

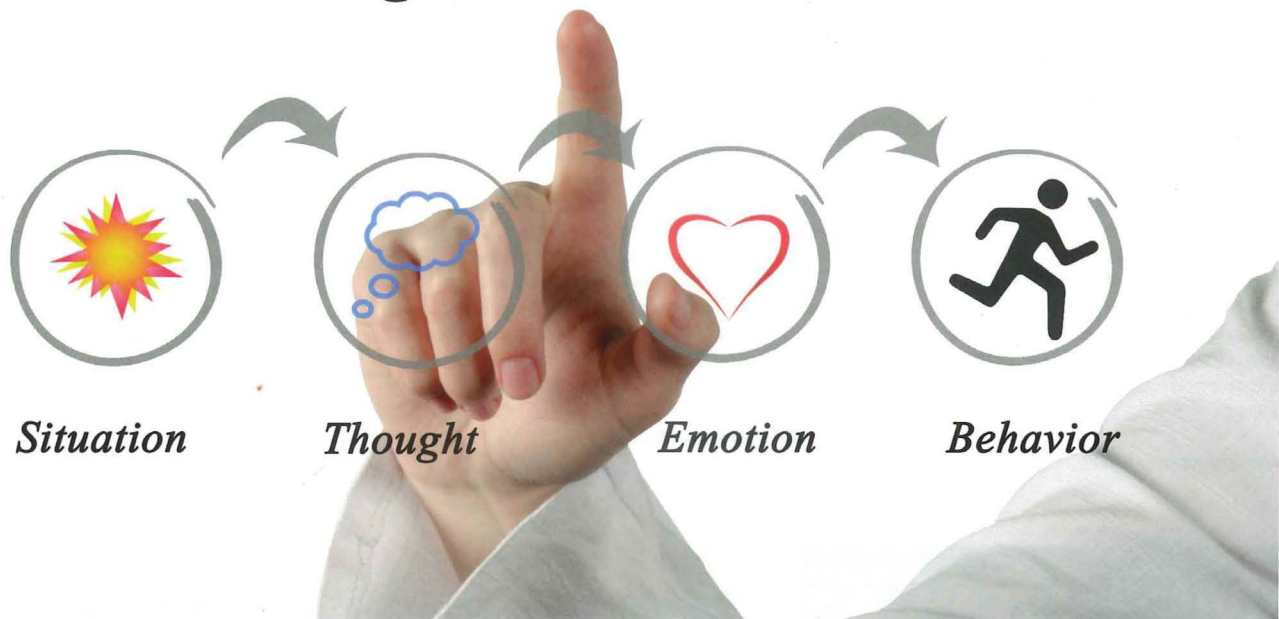
TRAINING & RECRUITMENT

# SYSTEMIC APPROACH

TEC TRANSNATIONAL

## COMBATTING HUMAN ERRORS IN MANUFACTURING

### *Cognitive Model*



By Dr David Scrimshire  
– MD of TEC Transnational

We've all heard the excuse: "it's down to human error" with the assumption that there's nothing we can do about it. However, when any type of quality issue is caused by a person doing something incorrectly there will be a deeper root cause of the incident. In any situation there are likely to be many factors that can lead to a human error, and these precursors or preconditions are referred to as human factors.

The study of human factors is about people in their working environments, and it is also about their relationship with equipment and procedures. Just as importantly, it is about their relationships with other people – their co-workers and managers. Its objectives can be seen as: safety, efficiency and effectiveness.

Human factors answer the question: "Why do smart people sometimes do stupid and/or dangerous things?"

#### **HUMAN ERRORS ARE CAUSED BY HUMAN FACTORS**

Combatting human errors requires a systemic approach that ideally prevents



their occurrence in the first place or mitigates the severity of their consequences if they happen, and then puts in place a countermeasure to ensure they never occur.

There are many factors that can cause a situation where a human error can occur, and these precursors or preconditions are referred to as 'human factors'. Information relating to human factors in aircraft maintenance is widely available, but little exists for the manufacturing sector. Dr David Scrimshire (MD of TEC) stated: "this prompted me to design a short course specifically for manufacturing organizations, that design-and-manufacture or just make-to-print".

TEC Transnational's 2-day course is unique and covers in detail everything that is needed to develop, document and implement the management processes to address human factors in the manufacturing environment.

The course commences with an explanation and examples of why human errors occur in manufacturing operations and their consequences. Guidance is provided on selecting the appropriate 'models' to search for, and prove, the root causes. The models are augmented with Why Trees and Boolean logic to enhance the search. Attention then switched to devising and implement effective controls (barriers) to prevent or mitigate the consequences of human errors to downstream operations or the customer. I've also added a session to show how to use practical psychology to help motivate staff.

**The course is highly interactive and includes many individual and team exercises, Case Studies and quizzes. The full course syllabus is available at our web page: (tectransnational.com).**



Achieving excellence through  
accelerated learning

## TEC TRAINING COURSES

*TEC Transnational specialise in implementing modern and effective manufacturing and quality systems and in the process train and 'coach' the people who will be operating the systems when we are no longer around. We empower people to achieve measurable (£) continuous sustainable improvements in performance and efficiency for their organisations - achieving excellence through accelerated learning.*

You can opt for training at your site or you can join one of our public training courses hosted at our central training venue, **The Woodland Grange Conference Centre**, Leamington Spa.

***Take a look at just some of the courses available ...***

- AESQ-approved AS13000 – Problem Solving (8-D)
- AS9100:2016 Rev D Internal Auditor Training
- AESQ-approved AS13004 – PFMEA & Control Plans
- FAIR (first article inspection report) - AS9102:2014
- Auditing conformity, performance and effectiveness
- AESQ-approved AS13006 – Process Control Methods

- IRCA Certified AS9100 Lead Auditor
- Aerospace APQP & PPAP - AS9145
- AESQ-approved AS13003 – Measurement Systems Analysis
- Counterfeit parts, Conflict minerals and Product safety
- Human factors in manufacturing

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