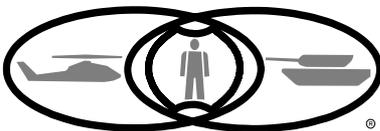


“Risk Management allows us to operate successfully in high risk environments. Leaders at every level have the responsibility to identify hazards, to take measures to reduce or eliminate hazards, and then to accept risk only to the point that the benefits outweigh the potential costs.”

- Chief of Staff, Army, July 1995



U.S. ARMY SAFETY CENTER

FORCE XXI

Commander and Staff Risk Management Booklet

OPERATIONAL FRAMEWORK

“Historically, more casualties occur in combat due to accidents than from enemy action.”

FM 25-101, September 1990

“Safety is a component of protection.”

FM 100-5, June 1993

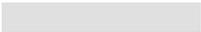
“Risk Management is the Army’s principal risk-reduction process to protect the force. Our goal is to make risk management a routine part of planning and executing operational missions.”

Chief of Staff, Army, July 1995



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26 September 1997



Risk Management Process

Risk Management is the process of identifying and controlling hazards to protect the force. It is applicable to any mission and environment. The five (5) steps are:

1. **IDENTIFY HAZARDS** - Identify hazards to the force. Consider all aspects of current and future situations, environment, and known historical problem areas.
2. **ASSESS HAZARDS** - Assess hazards to determine risks. Assess the impact of each hazard in terms of potential loss and cost based on probability and severity.
3. **DEVELOP CONTROLS & MAKE RISK DECISION** - Develop control measures that eliminate the hazard or reduce its risk. As control measures are developed, risks are re-evaluated until all risks are reduced to a level where benefits outweigh potential cost.
4. **IMPLEMENT CONTROLS** - Put controls in place that eliminate the hazards or reduce their risks.
5. **SUPERVISE AND EVALUATE** - Enforce standards and controls. Evaluate the effectiveness of controls and adjust / update as necessary.

Risk Management Assessment Success Criteria

	Sustain	Improve
♦ Identified the most important hazards.		
- Available facts for each METT-T factor gathered and considered?		
- Hazards (enemy and accident) most likely to result in loss of combat power identified?		
♦ Assessed risk level of each hazard.		
- Valid method/tool used to assess initial risk level?		
♦ Developed appropriate control options and determined residual risk.		
- Each control addressed hazard reason(s)?		
- Residual risk level realistic for each hazard?		
- Valid method/tool used to determine the residual risk level for each COA?		
- Residual risk level for each COA entered on decision matrix?		
♦ Made risk decision for selected COA.		
- Valid procedure/guidance used for determining risk decision		
♦ Hazards and controls clearly communicated to responsible authority/unit/leadership?		
- Controls integrated into appropriate paragraphs and graphics of the OPORD/FRAGO and rehearsals?		
♦ Implemented and enforced controls.		
- Effective methods used to supervise / enforce controls?		

Need to Risk Manage a METT-T Hazard

Hazards not adequately controlled are likely to cause loss of combat power. Answer the following questions about each hazard to determine if it is adequately controlled. If not, hazard needs to be risk managed.

		<u>Adequate?</u>	
		Yes	No
Support	<ul style="list-style-type: none"> Is type / amount / capability / condition of support adequate to control hazard? <ul style="list-style-type: none"> - Personnel - Supplies - Equipment / Materiel - Services / Facilities 		
Standards	<ul style="list-style-type: none"> Is guidance / procedure adequately clear / practical / specific to control hazard? 		
Training	<ul style="list-style-type: none"> Is training adequately thorough and recent to control hazard? 		
Leader	<ul style="list-style-type: none"> Is leadership ready, willing, and able to enforce standards required to control hazard? 		
Unit Self-Discipline	<ul style="list-style-type: none"> Is unit performance and conduct sufficiently self-disciplined to control hazard? 		

If all “yes”, no further action required (subject to commander’s risk guidance). If one or more “no”, risk manage this hazard

Recommended Risk Management Responsibilities*

- **Commander (Overall)**
 - Provide risk guidance.
 - Select hazard control options.
 - Make risk decision for COA.
 - Enforce and evaluate controls.
- **CofS (XO) (Staff Supervision)**
 - Supervise risk management integration across entire staff.
 - Ensure hazards and controls integrated into plans and orders.
 - Ensure staff monitors and enforces controls during execution.
- **Staff Officers (Functional Area)**
 - Identify hazards most likely to result in loss of combat power.
 - Develop control options that address reasons for hazards.
 - Integrate hazards and selected controls into functional area paragraphs, graphics, and annexes of OPORD.
- **Safety Officer (Coordination)**
 - Assist commander and staff with risk management integration during mission planning, execution and assessment.
 - Collect hazards and controls identified by staff; use to prepare risk assessment and control measures for all operations (see page 5).
 - Coordinate staff risk management and make recommendations to G3/S3.

* Consistent with FM 101-5, 31 May 1997.

Risk Management in OPORD Examples

<p>Commander’s Guidance: In the Assault Phase, R&S teams, FOXs and Engineers will be operating well in front of the task forces marking lanes for bypass. Ensure positive identification is made before any engagement.</p>
<p>Coordinating Instructions: 12. Due to the restrictive terrain, I am establishing a probable line of deployment (PLD) short of suspected enemy positions. MP teams will be positioned on the near side of the breach site for near side recognition. Ensure visual recognition signals are displayed where MPs can see them.</p>
<p>14. Additional Engineer assets have been requested from Corps. If they become available they will remain under division control.</p>
<p>15. Due to shortages in the Engineer MOSs, cross train any available personnel in expedient obstacle reduction techniques.</p>
<p>19. All available FOX vehicles will be attached to the lead task force. An additional Engineer platoon will be attached to the lead task force. An additional Engineer platoon will have an on order mission to support the lead task force at the request of the task force commander.</p>
<p>21. Prior to LD, go to MOPP level 2. Be prepared to execute MOPP 3 or 4 with little prior notification. Recent use of non-persistent chemical agents indicates a THREAT willingness to contaminate the battlefield.</p>
<p>25. Modify your existing work/rest plans to ensure that all soldiers are able to get 4 hours sleep before LD time.</p>

Risk Management Definition of Terms

Hazard	Any real or potential condition that can cause injury, illness, or death of personnel or damage to or loss of equipment, property, or mission degradation.
Risk	Chance of hazard or bad consequences; exposure to chance of injury or loss. Risk level is expressed in terms of hazard probability and severity.
Exposure	The frequency and length of time subjected to a hazard.
Probability	The likelihood that an event will occur.
Severity	The expected consequence of an event in terms of degree of injury, property damage, or other mission-impairing factors (loss of combat power, adverse publicity, etc.) that could occur.
Controls	Actions taken to eliminate hazards or reduce their risks.
Risk Assessment	The identification and assessment of hazards (first 2 steps of risk-management process).
Residual Risk	The level of risk remaining after controls have been identified and selected for hazards that may result in loss of combat power. Controls are identified and selected until residual risk is at an acceptable level or until it cannot be practically reduced further.
Risk Decision	The decision to accept or not accept the risk(s) associated with an action; made by the commander, leader, or individual responsible for performing that action.

Risk Management Worksheet Example

1. Mission / Task: Conduct Deliberate Attack		2. DTG Begin: 112000OV09		
3. Date Prepared: 11 Nov 99		COA # <u>2</u>		
4. Prepared By: MAJ _____		Safe Asst G3 _____		
5. Hazards		6. Initial Risk Level	7. Controls	
8. Residual Risk Level		11. How to Implement	12. How to Supervise	
13. Controls Effective?				
ENEMY - Chemical attack in zone	E	Employ B & S teams to ID and mark lanes. Employ FOX vehicles. Increase MOPP level.	OPORD	SITREP
- Misidentification of friendly vs THREAT personnel and equipment	E	Use visual recognition markings. Conduct IFF training. Positive ID before engaging. Synchronization and communication between units.	OPORD	SITREP
TERRAIN - Threat Obstacle plan forces operation in restrictive terrain	E	ID possible bypasses. Standard lane marking. Task organize to commit Eng units where needed.	Rehearsal	Back brief
TROOPS - Combat Engineer units are at 80% strength	H	Cross train where appropriate. Request additional assets from Corps.	FRAGO	Back brief
EQUIPMENT Not issued all authorized FOX vehicles	E	Cross level available FOX vehicles	FRAGO	SITREP
TIME - Fatigue due to 24 hours continuous operations. 12 hours until expected LD	H	Modify existing work/rest plan	FRAGO	Back brief
9. Overall Risk Level after Controls are Implemented (Circle One)		10. Risk Decision Authority:		
LOW		MG / Smith		
MODERATE		Rank / Last Name / Position		
HIGH				
EXTREMELY HIGH				

Worksheet Instructions

- Block:**
- 1-4 Self-explanatory**
 - 5. ID Hazards** - Review METT-T facts for each course of action (COA) for this mission / task. ID enemy and accident / fratricide hazards most likely to cause loss of combat power. That is, hazards not adequately controlled at this or next two lower echelons (see page 7). Sources of METT-T facts and hazards include: mission / task instructions; CCIR (PIR/FFIR/EFIR), mission planning systems such as Maneuver Control System (MCS), Aviation Mission Planning System (AMPS), Battlefield Planning Visualization (BFPV) system and Engineer Operations Analysis System (E-OPS); Tactical SOP; unit accident history, reconnaissance, and experience.
 - 6. Assess hazards** - Determine risk of each hazard not adequately controlled by using the risk assessment matrix (see page 8).
 - 7. Develop controls** - Develop one or more controls to eliminate each hazard or reduce its risk. Controls should address reason(s) the hazard needs to be risk managed (see page 7). Enter controls in block 7.
 - 8. Determine residual risk** - For each hazard, use the risk assessment matrix (see page 8) to determine the level of risk remaining, assuming the controls are implemented. Enter the level of residual risk for each hazard in block 8.
 - 9. Determine COA risk** - Use procedures in unit SOP. If no unit procedures, the COA's overall risk level is the same as the hazard with the highest residual risk. Circle risk level in block 9. Enter residual risk level of each COA as a criterion on decision matrix.
 - 10. Make risk decision** - Commander selects COA and decides to accept or not accept the COA's risk level. Use unit SOP to decide who is authorized to accept what level of risk. If no unit procedure, commander will elevate risk decision only if cannot meet next higher commander's intent and risk guidance. In block 10, enter rank, name, and position of commander accepting COA's risk.
 - 11. Implement controls** - In block 11, enter how each control will be put into effect/communicated to the personnel who will make it happen. For example: OPORD (see page 9), FRAGO, TACSOP, and rehearsals
 - 12. Supervise** - In block 12, enter how each control will be monitored/enforced to ensure it is implemented. For example; command presence, leader supervision, PCI, PCC, SITREP, Spot Check, Back Brief, etc.
 - 13. Evaluate** - For AAR, determine effectiveness of each control in reducing risk of the targeted hazard. In block 13, enter "yes" if effective, "no" if not. If "no", determine why and what to do next time this hazard is identified. For example; change the control, develop a different control, or change how the control will be implemented or supervised. Assess mission risk management performance (see page 10) and report during AAR.

Risk Management Integrated into the Military Decision Making Process

Risk Management Steps

Military Decision Making Process*	Identify Hazards	Assess Hazards	Develop Controls & Make Risk Decision	Implement Controls	Supervise & Evaluate
1. Receipt of Mission	X				
2. Mission Analysis	X	X			
3. COA Development	X	X	X		
4. COA Analysis	X	X	X		
(War Game)			X		
5. COA Comparison			X		
6. COA Approval			X		
7. Orders Production				X	
8. Rehearsal	X	X	X	X	X
9. Execution & Assessment	X	X	X	X	X

* FM 101-5, 31 May 1997

Risk Assessment Matrix for Individual Hazard

SEVERITY	PROBABILITY				
	Frequent	Likely	Occasional	Seldom	Unlikely
Catastrophic	E	E	H	H	M
Critical	E	H	H	M	L
Marginal	H	M	M	L	L
Negligible	M	L	L	L	L

Risk Level: E-Extremely High, H-High, M-Moderate, L-Low

PROBABILITY - The likelihood that an event will occur.

FREQUENT - Occurs often, continuously experienced.

LIKELY - Occurs several times.

OCCASIONAL - Occurs sporadically.

SELDOM - Unlikely, but could occur at some time.

UNLIKELY - Can assume it will not occur.

SEVERITY - The expected consequence of an event in terms of degree of injury, property damage, or other mission-impairing factors.

CATASTROPHIC - Death or permanent total disability, system loss, major damage, significant property damage, mission failure.

CRITICAL - Permanent partial disability, temporary total disability in excess of 3 months, major system damage, significant property damage, significant mission degradation.

MARGINAL - Minor injury, lost workday accident, minor system damage, minor property damage, some mission degradation.

NEGLIGIBLE - First aid or minor medical treatment, minor system impairment, little/no impact on mission accomplishment.