Nordic Group

WEBINAR ON RISK COMMUNICATION

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EUROPEAN FOOD SAFETY AUTHORITY

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TODAY'S LEARNING JOURNEY

- We will look at the following aspects of risk communication and discuss some examples:

1. Risk analysis and roles → 2. Why risk communication → 3. Start with the audience
4. Communicate uncertainty → 5. From evidence to useful messages → 6. Summary and next steps

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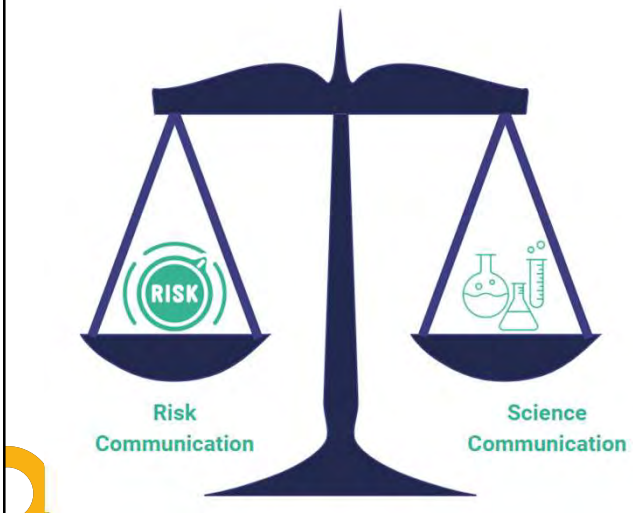
RISK COMMUNICATION VS SCIENCE COMMUNICATION



Science communication focuses on sharing facts, evidence, and scientific findings.

Risk communication reflects the **uncertainty and potential consequences identified during the risk analysis**.

While science informs understanding, risk often guides action.

Both are essential, but they **weigh information differently** based on context and audience needs.

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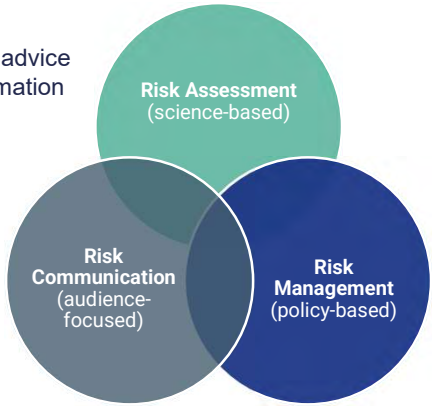
QUICK RECAP: RISK ANALYSIS

RISK ANALYSIS IS…

an umbrella term that describes the whole process from assessing risks from certain hazards, managing the identified risks and communicating risk-related findings and risk management measures

Source: Codex Alimentarius, 1997



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BACK TO BASICS: HAZARDS AND RISKS

What is a *hazard*? What is a risk? Do you know the difference?

Risk is the likelihood of a hazard causing harm

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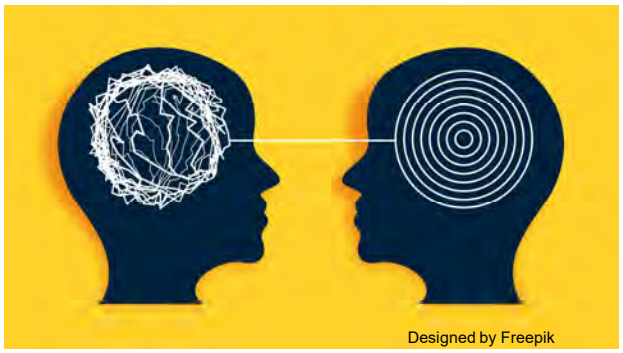
RISK COMMUNICATION IS ABOUT...

- Raising **awareness and understanding** about risks, the context of risks including benefits
- Taking into account **perceptions** (individual, cultural, social, etc.) about risks related to science, technology, etc.
- Providing the **audience** with **appropriate information** to make informed choices
- Building and maintaining **trust through dialogue and cooperation** among risk managers, assessors, and stakeholders including the public



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FACTS ARE NOT ENOUGH...

Scientific facts are the foundation. To be useful, communication must also answer the audience's practical questions.

Relevance	Meaning	Action	Credibility
• Does this concern me?	• How serious it?	• What can I do?	• What will the authorities do?

Good risk communication connects evidence with relevance, meaning, action and a credible source.

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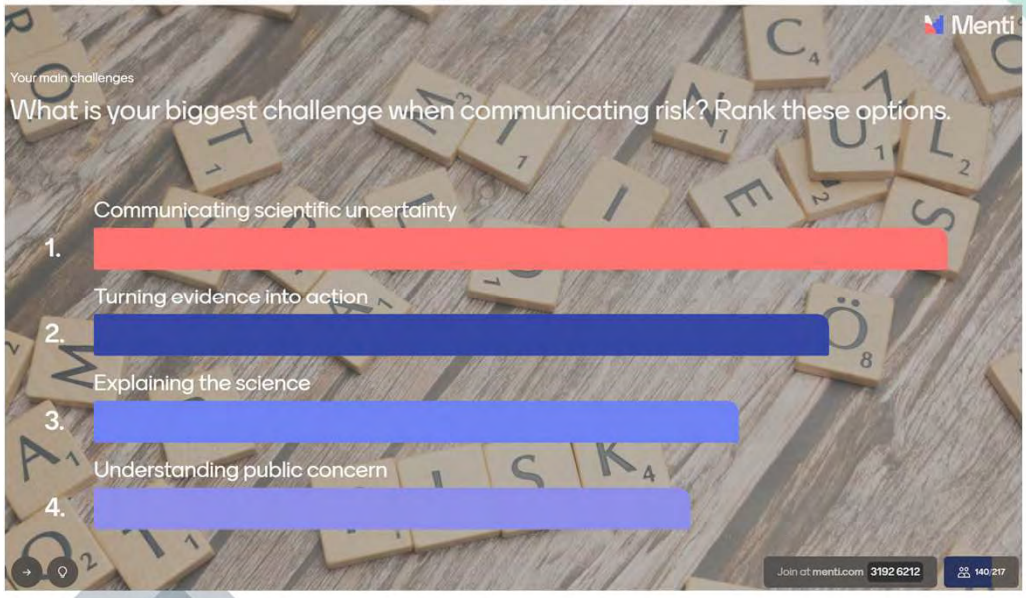

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DIFFERENCE BETWEEN ACTUAL AND PERCEIVED RISK

ACTUAL

- Objective risk is **measurable**, data-driven, and based on factual evidence.
- It is determined through **scientific analysis, statistics, and probability models**.
- **Quantifiable:** Risk can be calculated using risk assessment methods.
- The level of risk **does not change** based on personal opinions.
- Used in Risk Management

VS

PERCEIVED

- Subjective risk is **based on individual perceptions, emotions, and experiences**, meaning it varies between people.
- People assess risk based on **past events or emotional responses**
- The way risks are **framed** in news or discussions shapes perception
- People may ignore real dangers **or** exaggerate unlikely risk
- **Subjective risk** reflects how people **feel** about a risk

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RISK PERCEPTIONS: INFLUENCING FACTORS (CONCERN ASSESSMENT)

Levels and corresponding factors to take into account when developing concern assessments

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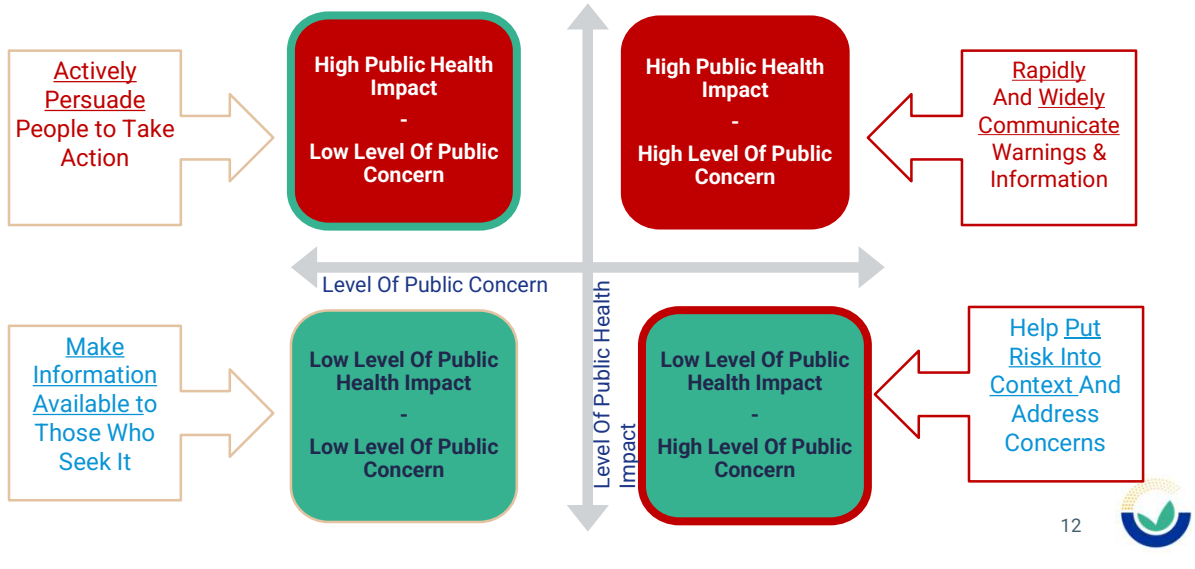
IMPACT OF RISK PERCEPTIONS: COMMUNICATOR MATRIX



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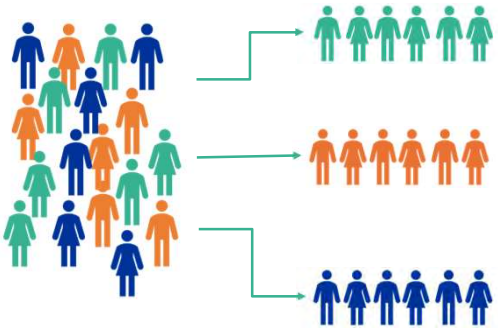
AUDIENCE SEGMENTATION

What is Audience Segmentation?

In simple terms, it's when you divide the audience into multiple **smaller specific audiences** based on some shared characteristics.

The goal is to deliver a more **targeted message** or to derive unique insights from data analytics.



For risk communication, we segment the audience to tailor messaging more effectively. Segmentation requires an understanding of the characteristics of different target audiences so that we can then tailor communication messages and products to them.

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EFSA APPROACHES – "KNOWLEDGE DEFICIT" MODEL

A mapping model, developed by EFSA, clusters audience categories into 'entry', 'informed' and 'technical' – this may also serve to categorise stakeholders for development of appropriate **communication material.**

Entry	Informed	Technical
• General news media • Informed citizens • Concerned citizens	• Political decision-makers • NGOs and consumer organisations • Specialised news media	• Assessors • Scientists / Academics • Technical risk managers • Industry representatives

Source: Guidance on Communication of Uncertainty in Scientific Assessments (EFSA, 2019). Based on research (2015) and assumptions about user scientific/technical literacy, numeracy, EU knowledge, etc.

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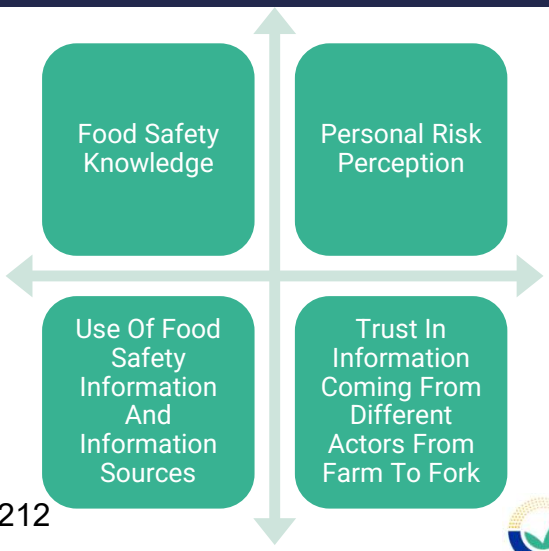
EFSA APPROACHES – "CONCERN ASSESSMENT" MODEL

- 'Audience segmentation' in scientific literature tends to focus on the examination and targeting of the **general public** rather than specific groups such as academics and professionals, governments, media or industries
- For the general public, depending on the specific type of risks in question, one or more of the following factors should be considered in segmentation:



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Source: Sato et al., 2020
Source: Technical assistance in the field of risk communication 2021

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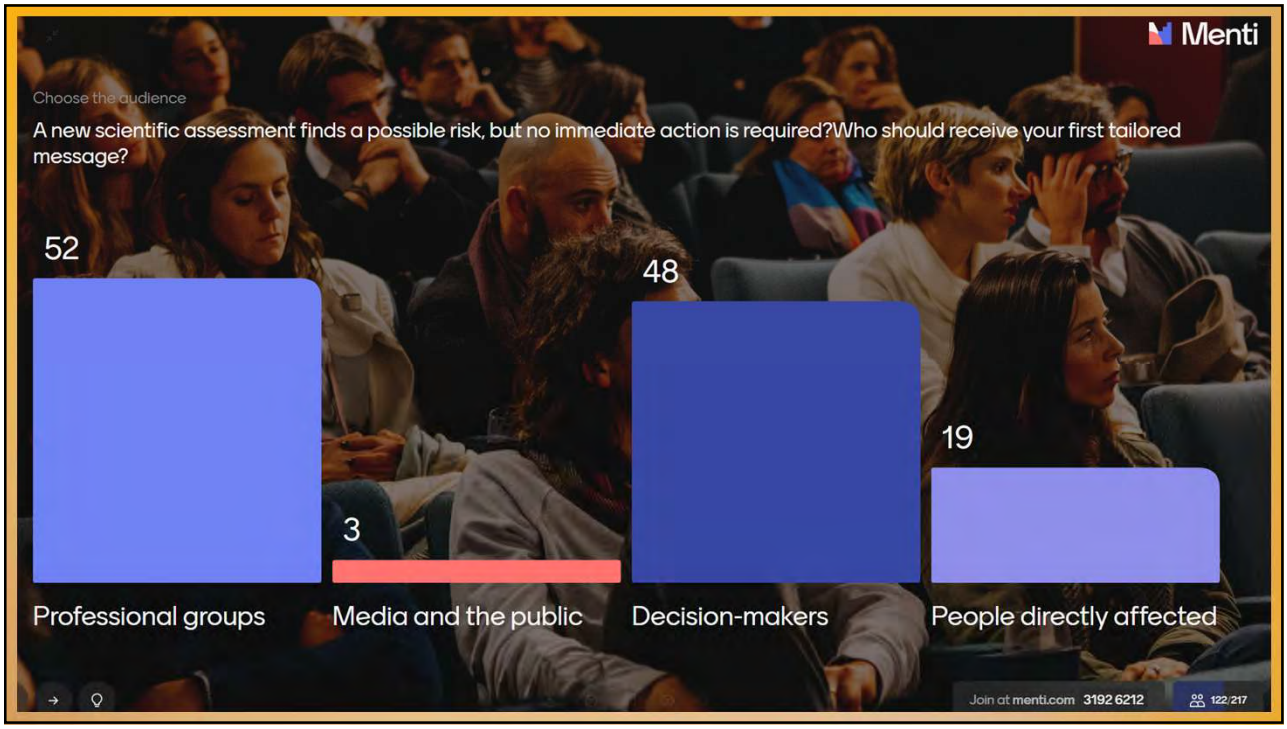

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UNCERTAINTY IN EVERYDAY LIFE

Designed by macrovector / Freepik

- Meteorologists review satellite images to make predictions about the weather.
- They are **rarely 100% certain** what will happen.
- When they make a forecast, they usually indicate **how likely the prediction is**.
- If they say there is a "strong chance" of rain, you will probably decide to take your umbrella when you go outside.
- If the chance of rain is "slight", you are more likely to decide to leave your umbrella at home.
- If the forecaster uses percentages – a 90% or 10% chance of rain – for many of us the message becomes **even clearer.**

Source: Uncertainty in scientific assessments

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UNCERTAINTY MATTERS

- Uncertainty affects almost all decisions in life
- It helps us prepare for different outcomes
- In food safety, decisions must often be made with incomplete information
- Understanding and communicating uncertainty improves decision-making

Uncertainty ≠ Failure

- Scientific uncertainty does not mean the science is insufficient or weak
- Uncertainty in science reflects the reality of the complexity of the systems/exposure/data

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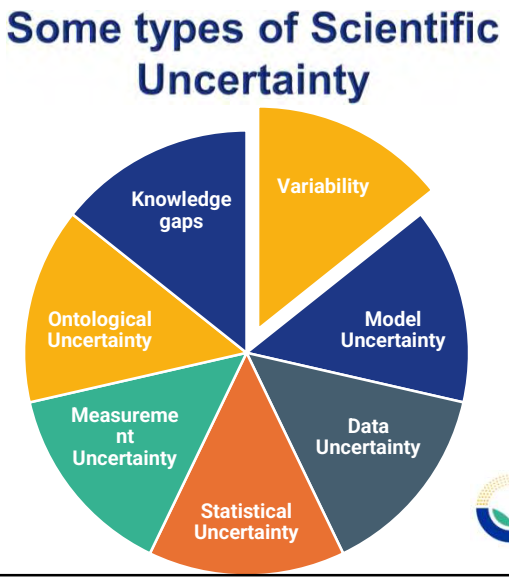
TYPES OF (SCIENTIFIC) UNCERTAINTY

EFSA defines uncertainty as “all types of limitations in available knowledge at the time an assessment is conducted”.

Uncertainty takes multiple forms that must be recognised and characterised to support sound decision-making.



- Source: Uncertainty in scientific assessments | EFSA

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RISK COMMUNICATION AND UNCERTAINTY

Risk Communication

Risk communication plays a crucial role in how audiences perceive the risks and benefits in risk assessments, and how one may act upon the results.

A primary role of risk communication is to contextualize uncertainties, emphasise transparency, and explain how to address information gaps in the future.

Uncertainty Communication

Uncertainty Communication helps better **contextualise conclusions**, explain **how certain they are** and **express the relative likelihood** of **different outcomes**

Uncertainty communication plays a **critical role in the dialogue with risk managers and civil society** – to ensure understanding of conclusions

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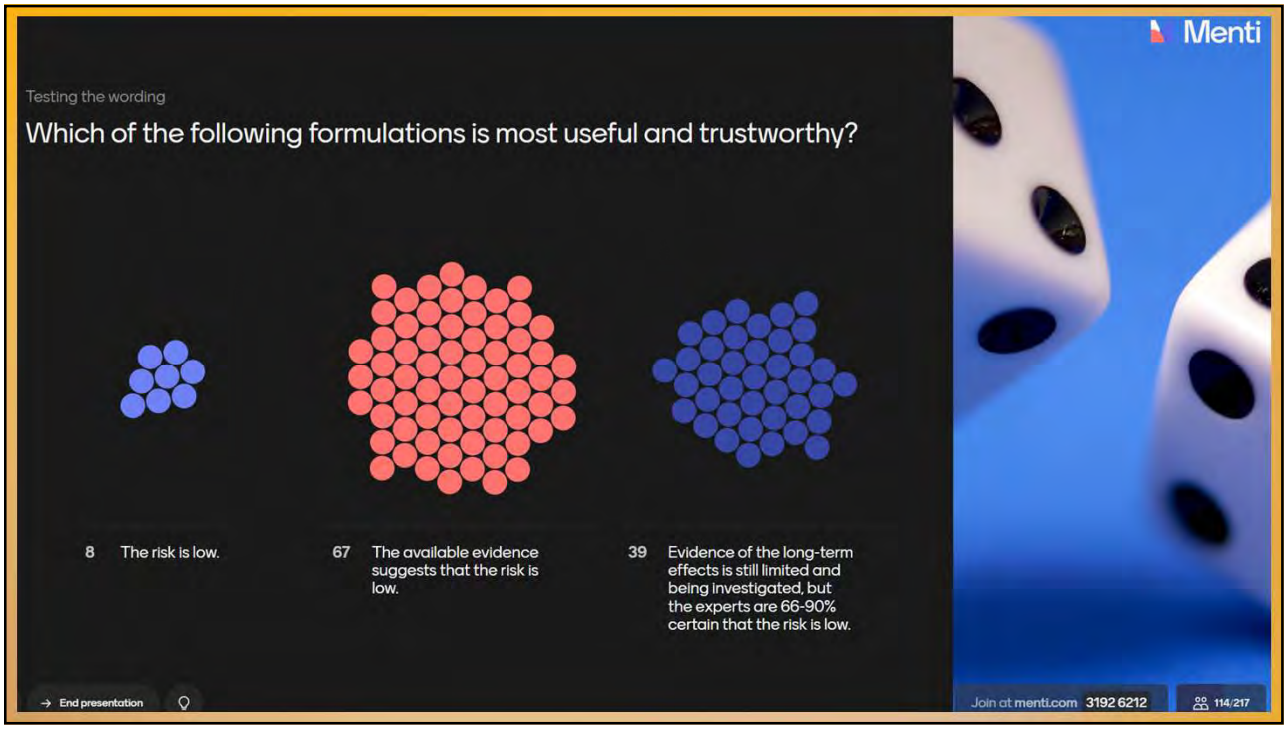

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COMMUNICATION TECHNIQUES TO BUILD AND MAINTAIN TRUST

To maintain trust, it is essential to rely on 'systems and practices that are ethically grounded, scientifically verified, economically viable and clearly communicated' (Arnot et al., 2016)

Transparency and Openness: Share what is known, unknown, and what's being done (Siegrist, 2019). Access to information is a major contributor to real and perceived transparency. Honesty and truthfulness emerge as a 'driver of trust'.

Consistency: Consistency in evidence-based risk communication and commitment to rigorous research is a key factor in maintaining public trust, even when low risks are communicated under uncertainty. **Align messages across channels and partners** to ensure consistency for the recipient.

Responsiveness: Responsiveness should be seen as organised delivery of communication in a timely manner, meeting the target audience needs through collaboration in the network of institutions and interested parties.

Empathy: Address emotional as well as factual needs. Empathy and concern, if genuinely expressed, can help build trust with the public (Sparks and Shepherd, 1994; Frewer et al., 1996, cited in Charlebois and Summan, 2015, p. 159).

Source: European Food Safety Authority (EFSA), Maxim, L., Mazzocchi, M., Van den Broucke, S., Zollo, F., Robinson, T., Rogers, C., Vrbos, D., Zamariola, G. and Smith, A., 2021. Technical assistance in the field of risk communication. *EFSA Journal*, 19(4), p.e06574.

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SOURCES OF INFORMATION

Risk communication depends on accurate, timely, and relevant insights.

Scientists are often regarded as a trustworthy source of information. According to the Special Eurobarometer on Food safety in the EU (2025), trust in "Scientists working at university or publicly-funded research organisations" is 84%. They are the second most trusted after "General practitioners and specialist doctors" (90%).

In the case of risk communication, the source of the information should be credible, informed and trusted. Tonkin et al. (2019), generally recommends that information should be provided by trusted independent bodies, providing examples like chief medical officers or hospitals.

Van Kleef et al.'s (2007) found that independent actors are perceived to offer unbiased opinions regarding food safety matters, and so are trustworthy channels of information.

Often experts, such as scientists or medical professionals, are cited when talking about risks.

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BENEFIT OF CLEAR COMMUNICATION OBJECTIVES

Communication objectives guide strategy, help monitor and measure success, and ensure alignment between risk managers, industry, and consumers.

The way **communication objectives** are set, and subsequent **communication content developed**, varies across **different target groups**, across **different phases of the risk analysis process**. Regulatory bodies must consider all three of these factors when developing appropriate content and outreach.

FOUR CORE OBJECTIVES

Without clear objectives, risk communication may fail to adequately convey the risk message or address consumer or other stakeholders' concerns.

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EFFECTIVE RISK REDUCTION STRATEGIES

Risk managers must address multiple communication objectives: businesses require clear guidance on complying with safety measures, while consumers need accessible information about risks, evaluation processes, and uncertainties in order to make informed decisions for themselves and for society (Renn, 2015).

Risk
Address **real and perceived risks** equally (Slovic, 1987) in communications.

Actionable
Prioritise conveying **actionable advice** – actions or behaviours that consumers can perform that are simple and effective (e.g., safe cooking temperatures, effective hygiene practices).

Clear
Focus on the **clarity and feasibility** of the proposed recommendations.

Food Safety Example
During a food safety incident, clear **food recall instructions** include product information, product images, batch numbers, and **what actions to take** with the product (e.g., return it to the shop, dispose of it safely etc., attend the doctor if experience specific symptoms)

Communication needs to transmit the 'availability' of actions to prevent or avoid risks and should appear 'personalised' to affected populations.

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MESSAGE CRAFTING

Content

Clearly identify what you want the audience to think, feel, or do.
Avoid jargon, use **plain language**, simplify the message as much as possible.
Align messages with audience **values** (social trust), not just facts.
Use a **tiered message structure**:
- Simple, memorable core message
- Supporting details (FAQs, data & evidence)
- Advanced, technical resources (reports, scientific references)

Keep **visual style and core phrasing** consistent

Sources

Evidence-based information, referencing credible sources (e.g., WHO, FAO, EFSA or other relevant agencies).
Ensure **sources are credible**, informed and trusted.

Tailor Messages to Audience Segments

Adjust **tone and format** based on audience literacy, knowledge levels and needs.
Consider the role **risk perceptions** might play.

Framing

Experiment with **framing**, like gain/loss framing, positive/negative framing, and other techniques, to find the most effective approach.

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COMMUNICATION STRATEGY

A communication strategy is a structured plan aligning communication objectives, target audiences, messages, channels, and evaluation.

Without a strategy, the (risk) communication may fail to adequately convey the risk message or address consumer/stakeholder concerns.

Charlebois and Summan's (2015) core risk communication strategy supports **the inclusion of openness (and transparency, independence and timeliness) as key factors** that inform the strategy.

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THE CYCLE OF COMMUNICATION PRODUCTION

Communication production is an **iterative process**.

Communication is not a one-off event, but a continuous cycle of testing, feedback, and refining.

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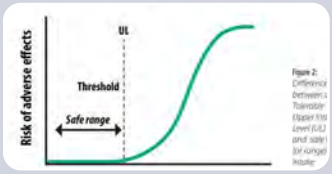
AN EXAMPLE: NUTRITION: SUGARS – SETTING A THRESHOLD



2017 - Nordic countries ask EFSA to assess health risks associated with intake of dietary sugars and set a tolerable upper intake level (UL).

2021 - Draft opinion goes out for public consultation, many stakeholders (WHO, industry, consumers), social research helps to target them

2022 - Final scientific opinion: "Added and free sugars should be as low as possible" but not possible to set a tolerable upper intake for sugars

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RECAP OF TODAY'S LEARNING JOURNEY

Science communication focuses on **facts and findings**, risk communication reflects on **uncertainty and potential consequences**

A hazard is the **potential for harm**, a risk is the **probability that harm will occur** under specific conditions

Communicating uncertainty doesn't mean science is weak. It supports informed decisions based on **the likelihoods of a range of possible outcomes**

Objective risk is **measurable**, data-driven, factual. **Subjective risk** is from perceptions, emotions, experiences, values, and **varies between people**

How people understand, perceive and experience a risk changes **how and what to communicate** to them

Segmentation means **dividing the audience into smaller groups** based on shared traits to tailor messages, tools and channels

Clear objectives guide strategy, align stakeholders, measure success; they should be designed to **maintain trust**

A **communication strategy** aligns objectives, audiences, messages, channels, and evaluation

Communication is a cycle, a continuum of **research, testing, feedback and refining**

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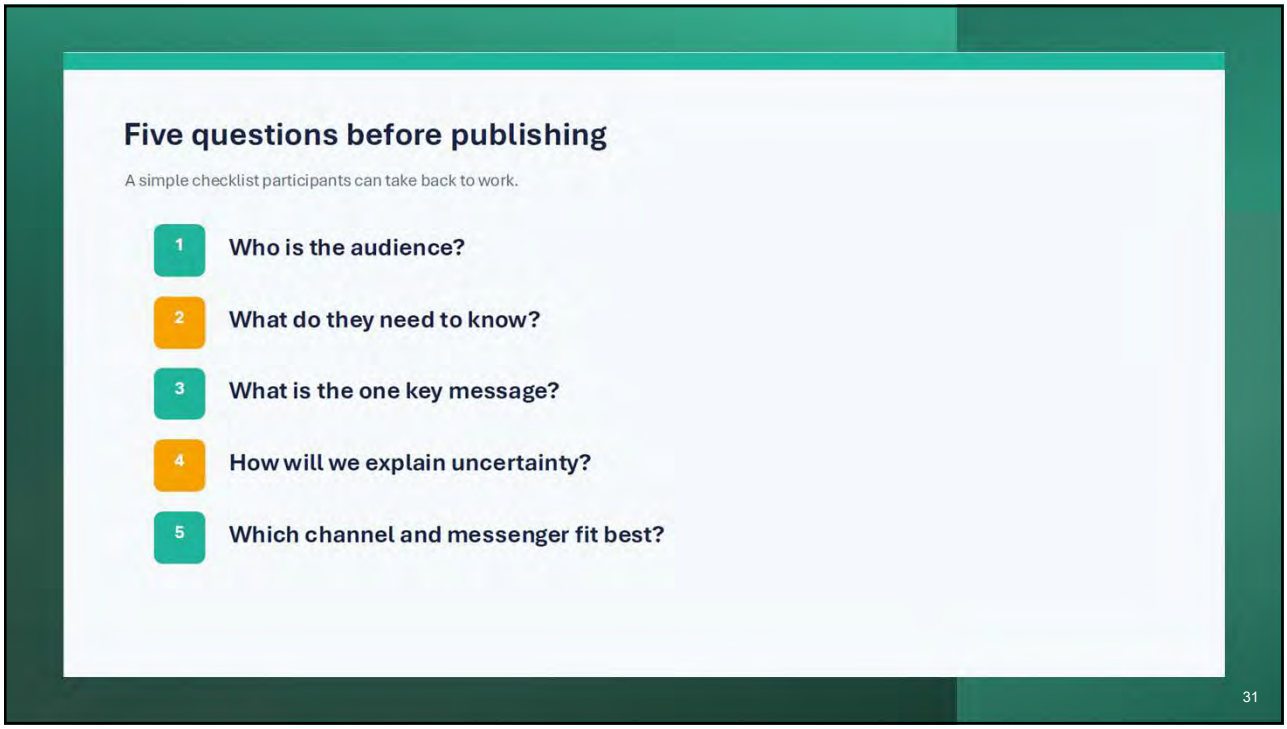
Five questions before publishing
A simple checklist participants can take back to work.
1
Who is the audience?
2
What do they need to know?
3
What is the one key message?
4
How will we explain uncertainty?
5
Which channel and messenger fit best?
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