

The art in policy Delphi practice: critical decisions for its design and application on foresight exercises

El policy Delphi en la práctica: decisiones críticas para su diseño y aplicación en ejercicios de prospectiva

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Abstract

The Delphi method was initially developed in the mid-20th century as a tool for exploring future technological developments, and its variant known as the policy Delphi was developed in 1970 to incorporate the ideas of different stakeholder groups in foresight exercises. A review of more than one hundred exercises that employed this technique up to 2025 allows for a reflection on its practical implementation and on the crucial decisions involved during its design, execution, and analysis phases. Fourteen crucial decisions have been identified for the design, execution, as well as the analysis and interpretation of foresight exercises, which concern the balance in areas such as theoretical considerations, participation of all stakeholder groups, uncertainty management, breadth of analysis, methodological approaches, the use of collective expertise to examine policy instruments and decisions, case-based experiences, and decision-making informed by dominant patterns of thought.

Keywords: *Foresight; Futures; Methods; Project Design.*

Resumen

El método Delphi que se diseñó para indagar acerca del futuro de la tecnología a mediados del siglo XX, tiene una variante llamada policy Delphi que se desarrolló en 1970 para incluir las ideas de diferentes grupos de interés en ejercicios de prospectiva. Una revisión de más de cien ejercicios que utilizaron esta técnica hasta 2025, permite una reflexión acerca de su implementación práctica y decisiones cruciales durante su diseño, ejecución y fases de análisis.



Se han identificado catorce decisiones cruciales para el diseño la ejecución, así como el análisis de los ejercicios de prospectiva que comprenden el equilibrio en áreas como consideraciones teóricas, participación de todos los grupos de interés, gestión de la incertidumbre, amplitud del análisis, enfoques metodológicos, aprovechamiento de la experiencia colectiva para analizar instrumentos y decisiones políticas, experiencias basadas en casos y la toma de decisiones atendiendo al pensamiento dominante.

Palabras clave: *Diseño de Proyecto; Futuro; Prospectiva; Metodología.*

INTRODUCTION

The Delphi method was developed in the mid-20th century to “obtain the most reliable consensus of opinion of a group of experts [...] by a series of intensive questionnaires interspersed with controlled opinion feedback” (Linstone & Turoff, 2002, p. 10). Over time, researchers refined and adapted the method to better align with diverse research objectives, and Turoff (1970) introduced the concept of the *policy Delphi* to facilitate expert discussions and generate multiple perspectives on complex issues, particularly in the context of foresight. This approach has been applied in settings where information is scarce, alternative scenarios could be explored, and divergent viewpoints are essential for understanding both consensus and dissent (Beiderbeck et al., 2021; de Loë et al., 2016; Linstone & Turoff, 1975; Turoff, 1970; Klenk & Hickey, 2011; Meskell et al., 2014).

Academic contemporary research employs *policy Delphi* across fields such as sociology, education, energy, health, and security (e.g., Loughlin & Moore, 1979; Sharples et al., 2009; Uehara et al., 2021; Walpole et al., 2015), although there is no universally accepted framework for designing, managing, and analysing these studies. Typically, a steering committee design the exercise and selects a panel of participants to complete questionnaires, often delivered remotely through online platforms supporting iterative rounds. At least two rounds are required, as the second enables participants to review aggregated feedback—such as means, distributions, and deviations—from the previous iteration, fostering informed and participatory responses, sometimes in real time (Gordon & Pease, 2006). *Policy Delphi* is frequently combined with other foresight methods to enhance precision and scope, either before or after the Delphi exercise. Building on Turoff’s seminal work, a myriad of creative adaptations has emerged to engage diverse stakeholders around complex problems.

This study addresses the following research question: How can *policy Delphi* exercises be more effectively designed, conducted, and interpreted? The aim is to provide foresight practitioners a structured reflection on key decisions, trade-offs, and implications at each stage of the process. Given the challenges of preparing for the future (exploratory approach) or shaping it (normative approach), choices made by organizers can significantly influence outcomes. Policy-makers, researchers, and

decision-makers across domains—such as healthcare, education, environmental policy, and strategic planning—can leverage participants judgment to inform interventions and programs. Consequently, the findings of this study offer practical guidance for those planning, analysing, or implementing *policy Delphi* exercises.

The article presents a theoretical framework and a systematic review of *policy Delphi* studies, culminating in fourteen practical decisions for organizers to consider before implementation. The conclusions highlight key insights and suggest directions for future practice.

THEORETICAL FRAMEWORK

Futures Studies and Their Vocabulary

Modern futures studies emerged from forecasting, largely enabled by the development of computational quantitative methods in the twentieth century. *Forecasting* involves extrapolating predictions from present conditions and historical trends (Armstrong, 1985; Peter & Jarratt, 2015); in contrast, the term *foresight* refers to processes that incorporate interactive time horizons, open reflection, relationship management, consultation, and dialogue aimed at shaping shared future visions and identifying future opportunities. Foresight methodologies—such as the *policy Delphi*—provide analytical systems capable of anticipating alternative futures and visualizing their consequences through holistic and creative perspectives (Fuerth, 2009; Kadtko & Wells III, 2014), and they can also promote new ways of understanding in contemporary contexts (Andersen & Borup, 2009).

Foresight differs from traditional *long-term planning* by recognizing that discontinuities may arise. Hence, methods that rely on past events and empirical data—such as econometric models or patent analysis—can constrain open-minded responses to disruptive changes. While foresight exercises often begin by considering recent history and current conditions, linear extrapolation in dynamic environments paves the way to error.

Popper (2008) classifies foresight methods into four categories: evidence, creativity, interaction, and expert judgment. Evidence-based approaches draw on historical data to predict future developments, whereas creative methods generate images, business models, and management practices to suggest plausible alternatives. Participatory and interactive processes enable stakeholders to anticipate, recommend, and transform systems, contributing to shared visions and strategies for social, political, economic, or technological change. Expert-based approaches provide access to up-to-date empirical knowledge and leverage the capacity of specialists to extrapolate, imagine, and collaborate on future-oriented judgments.

Although the Delphi method was originally designed for expert judgment, *policy Delphi* introduces variations that incorporate stakeholder interaction, creative idea generation, and integration with other research methodologies, aligning with Popper's multidimensional framework.

Evolution of Futures Studies and Policy Delphi: Current State

Humanity has long sought to anticipate the future to prepare for change. However, as an academic discipline, futures studies are generally traced back to developments in France during the 1960s, led by authors such as Gaston Berger and Bertrand de Jouvenel, whose perspectives were especially critical and pessimistic toward technological progress (Andersen & Rasmussen, 2012; Miles et al., 2008). By the 1980s, the field adopted a global, pragmatic focus on major social changes and emerging trends, consolidating analytical techniques and launching national foresight exercises.

Developed at RAND in the post-World War II era, the Delphi method served as a systematic forecasting instrument designed to predict technological and military advancements among potential adversaries—particularly the Soviet Union—thereby informing United States of America defence strategies throughout the Cold War. Face-to-face expert discussions often failed due to hierarchy and group pressures, so Helmer, Dalkey, and Rescher introduced anonymous questionnaires with iterative feedback, allowing participants to revise opinions without external influence and converge toward collective judgments.

In 1970, Turoff proposed the *policy Delphi*, shifting the focus from consensus to exploring divergent stakeholder positions (Turoff, 1970). Since then, numerous adaptations have emerged, supported by advances in information and communication technologies. Online platforms reduced turnaround times, expanded panel diversity, and enabled real-time Delphi with continuous feedback (Gordon & Pease, 2006), alongside hybrid approaches integrating bibliometrics, simulation, big data analytics, and scenario studies.

Conceptual and Methodological Approaches to *policy Delphi*

The distinction between exploratory and normative approaches shapes the design of foresight exercises: exploratory studies investigate potential changes, while normative one's outline pathways toward desirable futures, requiring stronger commitment to outcomes. Within *policy Delphi*, Turoff (1970) identified three roles: the steering group, expert panel, and end-users, allowing the method to operate under both frameworks.

Futures research often adopts transdisciplinary and interdisciplinary perspectives to address complex social realities (Nikolova, 2014). Expert selection depends on research scope, but *policy Delphi* remains flexible, enabling diverse panels and ensuring anonymity to reduce social pressures. However, limitations common to social sciences—such as replication challenges, sample representativeness, and variability in expert engagement—persist (Vicente & Martínez, 2024). These issues highlight the need for transparent documentation of methodological choices and analytical strategies to strengthen credibility.

Practical Development of Foresight Exercises

Foresight operates as a continuous, iterative cycle. Cuhls (2003) describes a process beginning with theme identification, followed by questionnaire design, application of research techniques, and participatory discussions that generate feedback for new themes. Within this broader cycle, a specific foresight exercise typically comprises three phases: planning, implementation, and monitoring/dissemination (Andersen & Rasmussen, 2012), and Horton (1999) described three stages: gathering and synthesizing trends, interpreting their implications for the organization, and integrating this understanding into actionable commitments.

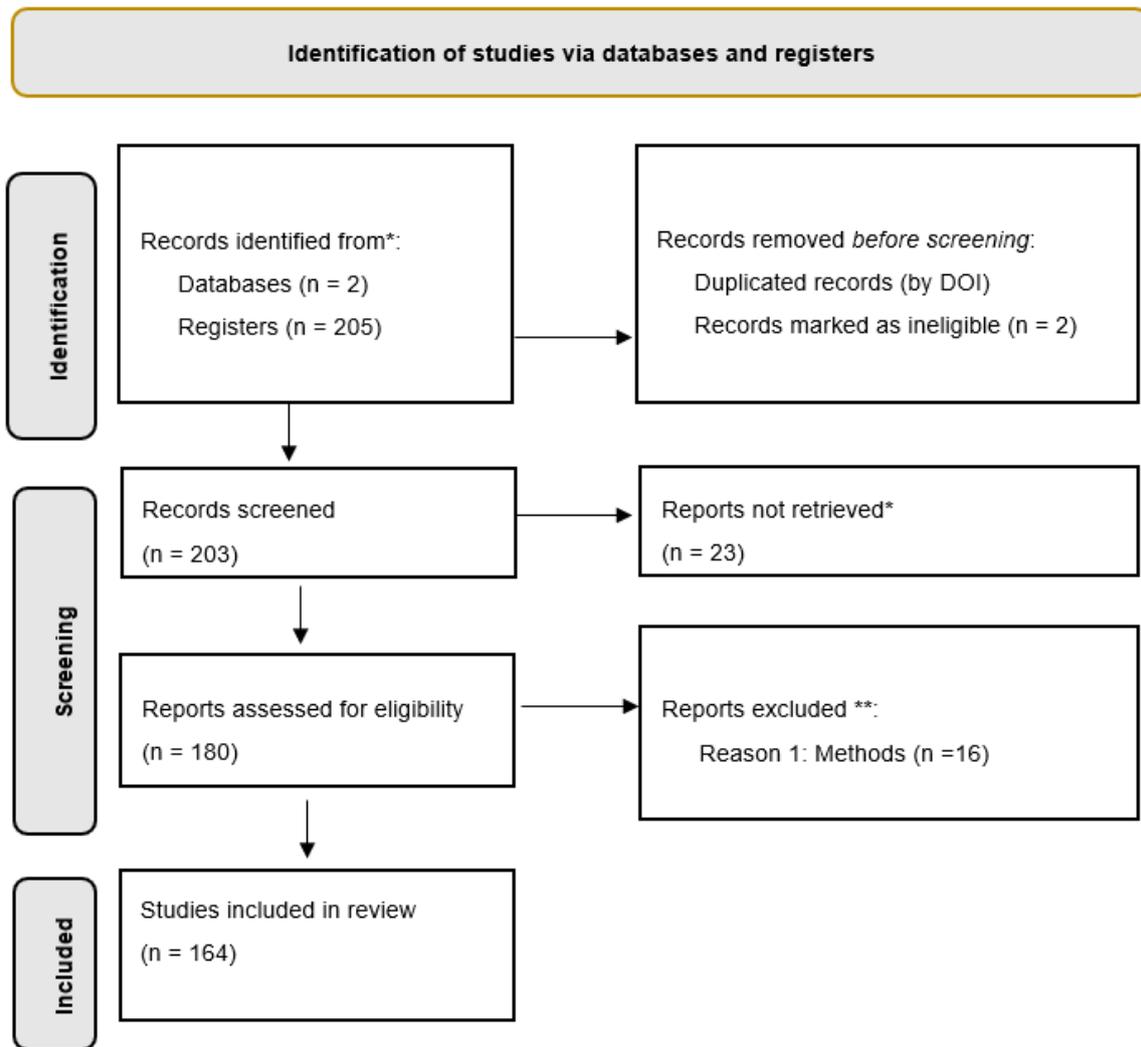
METHODOLOGY

The bibliometric analysis was conducted in accordance with the PRISMA 2020 guidelines (Page et al., 2021), while also considering the scope of this study and the available data through the systematic approach proposed by Zupic and Čater (2015). This methodology was designed to address the research question: How can Policy Delphi studies be more effectively designed, conducted, and analysed? Figure 1 provides a schematic representation of the process.

Figure 1.

PRISMA 2020 flow diagram for new systematic reviews which included searches of databases and registers only

Source: Adapted from Page et al, (2021) (CC BY 4.0)



First, studies published in the ScienceDirect and Web of Knowledge databases were retrieved using the keywords “policy Delphi” and related terms such as “foresight” and “foresight exercise”. The search aimed to identify foresight exercises incorporating the Policy Delphi methodology. A total of 205 references were found, covering the period from the earliest record—the first article by Turoff in 1970—up to April 1, 2025. Of these, 203 were analysed in English due to their broader international impact, while publications in Polish and Portuguese were excluded as they targeted more restricted audiences. The initial corpus comprised 181 research articles, 9 book chapters, 7 conference papers, 2 review articles, 2 doctoral theses, one letter to the editor, and one scientific meeting abstract. Duplicate studies—those published in multiple formats, such as both a conference paper and a journal article—were removed, resulting in a refined set of 180 references.

The screening prioritized works by citation counts to identify key contributions and assign thematic categories. Sixteen purely methodological studies were excluded, leaving 164 for review. For each, data covered method combinations, expert selection, panel size, participation, involvement of futurists or policymakers, rounds, origin, and international scope, plus free-text observations. Finally, studies were ranked by citation count, and key information was systematically documented in Table 1 to support subsequent analysis.

Table 1. *Analysis Conducted on the Policy Delphi Studies Reviewed*

Fiel	Description
DOI	Unique identifier for each reference
Title	Publisher work title
Authors	Full list of authors
Source	Journal, book, or conference where the work was published
Publication Year	1970-2025
Total Citations	Citations recorded up to April 1, 2025
Citations per Year	Average citations per year from publication to 2024
Topic	Category assigned for the study (e.g., business administration, education, environment, medicine, security)
Combination of foresight methods	Indicates whether other methods were used before or after <i>policy Delphi</i> to gather information or conduct analysis
Type of combined methods	Specific methods combined with <i>policy Delphi</i>
Expert selection method	Procedure used to identify and select panel experts
Kind of experts:	Description of participant profiles included in the panel
· Researchers	· Yes/No
· Policy-makers	· Yes/No
· Futurists	· Yes/No
Number of Participants	Total number of persons invited to join the study
Number of Participants that completing study	Number of individuals who completed all rounds
Number of rounds	Total number of discrete rounds conducted
Country	Country where the exercise originated
Multiple countries	Yes/No
Other observations	Free-text notes on specific needs or comments related to the exercise

Source: *Author's Own Work*

And finally, third, the data were synthesized (Step 8 of PRISMA), organizing the available information to reveal the “structure and dynamics of the research field” (Zupic & Čater, 2015, p. 431). This process enabled the interpretation phase (Step 10 of PRISMA 2020 and Step 5 of Zupic & Čater), which is

presented here as fourteen key decisions that sponsors and/or organizers should consider when planning and conducting a *policy Delphi* exercise.

RESULTS

The Fourteen Decisions

These decisions derive from the analysis and are grouped according to the main phases of the exercise.

PLANNING PHASE

Expert Judgment vs. “Wisdom of the Crowd”

Since *policy Delphi* exercises do not rely on representative sampling (Okoli & Pawlowski, 2004), selecting experts becomes a demanding task for the organizing committee. While Turoff originally worked with small expert groups, the opposite approach is also possible. Surowiecki (2004) introduced the concept of “wisdom of the crowd,” highlighting the superior capacity of groups compared to individuals in generating innovative public opinions and demonstrating that collective predictions often outperform those of any single participant.

Four key elements underpin this approach: diversity of opinion, participant independence, group decentralization, and aggregation mechanisms that transform individual judgments into collective decisions (Davis-Stober et al., 2015; Wu et al., 2015). Furthermore, Spickermann et al. (2014) distinguished between superficial diversity (e.g., age, gender) and deep diversity (e.g., values, knowledge, learning curves), both of which merit consideration. Some reviewed studies report very large panels—over 1,000 participants—combining experts and stakeholders to ensure diversity and aggregate input across Delphi rounds (Pereira et al., 2018; Sharples et al., 2009), though independence and decentralization were rarely explained. This underscores the need for clear diversity criteria and robust aggregation mechanisms in future exercises.

Education vs. Indoctrination

Godet (2010) claimed that those who ignore the past cannot anticipate possible futures, although in some topics it may be necessary to provide panellists with basic assumptions, particularly when panels are heterogeneous rather than composed exclusively of specialists (Rowe & Wright, 2001). Educating stakeholders can be an explicit objective of *policy Delphi* studies (Turoff, 1970), and it could exist contexts where the question arises whether expertise can be developed through training or extended practice when sufficient information is lacking, as suggested by Shanteau et al. (2002).

In exploratory exercises, where all contributions are welcome, uninformed participants may add

limited value, whereas in normative exercises their involvement implies a commitment to future actions (Nikolova, 2014). Therefore, participants should possess substantial expertise; including those without it is counterproductive unless they receive adequate briefing or training. Yet, any educational intervention carries the risk of bias or indoctrination (Rourke, 1984). In normative policy Delphi exercises, this risk is particularly critical, as training may introduce political, behavioural, or other biases. Consequently, any informational intervention—including preparatory materials for panel members—must be carefully justified and documented.

Anonymity vs. Constructive Forums

One of the defining features of the *policy Delphi* method is anonymity, which helps minimize the influence of individuals seeking to impose their views on the expert panel. Current applications of this methodology use to employ online platforms, offering convenience for participants and facilitating efficient data collection (Moon & Baker, 2012), thus anonymity is easily preserved across rounds by providing only aggregated feedback rather than individual responses. Turoff himself acknowledged that committee meetings and analytical work could not be entirely replaced, as their purpose was to gather perspectives to address any emerging circumstances (Turoff, 1970).

Nevertheless, anonymity does not preclude the integration of complementary approaches. Combining *policy Delphi* with discussion groups or workshops—whether in-person or virtual—can create constructive forums where participants interact openly, generating richer insights and broader options for addressing complex issues affecting diverse stakeholders. If hybrid formats are adopted, the design must be carefully justified, ensuring that such interactions do not compromise the independence of participants or introduce undue influence that could bias the results.

Breadth vs. Depth

The objectives of *policy Delphi* studies often include exploring alternative scenarios, uncovering underlying assumptions, fostering consensus among participants, and linking diverse topics from multiple perspectives (Turoff, 1970). Consequently, the exploration process may require questionnaires of considerable length, which can reduce response rates across successive rounds. In opposition, overly concise instruments should produce risk to obtain superficial data, although follow-up workshops may help compensate for this limitation (de Loë, 1995).

Striking an appropriate balance between breadth and depth during questionnaire design is therefore a critical challenge. Pre-testing the questionnaires can provide valuable insights, yet it requires initial assumptions about the time and effort panel members are willing to invest. This trade-off underscores

the importance of aligning the scope of inquiry with participant capacity to maintain both rigor and engagement throughout the exercise.

Uncertainty vs. Quantitative Methods

Each round of questionnaires—and the final stage—requires systematic analysis. Descriptive analyses are most common, encompassing both qualitative and quantitative dimensions, often complemented by dissent analysis. Qualitative data in *policy Delphi* studies can be processed using commercial software such as NVivo or Atlas.ti, which support systematic coding and thematic exploration. Researchers also employ open-source alternatives like R, with packages tailored for textual data analysis, or even *ad hoc* designs (e.g. Martínez & Durán, 2024).

Analytical tools should enable flexible interpretation of panellists' responses while ensuring transparency, yet detailed methodological reporting is uncommon. Key aspects—such as confidence levels or optimism in predictions—are often neglected, despite evidence of polarization between pessimistic and optimistic views (Beiderbeck et al., 2021). Understanding these variations can strengthen data robustness and scenario implications. Although uncertainty complicates the use of reliability measures or confidence intervals, incorporating them enhances validity and should inform question design.

Foresight vs. Trends

The temporal horizon of the exercise is critical, due to expert projections could be classified into three categories—possible, probable, and preferable—depending on how questions are framed (Bell, 1997). Voros (2003) expanded these categories through the “futures cone,” aiming to avoid linearity in future-oriented research. Accordingly, foresight methods based on empirical data often employ techniques such as econometrics, bibliometrics, or quantitative analysis (Popper, 2008). This distinction between forecasting and foresight becomes evident when using these tools, as intuitive forecasting has well-documented limitations (Lenz, 1962; Slocum & Lundberg, 2001).

In the context of *policy Delphi*, a key question arises: how can panellists deliberate on future issues in the absence of empirical data or discernible trends? The less information available on the topics under consideration, the greater the need for careful and deliberate expert selection. In such cases, it may even be advisable to assess whether participants have prior experience in foresight or future-oriented research—so-called “futurists.” Interestingly, none of the reviewed studies explicitly reported including futurists among their panellists, underscoring the importance of clearly defining the type of foresight to be pursued.

Adaptation versus Fidelity

Managing a *policy Delphi* exercise often requires creativity to adapt the methodology to specific political, cultural, or institutional contexts. Consequently, variants of the original method have emerged to support diverse consultation formats (e.g., Haynes et al., 2016), frequently integrating mixed methods from different disciplines to enhance flexibility. Adaptations may involve reformulating questions, designing iterative rounds that balance openness and focus, and interpreting results to accommodate both consensus and dissent. Such practices demand methodological expertise rarely addressed in formal guidelines and often embedded as tacit knowledge within research teams. Therefore, documenting and justifying every methodological decision is essential.

IMPLEMENTATION PHASE

Consensus versus Dissent

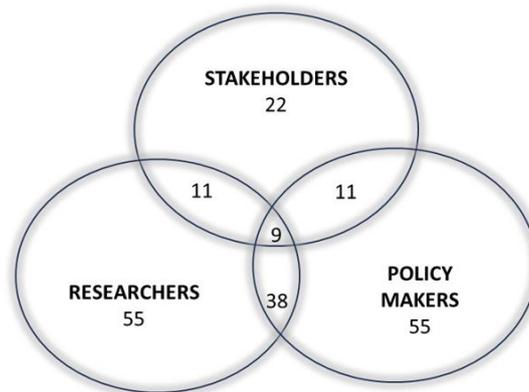
Early Delphi studies conducted with small groups often achieved high levels of agreement, sometimes within only a few rounds. Incorporating divergent viewpoints—known a priori on certain issues—would enrich a *policy Delphi*; however, this requires defining the degree of agreement that makes an argument optimal in terms of representativeness, and on this point researchers remain divided. For instance, Loughlin and Moore (1979) suggested a 51% agreement threshold based on the mean of a parameter, whereas other authors advocate for 75–80%. Some studies consider agreement intervals as a score of 3 (mean, median, or higher) on a four-point Likert scale, while others employ calculations using the Interquartile Range. Regarding the timing for setting the agreement threshold, some recommend establishing it during the study design phase (Edwards et al., 2013; Ward et al., 2019; Williams & Webb, 1994), although in practice it is often more convenient to do so after the first round has been tabulated.

A key strength of *policy Delphi* is balancing structured objectivity with contested assumptions. Unlike traditional Delphi, which seeks consensus, policy Delphi values divergence. Yet implicit notions of what counts as ‘credible’ often bias results toward agreement. The legitimacy of forward-looking judgments—whether based on expert authority or aggregated stakeholder views—raises critical questions: Which voices are included or excluded? What epistemic frameworks shape outcomes? To what extent do prevailing norms influence projections? Exposing these assumptions is not only methodological but a political and ethical imperative, clarifying whether the value lies in consensus or in the richness of contributions.

Stakeholder Groups versus Conflicts of Interest

Expert panels typically include individuals from diverse backgrounds, primarily policy-makers and researchers, although only fifty-five published studies explicitly detail this composition. Figure 2 illustrates the number of studies incorporating stakeholder groups (22), combined with other categories such as researchers (11) and policy managers (11). However, a complete combination of these categories was observed in only nine studies focused on areas such as energy, education, environment, sustainable development, animal welfare, or tourism (see, for example, Collins et al., 2009; Guimont & Lapointe, 2016; Kattirtzi & Winskel, 2020; Maxey & Kezar, 2015; Mehnen et al., 2013; Rikkonen & Tapio, 2009). This finding indicates that steering committees value stakeholder inclusion but mitigate conflicts of interest through careful selection and validation against other expert views. Diverse panels, including researchers, enrich the process; however, conflicting opinions should be cross-checked or supplemented, with documented justification. Ultimately, triangulation and transparency are essential to address limitations and reduce uncertainty.

Figure 2. Type of experts included in the expert panel of the *policy Delphi*



Source: Author's Own Work

Lack of Theory versus Partial Omniscience

Designing the questionnaire through which information will be elicited requires openness to exploring all possible options. This, in turn, highlights the fact that existing theories may be insufficient to explain future alternatives. Such theoretical gaps cannot be easily compensated by imagination alone, understood as an expanded vision of substantive knowledge projected into the future (Loveridge, 2004).

Expert selection typically prioritizes individuals with recognized experience in the topic, though finding specialists for every area can be challenging. Panels often include experts in specific fields who may identify additional panellists during the process. As shown in Figure 2, researchers are commonly

included, likely to anchor theory and define the state of knowledge. Additional participants may be added as needed, making it essential to assess whether certain arguments should carry greater weight depending on the exercise's purpose—raising questions about differential weighting and its criteria.

Mechanical Process versus Interpretative Judgment

Although often presented as a structured and systematic process, successful implementation depends on the steering group's judgment and ability to manage ambiguity. In practice, *policy Delphi* requires continuous interpretative decisions—such as question design, participant selection, and feedback synthesis—making it far from mechanical. Published studies rarely provide sufficient detail to assess reliability or transparency, and procedural guidelines cannot anticipate situations that demand *ad hoc* solutions.

Case Studies versus Generalization

Case studies showed that *policy Delphi* exercises rarely proceed as planned, as unforeseen dynamics—such as stakeholder shifts or political pressures—often require real-time, *ad hoc* adjustments (Havers et al., 2019; Bloor et al., 2015). These experiences suggest the method is as much an art as a science across domains like health, education, and security. While theoretical frameworks guide design, rigid applications fail to capture the complexity and adaptability needed in practice. Documenting these variations remains essential for improving future exercises and consolidating lessons learned.

MONITORING AND DISSEMINATION

Europe-USA centric versus rest of the planet

Attending to Eurocentrism about future studies Sardar said that: “Eurocentrism is all too evident in this mode of inquiry from the way time and space are perceived, masculinity and technology are privileged, social organisation and institutional arrangements are structured, and non-western cultures made totally invisible” (Sardar, 2010, p. 182). Perhaps for this reason, it is evident that the countries that have conducted the most *policy Delphi* studies are Canada, the United States, some European countries, and Australia. If the future vision sought by such studies is more aligned with the philosophical trends in how the future is understood in these countries, as opposed to how future forecasting is perceived in other parts of the world, it goes beyond the scope of this article, which only presents evidence from studies that have been conducted and published up to this point.

Although *policy Delphi* is often described as methodologically neutral, its application is shaped by cultural, institutional, and geographical contexts. Assumptions such as the value of dissent, expert

authority, or feasibility of multiple rounds may not hold universally. In collectivist societies, anonymity may conflict with norms favoring visible consensus, while hierarchical institutions can undermine open exchange despite confidentiality. Geographic factors—such as digital access or political sensitivities—also influence practice. These complexities call for a contextual, adaptable approach that avoids rigid prescriptions and remains attuned to social dynamics.

Critique versus Technocracy

Traditional descriptions of this method tend to emphasize its capacity to produce rational and consensual outcomes, yet they often overlook the inherently subjective and contested nature of knowledge, as well as the influence of dominant thinking. In this context, dominant thinking is not merely a reflection of majority beliefs but rather a strategic construction that reinforces the status quo and suppresses alternative perspectives (e.g. Balthasar, 2024; Daheim & Uerz, 2008; Simonse et al., 2023). Recognizing and critically analysing these dominant ideologies is essential for understanding power dynamics and fostering social change.

When a foresight exercise challenges technocratic assumptions—favouring participatory or value-based perspectives over expert-driven, data-centred approaches—it raises implementation questions. Will recommendations grounded in alternative epistemologies gain legitimacy among decision-makers accustomed to conventional norms, or face resistance as less objective or politically inconvenient? While such critique enriches the process intellectually and ethically, it complicates translating results into policy contexts that privilege expert authority and procedural rationality. Steering groups must navigate competing narratives, power asymmetries, and value judgments throughout the exercise. Table 2 summarizes fourteen key decisions for policy Delphi and their practical implications.

Table 2

Summary of the 14 Trade-offs in Policy Delphi Practice

Trade-off	Key Tension	Practical Implication
1. Expert judgment vs. wisdom of the crowd	Small, elite panels vs. large, diverse groups	Define criteria for diversity and aggregation mechanisms
2. Education vs. indoctrination	Context-setting vs. biasing	Justify and disclose preparatory materials
3. Anonymity vs. forums	Confidentiality vs. dialogue	Consider hybrid formats; justify design
4. Breadth vs. depth	Wide coverage vs. response fatigue	Pretest questionnaires; consider workshops
5. Uncertainty vs. judgment	Lack of metrics vs. subjective opinion	Incorporate measures of confidence and optimism
6. Foresight vs. trends	Preferable futures vs. extrapolation	Specify foresight orientation clearly

7. Adaptation vs. fidelity	Modified methods vs. legitimacy	Justify and report methodological changes
8. Consensus vs. dissent	Agreement vs. polarization	Clarify whether the study values consensus or divergence
9. Stakeholders vs. conflicts	Inclusivity vs. bias	Disclose and triangulate stakeholder views
10. Theory vs. omniscience	Absence of framework vs. reliance on experts	State theoretical anchoring and limits
11. Mechanical vs. interpretive	Step-by-step tool vs. ad hoc choices	Document interpretive decisions
12. Cases vs. generalization	Context-specific insights vs. theory	Highlight lessons for transferability
13. Eurocentrism vs. diversity	Western bias vs. global perspectives	Adapt method to cultural contexts
14. Critique vs. technocracy	Reinforcing norms vs. challenging power	Reflect on epistemological assumptions

Source: Source: Author's Own Work

CONCLUSIONS

The *policy Delphi* method, grounded in expert judgment and iterative feedback, has proven to be a flexible and adaptable tool for complex foresight exercises, whether used alone or combined with other approaches. Over time, it has evolved to address diverse objectives and contexts; however, its application entails trade-offs and methodological decisions that can significantly shape outcomes. Balancing expert judgment with broader participation, managing tensions between consensus and dissent, and adapting to political, cultural, and institutional settings underscore the method's nuanced nature.

This article reviewed studies employing *policy Delphi* and proposed practical decisions for its design, implementation, and dissemination. While the method fosters exploration of alternative futures and diversity of perspectives, its execution is complex, requiring careful participant selection, stakeholder role consideration, and sensitivity to technocratic assumptions. Critiquing these assumptions enriches foresight intellectually but may complicate the uptake of results within governance structures privileging expert authority and procedural rationality. Successful exercises demand methodological awareness beyond procedural guidelines, embracing ambiguity and dissent as legitimate analytical dimensions.

Limitations of this review stem from incomplete reporting in published studies, where internal decisions—such as expert selection or question design—rarely appear in detail. Future research should enhance transparency, refine questionnaire design, and explore hybrid approaches. Developing a standardized yet adaptable guide could improve practice while preserving flexibility. Theoretical work should continue to advance understanding of strategic decision-making under uncertainty, integrating diverse knowledge systems. Ultimately, the effectiveness of *policy Delphi*

depends on reconciling scientific rigor with creative flexibility to generate actionable insights for decision-makers facing increasingly complex and uncertain futures.

ETHICAL CONSIDERATIONS

The Declaration of Helsinki (1964; current revision 2024), which establishes safeguards for vulnerable people, ensures transparency in clinical trials and commitments to distributive justice as equity in research. In the case of the research that has given rise to this article, it is based exclusively on secondary sources, as it is a review of the literature and did not involve human participants, either as subjects of study or as members of a research team, since it is an individual scholarly work.

AVAILABILITY OF DATA AND MATERIALS

The data used in this research are publicly available, and the analysis performed can be accessed upon reasonable request to the author.

DECLARATION OF GENERATIVE AI AND AI-ASSISTED TECHNOLOGIES IN THE WRITING PROCESS

It was not used in the process of creation nor analysis. Copilot AI was solely consulted during the writing stage of the research in English when it was required, for the purpose of verifying the meaning of complex sentences, as well as to assist in reducing the length of the manuscript, which exceeded 6.000 words due to the requests and clarifications prompted by the reviewers.

CONFLICT OF INTEREST

The author declares that there is no conflict of interest.

FINANCING

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AUTHORS' CONTRIBUTIONS

The main and only author oversaw the documental compilation, analysis and composing of the manuscript, with the correct annotations done by the reviewers that suggested a more logical distribution for an easier reading experience.

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