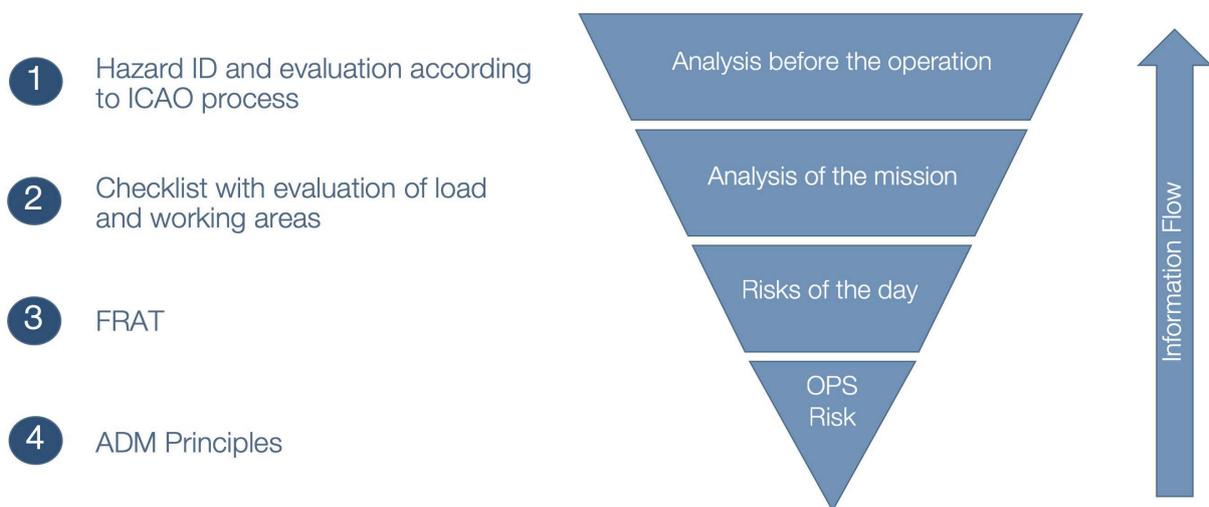


NGFT – Safety Tools / Risk Assessment Management Guide

NGFT Safety Tools is a web application that will allow to setup and develop Risk Analyses for various areas in your company. It is part of the risk management process in your company and should be an integral part of your SMS. There can be many applications of the risk management process within an organization, customized to achieve objectives and to suit the external and internal context in which they are applied.

The Workplace Risk Analysis Tool and Flight Risk Analysis Tool are part of an integrated risk analysis process.



The process starts with a general analysis of risks before you commence a specific type of operation (e.g. underslung loads). These risks are addressed in your SOP for the operation.

When you receive the request for an operation, you may be able to scout the the pick-up and drop-off area. This is where the workplace risk assessment tool (WORA) comes in. It allows you to identify risks relating to the ground operation part of the mission. The risk are then sent to the pilot and crew actually performing the mission. This will give them a heads-up on what they can expect and therefore make a better plan to perform the mission.

On the day of the operation, you perform the Flight Risk Assessment (FRAT). This will again allow the crew to better prepare themselves for the mission of the day. It also serves as info for the crew briefing where all relevant risks are discussed.

Finally, in flight the crew uses ADM principles to deal with any change in plan or different circumstances.

All four elements form an integral part of the safety assurance process in your SMS by providing a feed-back loop to the safety manager and management. For more

information, please check out our webinar on [Structured Risk Analysis in Aerial Work Operations](#).

The Safety Tools FRAT is a very flexible tool that can provide you with a very simple questionnaire or an elaborated, factor dependent risk analysis.

We continuously want to make this tool better. Please send us your feed-back and suggestions to:

frat@ngft.com

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1 Introduction

Create, import, edit and publish risk assessments for your crew with NGFT's Risk Assessment Tool. This manual supports risk tool managers and helps them using the toolbox provided by NGFT.

Using this guide will help you when importing prefabricated risk assessments, editing your existing risk assessments, or creating new risk assessments from scratch.

Moreover, you'll get to know functions and features like:

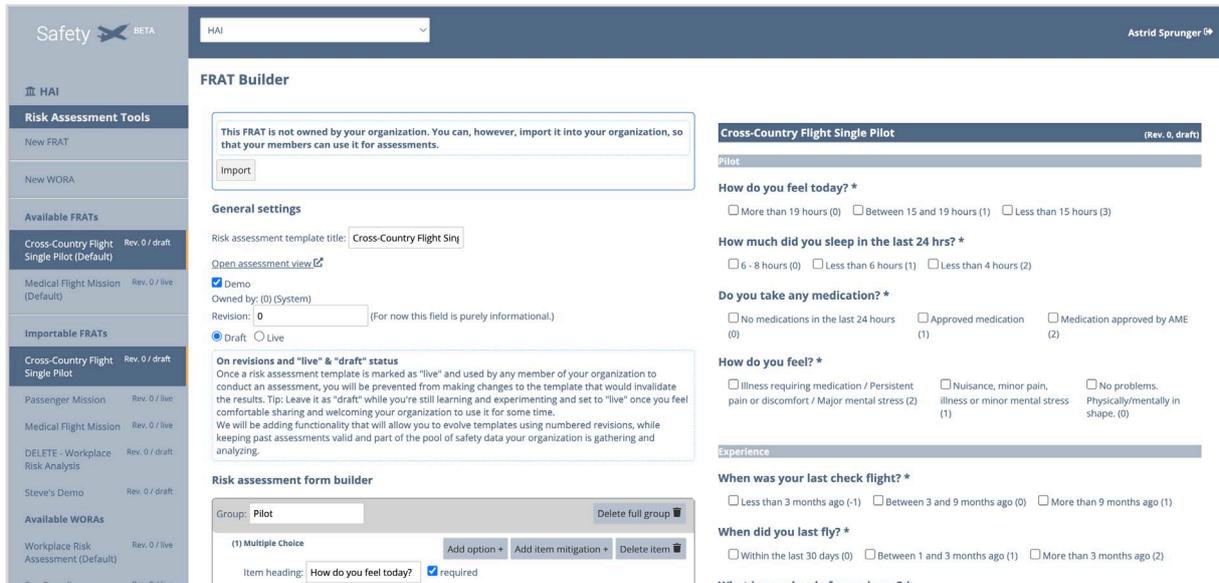
- Groups
- Items
 - Multiple choice
 - Tag
 - Slider
- Mitigations
- Flags
- Risk levels
- Modifiers

1.1 FRAT Overview

The processes described in this guide are based on a single risk assessment example. To get a more widespread impression of possible risk assessments that you can produce with this tool, go to <https://app.ngft.com/0/safety>.

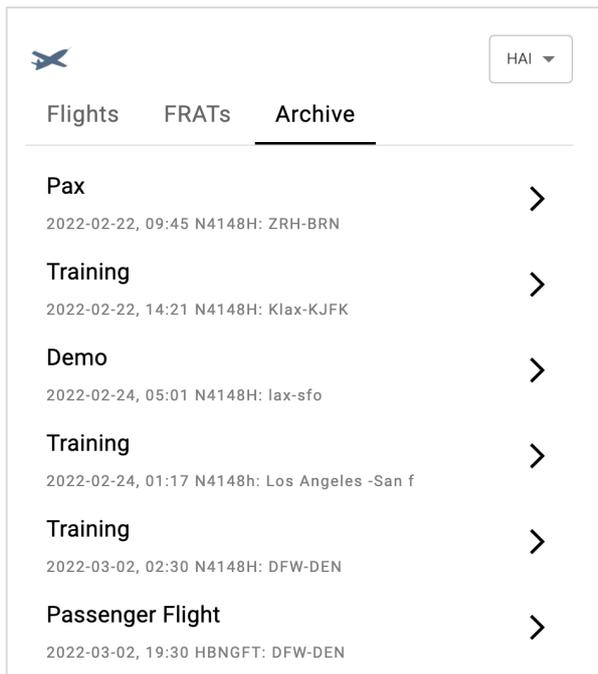
There are three different views available in the FRAT tool:

1. Administrator view (includes management of WORA, FRAT and Crew Overview) This view is reserved to logged-in users with administrator privileges.



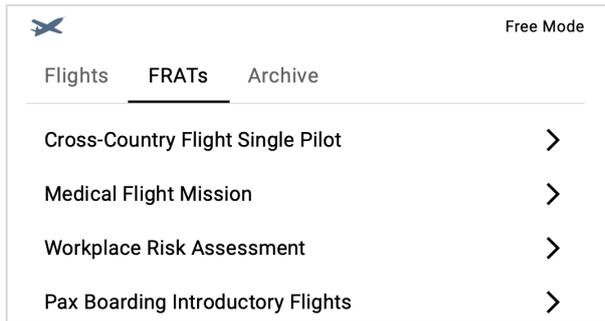
2. User with login (includes flight function, WORA and FRAT)

Users with Login can open a flight, perform FRATs and manage their flights in the archive.



3. User of free version (FRAT only)

Guest users without a login are only able to use the risk assessment view.



In order to best use the system, we suggest you set up your crew in Crew Overview. Then you assign WORA and FRAT to them. Once logged in, your crew will be able to use all functions of the WORA and FRAT tools.

1.2 Access to FRAT

Log in using the link in the top-right corner to access your company-specific risk assessment area. To be able to import, edit and create risk assessments, you'll need to be assigned with the corresponding user role from the user management at my.ngft.com.

For information on the crew management system, see this guide for more details.

2 Risk assessments (as a regular user)

Let's look at risk assessment in the role of a regular user, i.e. a user wanting to get a risk evaluation for a specific flight/operation.

2.1 Setting up a flight

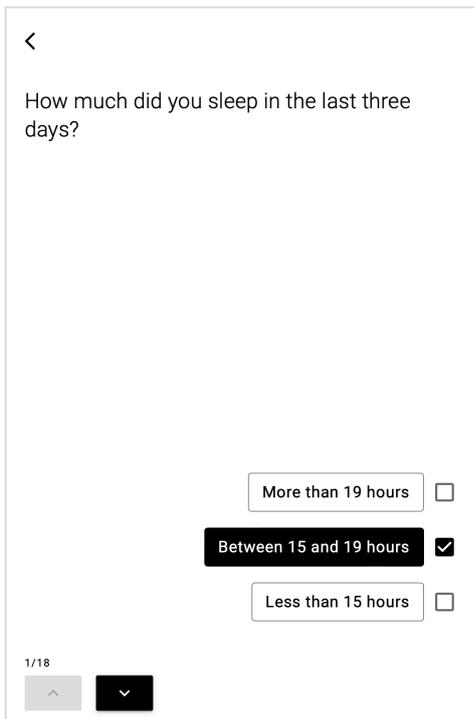
Before your crew can begin to fill out a FRAT, they need to open a flight. The FRAT, any reports or post-flight briefings can be linked to a flight. To set up a flight, the crew must add the following information:

- Date
- Departure, destination, alternate
- Time of take-off, expected en-route time
- Number on board
- PIC

These elements are stored and can be retrieved later.

2.2 Provide answers to evaluate risk

While you work your way through the items (questions) and maybe also add custom risks, your corresponding risk level is amounting to the score shown in the "Results"



<

How much did you sleep in the last three days?

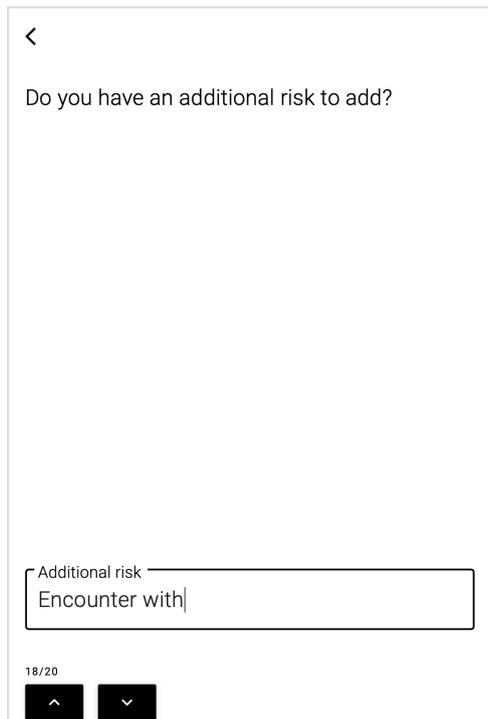
More than 19 hours

Between 15 and 19 hours

Less than 15 hours

1/18

^ v



<

Do you have an additional risk to add?

Additional risk

Encounter with

18/20

^ v

2.3 Choose mitigations to reevaluate

Below the risk level indicator, you may find available mitigation measures. The provided mitigation measures depend on the assessment answers given above.

You now choose the mitigation measures you intend to apply. Finally the mitigated score is your result to take into account if you apply the measures selected.

← Risk score

Cross-Country Flight Single Pilot

Get rest at the destination, take a break	<input type="checkbox"/>
Get rest at the destination, take a break	<input type="checkbox"/>
Stop! Don't fly!	<input type="checkbox"/>
Limit flight activity is possible. Get rest if possible, review effects of meds with AME	<input type="checkbox"/>
Review Operating Manual with focus on systems and emergencies	<input type="checkbox"/>

2.4 Print to PDF

In the current “beta” phase you can save your risk assessment as a pdf file. The release version will provide an email sending feature as well as an integration to NGFT’s safety management system and an export formats and data connectors to third-party safety systems.

3 Create, import and modify risk assessments templates

This part covers the functions of the FRAT Builder. To be able to access the creation view of the risk assessment tool, your user must have corresponding access rights.

With admin access rights, the left sidebar contains the following added functionality:

FRATs (flight risk assessments) and WORAs (workplace risk assessments) are identical in their function and behavior, but they are used in different areas and/or by different crew. Everything that refers to FRATs in this guide equally applies to WORAs.



New FRAT: create a new blank assessment template (see 3.1).

Available FRATs: List of assessment templates created or imported into your organization’s collection of available FRATs. “Rev. X” indicates the revision of the corresponding FRAT and status (e.g. “draft”) refers to whether your assessment template is still being edited or already published to your crew and final users (see 3.3). The indication “(imported)” shows that this FRAT has been imported from the importable FRATs (see below).

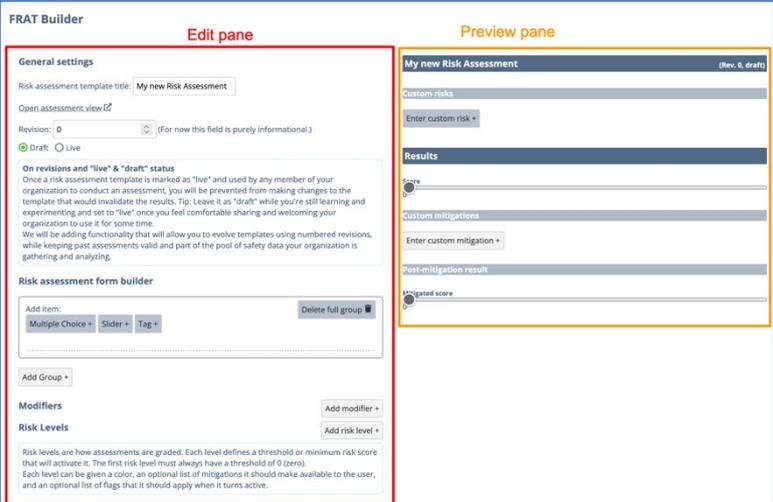
Importable FRATs: These are completely preconfigured FRATs made available by NGFT. You may import those to your organization in order to make them appear under “Available FRATs” with the trailing indication “(imported)” in their name. Imported FRATs can be made available to the organization users. **You can either use those imported FRATs without modifications or create your own organization-specific revisions to start from. (NOT YET IMPLEMENTED)**

3.1 Elements of Risk Assessments

While editing or creating an assessment template, the main screen is split vertically.

Setup and editing are done on the left while the right side provides a current preview.

You may need to click an element in the preview pane to force it to reflect the latest change made in the edit pane.



The screenshot shows the FRAT Builder interface with two main panes: the Edit pane on the left and the Preview pane on the right. The Edit pane is titled 'Edit pane' and contains sections for 'General settings', 'Risk assessment form builder', and 'Modifiers'. The Preview pane is titled 'Preview pane' and shows a preview of the risk assessment form with sections for 'My new Risk Assessment', 'Custom risks', 'Results', 'Custom mitigations', and 'Assessment mitigation result'.

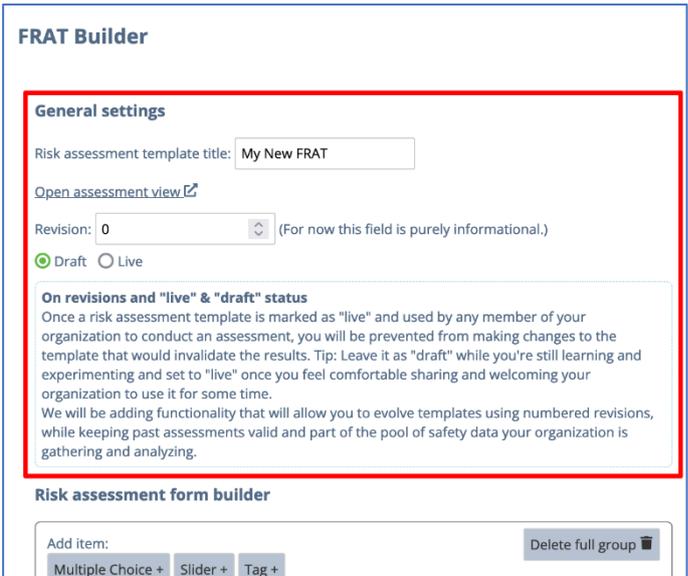
3.2 General settings

The general settings section contains the title of the risk assessment, which will also be the displayed to end-users. A short yet precise title is recommended.

The “assessment view” link opens the risk assessment view for end-users. A click on the risk assessment in the left sidebar loads the admin view again. Alternatively use your browser’s back button.

The revision number reflects the template version of the risk assessment.

Revision numbers are used to ensure the data collected with the FRAT stays homogeneous and relevant for further use in safety management systems or for other evaluation purposes.



The screenshot shows the 'FRAT Builder' interface with the 'General settings' section highlighted in a red box. The section includes fields for 'Risk assessment template title' (My New FRAT), 'Open assessment view' link, 'Revision' (0), and 'Draft'/'Live' radio buttons. Below this is a text box titled 'On revisions and "live" & "draft" status' with explanatory text. At the bottom, there is a 'Risk assessment form builder' section with 'Add item' buttons for 'Multiple Choice', 'Slider', and 'Tag', and a 'Delete full group' button.

3.3 Building a FRAT

Risks can come in many forms and combinations. The level of risk usually depends on a number of factors. Let’s say you perform an IFR flight, at night with potential snowfall. While each of these elements have a certain risk associated individually, in combination, the risk is significantly higher. You are able to model this in the FRAT builder.

Before you start to put your FRAT together, think about the major risk areas that affect a flight. They typically include:

- Crew (well-being, training, experience)
- Environment (Geography, Altitude)

- Weather incl. day/night
- Aircraft (capabilities, performance)
- Type of mission (e.g. rescue, sling, training)
- Coordination with people on the ground

Each of these should be clustered into groups of questions/items so your crew can answer them in one go.

When developing a FRAT, you can set the risk level yourself. It is important to think about what level of risk is acceptable. Which level of risk is your company not willing to accept under any circumstances? Which level would need a sign-off from a superior? Define these levels and integrate them into the FRAT.

You are also able to offer suggestions how to mitigate / manage risks and thereby reduce the risk score. Mitigation measures might be appropriate for one mission but not all. The crew should be able to select mitigation measures that are suitable to the mission they are about to start.

It is not possible to think about all the risk for certain mission beforehand. This is why there is the possibility to add custom risks by the crew. They could include special obstacles that are in the final approach area or any other risk. For each of these the crew can define custom mitigation measures.

The biggest amount of work developing a FRAT is done before you log-in and open the FRAT builder. Please note that many FRATs are available to everyone. They have been provided by other operators and training providers. They wanted to make sure that everyone else can profit from their experience. If you would like to share yours, we would be happy to review and make it available to your fellow operators. Let's collaborate and share regarding safety.

3.4 FRAT Builder

3.4.1 Groups

Every item in the risk assessment form is part of a group that can be used to create thematic, chronological etc. sections of items. A group can contain one, several or all items of a FRAT.

Note: The name of the group can only be set after having added a first item to it.

3.4.2 Items

Items are single risk assessment elements that add values to the risk score depending on the choices made and answers given by the end-user making the assessment. Mitigation measures are linked to the items they were created in.

Items can be configured to be required (must be answered) or optional.

3.4.2.1 Multiple Choice

Multiple choice items are quite extensively configurable. The Item heading represents the “question” or “subject” of the risk element and as many options as needed can be added to provide the “answer” or “selection”. Every option is assigned a risk score (number value) that adds to the total risk score. The allowed number of options the user can choose defines the maximum number of options selectable for this item.

In multiple choice items, mitigations can be added on item level, but also to every single option. Flags and their use are explained in chapter 3.1.2.4.

3.4.2.2 Tag

Tags are single choice elements the user may select or not. They consist only of a checkbox and the associated text. Tags cannot be set to required, as this would make them compulsory to be selected. So if you need to create a sign-off-like single choice element, please use a multiple choice item instead.

3.4.2.3 Slider

The minimum and maximum values of the slider define its span. All integral values between and including those values can be set using the slide element. The threshold for applying flags is a slider value from which upwards the flag will be triggered/activated. Flags and their use are explained in chapter 3.1.2.4.

3.4.3 Mitigations

Upon getting the total risk score and the corresponding risk level for the assessment, a user can choose to mitigate the risks. Mitigations are listed descriptions of measures and procedures directly depending on the choices made during risk assessment. The admin adds corresponding mitigation measures to every item and/or to single options of the multiple choice item. Every mitigation is assigned a risk mitigation value, by which the total risk score is reduced. The post-mitigation result score is then shown in the same as the initial assessment results, but with a “new” risk score and level.

Mitigations can also be added to risk levels. See details in chapter 3.1.2.6

3.4.4 Flags

Flags are used to trigger modifiers (see chapter 3.1.2.5 below). To define one or more flags you need to add their name(s) to the corresponding item, option or even risk level. Flags get triggered/activated when the corresponding item/option slider threshold value is selected.

3.4.5 Modifiers

Modifiers increase or decrease the risk score by a certain value, when a single or multiple flags have been triggered. It is therefore possible to use the modifiers also to modify risk scores for combined flags triggered by assessment items or trigger the same flag from various items.

Example 1: if separate assessment items trigger the flags “night” and “mountain”, a modifier could be set to be activated only if both flags have been triggered. Thus triggering the modifier and adding its risk score value to reflect the increased risk of flying in mountain areas at night.

Example 2: combining the flag triggered by the selection of a certain risk assessment item with the flag for a certain risk level could add a large enough risk score value to move the risk score to reach the level called “CANCEL FLIGHT”.

3.4.6 Risk levels

Risk levels correspond to risk scores spanning from a configured starting value. The max value is defined as 1 below the next superior risk level. If no such superior risk level has been set, it spans to the maximum risk score the assessment can produce.

Risk levels can have mitigations as well as flags defined. This allows the use of risk levels in modifiers and to display specific mitigation measures linked to risk levels, e.g. to discuss the risks with a peer or get sign-off from the responsible person.

3.5 Archive

The archive stores all flights and FRATs of your crew. They can retrieve, review and add data.

4 Contact

Frequent questions and **support topics** are to be found in the NGFT [Knowledge Base](#).

Send an **email** to frat@ngft.com , to have a ticket created in our system, allowing yourselves and us to track the progress of your request.

We wish you a lot of success with DocGen

Your NGFT Team