



DRAFT GUIDANCE ON COMMUNICATION OF UNCERTAINTY

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	Uncertainty Communication GD: short history of its development

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 end of 2018.

Why is EFSA doing this?

- Setting common standards and criteria for assessing and communicating the uncertainties in all of EFSA's scientific areas.
- To improve the transparency and robustness of EFSA's scientific advice and help to contextualise assessment conclusions better.
- Communication of uncertainty is critical to EFSA's dialogue with risk managers and civil society.
- Helps to ensure public confidence in the EU food safety system.

TARGET AUDIENCE RESEARCH

focus groups study, 2016

5 Focus groups

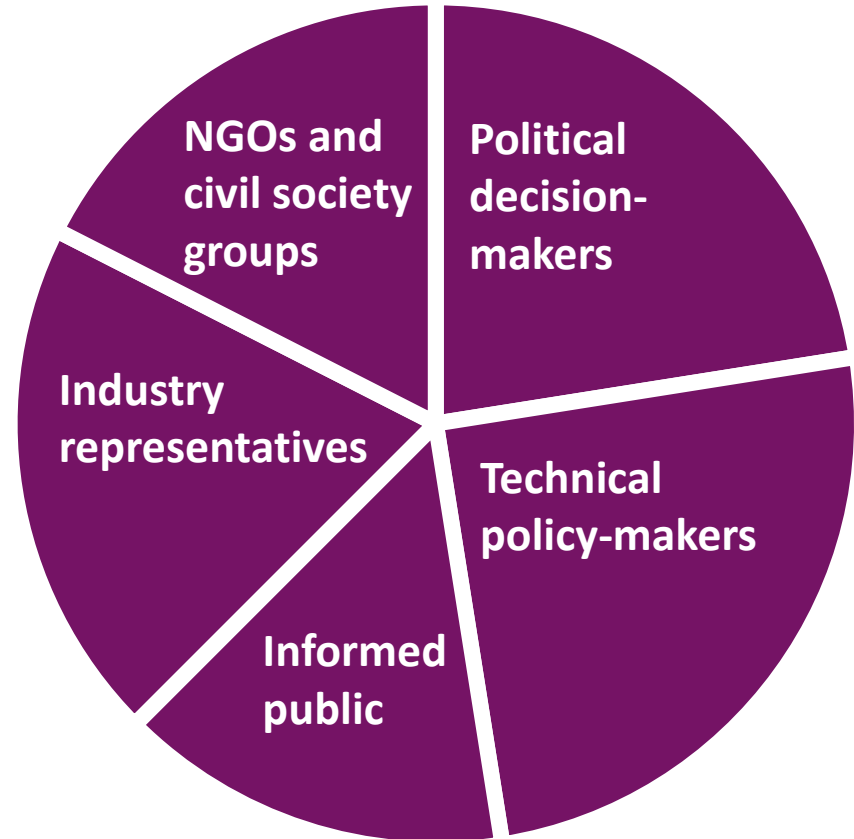
39 Participants

Risk perception and confidence in EFSA don't change in face of uncertainty

Positive framing preferred

Qualitative most preferred by technical levels

Quantitative most preferred for entry level



TARGET AUDIENCE RESEARCH

multilingual online survey, 2017

1,913 participants

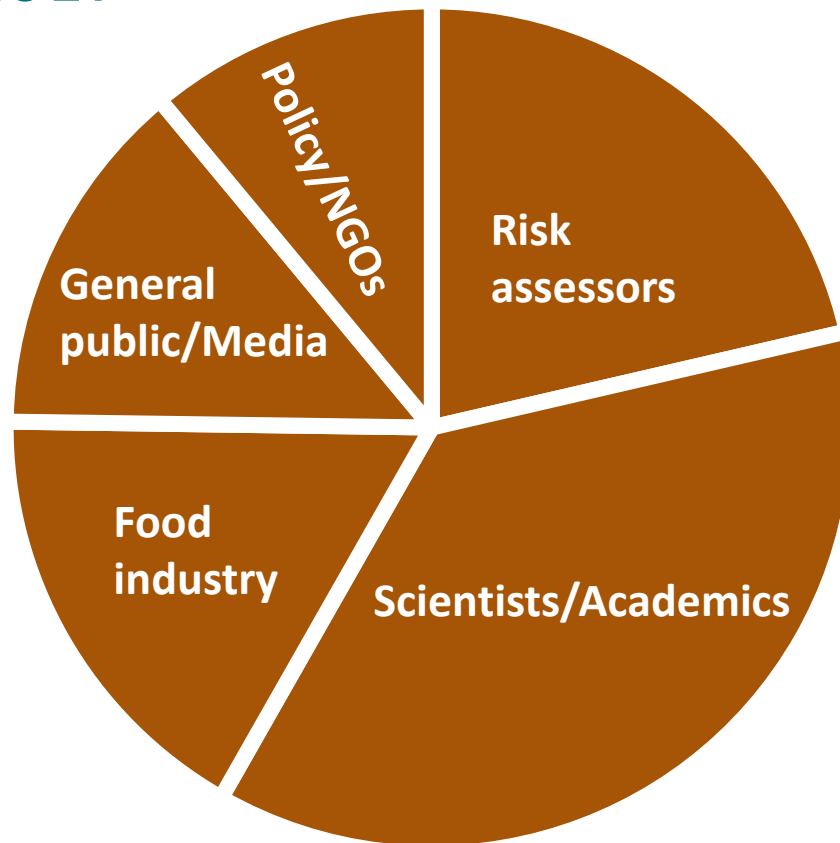
96% replied positively about the need to communicate uncertainty information

Positive-framed wordings preferred

Each of the main types of uncertainty expression was preferred by at least some individuals to help understand the risk:

Qualitative most helpful for **General public/Media**

Quantitative most helpful for the **Food Industry**
(although these differences were confounded with language and other factors)





EFSA's draft Guidance document on communication of uncertainty

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).

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	Uncertainty Communication GD: guidance for communicators

STRUCTURE

1.

Introduction

2.

Expressions of
uncertainty

4.

Evidence
sources

5.

Further
Research

3.

Guidance

6.

Implementation
& evaluation

Communicate uncertainty
expressions, select formats, word
messages for different audiences

Testing, training, dialogue, knowledge
management, review after 3 years



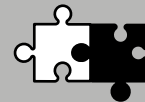
**NO EXPRESSION OF
UNCERTAINTY**



**DESCRIPTION OF A SOURCE
OF UNCERTAINTY**



**DESCRIPTION OF THE
DIRECTION/MAGNITUDE
OF UNCERTAINTY**



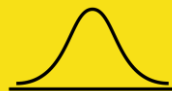
**INCONCLUSIVE
ASSESSMENT**



**A PRECISE
PROBABILITY**



**AN APPROXIMATE
PROBABILITY**



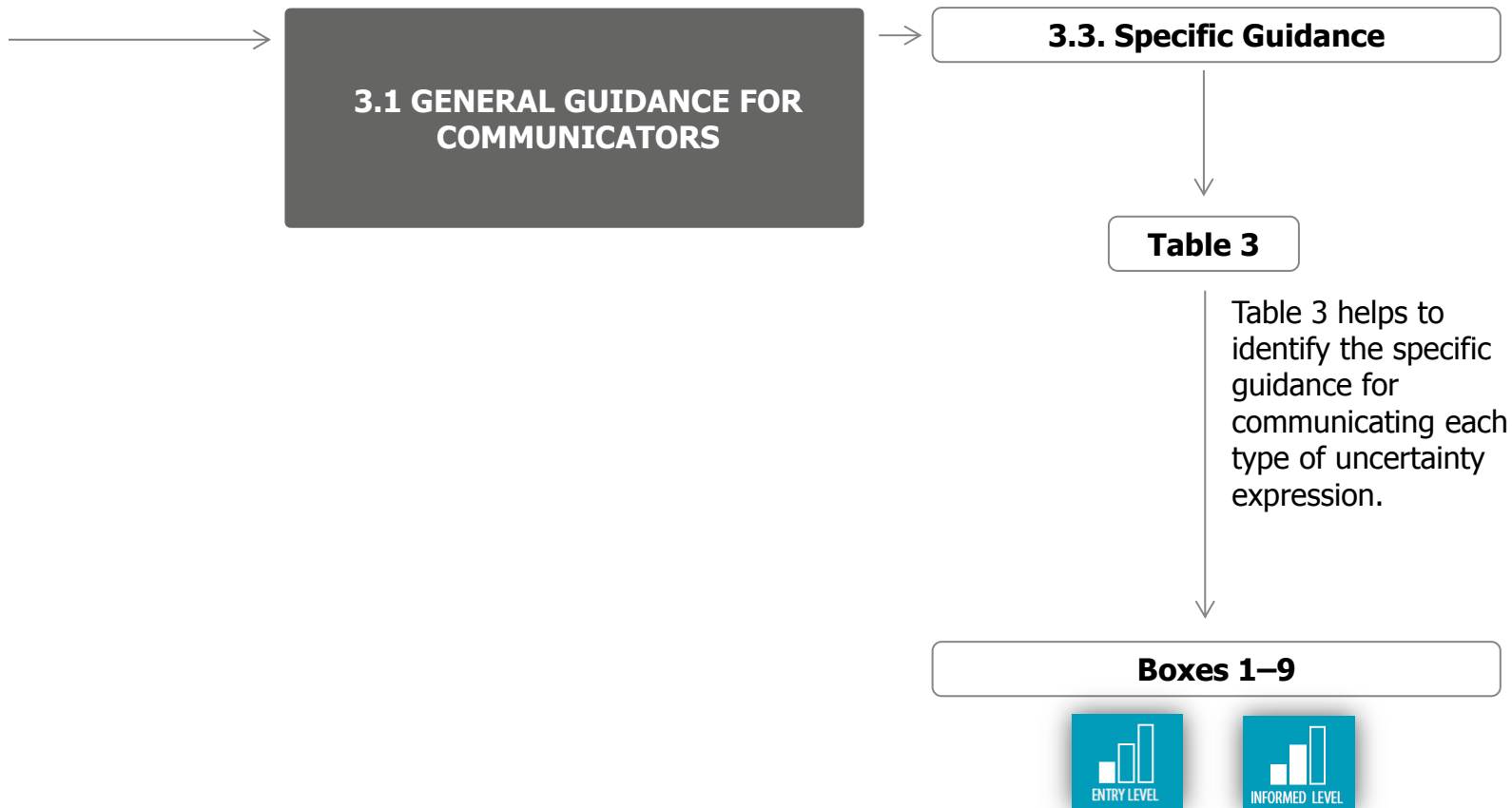
**A PROBABILITY
DISTRIBUTION**



**A 2D PROBABILITY
DISTRIBUTION**

— Expressions of uncertainty described *in*
EFSA's Guidance on Uncertainty Analysis (EFSA Scientific Committee et al., 2018)

USING THE GUIDANCE



USING THE GUIDANCE (GD fig. 1)

3.1 GENERAL GUIDANCE FOR COMMUNICATORS



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

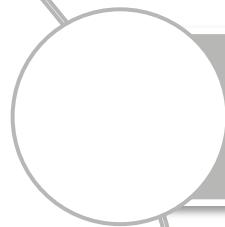

a two-dimensional probability distribution

3.2 GENERAL GUIDANCE FOR ASSESSORS



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	Engagement & Implementation

PUBLIC CONSULTATION

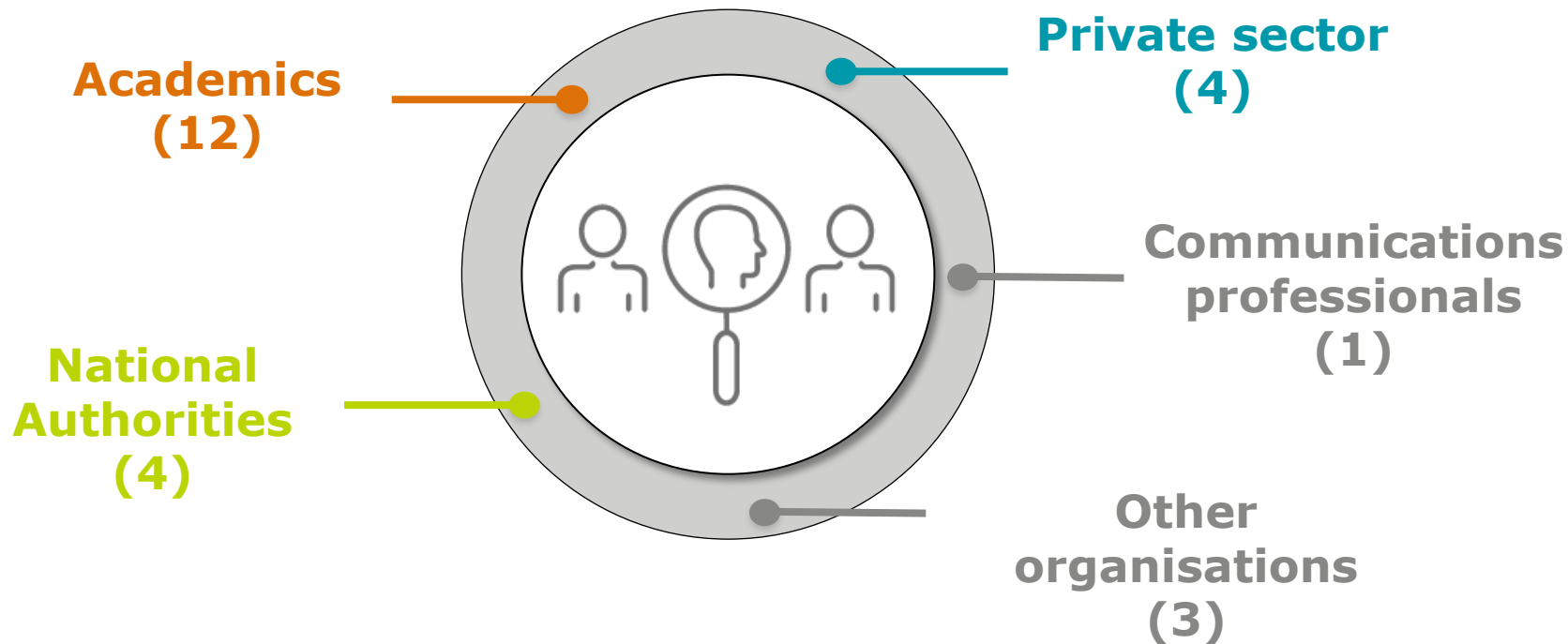
Live from 4 May to 24 June 2018 and
disseminated via:

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

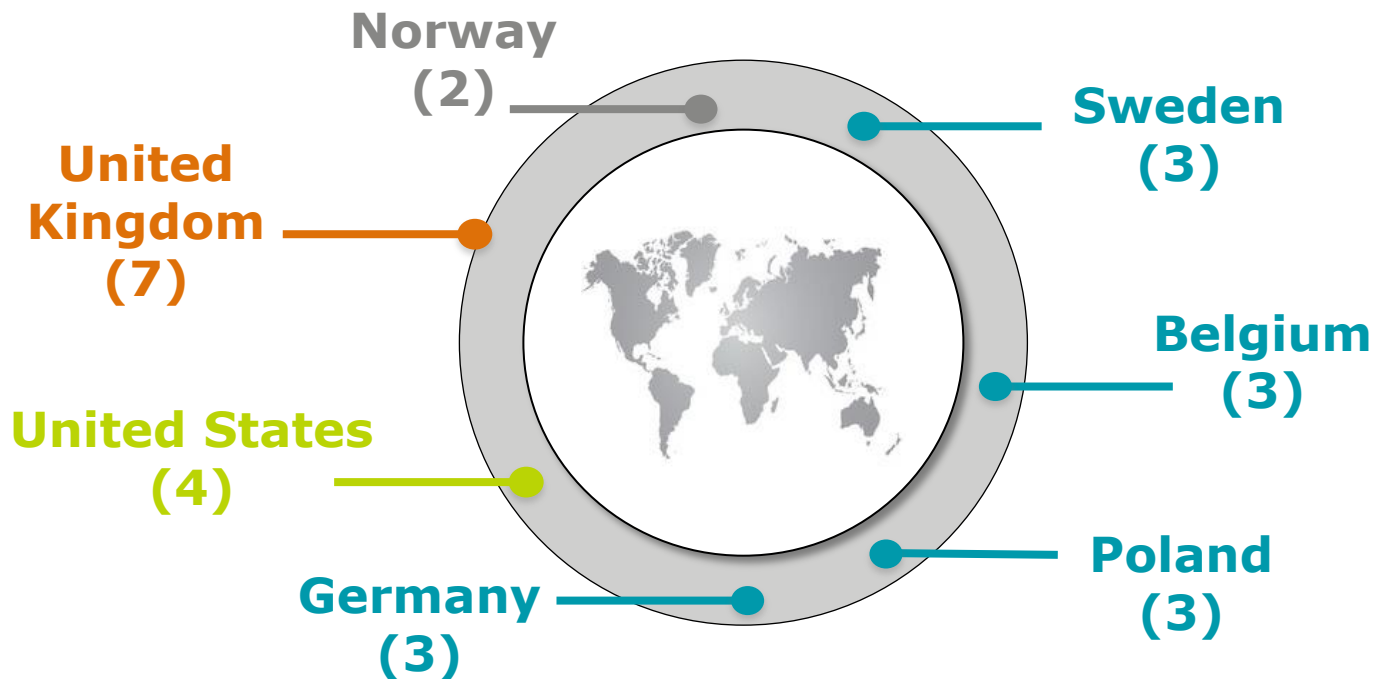
Result: **24 participants, 212 comments**



PARTICIPANTS



PARTICIPANTS BY COUNTRY



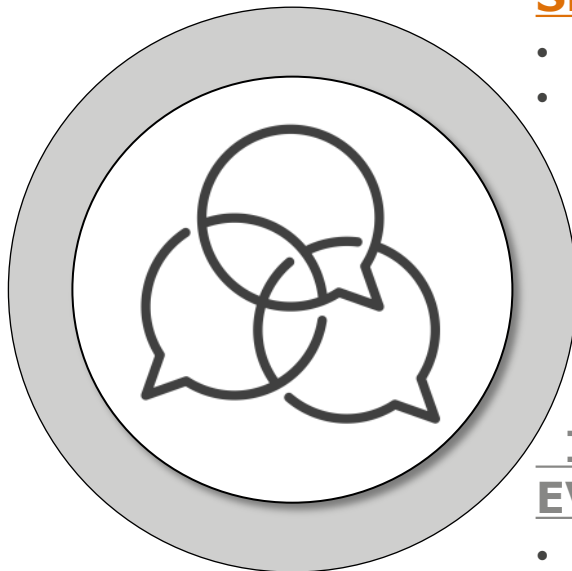
SUMMARY OF COMMENTS

FURTHER CLARIFICATIONS

- Scope and role
- Segmentation of EFSA target audiences

ADDITIONAL SOURCES OF EVIDENCE

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



IMPROVE GUIDANCE SECTION

- Readability and usability
- Need to update guidance points

IMPLEMENTATION AND EVALUATION

- Further research and testing
- Feedback channels

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

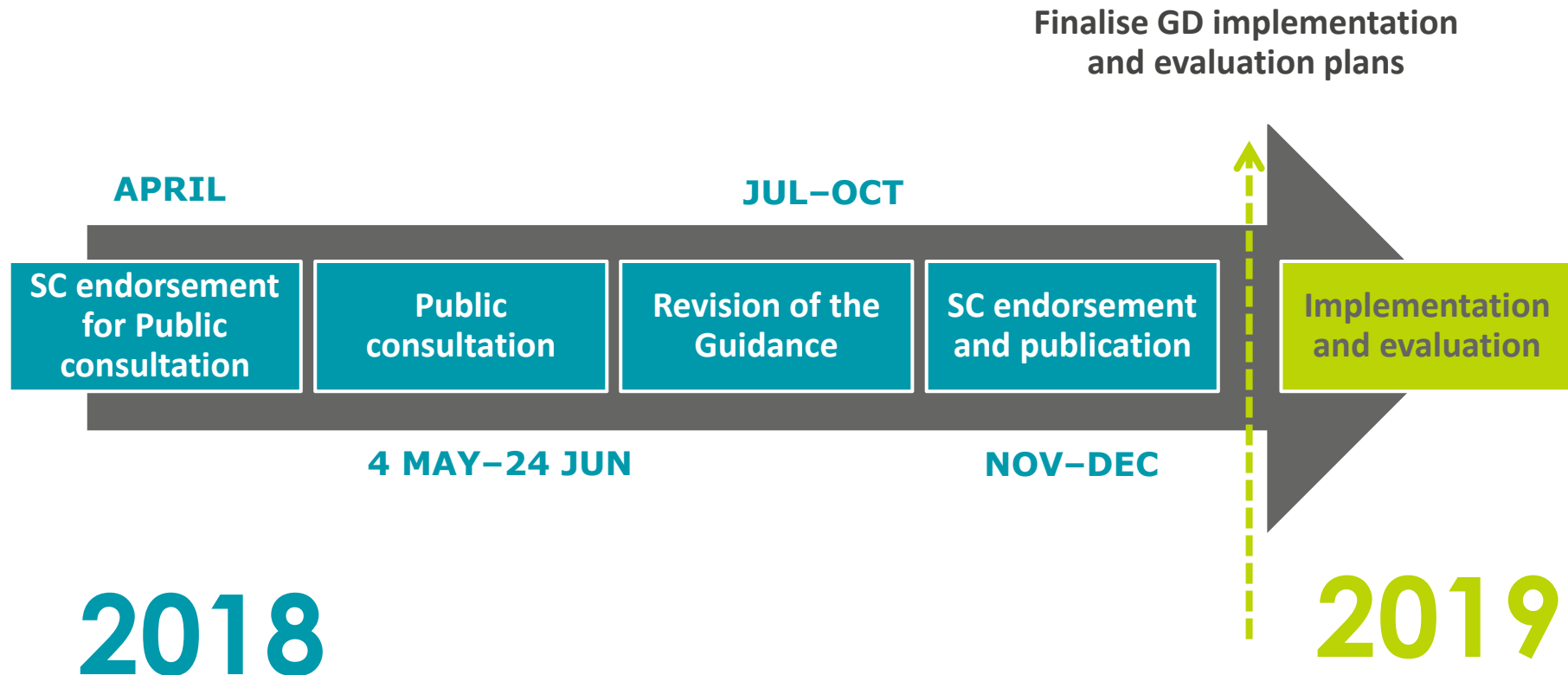


EVALUATION

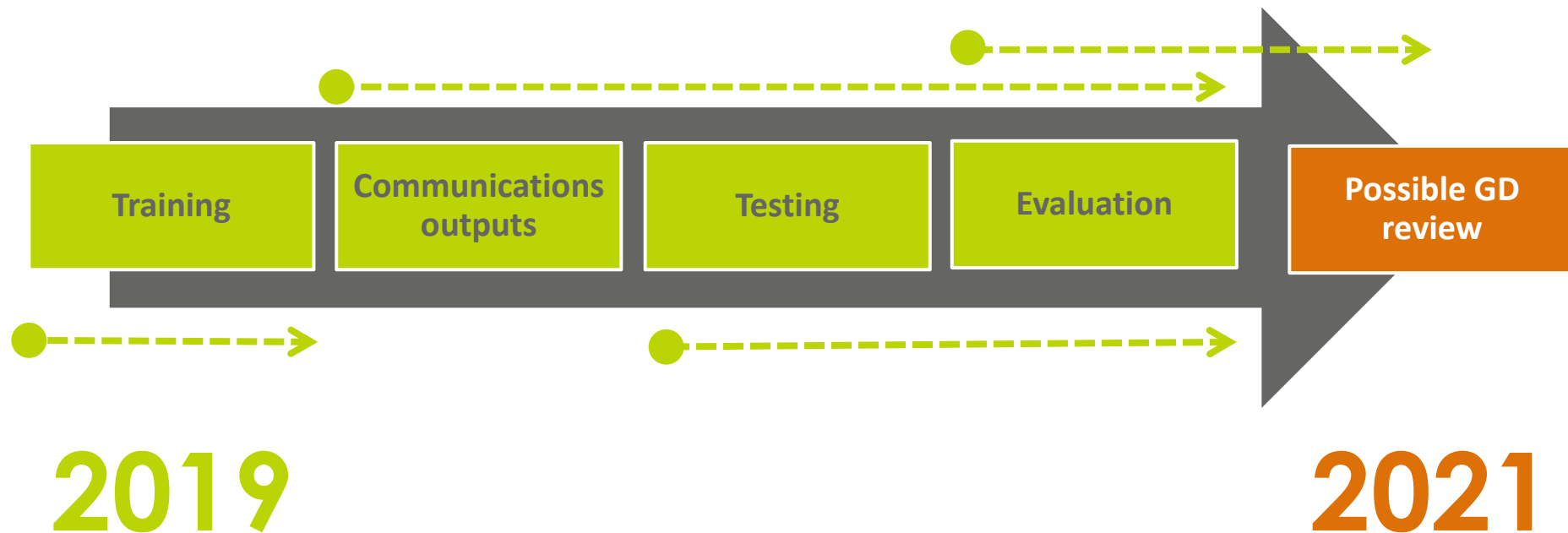


- Where there is little or even no evidence to guide best practice, reasoning and expert judgement was used, therefore the guidance needs to be carefully evaluated (see Section 6).
- Ad hoc **testing of understanding of uncertainty messages** and formats on receivers of EFSA's communications
- How the **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 2018–19



TIMELINE 2019–21



#ScientificUncertainty

“

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

”

A black and white engraving of Voltaire, a French philosopher, writer, and historian. He is shown from the chest up, wearing a dark coat with a white cravat. Two large white question marks are superimposed on the right side of his head.

Voltaire
Ecrivain, historien et philosophe français