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New Standard Aims to Improve E-QualityL arge warehouse stores are notorious for poor service quality, but the free market system allows them to prosper because consumers are willing to trade good service and convenience for lower prices. What this means to the big-box retailers is that there's no need to improve customer service to boost customer satisfaction.Likewise, as e-commerce is still in its infancy, most dotcoms are competing against local brick-and-mortar shops whose storefronts and other overhead make matching online prices impossible. This has resulted in poor e-quality.If you've ever made an online purchase--or even just kept up with your Quality Digest reading--the concept of poor e-quality likely isn't foreign. But at least one young company promises to help companies improve the quality of their e-commerce.Clicksure has created the Quality Standard for Electronic Commerce, which it claims is "the world's most comprehensive and reliable quality e-business certification program." The company was incorporated in early 1999 by five individuals previously with SGS Group, the largest verification, testing and certification organization in the world. "It's our goal that the Quality Standard for Electronic Business will soon stand alone, and Clicksure will then be just one of the certifying bodies," explains Steve Delcarson, president and COO of Clicksure. "Our mission is to build confidence in e-business for customers, Web site visitors, venture capital lenders, suppliers and anyone else working with an e-commerce company. And it doesn't matter if we're talking about a Fortune 100 brick-and-mortar company or a small, upstart pure dotcom."With the standard's advisory board in place and version 3.0 of the Quality Standard for Electronic Business soon to be released, Delcarson says his organization is very close to developing an independent, nonprofit foundation that will administer the standard. Crucial to the formation of the foundation--particularly so soon after the creation of the standard and even of Clicksure itself--are the Clicksure signatories. The Clicksure Signatory program is an initiative to gain recognition of the Clicksure quality standard by well-established players in e-commerce. Signatories are companies committed to promoting and maximizing the number of quality e-businesses in the world by using the good name of their company or brand. Among them are Arthur Andersen, Compaq, IBM, Lotus and Wegmans.Delcarson envisions benefits for every player in the e-commerce supply chain. "Customers who see the Clicksure Mark can feel confident that the company they're dealing with has quality programs in place for security, service, order filling, customer complaint management and more," he says. Likewise, venture capital lenders, suppliers and business partners should benefit from the building of confidence in the e-business sector."For the companies themselves, this program is really a journey," continues Delcarson. "Certification becomes the endpoint, but the program begins with our services designed to develop their online practices into best practices."To accomplish this goal, Clicksure currently has a number of products--the Clicksure Confidence Builder, Discovery Snapshot and Investigator--all of which are paperless, technology-based applications that users employ to begin the certification process themselves. "In fact, 40 percent of compliance to the standard can be assessed through observing the companies' Web sites," says Delcarson. "But in trying to really improve e-business as a whole, our standard goes well beyond just Web sites to how companies conduct business, handle security, monitor customer feedback and so on." Clicksure has developed its hallmark program to comply with ISO/IEC Guide 62 and has applied for accreditation with a leading European accreditation agency to the European standard EN 45012. In the near future, Delcarson expects this accreditation will be complete--with larger and larger companies coming onboard--and the Quality Standard for Electronic Business will be one step closer to becoming the default global standard for quality in e-business.With the Internet creating a second gold rush, many companies are quick to jump into the online market to get their share of the riches. But some do so before setting up quality procedures and processes. And as e-business competition grows, as is the case in the traditional markets, the successful companies will use quality management systems to set themselves apart from their competitors. Whether Clicksure's program will become the global standard--a de facto ISO 9000 for online companies--remains to be seen. But with the accreditation, the lack of comprehensive competition and its association with major high-tech players, the Quality Stand-ard for Electronic Business seems well-poised for growth. To learn more about Clicksure, its standard and other services, visit www.clicksure.com.RAB Requires ISO 9000:2000 Transition Training of Auditors ISO 9000:2000 Transition ResourcesIn an effort to make the transition to the 2000 version of ISO 9000 as seamless as possible, RAB has launched a new ISO 9000:2000 transition section on its Web site. Both linked from the main RAB home page and available at www.rabnet.com/iso_main.shtml, the ISO 9000:2000 transition section offers a number of ISO 9000:2000 resources. They include: A question-and-answer guide for RAB-certified auditors A list of approved transition-training courses Learning objectives for transition-training courses Transition-training course requirements for course administrators RAB advice for registered companies on making the transition smoothly A link to the ISO Web site for more information about the 2000 revisions A link to the American Society for Quality (ASQ) Web site, where the FDIS version of ISO 9000:2000 is currently available For more information, visit the ISO Web site revisions page at www.iso.ch/9000e/revisionstoc.htm or the ASQ Web site at www.asq.org Are you growing concerned about your company's eventual transition to the soon-to-be-released ISO 9000:2000 standard? If so, rest assured that your auditor will be preparing to make that transition as problem-free as possible.The Registrar Accreditation Board (RAB) has announced a requirement for its certified quality management systems ISO 9000 auditors to complete approved transition training. "RAB's role as an auditor certification body is to assure that any new skill requirements for certified auditors are met and maintained," says Joseph R. Dunbeck, RAB chief executive officer. "Therefore, we are requiring that all RAB-certified auditors complete a minimum of 14 hours of training within 24 months of the issuance of ISO 9001:2000."RAB-certified auditors must complete the transition training course before conducting audits to ISO 9000:2000 if they wish to use these audits for maintaining certification. However, auditors will be allowed to continue to audit to the ISO 9000:1994 standards for up to three years after issuance of the 2000 series, which is expected by the end of this year.To ensure the consistency and quality of transition training for certified auditors, the RAB auditor certification department has developed a program for approval of transition-training courses. Based on a review of course materials, RAB will add courses that meet stated learning objectives to the list of approved courses posted on the organization's Web site (www.rabnet.com). "This approval process will aid RAB-certified auditors in the selection of an acceptable course," explains Cindy Miller, director of RAB's auditor certification programs. "By selecting an approved course, an auditor is assured that RAB has accepted the course as meeting stated requirements and therefore, that auditor is required to submit less documentation."Complete information on the transition training requirements was mailed to all RAB-certified auditors in August.Free Auditing Proves Very ValuableIf your company has ever even looked into becoming registered to ISO 9000, hiring a quality management consultant or performing gap analysis, you probably never thought you'd hear the words "free" and "auditing" in the same sentence. But, believe it or not, that's exactly what the Midlands Auditing Group (MAG) offers. MAG is made up of a group of auditors who volunteer their time and services in exchange for nothing more than to gain experience, recoup travel expenses and perhaps get a meal. But before you fire your registrar, be advised that MAG can't get your company registered to ISO 9000. What its auditors do provide is invaluable gap analysis--an economical, mutually beneficial alternative to often pricey consulting."MAG was founded in 1995 to provide auditors--particularly in small companies, where they don't have large audit teams--experience," explains John Matras, chair of MAG. "We're in no way aiming to replace registrars for surveillance audits of ISO 9000-registered companies. However, one client did tell us that because of its work with us, its registrar lowered the number of required audits from two to one." But many of MAG's clients use the free service well before contacting an ISO 9000 registrar. "For us, MAG sent five auditors, who came in and did a full-blown audit that resulted in our discovering a few areas needing improvement," says Della Sanders, director of quality for Werner Logistics Services, a division of national truckload carrier Werner Enterprises based in Omaha, Nebraska. "The MAG auditors are especially helpful because they bring a variety of experiences dealing with quality in a small or medium-size company to the table." After working with MAG, Werner Logistics passed its initial ISO 9000 registration audit. Based in Omaha, Nebraska, MAG auditors have completed more than 50 audits in areas as far away as Florida. "Our typical company may employ about 150 people in any industry," says Matras. "We've helped one company in food processing, a trucking company, computer firms and others in more than a dozen industries. To learn more about MAG, contact John Matras at (402) 232-4730 or e-mail john_r_matras@raytheon.com .APQC Benchmarks Performance Measurement Best PracticesT he concept of performance measurement systems is anything but new. Indeed, they're key factors in separating leading companies from the field and are often given credit for being such. But like any measurement system, these are only helpful if they're used to gauge effective indicators of future success.Among the more popular of such systems are balanced scorecards, multifaceted tools that can be used for communications, alignment, improvement and control. But perhaps most important, balanced scorecards allow organizations to rally effort around those vital activities: those most likely to lead to future success.A recent American Productivity & Quality Center (APQC) Best-Practice Report, Measure What Matters: Aligning Performance Measures with Business Strategy, offers a thorough examination of balanced scorecards and innovative performance measurement practices. Concluding a consortium-learning forum conducted by APQC, this report focuses on designing a performance measurement system, implementing and operating the system, and communicating and driving behaviors. "Implementation of the balanced scorecard has proved to be a challenge for most organizations," says Neil Peltier, the APQC study's project manager. "The observations of the best-practice partners reflect the challenges and concerns associated with initiating the balanced scorecard and reveals how to overcome those challenges." Even the most advanced users of performance measurement often don't have a fully integrated scorecard in use throughout the organization. "Meaningful and effective performance measurement begins with strategic planning and is linked to the periodic planning process," explains Arthur M. Schneiderman, an APQC expert. "Executives need to be actively involved in leading a measurement implementation effort."The organizations chosen for their best practices in aligning performance measures with business strategy include 3M, Boeing, Caterpillar, GTE Human Resources and Nortel Networks.The best-practice report is available to members of APQC's International Benchmarking Clearinghouse for $295; the nonmember price is $495. Measure What Matters includes an executive summary, an overview of how best-practice companies align performance measures with business strategy, study findings supported by company examples and company profiles. The executive summary is available for free download at www.store.apqc.org, the APQC online store at which the entire report can also be purchased.For more information, contact APQC by visiting www.apqc.org or by calling (800) 776-9676.Organizations Seek Global Conformity Assessment StandardsTwo global organizations, the Industry Cooperation on Standards and Conformity Assessment (ICSCA) and Partners in World Safety (PWS), recently held their second meeting in a continuing effort to promote a common understanding on ways to increase public health, safety and protection of the environment while saving time by eliminating nonvalue-adding conformity-assessment processes, resulting in more efficient market-access procedures. ICSCA is an informally organized but broadly leveraged group of corporate standards professionals and business executives from 14 countries, more than 50 globally active companies and 13 industry associations. The organization's members share a vision of increased trade and commerce through the appropriate application of industry standards and the belief that such standards should add value to the products affected by them. The ICSCA focus is on conformity-assessment requirements and agreeing upon ways to improve the global "system" for standards development. PWS, too, is an informally organized global group of national certification bodies, all actively operating in the International Electrotechnical Commission System for Conformity Testing and Certification of Electrical Equipment (IECEE) CB-Scheme. PWS is a group of certification body executives and conformity assessment and standards experts from nine countries and 10 companies. PWS members share a common focus on safety, and a vision of "working together for world safety." The main aim of the group is to find solutions for the processes in conformity assessment for public health, safety and protection of the environment. At their first meeting, ICSCA and PWS developed and signed a basic agreement on principles, which includes: Concurrent harmonization of regulations, standards and conformity-assessment processes globally on a sectorial basis "One standard, one test, global acceptability" on a sectorial basis Support for the IECEE CB-Scheme as a benchmark model for other sectors, including the scheme's extension to sectors that may use only a proportion of IEC standards and to non-IEC member countries In recognition and support of ICSCA/PWS liaison, the International Electrotechnical Commission Conformity Assessment Board at its May 24 meeting in Geneva gave formal endorsement to the ICSCA-PWS Basic Agreement on Principles.At the groups' second meeting, ICSCA and PWS agreed on several joint actions related to the following four interconnected issues to be dealt with in the regulated area: Jointly develop a Suppliers Declaration of Conformity (SDoC) form Jointly develop content for the compliance folder, which normally accompanies the SDoC Jointly develop a white paper on market surveillance, because market surveillance is an important component in a workable regulatory system that accepts SDoC Jointly advise governments on how to incorporate SDoC in their regulatory systems More information is available at the ICSCA Web site, www.icsca.org.au.America's Best-Kept Secret: We Love Our JobsPride is alive and well in the U.S. workplace. A new survey finds that nine out of 10 people are proud of their jobs, and three-fourths are proud of their workplaces. Moreover, 63 percent of workers say they wouldn't switch employers for the same job at the same wage.According to the survey, conducted by MeaningfulWorkplace.com, 72 percent of workers say they do important work most or all of the time. Only 5 percent report that their jobs are mostly or entirely busywork. "Forget all those stereotypes of lazy workers who don't care," says Tom Terez, author of 22 Keys to Creating a Meaningful Workplace (Adams Media Corp., 2000). "Most people come to work wanting to make a difference. They want their jobs to matter."The biggest gripe is workplace bureaucracy. Among all respondents, people say they spend nearly 10 hours each week on average wrestling red tape and cumbersome workplace rules. Asked to cite the one factor that would offer the biggest boost to their productivity, respondents had a clear favorite: less organizational bureaucracy (44%), followed by a greater sense of purpose (29%), clear goals (18%) and being able to see results (9%).Only two in 10 workers say they'd swap employers for the same job and wage (while two in 10 felt neutral on the subject). This group spends 40 percent of its time dealing with workplace bureaucracy, compared to 18 percent for people who are inclined to stay with their current employer. Meetings are just as long for both groups, but for people who want to leave, there's twice as much unproductive meeting time.It would seem that with more bureaucracy and less productivity, these organizations would be clamoring for improvement ideas. But at workplaces where employees would rather leave than stay, only one in five employee-generated ideas is implemented--in sharp contrast to the 50-percent implementation rate at organizations where people prefer to stay.Eighty-nine percent of respondents said their organizations have a mission statement, and 54 percent have them for their departments and work areas. Yet, among those who would go elsewhere for the same job and pay, 42 percent say their mission statements are rarely if ever used to set priorities and maintain focus.Detailed results of the survey are available at www.meaningfulworkplace.com/survey/index.html . Optical metrology is a measurement method that collects information about an objects physical characteristics using light. This can involve taking measurements of length, area, size, surface roughness, and other attributes. Optical metrology has several uses in a variety of industries, including manufacturing, engineering, biology, and medicine.Optical metrology measures the characteristics of the light that interacts with the object being measured and is reflected, refracted, transmitted, or absorbed by it. This can involve measuring characteristics like distance, shape, or surface roughness using interferometry, speckle pattern analysis, or laser-structured light patterns.Using two or more light beams to produce an interference pattern that may be used to calculate the separation between an item and a measuring instrument is known as interferometry. A rough surfaces ability to scatter light is measured using a technique called speckle pattern analysis. To build 3D maps of an objects shape by deflecting the pattern or laser line, structured light patterns or laser lines are projected onto the part.Applications of optical metrologyManufacturing and Engineering: In manufacturing and engineering, optical metrology is used to guarantee the precision and quality of parts and components. Monitoring the calibre of coatings and other surface treatments is one way to do this, as is assessing the dimensions and surface roughness of machined items.Biomedical and Life Sciences: The physical characteristics of cells, tissues, and organs are measured and examined using optical metrology in the biomedical and life sciences. This may entail gauging biological material surfaces for roughness and cell size and shape.Archaeology and Conservation: In archaeology and conservation, optical metrology is used to precisely measure and record cultural heritage items. This can involve modelling items in 3D and keeping track of deterioration in historic structures and monuments.Aerospace and Defense: The form and surface quality of parts and components are measured in the aerospace and defence industries using optical metrology. This can involve assessing the surface roughness of radar-absorbing materials as well as the curvature of mirrors and lenses.Advantages and disadvantages of optical metrologyA non-contact measurement method, optical metrology involves no direct physical touch between the thing being measured and the measuring apparatus. This can reduce the possibility of the object or part being damaged. Moreover, optical measuring techniques can produce measurements that are quite accurate, making them a useful tool for applications that need for precise measurements. Furthermore, the usage of this technology is supported by its speed. For applications that call for quick measurements, optical metrology is a useful tool since it can deliver measurements quickly.The optical method of measurement does have some drawbacks, though, just like any other technology.Environmental variations including temperature, humidity, and vibration can affect optical metrology. In some circumstances, this can make it more challenging to obtain precise and repeatable measurements. However, depending on the precise technique employed, optical metrology may only have a small range. Large objects or surfaces may become more challenging to measure as a result. Also, the cost of optical measurement techniques and the associated hardware may make them unaffordable for specific applications or businesses.The perfect fit for youBy identifying the best tool for your inspection work, ZEISS optical metrology solutions assist you reduce the drawbacks. There is undoubtedly a solution for you, whether it be for use in the production area, the inspection of various parts, or part sizes.Generally, optical metrology is a strong measurement method that collects information about an objects physical characteristics using light. It is a useful instrument in a variety of industries and professions, from manufacturing and engineering to biomedicine and the life sciences, because to its broad range of applications and excellent accuracy. Although optical metrology has significant drawbacks, we reduce these drawbacks and optimise the benefits with our method to make it a useful tool for a variety of applications.Click on the following linkMetrologically Speaking to read more such blogs on Metrology. S.W. Hell, Nobel lecture: nanoscopy with freely propagating light. Rev. Mod. Phys. 87, 11691181 (2015) Google Scholar M. Shah, L.M. Schneider, A. 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full participation in FMEA efforts. Perhaps sponsors delegate responsibility and don't seem to appreciate the impact their support could have on the quality-improvement process. Moving on to step two, the desired future state might require management to: Demonstrate commitment to the FMEA system by directing more resources and giving more priority to the FMEA process Communicate the importance and purpose of FMEA in quality training and FMEA work sessions Ask for FMEA results and base decisions on that information Recognize and reward successful product design and process-design problem preventionComparing the current state of the organization's use of FMEAs with the ideal state will reveal gaps. After those gaps have been examined closely, success strategies are developed to remove or mitigate them. Our hypothetical manufacturing organization would initiate an FMEA sponsorship committee made up of sponsors and customers who would oversee the FMEA system and raise FMEA awareness throughout the enterprise. It would require that FMEA results be reported to senior management, whose sign-off indicates acceptance. Finally, a plan would be developed to coach sponsors on their roles and responsibilities necessary to support the FMEA initiative. This might include training on effective FMEA sponsorship and conducting regular status meetings with the sponsorship committee.In the final step of the barrier-removal process, the strategies might require the use of a project-management method that plans activities and tracks progress toward improved FMEA capability and results. The project plan will schedule time and allocate resources for a variety of action items that move the organization toward its FMEA goals. For example, the plan might outline a new activity for the FMEA sponsors: spending 10 percent of their time championing the FMEA work by walking through the design community selling the FMEA concept and its value to the engineering and manufacturing processes. On the last day of every month, sponsors designate an FMEA stakeholder "Quality Expert of the Month" for demonstrating exceptional effort in supporting and advancing the FMEA effort.Before long, the FMEA initiative will have greater success with visible and effective top-management sponsorship. The motivated and productive FMEA teams will develop more meaningful FMEAs, and the problems associated with implementing common FMEA processes will diminish. Consider Barrier 2: There is no value proposition for the FMEA. In analyzing the current FMEA system, it might be concluded that the value of the FMEA is not generally accepted across the organization's engineering and manufacturing functions. In addition, FMEAs may be done to fulfill a quality standard (such as QS-9000) mandate rather than being pursued as a benefit. As a result, there is no obvious connection between the organization's business strategies and the FMEA results. Compounding the problem, FMEAs are often done too late in the product-development process to affect the design of the product or the process. It's no wonder FMEAs don't receive much attention or priority.The FMEA vision is likely one where FMEA timing emphasizes early learning to prevent design and process problems rather than fixing problems as they occur. This means that FMEAs must be developed much earlier in the product-development process. Some FMEAs will actually be done in the concept or portfolio phase, before a specific component or system is designated for a specific end product, whereas others will be developed early as part of product- or process-design reviews to capture risk before designs are finalized. The FMEAs are developed as living documents; a strong FMEA vision requires that FMEAs be updated over time to accurately document and prioritize risk and incorporate new information. Gap analysis within the change plan leads to the development of realistic strategies to drive FMEA awareness as a quality-improvement system. It's essential to develop short- and long-term metrics that relate the contribution of the FMEAs to organizational quality goals. In addition, the organization may prepare marketing and awareness campaigns using specific examples of FMEA best practices and results extracted from the current FMEA archive. Another possibility is to poll FMEA managers and engineers for their best examples of early learning (early identification of key risk issues). A champion and project team should be assigned to ensure the longevity of this activity. Finally, implementation of the strategy can occur. The action items presented previously are scheduled in a project plan that integrates all FMEA improvement tasks in a coordinated fashion. Interim milestones are set to assess progress on a regular basis.By successfully implementing the four-step barrier-removal process, organizations can begin to use FMEA as a business-improvement tool. Both short- and long-term field measures for FMEA problem prevention will be improved. Almost immediately, plant rework and scrap will be reduced. As a result, production costs will fall. Organizations will also catch problems earlier in the supply chain, thereby reducing cost. Figure 2 demonstrates how identifying a faulty part early in the supply chain is much less costly than if the defective part were to propagate itself through several links in the supply chain and perhaps end up in the customer's hands. The detrimental effect of defective part propagation is known as the shadow effect.Figure 2: The Shadow Effect If cross-functional FMEA teams measure and track problem prevention as a result of effective FMEA activity, the organization will realize significantly lower warranty costs, life-cycle costs and increased customer satisfaction ratings over the long run. Profitability and market share will also improve. Figure 3 illustrates how FMEA activity affects enterprise value. Figure 3: Effective FMEA Activity vs. Enterprise Value There is a new calling in the manufacturing industry for fundamental change in the way FMEAs are delivered and valued in the enterprise. A new, highly accountable, coordinated management system is needed to bring about substantial improvements in manufacturing quality. Without a simple yet comprehensive multi-step management plan to give FMEAs a shot in the arm, FMEA reports will continue to be worthy of the attention they currently receive--none.About the author Jim Bongiorno, PMP, is founder and president of PlanTech Inc., a Detroit-based project-management consulting, training and staffing firm. For more than 15 years, PlanTech (www.plantechinc.com) has helped customers in the automotive, health care and technology industries improve project performance and product quality. E-mail Bongiorno at jbongiorno@qualitydigest.com .

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