

Delphi Cost Estimation

Delphi Cost Estimation Technique

- Developed at RAND Corporation in 1951.
- Developed by Norman Dalkey and Olaf Helmer.
- Structured communication technique or method
- Developed as a systematic, interactive forecasting method which
- Relies on a panel of experts
- The technique can also be adapted for use in one to one i.e. face-to-face meetings
- Used for business forecasting

Delphi Cost Estimation Technique ...

- Delphi is based on the principle that forecasts (or decisions) from a structured group of individuals / experts are more **accurate** than those from unstructured groups.
- The experts answer **questionnaires** in two or more rounds.
- After each round, a **facilitator** provides an anonymous summary of the expert's forecasts from the previous round as well as the reasons they provided for their judgments.
- Experts are encouraged to revise their earlier answers in light of the replies of other members of their panel.

Delphi Cost Estimation Technique ...

- During this process the range of the answers will decrease and the group will converge towards the "**correct**" answer.
- The process is stopped after a predefined stop criterion
 - Number of rounds
 - Achievement of consensus
 - Stability of results
- The mean or median scores of the final rounds determine the results

Important Features of Delphi Cost Estimation Technique

- Anonymity (Hiding the identity) of the participants
- Structured flow of information
- Regular feedback
- Role of the facilitator

Anonymous Participants

- All participants remain anonymous.
- Their identity is not revealed, even after the completion of the final report. This prevents
 - The Authority
 - Personality
 - Reputation of participantsfrom dominating others in the process.

Anonymous Participants ...

- Frees participants from their
 - Personal Biases
 - Allows free expression of opinions
 - Encourages open critique
 - Facilitates admission of errors when revising earlier judgments

Structured Flow of Information

- The initial contributions from the experts are collected in the form of answers to questionnaires and their comments to these answers.
- The panel director controls the interactions among the participants by processing the information and filtering out irrelevant content.
- This avoids the negative effects of face-to-face panel discussions and solves the usual problems of group dynamics.

Regularity in Feedback

- The Delphi Method allows participants to comment on the responses of others, the progress of the panel as a whole, and to revise their own forecasts and opinions in real time.

Role Played by Facilitator

- The person coordinating the Delphi method is usually known as a facilitator or Leader, and facilitates the responses of their panel of experts, who are selected for a reason, usually that they hold knowledge on an opinion or view.
- The facilitator sends out questionnaires, surveys etc. and if the panel of experts accept, they follow instructions and present their views.
- Responses are collected and analyzed, then common and conflicting viewpoints are identified.

Role Played by Facilitator ...

- If consensus is not reached, the process continues through thesis and antithesis, to gradually work towards synthesis, and building consensus.

Implementing Delphi Estimation Technique

- Choosing a Facilitator
- Identifying Your Experts
- Defining the Problem i.e. questionnaire
- First Round of Evaluation of Questions
- Second Round of Evaluation of Questions
- Third Round of Evaluation of Questions
- ...
- Act on the findings

Implementing Delphi Estimation Technique

- Choosing a Facilitator. The initial step of the Delphi Method is to picking your facilitator. It is suggested to do...
- Identifying Your Experts. The success of your Delphi method depends upon a board of specialists that are...
- Defining the Problem. Next step revolves around defining what issues you are looking to comprehend via Delphi Method.
- Ask first round of Questions. In the first round, you need to pose general questions to pick up an expansive...