

Low Kah Yi

Engineering leadership | Critical infrastructure | Singapore

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I lead engineering teams that modernize and sustain the control systems and digital infrastructure behind continuous, 24/7 operations. Over nine years in petrochemical operations, I have led control-system modernization, critical cutovers and the monitoring and recovery practices that keep systems available.

Professional experience

Process Control Applications Section Manager

ExxonMobil | MAR 2025 - PRESENT

Leads a team responsible for process control applications, advanced process control and digital initiatives.

Instrumentation & Control Engineer

ExxonMobil | MAR 2024 - FEB 2025

Reliability improvements and upgrades across instrumentation and control systems.

Control Systems Engineer

ExxonMobil | DEC 2022 - FEB 2024

Control infrastructure modernization, cutovers and operational resilience.

Process Control & Automation Engineer

PCS Singapore | JUN 2017 - DEC 2022

Led site automation lifecycle management and reliability programs in a continuously operating petrochemical facility, directing two supervisors and 10+ field technicians.

- Delivered \$10M+ in control infrastructure modernization across four legacy control and safety-system architectures with zero downtime.
- Directed a separate \$5M+ program replacing 30+ end-of-life gas chromatographs, from competitive tender through factory acceptance testing and site implementation.
- Designed and deployed a 90-node industrial wireless network for gas detection and valve-status monitoring.
- Implemented advanced process control and real-time optimization platforms; consolidated legacy PLC control onto distributed control systems.

Track record & skills

Track record

\$15M+ Capital programs delivered

Control infrastructure modernization and analyzer replacement at PCS Singapore, from vendor evaluation through factory testing and site cutover.

Zero Downtime across four migrations

Legacy control and safety-system architectures modernized within maintenance windows in a continuously operating plant.

Skills

Control & safety systems

Distributed control systems | PLCs | Safety instrumented systems (IEC 61511) | Advanced process control | Real-time optimization | Instrumentation & analyzers

Infrastructure & OT

Industrial networks | Virtualization | Real-time telemetry | Historians | IT/OT integration | Industrial wireless

Resilience & delivery

Critical cutovers | Disaster recovery & business continuity | Factory acceptance testing | Vendor evaluation & tenders | Risk assessment | Capital program delivery

Leadership

Second-line management | Capability & succession planning | Budget governance | Cross-team delivery

Education & development

Georgia Institute of Technology

M.S. Computer Science | Machine Learning specialization

National University of Singapore

Bachelor of Engineering | Chemical Engineering

Functional safety

exida Functional Safety Practitioner (FSP) | IEC 61511 | obtained 2022

Independent engineering

Infrastructure Resilience Studio

Replay synthetic power and cooling failures, compare changes, inspect measurement quality and assemble readiness evidence.

kahyi.com/experiments/resilience/

Control Room

Tune a PID controller, compare responses and test uncertainty with reproducible studies.

kahyi.com/work/control-room/

Independent experiments use original synthetic models and data; they do not depict any employer system.