

Quantitative Risk Assessment (QRA)

What is it and what is the value added?

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Our Meaning of Risk

**QRA is intended to answer the question
“what is the risk of an event,” which
implies answering three questions about
the event**

- What can go wrong?**
- How likely is it to go wrong?**
- What are the consequences?**

Form of the Results

QRA results generally take the form of an event frequency and the confidence in that frequency

3

Context of Risk Results

A QRA does not tell you *when* an event will occur, but it will tell you with uncertainty how often it might occur, thus providing insights on the “when” question

4

Triplet Framework

Scenarios, likelihoods, and consequences of events is the cornerstone of a QRA

5

Basis for Triplet

- **Scenarios: Based on an understanding of the system or facility**
- **Likelihoods: Based on the evidence supporting the scenarios**
- **Consequences: Based on the endpoints of the scenarios**

6

Value Added

- **Exposure and quantification of threats and consequences**
- **Roadmap for safe operation of the facility**
- **Greatly enhanced basis for making the right decision for managing the risk**