



**Whitemarsh**  
Information Systems Corporation

Return on Investment (ROI)

Enterprise-wide Project Management

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## Whitemarsh ROI Savings Summary

Project Management “data” is just another form of metadata. When project management data is stored in the Metabase System’s database, individual project plans, set within the context of the enterprise, are able to be manufactured.

The Whitemarsh approach is based on project, deliverable and task templates that enable the automatic generation of project plans. Once staff, by skill and work performance, are assigned, and once work environment factors are allocated, project plan resources are automatically generated.

Project accomplishment status can be recorded as work is accomplished. In addition, the actual created or modified work products can be directly accessed through the project management's entered data such as Deliverables or Tasks.

Whitemarsh’s project management creates and manages its data in an integrated database in common with all the other IT work products. The Whitemarsh project management approach is dramatically easier, faster, and more effective than traditional approaches and products. Its ROI over the traditional Project Management approach is 16:1.

Supporting Links	
Link Area	Link
Enterprise Data Management Areas	<a href="http://www.wiscorp.com/roi_enterprisewideprojectmanagemententerprisedatamanagementareas.html">http://www.wiscorp.com/roi_enterprisewideprojectmanagemententerprisedatamanagementareas.html</a>
The Data Administration News Letter Articles	<a href="http://www.wiscorp.com/roi_enterprisewideprojectmanagementtdan.html">http://www.wiscorp.com/roi_enterprisewideprojectmanagementtdan.html</a>
Short Papers	<a href="http://www.wiscorp.com/roi_enterprisewideprojectmanagementshort_papers.html">http://www.wiscorp.com/roi_enterprisewideprojectmanagementshort_papers.html</a>
Clients	<a href="http://www.wiscorp.com/roi_enterprisewideprojectmanagementclients.html">http://www.wiscorp.com/roi_enterprisewideprojectmanagementclients.html</a>

### 1.0 Issue

Work Breakdown Structures (WBS) exist in many different forms with different task lists and deliverables even when the overall project is the same. Because of these same but different projects, project managers almost always create task lists that support different strategies and approaches. It is not uncommon therefore to have deliverables with different names, contents, quality controls for both creation and execution.



Adding to all that complexity and uncertainty are variable work environments and the different proficiency levels and skills of those assigned to work on the projects.

In addition to all these difficult to control variables, there is the serial or parallel nature of tasks. Because of all of this, the list of problems exhibited by traditional project management approaches:

- Every WBS is somewhat different that in turn make comparisons difficult to almost impossible.
- Hard to compare assigned persons with varying skills and proficiencies.
- Hard to compare deliverables stylized to fit all the variable work breakdown structure task lists.
- Difficult to identify, quantify, and assess the effects of variable work environments.
- Difficult to assess the relative performance of one project with another as the majority of comparable items are not able to be interrelated.
- Virtually impossible to prototype and then compare various project plans.
- Difficult to produce really verifiable earned value reports.

## **2.0 Solution Approach**

Accomplishment of a solution to the problems cited above begins with clearly separating out the project management components that must ultimately comprise a viable project management solution. These include:

- Projects
- Deliverables
- Work process tasks
- Work environments
- Persons with varying levels of skills and performances

Projects can range from simple to complex. Simple projects are those that are short-term, single purpose with one or a few well defined deliverables and just a few persons.



Complex projects are those that are long-term, have multiple purposes consisting of interrelated, hierarchical as well as network engineered organized agendas, task lists, deliverables, and large collections of persons with varying skill levels and performance capabilities.

Initially, large collections of projects need be identified and examined to discern patterns through which complex projects can be broken into smaller well defined projects that can, in turn, be interrelated through the production of output deliverables from one project that become inputs to the next project.

Deliverables need be identified and examined in a way similar to projects. This results in collections of smaller, well defined deliverables that are created within one project and are then used within another.

Work process tasks are troublesome. That's because the vast majority of projects accomplished within the Whitemarsh business domain are "intellectual property" projects rather than "product manufacturing" projects. Designing a database or business information system, or deducing an enterprise's architecture are examples of the former while building a computer, automobile, or production line manufacturing are examples of the later.

Because of the critical difference between intellectual-property projects and product-manufacturing projects, the ability to identify, standardize, and rigorously monitor work process tasks ranges from close to impossible for the manager to completely frustrating to the persons actually performing the work.

Work environments within intellectual property projects have great variability. These variabilities include work performance enhancement tools, availability of reviewers, and the like. These must be identified, accounted for, and managed within projects.

The final component of effective project management includes the identification and assessment of persons, their skills and levels, and their relative levels of performance. Without being able to quantify performance based on audited deliverable accomplishment, project estimates are educated guesses at best.

### **3.0 Solution Engineering**

The engineered solution is first and foremost founded on a highly engineered data model of database tables (about 75). Within that collection are collections of templates that can be used over and over to effect standardization, comparison, and assessments across the many projects within an enterprise. The templates are:



- Project Template Types and Project Templates
- Deliverable Template Types and Deliverable Templates
- Task Template Types and Task Templates

These three collections of templates are hierarchically organized. That is, each “type” template can have multiple levels. Each type leaf is able to be related to a template apex record, which, in turn, can be hierarchical.

The relationship between template collections is many-to-many. This enables:

- Projects to be related to one or more deliverables and vice versa
- Deliverables to be related to one or more tasks and vice versa.

Deliverables and Tasks commonly exist in groups founded on an apex deliverable or apex task and then subordinate deliverables or tasks. Deliverables or contained deliverables are specified and are determined to have unit-effort staff-hour accomplishment estimates. In contrast, tasks and contained subordinate tasks are not precisely specified nor are their work accomplishment hours estimated. That is because deliverables accomplishments are what are identified, estimated, scheduled. Tasks, in and of themselves, do not result in the accomplishment of actual project products. Rather they only result in “time-burned.”

The fourth component are work environment factors. These are identified and assessed as to how their presence within a project result in deliverables being accomplished faster or slower.

The fifth component are persons assigned along with their determined skills, skill levels to specific project deliverables.

### **3.1 Project Context**

Projects are set within the context of existing enterprise architectures developed during the use of the a Metabase database, for example:

- Resource Life Cycle Nodes within resources that are components of enterprise missions.
- Actual deliverables that are accomplished through projects and are stored in a metabase.

### **3.2 Project Development**

Projects are developed through the application of templates and the assignment of work environment factors and person skills.



A new project is instigated by creating a new project record. The project is named and described. The next step is the assignment of one or more specific project templates from within the set of project templates. These assigned projects are sequenced and their independence, that is, serial or parallel with respect to each other.

At that point, the actual project work plan process is started. The result of that process is a completely identified set of project deliverables and project tasks. Generated as well are unit effort estimates, for example, it takes a half hour to identify, name, and describe a table. The quantity of tables is then estimated. Estimated as well is the average quantity of columns, and the like.

The project development effort continues with the assignment of persons work environment factors to project deliverables. At this point, embedded processes are run to determine the over project duration, staff hour estimates, and the like.

## **4.0 The ROI**

### **4.1 Traditional Calculation**

A traditionally developed project plan typically consists of:

- 250 work tasks
- 50 specific deliverables
- A PERT chart
- Assignment of staff
- Development of a project management proposal

The amount of time for such a project is commonly:

- Work tasks of 3 minutes each or 12 hours
- Deliverable specification at 1 hour each or 50 hours
- PERT chart at 2 minutes per task or 10 hours
- Assignment of staff at 3 minutes per task or 12 hours
- Development of an overall project management proposal, 8 hours

The total time is therefore 92 hours or 8 calendar days.



## 4.2 Changed Approach Calculation

- Initialize Project Table, 2 minutes
- Select Project Templates, 5 minutes
- Generate Work Plan that includes deliverables and tasks, 20 minutes
- Assign Work Environment Factors to Deliverables, 1 minute each or 1 hour
- Assignment of staff to deliverables, 2 minutes each or 2.5 hours
- Generate complete set of required resources, 10 minutes.
- Export Project Data for Project Graphics, 10 minutes.
- Import and Generate Project Graphics, 20 minutes.
- Development of an overall project management proposal, 2 hours.

The total time is therefore, 5 hours or one staff day.

## 4.3 ROI Summary

Comparing the two approaches, the traditional approach, even if a correct one, takes about 92 hours or 8 days. In contrast, using the Whitemarsh Project Management system takes about 5 total hours. That's a 16:1 ROI. More that 10:1 means that this approach is a Project Management Silver Bullet.

## 4.4 The “Real” ROI

The real ROI is almost incalculable because with the Whitemarsh Project Management approach:

- Every WBS is drawn from a standardized collection of that makes comparisons quick and easy.
- The assignment of and assessment of assigned persons is both easy and comparable as deliverable-accomplishment results are entered by each assigned person on a no less than weekly basis.
- Every deliverable specification is standardized, and the actual deliverables accomplished are able to be retrieved and reviewed during the project's actual execution.
- The effect of assigned work environments can be determined, and if possible changed along with the ability to re-generate the remaining project deliverables estimates.





## *Return on Investment (ROI): Enterprise-wide Project Management*

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- Quick, easy, and effective assessment of various project performance across the enterprise by mission, organization, business function, and by type of deliverable.
- Quick and easy prototyping of project plans through changes in person skill and performance levels and changes in work environment factors.
- Generation of current and predicted earned value reports.

