Basic Emergency Vehicle Operators Course

ORM & Route Selection

Operational Risk Management

Goal:

ORM is an integral part of our Planning, Training and Operations. ORM is a decision making tool to be used to increase our Operational Readiness and enhance our ability to accomplish the mission.

ORM accomplishes this by identifying Hazards, Assessing those Hazards for Risk, Making Risk Acceptance Decisions, Applying Controls to minimize the Risk and Supervision.

An EV Operator responding to a emergency will want to reach the desired destination as quickly as possible. The operator must do everything possible to ensure a prompt arrival. This means managing RISK and selecting the route that is the safest and one that will ensure a a timely response.

Operational Risk Management

Guidance:

OPNAVINST 3500.39C *(July 2010)*

MCO 3500.27B *(May 2004)*

AR-385-30 *(Feb. 2010)*

AF Inst. 90-901 *(April 2000)*

Objectives:

By the end of this module, students will be able to:

- **List the five steps in the ORM process**
- **List the four principles related to the ORM process**
- **List two benefits of ORM**
- **Define Risk**
- **Identify the characteristics of RISK**
- **Identify the factors associated with RISK**

Route Selection & ORM

ORM & Route Selection:

By the end of this module, students will be able to:

- **Identify the best route with the least amount of steering and speed adjustment requirements.**
- **Identify Approaches to intersections offering acceptable line-of-sight and legal right-of-way.**
- **The quickest, most direct route.**
- **The route that will give the least interference to the emergency warning devices being seen and heard.**
- **The route which is the widest and has available escape paths to the sides.**
- **The route which will assure safe arrival.**

Are you using ORM today?

Of course you are…

ORM may be known by other names or processes, but just look around…

Operational Risk Management

The term Operational Risk Management (ORM) is the oversight of operational risk including the risk of loss resulting from inadequate or failed internal processes and systems, human factors, or from external events. ORM is defined as a continual cyclic process resulting in acceptance, mitigation, or avoidance of risk.

ORM

- **Is a process not a program.**
- **It must become an inherent way of doing business**

Operational Risk Management

ORM

- **ORM Terms**
- **Five step ORM Process**
- **Four ORM Principles**
- **Three levels of ORM**
- **Benefits of ORM**
- **RISK**

Operational Risk Management

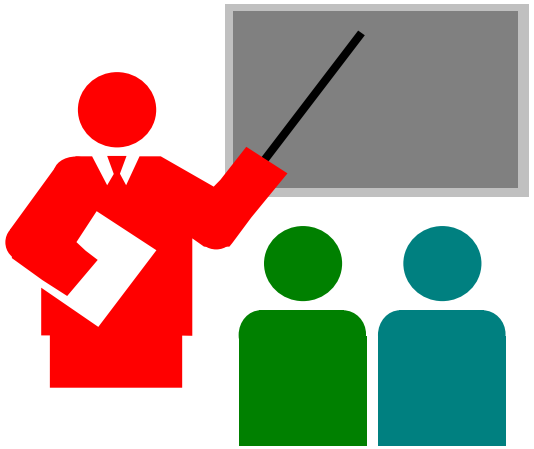
Four ORM Terms

Hazard

Risk

Probability

Severity



Operational Risk Management

Hazard

A condition with the potential to cause personal injury or death, property damage, or mission degradation.

Risk

An expression of possible loss in terms of severity and probability.

Probability

The likelihood that a hazard will result in a mishap or loss.

Severity

The worst credible consequence which can occur as a result of a hazard

Operational Risk Management

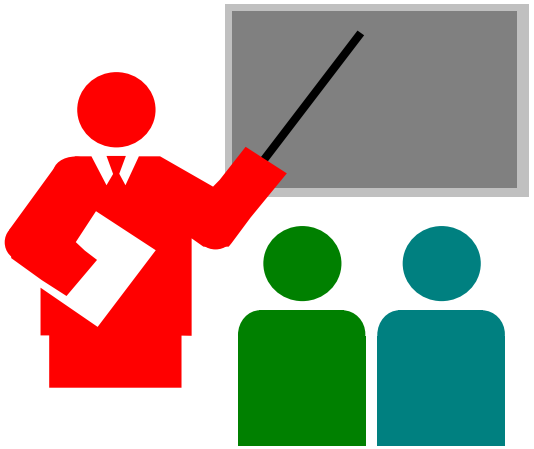
Five Step Process

1) **Identify the Hazard**
2) **Assess the Hazard**
3) **Make Risk Decisions**
4) **Implement Controls**
5) **Supervise**

Operational Risk Management

Four Basic Principles

1) **Accept risk when benefits outweigh the cost.**
2) **Accept no unnecessary risk**
3) **Anticipate and manage risk by planning.**
4) **Make risk decisions at the right level.**



Operational Risk Management

Three Levels of Application

1. **Time-critical – On the run**

   Consideration of the 5 steps

2. **Deliberate**

   Application of the complete 5 step process

3. **In-Depth**

   Complete 5 step process with detailed analysis

Assess

Balance

Communicate

Do It !

5-Step ORM and *ABCD*

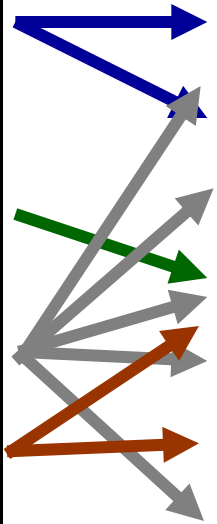
Time Critical Process and Mnemonic

A – Assess (your situation, your potential for error)

B – Balance Resources (to prevent and trap errors)

C – Communicate (risks and intentions)

***D* – *Do and Debrief* (take action and monitor for change)**



5-Step Deliberate and In-depth Process

1. **Identify Hazards**
2. **Assess Hazards**
3. **Make Risk Decisions**
4. **Implement Controls**
5. **Supervise (watch for changes)**

Operational Risk Management

ORM – TCRM

Benefits

Reduction in Mishaps/Operational Loss

Improved Mission Effectiveness

Effective mission accomplishment

Reduced exposure to future risk

Operational Risk Management

RISK

Definition

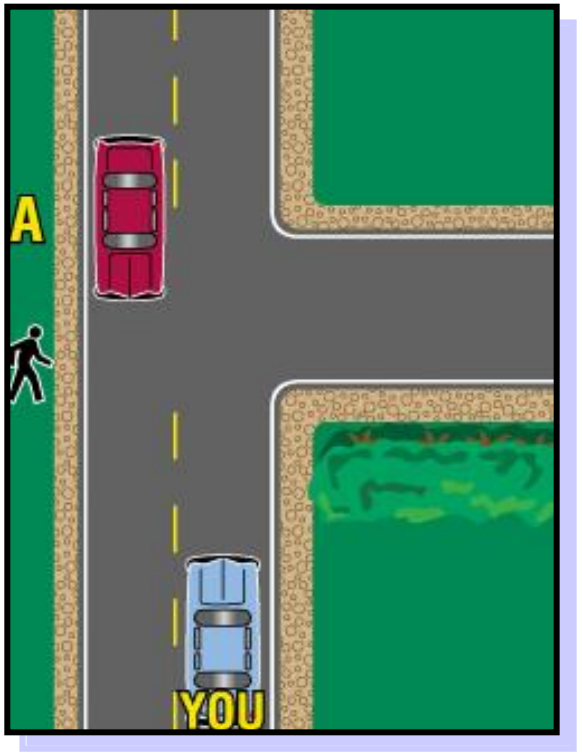
The chance of damage, injury or loss

Operational Risk Management

RISK

Assessing RISK when Driving

The amount of risk can seldom be determined with complete accuracy



Operational Risk Management

Factors to Evaluate Risk

Probability

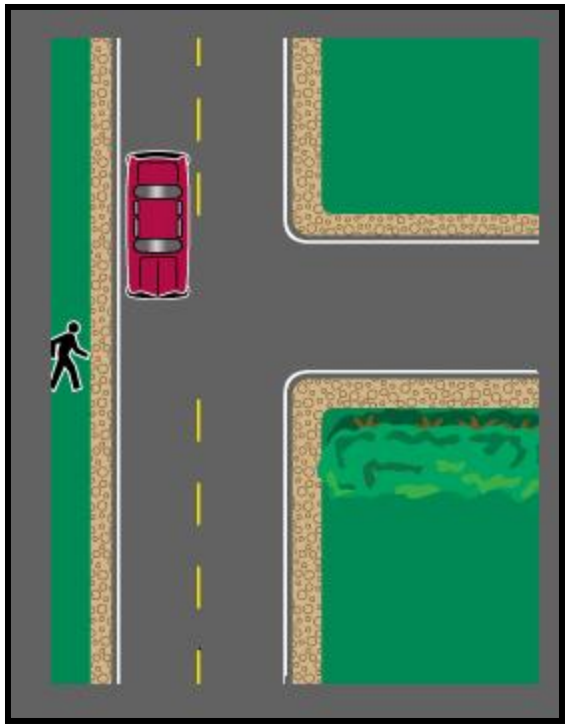
What is the likelihood of a dangerous event occurring?

Manageability

What is the manageability of the dangerous event?

Consequences

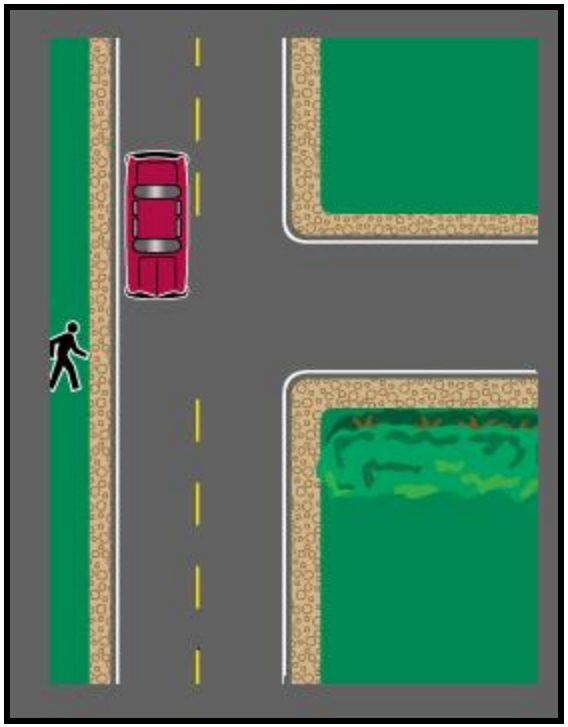
Identify and consider alternative actions.



Operational Risk Management

Characteristics of Risk

- Risk is always present
- Perceived Risk differs from actual risk
- Risk is shared
- Risk can be altered



Route Selection & ORM

Route Planning

For emergency response vehicles operating from a fixed base, it is particularly important to plan in advance.

Advance Planning usually takes on the form of a predetermined "Route Plan":

- Divide your response area into sections/districts

- Know selected routes during different times and conditions

Route Selection & ORM

Route Planning

A Route Plan Will:

- Be Updated on a regular basis
- May need to be adjusted on the fly, due to traffic conditions, detours, additional response information.

Always advise the dispatcher/supervisor of any change in route plans or change in response route.

Route Selection & ORM

Route Planning

Advantages:

- **Minimize response time**
- **Reduce accident/crash exposure**
- **Driver/Operator can devote full attention to the driving task.**

Route Selection & ORM

Factors to be considered

- **Location of facilities**
- **Events affecting traffic flow**
- **Characteristics of local roads**
- **Road conditions**

Location of Facilities

- **Shopping Centers / Malls**
- **Schools Districts**
- **Day Care / Child Care Facilities**
- **Hospitals / Medical Facilities**
- **Arenas / Ball Parks / City Parks**
- **Amusement Parks**

Route Selection & ORM

Events Affecting Traffic Flow

- **Rush Hour**
- **Mishap Traffic Back-Up**
- **Construction Zones**
- **Scheduled Events - Festivals**
- **Seasonal – Holiday shoppers**
- **Arenas / Ball Parks / City Parks**

Characteristics of local roads

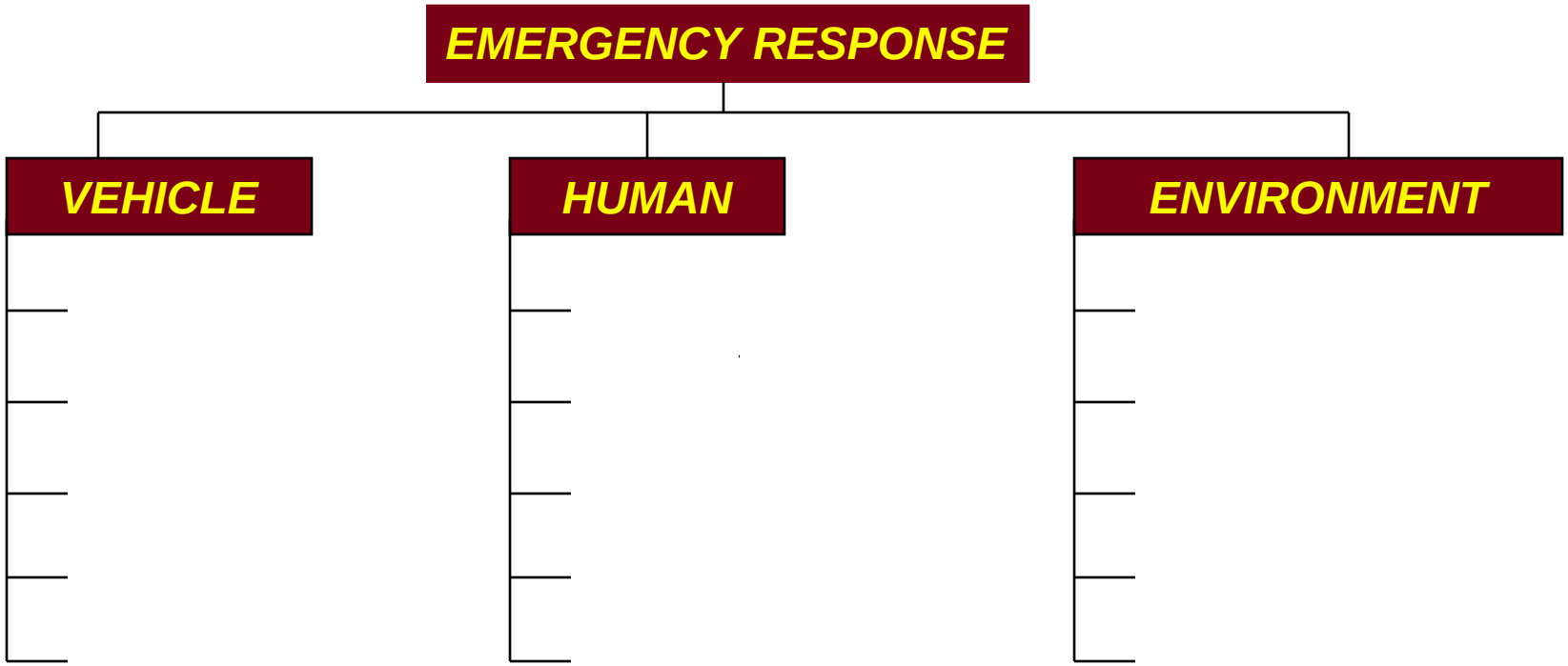
- **Road size**
- **Divided / undivided lanes**
- **Limited access roads**
- **Hazardous intersections**
- **Reversible Lanes**

Route Selection & ORM

Road conditions

- **Surface**
- **Dry / Wet**
- **Detours / Road construction**
- **Bad Weather – accumulated water, snow, ice**
- **Speed Bumps, Humps**

Hazard Identification Handout



List at least 5 Hazards under each heading. Additional Hazards Identified may be listed on the back of sheet.

Hazard Identification Handout

EMERGENCY RESPONSE

VEHICLE

- CONDITION
- TYPE
- LOAD CONDITION
- OPTIONS
- SAFETY EQUIPMENT

HUMAN

- VEHICLE FAMILIARITY
- PHYSICAL/EMOTIONAL READINESS
- PERSONAL PROTECTION
- DRIVER EXPERIENCE RESTRICTIONS
- SECONDARY DRIVER PARTNER

ENVIRONMENT

- DISTANCE TRAVEL
- TIME OF DAY/NIGHT/ DAY OF WEEK
- HIGHWAY LAWS
- OTHER DRIVERS
- WILDLIFE
- REQUIRED RESPONSE TIMES

** *ROUTES ARE DETERMINED BY THE LEAST NUMBER OF HAZARDS DRIVERS ARE EXPOSED TO*

Route Selection & ORM

Conclusions:

- **In many cases there is no “single best route”**
- **The shortest route may not be the best route**
- **Route familiarity is a distinct advantage**
- **Vehicle capability and handling limitations should be considered to ensure maximum advantage**
- **Routes may be emergency service specific**
  - **Police – Location of vehicle, officer safety**
  - **Fire – Location of fire hydrants**
  - **EMS – Patient transport or loading**

Summary

Route selection is often a low priority for non-emergency responses. However, proper route selection is critical during emergency response. Not all emergency responses start at the same location.

When a EV operator "practices" route selection during non-emergency driving, the chance that the best route decision for an emergency response will be made increases.

The emphasis should be on arrival at a destination, with speed as the second consideration.

REVIEW QUESTIONS

1) What is the definition of ORM?

2) What is the five step process of ORM?

3) What is Time Critical Analysis?

4) What are the four characteristics of RISK?

5) What four factors should be considered for proper route selection?