

• AVIATION & TRANSPORT • GUIDE

## The skills matrix *for aviation teams*

In aviation and transport, a skill is not just a capability, it is a licence, a rating, a certificate with an expiry date, and an operation cannot run a shift without enough qualified people on it. A skills matrix maps every safety-critical qualification against the people who hold it and the currency of each, so an operator can see at a glance whether every shift is covered, whose certificates are lapsing, and where one absence would ground the operation.



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**Reading time** 12 min • **Method** Upleashed 0 to 5 capability framework • **Updated** May 2026

### THE SHORT ANSWER

An aviation or transport skills matrix maps the safety-critical qualifications a role requires, type ratings, licences, certificates, recurrent training, against who holds each and whether it is current. Read it against the roster: every shift must have enough qualified, in-date people for each safety-critical task. In short: **it turns licences, ratings and currency into a live coverage picture, so an operator can see that every shift is safely crewed, catch lapsing certificates early, and never discover a qualification gap at the gate.**

#### KEY TAKEAWAYS

- **Skills are licensed and dated.** Type ratings, certificates and recurrent checks expire, so the matrix must track currency, not just possession.
- **Cover is per shift, not per team.** Every roster slot needs enough qualified people for each safety-critical task; a total is not enough.
- **Currency lapses are silent.** A certificate quietly expiring removes cover; the matrix flags it before it grounds someone.
- **Single-qualified tasks are critical risk.** A safety-critical qualification held by one person on a shift is an operation one absence from disruption.
- **Compliance is built in.** Training records must be inspection-ready; the matrix keeps qualification evidence current and to hand.

— [START HERE](#)

## A skill here is a *licence*

In most workplaces a skill is something you can do. In aviation and transport it is something you are formally **licensed and certified** to do, to a regulated standard, with a currency date attached. That changes what a skills matrix must capture: not just who can do a task, but who is qualified, whether that qualification is in date, and whether enough qualified people are on every shift. It is capability tracking with compliance and safety built in.

### Track qualifications and their currency

The columns of an aviation matrix are **safety-critical qualifications**: type ratings, licences, recurrent training and checks, dangerous-goods or medical certificates, and the rest. Crucially, each carries an expiry, competency-based training and assessment must be revalidated and renewed on a cycle, so the matrix tracks **currency, not just possession**. A qualification that has lapsed provides no cover, however skilled the person, so a matrix that ignores dates gives a dangerously false picture.

### Read coverage against the roster

Capability in aviation is meaningless in the aggregate; it matters **shift by shift**. Crew scheduling has to assign people qualified for the specific aircraft or task to each duty, within strict work-time rules. So the matrix is read against the roster: does every shift have enough current, qualified people for

each safety-critical role? A team that looks well-qualified on paper can still leave a particular shift short of a required certificate, and only a roster-level view reveals it.

### Catch lapses and single-qualified risk

Two failure modes matter most. **Silent currency lapses**: a certificate quietly expiring removes cover without anyone noticing until a check fails or a shift cannot be crewed. And **single-qualified tasks**: a safety-critical qualification held by only one rostered person, fine until they call in sick. The matrix surfaces both, flagging certificates approaching expiry so renewals are booked in time, and showing where cover is so thin that one absence grounds the operation.

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#### — WHY IT MATTERS NOW

## An expired certificate *grounds the shift*

In a safety-critical, regulated operation, a lapsed qualification or an uncovered shift is not an inconvenience, it stops the operation and can breach the rules. A skills matrix that tracks currency against the roster is how an operator stays safe, legal and running.

8%

GARTNER, 2024

of organisations have reliable workforce skills data, so most operators track currency in scattered spreadsheets.

CBTA

IATA / ICAO

competency-based training and assessment is the regulator-approved model, with licences revalidated and renewed on cycle.

63%

WEF, 2025

of employers call skills gaps the biggest barrier to change; in aviation they read as shifts that cannot be safely crewed.

Aviation and transport run on a simple, unforgiving rule: the operation may only proceed if the people on duty hold the current qualifications it requires. Miss that, through a lapsed certificate, a misjudged roster, an unnoticed single point of failure, and the consequences range from a grounded service to a regulatory finding to, at worst, a safety event. A skills matrix is the instrument that keeps the rule satisfied. It holds every qualification and its expiry in one place, shows **coverage against the live roster** so no shift is left

short, flags currency before it lapses so renewals are scheduled in good time, and keeps the training records inspection-ready that regulators require to be retained and reviewed. Run this way, capability stops being a compliance scramble and becomes a clear, current picture an operator can trust, and prove.

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— WHAT IT PROTECTS

## Four things an aviation matrix safeguards

In aviation and transport, a skills matrix protects four things that bear directly on safety, legality and keeping the operation running. Each follows from tracking qualifications and currency against the roster.

PROTECTS 01

### Safe crewing

By showing qualified, in-date cover per shift, the matrix ensures every safety-critical task is staffed by someone genuinely current.

PROTECTS 02

### Currency & renewals

It flags certificates approaching expiry, so recurrent training and revalidation are booked before cover silently lapses.

PROTECTS 03

### Operational continuity

It surfaces single-qualified tasks, so backup is built before one absence grounds a service or cancels a duty.

PROTECTS 04

### Regulatory compliance

It keeps qualification and training evidence current and to hand, ready for the inspections regulators require.

The common thread is **safety you can see and prove**. In a regulated, safety-critical operation, it is not enough to be confident the team is qualified; you must know it, shift by shift, and demonstrate it on demand. Capability here is distributed across licences and certificates with expiry dates, rostered across duties that cannot run short, and scrutinised by regulators who require evidence. The matrix makes that whole picture visible and current, so an operator can crew safely, renew in time, cover its single points of failure, and walk into an inspection with the proof already in order.

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— THE SCALE BEHIND THE SCORES

# The 0 to 5 capability framework

A safety-critical operation needs a scale that distinguishes someone in training from someone cleared to operate unsupervised, and marks the experts who examine and train others. This framework, developed by Dr Alex J. Martin-Smith, does that, with Level 3, qualified and current to operate unsupervised, as the bar for counting as cover on a shift.

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<b>0</b>	<b>Not required / not held</b> <span>EXCLUDED</span>
	The qualification is not part of this role, or not held. Excluded from the score, keeping the matrix focused on the ratings each duty genuinely requires.
<b>1</b>	<b>In training</b> <span>WEIGHTING 25%</span>
	Undergoing initial training for the rating or certificate. Up to 75% trained. Cannot yet be rostered as qualified cover for the safety-critical task.
<b>2</b>	<b>Line training / Supervised</b> <span>WEIGHTING 50%</span>
	More than 75% trained; operating under supervision or line training, not yet signed off to work the task unsupervised. Developing toward full qualification.
<b>3</b>	<b>Qualified &amp; current</b> <span>WEIGHTING 75% · COUNTS AS COVER</span>
	Holds the rating and is in date, cleared to operate unsupervised. The level that counts as genuine cover on a shift, provided currency has not lapsed.
<b>4</b>	<b>Examiner / Trainer</b> <span>WEIGHTING 100%</span>
	Qualified to instruct, check or examine others on the task, a line trainer, examiner or assessor. Deep currency, and able to bring others to qualification.
<b>5</b>	<b>Standards / Postholder</b> <span>WEIGHTING 100%</span>
	Owns the standard for the qualification, a head of training, standards or safety postholder. Accountable for how the capability is maintained across the operation.

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## Count current, qualified cover per shift

For each safety-critical task, count the people at Level 3 or above whose qualification is **in date**, that is your real cover, and only for the shifts they are rostered on. A lapsed certificate drops a person to effectively Level 0 for that task until renewed, however experienced they are. A shift with fewer qualified, current people than the task requires is a **gap to fill**; one resting on a single qualified person is a risk to back up. Currency is everything: the matrix must read dates, not just ratings.

**A worked example.** Why currency changes the picture:

```
Type rating A320 5 hold it · 1 lapsed, 1 off Wed → Wed  
cover thin  
De-icing cert 1 current holder rostered → single point of  
failure  
both look fine on a headcount – the roster and the dates tell  
the truth.
```

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— [SEE THE ROSTER](#)

## Every shift, *every qualification*

Here is the week as a coverage grid: each safety-critical qualification is a row, each roster day a column, and every cell shows how many qualified, current people are on shift that day, coloured green for safe cover, amber for a single person, red for none. A red or amber cell is a shift that is exposed. The pattern shows exactly where and when to act.

QUALIFIED CREW ON SHIFT · SAFETY-CRITICAL SKILL × ROSTER DAY

	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Type rating A320	2	2	1	2	2	1	1
Dangerous goods	1	1	0	1	1	0	0
Line check / SIM	2	1	2	2	1	1	2
Cabin safety lead	1	2	1	1	2	1	1
De-icing cert	0	1	1	0	1	0	1
First aid / med	2	2	2	1	2	2	1

■ 2+ qualified (safe)
 ■ 1 only (single cover)
 ■ 0 (gap)

## De-icing & DG

**have uncovered shifts:** red cells where no qualified, current person is rostered, fix before those days run

*Illustrative operation on the Upleashed 0 to 5 framework. Each cell counts qualified, in-date crew rostered that day; red is an uncovered safety-critical task.*

### WHAT THE DUTY MANAGER READS HERE

- **Red cells are immediate.** De-icing has no qualified person rostered on several days, and dangerous goods is uncovered midweek and at the weekend. These shifts cannot safely run as planned, re-roster a qualified person or the task stops.
- **Amber cells are fragile.** A single qualified person on a shift works until they are sick or delayed. Where a safety-critical row shows amber, line up a second current holder so one absence does not ground the duty.
- **Green is the target everywhere.** Type rating, line checks and first aid mostly show two or more, resilient cover. The aim is to lift the amber and red cells to green across the whole safety-critical set.
- **Read dates, not just names.** A person counts here only if their qualification is current; a lapsed certificate turns a green cell red. The grid reflects currency, which is why it catches what a headcount misses.

### — READY-TO-USE EXAMPLES

# Example qualifications to map for aviation

An aviation or transport matrix should map the safety-critical qualifications and the operational skills each role requires. Here are ready-to-adapt categories, a starting point to tailor to your operation.

Category	Examples to map (the columns)	Watch out for
<b>Licences &amp; ratings</b>	Type ratings, professional licences, route or line check currency	Tracking possession but not the expiry date
<b>Recurrent &amp; checks</b>	Recurrent training, simulator and line checks, proficiency checks	Cycles slipping so a check quietly lapses
<b>Safety certificates</b>	Dangerous goods, de-icing, fire and emergency, security awareness	A safety-critical certificate held by too few rostered people
<b>Medical &amp; fitness</b>	Medical certificates, fatigue and fitness-to-operate requirements	A lapsed medical removing an otherwise qualified person
<b>Operational skills</b>	Equipment, systems, customer and accessibility, incident handling	Mapping ratings but missing the day-to-day operational skills

Map the qualifications your operation is legally and operationally required to hold, scored so Level 3 means qualified and current to operate unsupervised, and always track the expiry alongside the rating. Read the matrix against the live roster, not just as a team total, so no shift is left short of a safety-critical qualification. As always, keep currency dates current, schedule renewals from the matrix, and treat any single-qualified safety-critical task as a risk to address.

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— AVOID THESE

# Six mistakes on an aviation matrix

## MISTAKE 01

### Tracking skill, not currency

A lapsed certificate is no cover. Track the expiry date, not just whether someone once qualified.

## MISTAKE 02

### Reading the team total

An aggregate hides an uncovered shift. Read coverage roster slot by roster slot.

## MISTAKE 03

### Missing the lapse warning

Currency slips silently. Flag certificates approaching expiry and book renewals in time.

## MISTAKE 04

### One qualified person on shift

A single holder is one absence from a stop. Build a second current holder for each task.

## MISTAKE 05

### Records not inspection-ready

Regulators require retained evidence. Keep qualification records current and to hand.

## MISTAKE 06

### Mapping ratings only

Operational skills matter too. Include the day-to-day competencies alongside the licences.

— FROM SCATTERED RECORDS TO LIVE COVERAGE

The method is free. A ready-made matrix just makes every uncovered shift and lapsing certificate *impossible to miss*.

Everything here works in a blank spreadsheet, and that is a fine place to start. A purpose-built template just makes the aviation view effortless: hold every qualification and its expiry, score people on the 0 to 5 scale, and the current, qualified cover is counted for you, so the uncovered shifts, the lapsing certificates and the single-qualified tasks stand out, and the evidence is ready when an inspector asks, all on a tool you control.



*The Advanced Excel Skills Matrix holds qualifications, currency and cover in one place, the basis for safe crewing, timely renewals and inspection-ready records, all on the same 0 to 5 framework used throughout this guide.*

TRY IT FREE	MOST POPULAR	WHEN YOU ARE READY
<p><b>£0</b></p> <p>The online 5x5 builder maps a small team in your browser, with no sign-up. Ideal for a single crew or depot.</p>	<p><b>£199</b></p> <p>The full Excel template: qualifications, currency, coverage and analytics, up to 30 people and 30 skills. One-off, yours forever.</p>	<p><b>£1</b></p> <p>Upgrade to PulseAI in your first year for a living, web and mobile version with AI skill suggestions and reminders.</p>

— COMMON QUESTIONS

## Quick *answers*

### **Q What is a skills matrix for aviation or transport?**

It is a grid mapping the safety-critical qualifications a role requires, type ratings, licences, certificates, recurrent checks, against who holds each and whether it is current. Read against the roster, it shows whether every shift has enough qualified, in-date people for each safety-critical task, and where currency is lapsing.

### **Q Why track currency, not just whether someone is qualified?**

Because in a regulated operation a qualification with a lapsed currency date provides no valid cover, however experienced the person. Type ratings, medicals and recurrent checks all expire and must be revalidated on a cycle. A matrix that records possession but ignores dates gives a false picture of who can actually be rostered.

### **Q Why read coverage shift by shift?**

Because cover that looks fine as a team total can still leave a particular shift short. Crew scheduling must put qualified, current people on each duty within strict work-time rules. Reading the matrix against the live roster reveals the specific shifts where a safety-critical qualification is thin or missing, which an aggregate hides.

## Q How does it help with renewals?

By flagging qualifications approaching their expiry before they lapse. Recurrent training, checks and certificates run on cycles, and the matrix shows what is due and when, so renewals are scheduled in good time rather than discovered after a certificate has expired and removed someone from the roster.

## Q How does it support regulatory compliance?

Regulators require training and qualification records to be retained and available for inspection. A skills matrix keeps that evidence current and in one place, so currency, recurrent training and competency assessments can be demonstrated on demand, rather than assembled in a hurry when an audit is announced.

## Q Does this work beyond airlines?

Yes. Any safety-critical, qualification-driven, shift-based operation benefits, rail, maritime, bus and coach, logistics, ground handling. Wherever roles depend on licences and certificates with expiry dates, and shifts must be crewed by qualified people, mapping currency against the roster keeps the operation safe, legal and running.

### — ABOUT THE AUTHOR



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Alex is the creator of the Upleashed capability framework that powers Skills Matrix Template, the award-winning Excel skills matrix. A Chartered Manager with an MBA, an LLM and a doctorate in business administration, he has spent more than two decades helping operations, HR and quality teams turn capability from a gut feel into something they can measure, manage and prove.

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A handwritten signature in black ink that reads "Alex J. Martin-Smith".

Dr Alex J. Martin-Smith

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## Crew every shift *safely*.

You now have the aviation method. The quickest way to start is to list your safety-critical qualifications with their expiry dates, mark who is current, and lay them against next week's roster. The red and amber cells you find are exactly the shifts to re-crew and the certificates to renew, before a gap reaches the gate.

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