

# Foreword

Evan W. Duggan (University of Alabama, USA) and Han Reichgelt (Georgia Southern University, USA) state the following in the first chapter of this important book on the quality of information systems: “Despite the fact that the IS discipline is over a half a century old and numerous articles have been written about software quality, there is, as yet, not a great deal of convergence of opinions on approaches for attaining quality.” Does this statement surprise you? Many global organizations have spent most of the past 20 years learning how to attain quality leadership in manufactured goods, the most basic of products. In the U.S., automotive companies are still playing catch up to Toyota and, most recently, Hyundai.

Since the Japanese quality revolution in the late 1970s, to the most recent invasion of quality goods from Korea and China, we are now just learning what it takes to plan, control, and improve the quality of physical goods, let alone software or systems.

Professors Duggan and Reichgelt have pulled together some of the latest research from capable authors to answer some of the most basic and important questions related to managing the quality of information and software systems. This book will become required reading for many including university and college students becoming exposed to quality management techniques in their university classes; quality professionals who have been looking for answers to IT quality problems; and IT professionals that design products and services to meet the dynamic quality requirements of their customers. In today’s world, quality means “to attain the lowest level of failure, the highest level of quality at the lowest possible cost” as mandated by the customer. That is no small task in the IT world.

In 1985, the world was just beginning to see the benefits of software development and IT systems. At that time, while working as an internal quality leader

at the Perkin Elmer Corporation, a manufacturer of analytical instrumentation, I was asked, “how do we apply the quality management techniques that we learned from Juran, Deming, and others to non-manufacturing goods like software?” I was then a babe in the field of quality compared to quality gurus such as Dr. Joseph M. Juran (who was then 76 years old and is now 105!) but I had to figure out what to do. There were few books to read, few published cases on lessons learned, and even fewer “champions” that we could consult to answer the question: “how do we manage the quality of software and systems?” We did what we could and what we did was not much. It was not that important then because many citizens of this planet had not yet experienced the Internet, e-mail, or other IT innovations.

Now it is 2006, and the scenario has not changed much for the quality of IT systems. We are still struggling to find answers to the question of how to manage information system quality. Now as citizens of this planet, we rely on information systems that we did not care much about in 1985 to do just about everything. Information systems quality is now a “big thing” and “it needs improvement”. The IT revolution will continue into the coming years: Many organizations are already seeing their internal IT infrastructures and people outsourced to larger more specialized companies; CIOs continue to change positions rapidly; Moore’s Law will still be applicable; and organizations will continue to seek to improve the quality of IT systems to stay ahead of competition, or worse, avoid obsolescence.

I am not a young lad anymore, nor am I as wise or as old as Dr. Juran but I have learned the secrets of attaining quality — good research, a high degree of collaboration among experts, and a need to change. All three are here. The research conducted in preparation for this book has provided answers to some of the most common questions about IT and software quality. The collaboration on the part of these top researchers and practitioners in the field lend credibility to understanding the lessons learned. The need for change in IT and systems quality is here.

Put all three together and business and society can reduce the pain of the system failures that plagued us in the last century. The Juran Institute has stated that we are moving into “the Century of Quality”. This century will be driven by the needs of society to have perfect quality. In the later part of the last century, we began to understand how to manage the quality of product. Now we have a better understanding of how to manage IT and software and systems quality. If we can figure out how to put the two (hardware and software quality) together, the citizens of this planet will enjoy this next century.

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