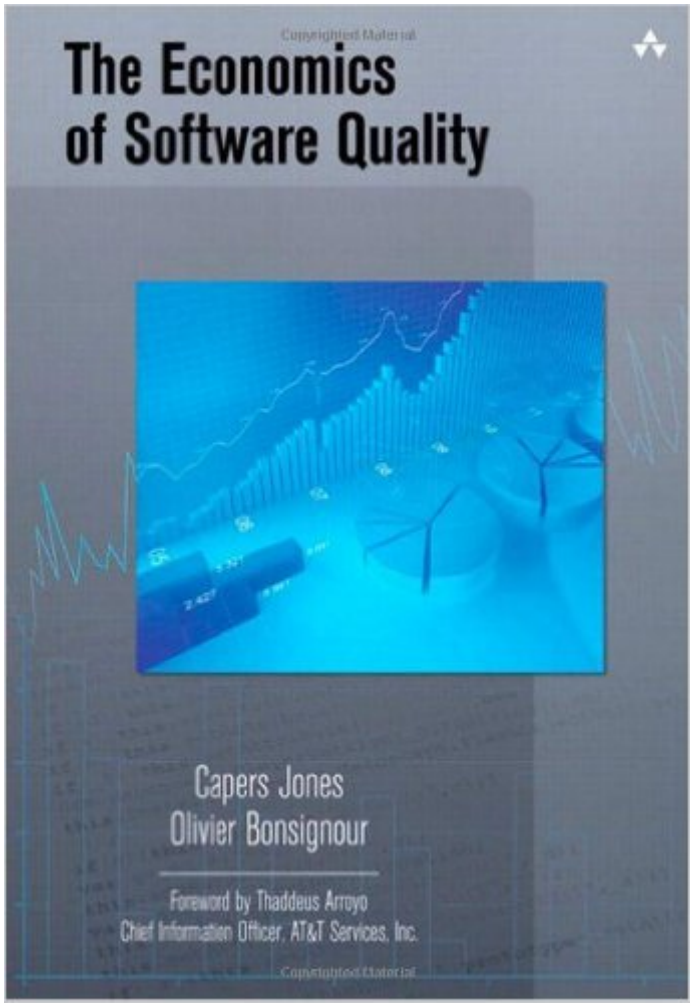
The Economics Of Software Quality



Synopsis

â œWhether consulting, working on projects, or teaching, whenever I need credible, detailed, relevant metrics and insights into the current capabilities and performance of the software engineering profession, I always turn first to Capers Jonesâ ™ work. In this important new book, he and Olivier Bonsignour make the hard-headed, bottom-line, economic case, with facts and data, about why software quality is so important. I know Iâ ™ll turn to this excellent reference again and again.â • â ”Rex Black, President, RBCS Â Poor quality continues to bedevil large-scale development projects, but few software leaders and practitioners know how to measure quality, select quality best practices, or cost-justify their usage. In The Economics of Software Quality, leading software quality experts Capers Jones and Olivier Bonsignour show how to systematically measure the economic impact of quality and how to use this information to deliver far more business value. Â Using empirical data from hundreds of software organizations, Jones and Bonsignour show how integrated inspection, structural quality measurement, static analysis, and testing can achieve defect removal rates exceeding 95 percent. They offer innovative guidance for predicting and measuring defects and quality; choosing defect prevention, pre-test defect removal, and testing methods; and optimizing post-release defect reporting and repair. Â This book will help you Move beyond functional quality to quantify non-functional and structural quality Prove that improved software quality translates into strongly positive ROI and greatly reduced TCO Drive better results from current investments in Quality Assurance and Testing Use quality improvement techniques to stay on schedule and on budget Avoid â œhazardousâ • metrics that lead to poor decisions

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Customer Reviews

Capers Jones and Olivier Bonsignour have authored a very useful book that will help the software industry make more objective decisions and improve the economic outcomes of software delivery organizations. This book is loaded with data, benchmarks and cause-and-effect relationships for reasoning about how to improve software quality. It is not an easy read because it goes both deep and broad across the diverse contexts of software domains and across the life-cycle practices of software development. This book is a great place to start when looking for credible and objective benchmark data to build a business case or defend a proposal for improving software quality or productivity.The economics of software quality is an attractive topic all by itself. However, the book delivers unexpected value on two other fronts. First, the presentation and discussion of substantial data provides an educational framework for quantitative reasoning with enlightening discussions on cause and effect as well as cautions on potential misinterpretation. Second, the well-integrated history lessons throughout give the reader a good feel for the improvement trends, or lack of improvement trends, across the software industry.Decades of experience, compiled into an encyclopedia of facts and figures. Well worth the price.

This book is a a precious and amazing piece of work. It includes hundreds of statistics and real world metrics, organized by project type, project size, technology, methodology, etc...Statistics range from defect density to common quality tools and processes defect removal efficiency.I do not know any source of information that come even close to this one.Precious corpus for anybody dealing with Software quality and outsourcing contracts.And a great book for anybody dealing with software in general !Expected all my expectations on the subject...

I liked very much this book. Caper Jones is one of my best authors. Everyone worried about software quality should read it.

I am quoting from this book on a regular basis. It’s been instrumental to illustrate and help me make my case.

Some off the material is different than previous works, but having so much data is amazingly helpful.

On of the better books explaining the facts behind the quantitative part of qa. it really gets to the why we are doing what we are doing.highly recommended.

In this book, authors Capers Jones and Olivier Bonsignour quantify the factors that influence software quality and provide information for people to gain insight into how their projects might compare to others. The measurements in this book are based on thousands of software projects.One of my frequent complaints about the software industry is that we just don’t measure very many things. However, thankfully there are people like Jones and Bonsignour that do have a rich source of metrics from enough projects that we can learn from them.Capers Jones has long been considered the source for software quality metrics. To me, Capers is the "numbers guy" of our profession. With over 40 years in the field, Jones has a wealth of information he has maintained and published over many years.Olivier Bonsignour is responsible for Research & Development and Product Management in a continual effort to build the world’s most advanced Application Intelligence technology. Prior to joining CAST, Mr. Bonsignour was the CIO for DGA, the advanced research division of the French Ministry of Defense.For example, the authors state that "high quality levels are invariable associated with shorter-than-average development schedules and lower-than-average development costs." This finding is based on over 13,000 projects between 1973 and today.The authors maintain that the real economic value of high quality software is not the cost to fix defects, but rather: * the reduced likelihood of canceled projects * the reduced risk of litigation * shortened development schedules * lower development costs * reduced warranty costs * increased customer satisfactionThis book addresses: * What is software quality and how do we define its value? * How can we estimate and measure software quality? * How can software defects be prevented? * How can we find and remove defects before testing? * What are effective ways to test software and measure its effectiveness? * What is the current state of post-delivery software defects? * How do projects of various characteristics (low, average and high-quality) compare? * How can technical debt be addressed from a business value perspective?You will find a multitude of data from projects in a variety of industries, at various levels of quality, and at various levels of practice maturity. You will see by the numbers which project approaches work and which ones don’t work very well.By reading this book, you will gain insight not only into the current state of software quality, but you will also learn about measurement and metrics of software. These are critical things for any software quality professional to learn. In fact, after reading this book, you will know more about software measurement than 95% (that’s my estimate) of testers and QA professionals.I highly recommend this book, not only as a guide for software quality efforts, but also a benchmark for your

own efforts.

The Economics of Software Quality Software Quality Assurance: In Large Scale and Complex Software-intensive Systems Software Process Design: Out of the Tar Pit (Mcgraw-Hill International Software Quality Assurance) Software Engineering Classics: Software Project Survival Guide/ Debugging the Development Process/ Dynamics of Software Development (Programming/General) Surreptitious Software: Obfuscation, Watermarking, and Tamperproofing for Software Protection: Obfuscation, Watermarking, and Tamperproofing for Software Protection Quality Management Exam Review for Radiologic Imaging Sciences (Quality Management Review) Quality Management for Organizational Excellence: Introduction to Total Quality (8th Edition) Lean Six Sigma: The Ultimate Guide To Lean Six Sigma With Tools For Improving Quality And Speed! (Lean, Six Sigma, Quality Control) Axiomatic Quality: Integrating Axiomatic Design with Six-Sigma, Reliability, and Quality Engineering Quality Management for Organizational Excellence: Introduction to Total Quality (7th Edition) Continuous Integration: Improving Software Quality and Reducing Risk Practical Guide to Software Quality Management (Artech House Computer Science Library) Applied Software Measurement: Global Analysis of Productivity and Quality Software Quality Assurance: From Theory to Implementation Quality Software Project Management Quality Software Management: First-Order Measurement Developer Testing: Building Quality into Software (Addison-Wesley Signature Series (Cohn)) Quality Software Management Handbook of Software Quality Assurance, The (3rd Edition) A Practical Approach to Software Quality