WHAT IT IS

Case studies are in-depth examinations of complex events or series of events and are based on:
- comprehensive understanding of the event(s)
- extensive description of the event(s)
- analysis of the event(s) taken as a whole and in context

A case study may incorporate a variety of other audit techniques, including interviews, surveys, questionnaires, data analysis, document reviews, and observations over time.

WHEN TO USE IT

Case studies are useful when the audit/evaluation question is complex, especially when the inputs and outputs of process or program activity are not clearly related or when evaluation criteria are not specific. When evaluating processes or programs, case studies often help determine effectiveness or verify cause-and-effect relationships. For example, a survey of Agency A's clients indicates widespread dissatisfaction with how the agency handles customer inquiries. Here a case study would be a means of investigating what aspects of the customer assistance process are not working as intended.

Case studies are of the following general types:
- **Critical instance** case studies gather data to examine a single instance of unique interest and/or to perform a limited test on an assertion about a strategy, program, or problem.
- **Cumulative** case studies gather data from many case studies to answer audit/evaluation questions.
- **Exploratory** case studies gather data both to describe conditions and to generate hypotheses for future investigation.
- **Illustrative** case studies gather data to describe and add realism and/or in-depth examples about a program or policy.
- **Program effects** case studies gather data to examine causality and usually involve multiple program sites and multiple audit/evaluation methods.
- **Program implementation** case studies gather data on program operations, often at multiple program sites.

Case studies can be of particular benefit during the reporting phase of the audit. They are an excellent means of developing anecdotal evidence to support audit findings and make the report more persuasive. However, designing and implementing case studies for use in generalizing findings about large-scale processes or programs is often cost prohibitive.

HOW TO PREPARE IT

Specify the nature of the issue being evaluated. Given the common uses of case studies, consider whether it would be an appropriate technique.

Determine the scope of the case study. Seek to limit the case study as a function of the audit/evaluation objective(s). The scope of study is often determined by project budget constraints.

Design the case study, taking care to select the most relevant event(s) for examination. Design types include best case, worst case, representative case, and areas of special interest. The design used is driven by the objective of the case study and how it fits into an overall process or program audit/evaluation.

- If the case study is designed to illustrate the optimum workings of a process or program, best case events are selected.
- If the objective is to find causes for process or program inefficiency or ineffectiveness, worst case events are selected.
- If the intention is to make generalizations about a process or program, representative event(s) are selected. Random selection may be advisable.
- A case study may be directed at a specific event of interest to an entity or government body. For example, legislators may want information on agency operations immediately subsequent to significant new legislation.

Determine methods for collecting data. Data collected should be sufficiently comprehensive to ensure that important conditions and consequences are considered. A full picture should be obtained, and bias should be minimized. While many of the following are standard audit/evaluation techniques, in case studies they typically are organized around a selected event or sample of events. These techniques include:

- structured or open-ended interviews
- questionnaires or surveys
- reviews of documents, records, or reports
- participant or direct observations

See the Interviews and Questionnaires/Surveys modules for more information.

Case study data collection is based on two central tenets. The first is rich detail in recording events, interviews, and observations. Direct observations generally take place over an extended period of time, as determined by the auditor/evaluator. During this time, the auditor/evaluator would continuously record observed events of relevance. Interview write-ups would likely be more detailed than when more narrow issues are the focus of the project.

The second central tenet of case study data collection is the use of multiple data sources to permit triangulation during data analysis. Therefore, it is usually important to use multiple techniques when gathering information. Although observations are often the most important component of case study analysis, they must be augmented by other evidence.

One technique unique to case studies is the participant observation. Participant observations differ from direct observations in that the auditor/evaluator participates in the process under review. In some cases, participant observers may not disclose their identity to other participants. Certain ethical considerations must be taken into account if this is done. For example, participant observers should not entice other participants to engage in improprieties or other uncharacteristic behavior.

However, participant observation can be a useful tool for addressing some of the weaknesses inherent in direct observations in which the identity of the auditor/evaluator is known. Recalling the previous example of Agency A, the agency with problems handling customer inquiries, a case study might involve contacting Agency A multiple times with a sample of realistic client inquiries. The agency's representatives would be unaware that the caller's motive was to evaluate the agency's handling of inquiries. This approach might lead to different observations than might occur during direct observation where the evaluator's presence and identity were known.

Analyze data. Data analysis for case studies is somewhat unusual in that much of the data collected are qualitative. In addition, analysis is often concurrent with the data collection phase rather than subsequent to it. The principle data analysis method for case studies is referred to as OTTR, which stands for "observe," "think," "test," and "revise." Analysis must be an iterative process whereby the initial observations are reflected upon and shape subsequent data collection.

- Observe -- initial observations are made and tentative hypotheses are formulated.
- Think -- consideration is made of what additional information must be collected to rule out alternative explanations or confirm initial hypotheses.
- Test -- additional information is collected through subsequent observation or review.
- Revise -- analysis of subsequent observations and review occurs, and initial hypotheses are reexamined.

The OTTR process continues until the initial hypothesis can be confirmed or until an alternative explanation is required to accommodate new data.

Report on data. As noted earlier, case studies can be an effective means of enhancing the persuasiveness of a report. Observations and anecdotes drawn from a case study often make for more interesting reading. However, care should be taken to avoid improper generalizations. Recall that case studies are generally non-probabilisitic audit/evaluation tools. Other tools must be used to confirm or reject hypotheses in a statistical sense.

ADVANTAGES

Case studies can add depth and realism to an audit/evaluation analysis by making it more "real life." They can also demonstrate the impact of processes, policies, or programs in human terms. They complement other methods well.

DISADVANTAGES

The event(s) described in and results of case studies are usually not generalizable in and of themselves. Data may not be statistically reliable or valid, and controlling for bias is problematic. Case studies may be time-consuming, given the requirement for "comprehensive understanding" of the activity under review.