



17th Chemical Process Safety Sharing (CPSS)

Topic: Implementing a Technical Authority System for Effective Technical Governance



Ummara Sittiwong
Ummara@thaioilgroup.com
Thaioil

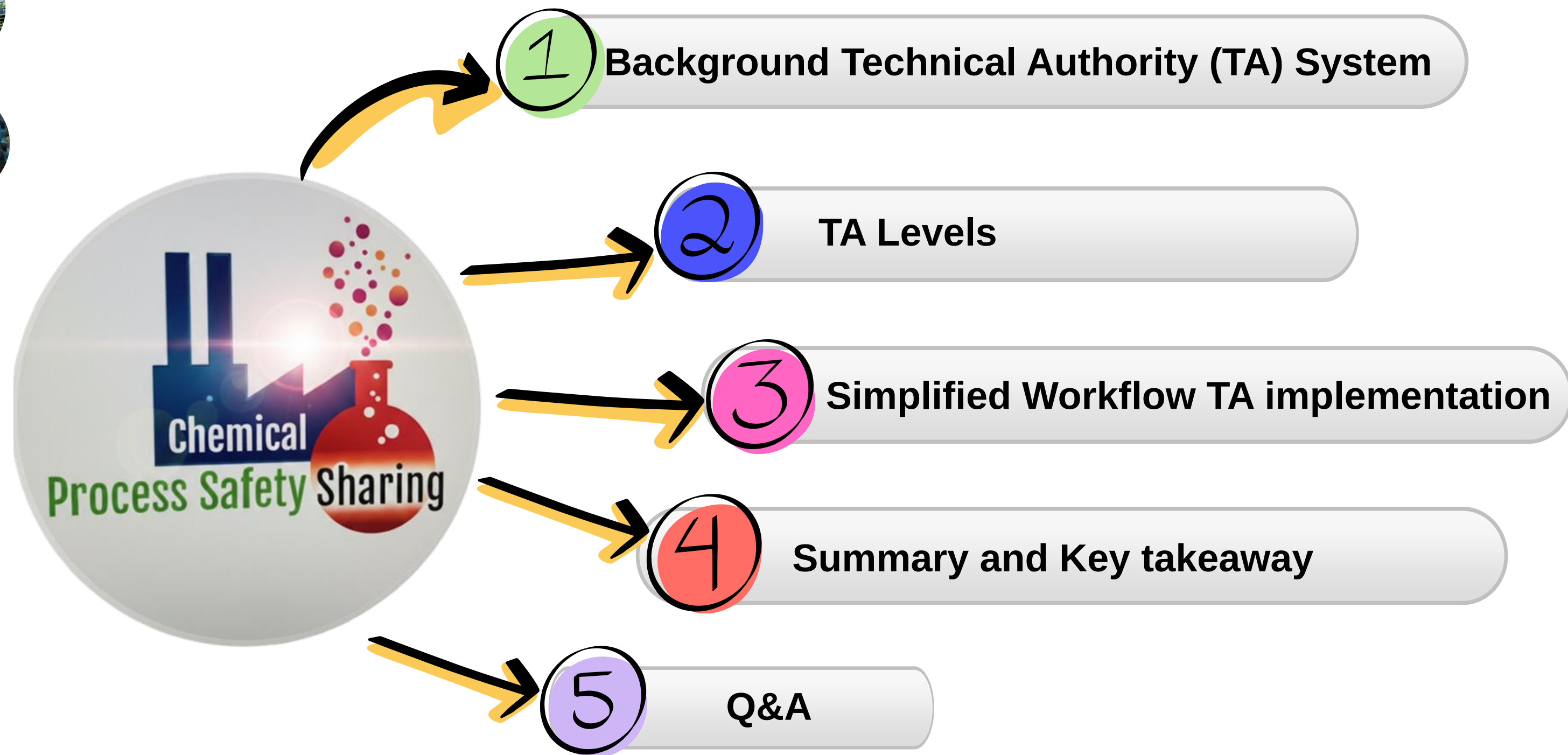


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June 11th, 2026, Pattaya, Thailand





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Background Technical Authority (TA) System

Technical Authority (TA) is a technical governance system that ensures critical technical decisions are made by the right people with the right competency and authority level.

TA is important because it helps to:

- Maintain process safety, technical integrity, and compliance with engineering standards
- Reduce technical risks and preventing unsafe decisions.
- Ensure safe and reliable operations.

Key roles & responsibilities as per Technical Authority Level

- As MOC work process, TAs will support in a part of technical review.

Note: If there is any deviation from TOSS/DEPs/International standard, TA will review and approve.

- Support in discipline technical issue e.g. incident investigation, risk assessment, etc
- Support compliance and assurance activities in projects

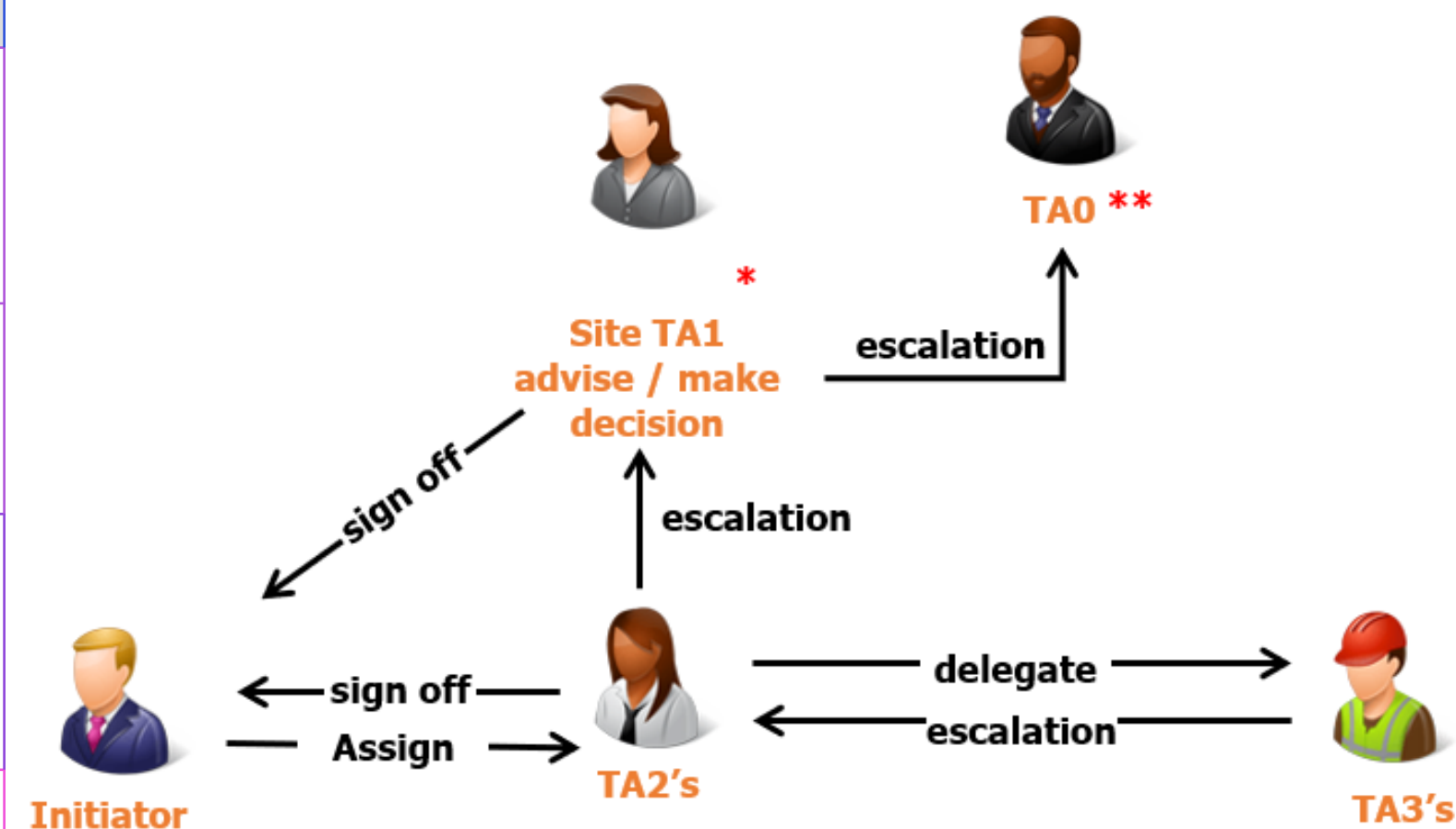




2 TA levels

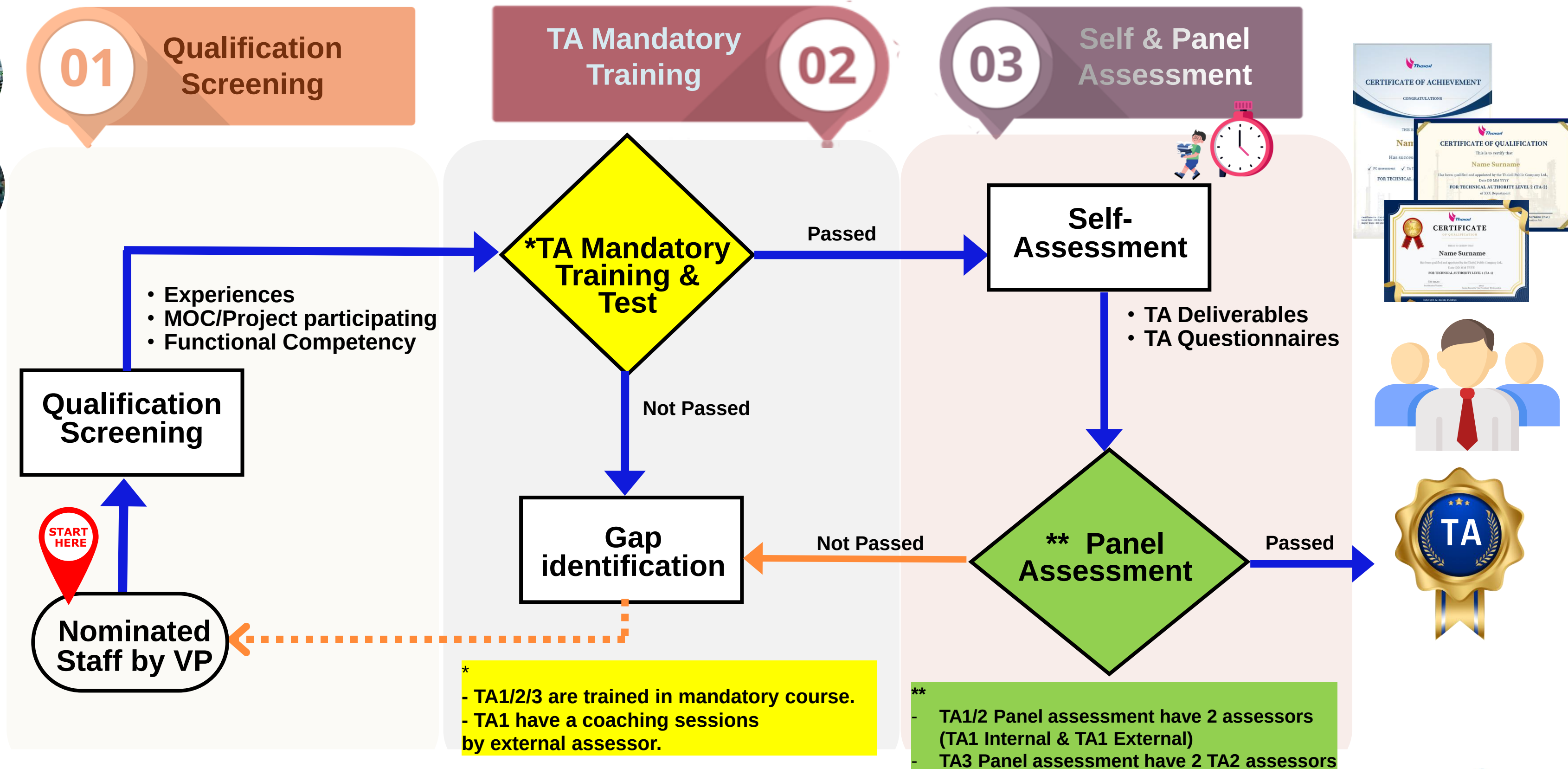
In Thaioil, there are TA 4 levels which are TA0, TA1, TA2 and TA3 respectively.

Level	Position or Equivalent	Experience Required
TA0	High Level Management	Based on position
TA1	Discipline VPs	Based on position
TA2	Section Managers / Lead / Senior Staff	10+ years
TA3	Senior Staff	5+ years





3 Simplified Workflow TA implementation

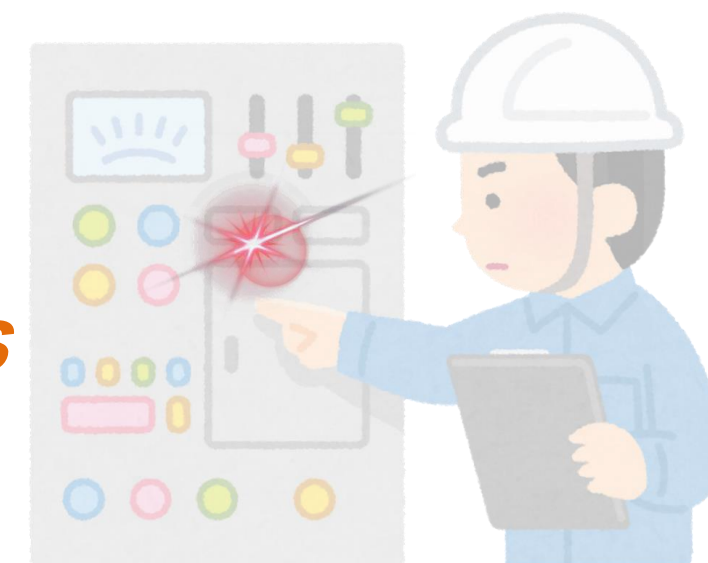




4 Summary and Key Takeaway

- ❑ The Technical authority (TA) system is a technical governance framework that ensures critical technical decisions are reviewed and approved by competent personnel at the appropriate authority level to maintain process safety, technical integrity, and engineering standard compliance.
- ❑ Strong Technical Authority is one of the key foundations of effective Process Safety Management (PSM) and to prevent process safety incidents.
- ❑ The TA implementation process consists of three key steps:
 1. Qualification Screening (Initial step)
 2. TA Mandatory Training (+ Examination)
 3. Self & Panel Assessment (Final step)

✓ Aim to achieve PSM goals of *zero harm and zero leaks*





***Thank you for
your attention***



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TA Level	Positions	Nominated by	Assessed and Certified by	Appointed by
TA0	SEVP (or delegate to EVP-M or EVP-E)	Based on position	-	-
TA1	Discipline VPs	Based on position	2 External TA1	-
TA2	Section head or experience staff > 10 years	TA1	1 External TA1 1 Internal TA1	Appointed by TA1
TA3	Senior staff with experience > 5 years	TA1	1 Internal TA2	Appointed by TA1



4 Coaching Sessions and TA Mandatory Training



4 Coaching Sessions for TA1

Session 1 (External TA1): **Leadership** and behavioral attributes to perform TA 1 role:

Session 2 (External TA1): TA 1 **Role in MOC**

Session 3 (External TA1): HSE Management System / HSE control framework and **Process Safety**

Session 4 (External TA1): become self-sufficient for future **TA2 Assessor**

TA Mandatory Training for TA1/2/3

One day internal training and the contents are included as below topics;

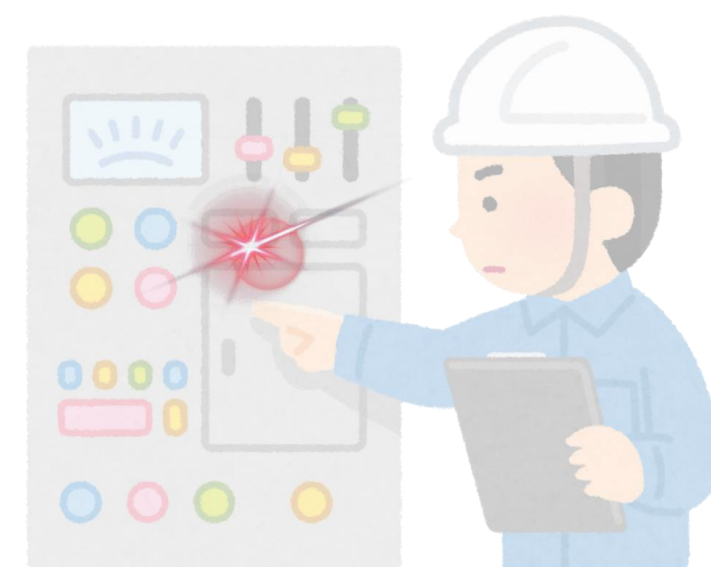
1. MOC System Knowledge (+ Examination)
2. TA System Knowledge
3. HEMP & ALARP Knowledge
4. Application of standard knowledge
5. HAZOP methodology



Sharing best practice

The TA system provides systematic technical governance that:

- ✓ Ensures competence through qualified personnel at appropriate levels
- ✓ Maintains engineering standards through controlled deviation management
- ✓ Protects assets through lifecycle integrity assurance
- ✓ Supports business through efficient, risk-based decision-making
- ✓ Aim to achieve PSM goals of *zero harm and zero leaks*





Key Challenges



Key Challenges in TA implementation

1. This additional challenge of **sourcing external assessors** particularly impacts TA1 and TA2 development.

For specialized or niche technical disciplines within the refinery and petrochemical industry, this can create significant bottlenecks in developing the TA system.

2. **TA revalidation** must be continuously performed to ensure that certified personnel maintain their competency and remain current.

3. **High Qualification** Requirements
 - Long development time to create new
 - Difficult replacing TAs who leave or retire





TA Responsibilities



Level	Position or Equivalent	Experience Required	Key Responsibilities
TA0	High Level Management	Based on position	- Accountable for the TA Framework - Resolve any escalated TA2 disagreements
TA1	VPs Discipline	Based on position	- Approve deviations/derogations as required from function/discipline standards - Handle any disagreements unresolved at TA2/TA3 level
TA2	Section Managers / Lead / Senior Staff	10+ years	- Support changes to review technical and provide technical assurance - Handle any disagreements unresolved at TA3 level.
TA3	Senior Staff	5+ years	- Conduct technical review and provide technical assurance - Require TA2 oversight





Sustain TA Assessment

Assessment	Current Practice	Improvement
TA 0	No assessment, TA0 level is based on position	Maintain as current practice
TA 1	2 assessors for assessment - Thaioil TA1 - External (Ex-Shell) TA1	1 assessor for assessment - Thaioil TA1
TA 2	2 assessors for assessment - Thaioil TA1 - External (Ex-Shell) TA1	1 assessor for assessment - Thaioil TA1
TA 3	1 assessor for assessment - Thaioil TA1	Maintain as current practice

