WFS Global

HSSE Risk Management and Assessment Manual

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Process Owner: WFS Global HSSE

WFS
Worldwide Flight Services

Contents

1 Purpose of HSSE Risk Assessment

As a responsible employer, WFS is committed to protecting our employees, external stakeholders, customers, and others, from harm. We do this through the implementation, management, and continuous improvement of our WFS Risk Management System (**RMS**). Part of this system is the Risk Management Process (**RMP**) which is used to identify, analyze, reduce and eliminate hazards to an acceptable level.

The Risk Management Process contains four clearly defined stages:

- PLAN - Activation of risk analysis and regular review of existing Risk Assessments.
- DO - Identification of hazards and their associated risks.
- CHECK - Risk Analysis and Evaluation.
- ACT - Control and mitigation of risks, validation and publication

The RMS is built around a set of core Global Risk Assessment (**RA**) Templates that set out the standard controls for the most common operational activities and how they should be conducted to provide an acceptable level of risk. These are then copied and adapted to create regional templates which account for variations or specific regional risks. These regional templates are then used within the associated region by WFS locations as a basis to assess and manage local risk. The results of the local RAs can highlight differences in operations or standards at local level and can highlight locations where additional risk mitigation controls are needed.

Global template risk assessment – sets out the most common activities and associated hazards and risks associated with WFS operations worldwide, and describes the controls required to ensure that risks are managed to an acceptable level.

Regional template risk assessment – takes the global template and adjusts for any region-specific hazards or risks, or additional or alternative controls required to ensure that risks are managed to an acceptable level.

Local risk assessment – takes the regional template and physically assesses the relevant activities as they are conducted locally and ensures that all global and/or regional controls are in place and effective. Adds any unique local hazards and risks and acts locally if any risk is assessed as unacceptable. Additional local risk assessments shall be created for any locally delivered activities not covered by a template risk assessment.

Within the Risk assessments process WFS calculates, and documents hazard risk in two ways, **Core Risk** – what the risk is currently with existing control measures in place and **Residual Risk** – what the risk will look like once any additional controls measures are implemented because of an action plan instigated in response to the risk assessment.

HSSE risk assessments can be shared with commercial customers, regulators, and auditing bodies to show WFS compliance to standards and regulations and to demonstrate our proactive approach to risk management.

The procedures contained within this WFS Global Risk Management and Assessment manual should be applied across all WFS locations – However if local laws / regulations are more stringent the local process should take precedence over this manual.

Sensible Risk Assessment

WFS adopts a policy that fosters a sensible approach to the assessment and management of risk. Sensible HSSE risk management is about preventing fatalities, injuries and workplace illness, not about stopping business from working. Sensible risk management should:

- Ensure that workers, customers, and the public are properly protected.
- Provide an overall benefit to WFS by balancing benefits and risks, with a focus on reducing real risks, i.e., those with serious consequences, or risk with a moderate level of severity but a high frequency.
- Enable innovation and learning.
- Enable individuals to understand that as well as the right to protection, they also must exercise responsibility.
- When faced with an intolerable risk to the operation we cease the associated task until the risk is mitigated.

1.1 Pulse – the Management System tool and database

Pulse has been implemented across all parts of WFS to provide a central database where all Health, Safety, Security and Environment (HSSE) events are registered, assessed, and actioned. Internal and external audits are registered, processed, and actioned along with self-inspections. The system provides an analysis tool for the detection of trends, as well as ensuring both corrective and preventive actions are managed accordingly. It therefore provides a comprehensive and accurate HSSE overview of the entire WFS group.

Pulse also has an integrated Risk Management Process (RMP) used to conduct, record, review and apply continuous improvement to the management of risks. This document provides a broad understanding of the RMP and the principles of RA. Clickable links to *"How to…… in Pulse"* are included throughout this document and these provide step-by-step instructions of how to use the Pulse Risk Assessment module for that part of the process.

Link to the complete guide to Risk Assessment in Pulse

Finding the Pulse Risk Assessment Module

1.1.1 Pulse Risk Assessment Templates

At the core of the risk management process within Pulse is the use of Corporate and Regional Risk Assessment templates. There is a template for each of the core WFS operational tasks and in each they list the most commonly found hazards associated with the task/facility. These templates are available to be used as the basis of local facility risk assessments. The hazards in the templates can be added to if additional hazards are identified, updated to reflected to severity and likelihood at the local station or removed if the hazard does not exist at a particular location.

Order	Standards and Norms	Hazard	Hazard file		Consequence	WFS Risk Category	Existing Controls		Current Severity	Current Likelihood	Existing Control Effectiveness	Core Risk	Tolerability	A
1	EMEAA Cargo Handling Manual Edition 3	Struck by/against			Injury Employee	1. Occupational Health & Safety	Hi-Vis Vests, Self Inspections, Safety Barriers, Internal Audits, Training, Regulations, Signage, GSE speed inhibitors		Severe	Likely	High	High	Tolerable with mitigation	
2	EMEAA Cargo Handling Manual Edition 3	Collision with Property			Major Equipment or GSE Damage	10. Cost	Self Inspections, Safety Barriers, Internal Audits, Training, Regulations, Signage, GSE speed inhibitors		Moderate	Possible	Moderate	Moderate	Tolerable	
3	EMEAA Cargo Handling Manual Edition 3	Collision with Property			WFS facility damage	10. Cost	Self Inspections, Safety Barriers, Internal Audits, Training, Regulations, Signage, GSE speed inhibitors		Moderate	Possible	Moderate	Moderate	Tolerable	

Figure 1 - example of RA template

1.1.2 PowerBi Reporting

Microsoft PowerBi is the chosen HSSE data reporting system for WFS. The risk management system provides data for generated reports which can be found in the PowerBi dashboards. These reports provide comprehensive representation about risk assessments at multiple levels from station level through to Global. These dashboards are currently under development and will be published mid-2023.

1.2 When a Risk Management Process shall be conducted

An RA shall be completed and uploaded into Pulse for any routinely performed WFS process or task, an RA must also be performed whenever there is a new or changed process, procedure or significant change or different type of equipment.

A new RA or RA review should be performed any time there are variations from our documented SOP or any time there is significant changes to the operation, ie facilities, management, work scope – Pulse contain the following list of RA reasons:

1. Periodic review.
2. Response to Incident/audit OR Proactive intervention to near miss/observation trend.
    - Post Event Investigation follow-up or Near miss with potential serious outcome.
    - Any new hazards or negative trends detected in the operation.
    - Follow-up to an audit when significant deviations are identified.
    - Any other reason / request from RSSB.
3. New operation or significant change to existing operation.
    - Opening a new station, building, or adding a new customer.
    - Starting new activity.
    - Significant changes are planned to facilities, equipment, or infrastructure.
    - Introducing a new technology.
    - Before implementation of new or changed procedure.
    - Introduction or change to aircraft type operated by customers.

When creating the risk assessment in Pulse, it requires you to add the reason for the risk assessment.

1.3 Risk Management Process Flow

The RMP is divided into three key phases, activation, assessment, and validation. This allows for a systematic process to documenting and approving the HSSE risk assessment of a process or function.

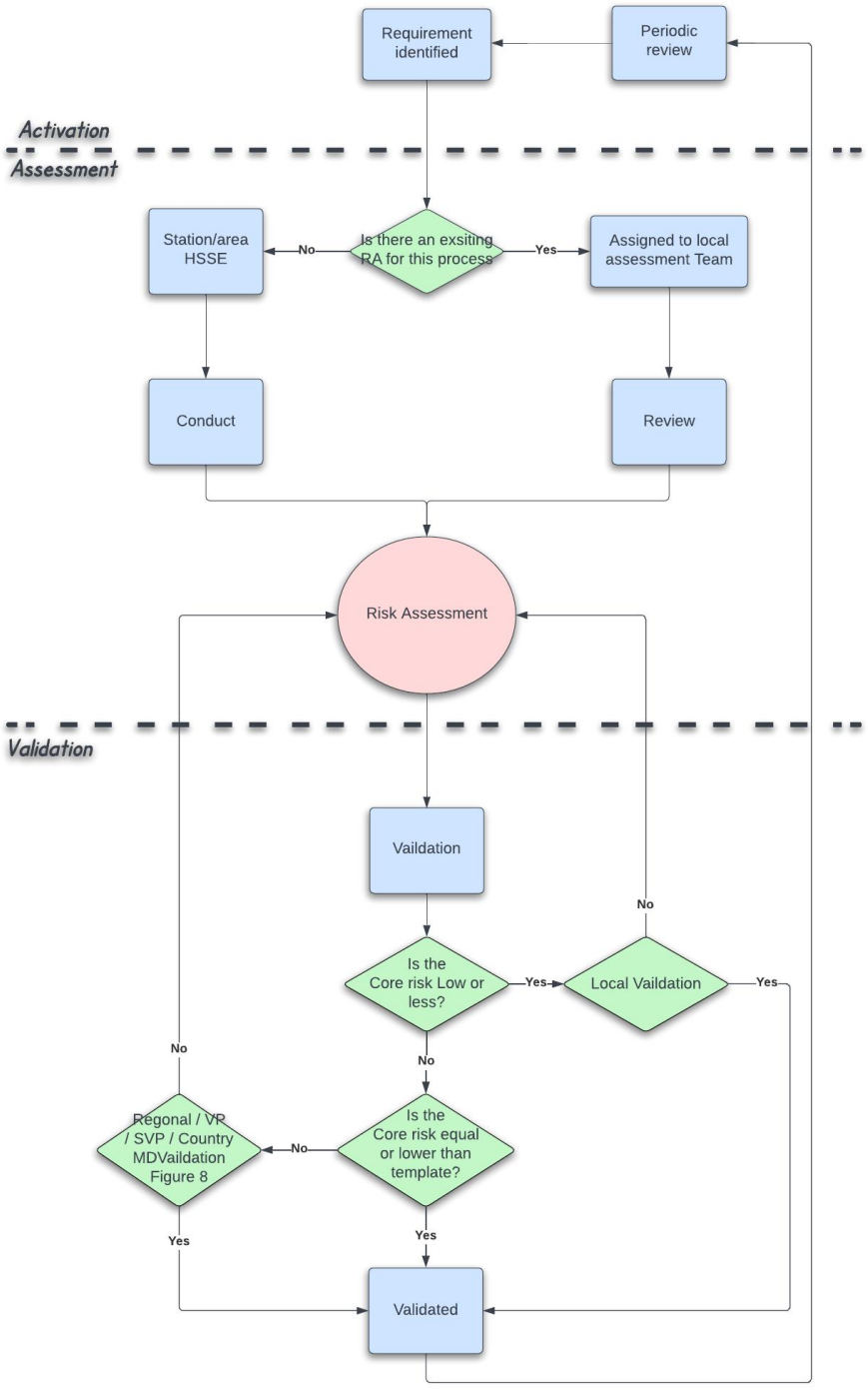


Figure 2 - The Risk Management Process

1.4 Definitions

HSSE Risk Management System (RMS)	The overall name given to the structured approach to identify, assess, prioritise and manage risks.
HSSE Risk Management Process (RMP)	Specific documented assessment of a function or process to determine Hazards / Consequences and levels of Risk. See section 2.1 for a more detailed explanation.
HSSE Risk Assessment (RA)	The task of identifying HSSE hazards, risk and controls.
Hazard	A hazard is any object, threat, situation, or behaviour that has the potential to cause loss, damage, or harm people, environment, or property.
Consequences	Potential bad outcome(s) or harm of the identified hazard
Severity	The potential extent of harm based on the WFS severity table
Likelihood	The actual frequency in which the harm is expected to occur using the WFS likelihood table.
Risk	The Severity multiplied by Likelihood of a given hazard which provides a quantifiable level of risk using the WFS risk matrix.
Core Risk	A measure of the severity & likelihood, considering existing controls
Residual Risk	A measure of the severity & likelihood, after additional controls have been implemented
Existing controls	The controls already in place to mitigate the risk
Control Effectiveness	The effectiveness of the controls in place or to be put in place and the compliance to said controls. A Breakdown of the levels can be found in section 4.3.1.2
Additional controls	Controls introduced through the RMP that help to reduce or eliminate the risk of the hazard
Tolerable Risk	Level of Risk deemed acceptable by WFS
As Low As Reasonably Practicable (ALARP)	When describing risk, a level of risk deemed to be as low as can be achieved considering cost, existing technology/knowledge, and business conditions.
Lead HSSE Risk Assessor	Individual assigned with leading the RMP, including documenting RA within Pulse and generated action plans.
HSSE Risk Assessor	An individual who has attended and completed the WFS risk management process training program.
Local HSSE Risk Assessor	An individual who has completed the WFS risk management process online training course.
Complex HSSE Risk Assessment	Any RA that does not have an existing template or has an existing core risk of High or above.
Standard HSSE Risk Assessment	Any existing RA template or RA review with a residual risk of Moderate or less.
Periodic Review	Regular and defined period, e.g. Every 6 months.

1.4.1 Definitions - Hazard

A hazard is any object, process, or behaviour that has the potential to cause loss, damage or harm which could occur to colleagues, customers, members of public, property, or facilities.

Health and safety hazards exist in every workplace. Some are easily identified and corrected, while others are necessary risks of the job and must be managed in other ways.

Hazards to the WFS operation can appear in many circumstances, some hazards are acute and pose an immediate harm, loss or damage while others are latent and take longer to materialize with a cumulative effect.

WFS classifies hazards within the 11 main categories in the risk matrix:

- Aviation security
- Asset protection
- Flight safety
- Occupational health and safety
- Aircraft damage
- Environment
- Reputation and brand
- Compliance/regulatory
- Customer Audit
- Cost
- Damage Other

1.4.2 Definitions - Risk

Once you have identified the hazards, decide how likely it is that there is a consequence (Likelihood) and its Severity. This is assessing the level of risk.

To make it simpler for local risk assessors to estimate likelihood of consequence at their location based on their experience, the following definitions are used.

Local Likelihood of a consequence

- Frequent – The outcome may be expected to occur at that location in any 30-day period.
- Occasional – The outcome may be expected to occur at that location in any 90-day period.
- Remote – The outcome may be expected to occur at that location in any 1-year period.
- Improbable – The outcome may be expected to occur at that location within a 1–5-year period.
- Extremely Improbable – The outcome may be expected to occur at that location beyond a 5-year period.

NB: If there is a major change in the volume of activity at a location then this may require a review of the relevant local risk assessment(s).

Potential Severity of the consequence – Establishing the potential severity of harm can be completed by use of information about the relevant work activity, together with:

- What is being harmed? People, property, cost, or brand.
- The most likely outcome.
- Nature of the harm, ranging from minor to catastrophic:
    - minor: superficial injuries, cosmetic damage, minor disruption, or cost.

- Moderate: lacerations, burns, concussion, serious sprains, aircraft, or structural damage requiring repair, moderate unplanned cost, and disruption.
- Severe and Catastrophic: amputations, major fractures, loss of life, property destruction, significant costs or disruption, flight safety events, aircraft damage or loss.

WFS uses a severity table which can be found in the following chapters, within this table definitions are provided to give an exact place within a 5 layered severity scale. These are minor, low, moderate, severe, and catastrophic.

1.4.3 Working Example of Risk, Consequence and Severity

Every day we conduct countless RAs as we go about our daily lives. Most of these RAs are conducted subconsciously to ensure our safety as we conduct regular tasks. We use our senses, experience, and judgement to determine the hazards, severity, and consequence to make decisions.

In this example the hazard is the moving vehicles; the hazardous event we are assessing would be a collision between a moving vehicle and a pedestrian; the consequence is an injury arising from being struck by a vehicle and the severity is the extent of the injury. The risk is therefore determined by considering the factors that may influence the chance of being struck by a vehicle and the seriousness of the injury.

The factors that might influence the chance of being struck by a vehicle include:

- The availability of a safe crossing point e.g., pedestrian crossing.
- The speed (30, 60, or 70 mph) and volume of traffic, e.g., dual / single carriage way.
- The fitness of the person crossing the road, e.g., mobility, vision, hearing.
- Whether or not the person is rushing or paying attention, etc.
- The fitness of driver (vision, reaction times, etc.).
- The weather conditions, e.g., rain or fog.
- Other environmental factors (parked cars, no safe crossing point); and
- The condition of the vehicle (maintenance, worn tyres etc.).

The factors that might influence the seriousness of the injury include:

- The size of the vehicle, e.g., getting struck by a bus or lorry/HGV/Truck rather than a car.
- The speed of traffic (30, 60, or 70 mph).
- The age and fitness of the injured party; and
- The effectiveness of the emergency response.
- Some of this information, together with information on available control measures may be used to determine how safe it is to cross.

1.5 Risk Matrix Tables

1.5.1 Severity Definitions

Severity	Occupational Health and Safety	Flight Safety	Aircraft Damage	Damage Other	Aviation Security	Asset Security
Catastrophic (A) 81	Fatality or significant permanent disability	Aircraft hull loss Event impacting the safe operation of a flight - immediate intervention required by crew (e.g. depressurisation, air turnback etc) Repair cost >$1M	Aircraft hull loss Repair cost >$1M	Property / damage loss >$1M	Security Breach that results in significant threats to the business Aircraft hull loss or fatality	Theft Incident >=$1M or Armed robbery
Severe (B) 27	Major Injury requiring hospitalization >72 hours and/or permanent impairment Fractures other than fingers, thumbs or toes Any loss of consciousness from injury or asphyxia	Event impacting the safe operation of a flight - immediate intervention required by crew (e.g. depressurisation, air turnback etc) **NEED TO ADD WEIGHT ERRORS IN HERE SOMEHOW**	Repair required or deferred and Aircraft inoperative more than 24 hours.	Property / damage loss 50k to >$500k GSE loss 50k to 500k	Major Security threat to the business Unscreened cargo/pax/bags flew Breach by Regulatory Authorities in Critical/controlled areas	Theft Incident $100k+ <$1M or Unarmed robbery
Moderate (C) 9	Severe Injury - Bone Fracture, Severe Nerve/Tendon/Muscle/Internal Organ Damage, 2nd/3rd degree burn, multiple night hospital admission (NTSB 830 Reportable) >7 days	Significant flight safety near miss	Repair required or deferred and Aircraft inoperative more than 60 minutes but less than 24 hours.	Property / facility damage loss 10k to >$50k	Failure to display ID or challenge visitor/ staff in restricted area Unscreened cargo caught before leaving the facility	Theft Incident $10k+ to <$100k or unarmed robbery
Low (D) 3	Serious injury or illness with absence >7 days	Minor flight safety event – SOP not followed	Repair required or deferred and Aircraft inoperative less than 60 minutes.	Property / damage loss <$10k	Failure to comply with non-regulatory WFS security procedure	Theft Incident <$10k or unarmed robbery
Minor (E) 1	Fractures of fingers, thumb or toes	Process Error identified before departure	No damage or repair deferred and no operational effect.	GSE loss < 1k	Potential process non-compliance with no security implications	Slight damage – no impact to operation or loss

Environment	*Reputation Brand	Compliance / Regulatory	Regulatory & Customer Inspections / Audit	Cost
Hazardous release >1000L Catastrophic impact on natural environment likely to tale >12 months to restore to ongoing legal non-compliance	Long term Global Damage to WFS brand	Catastrophic breach of regulatory requirements – Loss of company approvals or permits	Not Applicable for Single NOV	>=$1M
Hazardous release < 1000L uncontained with restoration within 1 year One-off legal non-compliance	Sustained Regional Damage to WFS brand	Serious breach of regulator requirement. Risk to company approvals or permits if not acted on immediately. Significant breach of company policy or SOPs. Approval suspended	Regulator or Customer Highest level finding	$100k to <$1M
Hazardous release <1000L contained OR <100L uncontained with restoration within 1 month	National Damage to WFS Brand	Breach if Company SOPs – Falls below expected industry guidelines – Approval restrictions	Regulator or Customer Second highest level finding	10k to <100K
Hazardous release <100L contained OR >10L uncontained with restoration within 1 day	Local Damage to WFS Brand	Breach of company SOPs No impact on approvals permits – Falls below expected industry guidelines	Regulator or Customer Third highest level finding	<$10k
Hazardous release <10L contained No Damage or impact to environment	Negligible damage to WFS Brand	No breach of company requirements	Observation Only	No direct cost

Figure 3 - Severity Table (also Available in the Pulse Risk module)

Likelihood Table

Likelihood	Definition	Frequency
Extremely Improbable (1)	The outcome may be expected to occur beyond a 5 year period	1 in 2.5m turns 1 in 250m manhours 1 in 25m tons
Improbable (2)	The outcome may be expected to occur within a 1-5 year period	1 in 1.5-2.5m 1 in 150-250m manhours 1 in 15-25m tons
Remote (4)	The outcome may be expected to occur in any 1 year period	1 in >500k turns 1 in >50m manhours 1 in >5m tons
Occasional (8)	The outcome may be expected to occur in any 90 day period	1 in <250k turns 1 in <25m manhours 1 in <2.5m tons
Frequent (16)	The outcome may be expected to occur in any 30 day period	1 in <100k turns 1 in <10m manhours 1 in <1m tons

Figure 4 - Likelihood Table

1.5.2 Risk Matrix

	Minor (E) 1	Low (D) 3	Moderate (C) 9	Severe (B) 27	Catastrophic (A) 81
Frequent 16	Low (16)	Moderate (48)	High (144)	Ultra (432)	Ultra (1296)
Occasional 8	Low (8)	Moderate (24)	High (72)	High (216)	Ultra (648)
Remote 4	Low (4)	Low (12)	Moderate (36)	High (108)	High (324)
Improbable 2	Negligible (2)	Low (6)	Low (18)	Moderate (54)	High (162)
Extremely Improbable 1	Negligible (1)	Negligible (3)	Low (9)	Moderate (27)	High (81) (68) Moderate

Figure 5 - Risk Matrix

Note – Numbers in brackets – The risk calculation and explanation can be found in 4.3.1

2 Fundamentals of the Risk Management Process

WFS is required legally and ethically to ensure that RAs are made and strives to ensure that those who complete them are given adequate resources and training to ensure their competence in conducting them.

Competence is not achieved by obtaining a particular formal qualification but results from a combination of adequate knowledge and skills, experience, and certain personal qualities such as good judgement.

2.1 Requirements for Local Risk Assessor:

Local Risk Assessors with the following training and competence can complete straightforward RAs.

- Experience and training in hazard identification and carrying out RAs (completion and certification of the WFS risk management eLearning module). This includes understanding Risk Assessment, Risk Mitigation and Risk Monitoring.
- Knowledge of the processes or activities to be assessed.
- Technical knowledge of the equipment or machinery (if required).
- Good communication and report writing skills.
- Constructive critical thinking.
- Information gathering: the ability to gather and analyse information from various sources is critical in conducting a comprehensive Risk Assessment.
- Knowledge of local legislation and guidance.
- Understanding of WFS best practice for the subject of the RA (e.g. WFS Cargo Handling Manual, WFS Global Cargo Security Standard).
- Awareness of the limitations of their own existing experience.
- Willingness to supplement this with help and advice from subject matter experts (SME).

Employees completing the functions, safety representatives and local management should always be consulted as part of the risk assessment process.

2.2 Requirements for HSSE Risk Assessor:

For more complex RAs, a HSSE Risk Assessor will be required to oversee the RA. A HSSE Risk Assessor needs to meet the requirements for the Local Risk Assessor and have completed a two-day WFS risk management course.

There may be occasions when risk assessments need to be completed on complex operational threats such as cyber-security or specific terror risks. In these cases, subject matter experts from within WFS and external contractors can be utilised to ensure a comprehensive RMP is completed.

2.3 Risk Management Training

There are two courses available for risk assessment training:

2.3.1 HSSE Risk Assessor

This is a two-day course delivered in person that covers the fundamentals of risk assessment, classroom instruction and workplace risk assessment practical. Those who have completed this training are able to complete risk assessments and manage the associated action plans for all risk categories and levels. Attendees are also able to validate risk assessments provided they do not generate a high-risk hazard or a hazard that is a higher risk than the template it was created from. In this case they must be validated by the Line of Business / Regional safety manager / Country MD (details of this can be found in the validation section of this manual). The target audience for this course is the HSSE team and selected Operational Managers with HSSE experience.

2.3.2 Local HSSE Risk Assessor

This training is provided online through an eLearning module. The course lasts approximately 2 hours and takes you through the basics of risk assessment, and several practical examples. To complete the course and gain accreditation delegates will complete several tasks and questions within the online course that will generate a pass/fail result. Attendees will also be coached/mentored by HSSE risk assessors and be getting support through pulse risk assessment forums. Those who have completed this training are able to take part in all risk assessments allocated to their facility and are able to provide final validation for risk assessments with Low or Negligible risk hazards. The target audience for this course is station management and all other operational Managers.

3 Conducting a Risk Management Process

The RA can be best understood as a cycle (figure 6) which allows for continuous improvement of the control measures that are put in place which reduce the risk of hazards in the workplace. This cycle can be broken into 4 parts:

- Plan
  - Activation of the risk management process
  - Selection of the RA team
  - Identifying the standards
- Do
  - Identifying all potential hazards
  - Identifying the consequences
- Check
  - Reviewing/assessing the existing controls
  - Calculating the core risk : determine the level of risk associated with each hazard by combining the likelihood and the Severity
  - Reviewing effectiveness of existing controls (ALARP)
- Act
  - Identifying additional controls
  - Creating action plans
  - Estimating the residual risk
  - Validation

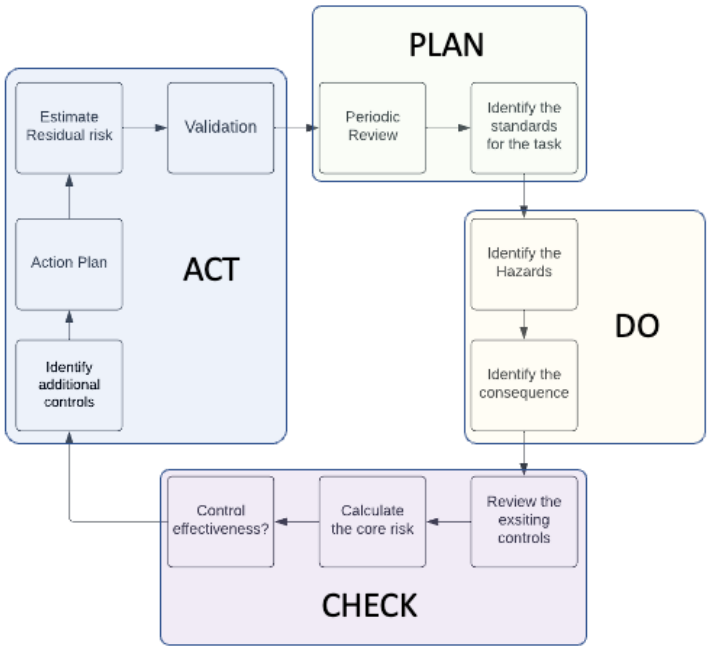


Figure 6 - Plan, Do, Check, Act

3.1 PLAN

3.1.1 Activation of the Risk Management Process

As detailed in section 2.3 there are several reasons why a RA may be carried out. These can be summarised into three categories which are as follows:

4. Periodic review
5. Response to Incident/audit OR Proactive intervention to near miss/observation trend
6. New operation or significant change to existing operation

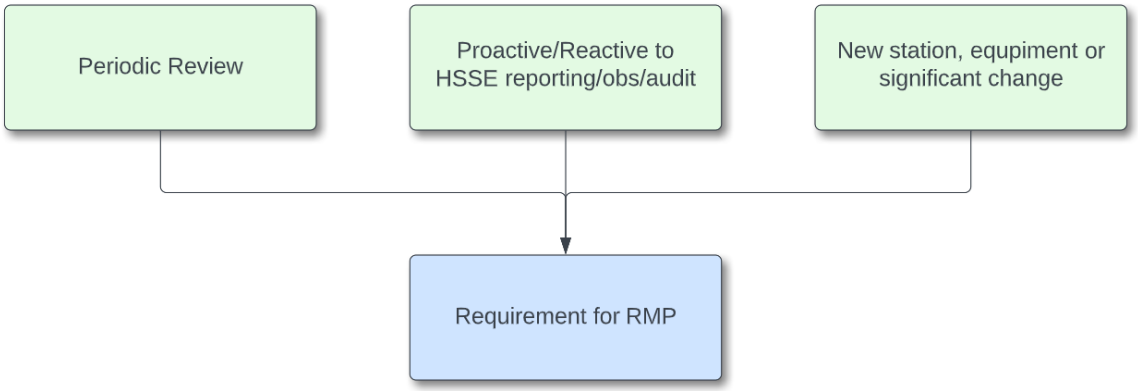


Figure 7 - Reasons for an RMP

3.1.1.1 Periodic Review

It is good practice to periodically review all RAs to ensure they are current, and the control measures remain effective. WFS has adopted the following guidelines for the review of RAs dependent upon the highest individual core risk found within the RA. These time frames are built into the Pulse system and are automatically set upon validation of the risk assessment.

Highest Core Risk	Review time frame	Risk Assessor
Ultra	Stop Operations until Risk is Mitigated	HSSE Risk Assessor
High	1 Years	HSSE/Local Risk Assessor
Moderate, Low & Negligible	2 Years	Local Risk Assessor

RAs are a dynamic live document which must record, assess, and control the risks that exist in tasks. WFS refers to this as the risk management process cycle which we saw earlier in figure 2.

Additionally, action plans shall exist for high risks. These action plans have a maximum time frame of six months. Therefore, individual hazards that are classified as high risks shall be reviewed on a maximum of a six-month basis. More details about this process are described in section 4.4.

3.1.1.2 Proactive/reactive response to HSSE Reporting/Observations/Audit

It is common practice following an incident to review the RAs relating to the tasks or activities being conducted during which the incident occurred. The review should highlight any failures of controls or identification of hazards that have not previously been spotted. Near miss trending data might also indicate that hazards are not effectively controlled which also would prompt a review of the RA to improve control measures. Finally, enforcement agencies and external or internal audits may identify that an RA does not comply with legislation requirements or sufficient to control risks.

3.1.1.3 New or change in activities, equipment, or facility.

When the process, work methods, material or facility significantly change, the RA for the activity shall be reviewed to ensure the hazards have been suitably identified and risk control measures put in place. In addition, WFS seeks to keep up to date with technological advances. Mitigations to problems that were previously not available or not cost effective may be more widely available and become more cost-effective. These new advances in technology may provide much better controls than the existing administrative controls and therefore be more effective at reducing risks. However, any new technology must be carefully risk assessed to ensure that while eliminating one risk it does not inadvertently introduce another.

3.1.2 Selecting the Risk Management Process Lead and Team

3.1.2.1 Risk Management Process Lead

Once the need for a RMP has been identified, the team and Lead need to be selected. WFS requires any RA that does not have an existing template or a template with a core risk higher than moderate, referred to as a complex RA, is led by a HSSE Risk Assessor.

The responsibilities of the lead assessor are:

- Defining objective and scope of RA.
- Selecting Team.
- Managing and Coordinate Risk assessment process.
- Documenting the RA in Pulse.
- Creating and Managing Actions.
- Ensuring the Validation process is followed.
- Communicating results of the RA.

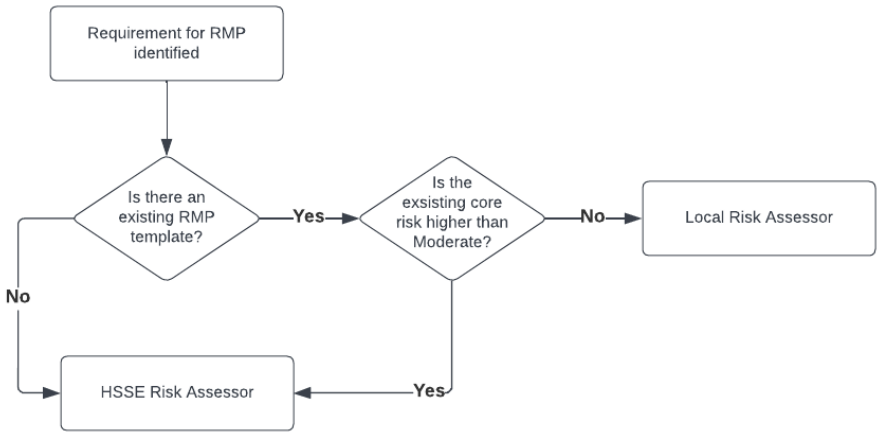


Figure 8- Risk Management process lead flow

3.1.2.2 Risk management process team

While RAs can be completed by individuals, drawing on the knowledge of others is essential for completing an effective and comprehensive RA. Creating a multidisciplinary RA team can use the knowledge of a variety of people to ensure effective controls are put in place to control hazards. The following groups of people should be considered when creating this team.

Supervisors/Managers – These will have a good knowledge of the area and the activities undertaken. This person also knows the staff involved and if recommendations are practical or not.

Safety representatives – trade unions or staff representatives should know the tasks and the workforce. The safety representative may also have health and safety knowledge or qualifications. Involving a representative of employee safety is an effective way to improve the health and safety culture.

Colleagues – employees that perform the function or will be required to perform the function can give help with assessing risk levels and by suggesting realistic and practical control measures. However, beware of over familiarity with the tasks that can cause workers perception of risk to be diluted.

3.1.3 Identifying the WFS standards

A risk assessor needs to know what the standard is for the process they are assessing so that they can identify any gaps that may be demonstrated during their observations. Knowing the standards also allows the assessor to plan the scope of their observations.

Each station will set its standards based on two sources of information:

- WFS manuals, policies and procedures
- Regional/local requirements and regulations

These are the minimum standards that are required by WFS within the operation globally. All stations should meet or exceed these standards. Any deviation must be approved by Regional/Group HSSE following a non-standard operation request/case made.

These standards can be found in the following documents, this list is not exhaustive:

a) Global Security standard
b) Regional Ground Operations Manual
c) Regional Cargo Handling Manual
d) Dangerous Good Manual
e) Dangerous Goods Regulations
f) Local Standard Operating Manuals
g) Customer/Airline Manuals

Regulatory bodies and governments may apply standards to stations on a local level that exceed the minimum requirement set by WFS through its group standards. It is the responsibility of the local HSSE and operational managers to ensure that they are compliant with these standards. As with group standards, local standards must be implemented in the operation and recorded in the RA.

For example, In the United Kingdom the Control of Noise at Work Regulations 2005 requires that noise levels should be kept as low as possible, but where noise levels reach the Upper Exposure Action Value of 85dbA, hearing protection should be issued.

Around the world different legislative bodies have different standards so it is vital that, at a local or regional level, standards are known and reflected in the workplace. These should therefore be included within the RA to ensure that legal compliance is being achieved and referenced within the RA documentation.

Referencing of industry standards or national HSSE guidance can also help to identify additional control methods that could be introduced. Many countries also offer guidance through Codes of Practice which are not legally enforceable but are an expected industry standard.

3.2 DO

3.2.1 Identifying the Hazards

The first step in the DO phase is to identify the Hazards found when a task is being completed or those that exist in the general workplace. Robust identification of Hazards is a fundamental step in the broader RMP process. What is it about the operation, environment, processes etc. that can cause harm, damage, or impact the safety and security of the operation. There are several methods available to ensure that hazards can be identified.

- Creating the risk assessment in Pulse by copying the appropriate template will allow you to identify the common hazards that you can expect to see when you conduct your hazard identification.

How to create your risk assessment in Pulse & Editing your risk Assessment details

- The simplest strategy is to walk around the workplace and look at what could cause harm. Whilst it is important to focus on the significant hazards, we need to record ones that are of low severity but high frequency.

- Talking to employees can also be a good source of information and often will identify hazards that might not be visible during a walk round. Talking to experienced people who are familiar with the tasks often generate a conversation about the times when they have found working difficult and the range of hazards they have faced.

- A frequently overlooked tool to identifying hazards is referring to manufacturer's instructions, data, or machine manuals. These can be a good source of information. Previous accidents and incidents within the organisation can also identify significant hazards and the harm that could result from those hazards.

- Reference to legislation will also help to identify potential hazards, what is being legislated for is often an indication of what has happened and what types of controls are required to mitigate the risks. Aviation is also regulated by national and global bodies that set operational standards, e.g., ISAGO/GOM.

- Other external references can be taken when assessing risk, such as accidents in similar organisations and industry knowledge. This may come from, for example, articles in professional body publications or through trade unions.

- Historical records: Accident and ill-health records can often help to identify the less obvious hazards, including hazards to health, e.g., from exposure to high levels of noise or harmful fumes.

3.2.1.1 Examples

Most hazards and their associated control measures can be seen across the WFS network as they are standard to the industry and our operation. Risks associated with fall from height, noise and moving vehicles will often have control measures which are reflected at the station. However, there will be unique hazards which require control measures which are specific to a location. It would be impossible to list every single possible hazard that could be found on a RA. However, here are some examples that you may find in the workplace.

- Mechanical: moving parts of machinery; or moving vehicles, forklifts and GSE
- Physical: noise, vibration, radiation, or thermal energy

- **Biological**: legionella bacteria or blood borne viruses.
- **Chemical**: Spills or leaks, corrosive, or toxic chemicals.
- **Ergonomic**: Manual Handling.
- **Psychosocial**: pressure of work or shiftwork.
- **Environmental**: Weather, noise, surface condition, uneven Surface, lighting.
- **Aviation Security:** hazards that involve terror or hostile actions aimed at transportation infrastructure that impact the Safety of aircraft, airports, and staff.

These can be generally broken down into 3 types of Hazard category, these are.

- **Acts**: such as manual handling.
- **Situations**: such as working at height or in confined space; or
- **Sources of Energy**: such as electricity or moving parts or machinery.

A hazard may exist in more than one category, and this is important as your control measures will need to reflect this.

Editing existing or creating a new Hazards in Pulse

3.2.2 Identifying who may be affected?

Once the significant hazards have been identified consideration must be given to the part of the operation that may be affected and how they may be affected. This will help to identify the best way of managing the risk.

This will involve identifying groups of people (people working directly or indirectly), processes (such as flight safety / security) and in each case identifying exactly how the harm may occur, (i.e., what type of injury or process failure). Some groups of workers are covered by specific legal requirements for RA, e.g., new and young workers, new or expectant mothers and people with disabilities who may be at particular risk. In this case a HSSE manager should conduct the assessment. Other groups such as workers and customers who may not be in the workplace all the time may require additional consideration. e.g., cleaners, visitors, contractors, maintenance workers etc.

Pulse also allows the risk assessor to take a single hazard and break it out into its affect to various groups of people if it is determined that the risk rating is different for each of them.

3.2.3 Identify Existing Controls

A suitable and sufficient RA requires us to record the existing control measures previously implemented to control the hazard being assessed. Using the list of possible hazard categories here are some examples of controls:

Mechanical: Seatbelts, Dead-Man switch, Emergency Stops, Barriers/shields.
Physical: Hearing Protection, Foot protection, time limited tasks, radiation, or thermal shielding, slave pallets.
Biological: Face masks, face shields.
Chemical: Chemical suits, breathing respirators, spill kits.
Ergonomic: workplace assessments, ergonomic designed equipment.
Psychosocial: work/time limits, adequate staffing.
Aviation Security: Security screening, facilities and secured area protection and fencing, cargo segregation, intrusion response.
Documentary / Administrative: Process / Procedures / Local SOPs / Training.
Flight Safety: No touch policy / banksman / Load plans / DG Regulations.

3.2.4 Determine the Severity & Likelihood

As part of evaluating the risk stage, consideration must be given as to how likely it is that a hazard could cause harm (**likelihood**) and how severe that harm might be (**Severity**).

Once the potential for harm, a Hazard, has been established, the risk with the existing control measures in place should be identified and evaluated first. Consider each step of the task to determine what controls might already be in place. They might not be physical controls but be part of the training given or be the reason why tasks are conducted in a particular order. There may be a possibility that you are risk assessing a new process which has no control measures in place. In this case you would therefore evaluate the risk based on no control measures being in place.

3.2.4.1 Determine the Severity

For each hazard you will need to identify the most likely severity of harm using the WFS Severity chart, you should use your knowledge and data collected on actual severities of past events, along with your judgement of the circumstances to make this determination. This chart includes descriptions of all the categories of operation that WFS participates and shows the risk ranging from catastrophic to low. WFS Severity Chart can be found in section 2.5. Here are descriptions within Occupational Health severity category.

Severity	Occupational Health and Safety	Flight Safety	Aircraft Damage
Catastrophic (A) 81	Fatality	Aircraft hull loss Event impacting the safe operation of a flight – immediate intervention required by crew (eg depressurisation, air turnback etc) Repair cost > $1M	Aircraft hull loss Repair cost > $1M
Severe (B) 27	Major Injury requiring hospitalization >72 hours and/or permanent impairment	Event impacting the safe operation of a flight - immediate intervention required by crew (eg depressurisation, air turnback etc)	Repair required or deferred and Aircraft inoperative more than 24 hours.
Moderate (C) 9	Severe Injury - Bone Fracture, Severe Nerve/Tendon/Muscle/Internal Organ Damage, 2nd/3rd degree burn, multiple night hospital admission (NTSB 830 Reportable) >7 days	Significant flight safety near miss	Repair required or deferred and Aircraft inoperative more than 60 minutes but less than 24 hours.
Low (D) 3	Lost Time Injury Recordable to the authorities < 7 days	Minor flight safety event – SOP not followed	Repair required or deferred and Aircraft inoperative less than 60 minutes.
Minor (E) 1	Any Injury / Occupational Illness not requiring lost time – Strains / sprains, bumps, bruises, simple eye irrigation, use of bandages or temporary immobilization	Process Error identified before departure	No damage / or Repair Deferred and no operational effect.

Severity

This is the title of the level of Severity along with its associated score. The score increases in multiples of 3 and is used in calculating the final Core/Residual Risk

Definition

This is the description of the severity you would expect the hazard to cause should an outcome occur. You should use your knowledge of past events and your judgement of the circumstances to make this determination.

As already mentioned earlier in the manual, WFS adopts a sensible RA policy in which we seek to sensibly control scenarios. This must be considered when identifying severity and while there is no magic formula to guide risk assessors, the guidance is to apply the theory of what is reasonably expected as a responsible employer. If there is any time you wish to seek guidance, then your local HSSE manager will give guidance and if required then the regional or group HSSE teams are always available.

3.2.4.2 Determine the Likelihood

Likelihood reference is the chance that harm may be caused by the hazard has been identified. This ranges from Extremely Improbable to frequent and each escalation between this has a definition and frequency range.

Likelihood	Definition	Frequency
Extremely Improbable (1)	The outcome may be expected to occur beyond a 5 year period	1 in 2.5m turns 1 in 250m manhours 1 in 25m tons
Improbable (2)	The outcome may be expected to occur within a 1-5 year period	1 in 1.5-2.5m 1 in 150-250m manhours 1 in 15-25m tons
Remote (4)	The outcome may be expected to occur in any 1 year period	1 in >500k turns 1 in >50m manhours 1 in >5m tons
Occasional (8)	The outcome may be expected to occur in any 90 day period	1 in <250k turns 1 in <25m manhours 1 in <2.5m tons
Frequent (16)	The outcome may be expected to occur in any 30 day period	1 in <100k turns 1 in <10m manhours 1 in <1m tons

Likelihood

This is the title of the level of likelihood along with its associated score. The score increases in multiples of 2 and is used in calculating the final Core/Residual Risk

Definition

This is the description of the timeframe you would expect the hazard to cause an outcome to occur. You should use your knowledge of past events and your judgement of the circumstances to make this determination. For example you may never have had an associated event but your judgment may indicate an event may occur 'occasional'

Frequency

This is a definition of frequency used at Regional and group level, Should not be used at Station or Building level.

Figure 9 – Likelihood Table

Recording Severity and Likelihood

3.3 CHECK

3.3.1 How Core Risk is Calculated

The final stage for each hazard is the calculation of the current Risk level (Core Risk) considering all existing control measures. The simple definition of **Risk** is **Likelihood x Severity**; therefore, we use the results of our severity and likelihood assessment to determine the risk posed by each hazard. Using the likelihood and severity tables we give a numeric value for each, increasing in value with either likelihood or severity.

	Minor (E) 1	Low (D) 3	Moderate (C) 9	Severe (B) 27	Catastrophic (A) 81
Frequent 16	Low (16)	Moderate (48)	High (144)	Ultra (432)	Ultra (1296)
Occasional 8	Low (8)	Moderate (24)	High (72)	High (216)	Ultra (648)
Remote 4	Low (4)	Low (12)	Moderate (36)	High (108)	High (324)
Improbable 2	Negligible (2)	Low (6)	Low (18)	Moderate (54)	High (162)
Extremely Improbable 1	Negligible (1)	Negligible (3)	Low (9)	Moderate (27)	High (81) (68) Moderate

Figure 10 - Risk Matrix

Therefore, if a hazard was deemed to be of **Low** severity and **Remote** likelihood it would have a score calculated like this:

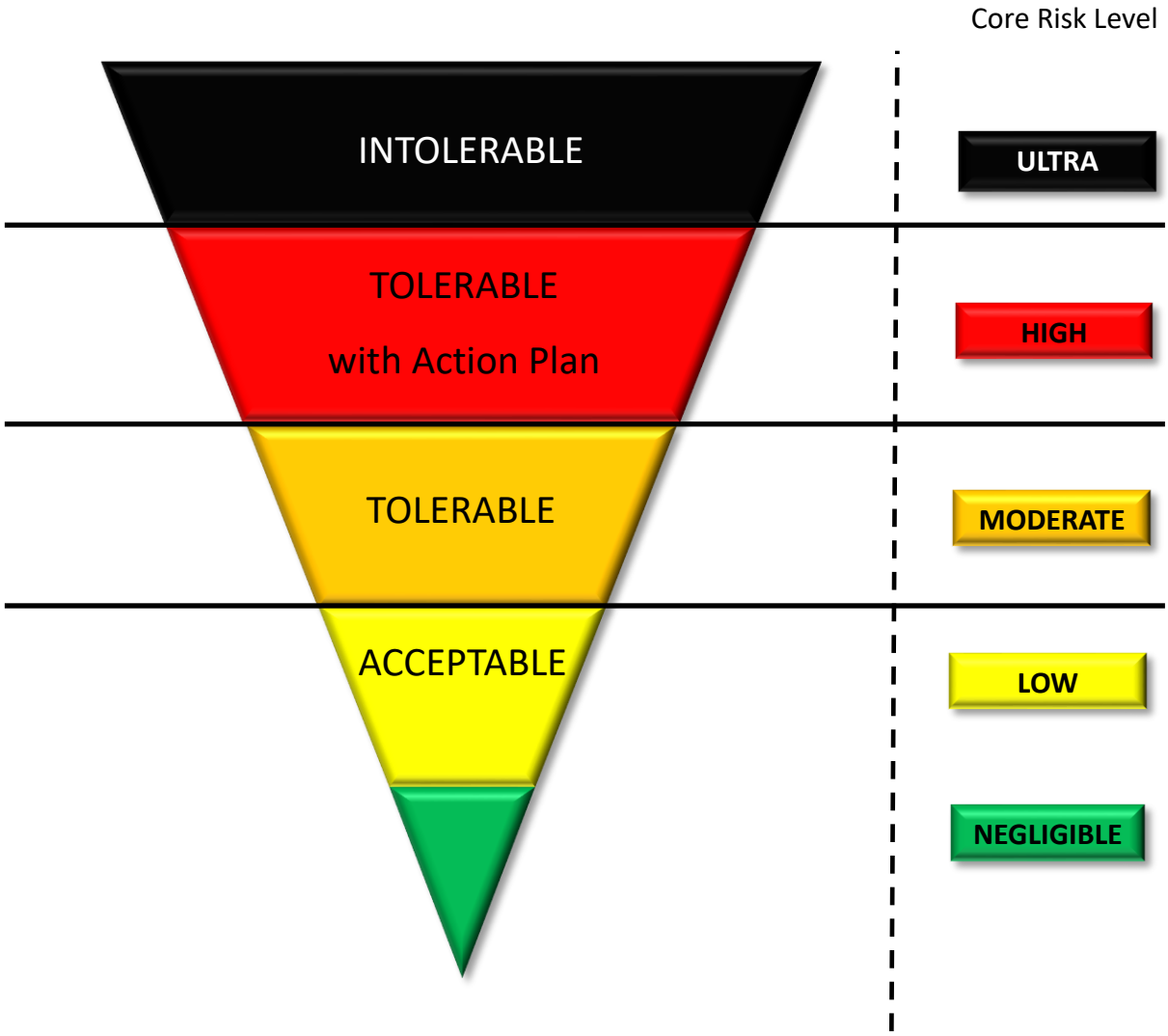
Likelihood is **Remote** = 4, Severity is **Low** = 3, therefore 4 x 3 = 12.

This would give it an overall score of **12**, which according to the following risk matrix table gives a risk of **low**. This would therefore be regarded as acceptable within the risk matrix, however it must be noted that if cost-effective measures could be applied to reduce this further, we should explore them. We will look at this further in the next section.

In the next example the severity is **Severe**, and the likelihood is **Remote a**nd as a result would have a score calculated like this:

Likelihood is **Remote** = 4, Severity is **Severe** = 27, therefore 4 x 27 = **108**
This would give an overall score of **108**, which according to the risk matrix table gives a risk of **High.** This is therefore means this Hazard would be prioritised higher than the first example when applying future mitigations.

The following diagram gives a graphic explanation of relationship between risk tolerance and the WFS Core/residual risk rating.



Ultra – Intolerable

This level of risk is not acceptable to the organisation and any operation associated to the hazard must cease immediately until controls are put in place to reduce the risk to a **Tolerable** level.

High – Tolerable with Action Plan

These hazards are only tolerable to the organisation whilst an action plan exists demonstrating a strategy to reduce the risk. These risks can only be approved by the operational and HSSE SVP/VP, or legal representative.

Moderate – Tolerable

These hazards are tolerable but must be monitored and reviewed to ensure they maintain their tolerability. The organisation considers It is highly desirable to reduce these risks to an acceptable level.

Low & Negligible

These risks are acceptable to the organisation without any further mitigation.

3.3.1.1 Catastrophic / Extremely Improbable

High-risk Hazards comprising of "**Catastrophic"** severity and **"Extremely Improbable"** likelihood are difficult to mitigate as the severity is at the highest category and often based on the specific nature of the hazard or the environment or mechanism it exists within, with no practical way to reduce the severity. The likelihood, Extremely Improbable is already at the lowest category on the likelihood scale and therefore cannot be reduced meaning that hazards in this category remain high-risk by default.

An example of this type of **Catastrophic / Extremely Improbable** hazard is a person being ingested into an aircraft engine. The severity of someone being ingested into an engine is always going to be fatal and therefore Catastrophic. Engine ingestion events do happen in the industry every few years, as WFS has not recorded any such incidents the likelihood is classified as the lowest frequency, Extremely Improbable. When you combine the Severity of Catastrophic and a Likelihood of Extremely Improbable it results in a high-risk hazard.

To manage aircraft ingestion hazards, WFS has implemented standard controls across the network wherever aircraft handling is performed. These controls include; initial training and awareness, a process in the Ground Op manual for agents to remain in a safe zone until the engines have been shutdown, and self-inspections and audits, to measure control compliance. All of these controls are considered administrative and require people to follow the rules – currently, there are no engineering controls in existence within WFS or industry that can reduce the hazard severity or overall risk.

To effectively manage and prioritise risks, these types of High-Risk hazards are subject to strict control effectiveness, if risk assessments can demonstrate a **high** level of compliance to all the controls identified on the regional risk assessment templates for these specific high-risk hazards, the risk of these hazards can be reduced to moderate.

In the Pulse risk assessment, by selecting a "High Control effectiveness", the hazard score is reduced to a moderate risk and enters a "Watch List". These hazards will not require any additional action plans but will be displayed on the watch list for the owning LOB/Regional VP/SVP for monthly review. The watchlist will display associated inspections, audits or near miss and incident data to ensure high control effectiveness is maintained. If any audits / Inspections or Event data identifies that stations are not managing any Hazards on the watchlist accordingly, the control effectiveness will be updated in the risk assessment and an action plan will be required to manage the control effectiveness back up to the required level.

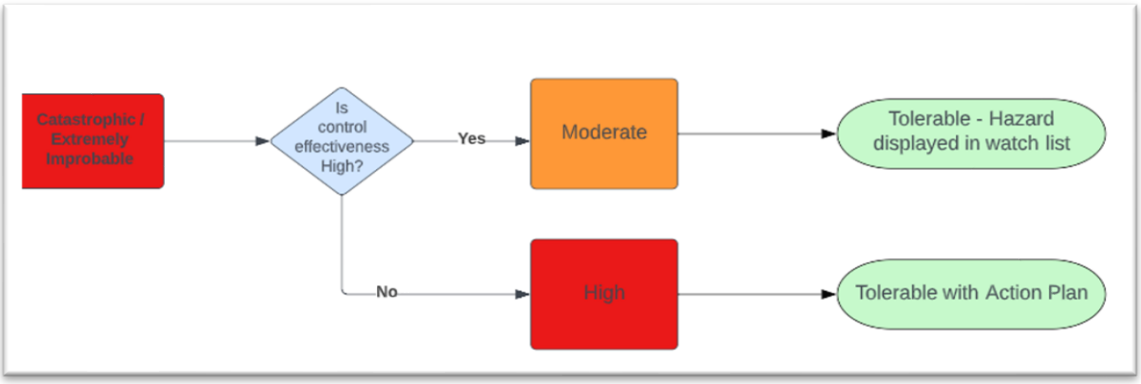


Figure 11 - Control Effectiveness Flow

A guide to understanding the use of control effectiveness can be found in 4.3.1.2.

(NOTE: Fig 12 is only applicable to hazards which feature in Catastrophic / Extremely Improbable)

This rule also applies to the residual risk column for these Catastrophic / Extremely Improbable hazards. You can demonstrate the effect that an action plan, focused on improving control compliance/effectiveness, will have on the risk rating. More information on calculating residual risk can be found in section 4.4.4. As with all hazards in the High category an action plan must be in place demonstrating a strategy to reduce the risk.

3.3.1.2 Are the Existing controls effective?

Once the Core Risk has been calculated and recorded, we then need to determine if the measures are effective at controlling the risk of the hazards identified.

WFS adopts the policy of applying the principle of sensible risk management and ALARP when managing hazards. ALARP is defined **A**s **L**ow **A**s **R**easonably **P**racticable, in practice this means that we are required to manage risk down to a level which is considered practicable through balancing the mitigation requirements such as time and cost versus the reduction in risk. Considering our Risk Matrix and the disruption, time and cost needed to mitigate the hazard.

For example, mitigating the risk of human engine ingestion through engineering interventions, such as installing guarding on engines, would eliminate all risk but be financially and operational impractical. Whereas, strictly controlling the ERA during aircraft arrival and training of staff on the hazard mitigates the risk to a tolerable level or ALARP.

In the check phase of the RA cycle we need to evaluate if our existing control measures satisfy ALARP. This can be done in two stages:

- Does the control measure fit the principles of prevention? (see section 4.3.2)
- Does the control measure work in 'real world?' i.e. is it being used or followed in the operation you are risk assessing?

Pulse allows you to enter your evaluation of control effectiveness as either High, Moderate, Low, or negligible. The following table provides guidance to your assessment of the control effectiveness.

Control Effectiveness	Description	Ratio
High	High compliance to control measure that follows the principles of prevention	95%+
Moderate	Satisfactory compliance to a control that follows the principles of prevention	Between 70 to 95%
Low	Unsatisfactory compliance to a control that partly follows the principles of prevention	Between 40 to 70%
Negligible	Poor or non-compliance to a control that doesn't follow the principles of prevention	Below 40%

Data for this should be taken from the local daily & weekly inspections, audit reports, near miss reporting and incident data as well observations during the risk assessment.

3.3.2 Core Principles of Prevention

When considering current controls and adopting new controls, the general principles of a control hierarchy should be applied. Three simple rules can be used to help us to initially establish the principles behind the most effective methods of controlling hazards.

1. **Prevention** is better than **protection** which is better than **mitigation**.
2. **Engineering controls** are regarded more reliable than **procedural controls** which in turn are better than **behavioural controls**.
3. When reviewing effective control measures:
   - **Engineering** concerns should adopt **engineering** solutions.
   - **Procedural** concerns should adopt **procedural** solutions.
   - **Behavioural** concerns should adopt **behavioural** solutions.

3.3.2.1 Hierarchy of Control

When considering current controls and additional controls, the general principles of a control hierarchy should be applied. Some simple rules can be used to help us establish the most effective methods of controlling hazards. Examples can be found in the Appendix Section 7.1

- **Eliminate**
  - We should always seek first to eliminate the risks associated with the hazards, but this is not always possible.
- **Reduce**
  - Reducing the amount of the hazard or the exposure to the hazard can be a useful strategy in controlling the risks that cannot be eliminated.
- **Isolate**
  - Isolating the hazard is the principle of preventing contact with the hazard. It could involve enclosing the dangerous parts of a machine behind some guarding or enclosing spray painting in a booth.
- **Control**
  - Controls such as safe systems of work and permits to work are means by which we can seek to control the hazards to prevent them becoming injurious.
- **Personal Protective Equipment**
  - The supply of personal protective equipment is the final resort in controlling hazards, if the risks cannot be controlled by any collective means.
- **Discipline**
  - Instilling discipline into the workforce using supervision and, where necessary, having the appropriate means to discipline employees if they have worked unsafely due to their own neglect or failure to follow instructions.

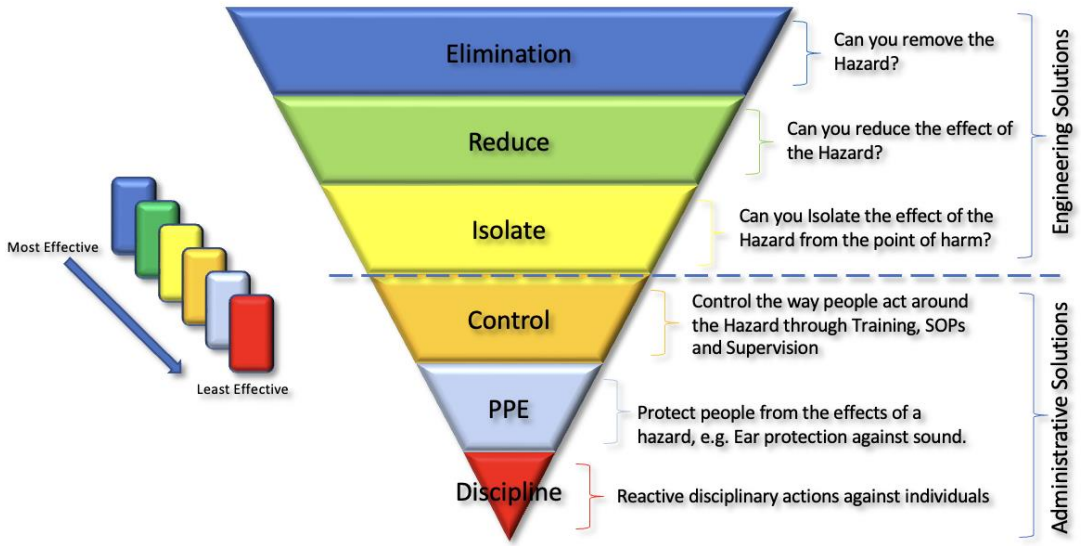


Figure 12 - Hierarchy of Control

Editing the Controls of your risk assessment

3.4 ACT

3.4.1 Action Plans

In the Check phase of the RMP the review of your existing controls may identify areas in which the core risk is not acceptable, or that improvements are needed or desirable. The RA must therefore include an action plan(s) that show the method of future control that need to be implemented. This action plan would also demonstrate a long-term reduction of risk which would be documented through a residual risk lower than the current core risk.

Important Points:

- Action plans must be in place for all High risks for the risk assessment to be submitted to validation. (Note: If any Ultra risk is identified, the function must not be continued until the risk has been reduced)
- All action plans have a maximum length of 6 months.

The principles of prevention and hierarchy of control must be applied when developing improvements or new controls. A reminder:

- **Prevention** is better than **protection** which is better than **mitigation**.
- **Engineering controls** are regarded more reliable than **procedural controls** which in turn are better than **behavioural controls**.

When reviewing ineffective control measures:

- **Engineering** concerns should adopt **Engineering** solutions
- **Procedural** concerns should adopt **procedural** solutions
- **Behavioural** concerns should adopt **behavioural** solutions

3.4.2 Risk Action Groups – RAG(s)

In some High-risk cases a regional or group action plan may be developed by a RAG (**R**isk **A**ction **G**roup). Examples of this will typically be hazards that have been defined at regional or group level to have a high risk. The RAG will then develop strategies to reduce the core risk of these hazards at a regional or group level. These action plans will detail the Group or Line of Business plan to manage this risk which may include regular VP/SVP review or hazard awareness campaigns. Like all action plans they will be limited to 6 months review by an accountable manager/VP/SVP. The details of these action plans will be documented in the risk assessment template and will be copied into your risk assessment when you create it. A facility RA will still be required to include an action plan with the details of the RAG group strategy. The action plan 'how to guide' shows you where you can find this information to create the action plan.

3.4.3 Creating an action plan

After completing the RA, if there are improvements that need to be made, action plan(s) should be raised with as much detail as possible with realistic implementation dates. The implementation dates should be prioritised so that they can be dealt with on a 'worst first' basis.

A good action plan might include:

- A few 'quick wins' - cheap or easy improvements that can be done quickly, perhaps as temporary solutions until more reliable controls are in place
- Long-term solutions to those risks with the worst potential consequences, especially personal injury or ill-health
- Establishing a programme of continuous improvement using technology on equipment to mitigate human error. E.g., fail-safe systems, auto cut-outs, proximity warnings
- Arrangements for training employees on the main risks that remain and the corresponding controls;
- Arrangements for monitoring to ensure that the control measures stay in place.
- Clear responsibilities for leading on individual actions; and
- Target dates for completion.

Creating an Action Plan

3.4.3.1 Creating Effective Actions

Identify action plans that eliminate or reduce the risk to ALARP - As Low As Reasonably Practicable. When identifying the action plans, some of the control measures may be more complicated or difficult to implement or some actions may take more time and resources to implement than others. In deciding which risk control measures to recommend and their priority, you should choose measures that reduce the exposure to the risk as much as possible, elimination of the risk is far more effective than administrative controls and PPE. Use the Principles of prevention and Hierarchy of Controls to help decide what type of control to include in the action plans.

3.4.3.2 Writing Effective Actions

The recommended actions should be written using the SMART principles, importantly action should be clear and concise. It is better to create multiple actions rather than group actions together, especially if different actions require different people to implement different things. The Validation Stage will review the actions and suggest any changes or additions.

3.4.3.3 SMART Definition

SMART	Definition
Specific	Ensure the recommended action is clear and specific. The action should include a clear statement that identifies what needs to be done, when and by whom. **Effective**: They need to address the actual problem in order to prevent re-occurrence or minimise its likelihood.
Measurable	Is it clear when this action will be complete; have you made it quantifiable?
Assignable	The action needs an owner. This should be the person who is accountable for ensuring the action is implemented.
Realistic	Ensure the intervention is achievable, within the scope of the action, and that they have adequate time to complete it. **Efficient**: If they eliminate the problem but the 'cost' to the business is that it cannot realistically operate then the recommendation needs to be reviewed.
Timebound	Ensure that there is a time frame within which the intervention should be completed and then check that it has been. **Sustainable:** The recommendation should not be a quick fix that will be forgotten in 6 months' time, or when staff leave and new staff arrive

3.4.4 Estimating the residual risk

This process is the same as the one conducted for calculating the Core Risk except you are estimating the effectiveness of the control measures you want to introduce. Considering the expected effectiveness of your future planned controls you are required to enter in the Future Severity and Future Likelihood. This in turn will generate the Residual Risk rating through the calculation used in the risk matrix.

If your new control has followed the principles of ALARP and SMART then it will have reduced the risk of the hazard causing harm. This will be quantifiable through inspection, audit, incident and near miss data. If the residual risk has not been effectively reduced, then it may be an indication that you need to improve the controls effectiveness further or that the controls don't sufficiently mitigate the hazard. When you complete your next RA review then you will be able to change the Core Risk to the new risk level should it have been demonstrated through supporting evidence.

4 Validation

Finally, Validation is the phase in which the RMP is approved by an accountable individual. The approval process ensures that the validator has reviewed the RMP and the senior facility/legal representative/VP/SVP leadership are aware of the control measure adopted. The validator confirms that the RA was conducted correctly, and any corrective actions are suitable and effective. The validation process confirms the responsibility for the RMP and its actions to the individual who carried out the assessment. In validating the RA, the validator confirms their ownership and accountability for the risk and it is tolerable to WFS. The validation process is dependent the difference between the template residual risk and the facilities residual risk. The following diagram details the steps required for validation depending on the core risk.

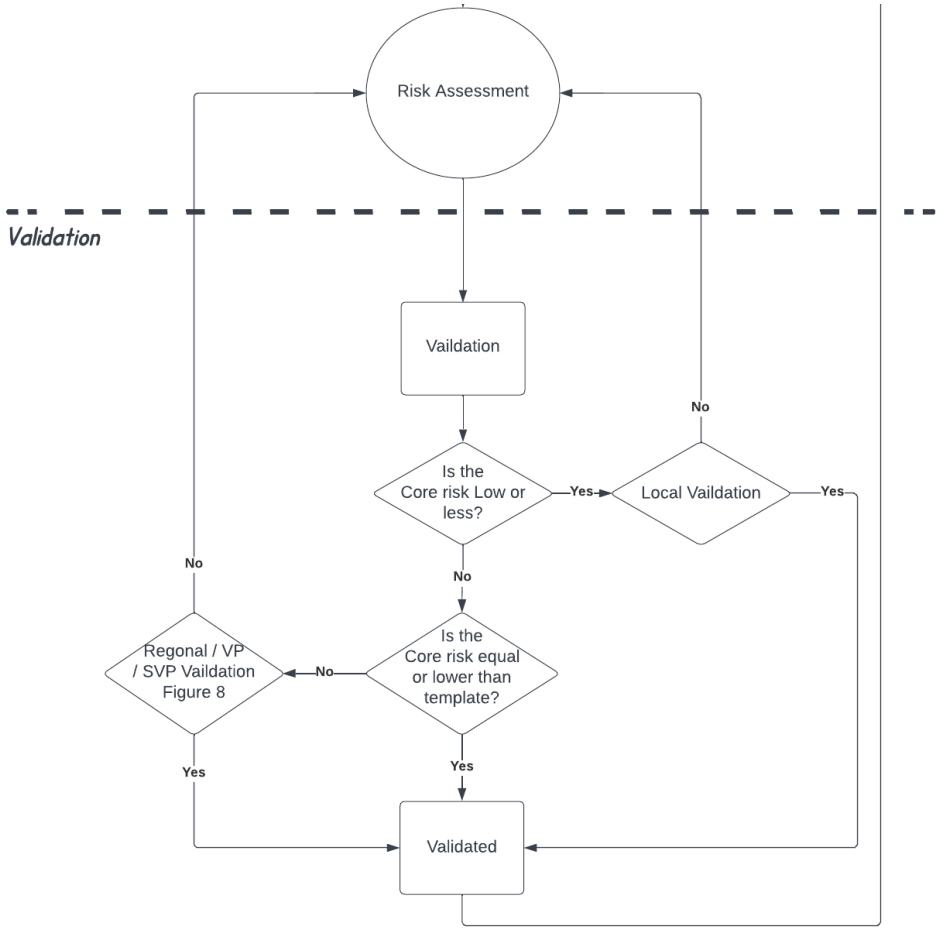
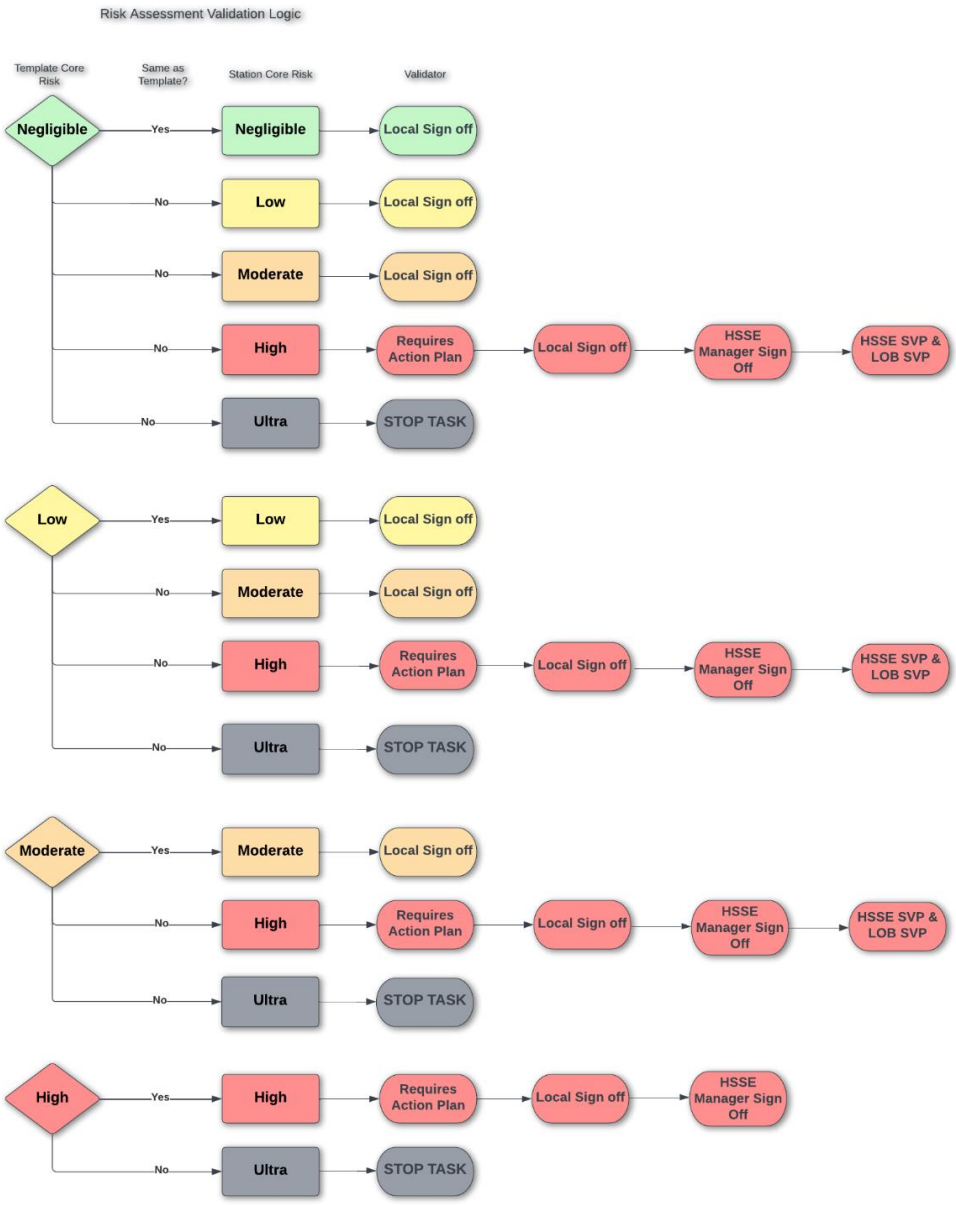


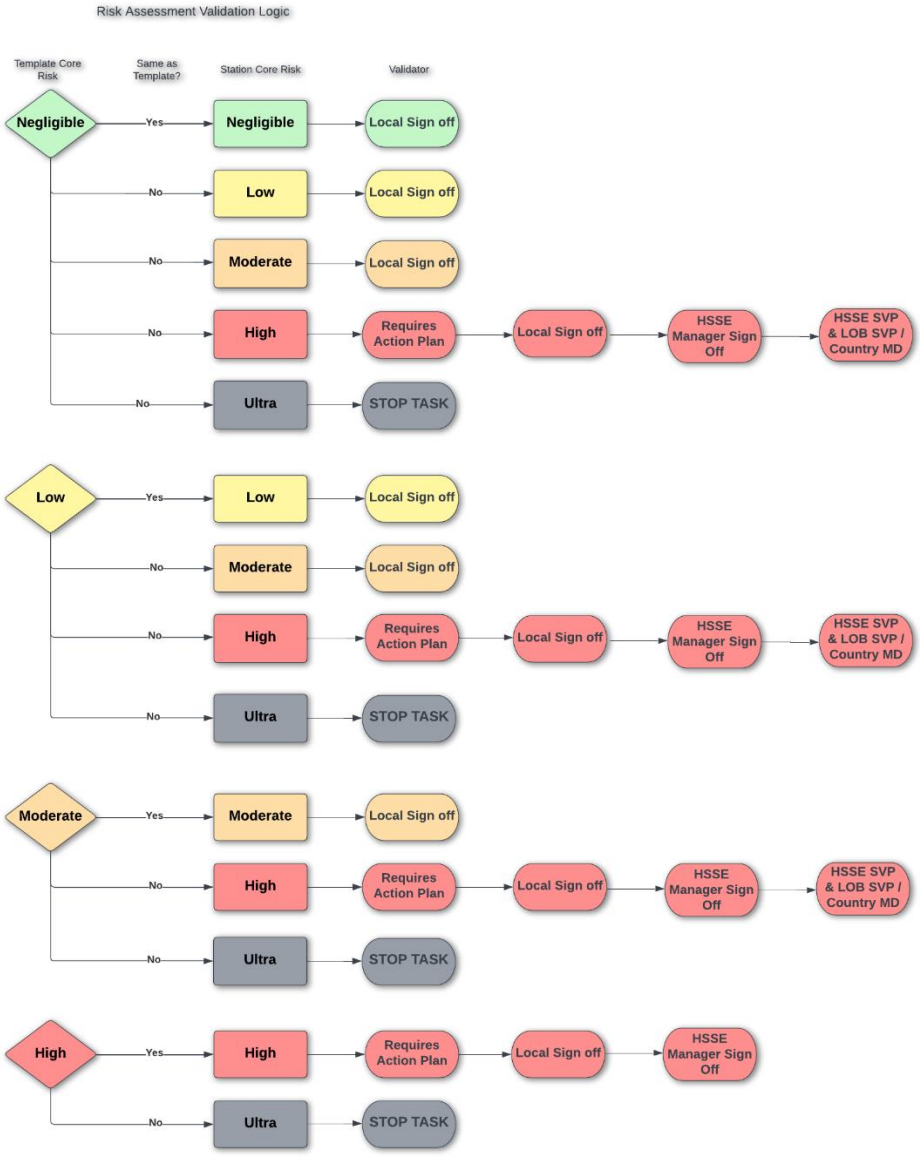
Figure 13 - Validation Flow

When a facility HSSE RA displays a change that results in an increase in the Core risk from the corporate template it is required to be reviewed by Regional VP/HSSE, and in the case of High/Ultra an SVP is required. Corporate templates display the calculated risk associated to a task while considering the standard risk controls detailed in the GOM. There is no change in requirement if the facility HSSE RA shows a lower residual risk to the corporate template.

Validating your Risk Assessment

The following diagram shows the validation workflow and the final validator for risk assessments. This flow is driven by the relationship between the template and station core risk.





5 Monitoring & Oversight

Figure 14 - Risk Assessment Validation Logic

and have KPIs applied to ensure continuous improvement and accountability at all levels. Within PowerBi there are dashboards to allow Stations, Countries, and Regions to monitor performance as-well as allowing the data to be reported on during monthly RSSBs.

These dashboards will allow group, regional and station management to make interventions and create actions for risk assessment activation or additional control measures to be applied should trending be observed. ERG meetings will also have the authority to instigate RMP due to recommendations formed from incident investigations.

6 Appendices

6.1 Hierarchy of Control

Eliminate

This may involve eliminating a task altogether. 'HSSE' should not, however be used as an excuse to not undertake a task.

Eliminating a specific hazard by design may be straightforward e.g., provision of adequate floor power sockets would eliminate trailing cable hazards; or it may involve introducing different hazards e.g., mechanical hazards rather than manual handling hazards or hydraulic power rather than electrical.

The implication of exchanging one hazard for another requires careful consideration.

The risks posed by a particular hazard should also be considered in the context of its benefits e.g., an electric lawn mower compared to a manual mower.

Reduce

Hazards may be reduced by substitution e.g., swapping a corrosive cleaning chemical for one that is irritant or a highly flammable solvent for one that is flammable; or by specification e.g., site rules requiring the use of 110V electrical equipment rather than 230V.

With this type of control strategy two things require consideration:

1) Is the lower hazard alternative as effective at doing the job?
2) Does the workforce appreciate that a lower hazard alternative is safer but not safe?

Isolate

Isolation strategies may be designed to keep the hazard away from people or to keep people away from the hazard, e.g., an acoustic enclosure around a noisy machine will contain the noise energy and keep it away from the workers whereas an acoustic haven provides a safe place for people away from noise sources.

Other examples of isolation strategies would include:

- Machinery guarding to stop people reaching the dangerous parts.
- Guard rails to prevent people falling off a scaffold.
- Security fencing to keep children away from construction sites.

Control

Engineering controls may be used to reduce exposure to a hazard, e.g., local exhaust ventilation (LEV) to control dust or fume near its source, minimising airborne concentrations reaching the workers breathing zone.

Organisational or procedural controls may be used to reduce overall exposure to a hazard. This may be particularly useful where there is a dose response relationship (i.e. the greater the exposure the greater the likelihood and / or severity of harm). Examples might include working time limitations or job rotation to reduce the frequency and duration of exposure to repetitive tasks such as manual handling.

Safe Systems of Work (SSW)

SSW defines safe methods of undertaking a particular activity. This includes method statements, safe operating procedures, and where necessary Permits-to-Work (PTW).

Personal Protective Equipment (PPE)

PPE is very much the last line of defence. PPE does nothing to prevent the accident from happening and does nothing until the accident happens in which case it provides a protective barrier to reduce the harmful consequences.

6.2 Terms of Reference - Risk Action Groups – RAGs

All High-risk Hazards will be by reviewed by the LOB or regional HSSE leads. Hazards that would benefit from a wider strategic approach will be passed onto a RAG (**R**isk **A**ction **G**roup). These will typically be those Hazards identified at multiple stations or within the Corporate or LOB templates. The RAG will then develop strategies to reduce the core risk of these hazards for them to be implemented at regional and station level. These will take the form of Pulse action plans detailing the Group or Line of Business plan to manage this risk which will include, projects, regular VP/SVP review or hazard awareness campaigns.

RAG groups will also take ownership for any actions developed in response to an Event Review Group (ERG) that are applicable beyond the scope of a single station.

Hazards and associated plans developed by the RAG will be reported to the RSSB in a specific section of the meeting.

RAG Groups

I. Ramp Safety & Damage.
II. Warehouse Safety (including Dangerous Goods).
III. Security.

RAG meeting frequency

I. Every month on a date defined by the chairperson.
II. Date needs to reflect the need to report to the RSSB, preferably the week prior to the RSSB.

Chairperson

I. Regional Operational Leader
    a. Responsibilities
        i. Reporting to RSSB ongoing performance.
        ii. Providing RAG prioritisation of Hazard focus.
        iii. Assigning RAG resources to action plan projects.
        iv. Ensuring RAG projects are progressed in a timely manner.
        v. Be a champion for change and dynamic risk management within the business.

Group Composition

I. A team selected by chairperson and regional HSSE SVP/VP.
II. A suitable mix of Operational and HSSE SME representatives.
III. Representation from front line colleagues.
    a. Responsibilities.
        i. Developing dynamic hazard control action plans.
        ii. Attending relevant ERG calls.
        iii. Take part or lead project teams for risk reduction.