## Explain how the Delphi technique is used in estimation practices for project management. Does the Delphi technique have any weaknesses or risk associated with it? If so, please explain what they are and how they can affect the outcome of a project.

The Delphi technique entails gathering a panel of experts who are ideally anonymous to each other to build a consensus. The experts are required to answer questionnaires for each round. The facilitator will provide an anonymous summary of the other experts’ forecast from the previous round. As experts tend to stick to their theory, they will not take into consideration what the other experts will share. This can prove to be beneficial for estimation as Delphi relies on the ego of each expert to provide a variety of theories to be discussed for the problem. Once the experts have review the summary of the forecast by the other experts in the panel, they may revise their suggestion which can direct which theory is “correct”. The process is finalized after a consensus has been achieved. Delphi can be used for various estimation techniques such as cost, time, and risk.

Although Delphi can be a very powerful technique, it can also have risks and weaknesses associated with it. For instance, if two or more experts had met prior to the Delphi group discussion, this will reduce the uniqueness of each theory, thus rendering the Delphi analysis less effective. Delphi is also expensive to conduct as well as time consuming as it requires the time of a large group of participants, especially since it is an iterative process. As participants of the panel tend to stick to their views, they are less likely to move from their initial suggestions, making it difficult to reach a consensus quickly. Participants who do not shift from their initial view might also pose a risk if no changes have been made since the first round. Risks such as the loyalty of each participant can impact the findings of the analysis. If an expert was associated with a competing company, they might deliberately suggest bad ideas or products. The worst case of a Delphi analysis is that the estimate will result in not being accurate. This is especially evident if the idea to be discussed is novel and unique.

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| **Risk** | **Outcome** |
| Members met prior to group discussion | Less variety of unique ideas |
| Expert has no loyalty | * Expert deliberately recommends unreliable products * Expert deliberately suggests bad ideas |
| Idea is novel | Inaccurate estimate |
| Participants do not move away from their initial views | No proper consensus |
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