INDUSTRIAL VISIT TO eTiQa

Objective of The Industry Visit

- Provide students with close-up exposure ro real worldworkplace environments
- Helps students understand how computer assisted system support daily tasks
- Allow students to observe practical applications of data engineering such as system development and IT operations
- Strengthen students understanding of how classroom concepts relate to industry practices

SECPH - Year 1 Section 3

Introduction

On 15 January 2026, Section 03 from the Data Engineering (Year 1 Semester 1) programme visited the eTiQa Digital & Innovation Centre in Iskandar Puteri, Johor accompanied by our lecturer, Ts. Dr. Muhammad Iqbal Tariq bin Idris. The purpose of this indutry visit was to expose students to the real world applications of data engineering and digital systems used in the insurance ecosystem. Through the visit, students gained vauable insights into how data, system developments and digital innovation are implemented in a professional environment helping the students connect classroom concpets with actual industry practice.

Company Background

eTiQa Digital & Innovation Centre located in Iskandar Puteri, Johor, serves as one of the strategic technology hubs for eTiQa, supporting its digital transformation initiatives across Malaysia and the ASEAN region. The centre is established to strengthen eTiQa's technology capabilities and focuses on developing, maintaining and innovating digital platforms for their insurance operations, customer services and enterprise systems.

eTiQa operates in the insurance and takaful industry, but this center specifically functions as a technology-driven organisation. The centre plays an important role in the digital insurance industry enabling faster, smarter and more reliable services. The centre also handles large volumes of structured and unstructured data generated from customer interactions, financial transactions, and digital platforms. With all the data collected, the centre will design pipelines, manage the database and support analystics system that help eTiQa make data driven decisions, detect risks and enhance service quality.

At a regional and global level, eTiQa Digital & Innovation Centre supports eTiQa's operations across ASEAN by delivering secure digital solutions.

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Observations and Technical Insights

Operations observed

At Etiqa, smooth flow of digital transactions are their main concern. Since the products are e-policies and instant claim approval, they need to ensure their app and website does not crash while processing large quantity of customers at once.

In the company, the department manages end-to-end flow of data. They work on AI models for instant approvals of customers' personal information legitimacy while monitoring the system performance to prevent bottleneck simultaneously.

Since they are huge company, they also have to follow standard operating procedures to ensure their digital line is stable. For example, they need to do testing phase for the system before integrating the new system into the website or app. They follow these procedures to keep the service interruption to absolute minimum.

Role of Computing and Information Systems

Computer-Assisted Manufacturing

- Data Engineer ensures data flows reliably from the sources, such as website, customer apps and so on, to a central database.
- Example: When you buy car insurance online, the Engineer's pipeline ensures your car plate number is instantly verified against national records.

Resource planning systems

- Data Analyst acts as "supervisor". They look at dashboards to see which products are selling and if the system is slowing down.
- Example: If a surge in their website's traffic, the analyst flags the need for more server power to prevent a system crash.

Quality control systems

- Data Scientist build algorithms that act as digital sensors to spot defects or lies.
- Example: If someone submits a fake medical bill, their AI model will flag it as "high risk" for an auditor to check.

Machine monitoring and maintenance systems

- If the database slows down, data engineer performs "digital maintenance" to prevent a bottleneck in policy processing.

Use of databases, sensors, or automation

- Data is the raw material of the business. Hence, they store it and uses a centralized database to instantly verify customer info, allowing for faster claim approvals through automation and reducing manual work.

Research-to-Market Translation

- Etiqa uses data analytics to study customer data and claims patterns. They also undergo actuarial research to estimate customer's insurance risks and set premiums. Hence, automated systems were invented to enhance customer experience.
- Validation and testing are done to ensure reliability and fairness of the system. All products and processes must also comply with guidelines set by Bank Negara Malaysia.
- Finally, Etiqa maintains strong data governance practices to ensure customer data is secure, accurate, and properly managed.

Integration of Computing and Networks

- Etiqa uses advanced computing systems which handle a wide range of insurance operations, from tracking customer information to reducing errors. This supports data-driven decision-making which are responsible for risk assessment and customer services.
- Customer databases and claims management systems are interconnected, allowing data to flow seamlessly between them. Ultimately, this improves customer experience and operational efficiency.
- Strong networking and real-time data exchange ensure smooth large-scale operations and faster service delivery. This enables reliable access to information for decision-making.

Source : Canva element

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Learning Outcomes

Through the visit,we get to know how EtiQa or a standardize company organized and what our course actual work in real world/EtiQa which can be categorized in many parts,including

- Frontend developer

-develop user interface for a web

- Backend developer

-handle server logic and data processing

- AI team

-apply Ai to industry to achieve automation

- Data analysis team

-handle big data from clients and give report and insights

- Data engineer team

-handle big data from clients and categorize these messy data to ease the analysis job

- Business analysis team

-analyze client report and give financial plan or insights

Skills and Knowledge development

In order to fit into the company and remain competitve, we need to equipped ourselves with following skills

- Interpersonal and presentation skills

(to coordinate and descript your work with other team when producing a project)

- Basic coding skills (Python,Java)and SQl
- capability to do teamwork and collaborate

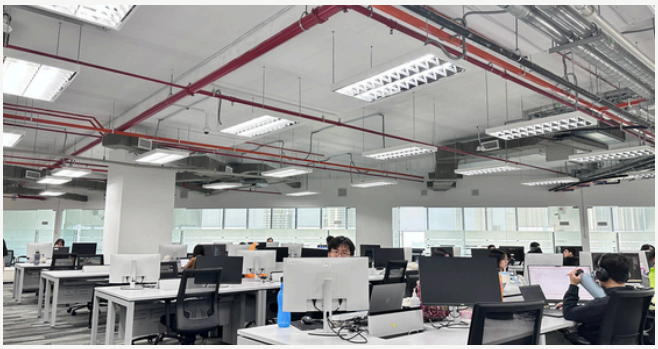
Other than that, even being employed,we are required to join staff training in the company to ensure we keep on track wtih the latest technology.Therefore,we can become a holistic professional not only in programming but also in financial literacy so that we can know the company overall goals and direction.

Relevance

This industrial visit to Etiqa was especially relevant to our Technology and Information System (SECP1513) course . This was said to be as the visit provided clear examples of how Information Systems are applied to real-world organizations such as Etiqa itself.

Particularly, from this experience, Etiqa's digital operation showed us how emerging technologies such as Artificial Intelligence (AI) are reshaping the insurance industry. This corresponds to Chapter 1, Emerging Technologies in ICT by demonstrating how ICT trends shift from theory to practical applications in automating claims and enhancing customer experience. The visit highlighted the growing demand for Data Engineers in the financial sector, as the technical skills was highly required in order to manage information systems with accurate risk assessment.

Ultimately, by observing their working environment, we gained a deeper understanding of industrial standards and the importance of data privacy ethics. This closes the gap between our classroom concept of Information Systems and the real-world situations in corporate settings.



Conclusion

This industrial visit at Etiqa has given us deeper insights on how Information Systems are applied to real-world corporations. As students of Data Engineering course, witnessing how a leading Insurance and Takaful company manages extensive datasets and complex system highlighted the importance of industry exposure.

This visit strengthens our understanding of the topics learnt in the Technology and Information Systems course, specifically emerging data technologies serves as the foundation of present financial services.

All in all, this visit has increased our career awareness and became an inspiration for us to pursue excellence in the field of data engineering and industrial computing.

Acknowledgement

We would like to express our sincere gratitude to Etiqa for providing us with the opportunity to visit their facilities. This experience offered a fundamental insight into the integration of technology within the industry.

We would also like to extend our deepest appreciation to Ts Dr Muhammad Iqbal Tariq Bin Idris, for his perpetual guidance, patience and support, and for organizing this industrial visit. His efforts in connecting academic theory with industrial practice have significantly enriched our learning experience in the Technology and Information System (SECP1513) course.

Furthermore, we are grateful to the Faculty of Computing at Universiti Teknologi Malaysia and the organizing staff for making this industrial visit a success. Lastly, we would like to thank our fellow peers and classmates for their cooperation and for making this learning experience enjoyable.

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