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Cyber Incidents – Data leakage

Case Study & Lesson Learnt

23 May 2018

Forensic

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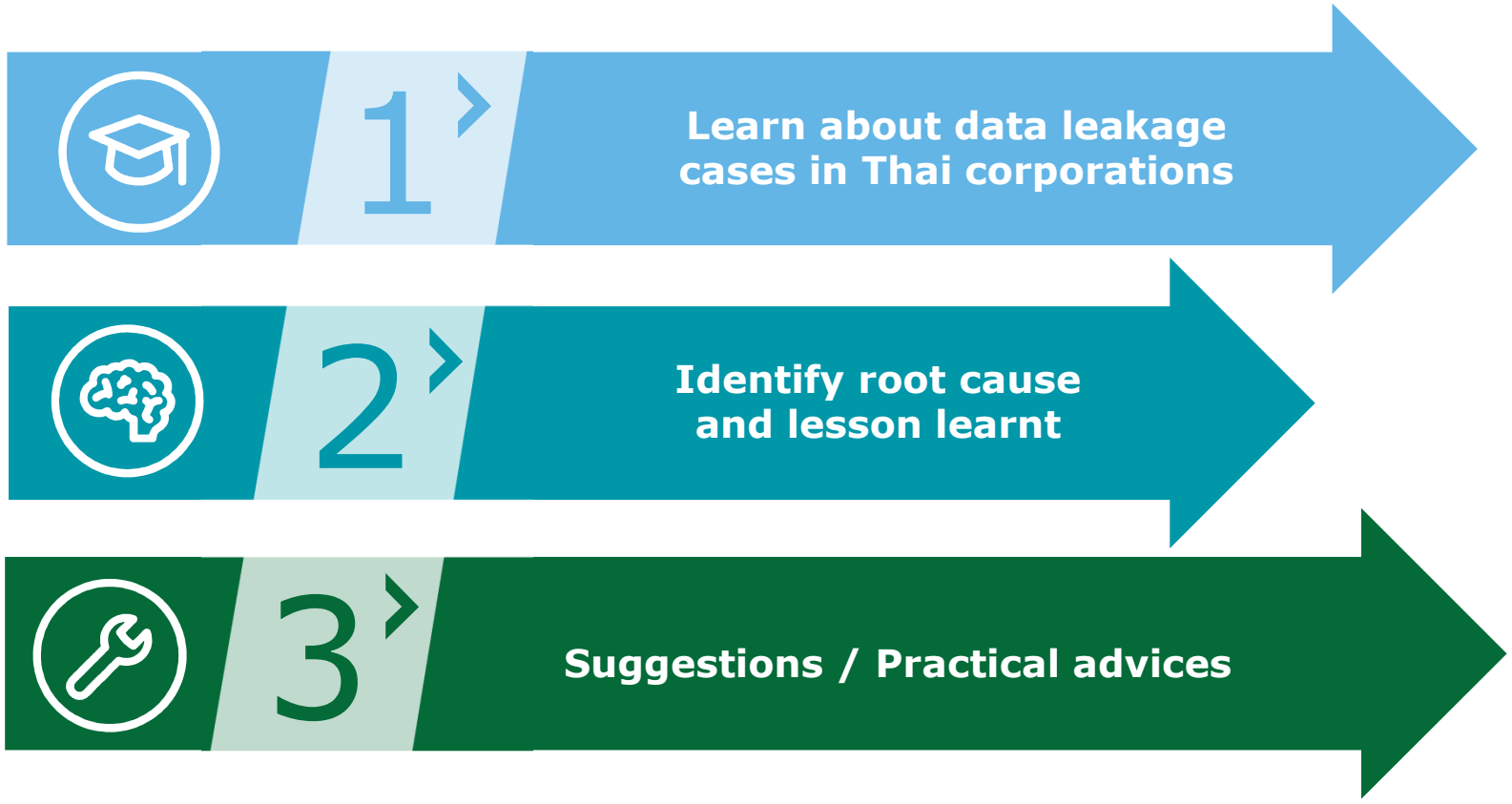
Key objectives

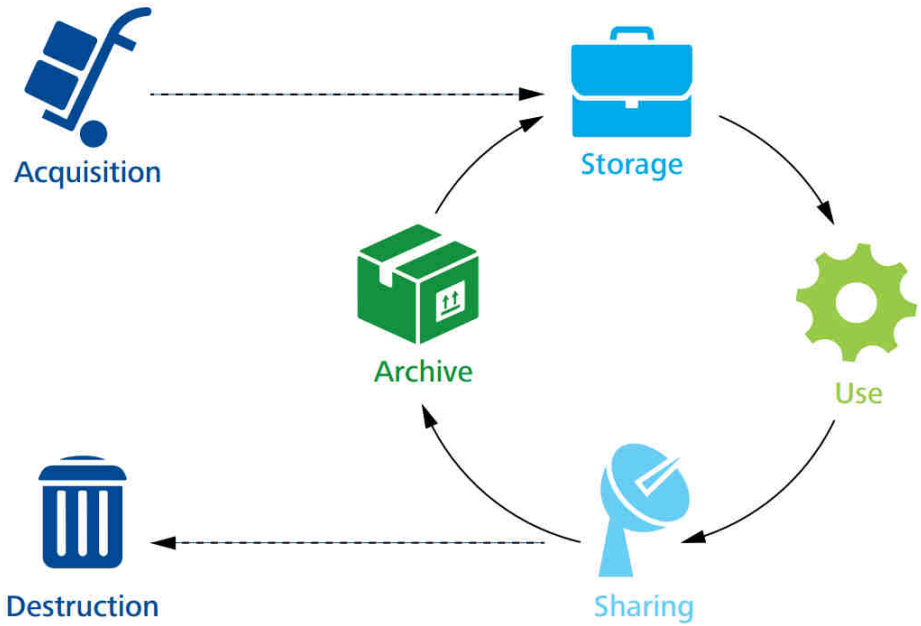
What you can expect from this session



What is Data Leakage?

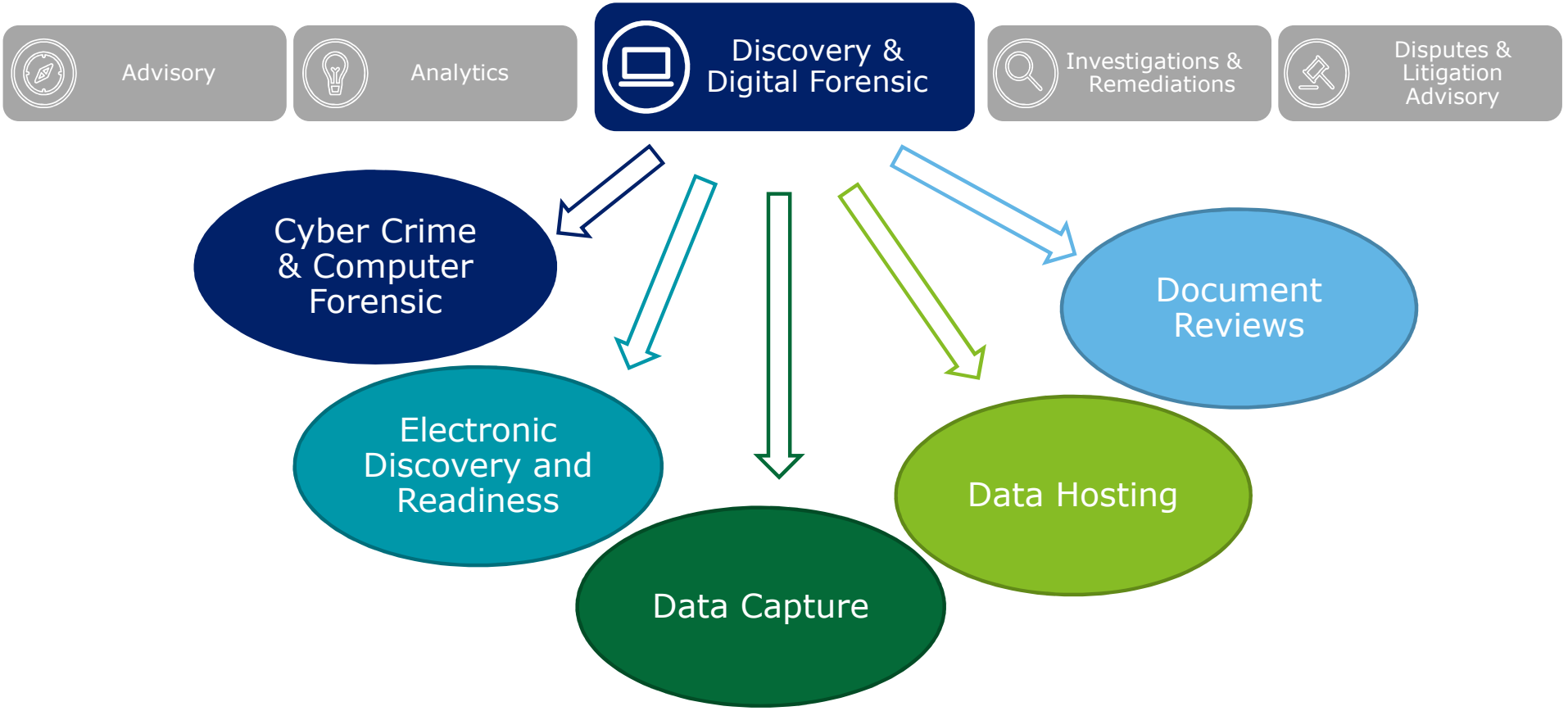
*The **movement** of an **information asset** from an **intended state** to an **unintended, inappropriate or unauthorized state**, representing a **risk** or a potentially **negative impact** to the organization.*

Enterprise Data Lifecycle



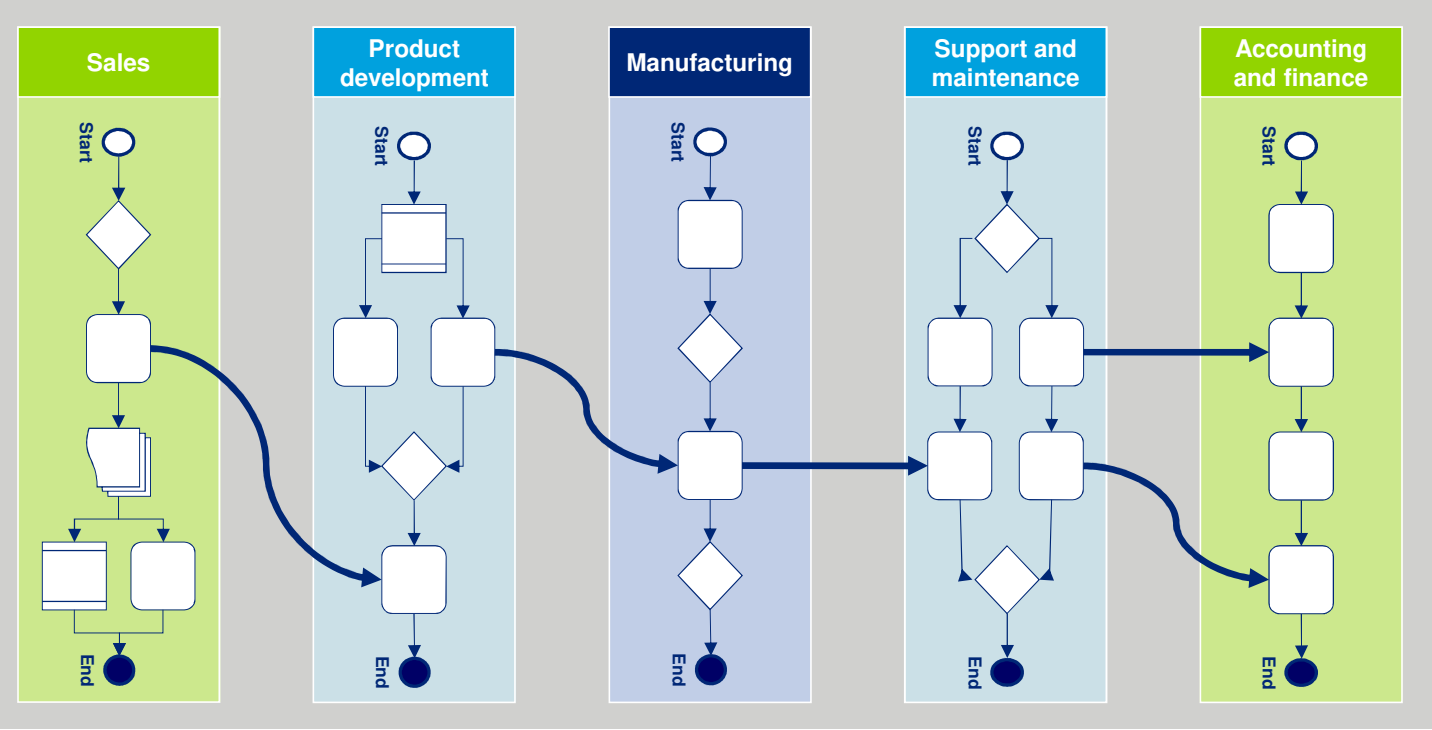
Deloitte Discovery

Why do we show up at a crisis?



Why could data leak?

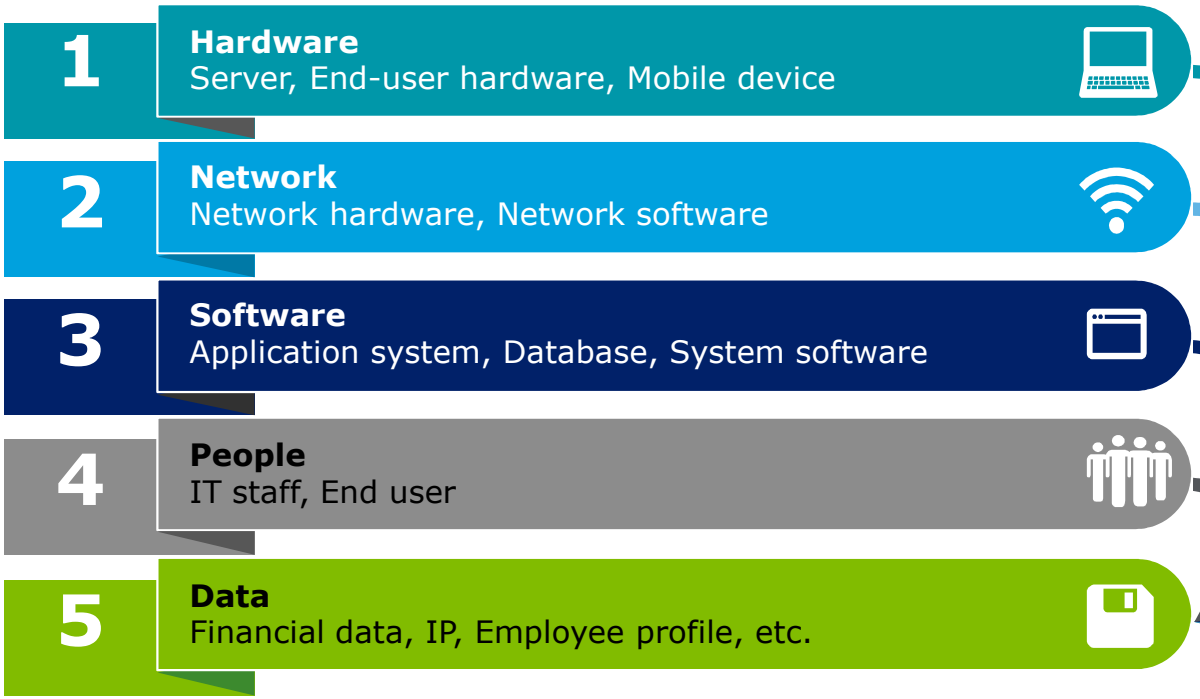
Because it flows …



Sensitive data such as **personal information**, **financial data**, and **intellectual property** moves horizontally **across organizational boundaries**, including vertical business processes (e.g., order fulfilment process).

Technology elements in the business

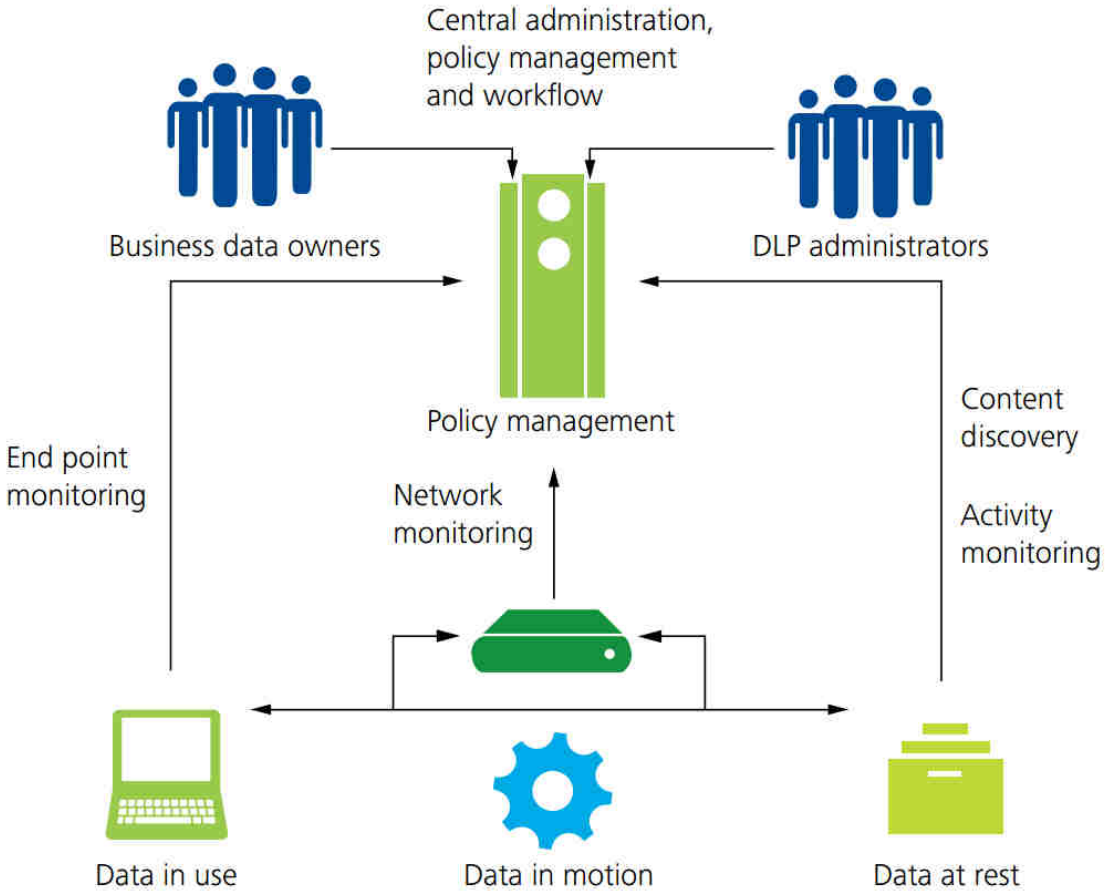
And why they can lead to data leakage



- *Physical damage / Loss / Theft*
- *Channel of Intrusion and Exfiltration, Catalyst for pervasiveness*
- *Has been overlooked, not properly managed*
- *Is this the most vulnerable?*

- Reputational risk
- Regulatory risk
- Financial risk
- Operational risk

Deloitte’s DLP in Action



Key Considerations

To assess your data leakage risks

General

- What **information or data elements** present the **most risk**?
- What **locations or business units** present the **most risk**?
- What are our **mitigating controls**?
- How **robust** of a **governance structure** and **incident response workflow** do we need to support our goals and mitigate our risks?
- What type of **resourcing** do we need to **support management** of the tool and the **incidents it generates** on an on-going basis?

Data-at-rest

- What **types of data repositories** does the solution need to be able to scan?
- What do we plan to **do with the data** once it is found?

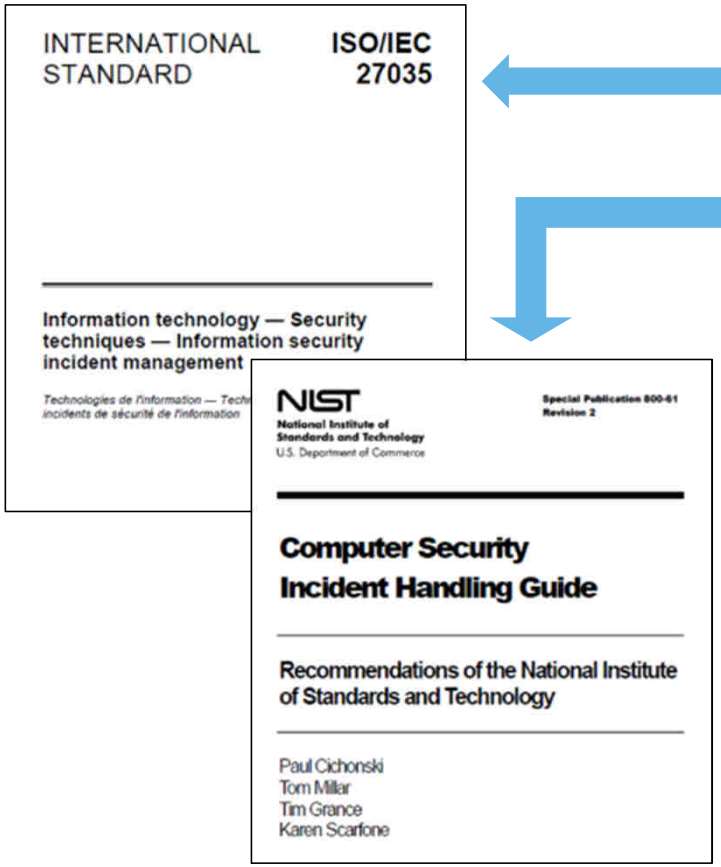
Data-in-motion

- Do we care about **outgoing** transmissions only, or **incoming and internal** as well?
- What **protocols** do we need to monitor and protect?
- Do we need to **block or encrypt** traffic?

Data-in-use

- What **platforms** does the solution need to support?
- What do we want the tool to accomplish when users are **not on the network**?

Examples of guidelines from recognized institutes



ISO/IEC 27035:2016 – Information technology incident management

NIST Special Publication 800-61 Revision 2 – Computer Security Incident Handling Guide

SANS institute – Various contents …

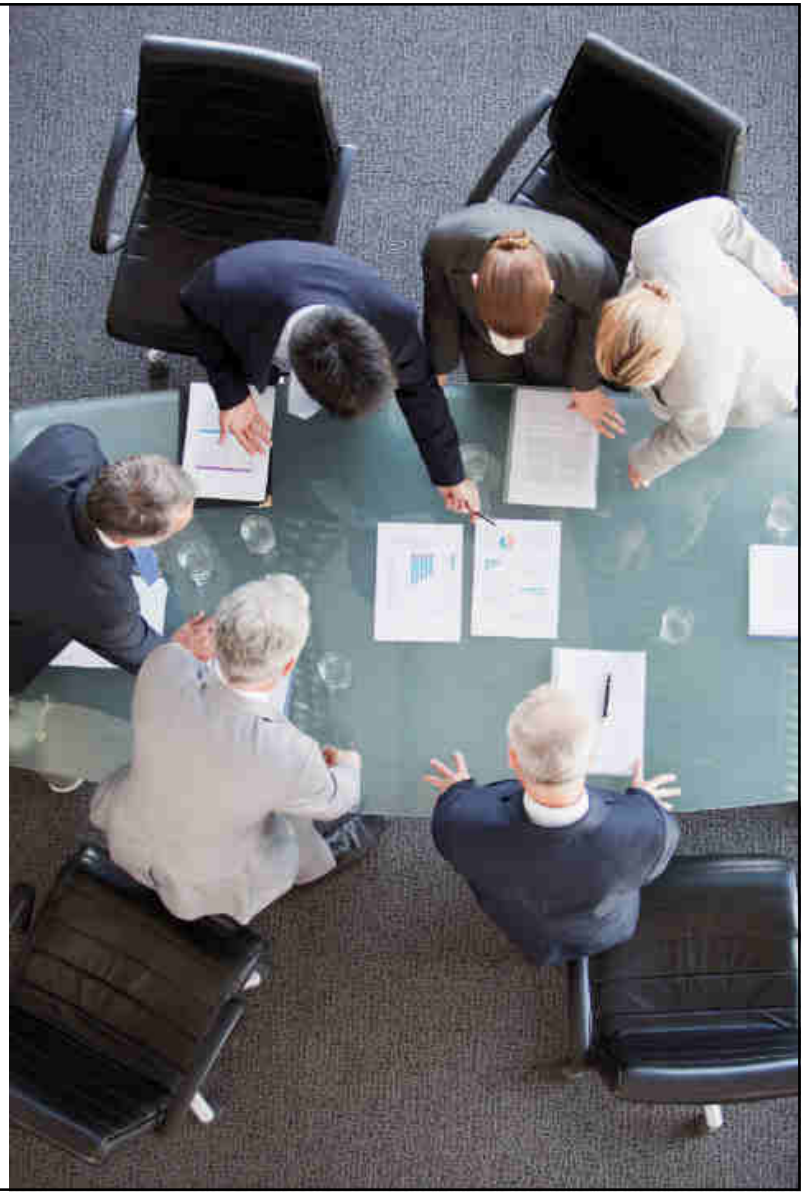
And many more from other organizations…

- https://www.alienvault.com/resource-center/ebook/insider-guide-to-incident-response
- https://www.crest-approved.org/wp-content/uploads/2014/11/CSIR-Procurement-Guide.pdf

IT Asset Management (ITAM)

Efficient ITAM could mitigate risks on data leakage and help you comply with regulations

- **Detailed inventory of IT assets** could help data controllers analyze their current IT resources used to process personal data and asses the risk of data breach.
- **Appropriate internal controls** or counter measure could be implemented to mitigate data breach risk.
- In case of data breach, ITAM will **help the data controllers/processors notify the regulators** by answering their questions such as:
  - What assets/data were affected?
  - Who was affected? Who had the access to the assets?
  - Where was the affected assets located? Where was the data processed?
  - How will data controller response to the breach? How many stakeholders were affected?
- Overall, ITAM could help data controllers **understand their IT landscape, optimize IT costs and provide a foundation for complying to regulations**.



Contact

Thanwa Wathahong
Director – Deloitte Forensic
twathahong@deloitte.com

Thanwa is a Director at Deloitte Forensic practice in Thailand. He focuses on Digital and Cyber forensics, Discovery and Corporate Investigation, Forensic Analytics, Cyber incident response, Business Intelligence, Anti-Bribery & Corruption, Fraud Risk Management, Litigation Support & Dispute Analysis, and Fraud Detection, Monitoring and Fraud Management System.

He holds two bachelor's degrees; in Computer Engineering and Law, plus MBA in Finance.

He is also:
- *A guest lecturer in Fraud Analysis and Detection at the Master of science program in Cyber security and information assurance (international program), Mahidol University*
- *A trainer at Federation of Accounting Professions, Thailand.*

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