

## Calculating efficiency of the test team

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### **1.0 Purpose**

At every point in time, test manager/ test lead thinks in terms of efficiency of his test team. How is the team doing? How good are the efforts put in with time? This paper presents one approach that can be used for measuring the efficiency of the test team. This approach can give the efficiency in terms of units per hours in normalized form for a test project at any phase of the project.

### **2.0 Theory**

The theory behind the approach is to normalize the efforts/ work done to a basic unit of measurement for the various 'work items' of all phases of the test project i.e. defining the requirements and test ware into work items and then normalizing them to a basic unit.

#### **2.1 *Unit for normalization for various work items:***

The following is the suggested normalization of various work items. Although the list below does not details all the work items but it does list the ones which are noticeable observed in a test project.

Work items 1 – Requirement documentation

Measure: Requirement docs can be given weightage of 1 to 5, 5 being maximum

Work items 2 – User cases

Measure: Use cases can be given weightage of 1 to 5, 5 being maximum

Work items 3 – test case creation

Measure: test case creation given weightage of 1

Work items 4 – test case execution

Measure: test case execution given weightage of 1

Work items 5 – defect reported

Measure: Each defect reported given weightage of 1

Work items 6 – defect managed

Measure: Each defect managed in defect meeting given weightage of 1

### **3.0 Sample Calculations**

To provide an example of how the efficiency is calculated, consider the following:

#### **3.1 *The project phase***

Test execution and defect reporting in progress but at the same time development working on various other modules. As the efforts of the new requirement/ code is not done, the calculations are based on existing efforts done by the team.

### 3.2 *Baseline for unit of normalization for the sample*

Work Item	Normalized unit
Use Case	5 units
Requirement docs	3 units
Test cases created	1 unit
Test cases executed	1 unit
Defect Reported	1 unit
Defect managed	1 unit

### 3.3 *The statistics for the project are as under for the various work items*

Work Item	No of work items
Use Case	34
Requirement docs	27
Test cases created	7243
Test cases executed	1712
Defect Reported	960
Defect managed	960

### 3.4 *Based on this the efficiency is calculated as*

Efficiency =  $(\sum (\text{Normalized units } 1 \dots n) * (\text{work items } 1 \dots n)) / \text{Total efforts in man hours} * 100$

With total man hours around 14080, the efficiency is:

**Efficiency = 79% (units/ hour)**

### 4.0 **Pros and Cons**

1. This is an great way of finding of the test team efficiency based on statistical data,
2. As no standard exists to baseline and measuring the complexity of work items and work units, the approach can show varying results for test managers/ leads across teams or organizations,
3. The baselining of normalization units can vary based on project and person who is performing the exercise,
4. Testware has to be managed using proper tools that assist collection of test statistics,
5. Statistics can be misleading, BEWARE !

### 5.0 **Suggestions**

Any other observations and/ or pros & cons, please mail [jcrvs@hotmail.com](mailto:jcrvs@hotmail.com)