

Enterprise Risk Management for Water Utilities

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Presentation Goals

- Define Risk, Risk Management and ERM
- Why is Risk Management Important
- Traditional Risk Management vs ERM
- Types of Risk and Risk Categories
- Risk Maturity
- ERM Tools
- Questions



“Take risks: if you win you’ll be happy; if you lose, you will be wise and unemployed.”



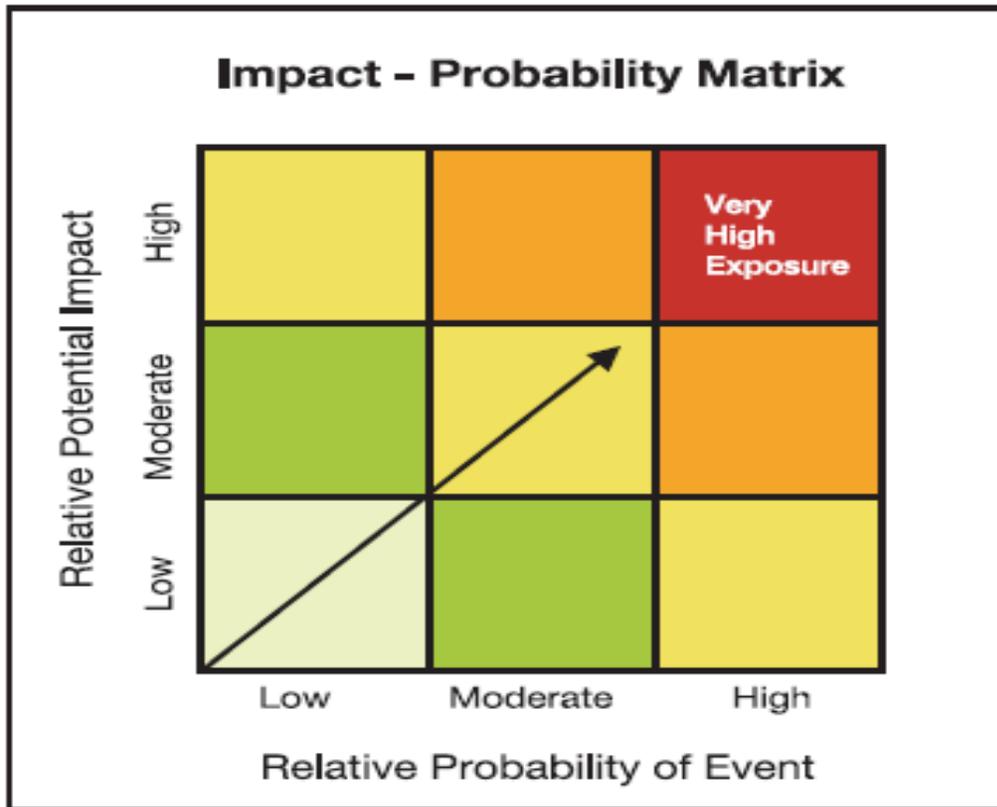
Risk & Risk Management

- Risk is the difference between the actual outcome of an event and the expected one.
- Risk management is the process of managing the effects of uncertainty related to an organization's objectives.

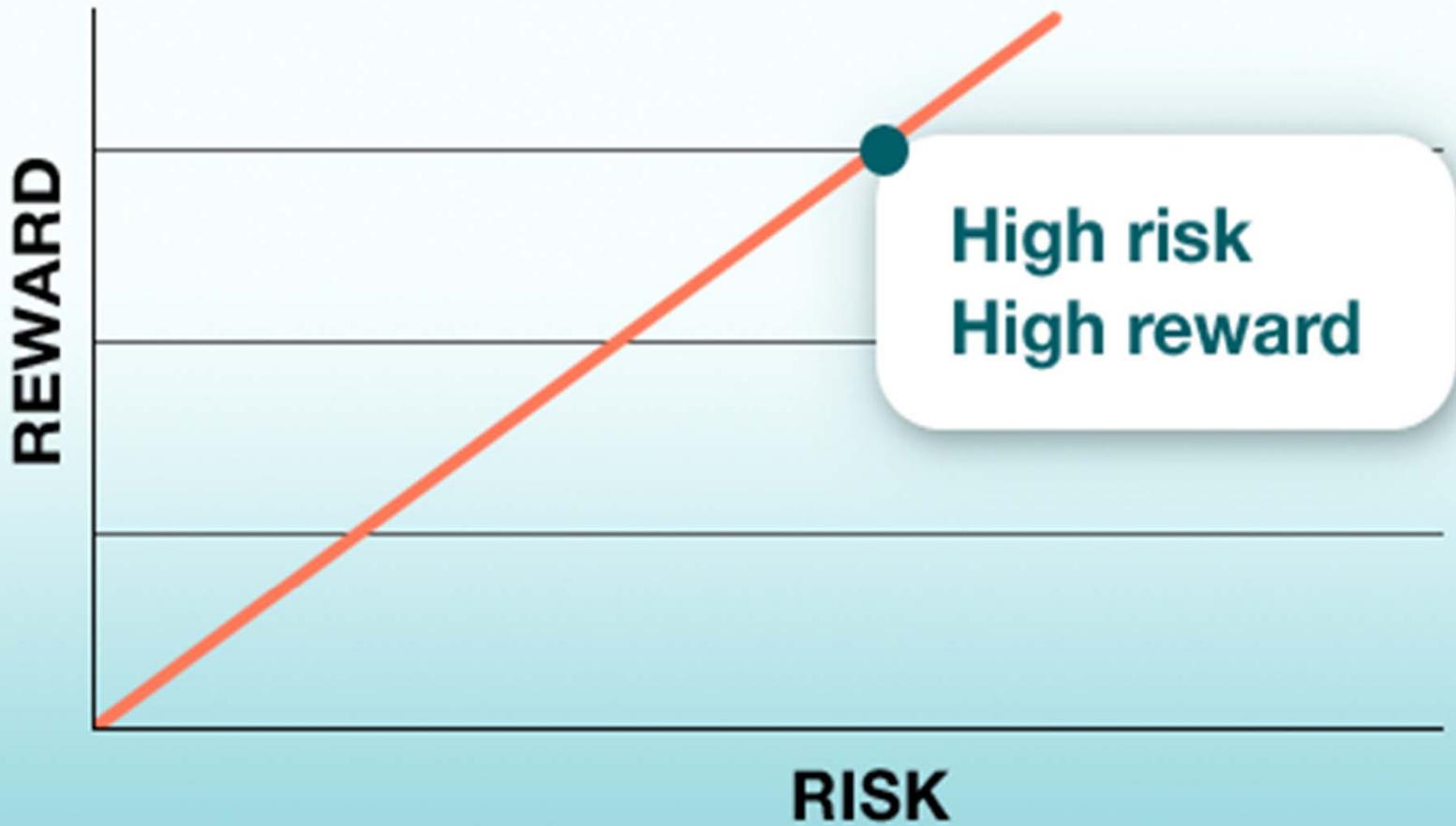


Risk Management

- Reducing the likelihood a negative event will occur or minimizing the impact if it does



Risk vs Reward





Enterprise Risk Management

COSO (2004) defines enterprise risk management as:

“a process, effected by an entity’s board of directors, management, and other personnel, applied in strategy setting and across the enterprise, designed to identify potential events that may affect the entity, and manage risk to be within the risk appetite, to provide reasonable assurance regarding the achievement of entity objectives”



Evolution of ERM



Risk Management vs ERM

• Traditional Risk Management

- Silo approach
- Historical
- Financial
- Accounting
- Reactive
- Ad hoc
- Hazards

• Enterprise Risk Management

- Holistic approach
- More strategic focused
- Business
- All Management
- Proactive
- Continuous
- Opportunities

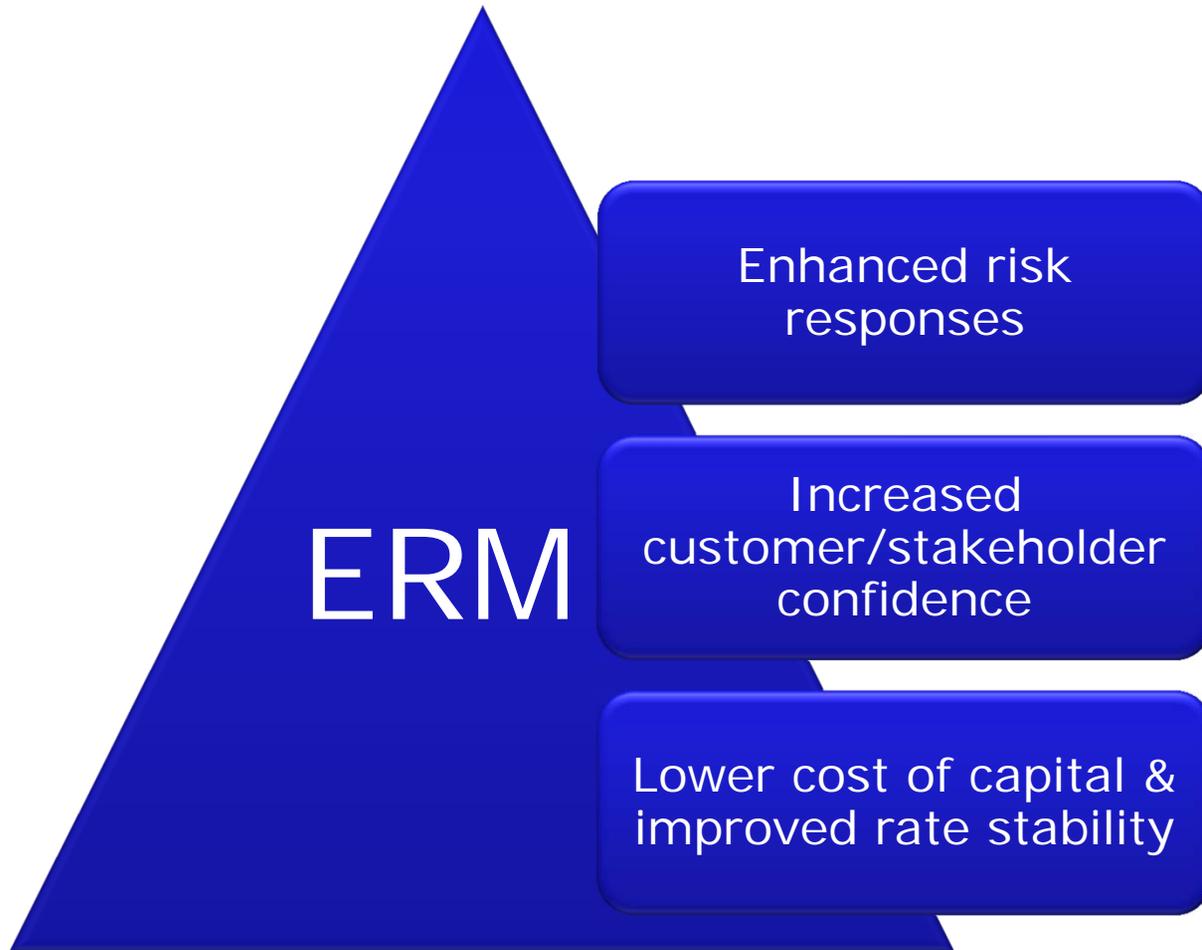


The goal of ERM:

To create, protect, and enhance stakeholder value by managing the uncertainties that affect the ability of an organization to achieve its objectives.



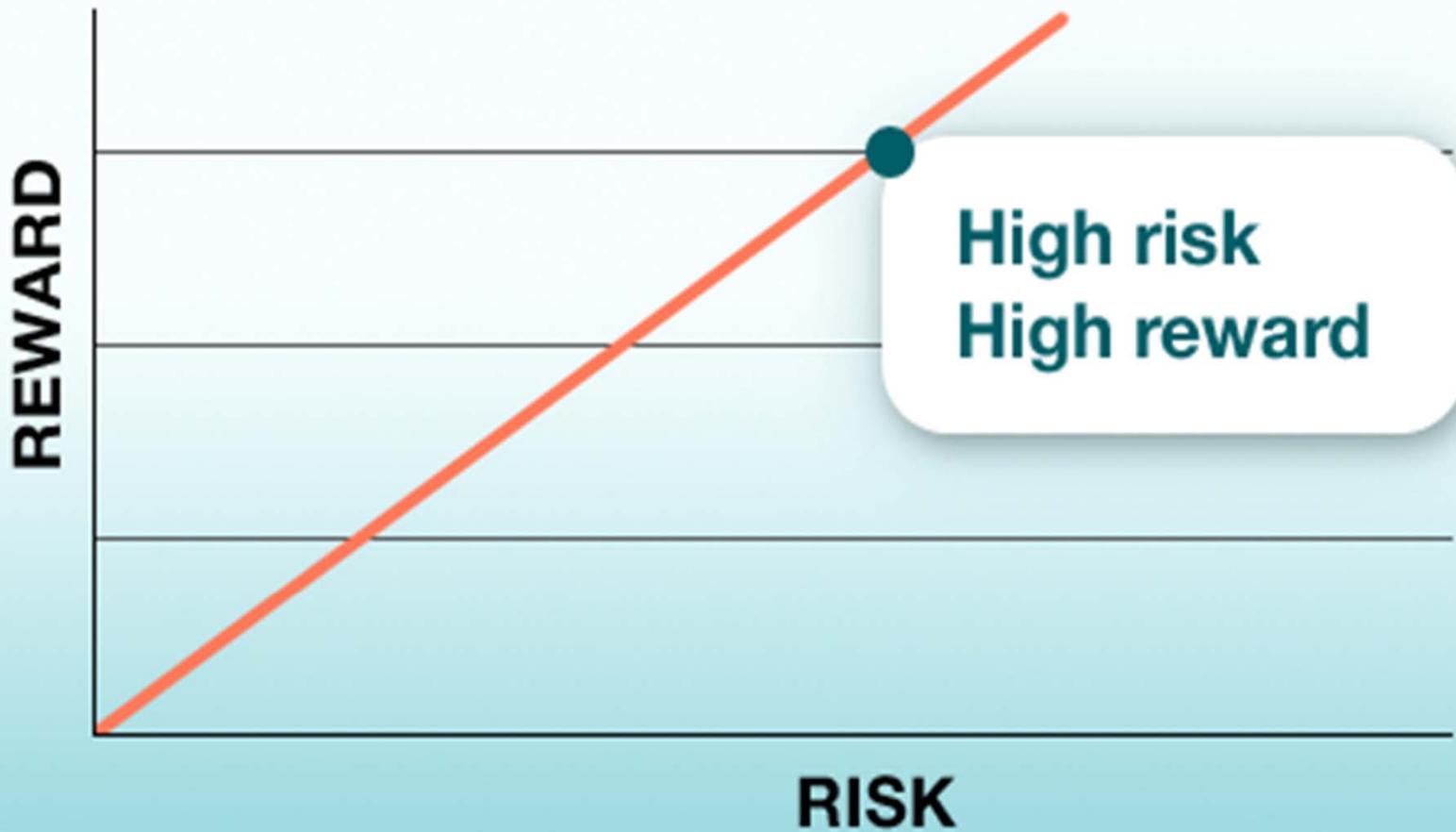
Benefits of ERM



		TYPES	
		Avoidable	Unavoidable
CATEGORIES		Strategic	
		Commercial	
		Operational	
		Technical	
		Financial	
		Compliance	



Assessing Avoidable Risk



Avoidable Risk



Avoidable Risks

- Poor customer relations
- Complete asset and system failures not resulting from an external event
- Inadequate human capital
- Lack of internal controls



Unavoidable Risks



Unavoidable Risk

- Natural disasters
- Weather
- Market volatility
- Changes in the regulatory environment
- Workplace safety hazards



Risk Maturity



Prof. Simon Pollard – Cranfield University, UK

Risk Management for Water and Wastewater Utilities

WRF Publications

“Risk Analysis Strategies for Credible and Defensible Utility Decisions” [#2939]

“Developing a Risk Management Culture- Mindfulness in the International Water Utility Sector” [#3184]

“Risk Governance: A Water Utility Manager’s Implementation Guide” [#4363]



Level 1 - Characteristics

- Lacks formal risk management processes
- Relies on individuals to develop risk management for their own areas of responsibility
- No means of monitoring risks



Level 2 – Characteristics

- Recognizes that risk management requires a formal system
- Has some basic processes in place
- Focused mainly on water quality, occupational health and safety
- Risk management is the result of established processes not active management of risk



Level 3 – Characteristics

- Defined and implemented risk management processes across core business areas
- Adopted policies and procedures that guide risk management
- Provide staff and management with funding, training, and other tools to support risk management



Level 4 – Characteristics

- Ability to evaluate and ensure the effectiveness of its risk management activities
- Risk management is part of the organizational culture and reaches across all functions and through the hierarchy



Level 5 – Characteristics

- Highly adaptable, flexible, and pay high levels of attention to human and organizational behavior
- Promotes continuous improvement and deeper understandings of adding value
- Constantly questioning norms and assumptions
- Information is continually developed and shared



Framework

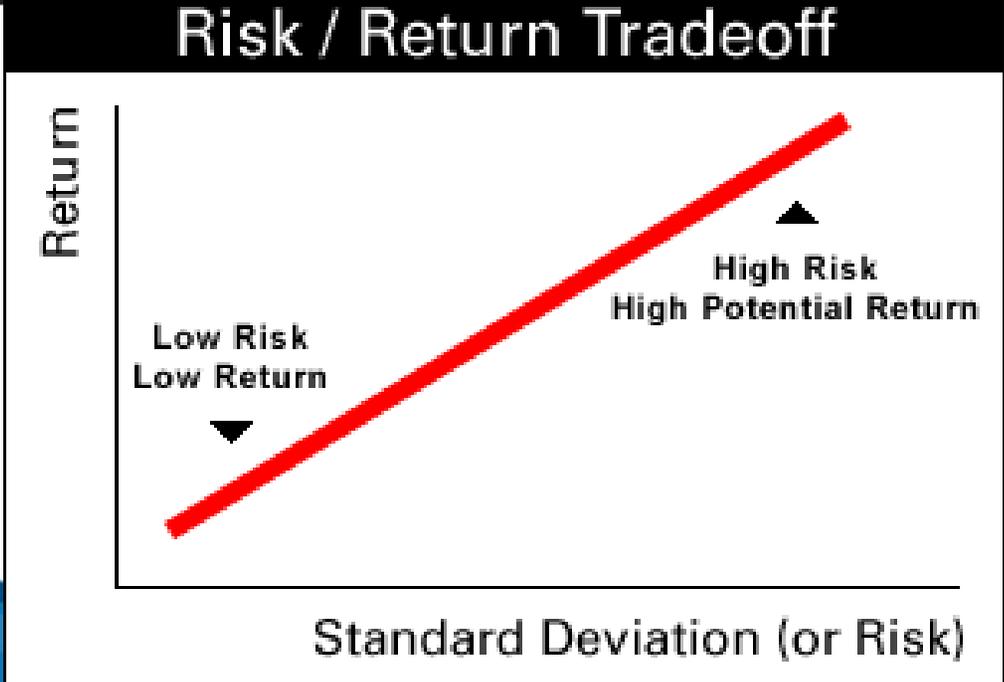
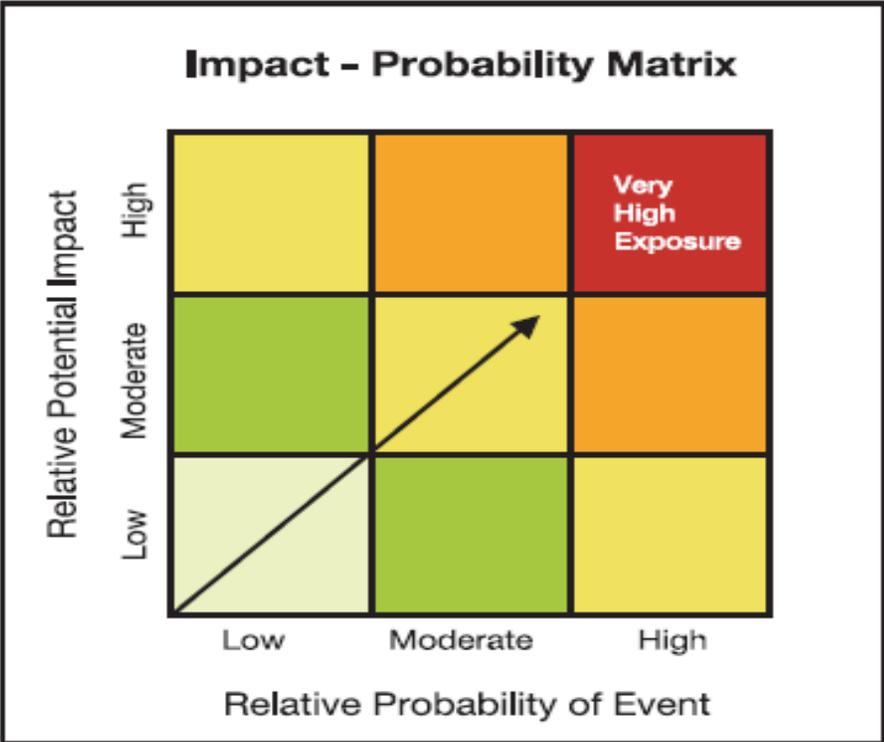


Risk Tolerance

- 1) How does this objective increase stakeholder value?
- 2) How much risk are we willing to undertake to achieve the objective?



ID & Assess Risks



ID & Assess Risks

- Event inventories
- Risk questionnaires & surveys
- Facilitated workshops
- SWOT analysis
- Scenario analysis
- Risk ranking
- Risk maps
- Linkage of risks to objectives



Treat & Control

- Tolerate
- Treat/Control
 - Preventative
 - Directive
 - Detective
 - Corrective
- Terminate



Communicate & Monitor

- Ongoing monitoring & reporting
- Communication within the organization and with the board and public.



Develop Tools That Works for You

A	B	C	D	E	F	G	H
Objective	Ranking	Category	Risk Event	Probability	Impact	Score (E*F)	Required Response
Phase 1: Automate electronic workorders to field customer service with mobile devices	1	User	End users resist the changes in process	high	high	9	Team leads will be brought into the project early and keep their respective teams informed of potential changes well in advance and seek input at required decision points.
Phase 0: Complete accepted implementation plan for phase 1 by July 15th	2	Planning & Control	Unable to gain acceptance by project coordination team due to scheduling conflicts	medium	high	6	Schedule conflicts are discussed in advance and review and approval process including deadline defined by the team.



“It isn’t the strongest or most intelligent species that survives but rather the most adaptable.”



Questions?

Tualatin Valley Water District



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Thank you

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