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## Integrating Work Breakdown Structure with the Organization Breakdown Structure (Approach Theoretical)



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### ABSTRACT

The paper aims to find the integration between Work Breakdown Structure with The Organization Breakdown Structure. (Approach Theoretical). This importance is emphasis from the role of organizations in making strategic decisions in filed operational project management arises from failures at the planning stage leading to a series of subsequent alterations and clarifications. This is requirements: **What**, (the project scope and goals) and **Who**, (the project team) in addition to **Whom**, (the project sponsor). The contents of this effort aimed at establishing a new understanding of the meaning regarding the principles of fit the work breakdown structure approach in performance and competitiveness in project management according to the concept of the (SMART goals).based on the above we can determine the objectives of the study from through need know the technical structure and business plan and project costing.

## 1. INTRODUCTION AND THE PURPOSE :

Every project needs plan explaining how it is going to proceed. The participants need to know the goal, the steps to achieve it, the order those steps take and when those steps must be complete. Fundamental and essential as scope definition appears.[1].

This paper provides a knowledge conceptual approach to, work breakdown structure in attempt to explore the scientific bases of the theoretical concerns. The goal is establish a new approach to project management, and particularly the scientific research teams to keep pace with scientific research with related companies and organizations.

This study presents a new method to organize and discusses, to secure Integrating work breakdown structure with the organization process.

According to the above we can determine the objectives of the study as follow:

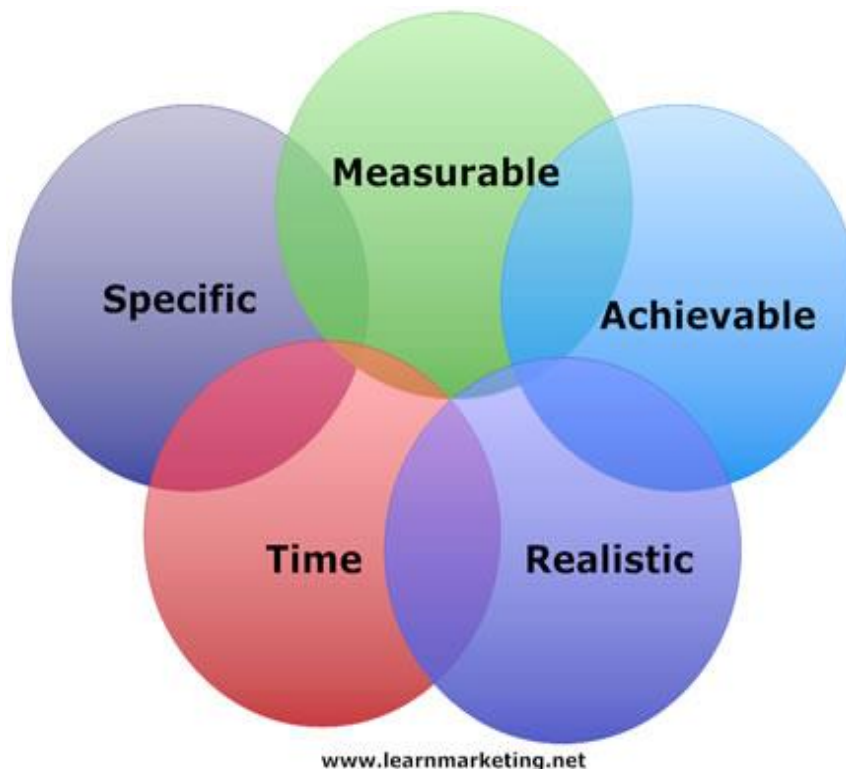
1) Identify the trends and qualitative conceptive of the project management principles and the possibility to support and assign the application process in depended (**Who, What, Whom**) through Integrating work breakdown structure (WBS) with the organization breakdown structure (OBS).

2) An attempt to explore the scientific bases for the concerns of the projects theoretical subject, WBS and OBS, as well as qualitative dimensions **What**, (the project scope and goals) and **Who**, (the project team) in addition to **Whom** (the project sponsor). of the entrance to the integrating, so as to devise and develop ideas we have tried to find points similarities or difference with the view of the researchers and specialists through what we have established of a clear methodology and what we have done of the theoretical analysis, the contents of this effort aimed at establishing a new understanding of the meaning regarding the principles of fit between WBS and OBS.

How to achieve integrating, proportionality and evaluation between the two parties remains an unanswered question in conceptual and empirical domains. Thus, the present study attempts to address this problem. The study is interested in investigating the integrating between work breakdown structures (WBS) with the organization breakdown structure (OBS).

**2 SMART goals : What** does SMART stand for? A SMART objective can be defined as follows,(Fig 1) :

- 1) **Specific:** well-defined and, in most cases, written objective that is specific and clear. Different people will have the same understanding of this target and it is not open to speculation.
- 2) **Measurable:** progress towards achieving a target has to be able to be assessed and measured. It should be clear when the objective has been achieved and the task has been completed.
- 3) **Achievable:** a SMART objective needs to be achievable by the person or the project that the target has been set for. For example, achieving 100% customer satisfaction may not always be achievable. Realistic, although a target can be set to stretch a person, a team or an organization beyond their usual routine, it should be realistic and have a very good chance of success based on the available human and physical resources and expertise.



**(Fig.1 ) Smart Goals**

*Source: Dessler, Gary., (2011). Human Resources Management., Peavosn Education, Published as prentice- Hall , England , P.101*

4) Time: SMART objective will have a specific time span for its completion. For example, a target to 'improve the strength of the produced stools' cannot be considered as SMART because it is not clear how this improvement will be measured and what the time frame for completion of this task is. If the target is set as 'improve the strength of the stools within three weeks, so each stool can take a load of up to 130 kg', then this is a SMART target because it is time-bound and success can easily be measured.[2].

### 3 . Organizing Project (Team and sponsor and Priorities

Simply, stated but not simply to achieve, organizing is about arranging the people, material and support resources in a project to meet the project's communication, integration and decision-making needs to achieve on-time project delivery. Organizing includes identifying the project tools. Methods and templates to use, the reporting relationships and even the types and frequency of meetings. Increasingly, projects cut across departmental boundaries and appropriate organization will often be a temporary arrangement, consisting of a project manager supported by a team drawn from various quarters with the appropriate skills for the needs of the project.[3].

One of the keys to the success of any project is the creation of project requirements that are 'comprehensive and clear, well structured, traceable and testable. [4].

The project's requirements define the mission or brief of the project and answers questions such as. [3].

**What** are they trying to accomplish (the project scope and goals)?

**Who** is performing the project (the project team)?:

**Whom** are they doing this (the project sponsor)?

Project scope defines the work that must be accomplished to produce a deliverable with specified features or functions. The deliverable can be a product, service, or other result. But product scope defines the features or functions that characterize the deliverable,[5].

According to the Project Management Institute, the scope statement should include the following. [9].

- i) Description of the Scope
- ii) Product Acceptance Criteria
- iii) Project Deliverables
- iv) Project Exclusions
- v) Project Constraints
- vi) Project Assumptions

Clearly project scope document is also critical to managing change on a project. One of the most common trends on projects is the incremental expansion in the project scope. Increasing the scope of the project is a common occurrence, and adjustments are made to the project budget and schedule to account for these changes,[6].

The sponsor and the project manager may be responsible for selecting the key project team members. In other cases, the project manager may be assigned manpower by a functional manager, a contracts manager (in the case of a contracting company), or a consulting partner may appoint a junior to oversee smaller value contracts,[3].

1) Project team can identify what needs to be achieved. This involves planning the steps that need to be taken to move from the starting point to the end point, thus closing the gap between where the sponsor is now and where the sponsor wants to be. Each team member of the project team and office to have a good understanding of the fundamental project requirements, which include. [5].

- i) Customer liaison
- ii) Project direction
- iii) Project planning
- iv) Project control
- v) Project evaluation
- vi) Project reporting

Once the project team has identified the work, prepared the schedule and estimated the costs, three fundamental components of the planning process are complete. This is an excellent time

to identify and try to deal with anything that might pose a threat to the successful completion of the project.

This is called risk management., “high threat ” potential problems are identified along with the action that is to be taken on each high threat potential problem, either to reduce the probability that the problem will occur or to reduce the impact on the project if it does occur.

2) Project sponsor can play a role in the selection and successful implementation of product innovation projects. Savvy project managers recognize the importance of having “friends in higher courts “who can advocate for their case and protect their interests, [7].

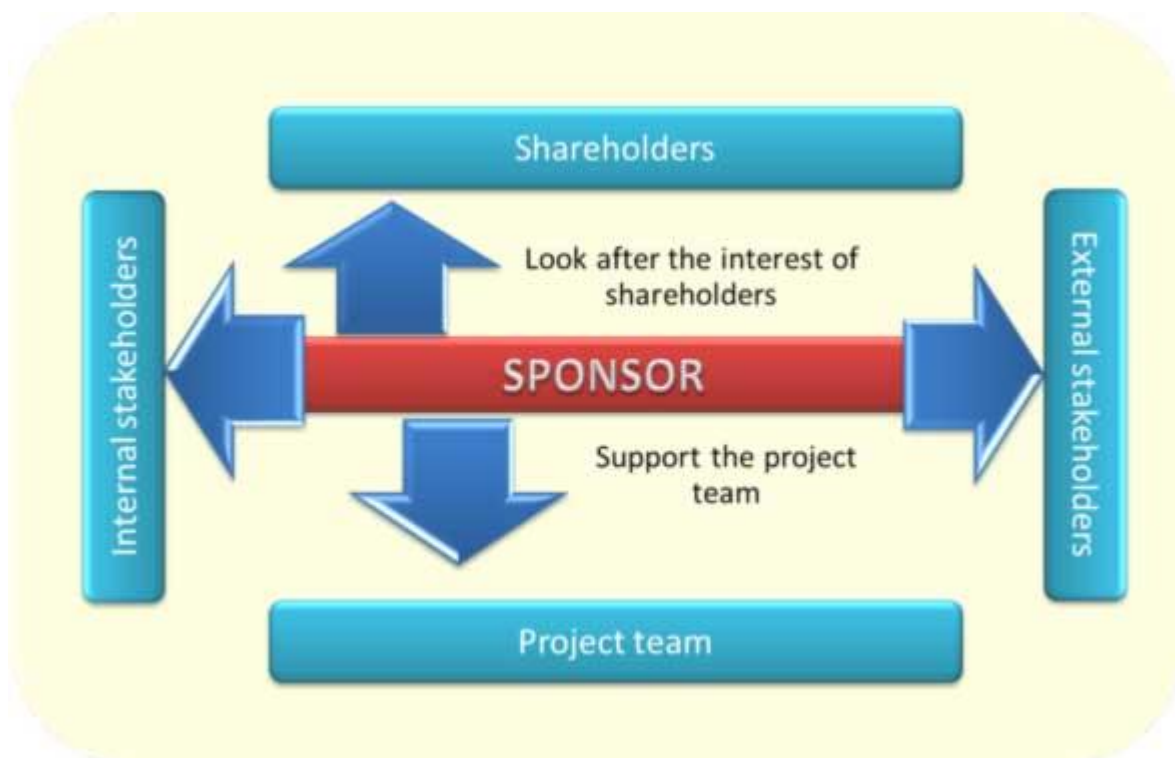
The project sponsor pays for the project; the end users enjoy the benefits of the project. For example, a local government funds a new library, the local residents are the end users; a manufacturing company commissions the development of a new design of motor car, the end users are the people who purchase and drive the car. Sponsors can be.[3]:

- i) **Private individuals**, a celebrity commissioning an artist to do a portrait:
- ii) **Several**, private individuals, a group of investors opening a new city centre restaurant:
- iii) **Corporate**, bank commissioning a consulting firm to oversee a merger with another bank:
- iv) **Government**, the updating of the UK Passport Office systems:
- v) **Mixed government-private** (The building of some hospitals and prisons is managed as a public-private partnership):
- vi) **Multinational**, common on very large engineering and aerospace projects which are usually too expensive and risky for anyone sponsor to act alone. the Channel Tunnel had sponsors in England and France and the development of the Eurofighter was financed by several European countries.

The role of the project sponsor takes on different dimensions based on the life-cycle phase the project is in. During the planning/initiation phase of a project, the sponsor normally functions in an active role, which includes such activities as.[5].

- i) Assisting the project manager in establishing the correct objectives for the project.
- ii) Providing the project manager with information on the environmental political factors that could influence the project's execution.
- iii) Establishing the priority for the project (either individually or through consultation with other.
- iv) Executives and informing the project manager of the established priority and the reason for the priority.
- v) Providing guidance for the establishment of policies and procedures by which to govern the project functioning as the executive-client contact point

Moreover (Fig 2) gives another important to project sponsor: the fig shows there are many variables as shareholders, project team, internal and external stakeholders which are basic in the sponsor job.



(Fig.2) Tool of project Sponsor

Source: Conchir, D. (2011). *Overview of the PMBOK Guide: Short Cuts for PMP Certification*. Springer Publishing Company, Incorporated. P. 84.

3) Relative importance of each criterion. Priority matrix (Fig 3) for the project to identify which criterion is constrained, which should be enhanced, and which can be accepted (Internet):

	Time	Performance	Cost
Constrain		○	
Enhance	○		
Accept			○

(Fig.3) Priority Matrix

Source : [https:// ekoppm.wordpress. com/2013/ chapter.4. p. 122.](https://ekoppm.wordpress.com/2013/chapter.4.p.122)

i) **Constrain.** The original parameter is fixed. The project must meet the completion date, specifications and scope of the project, or budget.

ii) **Enhance.** Given the scope of the project, which criterion should be optimized? In the case of time and cost, this usually means taking advantage of opportunities to either reduce costs or shorten the schedule. Conversely, with regard to performance, enhancing means adding value to the project.

iii) **Accept.** For which criterion is it tolerable not to meet the original parameters? When trade-offs have to be made, is it permissible for the schedule to slip, to reduce the scope and performance of the project.

#### 4. The work breakdown structure (WBS).

(WBS) is tool for component parts project. It is the foundation of project planning and one of the most important techniques used in project management.[8].



The idea behind the WBS is simple: You can subdivide a complicated task into smaller tasks until you reach a level that cannot be further subdivided. At that point, it is usually easier to estimate how long the small task will take and how much it will cost to perform than it would have been to estimate these factors for the higher levels.[6].

According to the Project Management Body of Knowledge (PMBOK), a Work Breakdown Structure (WBS) is "a deliverable-oriented grouping of project elements which organizes and defines the total scope of the project. Each descending level represents an increasingly detailed definition of a project component. Project components may be products or services.".[8].

The WBS delineates the individual building blocks that will construct the project. Visualize the WBS by imagining it as a method for breaking a project up into "bite-sized".[9].

1) Purposes of the Work Breakdown Structure. The WBS serves six main purposes:.[10].

i) **It echoes project objectives**, given the mission of the project; a WBS identifies the main work activities that will be necessary to accomplish this goal or set of goals.

ii) **It is the organization chart for the project.**

iii) **It creates the logic for tracking costs**, schedule, and performance specifications for each element in the project.

iv) **It may be used to communicate project status.** Once tasks have been identified and responsibilities for achieving the task goals are set.

v) **It may be used to improve overall project communication.** This structure improves motivation for communication within the project team, as members wish to make activity transitions as smooth as possible.

vi) **It demonstrates how the project will be controlled.**

2 ) Building a Work Breakdown , WBS makes very easy for everyone on the project to understand ,it makes managing the project much easier, too. But don't be fooled; it isn't always easy to build a good WBS.

There are three steps that provide a guideline to developing a useful WBS.[9].

i) **WBS Step One** : Begin at the Top A WBS breaks down a project into descending levels of details, naming all the tasks required to create the deliverables named the statement of work (SOW). you can begin the breakdown process by listing either the major deliverables or the high-level tasks from the scope statement on the first tier.

ii) **WBS Step Two**: Name All the Tasks Require to Produce Deliverables, task name describes an activity that produces a product., if a WBS in a landscaping project lists "lawn" or "shrubs," you will need to add verbs to each task name: "lawn" becomes "put in lawn," "shrubs" becomes "plant shrubs," and so on. The next step is to break down each task into the lower-level, detailed tasks required to produce the product. This sounds easy, doesn't it? Don't be deceived. Breaking down the WBS can be the most difficult step in the planning process, because it's where the detailed process for building the product is defined.

iii) **WBS Step Three: How to Organize the WBS** Once all the work packages are identified, it is possible to rearrange them in different ways, it can be useful to place work packages under different summary task headings; in this case, the overall project will remain the same even though the work packages are grouped differently. The same work packages are reorganized under different summary tasks. Different ways of organizing work packages may emphasize different aspects of a project.

## 5. Integrating the WBS with the Organization breakdown structure.

After the discussion of the two axes and their source, in response to complete our model, compromising concept which pay it title for the study-shed light on the contents of the relationship between the two axes:

The WBS is used to link the organizational units responsible for performing the work. In practice, the outcome of this process is the organization breakdown structure (OBS). The OBS depicts how the firm has organized to discharge work responsibility. The purposes of the OBS are to provide a framework to summarize organization unit work performance, identify organization units responsible for work packages, and tie the organizational unit to cost control accounts. Recall, cost accounts group similar work packages.[11].

The objective of the development of this framework is to work until you find the methodology: **(what, how, whom)** it is possible that OBS and WBS have a valuable and useful integrating for operational project management.

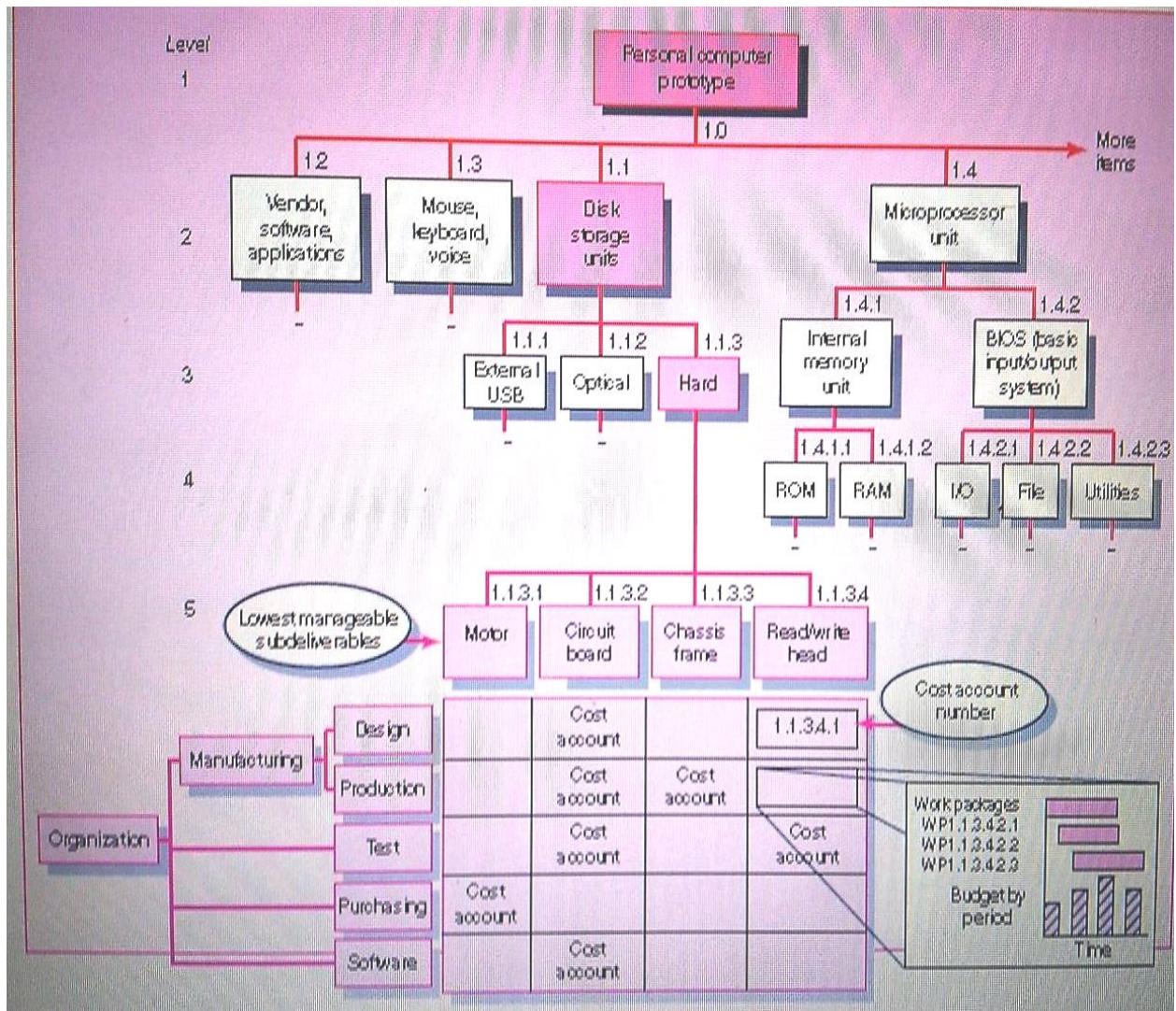
Thus (Camillus) study concluded with important step in this direction by providing "integrating" schools. [12].

- 1) Strategy Implementation School.
- 2) Integrated Structured School (Gestalt School).

According to this above approach, this study comes together on the critical line that began preparing to measure integrating between WBS and OBS under knowledge operational project management concepts. Perhaps in that we have put forward in parallel contemporary research in our area of interest.( Fig.4). integrating the WBS and the OBS responsibility at the work package level can be defined in a project by integrating the WBS with the OBS to create a matrix This matrix gives a good visual guide showing (who) is responsible for which parts of the project (Project team) . If one area of the project falls behind, it is quickly realized which resource unit is responsible.[3].

As in the WBS, the OBS assigns the lowest organizational unit the responsibility for work packages within a cost account. Herein lies one major strength of using WBS and OBS; they can be integrated. The intersection of work packages and the organizational unit creates a project control point (cost account) that integrates work and responsibility. The intersection of the WBS and OBS represents the set of work packages necessary to complete the sub deliverable located immediately above and the organizational unit on the left responsible for accomplishing the packages at the intersection. [13].the world become more competitive, there is a great need for managing the process of operational project management and "getting it right the right time" in a new ways.

Today, emphasis is on the development of an integrated project management process that focuses all project efforts toward the integration of the organization.[9].



( Fig.4) Integration of WBS and OBS

Source Of design and additive researcher on: Paul and Gardiner, D. (2005) (1<sup>th</sup> ed). Project management: A strategic planning approach. Palgrave Macmillan. New York, USA, ISBN 13: 978-0-333-98222-8 p.

- i) Integration of the projects with the WBS of the organization:
- ii) Integration within the process of OBS actual projects:

The benefit of using an OBS is that it allows for better initial linking of project activities and their budgets, either at a departmental level or, even more directly, on an individual-by-individual basis. In this case, the direct cost for each work package is assigned to a specific individual responsible for its completion..[13].

Assignment Matrix to identify team personnel who will be directly responsible for each task in the project's development, a Responsibility Assignment Matrix (RAM) is developed. (The RAM is sometimes referred to as a linear responsibility chart.) Although it is considered a separate document, the RAM is often developed in conjunction with the WBS for a project. the most commonly used scheme in practice is numeric indention. we can see , the project manager is responsible for assuring that the project team (**who**) develops cost estimates based on the best information available and revises those estimates as new or better information becomes available. The project manager is also responsible for tracking costs against the budget and conducting an analysis when project costs deviate significantly from the project estimate. The project manager then takes appropriate corrective action to assure that project performance matches the revised project plan.[1]. Low pricing without market information is meaningless. The price level is always relative to :

- i) the competitive prices,
- ii) the customer budget, and
- iii) the bidder's. [3]. (This is here **what** the scope and goals).

During estimation by Identifying all possible costs associated with the project and building them into the initial proposal. While a simplified model of cost estimation might only require a bottom-line final figure, most customers will wish to see a higher level of detail in how the project has been priced out.

Cost estimating involves developing an approximation (quantitative assessment) of the costs of the resources needed to complete project activities .costs must be estimated for all resources that will be charged to the project. This includes, but is not limited to, labor, materials, supplies and special categories costs such as inflation a o llwance or management reserve. [3]. look after the interest of shareholders (whom the project sponsors).

The ideas mentioned above in **what** (scope **and** goals), who (project **team**) and **whom** (project **sponsor**) are the basis for Integrating the WBS with the Organization.

This paper pointed to the need to focus on these issues as a basis from which to start to identify integration and prepare such a perception consistent with the objectives of the study.

Companies use a number of methods to estimate project costs, ranging from the highly technical and quantitative to the more qualitative approaches. Among the more common cost estimation methods are the following.[15]:

- 1) Ballpark estimates: sometimes referred to as order of magnitude estimates, ballpark estimates are typically used when either information or time is scarce. rule of thumb for ballpark estimates is to aim for an accuracy of  $\pm 30\%$ .
- 2) Comparative estimates: Comparative estimates are based on the assumption that historical data can be used as a frame of reference for current estimates on similar projects.
- 3) Feasibility estimates: These estimates are based as a guideline on real numbers, or figures derived after the completion of the preliminary project design work.
- 4) Definitive estimates: These estimates can be given only upon the completion of most design work, at a point when the scope and capabilities of the project are quite well understood.

In spite of project management's best efforts, a variety of issues affect the ability to conduct reasonable and accurate project cost estimates. [14].

- 1) Low initial estimates : Caused by misperception of the scope of the project to be undertaken, low initial estimates are a double-edged sword. In proposing the low estimates at the start of a project,
- 2) Unexpected technical difficulties: A common problem with estimating the costs associated with many project activities.
- 3) Lack of definition: The result of poor initial scope development is often the creation of projects with poorly defined features, goals, or even purpose.
- 4) Specification changes: One of the banes of project management cost estimation and control is the midcourse specifications changes.
- 5) External factors: Inflation and other economic impacts can cause a project to overrun its estimates, many times seriously.

Cost projections created during the budgeting process are frozen before project implementation starts. They form the baselines for control and performance measurement of the project.

Baseline cost projections can be aggregated to higher levels of the WBS for reporting purposes, and used to generate S-curves for visual representation in the project plan and progress reports. Curve is An S-curve cumulative project cost against time. The S-curve is so named because of its uncertainty, increasing the probability of detrimental delays. The project manager should perform a tradeoff analysis of a schedule over run and a budget overspend.[3].

Question, we might ask is: "How does a project become one year late?" The answer is: "One day at a time." When we are not paying close attention to a project's development, anything can (and usually does) happen. The following:.[16].

- i) Configuration control includes procedures that monitor emerging project scope (**what**) against the original baseline scope.
- ii) Design control relates to systems for monitoring the project's scope, schedule, and costs during the design stage.
- iii) Trend monitoring is the process of tracking the estimated costs, schedules, and resources needed against those planned. Trend monitoring shows significant deviations from norms for any of these important project metrics.
- iv) Document control ensures that important documentation is compiled and disseminated in an orderly and timely fashion.
- v) Acquisition control monitors systems used to acquire necessary project equipment, materials, or services needed for project development and implementation.
- vi) Specification control ensures that project specifications are prepared clearly, Communicated to all concerned parties, and changed only with proper authorization.

Based on the above we address the extent of influence that, vision popped requires operational project management co-existence between people, (placed two axes), first, Work Breakdown Structure. Second, it includes Organization Breakdown Structure , in addition to the need to build a bridge between the two axes that expresses the concept of project management

integrating, in achieving the organization's strategy and operations because if we don't consider that it will reach half way without crossing.

## 6) CONCLUSIONS:

Conclusions summary focused as follows:

1) An increasing emphasis on the need to improve knowledge, because now it evolved into a competitive weapon and is no longer a technical process but one of the strategic goals of project management according to SMART goals . Therefore knowledge is a real opportunity that must get higher management attention and support and is considered one of the criteria's for project management.

2) The study methodology for content under contemporary concerns centered on two-way. The first is addressed under the concept of organizational knowledge. The second axis is the concept of project tools. Based on this study begins the critical line in preparing for the evaluation of the relationship and integration between organizing Work Breakdown Structure with The Organization Breakdown Structure in the approach strategy.

3) Determining this integration are considered some new concepts one of the major responsibilities of the top management and the nature of events and activities and objectives of the projects and:

4) It is attempt to explore the scientific bases for the concerns of the projects theoretical subject, WBS and OBS, as well as qualitative dimensions **what**, (the project scope and goals) and **who**, (the project team) in addition to **whom**, (the project sponsor). of the entrance to the integrating, so as to devise and develop ideas we have tried to find points similarities or difference with the view of the researchers and specialists through what we have established of a clear methodology and what we have done of the theoretical analysis, the contents of this effort aimed at establishing a new understanding of the meaning regarding the principles of fit between WBS and OBS.

5) The study revealed that WBS may improve the effectiveness of knowledge management in the project management also. And OBS tool have improved the effectiveness of project management, but the integration between the two themes reinforces the capacity of the organization's competitiveness.



6) Integrating the WBS and the OBS responsibility at the work package level can be defined in a project by integrating the WBS with the OBS to create a matrix This matrix gives a good visual guide showing (**who**) is responsible for which parts of the project (Project team).

7) The project manager is responsible for assuring that the project team (**who**) develops cost estimates based on the best information available and revises those estimates as new or better information becomes available, reflects the project organization's strategic goals (**what**), mission statement, and business plan. Cost management has been defined to encompass data collection.

8) The sponsor (**Whom**) and the project manager may be responsible for selecting the key project team members. In other cases, the project manager may be assigned manpower by a functional manager, a contracts manager (in the case of a contracting company), or a consulting partner may appoint a junior to oversee smaller value contracts, and finally:

9) The ideas mentioned above in **what (scope and goals)** and **who ( project team)** finally **whom ( project sponsor)** are the basis for Integrating the WBS with the Organization.

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