

CECOM
Directorate of Safety Risk Management

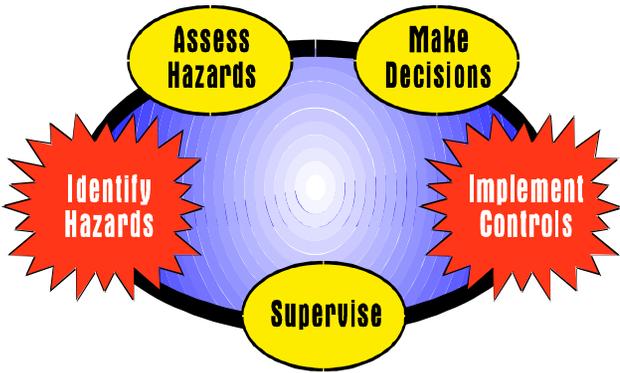


Risk Management

CECOM
LOGISTICS ASSISTANCE REPRESENTATIVES
Training



WHY SAFETY?

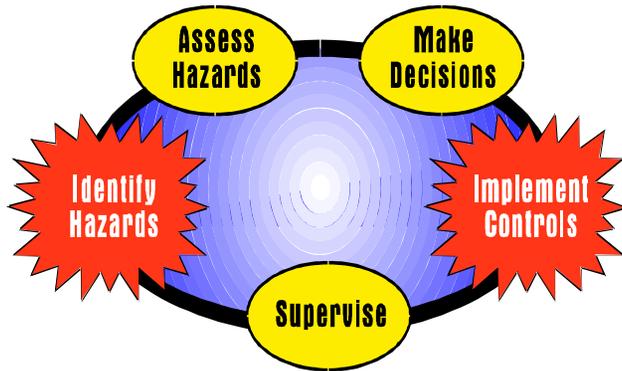


Risk Management

Why Safety?

Battle and Non-battle Casualties

Army	W.W.II 1942-45	Korea 1950-53	Vietnam 1965-72	DS/S 1990-91
<i>Accident</i>	56%	44%	54%	75%
Friendly Fire	1%	1%	1%	5%
Enemy Action	43%	55%	45%	20%



*The Army's Key to
Reducing Accidents ...*



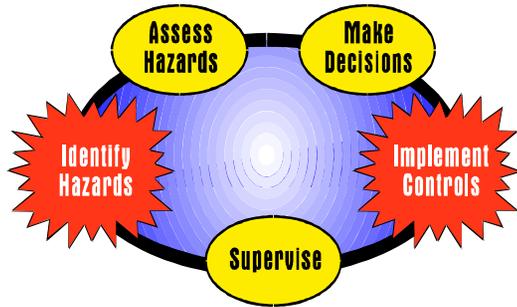
Risk Management

RISK MANAGEMENT

The Army's doctrinal process for identifying & controlling hazards. Identifies hazards that create unnecessary risks, and the controls which allow the commander to accomplish the mission.

Hazards that cannot be eliminated or controlled through application of industry standards require formal risk acceptance.





RISK MANAGEMENT

Definitions

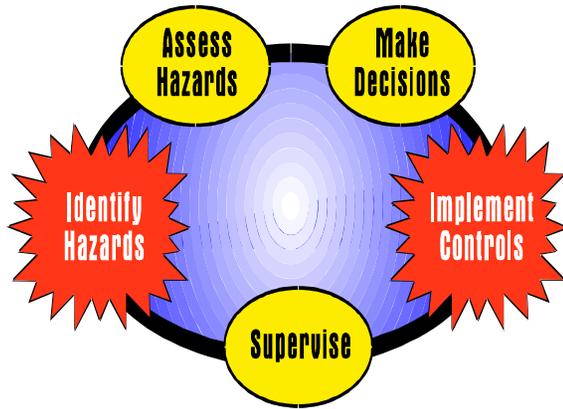
Risk Management - A process to identify, evaluate, select and implement actions to reduce risk.

Risk - An expression of loss in terms of probability and severity.

Hazard - A condition that is a prerequisite for an accident.

Residual risk - Remaining risk after corrective action has been implemented.

Risk Assessment - An evaluation of risk should a hazard result in an accident vs. benefits from accepting the risk.

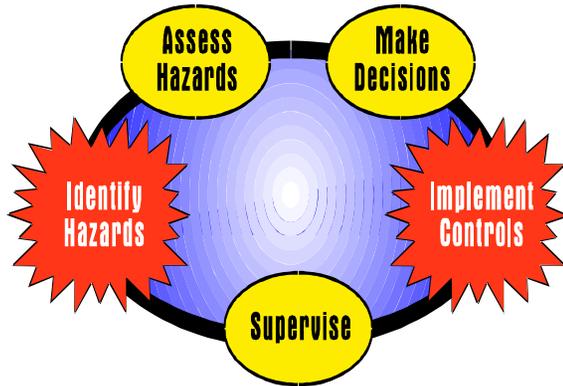


RISK MANAGEMENT

Five Step Process

Risk Assessment

- o Identify Hazards
 - Potential exists, mission impact
- o Assess Hazards
 - Probability & Severity, identify options
- o Make Risk Decisions
 - Describe risk, controls
- o Implement Controls
 - SOP/training/standards, briefings etc....
- o Supervise
 - Reevaluate, lessons learned



RISK MANAGEMENT

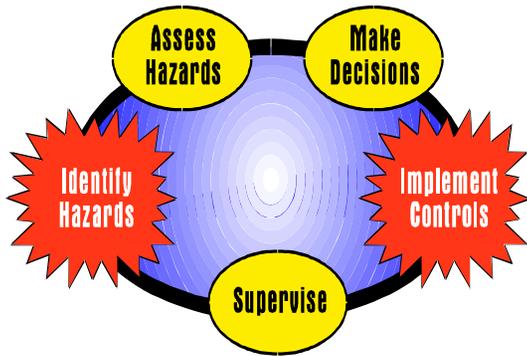
Risk

Risk is defined as a probability that a situation will produce harm under specified conditions. Risk is a combination of :

- 1. Probability that an adverse event will occur.*
- 2. The severity of the adverse event.*

Risk encompasses impacts on health, safety & equipment and arises from:

- 1. The existence of a hazard.*
- 2. Exposure to the hazard.*



Risk Management

DECISION AUTHORITY MATRIX for RISK ACCEPTANCE

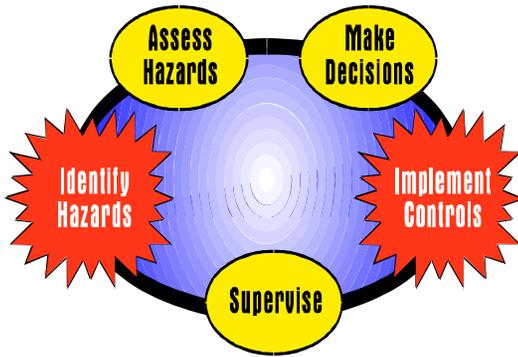
HAZARD PROBABILITY

HAZARD SEVERITY	FREQUENT	PROBABLE	OCCASIONAL	REMOTE	IMPROBABLE
	A	B	C	D	E
CATASTROPHIC	HIGH RISK				MEDIUM
CRITICAL					MEDIUM RISK
MARGINAL	LOW RISK				
NEGLIGIBLE					MEDIUM

High Risk - Significantly degrades mission capabilities.

Medium Risk - Degrades mission capabilities.

Low Risk - Little or no impact on accomplishing mission.



Definitions

Hazard Probability

A. FREQUENT

- Individual Soldier - Occurs often in career/equipment
- All Soldiers - Continuously experienced

B. Likely

- Individual Soldier - Occurs several times in career/equipment
- All Soldiers - Occurs frequently

C. Occasional

- Individual Soldier - Occurs sometime in career/equipment
- All Soldiers - Occurs sporadically or several times

D. Remote

- Individual Soldier - Possible to occur in career/equipment
- All Soldiers - Remote chance but expected sometime

E. Unlikely

- Individual Soldier - Assume will not occur in career/equipment
- All Soldiers - Possible, but improbable, very rarely

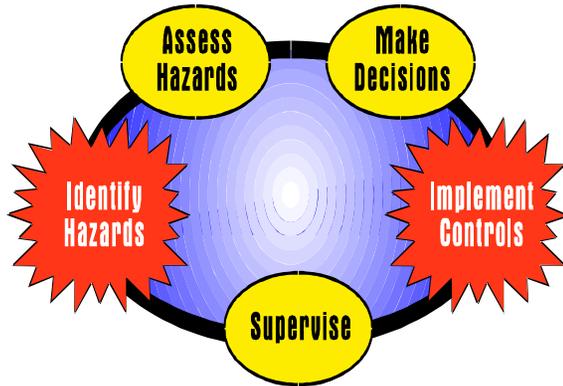
Hazard Severity

1. CATASTROPHIC - Death or permanent total disability, systemloss, major property damage.

2. CRITICAL - Permanent partial & temp disability, major system damage

3. MARGINAL- Minor injury, lost workday, compensable, minor system damage

4. NEGLIGIBLE - First aid or minor supportive medical treatment, minor system impairment

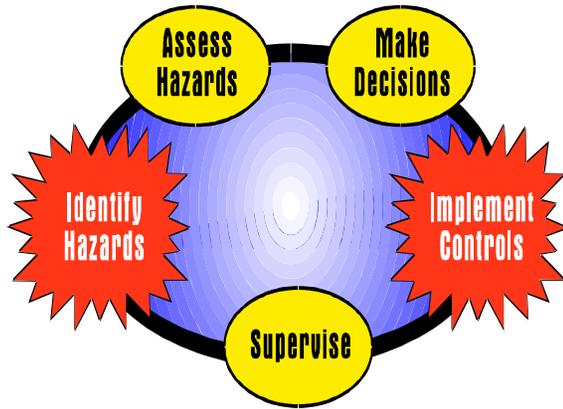


RISK MANAGEMENT

Decision-Making Principles

- o Clearly articulated.
- o Includes users & technical expert views.
- o Examines system interaction.
- o Implemented effectively, expeditiously & flexibly.
- o Shows impact on risks of concern.
- o Can be revised.

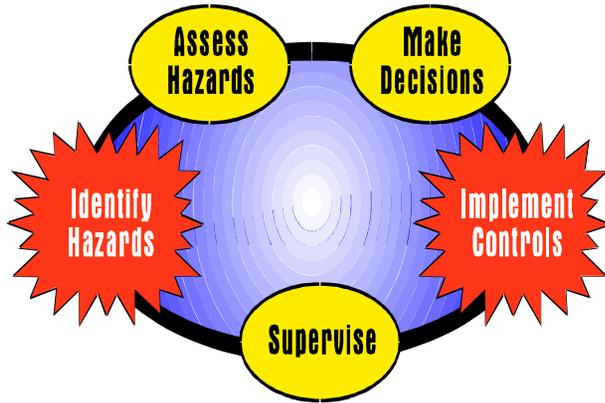
AVOID: “PARALYSIS BY ANALYSIS”



RISK MANAGEMENT

Risk Decision Options

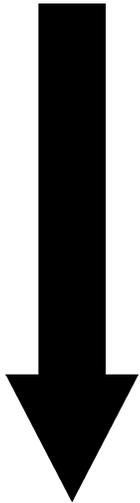
- o Accept risk.
- o Accept risk with modified control measures.
- o Require more information.
- o Reject risk.
- o Elevate decision to higher authority.



RISK MANAGEMENT

Implement Controls

MOST EFFECTIVE



LEAST EFFECTIVE

- o **Engineer Changes** - Minimizes risk.
- o **Safety Devices** - Requires engineering change.
- o **Warnings** - Requires engineering change.
- o **Procedures** - Do not eliminate the hazard.
- o **Training** - Use in combination.

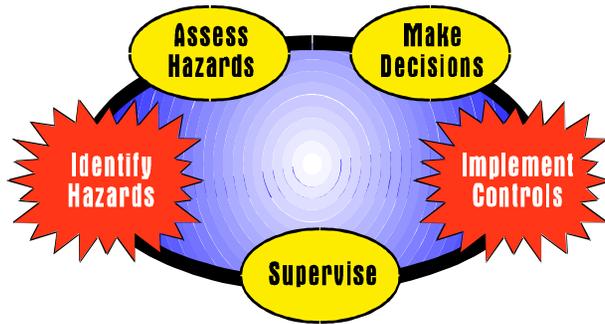


RISK MANAGEMENT

Supervision

Why supervision ?

- o Verify the controls were effective.
- o Identify needed modifications.
- o New information becomes available.
- o Lessons Learned.



Risk Management

Traditional Approach vs Risk Management

Common Sense

Random hazard assessment

More omission

Uninformed decision

Reactive

Compliance based

Methodical

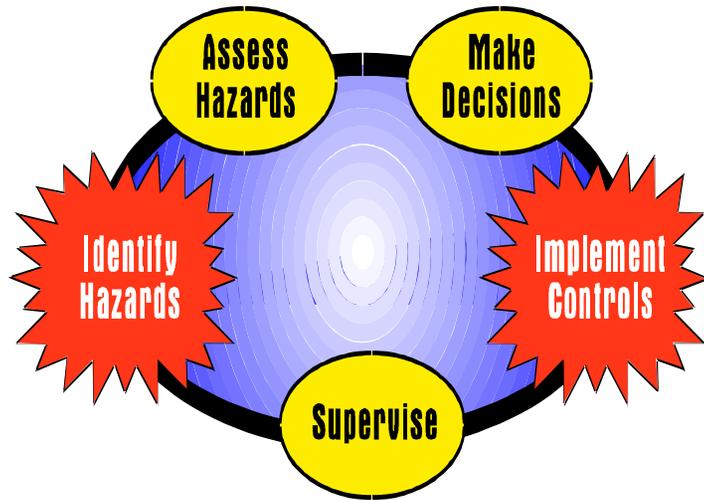
Systematic

Less omission

Informed decision

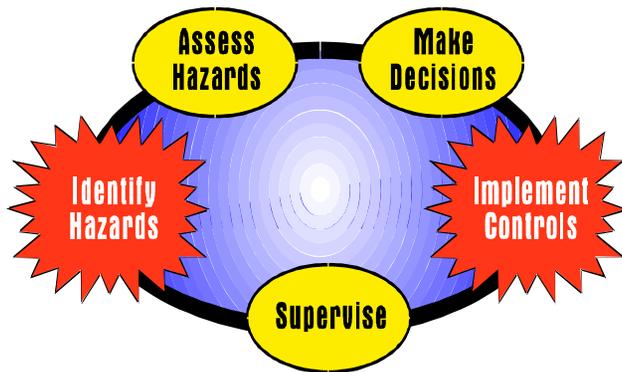
Proactive

Involvement and
empowerment



= *Less Accidents!*

*4th ID reduced accident by 50%
during Vietnam using
Risk Management!*



Risk Management

The Doha Catastrophe

2 Dead

58 Injuries

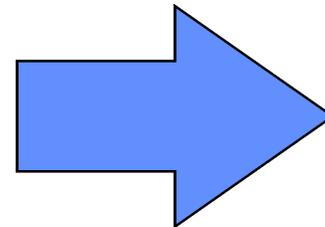
4 Tanks Destroyed

7 FAASV Destroyed

6 M109A3 Howitzers

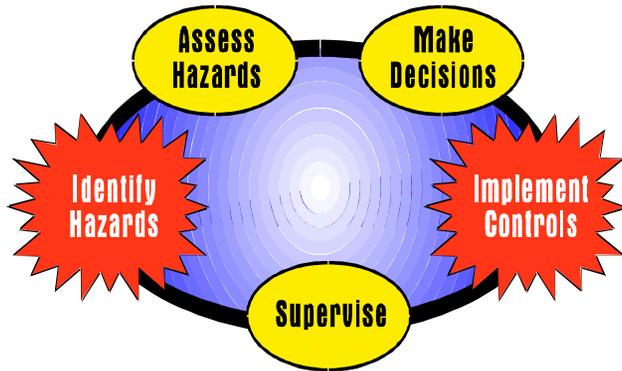
27 Trucks

450 Tons of ammunition



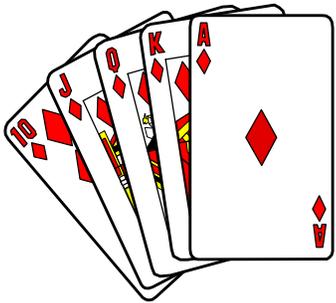
\$50 Million

“Worst accident in Army history”



Risk Management

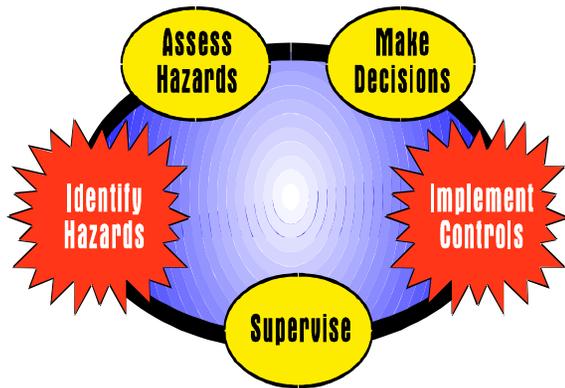
Gambling vs. Risk Management



**Gambler: Performs without regard to risk.
The gambler is only guessing!**



**Risk Manager: Weighs risk with mission,
establishes controls, can reasonably predict
the outcome.**



RISK MANAGEMENT

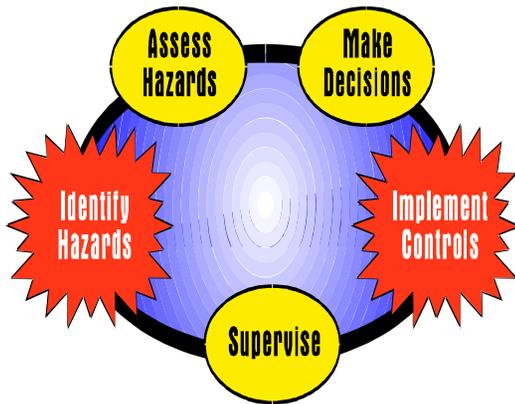
Integration

Risk



SYSTEM APPROACH





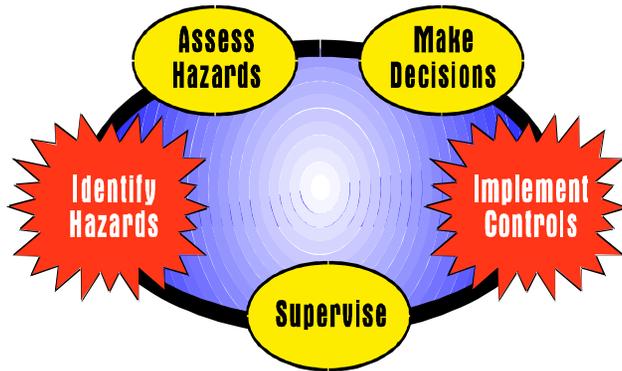
RISK MANAGEMENT

Principles

- o Integrate into mission planning, preparation and execution.
- o Accept no unnecessary risk.
- o Make risk decisions at proper level.

Benefits

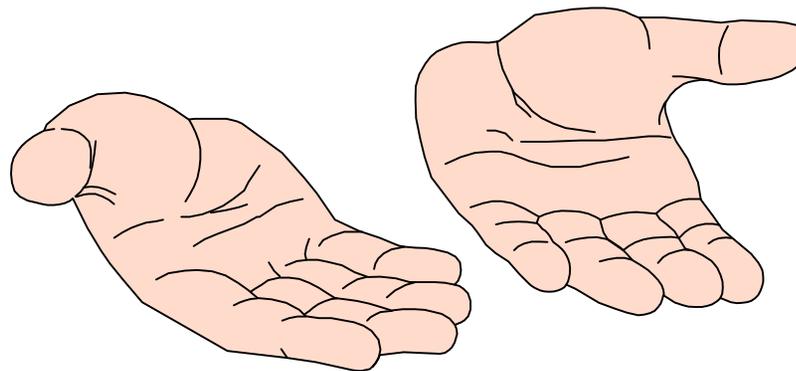
- o Enhance training
- o Training realism
- o Combat effectiveness
- o Reduces Accidents

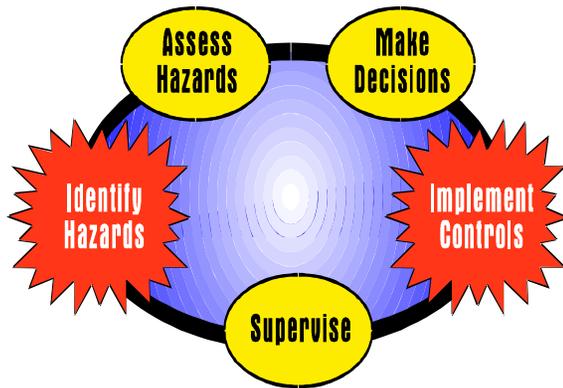


Risk Management

CECOM Can Assist in Making an Informed Risk Decision By Providing:

- Technical Guidance
- Categorizing Risk
- Identifying Alternatives

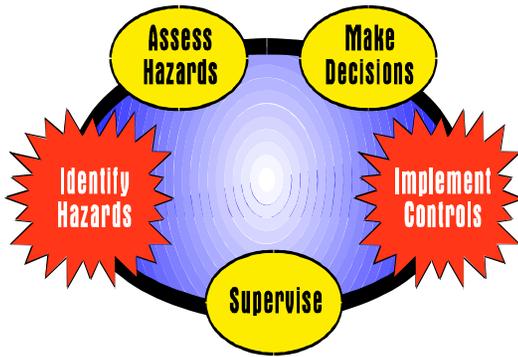




RISK MANAGEMENT

The LARs Role

The CECOM LAR provides the decision maker the technical guidance necessary for him to make an informed Risk Decision and plays a key role in the supervision process.



RISK MANAGEMENT

Review

- o Five step Process for identifying and controlling hazards.**
- o Accept no unnecessary risk.**
- o Risk decision made at proper level.**
- o Significant benefits.**
- o Fully integrated into system.**
- o LAR role to present technical guidance and assistance.**