

LEAN AI THINKING



Introduction

Lean Thinking is a logical, systematic approach focused on cultivating an organizational environment that continuously identifies and eliminates waste (Muda). By augmenting traditional Lean tools with AI-driven capabilities - such as automated root-cause analysis and problem-solving - organizations transform into dynamic learning enterprises that continuously optimize their processes. When properly deployed, this integrated methodology drives substantial financial gains, enhances process efficiency, and elevates customer satisfaction.

This Lean AI Thinking training is designed for individuals seeking to master foundational Lean principles while preparing to lead mid to high-impact improvement projects and Kaizen events in the modern workplace.

The course is structured to maximize practical learning through interactive workgroup discussions, practical simulation games, and hands-on exercises utilizing AI Co-Pilots.

Objectives

- Understand Lean methodology & philosophy through the lens of AI integration
- Understand AI LLM Prompt to enhance productivity for Root Cause Analysis, brainstorming for Kaizen event
- Understand key concepts for Lean ranging from JIT, One Piece Flow, Push and Pull and Takt time

Duration

- 1 day | 9am – 5pm | 7 learning hours

Who Should Attend

Management and Supervisors in manufacturing facilities, Process and Quality Engineers, Professionals who are involved in project for productivity, quality or efficiency improvement in their organizations.

Device Requirement

To ensure an optimal experience, participants are strongly **encouraged to bring a laptop** for downloading information (data set) & trying prompts and accessing shared materials via Zoom or Google Drive. **Tablet** (e.g. iPads) **may be used as alternatives**, though screen size and tool performance may not be ideal.

There is no requirement to download any software and the LLM used are mainly web based - Gemini (*incl Gemini Notebook*), ChatGPT & Claude.



SQI
INTERNATIONAL



enquiries@sqi.org.sg



www.sqi.org.sg



+65-6467 4225



401 MacPherson Road #03-16/17 MacPherson
Mall Singapore 368125

Course Fees

Member: S\$458.89

Non-Member: S\$507.94

All fees stated are inclusive of Registration Fee and 9% GST

Award of Certificate

Certificate of Completion will be issued to participants who have attended at least 75% of the course.

Course Content

- **Foundations of TPS & AI**
 - Explore the history of the Toyoda family and evolution of TPS into Industry 4.0
 - Understanding consideration to prevent pitfall of “automating Waste”
- **AI LLM and Prompt framework**
 - Intro to LLM: Understanding LLM and configuration and Gemini Notebook
 - CRAFT & COSTAR: Prompting technique and framework
- **Create Flow and Established Pull**
 - Continuous Flow: Apply JIT and One-Piece Flow principles
 - Takt Time: Understand concept of Takt time
 - Balancing between Push vs Pull strategies
 - Using LLM to analysis flow and bottleneck with production flow
- **Waste identification and elimination**
 - AI-Enhanced Work Breakdown & Waste Identification: Master the 8 Wastes (Muda)—using work breakdown structures (*Participants are encourage to bring their real process for discussion too*)
 - AI-Powered QC Tools: Enhance basic Quality Control (QC) tools and Root Cause Analysis (e.g. Fishbone diagrams, 5 Whys) using LLM as a Co-Pilot



Please refer to this URL
<https://www.sqi.org.sg/courses/>
or QR Code for soft copy and
updated training schedule

Thomas Ho / Low Khee Siang
+65-6467 4225
enquiries@sqi.org.sg

CONTACT
US!

Membership Application

Register membership online at
www.sqi.org.sg/membership-join/ or
contact us to get the membership
application form.

Membership Categories:
~ Organization membership
~ Individual membership

SQI International is a subsidiary of Singapore Quality Institute (SQI). SQI operates as a non-profit professional institute that promotes and advances excellence in the field of quality in Singapore; and actively champions quality initiatives in the region and around the world through networking and collaborating with other international quality organizations.

SQI is a World Partner of the American Society for Quality (ASQ); and a Board Member of both the Asian Network for Quality (ANQ) and the World Alliance for Chinese Quality (WACQ).

