

7.6 Analyze Potential Value and Recommend Solution

7.6.1 Purpose

The purpose of Analyze Potential Value and Recommend Solution is to estimate the potential value for each design option and to establish which one is most appropriate to meet the enterprise's requirements.

7.6.2 Description

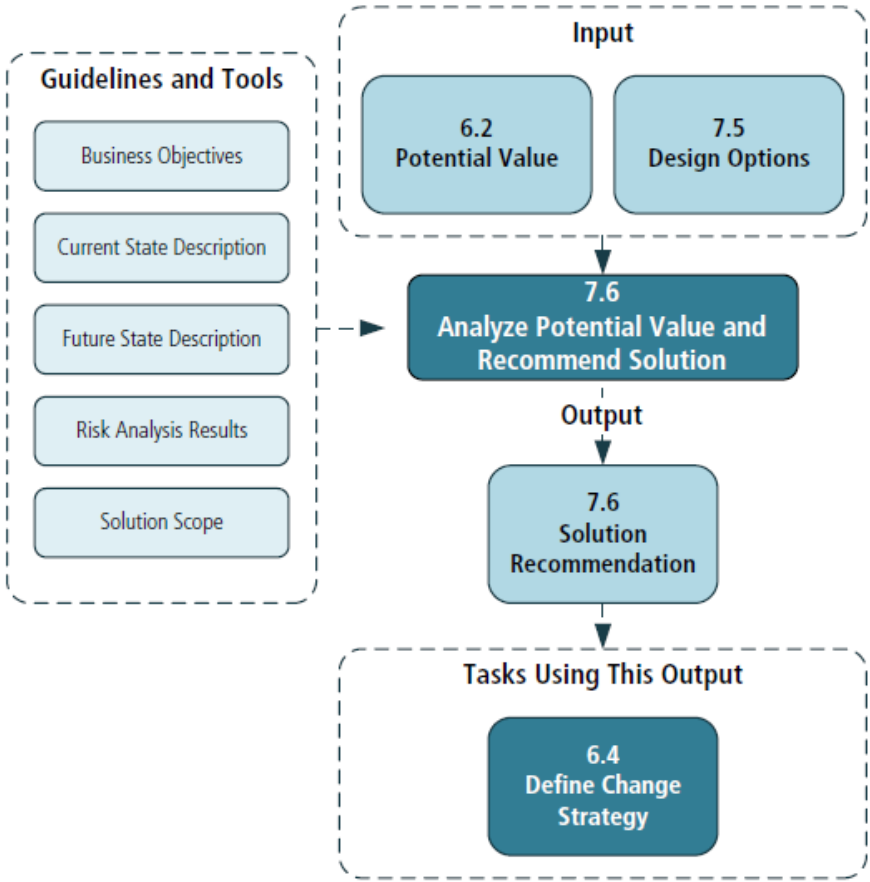
Analyze Potential Value and Recommend Solution describes how to estimate and model the potential value delivered by a set of requirements, designs, or design options. Potential value is analyzed many times over the course of a change. This analysis may be a planned event, or it may be triggered by a modification to the context or scope of the change. The analysis of potential value includes consideration that there is uncertainty in the estimates. Value can be described in terms of finance, reputation, or even impact on the marketplace. Any change may include a mix of increases and decreases in value.

Design options are evaluated by comparing the potential value of each option to the other options. Each option has a mix of advantages and disadvantages to consider. Depending on the reasons for the change, there may be no best option to recommend, or there may be a clear best choice. In some cases this means the best option may be to begin work against more than one design option, perhaps to develop proofs of concept, and then measure the performance of each. In other instances, all proposed designs may be rejected and more analysis may be needed to define a suitable design. It is also possible that the best recommendation is to do nothing.

7.6.3 Inputs

- **Potential Value:** can be used as a benchmark against which the value delivered by a design can be evaluated.
- **Design Options:** need to be evaluated and compared to one another to recommend one option for the solution.

Figure 7.6.1: Analyze Potential Value and Recommend Solution Input/Output Diagram



7.6.4 Elements

.1 Expected Benefits

Expected benefits describe the positive value that a solution is intended to deliver to stakeholders. Value can include benefits, reduced risk, compliance with business policies and regulations, an improved user experience, or any other positive outcome. Benefits are determined based on the analysis of the benefit that stakeholders desire and the benefit that is possible to attain. Expected benefits can be calculated at the level of a requirement or set of requirements by considering how much of an overall business objective the set of requirements contribute to if fulfilled. The total expected benefit is the net benefit of all the requirements a particular design option addresses. Benefits are often realized over a period of time.

.2 Expected Costs

Expected costs include any potential negative value associated with a solution, including the cost to acquire the solution, any negative effects it may have on stakeholders, and the cost to maintain it over time.

Expected costs can include:

- timeline,
- effort,
- operating costs,

- purchase and/or implementation costs,
- maintenance costs,
- physical resources,
- information resources, and
- human resources.

Expected costs for a design option consider the cumulative costs of the design components.

Business analysts also consider opportunity cost when estimating the expected cost of a change. Opportunity costs are alternative results that might have been achieved if the resources, time, and funds devoted to one design option had been allocated to another design option. The opportunity cost of any design option is equal to the value of the best alternative not selected.

.3 Determine Value

The potential value of a solution to a stakeholder is based on the benefits delivered by that solution and the associated costs. Value can be positive (if the benefits exceed the costs) or negative (if the costs exceed the benefits).

Business analysts consider potential value from the points of view of stakeholders. Value to the enterprise is almost always more heavily weighted than value for any individual stakeholder groups. There might be increases in value for one set of stakeholders and decreases in value for another set, but an overall positive increase in value for the enterprise as a whole justifies proceeding with the change.

Potential value is uncertain value. There are always events or conditions that could increase or decrease the actual value if they occur. Many changes are proposed in terms of intangible or uncertain benefits, while costs are described as tangible, absolute, and might grow. When benefits are described as intangible and costs expressed as tangible, it may be difficult for decision makers to compare their options. Business analysts define a complete estimate of the purpose-driven and monetary effects of a proposed change by considering the tangible and intangible costs alongside the tangible and intangible benefits. The estimate of costs and benefits must take into account the degree of uncertainty pertaining at the time the estimates are made.

.4 Assess Design Options and Recommend Solution

Each design option is assessed based on the potential value it is expected to deliver. At any point in analyzing the design options, it may become necessary to re-evaluate the initial allocation of design elements between components. The reasons for re-evaluation include better understanding of the cost to implement each component and to determine which allocations have the best cost-to-benefit ratio.

As costs and effort are understood for each solution component, business analysts assess each design option to ensure that it represents the most effective trade-offs. There are several factors to take into consideration:

- **Available Resources:** there may be limitations regarding the amount of

requirements that can be implemented based on the allocated resources. In some instances, a business case can be developed to justify additional investment.

- **Constraints on the Solution:** regulatory requirements or business decisions may require that certain requirements be handled manually or automatically, or that certain requirements be prioritized above all others.
- **Dependencies between Requirements:** some capabilities may in and of themselves provide limited value to the organization, but need to be delivered in order to support other high-value requirements.

Other considerations may include relationships with proposed vendors, dependencies on other initiatives, corporate culture, and sufficient cash flow for investment.

Business analysts recommend the option or options deemed to be the most valuable solution to address the need. It is possible that none of the design options are worthwhile and the best recommendation is to do nothing.

7.6.5 Guidelines and Tools

- **Business Objectives:** used to calculate the expected benefit.
- **Current State Description:** provides the context within which the work needs to be completed. It can be used to identify and help quantify the value to be delivered from a potential solution.
- **Future State Description:** describes the desired future state that the solution will be part of in order to ensure the design options are appropriate.
- **Risk Analysis Results:** the potential value of design options includes an assessment of the level of risk associated with the design options or initiative.
- **Solution Scope:** defines the scope of the solution that is being delivered so that a relevant evaluation can be made that is within the scope boundaries.

7.6.6 Techniques

- **Acceptance and Evaluation Criteria:** used to express requirements in the form of acceptance criteria to make them most useful when assessing proposed solutions and determining whether a solution meets the defined business needs.
- **Backlog Management:** used to sequence the potential value.
 - **Brainstorming:** used to identify potential benefits of the requirements in a collaborative manner.
- **Business Cases:** used to assess recommendations against business goals and objectives.
- **Business Model Canvas:** used as a tool to help understand strategy and initiatives.
- **Decision Analysis:** used to support the assessment and ranking of design options.
- **Estimation:** used to forecast the costs and efforts of meeting the requirements as a step towards estimating their value.
- **Financial Analysis:** used to evaluate the financial return of different options and choose the best possible return on investment.

- **Focus Groups:** used to get stakeholder input on which design options best meet the requirements, and to evaluate a targeted, small group of stakeholders' value expectations.
- **Interviews:** used to get stakeholder input on which design options best meet the requirements, and to evaluate individual stakeholders' value expectations.
- **Metrics and Key Performance Indicators (KPIs):** used to create and evaluate the measurements used in defining value.
- **Risk Analysis and Management:** used to identify and manage the risks that could affect the potential value of the requirements.
- **Survey or Questionnaire:** used to get stakeholder input on which design options best meet the requirements, and to identify stakeholders' value expectations.
- **SWOT Analysis:** used to identify areas of strength and weakness that will impact the value of the solutions.
- **Workshops:** used to get stakeholder input on which design options best meet the requirements, and to evaluate stakeholders' value expectations.

7.6.7 Stakeholders

- **Customer:** represents the market segments affected by the requirements and solutions, and will be involved in analyzing the benefit of those requirements and costs of the design options.
- **Domain Subject Matter Expert:** may be called upon for their domain knowledge to assist in analyzing potential value and benefits, particularly for those requirements where they are harder to identify.
- **End User:** provides an insight into the potential value of the change.
- **Implementation Subject Matter Expert:** may be called upon for their expertise in implementing the design options in order to identify potential costs and risks.
 - **Project Manager:** manages the selection process so that when effecting the change they are aware of potential impacts on those supporting the change, including the risks associated with the change.
 - **Regulator:** may be involved in risk evaluation concerning outside regulatory bodies or place constraints on the potential benefits.
 - **Sponsor:** approves the expenditure of resources to purchase or develop a solution and approve the final recommendation. The sponsor will want to be kept informed of any changes in potential value or risk, as well as the resulting opportunity cost, as he/she may prefer another course of action.

7.6.8 Outputs

- **Solution Recommendation:** identifies the suggested, most appropriate solution based on an evaluation of all defined design options. The recommended solution should maximize the value provided to the enterprise.