



PROJECT MANAGEMENT
CENTER FOR EXCELLENCE

A.J. CLARK SCHOOL OF ENGINEERING
Civil & Environmental Engineering Department



STRATEGIES FOR MANAGING RISK...

Susan Parente

PMP, CISSP, PMI-RMP, PMI-ACP, CSM, CSPO, PSM I, ITIL, RESILIA, CRISC, GLCP, MS Eng. Mgmt.

Parente@s3-tec.com, @TechRiskManager

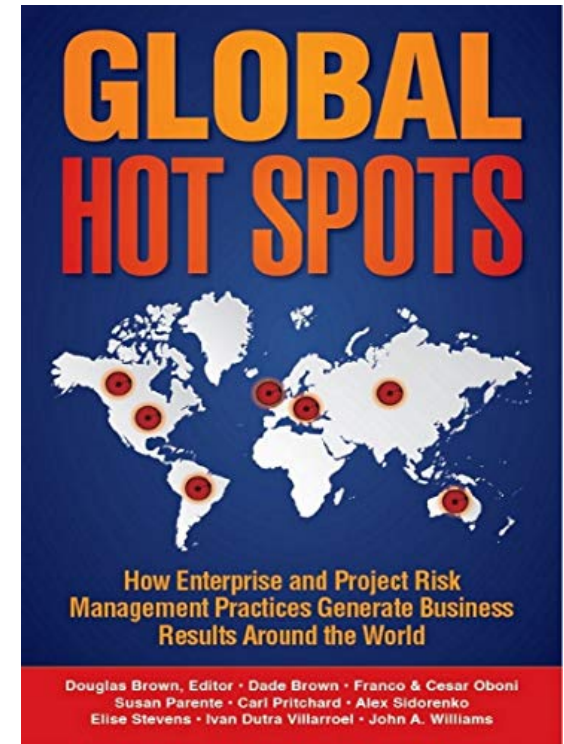
2020 Project Management Symposium

About me & S3 Technologies

- Consultant, Trainer, Author, Professor
 - Associate Professor, Post University MBA Program: Project Management
 - Adjunct Professor, Montclair State University MBA Program: Risk Management
 - Instructor, University of Virginia SCPS Proj. Mgmt. Certificate: Agile Project Mgmt.
- 12 years: instructor & consultant of proj. mgmt. best practices
- 10 years: developing/ instructing PMI certification preparation classes and other proj. mgmt. curriculum
- 25+ years in engineering and software development industries

About me...

- Interested in learning more about Risk Management..?
- *My co-authors include notable risk mgmt. colleagues of mine from around the globe!*



Douglas Brown, Editor • Dade Brown • Franco & Cesar Oboni
Susan Parente • Carl Pritchard • Alex Sidorenko
Elise Stevens • Ivan Dutra Villarroel • John A. Williams

Expected Outcomes

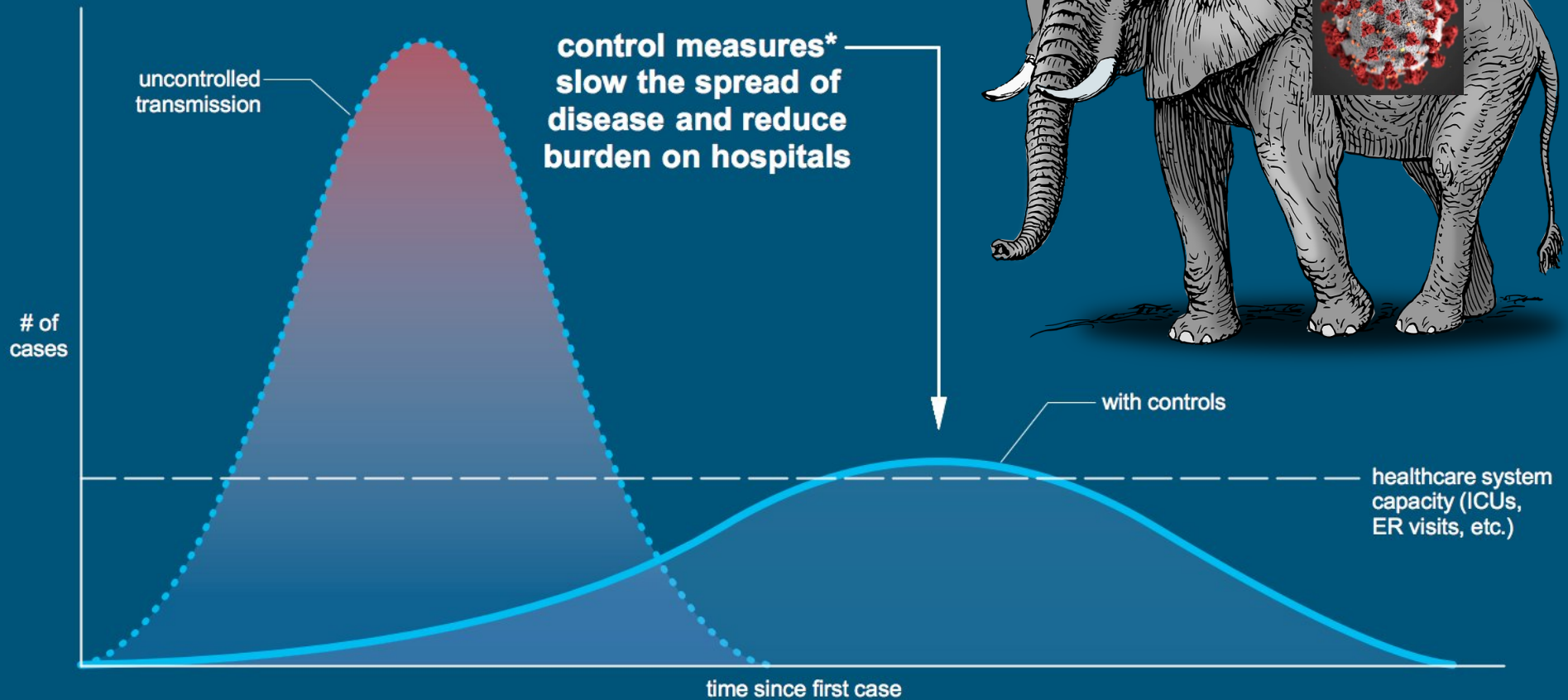
- ◆ Tools for risk response planning
- ◆ Facility with Risk Response Planning
- ◆ Appreciation for the value of effective risk response planning

- ◆ *A new relationship with Risk as an opportunity!*

The Elephant in the Room...

Yes, this is Quantitative Risk Analysis.... And yes, now everyone is talking about risk.

LOWER AND DELAY THE EPIDEMIC PEAK

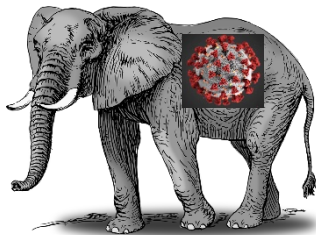
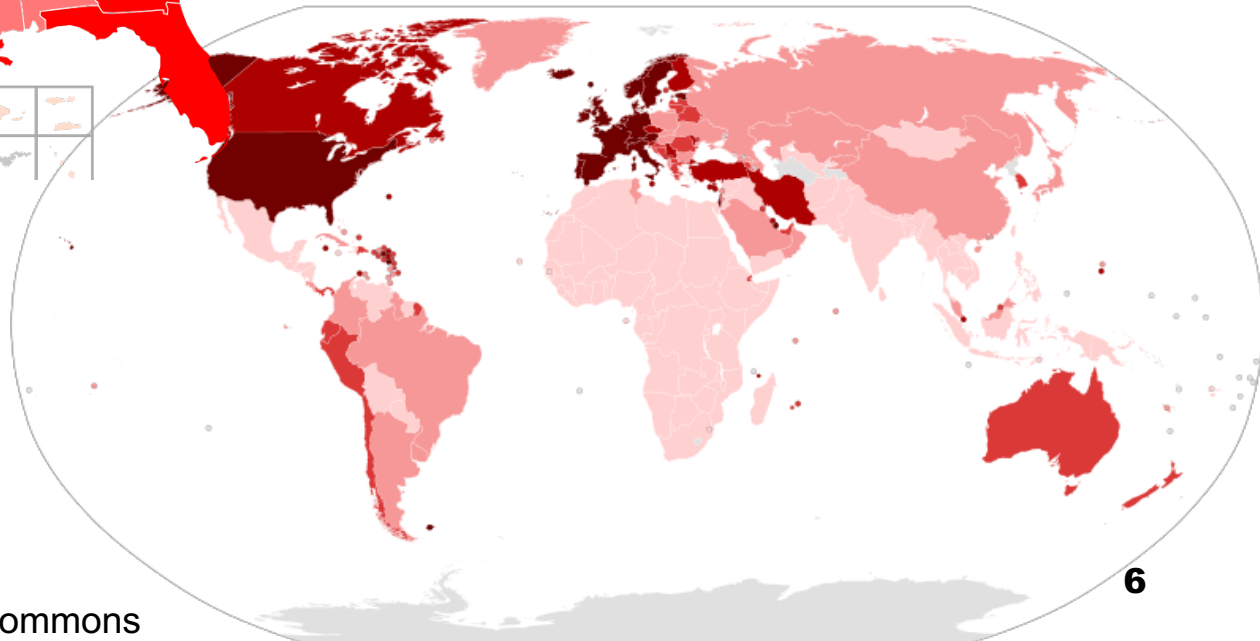
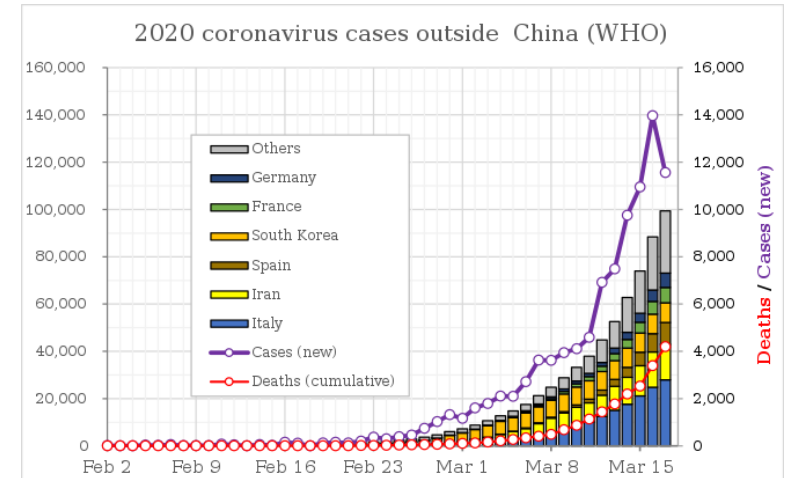
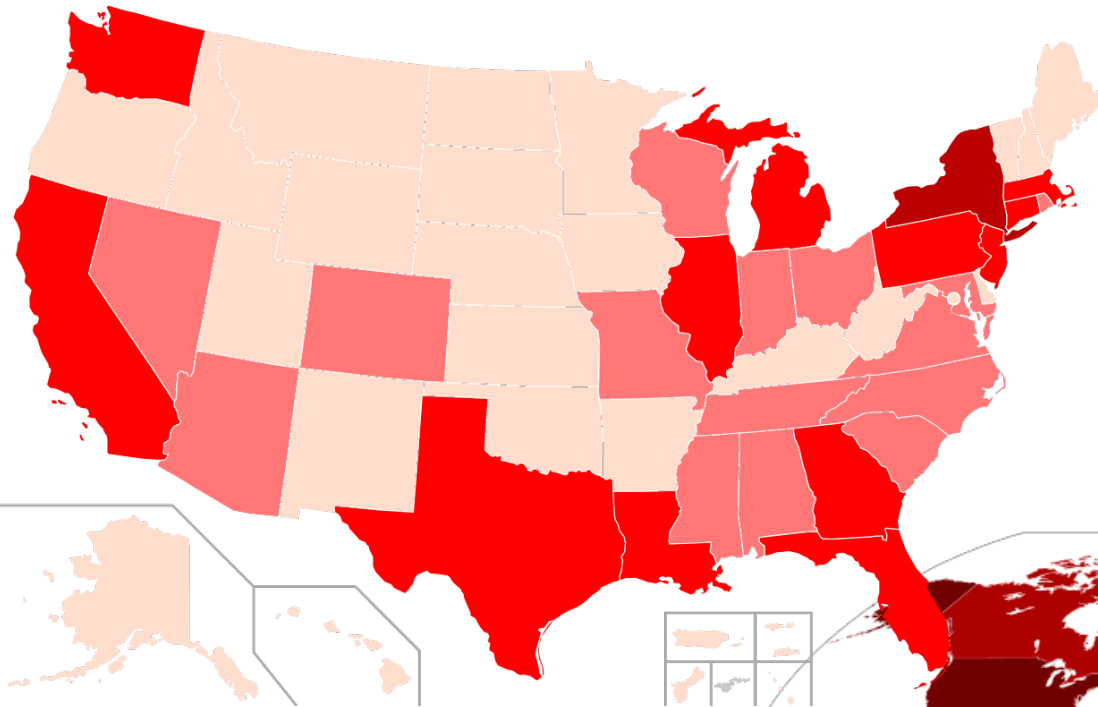


* control measures may include handwashing, teleworking, limiting large gatherings, minimizing travel, etc.

CC BY 2.0 Esther Kim @K_thos
Carl T. Bergstrom @CT_Bergstrom

The Elephant in the Room...

This is Issue Management.... And yes, now everyone is talking about it as a risk.



What is Risk?

- ◆ Risk is uncertainty...



What is Risk?

- ◆ Risk is uncertainty...

<https://www.youtube.com/watch?v=xigLVqPqaHI>




What is Risk?

“Thank goodness for helmets...”

Thank goodness for risk management!

What is Risk?

◆ Strategies for Managing Risk...

- Helmet?
- Safe checks
- Backups?
- Engineering/ Design (Breakaways, etc.)
- Flight check
- Calls/ communication
- Certification 

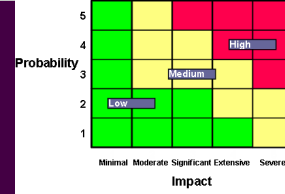
What is Risk?

- ◆ Risk is uncertainty...

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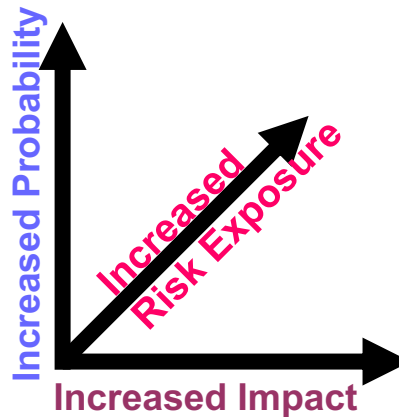
Risk Defined



- ◆ A **Risk** is an **uncertain event or condition**, that if it occurs, has a positive or negative effect on at least one objective
- ◆ **Probability** + **Impact** = **Risk Exposure**

Probability:

The Likelihood of Occurrence That an Objective Will Not Be Met Using the Current Plan



Impact:

The Consequence of Occurrence
Penalty Incurred If the Objective Is Not Obtained

◆ Risk vs. Issue

- A **Risk** is an event that may occur in the future
- A **Problem** or **Issue** is something that has already occurred and you are dealing with now

Strategies for Managing Risk

*If You Haven't Identified Your
Risks,*

You're Already Taking Them.



Strategies for Managing Risk



Why manage risk?

Project Constraints

- ◆ Fundamentally, only 2 of the 3 aspects of the triad can be selected. The 3rd is then determined by the aspects which are selected.



Why Manage Risk?

- ◆ Identify potential **problems**
 - Efficiently manage project **resources**
 - Reduce threats
 - Increase opportunities
 - Structured and **systematic review** of Project
 - Decision Making
 - Process for **system improvements**
 - Project **Communication**

When do we Manage Risk?

Develop a Risk Management Plan:

- ✓ Define Risk
- ✓ Define Your Risk Tolerance
- ✓ Detail your Risk Policy
- ✓ Establish Risk Management Process
- ✓ Define Roles
- ✓ Plan Process Implementation
- ✓ Baseline Risk
- ✓ Develop Risk Documentation/ Templates

How do we Manage Risk?

- ◆ **Identification**
 - Discovery of a potential risk
- ◆ **Assessment**
 - Review, analysis, and prioritization
- ◆ **Response Planning**
 - To mitigate, avoid, transfer or assume assessed risks
- ◆ **Execution**
 - Of response strategies, as determined in response planning
- ◆ **Planning, Monitoring, Documentation and Communication**
 - Foundations of the RMP, essential to all phases
 - Part of continuous process improvement for the RMP



How do we Manage Risk?

◆ Tools & Techniques:

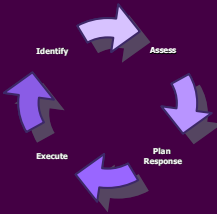
- Risk Response Strategies *(for threats and opportunities)*
- Contingency Response Strategies
- Expert Judgment

◆ Outputs:

- Risk Register Updates
- Contract Decisions (risk related)
- Project Management Plan Updates
- Project Document Updates

* Off Peak Training, (2007-2012) PMI-RMP Exam Preparation Course Guide. Published by Off Peak Training, Reston, VA.

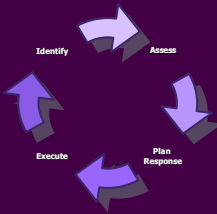
Response Planning



Risk Response Strategies *(for Threat Risks)*:

- ◆ **Mitigate:** Pre-Event actions to **reduce the probability or impact** of a risk
- ◆ **Avoid:** **Eliminate** the risk producing activity entirely by choosing an alternate approach.
- ◆ **Transfer:** Take actions that **redistribute** risk to another area. (This does not relieve the responsibility of tracking and closing the risk)
- ◆ **Accept:** **Accept** the risk as stated with no other action.

Response Planning

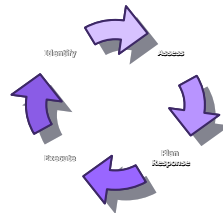


Risk Response Strategies *(for Opportunity Risks)*:

- ◆ **Enhance:** Pre-Event actions to **increase the probability or impact** of a risk
- ◆ **Exploit:** Drive the **risk event to occur** by changing its probability to 100%, or as close as possible.
- ◆ **Share:** **Share risk ownership** with an individual or group to influence the opportunity occurrence.
- ◆ **Accept:** Accept the risk as stated with **no other action**.

Risk Planning, Monitoring, Documentation & Communication

- ◆ Monitor, Track and Communicate Risk
 - Track the progress of mitigating the risk.
 - Communicate this information to management and internal and external stakeholders.
- ◆ Integration of Risk Management with Cost and Schedule Processes



Summary

- ✓ **Risk Management** is an organized, systematic decision-making process that efficiently *plans, assesses, handles, monitors, and documents* risk to *increase* the likelihood of achieving project goals and *decrease* the likelihood that a risk would become a future problem
- ✓ Consider all possible response strategies
- ✓ Document, Reassess & Monitor Risks
- ✓ *Create a Culture of Risk Awareness...*

Risk Awareness starts with me!

Busting Barriers to Implementing RM

For discussion and resources on Risk Management...

Please join me on **LinkedIn**

Very High	L	M	H	S
High	L	M	H	S
Medium	L	M	H	S
Low	L	M	H	S
Very Low	L	M	H	S
	1	2	3	4
	Minimal	Medium	Significant	Extreme
	Consequence of Occurrence			

Risk Management Implementation Group

<http://www.linkedin.com/groups?mostPopular=&gid=3442533>



Agile Risk Management Group

http://www.linkedin.com/groups?gid=4020498&trk=myg_ugrp_ovr

S³ Technologies, LLC

Susan Parente

Parente@s3-tec.com

703-328-7391



@TechRiskManager

Additional Information

Sample Risk Register:

<Project> Risk Register- Threats

Last Update: <date>

Priority (Rank Order)	Probability	Impact	Exposure (Prob x Impact)	Risk ID #	Risk Type	Status	Owner	POC	Risk Statement
	Very Low, Low, Med, High, Very High	Minimal, Moderate, Significant, Extensive, Severe	(see key) Ex: HIGH 4-5	1	Technical, Cost, Schedule, Security			First and Last Name	Risk defined in "if... then..." statement.

Risk Triggers	Risk Strategies	Residual Risks or Secondary Risks	Status Notes	Date Identified
	Mitigation, Avoidance, Transfer, Assume (include both short and long term)	Residual Risk is the risk remaining after employing the response. Secondary Risks are a direct result of the risk response.	History of Risk Status	Date Risk was identified

Additional Information

PMI-RMP® Certification

PMI-RMP® Certification

PMI Risk Management Professional (PMI-RMP)®

- ◆ “PMI’s Risk Management Professional (PMI-RMP)® credential is a response to project management’s increasing growth, complexity and diversity. Globally recognized and demanded, the PMI-RMP® fills the need for a specialist role in project risk management.”
- ◆ “It recognizes your unique expertise and competency in assessing and identifying project risks, mitigating threats and capitalizing on opportunities, while still possessing a baseline knowledge and practical application in all areas of project management.”

Reference: PMI, “PMI Risk Management Professional (PMI-RMP)” Retrieved from:
<http://www.pmi.org/en/Certification/PMI-Risk-Management-Professional-PMI-RMP.aspx>

PMI-RMP® Certification

Who should apply:

- ◆ Risk management specialists and Project Risk Managers
- ◆ To increase your skills in project management
- ◆ To highlight your specialized expertise to employers

PMI-RMP Requirements:

- ◆ A 4 year degree (bachelor's or the global equivalent), with at least 3,000 hours of project RM experience and 30 hours of project RM education.

OR

- ◆ A secondary diploma (high school or the global equivalent) with at least 4,500 hours of project RM experience and 40 hours of project RM education.

Reference: PMI, "PMI Risk Management Professional (PMI-RMP)" Retrieved from:

<http://www.pmi.org/en/Certification/PMI-Risk-Management-Professional-PMI-RMP.aspx>

PMI-RMP® Certification

How to Apply:

- ◆ Online at www.pmi.org
- ◆ More Info:
 - PMI-RMP Handbook
 - PMI-RMP Exam Preparation

Maintain Your PMI-RMP:

- ◆ Earn 30 PDUs/ 3 year cycle in project risk management
- ◆ Learn more at: <http://www.pmi.org/en/Certification/PMI-Risk-Management-Professional-PMI-RMP.aspx>

Reference: PMI, "PMI Risk Management Professional (PMI-RMP)" Retrieved from:
<http://www.pmi.org/en/Certification/PMI-Risk-Management-Professional-PMI-RMP.aspx>