

# CYBER RISK ASSESSMENT

## RISK ASSESSMENT TIPS

- ▶ Refer to CESER's *Risk Assessment Essentials* for consistent methodologies.
- ▶ Follow the **CIA Triad**: Confidentiality, Integrity, Availability—evaluate the importance of each aspect to your methodology.
- ▶ Choose balanced scoring scales (e.g., 1–5); ensure meaningful differences between numbers.

## QUALITATIVE VS. QUANTITATIVE CHALLENGES

- ▶ **Qualitative:** Uses a corresponding number that represents descriptive words (e.g., *low* = 1, *medium* = 2, *high* = 3) to assess risk impact. This is useful for capturing judgment-based insights when detailed data isn't available.
- ▶ **Quantitative:** Uses real numbers informed by measurable data (e.g., monetary values or historic probabilities) to assess risk. This is more costly, time consuming, and difficult than a qualitative assessment.

## TOP THREE SOURCES

### THREAT SOURCES:

### VULNERABILITY SOURCES:

### CONSEQUENCE SOURCES:

Category		Annual Threat Probability (% per year)		
Score	Tier	Uniform Scale	Adjusted Uniform Scale	Rough Order of Magnitude Scale
1	Low	0%-20%	0%-10%	<1%
2	Med-Low	20%-40%	10%-20%	1%-5%
3	Medium	40%-60%	20%-30%	5%-15%
4	Med-High	60%-80%	30%-40%	15%-35%
5	High	80%-100%	>40%	>35%

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## CYBER RISK ASSESSMENT STEPS



## IMPACT AREAS TO CONSIDER

- ▶ Security
- ▶ Evacuation
- ▶ Environment
- ▶ Tactical
- ▶ Strategic
- ▶ Economic
- ▶ Fatalities

## KEY CONSIDERATIONS

- ▶ **Stakeholders May Assess Risk Differently:** Focus on broad concurrence from stakeholders or adjust assumptions as needed. Bring subject matter experts together to discuss consequences and impacts.
- ▶ **Credible Sources:** Collect information from reliable datasets, industry briefs, and SMEs. Surveys are helpful for gathering quantitative insights.
- ▶ **Defensible and Replicable Assessments:** Prioritize methodologies that can be justified and replicated across time and cases.



U.S. DEPARTMENT  
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Office of Cybersecurity, Energy Security,  
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