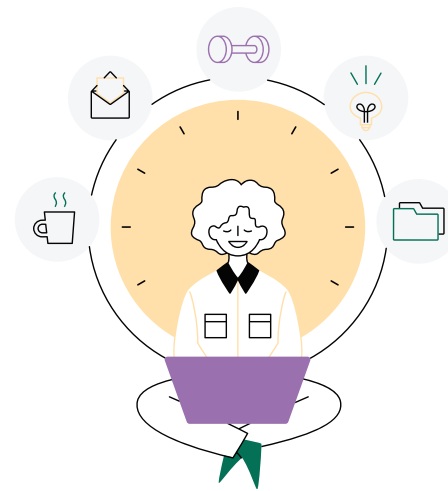




**UTM**  
UNIVERSITI TEKNOLOGI MALAYSIA

# DATA ANALYTICS, INFRASTRUCTURE & SAP



## 1 EXECUTIVE SUMMARY

My focus is on Infrastructure, which plays a critical role in ensuring that all global business operations run smoothly. PPG uses a **cloud-only approach**, relying on platforms such as AWS, Azure, Oracle Cloud, and Alibaba Cloud to host systems and applications. The infrastructure team works using the **Plan-Build-Run** framework, where they gather business requirements, develop the needed IT services, and maintain 24/7 system availability across different regions.

**Data analytics** at PPG focuses on transforming raw data into useful insights that enable better decision-making across global operations through the Data Analytics Center of Excellence (COE). By analyzing data from various sources, the COE helps identify risks, improve efficiency, and support areas such as supply chain and operations, while its teams ensure data is reliable, accessible, and actionable for the business.

From the first **SAP** implementation in 1991 to the current S/4HANA cloud migration, PPG's SAP aims to create a connected, scalable, and competitive global operation. The core business processes are integrated by key operational streams and the transformation simplifies operations by merging disparate systems into a single global template.

## 2 INTRODUCTION

- **PPG** is a global coatings company that produces paints and coatings products and brands
- **Established** in 1883
- **Operates** in more than 70 countries
- **Sales** are \$15.8 billion in 2024
- **Mission** is protect and beautify the world through innovative products
- **#234** on the FORTUNE 500 list is one of the **honor**
- The **strategic business segments** is Global Architectural Coatings, Performance coatings and Industrial Coatings

## 4 REFLECTION

The motivation that I gain from this career talk is Information Communication Technology(ICT) making effort of technical tasks can contribute to an eco-friendly industrial impact and ensure industry sustainability. I learned about how the way PPG apply environmentally friendly product in our life and reduce waste in industry from this career talk. ICT play a meaningful role to enhance operation efficiency, meet business demand and commitment to innovation. The ICT internship that PPG offers motivated me to learn more technical knowledge and improve the relate skills to have more opportunity for my future career.




The insights key and information that I gain is the jobs in ICT have a strong teamwork, teams key skills and problem solving skills. Every segments of PPG collaborate deeply and have their critical strategies. For instance, Data Analytics CoE enabling decision making, global infrastructure CoE have its organization framework (Plan, Build, Run) to support multiple services and SAP CoE focus on key business processes such as Financial Accounting. ICT be a vital role to growth the industry by using the advance technologies. For example, IT infrastructure evolution, autonomous infrastructure and zero-trust security model will be the future IT infrastructure trends and innovation activities in industry.

## 3 CONTENT OF TALK

### Data Analytics



**Master Data**

Keeps important core data (like products, customers, suppliers) clean, accurate, and consistent for the whole company.






**ERP Analytics**

Analyzes data from ERP systems to help with daily operations, finance, and business decisions.




**Data Lake Analytics**

Combines data from many systems in one place to do deeper analysis and advanced insights.






**MLOps**

Helps build, deploy, and maintain machine learning models smoothly and automatically.





**Data Analytics Team Key Skills**


**Programming language**



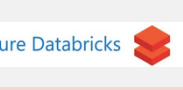


**Data & File Types**




**Data Visualization**



**ELT**



**Database Designs**



**DevOps Practices & Version Control**

- Star Schema
- Dimensional modeling

**Understanding The Role of Data Analytics in PBG**

**Purpose of Data Analytics**

The COE turns raw data into insights that help the business make better decisions and understand current and future situations.

**Value of Data Analytics**

Data analytics helps improve efficiency, reduce risks, and use resources more effectively.

**COE Team Structure**

The COE consists of master data, ERP analytics, data analytics, and ML Ops teams, each handling different data functions.

**Skills Needed**

Skills in analytics, data management, and machine learning are used to produce useful and practical insights.

### Infrastructure

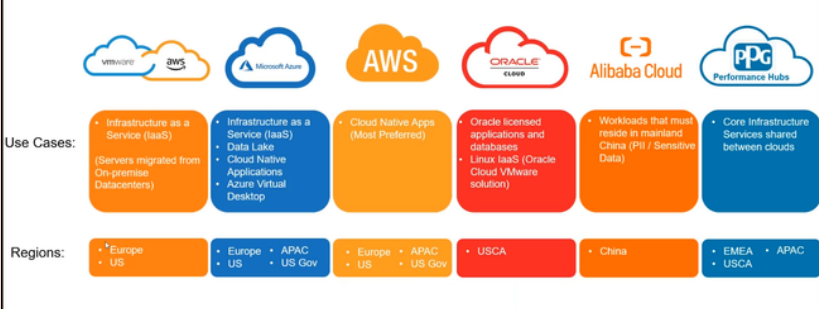
**Global Infrastructure CoE**

- Supports PPG's worldwide operations through a cloud-only approach.
- Uses major cloud platforms: AWS, Azure, Oracle Cloud, Alibaba Cloud.
- Ensures systems, networks, and applications run efficiently across all regions.

**Main Responsibilities**

- Manage cloud services, servers, virtualization, and networking.
- Handle identity access, backups, databases, and system security.
- Use automation tools to improve reliability and reduce downtime.

**Multi-Cloud Approach**



\*Source: Industry Talk PPG

**Plan - Build - Run Framework**

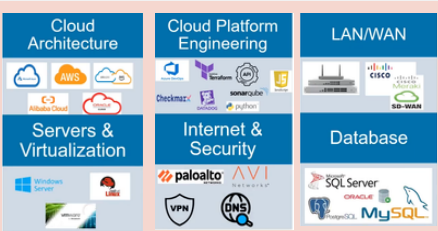
**Plan:** Gather business needs, design the IT strategy, and plan new services.

**Build:** Develop and deploy cloud solutions, servers, storage, and applications.

**Run:** Maintain 24/7 operations, monitor systems, troubleshoot issues globally.

**Future IT Trends**

- **AI-Driven Operations (AIOps):** Automate maintenance using machine learning.
- **Autonomous Infrastructure:** Systems can self-heal and self-optimize.
- **Zero-Trust Security:** Continuous authentication to protect against cyber threats.
- **Edge Computing:** Process data closer to users for real-time performance.



### SAP CoE

**ERP (Enterprise Resource Planning)**

- Connect all the core business processes of a company
- Provides a single source of truth
- One system that can support all the business areas

**SAP (System Analysis Program)**

- Formed in Germany 50 years ago
- Modular approach
- Application on its own for each of the specific business areas

**Implementation History**

- 1991(initial) - Belgium & Netherlands
- 2025(current) - S/4HANA Cloud

**Future Desired State**

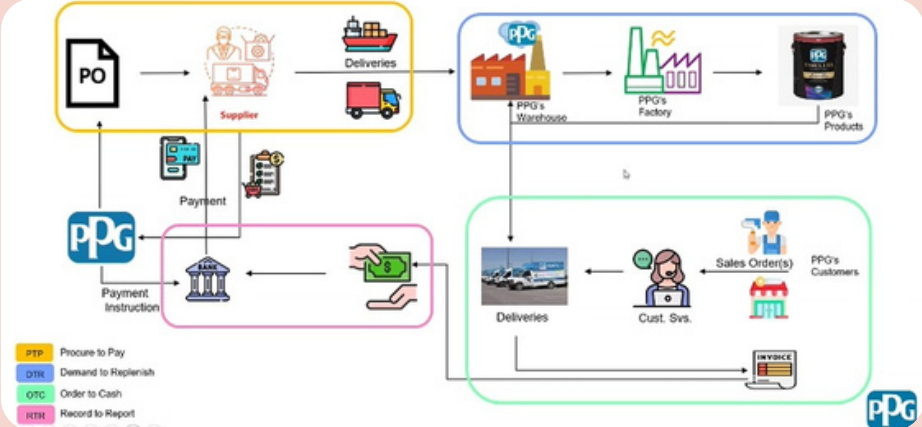
- Disconnected → Connected (S/4 Transformation)

Functional	Technical	Reporting
Focus on key business processes	Backend tools for developing, customizing and managing SAP system	SAP BI(business intelligence) suite
FI, CO, MM, SD, PP, QM, PM, etc	Basis, PI(Process Integration), ABAP(Adv. Bus. Appl. Programming)	Business Warehouse(BW), SAP Analytics Cloud(SAC)

**Operations Streams**

<b>DTR (Demand to Replenish)</b>	PP (Production Planning) eWM (Extended Warehouse Management) etc.
<b>OTC (Order to Cash)</b>	SD (Sales and Distribution)
<b>PTP (Produce to Pay)</b>	MM (Materials Management) VIM (Vendor Invoice Management)
<b>RTR (Record to Report)</b>	AP (Account Payable) FA (Fixed Asset) etc.

**Process Flow**

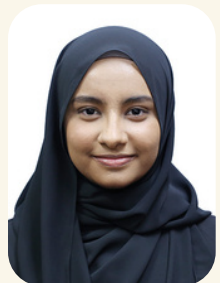


\*Source: Industry Talk PPG

## 6 GROUP MEMBER



Hee Hui En  
A25CS0065



Aleeya Maisarah  
A25CS0183



Gan Yu Xuan  
A25CS0226



Aimi Nurafina Izzati  
A25CS0042

