POST IMPLEMENTATION ANALYSIS

OVERVIEW

❖ Measuring the effectiveness of testing.

❖   Two purposes :

1. evaluates the performance of testers

2. enables IT organization to modify its

testing process.

CONCERNS

❖ To improve test process, the results of testing must be evaluated continually.

❖ Formal process and mgt support for the process needed for continuous improvement.

WORK BENCH

❖ Input : Test Results

❖ Do Tasks :

1. Establish Assessment Objectives

2. Identify what to measure

3. Assign Measurement Responsibility

4. Select approach to evaluation

WORK BENCH

❖ Do Tasks :

    5. Identify needed facts

    6. Collect evaluation data

    7. Assess Effectiveness of Testing

❖ Check : Analysis correct and reasonable

❖ Output : More Effective Testing

INPUT

- ❖ Number of tests conducted

- ❖ Resources used in testing

- ❖ Test tools used

- ❖ Defects uncovered

- ❖ Size of software tested

- ❖ Days to correct errors

- ❖ Defects not corrected

Establish Assessment Objectives

❖ Identify test weaknesses

❖ Identify the need for new test tools

❖ Assess project testing

❖ Identify good test practices

❖ Identify poor test practices

❖ Identify economical test practices

Identify what to measure

- ❖ Involvement

- ❖ Extent of testing

- ❖ Resources

- ❖ Effectiveness

- ❖ Assessment

Assign Measurement Responsibility

❖ One group must be responsible for collecting and assessing testing performance information

❖ IT mgt assigns this to Quality Assurance group

❖ Other groups : Information Services Comptroller, manager of standards or s/w support or planning manager

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Select Evaluation Approach

❖ Judgement

❖ Compliance with methodology

❖ Problems after test

❖ User reaction

❖ Testing metrics

Identify Needed Facts

- ❖ Change characteristics

- ❖ Magnitude of system

- ❖ Cost of process b eing tested

- ❖ Cost of test

- ❖ Defects uncovered by testing,by phase and after test

- ❖ Cost of testing by phase

- ❖ System complaints

- ❖ Quantification of defects and correctness of defect

- ❖ Who conducted the test

Collect Evaluation Data

❖ Collection Mechanism

❖ Storage Mechanism

❖ Method to select and summarize the information

❖ Utility programs used wherever possible

Assess the Effectiveness of Testing

❖ Metrics - assess testing by quantitatively showing the effectiveness of the test process.

❖ 34 testing metrics

❖ User participation

❖ Instructions coverage

❖ Number of tests

❖ Paths coverage

❖ Acceptance criteria tested

Assess the Effectiveness of Testing

❖ Test cost

❖ Cost to locate defect

❖ Achieving budget

❖ Detected production errors

❖ Defects uncovered in testing

❖ Requirements, Design, Program, Test, Installation and Maintenance phase testing effectiveness (test cost vs. No. of errors detected)

OUTPUT

❖ Measurement/Action Approach used to improve the test process.

THANK YOU