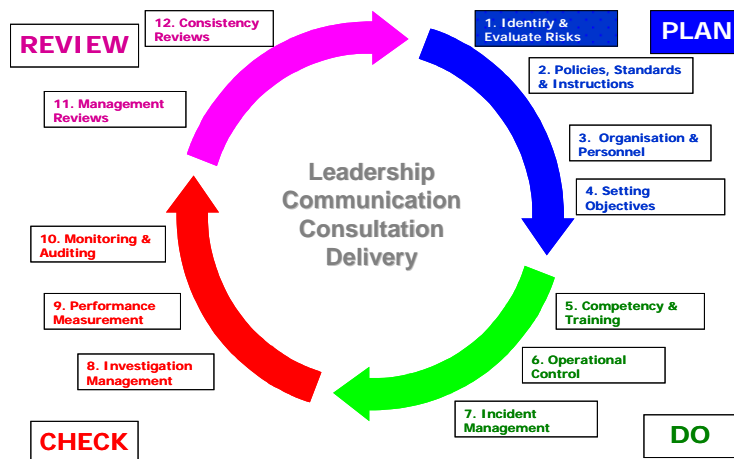




HSE Guidance

A practical guide to assessing and managing health and safety risks

MRS: Section 1: Identify & Evaluate Risks



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1. Introduction

Why risk assessment matters

Effective risk assessment and risk management protect people and the environment... and it's good business.

Accidents, incidents and near-misses carry a very high human cost as well as serious financial costs. It's too late once something has gone wrong. So it is essential to identify the risks in advance, and put controls in place that reduce the chances of hurting people or damaging our workplace.

This guide

Our Health and Safety Performance Standard HSSE-MRS-PL-001 identifies the risks we must assess in BAA, and why. This guide explains how we do it.

Everyday risk assessment

Assessing risks is something we all do instinctively every day. When we drive a car, for example, we have to assess whether it is safe to drive off, or how much braking distance we need between us and the car in front.

At work, too, we must all be constantly alert to what might affect our health and safety, and those about us. And if we see something we must make it safe if we can, or report it at once to our manager or supervisor.

A systematic approach

Although we're instinctively on the look-out for risks all the time, this guide concentrates on formal risk assessment – a systematic process to identify, examine and reduce risk.

You must be trained to the appropriate level before carrying out a formal risk assessment. The training is available through Uni and while this guide complements that training, it is in no way a substitute for it.

2. What risk assessment is and does

Everything we do carries some risk. And while it's virtually impossible to eliminate them entirely, we can minimise and limit them with risk assessment.

Risk assessment is a systematic process that allows us to identify:

- what, in our work, could harm people or the environment
- how likely it is to happen
- what we can do to reduce the chance of it happening

3. The terminology

It is important to understand the language of risk assessment, so that everyone uses the same terminology and operates consistently.

A hazard

...is anything with the potential to cause harm. We look for anything that could cause a problem... electricity, noise, chemicals, moving machinery, a slippery floor, dust, etc.

The likelihood

...is the probability that harm will occur. We assess whether it is likely to happen today... in the next week... the next year... never.

The severity

...is the amount of harm caused if it does go wrong – a small cut or an amputation... a minor trip or serious fall... chronic ill health or even death?

The consequence

...is the result of the hazard actually causing a problem. So it's the harm the hazard causes – electrocution, deafness, poisoning, wounds and cuts, breathing problems, or whatever.

NOTE: The accepted practice in Health and Safety circles is to combine severity and consequence and refer to the combination as the consequence. We follow that convention in the rest of this document.

Risk

...is a combination of the likelihood and probable consequence. There are several ways of expressing this, and BAA has adopted the specific expression that you will find in Section 9. Assessing the Residual Risk. You must follow this convention, to avoid confusion and to enable risks to be easily compared.

Control measure

... is anything put in place to reduce a risk, either by reducing the likelihood of harm or its severity.

4. When to do an assessment

We always need to do an assessment:

- before we carry out any work activity for the first time
- before any new equipment or substance is used for the first time
- following an accident or near miss
- following any material change, such as a process alteration.

In 'normal' circumstances' – when none of these applies – we must review the most recent assessment within 3 years.

5. Everyone plays a part

Everyone looks out for risks. No exceptions. It isn't someone else's responsibility; it's up to you to be constantly alert to what might affect your own health and safety, and the health and safety of those around you.

You do this yourself, by considering whether anything has changed since the last assessment. If it has, we need a formal review of the risk assessment.

You should also encourage your colleagues to be just as vigilant, and to report any perceived risks to the appropriate supervisor and manager.

Working together like this ensures that we manage risks effectively, and we keep BAA a safe company.

6. Formal risk assessments - responsibilities

Management

Management are accountable for ensuring that formal risk assessments are completed and up-to-date for:

1. activities of the BAA employees they are responsible for
2. any processes, operations or facilities they are responsible for, which impact on members of the public, other employees or third parties
3. any plant or equipment they are responsible for, whether BAA owns, hires or borrows them
4. any risks identified to them by third parties, that may affect 1, 2 or 3.

Whilst a manager can't delegate accountability s/he may delegate responsibility for leading the assessment to a trained and competent member of staff.

The make-up and roles of the assessment team

A team approach is essential for a comprehensive and effective assessment. A successful assessment team contains members who, as a group:

- understand what the equipment, process, activity or facility being considered is designed to do
- know in detail how the work is actually done *and*
- understand what risk assessment is for, and how to do it.

At least one of the team members must have been trained as a BAA risk assessment facilitator. There are some clearly defined key roles in the team.

Assessment leader

This is a manager or supervisor responsible for the area, staff or process. In some locations there is local agreement that responsibility for conducting the assessment may be delegated to an appropriately trained member of staff.

BAA is legally responsible for carrying out adequate risk assessments, because of its status as employer, landlord, or controller of premises. The assessment leader's role is to enable BAA to discharge this responsibility, through:

- ensuring the facilitator understands what is to be assessed
- with the facilitator, deciding who should comprise the assessment team
- researching relevant information that may be needed for the assessment (such as third party observations, and accident and near-miss data)
- organising and arranging the assessment
- ensuring the assessment adequately identifies all risks

6. Formal risk assessments – responsibilities (continued)

- recording and communicating the completed assessment.

Risk assessment facilitator

This could be the assessment leader, or another team member.

She or he:

- must have been trained as a BAA risk assessment facilitator
- must be competent to run the process that they are guiding the assessment team through
- helps set up the team, and ensures they understand their objective, their roles, the terminology used, and the process to be followed
- ensures that all members of the team can contribute fully to the assessment.

The safety representative and any other competent members of the workforce

You must involve members of the workforce who are familiar with the activity, equipment and location being assessed; and if there's an appointed safety representative for the section or department they should be given the opportunity to join the team.

Members of the workforce generally have front-line skills and detailed knowledge of day-to-day tasks - so they can bring expertise to the team that helps ensure that:

- the assessment covers all the key hazards and risks
- any actions taken to reduce risk are realistic and achievable.

Other relevant people

Sometimes the risk being assessed interfaces with other BAA teams or other organisations – or the activities of others have a potential impact on your own health and safety. So it is important to consider consulting representatives from those other teams, areas and bodies as part of your assessment.

With common user areas for example, those other users may well add real value to the assessment.

7. The risk assessment process – at a glance

Step 1 – Identify the work tasks / jobs / areas to be assessed

Methodically working through job functions, physical areas and processes usually pinpoints the main assessment requirements. But it may also bring about duplication, so avoid assessing something twice. For example, an Engineering Technician's job role, the baggage sort area and a belt breakdown process are likely to overlap.



Step 2 – Analyse and break down the tasks into manageable pieces

Break processes down into individual tasks or sub-processes, so you are looking at manageable-sized chunks. Check to see whether there are any generic assessments for these. If there are, check whether they are suitable to cover the risks in your area, or whether you need to review and localise them.



Step 3 – Identify all the hazards and list them on the form.

Using the Risk Assessment Form, note all the hazards that the team identifies. Against each one note the likelihood, the consequences and the people at risk.



Step 4: Record and review the existing control measures

List the existing control measures and arrange them in priority order (= effectiveness). Make certain that everything on the list is accurate – that is, it is actually being applied and is effective in reducing the risk.



Step 5 – Assess the remaining level of risk

Take the existing control measures into account first, then use the Risk Matrix to determine the remaining risk. Consider the likelihood or frequency of an accident, and the most likely level of impact or consequence – not the most extreme.



Step 6 – Decide whether further action is needed to reduce the level of risk

Consider carefully – is the level of risk acceptable and can it be reduced further? Note on the form the action required, the person responsible, and the timescale. Then make sure that the action is carried out.



Step 7 – Complete and communicate the assessment.

Check the form for completeness and accuracy, and make sure everyone affected knows about it. A period of wider consultation often helps at this stage as it gives all the interested parties – the workforce, safety reps, business partners, local safety adviser, etc. – the chance to make any final contributions. Once the manager has incorporated any amendments and signed off the assessment, make sure a copy is filed on the Airport Document Database, or a locally agreed database.



Step 8 – Review the assessment as appropriate

The risk assessment must be reviewed:

- as soon as there is a change to work conditions, equipment, or practices
- if there is a significant accident, or near miss
- within 3 years of the last review, in any event.

8. Identifying the hazards and the people at risk

Sources of information

You can pinpoint hazards from a number of sources, including:

- an analysis of accident / near-miss reports and their causes
- existing generic risk assessments, or assessments of similar risks
- instructions or hazard data sheets from equipment or substance manufacturers or suppliers
- task or job analysis – breaking the overall process or activity down into smaller, individual tasks or operations
- the experience of the assessment team, in this or similar operations.

External factors

It is important to consider whether there are any external factors that could influence these hazards, or create additional ones. For example:

- during the night, darkness or fewer people about may increase the risk – so the risk of assault might increase as there is less chance of someone noticing or raising the alarm
- access to and from some areas may be restricted at certain times
- certain weather conditions – hot, cold, windy, foggy or wet – could affect materials and surfaces
- noise – may be a hazard in its own right or may mask audible warnings
- emergencies or unusual events, like a fire, water leak or security alert.

Who is at risk

You must identify who is likely to be affected – the public... specific BAA staff... other employers' staff... emergency services staff... whoever.

You may need to take account of the following specific groups.

- The under-18s at work are likely to be inexperienced, less skilled, more likely to lark about and less risk-aware than older staff. Children are more inquisitive, more agile, smaller, harder to control, and much less aware of risk than adults (see HSS20)
- Nursing and expectant mothers at work are also more at risk, as they may be less agile, or more prone to tiredness. See HSS28.
- People with a disability may be less mobile, and less able to pick up audible or visual warnings

9. Assessing the risk with the BAA matrix

To assess the risk from the information we have so far, we first consider the existing control measures, then decide:

- what is the likelihood of the harm occurring
- if it did happen what would be the most likely outcome.

The likelihood is relatively straightforward. We can use our accident records, information from external sources and our own judgement and experience.

Determining the consequence is less scientific and more a matter of team judgement. You decide what the worst probable outcome is likely to be. That's not the worst possible outcome – we're looking at the most likely scenario.

9. Assessing the risk with the BAA matrix
(Continued)

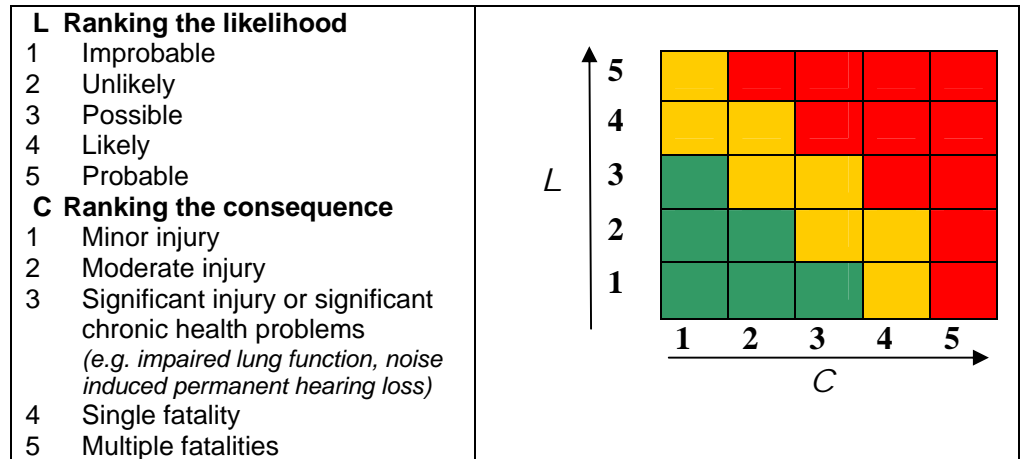
Take someone falling from a 2 metre step ladder. They might die or they might get up without a scratch. But the most probable outcome is a broken bone.

Using the matrix

Using the definitions below, give the likelihood and probable consequences an appropriate value and plot the results on the matrix. The colour code is that:

- risks in the red zone are high risks
- those in the amber zone are medium
- those in the green zone are low risks.

Stick to the colours and DO NOT multiply the numbers to give relative risks – the outcomes are misleading.



10. Hierarchy of effective control measures

There's often more than one way to control any given risk. So we must identify all the possible measures, then consider and prioritise them in a structured way. It isn't about leaping to the first solution that occurs to us!

So we have a list – sometimes called a control hierarchy – that must be used to consider and rank the range of potential control measures. It is based on some straightforward and powerful principles.

- Preventing an accident is better than reacting to it once it happens.
- It is better to use physical means than to rely on people following management procedures.
- Measures that protect everyone in the workplace are preferable to those that protect only one individual.
- Measures that fail to a safe condition are preferable to measures which fail to danger, (So, for example, a washing machine door has a safety feature that won't let you open the machine while it's running. If the door is forced open, it shuts off the electricity to the motor. It fails to safety. However, if safety gloves fail the person wearing them is at real risk. They fail to danger.)

The control hierarchy

When considering how to reduce a risk, start at the top of the list.

So elimination is always the first choice – but if it isn't possible to eliminate the risk completely, or the cost of doing so is out of all proportion to the reduction in the risk, then move on to consider substitution.

10. Hierarchy of effective control measures (Continued)

But if substitution is not possible either or the cost is again out of proportion to the reduction in the risk, it's on to isolation. And so on down the list. The hierarchy works whether you are looking at just one control, or may be that several. The rule stays the same – always follow the hierarchy

Control	Explanation	Example
Elimination	Change the process to eradicate the hazard. Stop using or remove the hazardous article or substance	Use a fork-lift instead of manual handling Remove the old cable.
Substitution	Use a different product, article or substance.	Use battery tools rather than mains ones, or water-based products instead of solvent-based ones.
Isolation	Use barriers or fencing to prevent access.	Provide guards on machinery, preferably interlocked. Operate equipment remotely, or totally or partially enclose it.
Engineered Controls	Engineering Design (Safe Place strategy)	Silencers, dampers, insulation,
	Design (Safe Person strategy)	Local exhaust ventilation, etc.
	Limit the exposure	Operate Permits to Work (PTW) system, produce a written Safe System of Work (SSoW), and provide information, instruction, and training. Job rotation. Cut the time exposure to noise and hazardous substances.
Personal Protective Equipment (PPE)	Special equipment that tolerates the risk and focuses on the consequences NOTE: Although PPE is a last resort, it may be useful as a short term measure while more robust controls are put in place and as a “reserve” in case other controls fail.	Hard hat, safety shoes, fall-arrest harness, breathing apparatus, gloves, eye shields, ear defenders, etc.
Discipline	Company rules, procedures, and instructions. Supervision.	Disciplinary procedures. Signs and posters. Consistent management line.

From the general to the specific

In the hierarchy chart there are references to *training... supervision... instructions* and so on. These are general principles in a general chart – but they do not say enough to produce effective and specific control measures for a detailed risk assessment.

For example, the word *training* does not explain what or how training reduces the risk, or how often it should be given. It needs a specific context and framework that fits the risk under review – for example, *All staff working in the stores will receive manual handling training every two years.*

10. Hierarchy of effective control measures (Continued)

The control measures always have to fit the specifics of the problem – and work. So, for example:

- *Airport Fire Service attendance* cannot be guaranteed for all fire incidents, so it is not an effective control. Maybe this situation needs a strict no-smoking policy along with smoke alarms and extinguishers.
- *Training* must cover everyone at risk or it can never be fully effective. So identify who needs the training and specify their job roles.
- *Supervision* implies the individual is under the constant watchful eye of a senior and/or experienced worker. Except for trainees and young persons this is rarely the case. So *supervision* is difficult to specify.
- *PPE* does not indicate the type or specification of the protective clothing or equipment. Be specific and fit the solution to the situation.
- *Approvals process... written instructions* and the like are too vague. Specify the document title or reference, use *must* or *shall* instead of *should* and spell out the sanctions if it's a disciplinary matter.

One final word on controls – always check that a control we assume to be in place actually is and is effective, before accepting it as an existing risk control measure on our assessment.

11. Action planning

Before committing a final version to paper, just ask yourself and the team:

“Is there anything we could do to reduce the risk further?”

Look again at the controls list, and if there are additional actions you can take add them to the end column on the risk assessment form (Appendix 1)

With all the actions listed, transfer the list to the local SMS action plan so that they will definitely be followed up.

Remember – as soon as any new control measures are in place they need to go into the *Control Measures* column of the risk assessment form.

12. Recording the assessment

Carrying out a systematic study of our work-related risks is one thing. But doing the assessment is not enough on its own.

The significant results of an assessment must be recorded in writing. It is not only a legal requirement, but it also safeguards all the work done. There is no point in an assessment that nobody can remember, a month later.

What to record

Record details of the:

- scope of the risk assessment – what it covers... process or area
- population affected by the hazards (i.e. employee groups, third party employees, or public – plus any special categories such as young persons, new or expectant mothers, etc)
- name of the line manager responsible for the assessment
- names and roles of assessment team members
- date it took place
- hazards identified and their consequences
- existing control measures and factors that might mitigate the risk
- residual risk – the level of risk **after** considering existing controls

12. Recording the assessment (Continued)

- further actions needed, the person responsible for carrying them out and the timescale for completion.

How to record it

You must use the standard risk assessment form (Appendix 1) unless you have been instructed differently by the local Safety Office. It covers all the information needed.

To ensure consistency there is also a standard format for numbering risk assessments (Appendix 2).

All assessments must be recorded on the Airports Document Database or locally agreed database, and a copy must go into any relevant local safety manual.

If your risk assessment produces a red risk, it must be put onto the appropriate Key Risk Register (there's more on this in the next section).

13. Use and communicate the results

So far we have spent a lot of time and resources to produce a comprehensive document that meets the legal benchmark of being *suitable and sufficient*.

But a document is only useful when we put it into action. So the information has to go to those who are exposed to the risks, or who are implementing and monitoring the control measures.

Who to inform

We need to provide:

- a copy of the risk assessment to the safety representatives of the staff exposed to the risk
- information about risks that affect other staff, to their employers – or the individual if s/he is self-employed.
(Department managers must have a process for doing this, and for capturing and assessing any risks those employers make us aware of).
- information to our staff on:
 - the risks of doing their job
 - the controls that reduce them.

How to inform them

We have to give the information to staff and colleagues in a way that allows them to ask questions and confirm their understanding.

This may mean an oral briefing, because simply placing the assessment in a safety manual or on a notice board, and leaving it to the individual to find and read is not acceptable.

The Key Safety Risk Registers and Key Business Risk Registers

If your risk assessment produces a red risk, it must be put onto the appropriate Key Safety Risk Register. These registers are used mainly at business unit or airport level and:

- allow senior management teams to identify and track the most serious risks,
- lists how that risk is managed and controlled,
- are in a format that supports the review and reporting of risks at a local and group level.

13. Use and communicate the results (Continued)

So they help BAA as a whole to manage and control the risks that might otherwise cause significant injury or loss to our business.

The significant risks that must be reported to the appropriate register are:

- residual risks in the red zone of the matrix
- significant amber risks, if the controls in place may become ineffective (for example, a period of re-organisation may result in some management procedures being missed if not adequately identified and managed).

Any significant residual risks identified by a risk assessment must also be recorded on the department's Key Safety Risk Register. And any risks in the red zone of that register must then be copied to the departmental Key Business Risk Register.

You can find the risk register template and more guidance, on the Risk Management intranet site.

Using the assessment for Safe Systems of Work and Method statements

Where we need to develop a written *Safe System of Work* or *Method statement*, use the risk assessment as the source document. It will contain all the significant risks and control measures that you need to build into a safe working procedure.

14. Review and audit

When to review

Risk assessments must be reviewed:

- whenever there has been a serious accident or potentially serious accident involving the activity, equipment, or facility assessed
- whenever there is a near miss, where no one was hurt or no damage was caused although it could have been
- before new equipment or work procedures are introduced (including re-organisation or relocation of the task).
- whenever a third party advises us of a risk that has not already been adequately considered
- within three years after the most recent review, in any event.

Audit arrangements

Assessments are audited at various levels.

Departments

Departments should examine their own risk assessment procedures and outcomes, as a natural function of their ongoing inspection and management role. This guide will help to check the adequacy of your own risk assessments.

Heads of Section

Heads of Section should make sure that:

- there are effective controls covering the risks, especially those that feature on any of their Key Risk Registers.
- the actions specified to further reduce those risks are implemented and signed off.

Local safety departments

Local safety departments will carry out sample audits, on assessments and the

appropriate use of risk registers.

Appendix 1

Risk assessment form

Subject of risk assessment :			Work activity and Location:			
Reference number:			Dept / Section:			
Date completed:			Replaces RA dated:			
RA team members:			Signed (RA co-ordinator)			
			Line manager:			
Hazards identified, harmful consequences, persons at risk	Existing control measures and their effectiveness	Residual risk (see note)			Actions required, and target date	Person responsible
		L 1-5	C 1-5	R R,A,G		

Continue with extra lines if needed.

Appendix 1 notes:

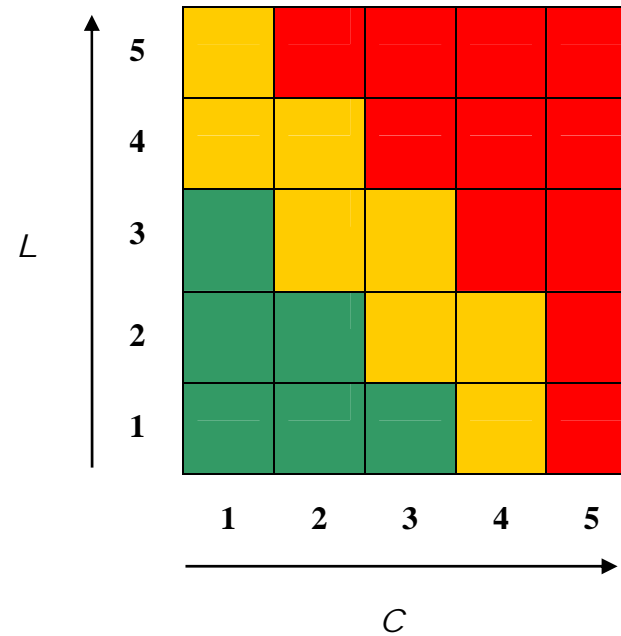
Risk level: L = Likelihood C = Consequence R = Risk (Red, Amber, Green)

L Ranking the likelihood

- 1 Improbable
- 2 Unlikely
- 3 Possible
- 4 Likely
- 5 Probable

C Ranking the consequence

- 1 Minor injury
- 2 Moderate injury
- 3 Significant injury or significant chronic health problems
(e.g. impaired lung function, noise-induced permanent hearing loss)
- 4 Single fatality
- 5 Multiple fatalities



Appendix 2

Format for risk assessment references

Risk assessments must list the following information...	Airport	Regulation	Business unit	Assessment number	Date
...as a series of abbreviations in the format...	aaa	aaa	an	nnnn	nnnnnn
The company abbreviations are... Aberdeen Edinburgh Gatwick Glasgow Heathrow Heathrow Express Stansted Southampton World Duty Free	AAL EAL GAL GLA HAL HEX STA SIA WDF				
The various regulations are... Management of Health & Safety at Work Control Of Substances Hazardous to Health Display Screen Equipment Manual Handling Operations Provision and Use of Work Equipment Lifting Operations and Lifting Equipment Personal Protective Equipment First Aid Noise at Work		MHS CSH DSE MHO PUW LOL PPE FAW NOI			
Business Unit... organised by airport as a two letter/number abbreviation			T2, ROetc		
Assessment number... Each business unit assigns its own 4 digit numbers				1234, 1357 etc	
Date... date month year as a six digit number. So 12 Nov. 2003 is...					121103

Where the risk assessment covers more than one set of regulations, for example a generic activity assessment, list them collectively as MHS

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