Foreword

Lately, the debate on Green IT and the – very successful – practical measures associated with this concept have given reason to also give some thought to “IT for Green” – i.e., the discipline of environmental informatics and the corporate application systems it provides, also known as Corporate Environmental Management Information Systems (CEMIS). The strong general interest in Green IT was motivated by the insight that IT contributes substantially to the Carbon Footprint of the economy and, as a result, to global climate change. The demand for resource efficiency, particularly energy efficiency, is closely linked to the claim for Green IT. Therefore, reducing ecological damage caused by IT and increasing its environmental and economic efficiency are important issues.

The appeal for Green IT has quite considerable effects on practice. As yet, however, “IT for Green” does not seem to have gained a similarly strong impact. This is surprising if one considers that the impact of the “IT for Green”-approach on environment and economy is generally anticipated to be much stronger than effects caused by Green IT, because Green IT in its narrow sense is restricted to the realm of information processing (at a company level), whereas “IT for Green” applies to the entirety of a company’s business processes.

A closer look at companies’ management practices reveals that, on the one hand, information systems developed by environmental informatics were created in response to environmental legislation demands. On the other hand, many of these IT systems supplement (standardized) environmental management systems. Unlike Green IT, they serve exclusively as an instrument of corporate environmental protection. This comparatively narrow focus may explain why CEMIS are of such little relevance to practice. As a general rule, most companies delegate environmental management and measures of environmental protection to environment departments or commissioners. In this way, these issues are no longer dealt with at strategic management level. Instead, they become subtasks of an operative management that usually lacks the (financial) means and strategic commitment necessary to procure or develop integrated and comprehensive information systems.

Basically, “IT for Green” stems from the same root as Green IT. Despite its shadow existence, “IT for Green” is however potentially more effective and efficient than Green IT due to its larger scope of application.

In view of this situation, the discipline of environmental informatics is challenged to enlarge its focus from environmental issues to the broader concept of sustainability. It could then contribute to a paradigm shift which leads, for example, to the development and establishment of strategic environmental information management. This new paradigm would demand for integrated information systems that support the strategic goal of sustainability.

To conclude, the discipline of environmental informatics, viewed from a corporate perspective, needs to be modernized and expanded based on the outcomes of the sustainability debate. This volume
is dedicated to these tasks, which are largely covered by the included chapters. It demonstrates impressively how the potential of CEMIS can be used for viable applications. The volume provides a means of orientation in a new world of CEMIS (“CEMIS 2.0”), which – for the reasons given above – are hoped to have a broad impact in the near future. May this volume encourage companies to make use of modern information and communication technology in order to contribute to the long-term goal of sustainable development.

We hope that a large community of readers will draw inspirations for their own work from this collection of promising ideas and well-founded studies.

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