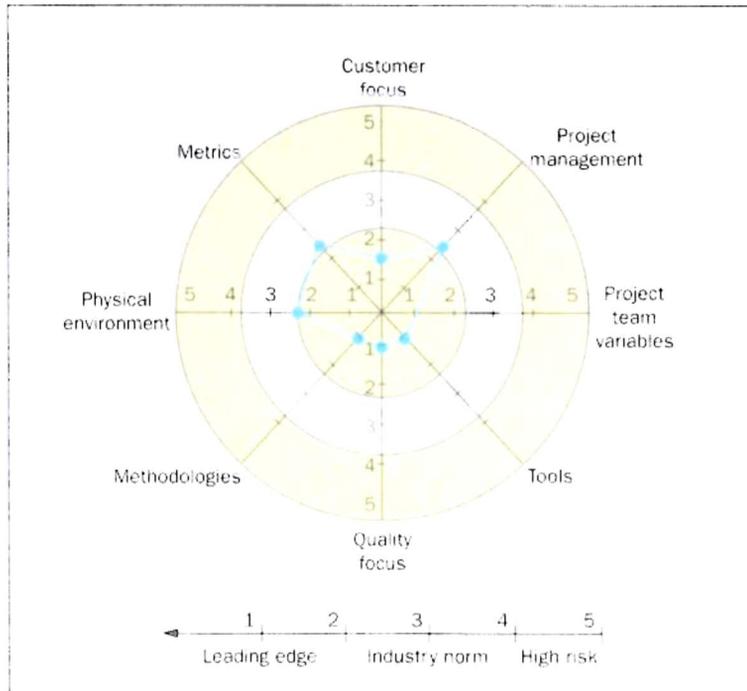


# Foreword

In the May 1995 issue of the *AT&T Technical Journal*, which focused on the 1B processor, I wrote about the importance of sharing success stories across the R&D community. Nowhere is this more important than in the area of software development. Software is part of virtually all of AT&T's products and services and is the preeminent integrating technology.

During the last two decades, researchers and practitioners have developed quantitative and analytical approaches to improving software quality. Researchers have developed algebraic formalisms for expressing program designs that make it possible to check correctness. Academics and commercial firms are developing platforms and infrastructures for supporting libraries of reusable software objects. Recently, the AT&T Software Leadership Group launched an effort to accelerate the adoption of uniform best-in-class methodologies throughout AT&T.



**Figure 1. The web-like solid line in this statistical display summarizes assessment results across eight dimensions from the ten best organizations outside AT&T. A score closest to the bullseye of 1.0 denotes a leading-edge area, whereas a score of 3.5 or more signifies a high-risk area. This data, which reflects 1994 results, was provided by Capers Jones of Software Productivity Research.**

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Among this team's goals are:

- Significantly improving productivity, reliability, and speed by implementing best practices in software development processes, and
- Performing software process assessments using widely available assessment instruments. This allows results to be compared with best-in-class organizations outside AT&T (see Figure 1).

The papers in this issue—the first of two special issues of the *AT&T Technical Journal* on information technology—illustrate how far we have progressed in our journey toward achieving software excellence. They begin on page 3, immediately after the “AT&T Innovation Briefs” section, and I encourage you to read and to learn from them.



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