



***Risk management and Industry:  
workout how to make proper decisions***

**Conclusioni**

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“Individual Project risk is a uncertain event or condition that, if it occurs, has a positive or negative effect on one or more project objectives”

“Overall Project Risk is the effect of uncertainty on the project as a whole, arising from sources of uncertainty including individual risks, representing the exposure of stakeholders to the implications of variations in project outcome, both positive and negative”

*PMBok, Sixth Edition*

- No risks? No projects...
- An uncertainty (lack of complete knowledge about a future event) that matters
- Negative risks -> threats
- Positive risks -> opportunities

## RISK MANAGEMENT SCOPE

Unexpected events  
(unknown unknowns)



Total uncertainty  
(management reserves)

Risks (known unknowns)

Risk 1

Risk 2

Risk 3

Risk 4

Risk 5

Risk n

Partial uncertainty  
(contingency reserves)

**Risk Management**

Certain events  
(knowns)



No uncertainty

## RISK DESCRIPTION

**Because of ...**

**It may happen that ...**

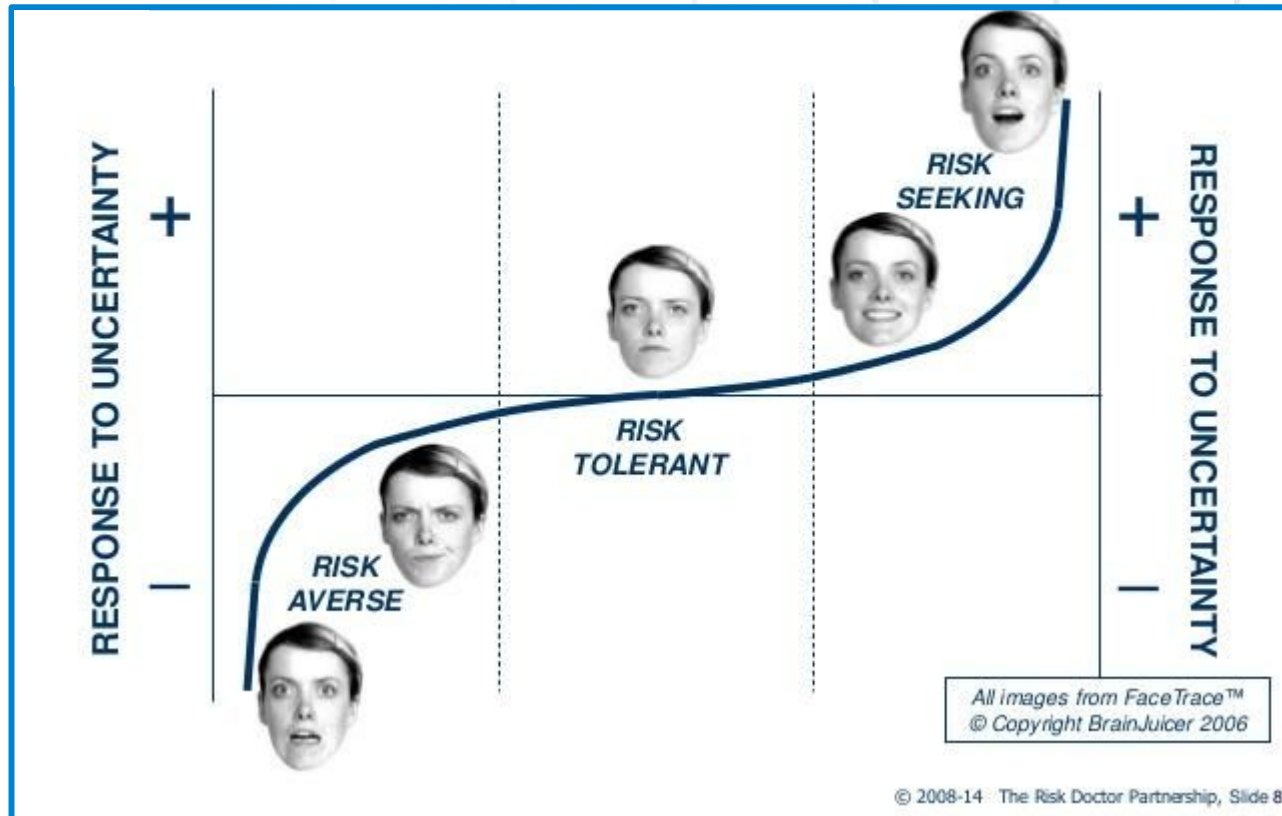
**Causing effects ...**



**Figure 5-2. Cause, Risk, and Effect**

*PMI Practice Standard for Project Risk Management*

## RISK ATTITUDES & RETROSPECTIVE



## PLAN RISK MANAGEMENT: GOALS & BENEFITS

Develop the overall **risk management strategy** for the project, to decide how the **risk management processes will be executed**, and to **integrate** the Project Risk Management with all other project management activities.

- Ensure risk management is **commensurate with both risks and importance** of the project to the organization
- Ensure risk management is **commensurate to organization and stakeholders' risk attitude**
- **Communicate with and obtain agreement and support from all stakeholders**, to make risk management effective throughout the project life cycle



## PLAN RISK MANAGEMENT: CRITICAL SUCCESS FACTORS

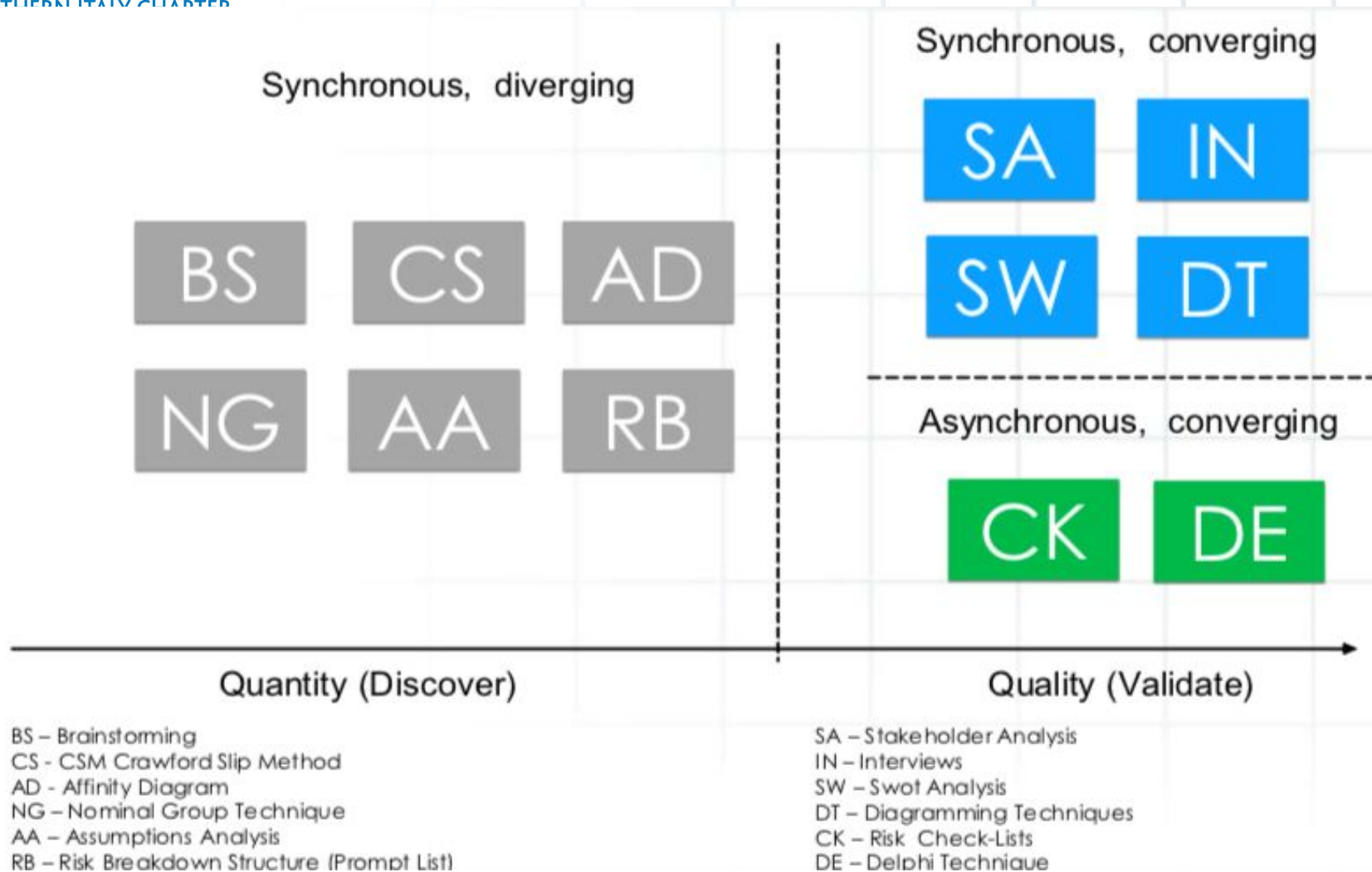
- **Identify and address barriers** to successful Risk Project Management
  - Value of Project Risk Management is recognized by project Stakeholders and within the organization
  - Project valid definition and high level planning information are available (project charter)
  - Project risk management organizational assets (project and risk management procedures, templates, roles, responsibilities, authority level, glossary, ...) are available
- **Involve Project Stakeholders** in Project Risk Management
- **Comply with the Organization's Objectives, Policies, and Practices**



- **Provides** all project stakeholders with a **common view** about
  - How risk management activities will be handled
  - What has been agreed upon
  - What responsibilities and involvement stakeholders will have
- **Includes**
  - Project description
  - Risk Management strategy, organization and methodology
  - Roles & Responsibilities
  - Risk Management tools and guidelines for use (i.e. probability and impact scales, Risk Breakdown Structure), templates
  - Stakeholder risk attitude (tolerance, thresholds)
  - Criteria for success (project, risk management processes)
  - Tracking (recording, sharing, auditing, lessons captured)
  - Communication
  - Budgeting & Timing for Risk Management



## IDENTIFY RISKS - TECHNIQUES



## PROBABILITY AND IMPACT DEFINITION

Probability of occurrence and impacts on project objectives have to be estimated as better as possible, according to what has been defined in the Risk Management Plan:

- Scales
- Project Objectives to be considered

Table 11-1. Example of Definitions for Probability and Impacts

SCALE	PROBABILITY	+/- IMPACT ON PROJECT OBJECTIVES		
		TIME	COST	QUALITY
Very High	>70%	>6 months	>\$5M	Very significant impact on overall functionality
High	51-70%	3-6 months	\$1M-\$5M	Significant impact on overall functionality
Medium	31-50%	1-3 months	\$501K-\$1M	Some impact in key functional areas
Low	11-30%	1-4 weeks	\$100K-\$500K	Minor impact on overall functionality
Very Low	1-10%	1 week	<\$100K	Minor impact on secondary functions
Nil	<1%	No change	No change	No change in functionality

PMI PMBoK Sixth Edition

# PROBABILITY AND IMPACT MATRIX

Probability	Threats Risk Score = Probability x Impact					Opportunities High (RED) / Med (YEL) / Low (GRN)				
	0.90 Very Likely	0.05	0.09	0.18	0.38	0.72	High	High	High	Med
0.70 Likely	0.04	0.07	0.14	0.28	0.56	High	High	Med	Med	Low
0.50 Possible	0.03	0.05	0.10	0.12	0.40	High	High	Med	Low	Low
0.30 Unlikely	0.02	0.03	0.06	0.12	0.24	High	Med	Med	Low	Low
0.10 Very Unlikely	0.01	0.01	0.02	0.04	0.08	Med	Low	Low	Low	Low
	0.05	0.10	0.20	0.40	0.80	Very High	High	Med.	Low	Very Low
<p>Example Impact Definitions – May Be Tailored to Each Project Objective Impact on an Objective (e.g. Cost, Schedule, Scope, Quality)</p>										

## QUALITATIVE vs. QUANTITATIVE ANALYSIS



**Figure 7-1. Comparison of Qualitative and Quantitative Approaches**

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### THREATS

- **Avoid:** ensure the threat cannot occur or can have no effect on the project.
- **Transfer:** transfer to a third party that is better positioned to address the threat
- **Mitigate:** identify actions that will decrease the probability and/or the impact of the threat
- **Accept:** take no action unless the threat actually occurs (contingency plans, fallback plans).

### OPPORTUNITIES

- **Exploit:** ensure the opportunity will occur and the project will benefit of it.
- **Share:** transfer to a third party that is better positioned to address the opportunity
- **Enhance:** identify actions that will increase the probability and/or the impact of the opportunity
- **Accept:** take no action unless the opportunity actually occurs (contingency plans, fallback plans).

## CONTROL RISKS: GOALS

«The primary objectives of risk monitoring and controlling are to track identified risks, monitor residual risks, identify new risks, ensure that risk response plans are executed at the appropriate time, and evaluate their effectiveness throughout the project life cycle.

In addition to tracking and managing the risk response actions **the effectiveness of all of the Risk Management processes should be reviewed** to provide improvements to the management of the current project as well as future ones»

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- Check whether **approved response actions have been included in the current project management plan**, and take any appropriate action if necessary, invoking the change management process with respect to any missing action
- Monitor **trigger conditions** related to contingent responses
- Measure **effectiveness of the response**
- Ensure **periodic risk reassessment**
- **Perform risk audits**, to identify any barriers to effectiveness or keys to success in risk management
- Identify **lessons learned**
- No risks «open» at the end of the project



- **Integrate** Risk Monitoring and Control with Project Monitoring and Control
- Continuously **Monitor Risk Trigger Conditions**
- **Maintain Risk Awareness** (communication, reports)



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**GRAZIE!**

**CONTATTI:**



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