



Rolls-Royce SMS

Risk Module intro

July 2022

Statement



01

Risk Module Introduction

- Risk Module Definitions
- Putting it together



02

Risk Module Definitions

- Risks
- Risk Response
- Risk Assessment
- Hazards
- Barriers
- Consequences (Qualitative and Quantitative)
- Threats and Errors
- Actions



Risk Module Definitions

Risk

Description of a potential undesired event that has loss-causing potential, which the organisation seeks to:

- Understand the circumstances that may lead to occurrence
- Reduce the probability of occurrence
- Reduce the severity of the potential consequences.



Risk Module Definitions

Risk Assessment

- Numerical assessment of a Risk
- Uses a **matrix** of probability of occurrence and severity of consequence
- Identifies the Risk Level, according to pre-established rules specified in the Matrix

		Likelihood					
		Extremely Improbable (0)	Improbable (0)	Remote (0)	Occasional (0)	Frequent (0)	
Severity	Negligible (1)	1	2	3	4	5	Risk Level Key ✔ Minimal ✔ Acceptable ○ Undesirable ⚠ Unacceptable ⚠ Extreme
	Minor (2)	2	4	6	8	10	
	Moderate (3)	3	6	9	12	15	
	Major (4)	4	8	12	16	20	
	Catastrophic (5)	5	10	15	20	25	



Risk Module Definitions

Hazard

Any object, situation, operation, or activity, that presents risk to the organisation.

A Hazard is not a loss-causing event in itself, but something that could lead to one.

Hazards can be **Situational** (eg. Terrain surrounding airport) or **Episodic** (eg. a typhoon) or **both** (eg. FOD)



Risk Module Definitions

Barrier

Any measure taken to mitigate a Risk.

Barriers may be

- **Proactive**
in which they seek to prevent the risk occurring (targeting the Probability)
- **Reactive**
in which they seek to reduce the severity of the consequences when the Risk occurs

Barriers can be arranged into a hierarchy (or “Barrier Family”)



Risk Module Definitions

Consequences

Results or outcomes of a Risk occurring.

Based on defined descriptions of losses, and divided into categories, they define the level of severity of the Risk.

Divided into two types

- **Qualitative**
Based on descriptions of losses (eg environmental damage)
- **Quantitative**
Based on measurable, quantified losses (eg. Financial loss)



Risk Module Definitions

Threats and Errors

Events, situations or anomalies/abnormalities that can trigger the occurrence of a Risk

Otherwise defined as situations which the defences are not effective at containing



Risk Module Definitions

Actions

Tracked and managed task assignments designed to improve existing barriers or create new ones



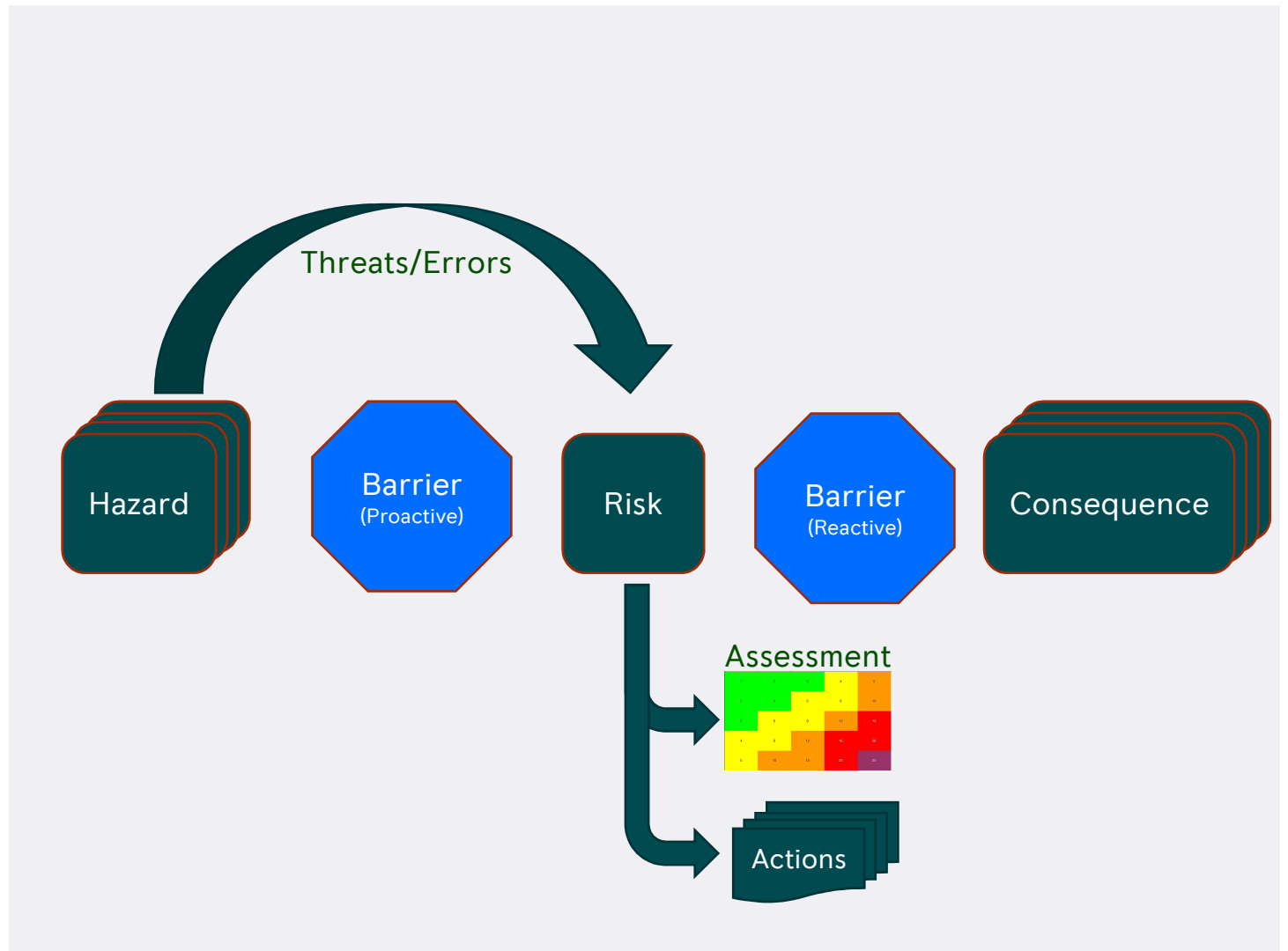
03

Putting it together

- How the parts fit together
- Risk Module Workflow



Putting it together





Putting it together

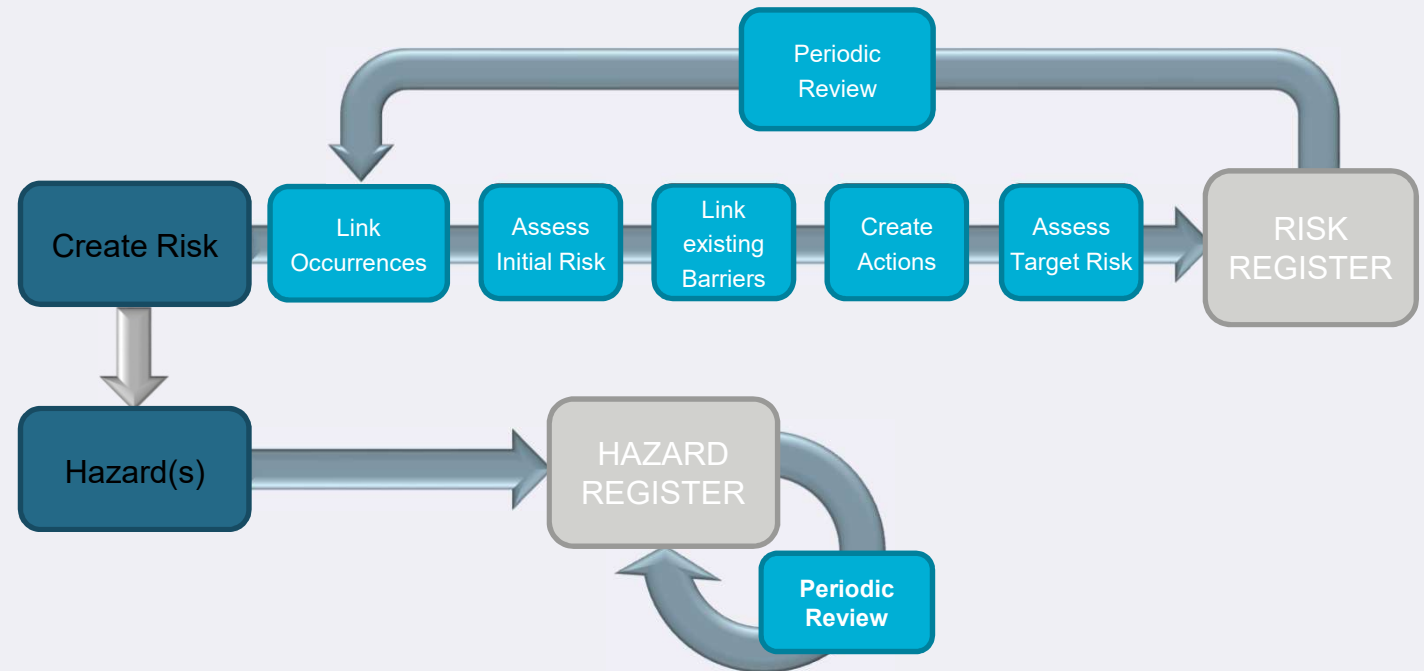
Risk Module Workflow

- Can be a Risks-first or Hazards-first workflow
- Related items can be entered or linked in any order
- Follow-up videos will be available to show how to use the system



Putting it together

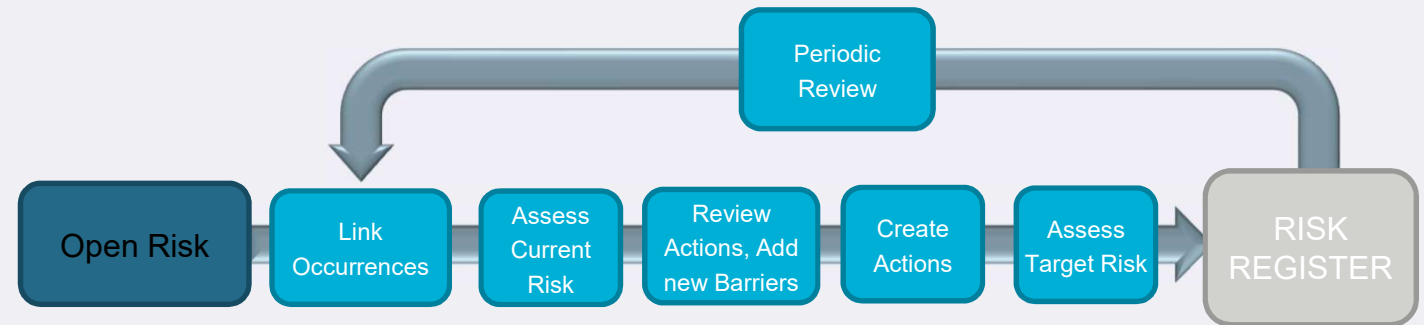
Initial Risk Response Process





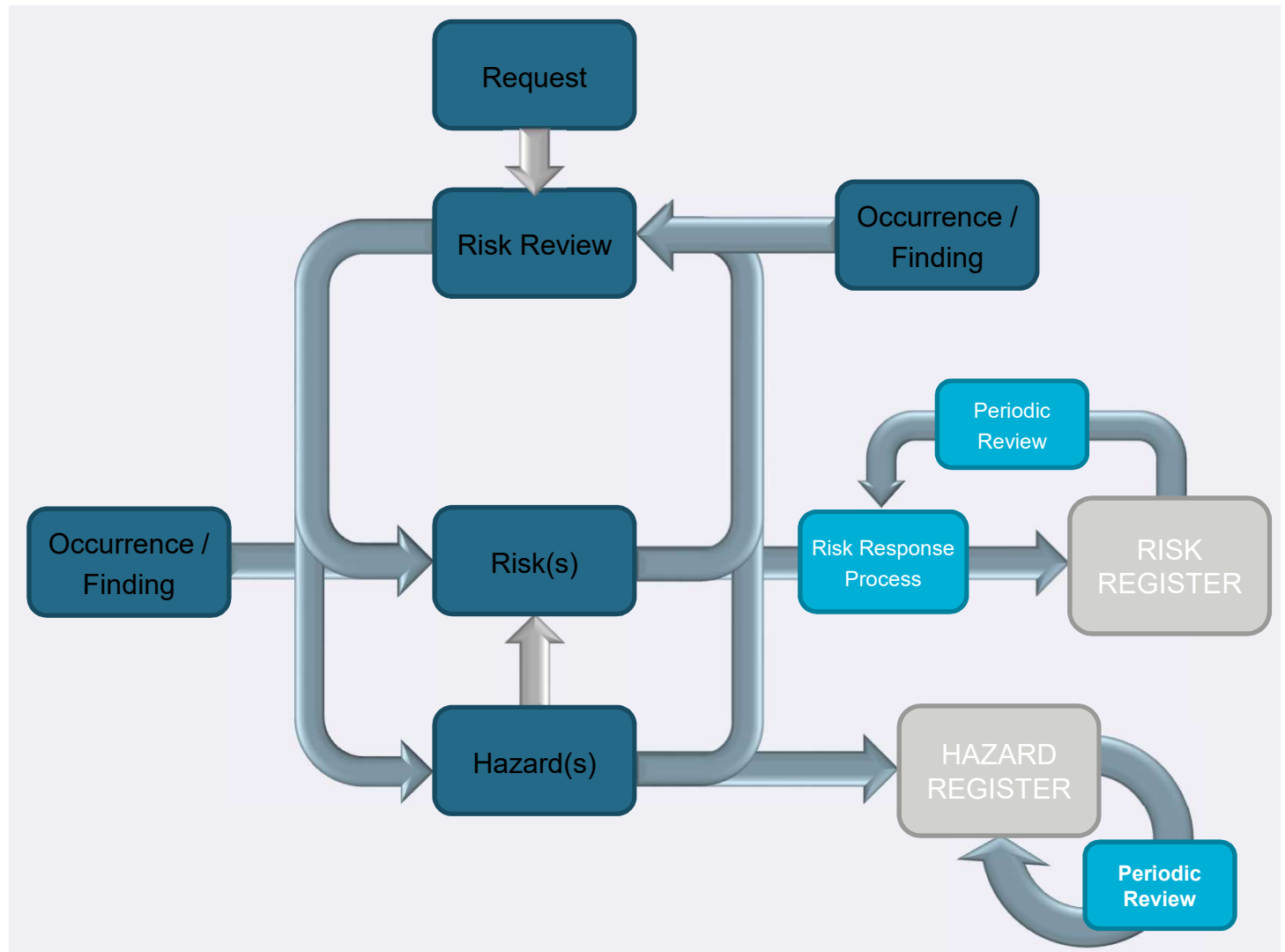
Putting it together

Periodic Review Process





Overall Risk Process





Thank you