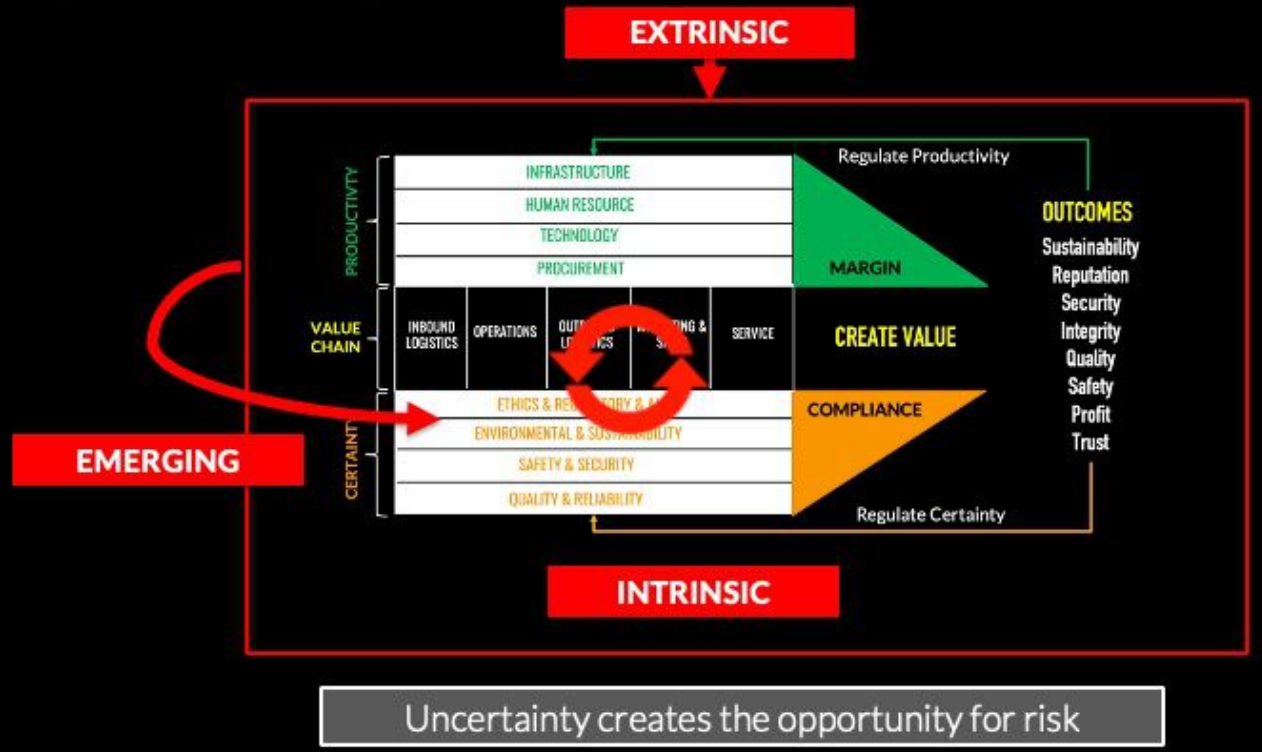
LEAN COMPLIANCE

ELEVATE COMPLIANCE BY STAYING AHEAD OF RISK

ELEVATE COMPLIANCE WEBINARS

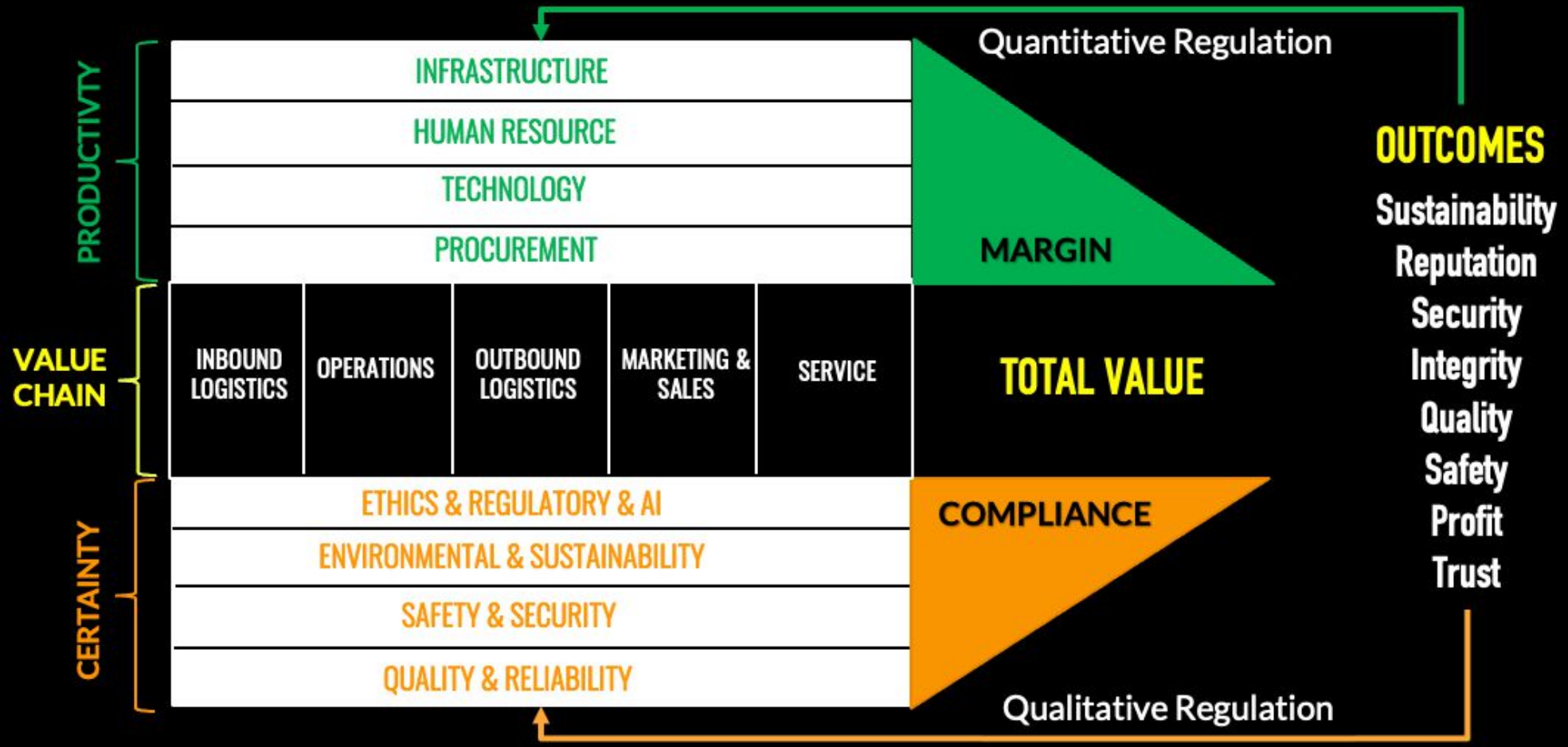
Raimund Laqua, PMP, P.Eng
ray.laqua@leancompliance.ca



Uncertainty creates the opportunity for risk

ABOUT LEAN COMPLIANCE

Lean Compliance –Helping You Deliver Total Value



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BIG IDEA

Everything happens in the presence of uncertainty, and uncertainty creates the opportunity for risk

To effectively handle risk

THREAT



OPPORTUNITY

You must effectively contend with the dragon of uncertainty

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LEAN COMPLIANCE

OUTLINE

1. Uncertainty and Risk
2. Addressing the Root Cause
3. Improving the Probability of Success

LEAN COMPLIANCE

1. UNCERTAINTY AND RISK

Time to talk about what we don’t like to talk about and why risk is a four-letter word



1. UNCERTAINTY AND RISK

We don't like to hear, see or talk about risk



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1. UNCERTAINTY AND RISK

Not many want to talk about risk let alone confront dragons, but that's exactly what we are going to do



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1. UNCERTAINTY AND RISK

We need some volunteers



A TEAM

COMPLIANCE TEAM



A WIZARD

RISK MANAGER



A DRAGON

UNCERTAINTY

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1. UNCERTAINTY AND RISK

We need a mission



THE RING



THE DESTINATION

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1. UNCERTAINTY AND RISK

We need a map

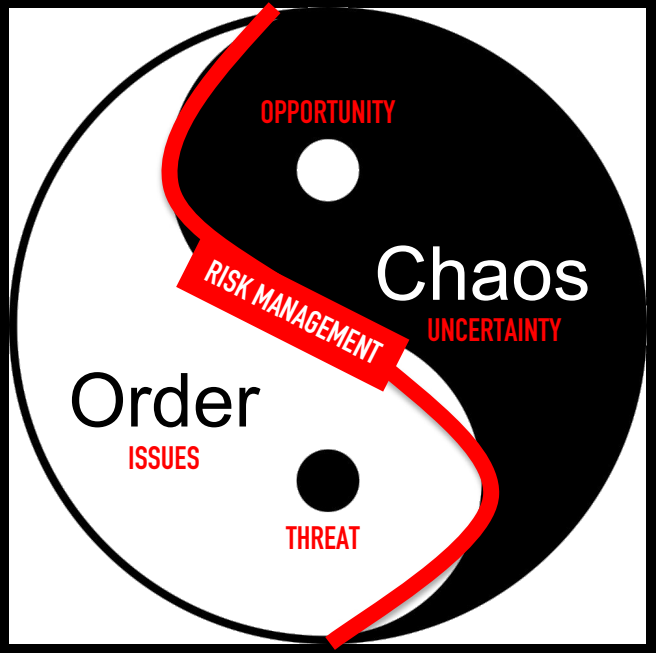

FORODWAITH
ERED MITHRIN
IRON HILLS
RHÛN
ERIADOR
ARNOR
Realm of
RHUDAUR
ANGMAR
Carn Dûm
Here was of old the Witch-realm of Angmar
ERED LUIN
Icebay of Forochel
Himling
Forlindon
Eastland
Gulf of Lhûn
Harlond
Harlindon
Blue Mountains
Grey Havens
Mithlond
Tower Hills
Lindon
THE SHIRE
Bree
Fornost
North Downs
Weather Hills
Weathertop
Old Forest Road
East-west Road
Bridge
Bruinen
South Downs
Sarn Ford
Baranduin (Brandywine)
Tharbad
Nîn-in-Eilph (Swanfleet)
Greenway
Old Ford
Trollshaws
Trollsh
Ettenmoors
Carrock
Misty Mountains
Rivendell
Celebrant
Celebrían's Gift
Celebrían's Garden
Celebrían's Stone
Celebrían's Steps
Celebrían's Bridge
Celebrían's Well
Celebrían's Tree
Celebrían's Grave
Celebrían's Path
Celebrían's Rock
Celebrían's Cave
Celebrían's Pool
Celebrían's Fountain

1. UNCERTAINTY AND RISK

Uncertainty and Risk Map of Middle Earth

ORDER

- The place you are when what you do works
- Predictable
- Deterministic
- Routine
- Underwhelming



CHAOS

- The place you are when what you do doesn't work
- Unpredictable
- Random
- Abnormal
- Overwhelming

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1. UNCERTAINTY AND RISK

Adventures are risky and uncertain



"It's a dangerous business, walking out one's front door. You step onto the road, and if you don't keep your feet, there's no knowing where you might be swept off to."

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1. UNCERTAINTY AND RISK

Uncertainty creates the opportunity for risk



"You certainly usually find something, if you look, but it is not always quite the something you were after."

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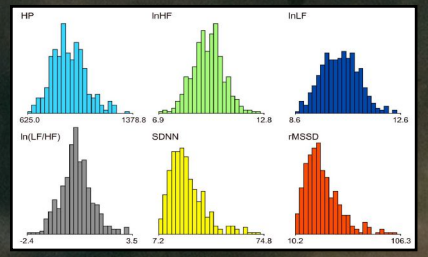
1. UNCERTAINTY AND RISK

There are two kinds of uncertainties

ALEATORY

IRREDUCIBLE UNCERTAINTY





Natural variability

Distributions

Having to do with chance
No ability to predict outcome

MARGINS

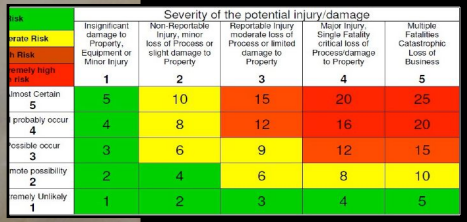
UNCERTAINTY

RISK

EPISTEMIC

REDUCIBLE UNCERTAINTY





Lack of knowledge

Probabilistic events and outcomes

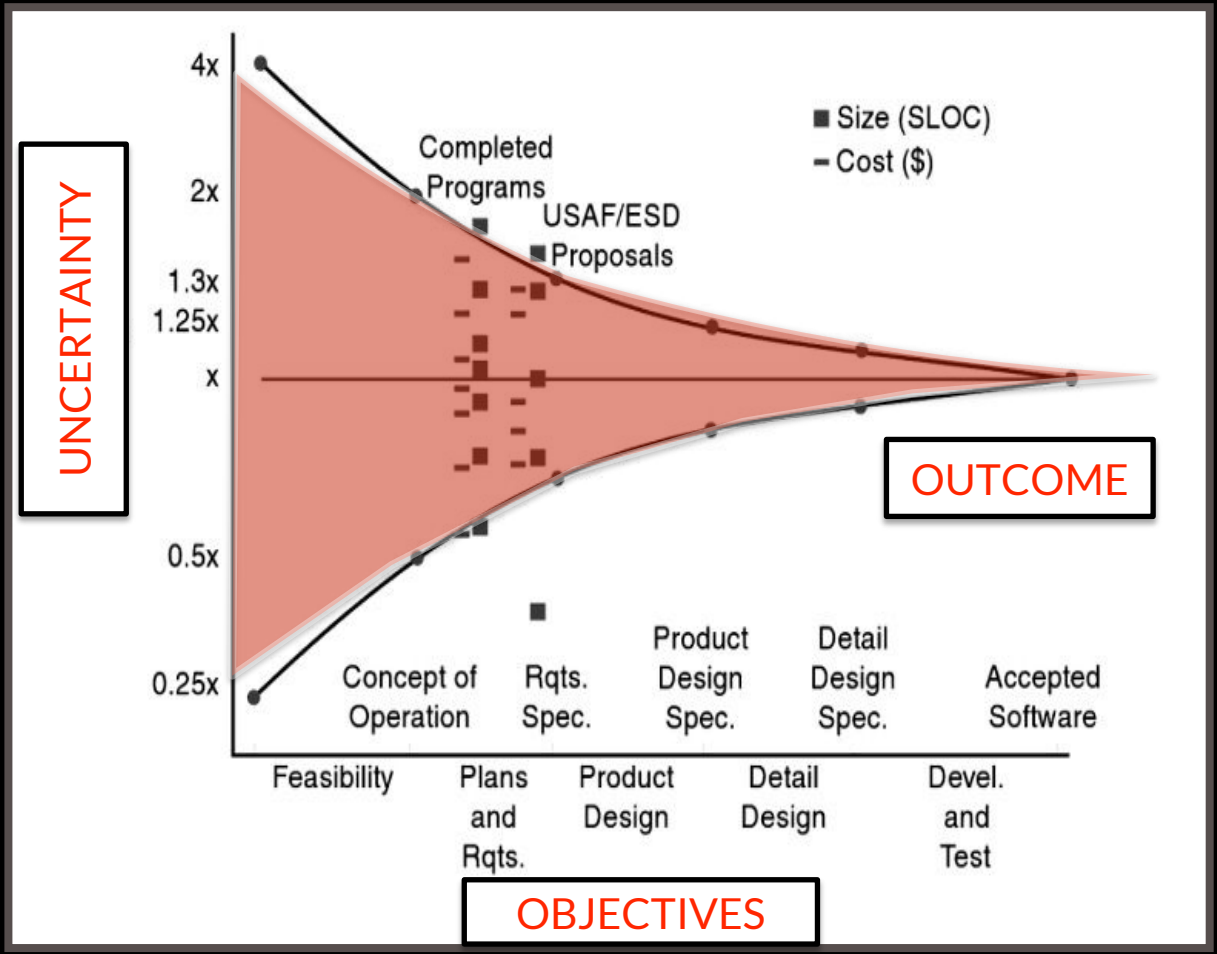
Having to do with knowledge
Can predict outcome

BUY DOWN

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1. UNCERTAINTY AND RISK

The wizard's hat – cone of uncertainty



"effects of uncertainty on expected results"

ISO 9001

"effects of uncertainty on objectives"

ISO 31000

"effects of uncertainty – deviation from expected"

potential adverse effects (threats) and potential beneficial effects (opportunities)

ISO 14000

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1. UNCERTAINTY AND RISK

Not all risks matter – you need to decide which ones really do.



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1. UNCERTAINTY AND RISK

The risks that matter are connected to what matters



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1. UNCERTAINTY AND RISK

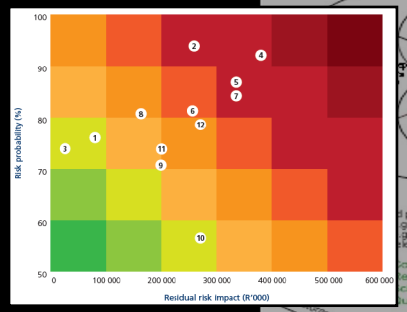
To protect what matters we need a strategy



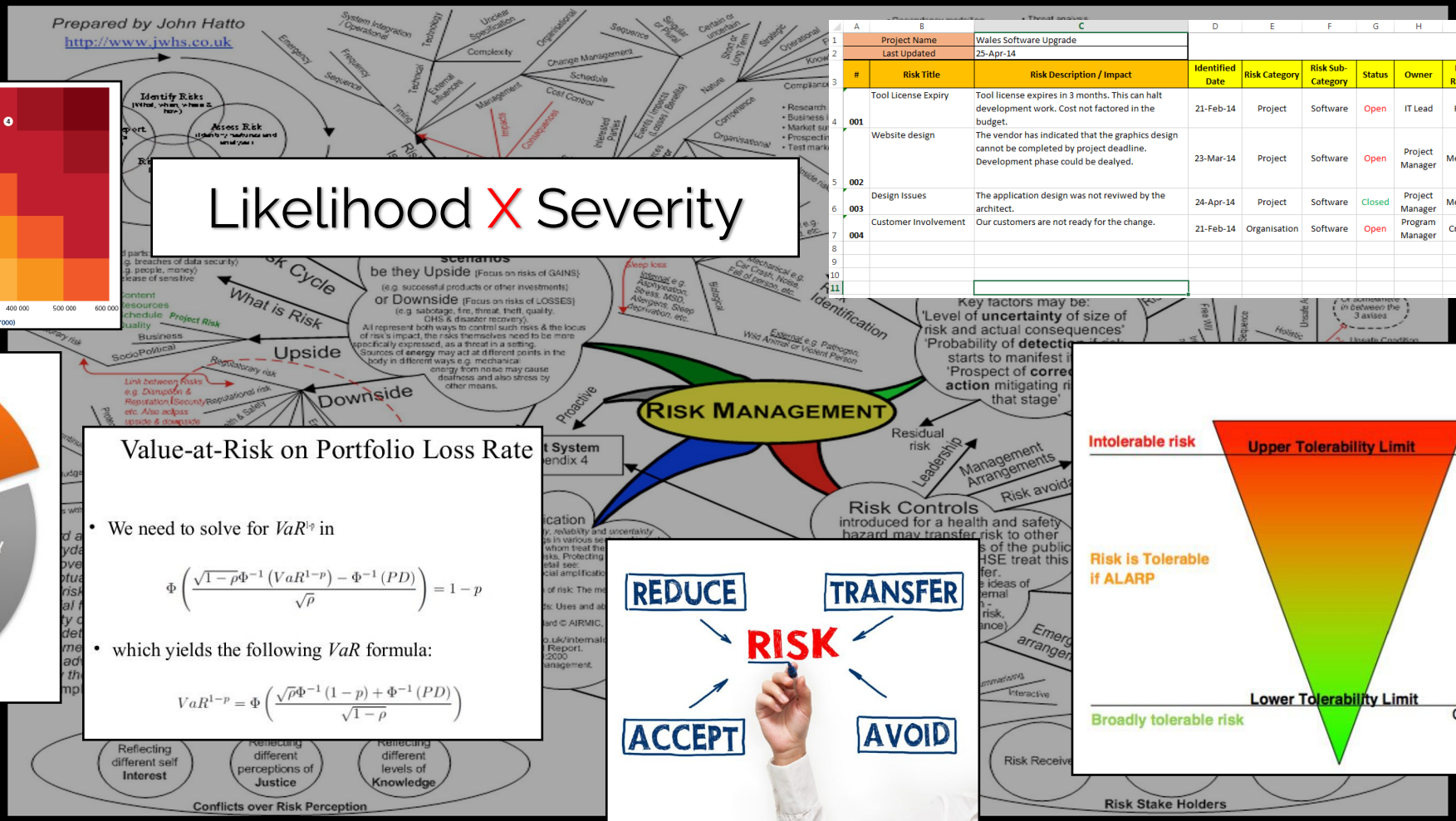
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1. UNCERTAINTY AND RISK

Old strategies based on an old map are not enough



Likelihood X Severity



	A	B	C	D	E	F	G	H	I	J	K
1		Project Name	Wales Software Upgrade								
2		Last Updated	25-Apr-14								
3	#	Risk Title	Risk Description / Impact	Identified Date	Risk Category	Risk Sub-Category	Status	Owner	Risk Rating	Possible Mitigation	Date Closed
4	001	Tool License Expiry	Tool license expires in 3 months. This can halt development work. Cost not factored in the budget.	21-Feb-14	Project	Software	Open	IT Lead	High	1. Move to alternate tool. 2. Amend project budget to include software cost.	
5	002	Website design	The vendor has indicated that the graphics design cannot be completed by project deadline. Development phase could be dealyed.	23-Mar-14	Project	Software	Open	Project Manager	Medium	1. Move the project go live. 2. Work on weekends. 3. Add more resources to the project.	
6	003	Design Issues	The application design was not reviwed by the architect.	24-Apr-14	Project	Software	Closed	Project Manager	Medium	1. Arrange a workshop.	20-Apr-14
7	004	Customer Involvement	Our customers are not ready for the change.	21-Feb-14	Organisation	Software	Open	Program Manager	Critical	1. Arrange meeting with customer to see how we can help by 21-Mar.	
8											
9											
10											
11											



Value-at-Risk on Portfolio Loss Rate

- We need to solve for VaR^{1-p} in

$$\Phi\left(\frac{\sqrt{1-\rho}\Phi^{-1}\left(VaR^{1-p}\right)-\Phi^{-1}\left(PD\right)}{\sqrt{\rho}}\right)=1-p$$

- which yields the following VaR formula:

$$VaR^{1-p}=\Phi\left(\frac{\sqrt{\rho}\Phi^{-1}\left(1-p\right)+\Phi^{-1}\left(PD\right)}{\sqrt{1-\rho}}\right)$$

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1. UNCERTAINTY AND RISK

Need new strategies based on a new map – The Two Towers of Risk/Certainty Management

PREVENT FAILURE

- Minimize loss
- Reduce non-conformance by mitigating threats
- Pay attention to what might cause failure and what could go wrong

ENSURE SUCCESS

- Maximize benefits
- Increase conformance by exploiting opportunities
- Pay attention to what is critical to success and what needs to go right

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1. UNCERTAINTY AND RISK

Need a new posture



Ostrich
I don't want to know

RISK TOLERANT



Avoider
I don't want any risk

RISK INTOLERANT



Decider
Let's size the risk and decide

RISK NEUTRAL



Gambler
Let's play the odds

RISK SEEKING



Strategist
Let's reduce threats and exploit opportunities

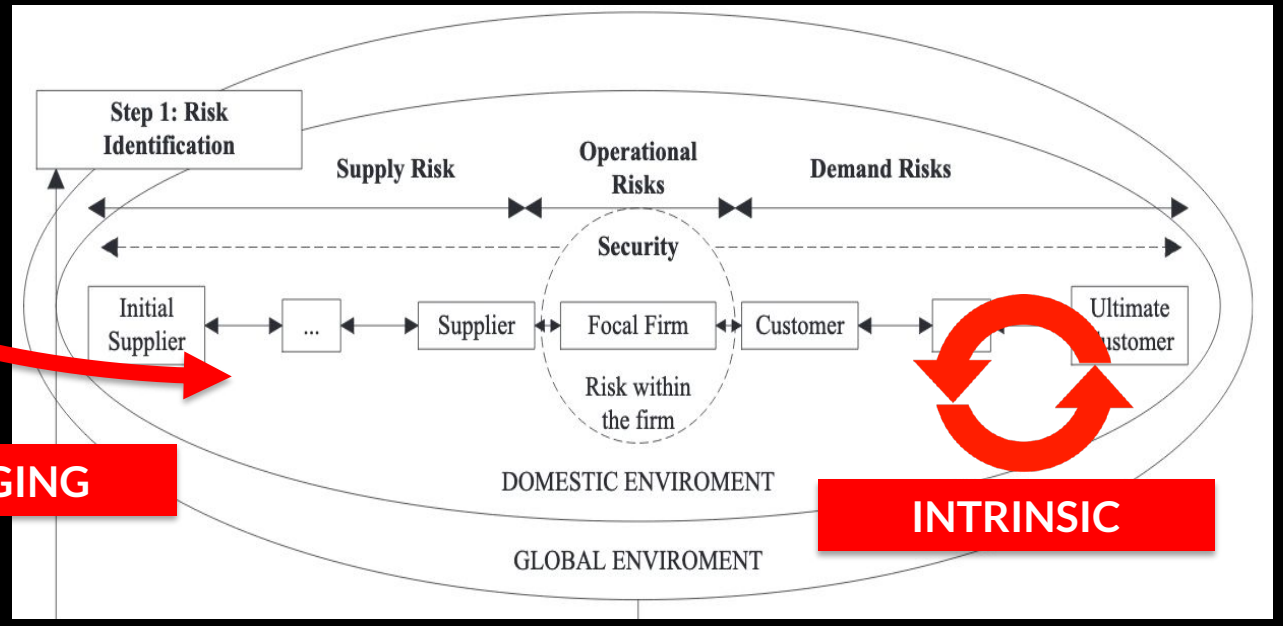
RISK OPTIMIZER

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1. UNCERTAINTY AND RISK

Need to know where the dragons hide

EXTRINSIC



EMERGING

INTRINSIC

- **EXTRINSIC** – risks that are external to the organization (in/out).
- **INTRINSIC** – risks that are inherent in the organization.
- **EMERGING** – risks that arise because of changing conditions, behaviours, or capability.

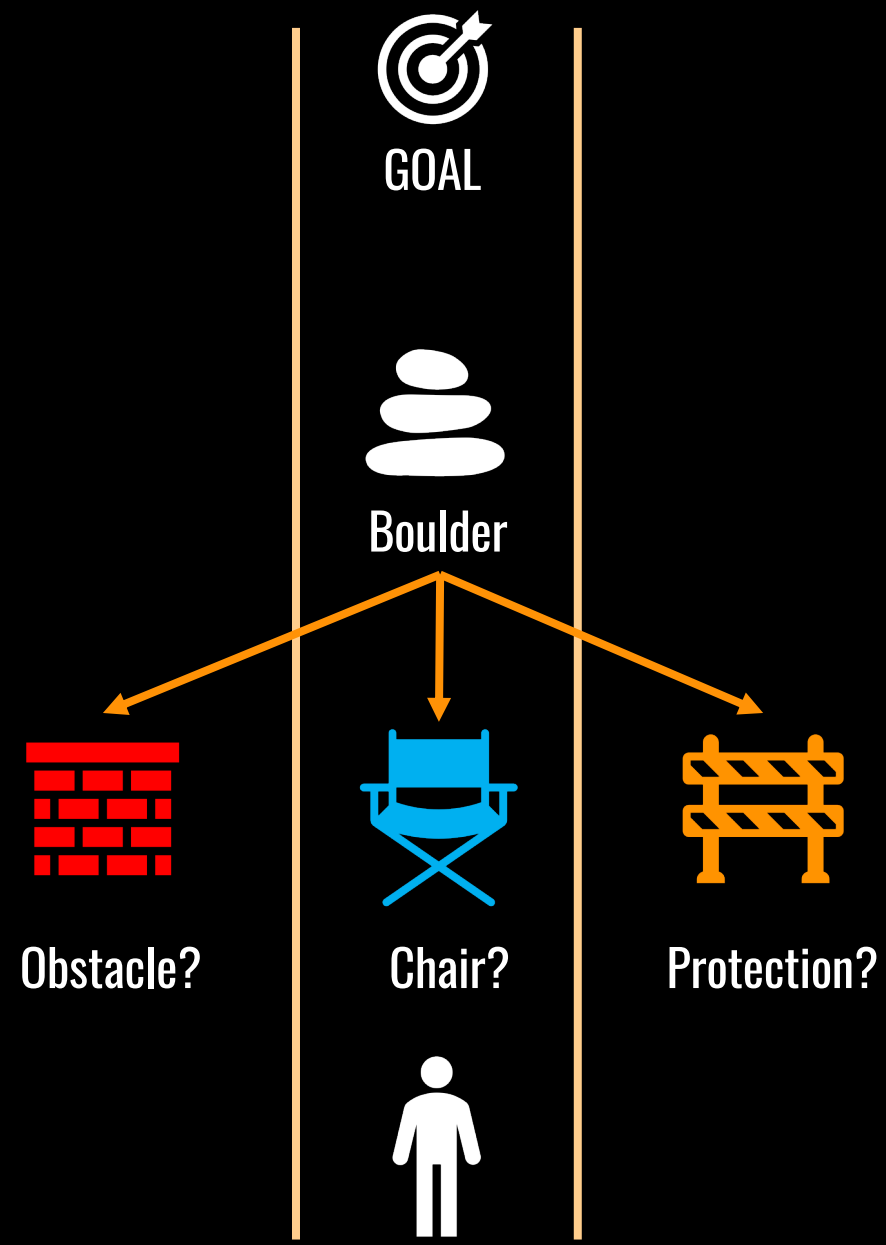
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1. UNCERTAINTY AND RISK

Need new glasses

What you perceive is based on your goals:

- **If we have no goal**, the boulder is just a rock.
- **If we want to get home**, the boulder is an obstacle preventing us from getting home.
- **If we are tired**, the boulder is a chair; a place to sit down and rest so we can make it the rest of the way home.
- **If we are in need of safety**, the boulder protects us from walking into a sink hole to ensure that we make it home.



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CHECKPOINT #1

What is your organization's attitude towards risk?

1. **Ostrich** – I don't want to know
2. **Avoider** – I don't want any risks
3. **Decider** – Let's size them up and decide
4. **Gambler** – let's play the odds
5. **Strategist** – let's reduce threats and exploit opportunities

Answer:

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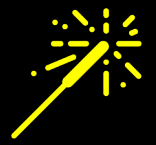
2. ADDRESSING THE ROOT CAUSE

Time to meet the dragon of uncertainty up close



2. ADDRESSING THE ROOT CAUSE

How uncertainty creates the opportunity for risk



FACT



FACT



CAUSE ACTION + CONDITION = EVENT

† Adapted based on the Apollo Root Cause Method™

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LEAN COMPLIANCE

2. ADDRESSING THE ROOT CAUSE

How uncertainty creates the opportunity for risk



FACT



FACT



ROOT CAUSE

ACTION + CONDITION = EVENT

PROXIMAL CAUSE

EVENT → RISK EVENT → CONSEQUENCE

UNCERTAIN



CONDITIONAL



† Adapted based on the Apollo Root Cause Method™

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2. ADDRESSING THE ROOT CAUSE

How uncertainty creates the opportunity for risk

QUALIFIED RISK STATEMENT

As a result of **< a specific action >**
in the presence of **< a specific condition >**
< a specific event > *may occur,*
which may lead to **< a specific effect on objectives >**

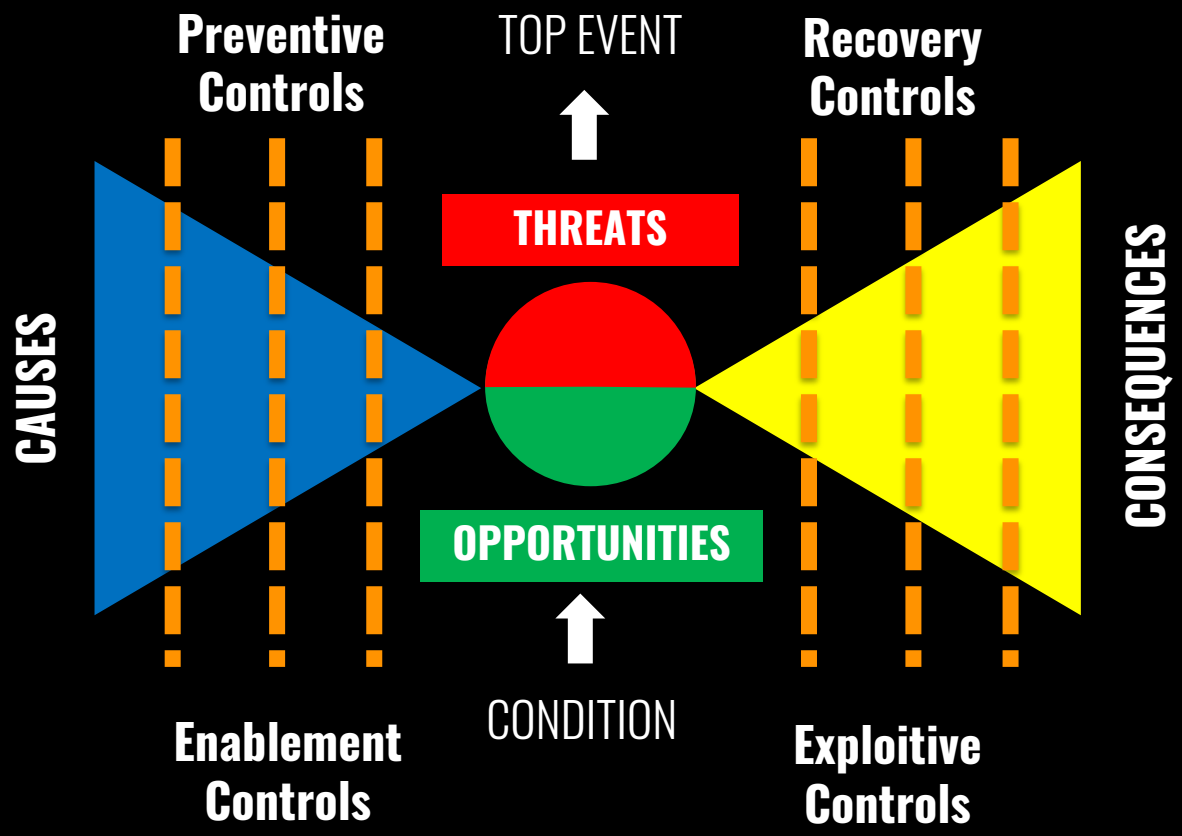
EXAMPLE

As a result of **< walking down a path towards home >**
in the presence of **< a hole in the ground>**
< falling in the hole > *may occur,*
which may lead to **< an injured leg and not making it home >**

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2. ADDRESSING THE ROOT CAUSE

The wizard's secret weapon – the bow tie analysis



The Bow-tie analysis is a risk assessment and management technique used in various industries, particularly in the fields of safety, aviation, and healthcare, to visually represent and analyze uncertainty and its effects on objectives.

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2. ADDRESSING THE ROOT CAUSE

How to improve the probability of mission success

RING DESTROYED

Happy Plan



- Leave the Shire
- Travel to Mt. Doom
- Throw ring into the fires of Mt. Doom
- Return to Shire



The Shire





Mt. Doom

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THREAT

MISSION FAILURE

RING DESTROYED

Unhappy Plan



- Leave the Shire
- Travel to Mt. Doom
- Confront Dragon
- Return to Shire



The Shire







Mt. Doom

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LEAN COMPLIANCE

THREAT

OPTIMIZATION STARTED

PENDING

RING DESTROYED

Causes | Prevention Controls | Recovery Controls | Consequences

RISK EVENT
Falling in Hole



The Shire









Mt. Doom

THRESHOLD: LOW

INHERENT RISK: HIGH

RESIDUAL RISK: HIGH

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LEAN COMPLIANCE

THREAT

OPTIMIZATION STARTED

RUNNING | PENDING

RING DESTROYED

Causes | Prevention Controls | Recovery Controls | Consequences

Distracted



Running



Walking





The Shire

RISK EVENT

Falling in Hole









Mt. Doom

THRESHOLD: LOW

INHERENT RISK: HIGH

RESIDUAL RISK: HIGH

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LEAN COMPLIANCE

THREAT

OPTIMIZATION STARTED

RUNNING | PENDING

RING DESTROYED

Causes | Prevention Controls | Recovery Controls | Consequences

Distracted



Running



Walking





The Shire

RISK EVENT

Falling in Hole















Mt. Doom

THRESHOLD: LOW

INHERENT RISK: HIGH

RESIDUAL RISK: HIGH

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LEAN COMPLIANCE

THREAT

OPTIMIZATION STARTED

COMPLETE | PENDING

RING DESTROYED

Causes	Prevention Controls				Recovery Controls		Consequences
Distracted				**RISK EVENT** Falling in Hole			
Running							
Walking							

The Shire

Mt. Doom

THRESHOLD: LOW

INHERENT RISK: HIGH

RESIDUAL RISK: MEDIUM

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LEAN COMPLIANCE

THREAT

OPTIMIZATION STARTED

COMPLETE | PENDING | RUNNING

RING DESTROYED

Causes	Prevention Controls				Recovery Controls		Consequences
Distracted				**RISK EVENT** Falling in Hole			Fatality
Running							Broken Bones
Walking							Cuts and Bruises

The Shire

Mt. Doom

THRESHOLD: LOW

INHERENT RISK: HIGH

RESIDUAL RISK: MEDIUM

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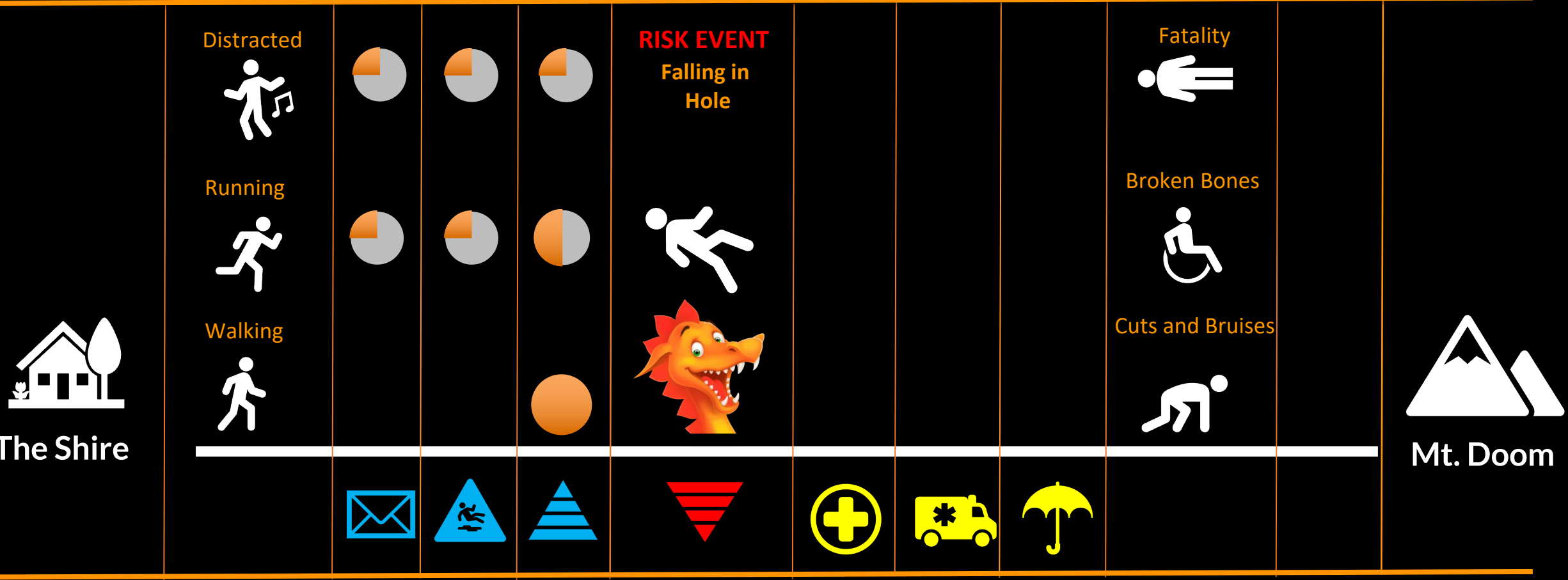
THREAT

OPTIMIZATION STARTED

COMPLETE | PENDING | RUNNING

RING DESTROYED

Causes | Prevention Controls | Recovery Controls | Consequences



THRESHOLD: LOW

INHERENT RISK: HIGH

RESIDUAL RISK: MEDIUM

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LEAN COMPLIANCE

THREAT

OPTIMIZATION STARTED

COMPLETE | PENDING | COMPLETE

RING DESTROYED

Causes	Prevention Controls				Recovery Controls			Consequences
Distracted				RISK EVENT Falling in Hole				Fatality
Running								Broken Bones
Walking								Cuts and Bruises

The Shire

Mt. Doom

THRESHOLD: LOW

INHERENT RISK: HIGH

RESIDUAL RISK: LOW

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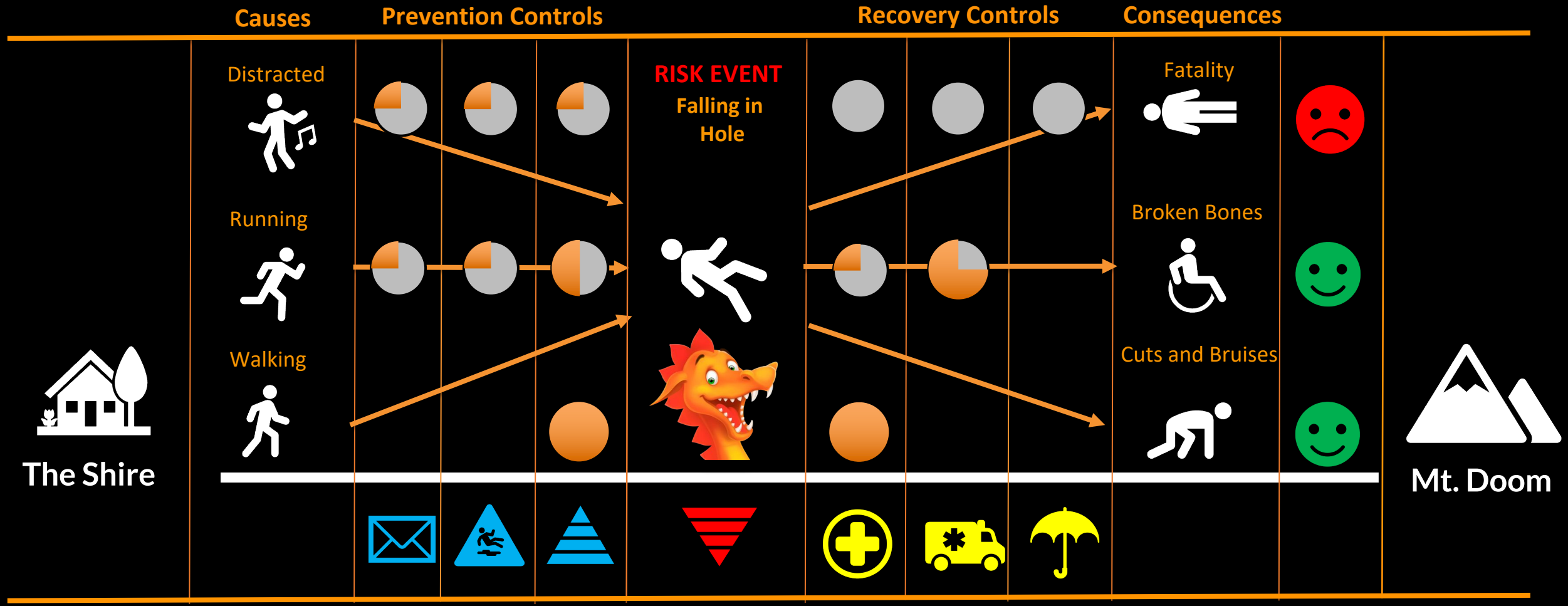
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THREAT

OPTIMIZATION COMPLETED

COMPLETE | MISSION SUCCESS | COMPLETE

RING DESTROYED



THRESHOLD: LOW

INHERENT RISK: HIGH

RESIDUAL RISK: LOW

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2. ADDRESSING THE ROOT CAUSE

Risk plan generated from the bow-tie analysis

#	RISK OWNER	INHERENT LEVEL OF RISK	TREATED LEVEL OF RISK	QUALIFIED RISK STATEMENT	PREVENTION	RECOVERY
R1	John	LOW	LOW	*As a result of walking on the path, falling in the hole may occur, leading to cuts and bruises*	Pylon, sign, e-mail	First aid
R2	John	MEDIUM	LOW	*As a result of walking on the path, falling in the hole may occur, leading to broken bones*	Pylon, sign, e-mail	First aid, hospital
R3	Mary	HIGH	LOW	*As a result of walking on the path, falling in the hole may occur, leading to a fatality*	Pylon, sign, e-mail	None
R4	John	LOW	LOW	*As a result of running on the path, falling in the hole may occur, leading to cuts and bruises*	Pylon, sign, e-mail	First aid
R5	John	MEDIUM	LOW	*As a result of running on the path, falling in the hole may occur, leading to broken bones*	Pylon, sign, e-mail	First aid, hospital
R6	Mary	HIGH	HIGH	*As a result of running on the path, falling in the hole may occur, leading to a fatality*	Pylon, sign, e-mail	None
R7	John	LOW	LOW	*As a result of distracted walking path, falling in the hole may occur, leading to cuts and bruise*	Pylon, sign, e-mail	First aid
R8	John	MEDIUM	LOW	*As a result of of distracted walking on the path, falling in the hole may occur, leading to broken bones*	Pylon, sign, e-mail	First aid, hospital
R9	Mary	HIGH	HIGH	*As a result of of distracted walking on the path, falling in the hole may occur, leading to a fatality*	Pylon, sign, e-mail	None

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CHECKPOINT #2

What is inherent risk?

1. Risk you inherit from other systems
2. Level of risk before risk treatments
3. Level of risk after risk treatments
4. Risk due to aleatory uncertainty
5. None of the above

Answer:

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LEAN COMPLIANCE

3. IMPROVING THE PROBABILITY OF SUCCESS

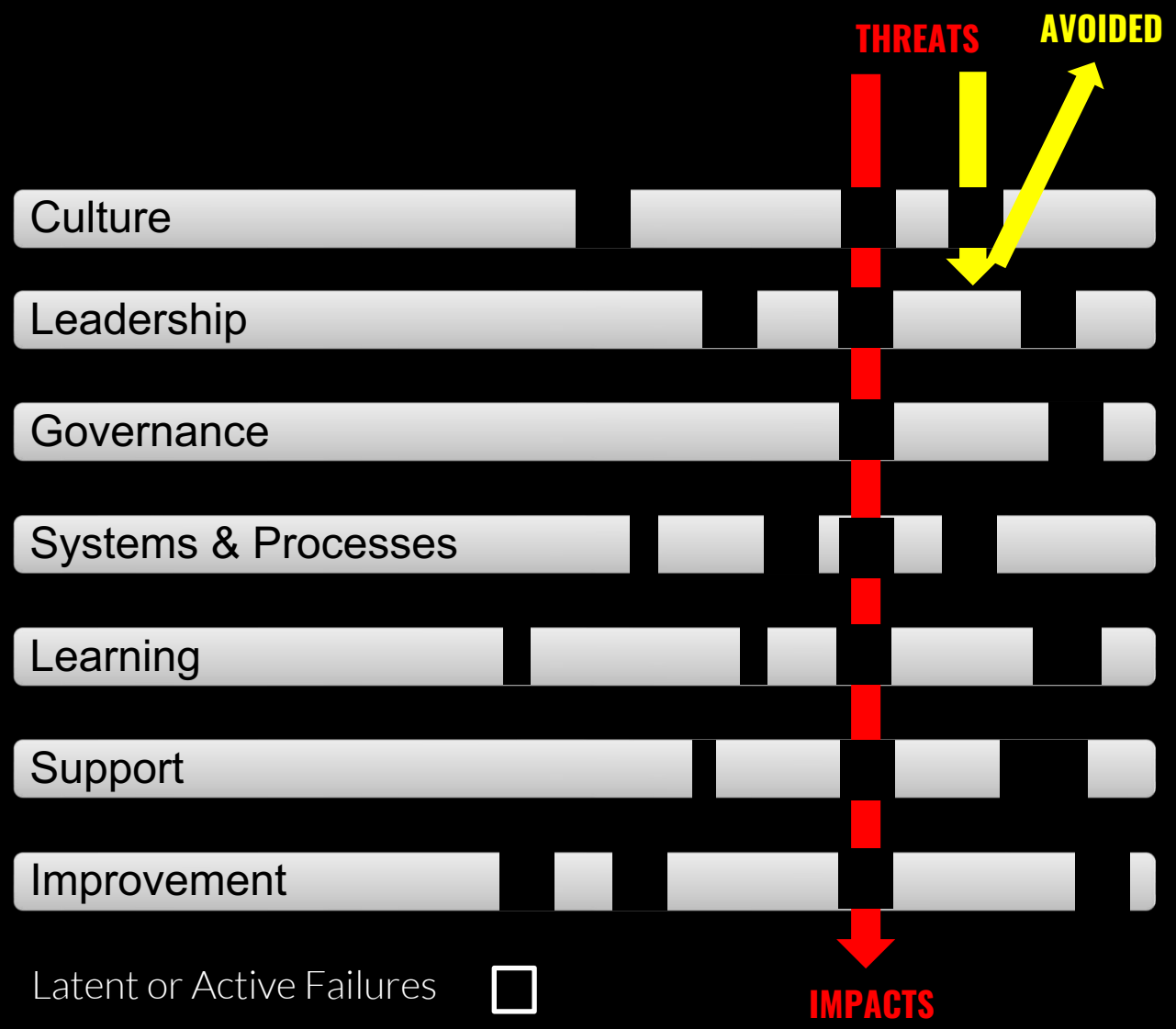
Mission success depends on compliance success



3. IMPROVING THE PROBABILITY OF SUCESS

Program lines of defense

COMPLIANCE MANAGEMENT PROGRAM



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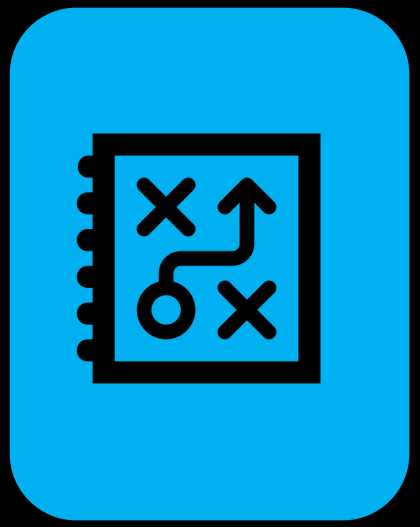
LEAN COMPLIANCE

3. IMPROVING THE PROBABILITY OF SUCCESS

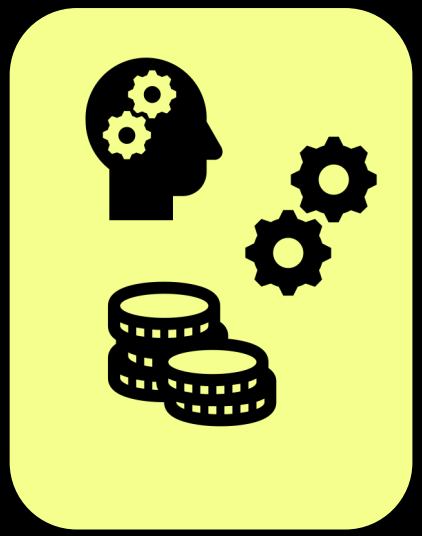
STEP 1: Credibly answer the 5 questions of program success



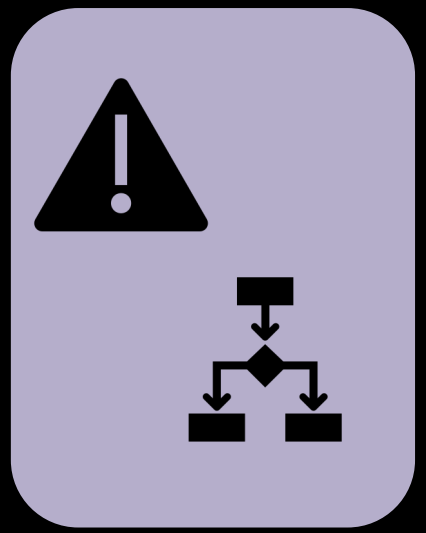
1. What are the outcomes of your compliance program?



2. What is your strategy to achieve those outcomes?



3. What do you need to follow your strategy?



4. What obstacles or opportunities need to be handled?



5. How will you measure your progress?

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3. IMPROVING THE PROBABILITY OF SUCCESS

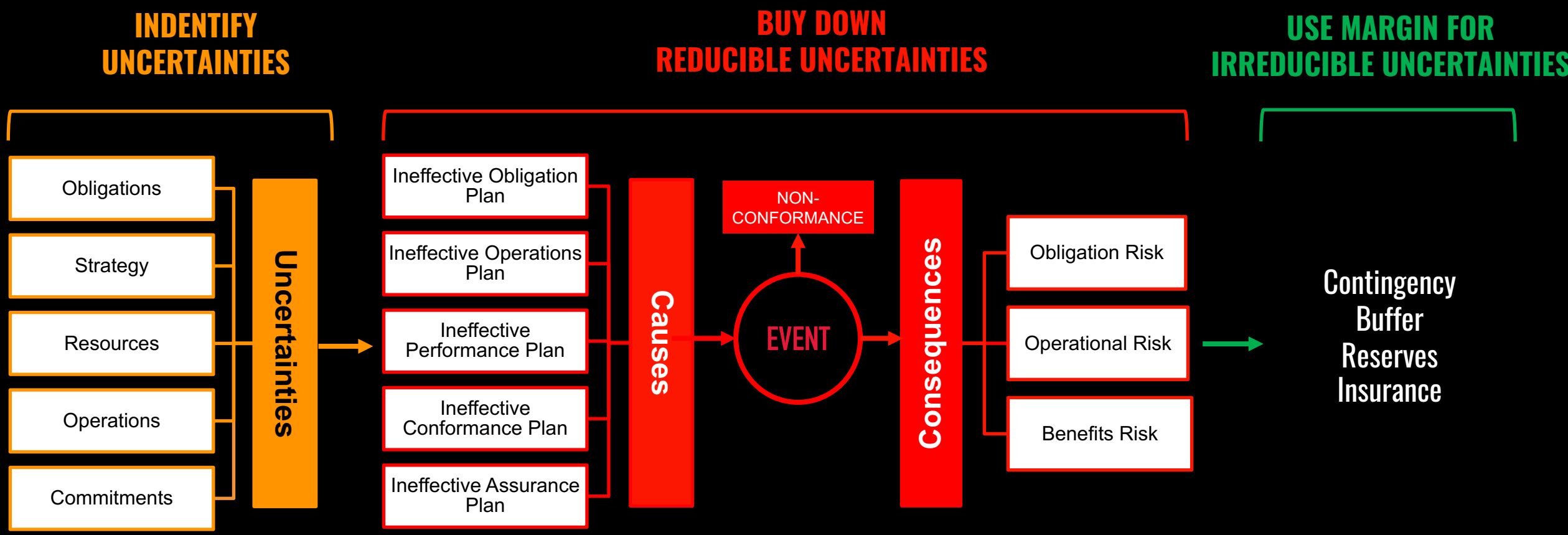
STEP 2: Conduct a program pre-mortem

1. Introduce	• Introduce pre-mortem (open and honest discussion and imagine the program failed, and it succeeded)
2. Debrief	• Debrief discussions (all team members describe why the program failed, and why the program succeeded)
3. Prioritize	• Prioritize risk (separate into reducible and irreducible risk)
4. Brainstorm	• Brainstorm handling strategies (identify steps to buy down risk or address with margins)
5. Document	• Create Risk-adjusted Plan, Update Risk Register

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3. IMPROVING THE PROBABILITY OF SUCCESS

STEP 3: Identify uncertainties and handle risk



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PROGRAM SUCCESS CANVAS

1. DESTINATION

What are the outcomes of your compliance program?

2. PLAN

What is our strategy to achieve those outcomes?

3. RESOURCES

Do we have everything we need?

4. PROGRESS

How do we measure progress?

PREMORTEM

Why did we fail?

Why did we succeed?

UNCERTAINTIES

What didn't we know?

What didn't we control?

5. RISK

What threats or opportunities hinder or advance progress?

Reducible / Buy down

Irreducible / Treat with Margin

0. ASSUMPTIONS

CHECKPOINT #3

Where do you need to improve your compliance?

1. Defining compliance success
2. Developing an effective strategy
3. Identifying what's needed to meet all your obligations?
4. Effectively handling obstacles and opportunities
5. All of the above

Answer:

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4. TRAVEL LOG

A review of what we learned about dragons



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ELEVATE COMPLIANCE BY STAYING AHEAD OF RISK

Defeating the Dragon of Uncertainty

Defeating the Dragon of Uncertainty



1. *Business is risky and uncertain.*
2. *The root cause of risk is uncertainty.*
3. *There are two kinds of uncertainty: aleatory and epistemic*
4. *Aleatory uncertainty is treated with margin.*
5. *Epistemic uncertainty you buy down.*
6. *The risks that matter are connected to what matters.*
7. *You must prevent loss and ensure success to achieve program effectiveness.*
8. *The strategist is the the new role of a compliance risk manager*
9. *Compliance programs are an effective line of defense against obligation risk.*
10. *The bow-tie analysis can help determine how to effectively buy-down risk*
11. *A program pre-mortem can help to ensure overall compliance success*
12. *Mission success depends on compliance success.*

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