

Section 2

Overview of Risk Management

First Let's Talk About Risks

Risk Has Many Definitions

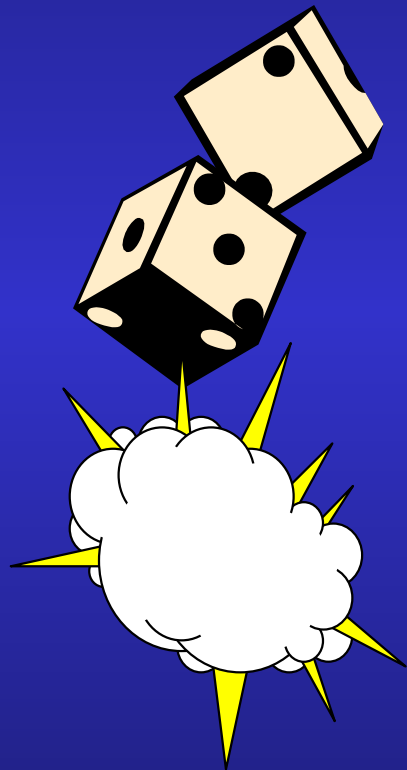
“...the uncertainty that surrounds future events and outcomes. It is...an event with the potential to influence positively or negatively an organization’s achievement of objectives.” (PWGSC IRMF)

“An ***uncertain event*** that
threatens your ability to meet ***objectives***
within ***constraints and deterrents***”

A Bit of History

- Risk management is NOT something “new”
- Insurance has been around for a long time
 - reason why risk management became a discipline (actuarial statistics
- So has financial risk management
 - interest rates...lock in mortgage rate, GIC.....
 - exchange rate futures
 - bonds
 - hedge funds.....

Risk has two components:



Probability - how likely is it to occur?

Impact - what is the expected loss if it does?

Key Points About Risks

- They are an uncertain event
- They are “in the future”
- If they impact (happen), they become a problem/issue, and are no longer a risk
- Risk and opportunity are two sides of the same coin
- You can accept (live with) a risk, and realize a positive opportunity

The Measure of Impact is Very Subjective

Impact is measured on a scale

- For ourselves it is often an unwritten scale
- For an Insurance company it absolutely is written, based on their actuarial tables

Example: Risk That You Write off Your Shiny New Car



So What is the Expected Loss

- Lets say the probability is 1%
- The impact is \$25,000 loss
 - So the expected loss is $.01 \times \$25,000 = \250
 - So What's the problem?
 - Why bother with insurance?

Same Cause: Very Different Risks

Your View

- If I total my car, and I do not have comprehensive insurance, I will not have a car to drive, and I have lost 25,000
- Probability, 1%
- Impact on my scale VHI
- Action: get insurance if insurable

Insurer's view

- If you total your car I will have to pay out 25,000
- Probability 1%
- Impact Low on my scale
- Action 1: pay the 25,000
- Action 2: increase his premium
- Action 3: consider canceling his policy

The Real Issue

- So the real issue is to:
 - state the risk as it affects you,
 - against an impact scale that is appropriate to you which
 - matches your perception of the risk.
- Then take an appropriate action

The Lesson

- Partners may have a very different view of a risk..
 - this can create for each risk:
 - two risk statements from one risk
 - two or more different mitigation plans
- Same for vendor and purchaser
- Same for Prime and Subcontractor
- Same for senior and middle management

Compounded by personal and organizational risk tolerance

The Risk

- If different groups have different views of risk they will have difficulty;
 - communicating about risk
 - comparing risks
 - cooperating to reduce risks
- and attempting to manage risks will be difficult, ineffective, and frustrating

The Mitigation

- Agree on a process and follow it
- Agree on scales and use them
- Agree on communication methods
- Agree on rules for exchanging risk information
- Above all agree that you ARE going to manage your risks

Risk Management

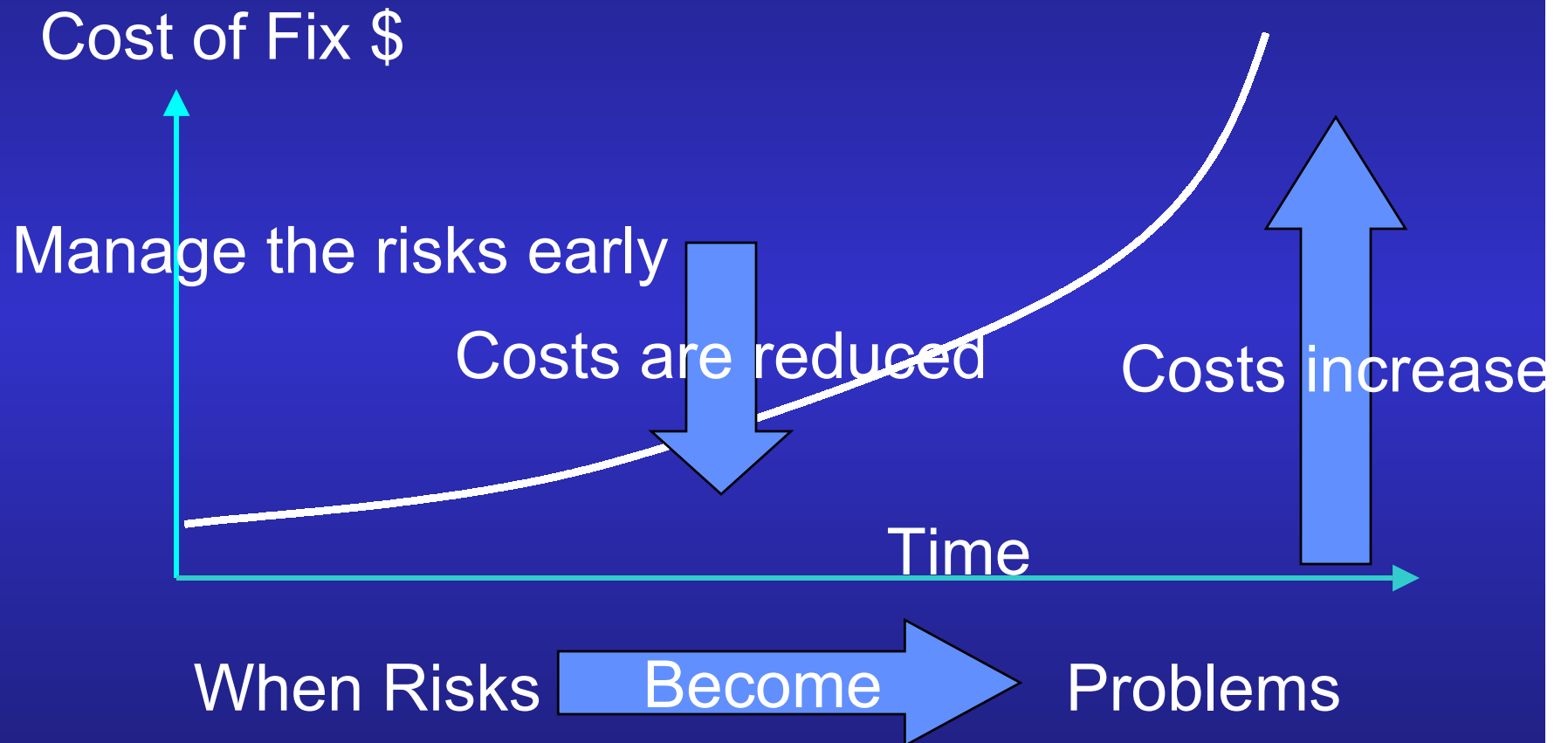
- “Risk Management is project management for adults” -
- “Crisis Prevention- to free up your best and brightest to focus on opportunities”
- Hornjak

Goals of Risk Management

- To evaluate and analyze currently known uncertainty, and predict likely outcomes
- To identify strategies for
 - reducing risk to “acceptable” level, and
 - controlling residual risk
- To focus management attention on their risk



Why Do Risk Management?



You Ignore a Risk When You....

- Don't think about it
- Don't take action
- Pretend it won't/can't happen



Risk Is Not

- problem
- difficulty
- worry
- whinge
- gripe

But....

If these are expressed in a risk syntax
they be managed in a risk context.

“If this *problem* is not resolved by....then
these.... bad things will happen”

Risk Management Definitions

- **Risk**: a problem which has not yet occurred
- **Problem**: a negative impact resulting from the occurrence of a risk
- **Risk Management**: what is done to address and control risks prior to their transition into a problem
- **Issue**: Imprecise term sometimes used to describe a risk event, sometimes it is a risk, a problem, or current project undertaking.
- **Risk Event**: A discrete occurrence that affects the project - best thought of as an impacted risk.

Risks are Uncomfortable

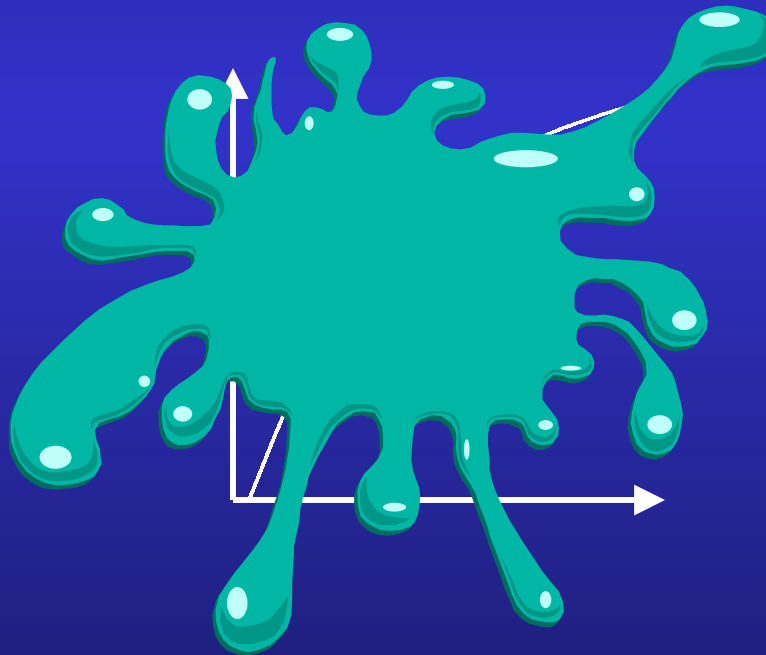
- Risks are ALWAYS Negative Things
- We don't like to think about risks
- It won't happen to me

Dealing With Risk Requires Facing the Truth

"The truth will set you free but before it does it will make you miserable"

A Risk is:

The stuff that could mess up your beautifully detailed plans.

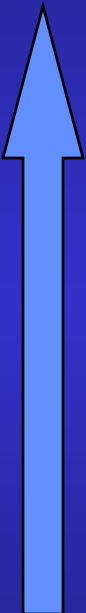


Planning

“Planning is an unnatural process; it is much more fun to do something. The nicest thing about not planning is that failure comes as a complete surprise --- rather than being preceded by a period of worry, anxiety and depression”

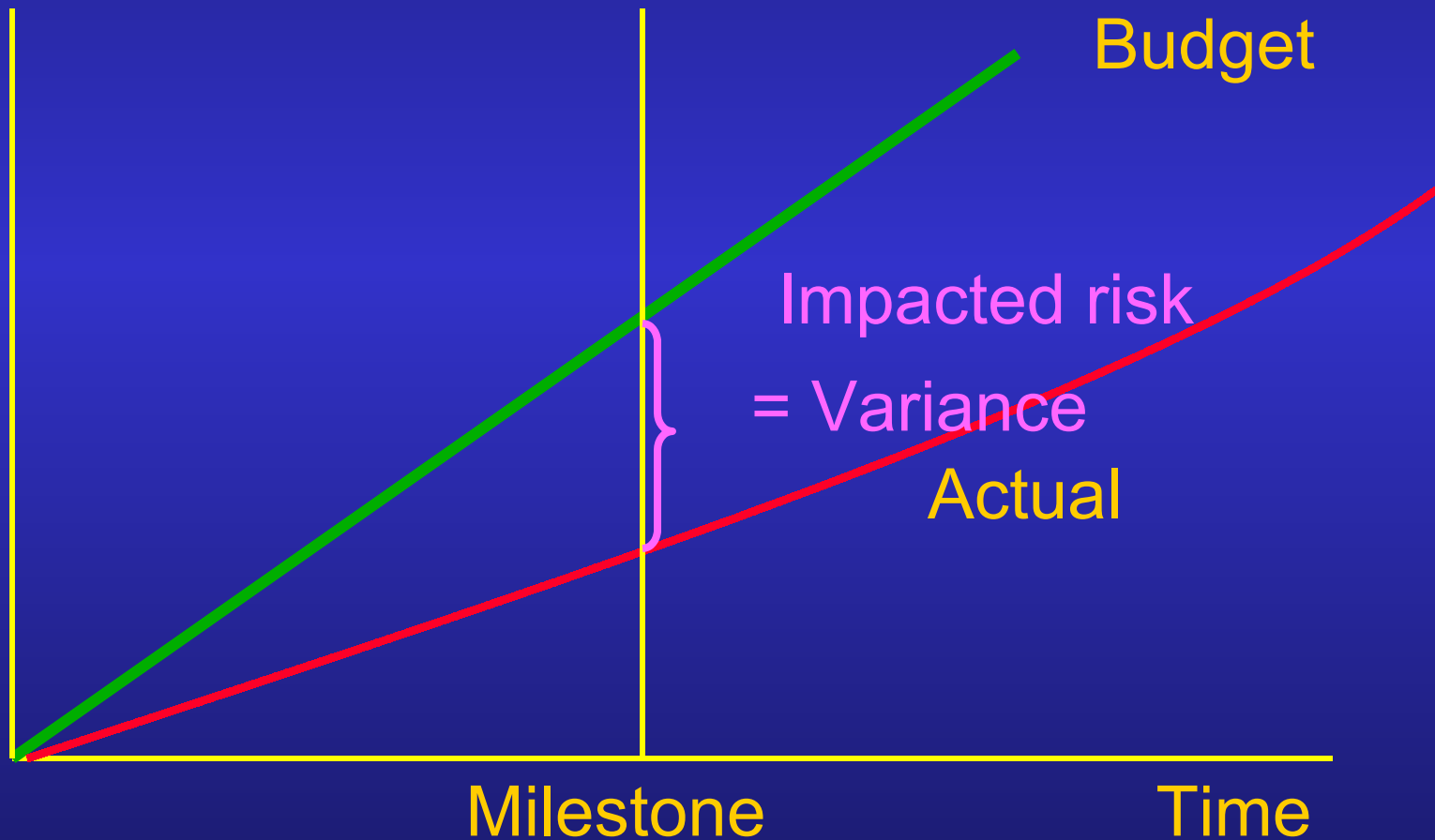
A Plan:

Natural progression: requires continuous review

- 
- Is based on:
 - **Known knowns**; what you know "for sure"
 - Incorporates:
 - **Known unknowns**; assumptions you make
 - Is subject to:
 - **Unknown unknowns**; that spring up and bite

Your typical situation

Progress

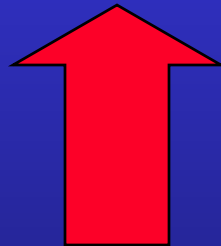


Risk Management

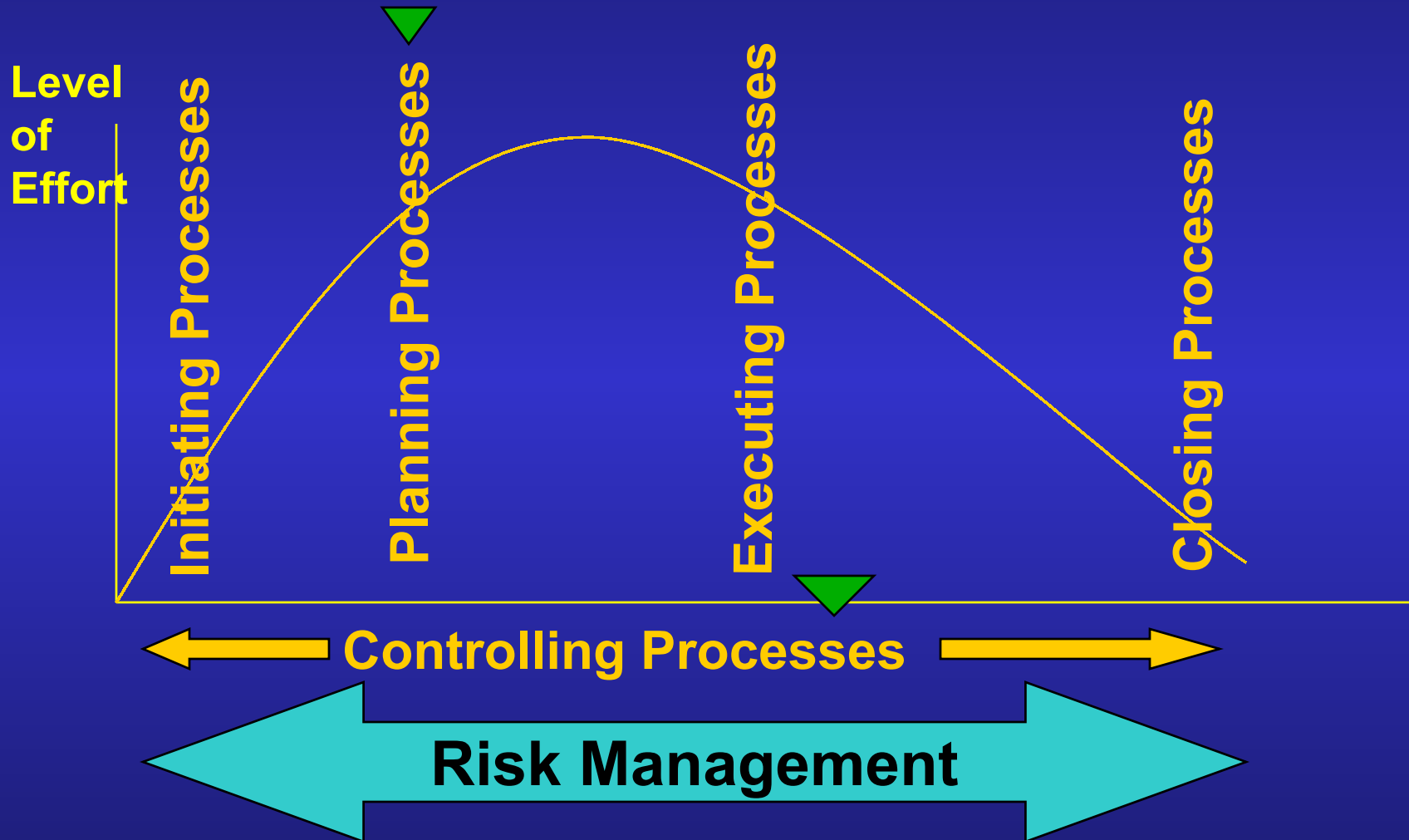
Proactive Risk Management brings

Closer to the Plan

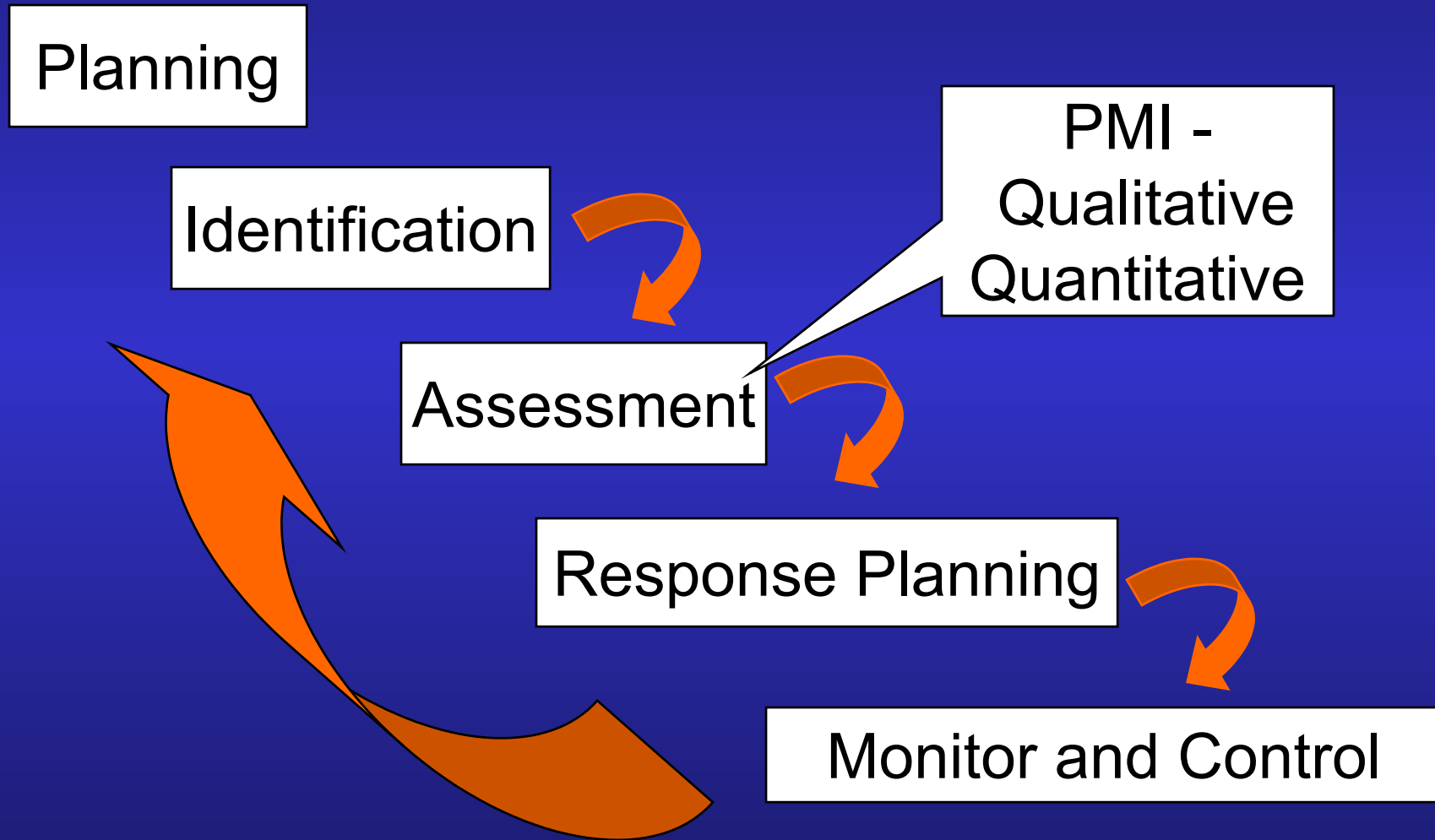
Actual Performance



PMI View of Risk



PMI Risk Management Process



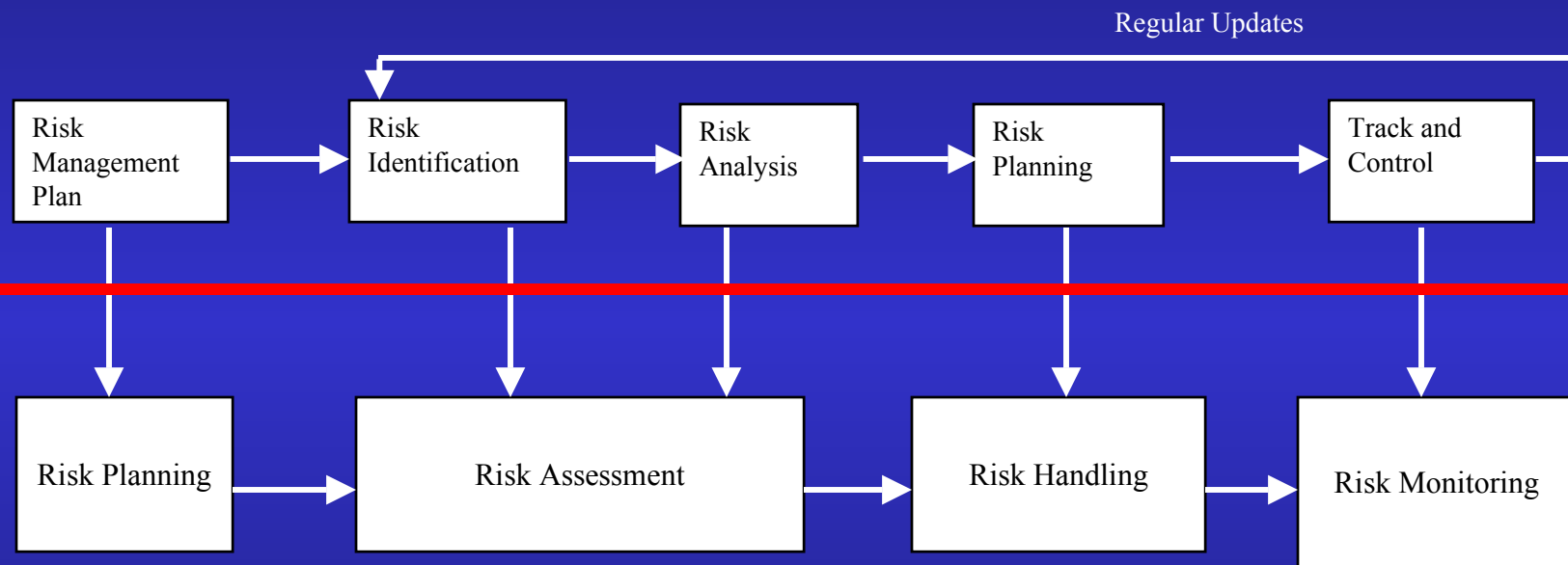
SEI Continuous Risk Management Process

Risk Management Plan



Mapping Risk Management Process

PBSi Process



DOD Process

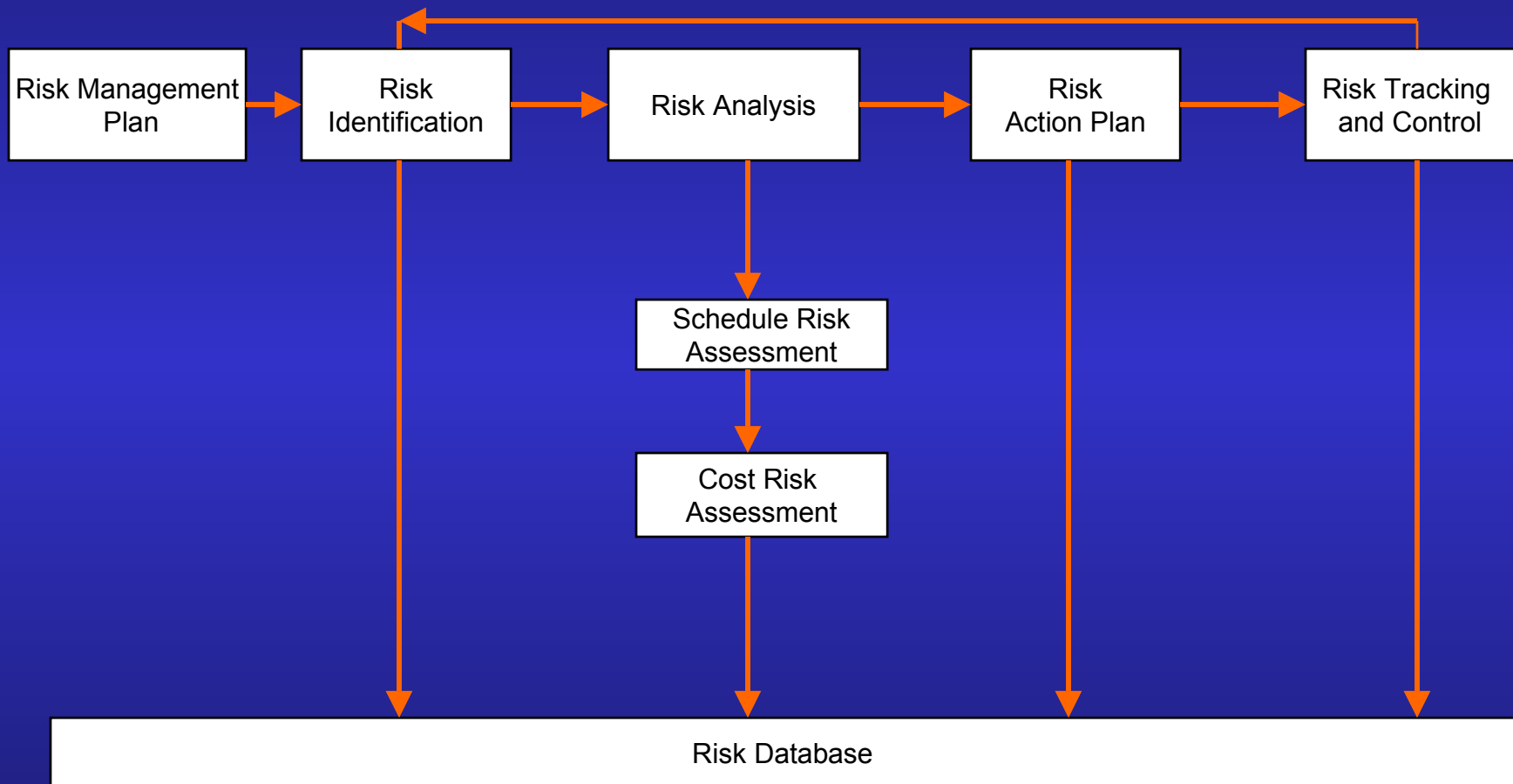
Risk in Other Frameworks

- **TBS Enhanced Management Framework**
 - “Principle: Project management decisions are based on risk management”
- **IEEE Software Engineering SWE-BOK**
 - Risk Management is a key part of Software Engineering Management
- **DoDD 5000.1 Defense Acquisition**
 - “PMs and other acquisition managers shall continually assess program risks.”

DoD 5000.1 Defense Acquisition

- Risk management encompasses identification, mitigation, and continuous tracking and control procedures that feed back through the program assessment process to decision authorities.

PBSi Risk Management Process



A Paradigm Shift is Occurring

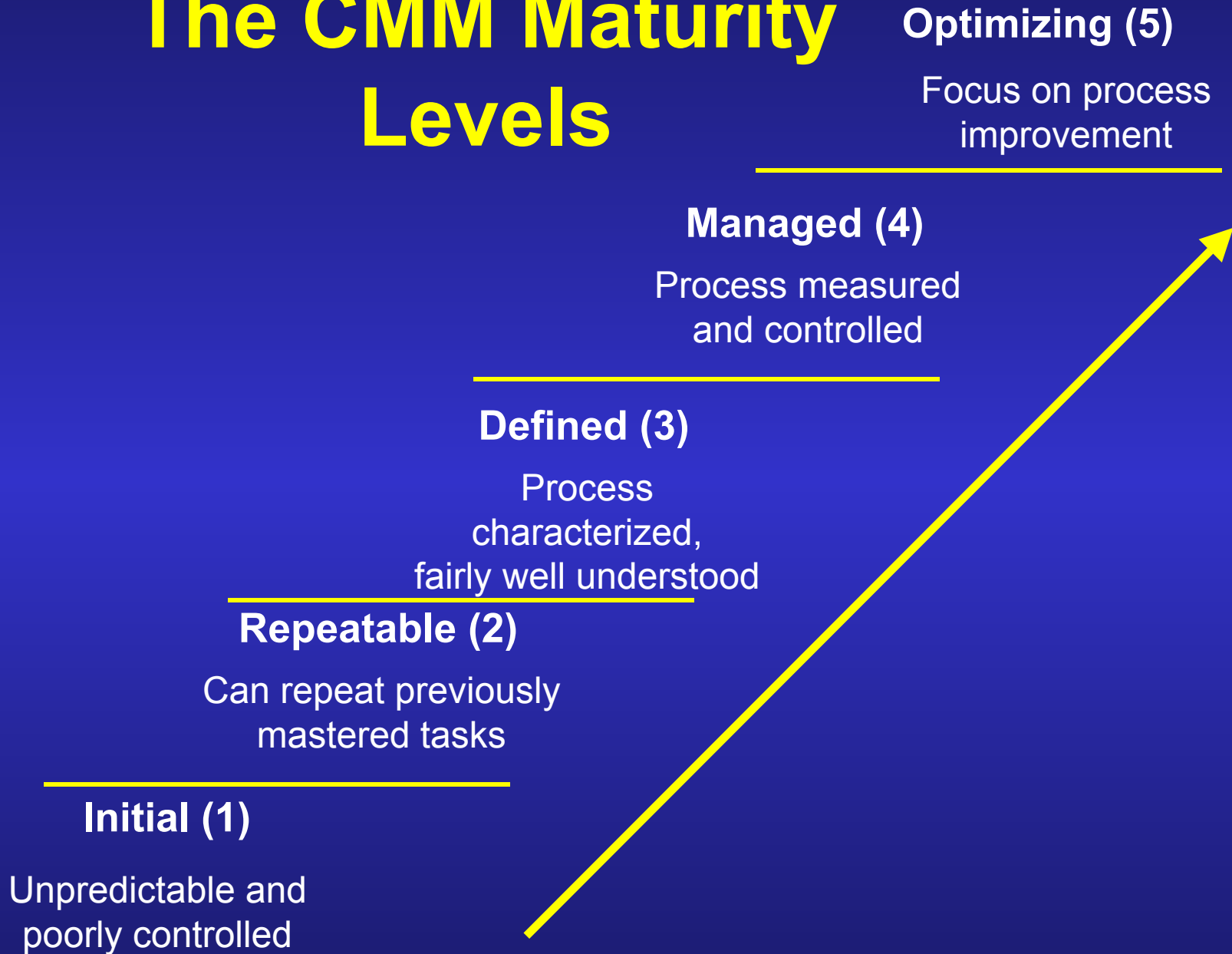
from

- Informal Risk Evasion
 - "it will never happen"
 - "things will work out OK"
 - "it's all their problem"

to

- Effective Risk Management
 - "What might go wrong?"
 - "How can we (all stakeholders) reduce risk?"
 - "What could we do if it happens"

The CMM Maturity Levels



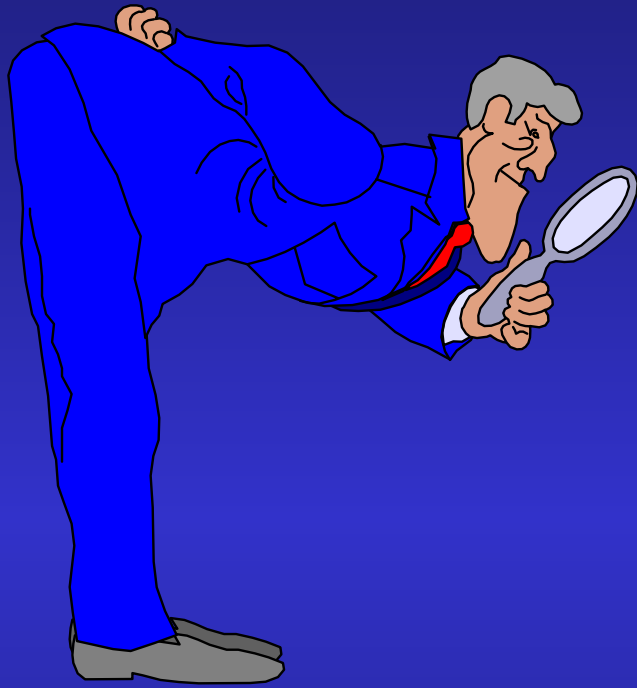
Risk Management

- Characterised by a structured culture
- Symptomatic of a SEI level 2-3 maturity level
- A component of a planning and process culture
- Fosters open communication
- Builds teamwork

Effective Risk Management

- A continuous process -ongoing
- Team based -stakeholders
- Action oriented -expect results
- Integrated -not stove piped
- Forward looking -proactive

So What Is the Process?



Risk Identification

- Searches for project risks
- States the risk in a standard syntax
- Enables risk analysis
- Documents risk description

Identification converts concerns into manageable statements

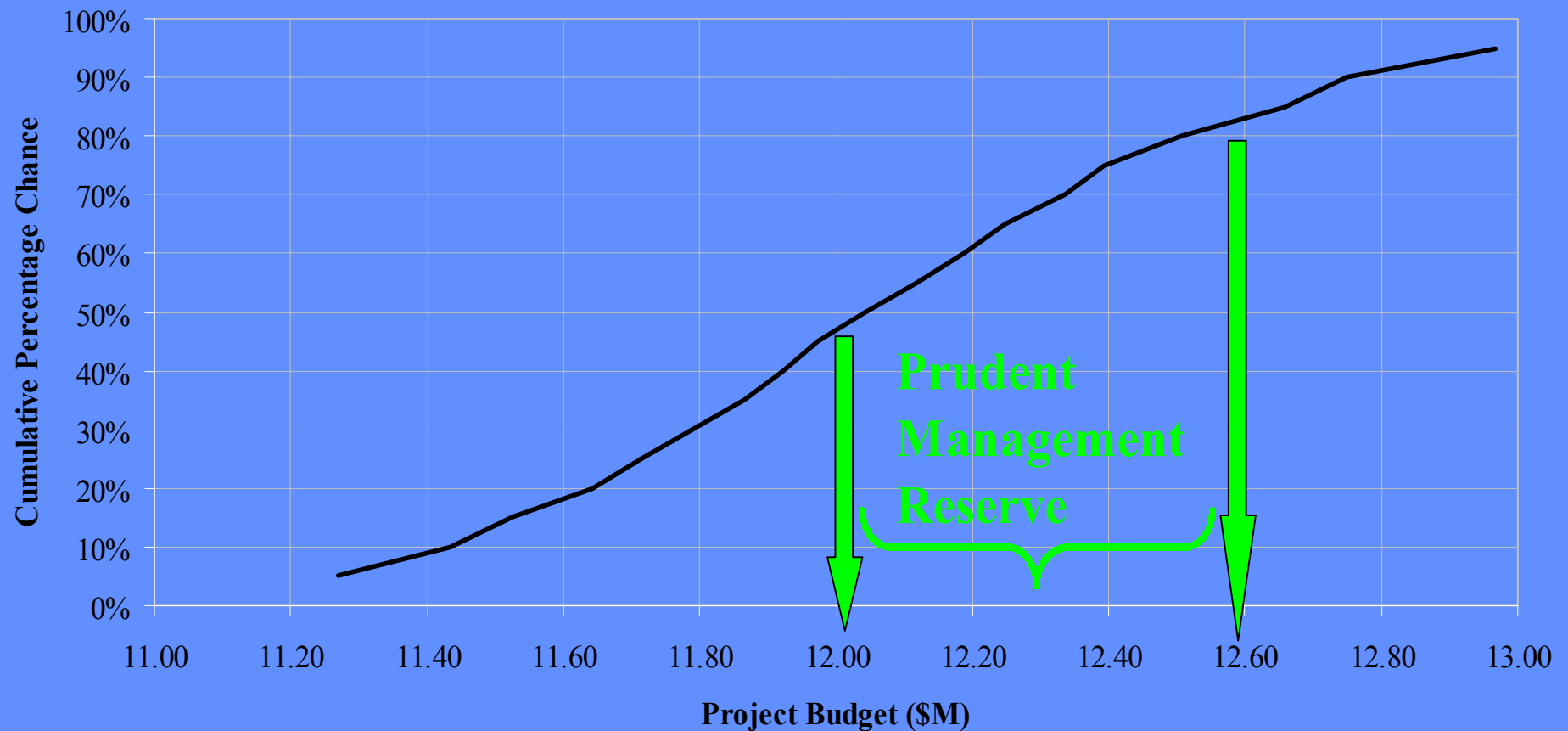
Risk Analysis

- Allows prioritization
- Removes duplication
- Supports selection for mitigation/action
- Simplifies reporting on "top ten"

Analysis converts risk statements into decision making information

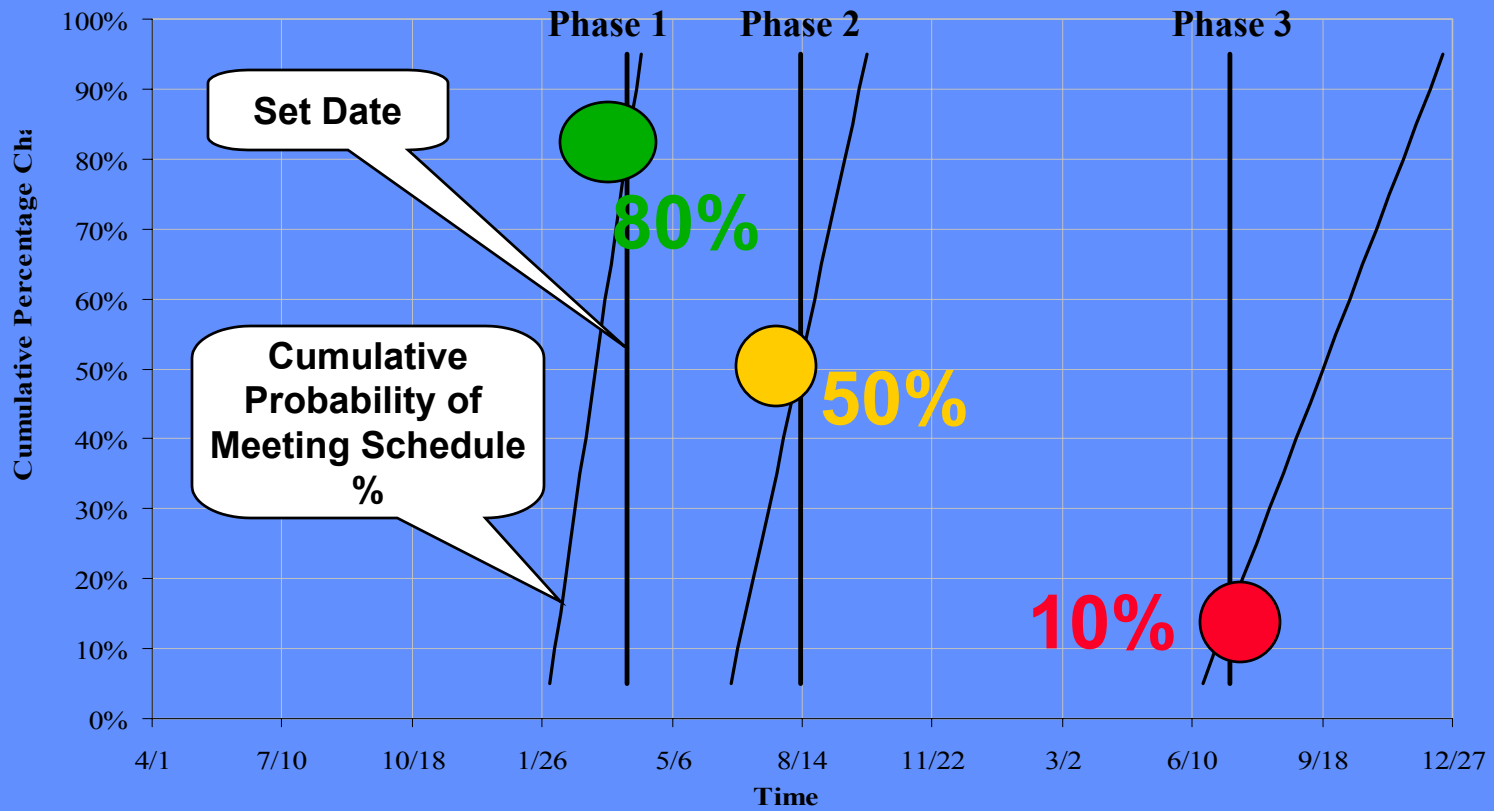
Quantitative Cost Risk Analysis

Prerequisite: Project Cost Breakdown by WBS



Schedule Risk Analysis

Prerequisite: Project Logic Network/PERT



Risk Action Planning

- Selects risks for action
- Identifies suitable strategy
- Develops tactical actions
- Outlines contingency plan and critical date

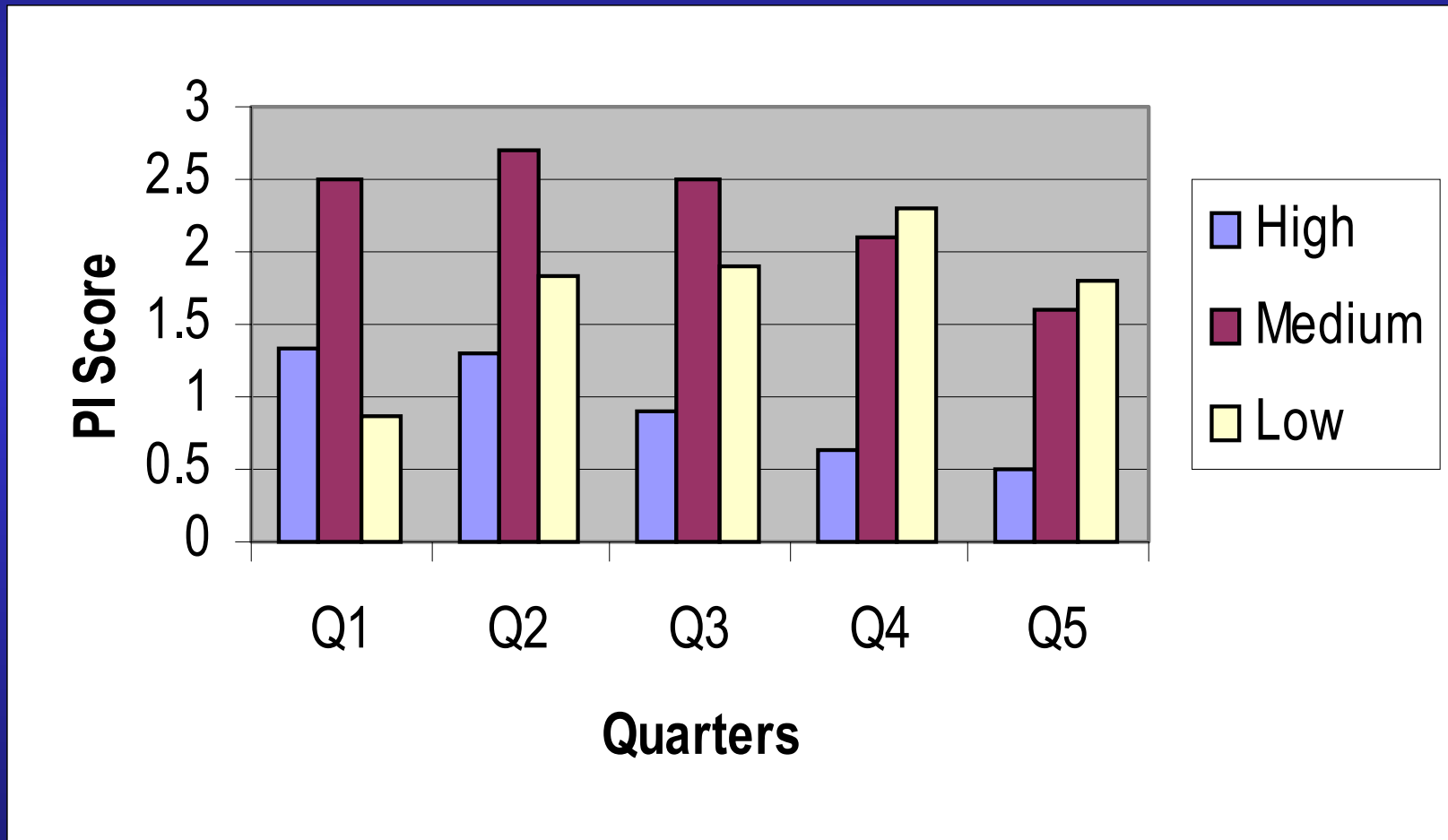
*Action planning creates the response
to the risks*

Risk Tracking

- Follows changes in risks
- Keeps actions current and appropriate
- Maintains focus on top risks
- Keeps risks on the project agenda

Risk tracking maintains a current risk profile

Typical Trend Analysis





Effective Risk Management Cultural Overview

Effective Risk Management- Culture

- Decriminalise
- Responsible
- Communicates
- Truthful
- Process oriented
- Plans ahead

"risk is OK"

"that's mine"

"open and frank"

"this will hurt"

"do it right"

"forward looking"

Typical Roles of Team Members

Team members involved in Risk Management can be any of:

- Risk Facilitator
- Risk Contributor
- Risk Owner
- Actionee
- Member of Risk Management Board

All must be willing to take ownership

Benefits of Risk Management

An investment in success

APM Risk SIG

ranked list of benefits

(Ref : Int J Project Management, Vol 12 Part 1, 1994)

1. Produces credible schedules/budgets
2. Improves project understanding
3. Justifies contingency planning
4. Allows rational risk-taking
5. Identifies risk ownership
6. Assists in contracting for risk
7. Generates historical database
8. Distinguishes between luck & management

Benefits of Risk Management

- Reduces requirement to solve problems on the fly
- Reduces reliance on, and cost of, crisis management
- Saves cost and schedule spent fixing problems that could have been prevented
- Improves decision making because there is more time to consider and analyze options
- Builds a team approach focussed on avoiding threats to the long term goals
- Allows an orderly response (less disruptive) to possible crisis so that you are ready if it happens

Gets the "elephants" on the table

