software Fix Quality</td>
<td>$100 \times A_{factor} \times \frac{(DFc)}{(Fc)}$</td>
<td>% Defective per month</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
<th>Jun</th>
<th>Jul</th>
<th>Aug</th>
<th>Sep</th>
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<td>1</td>
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<td>1</td>
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<td>0</td>
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<td>1536</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>435</td>
<td>0</td>
<td>0</td>
<td>218</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>NA</td>
<td>NA</td>
<td>0.07%</td>
<td>100%</td>
<td>NA</td>
<td>100%</td>
<td>0.46%</td>
<td>100%</td>
<td>NA</td>
<td>0.46%</td>
<td>100%</td>
<td>100%</td>
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<tr>
<td>0</td>
<td>0</td>
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<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>0.54%</td>
</tr>
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</table>
SFQ Study

- Decided on the 3 router Product Categories for the study:
  - 1.2.9.1 Core Routers
  - 1.2.9.2 Edge Routers
  - 1.2.9.3 Access Routers

- If you are in a router Product Category, can we add you to the SFQ study team?
Tower Initiative

Tom Yohe – WesTower Communications
• Tower Initiative

Wireless Site Installation Quality and Performance Reliability

Charter

Obtain input from industry leaders to clarify and prioritize wireless site installation quality, safety and performance reliability issues facing the industry today. Based on the findings, the team will recommend future QuEST Forum initiatives to improve quality, safety and reliability of wireless sites.

Initiative Summary

• Over 30 service providers, installation contractors, A&E firms, OEM suppliers and other organizations currently participating

• Developing metrics and best practices leading to improvement in targeted areas of installation performance, including safety of those performing work on the tower sites.
# Team Member Organizations

<table>
<thead>
<tr>
<th>ACS</th>
<th>Foresite Group</th>
<th>Nokia Solutions and Networks</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADTRAN</td>
<td>Fullerton Engineering</td>
<td>Nexius</td>
</tr>
<tr>
<td>AFL</td>
<td>Goodman Networks</td>
<td>Nexius</td>
</tr>
<tr>
<td>Alcatel-Lucent</td>
<td>Great Plains</td>
<td>OSP Magazine</td>
</tr>
<tr>
<td>Amphenol</td>
<td>Huawei</td>
<td>PTI (Pinnacle)</td>
</tr>
<tr>
<td>AT&amp;T</td>
<td>IBS Wireless</td>
<td>Teletech Team</td>
</tr>
<tr>
<td>Avion Systems</td>
<td>Indus Towers</td>
<td>Vantage Point Communications</td>
</tr>
<tr>
<td>Axis Technologies</td>
<td>IWPC</td>
<td>Velocitel</td>
</tr>
<tr>
<td>BlueStream</td>
<td>Jacobs</td>
<td>Verizon</td>
</tr>
<tr>
<td>CenturyLink</td>
<td>KGP Logistics</td>
<td>Verizon Wireless</td>
</tr>
<tr>
<td>CommScope</td>
<td>Mastec</td>
<td>Vodafone</td>
</tr>
<tr>
<td>Ericsson</td>
<td>NATE</td>
<td>WesTower</td>
</tr>
</tbody>
</table>

• Executive Board Sponsor: Trevor Putrah, President KGP Companies
Tower Initiative

Current Activities

Benchmark Study
- In-progress
- Results pending participants’ data submittal
- Current Installation Metrics
- Tower Construction Product Category proposed for PCT 5.2

Tower Installation Issues Survey
- 17 Participants
- Top Issues Identified
- Best practices library and measurements considered – no action taken
- Will revisit possible next steps with the team

Safety Sub-team
- Developing safety requirements and metrics
- Guided by Statement of Intent
- Collaborating with NATE and members of EHSCP
- Seeking participants from EMEA and APAC
Wireless Installation Benchmark Study

- Results will aid participants in evaluating and improving performance of installation services.
- Spans an extended period of time using aggregate data from the participants.
- Individual company data is submitted through a secure QuEST Forum portal with anonymity and confidentiality maintained.
- The metrics used will be those currently defined for TL 9000 Product Category 7.1.1, Installation and include the following:

<table>
<thead>
<tr>
<th>On-Time Delivery</th>
<th>Fix Response Time</th>
<th>Service Quality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number Of Problem Reports</td>
<td>Overdue Fix Response Time</td>
<td>Service Outages</td>
</tr>
</tbody>
</table>

- Data submittals began in April
- Additional participants needed and welcome
## Tower Installation Survey

### Structural Issues

<table>
<thead>
<tr>
<th>Issue</th>
<th>Number of Responses</th>
<th>Severity Critical</th>
<th>Severity Major</th>
<th>Severity Minor</th>
<th>Service Affecting</th>
<th>Potentially Service Affecting</th>
<th>Safety</th>
<th>Regulatory</th>
<th>Misc.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improperly secured or damaged coax, fiber, power, etc. cables</td>
<td>17</td>
<td>76.5</td>
<td>41.2</td>
<td>52.9</td>
<td>5.9</td>
<td>47.1</td>
<td>76.5</td>
<td>5.9</td>
<td>5.9</td>
</tr>
<tr>
<td>Improperly installed grounding equipment</td>
<td>18</td>
<td>72.2</td>
<td>23.5</td>
<td>52.9</td>
<td>23.5</td>
<td>35.3</td>
<td>35.3</td>
<td>23.5</td>
<td>5.9</td>
</tr>
<tr>
<td>Improperly installed weatherproofing</td>
<td>17</td>
<td>70.6</td>
<td>11.8</td>
<td>58.8</td>
<td>29.4</td>
<td>35.3</td>
<td>82.4</td>
<td>5.9</td>
<td>5.9</td>
</tr>
<tr>
<td>Incorrect and loose hardware for grounding connections</td>
<td>17</td>
<td>70.6</td>
<td>13.3</td>
<td>66.7</td>
<td>20</td>
<td>26.7</td>
<td>80</td>
<td>40</td>
<td>6.7</td>
</tr>
<tr>
<td>Poor RF connector connections with antenna jumpers and main coax runs</td>
<td>17</td>
<td>70.6</td>
<td>64.7</td>
<td>29.4</td>
<td>5.9</td>
<td>82.4</td>
<td>58.8</td>
<td>5.9</td>
<td>5.9</td>
</tr>
</tbody>
</table>

### Please indicate which of the following best describes your company:

<table>
<thead>
<tr>
<th>Answer Options</th>
<th>Response Percent</th>
<th>Response Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication Service Provider</td>
<td>27.3%</td>
<td>6</td>
</tr>
<tr>
<td>Equipment or Material Supplier/OEM</td>
<td>22.7%</td>
<td>5</td>
</tr>
<tr>
<td>Installation Services Provider</td>
<td>31.8%</td>
<td>7</td>
</tr>
<tr>
<td>Engineering Services Provider</td>
<td>9.1%</td>
<td>2</td>
</tr>
<tr>
<td>Other (please specify)</td>
<td>9.1%</td>
<td>2</td>
</tr>
</tbody>
</table>

22 answered question

1 skipped question
Help reduce the number of accidents industry wide

“The Forum has identified opportunities to use its existing infrastructure, experience, and expertise in ways that will assist both in the improvement of policies and practices of the organizations providing these services, as well as in the promotion of a higher level of training and performance…”

- Develop a TL 9000 product category specific to communications tower installation and maintenance services

  Continual improvement of an internal safety program compliant with applicable laws and recognized best practices – validated by metrics, benchmarking and Certification Body audits

- Develop a certification program specifically for individuals involved in the provision of cell tower installation and maintenance services

  Evidence of periodic safety training from qualified organizations and self-maintenance of individual’s safety records on a “Safety Passport” issued by a TL 9000 registered employer
Safety Sub-Team

*Engaging other Industry Organizations*

- **NATE**
  - QuEST Forum and NATE executives agreed to collaborate
  - QuEST Forum liaison membership offered
  - Reciprocal representation within each organization

- **EHSCP**
  - Members of Safety Sub-Team are members of EHSCP

- **OSP**
  - Panel discussion centered on Tower Initiative scheduled for October
  - OSP Expo
  - OSP Magazine article drafted
Please Join Us

• Tower Initiative Team meetings:
  – Every other Thursday – Resuming in Q42014

• Safety Sub-team meetings
  – Alternate Thursdays

Contact Mark Barnes: mbarnes@kgptel.com
Marketing Outreach

Tom Yohe – WesTower Communications

Executive Sponsors:
Steve Pickett – WesTower Communications
John Greene – New Lisbon Telephone Co.
Yasser Nafei – LG Electronics
Marketing Outreach - Scope

To expand the marketing of QF and TL beyond the traditional core audience & venues, & augment existing efforts, through –

- Customized marketing material
- Speaking engagements at non-QF events
- Leveraging existing strategic relationships & developing new ones
- Championing involvement and value for new participants
- Expanding support to international groups/hubs
- Engagement with gov. agencies to build support for TL
2013 Goals & Results

Green:
• Complete all tasks and associated milestones per schedule - met
• Obtain membership/participation from another under/non represented market – exceeded (Great Plains Communications, Jiangsu Zhongtian Technology Co., Ltd., Shenzen SmartTel, Timeline Global Telecom Solutions B.V., Databox)
• Incorporate QuEST Forum and/or TL 9000 messaging in three external presentations on conference agendas – exceeded (seven)
• Develop marketing relationship with another industry organization – exceeded (Shenzhen Association for Quality, OSP Magazine, NTCA)

Blue:
• Obtain membership/participation from two under/non represented market
• Incorporate QuEST Forum and/or TL 9000 messaging in five external presentations on conference agendas
• Develop marketing relationship with two other organizations

All exceeded (see above)
Recent Major Accomplishments

Developed relationship with Outside Plant Magazine
  • Published interview with Fraser, article on UTD Marketing contest, and 5 other articles on QF/TL in OSP Magazine
  • Participated in OSP EXPO 2013, also presenting in 2014
Developed/distributed “Elevator Speech” material on QF & TL
Maintained file of TL 9000 ROI/Benefits examples
Developed testimonial template
Conducted several executive visits to China, India, and Brazil
Presentations/panels at industry events including TIA 2014, FutureCom, OSP EXPO 2013, NFV, NTCA, TelcoVision, and LTE 2013
Supported ILEC Marketing contest at UTD
Development of relationship with NTCA, NATE, EHSCP
Marketing Outreach – 2014

Concentrating on 3 market segments

- ILECs, Wireless operators, and Cloud suppliers

Continuing to support of regional efforts in

- China – nearing establishment of joint subsidiary
- India
- South America

Continuing work on documenting ROI/Benefits of TL

Helped recruit support for all strategic initiatives including Sustainability, Tower Quality & Safety, and Wireless Handset
Sustainability

Steve Pickett – WesTower Communications
Sustainability Initiative (SI)

Executive Sponsors

Glenn Edwards – The BT Group
Victor Li – Huawei
Steve Pickett – WesTower Communications

• **Vision:** The global leader in providing benchmarking for CSR initiatives to sustainability-driven business improvement and profitability

• **Added Value:** provides a data-driven process that empowers companies to anonymously compare best practices with other companies

• **Scope:** Identify, document, and benchmark a common set of industry-accepted sustainability measurements for the ICT industry

• **Goal:** Establish the QuEST Forum TL 9000 Benchmarking Tool as the industry tool proving holistic sustainability measures for business improvement and cost control
A Global Initiative for ICT Sustainability

- The Quest Forum has assembled a diverse mix of companies participating in an initial benchmarking study of sustainability intended to raise the holistic understanding and practice of sustainability in the ICT sector.

- AT&T’s Stephen Bernard has been a part of the initiative since its inception and is now driving the weekly progress of the Sustainability Initiative.

- John Spear (EPI Consulting) is supporting the ICT SI with continuous contributions and providing guidance and instruction on the award winning model.

- The SI Pilot Team and Member Companies (shown on next slide) have exhibited relentless drive in making this initiative a success.
### The SI Pilot Team - Global Participation

#### Companies / Organizations

<table>
<thead>
<tr>
<th>Adtran</th>
<th>BT</th>
<th>PTI Solutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adva</td>
<td>DT / GeSI</td>
<td>Sector Supply</td>
</tr>
<tr>
<td>Airtel</td>
<td>epi Consulting</td>
<td>Tech Mahindra</td>
</tr>
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<td>Ericsson</td>
<td>Vodafone</td>
</tr>
<tr>
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<td>Huawei</td>
<td>WesTower</td>
</tr>
</tbody>
</table>

#### Members

- Stephen Bernard, AT&T
- Sudeep Bhalla, Vodafone
- Shiloh Coleman, Sector Supply
- Dr. Glenn Edwards, BT
- Dawn Ellis, pti Solutions
- Maria Eriksson, Ericsson
- Sudhir Gokhale, TechMahindra
- DeAnn Hargis, Alcatel-Lucent
- Parag Harolikar, Tech Mahindra
- Jef Mindrup, WesTower
- Arun Malik, QuEST Forum
- Christian Musiol, Adtran
- Luis Neves, DT / GeSI
- Fraser Pajak, QuEST Forum
- Steve Pickett, WesTower
- Joe Phelan, Adva Optical Networking
- Jack Pompeo, Huawei
- Mini Rajavarma, Airtel
- John Spear, epi Consulting
- Chris Springett, epi Consulting
- Cecelia Sullivan, pti Solutions
- John Wronka, Alcatel Lucent
- Tom Yohe, WesTower
- Will Zhanghao, Huawei
In 2009, Sustainability as a new term was incorporated into the TL 9000 Requirements Handbook v.5*
**SI Progress and Key Steps**

**UTD Measurement Benchmarking**
- May-June 2014 - Baseline UTD benchmark pilot
- Oct 2014 - 2nd pilot run with expanded group
- Quarterly data beginning Oct 2014
- 2015 Best in Class / Worst in Class

**Best Practices Sharing**
- Training sessions and case studies (EPI/Spear)
- 7/24/14 The Start of Sustainability (WesTower/Mindrup)
- 9/4/14 Sustainability at AT&T (AT&T/Bernard)
- Sustainability at Huawei (Huawei/Zhanghao)

**TL 9000 Measurements Development**
- 2014 Mapped 5 TL 9000 (2009) requirements to the EPI Model
- 2015 Create true TL 9000 performance measures (Measurements Handbook)
- 2015 Subset of quantified hard measures tied to cost savings
SI Progress and Next Steps

Marketing and Promotion Plan
• 2014 Q4 - Prepare written Marketing/Promotion Plan to communicate program
• QF Added Value - empowers other organizations and their measures
• Creating a level playing field in the ICT industry

Coordination with Other Organizations
• 2014 Q4 - Dialog with other organizations, bring to the table for interaction, review and comment
  • GeSI, EICC, CDP, ATIS

Third-party verification
• 2015 Determine Third party verification and certification bodies
• 2015-2016 Build program for third party verification
• Auditable in 2017
• Alignment with governmental requirements
• Leverage from existing reporting requirements
Benchmarking Pilot Results

*Fastest setup to first data* for any QF benchmarking study. A convincing indication of the enthusiasm and engagement of the pilot participants.

- **Circular Economy Lifecycle** – a comprehensive analysis of products from creation to retirement - scored the lowest average 28.6%

- **Carbon Footprint & Ozone Depletion** – focused on analysis, measurement, and reduction - scored the highest average score 67.5%

- **Average of all** ten measures 49.4%

- **Success is in Starting** - What gets measured is what gets improved

- **Join us!** The initiative is open for new companies to participate. Our focus is on making Sustainability easier with greater ROI through best practices sharing between ICT companies.

- **Second data collection round in October**
ICT Connects the planet - connect with us.

Join the QuEST Sustainability Initiative and help make our planet a better place.
Product Development

Ken Koffman – JDSU
PDC Charter

• Define the process and governance to:
  • Develop and deliver complementary products and services that enable the improvement of Quality and Reliability in the ICT industry, resulting in:
    • QuEST Forum being recognized as the global force for quality & reliability in ICT (“top of mind”)
    • Improved member satisfaction
    • Increased revenue
• **PDC – Membership and Governance**

• Product Development Committee (PDC):
  • 4 QuEST Forum Executive Board members,
  • 1 QuEST Forum Executive Contributor,
  • Program Management Office Leaders
  • Project Leads
  • Team Members

• EB members
  • Ken Koffman, (Co-Chair)
  • Fraser Pajak, (Co-Chair)
  • Petter Jartby,
  • Trevor Putrah,

• Executive Contributor
  • Jennifer Schoenhofer

• Program Management Office:
  • Mary Knotts (Telecommunication Systems, Inc.)
  • Joe Kunzer (Coriant)

• Team Meets Monthly To Review Progress – All are Welcome!!!!
# Title - Opportunity Assessment

<table>
<thead>
<tr>
<th>Summary of Opportunity</th>
<th>Strategy &amp; Rationale</th>
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<th>Objectives</th>
<th>Key Deliverables</th>
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<tr>
<th>Key Benefits</th>
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<th>Proposed Execution Timing/Confidence</th>
<th>Asks</th>
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QF Product Development Process

Governance:
- Product Development Committee: Executive Board directors
- Program Management Office Lead: QF member Volunteer
- Work Group Leadership
- OSWG Liaison: OSWG LC member Volunteer
- CEO
- Project Lead: For each development project
PDC Projects

- QFA – Quest Forum Academy (Phase 1 Live)
- Internship Program (Pilot Program w/3 Students)
- Benchmarking Service (Focus on QF Sz)
- TL 9000 Guidance Package (Material Being Assembled)
- Ideas Being Cultivated
  - Small Business/Technology Start-up Education
  - QF Dues recommendation from EMEA
  - PDR Data Input Automation Service
  - Industry Awards
Wireless Handset

Lynn Nicholson – AT&T
Paul Hand – LG Electronics
Charter:

Standardize the measurements used to monitor Wireless Handset performance and provide the basis for benchmarking of improvements in quality.

Leadership

Team Members:

Executive Sponsor - Yasser Nafei, PhD - LG
Co-Chairs - Lynn Nicholson – AT&T
            Paul Hand - LG
Secretary - Sean Brock - LG
Advisors - Beth Ford - AT&T
           Dave Sanicola - DESARA Grp
Subgroup Participating Members

- Beth Ford – AT&T
- Lynn Nicholson – AT&T
- Vincent Arrigali - CISCO
- Nancy Lee – Ericsson
- Eric Wash – HTC
- Neal Harkrider – Huawei
- Stephen Choy – Infinera
- Paul Hand – LG
- Sean Brock – LG
- Tim Sheppard - Samsung
- Ken Koffman – JDSU
- Karin Benebadji – PWC
- Don Irvine – QuEST
- Fraser Pajak – QuEST
- Dave Sanicola – DESARA Grp
- Tom Daniel – Verizon
- Adauctus Kuffar – Verizon
- Sankaran Ramanathan – Verizon
- Joe Venable – Pantech
- Vito Bondi - Motorola Mobility
• **Wireless Handset Status**

  • **Dead on Arrival (DOA) – Definition complete**
    - Updates made to the DOA multiplier calculations

  • **Buyer’s Remorse (BRE) – Definition complete**
    - Completed at last Workshop on 5/22

  • **Warranty Defect Rate (WDR) – Definition complete – review underway**
    - Completed at last Workshop on 5/22

  • **New Sub-Team formed on 5/11 to define device testing criteria during triage process**
    - Team Members: Verizon, Pantech, AT&T, HTC & LG

  • **QuEST Handset Workshop on 9/8/14 will work on definitions for:**
    - Bounce
    - NTF

  • **DOA Benchmark Study Underway:**
    - Test data submitted to University of Texas – late May
    - Additional participants added:
      - Pantech, HTC, Huawei, and Telus

  • **Letter composed to senior executives of OEM and Carriers for supporting participation in handset metrics study – to be finalized and sent**
## DOA Benchmark Project Plan

### Current Status – *(to be updated on 9/8/14)*

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<th>Activity</th>
<th>Owner</th>
<th>Feb</th>
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<tbody>
<tr>
<td>1. Finalize project plan</td>
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<td>2. Recruit participants</td>
<td>Project Team</td>
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<td>3. Establish Benchmark Repository</td>
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<td>4. Test Benchmark Repository</td>
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<td>5. Data Submission Training</td>
<td>Project Team</td>
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<td>6. Gather and submit data</td>
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<td>7. Data validation / correction</td>
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<td>8. Results analysis *</td>
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<td>9. Status update to Executive Board</td>
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<td>10. Review &amp; agree next steps</td>
<td>Project Team</td>
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QuEST Forum Academy

Sheronda Jeffries – Cisco

- **Scope:** QuEST Forum Academy is intended to:
  - Offer value to members and prospective members by providing educational opportunities consistent with the intent of TL 9000 and the best practices introduced at QuEST Forum’s conferences.
  - Provide a top-quality educational system that supports quality and process improvement focusing upon the needs of the ICT industry.

- To learn more: [http://questforum.org/resources/webinar.html](http://questforum.org/resources/webinar.html)
Small Business

Sue Clancy – BIZPHYX

**Scope:**

- For QuEST Forum members under $100MM in revenue. We serve as a global forum for small businesses to continue to mature, grow and innovate as an integral part of the Information and Communication Technology (ICT) Industry supply chain.

**Mission:**

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.
Small Business

- Small Business Membership Dues Structure
  - <$10MM - $2,500.00
  - $10MM - $50MM - $4,000.00
  - $50MM - $100MM - $6,000.00

- Monthly Lecture Series on various Small Business Topics

- Small Business Workshop at the America’s Best Practices Conference

- Small Business Networking Lunch with Executive Board at the America’s BPC

- Small Business and Technology Start-up Education Program (Under Development)
Small Business

- Small Business is one-third of the membership of QuEST Forum
- Small Business is represented on the QuEST Forum Executive Board
  - JoAnn Brumit – Executive Board Treasurer and Small Business Sponsor
  - Dave Sanicola – The DESARA Group – Executive Board Member
  - Kanchana Raman – Avion Systems, Inc. – Executive Contributor
  - Jennifer Shoenhofer – Axis Teknologies - Executive Contributor
  - Sue Clancy – BIZPHYX – Executive Contributor
  - Cecelia Sullivan – PTI Solutions – Executive Contributor
- Small Business participates in sponsorship of QuEST Forum Events
Best Practice Conferences

Americas Best Practices Conference
8 – 10 September 2014
Clearwater Beach, FL

APAC Best Practices Conference
13 – 16 April 2015
Tokyo, Japan

EMEA Regional Conference
15 – 18 June 2015
Munich, Germany
Face to Face Workgroup Meetings

Workgroups – OSWG, GBE, IGQ & NSPRC
17 - 21 November 2014
Richardson, TX

Leadership Summit & Workgroups
26 – 30 January 2015
Richardson, TX

Workgroups
18 - 21 May 2015
Richardson, TX
Thanks for attending!

Member Education Webinar Sub-Team

Jennifer Simcox
Richard Hill
Sheronda Jeffries
Tom Yohe
Karen Rawson

To ensure that your attendance is captured, if you did not access this webinar via the internet directly using WebEx, please remain on the line after the webinar ends and we will capture your name. Please email Jennifer Simcox: jennifer.simcox@AFLglobal.com