

5. Horizon Scanning: Delphi Exercises

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Horizon Scanning is a foresight approach that identifies priorities for future policy, practice, or research. There are a range of Horizon Scanning methods from literature reviews to expert panels, workshops and interviews. What binds these methods together is drawing on expert knowledge, to seek out cutting-edge directions. This infosheet specifically looks at Delphi Exercises, which have been increasingly used to source, develop, negotiate, and build consensus. By returning multiple times to the same group of experts – often through a survey – recommendations are refined.



HORIZON SCANNING AT-A-GLANCE

- Co-creates expert recommendations for policy, practice or research. Iterative nature deepens findings and supports mutual learning amongst invited participants.
- Requires survey software, virtual or physical meeting space, organisational and people management skills.



Benefits

1. Establishes expert-derived evidence on strategic priorities, e.g. to guide future investment in research or for public policy interventions.
2. Identifies emerging opportunities and risks, as well as critical knowledge gaps that need filling.
3. Provides clear signposting for action, which is especially important when dealing with complex societal challenges.
4. Ensures a proactive, anticipatory approach, as opposed to reactively waiting for problems.
5. Highlights where consensus amongst expert stakeholders can be more easily attained.



Challenges and limitations

1. **Traditional focus on consensus** means that (inevitable) differences and tensions in expert positions can be underrepresented (although there are some examples where divergence has been embraced).
2. **Achieving sign-off** will require the coordinating team to manage their experts appropriately to ensure they feel comfortable with the final Horizon Scan output.
3. **Considerable organisational work**, e.g. chasing individuals for responses at every part of the Delphi process to avoid or mitigate delays.



Participants

The intended purpose of the Horizon Scan dictates participants. For example, researchers should be included if the purpose is to present researcher priorities for policymaker/funders to consider. Horizon Scanning has traditionally focused on professional expertise, and thus been invitation-only exercises. However, we argue they could be legitimately broadened to involve citizens, as part of including more everyday expertise. The method can be used by (and/or involve) decision-makers to inform future directions.

STEPS

There are a range of ways of implementing a Delphi Exercise, and, in fact, the exact implementation has rarely been detailed. Foulds et al. (2019, section 3.3) gives the following possible steps:

01 PRODUCE TERMS OF REFERENCE

Establish scope, agree on key definitions and target communities.

02

SELECT WORKING GROUP (WG) MEMBERS

We suggest selecting 25-30 members to: lock-in certain expert perspectives and guarantee gateways for wider input. Inclusivity targets are crucial, e.g. gender, geography, seniority, disciplines, policy experience.

03

SOLICIT RECOMMENDATIONS

All WG members complete first online Delphi survey, providing 5+ recommendations in response to a stated question. Each member sends survey to 10+ colleagues.

04

EDIT AND CATEGORISE

Merge or disaggregate submitted recommendations; delete irrelevant ones; edit language for clarity; anonymise.

05

WORKING GROUP VOTE

Longlist of recommendations is circulated to the WG for evaluation, e.g. voting on a scale of 1 (definitely exclude) to 5 (definitely include).

06

GROUP MEETING(S)

The voting will lead to a set of preferred recommendations, and some areas that need discussion. A workshop enables all WG members to directly annotate/edit emerging recommendations.

07

FRAME THE HORIZON SCAN

A second WG workshop could be arranged to discuss a common mission statement; identify critical gaps; cluster sets of recommendations.

08

WRITE FINAL REPORT

The exercise depends on shared ownership (e.g. co-authorship), thus all WG members should sign-off on the final write-up led by the coordinating team.

Timeframe: due to the time needed to obtain responses as well as robustly edit and ensure internal quality assurance it is likely to take a full year to get a high-quality Horizon Scan.



OUTCOMES AND IMPACT

The final output is the Horizon Scan itself, which is a set of recommendations; these could be research questions that need answering/funding, or precise policy interventions that need urgent consideration. Horizon Scans are often made up of a number of recommendations, e.g. "100 priorities", grouped around common themes. Decision-makers (the key actors to deliver impact) can engage with Horizon Scans in different ways. For example, a Horizon Scan could be submitted to decision-makers at the end of the exercise ('inform'); decision-makers could be engaged for validation or review purposes in the latter stages ('consult'); or decision-makers could be involved in the central expert group throughout ('involve').



RESOURCES NEEDED

Survey software to speed up the process of gathering Working Group member (and wider community) recommendations; Spreadsheet software to clean and analyse survey responses; Physical/virtual spaces for group meeting(s); Good organisational and people management skills to ensure timely responses and that disagreements are constructively negotiated.



ONLINE/OFFLINE

The most important element is to bring participants together at some point to discuss and negotiate the emerging recommendations – this can be done virtually or physically.

LEARN MORE

- Foulds, C., Bharucha, Z.P., Krupnik, S., de Geus, T., Suboticki, I., Royston, S. and Ryghaug, M., 2019. *An approach to identifying future Social Sciences & Humanities energy research priorities for Horizon Europe: Working Group guidelines for systematic Horizon Scanning*. Cambridge: Energy-SHIFTS.
- Sutherland, W.J., Fleishman, E., Clout, M., Gibbons, D.W., Lickorish, F., Peck, L.S., Pretty, J., Spalding, M. and Ockendon, N., 2019. *Ten years on: A review of the first global conservation horizon scan*. *Trends in ecology & evolution*, 34(2), pp.139-153. Note: This group has led 14 annual Horizon Scans to identify issues of concern for global biological conservation.

REAL LIFE EXAMPLE: Energy-SHIFTS

This EU Horizon2020 project ran four Horizon Scanning exercises to identify 100 priority Social Sciences and Humanities questions for each of the following policy areas: [Renewables](#); [Smart Consumption](#); [Energy Efficiency](#); and, [Transport and Mobility](#). A video on [What is Horizon Scanning?](#) was also produced by the project.

