NEWS LETTER

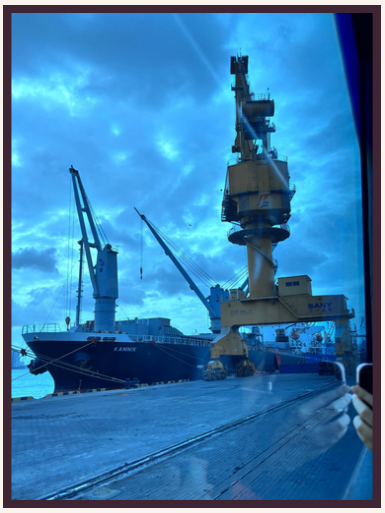
JohorPort® A Member of MMC Group

Industry Visit 2: ***Johor Port***

Thursday, 8 January 2026

Summary:

Johor Port Berhad is a responsible and customer-friendly palm oil terminal that uses ICT to improve efficiency as an integrated multi-purpose port. During the industrial visit, it was highlighted that the ICT Department is organised around four main pillars: infrastructure, business applications, project and governance, and administration and helpdesk. Johor Port Berhad uses key systems such as JPBI, ERP RAMCO, PAMS, application development, and data analysis to support its business operations. The organisation adopts both low-code platforms and traditional programming methods to develop practical applications. In terms of infrastructure, Johor Port Berhad emphasises cybersecurity, personal data protection, and data centres with disaster recovery to ensure system reliability and business continuity.



Overall, Johor Port Berhad demonstrates a strong commitment to digital transformation by leveraging ICT to enhance operational efficiency, security, and service quality.

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Johor Port Berhad Overview:

Johor Port Berhad (JPB) is a major port operator in Malaysia and a member of the MMC Group. It serves as a strategic multi-purpose port facility at the southeastern tip of Peninsular Malaysia, handling containerised cargo, bulk, breakbulk, liquid cargo, marine services and free zone operations. It is also the world largest palm oil terminal with storage capacity for edible oil for 740,340MT.

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ICT Department Overview:

Johor Port Berhad achieves stable development through four ICT main pillars: Infrastructure, Business Application, Project & Governance, and ICT Administration & Helpdesk.

Firstly, the Infrastructure pillar covers essential areas such as network, firewall, and database management, which ensure system stability and security. Meanwhile, the Business Application pillar manages strategic systems including JPBi, CATOS, and MSIS, and focuses on application development. Notably, the adoption of low-code development has significantly improved efficiency, enabling the completion of many projects while reducing workload by nearly 50%.

In addition, the Project & Governance pillar highlights the importance of the Information Security Management System (ISMS) to ensure secure and well-governed ICT projects. Finally, ICT Administration & Helpdesk plays a crucial role in coordinating internal and external parties and supporting daily ICT operations

Business Application Overview:

JPBI e-Community
A central portal integrating Johor Port's key operational systems, enabling single-platform access to improve efficiency and convenience.

ERP RAMCO
An enterprise system that integrates HR, finance, and supply chain functions to improve data sharing and reduce errors.

PAMS (Port Access Management System)
A digital system that controls access permits and security for personnel and vehicles, enhancing port safety.

Application Development
Uses low-code platforms for fast workflow development and traditional programming for complex systems.

Data Analysis
Analyzes operational data to support decision-making and improve efficiency and resource management.

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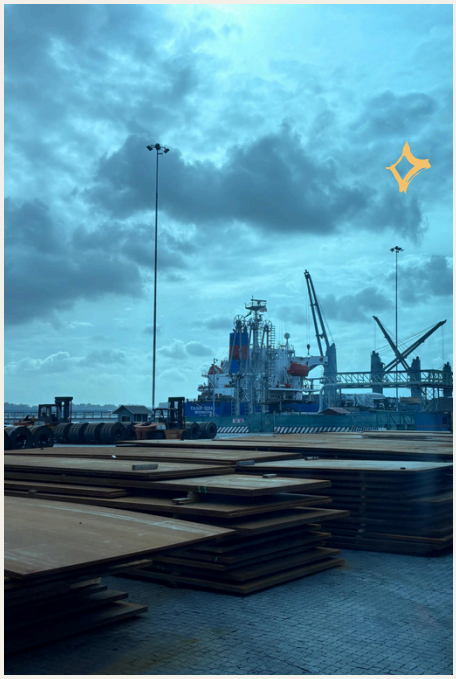

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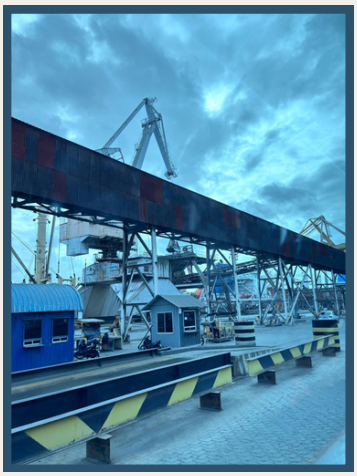
Infrastructure Overview:

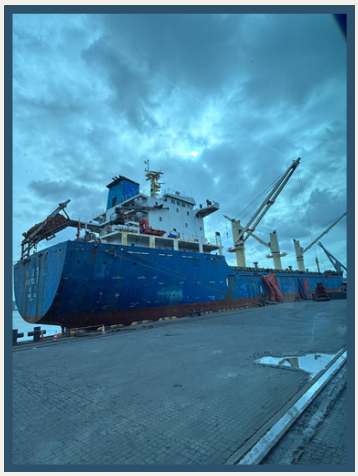
MetroCluster Solution
Ensures continuous data availability for critical systems through transparent failover and automatic data mirroring.

Broadband Network
A high-speed network covering over 50 km of the port, supporting reliable connectivity, non-disruptive upgrades, and automated failover.

Cybersecurity & Data Protection
Provides advisory support, cybersecurity awareness, 24/7 monitoring, and regular security assessments.

Data Center & Disaster Recovery
Features an active-active design with on-premise and cloud backups to ensure high availability and quick recovery.

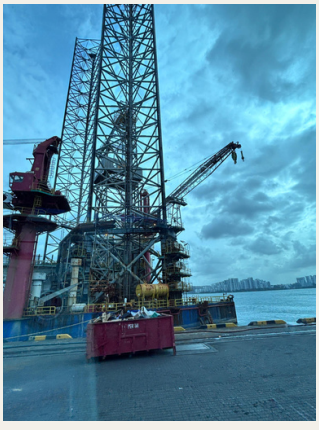




Reflection:

This industry visit to Johor Port provided us with valuable insights on how information and communication (ICT) supports large-scale industrial operations. Before the visit, we mainly view ports as facilities focused on logistics and cargo handling. However, this visit help us to understand that ICT playing a main role in ensuring efficiency, security, and smooth daily operations.

One of key reflection from this visit is the importance of adaptability in technology field. The use of low-code platform and traditional programming showed us that efficiency and flexibility are highly valued in real world environment. Instead of focusing solely on complex coding, organizations prioritize solutions that can be developed quickly and adjusted easily according to changing business need. This make us reflect on how as Computer Science students should not only focusing on programming skills but also understanding system design and problem solving from practical perspective.



Another important insight is the emphasis and reliability. The discussion on network redundancy, cybersecurity, and infrastructure planning highlighted that system failure in industrial environments can have serious consequences. This made us realize that responsibility and risk management are essential qualities for IT professionals, especially when working with crucial system.

Overall, this visit encouraged us to rethink our learning approach. It motivated us to place more value on real-world application, continuous learning, and the ability to adapt new technologies. This visit help us to gain a clear perspective on how our studies can be applied beyond the classroom and better prepared us for future professional challenges

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