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UTM
UNIVERSITI TEKNOLOGI MALAYSIA

# INDUSTRIAL TALK TWO: SYSTEM DEVELOPMENT @ CREDENCE (TM SUBSIDIARY)

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# DESCRIPTION OF THE SYSTEM DEVELOPMENT

Analytics refers to the systematic analysis of data to extract meaningful insights and make informed decisions. Data collection can be done from existing database, customer's informations, or social media. It involves examining large sets of data to identify patterns, trends, correlations, and other valuable information.

Analytics can be applied in various fields including business, finance, healthcare, sports, transportation and more.

*Possible career opportunities:*

Business analysts
Before all the data analysis process, Business Analyst will work with the customer to gather all the information, and take notes of all the questions the customer wants answered.

Data Architecture
They construct the whole process of the project like the type of database used.

Data Scientist
The research a lot on new technologies and see whether they can be used in the process.

Data Analyst
Their main purpose is to analyze data. They need to have strong statistical skills as they handle a large amount of data.

Data Engineer
They are in charge of gathering data from customers and preparing it to be analyzed by data analysts.

BI Developer
After the data has been reorganized, these people are in charge of visualization and making it into meaningful representations for the customers. They need to work closely with the business analysts

*Tech Used:*
Database/ OLAP: PostgreSQL, ClickHouse, Druid
Visualisation Tools: Tableu, PowerBI, Metabase, Superset
ETL/ ELT: Airflow, Spark
Programming Language: SQL, Python, Bash Syntax

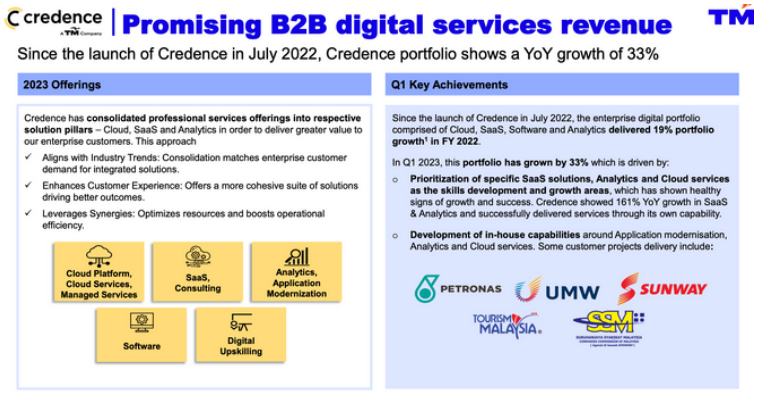
# HISTORY

On 6 July 2022, Telekom Malaysia Berhad (TM) launched Credence, a new cloud and digital services company focused on expanding the capabilities of enterprises and the public sector in their digital transformation journey.

Credence CEO Krishnendu (Krish) Datta, a 56-year-old Singaporean, has more than 34 years of technology industry experience, having built and led several enterprise tech-based businesses across Asean, Australia, Japan, India and the Middle East, according to TM's 2021 annual report. The former SAP senior executive is also co-founder and CEO of Xampr, which started a no-code, low-code platform for mobile application development, focusing on integration, last-mile process and flexible template-based workflow and adoption. The art lover also co-founded an online art platform, MayinArt.

During the launch, Credence announced key partnerships with VMware, AWS and Huawei, which enables a broader range of customized options for enterprises.

With the presence of credence and today's improvement in digital demands,
TM is assured to be an astute digital solutions provider. The presence of Credence, which focuses on technology and digital innovation, in TM nowadays can fulfill the address market needs and launch a dedicated company. TM can also be able to provide end-to-end digital solutions and services to the customers by the presence of credence.
Leveraging TM's established resources, infrastructure and its strong links to enterprises and the public sector, Credence is well-positioned to accelerate Malaysia's digital transformation journey.




reference: https://tm.listedcompany.com/misc/TMB_1Q_2023_Results_Presentation.pdf

# TECHNOLOGY AND TOOLS USED IN SYSTEM DEVELOPMENT.

## REFLECTIONS

Sim Yee Teng

**I hope I am able to develop a new system with my team and company with the similar function with the exist of credence. Through this assignment, I have known the usage of credence, which is fulfilled the demands of market and customer needs nowadays. Thus, I hope to develop a system which is more advance to ChatGPT also to fulfilled majority's demand on solving daily problems. I will also keep on enhancing and learn new knowledge as I know that technology nowadays keep on improving. With the up-to-date knowledge I can develop better system.**

Tan Xin Ying

**I believe I would keep myself updated about the latest trends in system development. I will also keep learning programming languages and tools that are widely used in the industries. I hope I can connect and collaborate with other developers and professionals in the field to enhance my skills. The technology is evolving fast so I would stay proactive to explore and understand how different technologies work.I might also strive for continuous improvement in development processes and methodologies.**

Taqia Tahmida

**It was interesting to learn about the system development process of Credence and hear an alumni talk about her experience of working in this industry. This has inspired me to look forward to the day I have enough skills to venture into developing systems myself and made me look forward to my studies and have a resolve to work even harder in learning and gaining knowledge.**

Karen Voon Xiu Wen

**System developer is an occupation that requires continuous learning in the future and I hope that I can become a reliable system developer that can cooperate with team members well and take charge on many projects.**

Chang Wei Lam

**From the industrial talk, i learn a lot about credence and how was its built.Ms Qistina gave us some advice and direction for what we should do now.I will probably be getting some major upgrades, optimizing my algorithms, and learning some new programming languages and try my best improving, and adapting to new challenges in order to be a goodsystem developer.**

Fatema Junaed

**Ms Qistina's industrial talk provided valuable advice and direction on how to become a skilled developer. Through the online talk I gained insights on the journey of credence and its role in meeting marketing demands. The talk, not only opened a possible career opportunity for me in systems development, but also encouraged me to stay up to date with the knowledge I acquire in the technological field through up to date tools and constantly improving on the programming languages I learn.**

There are some famous and most common technologies and tools that are used in Credence. For database / OLAP development, the most frequently used are PostgreSQL, Clickhouse, Druid. The most used app in company Credence to deal with basic databases is PostgreSQL. PostgreSQL is the most advanced, free and open-source relational database management system (RDBMS) emphasizing extensibility and SQL compliance. It is used to develop a database engine and closely related components.

Besides that, Tableau and PowerBI are the two most popular visualization tools. PowerBi is the collection of software services, apps, and connectors that work together to visualize and discover what's important in your unrelated source of data. When the customers have a limited budget, the company will use Metabase and Superset . These useful open-source dashboarding tools hook up the database to provide an affordable and achievable solution to the analytic needs of the customer.

Next, the ETL, extract, transform and load tools. Mostly will be used in Airflow and Spark. The talker personally will prefer Airflow as the ETL tools to be used because it can handle complex data workflows. Airflow's extensible Python framework enables it to build workflows connecting with virtually any technology and helps to manage the state of the workflows.

The most used programming language in Credence is SQL and Python. The staff member needs to have strong skills in both of these languages. For data engineers, is it better if Bash Syntax is mastered. Bash is a Unix shell and command language to replace the Bourne shell. Bash has many built-in commands that you can use to perform various tasks and provides several types of expansions that allow you to perform various operations on strings. Additional Cloud platforms such as Amazon Web Services (AWS), Microsoft Azure, and VMware are also used in Credence.