EFSA Guidance on Communication of Uncertainty (Jan 2019)

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Guidance on Communication of Uncertainty in Scientific Assessments

European Food Safety Authority, Andrew Hart, Laura Maxim, Michael Siegrist, Natalie Von Goetz, Cristina da Cruz, Caroline Merten, Olaf Mosbach-Schulz, Majlinda Lahaniatis, Anthony Smith, Anthony Hardy ... See fewer authors

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SECTIONS PDF TOOLS SHARE

Figures References Related Information

Metrics

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How is EFSA carrying out this work?

2013

EFSA set up a Scientific Committee Working Group on Uncertainty in Scientific Assessment.

2015

EFSA publicly consults on draft Uncertainty Analysis GD.

Includes section on Communication

2016

The draft GD on Uncertainty Analysis was revised and trialled by EFSA's 10 scientific panels for one year.

Focus group study on how to communicate uncertainty to different target audiences.

2017

A workshop gathered feedback from the trial to help finalise the GD on Uncertainty Analysis .

The results of the focus groups were fed into a larger scale online survey to test preferences for expressions of uncertainty. In July a WG of social scientists, risk communicators and risk assessors starts to develop the Uncertainty Communication GD.

2018

The Uncertainty Analysis GD was published in January alongside a Scientific Opinion with the detailed scientific reasoning and methods.

A public consultation on the draft Communication GD was launched (4 May–24 June). The comments are used to revise the GD with the aim of having a final draft published by January 2019.

Terms of Reference

1. Develop practical **guidance for EFSA communicators** on how to communicate the various uncertainty expressions described in EFSA's Uncertainty Analysis GD (EFSA Scientific Committee, 2018a;b).

2. **Advise risk assessors** on how uncertainties are reported in EFSA assessments in relation to the need to communicate.

3. **Advise EFSA** on its current communication approach for dealing with uncertainty as described in the EFSA handbook*: When Food Is Cooking Up a Storm – Proven Recipes for Risk Communications* (EFSA, 2017).

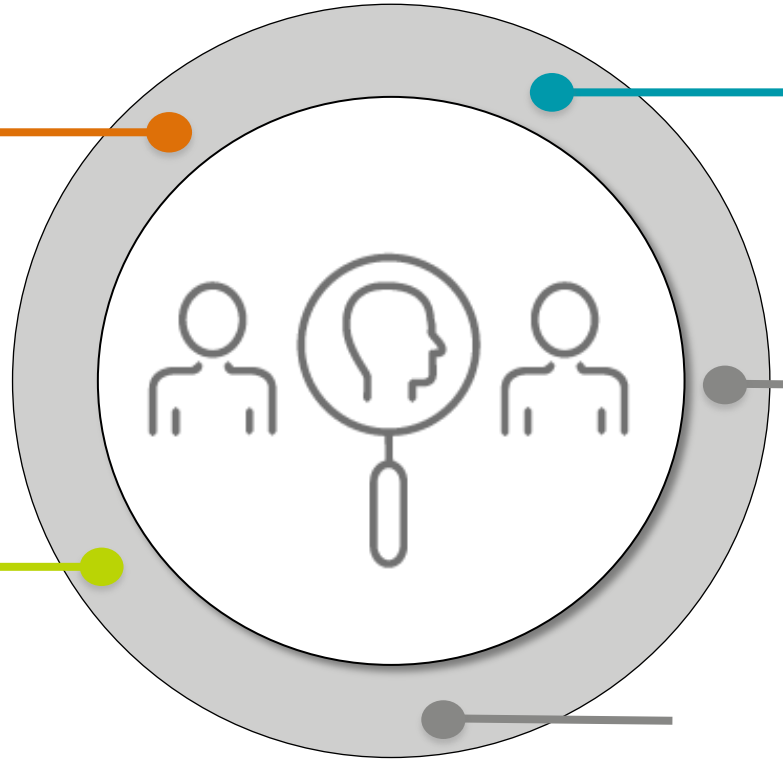
Public Consultation

Live from 4 May to 24 June 2018 and disseminated via:

- EFSA website news
- Focal Points and Advisory Forum networks
- Direct emailing
- Newsletters (EFSA Highlights, Stakeholders, Scientific Cooperation)
- LinkedIn
- Twitter
- ResearchGate

Result: **24 participants, 212 comments**

Participants by role



Academics (12)

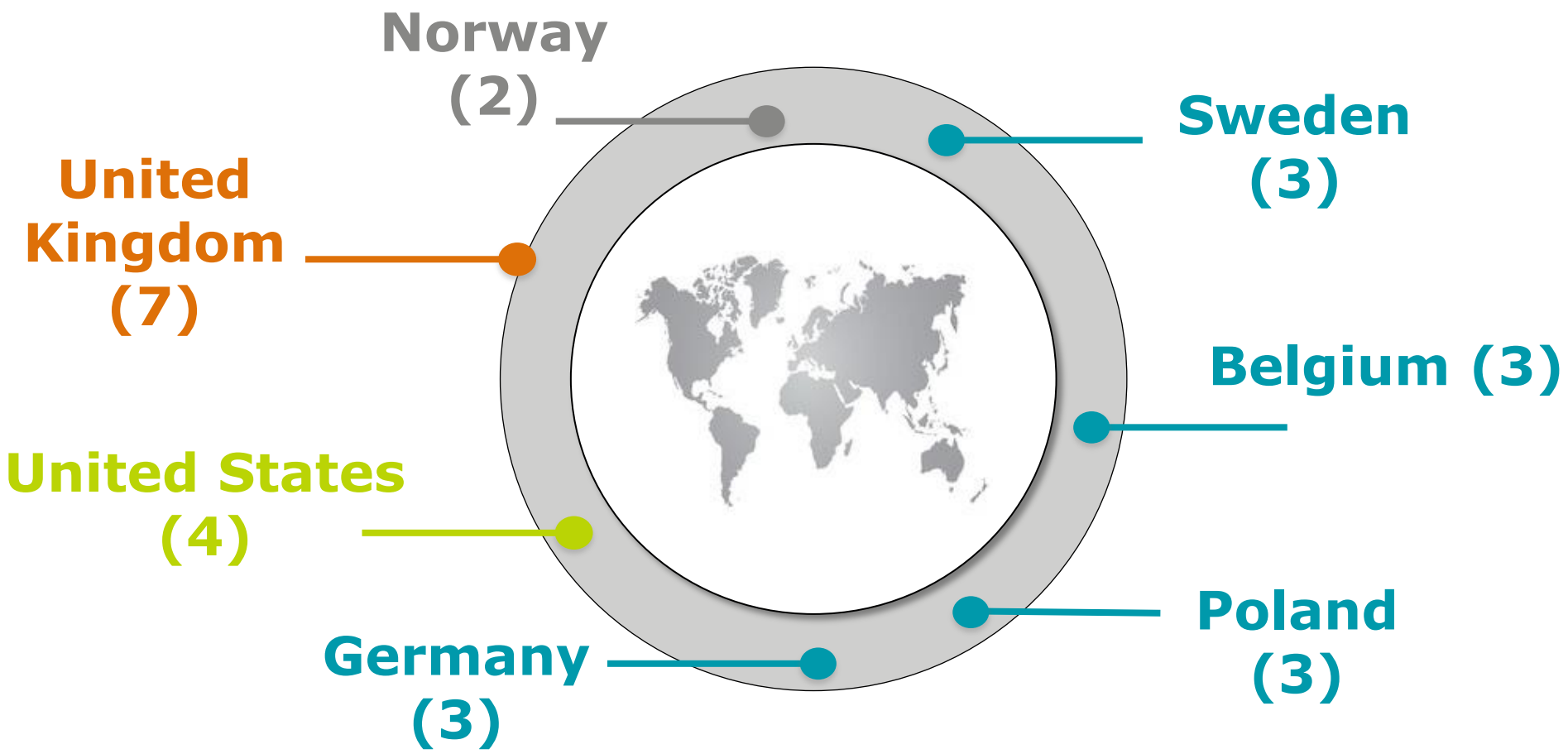
Private sector (4)

National Authorities (4)

Communications professionals (1)

Other organisations (3)

Participants by country



Evaluating the comments

The 212 resulting comments were subject to evaluation and assessment

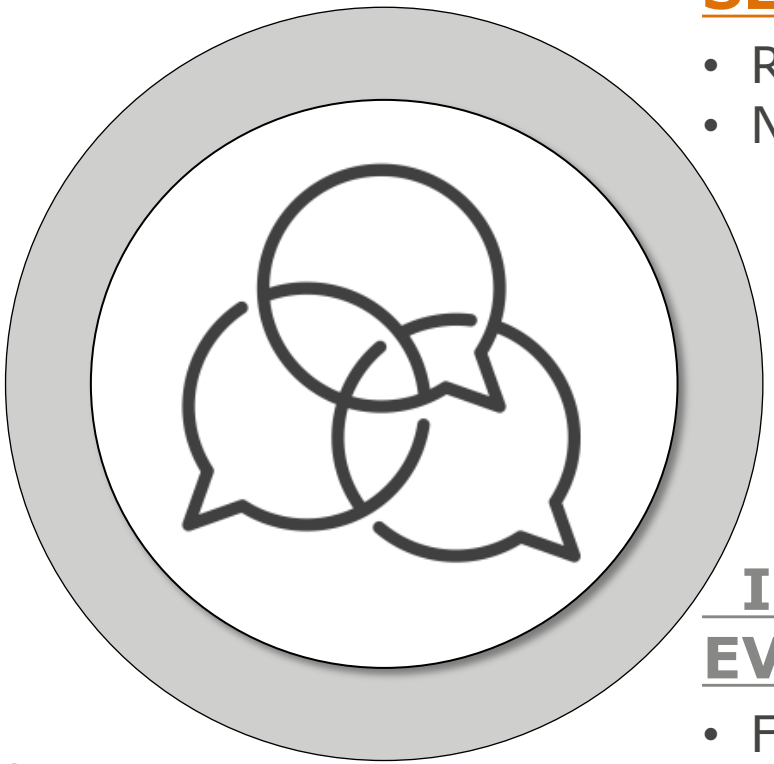
The WG responded one by one

Where considered appropriate, the guidance document has been modified to take account of them

Summary of comments

FURTHER CLARIFICATIONS

- Scope and role
- Segmentation of EFSA target audiences



IMPROVE GUIDANCE SECTION

- Readability and usability
- Need to update guidance points

ADDITIONAL SOURCES OF EVIDENCE

- New references were proposed to be added to the literature study

IMPLEMENTATION AND EVALUATION

- Further research and testing
- Feedback channels

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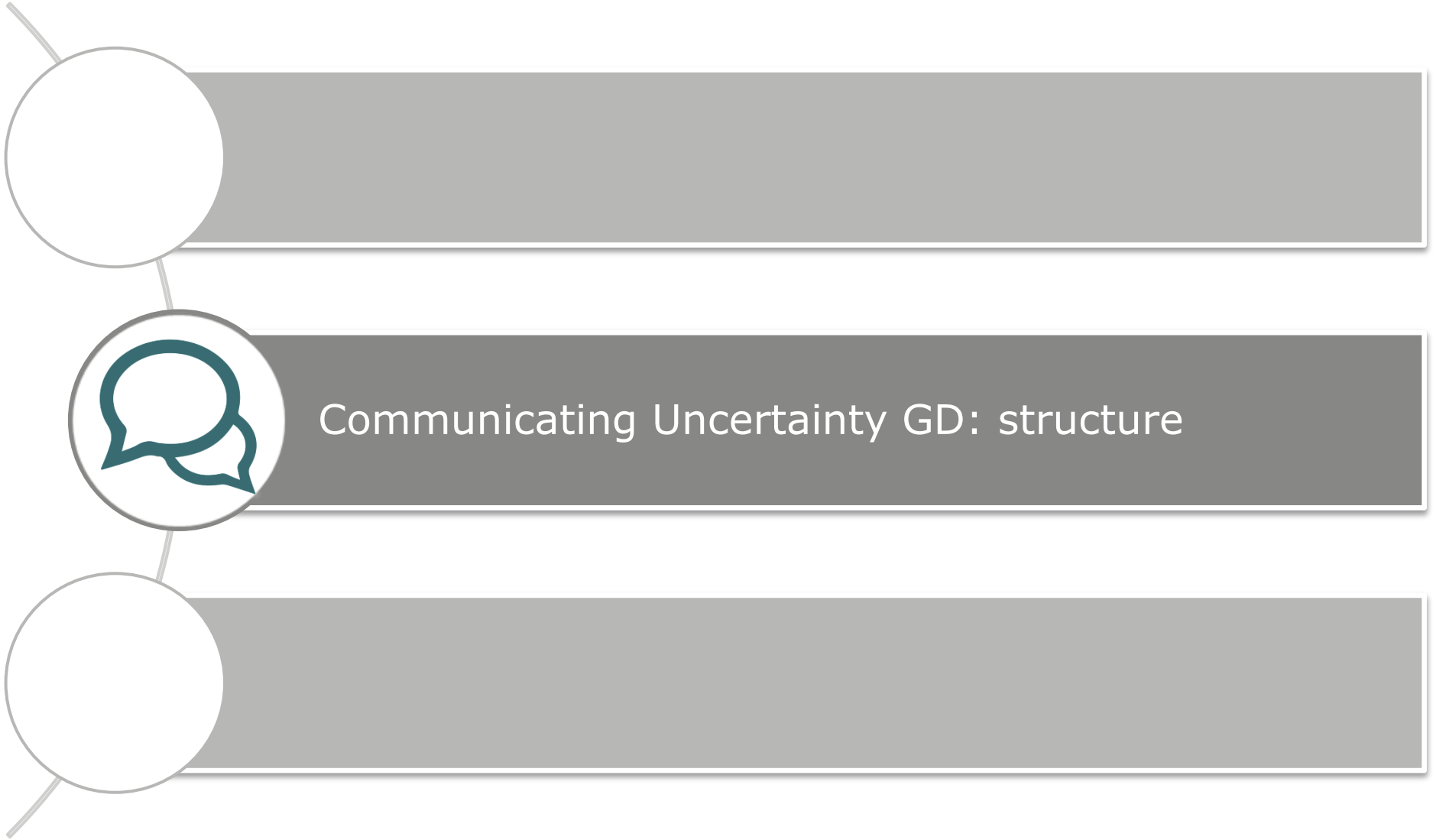
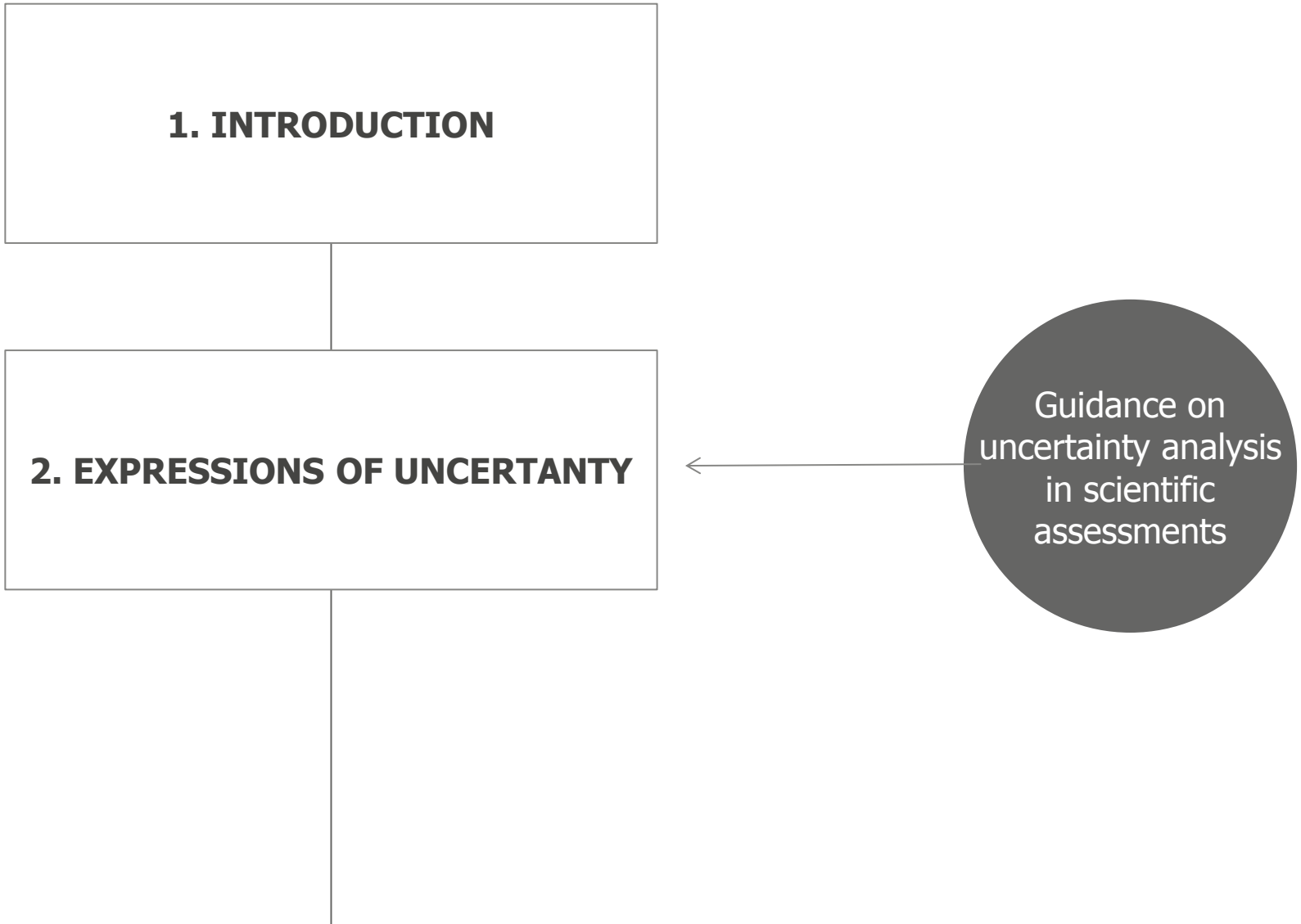


Communicating Uncertainty GD: structure

Document structure (GD fig. 1)



3. GUIDANCE ON COMMUNICATING UNCERTAINTY

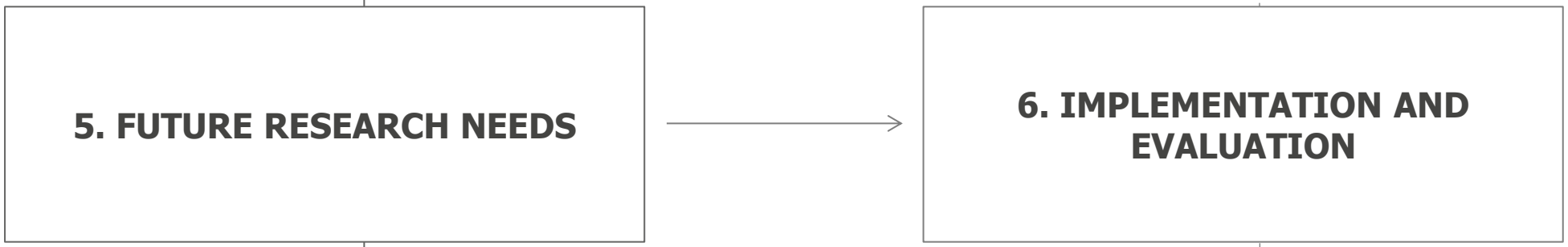
- Scientific literature
- International context
- EFSA target audience research
- EFSA examples

Appendix B

Appendix B gives an overview of each literature source and/or the reasoning underpinning each point of guidance.

4. SOURCES OF EVIDENCE


4. SOURCES OF EVIDENCE
5. FUTURE RESEARCH NEEDS


5. FUTURE RESEARCH NEEDS
6. IMPLEMENTATION AND EVALUATION

3.1 GENERAL GUIDANCE FOR COMMUNICATORS

Communicators should apply both the general guidance in Section 3.1 and the relevant specific guidance from Boxes 1–9 for communicating uncertainty to the 'entry' and 'informed' level audiences.

3.2 GENERAL GUIDANCE FOR ASSESSORS

Assessors should apply both the general guidance in Section 3.2 and the specific guidance at the technical level provided in boxes 1–9.

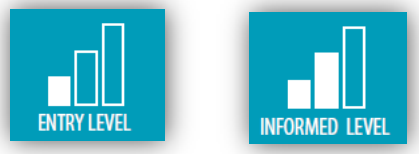
3.1 GENERAL GUIDANCE FOR COMMUNICATORS

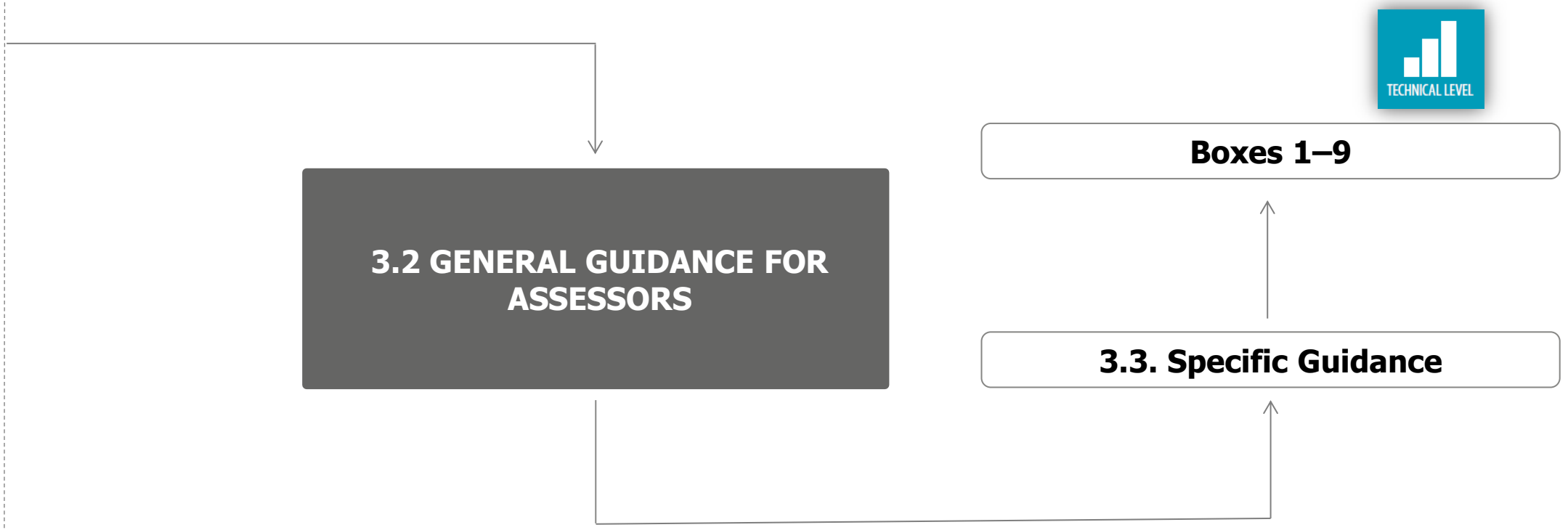
3.3. Specific Guidance

Table 3

Table 3 helps to identify the specific guidance for communicating each type of uncertainty expression.

Boxes 1–9




TECHNICAL LEVEL
Boxes 1–9
3.2 GENERAL GUIDANCE FOR ASSESSORS
3.3. Specific Guidance

3.1 GENERAL GUIDANCE FOR COMMUNICATORS

3.2 GENERAL GUIDANCE FOR ASSESSORS

	SPECIFIC GUIDANCE TO COMMUNICATE:
Box 1	assessments using standardised procedures
Box 2	description of sources of uncertainty
Box 3	qualitative descriptions of the direction and/or degree of uncertainty using words or symbols
Box 4	inconclusive assessments
Box 5	unqualified conclusions with no expression of uncertainty
Box 6	a precise probability
Box 7	an approximate probability
Box 8	a probability distribution
Box 9	a two-dimensional probability distribution

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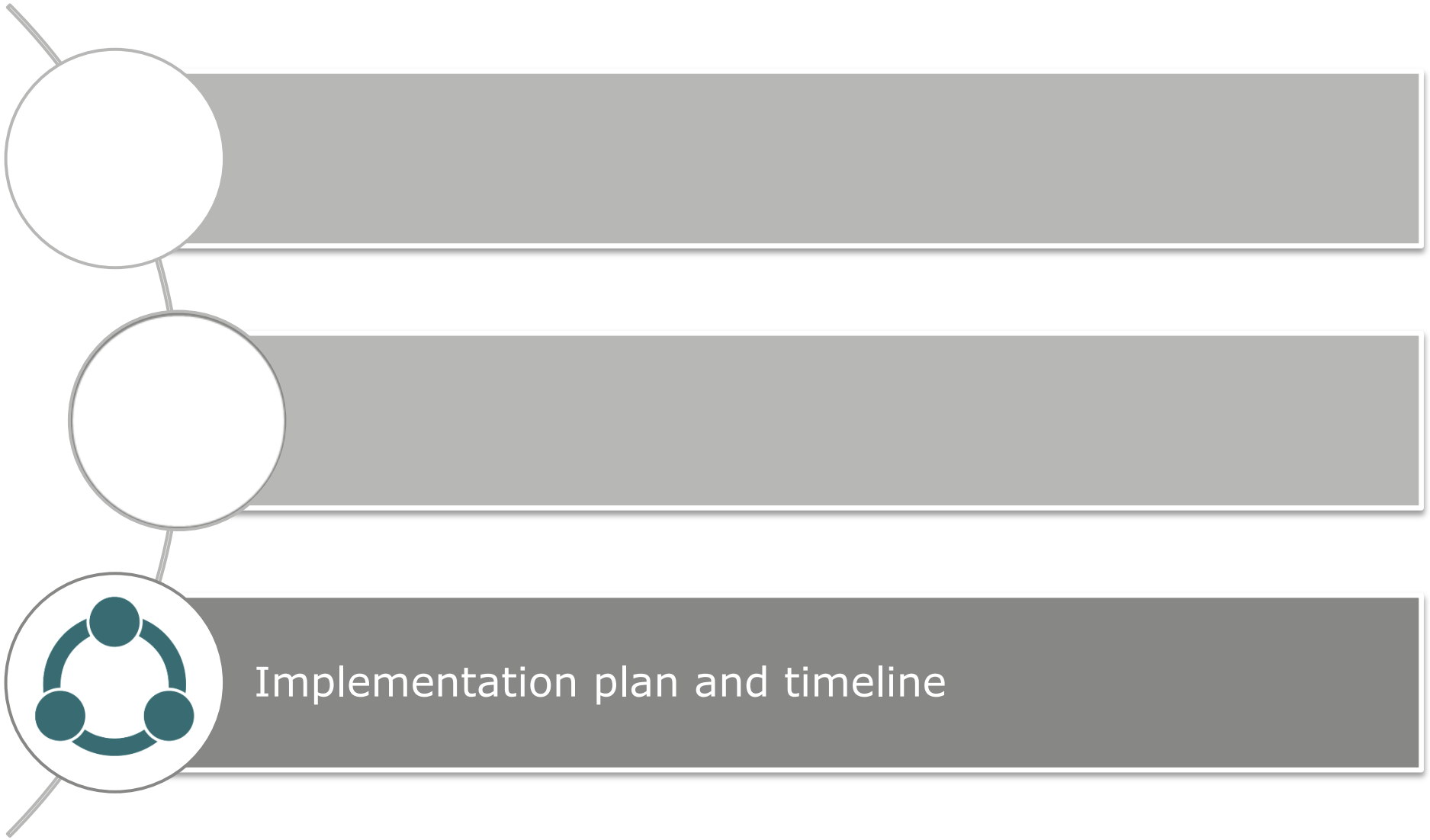


Implementation plan

- Will **shadow the gradual application of the Uncertainty Analysis GD** by EFSA's scientific panels and scientific staff in their assessments
- Creation of a **database of examples**, linked to the database of assessments produced by the panels
- EFSA's staff and experts **need training** and support to ensure they recognise and understand the **types of uncertainty expressions** used in scientific assessments and can **apply the step-by-step process presented in Section 3**
- **FAQs** available on EFSA's website with entries on key concepts and expressions for communicating uncertainty, including the interpretation of probability expressions

Engagement

EFSA'S STAFF & EXPERTS

- Communicators
- Scientific staff and experts

MEMBER STATES AND INSTITUTIONS

- DG SANTE, EU Agencies
- Advisory Forum
- Communications Expert Network

STAKEHOLDERS

- EFSA Stakeholder Forum
- Communicators Lab
- Academics
- Journalists

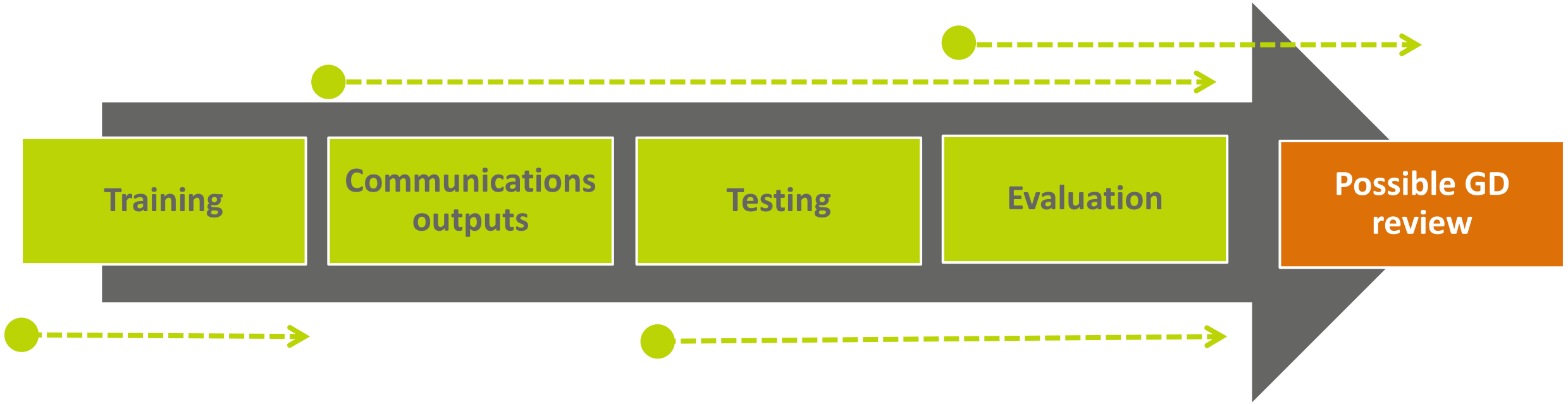
INTERNATIONAL INTEREST

- Joint EFSA/BfR International Conference on Uncertainty in Risk Analysis
- IRCLG

Evaluation

- Where there is little or even no evidence to guide best practice, reasoning and expert judgement was used, therefore the guidance needs to be carefully evaluated (see Section 6).
- Ad hoc **testing of understanding of uncertainty messages** and formats on receivers of EFSA's communications
- How the **roles of different audiences** (e.g. decision-makers, journalist) **affect their information needs** related to EFSA's scientific advice including information in relation to uncertainties
- Evaluate the **understanding and use of uncertainty** information by **decision-makers and other stakeholders** to assess the impact and effectiveness of this approach
- Following the implementation, **carry out a review**, focusing on how the approach affects understanding of uncertainty information, and eventual GD update

Timeline 2019–21



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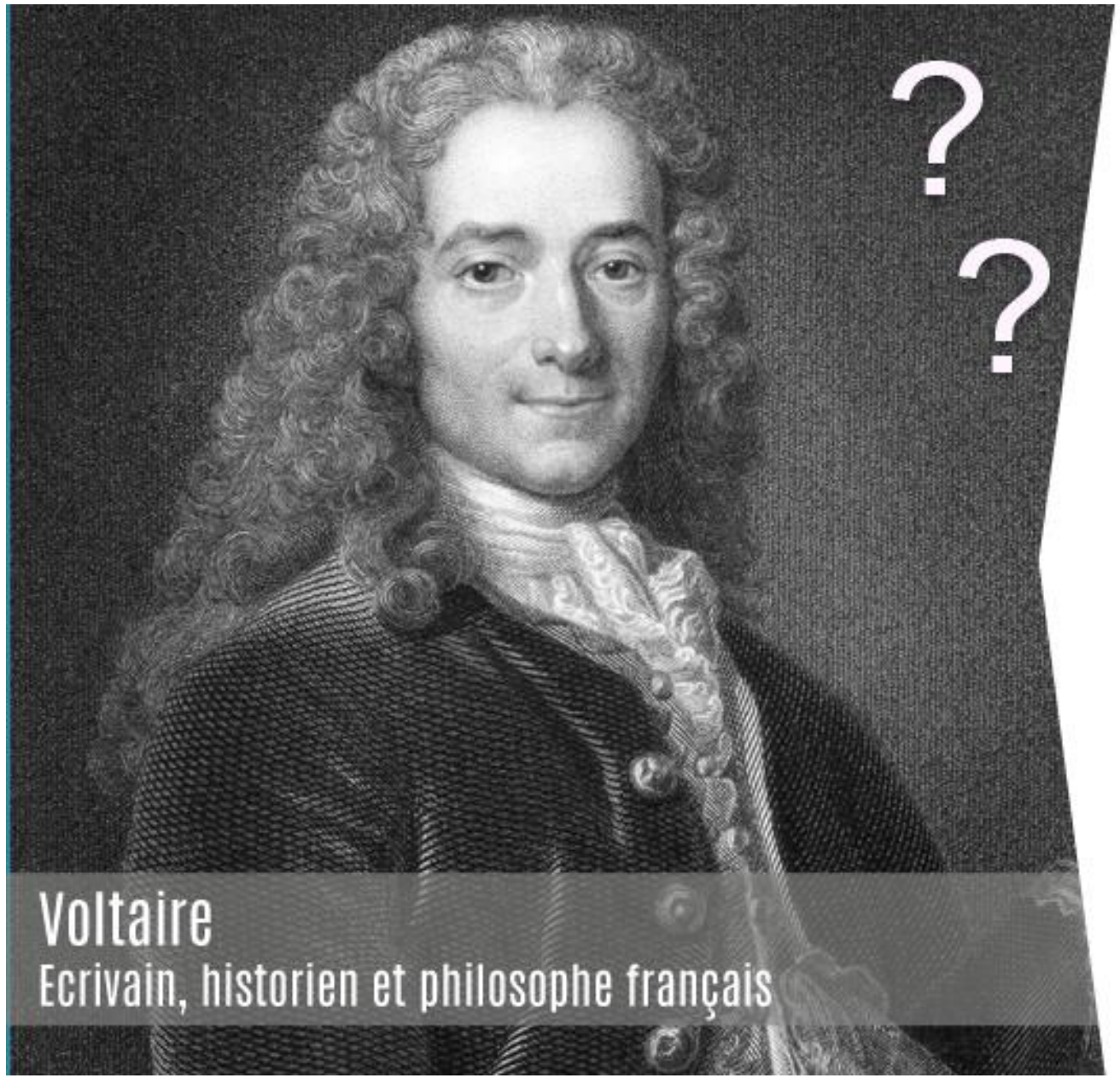

“Le doute n'est pas
un état plaisant, mais
la certitude est absurde.”

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