

# : *What are the characteristics of decisions?*

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Managers make many decisions and the characteristics of each decision determine if analytics and decision support are appropriate and if so what support is most useful. Decisions are made as part of processes and decisions result in outcomes. A decision may involve assessing and evaluating alternatives using data sets, variables and algorithms. The quality of a decision is often impacted by the type of process or path that is pursued in making and implementing a decision. Organizational decision environments are typically characterized by a rational decision making approach. Rationality is "the quality of being consistent with or based on logic." Some definitions also assert rationality is "the state of having good sense and sound judgment." So rational thinkers base decisions on logic and have good sense and sound judgment. Managers and responsible decision makers attempt to be rational, wise and thoughtful in their decision-making.

Decisions vary widely in structure and complexity, see Table 1. Some decisions are characterized by their concise, clear, well-defined and structured nature. These are typically known as operating or function-specific decisions. This type of decision is usually routine, occurring regularly and frequently, i.e. daily or weekly. Tactical decisions are typically semi-structured in nature, this means that some but not all of the information necessary to make the decision is available. These decisions are mostly internally focused and may even be specific to an individual business function. Other decisions are more complex. Some variables may not be well understood, often information required to make the decision may be unavailable, incomplete and in some cases information may be known to be inaccurate. Classified as strategic decisions, these are usually complex, unstructured decisions involving many different and connected parts. These decisions usually involve a high degree of uncertainty about outcomes. If implemented, strategic decisions often result in major changes in an organisation.

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Decision Type  
Decision Maker  
Frequency  
Characteristics  
Data Sources

Function specific, i.e. marketing  
Operations Managers  
Routine, daily - weekly, problem stimulus  
Well-defined, structured, low complexity, clear decision criteria, solvable, good information often available  
Internal, especially from operations activities and accounting

Control, Resource Allocation, Tactical  
Middle Managers  
Periodic, monthly,  
quarterly, problem stimulus  
Often multiple issues  
to resolve, semi-structured,  
accepted procedures for problem identification and decisions, some information may be delayed or unavailable  
Internal, especially current and historical from operations and accounting. Some external information may be available

Strategic, Enterprise-wide  
Senior Managers  
Ad hoc, annual,  
crisis or opportunity  
stimulus  
Complex, difficult to define,  
information may be unknown  
or unavailable, unstructured  
Internal and external  
from a variety of sources,  
high variety and formats,  
new data may need to be collected

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Table 1. Fundamental Characteristics of Decisions

The characteristics of decisions go beyond the attributes outlined in Table 1 to include other aspects, such as risk and the anticipated amount of management consideration or management discussion. Evaluating the level of these characteristics can assist in determining if computerized decision support will be useful in a decision process. Simon (1960) identified three stages in a decision process: 1) Intelligence -- information gathering and problem identification, 2) Design -- creating or identifying alternative courses of action, 3) Choice -- selecting a course of action. Decision support may be appropriate in all, one or none of the stages. Now let's briefly consider three characteristics models proposed by Snyder (1958), Hage (1980), and the Bradford Group (1981). Identifying characteristics of a decision can help to better understand organisational decisions and decision processes.

### Snyder Model

Snyder (1958) developed a decision making approach for studying political phenomena. His major contribution is a typology of decision situations. Snyder argues that three key variables, in addition to the decision situation, explain decision-making behavior: 1) spheres of competence, including specialized functions, authority relations, the basis of participation and reciprocal expectations; 2) communication and information; and 3) motivation of the decision makers, including personality of decision makers. Snyder's analysis emphasizes the interaction of the decision-maker with the various elements of the situation.

### Hage Model

According to Hage (1980) the process by which decisions are made can be predicted, even if it appears to be a highly unique phenomenon. Hage defines the following thirteen characteristics of a single decision trajectory:

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- 1) **Degree of routinization** is the extent to which specified steps in the process are defined and used
- 2) **Degree of delegation** is the extent to which the bulk of the process occurs at lower levels
- 3) **Duration** is the length of time between the first proposal and final decision
- 4) **Intensity of participation** is the amount of effort each interest group expends
- 5) **Amount of discussion** is the amount of time spent considering verbally the decision
- 6) **Extensivity of participation** is the number of interest groups involved
- 7) **Amount of information search** is the extent to which the interest groups seek facts relative to the decision
- 8) **Stability of coalition** refers to the extent of change in the combination of people groups
- 9) **Amount of joint creation** is the extent to which the final decision outcome is the product of joint creation
- 10) **Amount of negotiations** is the amount of time spent bargaining
- 11) **Amount of deliberation delay** is the amount of time spent in avoiding a final decision

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- 12) **Amount of conflict** is the extent of disagreement amount the interest groups
- 13) **Duration of conflict** is the amount of time the disagreement continues.

Table 2. Characteristics of a Decision Trajectory (Hage, 1980)

For high risk decisions, Hage hypothesizes that high risk of the decision issues is positively related to intensity of information search, amount of discussion and stability of coalitions. Low risk decisions, according to Hage, have different decision processes that are determined by the frequency of occurrence of the decision issue.

### The Bradford Group Model

Astley, Axelson, Butler, Hickson and Wilson (1981), a group of researchers at the University of Bradford, argue that there are two fundamental factors that explain the nature of decision making: 1) the task complexity of the decision and 2) the political cleavage of the interests involved. The Bradford Group define complexity as the extent to which the topic of the decision making process, is made up of multiple considerations and is difficult to evaluate. Astley et al. think that complexity may be measured by a combination of indicators; 1) by the rarity or novelty of a topic, 2) by the precision or specificity of the criteria for evaluating a topic, and 3) by the clarity of the definition of the topic. They define cleavage, a concept taken from the political science literature, as the extent to which interested parties to the decision tend to split apart. Astley et al. note that the two concepts of complexity and cleavage are related and interact. The Bradford Group hypothesized that complexity and cleavage explain the content or activities of the decision-making process.

### Summary

Decision making is central to all managerial activity. By exploring the characteristics of decisions, our aim is to help managers begin to unpack the complexity of organizational decisions. The three characteristics models considered here are relevant and useful for evaluating decision processes. However, it is clear that there is no consensus. So managers and decision support designers need to exercise caution when selecting a characteristics model, as similar decisions in different companies or across industries may have different characteristics. Nonetheless, decision

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characteristics models should be used to better understand context specific decision making, with a view to developing organizational decision support and decision evaluation capabilities in the future.

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