

# Technical Consulting

## Safety Management – Error Management Performance



## Performance Review of an Error Management System (EMS) for a major Singapore MRO



### SIA Engineering Company (SIAEC) – Singapore

SIAEC is a major aircraft maintenance repair and overhaul company operating in Singapore, Australia, Hong Kong, Indonesia and Philippines. Baines Simmons was commissioned to conduct an Error Management Diagnostic to provide independent recommendations, benchmarks and a fresh assessment of SIAEC's maintenance error management performance.

### Client Profile

SIA Engineering Company (SIAEC), formed from the engineering division of Singapore Airlines, has 25 joint ventures and subsidiaries across nine countries which together comprise the SIAEC Group. The SIAEC Group provides extensive maintenance, repair and overhaul (MRO) of aircraft to 85 international airlines worldwide. With certifications from more than 20 airworthiness authorities, SIAEC provides complete MRO services in airframe, component, engine, aircraft conversions and modifications to major airlines from four continents.

### The Challenge

The client could already demonstrate commitment to an error management process through the resourcing of error investigators, implementation of the Boeing MEDA investigation tool, and past and future internally scheduled staff training. The challenge lay in finding a way forward to improve and advance the performance of this earlier Error Management System (EMS) investment.

### The Solution

The Baines Simmons consulting project team executed a local error management diagnostic in Singapore, conducted by highly trained assessors capable of effective interviewing, evaluating information, observational analysis and facilitating feedback against best practice and across standards, processes, procedures and reporting criteria.

The EMD assessed the organisation under 8 review areas:

Management Commitment and Support	Ownership and Support of the Programme	Reporting and Investigations	Organisations and Enablers
Procedures	Maintenance Data	Education and Feedback	Workforce Competence

*"We were very impressed with the professional approach and tools used by Baines Simmons consultants.*

*"They provided very good value for money and gave us confidence in our maintainers' current approach. They provided them with excellent recommendations for advancing their aspirations to becoming a greater learning organisation in the area of maintenance performance improvement through operation of an open and effective error management system."*

Kess Chiang Hui Sien  
 Snr Mgr Engineering Division

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The review was rapidly conducted over a period of five days at both Base and Line Maintenance locations, across personnel in different hangars, working on different aircraft groups on different levels from senior management to technicians.

The results of the assessment were entered into an analysis tool that factored, combined and calculated the level of best practice performance operating within the organisation.

These created an index score to benchmark and monitor the health of the Maintenance Error Management System (MEMS). In parallel with the EMD activity, three staff error management workshops were completed with outputs provided to senior management.

### The Outcome

- ▶ The EMD results successfully provided SIAEC with an overall EMS maturity rating and benchmark against major non-European, UK and European MROs.
- ▶ The Executive summary significantly highlighted four fundamental areas for focussed improvement beyond the client's initial preconceived views.
- ▶ The detailed report showed the EMD results combined for all locations, activities and managerial levels providing fresh and objective insights.
- ▶ The EMD provided an invaluable catalyst and direction for refining the important next steps to improve the MEMS performance.

### Summary of Baines Simmons services utilised

#### **SMARRT®**

Error Management Diagnostic (EMD)

Staff Error Management Facilitation Workshops

#### **Consulting support:**

MRO Board Strategic MEMS & SMS leadership support