



# Managing Risk: Turning the *Titanic* Into the *Love Boat*

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# The Shampoo Conundrum



U.S. Department of Health and Human Services  
Centers for Disease Control and Prevention

# The Project Quiz

Q1. What is the one thing that, if not done well, causes most projects to fail?

Q2. What project management (PM) process is least understood?

Q3. What is the one project activity that has the most return on investment (ROI)?

In many cases the answer is **risk management (RM)**.

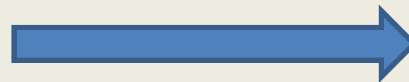


# Agenda

- Benefits
- Objectives and Levels
- Life Cycle
  - The Plan
  - Processes
    - Identify, Analyze, Plan Responses, Monitor



# Benefits of Good Risk Management



- Increased likelihood of project success
- Maintenance of cost, scope, and schedule (good earned value management [EVM] data)

- Better quality
- Better use of resources
- A happy project team
- Stakeholder satisfaction



# Risk Management Objectives

- Decrease the probability and impact of negative events (**threats**)
- Increase the probability and impact of positive events (**opportunities**)

## Risk Levels

- **Individual**—Affects an element, work package, objective, or task
- **Project**—Applies to whole project (is NOT a sum of individual risks)





# The Risk Life Cycle

Risk is an iterative cycle, and risk management is **NOT** an optional process.

1. Develop RM Plan
2. Identify Risks
3. Analyze Risks
4. Plan Responses
5. Monitor and Control



# 1. Develop Risk Management Plan

- Introduction
- Description
- Methodologies
- Organization
- Roles/Responsibilities
- Stakeholder Tolerances
- Success Criteria
- Tools
- Thresholds
- Templates
- Communications Plan
- Strategy
- Risk Breakdown Structure

**NOTE:** The elements used depend on the size and complexity of the project.





# The Bad and the Ugly Risks

- Users may not use the application.
- If we do not implement this change, the users won't have what they need to perform work.
- There is a risk if we upgrade this system.
- The vendor may not perform.
- Funding may run short.

Cause (Fact or Condition)

Risk (Uncertainty)

Effect (Possible Result)

## The Risk Statement



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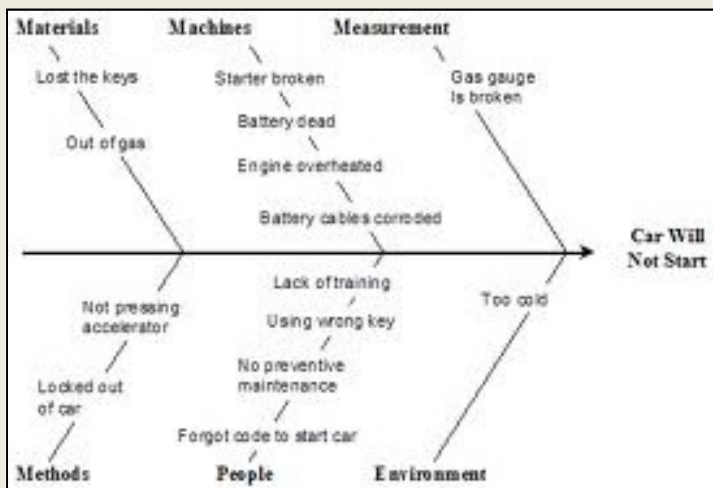
## 2. Identify Risks

- Consider the
  - Past (Historical Review)
  - Present (Current Assessment)
  - Future (Creativity and “What if ...?”)
- Document
  - Cause, effect, trigger conditions, preliminary responses
- Assign each risk to a risk owner

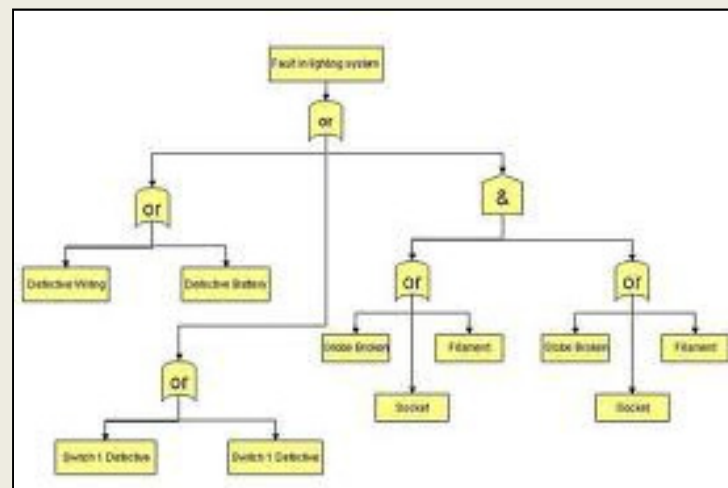


# Identification Techniques

Cause and Effect  
(Ishikawa, Fishbone)

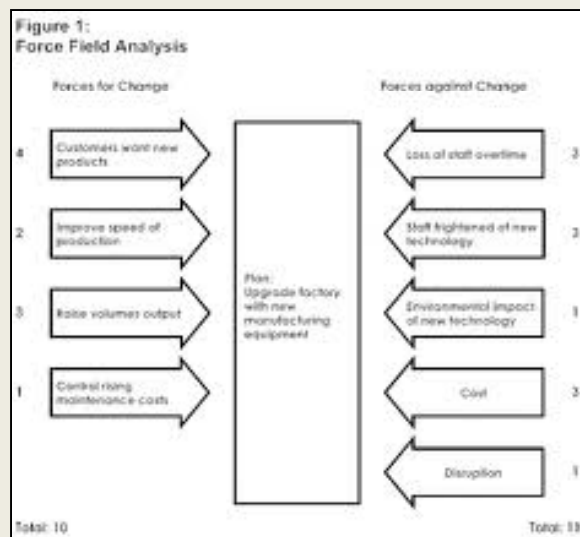


Fault Tree  
(Failure Modes and Effect)

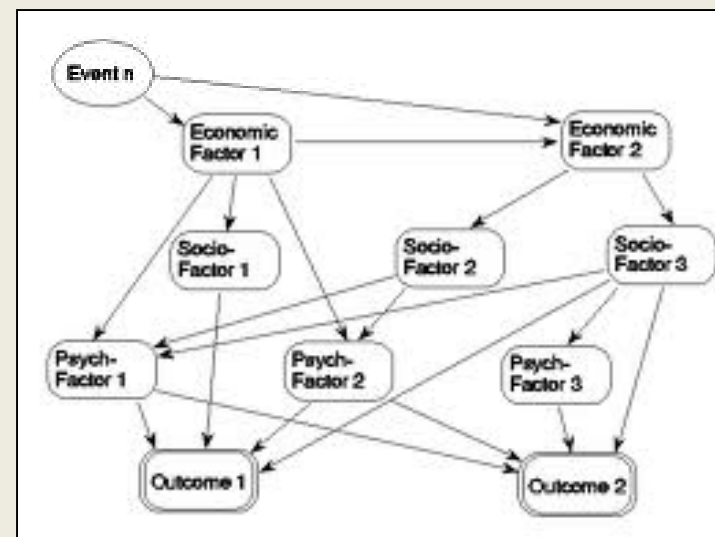


# More Techniques

## Force Field



## Influence Diagram



# Other Sources and Techniques

- Document Reviews/Historic Information
- Delphi Technique (polling)
- Lessons Learned
- Interviews
- Prompt Lists
- Brainstorming
- Risk Breakdown Structure



### 3. Analyze Risks—Qualitative

- Addresses individual risks descriptively
- Addresses probability of occurrence
- Prioritizes individual risks
- Adds to risk register
- Leads to quantitative analysis



	Risk Name	Open	Issue	Threat	Prio.	Imp.	Score
1	Jason does not have significant experience in...	Open	Risk	Threat	20.75	36.75	36.00
2	Difficulties to obtain comprehensive information	Open	Risk	Threat	29.50	36.50	36.75
3	Client will be busy and will not be able to partici...	Open	Risk	Threat	41.80	32.70	33.50
4	Suboptimal Problems	Open	Risk	Threat	29.00	44.50	33.00
5	Problems with web site are found	Open	Risk	Threat	30.90	22.00	6.30
6	Could find appropriate template design	Open	Risk	Threat	27.70	16.00	5.20
7	Difficulties to adequately represent company logo	Open	Risk	Threat	25.90	22.00	3.90
8	Problems with payment, installation, and downloa...	Open	Risk	Threat	22.20	30.60	2.40
9	Inconsistencies between graphic design and site	Open	Risk	Threat	19.30	9.90	3.00
10	Major external problems	Open	Risk	Threat	3.80	20.20	0.50
11	Big changes will required for existing template	Open	Risk	Threat	18.10	0.00	0.00
12	Difficulties with software development tool	Open	Risk	Threat	19.00	0.00	0.00
13	Admin will not be able to spend enough time for it	Open	Risk	Threat	26.90	0.00	0.00
14	Major problems with web site	Open	Risk	Threat	0.00	0.00	0.00
15	Problems with web hosting company	Open	Risk	Threat	11.10	0.00	0.00





# Samples

## Probability and Impact Matrix

Fig. 2

<b>High (3)</b>	3	6	9
<b>Medium (2)</b>	2	4	6
<b>Low (1)</b>	1	2	3
	<b>Low (1)</b>	<b>Medium (2)</b>	<b>High (3)</b>

## Analytic Hierarchy Process

Improves Ability to Compete in International Markets

	New Office	ERP Implem.	Chinese Office	Intern. Product	IT Outsourc.	Local Campaign
New Office	1	3	1/9	1/7	5	5
ERP Implem.	1/3	1	1/9	1/9	1/3	3
Chinese Office	9	9	1	1	9	9
International Product	7	9	1	1	9	9
IT Outsourcing	1/5	3	1/9	1/9	1	3
New Local Campaign	1/5	1/3	1/9	1/9	1/3	1



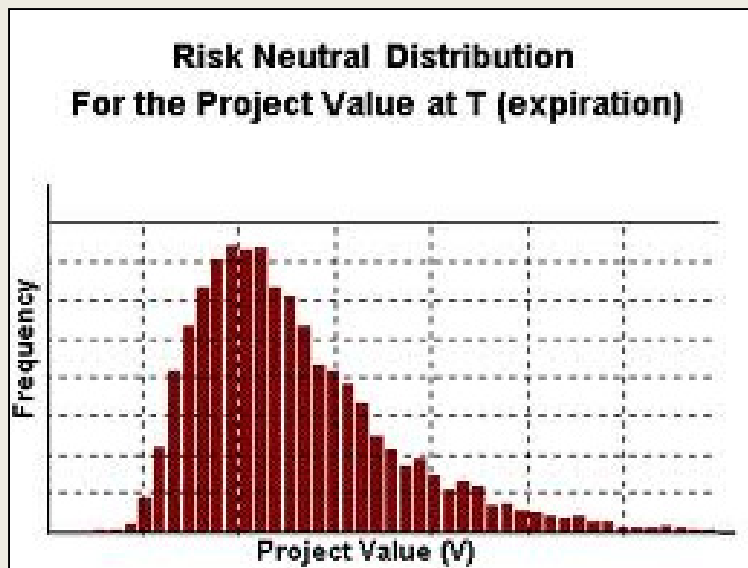
### 3. Analyze Risks—Quantitative

- Provides numerical estimate of the overall effect of risk on objectives of the project
- Helps determine needed contingency reserves
- Helps determine which individual risks contribute most to overall project risk and answers the question “how likely is success?”

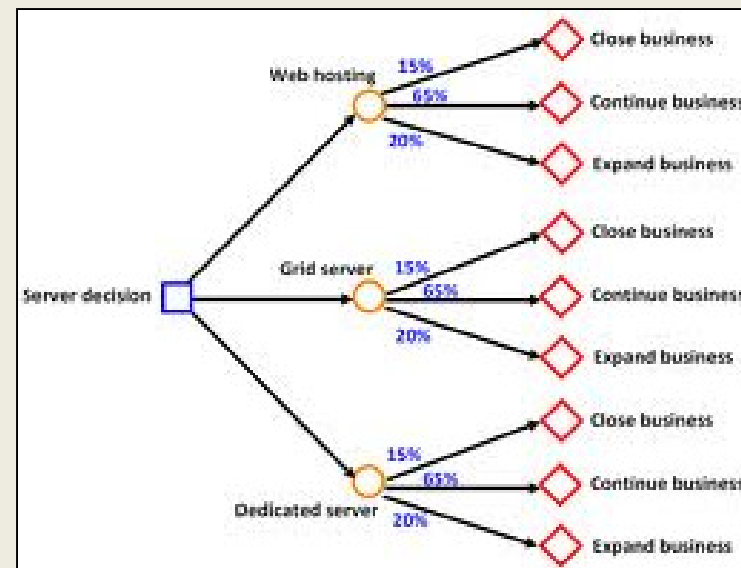


# Samples

## Monte Carlo



## Decision Tree



## 4. Plan Responses

Determine the set of actions that enhance the chance of project success. Actions include:

- Identify responses
- Select responses (strategies)
- Resource responses (budget and schedule)
- Update risk register
- Communicate responses



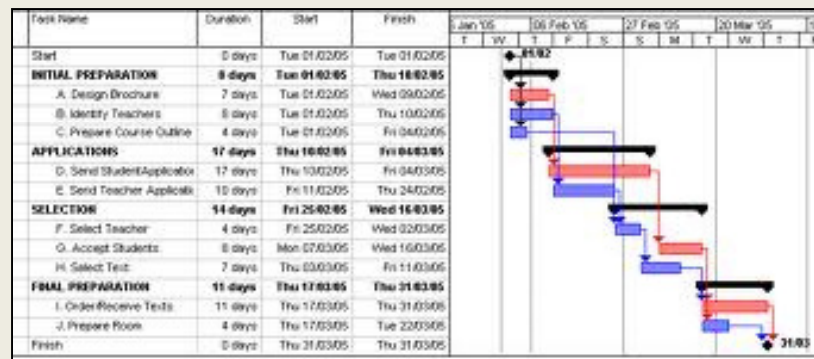
# Risk Strategies

- Avoid—Taking actions to ensure that risk cannot occur
- Transfer—Move risk to 3<sup>rd</sup> party
- Mitigate—Decrease probability or increase opportunity
- Accept—Take no action



# 5. Monitor and Control

- Monitoring of critical path
- Tracking of triggers
- Auditing
- Change control
- Status meetings
- Trend and variance analysis





# The Bottom Line

Good risk management practices can turn the project *Titanic* into the project *Love Boat*!



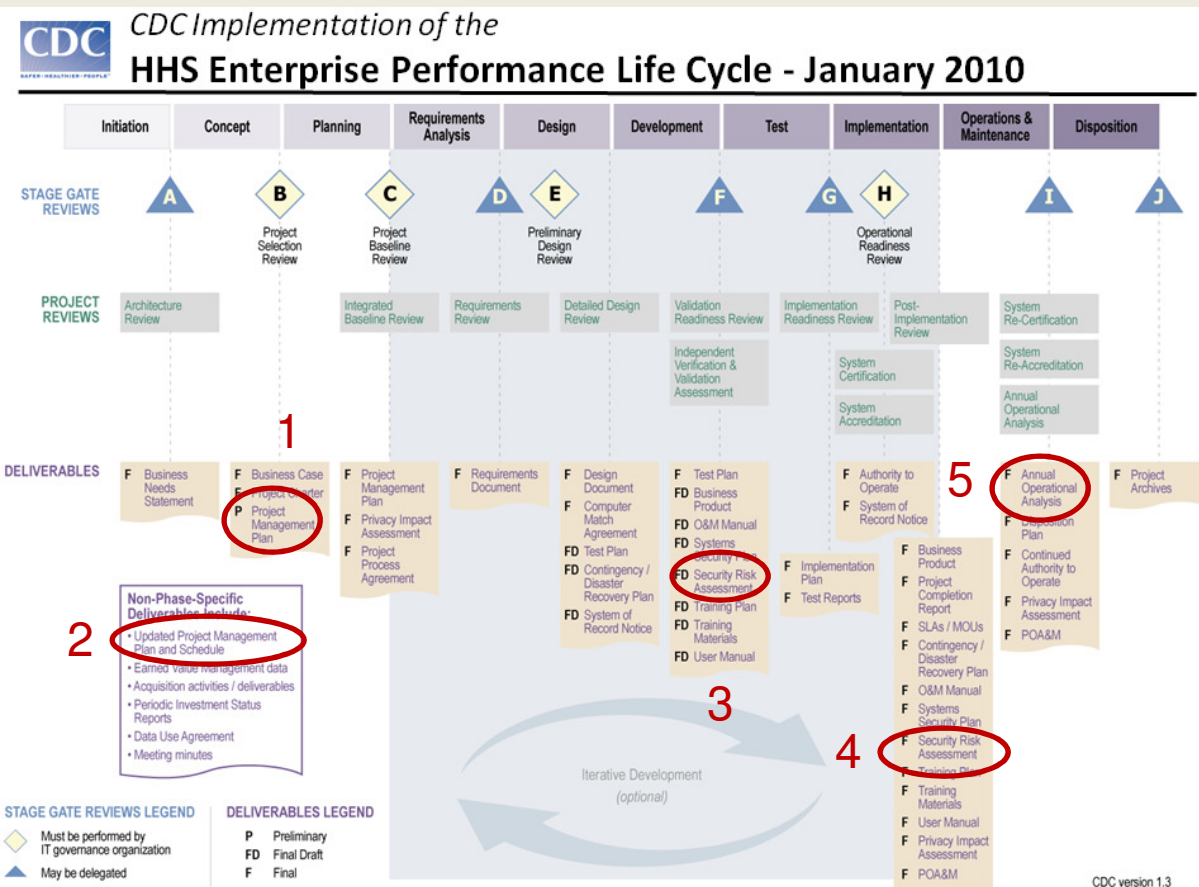
Love. Love exciting and new. Come aboard; we're expecting you.

And love, love is life's sweetest reward. Let it flow; it floats back to you.



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# The EPLC Connection



# Questions



Questions  
are  
guaranteed in  
life;  
Answers  
aren't.



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# Up Next...

- Please join us in Auditorium B for our “Networking Lunch with Knowledge Nuggets”.
- Box Lunches can be picked up in Auditorium B. Please remember to have your \$10.00 ready.

## “Networking Lunch with Knowledge Nuggets” Topics:

- Enterprise Architecture
- Integrating Portfolio Management
- Health IT Meaningful Use
- Understanding Project Costs

