



Technical Visit to Digital Library Penang

By

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On Friday, 31 October 2025, The Institution of Engineers, Malaysia (Penang Branch) successfully organised a technical visit to the Penang Digital Library (PDL), located at Jalan Masjid Negeri, George Town, Penang. The visit was conducted from 3:00 PM to 5:00 PM and provided participants with valuable exposure to the development, operation, and maintenance of Malaysia's first fully digital or "bookless" library. The programme aimed to provide engineers and participants with insights into the integration of digital infrastructure, smart facility management, and heritage preservation within a modern public technology hub aligned with the Penang2030 vision.

The technical visit attracted members from various engineering disciplines who were interested in understanding how engineering, information technology, and architectural conservation can be integrated to support a sustainable and community-oriented digital ecosystem.

Briefing on the Development of Penang Digital Library

The visit commenced with an informative briefing regarding the history and development of the Penang Digital Library. Participants were introduced to the unique concept behind the library, which was developed as a collaborative initiative under the "4P" partnership model involving the Public sector, Private sector, Professional bodies, and the People.

During the briefing session, participants learned that the project involved close collaboration between the Penang state government and private developers in refurbishing a heritage building into a modern digital facility. The project demonstrated how engineering innovation and architectural heritage preservation can coexist effectively within a technologically advanced environment. The speakers also highlighted the objectives of the Penang Digital Library in promoting digital literacy, lifelong learning, and community engagement through technology-enabled facilities and digital access to information resources.

Facility Walkthrough and Technical Observations

Following the briefing session, participants were guided through the various sections and facilities available within the library. The walkthrough provided detailed exposure to the layout and operational concepts implemented throughout the facility.

Participants observed several designated functional areas, including:

- Individual study zones
- Collaborative discussion rooms
- Digital reading spaces
- Amphitheatre and presentation areas
- Open community interaction spaces

Throughout the tour, engineers were able to observe the implementation of modern digital infrastructure such as high-speed fibre optic communication networks, wireless connectivity systems, and environmental control systems designed to maintain user comfort and ensure stable operation of digital equipment. Special attention was also given to the “Library in the Park” concept, which integrates glass architecture, natural lighting, and open green surroundings with modern digital facilities. The integration of these features demonstrated the importance of balancing sustainability, aesthetics, and engineering functionality in modern infrastructure development.



Photo during the Q&A session

Operations and Maintenance Discussion

During the interactive question-and-answer session, participants raised questions regarding the operational management, maintenance strategies, and long-term sustainability of the digital library system. The session clarified that while the physical infrastructure and facilities are managed by the Penang Chief Minister Office, the software systems, digital content management, and online repository architecture are outsourced to specialised service providers.

This outsourcing strategy allows the library management team to focus on public engagement and service delivery while ensuring that digital systems remain updated, secure, and professionally maintained. Participants also gained insights into the challenges associated with maintaining digital infrastructure, including cybersecurity considerations, system scalability, software support, and continuous technological upgrades required for modern smart facilities.

Engineering and Professional Insights

The technical visit provided participants with practical exposure to the evolving role of engineers in digital infrastructure and smart public facility development. The Penang Digital Library served as an excellent case study demonstrating how multidisciplinary engineering collaboration contributes to successful public utility projects. Participants were able to appreciate the growing importance of integrating civil infrastructure, electrical systems, communication networks, software management, and sustainability principles in modern engineering projects. The visit also highlighted the increasing relevance of digital transformation and smart asset management within engineering practice.



Token of appreciation

Conclusion

Overall, the technical visit to the Penang Digital Library successfully provided participants with meaningful insights into the planning, implementation, operation, and maintenance of a modern digital public facility. The visit demonstrated how engineering, technology, and heritage preservation can be integrated to support community learning and digital transformation initiatives.

Participants gained valuable knowledge and practical exposure that broadened their understanding of smart infrastructure development and the future direction of engineering applications in digital community spaces. The visit concluded with an engaging discussion session and group photography session involving the organisers and participants.