

WHITE PAPER

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**Utilizing the CARVER Target
Analysis and Vulnerability
Assessment Methodology as Part
of a Security Planning Process**

PREPARED BY

**SECURITY
MANAGEMENT
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Intelligent Security Solutions



POLICE

Utilizing the CARVER Target Analysis and Vulnerability Assessment Methodology as Part of a Security Planning Process

“Failure to prepare means preparing to fail.”

- John Wooden

As the father of modern-day automotive processes and measurement standards, W. Edwards Deming (the American management consultant who helped build Japan’s auto industry after World War II – and is still celebrated in Japan with the “Deming Award”), famously stated, “If you can’t describe what you are doing as a process, you don’t know what you’re doing.”

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Operational planning is a process. No military general – or security director for that matter - worth their salt, sits down with a blank sheet of paper and simply begins crafting a plan without some type of outline. The planning process must be follow a logical sequence. A process is defined as a series of actions or steps taken to achieve a particular end. Therefore,

regardless of whether your plan is meant to be proactive or reactive in nature, a step-by-step process must still be engaged to both write and carry out your operational objectives.

One of the many beautiful things about the CARVER Methodology is its ability to lay concepts out in a logical sequence. When a plan writer begins the planning process his/her first step is to analyze the task at hand. Because CARVER is both qualitative and quantitative, this allows the plan writer to use the CARVER acronym to decide how that analysis will unfold. For example, if a security director was assigned to deliver an emergency response plan to his/her organization, he/she can walk through the matrix to ask the questions, prior to putting pen to paper. A sample of the questions that CARVER could spark, might be:

- C** - What is **critical** about the plan? (why does it need to be written?)
- A** - Who and what will have **access** to the plan? (who will use it during an emergency?)
- R** - Who will **recognize** the value of the plan? (does the plan need to be written to a specific audience not directly involved with planning, but may be affected as the result of an emergency?)

- V** – What are the **vulnerabilities** of the plan? (Do factors such as time, money, resources, turnover, communications, interest, etc. affect the plan?)
- E** – What is the **effect** of not doing the plan or a minimal version of it? (what is the risk vs. gain of a less-than-comprehensive plan?)
- R** – If there is an emergency, will the plan help the organization **recover**? (how important is “down time” during an emergency?)

Obviously, these questions could be asked differently depending upon the plan writer’s stated requirement. However, the emphasis here is that just as one might use the time-tested “5 W’s (who, what, where, when, why) as a starting point, CARVER allows the planner to take the initial planning process one step further.

Variations of the Planning Process Using CARVER

Facility:		SMI									
Date:											
Prepared By: Security Management International, LLC											
ASSET	DESCRIPTION	Design Basis Threat	Physical	Chemical	Biological	Explosive	Fire	Political	Religious	RSK	Px
	Electrical Transformers	Numerous transformers provide electrical power	Physical Destruction	3	4	3	4	3	5	21	0.79
	Electrical Control Panels (interior)	Located throughout the interior of the building	Physical Destruction	3	4	3	4	3	5	20	0.87
	Main Loading Dock	Loading dock is used for deliveries and contains some merchandise and storage areas	Theft and Vandalism	3	3	3	4	3	3	17	0.87
	Water Utilities	High level of chemicals to heat process water for corrosion protection	Physical Destruction	3	3	3	4	3	5	18	0.88
CARVER Color Coding			CARVER Ratings								
1 - High			1 - Main Control Room								
2 - Medium			2 - Main Control Room								
3 - Low			3 - Main Control Room								
4 - Very Low			4 - Main Control Room								

There are numerous planning methods out there, as well as an exhaustive sampling of plans to be found online. The focus of these plans is dependent upon the assets involved, both in terms of assets to be protected and assets that can be utilized as response resources. As CARVER is primary focused on asset ranking and categorization, it lends itself as an ideal methodology to assist in the planning process. For

example, if the aim of a business continuity plan is to maintain business operations after a disaster strikes, CARVER can be utilized to address which assets are deemed most necessary for business to continue to function, at least on a temporary basis. This ranking system not only aids the planner as to where to shore up security vulnerabilities prior to an incident, but it also assists him/her in determining what redundancies need to be established (i.e., do spare parts need to be available for certain assets?).

By using a CARVER matrix to determine asset criteria, plans can be drafted to provide response to emergency incidents. These response measures include procedures for maximizing safety and minimizing property damage, allowing for essential functions to run uninterrupted for a

specific period of time, and to communicate critical information to personnel and the public before, during and after a crisis. In terms of security planning using the CARVER criteria matrix, most of the plans relate to one of the following categories:

- **Business Continuity Plans** – Provides guidance and procedures for maintaining essential business operations while recovering from a significant business disruption.
- **Business Recovery Plans** – Provides procedures for recovering business operations immediately following a disaster.
- **Continuity of Operations Plans** – Provides guidelines and procedures to continue an organization's key essential functions uninterrupted for a specific period of time.
- **Crisis Communications Plans** – Provides procedures for disseminating critical emergency communications to personnel and the public before, during and after a crisis.
- **Disaster Recovery Plans** – Provides detailed procedures to facilitate recovery of capabilities at an alternate site and is focused on large events.
- **Occupant Emergency Response Plans** – Provides planned procedures for maximizing safety and minimizing damage in response to an emergency incident at a facility.

As you can see, the uses for CARVER in response planning are virtually limitless. Because the CARVER matrix can be constantly reworked to address the question, "What if?", the planning process can be examined multiple ways and for multiple types of plans.

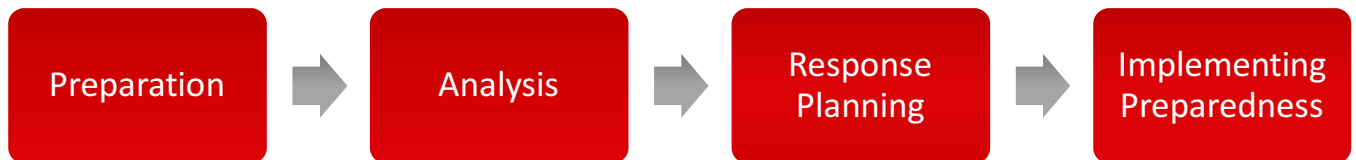
CARVER as a Contingency Planning Tool

Contingency planning is a tool to anticipate and solve problems that typically arise during the threat assessment and/or an incident response. Therefore, emergency planning and contingency planning are slightly different. The primary difference between the two is the level of specificity of the incident. For example, a preparedness plan can cover several types of weather-related incidents (floods, snow, sandstorms, etc.), while a contingency plan can be highly specific (such as an active shooter incident).



Due to its specificity, the contingency management planning process is organized around four basic components: preparation, analysis, response planning, and implementing preparedness.

4 Basic Components – Contingency Management Planning Process:



When utilizing the CARVER matrix criteria for contingency planning, strong coordination and process management is required. Using CARVER, a good contingency plan should address the following:

- Analyzing Potential Emergencies
- Analyzing Potential Impact
- Establishing Clear and Objective Strategies
- Implementing Preparedness Actions

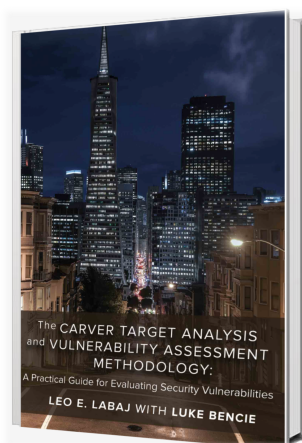
Effective contingency planning also requires action at several different organizational levels. This action must also be divided between strategic and tactical responsibilities. CARVER can be implemented to score the requirements of each division, unit, and individual charged with responding. Typically, these actions include gaining and maintaining situational awareness, activating and deploying key resources and capabilities, effectively coordinating response, and finally, demobilizing as the situation permits.

To demonstrate how the CARVER Methodology can be utilized for contingency planning, consider asking the following questions during the planning process, which are also asked during the target analysis and vulnerability assessment:

- What assets are you trying to protect?
- What is your asset inventory?

- What are the risks to these assets?
- Who and what are we defending against?
- How well does the current security solution mitigate these risks?
- Does it work and what are the points-of-failure?
- What other risks does the security solution/response cause?
- Are there ripple-effects to the response?
- What costs and trade-offs does the security solution/response impose or create?
- Is there a cost benefit analysis that can be performed?

By asking the right questions, the planning team can identify specific threats and establish a baseline that can be used against various scenarios to expose vulnerabilities and implement the most appropriate protective measures.



The following excerpt comes from the book, *The CARVER Target Analysis and Vulnerability Assessment Methodology: A Practical Guide for Evaluating Security Vulnerabilities* by Luke Bencie and Leo Labaj.

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To learn more about the CARVER Methodology, visit our website at:
<http://www.smiconsultancy.com/training/the-carver-methodology>

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