

David Douglas and Greg Papadopoulos with John Boutelle

CITIZEN Engineer

A HANDBOOK FOR SOCIALLY RESPONSIBLE ENGINEERING



“Δῶς μοι πᾶ στῶ καὶ τὰν γᾶν κινάσω”

“Give Me a Place to Stand and I Will Move the Earth”

Advance Praise for *Citizen Engineer*

“Engineers create many of the inventions that shape our society, and as such they play a vital role in determining how we live. This new book does an outstanding job of filling in the knowledge and perspective that engineers must have to be good citizens in areas ranging from the environment, to intellectual property, to ensuring the health of the innovation ecosystem that has done so much for modern society. This is exactly the sort of book that engineers and those who work with them should read and discuss over pizza, coffee, or some other suitable, discussion-provoking consumable.”

—John L. Hennessy, president, Stanford University

“*Citizen Engineer* is the bible for the new era of socially responsible engineering. It’s an era where, as the authors show, engineers don’t just need to know more, they need to *be* more. The work is an inspiration, an exhortation, and a practical how-to guide. All engineers concerned with the impact of their work—and that should be *all* engineers—must read this book.”

—Hal Abelson, professor of computer science and engineering, MIT

“Code is law. Finally, a map to responsible law making. This accessible and brilliant book should be required of every citizen, and especially, the new citizen lawmakers we call engineers.”

—Lawrence Lessig, director, Safra Center for Ethics, Harvard University,
and cofounder, Creative Commons

“Just as the atomic bomb brought us the citizen scientist, the computer has brought us the citizen engineer. This book is for engineers who take their societal responsibilities seriously, combining the idealism of dreamers with the pragmatism of builders.”

—Danny Hillis, cofounder, Thinking Machines, Inc.,
and Applied Minds, Inc.

“In good economic times and bad, the forces driving companies to go green are getting stronger. Innovation will be the key to solving thorny environmental problems and creating lasting value for smart companies. Engineers are at the center of innovation. For businesses and the economy to experience the environmental and economic benefits of going green, we’ll need engineers who read, understand, and act on the ideas in this book.”

—Andrew Winston, author, *Green to Gold*

“The authors recognize the increasingly widespread impact of engineers on society in this new century and the resulting responsibilities that engineers now have. While engineering has long embraced safety in the designs of bridges and cars, not all of us consider the long-term environmental impact of our designs, or the importance of contributing to the knowledge base of engineering and honoring its intellectual property rights, as well as preserving the security and privacy of our fellow citizens who use our designs. I believe *Citizen Engineer* is a book that all of us teaching, studying, or practicing engineering should read, as well as those outside engineering who want to understand this force of change in the twenty-first century.”

—David Patterson, professor of computer science,
University of California, Berkeley

“Douglas and Papadopoulos have created an essential road map for re-engineering products, services, companies, and commerce in ways that are environmentally responsible, economically profitable, and just plain elegant.”

—Joel Makower, executive editor, GreenBiz.com;
author, *Strategies for the Green Economy*

“This book is the first to provide detailed guidance about eco-responsible product design and responsible use of intellectual property—two areas that are becoming vitally important to both the development of the engineer and the advancement of the engineering profession.”

—Dr. Bill Wulf, professor of engineering and applied science,
University of Virginia; member, National Academy of Engineering

“With details and examples as well as principles, this book endows every engineer with a visceral connection to eco responsibility and to the new ways to create and use intellectual property.”

—Robert Sproull, fellow and director, Sun Labs

“*Citizen Engineer* explains a critical transition of the engineering profession from technical focus to include social responsibilities and business context. This shift has changed the very nature of engineering as it is practiced today and as it must be taught in engineering degree programs.”

—Professor Steven D. Eppinger, deputy dean,
MIT Sloan School of Management

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HALL

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Library of Congress Cataloging-in-Publication Data

Douglas, Dave

Citizen engineer : a handbook for socially responsible engineering /
Dave Douglas, Greg Papadopoulos; with John Boutelle.
p. cm.

Includes bibliographical references and index.

ISBN-13: 978-0-13-714392-4 (pbk. : alk. paper)

ISBN-10: 0-13-714392-3 (pbk. : alk. paper)

1. Sustainable engineering. 2. Social responsibility of business. 3. Engineering—Moral and ethical aspects. I. Papadopoulos, Gregory Michael. II. Boutelle, John. III. Title.

TA170.D68 2010

620—dc22

2009020712

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ISBN-13: 978-0-13-714392-4

ISBN-10: 0-13-714392-3

Text printed in the United States with soy-based ink on recycled paper at R.R. Donnelley in Crawfordsville, Indiana.

First printing, August 2009

*To our children, Ally, Cameron, Dana, Halley, Kathryn,
Jack, Madison, Michael, and Nicholas.*

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