Threat Analysis & Risk Assessment (TARA)

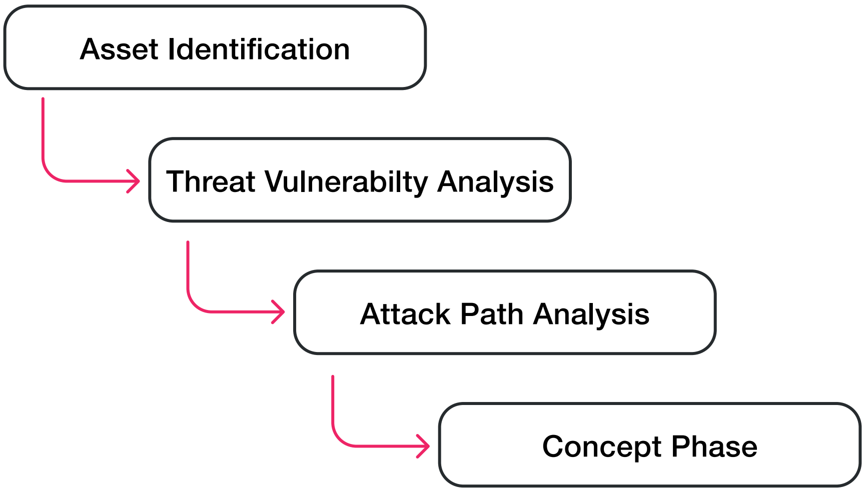
Karamba Security

Connected Software-Defined Vehicles (SDVs) are some of the most complicated machines ever developed. They also present a wide range of new attack vectors for hackers that could pose safety, operational, privacy or financial threats. It is imperative that automotive manufacturers take the steps necessary to examine the risks and to reduce them with appropriate mitigations.

Karamba Security's TARA process addresses Cybersecurity Compliance goals to meet the ISO/SAE 21434 standard and the UN R155 regulation, and produces an actionable and prioritized mitigation list that can be communicated with all suppliers involved.

Gain Actionable Insights from an Automotive Security Powerhouse

- ✓ Define system adversaries, functionality, and attack vectors
- ✓ Develop defense strategies for the lifetime of the vehicle
- ✓ Identify system and design vulnerabilities
- ✓ Meet the requirements of ISO/SAE 21434 and UN R155



Asset Identification

Threat Vulnerabilty Analysis

Attack Path Analysis

Concept Phase

Security Standing Assessment for Your Product

Asset Analysis and Identification

Identify the assets of your product and their cybersecurity properties. Assess the damage scenarios they could potentially face.

Threat Vulnerability Analysis

Identify the threat scenarios to the cybersecurity properties of your assets. Examine weaknesses, assess exploits, and consider the impact of potential damage scenarios.

Attack Path Analysis

Calculate the attack feasibility with CVSS, attack potential-based approach, attack vector-based approach, and windows of opportunity.

Concept Phase

Once the full scope of the risks is determined, a risk scoring matrix is created, and Karamba experts guide you step-by-step to a practical and tailor-made cybersecurity goal and mitigation concept.

Risk Matrix

The overall Security Risk Level is determined by combining the Vulnerability Assessment and the Vulnerability Impact.

Vulnerability Impact					
5	Very Low	Low	Moderate	High	Very High
4	Very Low	Low	Moderate	High	Very High
3	Very Low	Low	Moderate	Moderate	High
2	Very Low	Low	Low	Low	Moderate
1	Very Low	Very Low	Very Low	Low	Low
	1	2	3	4	5

Vulnerability Assessment

Karamba Security

End-to-End Product Security
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