The Delphi Technique

- Uses groups to pool expertise but tries to minimize adverse group effects by:
  - Restricting interpersonal interaction
  - Controlling information flow
- Principles:
  - Anonymity
  - Feedback
  - Iteration
- A structured process:
  - Judgments → Collate → Feedback → Judgments…

DELPHI STUDY ON FOOD SAFETY PRIORITIES

- First Round ("Brainstorming")
  - Elicited 240 topics in 4 risk domains from 88 experts from 30 countries
- Middle Round (1st Delphi Round)
  - 4 questionnaires (1 per risk domain)
  - 30-40 topics per domain
  - Topics rated on 3 criteria ("Knowledge", "Public Health", "Harmonisation")
  - Rationales given for 2 favourite topics
- Final Round (2nd Delphi Round)
  - 10 highest rated topics per risk domain rated again
  - Feedback given about ratings and rationales at previous round

Generic

1. Methods and systems for identifying emerging food risks (e.g. new food-borne diseases) [M E]
2. Development of standard risk-benefit assessment methods (of foods)[C E N]
3. Common data collection /surveillance scheme [C M E N]
4. Multiple contaminant impacts on the risk profile of foods [C M E N]
5. Risks/benefits of botanicals/herbals in food supplements [C N]
6. Allergenicity/ food allergens in general (risk assessment and management) [C N]
7. Aggregated exposure (as per cocktail effects, but including environmental as well as food exposures) [C E N]

Chemical

8. Harmonisation of methods for risk assessment of chemical contaminants
9. Cumulative exposure assessment (e.g. for pesticide residues/ PAHs)
10. Infant and baby food
11. Emerging contaminants

Microbiological

12. Systems for monitoring and characterising microbes isolated from food, environment and human illness cases
13. Improve the use of genetic data (e.g. from whole genome sequencing) for risk assessment of microbiological contaminants
14. Antimicrobial/ antibiotic resistance
15. Microbial food pathogens (in general)
16. Food-borne viruses (in general) (e.g. Hepatitis A and Norovirus in fruit and vegetables)
17. Campylobacter (e.g. in poultry and ready to eat foods)
18. Zoonoses (in general, including bio-hazards, MRSA etc.)

Environmental

19. Improving information on the occurrence and spread of harmful organisms
20. Ribonucleic acid interference (RNAi) applied to food producing organisms as pesticide, veterinary medicine or newly expressed trait in genetically modified crops
21. Better understand biological organisms and plant substances used in crop protection (so reducing need for chemicals e.g. pesticides)
22. The impact of chemicals on the ecosystem (release of chemicals to the environment)
23. Presence/detection of environmental contaminants in food (e.g. from agricultural, industrial or household sources)
24. Cocktail effects (the health risk assessment of chemical mixtures e.g. food additives)

Nutrition

25. Indirect effects on human health due to modified agricultural practices (e.g. via reduction of pesticide use, changed content of mycotoxins)
26. Developing standard biomarkers of intake and/or exposure to contaminants
27. Food supplements risk/benefits (generally)
28. Determination of allergen thresholds (clinical studies), in conjunction with immunochemical measurements of allergens in foods

28 food safety risk assessment priorities