



The Checkpoint Diagnostic

Software Solutions Division

A rapid “wellness” check to inform an organization of its current baselines

The foundation for a performance-enhancement program

A disciplined, focused vehicle for achieving identified business value



Introduction

The Checkpoint Diagnostic is an economical diagnostic method that can be rapidly deployed to improve performance in systems-development organizations. The method provides unique capabilities by integrating (1) quantitative performance baseline, (2) process baseline, (3) SEI and industry benchmarks, and (4) economic investment models of alternative improvement scenarios.

Traditional software assessments focus on evaluating current organization practice against a model of best practices or an applicable industry standard. The result is a characterization of practices in terms of strengths and weaknesses, or identification of noncompliance with the models or standards. Such practice characterization is often used as a substitute measure for performance. The premise of such an approach is that the better the organization’s practice characterization, the better the performance; improvement is measured by advances in process characterization and not by direct measures of performance such as defect density, cost of quality, schedule variance, and cost variance.

The Checkpoint Diagnostic takes a more enlightened approach. Early identification of business value drives the investigation, directing the collection of data necessary to establish performance baselines and economic investment models. Performance related to business value is defined, measured, and targeted for verifiable improvement.

The outputs from the Checkpoint Diagnostic are negotiated early and can be customized depending on circumstances and customer need. Typical outputs include

1. Qualitative process baseline: An analysis of project practices (against a best-practice model) and the associated artifacts; this includes a listing of key strengths and weaknesses and a process characterization.
2. Quantitative performance baseline: Project data and the appropriate analysis; it is designed to provide a performance baseline.
3. Benchmark performance comparison: When available, SEI and benchmark data are used to compare the organization’s performance with relevant industry or comparable data.
4. Prioritized listing of improvement opportunities with estimated quantitative benefits and measurable improvement goals.

Benefits of the Checkpoint Diagnostic

The Checkpoint Diagnostic provides many benefits to an organization at minimal cost and disruption. As a diagnostic, it can be deployed quickly without extensive preparation. The diagnostic methods and data collected in the Checkpoint Diagnostic leverage the lessons learned and the latest research from the Software Engineering Institute, the U.S. Department of Defense, and the systems-development community. Process is only one factor in a

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successful performance-improvement regimen. As in the Deming PDCA (plan, do, check, act) and Six Sigma DMAIC (define, measure, analyze, improve, and control) methodologies, the Checkpoint Diagnostic focuses on defining, measuring and improving performance.

The Checkpoint Diagnostic method is flexible and can be tailored to meet many different organizational objectives:

- It can be configured to be a rapid “wellness” check to inform an organization of its current process baseline, quantitative baseline, and relative performance. The Checkpoint Diagnostic provides leaders with data showing how the organization’s processes compare with accepted best practice, what quantifiable results these processes are delivering, and how the organization compares with others in the industry.
- It can be configured as the foundation for a performance-enhancement program that distinguishes between change for change’s sake and tangible improvement.
- Organizations with specific business objectives such as safety criticality, short market windows, and affordability targets can use the Checkpoint Diagnostic to identify and drive the needed performance enhancement. It can be tailored to provide a disciplined, focused vehicle for achieving identified business value from carefully chosen software investments.

The Checkpoint Diagnostic can also be used in an acquisition mode when providing oversight to a system-development supplier.

Lessons Learned from 20 years of Software Process Improvement

Examining your practices is not enough.
Compliance to standards does not mean performance.

- Failure to define and achieve business value
- False starts
- Unsustained sponsorship
- Improvement overreach
- Top-down-only implementation



For More Information

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Related Web Sites

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For General Information

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