

BRIEF PROFILE

Raghavan S. Nandyal has honed to perfection many years of C-Level consulting, software engineering and management experience with world-class organizations such as Motorola, NYNEX Science & Technology, LG Group and Intelligroup. Some of the companies he has consulted across the globe are ABB Global R&D, ACS Inc, Motorola, MIMOS Berhad, Satyam Computer Services, Nationwide, Network Solutions, and Visteon. He has the rare distinction of being a CMMI Institute (past: SEI) Certified High Maturity SCAMPI Appraiser and Instructor for both the Introduction to CMMI (DEV, SVC constellations) and People CMM – a distinction shared by among only less than 10 individuals in the world (2016).

He has been a prime consultant, coach and an assessor for CMMI, PCMM and Six Sigma based process improvement initiatives in leading multinationals worldwide, since 1996. He is on the international review panel and a referee for the prestigious IEEE Software Magazine. He is a regular speaker at international and premier conferences such as the SEPG conference and CMMI Global Congress. His paper: “Shoehorning CMMI Initiatives with People CMM” was rated among the top 10 papers presented at the 18th Annual Premier SEPG2006 Conference in Nashville, TN.

He is among the top 130 Certified High Maturity Lead Appraisers by the CMMI Institute, Carnegie Mellon University, on the three popular Capability Maturity Models®, CMMI (DEV and SVC constellations), and the People CMM in the world. He has led over 100+ SCAMPI Appraisals in all 3 classes of rigour for world-class organizations across the globe.

He has trained over 3000 people in India, Japan, Malaysia, South Korea, Thailand, the United Kingdom and the United States of America on CMMI, Software CMM and People CMM. He is the founder and CEO of SITARA Technologies Private Limited – a professional services Company with focus on strategic management consulting. SITARA established itself as a pioneering research & development organization and as the first 50 partners with the Software Engineering Institute for global transition of process technologies. As a global partner with the CMMI Institute, SITARA offers authorized services related to the CMMI and People CMM which includes delivery of the Introduction to CMMI-DEV, -SVC and People CMM courses and SCAMPIsm appraisal services.

His current research interests in software management are in mitigating software risks and building self-sustaining software process improvement programs in development environments working on emerging technologies. He has a number of technical papers in international conferences to his credit. He is the author of 5 professional books published by McGraw Hill Education which are widely used both by industry and academia. 'People CMM: Interpreting People CMM for Software Organizations' offers a competency management and organization development perspective to process improvements. 'CMMI: A Framework for Building World Class Software and Systems Enterprises' established a DevOps, and an Agile improvement paradigm while adopting the CMMI. 'Making Sense of Software Quality Assurance' established an authoritative interpretation of the SCAMPI appraisal method. The 2nd Edition of the CMMI entitled, Framework of Constellations for Building World-Class IT Organizations, addressed all three constellations of the CMMI in both staged and continuous representations. His fifth book, Building and Sustaining High Maturity Software Organizations established for the first time, the importance of sustaining high maturity within a continuous integration approach as in DevOps, while offering insights into how to build lean and agile, yet effective processes leveraging a strong competency management framework.

He has guided 5 students as an external guide on their Master's dissertation and is a donor alumnus of Indian Institute of Science, Bangalore. He is a Certified Lean Six Sigma Black belt by Exemplar Global, Inc. He specializes in maintaining an execution focus with regards to achieving Operational Excellence, Organization Development, Program/Delivery Management and Knowledge Management using Structured Methods, process design for DevOps, Agile for SDLC, and Lean Six Sigma transformations to solve business problems with tangible financial benefits.

EDUCATION**M.S.E.E.**, Illinois Institute of Technology. (Chicago, USA)**B.E.E.E.**, R.V.College of Engineering. (Bangalore, India)**CERTIFICATIONS**

CMMI Institute Certified SCAMPI High Maturity Lead Appraiser for Development and Services

CMMI Institute Certified SCAMPI Lead Appraiser for People CMM

CMMI Institute Certified Instructor for Introduction to CMMI-DEV

CMMI Institute Certified Instructor for Introduction to CMMI-SVC and Services Supplement

CMMI Institute Certified Instructor for Introduction to the People CMM

Certified Lean Six Sigma Black Belt (Exemplar Global, Inc.) Certificate Number - B201510046

Certified SCRUM Master (Scrum Alliance) Certificant ID: 000492972

PROFESSIONAL SKILLS

1. Certified High Maturity Software Process and Competency Appraiser, Trainer and Coach for organizational process owners in a multi-model operational context.
2. Hands-on mentor and performance improvement coach, for Organization Development programs using People CMM, Business Transformation using DevOps, Agile, and Lean Six Sigma, Program/Knowledge Management using CMMI constellations in Software Development and Information Technology services organizations.
3. Certified Lean Six Sigma Black Belt and a Measurement & Analysis coach for the Program Management Office in creating and maintaining meaningful organizational process capability baselines using Six Sigma strategies with high maturity thinking.

EMPLOYMENT**Chairman & Chief Executive Officer** (*November 2000 to Present*)**SITARA Technologies Pvt. Ltd.**

#54, Sri Hari Krupa 6th Main Road, Malleswaram Bangalore, KA 560 003 INDIA

#435, Marshall Road, Southlake TX 76092 USA

<http://www.SITARATECH.com>*Roles & Responsibilities*

- Create a world-class strategic management consulting organization that specializes in innovating and using advanced technologies and state-of-the-art software engineering development practices
- Collaborate and partner with world-class professional enterprises such as the Software Engineering Institute, Carnegie Mellon University to ensure technology transfer in designated core competencies of SITARA Technologies
- Establish thought-leadership in the designated core competencies of SITARA Technologies by publishing *at least* 1 technical paper or book per year, both nationally and internationally

Customer Reported Benefits from SITARA's Management Consulting – (2000 – 2015)

<i>RoI from Process & Competency Improvement Programs</i>	: 5:1 to as high as 15:1
<i>Employee Satisfaction (PCMM Program)</i>	: Average upward score from 2 to 4/5 over 3-years
<i>Employee Utilization</i>	: Average of 85% consistent over 3-years
<i>Customer Satisfaction</i>	: Average upward trend from 3 to 4/5 over 3-years
<i>Customer Retention Rate</i>	: 85-100% for Pavilion Mode; 70% for POC pilots
<i>New Business/ Customer Growth Rate</i>	: 8-14% per year for \$1Million Pavilion investments
<i>Profitability</i>	: Average of 12% per year; 2-4% y-o-y growth
<i>Reduction of Cost of Poor Quality</i>	: 6%-12% per year with 1% project cost invested in automation of regression testing
<i>Reduction of Cost of Quality</i>	: 8%-15% per year with 4% project cost invested in sampling-based reviews, and commitment to reuse

Chief Process and Quality Officer, (16 May 2000 - December 2000)**Intelligroup, Inc.,**

499, Thornall Street Edison New Jersey 08837 USA

Roles & Responsibilities

- As a C-Level executive, responsible along with the corporate leadership team to grow revenues from US\$140 Million to US\$190 Million in 1-year
- Successfully created a dedicated development center of excellence in Phoenix, Arizona for American Express; spun-off as Seranova, Inc in 2001 with valuation of US\$150 Million
- Led the Software CMM Level 5 assessment for Advanced Development Center in October 2000 with no more than 14 defects per million lines of delivered source code quality goal

General Manager, Corporate Research & Development (03 August 1998 – 15 May 2000)

Intelligroup, Inc.

Roles & Responsibilities

- Primary architect behind the creation of a Level 3 Software Process in 9 months
- Primary architect behind the creation of a Level 2 People Process in 5 months
- Develop knowledge management infrastructure for the retention, building and effective utilization of intellectual capital from project execution (10% annual commitment to reuse)
- Create, innovate and hone best-in-class solutions for improving delivery capability with appropriate corporate and operational processes

Head-Emerging Technologies (01 April 98 – 30 June 98)**LG Software Development Centre (India)**

2nd Floor, Embassy Diamante, 34, Vittal Mallya Road, Bangalore-560 001 INDIA

PROJECTS

1. Management of 10 member staff working on projects using MCIS for an ISP project
2. Management of 15 member staff working on projects involving Electronic Commerce
3. Provide tactical support to Corporate Management with Process Improvement Programs, SEI Collaborations with SEMA Group and Center for Information Systems Engineering at Carnegie Mellon University

Head-Information Technology Management**Senior Manager, Corporate Office (15 April 97 -28 February 98)**Roles & Responsibilities

- Work with the corporate office team to provide policy and strategic direction to business units for LG-IC, LG-EDS, LG-E and LG-Internet and ensure 20% profitability
- Provide recommendations to the corporate team for a company-wide plan and strategy for deploying Software Engineering Practices, Corporate Quality Improvement Programs, CASE Tools, Networking of Computers and Information Systems
- Design and maintenance of major company-wide databases, Decision Support Systems, Information Systems, and Skills-Enhancement
- Development of LG's Information Technology professionals in the areas of Software Engineering by orchestrating quarterly internal seminars
- Develop and implement Quality road map using Management Charts. Lead the internal quality audits for official certification of internal processes and also serve the emerging quality needs of LG

PROJECTS

1. Advisor and Prime Consultant to LG-EDS Systems (US\$500 Million) on implementing process improvement initiatives and software engineering programs.
2. Member of the Vision Team of LGSI and mentor LGSI's corporate SEPG.
3. Assessment Team member on the First and a formal CBA-IPI assessment at LG-EDS Systems, Inc. Seoul (*Level 2 in 11 months*) [*November 1997*]

Program Manager (15 April 1996 – 14 April 1997)**Head-Project Planning & Support Services***Roles & Responsibilities*

- Interact with LG Affiliate Companies in Seoul, South Korea to identify outsourcing opportunities for LGSI within a \$4 Million seed capital budget over a 2-year period
- Institute management procedures, infrastructure planning and software engineering practices for creating a center of excellence at Bangalore as a C-Level team member of the vision team
- Identify and short-list 3 subcontractors for the LG Partner Program
- Provide high end consulting on Software Project Management, Software Testing Techniques, Software Development Processes, Methodologies and evaluate technology transfer and tool induction programs for LG Group in general and LG Software Development Centre in particular

PROJECTS

1. Delivered an SNMP Agent and MIB for a set top box for LG-Electronics while defining and architecting the LG Partner Program within \$50,000 on-budget and 4-month on-time schedule.
2. Successfully delivered a short-term \$50,000 consulting contract providing high-end consultancy on software production processes and maturity assessment using the Capability Maturity Model, Version 1.1 for LG-EDS Systems. (September '96 through December '96). *Prime consultant and Lead Assessor.*
3. Got a repeat order worth \$150,000 from LG-EDS Systems. (Jan-Dec '97)

Senior Manager (01 January 1995 – 31 March 1996)**NYNEX Science & Technology Asia Pvt. Ltd.**

Telecom Tower, 22nd Floor 18 Ratchadaphisek Road Huai Khwang, Bangkok 10310, Thailand

Roles & Responsibilities:

- Provide managerial and technical support to software projects by instituting appropriate controls and monitoring measures

PROJECTS

1. Instituted project management and system's engineering controls for Intelligent Field Access System : IFAS Phase I by undertaking code-walk-through, testing and system integration activities.
2. Authored the "Synergy Approach :Zero Defect Software Production Process".
3. Providing technical and managerial support to NYNEX Science & Technology Asia Pvt. Ltd. in the creation of a software excellence center in India.

Software Development Engineer (15 Jan. 1992 – 31Dec. 1994)

Motorola India Electronics Pvt. Ltd. "The Presidency", No.1 St. Marks Road, Bangalore.

Roles & Responsibilities:

- Develop systems software using structured methods approach to software engineering.

PROJECTS

1. An emulator prototype for the CDS16Z1A micro-controller using Extensible Virtual Tool-kit (XVT), graphical user interface development tool.
2. Incorporated the DC Remote Control feature for the existing Tone Remote Control feature of the Enterprise project of Motorola.
3. An X Window based profile plotter for the Path Profile project of the Motorola Cellular Planner.
4. User Interface development for the cellular telephone of the Personal Digital Cellular (Japan Digital Cellular) project running on the Radio Operating System (ROS).
5. Participated in Motorola's and the world's first Software CMM level 5 assessment as Code and Unit Test FAR member.

Project Associate (*Sept. 1991 – Dec. 1991*)

Computer Aided Design Laboratory. Indian Institute of Science, Bangalore.

PROJECTS

1. Assist in the "Advanced VLSI CAD for NELSI" consultancy project.

Research Assistant (*Jan. 1991 – Aug. 1991*)

Dept. of Electrical & Computer Engineering. Illinois Institute of Technology, Chicago

PROJECTS

1. Conduct research, funded by AT&T Bell Laboratories, in the area of Digital Systems Testing and Testable Design.

Research Student, High Voltage Laboratory (*Aug. 1989 - December 1989*)

Indian Institute of Science, Bangalore.

PROJECTS

1. Microprocessor based waveform analysis of periodic, non-sinusoidal analog waveforms.

PAPER PUBLICATION

1. R.S. Nandyal, "An Approach to Rework Projects", Software Engineering Symposium, Motorola, Phoenix, Arizona. 1993
2. R.S. Nandyal, "Function Analysis Tool: FAT", Software Engineering Symposium, Motorola, Phoenix, Arizona. 1993
3. R.S. Nandyal, "Automatic Code Generator: CGen", First Asia Pacific Motorola Software Symposium, Singapore. 1994
4. R.S. Nandyal, "Living with changing requirements", First Asia Pacific Motorola Software Symposium, Singapore. 1994
5. R.S. Nandyal, "Automated Function Analysis Tool: Auto FAT", Software Engineering Symposium, Motorola, Chicago, Illinois. 1994
6. R.S. Nandyal, "Cycle Time Reduction: A Survey of Solutions", Software Engineering Symposium, Motorola, Chicago, Illinois. 1994
7. R.S. Nandyal, "Automation of the product Life Cycle" - A Solution to Cycle Time Reduction, Software Engineering Symposium, Motorola, Chicago, Illinois. 1994
8. R. S. Nandyal, "Making the Use of Structured Methods More Effective", Computer Society of India, CSI '96, Bangalore, India. 1996
9. R. S. Nandyal, "Risks Involved for a High Maturity Organization to work with a Low Maturity Organization", Software Engineering Process Group Conference, Bangalore, India. 1999
10. R.S. Nandyal, "A Personal Software Process For Testing", First International Software Testing Conference '99, Bangalore, India. 1999
11. R.S. Nandyal, "Connecting Process Improvement Goals to Business Objectives", SEPG 2000, Bangalore, India. 2000
12. R. S. Nandyal, "Package Selection & Integration Process for Web Applications", SEPG 2000, Bangalore, India. 2000
13. R. S. Nandyal, "A Practitioner's View of the CBA-IPI", SEPG 2001, New Delhi, India. 2001
14. R.S. Nandyal, S.R. Nandyal, "Do you really have a software development strategy?", ESEPG 2002, Amsterdam, Netherlands 2002
15. R. S. Nandyal, "Shoehorning CMMI initiatives with People CMM", 18th SEPG Conference 2006, Nashville, TN, USA. 2006
16. R. S. Nandyal, "Making Sense of Process Improvement Programs and Appraisals", 18th SEPG Conference 2006, Nashville, TN, USA. 2006
17. R. S. Nandyal, "Building World-Class Enterprises with CMMI and People CMM", MIMOS R&D Symposium 2006, Kuala Lumpur, Malaysia. Dec. 14 2006 [*Keynote Address*]

18. R. S. Nandyal, "Making Qualitative Judgments of the Process - Establishing its Importance with Appraisal Case Studies", 19th SEPG Conference, Austin, USA. March 2007 [*Invited Paper*]
19. R. S. Nandyal, "High Maturity Behavior: Looking Beyond SCAMPI Class A for Clues", 19th SEPG Conference, Austin, USA. March 2007
20. R. S. Nandyal, "Competencies for a Software Quality Assurance Professional", 20th SEPG Conference 2008, Tampa, USA. March 2008
21. R. S. Nandyal, "Sustaining High Process Maturity - Inspirations from the People CMM", 21st SEPG Conference 2009, San Jose, USA. March 2009
22. R. S. Nandyal, R. Ramasamy, "Building a Mature Software Industry: Multidisciplinary Strategy with CMMI Constellations, PCMM and Six Sigma", ICT Strategic Review 2011/12, Transcending into High Value, PIKOM The National ICT Association of Malaysia, ISSN 2180-2548. 25th Year of PIKOM. 2011 [*Invited Paper*]
23. R. S. Nandyal, "Examples of Application of Quantitative and Statistical Methods in Software Engineering", 24th SEPG Conference 2012, San Jose, USA. March 2012
24. R. S. Nandyal, et al., "How to Accelerate High-Maturity Implementation of CMMI using Six Sigma", 24th SEPG Conference 2012, San Jose, USA. March 2012
25. R. S. Nandyal, "Sustaining High Maturity Process Implementation With Five People CMM Process Areas", 25th SEPG Conference 2013, Pittsburgh, USA. October 2013
26. R. S. Nandyal, "Top 10 Software Metrics/Measures for every Software Organization", CMMI Institute Global Congress Seattle 2015, Seattle, USA. May 2015
27. R. S. Nandyal, "Key Features of a Good Process Capability Baseline Report", CMMI Institute Global Congress Seattle 2015, Seattle, USA. May 2015
28. R. S. Nandyal, "Process Models and Performance Improvement: What Next?", First All India SPIN Conference, Hyderabad, India. December 2015 [*Keynote Address*]

PROFESSIONAL AND TECHNICAL BOOKS

1. R.S. Nandyal, "People CMM: Interpreting People CMM for Software Organizations", Tata Mc-Graw Hill 2003
2. R.S. Nandyal, "CMMI: A framework for building world-class Software and Systems Organizations/Enterprises", Tata Mc-Graw Hill 2004
3. R.S. Nandyal, "Making Sense of Software Quality Assurance - Gaining from Quality Audits and Assessments", Tata Mc-Graw Hill 2007
4. R.S. Nandyal, "CMMI: A Framework of Constellations for Building World-class IT organizations", 2nd Edition. Tata Mc-Graw Hill 2011
5. R.S. Nandyal, "Building and Sustaining High Maturity Software Organizations", Tata Mc-Graw Hill 2012

TUTORIALS AT CONFERENCES

1. R. S. Nandyal, "Applying the Fifth Discipline as a Leverage Tool for People & Software CMM", SEPG 2000, Bangalore, India. 2000 [*Day long Tutorial*]

CONTRIBUTIONS TO ACADEMIC RESEARCH

1. "Software Engineering Tool (SET) Using Software CMM framework", *August 1997 - February 1998*.
External Guide to Somu Patil for project execution at LGSI leading to the award of Master of Engineering in Software Engineering degree from Mysore University.
2. "Internet based Configuration Management Tool (CM Tool)", "QM Tool", "CMM Appraisal Tool", *January 1999 - July 1999*.
External Guide to Anand, Kapil Kumar, Praveen, Anji Reddy, for project execution at Intelligroup leading to the award of Master of Engineering from BITS, Pilani.

PERSONAL COMPETENCY DEVELOPMENT – SHARPEN THE SAW!

1. Software CMM Lead Assessor Training, Software Engineering Institute, Carnegie Mellon University (January 24 ~ January 28, 2000)
2. Introduction to CMMI (SE/SW) Version 0.9, Software Engineering Institute, Carnegie Mellon University (July 24 ~ July 27, 2000)
3. Blueprint for Success by Shiv Khera, Qualified Learning Systems, Inc. (August 31 ~ September 2, 2000)
4. Introduction to People CMM, Version 2.0, Dr. Bill Curtis (July 30~August 1, 2001)
5. Intermediate Concepts of CMMI, Software Engineering Institute, Carnegie Mellon University (September 10~14, 2001)
6. SCAMPI Lead Assessor Training, Arlington, VA, Software Engineering Institute, Carnegie Mellon University (September 24~28, 2001)
7. Instructor Training - Introduction to CMMI-SE/SW/IPPD, Software Engineering Institute, Carnegie Mellon University (November 14~16, 2001)
8. Instructor Training - Introduction to People CMM, TeraQuest Metrics (January 17~20, 2004)
9. ITIL Foundation Certificate in IT Service Management, Bangalore (June 16~18, 2005)
10. ITIL Service Support, Bangalore (July 18~22, 2005)
11. Intermediate Concepts of People CMM, Software Engineering Institute, Carnegie Mellon University (September 12~16, 2005)
12. SEI Certified SCAMPI High Maturity Lead Appraiser Authorization, Software Engineering Institute (October 18, 2006)
13. Acquisition and Services Supplements for CMMI V1.2, Software Engineering Institute (October 2008)
14. CMMI-Six Sigma BoK Workshop, SEPG 2009 San Jose CA (March 2009)
15. Lean Six Sigma Black Belt Certification, Exemplar Global, Inc. (September 2015)

SOFTWARE TOOLS AND INNOVATIONS

1. R.S. Nandyal, "Function Analysis Tool : FAT", Motorola Tools Fair, Software Engineering Symposium, Motorola, Phoenix, Arizona. 1993. FAT is a software engineering tool introducing a "black box" approach to unit testing.
Awarded the Third Best Tool Award in Motorola Tools Fair, Software Engineering Symposium-1993.
2. R.S. Nandyal, "Automatic Code Generator: CGen", First Asia Pacific Motorola Software Symposium, Singapore. 1994. CGen is a code generating software engineering tool capable of generating code in C language directly from a module specification in structured English.
3. R.S. Nandyal, "Integrated Software Engineering Tool: ISET", Motorola Tools Fair, Software Engineering Symposium, Motorola, Chicago, Illinois. 1994. ISET integrates six tools in the four areas of software production process automation namely, Development, Productivity, Testing and Quality into one environment under MS Windows.
Awarded the Third Best Tool Award in Motorola Tools Fair, Software Engineering Symposium-1994.