

Module 12 - Risk Management for IT (Software) Systems

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**Introduction: Common Risks**

This lesson introduces some of the most common risks for information and software systems.

The list of risks that we will cover is the result of long-term data collection and represents the most common program management risks that project teams have encountered over the years.

Before proceeding, take a minute to write down at least 5 risks you would anticipate that commonly occur in the information and software acquisition process. Put that paper off to the side for now. You will need to refer to it later.



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## Lesson Objectives

After completing this lesson, you will be able to:

- List some risks commonly associated with information and software-intensive programs.
- Summarize mitigation strategies for risks commonly associated with information and software-intensive programs.



# Objectives

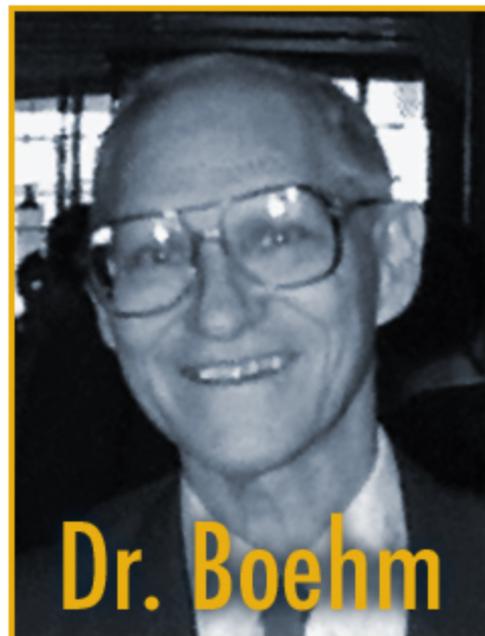
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## Common Software Risks

Many references and studies have been written that list common software development risks.

While there are a lot of such risks, they can be distilled down into common sets. Some of the best of these listings are provided in this section.

The sources of the risks cited in this section include those identified in risk management studies by [Dr. Barry Boehm](#), and various surveys by the [Software Technology Support Center \(STSC\)](#), the [Software Engineering Institute \(SEI\)](#) as well as those outlined in the DoD Risk Management Guide.



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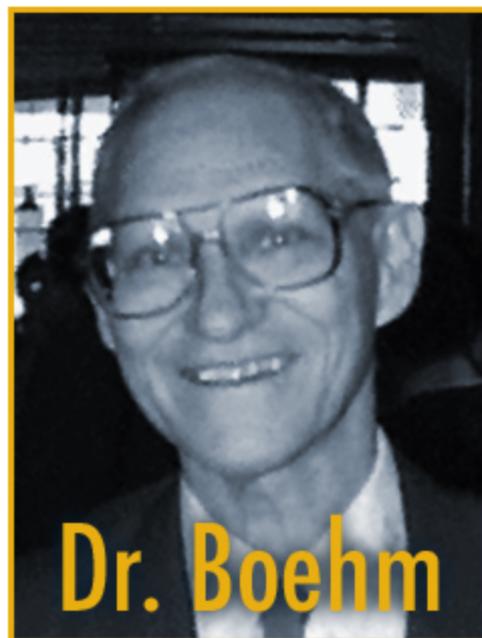
**Common Risks: Boehm's**

As part of his work on software risk management, Dr. Boehm surveyed a number of highly experienced Program Managers to determine their views on common program management risks that they encountered. His survey yielded the following "Top Ten" list of common risks.

Select each entry to see some of the mitigation strategies recommended for each.

[Personnel Shortfalls](#)[Continuing Requirement Changes](#)[Unrealistic Schedule and Budgets](#)[Shortfalls in Externally Furnished Components](#)[Developing the Wrong Software Functions](#)[Shortfalls in Externally Performed Tasks](#)[Developing the Wrong User Interface](#)[Real-time Performance Shortfalls](#)[Straining Computer Science Capabilities](#)[Gold-Plating](#)

Now take a look at your list of 'Top 5' risks. How does it compare?



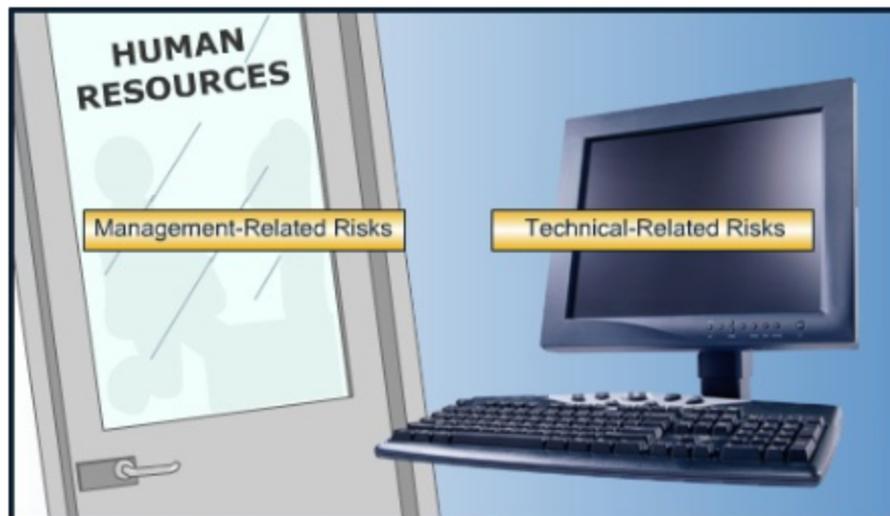
**Common Risks: STSC Listing**

Now let's turn our attention to the listing of common risk categories for software-intensive systems that was developed by the [Software Technology Support Center \(STSC\)](#).

This listing is based on consulting work the STSC has performed for various DoD Program Offices.

Take out your list again and see how it compares.

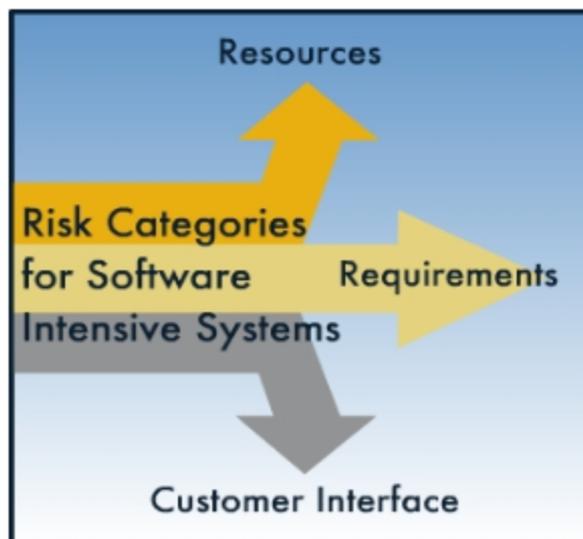
*Select each risk category for specific risks identified by the STSC.*



**Common Risks: SEI's Top Three**

Work done by teams from the [Software Engineering Institute \(SEI\)](#) shows that while there are many specific risks for information and software-intensive systems, the top three risk areas uncovered in their work tend to be in:

- Resources: Is there enough time, money, or people to do the job adequately?
- Requirements: Are requirements unstable, incomplete, or constantly changing?
- Customer Interface: Is the interface poorly handled?



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## Summary

This lesson summarized a variety of risks that are commonly encountered in the development of IT and software-intensive systems.

Some of the unique features that the software products contribute to these risks are: invisibility, difficulty of accurate cost and schedule estimation, inability to exhaustively test, pace of IT change and shortfalls in qualified personnel.

But as you probably discovered when you checked your own 'Top 5' risk list against the various 'official' ones, there is a lot of "common sense" involved in software Risk Management!



## Lesson Completion

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