

Presentation of SSQC to Potential Clients



This presentation outlines the ways in which Software Systems Quality Consulting (SSQC) can assist potential clients who are actively pursuing software process improvement .

The presentation reviews SSQC's capabilities, skills, and experience.

About SSQC

- Software Systems Quality Consulting
- Located in San Jose, California, USA
- Since 1990 - assisting organizations to develop and improve their software and hardware engineering and management practices
 - CMM and CMMI®
 - ISO 9001:2000
 - ISO 9000-3
 - SQA and Testing
 - BPR and Benchmarking
 - Assessments/Appraisals
 - Consulting
 - Education and Training

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SSQC is located in San Jose's Silicon Valley, the heart of the software industry in the United States. SSQC has a long history of working in the Silicon Valley's leading technology companies.

SSQC has a wide variety of services that support a wide variety of software engineering disciplines. Our skills and services span the software development lifecycle from requirements to testing, release, and maintenance.

An important part of SSQC's services are related to models for quality such as the the Capability Maturity Model for Software (SW-CMM), Capability Maturity Model – Integrated (CMMI) and ISO 9001/9000-3.

The SSQC Difference: 1

- Breadth of experience
 - Practitioner, academic, consulting, training
 - The number of industries served
 - International and US
 - In organizations of all sizes
 - Internationally recognized experts in CMM/CMMI and ISO 9001/9000-3

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SSQC differentiates itself from other consultancies in 3 ways.

The first way is in the breadth of our experience.

The principals of SSQC have strong backgrounds as engineering practitioners and have extensive experience in Research and Development organizations. Building on that experience, they have taught courses in accredited academic institutions and have provided consulting and training services to companies in a number of industries. SSQC's clients include international and US-based firms and organizations of all sizes.

SSQC has gained extensive experience working in three of the premiere models for software process improvement - the Capability Maturity Model for Software (CMM), Capability Maturity Model – Integrated (CMMI) and ISO 9001/9000-3.

SSQC has unique experience in assisting organizations transitioning between the models, implementing both models, and evaluating both models to determine which will be most beneficial. SSQC has developed the Hybrid Multi-Model Assessment method (HM2) which profiles organizations to both CMM and ISO 9001 in a single assessment.

Some of the industries in which SSQC has worked are listed in the next six slides.

Serving companies in a wide variety of industries

- Data and Telecommunications
- Software
- Semiconductor
- Manufacturing
- Services

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Difference: 1

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See Slide 10 for clients served and references in these industries. A breakdown of the industries follows on Slides 5-9.

SSQC has unparalleled engineering and process improvement experience in commercial high-technology research and product development industries. SSQC's consultants are practitioners with real world experience.

Of particular interest to companies selecting a consultant is the fact that SSQC has extensive experience in introducing the CMM and CMMI to commercial, high-technology firms. Fast moving product development environments pose significantly greater challenges than those encountered in the Defense Industry and government disciplines, which have historically been the primary focus for the CMM and CMMI.

In addition, SSQC has considerable experience in working with organizations that range from very small to very large.

Serving Data and Telecomm companies

- Networks and Wireless
- Carriers
- Voice Messaging
- Routers

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Difference: 1

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See Slide 10 for clients served and references in these industries.

Serving Software companies

- Financial Applications
- Desktop Publishing
- Real-Time and Embedded
- Operating Systems
- Enterprise Applications
- Commercial Applications (COTS)
- Help desk and knowledge management

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Difference: 1

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See Slide 10 for clients served and references in these industries.

Serving Semiconductor companies

- Equipment Manufacturers
- FPGA and ASIC Design Software
- FPGA and ASIC manufacturers
- Industry Groups - SEMATECH and SEMI

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Difference: 1

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See Slide 10 for clients served and references in these industries.

Serving Manufacturing companies

- Computers
- Computer peripherals
- Point-of-Sale devices
- Specialty gases for semiconductors
- Consumer devices

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Difference: 1

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See Slide 10 for clients served and references in these industries.

Serving Services companies

- Contract Engineering
- Customer Support
- Order fulfillment

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Difference: 1

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See Slide 10 for clients served and references in these industries.

A partial list of SSQC clients

3M	CTB McGraw-Hill	Lucent	Quantum
ABB	Daimler-Chrysler	McDonnell-Douglas	Raychem
Actel	DSET Corporation	Mentor Graphics	Roim
Acuson	EDO Corporation	MCI	Schulze Mfg.
Adobe	EDS	Microsoft	Seagate
Alltel	EPRI	MKS	Seiko Epson
Amdahl	Ericsson Telecom	Motorola	Sun Microsystems
Apple Computer	ETAK	NASA-Ames	SunSoft
Applied Materials	Fiserv	NASA-Lewis	Synopsis
Atria Software	Fujitsu	National Semiconductor	Synoptics
Auspex	Gallo Winery	Nokia	U.S. Air Force
Autodesk	GUPTA	Northern Telecom	U.S. Navy - SPAWAR
Barra Inc.	Hewlett-Packard	Northrop-Grumman	TCI Communications
Becton Dickinson	Hitachi Data Systems	Novell	Texas Instruments
Cadence	Hitachi Micro	Novellus	TRW
Centigram	Hughes	Octel	United Defense
Cisco	ICL	Oracle Corporation	Varian
CLARIFY	Informix	Pacific Bell	Viewlogic
Clarent	Kaiser	Paine-Webber	VLSI Technology
Compaq	KLA-Tencor	Philips Semiconductor	Western Digital
Consilium	Lam Research	Plexus Software	Wind River Systems
Cornerstone Imaging	Lockheed-Martin	Pyramid	Xilinx

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Difference: 1

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SSQC's clients and references include some of the most distinguished technology companies in the world. Also see <http://www.ssqc.com/pages/cliserv.htm> for latest list of clients served.

The SSQC Difference: 2

- Variety of consulting services provided
 - The hands-on support your organization requires both onsite and offsite
 - CMM and CMMI implementation consulting
 - CMM and CMMI based appraisals

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The second way SSQC differentiates itself from other consultancies is the variety of services it provides.

Any organization can find the right mix of onsite, offsite, and "hands-on" support that it requires. Whether you choose an assessment, an assessment and training, or an assessment, training, and consulting, SSQC is prepared to support your organization in achieving an advanced maturity level.

As a technology company itself, SSQC leverages the latest internet telephony and videoconferencing technologies to minimize costs, to maximize your access to our consultants, and to reduce frustrating delays imposed by different geographic separation.

CMM/CMMI implementation consulting

- Hands-on implementation
 - Planning
 - Project management
 - Facilitation
 - Mentoring
 - Process mapping
 - Documentation development
 - Technology selection and introduction

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Difference: 2

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SSQC's involvement doesn't stop after the assessment. When necessary we'll work side-by-side with you to outline your detailed CMM/CMMI implementation action plan and work hand-in-hand during the implementation of the plan in order to ensure your success.

SSQC can work closely with the team to review and monitor deliverables, risk, and progress and assist in adjusting the CMM/CMMI implementation plan as required.

SSQC can facilitate teams responsible for defining and improving processes, and resolving problems.

SSQC can also mentor individuals, providing support and guidance to ensure that they are successful.

SSQC has extensive experience in drawing process maps, and creating streamlined software process documentation based on those maps.

Based on their extensive industry experience, SSQC's consultants are prepared to assist your organization in technology selection and introduction to support software process improvement.

CMM/CMMI based appraisals

- Hybrid Multi-Model Assessment – HM²
- CMM Based Assessment for Internal Process Improvement (CBA IPI)
- Software Capability Evaluation (SCE)
- Standard CMMI Appraisal Method for Process Improvement (SCAMPI)
- Mini Assessment
- Risk Assessment
- Focused Diagnostic Assessment

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Difference: 2

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In addition to the SSQC developed HM² assessment method, SSQC provides SEI-authorized appraisal services which include CBA IPI, SCE and SCAMPI methods. SSQC is an SEI-authorized transition partner for CMM and CMMI appraisals.

The HM2, CBA IPI, and SCE methods produce comparable results with respect to establishing a profile for CMM software process maturity.

The SCAMPI method establishes a profile for CMMI maturity or capability level.

SSQC would assess selected projects to verify that the documented practices are implemented and to uncover undocumented practices that satisfy the additional requirements introduced by the CMM/CMMI.

To support a client's software process improvement plan steps, SSQC offers mini assessments, risk assessments, and focused diagnostic assessments which can be used as the basis for a software process improvement plan, or to identify progress against your existing plan and continuing relevance of the plan.

SSQC's diagnostic assessments focus on solutions to issues. Our diagnostic assessments give you the details you need to drive your improvements and prepare you for a future SEI-authorized appraisal. SSQC's diagnostic assessment reporting format is detailed, and includes key practice level findings along with a process maturity profile for executive management.

No matter what type of assessment you choose, SSQC's reports provide detailed findings **and more importantly**, suggested solutions that address the findings.

The SSQC Difference: 3

- Professional education and training
 - Complete course materials
 - Course licensing is available
 - Instructors who are internationally recognized subject matter experts
 - Full, proven curriculum
 - For all levels of management, SEPG members, and workers
 - From beginning to advanced skills

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The third way SSQC differentiates itself from other consultancies is the professional education and training it provides.

SSQC's greatest single investment has been in formal course materials and curriculum development. This investment reflects SSQC's belief that our clients are best served when they have the knowledge and skills to be self-sufficient. The nature of software process improvement requires that the organization own their defined policies, procedures, and standards. Otherwise the policies, procedures, and standards will not be maintained and improved.

In line with making our clients self sufficient, all of SSQC's course materials can be licensed for internal use.

Because SSQC's instructors are also consultants and authors, they bring both practical and cutting-edge concepts to the classroom.

SSQC's full proven software process improvement curriculum addresses every level of the organization from worker to executive management and every level of skill, from beginning to advanced.

SSQC courses have been attended by software engineering professionals from many of the world's leading technology companies. Their courses, have been sponsored for their members by professional associations, including the ASQ, CSU Long Beach's Software Engineering Forum for Training, Semiconductor Equipment and Materials International (SEMI), Software Engineering Institute (SEI), UC Berkeley and UC Santa Cruz. More information about our professional affiliations can be found at <http://www.ssqc.com/pages/affil.htm>

CMM/CMMI training to support any implementation strategy

- CMM/CMMI as a basis for process improvement
- Transition from ISO 9001/9000-3: taking the next step for process improvement

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Difference: 3

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SSQC's extensive portfolio of courses can be combined for organizations just embarking on process improvement through the CMM/CMMI and for organizations that are taking the next step in process improvement.

Complete CMM/CMMI curriculum

- Executive Overview of the CMM/CMMI
- Introduction to CMM - beginning and advanced versions
- Introduction to CMMI - Software and Systems Engineering
- Comparing the CMM and ISO 9001/9000-3
- Focused KPA and PA workshops - beginning and advanced versions for CMM and CMMI
- Implementation project management for SEPG members
- Software and Hardware Inspections
- Process Mapping via the UML
- Streamlining Process and Project Documentation
- Assessment Team Training

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Difference: 3

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SSQC's complete curriculum begins with executive management training because the most prevalent reason that software process improvement fails is lack of management commitment. Without proper education, informed decisions and firm commitment cannot be made.

Of particular interest are SSQC's Process Area workshops that accelerate implementation of the CMM and CMMI.

SSQC designed, developed, and exclusively delivers the software CMM Workshop Series for the University of California, Santa Cruz Extension's Software Engineering program.

Since June 2000, SSQC has been successfully promoting the CMMI transition efforts (both staged and continuous models) in the week long CMM series being offered by UC Santa Cruz's software engineering program.

Specialized and Advanced Topics

- Requirements Engineering: A Practical Approach to Modeling and Managing Requirements
- Software Estimation Bootcamp
- Software Measurement Bootcamp
- SPICE: An introduction to ISO 15504
- Taking the Next Step – Advancing from ISO to the CMM/CMMI
- I-SPI: Integrated SPI based on IEEE/ISO 12207
- Riding the Wild Spaghetti: Addressing the proliferation of International Standards

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Difference: 3

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SSQC's approach to training

- Unique graphical approach to representing and communicating the CMM and CMMI
 - Simplifies the content of the models
 - Minimizes language dependency
 - Accelerates mastery and maximizes retention
- Fully integrated exercises, practical examples, and interactive workshops that reinforce concepts

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Difference: 3

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Each CMM and CMMI course incorporates SSQC's unique graphical approach. This graphical approach simplifies content, minimizes language dependency and accelerates mastery and maximizes retention.

All courses include integrated exercises, practical examples, and interactive workshops that reinforce concepts.

SSQC strategic relationships

- When additional resources or specialized skills are required SSQC draws on established relationships
 - Object Oriented Analysis and Design
 - Software Reliability, Safety and Related Metrics
 - Additional Lead Assessors for large organizations

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When additional resources or specialized skills are required, SSQC draws on established relationships with industry experts and partners.

SSQC strategic relationships - continued

To remain on the leading edge of software engineering trends, SSQC partners with professional organizations and academic institutions

- AMERICAN ELECTRONICS ASSOCIATION (AEA)
- AMERICAN SOCIETY FOR QUALITY (ASQ)
- ISO/IEC JTC 1/SC7 SOFTWARE ENGINEERING STANDARDS - UNITED STATES TAG
- NATIONAL ASSOCIATION OF PURCHASING MANAGEMENT (NAPM)
- SEMICONDUCTOR EQUIPMENT AND MATERIALS INTERNATIONAL (SEMI)
- SOFTWARE ENGINEERING INSTITUTE (SEI)
- SOFTWARE PUBLISHER'S ASSOCIATION (SPA)
- SOFTWARE ENGINEERING FORUM FOR TRAINING (SEFT), CALIFORNIA STATE UNIVERSITY, LONG BEACH
- UNIVERSITY OF CALIFORNIA, BERKELEY
- UNIVERSITY OF CALIFORNIA, SANTA CRUZ

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To remain on the leading edge of software, hardware, and systems engineering trends, SSQC partners with professional organizations and academic institutions.

SSQC designed, developed, and exclusively delivers the software CMM Workshop Series for the University of California, Santa Cruz Extension's Software Engineering program.

Of particular interest, SSQC has been an active member of the United States Technical Advisory Group to the ISO/IEC Joint Technical 1, Subcommittee 7 which is responsible for producing international software and systems engineering standards.

SSQC's Long-Term Relationship With The SEI

Since 1993, when SSQC received permission from the SEI to reproduce various SEI CMM 1.1 technical reports for resale to the public, SSQC has maintained a close relationship with the SEI.

Since 1996, SSQC has offered a variety of presentations and tutorials at the annual SEI-sponsored conferences (SEPG) and symposia in both the US and Europe (ESEPG). SSQC was also presented an award by the SEI for outstanding service on the conference committee for SEPG 97 in San Jose, California.

SSQC has presented numerous tutorials and presentations (including the development of and transition to CMMI) at local SPINs in the Silicon Valley and has promoted a variety of SEIs offerings.

Since early 1999, SSQC tutorials, presentations, and panels have been successfully promoting the CMMI transition efforts (both staged and continuous representations) at a variety of conferences to include ESEPG 1999-2002, SEPG 1999-2002, Quality Week 1999-2001, PNSQC 1999-2000. Since June 2000, SSQC has been successfully promoting the CMMI transition efforts (both staged and continuous models) in the week long CMM series being offered by UC Santa Cruz's software engineering program.

SSQC is an SEI authorized transition partner and provides the following CMMI training and CMMI assessment services:

- Introduction to Capability Maturity Model Integrated-SE/SW training - Staged and Continuous
- CMMI assessment or benchmark through a SCAMPI appraisal

Professional contribution

SSQC's papers and articles have been published in the following journals/books

- COMPLIANCE ENGINEERING
- CROSSTALK - THE JOURNAL OF DEFENSE SOFTWARE ENGINEERING
- IEEE COMPUTER
- INFO WORLD
- MCGRAW-HILL, ISO 9000 HANDBOOK
- MCGRAW-HILL, QUALITY SYSTEMS UPDATE
- SOFTWARE MARKETING JOURNAL

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SSQC has been invited to publish papers and articles a variety of journals and books focused on software engineering and software process improvement.

Professional contribution - continued

SSQC's papers and tutorials have been presented at the following conferences

- ASQ ANNUAL QUALITY CONGRESS
- ASQ ANNUAL QUALITY AUDIT CONFERENCE
- CEEM'S IMPLEMENTING ISO 9000 IN THE SOFTWARE INDUSTRY
- WORLD CONGRESS FOR SOFTWARE QUALITY
- INTERNATIONAL CONFERENCE ON SOFTWARE QUALITY
- PACIFIC NORTHWEST SOFTWARE QUALITY CONFERENCE
- SOFTWARE PUBLISHER'S ASSOCIATION CONFERENCE
- SOFTWARE QUALITY WEEK (SOFTWARE RESEARCH INC.)
- SOFTWARE ENGINEERING INSTITUTE'S SEPG CONFERENCE
- SOFTWARE ENGINEERING INSTITUTE'S EUROPEAN SEPG CONFERENCE
- STC-SOFTWARE TECHNOLOGY CONFERENCE

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SSQC has been invited to present papers, panels, and tutorials at a variety of international conferences focused on software engineering and software process improvement.

SSQC has presented research papers at numerous national and international conferences, including those sponsored by the American Society for Quality (ASQ), Pacific Northwest Software Quality (PNSQC), the Software Publishers Association (SPA), Software Technology Support Center (STSC), the Software Engineering Institute (SEI) and Software Research Inc..