



Driving Software Process Improvement through System Testing Leadership

Are you the manager of an IT organization with a distinct System Test Team?

Do you know that you can use the interface between your development team and your system test team as the basis for achieving 20-40% improvements in your operation?

- The costs of system testing, maintenance and user support are directly correlated to the quality of the software that developers turn over to system testing.
- By tuning the development/test relationship based on metrics under your direct control you can improve productivity, reduce costs, and increase user satisfaction.
- You can also achieve more efficient outsourcing and offshoring through practical software process improvement activities, driven at the team interface, that are particularly compatible with distributed operations.

The System Test phase of the SDLC offers rich opportunities for improving productivity and quality

- Software project teams often operate at less than peak efficiency due to fundamental issues in the relationship between developers and system testers.

- Despite the use of system test entrance criteria, some developers believe that the existence of a system test team relieves them of some or all of the responsibility for testing their work. As a result, system testers wind up spending significant portions of the precious system test interval doing “warmed over developer testing” when they should be doing system testing.
- Inefficiency in the relationship between developers and testers is expensive. The cost of system testing is directly correlated to the quality of the software that developers turn over to system testing. The worse the quality, the more money that gets thrown at system testing in terms of people, churn, iterations and time. And as system functionality increases with each new release, the cost of system testing grows cumulatively since you need to keep testing the old capabilities in addition to testing the new capabilities. The result is that the inefficiencies get compounded, costs increase, and software quality suffers.
- The trend towards geographically dispersed development and system test teams and individuals (e.g. due to outsourcing, off-shoring and telecommuting) can accentuate the issues and cloud the relationship between developers and testers with misunderstanding, disappointment, and unrealistic expectations.

To mine these opportunities to improve productivity and quality, STS's Chief Consultant, Nathan Petschenik, can help you establish and drive certain types of software process improvement through System Testing leadership

- Nathan is an internationally known expert in System Testing.
- Nathan's techniques and expertise have saved millions of dollars for STS clients by identifying and eliminating barriers and impediments to quality and productivity in their organizations.
- His experience spans multiple industry sectors including Telecommunications, Life Sciences, Financial Services, and Government.
- His paper "Practical Priorities in System Testing" is considered a landmark in the transition of software testing from Art to Science.
- His book "System Testing with an Attitude" has received uniformly excellent reviews and praise.

STS offers a 2-day engagement delivered personally by Nathan that will launch fundamental improvements in your software development process. Typical benefits yield 20–40% annual cost avoidance and cost reduction:

- Improving the quality of the software that developers deliver to system test results in significant project productivity improvements and maintenance cost reductions. Did you know that a 10% improvement in developer testing can result in a 40% reduction in the number of important problems reaching users?
- Productivity increases in system test interval have stemmed the growth of system test teams, reduced the length of the system test interval, and allowed system test teams to take on testing of additional software releases without adding new team members.

Our techniques and expertise have saved millions of dollars for STS clients by identifying and eliminating barriers and impediments to quality and productivity in their organizations



- Higher quality software to users has yielded lower maintenance costs for fixing software problems in the field, less software related business disruption to users, their customers, and their supply chain partners, and increased user satisfaction with the software being delivered.
- The productivity and quality improvement techniques advocated by STS work particularly well with geographically dispersed development and system test teams and individuals because the improvements are driven at the interfaces and independent of specific processes, frameworks, and life cycle methodologies (which may differ between core, internal groups and outsourced activities).

Nathan's visit to your company will include the following:

- Role Awareness Seminar:
 - Using a time tested, structured technique, Nathan will facilitate a discussion meeting among system testers, developers, and project management (off-shore teams can be represented by on-shore team leads).
 - Productive, open dialogue at the Role Awareness Seminar will build awareness of system testing issues, clarify expectations, and help to solidify the "contract" between the development team and the system test team.
 - A key output of the meeting will be a list of barriers and impediments that project members believe stand in their way of doing the best job on quality of which they are capable.
- Measurements Check-up
 - Nathan will present a workshop on Using Measurements for System Test Success for system testers, system test leaders development leaders, and project management.
 - Discussion at the workshop will examine the reasons you need measurements to achieve success in system testing, the types of measurements that are most effective, and how they should be applied.



- As part of the workshop, a gap analysis will identify holes in your current measurement approach as it relates to system testing and to target areas on your project where your project's measurement approach needs to be changed or enhanced.
- Action Planning Meeting to Launch Software Process Improvement Activities
 - Nathan will conduct a meeting with system test leaders, development leaders, and project management to synthesize results from the Role Awareness Seminar and Measurements Workshop.

- The list of barriers and impediments to quality on your project formulated at the Role Awareness Seminar will be reviewed and an Action Plan established for breaking them down.
- The areas on the project where measurements need to be changed or enhanced as formulated at the Measurements Workshop will be reviewed and an Action Plan established for making the changes/enhancements.
- The action plans will be kicked off by formulating a schedule for implementation including periodic check-ups on status.

STS will make Nathan available for ongoing participation in Action Plan implementation and periodic status check-ups as necessary.

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STS also offers other consulting and training that include Nathan's personal involvement

- STS can provide system test leaders who can work on site to help your company succeed in implementing the action items for your Software Process Improvement activities.
- STS can also take on deliverables for implementing the action plan or provide supplemental staff (on-site or off-site).
- STS will teach the following workshops at your work site or ours:
 - “Driving Software Process Improvement Through System Testing” shows how system test leaders can influence attitudes and behaviors on a project in a manner that increases project productivity and improves software quality.
 - “Achieving Technical Excellence in System Testing” can help your system testers improve their skills for developing and executing tests that prevent important problems from reaching users.
 - “System Testing with an Attitude” is a balanced treatment on achieving technical excellence in system testing and driving software process improvement through system testing leadership.

Contact STS Consulting for more information

Contact STS for more information, or to schedule a consultation with Nathan to discuss how your organization can drive software process improvement through system testing leadership.

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