PCMS Information Pack

PETRONAS Completions Management System

“Towards Smarter Project Completion and Handover”

Information Pack (External)

May 2021
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**What is PCMS?**

**PCMS**

PETRONAS Completions Management System

A **PETRONAS-owned cloud-based system** accessible via:
- Web browsers at [https://pcms.petronas.com](https://pcms.petronas.com)
- Mobile applications for Windows, iOS, and Android devices will be made available soon

A digital system to manage processes and documentation related to project completion and commissioning activities, such as:
- Systemisation
- Inspection Test Records (ITR Checksheets)
- Phase Completion / Handover Certificates
- Punchlist

An enterprise-level platform, allowing:
- Multiple project usage
- Access rights (licences) to be managed on project-by-project basis
- Long term consolidation and repository of data
- Centralised reporting of commissioning progress across all projects

**PCMS Go-Live Date : 5 March 2021**
The PCMS Journey

Prior to CMS

CMS by Contractors

PCMS

Journey towards:
- Sustainability & Digitalisation
- Time & Cost Optimisation
- Consistency & Standardisation

**Manual** checksheet preparation, verification and approval process
**Manual** tracking of system completion and handover
**Manual** systemisation

**Semi automated** checksheet preparation, verification and approval process
**Automated** tracking of system completion and handover
**Manual** systemisation
**Inconsistent** software platform across projects
**Cost** embedded in each contract

**Digitised** checksheet preparation, verification and approval process
**Fully automated** tracking of system completion and handover
**Digital** systematisation and capable of interfacing with other platforms e.g. PEDMS
**Single platform** across PETRONAS
**Cost saving** through economy-of-scale
PCMS Organisational Structure

PETRONAS Group Digital (GD)

HUC (System Custodian)
Construction and Decommissioning Delivery (CDD)
Group Project Delivery (GPD), Project Delivery & Technology (PD&T)

PETRONAS Group Digital (GD)

Subject Matter Expert
Ir. Akbal Abu

Team Leader
Ron Yap Kai Ren

Focal Person
Ho Joon Heng

CMS Team
Siti Anis Iylia M Zainal
Nur Shairah Ahmad
Farah Shafiqah Mohd Mazny
Mareney Yahya
Nora Ismail
M Jalaluddin Mohamad
Christopher Hii Yik Bing
M Hazwan Ahamad

CMS Vendor
(HEXAGON Support Team)

- Custodian of process and governing procedures e.g. PTS / PBTR / CSP
- Management of users and licences
- Project creation and coordination
- Interfacing and support
- Training (internal)

- Software technical support
- Progressive updates
- Training (external)

Project Teams / Contractors

System Users

- Custodian of process and governing procedures e.g. PTS / PBTR / CSP
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- Interfacing and support
- Training (internal)

- Software technical support
- Progressive updates
- Training (external)

- Project-level CMS setup activities e.g. creating WBS, importing assets, creating ITRs and certificates
- CMS execution e.g. ITR completion, punchlist management, reporting, etc.

- Coordination with other digital solutions
- Overall consolidation of digital initiatives

- Hardware support (Azure server) and configuration
- Cyber security compliance requirements
- Commercial arrangements with software vendor

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Way Forward beyond Go-Live (5 Mar 2021 Onwards)

Current Status

Timeline

Q2 - Q4 2021
Q4 2021 - Q1 2022
2022 and beyond

Phases

Details

Pilot Project Deployment

• Brownfield HUC projects identified for pilot deployment - Integrated Bekok Oil (IBO), Dulang Redev 2.0 Infill Drilling, Kumang-E Redev, B11 CoCo, Baram-B Complex Reinstatement

Further Optimisation

• Monitoring of pilot projects deployment and user feedback to enhance system functionality
  • Incorporation of PTS/CSP updates
  • Mobile application testing and field deployment

Long Term Strategy

• Finalisation of long-term licensing approach with vendor and commercial agreement
  • Finalisation of project / contractor back-charging mechanism

Larger Scale Deployment

• Deployment beyond domestic HUC-managed projects e.g. Upstream EPCC/EPCIC projects, Downstream projects, International projects, etc.

Q2 - Q4 2021
Q4 2021 - Q1 2022
2022 and beyond

Details

Open

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Overview of System Configuration

HxGN PPM Smart®
Completions

i. Software setup and pre-configuration as per PETRONAS’ governing procedures e.g. CSP 20 & PTS 19.40.02:
   • Base ITR Checksheet Templates (~400 nos.)
   • Default System Definition
   • Default Handover Certificates

ii. Customisation of role profiles e.g. Administrator and User from Company and Contractors.

iii. Compliance with internal requirements e.g. cyber security requirements

Project Specific Configuration
(Post Go-Live)

i. User Account creation
ii. Project Information Data population (interface with single source of truth)
iii. Project Asset Data population (interface with design e.g. P-EDMS)
iv. Project WBS & Systemisation Setup

Preparation Timeline

2-3 weeks depending on number of users, including training

2-3 weeks depending on number of assets

1-2 months for document generation, depending on quantity and customisation required

Project Deployment
(Post Go-Live)

i. Digital / Paper ITR Checksheets management and tracking
ii. Specific Handover / Phase Readiness Certificates management and tracking
iii. Punchlist management and tracking
iv. Reporting and visualisation (interface with other tools)

PCMS

PETRONAS Completions Management System

Initial Configuration
(Pre Go-Live)

2-3 weeks depending on number of assets

1-2 months for document generation, depending on quantity and customisation required
System Login

Web browser access

URL – https://pcms.petronas.com

SSO login (PETRONAS ID)
Main Interface

Different tabs

Project selection

Available modules
Work Breakdown Structure (WBS)

- Pre-Configured systemisation
  - WBS by system has been pre-configured according to CSP 20 definitions.
  - WBS by physical location has to be defined according to the project
Pre-configured ITR base templates

- ITR base templates as per CSP 20, which can be further modified per project, and linked with project assets to generate the actual ITR checksheets
Task Models (Inspection Test Record Templates)

ITR template customisation
ITR Digital Completion

- Digital ITR task completion

- Digital ITR can be completed on a web browser or via application on a mobile device (future)

- Digital ITR approval

- Digital ITR is verified and approved by the authorised parties
Punchlist Management

Punchlist capture during ITR

- Punchlist items can be captured manually or during ITR completion

Punchlist form

- Punchlist items are generated using this digital form, tied to the relevant ITR / system, and monitored.
Semi-Automated ITR Forms (Paper Execution)

- PDF checksheet for printing
- QR code for bulk scanning
- Auto-populated details
Reporting and Visualisation

- Dashboard view
  - Configurable views which can be exported

Dashboard view:
- Project: My Projects
- User: Ron Yap Kairen

Open Dashboard view
- Configurable views which can be exported
- Tasks Completion (by Completion)
- Construction & MC Completion (by Completion)
- Commissioning Completion (Asset Discipline)
- Certificates (Certificate Type)
- Punchlist (by Category)
- Turnover Packages (by TOP Types)