Methods of prioritizing projects

The first meeting of the Steering Committee has called to get the IT department project portfolio under control. Upon review of the current project portfolio, it was discovered that there are hundred outstanding IT projects. CEO also wants dedicate approximately three hundred man hours to install a new Voice Over IP (VoIP) to replace the current telephone system. In addition to dedicating two hundred man-hours to network infrastructure upgrade and five hundred to thousand hours to software design and development to review the Web Portal project.

However, IT department has six application programmers and four network designers capable of completing 11, 400 man-hours for programming and 7, 600 man-hours for network design and install over the next year. The increased demand of IT man-hours has called for prioritizing of projects in order to organize the work of the IT department. METHOD TO PRIORTIZE PROJECTS Projects are selected so that the total net benefit provided by the selected projects is greatest, subject to not exceeding the budget constraints. A value-adding method is suggested to prioritize projects.

The aim of this method is to assign a value level to each project. It analyzes each project to identify the inherent opportunities, their costs and benefits, and then apply priorities. Projects are analyzed based on costs and benefit (Schatzberg, McCandless, & Gupta 1997). Key points to consider while priortizing projects The main points to be considered while prioritizing projects include the following points: • Expected benefits and opportunities of the project. • The cost of the project in reference to resources and work hours • The complexity of the project processes. • Risk offailureto complete the project.

• Customer's degree of importance to the company. • Available resources to the company of work hours and instruments. COST BENEFIT ANALYSIS AS A PRIORITY MEASURE This measure computes the priority of each project in reference to its relative cost and benefit. The relative cost of all projects is computed on a normalized scale from one to ten. Cost includes work-hours and resources. The relative benefit of all projects is also computed on a normalized scale from one to ten. The relative benefit value is computed taking in consideration profit and clients relative importance.

The priority of each project is computed as the difference between its relative cost and benefit as follows: Priority = Relative Benefit – Relative Cost THE EARNED VALUE ANALYSIS (EVA) PROJECT PRIORITY MEASURE One suggested measure for project priority is the Earned Value Analysis (EVA). This measure is an industry standard way to measure project progress to forecast its completion date and cost. The measure provides numerical indicators which are indicative of how fare ahead or behind is the project compared to its plan. Projects which are far behind get ranked higher than projects which are ahead of their plan.

This ranking criterion guides the company to complete all projects on time and in accordance to their plan. EVA captures a snapshot in time, which is used detect deficient or endangered progress. It ensures a clear definition of work prior to beginning that work. Work Breakdown Structure (WBS) The project is broken down into an organized Work Breakdown Structure (WBS). WBS breaks down all the work scope into appropriate elements for planning, budgeting, scheduling, cost accounting, work authorization, progress measuring, and management control. Calculating Earned Value

EVA measures progress against a baseline. It involves calculating three key values for each activity in the WBS: 1. The Planned Value (PV) which is the budgeted cost of scheduled work. 2. The Actual Cost (AC) which is the actual cost of performed work. 3. The Earned Value (EV) is the budget cost of performed work or the value of the work actually completed. These three values are combined to determine at any point of the project whether or not work is being accomplished as planned. The most commonly used measures are the cost variance: Cost Variance (CV) = EV - AC

and the schedule variance: Schedule Variance (SV) = EV - PV These two values can be converted to efficiency indicators to reflect the cost of the project. The most commonly used cost-efficiency indicator is the cost performance index (CPI). It is calculated thus: CPI = EV / AC A negative schedule variance (SV) calculated at a given point in time means the project is behind schedule, while a negative cost variance (CV) means the project is over budget (Cullen 2005). PRIORITIZATION MATRIX The prioritization matrix is a great tool to prioritize projects.

It is also know as the criteria matrix as it is used to compare choices relative to criteria like price, service, ease of use and almost any other factor desired (Carpenter 2007). Usually up till nine criteria is entered on the prioritization matrix but the number of criteria can be expanded if necessary. Each criterion is assigned a weight since not all criteria are of equal importance. The priority of one project is the sum of all criteria each multiplied with its assigned weight factor. An example prioritization matrix is shown in appendix 1. POSSIBLE PROBLEMS WHILE PRIORITIZING PROJECTS

Problems that could arise during project prioritizing could stem from a number of sources. Lack of data and information about the project can be one problem that hinders the evaluation and thus the prioritization of the project. Another problem could arise from wrongful analysis and understanding of the project and thus wrongful planning to complete the project. Complexity of project is another problem that faces project prioritizing. The higher the complexity, the harder and less accurate the prioritization process is. It is difficult to clearly understand and predict cost of complex projects.

CONCLUSIONS Prioritizing projects is and deciding which projects to do and when to do them is a complicated and often controversial matter. The project prioritization processes are based primarily on data. The project prioritization processes starts with considering key points to consider and then the identification of the method to be used to prioritize projects. A number of measures were presented as suggested methods to quantify the priority of different projects. A cost benefit measure considers the difference of cost and benefit of all projects to determine their priority.

The earned-value analysis prioritizes projects in reference to their status as ahead or behind their scheduled plan of execution. It helps the company complete projects on their scheduled plan. Another measure uses a prioritization matrix which contains a number of defined criteria. Each project is given a value in each criterion. Each criterion is assigned a weight by company professionals. Prioritization of projects can be hindered by a number of problems such as lack of data, wrongful analysis, and complexity of projects.

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