# From PDP Compliance to Data Protection in Action

## (Technology Perspective - Use Cases)

By :

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THALES DIS Cyber Security Products
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# Why is Data Security so Complex ?



## Explosive data growth

**100%**

The Global DataSphere is expected to more than double in size from 2022 to 2026



## Evolving compliance requirements

**2,500+**

Number of data privacy and security laws and regulations worldwide



## Operational complexity

**55%**

Number of respondents who cited complexity as the top barrier for data security deployment



## Rapidly increasing data breaches

**10.6B+**

Number of Records exposed across the 35 biggest data breaches and notable privacy violations analyzed for 2025

Sources: IDC Global DataSphere 2022; PwC Ready Assess database; Thales Data Threat Report 2025; Risk Based Security Year End Report 2021

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# Think of Data Security like a Bank Vault





**Door: Controls Access**
Authorized access only with key/combination to the lock.

(MFA, Perimeter Sec )



**Cameras:**
**Real-time Monitors Activity**
Monitor access for any suspicious behavior inside the vault.

(DAM, DRA, DRI)



**Safety Deposit Boxes:**
**Added Layer of Protection**
Only key holders can access the content

(Encryption/Tokenization/KMS)

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# DSPM: Layered Protection Approach



**Discover:**
CONTINUOUSLY DISCOVER & CLASSIFY DATA AT SCALE

**Protect:**
ENCRYPT, TOKENIZE, MASKING

**Control:**
CENTRALLY MANAGED PRIVILEGES AND DATA ACCESS

**Monitor:**
DB ACTIVITIES MONITORING, DETECT SUSPICIOUS PATTERN, AND INVESTIGATION SUPPORT

**Total Data Lifecycle Strategy**

Visibility, classification, access tracking, control, and policy enforcement at every stage

**From Tool Silos to Unified Data Awareness**

A single interface to understand and secure data risk regardless of format or location

**From Passive to Proactive**

Real-time detection, risk scoring, and automated remediation, supported by AI-powered analytics

# Thales Ciphertrust Data Security Portfolio

## Expanding our focus to Data Security Posture Management (DSPM)

### CipherTrust Data Security Platform

**Protect Data**

Data Encryption, Key Management & Policies

### Data Security Fabric

**Mitigate Data Risk**

Activity Monitoring, Risk Management & Analytics




Traditional DSPM

### CipherTrust Data Security Posture Management

Continuous monitoring and management of data security risks and compliance

*"Thales offers superior capabilities for data discovery, Encryption, Tokenization, and data-access controls, including visibility of cryptographic posture and governance of keys and secrets."*

*Forrester Wave ™ Data Security Platforms Q1 2025* (Mar 2025)



# Thales Solutions Alignment: For **Indonesia PDP Law**

Thales' solutions can help organizations' data security provisions on Chapters IV, V, VI and VII in the PDP Law by simplifying compliance and automating security with visibility and control, reducing the burden on security and compliance teams.

## Solutions to Inline with UU PDP

**Thales (CipherTrust Data Security Platform):** Membantu Pejabat PDP mencari sensitive data, mengelola kontrol enkripsi dan kebijakan data.

**Imperva (Data Security Fabric / DAM):** Memantau akses data secara transparan untuk memenuhi hak visibilitas dan akuntabilitas subjek data.

**Imperva (Data Risk Analytics):** Memberikan deteksi dini dan peringatan instan (*real-time alerting*) jika terjadi anomali atau upaya pembobolan data.

**Thales (High Speed Encryptor) :** melindungi data in-transit



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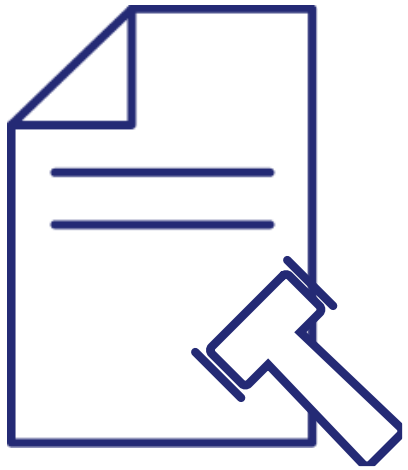
# PDP is here – What is in the concern? Where to focus?



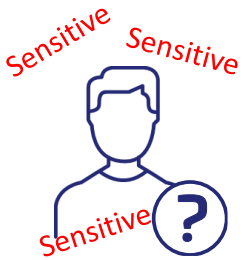
**PDP**
(Regulation)

PRESIDEN
REPUBLIK INDONESIA

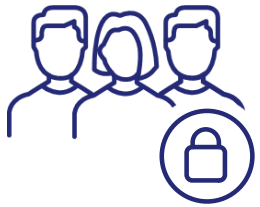
SALINAN

UNDANG-UNDANG REPUBLIK INDONESIA
NOMOR 27 TAHUN 2022
TENTANG
PELINDUNGAN DATA PRIBADI





DPO ?









Timeline to Comply



On - Premise



Cloud



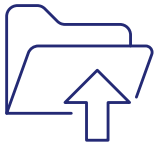
Servers




VMs



File System



SAN/ NAS



Data Lake



Container



Structured Databases



Unstructured Files

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# UU PDP
# Use Cases Compilation

# Use Case – File Encryption for DB protection

Banking, Insurance, Payment Gateway, Enterprise & Gov Customers

## Business Challenges

- Lots of Trx & reporting DBs are in clear
- Encrypt DB file, others sensitive Files/Folders
- data encryption solution to comply with PDP, PCIDSS, GDPR

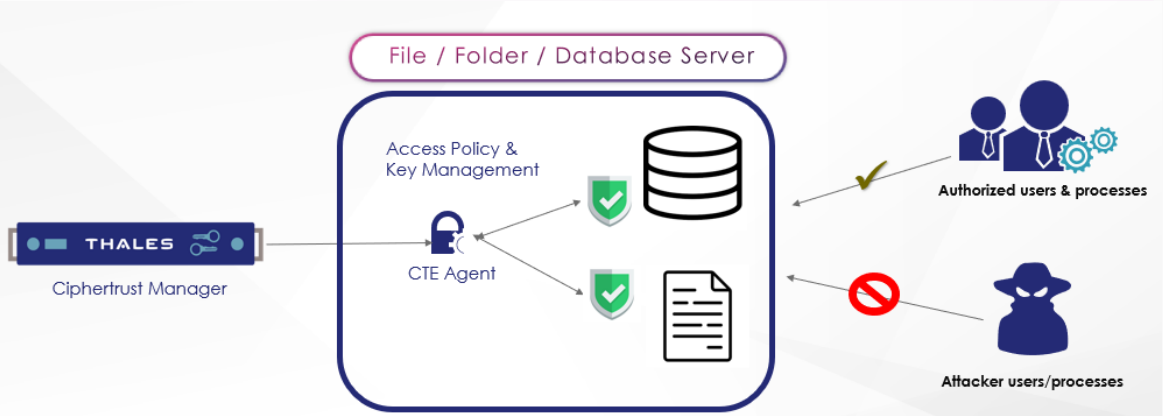
## Solution Detail

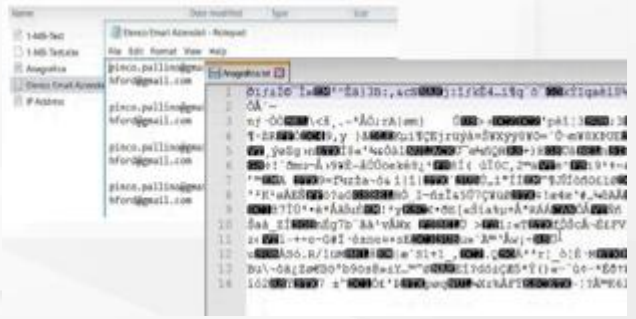
KMS + File Encryption

## Why Thales

- Comply with PDP, PCIDSS and GDPR
- Unified Platform for Future Data Protection use-case
- Flexible Implementation and asiest way to Implement,
- No changes to app & DB

## DB File Encryption solution architecture



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# Use Case – Tokenization & Data Masking

Insurance, BIG Telcos, BUMN & Government Customers

## Business Challenges

- Need to comply with UU PDP
- Lots of Applications using and store PII
- Up to Millions of TPS
- Need 1 single solution

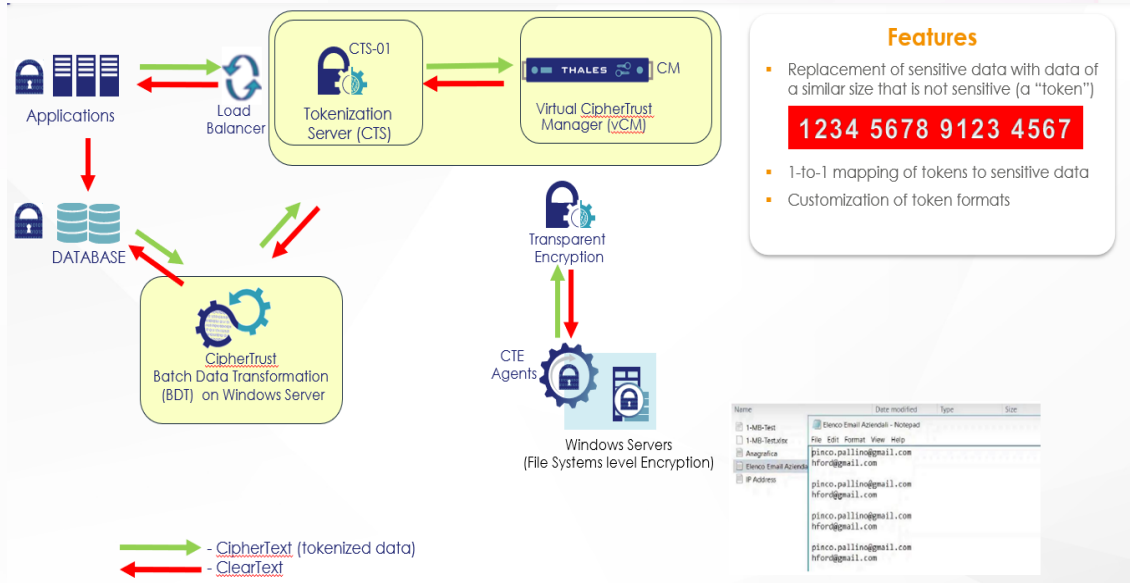
## Solution Detail

- KMS,
- Tokenization,
- File encryption
- Batch Data Transformation

## Why Thales

1. low performance impact
2. Single pane of glass DP solutions
3. Flexible Implementation and Risk Mitigation

## Data Protection Platform solution architecture

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# Use Case – Centralized KMS for DB Encryption

Banking++

## Business Challenges

- Keys are spread across the DB platforms
- Difficult to audit & maintain,
- Lower security level
- Key rotation is in manual ways

## Solution Detail

CipherTrust Manager + CAKM

## Why Thales

- Centralized KMS
- Unified Platform for Future Data Protection use-case
- easy to Implement,
- No changes to app & DB
- Key rotation is supported

## Solution Architecture




CONTROL

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# Use Case – Centralized KMS (BYOK & HYOK) for Clouds

## Banking Customer

### Business Challenges

- Roadmap of Centralized KMS
- Roadmap to partner with all Local Public Cloud vendors
- Securing Cloud Keys (BYOK, Keys can be created and managed by customer. Keys hosted in CSP)
- HYOK - Create, manage & store keys outside of CSP. Managed by Customer

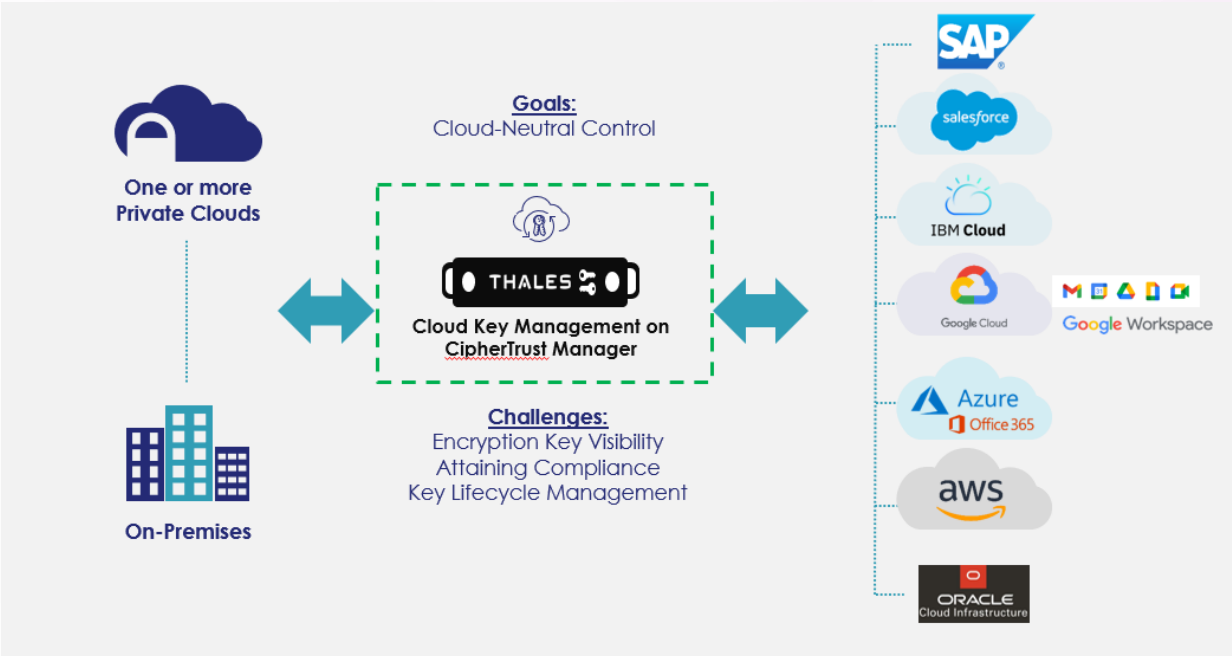
### Solution Detail

CipherTrust Managers + CCKM

### Why Thales

- Certified FIPS 140-2 level 1 key management platform
- Can be used for Centralized KMS and future Cloud KMS
- Easy integration

### KMS Platform solution architecture

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# Use Case – Data at Rest Protection

## CA Provider Company

### Business Challenges

- CA provider Compliance
- UU PDP Compliance
- Centralize Key Manager
- Data Protection Solution provisions and standards

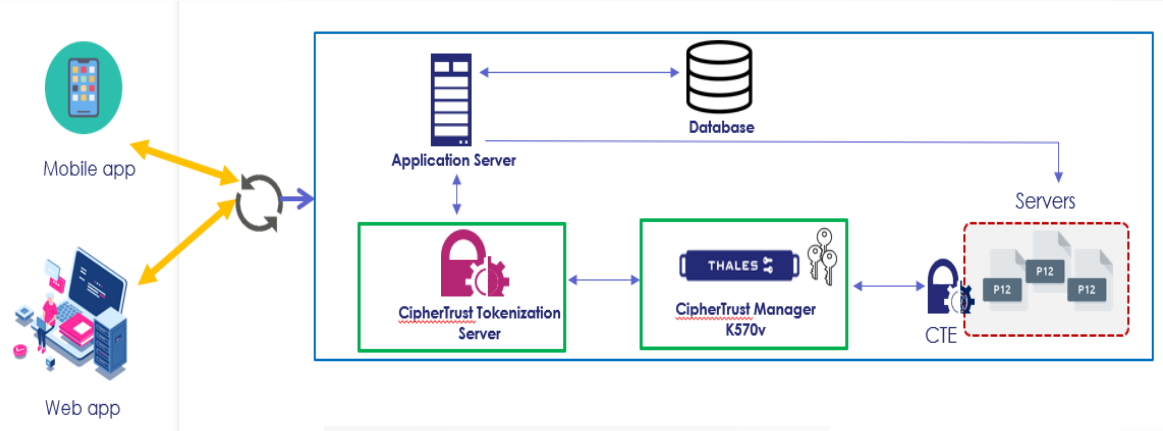
### Solution Detail

HW CipherTrust Manager,
CTE
CT-VL

### Why Thales

- Comply with UU PDP
- Flexible Implementation and Risk Mitigation
- Easy to Implement
- Unified Platform for Future Data Protection use-case

### Data Protection solution architecture




| Data | Plain Value | Tokenize |
|---|---|---|
| NIK | 7312042510720002 | 5471249728248829 |
| Credit Card | 1111-2222-3333-4444 | 9032-5420-8482-9536 |
| Email | sandyharyono@gmail.com | UEVRZ7tSyH7V@E7Oft.NAc |
| Date (MM/YY) | 10/29 | 48/18 |
| Datetime (YYYY-MM-DD hh:ii:ss) | 2023-10-12 10:12:59 | 3215-83-49 11:20:95 |

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# Use Case – DB Activity Monitoring & Risk Analysis

## Banking & Enterprise Customers

### Business Challenges

- Excessive access to sensitive records by a database user or application account.
- Large-scale data extraction may occur through seemingly legitimate database access.
- Traditional perimeter security may not provide sufficient visibility into database-level activity.
- Security and compliance teams need evidence to investigate potentially unauthorized access.

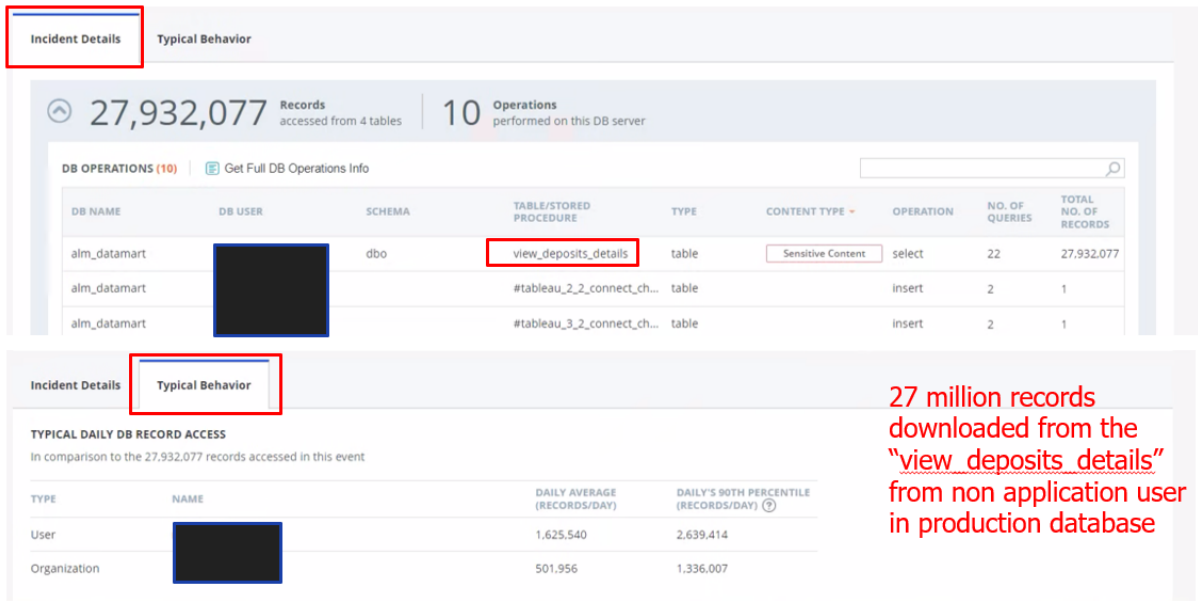
### Solution Detail

Data Security Fabric,

### Why Thales

- Detects abnormal database access patterns and excessive record access.
- Provides incident context: user, source host, application, destination database and activity volume.
- Supports investigation through incident details, related events and typical-behavior analysis.
- Generates actionable security alerts and audit evidence for security operations.

### Data Protection solution architecture




27 million records downloaded from the "view_deposits_details" from non application user in production database

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# Use Case – DC to DRC Data in-Transit Encryption

Banking & Gov Customers

## Business Challenges

- Excessive Data replications
- MiTB protection
- Performance impact with IPsec

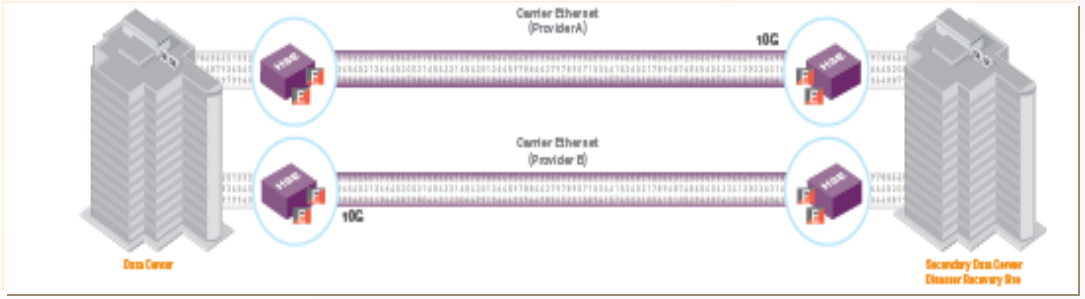
## Why Thales

- Very low performance impact
- Plug & Play, No changes
- Data in transit are encrypted

## Solution Detail

Thales HSE

## Data Protection solution architecture



# Thales ebook on PDP




## Personal Data Protection (PDP) Law of Indonesia

### Introduction

Indonesia passed its first Personal Data Protection (PDP) Law in 2022. The PDP Law is an effort to enhance the existing regulatory framework on personal data protection, it signifies the development of policies on personal data protection and confidentiality and strengthens the protection of the right to privacy. This eBook reviews the key requirements of PDP Law and provides data protection and access management strategies for complying with them.

### What is it?

The Personal Data Protection (PDP) Bill was passed on September 20, 2022 and President ratified it to become law on October 17, 2022. Indonesia will become the fifth ASEAN country to implement Personal Data Protection regulations.

PDP Law is the first comprehensive law in Indonesia to govern personal data protection in both electronic and non-electronic systems. The PDP Law has 76 articles across 15 chapters. These articles and chapters extensively cover data ownership rights, and prohibitions on data use, along with the collection, storage, processing, and transfer of personal data of Indonesian users.

It also introduces new concepts, including the requirement for both prior and post notifications to the regulator on cross-border personal data transfers. The new law goes further by introducing criminal sanctions for personal data breaches.

### What are the details?

**1. Who Needs to Comply with the PDP Law?**

It states that the law shall apply to any person (the definition of "person" in the PDP Law includes individuals and corporations), public agency, and international organization that carries out legal actions in Indonesia.

The PDP Law has extraterritorial reach, it applies to any person that carries out legal actions outside of the Indonesian jurisdiction if these actions have legal consequences in the Indonesian jurisdiction and/or for Indonesian Data Subjects residing outside of Indonesia.

**2. Defining Personal Data and Personal Data types**

The PDP Law defines **Personal Data** as any data concerning a person, whether identified or who may be identified independently or combined with other information, either directly or indirectly, through an electronic or non-electronic system. The individuals to whom Personal Data is attached are referred to as **Data Subjects**.

Personal Data is further classified into two types:

- **General Personal Data**, which consists of full name, gender, citizenship, religion, marital status, and/or Personal Data which is combined to identify a person (e.g., phone number and IP address). The previous draft of the PDP Bill only referred to General Personal Data as any data not classified as Specific Personal Data. Therefore, the PDP Law provides a more specific definition of General Personal Data.
- **Specific Personal Data**, which consists of health data and information, biometric data, genetic data, criminal records, children's data, personal financial data, and/or any data in accordance with the provisions of the prevailing laws and regulations. The law further defines Personal Data as data that, when processed, may significantly impact the Data Subject, including acts of discrimination.

**3. Identify key roles - Personal Data Controller and Personal Data Processor**

The PDP Law categorizes the key players related to personal data protection as "personal data controllers" and "personal data processors".

**Personal Data Controller** is defined in the PDP Law as any person, public body or international organization acting individually or jointly in determining the objectives and exercising control over the processing of Personal Data ("Controller").

**Personal Data Processor** refers to any person, public body or international organization acting individually or jointly to process Personal Data on behalf of a Personal Data Controller ("Processor"). Further, since the Processor cannot determine the objectives and exercise control over the processing of Personal Data by itself, a Processor can only process Personal Data after being appointed by a Controller, on behalf of the Controller.

The rights and obligations under the PDP Law that parties must comply with are subject to the respective role played by the party in processing Personal Data. As the party that determines the objective of processing, the obligations of the Controller are significantly greater than those of the Processor.

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*"Thales helps organizations turn PDP compliance into real actions of Data Protection (Discover, Protect, Control, Monitor)"*

# Thank you

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