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## TECHNIQUES FOR PROJECT INITIATION

### ***Part Four – Project Frameworks***

#### **Creating a Project Framework**

We have repeatedly noted that a key factor to getting a project off the ground is the development of a structured approach toward identifying the work scope and timing for the work. It is easy to be overwhelmed by just the magnitude of the project. Furthermore, most project estimates and proposals are not prepared in a format that lends itself to easy conversion to a project plan. Although a definition of the project work scope may be present in the pre-contract documents, it will almost always require a major restructuring in order to turn these data into a pragmatic project plan. Another aspect of this project initiation phase is bringing the pre-project plan up to date. The pre-project documentation will define the project "as proposed". In the development of the latest project plan, these data will have to reflect the definition of the project "as sold". These are often not the same.

A major component of the front-end work required to effectively plan and initiate a project, is the development of a framework for the project model. This framework, or structuring of the project is important to the development of a complete and organized project plan. It is also for sorting, selecting, grouping and summarization of the project data, which, in turn, is essential to support recognized management-by-exception techniques and reporting to the various stakeholders.

If we define the process of project planning and control as the integration of the project work scope, timing, resource usage, and cost, then we will need to develop a structured base for each of these, as follows:

- **Work Scope**--a top down hierarchical model, called a *Work Breakdown Structure (WBS)*. And, perhaps, an alternate hierarchical model, by responsibility or performer, called an *Organizational Breakdown Structure (OBS)*.
- **Timing**--a *Project Milestone Schedule*.
- **Resources and Cost**--a set of *Resource Codes and Cost Accounts*, used to facilitate selection, sorting, summarization, and interrogation of resource and cost data. Sometimes called *Resource Breakdown Structure* and *Cost/Budget Breakdown Structure*.

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## Work Breakdown Structure

The first step is usually to define the work breakdown structure (WBS), as this is the framework for the project work scope. If you cannot define the work scope, then you cannot define the schedule, resources or budget for the project. The WBS first helps with this (work scope) definition, and then becomes the framework for the identification of the details of the project. The WBS is an organization chart for the project work. If you were to draw a typical project WBS, it would look just like a typical business organization chart. At the top would be a single box, for the project. Under that, would be the main divisions of the project. A popular term for this level is **project deliverables**. The WBS can also be depicted in an outline form.

The approach works for any type of project. For instance, if your project is a prototype bomber for the Air Force, the WBS, at the deliverables level, might look like this:

### Air Force Prototype Bomber Project

Aircraft Structure

Propulsion Systems

Aircraft Control Systems

Armaments Systems

If your project is the development of a new product, the WBS might start off like this:

### Almonds & Molasses Cereal Project

Product Formulation

Lab Testing

Pre-production

Test Marketing

Package Design

Advertising Program

Sales & Distribution Program

Certification/Regulation

Production Engineering

Production Facilities

The deliverables section gives us our first level of project definition, and a framework for further structuring. Each of these items can usually be traced back to a basic project objective. Each of these items can usually be assigned to a specific responsible individual, for accountability. The development of the WBS continues in increasing levels of

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detail. Returning to the Bomber project, we can expand the first item of the WBS as follows:

1	Air Force Prototype Bomber Project
1.1	Aircraft Structure
1.1.1	Fuselage
1.1.1.1	Cowling
1.1.1.2	Cockpit
1.1.1.3	Body
1.1.2	Wings
1.1.2.1	Fixed portion
1.1.2.2	Trim portions
1.1.3	Tail
1.1.3.1	Fixed portion
1.1.3.2	Trim portions
1.1.4	Landing Gear
1.1.4.1	Main landing gear
1.1.4.2	Nose landing gear

Thus far, we have illustrated the WBS in an outline format. Figure 1 shows more of the Air Force Prototype Bomber WBS, in the alternate “organization Chart”.

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## Work Breakdown Structure

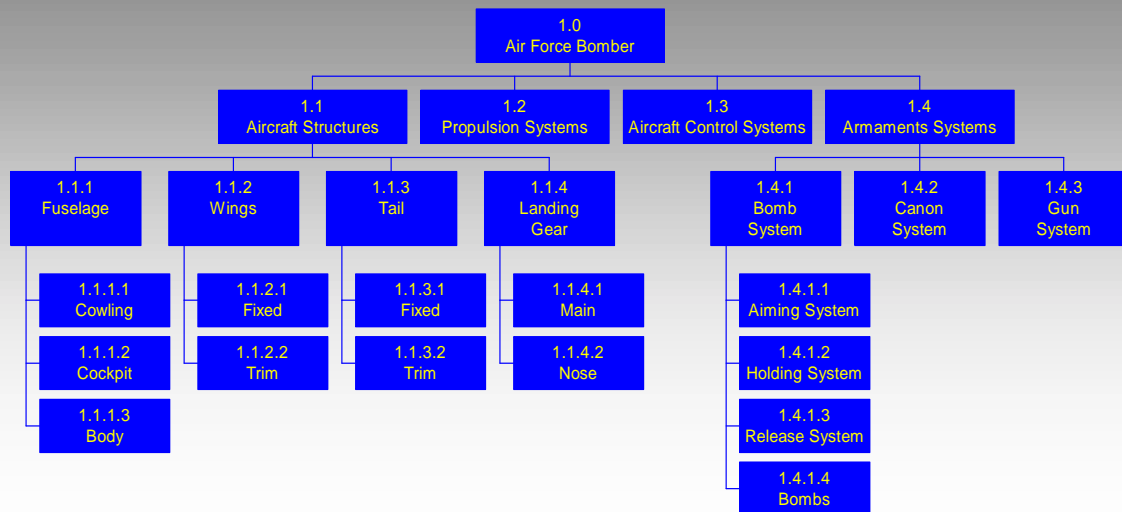


Figure 1

Eventually, each of the lower items can be subdivided even further, into work packages and individual activities. A hierarchical numbering system can be used to imbed the WBS into the activity identification code. There is rarely an ideal work breakdown structure for a given project. The important thing to keep in mind is to develop a framework that truly is indicative of how the project itself is structured and how the participants are likely to follow its execution.

Note; that with this numbering system, your project management software system should permit you use these codes to select specific portions of the project, to group activities within a common code, to sort activities by that code, and to summarize certain activity data at higher levels. Many products feature an outlining function, that allows you to develop your project activity details in an outline form. Other programs provide user code fields for this purpose. Most provide both formats. The outliner format offers greater simplicity, but is usually limited to a single WBS type framework. User code fields -- which may range from 2 to 20 code fields, depending on the product -- offer greater flexibility and the ability to have more than one WBS.

Why would anyone want to have more than one WBS? The answer is to support the information needs of all of the stakeholders. The deliverables-oriented WBS may be a handy way for the project manager to group the work. But the functional or line managers

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may want to look at it from a responsibility-oriented point of view. To facilitate this, we often develop a second framework, called the **OBS (Organizational Breakdown Structure)**. Using the OBS, we can assign codes by responsible manager or department. Additional activity coding schemes can be used to assign physical locations, project phases, priority codes, budget divisions, etc. Each of these codes can be used to sort and select activities, and for grouping and summarization.

The WBS and other structures, established in a coding scheme or an outliner, allow for the efficient and effective display and reporting of vast amounts of project data, to the various interested parties. Also, once established, the WBS can be used as a checklist for additional project work that may be similar to an earlier project.

## Article Series Segments

- Part One: Getting Started
- Part Two: Project Strategies
- Part Three: Stakeholders & Organizations
- *Part Four: Project Frameworks*
- Part Five: Project Milestone Schedules

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Harvey A. Levine, with 38 years of service to the project management industry, is founder of **The Project Knowledge Group**, a consulting firm specializing in PM training, PM software selection, evaluation & implementation, and PM using microcomputers.

He has implemented or enhanced the project management capabilities of numerous firms, often combined with the selection or implementation of computerized project management tools. Mr. Levine is considered the leading consultant to the project management software industry and is recognized as the leading expert in tools for project management.

He has been an Adjunct Professor of Project Management at Rensselaer Polytechnic Institute and Boston University. And has conducted numerous project management public seminars for ASCE, AMA, IBM, and PMI.

Mr. Levine is the author of the book "Project Management using Microcomputers", and has been published extensively in other books, periodicals and videos.

Mr. Levine is a past president of the Project Management Institute and the recipient of *PMI's 1989 Distinguished Contribution to Project Management* award. Recently, he was recently elected as a *Fellow of PMI*.

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