I first started using Just-In-Time software development after noticing that many software projects that followed the "rules" of various software development methodologies still delivered software over cost and over schedule. The software managers I observed (including myself) were baffled since the experts in the software engineering field told us that if we developed and followed a software methodology with documented procedures, our problems would be solved. Without exception, all of us managers had a mature software development process, and followed the process, but were still unable to meet cost and schedule goals. What went wrong?

If this sounds familiar then this book is of value to you. This text is not a primer on how to manage a software project; it assumes real-life experience by the reader. The intended audience is professionals who must manage and be accountable for the software development cost, the resources, and the schedule. These people are decision makers who ultimately direct the outcome of the software project. The concepts presented will also be beneficial in a software engineering management course to strengthen software management approaches. Whatever its use, this book presents software management techniques that both complement, and are unique from, most software project development methodologies. This perspective will hopefully put you in a different paradigm to successfully run a software development project.

This book investigates the aspects of Just-In-Time (JIT) software and risk management both from a technology perspective, (addressing implementation details of software), and the business perspective, (addressing software development cost, schedule, and strategy). This includes the risks associated with business decision making, investment, and profit.

Most of the concepts and examples focus on JIT software techniques and risks associated with software developed for revenue, that is, software sold as a product or software embedded within a product package. This type of software, as well as all software in general, represents a significant, growing industry as depicted in the following figure [1].

In the United States, it is estimated that software development makes up an annual cost of $40 billion [2] to $80 billion [3]. The global market for software products has already exceeded $300 billion [4] with an annual cost of $140 billion per year [5] and an estimated value of $435 billion in 1995 [6]. Effectively improving the current success rate
for managing software will have a significant impact in the software marketplace and its effect on society.

Since software developed for both product and in-house applications share similar development approaches, the results presented in this book can also be used for in-house software development applications. Because of the increased importance of the financial investment and potential returns associated with software produced for revenue, the JIT software development, risk management activities, and controls identified should be employed for critical in-house software applications that share similar characteristics.

The JIT software development is not a silver bullet. It is, however, one of many activities that must be performed to make a software development project successful. The following text addresses many different approaches and activities that could make the management of your next software development project less of a guess and more predictable. I hope these concepts, strategies, and tools will also work for you.

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  October 1995