# Delphi Technique

## Idea In Short

The Delphi Technique is a method used to estimate the likelihood and outcome of future events. A group of experts exchange views, and each independently gives estimates and assumptions to a facilitator who reviews the data and issues a summary report. The group members discuss and review the summary report, and give updated forecasts to the facilitator, who again reviews the material and issues a second report. This process continues until all participants reach a consensus. The experts at each round have a full record of what forecasts other experts have made, but they do not know who made which forecast. Anonymity allows the experts to express their opinions freely, encourages openness and avoids admitting errors by revising earlier forecasts.

The Delphi technique entails a group of experts who anonymously reply to questionnaires and subsequently receive feedback in the form of a statistical representation of the "group response," after which the process repeats itself. The goal is to reduce the range of responses and arrive at something closer to expert consensus. The Delphi Method has been widely adopted and is still in use today.

## Origins

The Delphi Technique has its origins in the Cold War. RAND developed the Delphi method in the 1950s to forecast the impact of technology on warfare. The US Air Force funded the original Project Delphi to attempt reaching a consensus view on the impact of technological advances on warfare. Prior to Project Delphi, the US Air Force had tried other methods, such as trend extrapolation and quantitative models. However, the shortcomings of the other methods became quickly apparent.

## The method

The Delphi method, also known as the estimate-talk-estimate technique [ETE], is a

systematic and qualitative method of forecasting by collecting opinions from a group of experts through several rounds of questions. This method relies on experts who are knowledgeable about a certain topic so they can forecast the outcome of future scenarios, predict the likelihood of an event, or reach consensus about a particular topic. The Delphi method consists of several rounds of written questionnaires that allow experts to give their opinions. After the experts answer each round of questionnaires, the facilitator collects all the answers and hands out a summary report of the answers to each expert. Then, the experts review the summary report and either agree or disagree with the other experts' answers. The experts then fill out another questionnaire that gives them the opportunity to provide updated opinions based on what they understand from the summary report. The Delphi method becomes complete when a consensus of forecasts is achieved.

## Features

Before we go into the general steps, it should be pointed out that the Delphi Model is a set (or family) of techniques, rather than one single clearly understood set of steps. Having said that, the key features of the Delphi Model are:

- **A Facilitator**: Provides the participants with initial questionnaires. Collects answers to these questionnaires and comments. The facilitator then filters out irrelevant information. This process avoids groupthink and the problems associated with group dynamics. The facilitator then creates the questionnaires for the second round and sends them to the participants
- **A series of information collection rounds** Here, participants can change their previous forecasts anonymously, see new information which is coming from other participants, and comment on this. In face to face meetings people tend to stick to their originally stated opinion to avoid loosing face, but with the Delphi Method they can change their mind at any moment
- **Participant anonymity**: It is normal for participants to remain anonymous at all stages to enable honest opinions to come through the process

The Delphi Technique can be difficult to understand from these three components alone, but a simple example should help clarify how it works.

## Delphi process

## Identify the issue and objective

It is important to define the issue you are trying to solve and what your objectives through the Delphi method. Make sure that you know what you are trying to forecast.

## Choose a group of experts and a facilitator

The experts can be individuals who are internal or external to the organization. The facilitator should take a neutral position and be someone with experience with research and data collection.

## Round one questionnaire

The facilitator provides the first questionnaire for the experts. Usually, questions in this round are open-ended to allow experts to brainstorm their ideas. The facilitator collects all the answers from the questionnaire and hands out a summary report of answers to the experts. In the summary report, the experts' identities remain anonymous to encourage them to state their opinions freely.

## Round two questionnaire

You should create the second questionnaire after analyzing the answers from the first round. Identify any similarities among answers and eliminate irrelevant / redundant content. So, the second questionnaire can go in the direction where there is consensus within the experts. When the experts answer the second questionnaire, their opinions may remain the same. Or, they may change their opinions after reading the summary report and other experts' opinions from the first round. After the completion of the second questionnaire, the facilitator hands out a second summary report of answers to the experts.

## Round three questionnaire

Proceed to the third round with the same idea as the second round. The third questionnaire should be created by analyzing answers from the second questionnaire. The experts will answer the third questionnaire based on their opinions from the summary report from the second round. You may continue to go through additional rounds of questionnaires. You can also choose to stop here if you feel like you've reached enough consensus among the experts; their forecasts should broadly agree with each other.

## Summary

The Delphi Technique is a tool which can be used to reach consensus amongst a group of people. It is suited to situations when you have many participants in the group and/or when you're looking to avoid the problems of groupthink to enable the group to agree on the best possible way forward. The Delphi Technique originates from the Cold War period, and is a family of techniques rather than one single repeatable procedure.