



DEPARTMENT OF THE AIR FORCE
Software Technology Support Center

**Guidelines for Successful
Acquisition and Management of
Software-Intensive Systems:
Weapon Systems
Command and Control Systems
Management Information Systems**

Condensed Version
February 2003

Preface

The U.S. Air Force's Software Technology Support Center is excited to provide an updated and condensed version of the *Guidelines for Successful Acquisition and Management of Software Intensive Systems (GSAM)*.

We are pleased that prior editions have been so well received and that many individuals and programs have worked hard to implement the principles contained therein. These users also repeatedly requested a more streamlined version of the content. Our goal for this project has been to provide a usable desk reference that would give a brief but effective overview of important software acquisition and development topics, provide checklists for rapid self-inspection, and provide pointers to additional information on the topics covered.

As we assembled these *Guidelines* using the experiences of software acquisitions and software development projects, assessments and consulting, we have found a handful of key principles that, when not followed, cause projects to suffer. Although these principles seem so basic, we have noticed that they are often neglected or are not implemented because they run counter to the prevailing environment:

- We must focus on the true customer.
- We must spend more energy communicating with this customer and working towards a quality product for the program. We must minimize, as much as possible, the time spent talking about the encompassing politics but focus instead on innovation, collaboration, and flexibility.
- We must understand the importance of the full lifecycle of our program and the accompanying product or service.
- We must baseline our requirements and project scope as soon as possible.
- We should break up our program into smaller phases or multiple projects, if necessary, to gain the advantage of incremental success.
- We must introduce measurements into our programs and appropriately use them for better predictability of costs, schedule, and quality and management of the program as it progresses. These measurements being used to also stimulate increased accountability into our cultures.
- We must not be afraid to talk about the risks associated with our programs and projects, and focusing on, tracking, and managing the key risks.
- We must capture relevant data, lessons learned, and other historical information from our programs with a mantra of organizational learning, regardless of the potential and actual staff and management turnover.
- We must work towards and emphasize sponsorship in our improvement efforts, where leaders and managers understand these principles and “walk the talk.”

We hope you find this reference useful. Note: If you notice errors or have a suggestion for improvement, please provide your recommendations to us at:

Customer Service
OO-ALC/MASE
7278 4th Street
Hill AFB, Utah 84056-5205
801-775-5555
www.stsc.hill.af.mil

Larry W. Smith
Project Manager
Software Process Improvement
Software Technology Support Center