

Attack Surface Definitions

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Goal

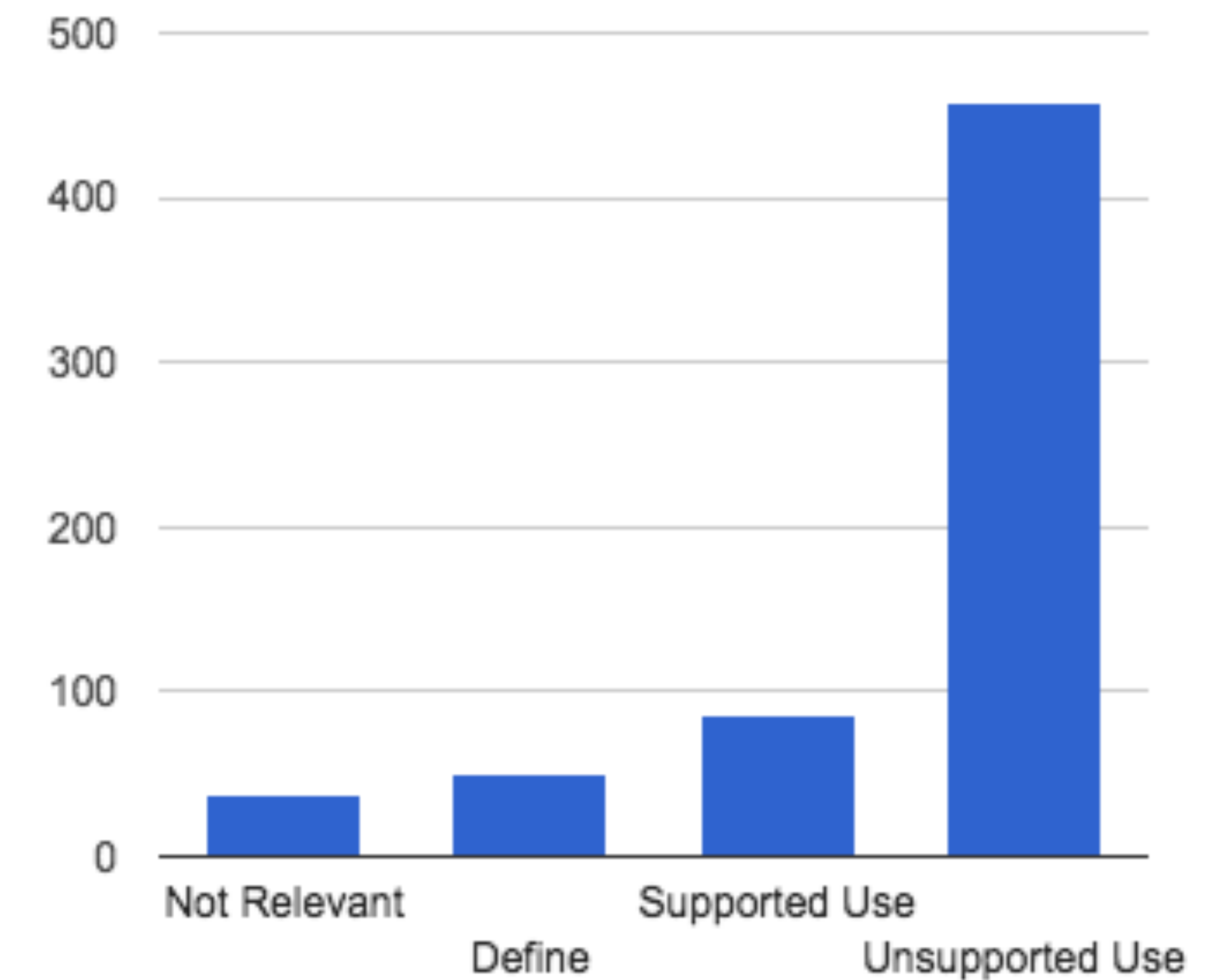
Help researchers and practitioners communicate about attack surfaces through a unified definition based on a literature review.

Approach

1. **Identify** different definitions of attack surface
2. **Cluster** similar definitions
3. **Recommend** specific definition for practitioners and researchers to cite and use

Review

- **50** papers provided their own definition
- **22** unique papers cited for attack surface definitions
- **71%** of papers did not cite or define attack surface



Clusters

- *Targets, Channels, Access*
- *Size*
- *Paths through system*
- *External actions*
- *Attack vectors*
- *List of features*
- *Exposed vulnerabilities*

Proposed Definition

“A system’s attack surface can be described across three abstract dimensions: *targets and enablers, channels, and access rights.*”

Usage: ...attack surface, as measured by X, Y, and Z.

