



Evaluation of the Project Review and Approval Board Process at Compaq

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04 Abstract

This paper documents the process and results of a structured decision making process conducted at Compaq Computer Corporation. The company currently uses a Project Review and Approval Board (PARB) process to approve all bids for customer projects. This process is viewed as too time consuming with too much overhead for smaller, lower risk bids. The decision is whether to modify the existing process. Several key stakeholders in the process participated in a structured decision process using the Analytic Hierarchy Process (AHP). They used the Executive Choice 2000 application, which is a software implementation of AHP. These stakeholders defined their overall goal, which is to better balance the reviews done with the benefits from the reviews. They first developed their objectives supporting the goal and organized them hierarchically. Their primary objectives are: quicker reviews, lower cost reviews, easier process for sales, lower training costs, raise standardization, identification and management of risk, improve bureaucratic view of process, and maintain visibility of deals. Stakeholders, using the Expert Choice software, made pairwise comparisons of the objectives and used the software to derive priorities for the objectives from those comparisons. They also identified five viable alternatives for the issue; raise the dollar threshold for reviews, raise the threshold for most reviews, establish two thresholds with two processes, maintain the status quo, and defer the decision to each territory to make. The stakeholders then did pairwise comparisons of those alternatives as they relate to the objectives. The stakeholders used the software to synthesize these pairwise comparisons and the objective priorities to evaluate the alternatives. The results of this structured decision making process selected the alternative of establishing two thresholds with two processes for the review of bids. This decision is currently being considered for implementation.

05 Introduction

Compaq Global Services, the consulting arm of the Compaq Corporation, currently utilizes a Project Review and Approval Board (PARB) process to evaluate the bids for all projects being billed to customers. The PARB is involved through out the life of the bid effort, from the decision to expend resources in answering a Request for Bids (RFBs), through negotiating and signing of the agreement.

The same project evaluation process is used for all projects above a given dollar amount, whether they are as small as in the hundreds of thousands of dollars total billing or as large as fifty million of dollars. Many people in the organization feel the process has become too bureaucratic and represents too much effort and time for smaller, lower risk projects. The Sales department has expressed the feeling that it is overkill for many proposals and that it slows down the process of preparing a competitive quotation.

This report will address the issue of whether or not the review process should be modified based on the dollar value of the specific project.

06 Analytic Hierarchy Process (AHP)

To assist the management team in identifying and documenting priorities, and to reach the decision most beneficial to the Compaq organization, the Analytic Hierarchy Process (AHP) was used. AHP was developed more than 20 years ago at the Wharton School of Business and is based on simple mathematics. It is designed to model the way most decision-makers think. Decision-makers use the process to break down a complex decision into successfully smaller and simpler parts. The AHP helps decision makers structure the important components of a problem into hierarchical structure similar to a family tree. When the problem has been sufficiently decomposed, the evaluation team makes simple pairwise comparison judgments between the various pieces. The results become a clear priority statement of the opinions of an individual or group.

The software chosen to implement the AHP was EXPERT CHOICE 2000 Enterprise (10.1.0904-99920), release Beta 7. See Section #16 for contact information on Expert Choice Software.

07 Team Charter / Goals

Dave Berry and Bill Carney prepared this report as a requirement for a George Washington University Masters of Project Management class in Executive Decision Making (Mgt 224). The final paper will be provided to the Management team of the PARB of Compaq Global Services to assist in their decision.

The goal of the exercise is to identify a listing of possible alternatives to the existing project review process. Once a reasonable number of alternatives has been identified and agreed to, the stakeholders select their weighted preference from each possible pair combination of alternatives. Software (Expert Choice) is then used to document the results and establish a most preferred solution.

08 Background

Compaq Global Services utilizes a Project Review and Approval Board (PARB) process to approve all projects being done for customers for fee of \$100,000 or larger. This process is implemented under the auspices of a WorldWide Program Management Office (WWPMO). This Program Management Office is a hierarchical organization with the following levels:

- World Wide
- Geography (North America, Latin America, Asia Pacific, Greater China, Japan, and EMEA (Europe, Middle East, and Africa).
- Country or Territory (US only)

The project reviews take place at three different points in the bidding cycle:

- Bid Investment Review (Approval to invest in bidding)
- Proposal Submission Review (Approval of the proposal as submitted to the customer)
- Terms and Conditions Review (Approval of the negotiated terms, conditions, and price)

In each case, the proposal project manager makes a standard presentation to the Review Board which contains the following:

- Briefing package (Executive Summary)
- Proposal (Copy of the Request for Proposal)
- Contract (Copy of the proposed Contract)
- Financial analysis (Financial analysis of the proposed project)
- Risk assessment (Risk assessment of the proposed project)
- Legal opinion (Corporate Legal opinion)
- Financial opinion (Corporate Financial opinion)
- PMO opinion
- Other opinions as required (human resources, subcontracting etc.)

The Review Board is composed of the responsible delivery managers, including at minimum representatives of the following departments:

- Finance
- Legal
- The Solutions Architect
- PMO

Depending on the requirements of the project others groups or departments may be invited to participate.

Currently this is the only management review of bid proposals that is required or conducted. Members of the Review Board ask questions of the proposal project manager and a business discussion takes place. This discussion is usually centered around the profit opportunity, and risks. Direction is provided on how to proceed and under what conditions. Minutes are produced documenting the results and actions from the review. All of the submitted documentation is recorded and archived. There is a log kept of all reviews.

The root of the problem being analyzed is that the same process is used for all projects. Proposals seeking approval can vary in billable cost from as small as \$100,000 to mega-projects in excess of \$50,000,000. Certain factions in the organization feel the review process has become bureaucratic and represents too high an investment in effort and time for some smaller, lower risk projects.

There is a significant benefit to the process, as it exists. A significant number of proposals are for projects with fixed prices and high risks. Many also have special terms or conditions, which can include late completion penalties, performance bonds, and other financial guarantees. Almost everyone agrees that the proposal reviews are necessary and valuable on the large and/or more complex deals.

The sales department representatives feel that in many cases, the review process has become overkill and that it can effect the response time for responding to certain types of proposals. This is perceived as affecting our ability to remain competitive.

There are also concerns regarding the visibility of our business by middle and senior management if the review process is relaxed. Because the same PARB criteria has been used for all project evaluation, there has been consistency in determining which projects to group and which projects to report separately in the project portfolio. Some of the delivery organizations are not happy about the possibility of having to report on certain projects and the visibility into their performance that could result from such reporting.

The following areas are of concern about the process:

- Improve the overhead and time-to-market associated with the process.
- Improve the value and perceived value of the process.
- Maintain management visibility and portfolio reporting for projects.
- Continue effective risk management for projects.

For this decision the following process was used.

A small number of representative stakeholders participated. These stakeholders do, however, control the majority of our business. They are also representative of the rest of the organization. The following table identifies the stakeholders who participated in the process. Only titles are provided on such an externally published document, per Compaq corporate policy.

Representing	Title
North America	PMO Director, North America
Asia	PMO Director, Asia Pacific
Europe	PMO and operations director, EMEA
World Wide	PMO Director, World Wide
Facilator	David Berry, Program Director

The stakeholders first identified the goals (Objectives) of the project review process and in several cases decomposed them in a hierarchical manner. It is acknowledged that some of these goals are in conflict. See Section #10 for a listing of the goals.

After careful discussion, the stakeholders identified a list of five possible alternatives, including remaining with the process as it stands now.

With the help of the facilitator, the stakeholders established the preferred method of evaluating each of the goals with regards to each of the alternatives (Choices included verbal, numerical, and graphical). The stakeholders were then asked to select and prioritize each possible pair of goals with regards to each of the listed alternatives using the identified method of evaluation. (Fifteen identified goals or sub goals times each of five alternatives yields more than 550 individual choices each stakeholder was asked to make.)

The Expert Choice software was used to compile the answers to the interviews with each of the stakeholders and derive priorities and rate alternatives based on the results.

The stakeholders were then asked to examine the results of process, not only to provide a check for clerical errors but also to help to validate their understanding of the model and its output.

The modeling software records and documents the level of ambiguity in the responses from all participants. This is helpful in identifying inconsistencies and areas that may need to be revisited or refined. However in this project the level of ambiguity was considered to be within normal levels and no further actions will be required.

Once the preliminary results had been reviewed and agreed to, and the level of ambiguity identified and accepted, the software was used to synthesize the results of the comparisons made by each stakeholder into an overall evaluation of the alternatives.

A computer sensitivity analysis was then performed on the results to determine which of the goals were most influential in selecting the outcome of the model. A final review was performed with the stakeholders to confirm the results of the sensitivity analysis and ensure that their expectations were reflected in the results of the model.

It is expected that this paper and the results of the model will be used to make a recommendation to management regarding the PARB process at Compaq Global Services.

09 Alternatives

The following alternatives have been selected to be evaluated by the model. Where available, the number of projects has been identified for each class of alternatives. Currently there are approximately 800 projects being reviewed by the PARB.

A-1 Hurdle level for project reviews at \$500K

The process will remain identical with the exception that the PARB reviews will be required only for projects that are in excess of \$500,000. Anticipated number of projects that would need PARB approval is 600.

A-2 Hurdle level for some review types at \$500K

PARB reviews will be required for all projects in excess of \$500,000. Additionally, certain project criteria (to be determined / defined) will require a PARB review even if the project is less than \$500,000. Some examples would be contracts involving outsourcing, performance bonds, bid bonds, penalties and high levels of liability. Anticipated number of projects that would need PARB approval is 650.

A-3 All projects above \$100K reviewed but allow abbreviated reviews up to \$500K

Projects that are greater than \$100,000 but less than \$500,000 will require an abbreviated review package and only require approval by the responsible manager.

A-4 Allow each territory to pick the alternative

Each territory can select from the options being discussed for their particular territory.

A-5 Stay with existing level with all projects over \$100K reviewed

This would mean no change to the process. All projects of \$100,000.00 or greater will require a PARB review. This is the status quo for comparison. Currently there are approximately 800 projects being reviewed by the PARB.

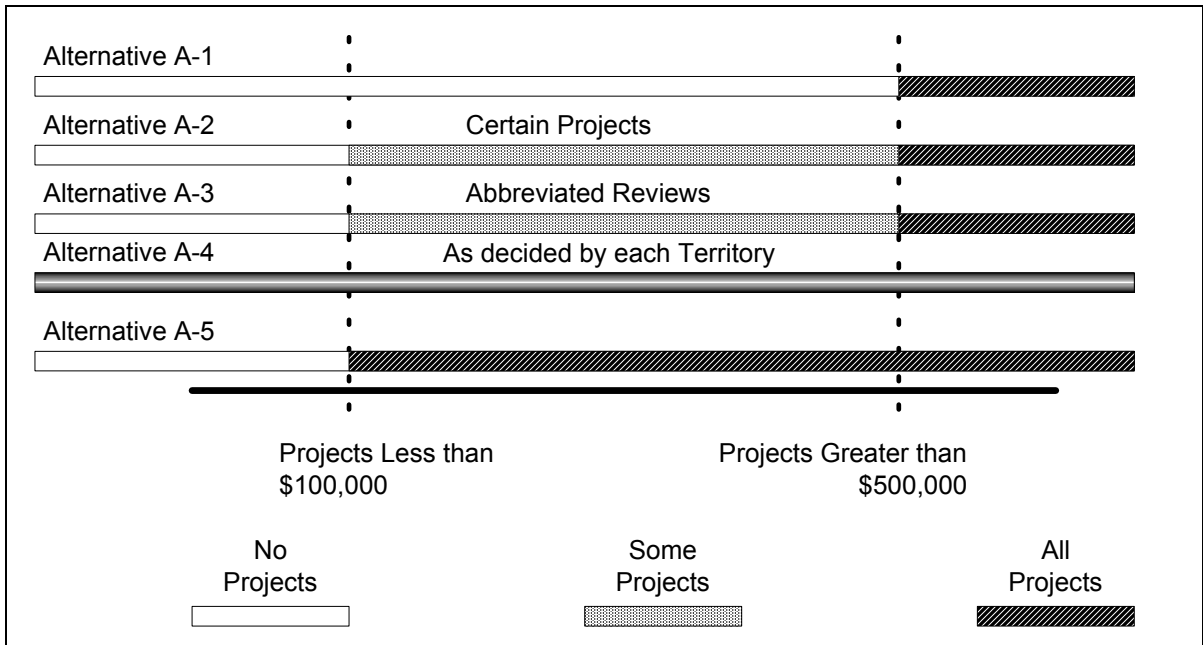


Figure #09-1 Alternatives

10 Objectives / Sub Objectives

The following objectives and sub-objectives were developed. Pair-wise comparisons were then, from which, the model derived priorities.

- Quicker Reviews
 - *Fewer Reviews*
 - *Quicker Review Scheduling*
- Lower Cost Reviews
 - *Fewer Reviews*
 - *Simpler Reviews for Low Complexity Deals*
 - *Less Management Time in Reviews*
- Easier Process for Sales
 - *Fewer times they have to go through reviews*
 - *Less time for reviews for simple projects*
- Lower Training Costs
- Higher standardization
- Identify and Manage Risk
 - *Identify High Risk Deals*
 - *Analyze and Quantify Risks*
 - *Implement strategies to Lower Risks*
- Improve Bureaucratic View of Process
 - *People think we are improving*
 - *People see more value in reviews*

- Maintain Visibility of Deals

12 Results / Conclusion

The following graph shows the combined synthesis of results for all stakeholders. It shows the objectives and their derived priorities as well as the ranking of alternatives with respect to those objectives. The percentages shown on the left side of the chart provide the priorities derived from the pairwise comparisons. The percentages at the right show the performance of the alternatives with respect to the objectives, weighted by the priorities, and based on the pairwise comparisons.

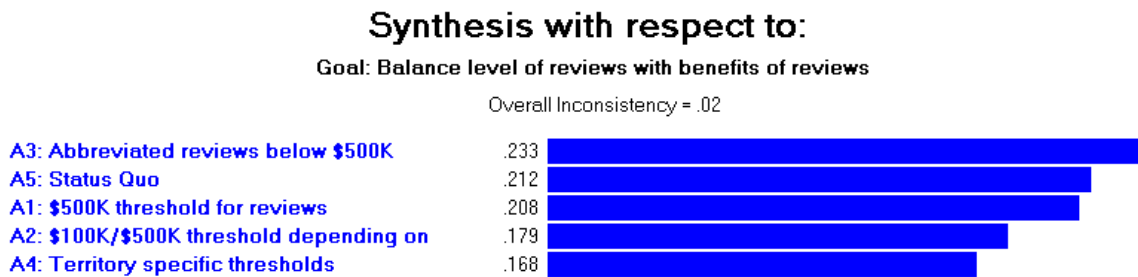


Figure #12-1 Synthesis with respect to the goals

The following graph shows the performance of the alternatives in regards each of the objectives and each alternative's overall performance. The vertical bar graph at the bottom portrays the priorities of the individual objectives.

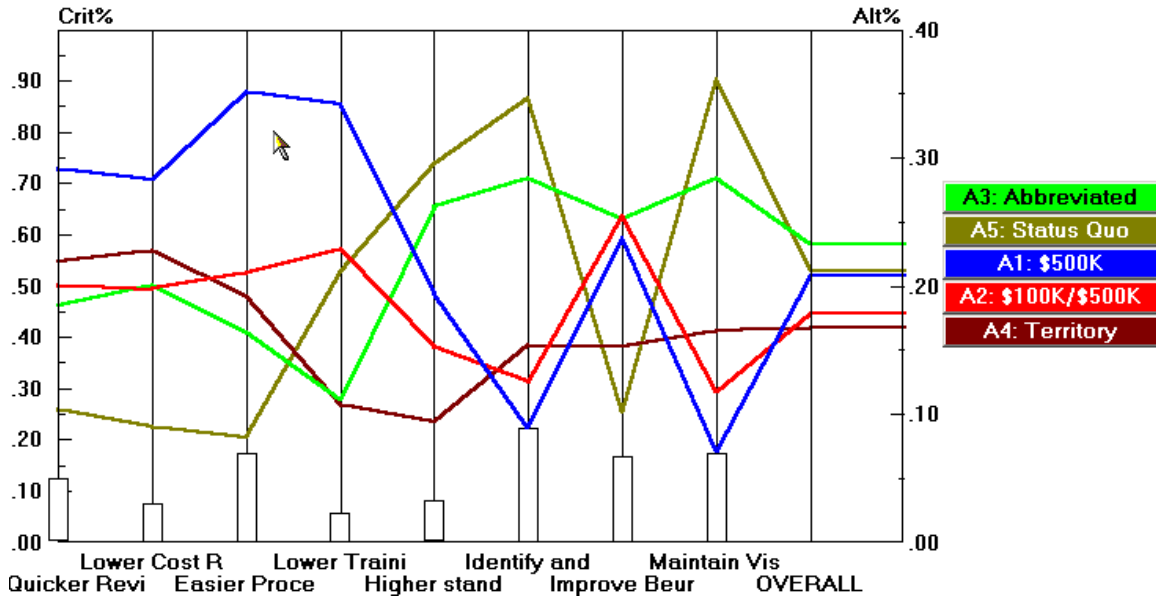


Figure #12-1 Performance of the alternatives

Sensitivity analysis was done. The model is the most sensitive to the objectives of maintaining visibility, identifying high-risk deals, and making things easier for sales. However, no one objective was extremely sensitive to changes in priority.

The combined synthesis of results for all stakeholders favored a more relaxed process (A2: Hurdle level for some review types at \$500K) which still required projects above \$100,000.00 to be reviewed, but using an abbreviated briefing package with approval by the responsible manager and having all projects above \$500,000.00 use the existing process.

However, if you look at the individual results, only one stakeholder (the WorldWide PMO Director), based on the synthesis of their pairwise comparisons, selected this alternative. The North American PMO Director selected Alternative A1: Hurdle level for project reviews at \$500K. The EMEA PMO Director and the Asia PMO Director both selected Alternative A5: Status Quo. Although the combined synthesis does represent the combined preferences of the stakeholders, it is a difficult conclusion for them to accept. The model was very helpful in determining the stakeholders' views and in clarifying the

points for debate. At this time they are not convinced they should move forward with the decision until they have time for more debate and dishwashing.

13 Future Activities

Continued refinement is needed before the final decision can be made. The stakeholders want to further refine the model and make the final decision the next time they have the opportunity for a face-to-face meeting. This is anticipated as being sometime in the first half of 2002, due to current corporate travel constraints.

14 Glossary

- AHP – Analytic Hierarchy Process
- EMEA – Europe, Middle East, and Africa
- PARB – Project Review and Approval Board
- PMO – Project Management Office
- WWPMO – World Wide Project Management Office

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16 End Notes

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