

4. Risk Based Criticality Analysis

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1. **Evaluation of Critical Infrastructure (CI):** The paper focuses on the need to evaluate the criticality of infrastructures and prioritize critical assets for effective protection of critical infrastructure.
2. **Lack of Standardization in Criticality Analysis:** It highlights that, unlike ICT risk analysis, criticality analysis for critical infrastructure is not yet standardized, and existing methodologies are often ad hoc and obscure.
3. **Comparison of Risk and Criticality:** The paper examines the relationship between risk and criticality by analyzing their scope, aims, impact, threats, and vulnerabilities, emphasizing the differences and similarities.
4. **Generic Risk-Based Criticality Analysis Methodology:** A key contribution of this paper is the proposal of a generic methodology for risk-based criticality analysis, aiming to provide a more structured approach.
5. **Detailed Impact Criteria List:** The paper presents a detailed list of impact criteria for assessing the criticality level of infrastructures, focusing on society-centric and sector-centric impacts, as opposed to traditional methodologies that mainly consider organization-centric impacts.
6. **Definition and Scope of Criticality Analysis:** Criticality analysis is defined as a society-centric risk analysis process specifically tailored for large-scale, interdependent systems and infrastructures.
7. **Urgent Need for Clarity in CIP Standards:** The paper acknowledges the urgent need to clarify how existing risk analysis methodologies can be effectively utilized for assessing, categorizing, prioritizing, and protecting critical infrastructures, given the lack of specific standards for critical infrastructure protection.