Thai–Japan Robot Implementation Personnel Development Project

Robot Training & Certification – FY2025 Executive Summary

Report to: Thai–Japan Robot Committee #9

27 February 2026 | Berkeley Hotel, Pratunam

Presented by

Kulchoke Popattanachai

President & CEO A.I.Technology Co., Ltd.

TARA Vice President

Content

Thai–Japan Robot Implementation Personnel Development Project

FY2025 PERFORMANCE OVERVIEW

- Activities: 20
- Training Days: 54
- Participants: 212

We sincerely appreciate the valuable guidance and support provided during the 8th Committee Meeting, which enabled the successful implementation of FY2025 activities.

Certification Status (as of 26 Feb 2026)

Confirmed Certified: 170 Engineers (80% - Provisional)

Pending: 35 Candidates
(Robot SI Exam 23-26 Feb 2026)

Strategic Impact: Established National Robot Safety Baseline | Expanded Advanced Capability | Strengthened SI Workforce | Reinforced Thailand–Japan Collaboration

Program Breakdown – 3-Level Development Structure (FY2025)

LEVEL 1 – FOUNDATION TRAINING

• Robot Safety Training (2 Sessions | 75 Certified)

• Mitsubishi Basic Robot (2 Sessions | 18 Certified)

Purpose: Establish foundational robot safety & operation competency

LEVEL 2 – ADVANCED ROBOT TRAINING

• 4 Japanese Brands (Mitsubishi | Yaskawa | Fanuc | Nachi)

• 66 Engineers Trained | 2 Sessions per Brand

Purpose: Upgrade programming & system integration capability

LEVEL 3 – ROBOT SI CERTIFICATION EXAM (Professional)

• Mitsubishi: 2 Session | Yaskawa: 2 Session | Fanuc: 2 Session

• 53 Candidates | 11 Certified | 35 Pending (23–26 Feb 2026)

Purpose: Develop industry-ready certified System Integrators

2025 ROBOT SAFETY TRAINING

Sessions 3 – November 11–12, 2025

Venue: Sanmei Robotics Academy, TGI Chonburi

ROUND 2 DEMONSTRATED STRONG READINESS OF THAI PARTICIPANTS TO ADOPT JAPANESE ROBOT SAFETY STANDARDS AND CONTRIBUTE TO NATIONAL SKILL UPGRADING

Key Messages from Mr. Nagai

- Robots are inherently dangerous, regardless of fences or software limits.
- Knowledge and actual capability are different — proper, hands-on training is essential.
- Anything uncertain or not fully understood should not be attempted.
- Risk assessment must be performed before using industrial robots or collaborative robots (cobots).
- Encoder mechanisms, memory loss, and battery replacement are critical for safe operation.
- Safety culture must be shared across the organization, not only by operators.

OVERALL TRAINING IMPACT

- Increased awareness of robot hazards and correct safe-teaching behavior
- Improved understanding of Japanese safety standards & risk-based design
- Stronger capability for participants to:
  - Identify dangers around robots
  - Perform inspection and check-sheet routines
  - Explain safety concepts to colleagues in their own factories
- Several companies expressed interest in sending more staff for future sessions

The program strongly supports the objective of the Japan-Thailand Robot Implementation Personnel Development Project, helping Thailand develop safe and competent robot personnel aligned with Japanese industrial standards.

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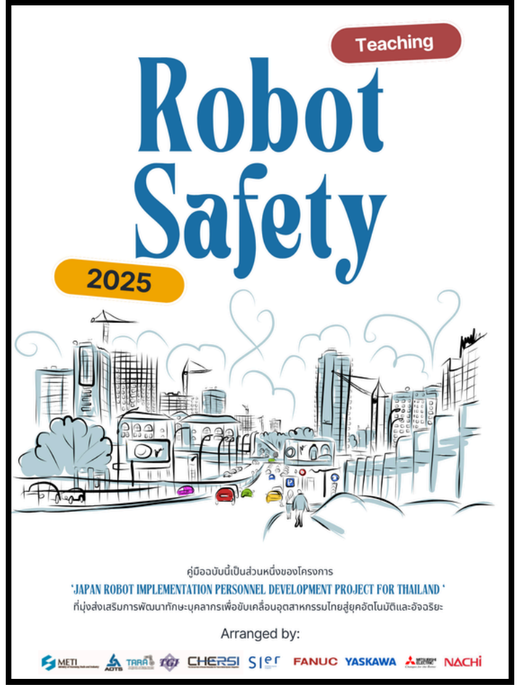

คู่มือฉบับนี้เป็นส่วนหนึ่งของโครงการ
'JAPAN ROBOT IMPLEMENTATION PERSONNEL DEVELOPMENT PROJECT FOR THAILAND'
ที่มุ่งส่งเสริมการพัฒนาทักษะบุคลากรเพื่อขับเคลื่อนอุตสาหกรรมไทยสู่ยุคอัตโนมัติและอัจฉริยะ

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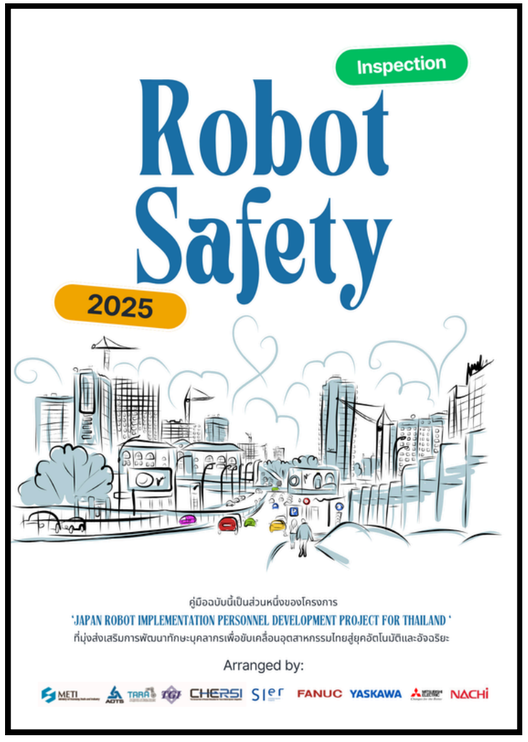

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Arranged by:

2025 ROBOT SAFETY TRAINING

Sessions 4 – November 13–14, 2025

Venue: Sanmei Robotics Academy, TGI Chonburi

KEY LEARNING TOPICS

Teaching (6 hours)

- Industrial robot types & characteristics
- Robot operating modes and inherent hazards
- **Safe teaching procedures and risk awareness**
- Laws & regulations related to industrial robots (ISO 10218, ISO 12100)
- Hands-on training with robot movement, safe zones, and emergency stop behavior

Inspection (6 hours)

- Robot system components: controller, servo, encoder, pneumatic elements
- Inspection checklist and daily/periodic inspection methods
- Failure modes, abnormal signals, and troubleshooting
- Case studies of accidents and preventive measures
- Practical inspection of robot systems and surrounding equipment
- **Understanding 'residual risk' and correct interpretation of safety manuals**

TRAINING OVERVIEW

Round 2 consisted of two sessions:

- 3rd Session: 11–12 November 2025 (20 participants)
- 4th Session: 13–14 November 2025 (20 participants)

A total of 40 participants from 30+ manufacturing companies, training institutes, and automation-related organizations attended.

Training was led by Mr. Nagai, focusing on safe robot operation (Teaching) and robot inspection (Inspection), following Japanese standards.

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PRESS RELEASE

TGI เปิดการอบรม “MITSUBISHI BASIC ROBOT” 2025

DETAILS OF TRAINING

สถาบันไทย-เยอรมัน (TGI) ร่วมกับ Mitsubishi Electric (Thailand) จัดการอบรมหลักสูตร **“Mitsubishi Basic Robot”** รุ่นที่ 1 วันที่ 6–7 ตุลาคม 2568 ณ ห้องปฏิบัติการหุ่นยนต์อุตสาหกรรม TGI จังหวัดชลบุรี ภายใต้โครงการ **Japan Robot Implementation Personnel Development Project for Thailand** ซึ่งถือเป็นอีกหนึ่งความสำเร็จของความร่วมมือระหว่าง **TARA, TGI และ Mitsubishi Electric** ที่มุ่งพัฒนาบุคลากรไทยด้านหุ่นยนต์และระบบอัตโนมัติให้มีสมรรถนะตรงตามความของการของภาคอุตสาหกรรม และเป็นแรงขับเคลื่อนสำคัญสู่การยกระดับประเทศไทยสู่ยุค Industry 4.0 อย่างยั่งยืน

LEARNING OUTCOME

- ผู้เข้าอบรม **ผ่านการทดสอบ 100%**
- คะแนน**ความพึงพอใจเฉลี่ย 95%**
- การเรียนแบบ **“คละกลุ่ม (Internal & External SI)”** ช่วยเปิดมุมมองใหม่ และส่งเสริมการแลกเปลี่ยนประสบการณ์ระหว่างอุตสาหกรรม
- เนื้อหาและชุดฝึกของ TGI ถอดแบบจาก Mitsubishi Japan เพื่อเตรียม**ขยายศูนย์ฝึกหุ่นยนต์**ให้รองรับความต้องการของภาคอุตสาหกรรมไทยในอนาคต

CONTENT

หลักสูตร เนื้อหา ตำรานี้ถ่ายทอดโดย อาจารย์ชมพูนิกข์ บุญรอด TGI และ อาจารย์วิลาวัณย์ บุตรศรี Mitsubishi Electric ให้ผู้เข้าอบรมได้**เรียนรู้ตั้งแต่ระบบหุ่นยนต์**โดยรวม โครงสร้าง ส่วนประกอบ การเขียนโปรแกรมด้วย **RT Toolbox3** และการ**ฝึกปฏิบัติจริง** (Jog Robot Operation) ตามคำสั่งต่าง ๆ เช่น MOV, MVS, MVR, MVC รวมถึง Palletizing Control Instruction

TARA PARTICIPANTS

1. Mr. Kantaphol Tinnabut – Tera Group Co., Ltd.
2. Ms. Thanpilin Banthoengjai – Tera Group Co., Ltd.
3. Mr. Thawipak Saefoong – Duck Riders Development Co., Ltd.
4. Mr. Preechanon Nukhuntung – Tac Siam Corp Co., Ltd.
5. Mr. Paramet Nuanchan – Bangkok Komatsu Co., Ltd.
6. Mr. Ponthep Prachomsee – M.E. Nikkiso Co., Ltd.
7. Mr. Makkaratach Kasemworakun – Meta Solution Co., Ltd.
8. Mr. Phakphum Chairam – Menam Machanika Co., Ltd.
9. Mr. Udomsak Aransotr – Menam Machanika Co., Ltd.

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PRESS RELEASE

TGI เปิดอบรม “MITSUBISHI BASIC ROBOT”#2

รองรับความต้องการบุคลากรด้านหุ่นยนต์และระบบอัตโนมัติอย่างต่อเนื่อง

DETAILS OF TRAINING

สถาบันไทย-เยอรมัน (TGI) ร่วมกับ Mitsubishi Electric (Thailand) จัดการอบรมหลักสูตร **“Mitsubishi Basic Robot”** ต่อเนื่องเป็น**รุ่นที่ 2 วันที่ 9–10 ตุลาคม 2568** ณ ห้องปฏิบัติการหุ่นยนต์อุตสาหกรรม TGI จังหวัดชลบุรี ภายใต้โครงการ Japan Robot Implementation Personnel Development Project for Thailand เพื่อตอกย้ำความสำคัญในการพัฒนาบุคลากรไทยด้านหุ่นยนต์และระบบอัตโนมัติ ให้มีสมรรถนะตรงตามความต้องการของภาคอุตสาหกรรม พร้อมเป็นแรงขับเคลื่อนสำคัญในการยกระดับประเทศไทยสู่ยุค Industry 4.0 อย่างยั่งยืน

LEARNING OUTCOME

- ผู้เข้าอบรม **ผ่านการทดสอบ 100%**
- คะแนน**ความพึงพอใจเฉลี่ย 94%**
- การเรียนแบบ “คละกลุ่ม (Internal & External SI)” เปิดมุมมองใหม่และส่งเสริมการแลกเปลี่ยนประสบการณ์ระหว่างอุตสาหกรรม
- กว่า 80% ของผู้เข้าอบรมรุ่นนี้มาจากภาคอุตสาหกรรมจริง และได้สะท้อนมุมมองไว้อย่างน่าประทับใจว่า **‘เรียนให้รู้เพื่อทำเองได้ คุยกับ SI รู้เรื่อง และไม่ถูกหลอก’** ✨

CONTENT

หลักสูตรนี้ถ่ายทอดโดย อาจารย์ชมพูนิกข์ บุญรอด (TGI)
โดยมีเนื้อหาครอบคลุมทั้งภาคทฤษฎีและภาคปฏิบัติ ได้แก่

- ระบบหุ่นยนต์โดยรวม โครงสร้างและส่วนประกอบ
- การเขียนโปรแกรมด้วย RT Toolbox3
- การฝึกปฏิบัติจริง (Jog Robot Operation) ด้วยคำสั่ง MOV, MVS, MVR, MVC รวมถึง Palletizing Control Instruction

เตรียมขยายศูนย์ฝึกหุ่นยนต์ให้รองรับความต้องการของภาคอุตสาหกรรมไทยในอนาคต พร้อมผลักดันให้ TGI เป็นศูนย์กลางการเรียนรู้เทคโนโลยีหุ่นยนต์ของภูมิภาคตะวันออก

TARA PARTICIPANTS

1. Mr. Kittisak trisukitworakul – Digital Automation Intelligence Co., Ltd.
2. Mr. Ekkarat Intakarn – Thai Chanathorn Industry Co., Ltd.
3. Mr. Saran Rattanaprapa – Muangthong Aluminium Industry Co., Ltd.
4. Mr. Prakorb Tuphlek – L&E Manufacturing Co., Ltd.
5. Ms. Kanittha Khanma – Rieckermann (Thailand) Co., Ltd
6. Mr. Kongpop Phopanit – TYK Filters Co., Ltd.
7. Ms. Peeraya Saomoke – TYK Filters Co., Ltd.
8. Mr. Jiraroj Suwannee – Tac Siam Corp Co., Ltd.

“LEARNING TO DO — EMPOWERING THAILAND’S SMART INDUSTRY 4.0 WORKFORCE”

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METI AOTS TARA TGI CHERSI SIer FANUC YASKAWA MITSUBISHI ELECTRIC NACHI

MITSUBISHI ELECTRIC
Changes for the Better

NEWSLETTER

Mitsubishi Advanced Robot Training – Session 1

October 14–17, 2025

Organized by AOTS, Mitsubishi Electric (Thailand) and TARA

TOPIC 01

A Warm Collaboration

The Mitsubishi Advanced Robot Training – Session 1 concluded successfully after four days of intensive hands-on learning, led by Mr. Nagai Kiichi, Senior Instructor from Japan.

Nine TARA participants completed the training, showing strong discipline, teamwork, and passion for mastering industrial robotics.

TOPIC 02

Achievement

All nine participants completed the training and received certificates of achievement from Mitsubishi Electric and AOTS

Their commitment — "on time, no absence, full attention" — reflects the Japanese-style learning discipline that defines this successful collaboration.

TOPIC 03

Special Thanks

A heartfelt appreciation to Mitsubishi Electric (Japan & Thailand) and AOTS for continuous support in developing skilled robot engineers for Thailand's Industry 4.0 transition.

Instructor's Message – Mr. Nagai Kiichi

"Understanding the logic is more important than completing every task. Precision comes from knowing how force and distance work together."

Training Highlights

Day 1 – Robot Programming & Motion Control
Participants learned RT Toolbox3 programming, Pick & Place simulation, and Cycle Time optimization techniques.

Day 2 – Maintenance & Force Sensor Setup
Hands-on sessions on robot battery replacement, preventive maintenance, and Force Sensor parameter settings.

Day 3 – Force Control & Insertion Accuracy
Advanced exercises using Oscillograph for force analysis and hole insertion control combining Force + Distance.

Day 4 – M-Distance & Final Challenge
Applied logic control to synchronize motion and force — culminating in the Surface Tracing Project, where participants programmed robots to trace curved surfaces with precision and smoothness.

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TARA Participation List

Mr. Akkaporn Satya: Duck Riders Development Co., Ltd.
Mr. Pisit Chanakul: Abiz Technology Co., Ltd.
Mr. Makkaratach Kasemworakun: Meta Solution Co., Ltd.
Mr. Thawipak Saefoong: Duck Riders Development Co., Ltd.
Ms. Kanittha Khanma: Rieckermann (Thailand) Co., Ltd
Mr. Prakorb Tuphlek: L&E Manufacturing Co., Ltd.
Mr. Saran Rattanaprapa: Muangthong Aluminium Industry Co., Ltd.
Ms. Kwanchanok Sapso: Thai Rokuha Co., Ltd.
Mr. Kittisak Boonkon: Thai Rokuha Co., Ltd.

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MITSUBISHI ELECTRIC
Changes for the Better

NEWSLETTER

Mitsubishi Advanced Robot Training – Session 2

October 24-29, 2025

Organized by AOTS, Mitsubishi Electric (Thailand) and TARA

TOPIC 01

Learning Beyond Basics

The second session of Mitsubishi Advanced Robot Training concluded successfully after four days of advanced technical learning, led by **Mr. Yuki Oguri,** Senior Instructor from Japan.

Unlike beginners' courses, this session emphasized real industrial applications — from simulation setup, robot programming, to force sensor integration — reflecting the participants' strong foundation and quick adaptability.

TOPIC 02

Deep Dive into Robot Mastery

The training started with a review of engineering tools, verification of robot operation, and data maintenance through **backup & restore.**

Participants learned the use of **RT Toolbox3, PLC communication, Cycle Time optimization,** and practiced hands-on robot motion control with **Force Sensor** — mastering how to manage position, force, and coordination under real factory conditions.

TOPIC 03

Force Control in Action

Days 3–4 focused entirely on **Force Sensor Programming** and advanced exercises:

- **Simple Push Test (5N Force Application)**
- **Gear Insertion with Rotation Control (1°–30° steps)**
- **Pressing on a Wavy Surface with Constant Force**

Each exercise combined precision, balance, and feedback control, training participants to write efficient robot programs for automation lines.

Training Highlights

Day 1 – Robot Programming & System Setup
Orientation, tool operation review, RT Toolbox3 programming, and Pick & Place simulation.
Included **Battery Maintenance** and **Origin Setting** (ABS/Jig) for precise motion control.

Day 2 – Backup & PLC Communication
Focused on **Backup & Restore**, simulation practice, and **PLC Communication**.
Covered safety setup — **STR, SLS, SLP** — for accuracy and safe automation.

Day 3 – Force Sensor Integration
Hands-on **Force Sensor** setup, programming, and **Oscillograph** analysis.
Developed insertion programs balancing force and position.

Day 4 – M-Distance & Wavy Surface Task
Final challenge combining **M-Distance** Logic and **Force Control** on curved surfaces.
Concluded with cycle-time improvement and certificate presentation.

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Instructor's Message – Mr. Yuki Oguri

"Over the past four days, all of you have learned very quickly — without needing to start from the basics.
This concludes our 4-day robot training program.
Please take what you've learned and apply it seriously to your future **Automation System Design** projects."

List of TARA Participants

1 Mr. Watcharaphon Thanapun:
Parker International Corporation (Thailand) Co., Ltd.
2 Mr. Jinthananon Thaveerojanavinit:
Versed Automation System Co., Ltd.
3 Mr. Piti Sillapatiwat: Versed Automation System Co., Ltd.
4 Mr. Kittisak trisukitworakul: Digital Automation Intelligence Co., Ltd.
5 Mr. Boonchai Sa-ngasong: Top Medical (2015) Co., Ltd.
6 Mr. Thasit Sriprang: Extra Solution Engineering Co., Ltd.
7 Mr. Kantaphol Tinnabut: Tera Group Co., Ltd.
8 Ms. Thanpilin Banthoengjai: Tera Group Co., Ltd.
9 Ms. Angkana Jariyanupattanakul:
Gerenga Service (Thailand) Co., Ltd.

NEWSLETTER

Yaskawa Advanced Robot Training – Session 1

November 25-28, 2025

Organized by AOTS, Yaskawa Electric (Thailand) and TARA

TOPIC 01

Learning the Essentials

The YASKAWA Advanced Robot Training, held over four intensive days, was filled with dynamic, **hands-on learning** led by **Tatsuhiko Ueda Sensei**, a senior robotics specialist from Japan. Participants from various Thai industries gained deep technical insight, progressing from **simulation fundamentals to advanced robotic programming**.

TOPIC 02

Intensive Programming Session

Participants progressed from system setup and MotoSim Touch cell creation to I/O communication, sequence design, and program execution on the Teach Pendant. Hands-on exercises covered **I/O Simulation**, **workpiece transfer logic, and dual-robot coordination** using I/O Connect — essential skills for real industrial environments.

TOPIC 03

Hand-On Application

A key highlight was the **Robot Palletizing System challenge**, where trainees built a virtual palletizing cell, configured conveyors and pallets, and programmed stacking operations.

On the final day, participants advanced into **Vision Sensor integration with MotoSimPlus**, **Remote Programming Pendant (RPP)** network setup, robot maintenance (battery & grease), and full operation on the actual robot.

Training Highlights

Day 1 — MotoSim Touch Setup & Fundamentals
Cell setup, tool data, simulation basics, and teaching/playback.
JOB conversion, online/offline data, and applying offline teaching to real robots.

Day 2 — I/O Simulation & Multi-Robot Coordination
Participants practiced I/O Simulation, workpiece tracking, and robot-to-robot coordination using I/O Connect to avoid collisions.

Day 3 — Application Programming (Robot Palletizing System Examination)
Trainees built a complete palletizing cell: conveyors, pallets, stacking logic, and operational flow in MotoSim.
This challenge showcased creativity, problem-solving, and teamwork across all participants.

Day 4 — System Configuration & Maintenance
Covered Vision Sensor with MotoSimPlus, battery/grease maintenance, and RPP network configuration.
Concluded with full robot operation and verification on actual machines.

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Instructor's Message – Ueda Sensei

"These four days may have been short, but the knowledge you gained will help you advance to higher levels in robotics."

List of TARA Participants

1 **Ms. Angkana Jariyanupattanakul,** gerenga Service (Thailand) Co., Ltd.
2 **Mr. Makkaratach Kasemworakun**, Meta Solution Co., Ltd.
3 **Mr. Phonlawat Khrambunlue**, Wattana Machinetech Co., Ltd.
4 **Mr. Piti Sillapatiwat,** Versed Automation System Co.,Ltd.
5 **Mr. Sattawat Nemmanee,** A.I.Technology Co., Ltd.
6 **Mr. Withoon Mekkabut**, Sanden Intercool (Thailand) PCL.
7 **Mr. Thanathon Vichitchan**, AppliCad PCL.
8 **Mr. Sasit Boondaw**, Sangcharoen Tools Center Co., Ltd.

NEWSLETTER

Yaskawa Advanced Robot Training – Session 2

January 13-16, 2026

Organized by AOTS, Yaskawa Electric (Thailand) and TARA

TOPIC 01

Advanced Programming & Simulation

The YASKAWA Advanced Robot Training – Session 2 was conducted over four intensive days, focusing on advanced robot programming and system integration skills. Participants began by reviewing their backgrounds and experience to enable effective group learning. The course then progressed into MotoSim and MotoSim Touch, emphasizing robot cell creation, offline programming, job structure, and simulation-based system design before operating on actual robots.

TOPIC 02

From Simulation to Real Handling

The training continued by bridging simulation with real-world handling applications. Participants learned how to:

- Configure robots for handling applications
- Manage I/O Event Manager for coordination with external devices
- Measure real robot and workstation dimensions to build accurate simulations

Through hands-on exercises, trainees practiced workpiece transfer, collision avoidance, and logical sequencing within robot cells.

TOPIC 03

Robot Palletizing System Design

A major highlight of Session 2 was the Robot Palletizing System challenge. Using real industrial conditions, participants designed a complete palletizing model:

- Defined pallet and workpiece parameters
- Created stacking patterns (multi-layer, zero-clearance)
- Selected appropriate robot models based on payload, reach, and cycle time
- Built palletizing logic using Trans Job

Through step-by-step coaching by Ueda Sensei, all teams successfully completed and validated their palletizing models by the final day.

Training Highlights

Day 1 – MotoSim & Offline Programming Fundamentals
Robot cell creation, job structure, and simulation-based teaching

Day 2 – Handling, I/O & Cell Design
Simulation-to-handling transition, I/O coordination, and realistic cell layout

Day 3 – Palletizing Model Development
Palletizing logic, Trans Job, and system-level thinking

Day 4 – System Configuration, Maintenance & Advanced Topics
Remote Programming via Teach Pendant,
Network connection between MotoSim and Controller,
Robot maintenance (battery & grease),
Force Sensor applications, and 7th Axis Positioner overview

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Instructor's Message – Ueda Sensei

"These four days may have been short, but the skills you have learned will help you take the next step as professional robot system integrators."

List of TARA Participants

1 **Mr. Chaiya Singthoong** Karnjanalohakarn Co., Ltd.
2 **Mr. Thirapol Ruanthong** Nippon Kikai Engineering Co., Ltd.
3 **Mr. Nopporn Puangngam** A.I.Technology Co., Ltd.
4 **Mr. Nutthapat Phaholpholyarn** Robot System Co., Ltd.
5 **Mr. Metee Nilparak** Mahatanee Industrial Co., Ltd.
6 **Mr. Chanutchai Tansomerong** TSR Automation System Co., Ltd.
7 **Mr. Thanom Kaeokhwanoi** Thai Summit Roll Forming Technology Co., Ltd.
8 **Mr. Tanawan Kaennok** Duck Riders Development Co., Ltd.

NEWSLETTER

FANUC Advanced Robot Training – Session 1

December 16-19, 2025

Organized by AOTS, FANUC THAI and TARA

TOPIC 01

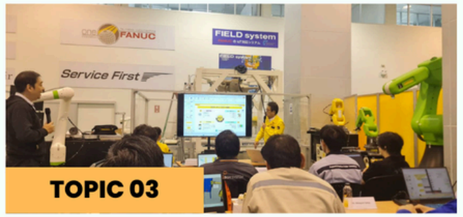
A Strong Step Toward Advanced Robot SI Capability

The FANUC Advanced Robot Training – Session #1 was successfully conducted over four intensive days, focusing on **advanced robot programming, simulation, vision, force control, and real industrial applications.**
The program was designed to strengthen Thai Robot SI capabilities and prepare participants for real factory deployment.
Participants demonstrated strong commitment, discipline, and hands-on engagement throughout the training, reflecting the Japanese-style learning philosophy of precision, responsibility, and continuous improvement.

TOPIC 02

Training Achievement

All participants successfully completed the training and received certificates of completion from FANUC and AOTS. The program also prepares participants for the upcoming **ROBOT SI CERTIFICATION EXAM**, strengthening both technical capability and professional credibility.



TOPIC 03

Looking Forward

This training marks another important milestone in building a strong **Robot SI Community** in Thailand — capable of delivering **reliable, responsible, and high-quality automation solutions** for the future of Thai industry.

"This program reflects Japan–Thailand collaboration in developing high-level Robot SI capabilities for Industry 4.0."

Training Highlights

Day 1 – Robot Programming & System Setup

Participants reviewed FANUC robot fundamentals and advanced programming concepts, including:
- Robot motion control and coordinate systems
- Program structure and logic flow
- Introduction to simulation-based workflow for system design

Day 2 – Vision & Force Sensor Integration

Focused on practical integration of FANUC technologies:
- Vision calibration and coordinate alignment
- Force Sensor fundamentals for safe and precise operation
- Applications for handling, insertion, and human-collaborative tasks

Day 3 – Automation Logic & Real Application Thinking

Advanced exercises emphasized:
- Combining Vision + Force Sensor for real production scenarios
- Error prevention, safety logic, and collision handling
- Application thinking based on actual customer use cases

Day 4 – Simulation, Optimization & SI System Design

Participants applied ROBOGUIDE to:
- Create virtual workcells
- Simulate robot motion and cycle time
- Optimize layout, motion profile, and energy usage
- Validate system feasibility before real installation

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086-0997097

Instructor's Message – Shinozuka Sensei

"Understanding the logic behind robot motion, force, and vision is far more important than simply completing tasks. These skills will help you design better automation systems in real factories." This approach demonstrated how simulation can be used not only for engineering design, but also as a **powerful sales and communication tool** with customers.

List of TARA Participants

1 **Ms. Soontaree Krairabiab** Pensook Technology Co., Ltd
2 **Mr. Siksaka Pungpho** A.I. Techonology Co., Ltd.
3 **Ms. Angkana Jariyanupattanakul** gerenga Service (Thailand) Co., Ltd.
4 **Mr. Akkaporn Satya** Duck Riders Development Co., Ltd.
5 **Mr. Worramate Pornkiratichinda** Robot System Co., Ltd.
6 **Mr. ThongchaiPomrak** Robot System Co.Ltd.
7 **Mr. Chanutchai Tansamrong** TSR Automation System Co., Ltd.
8 **Mr. Jirat Torattanawattana** Wattana Machinetech Co., Ltd.

NEWSLETTER

FANUC Advanced Robot Training – Session 2

January 26-29, 2026

Organized by AOTS, FANUC THAI and TARA

TOPIC 01

Advancing Robot SI Capabilities through Hands-on Training

The FANUC Advanced Robot Training – Session 2 was successfully conducted over four intensive days, focusing on **advanced robot programming, system integration, simulation, vision sensing, and force control technologies.**
This program emphasized practical, hands-on learning and real industrial use cases, preparing participants for advanced automation projects and the upcoming Robot SI Certification Exam (JARSIA).

TOPIC 02

Training Achievement

All participants successfully completed the program and received **Certificates of Completion from FANUC** and AOTS, strengthening their readiness for **Robot SI Certification** and real industrial deployment.

TOPIC 03

Looking Forward

This training reinforces **Japan–Thailand collaboration** in developing a strong **Robot System Integrator (SI) community**, supporting sustainable, high-quality automation solutions aligned with **Industry 4.0**.

"This program reflects Japan–Thailand collaboration in developing high-level Robot SI capabilities for Industry 4.0."

Training Highlights

Day 1 – Robot System Fundamentals

Participants learned FANUC robot system structure, safe operation, coordinate systems, Teach Pendant usage, alarms, battery management, and mastering (Zero / Quick Mastering), ensuring a strong technical foundation.

Day 2 – Practical Skills & Real Applications

Hands-on training covered **payload setup, force control, and mastering**, alongside real-world applications such as **Bin Picking, Welding, and Food-grade robots**, encouraging participants to connect training content with actual factory challenges.

Day 3 – Vision Sensor Integration

Focused on camera calibration, coordinate alignment, object recognition, and the impact of lighting and surface conditions—highlighting how vision systems expand robot capability beyond fixed teaching.

Day 4 – Simulation & SI System Design with ROBOGUIDE

Participants used **ROBOGUIDE** to design layouts, program Pick & Place operations, analyze cycle time, and optimize robot-friendly motion—reinforcing simulation as both an **engineering and customer communication tool.**

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Instructor's Message – Shinozuka Sensei

"Understanding robot logic, motion, force, and vision together is the key to effective system integration. Simulation helps engineers design better systems and communicate value clearly to customers."

List of TARA Participants

1 **Mr. Makkaratach Kasemworakun** Meta Solution Co., Ltd.
2 **Mr. Decharwat Hengtrakun** Nippon Kikai Engineering Co.,Ltd.
3 **Mr. Apisit Po-ngam** CPRAM Co., Ltd.
4 **Mr. Tanet Temprasert** CPRAM Co., Ltd.
5 **Mr. Chanayut Ruenprot** Riverplus Co., Ltd.
6 **Mr. Jeeraphong Noijan** Riverplus Co., Ltd.
7 **Mr. Nutthapat Phaholpholyarn** Robot System Co., Ltd.
8 **Mr. Thitiphong Fainui** Robot System Co., Ltd.

NEWSLETTER

NACHI Advanced Robot Training – Session 1

February 2-5, 2026

Organized by AOTS, NACHI THAILAND and TARA

TOPIC 01

Building Advanced Robot Operation & System Foundations

The NACHI Advanced Robot Training – Session 1 was successfully conducted over four intensive days, focusing on strengthening participants' technical capabilities in robot operation, robot systems, robot safety, and vision technology.
The program combined theoretical lectures and hands-on practice using NACHI MZ Series robots, providing participants with a solid foundation for advanced industrial robot applications.

TOPIC 02

Training Achievement

All participants successfully completed the training program and enhanced their competencies in robot systems, safety engineering, vision integration, simulation, and PLC control.
The training significantly strengthened participants' readiness for real industrial deployment and preparation for the Robot SI Certification Exam (JARSIA).

TOPIC 03

Looking Forward

Strengthening Japan–Thailand Robot SI Capability
This program reflects the strong collaboration between Japan and Thailand in developing advanced Robot System Integrator (SI) capabilities.
Through continuous skill development and knowledge transfer, the program supports the growth of a sustainable, high-quality automation ecosystem aligned with Industry 4.0.

Training Highlights

Day 1 – Robot Operation, System & Safety
Robot operation, system fundamentals, and safety with practical risk assessment based on Carton Box Transportation / Palletizing.

Day 2 – Vision System & Practical Training
Vision system training including camera configuration, calibration, and real-workpiece testing for flexible robot operation.

Day 3 – Offline Simulation with FD on DESK III
Offline simulation using FD on DESK III, practicing pick-and-place programming and verifying cycle time.

Day 4 – Software PLC & System Integration
Software PLC and system integration, focusing on ladder programming, I/O control, and safety logic.

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Instructor's Message – Tojo Sensei

"Safe and effective robot integration begins with a clear understanding of robot operation, system logic, and risk assessment."

List of TARA Participants

1 **Ms. Soontaree Krairabiab** Pensook Technology Co., Ltd
2 **Mr. Naruephop Jerasate** Pensook Technology Co., Ltd.
3 **Mr. Suriya. Pattarasomsakul** PSN Innovation Co., Ltd.
4 **Mr. Rachata Jumratchay** Best Plastics Technology Co., Ltd.
5 **Ms. Krittiyaporn Plotchum** Best Plastic Technology Co., Ltd.
6 **Mr. Akaraphong Koomngern** A.I.Technology Co., Ltd.
7 **Ms.Thitiworada Katikawong** Thai Rokuha Co., Ltd.
8 **Mr. Decharwat Hengtrakun** Nippon Kikai Engineering Co.,Ltd.

NEWSLETTER

NACHI Advanced Robot Training – Session 2

February 10-13, 2026

Organized by AOTS, NACHI THAILAND and TARA

TOPIC 01

Building Strong Foundations in Robot System Integration

The NACHI Advanced Robot Training – Session 2 was successfully conducted over four intensive days, focusing on strengthening System Integrator (SI) capabilities in robot operation, safety engineering, vision integration, offline simulation, and PLC control.
A key highlight of Day 1 was Risk Assessment practice, reinforcing that safety is not optional — it must be systematically embedded into every project.

TOPIC 02

Vision System & Practical Integration

Day 2 focused on NVsmart Vision System integration.

Participants learned:
- Camera connection and configuration
- Vision calibration
- Work recognition & visual correction
- Real station sheet testing with actual workpieces

The session provided real industrial scenarios, allowing participants to program and test camera functions directly on actual robot systems.

TOPIC 03

Offline Simulation – FD on DESK III

Participants practiced:
- Virtual robot teaching
- Program creation on PC before transferring to Teach Pendant
- Cycle time estimation
- Collision checking
- Layout and motion validation

A major highlight:
👉 **NACHI provides FD on DESK III free trial for 90 days**
More generous than any brand participants had previously experienced.

TOPIC 04: Software PLC & System Integration

Day 4 covered:
- Software PLC integration
- Ladder logic and I/O control
- Signal communication between robot and external devices
- Virtual PLC circuit simulation without hardware

Participants appreciated **learning directly from the manufacturer,** gaining clearer understanding of brand-specific functions and differences between robot platforms.

Looking Forward

With its strong safety philosophy, structured methodology, and **practical tools like FD on DESK III, NACHI continues** to play a vital role in strengthening Thailand's industrial automation ecosystem.

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Participant Reflections

Participants strengthened their **robot system foundation, hands-on programming, vision integration, simulation skills, and risk awareness** throughout the 4-day program.
Learning directly from the manufacturer increased their confidence and system-level understanding.
They **look forward to advanced solutions, cobot applications, and new Japanese innovations in future sessions.**

List of TARA Participants

1 **Mr. Ananchai Ngamketsuk** Terakit Electric Solution Co., Ltd.
2 **Mr. Nuttapon Wongmethawasin** Abiz Technology Co., Ltd.
3 **Mr. Teerapong Wongsorn** Abiz Technology Co., Ltd.
4 **Mr. Weera Noimee** West Coast Engineering Co., Ltd.
5 **Mr. Sade Chaimongkon** West Coast Engineering Co., Ltd.
6 **Mr. Jirat Torattanawattana** Wattana Machinetech Co., Ltd.
7 **Ms. Angkana Jariyanupattanakul**
gerenga Service (Thailand) Co., Ltd.
8 **Mr. Wattana Thongthaeng** TAF Automate Co., Ltd.

Thai–Japan Robot Implementation Personnel Development Project

3-Year Development Journey

"Over the past three years, we have built Thailand's robot capability foundation."

2023 — PILOT PHASE

- **3** Sessions
- **9** Participants

- Advanced Robot Training (3 Brands)
- Established initial collaboration model

Pilot & Trust Building

2024 — EXPANSION PHASE

- **13 Sessions**
- **101** Participants

- Introduced:
  - Basic Training
  - SI Pre-Certification
  - Examiner Training
  - Multi-brand Advanced

Program Expansion

2025 — FULL IMPLEMENTATION PHASE

- **20 Sessions**
- **212** Participants

- Structured 3-Level Framework
- Robot Safety Program Launched
- SI Certification System Operational

Structured Qualification System

36 Sessions | **103** Training Days | **322** Engineers Trained | **262** Certified

From Pilot Collaboration to Structured National-Level Robot Qualification Framework

Train-the-Trainer Phase (FY2026)

Recommended Selection Criteria Framework

FY2026 marks the transition from capacity building to sustainability and localization.

1 Strategic Context

- FY2023–2025: Capacity Building Phase
  36 Activities | 322 Participants | 262 Certified
- FY2026: Transition to Sustainability & Localization

2 Objective

- Establish **15 Certified Thai Trainers**
  Support Thailand-led Robot Qualification System

3 Eligibility Criteria

- Completed Advanced Robot Training
- Passed Robot SI Certification (2nd Grade)
- No disciplinary record
- Recommended by Robot Brand
- Committed to TARA Program (2-year minimum)
- **Score ≥ 80**

4 Scoring Framework

- Technical & System Design Competency – 40%
- Teaching Ability – 25%
- Safety Understanding – 20%
- Communication & Professionalism – 15%

Selection Process (FY2026)

This Train-the-Trainer framework ensures a transparent, merit-based, and brand-aligned selection system.

STEP 1 – Candidate Pool

- Brand Nomination (21)
- SI Exam Pass (17+)
- Combined Technical Pool

STEP 2 – Scoring Matrix

Criteria	Criteria	Score (1–5)	Weighted Score
Technical Skill	40%	4	1.6
Teaching Skill	25%	4	1
Safety Knowledge	20%	5	1
Communication	15%	4	0.6
Total	**4.2 / 5 = 0.84 x 100 = 84 Score**		

STEP 3 – Final Selection

- Top 15 Candidates
- Committee Endorsement
- Official Appointment

TARA Certified Trainer (Provisional) – FY2026

Governance Model

- 1-Year Probation Period
- Performance Evaluation after Year 1
- Re-certification every 2 years
- Continuous Alignment with Robot Brands & TARA

Transition Phase: From METI-supported Project to Thailand-led Qualification System

Robot SI Candidate Pool

DRAFT – For TARA Internal Discussion

Total Potential Technical Candidates (Preliminary): 38+

SI Exam – Passed (17+)

Overview of candidates who successfully passed the 2025 Robot SI Certification Exam.

No	Date	Name	Position	Company name	Gender	ritten Exa	actical Ex
YASKAWA: 8							
Y003	18/02/2025	Mr. Weera Noimee	Robotics Specialist	West Coast Engineering Co., Ltd.	Male	76	96
Y005	18/02/2025	Mr. Setthakit Komkrit	Project Engineer	Robot System Co., Ltd.	Male	72	100
Y011	19/02/2025	Mr. Thitiphong Fainui	Project Engineer	Robot System Co., Ltd.	Male	78	89
Y001	17/09/2025	Mr. Chalermpol Chaiyamang	Project Manager	Smile System Co., Ltd.	Male	80	94
Y002	17/09/2025	Mr. Kasae Suksethit	Maintenance	Bangkok Sheet Metal PCL.	Male	82	98
Y003	17/09/2025	Mr. Komkrit Saneechai	Service Manager	GW Advanced Engineering Co., Ltd.	Male	82	98
Y004	17/09/2025	Mr. Phithakphong Charoenrat	Electrical and Automation Engineer	Emex Group (Thailand) Co., Ltd.	Male		92
Y009	17/09/2025	Mr. Prasert Boonrach	Programmer PLC	Most Automation Technology Co., Ltd.	Male	94	
MITSUBISHI: 3							
No	Date	Name	Position	Company name	Gender	ritten Exa	actical Ex
M001	20/02/2025	Metasit Laoton	Control Engineer	Robocloud Co., Ltd.	Male	92	85
M002	20/02/2025	Taipan Tanpaibul	Robot Engineer	Weldex Co., Ltd.	Male	88	70
M005	21/02/2025	Sade Chaimongkon	Head of Smart Handling Robotic , Deput	West Coast Engineering Co., Ltd.	Male	86	94
FANUC: 6							
No	Date	Name	Position	Company name	Gender	ritten Exa	actical Ex
F002	15/09/2025	Mr. Weera Noimee	Robotics Specialist	West Coast Engineering Co., Ltd.	Male		98
F003	15/09/2025	Mr. Metasit Laoton	Robot Engineer	Mygrowtech (Thailand) Co., Ltd.	Male		86
F004	16/09/2025	Mr. Sattawat Nemmanee	Electrical Engineer	A.I.Technology Co., Ltd.	Male	94	95
F005	16/09/2025	Mr. Wasin Wachirapanee	Service Manager	GW Advanced Engineering Co., Ltd.	Male	90	82
F006	16/09/2025	Mr. Pirapat Jongkonpuet	Electrical Designer	Eureka Automation Co., Ltd.	Male	86	89
F007	16/09/2025	Mr. Theerapol Kumset	Mechanical Engineer	Eureka Automation Co., Ltd.	Male	86	88
Total:17							

Brand Nominated (21)

Overview of candidates who completed the manufacturers' Advanced Robot Training programs and have been nominated for Trainer development.

Prospective instructor	No.		Name	Company	Product	Position	E-mail
MITSUBISHI							
○	86	1	Mr. Pisit Chanakul	Abiz Technology Co., Ltd.	System Integrator	Senior Application Engineer	pasit@abizgroup.com
○	98	2	Mr. Kittisak Boonkong	Thai Rokuha Co., Ltd.	System Integrator	Robot Engineer	kittisak.thairokuha@gmail.com
○	85	3	Mr. Piti Sillapatiwat	Versed Automation System Co., Ltd.	System Integrator	Project Engineer	piti@versed-automation.co.th
○	87	4	Mr. Kittisak trisukitworakul	Digital Automation Intelligence Co., Ltd.	System Integrator	General Manager	kittisak@dgati.com
○	90	5	Ms. Angkana Jariyanupattanakul	Gerenga Service (Thailand) Co., Ltd.	System Integrator	Robotic Engineer	angkana.j@gerenga.com
YASKAWA							
○	77	1	Ms. Angkana Jariyanupattanakul	gerenga Service (Thailand) Co., Ltd.	System Integrator	Robotic Engineer	angkana.j@gerenga.com
○	82	2	Mr. Phonlawat Khrambunlue	Wattana Machinetech Co., Ltd.	System Integrator	Industrial Robotics Department Manager	phonlawat.kbl@gmail.com
○	90	3	Mr. Piti Sillapatiwat	Versed Automation System Co.,Ltd.	System Integrator	Project Engineering	piti@versed-automation.co.th
○	80	4	Mr. Thanathon Vichitchan	AppliCad PCL.	System Integrator	Application Engineer Contract	thanathon_wi@applicadthai.com
○	83	5	Mr. Chanutchai Tansomerong	TSR Automation System Co., Ltd.	System Integrator	Robotics & PLC Service Manager	Tsr.automation2024@gmail.com
○	80	6	Mr. Thanom Kaeokhwanoi	Thai Summit Roll Forming Technology Co., Ltd.	Automotive Part	Project Engineer	Thanom.kae@thaisummit.co.th
FANUC							
○	82	1	Ms. Soontaree Krairabiab	Pensook Technology Co., Ltd	System Integrator	General Manager	soontaree_k@pensook.com
○	84	2	Ms. Angkana Jariyanupattanakul	gerenga Service (Thailand) Co., Ltd.	System Integrator	Robotic Engineer	angkana.j@gerenga.com
○	86	3	Mr. Chanutchai Tansamrong	TSR Automation System Co., Ltd.	System Integrator	Robotics & Plc Service Manager	tsr.automation2024@gmail.com
○	85	4	Mr. Makkaratach Kasemworakun	Meta Solution Co., Ltd.	System Integrator	System Engineer	mkrtpie13@gmail.com
○	87	5	Mr. Nutthapat Phaholpholyarn	Robot System Co., Ltd.	System Integrator	Project Engineer	nutthapat@robotsystem.co.th
○	83	6	Mr. Thitiphong Fainui	Robot System Co., Ltd.	System Integrator	Project Engineer	thitiphong@robotsystem.co.th
NACHI							
○	84	1	Ms.Thitiworada Katikawong	Thai Rokuha Co., Ltd.	System Integrator	Automation Engineer	fa@rokuha.com
○	85	2	Mr. Nuttapon Wongmethawasin	Abiz Technology Co., Ltd.	System Integrator	Senior Sales Engineer	nuttapon@abizgroup.com
○	87	3	Mr. Weera Noimee	West Coast Engineering Co., Ltd.	System Integrator	Robotics Specialist	WeeraNo@wce.co.th
○	82	4	Mr. Wattana Thongthaeng	TAF Automate Co., Ltd.	System Integrator	Managing Director	monkeypop134@gmail.com
Total		21					

Pending: 35 Candidates

(Robot SI Exam 23-26 Feb 2026)

Final candidate list will be confirmed after February 2026 examination results.

Benefits to TARA Members

Thai-Japan Robot Implementation Personnel Development Project for Thailand

Technical Capability Enhancement

1

- **Direct learning** from robot manufacturers
- **Hands-on training** in Robot setup, Vision integration, and PLC programming
- **Simulation-based learning** before real deployment
- **Systematic understanding** of multi-brand technologies

Advanced Robot Safety & Risk Management

2

- **In-depth Safety standards from Japanese manufacturers**
- Structured **Risk Assessment** training
- **Elevation of Thai SI safety practices to international standards**
- **Strengthening compliance** mindset for industrial applications

Direct Knowledge Transfer from Manufacturers

3

- Technical **Q&A with expert engineers**
- **Access to advanced functions** beyond manuals
- **Reduced learning curve** for system integrators
- **Exposure to new solutions** (Industrial Robots & Cobots)

Business & Technology Enablement

4

- Industry-supported **simulation software access**
- **NACHI: FD on DESK III (90 days)**
- **FANUC: ROBOGUIDE (30 days)**
- **Practical testing** environment prior to implementation
- **Reduced development risk and improved system validation**
- **Foundation for TARA's Robot Training & Certification System (from 2026 onward)**

Beyond technical training, this project reflects the spirit of partnership between Thailand and Japan.

Through knowledge sharing, safety standards alignment, and long-term collaboration, we are not only developing robot engineers — we are building trust, friendship, and shared growth.

The NACHI “Spread Love” initiative symbolizes more than support.

It represents commitment — to people, to industry, and to the future of Thailand’s robotics ecosystem.

From Skill Development to Industrial Partnership —
Together, We Build Thailand’s Robotics Future.


Happy
Valentine's
Day
Spread Love
NACHI
NACHI Advanced Robot Training
(Feb 10-13, 2026)
Participant Reflection

Building Thailand’s Sustainable Robot Qualification System.

Together – Japan & Thailand

We look forward to the 10th Thai–Japan Robot Committee Meeting.

Thai–Japan Robot Committee | 27 February 2026