Preface

This book is both timely and timeless. It is timely in that information systems (IS)—in all their guises—are even more fundamental to business, organizations and society now than ever before. They underpin e-business and social media as well as driving the operations of organizations of all sizes. It is timeless in that we seem to continue to make many of the same mistakes again and again when delivering IS. The better we can understand the past of models and methods for delivering successful IS, hopefully, the less we will repeat those mistakes. We have seen a worrying shift towards strategy in the role for IS. They are clearly strategic, but they must be developed, deployed and they must deliver. But we must also focus on the systems themselves.

There are tensions between used and useful systems. We need to understand better why some systems get used and others do not. We also need to appreciate the role of context and the appropriateness of different development methods. As the context in which the system is, or will be used, changes, so the systems need to change too—and changed more frequently as well as being used by different people for different purposes. All IS development tends to follows a lifecycle. Sometimes this is all planned in advance and sometimes it is incremental. Developers must match process to problem and to requirements. They must also plan for, and deliver, benefits.

In the mid-1990s, I was part of a team at Warwick Business School that developed a 3-D model of Information Systems Success (Ballantine et al. 1996). This model attempted to understand IS success by separating it into three levels; *technical development, deployment* to the user, and *delivery* of business benefits. The model is described later in this book, but it is useful just to reprise it, here in the foreword, as it attempts to uncover the quantity and complexity of the variables that need to be combined in some way so as to allow organizations to derive benefits from their IS.

In the model, *filters act between the levels* of IS effectiveness and inhibit or encourage adoption of the system at the next level, but the filters act independently of the quality of the system at lower levels. *Influencing factors* collectively determine the quality of the information system within levels. Some factors may work at more than one level and not all factors have to be positive in order to achieve a positive result overall. There may be inter-relationships between factors within and across levels. Influencing factors can be endogenous, within the control of actors at the respective levels or exogenous, lying outside such control.

At the *development level*, success is influenced by endogenous factors such as complexity, project management, technology, development method, user involvement, professional skills and experience, and data quality. Output from this level is a technical system that enters the *implementation filter*. Exogenous factors influence implementation that results in the acceptance, or not, of the technical system. A technically excellent system, but one in which users had not participated, might be rejected, as might an imposed system or one that offers nothing that existing systems do not already deliver. An IS can be a success at the development level, but not at the deployment level. Yet, a low quality technical system may be successfully deployed due to the support of a champion, business imperative or management dictate.

A successful, implemented system enters the *deployment level* where factors influence how much, and how well, the system is used. The user is central, as the technical system serves the user and delivers benefits. Deployment success is influenced by user satisfaction, support, information quality, user skills, the resources deployed for implementation and the nature of the task. An IS, although successfully used, may fail to deliver business objectives. The *integration filter* determines whether the system actually works within the organization. It may be prevented from doing so by an organizational structure or politics.

At the *delivery level* forces such as active senior management support, change management skills and benefits management improve fit between the system and the organization. The resources available and the way output from the system is used affect success, as does the alignment of individual and business objectives. However, even achieving business objectives may not result in increased business performance, due to exogenous factors in the *environment filter*. These include competitor movements and political, social, and economic factors.

The primary purpose of outlining this model here is to communicate that IS success is not simple. We need to draw a wide boundary around the notion of the information system and appreciate the rich and complex scope and impact of IS. This book attempts to do this. It is a source guide to the theory and practice of IS methods and methodologies. But crucially it offers a multi-disciplinary approach to these, allied to a depth of understanding. It is contemporary—as system use changes so do methods to deliver them. And it is clear about the need to understand

context. It is a book that will appeal to students of IS, to those researching in IS, and to those whose main role is to develop IS. Hopefully, it will help us to avoid repeating the mistakes of the past and to deliver more useful, used systems.

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Reference

Ballantine, J., Bonner, M., Levy, M., Martin, A., Munro, I., & Powell, P. (1996). The 3-D model of information systems success: The search for the dependent variable continues. *Information Resources Management Journal, 9*(4), 5–14.

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