

Measurement Plan

**Version1.1**

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**VERSION HISTORY**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
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1. **Purpore**

This document describes detail of the measurement for BDS project.

The main stakeholders are: Leader, admin, department head, emloyees.

1. **Expected Benefits Summary**

* Objective planning and estimating.
* Tracking actual performance against established plans, objectives, and baselines.
* Identifying process related issues.

1. **Define Measurement Goals based on Project’s Goals**

Create product to meet customer requirement. We need to give some criteria to meet this goal.

* **Improve product quality:**
* **Reduce Defects*:*** Reducing defects is the first thing when examining the quality of software. A low defect count is often synonymous with high quality software. Defects are also the most visible sign of quality problems.
* **Theory Building:** To know where to modify the code when a requirement change occurs, they know exactly where to go hunting for a bug that has been found in the software.
* **Build Less*:*** It makes it easier to understand, gives us more time to focus on the important parts that are actually used, and almost always has fewer defects.
* **Improve customer satisfaction:**
* **Listen and Learn*:*** Listening is key to effective customer service and it can also help boost your profitability.

Facilitating Feedback*:* If you don’t have a reason for face-to-face interaction with a customer, look for ways to stay in touch and show you are listening and eager to keep the lines of communication open.

* You must know what your customers want, provide it to them on a consistent basis and ask them how you are doing.
* **Look for Ways to Treat Customers as You Would like to Be Treated:** customer wants to see the sunny side of you and your business, so have your filter on and put yourself in their shoes.
* **Improve project progression**
* **Devise rules*:*** These rules are essentially defined milestones with a predetermined value. This can be applied to any phase of a project to measure progress – from document development to actual physical construction, based on what has actually been accomplished.
* **Data integration*:*** Capitalize on updates that are likely being made by schedulers & project managers anyway, eliminating the double data entry and potential errors that may be typical of more manual data collection.
* **Use the information to inform decision*:*** This can enable managers to take proactive action to address productivity shortfalls or make other plans accordingly to minimize an overrun’s impact on project performance.

1. **Implementation Strategy**
2. **Risk**

* <PM_RiskManagementPlan_Ver1.0.docx>

1. **Schedule and WBS**

* [WBS](../../../../Improgress/2.%20Artifact%20and%20Deliverable/Project%20Monitoring%20and%20Control/PM_Work%20Breakdown%20Structure.xlsx)

1. **Define how metrics will be analyzed (analysis techniques, criteria, benchmarking…)**
2. **Customer Satisfaction**

**Schedule:** Close Project

**Chart about Satisfaction score of all questions**

Satisfaction score (SS) =

|  |  |
| --- | --- |
| **Metric** | **Metric analysis** |
|  | * SS 3 🡪 Bad * 3 SS < 4 🡪 Good * SS 4 🡪 Very Good |

1. **Team Morale**

**Schedule:** Close Project

All questions in survey divide into 5 main categories:

* Management
* Motivation
* Physical Environment
* Emotional Environment
* Systems, Tools and Processes

**Chart about Satisfaction score of all questions**

|  |  |
| --- | --- |
| **Metric** | **Metric analysis** |
|  | * SS 3 🡪 Bad * 3 SS < 4 🡪 Good * SS 4 🡪 Very Good |

1. **Quality**
   1. **Defect**

**Schedule:** After testing phase

Defects density (DD) =

Defect score (DS) =

* DS < 1 🡪 Good
* 1 DS < 2.5 🡪 Bad
  + DS 2.5 🡪 Very bad
  1. **Test case**

**Schedule:** After testing phase

Test coverage (TC) =

* TC < 50% 🡪 Bad
* 50% TC < 70% 🡪 Normal
* TC 80% 🡪 Good

1. **Productivity**

**Schedule:** Weekly

Productivity

* Size can be any size measure (KLOC, Function Points, use cases, test cases, etc.)
* Effort is measured in:
* Individual hours, days or months (person-day, person-month, man-hour, man-day, man-month).
* Team or Group hours, days or months

*For example:* Size is KLOC, effort is Person month. The chart can be shown as below

1. **Define Metrics to address Measurement Goals**
2. **Definition**

|  |  |  |
| --- | --- | --- |
| **Criteria** | **Component** | **Definition/ Description** |
| Productivity | Effort | Effort is measured in:   * Individual hours, days or months (person-day, person-month, man-hour, man-day, man-month). * Team or Group hours, days or months |
| Team Morale | Physical environment | The place for working |
| Systems, tools and processes | Tool, process use for doing project. |
| Emotional Environment | Working environment between team members (Ex: trust and respect are earned). |
| Motivation | Motivation is what makes people persist  when they run into almost insurmountable  roadblocks. |
| Management | Include many factors: compensation, rewards, opportunity, relationship, training… |

1. **Define Metrics**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Criteria | Description | Goal | Metric | Executor |
| Earn Value Management | These criteria give the calculation about the time for the implementation of the project in order to know the project is done ahead of schedule, on schedule or behind schedule and give decision making for the appropriate corrective action. | Deliver product to market within schedule and budget. | **Cost Performance Index (CPI)**  **Schedule Performance Index (SPI)**  **Cost Variance (CV)**  **Schedule Variance (SV)**    **Budget at Completion (BAC)**  **Estimate at completion (EAC)** | Project Manager |
| Productivity | This criterion gives the calculation about the productivity of project based on the size of output and effort of all members. | Improve, enhance the productivity of all members. |  | Project Manager |
| Risk | This criterion gives the calculation about the risk based on the problems and total risks. | Control risks in order not to become problems. | Risk list divide into 3 severity level   * High (H): 3 pts * Medium (M): 2pts * Low (L): 1 pts | Project Manager |
| Customer Satisfaction | These criteria give the calculation about the appreciation of customer about the product based on the list of questions to know how much they like the product. So project team can improve the product better and have customer satisfaction. | Improve customer satisfaction. | List of 10 questions, each question has 5 answers with its point:   * Very satisfied (VS): 5 pts * Somewhat satisfied (SS): 4 pts * Neither satisfied nor unsatisfied (N): 3 pts * Somewhat unsatisfied (SU): 2 pts * Very unsatisfied (VU): 1 pt. | Project Manager |
| Team Morale | These criteria give the calculation about the appreciation of each member about the team based on the list of questions to know how much they like the team to make team become better. | Enhance team morale and help team working efficiently. | List of 10 questions, each question has 5 answers with its point:   * Strongly agree (SA): 5pts * Agree (A): 4 pts * Neutral (N): 3 pts * Disagree (D): 2 pts * Strongly disagree (SD): 1 pt.   Satisfaction score (SS):  (SD+(D\*2)+(N\*3)+(A\*4)+(SA\*5))/ Number of employees answer ques | Project Manager |

1. **Describe how to collect data (which data to collect, counting rules, frequency…)**

|  |  |  |  |
| --- | --- | --- | --- |
| No. | Data | Weekly | Description |
| 1 | Productivity | Weekly | * Giving schedule about “Productivity”. * Giving some question about the productivity of project. * Collecting data on weekly. * To bring up to data storage “Productivity”. |
| 2 | Risk | Every week | * Giving schedule about “Risk”. * Giving some question and create “Risk Form” about risk to calculate total risk. * Collecting data on weekly. * To bring up to data storage “Risk”. |
| 3 | Customer Satisfaction | Close Project | * Giving schedule about “Customer Satisfaction”. * Giving some question and survey form to customer to know about the appreciation of customer about the product. * Collecting data after release new product or update product. * To bring up to data storage “Customer’s Satisfaction”. |
| 4 | Team Morale | Close Project | * Giving schedule about “Team Morale”. * Giving question and survey about the appreciation of each member about the team. * Collecting data once a year. * To bring up to data storage “Team Morale”. |
| 5 | Defect | After testing of each coding release version | * Defect log. |

1. **Glossary of Terms**

This section defines the terms used in the measurement program. The definitions provided here are from the terms used in this measurement plan template.

* Base Measure: "A distinct property or characteristic of an entity and the method for quantifying it"
* Derived Measure: "Data resulting from the mathematical function of two or more base measures"
* Indicator: A Derived Measure or Measures in a visual format designed to answer the information need.
* Risk: A potential problem (with reasonable probability of occurring and impact sufficient to cause concern).