

Bryan Dodson

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Professional Summary

Distinguished Quality & Reliability expert with over 35 years of experience transforming product development, engineering, and quality systems for major global manufacturers. Recognized leader in Warranty, Quality Systems, Design for Reliability, and failure prevention strategies, with an unmatched record of delivering major warranty reductions, cost savings, and performance improvements across industries. Author of six engineering textbooks and developer of the NASA-standard reliability software. Now seeking consulting opportunities where strategic insight, deep technical knowledge, and practical execution can drive world-class results for clients.

Consulting Competencies

- Root Cause Analysis & Warranty Reduction
 - Robust Engineering
 - Quality System Implementation
 - Reliability Engineering
 - Supplier Development & Manufacturing Quality
 - Digital Transformation of Quality Systems
 - Computer programming in multiple languages including integration with enterprise databases
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Consulting Highlights

- Led a **Chrysler supplier turnaround**, moving a plant from worst to best-in-class quality within 4 months.
- Directed Visteon's quality and reliability team, achieving **30%+ annual warranty reductions for 4 consecutive years**.
- Engineered design solutions for the Las Vegas High Roller and Dassault Falcon actuator system that **launched under budget with zero defects**.
- Implemented automated **warranty and quality management systems** for SKF, Visteon, and ContiTeves.
- Developed and led **Design for Six Sigma programs** adopted globally.
- Created SKF's enterprise-wide **quality system** integrating product development, sales, and manufacturing.

Education

- Doctor of Business Administration
 - Master of Business Administration
 - Master of Science, Industrial Engineering
 - Bachelor of Science, Petroleum Engineering
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Licenses & Certifications

- Professional Engineer - Michigan
 - Six Sigma Master Black Belt
 - Lean Six Sigma Master Black Belt
 - Design for Six Sigma Master Black Belt
 - ASQ Fellow
 - SAE Fellow
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Awards

- Distinguished Alumni, Louisiana Tech University, April 2020.
- The 2014 ENBIS Best Presentation with Industrial Focus. Awarded for presentation of "Effect of Average Cycle Time and Cycle Time Variation on Inventory, Asset Utilization and Throughput for a Multi-Station Manufacturing Channel."
- SAE Excellence in Oral Presentation Award. Awarded for 2012 World Congress presentation of "An Engineering Alternative to Statistically Designed Acceptance Tests."
- SAE (2004) Forest R. McFarland for outstanding technical leadership.
- Visteon Leading the Way Award (2003) for developing and implementing a global product development quality process.
- Visteon Quality Award (2004) for leading the warranty reduction team.
- Visteon Quality Award (2002) for leading the team that developed Six Sigma training and the Design for Six Sigma Program.
- Ford Global Excellence Award for leading the best (of 108 teams) High Mileage Reliability project team in 2000.
- Continental Global Excellence Award (2000) for leading statistical problem solving teams.
- Ford Global Excellence Award (1999) for Continental Teves ABS warranty performance over a five year period.
- Continental Global Outstanding Performance Award (1999) for leading the development of a global reliability data intranet.

Employment History

- SKF - Director Quality Systems and Transformation
- Collins & Aikman - Senior Director Corporate Quality & Continuous Improvement

- Visteon - Associate Director Quality & Reliability Engineering and Senior Technical Fellow
 - Continental Teves - Manager Reliability Engineering & Quality Information Systems
 - Alcoa - Reliability Leader & Technical Quality Consultant
 - Morton Thiokol – Industrial Engineer
 - University of Detroit Mercy – Adjunct Professor (2008 – present)
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Publications

Developed the reliability life data analysis software used by NASA (John F. Kennedy Space Center); this has been the standard NASA standard reliability software since 1998. This software is also use by The Utrecht University for their Reliability Engineering course.

Additional Commercial Software

- Dodson, Bryan, *Six Sigma Study Guide*.
- Dodson, Bryan, *International Quality Federation Six Sigma Study Guide* – used by the University of Toledo and the University of Detroit Mercy for their Six Sigma programs
- Dodson, Bryan, *EVOptimizer* – sequential simplex optimization tool.
- Dodson, Bryan, *Designed Experiment Trainer* – used by Chalmers university for their DOE course.
- Dodson, Bryan, *Measurement Assurance Trainer* - adopted as a global standard by Valeo.
- Dodson, Bryan, *Measurement Assurance* - adopted as a global standard by Valeo and Ford.
- Dodson, Bryan, *ASQ Electronic Certification Series*, Quality Council of Indiana, December, 1995.

Books

- Dodson, Bryan, Pat. Hammett and Rene, Klerx, *Probabilistic Design for Optimization and Robustness for Engineers*, John Wiley & Sons, 2014.
- Dodson, Bryan & Schwab, Harry, *Accelerated Testing: A Practitioner's Approach*. Society of Automotive Engineers, 2006.
- Dodson, Bryan, *Weibull Analysis (with software)*, Quality Press, Milwaukee, Wisconsin, 1994, 2006 (2nd Edition).
- Dodson, Bryan, Keller, Paul & Pyzdek, Thomas, *Six Sigma Study Guide*. Quality Publishing, Tucson, Arizona, 2001.
- Dodson, Bryan, Nutt, Dave, and Johnson, Timothy, *Certified Quality Engineer Quick Reference Notes*. Quality Publishing, 1996.
- Dodson, Bryan & Nolan, Dennis, *Reliability Engineering Handbook*. Quality Publishing and Marcel Dekker 1995.

- Dodson, Bryan & Nolan, Dennis, *Reliability Engineering Handbook - Solutions Manual*. Quality Publishing, 1996.
- Dodson, Bryan and Mulcahy, Michael, *Certified Reliability Engineer Examination Study Guide*, Quality Publishing, 1992.

Articles and Presentations

- Metz, M.C., Caicedo, A., Dodson, B., and Klerx, R. (2019, October). "Evaluation of Lifetime Parameter Estimation Methods", *Reliability*, Presented at the *Maintenance & Managing Risk Conference, ASQ Reliability & Risk Division, San Antonio*.
- Dodson, B., Cheng, X., and Klerx, R. (2019, September). "Weibull Arrhenius-Lognormal Case Study for Machine Life Prediction", Presented at the *19th Annual Conference of the European Network for Business and Industrial Statistics, Hungary*.
- Carr, M., Dodson, B., Tully, J., and Klerx, R. (2019, April). "Evaluation of Test Strategies Parameter Estimation Methods", Presented at the *WCX™ World Congress Experience (SAE International) Detroit*.
- Dumont, D., Dodson, B., and Klerx, R. (2018, September). "An Alternative Proposal to the Traditional ISO Method for Non-Normal Ppk", Presented at the *18th Annual Conference of the European Network for Business and Industrial Statistics France*.
- Landi, G., Dodson, B., and Klerx, R. (2017, September). "Design of Experiments used in Engineering Using Virtual Simulations", Presented at the *17th Annual Conference of the European Network for Business and Industrial Statistics, Italy*.
- Joubert, O., Dodson, B., and Klerx, R. (2016, September). "Using DOE to Reduce Variation in Processes and Product Design", Presented at the *16th Annual Conference of the European Network for Business and Industrial Statistics, United Kingdom*.
- Dodson, B. Boychinov, I & Klerx, R. (2014, September). "Effect of Average Cycle Time and Cycle Time Variation on Inventory, Asset Utilization and Throughput for a Multi-Station Manufacturing Channel", Presented at the *14th annual conference of the European Network for Business and Industrial Statistics, Austria*.
- Dodson, B., Slater, J., Klerx, R., & Re, P. (2013, September). "Financial optimization of appointment scheduling", Presented at the *13th annual conference of the European Network for Business and Industrial Statistics, Turkey*.
- Dodson, B. and Klerx, R. (2012). "An Engineering Alternative to Statistically Designed Acceptance Tests", *SAE International Journal of Passenger Cars*, (Vol: 5, No. 1), and presented at the 2012 SAE World Congress.
- Dodson, B., Re, P., Klerx, R., & Weidenbacher, M. (2012, September). "An improvement to the sequential simplex optimization algorithm", Presented at the *12th annual conference of the European Network for Business and Industrial Statistics, Republic of Slovenia*.
- Lynch, D. and Dodson, B., "Analyzing Unassigned Interactions to Strengthen DOE Strategy," *SAE Technical Paper 2004-01-1746*, 2004, and presented at the 2004 SAE World Congress.
- Dodson, Bryan (2002). "The Hidden Costs of Poor Reliability", *Proceedings from the 56th Annual Quality Congress, Denver, CO*, and presented at the 2002 ASQ World Conference.
- Dodson, Bryan (1999). "Reliability Modeling with Spreadsheets", *Proceedings from the 53rd Annual Quality Congress, Anaheim, CA*, and presented at the 1999 ASQ World Congress.
- Dodson, Bryan (1996). "Providing Reliable Products in the Automotive Industry", *Proceedings from the 1996 Society of Logistics Engineers, Indianapolis, Indiana*.
- Dodson, Bryan (1996). "Is Probability Paper Obsolete?", *Reliability Review*.

- Dodson, Bryan (1995) "A Technique for the Optimization of Reliability Verification Tests", *Proceedings from the 49th Annual Quality Congress, Cincinnati, Ohio*.
- Dodson, Bryan (1995). "Control Charting Dependent Data: A Case Study", *Quality Engineering*, Vol: 7, No: 4.
- Dodson, Bryan (1994). "Determining the Optimum Schedule for Preventive Maintenance", *Quality Engineering*, Vol: 6, No: 4.
- Dodson, Bryan (1994). "Using Statistics to Schedule Maintenance", *Proceedings of the 2nd Annual Reliability and Maintainability Symposium, Dallas, Texas, October*.
- Dodson, Bryan (1994). "An Alternative Method of SPC Instruction", *The 3rd Annual Spring Quality Workshop* (Sponsored by the Evansville-Owensboro ASQ), Evansville, Indiana.
- Dodson, Bryan (1993). "Using the Weibull Distribution to Schedule Preventive Maintenance", *Proceedings of the 31st Annual Reliability Engineering and Management Institute*, Tucson, Arizona.
- Dodson, Bryan (1993). "Determining the Economic Optimal Target for A Process with Upper and Lower Specifications", *Quality Engineering*, Vol: 5, No. 3.
- Dodson, Bryan, "Optimizing Schedules for Equipment Monitoring", *Proceedings of the 1993 CSI User Conference*.
- Dodson, Bryan and Arends, Jerry (1992). "Incorporating Risk in Project Decisions in a Manufacturing environment", poster presentation at the *35th Annual Conference of the Midwest Academy of Management*.
- Dodson, Bryan (1991). "Determining the Economic Optimum Target for A Production Process", presented at the *35th Annual Fall Technical Conference of the American Society for Quality Control's Chemical and Process Industries Division*.
- Contributing writer to *Manufacturing Facilities: Location, Planning, and Design* by Dileep Sule, PWS-Kent, 1988.