

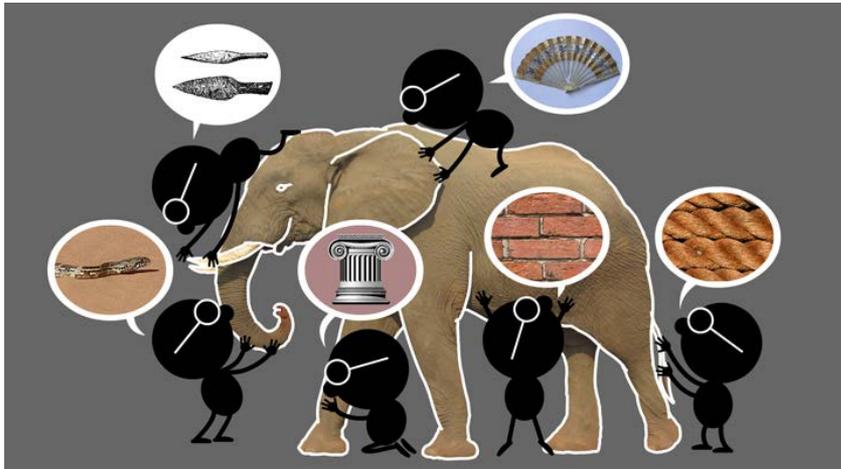
Module 1.2

Cyber Security Objectives

Ravi Sandhu

Spring 2021

Elephant Problem

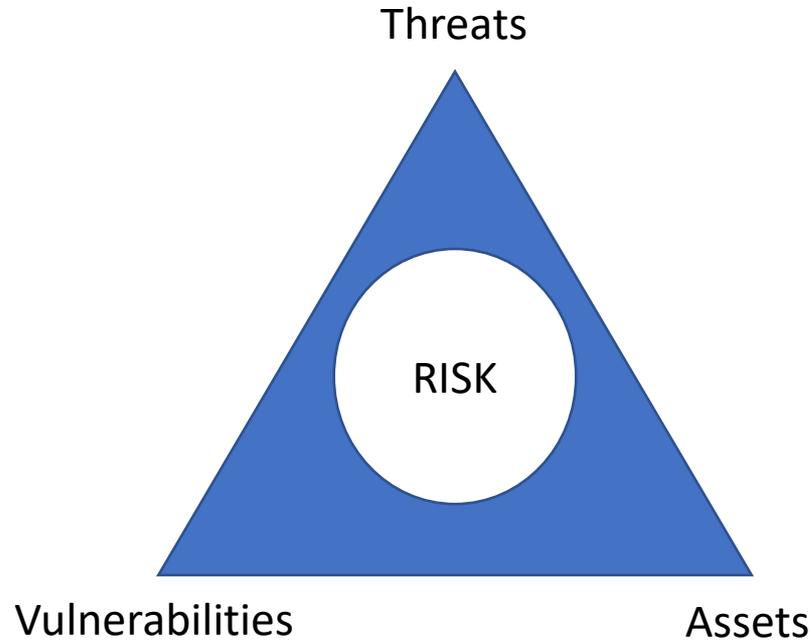


Applied vs Foundational Science: Cyber-elephants require applied and foundational combined

Present vs Future Focus: Rapidly evolving cyber-elephants require future focus

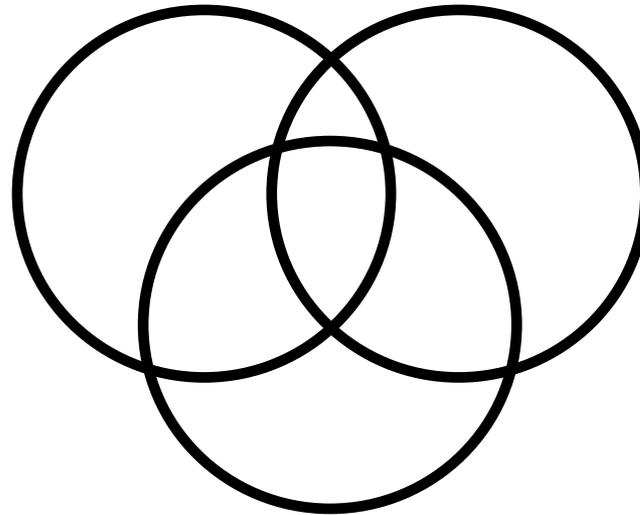
Cyber-Elephant Problem





**Control of read and write is
fundamental to all three**

INTEGRITY
modification

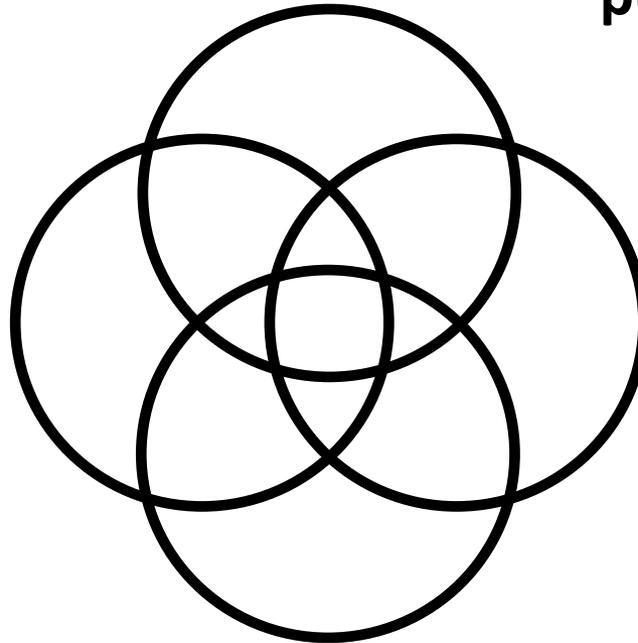


AVAILABILITY
access

CONFIDENTIALITY
disclosure

USAGE
purpose

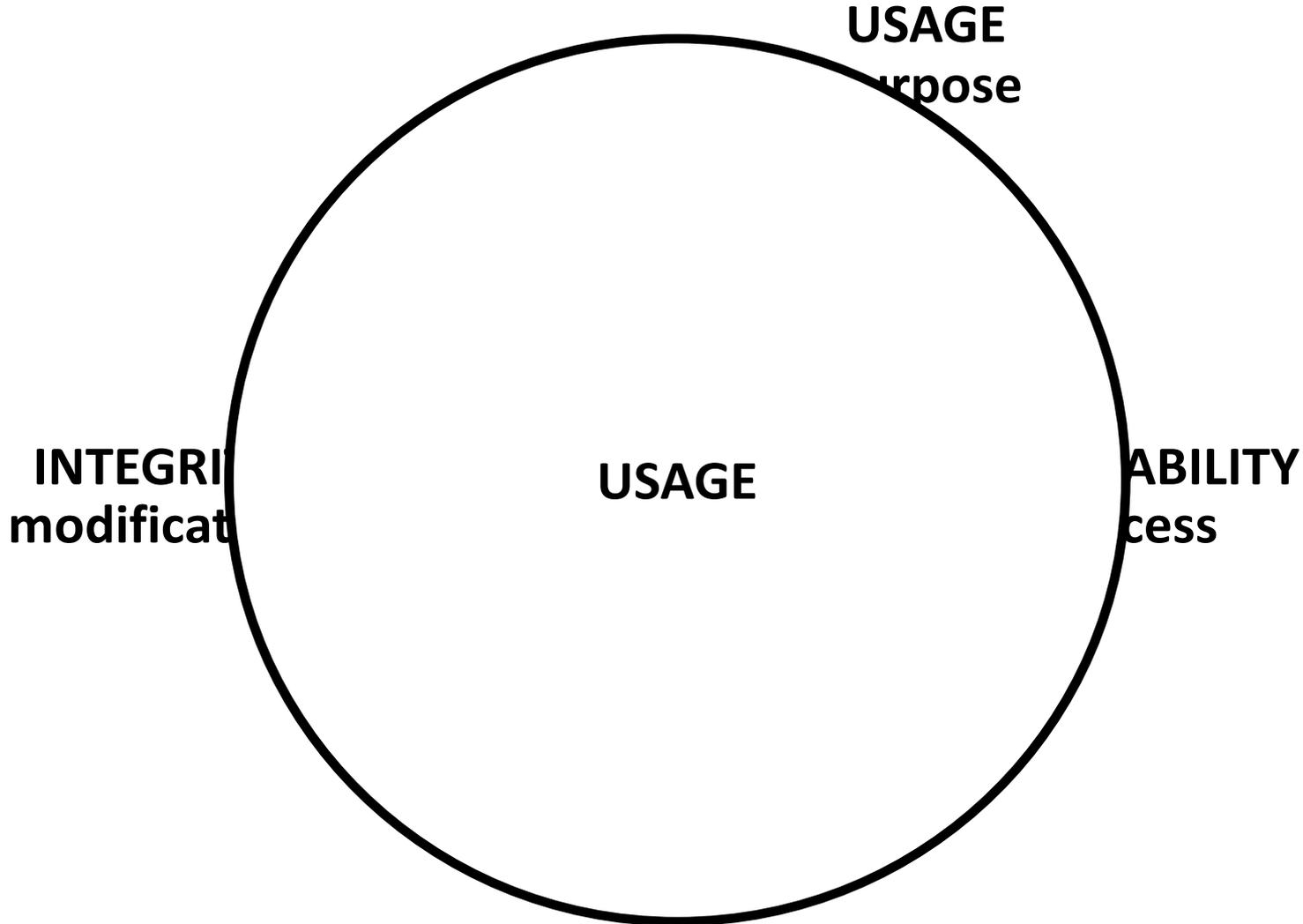
**Covers privacy and
intellectual property
protection**



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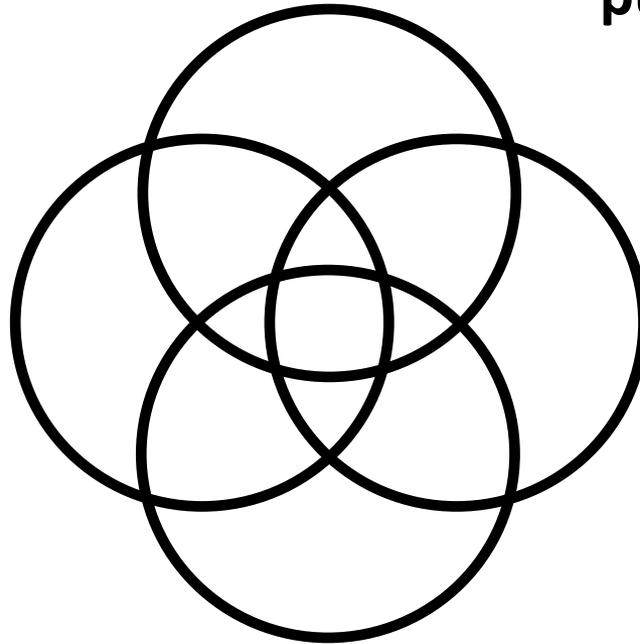
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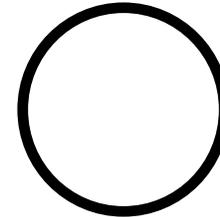
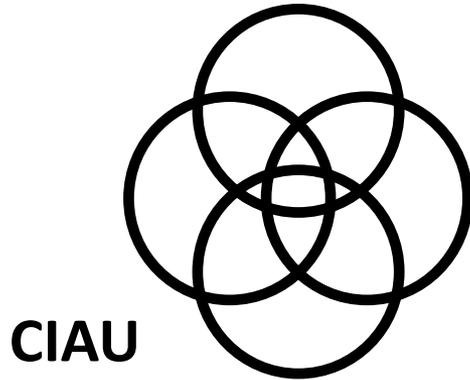
**Evaluation of tradeoffs
requires
application context**



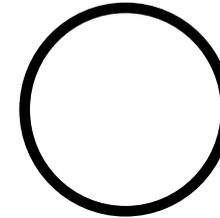
INTEGRITY
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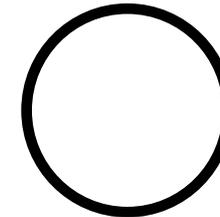
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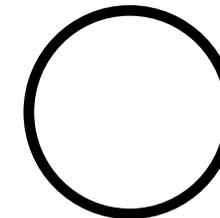
Cost



Convenience



Growth



Safety

- **Cannot have it all within CIAU**
- **Need to reconcile with non-Security Objectives**
- **Evaluation of tradeoffs requires application context**

