
LKP Consulting Group

Presents

The Real Cost of Software Defects

Objective

To **Identify, Quantify and Mitigate Risk**
introduced in Technology Projects
and **Increase Project Efficiency**
through a structured QA organization
by applying a formal and consistent
QA and Testing Framework.

The Real Cost of Software Defects

The longer a defective application evolves the more costly it is to repair.

According to the CTO of one software development organization, a bug that costs \$1 to fix on the programmer's desktop costs \$100 to fix once it is incorporated into a complete program, and many thousands of dollars if it identified after the software has been deployed in the field [1].

Barry Boehm, one of the industry's leading experts on software quality, has published several studies over nearly three decades that demonstrate how the cost of removing a software defect grows exponentially for each downstream phase of the development lifecycle in which it remains undiscovered [2].

Since the original study, Boehm's results have been confirmed in a number of subsequent studies [3].

Further, another major research project conducted recently by the United States Department of Commerce, National Institute of Standards and Technology showed that in a typical software development project, fully 80% of software development dollars are spent correcting software defects.

The same NIST study estimated that software defects cost the U.S. economy, alone, \$60 billion per year [4].

The Real Cost of Software Defects

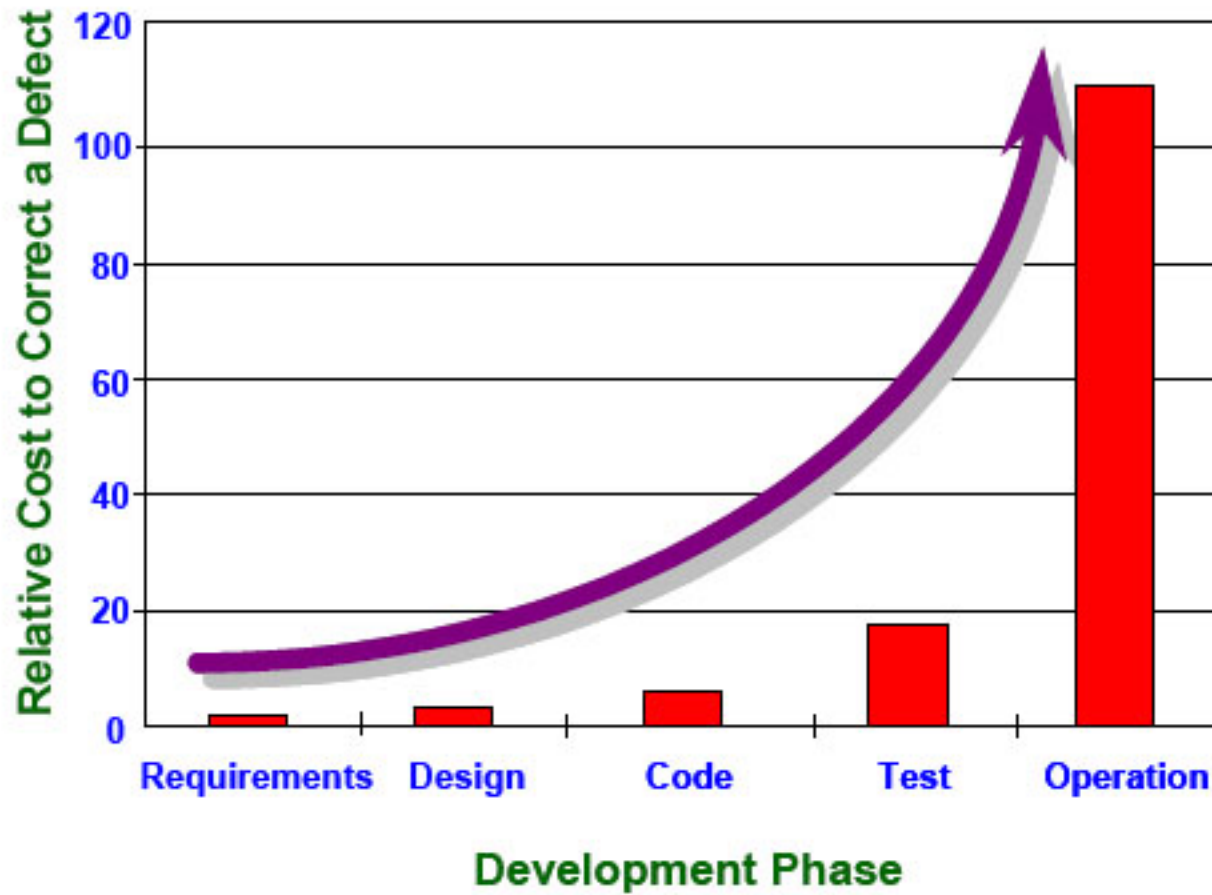
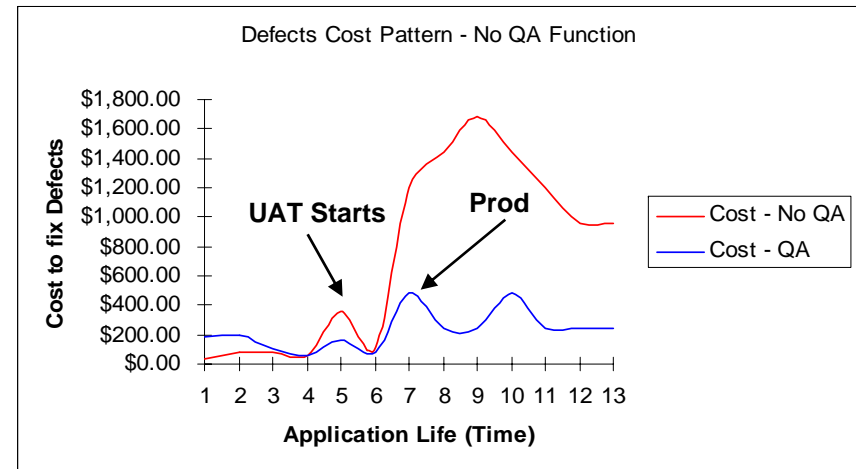
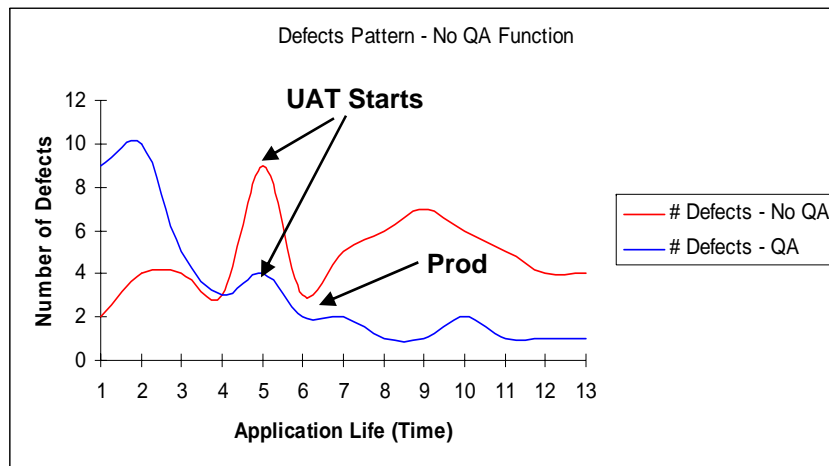


Figure 1 - Increasing cost of defect correction

QA Function - Value Proposition

Higher quality of software development



- ▶ Increase quality of code at user handoff
- ▶ Reduce cost of defect because of life-cycle detection
- ▶ Effective software risk management with quality tracking

Key Value Messages

More **Predictable** Application Delivery
Higher (and quantifiable) **Quality** of code delivered
Reduction of **Business Risk** and of **Financial Loss**
and greater **Client Credibility**

Contact



LKP Consulting Group, LLC
2870 Peachtree Road, #929
Atlanta , GA 30305
Phone: 770.530.2731
Fax: 678.868.1113
info@lkgpgroup.com

References

- [1] "Building a Better Bug Trap", *The Economist*, June 19, 2003
http://www.economist.com/science/tq/displayStory.cfm?Story_id=1841081
- [2] Barry Boehm, Software Engineering Economics, Prentice-Hall, 1981
- [3] Robert Grady, Applications of Software Measurement Conference, 1999
- [4] National Institute of Standards & Technology, US Dept of Commerce, "The Economic Impacts of Inadequate Infrastructure for Software Testing", May 2002