

There should be at least three alternative solutions identified, but there could be more. After the alternatives have been identified and documented, it is important to screen out the weakest ones, which is the purpose of Template 4.

The first criterion in the template, Responsiveness to the Requirements, is the most important. An alternative solution that looks good initially may, upon closer scrutiny, be found weak in responding to some of the requirements. The next criterion in the table is feasibility--that is, is it capable of being successfully carried out in this organization? The third criterion is enterprise architecture. Is it compatible with the present planned IT architecture? Does it support the business strategies and goals of the organization?

The fifth criterion, risks and constraints, is always important. If it is too risky, for example, management might consider it unacceptable. Constraints can be in many forms, such as it might take too long to implement, users are likely to resist it, it requires intensive training, it could negatively affect strategic partners, and so on. The sixth criterion is affordability. For example, can the organization afford it at this time? Will it take too long to recover the investment?

The seventh criterion, new opportunities, asks whether it opens up new opportunities that do not exist now. This would be an extra benefit of solving the problem with a given solution.

Template 4 is constructed to facilitate logical analysis of the alternatives. Specifically, each criterion in a column represents a hurdle that needs to be passed before the next criterion in the column to the right is considered. For example, if close examination of an alternative shows that it is not sufficiently responsive to the requirements, there is no need to evaluate it with the remaining criteria. Similarly, an alternative that is responsive to the requirements but not feasible for some reason would also be screened out.

Of course, there never (or rarely) is a perfect solution. Usually potential solutions must be modified perhaps several times before they are retained as acceptable alternative solutions to the problem. This template helps the IPT to weed out those alternatives that are clearly not viable and to determine how other alternatives can be improved through modification. You should end up with three alternative "finalists" that will move on to the next step for more refined analysis to identify the best solution to the problem.

An integrated project team (IPT), representative of the affected stakeholders, is usually the group that uses template 4 (or the equivalent) to rank order the alternative solutions. This helps to identify those that should be improved so they are more viable solutions. The last column on the right is used to make a ranking of the alternatives after any necessary improvements have been made. A "1" rating in this column means it is the highest ranking alternative solution. This ranking may change as a result of Activity 5, which looks closer at the risks involved and screens out all but the best two alternatives, and Activity 7 (economic analysis), which compares the best two financially and requires the IPT to make a decision on which is the one best alternative solution to recommend to the executive decision makers. .

Alternative Solution	Responsiveness to Requirements	Feasibility (Capable of Being Successful)	Enterprise Architecture	Risks and Constraints	Affordability	New Opportunities	Rank Order
Altern. #1 Acquire an In-house Graphics Management System	Can meet all requirements	Feasible	Supports; no conflict	Risk of contractor bias toward unsuitable tool	Relatively low, affordable cost, assuming contractor installs off-the-shelf software	None beyond meeting the current objectives	1
Altern. #2 Outsource the Graphics Management Functions	.Can meet all requirements	Feasible	Supports; no conflict	No experience with outsourcing business functions; potential loss of flexibility for meeting future needs	Likely greater initial cost, but affordable	On-going relationship may be source of expertise to exploit new opportunities	3
Altern. #3 Use Software as a Service	Potentially could meet all requirements	Probably Feasible	Depends on interface requirements of the host organization	May not have the internal bandwidth and hardware required to interface with the host; SaaS services are new and not fully tested	Possibly quick implementation with least initial and on-going cost, depending on the host's interface requirements	Host may offer access to valuable new capabilities at relatively low cost	2
Altern. #4 Acquire Expert Small Graphics Arts Specialty Firm	Can meet all requirements	May not be feasible because of large purchase cost, merger risks, and difficulty of identifying a suitable small firm willing to be acquired	Compatibility with enterprise architecture would be an acquisition requirement.	May have substantial risk; integration of an acquired firm has inherent risks (e.g., culture clash)	Likely highest initial cost, but potentially fastest start-up of high-quality graphics support.	Could offer graphic services to other firms, resulting in a new income stream.	4
[and so on]							

Template 4. Analyzing Alternative Solutions

As you may have surmised, the results of the Template 4 analysis can be used to strengthen the best alternative solutions. The template may identify a correctable weakness in an otherwise good alternative solution. Correcting that weakness will strengthen that alternative solution.

Documenting Evaluations and Results

Templates 3 and 4 are summaries that are usually included in a report by the acquisition planning IPT to document its analysis of the problem, the solution alternatives considered, and its recommended solution alternative. Depending on the policies of the

organization, this report may be submitted after further analysis (beyond Template 4) has been completed and the recommendation solution has been determined.

How Management Detects Solution Selection Bias

A tactic used too frequently is to "know" the best solution in advance and then recommend it in a comparison with one or two weak alternatives. The idea is to cause the pre-selected solution to be chosen for funding. The problem with this tactic is that little thought is given to uncovering alternatives that could be far superior to the one that was pre-selected. Whenever one alternative looks strong and the other two look a little too weak, it raises the question of whether or not this was a pre-selected solution. Acquisition teams can undermine their own credibility with senior management by unintentionally or intentionally recommending a solution that appears pre-selected. It can motivate the decision makers to reject or ignore the IPT's recommendation and to initiate other steps to identify the best solution. Ideally, at least two of the final alternatives will be strong, but they will have different strengths and different weaknesses. A case can then be made for recommending the one that on balance is the stronger of the two in terms of meeting the organization's needs.

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