

Revenue Loss through Poor Safety Performance

This structured tool is intended to be used as a means of presenting the business case for improvement of a specific shortfall noted in the company (normally a human factors issue), that need the Boards support and resource allocation. The intention is to use a systematic and focussed methodology that talks in the same language of the Board (money, commercial benefit), and is set up to enable small projects to be run and thus demonstrate a positive Return on Capital Invested (ROCI). This process is intended to be used for small and manageable projects that slowly improve to companies weakest areas, hence the human factors focus; remember, you can eat an elephant one slice at a time, but can't succeed in swallowing it whole.

The second section of the document is the formatted headings covered blow, and the third section is a worked example for An-Other Maintenance Co. The figures are estimated but based on real experience.

Subject Under Consideration

Identify the specific subject causing revenue loss, it is necessary to be able to detail the size of the problem and likelihood of loss occurring, this may be in actual losses currently happening or through identified risks that have been assessed but as yet have not occurred

Risk Assessment

To enable the organisation to measure if this project should be treated as a priority, it is ideal if a risk assessment is carried out and if possible ranked against other factors that need to be addressed. This element was not covered in the workshop, but is a common business practice, and aids in generating support and clear objectives.

Objectives

*Define the objective (all objectives must be **SMART**):*

Specific,

Measurable,

Achievable,

Relevant, and

Timed

Standards to be Improved

Define the specific standards within the company that will enable the required improvement, this could be a list of many standards, (standards may be set out in policies, procedures or training requirements).

Method of Standards Improvement

Define precisely how these improvements will be set in place and managed to achieve the required improvement. Remember that under this heading you must list the resources that you have identified as being required, be realistic; don't be over optimistic and minimise the resources and then fail or be frivolous and ask for to much such that the ROCI will not be beneficial to the company.

Cost

Estimate the costs, using as far as possible real costs and with a breakdown of what those costs might be. If you are able to convince the Board that this is a problems that has been thought through, planned and costed it is more likely that they will approve the resources required

Performance Improvement Measurement

Once the project is running it will be necessary to take measurements of the performance, such that as the levels of achievement are improved, the trends can be mapped and reported.

Feedback against Objectives

It is essential for credibility and for future support on other improvement projects that the level of achievement against the objectives is demonstrated. As a minimum the Board should be shown how well the project has gone, and the staff must be briefed, you will need their continuing support for this and other improvement project. Be fully honest in reporting successes or otherwise, remember every percentage point goes positively towards the company's bottom line so don't seek to report 100% improvement if its not the case, and as this is will soon be identified and cause damage to the processes credibility.

Revenue Loss through Poor Safety Performance (Master)

Subject Under Consideration

Risk Assessment

Objectives

Standards to be Improved

Method of Standards Improvement

Cost

Performance Improvement Measurement

Feedback against Objectives

Revenue Loss through Poor Safety Performance

Subject Under Consideration

Loss of Revenue due to aircraft non-availability, caused by maintenance induced damage in the hangar.

Risk Assessment

The risk has been assessed as **high** in terms of incurred damage that delays the return of the aircraft back to service. In terms of releasing unairworthy aircraft to service this was assessed as **low**.

This threat was ranked 1st in the causes of maintenance induced damage to aircraft.

Objectives

Increase the aircraft availability through reducing the maintenance induced hangar damage by 10% per year over current costs. Initial damage reductions to be achieved by 31/12/01.

Estimated losses to revenue per annum = 0.5M per base

Standards to be Improved

- **Detailed Accountabilities for roles involved in this task and its management.**
- **Staff competencies for damage inducing tasks to be defined, assessed and actively managed**
- **Manual Handling of LRUs (line replacement units) to be systemised and actively controlled**
- **Aircraft manoeuvring and/or towing in the environs of the hangar to be systemised and training given as appropriate and required in the competency profiles.**
- **Supervisory guidance materials to be enhanced and training given as appropriate.**
- **The use of compliant practises to be monitored during work in progress.**

Method of Standards Improvement

The use of improved and more detailed accountabilities for staff and managers and enhanced with detailed competency requirements in the competency profile will enable the base for improvement. The introduction of well laid out and useable procedures for manual handling and towing aircraft will establish the standards required. The training of towing crews and staff doing the manual handling will most be OJT but will improve the staff's understanding of the processes and the need for enhanced safety. Finally the introduction of compliance monitoring in the engineering environment will enable improvement in three areas:

1. It will identify poor practice in the workplace and aid in establishing the new procedures,
2. It will identify impracticalities in the procedures and shortfalls in facilities and equipment,
3. It will enable managers and supervisors to have better insight into the work environment and the staff's interface with that, such that it will engender broader opportunities for improvement

The organisational culture within the Company must underpin this project positively, we will endeavour to develop open reporting from the staff for mishaps and near misses, the more significant occurrences already being reported through the Company MOR scheme.

The Boards commitment to moving towards a just and learning culture has already made a significant step in this area, we now need to open this commitment out to a demonstrated practice. Ideally the company openly rewarding good practice and mentoring staff whose practice falls below the defined standards expected.

Staff having completed their human factors training (82%) are now able to better understand their interactions with peers and supervisors, and are supportive of such initiatives as this. In support of this effort the CEO should ensure that managers and supervisors have the same insights gained from our in-house HF training, currently 42% Managers and 50 % Supervisors have completed the course.

Cost

The immediate costs fall into three blocks:

- **Development of accountabilities, competencies and procedures** in manpower hours is 40 man-hours at £32 p/h = **£1280.00**

- **Training**

Six people (towing crews) to be given OJT (2 hours x 6 people = 12 hours at £25 p/h =£300) plus supervisor trainer (10 hours including course development at £32 p/h = £320).

Four people to be given 2 hours classroom manual handling course (8 hours x £25 = £200) plus external trainer for two sessions (£400)

Two supervisors to be trained in compliance monitoring techniques, an external residential two day course was selected from a QA training company for a price of £700 per person = £1400.

Total costs of training in company facilities and therefore zero rated is (300 + 320 + 200 + 400 + 1400) = **£2620**

- **Compliance Monitoring**, this will require task monitoring whilst work is in progress and therefore no lost working time for the staff other than 5 minute post task debriefing from the supervisor. The monitoring will be part of the two supervisors normal duties, but is assumed to take 8 hours per month each and is costed at £32 per hour = £256 x 12 = **£3072**

The total costs of developing new processes, training the staff and supervisors and carrying out the monitoring is (1280 + 2620 + 3072) = £6972 a notional £7000, with the expected payback of £50,000.00 based on 10% improvement over the current loss of £500,000 per annum.

Expected benefit from the capital invested £7,000/£50,000 = **£43,000 per annum**

Performance Improvement Measurement

The current incident reporting and repair requirements that have been identified in these two distinct areas that account for the majority of maintenance related hangar damage to our aircraft will be used as the base line. All staff will be briefed on the need for open reporting and the target to reduce our hangar damage rate by 10% or better and the need for open honest reporting if mishaps occur and for enhanced efforts to work safely and thus also improve their performance.

The reported damage will be assessed and costed by the Quality Department and investigated to aid identification of improvements required. The quarterly Quality and Safety report raised for Senior Management by the Quality and Safety Manager will include a specific comment on this project to maintain active measurement of performance against the target and based on last years actual hangar damage costs.

Feedback Against Objectives

The Objectives set for this action will be reviewed at the end of 2001 to confirm, or otherwise, the successes of this damage reduction project. The staff and supervisors will be given updates against the targets at their staff safety meetings. This will engender continuing commitment, whilst ensuring that everybody remains involved in the bigger goal of addressing all safety shortfalls and human error through focussed management and loss management projects.

Subject to performance and achievement of this objective further projects will be identified and presented to the Board for support to further enhance performance in the workplace.