

TECHNICAL STRUCTURED PROBLEM SOLVING (TSPS 8D)

BY ELITE INDIGO

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STRUSTURED

Enhance your team's analytical capabilities and master the art of technical structured problem-solving to tackle complex challenges with precision.

Walk away with practical "quick wins" to apply systematic problem-solving frameworks and drive effective, datadriven solutions immediately.





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Program Overview

The Technical Structured Problem Solving (TSPS) Course equips participants with a structured methodology to analyze and resolve complex technical issues systematically. Inspired by the 8 Disciplines (8D) Problem Solving Methodology, TSPS provides participants with a set of practical tools, including TSPS Checklists, Cause Analysis Worksheets, and Job Aids, to identify root causes, implement effective corrective actions, and standardize solutions.

This hands-on, interactive program is designed to develop critical thinking, leadership in problem-solving teams, and structured decision-making skills to drive sustainable improvements in technical and manufacturing environments.

Course Objectives

By the end of this program, participants will be able to:

- pply the TSPS methodology to identify, analyze, and solve complex technical problems.
- Utilize problem-solving tools (TSPS Checklist, Cause Analysis Worksheets, Job Aids) to enhance troubleshooting efficiency.
- Lead and facilitate cross-functional problem-solving teams effectively.
- Develop data-driven solutions and validate their effectiveness.
- Standardize corrective actions to prevent recurrence.
- Create and present a TSPS Summary Report with well-documented problem resolutions.

Learning Outcomes

- Participants will confidently apply a structured problem-solving approach to realworld technical challenges.
- Gain hands-on experience in root cause analysis, corrective action planning, and solution standardization.
- Effectively document and communicate findings through a structured TSPS Summary Report.
- Enhance their ability to collaborate and lead teams in resolving manufacturing, quality, or operational issues.





Methodology

This course uses a practical and interactive approach, combining:

- Instructor-led presentations (concepts, best practices).
- Hands-on activities (problem-solving exercises, real-world case studies).
- Group discussions (team-based analysis, decision-making).
- Q&A sessions (interactive engagement, troubleshooting guidance).
- Digital & Physical Tools:
 - Online Training: Laptop, Zoom (or equivalent).
 - In-Person Training: Projector, printed worksheets.

Target Audience

- Engineering & Technical Teams
- Ouality & Reliability Professionals
- Integration & Process Engineers
- Materials & Manufacturing Specialists
- IT & Data Analysts involved in problem-solving

Pre-Requisites

None.

Duration

Two (`2) Full-Day Workshop;

Course Schedule

- 1. Define Problem
- 2. Current Situation
- 3. Identify Causes
- 4. Develop Solutions
- 5. Implement Solutions
- 6. Standardize Solutions
- 7. Next Steps



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Course Outline & Schedule (Day 1)

Duration	Details
1.5 Hours	Step 1: Define Problem Purpose: • Identify the problem and the importance of working on it. Output: • Prepare for the TSPS process • Implement Emergency Containment Action (ECA). • Establish a team. • Develop a Problem Statement. • Begin TSPS Summary Report.
1.5 Hours	Step 2: Current Situations Purpose: • Clarify the problem areas as the situation exists today. Output: • Create a problem description using IS/IS NOT evaluation. • Implement Short-term Containment Actions, if needed, and remove the ECA. • Update TSPS Summary Report.
1 Hour	Lunch Break
4 Hours	Step 3: Identify Causes Purpose: • Identify and verify the root causes of the problem. Output: • Problem description with differences and changes. • Develop and test theories to isolate and verify the root cause of the problem and how it escaped detection by identifying and verifying the escape point. • Update the TSPS Summary Report.





Course Outline & Schedule (Day 2)

Duration	Details
1.5 Hours	Step 4: Develop Solutions Purpose: • Develop and evaluate solutions to eliminate the root cause. Output: • Select the best Permanent Corrective Action (PCA) to: - Remove the root cause of the problem. - Correct the root cause of the escape. • Test and Verify that both actions will be successful when implemented without causing undesirable effects. • Update TSPS Summary Report.
1.5 Hours	Step 5: Implement Solutions Purpose: • Implement and validate the Permanent Corrective Actions (PCA). Output: • Implementation plan, risks and barriers identified. • Validate that the PCA is working as intended. • Remove the Short-term Containment Action. • Update TSPS Summary Report
1 Hour	Lunch Break
2 Hours	 Step 6: Standardize Solutions <u>Purpose:</u> Modify processes and systems to ensure that improvements are sustained over time. <u>Output:</u> Document plans for communicating, integrating and monitoring the changes. Plan implemented for systemic improvements for similar products and processes.





Course Outline & Schedule (Day 2)

Duration	Details
	Step 7: Next Steps <u>Purpose:</u> • Evaluate accomplishments and lessons learned. • Determine next steps.
2 Hours	Output: • Document Post-mortem. • Recognize team and contributions. • Communicate results: TSPS Summary Report published and archived.
	Wrap Up & Survey
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What participants are saying about this Training Programme?

"This training is very useful for my career path especially for 8D purpose as more clearly instructions when do TSPS."

– Wen Shuan, Hotayi Electronics Employee

"Thanks to SK for delivering the course in a way that it is easy to understand and entertaining. Love his energy throughout the 2 day class." — **Siew Goh, Intel Employee**

"The trainer is very well versed with course knowledge and he has the right skill to deliver the content in the right manner."

- James, Intel Employee

"This course is really helpful for me as a newbie in my team. It helps me a lot to improve my problem solving skills and then i can apply in my work and daily operation support. Thank you very much!" — **Azni, Intel Employee**

"Thank you Sir SK Chew for very detailed and informative training. It allows me to understand how to apply this training materials for my work and day-to-day life." — **Saiyidah, Intel Employee**

> "Great Learning with great case study example and relatable real case issues" — **Lingges, Intel Employee**



Trainer Profile



The Facilitator Dr. SK Chew

Applied Statistics | Process Control System | Problem-Solving Master Trainer

Dr. SK Chew is a passionate and inspiring corporate trainer with over 28 years of experience in statistical analysis, process control, and problem-solving. He specializes in transforming complex statistical methodologies into practical applications, enabling professionals to make data-driven decisions that enhance efficiency and productivity.

A highly sought-after Master Trainer and Staff Statistician, Dr. Chew has conducted training sessions across Malaysia, the United States, China, Vietnam, and Taiwan. His ability to engage and connect with participants has earned him the title of "Best Instructor of the Year" at Intel Malaysia.

His mission is to empower professionals with the knowledge and skills to leverage data effectively, optimize processes, and drive impactful business solutions.

Dr. Chew's Facilitation Style

3D – Data-Driven, Decision-Oriented, Dynamic **Data-Driven:** Simplifying statistical analysis and process control methodologies for real-world business applications. **Decision-Oriented**: Equipping professionals with structured problem-solving techniques to enhance decision-making and operational efficiency. **Dynamic**: Delivering engaging, hands-on training with case studies, simulations, and interactive

learning experiences.





What participants are saying about the Trainer?

"The trainer has a very cheerful demeanor, well spoken and very patient, he's willing to use his break time to help me catch up with the lecture parts I missed and I've learned a lot during the training session, would definitely love to join his course again in the future." — **Jia Wei, Intel Employee**

"Dr SK Chew is fantastic trainer. I easily understand this course with systematic training plan." — **Aminuddin, Stratus Automation Employee**

"He is a very good trainer. Probably the best trainer that have attended. Keep the class interesting and active and lively."

— Jordan, Hotayi Electronics Employee

"Very good and professional instructor. Five Stars" — **Ng, Intel Employee**

"Very engaging and passionate instructors, relevant to our jobs, help addresses our gap." — **Cheong, Intel Employee**

> "Instructor really knowledgable and very good. Excellent trainer." — **Cheah, Intel Employee**



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