



## About Us

### Our Philosophy

Today clients require more sophistication and are more demanding. Client will always keep changing and so will consulting business. We strongly believe that true value addition provided by consulting business is about knowledge sharing and meeting client's business objectives. Knowledge that helps improve overall productivity and efficiency.

Consulting companies must draw a framework of services, driven by processes, that not only demonstrate technical expertise, but operational excellence, functional efficiency, management effectiveness, financial viability, and a deeper understanding of client's business objectives and deliverables, too.

Consulting companies must leverage their network of resources in combining the parameters, efficiently, required to deliver a solution that meets client's business objectives and goals and exceed their expectations.

### Our Values

Establishing relationships built on trust, integrity, and knowledge. Mutual respect and professionalism are the foundation of any business.

We have a deep sense of commitment towards our employees, customers, and business partners, to develop and sustain long term business relationships based on ethical business practices, high quality services, and deliver on our promise, every time.

### Our Credentials

- Nominated by Sabre Holdings, a S&P 500 Company, for 'MBE Supplier of the year 2005' award.
- Nominated by DFW-MBC for 'MBE Class -II' Supplier of the year 2005 award.
- Rated as one of the 'Top Women Owned Business' in United States by DiversityBusiness.Com.

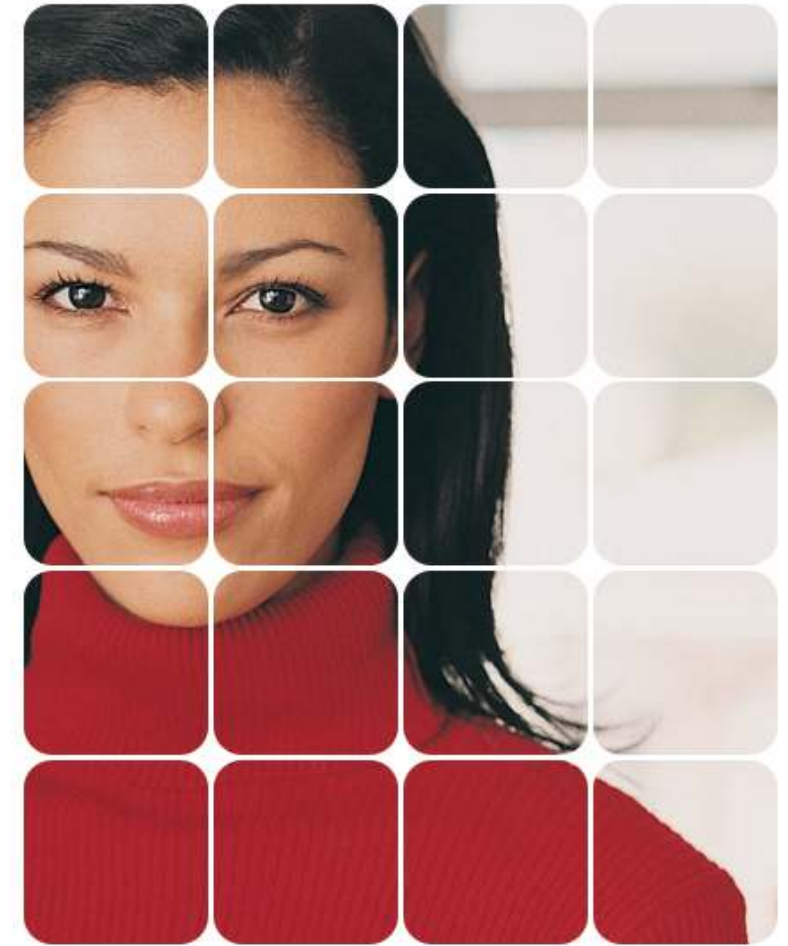
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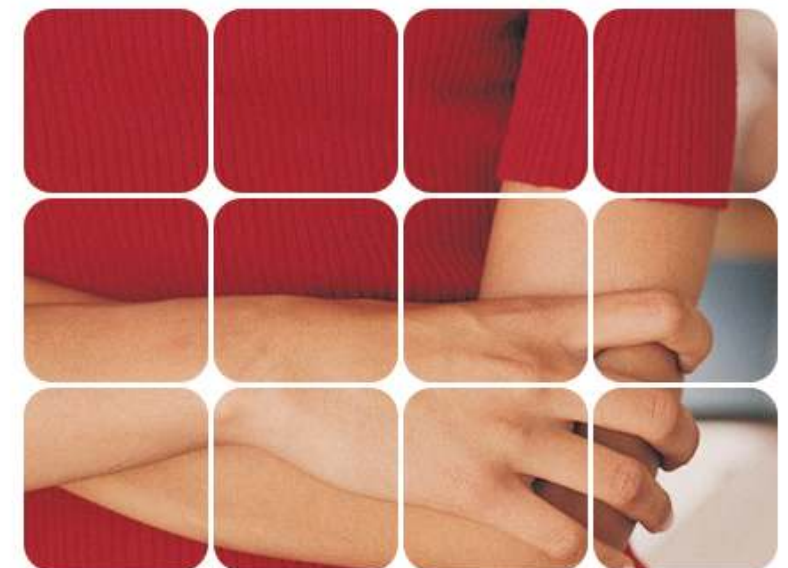
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## 4 CONSULTING, INC.

QUALITY ASSURANCE  
A SYSTEMIZED APPROACH

### Knowledge Based Consulting



## Quality Analysis

With most end-users applications constantly being updated, development and testing becomes an ongoing process, further reinforcing the need for an integrated test and development team. Rapid development cycles and rigorous testing plans have to work together to meet production schedules. Working together requires understanding each other's job pressures. Development has deadlines and test has deadlines. Development often sees QA as a time afterthought, while it seems QA never has the time needed to test the end-user's application thoroughly. Getting together on this crucial point is imperative if a team is to work together at all.

### Software Quality Assurance

SQA is defined as a planned and systematic approach to the evaluation of the quality of and adherence to software product standards, processes and procedures.

SQA includes the process of assuring that standards and procedures are established and are followed throughout the software acquisition life cycle. Compliance with pre-defined standards and procedures is evaluated through process monitoring, product evaluation and audits.

## SDLC – A phase by phase analysis

### Process Modeling and Requirements Analysis

Determining and establishing requirements for all system elements is always crucial. Work begins by establishing requirements and then allocating some subset of these requirements to the software. This system view is essential when the software must interface with other elements such as hardware, people and other resources. The essential purpose of this phase is to determine the need for the software and to define the problems that must be solved.

Productivity metric model is used to confirm and analyze the requirements.

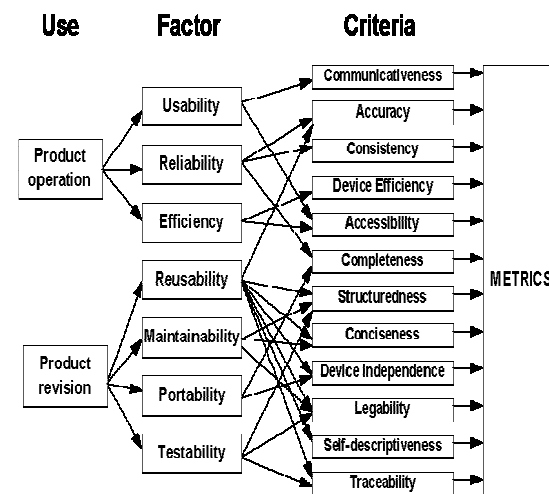
### System Analysis and Design

In this phase, the software development process, the software's overall structure and its intricacies are defined. All factors like the client/server technology, the number of tiers needed for the package architecture, the database design, the data structure design and so forth, are all defined in this phase from which a software development model is created. The productivity model has to be kept in mind in the process modeling and requirement analysis phase as well as in the systems analysis and design phase.

### Code Generation

The design must be translated into a machine-readable form. The code generation step performs this task. The nature of the design determines the complexity of the code.

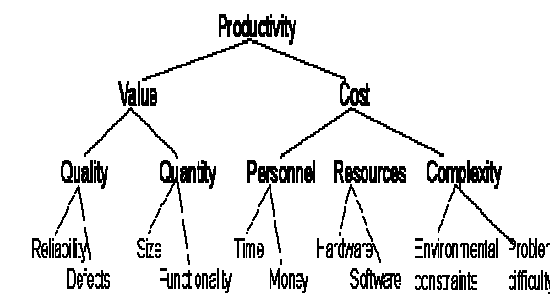
The metric used to measure the data and code is the metric model for data collection.



### Testing

Once the code is generated, the software program testing begins. Different testing methodologies are available to debug and report the bugs that were present during the previous phases. No quantitative approach to software QA can be complete without a measurable definition of software product quality. Work on resource estimation and productivity assessment inspired software engineers to develop quality models, which took into account various views on software quality.

The following figure depicts a software quality model.



The quality model has to be kept in all the phases as the model gives an idea of how important each phase is and all the points that must be kept in mind for successful delivery of the project.

The metric specific to the testing phase is the reliability model measurement – which is implemented in the testing phase to check on the code and the general working of the projects according to the standards expected. Bug counts are invariably a primary area of test metrics that are reported to management.

### Maintenance

Software will definitely undergo change once it is delivered to the client or the customer. There are many reasons for the change. Changes could be needed because of some unexpected input values into the system.

### Risk Management model for the entire project

The challenge in selecting and following a methodology is to do it wisely and to provide sufficient process disciplines to deliver the quality required for business success, while avoiding steps that waste and delay the delivery of the project.

Structural and complexity metrics - The structural attributes of representations of the software are measured, which are available in advance of (or without the need for) execution. This metric model can be executed immediately during the testing and maintenance phases.

Performance evaluation and models - Performance specialists investigate the internal workings of a system and this is relevant to the specification and design phase for software QA.

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### Engagement Scenario

The following is a brief sample of QA roles and responsibilities. Actual functions of QA roles and responsibilities will be driven by customer-driven parameters.

Implementation Team	QA Team	Project Team
Structure: Manager + QA resources	Structure: Team Lead + QA resources	Structure: Development Lead + team members
Duties: Approve & assign QA requests to QA team lead	Duties: Develop test requirements & test scenarios	Duties: Submit test requirements & requests to implementation manager

QA Engagement Scenario

## Our People

### Tom Volkenant Senior Automation Engineer

Tom has more than 10 years' progressive advancement through the lifecycles of software development, testing, and defects. Mr. Volkenant has strong foundation in QA Best Practices. As an advanced QA practitioner, Mr. Volkenant is relied upon for planning, managing and executing test strategies, implementing structured testing processes and creating effective test plans utilizing select testing tools. Mr. Volkenant estimates resources, assesses test tools, and identifies project and application risk - critical in creating a robust test environment. He is certified by Mercury Interactive to operate all software represented in the company's suite of products. Mr. Volkenant certifies that products not only perform as promised, but are also functionally accessible to the typical end-user - a substantial departure from the past convention that products work only as development intended.

Prior to relocating to the DFW metroplex, Mr. Volkenant was employed as a Quality Control Specialist for a worldwide B2B business service provider. In this capacity, Tom provided diverse testing scripts for 19 corporate clients in the Midwest division. Upon completion of undergraduate studies at South Dakota State University, Mr. Volkenant obtained his degree in computer science from Vatterott College in St. Louis, Missouri.

