

Martin J. Eppler

# Managing Information Quality

Increasing the Value of Information  
in Knowledge-intensive Products  
and Processes

Second Edition

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With 39 Figures and 34 Tables

 Springer

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ISBN-10 3-540-31408-3 Springer Berlin Heidelberg New York  
ISBN-13 978-3-540-31408-0 Springer Berlin Heidelberg New York  
ISBN 3-540-23571-X 3. edition Springer Berlin Heidelberg New York

Cataloging-in-Publication Data  
Library of Congress Control Number: 2006927427

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springeronline.com

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Printed in Germany

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Hardcover-Design: Erich Kirchner, Heidelberg

SPIN 11617303 42/3153-5 4 3 2 1 0 – Printed on acid-free paper

## Preface to the Second Edition

It still holds true: information is not always the answer. Information is often part of the problem. While the main goal of information in the business place is to enable adequate decisions and actions, it can also lead to numerous negative effects: it can confuse, block creativity, or it can lead to hectic activism, stress and fatigue. Information can distract and divert attention, and it may even delay important decisions – the paralysis by analysis. Strategies to avoid these dysfunctional effects of information can be divided into sender-based strategies and receiver-based strategies. In my previous research, I have looked at receiver-based strategies that outline effective ways of dealing with information overload. This book, by contrast, analyzes *sender-based strategies* that aim at making content actionable by increasing its information quality. By offering relevant and sound information in a convenient and reliable manner, managers and information providers ranging from analysts to CEOs can not only optimize communication, they can also improve their reputation, employee satisfaction and customer loyalty. In a time where information has become a commodity or even a nuisance, this is a valuable strategy. The main premise of this book is consequently that information quality has already become a (if not *the*) decisive factor of the information economy. Many companies, however, are not managing this factor systematically.

I personally became aware of the relevance of information quality when working on an interactive supplement to a weekly economic newspaper in the early nineties. The central question in developing the supplement was how the value of the provided information changed by offering it in an interactive format. To answer this question, I had to look at the factors that make information useful to the reader. I had to examine issues such as *timeliness*, *convenience*, or *clarity*. Since then, I have spent a great amount of time finding out what these and other information attributes really mean to information consumers. The results are documented in this book. It contains the key insights gained during a four year research project on information quality at the Institute for Media and Communications Management of the University of St. Gallen. It is the synthesis of a research report (a habilitation) that also included survey and focus groups results, as well as an extensive theoretical discussion. The book is aimed at scientists, students and practitioners who are interested in understanding and managing the attributes of information that make it valuable to diverse information consumers.

Since this book was first published in 2003 my work on the topic has continued and evolved. The current second edition reflects this evolution and incorporates new research conducted at the University of Lugano (USI), namely an additional extensive case study, further considerations regarding principles and tools of in-

formation quality management, as well as insights and a short case study on information quality in e-government. This new edition also discusses ways of moving beyond data and information quality by considering communication and knowledge quality (illustrated through a short corporate case study).

Lugano, March 2006

Martin J. Eppler

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# 1. Introducing the Notion of Information Quality

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The first chapter introduces the notion of information quality by discussing three real-life business cases where the quality of information is of crucial importance. Specifically, the notion of information quality will be discussed in the context of strategy consulting, product development, and web design. The chapter also provides an overview of the main goals, target groups, and chapters of the book.

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*Chapter  
Overview*

*Everything that can be said, can be said clearly.*

LUDWIG WITTGENSTEIN

What makes information useful? This broad and general question is the central concern of this book. Information quality – the fitness for use of information<sup>1</sup> – is a term that is vague and general, yet promising and pertinent: Amidst the increasing *quantity* of available information, the *quality* of information becomes a crucial factor for the effectiveness of organizations and individuals. Information quality is not only, as we will see, an issue that involves graphic designers, information systems architects, communication trainers, or technical authors. It is also (and perhaps primarily) a management challenge, as knowledge work<sup>2</sup> – which requires information both as input and output factors – becomes increasingly collaborative and distributed and thus requires continuous and systematic coordination and management. This text will therefore examine the concept of information quality from a *general management perspective*.<sup>3</sup> Specifically, it will look at *criteria* that enable

*Information  
Quality:  
A General  
Management Topic*

*A Focus on  
Criteria*

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<sup>1</sup> We shall use this definition as a preliminary proxy. Extensive definitions will be provided below.

<sup>2</sup> Knowledge work involves analyzing and applying specialized expertise to solve problems, to generate ideas, or to create new products and services (Zidel 1998). Schultze defines knowledge work as the production and reproduction of informational objects (Schultze 2000).

<sup>3</sup> Unlike many prior studies on information quality that focus on specific applications such as data warehouses, management in-

*Knowledge-intensive  
Processes as the  
Context of the Book*

management to better define information quality goals, analyze information quality problems, and improve the way that individuals and teams create and manage information in knowledge-intensive processes which rely heavily on the individual's expertise and personal contribution in the form of information. Examples of *knowledge-intensive<sup>4</sup> processes* are such complex endeavors as product development, market research, strategy development, business consulting, or on-line publishing. There are, however, many other less prominent tasks which can also be considered as knowledge-intensive processes such as reading or writing a report, presenting a concept or teaching a course. All of them, it will be argued, can benefit from an analysis of the quality of information.

*Business  
Scenarios as  
Starting Points*

Below, we present three brief real-life scenarios that illustrate why the notion of information quality is a highly relevant management and research topic. They show typical problems in managing the quality of information in knowledge-intensive processes. The following scenarios (or mini case studies) are based on the experience of the author and represent authentic business situations. Each scenario includes a series of key questions that will be addressed in this book.

*Scenario 1:  
Strategy Consulting*

A strategy consulting company receives feedback from its clients that the delivered report and the accompanying presentations are inadequate and too difficult to use by the managers who have commissioned the analysis. The managers find the reasoning of the consultants hard to interpret and difficult to put into practice. They have problems communicating the results to their peers in the company. They also claim to have problems in locating crucial evidence in the large document quickly. In addition, they indicate that they require more detailed information on the market situation, and less analysis of their internal status-quo. Specifically, they ask for more current market information to be included in the report. Nevertheless, they do not want the report to become any longer than it already is (namely, over eighty pages).

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formation systems, multimedia, library services and so forth, the present study is addressed to researchers and practitioners with an interest in general management topics beyond individual disciplines or functional sectors.

<sup>4</sup> The term 'knowledge-intensive' was used in a similar way by Starbuck, 1992. He states that "labeling a firm as knowledge-intensive implies that knowledge has more importance than other inputs" (Starbuck, 1992, p. 715, see also Nurmi, 1998). The same reasoning can be applied to processes. The term will be described in more detail in section 3.1.2. For a definition of a knowledge-intensive process see Eppler et al., 1999, or section 3.1.2.