

# The Flow System – A3 Problem Solving (LT-M4)

## *Syllabus*

### Description of Course

The A3 Problem Solving (LT-M4) master's course is a continuation of the content learned in the Lean Thinking Advanced Course (LT-A1). This course is based on the A3 technique used in Toyota, known as Toyota Business Practices (TBP). It is also known in Europe as Practical Problem Solving (PPS).

The A3 Problem Solving approach is infamous within Lean Thinking, having been developed in Toyota as TBP. This course teaches you the same approach and aspects of A3 Problem Solving that Toyota uses. It will ensure that you know the differences between Point of Cause Analysis and Root Cause Analysis, something that is often overlooked in similar courses.

You will learn how to create an A3 problem solving paper, how to define the problem, measure the discrepancy from standard or gap if no standard exists, breakdown the problem, identify points of the cause, set a target condition, do root cause analysis, define countermeasures to the problem and assess them effectively and then implement them.

In addition, you will be able to effectively evaluate results and processes, understand the importance of standardizing improvements, and determine why Yokoten is important. You will also learn that the final step in an A3 Problem Solving paper is kaizen.

You will also learn why TBP comes after Ji Kotei Kanketsu (LT-M3), also known simply as JKK, and how the two approaches work together to establish exceptional quality and operational excellence.

### Duration of Training

The A3 Problem Solving (LT-M4) master's course requires 16 hours of training and can be taken as a two-day in-person training session, an online live virtual class, or as an asynchronous self-paced online training using The Flow System's learning management system (LMS). This course can be taught publicly or privately to any organization.

Participants must complete the training before receiving a code allowing them to take the A3 Problem Solving (LT-M4) assessment for accreditation. The fee for the assessment is included in the course fee for training attendees.

At the master's level, participants will demonstrate an ability to apply the new knowledge and complete an online assessment. The master's level courses' application portion will be reviewed by peers and industry experts in their chosen field.

Participants who attend the training will have two attempts at the A3 Problem Solving (LT-M4) assessment. Participants who wish to forgo the training and jump straight to the assessment may do so but must first buy a code and will only have one attempt as opposed to two for people taking the training. You can buy a code below by clicking 'Take Assessment.'

## Objectives of Course

This course is a master's course that continues to build on the material learned from both the Foundations (FS-1) and the Lean Thinking Advanced (LT-A1) courses. As a mastery level course, participants will be required to envision applying the material covered in the course to their place of work. After successfully completing this course participants should be able to:

- Explain the A3 Problem Solving process.
- Create an A3 Problem Solving A3 paper.
- Exhibit the ability to conduct a Point of Cause Analysis.
- Exhibit the ability to conduct a Root Cause Analysis.
- Describe effective nemawashi.
- Apply the technique learned to their own problems.
- Exhibit an ability to integrate the above approaches into operational excellence processes.
- Define and create a standardized work process.
- Evaluate A3 papers for effectiveness and correctness.

## Outline of Course

- Introductions
- Overview (What is A3 Problem Solving)
- Types of Problem
- The 10 Elements of Success
- The 8 Steps of Problem Solving

- Point of Cause Analysis
- Root Cause Analysis
- Measuring Current Condition
- Defining a Target
- Developing Effective Countermeasures
- Nemawashi
- Yokoten
- Standardized Repeatable Process

## The Flow System Advanced Accreditation

Participants completing the Foundations (FS-1) training (in-person) or the Foundations (FS-1) course (online), or those who wish to only take the Foundations accreditation exam without participating in training or an online course, can take the exam at any time. Participants who complete training (face-to-face or online) will have two attempts at the exam. Participants who wish to forgo any training may do so and pay to take the exam. Participants who skip any training will have one chance to pass the exam. Upon passing the Foundations Exam, participants will receive a Certification of Completion for The Flow System Foundations Course. Once a Certification of Completion for The Flow System Foundations Course has been obtained, participants can continue to any of the Advanced Courses (see Figure 1). The Flow System Training Map can be found in Figure 1 provided below.

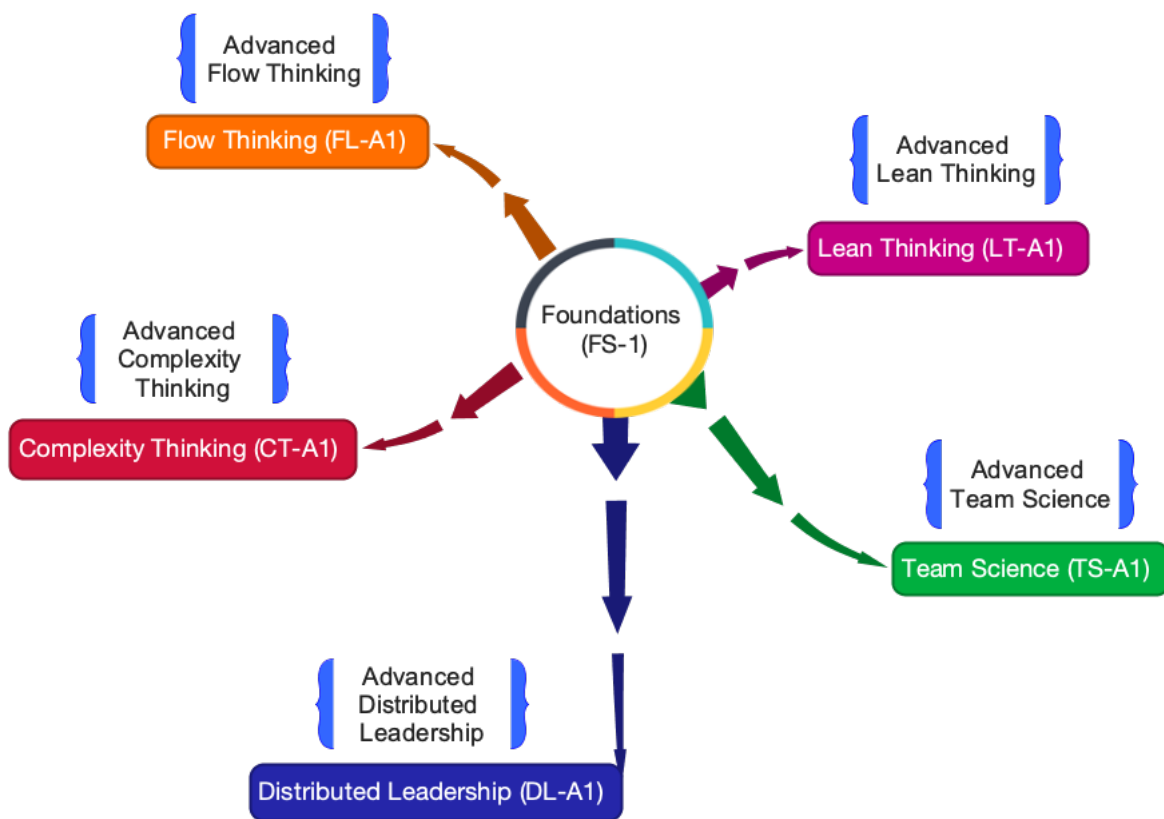


Figure 1: The Flow System Foundations and Advanced Courses

## The Flow System Masters Accreditation




There are a total of five master level accreditations to choose from, one to accompany each advanced course. Once the foundations course (FS-1) and the selected advanced course has been successfully completed and the accreditation exam passed, participants can continue to take courses at the master level within the chosen advance track. Participants can only continue to the master level courses after achieving the appropriate advanced accreditation. For example, before taking any of the lean thinking master level courses (LT-M1 through LT-M5), the foundations (FS-1) and lean thinking advanced (LT-A1) courses must first be successfully completed.

The master level courses for the Lean Thinking track include the following courses:

- Toyota Production System (LT-M1)
- Lean Tools & Metrics (LT-M2)
- Ji Kotei Kanketsu (LT-M3)
- A3 Problem Solving (LT-M4)
- On The Job Development (LT-M5)

A master level accreditation in Lean Thinking will include the following path:

1. Mastery Complexity Thinking Accreditation
  - a. Accredited in the Foundations (FS-1) course
  - b. Accredited in the Lean Thinking (LT-A1) Advanced course
  - c. Successful completion of all 5 Mastery Lean Thinking courses
    - i. Toyota Production System (LT-M1)
    - ii. Lean Tools & Metrics (LT-M2)
    - iii. Ji Kotei Kanketsu (LT-M3)
    - iv. A3 Problem Solving (LT-M4)
    - v. On The Job Development (LT-M5)
  - d. Pass Mastery Lean Thinking Accreditation Exam

Courses	Course Completion & Exam	Accreditation
Foundations Course		Foundations Accreditation
Advanced Course Lean Thinking		Advanced Lean Thinking Accreditation
Mastery Lean Courses LT-M1 + LT-M2 + LT-M3 + LT-M4 + LT-M5		Mastery Lean Thinking Accreditation

## Trainers

The Flow System Foundations Course (in-person) will be administered by the co-creators of The Flow System and/or by certified TFS trainers. The online courses will only be administered and monitored by the co-creators of The Flow System. All trainers are considered experts in their field of practice/study and have a command of the materials that are presented in The Flow System Foundations Course.

## Recommended Readings

The Flow System Reading Materials include 1) *The Flow System: The Evolution of Agile and Lean Thinking in an Age of Complexity*; 2) *The Flow System Guide*; and 3) *The Flow System: Key Principles and Attributes*.

- 1) *The Flow System: The Evolution of Agile and Lean Thinking in an Age of Complexity*  
Available from Amazon.

Hardback:

<https://amzn.com/1680400584/>

Kindle:

<https://amzn.com/B08NXPGMSC/>

- 2) *The Flow System Guide*  
Available online (free)  
<https://flowguides.org/index.php>

Amazon book (print-to-order)

<https://amzn.com/B085KN39FP>

Amazon Kindle Format

<https://amzn.com/B085PQFXFN/>

- 3) *The Flow System: Key Principles and Attributes*

Amazon book (print-to-order)

<https://amzn.com/B085DQB92N/>

Amazon Kindle Format

<https://amzn.com/B085DHFNMT/>