

## Checklist for Assessing Institutional Resilience Against Accidents (CAIR)

### *1. Mindful of Danger*

Top managers are ever-mindful of the human and organizational factors that can endanger their operations.

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Yes	?	No

### *2. Acceptance of Setbacks*

Top management accepts occasional setbacks and nasty surprises as inevitable. It anticipates that employees will make errors and trains them to detect errors and recover.

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Yes	?	No

### *3. Commitment*

Top managers are genuinely committed to aviation safety and provide adequate resources to serve this end.

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Yes	?	No

### *4. Regular Meetings*

Safety-related issues are considered at high-level meetings on a regular basis, not just after a bad event.

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Yes	?	No

### *5. Events Reviewed*

Past events are thoroughly reviewed at top-level meetings, and the lessons learned are implemented as companywide reforms, rather than local repairs.

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Yes	?	No

### *6. Improved Defense*

After a mishap, the primary aim of top management is to identify the failed system defenses and improve them rather than divert responsibility to particular individuals.

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Yes	?	No

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#### 7. Health Checks

Top management adopts a proactive stance toward flight safety. It does the following:

- Takes steps to identify recurrent traps and remove them.
- Strives to eliminate the workplace and organizational factors likely to provoke errors.
- “Brainstorms” new scenarios of failure.
- Conducts regular “health checks” on the organizational processes known to contribute to mishaps.

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Yes	?	No

#### 8. Institutional Factors Recognized

Top management recognizes that error-provoking institutional factors (e.g., under-manning, inadequate equipment, inexperience, patchy training, bad human-machine interfaces, etc.) are easier to manage and correct than fleeting psychological states such as distraction, inattention and forgetfulness.

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Yes	?	No

#### 9. Data

It is understood that the effective management of safety, just like other management processes, depends critically on the collection, analysis and dissemination of relevant information.

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Yes	?	No

#### 10. Sampling of 'Vital Signs'

Management recognizes the necessity of combining reactive outcome data (i.e., near-miss and incident reporting) with active process information. The latter entails far more than occasional audits. It involves regular sampling of a variety of institutional parameters (e.g., scheduling, budgeting, procedures and training), identifying which “vital sign” is most in need of attention and then carrying out remedial action.

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Yes	?	No

#### 11. Employees Attend Safety Meetings

Meetings relating to flight safety are attended by employees from a wide variety of departments and levels.

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Yes	?	No

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#### 12. Career Boost

Assignment to a safety-related function (quality or risk management) is seen as a fast-track appointment, not a dead end. Such functions are accorded appropriate status and salary.

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Yes	?	No

#### 13. Money vs. Safety

Acknowledgment that commercial goals and safety issues can come into conflict. Measures are in place to recognize and resolve such conflicts in an effective and transparent manner.

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Yes	?	No

#### 14. Reporting Encouraged

Policies are in place to encourage everyone to raise safety-related issues. (One of the defining characteristics of a pathological culture is that messengers are "shot" and whistleblowers dismissed or discredited.)

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Yes	?	No

#### 15. Trust

The company recognizes the critical dependence of a safety management system on the trust of the work force, particularly in regard to reporting systems. (A safe culture — that is, an informed culture — is the product of a reporting culture that, in turn, can only arise from a just culture.)

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Yes	?	No

#### 16. Qualified Indemnity

Policies relating to near-miss and incident-reporting systems make clear that the organization's stance includes qualified indemnity against sanctions, confidentiality and the organizational separation of the data-collecting department from those involved in disciplinary proceedings.

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Yes	?	No

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#### 17. Blame

Disciplinary policies are predicated on an agreed (i.e., negotiated) distinction between acceptable and unacceptable behavior. All recognize that a small proportion of unsafe acts are indeed reckless and warrant sanctions, but the large majority of such acts should not attract punishment. (The key determinant of blameworthiness is not so much the act itself — error or violation — as the nature of the behavior in which it is embedded. Did this behavior involve deliberate and unwarranted risk-taking, or a course of action likely to produce avoidable errors? If so, then the act would be culpable regardless of whether it was an error or a violation.)

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Yes	?	No

#### 18. Non-Technical Skills

Line managers encourage their employees to acquire the mental (or non-technical) as well as the technical skills necessary to achieve safe and effective performance. (Mental skills include anticipating possible errors and rehearsing the appropriate recoveries. Such mental preparation at both the individual and organizational level is the one of the hallmarks of high-reliability systems, and goes beyond routine simulator checks.)

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Yes	?	No

#### 19. Feedback

The organization has in place rapid, useful and intelligible feedback channels to communicate the lessons learned from both the reactive and proactive safety information systems. Throughout, the emphasis is on generalizing these lessons to the system at large.

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Yes	?	No

#### 20. Acknowledgement of Error

The organization has the will and the resources to acknowledge its errors, to apologize for them and to reassure any victims that the lessons learned from such mishaps will help to prevent their recurrence.

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Yes	?	No

### CAIR: Checklist for Assessing Institutional Resilience

#### SCORE:



**YES** = This is definitely the case in this company.

**Score 1**

**Yes**



**?** = Don't know; maybe; could be partially true.

**Score 0.5**

**?**



**NO** = This is definitely not the case in this company.

**Score 0**

**No**

#### Interpreting the score

16 – 20 So healthy as to be barely credible!

11 – 15 In good shape, but don't forget to be uneasy.

6 – 10 Not all bad, but there is still a long way to go.

1 – 5 The organization is very vulnerable!

0 Jurassic Park!

*With acknowledgement to Professor James Reason,  
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