



Title: IT Asset Management (ITAM): Enhancing Efficiency and Security in the Digital Era

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Presentation video link: [Video PowerPoint Presentation](#)

Research context

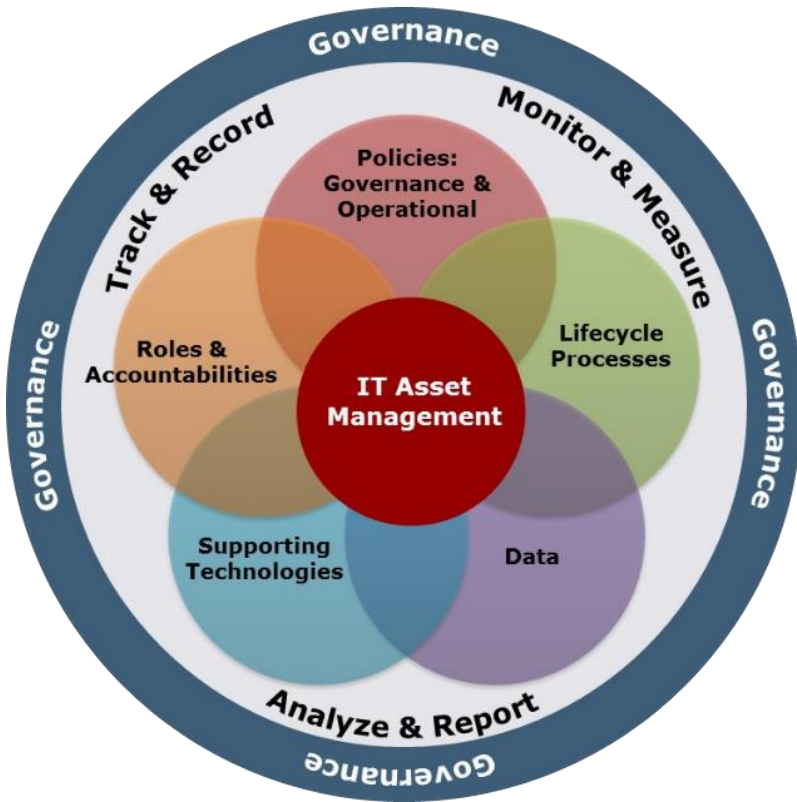


- **The reliance of IT within Organisation's**
 - Growth of the Digital world
 - IT becomes outdated quickly
 - Increased difficulty in tracking and managing assets [1].
- **The role of client services within Digital Health Care Wales (DHCW)**
 - Main responsibilities include maintenance and allocation of IT equipment
- **Responsive to need by using IT Asset management (ITAM)**
 - System to respond to the need to track assets and keep an up-to-date inventory
 - Identify and mitigate security risks
- **Increasing efficiency and adhere to stringent requirements on data management and security.**
 - Implement systems that provide visibility into assets [2].
 - Vulnerabilities are identified and addressed timely [2].



Research Problem

- DHCW required an ITAM system that improved efficiency and was compliance with security governance.
- The evolution of ITAM and the crucial role it plays.
- ITAM practices are influenced by regulatory frameworks such as GPDR.
- Assurance that stringent requirements on data management and security are imposed [4].



Research Aim & Objectives



- The aim of this research is to develop a comprehensive ITAM system that enhances efficiency and security in the following areas: asset tracking, lifecycle management and stock control whilst ensuring compliance with industry standards and security measures are met for DHCW.
- **Objectives**
 - To conduct an analysis of DHCW's current IT asset management practices to identify gaps and areas for improvement.
 - To conduct a comprehensive literature review to identify best practices and challenges.
 - To identify a framework that will address the specific needs of DHCW.
 - Test and evaluate the ITAM framework through a case study.
 - To provide recommendations for implementation of a solution to improve ITAM practices in DHCW.

Literature Review



Several theoretical frameworks detailed below that guide the implementation and utilization of ITAM systems.

- **Resource-Based Theory (RBT) in ITAM**

- IT assets are considered both valuable and rare and provide a competitive edge [5].
- IT assets that cannot be imitated or substituted creates a critical IT system supporting core business functions [6,7]
- Aligning ITAM with business strategy IT assets can contribute to business goals [8].

- **Total Cost of Ownership (TCO) Theory**

- Understands the full cost of IT assets [9].
- Cost benefit analysis in decision making [10].

- **Asset Lifecycle Management (ALM) Theory**

- Effective use and each stage: Acquisition, deployment, maintenance and disposal [11] to maximise values and minimise risks
- Systematic approach to manage assets [12].

Literature Review [continued]



- **IT Governance, Risk, and Compliance (GRC) Theory**

- Effective IT governance involves aligning IT strategy with business strategy
- Governance, risk management and compliance [13].

- **Configuration Management (CM) Theory**

- Management database of all components of an IT environment [14].
- Asset relationships [14].
- Change management and ensuring the existing business is not disrupted [14].

- **Risk Management (RM) Theory**

- Risk identification to assess vulnerabilities, compliance issues or operational failures [15].
- Risk assessment to evaluate likelihood of impact on identified risks [15].
- Risk mitigation to develop and implement strategies to eliminate risks [15].

Research/Development Methodologies



Research Methodology:

- **Mixed-Methods:** Combining qualitative and quantitative data
 - Detailed literature review.
 - Questionnaires to gain quantitative data- target minimum of 20 IT personal.
 - Unstructured interviews to gather Qualitative data – provide insights into practices [16].
 - Testing of a hypothesis via a case study to test the proposed ITAM framework.
 - Data analysis for comparison between the existing and proposed ITAM framework. – This will utilise statistical techniques such as t –tests of quantitate data and thematic analysis will be utilised on qualifcative data [17].

Research/Development Methodologies [continued]



- **Philosophy:**

- Positivism-collection and analysis of empirical data to validate research findings [18] .
- Elements of phenomenology- through methods of unstructured interviews and case study.

- **Deductive Approach**

- Review existing ITAM theories and frameworks.
- Develop a framework to apply to DHCW- using an agile methodology to have continuous feedback –feature Driven Development to allow continuous feedback [19].
- Test this framework.
- Beware of bias.

Research Methodologies



Phases:

1. Literature review

- Identify existing ITAM theories and frameworks.
- Identify gaps and required improvements.
- Consider this within recommendation of proposed framework for DHCW.

2. . Survey

- Involving 20 IT personnel.
- Collate feedback on existing and proposed ITAM framework [20].

3. Case Study

- Test the proposed framework in DHCW.
- Evaluate the effectiveness: improving asset tracking, lifecycle management and risk assessment [21].
- Analyze and compare.
- Inform future proposal data.

Resources



Resources Required:

- **Hardware:**

- PCs connected to DHCW's network – for data collection, analysis and framework development.

- **Software:**

- Microsoft Excel, ITAM software (to be determined).

- **Information:**

- ITAM databases, industry reports, academic articles [22].

- **Human Resources:**

- Collaboration with IT staff and management within DHCW recruited through professional networks and industry associations [23].
- Relevant departments in relation to compliance with security and governance.

Project impact and limitations



Impact:

- ITAM is essential for managing and optimizing an organization's IT resources.
- One of the primary cybersecurity issues is the lack of comprehensive visibility into all IT assets within an organization-ITAM provides the necessary infrastructure to support mitigation around security risks.
- The ITAM framework proposed for DHCW will be efficient and secure.

Risks and Limitations:

- Data Inaccuracy and Incompleteness – linked to poor decision making, inefficiencies and increased costs [24].
- Data access and compatibility – being denied accessed to implement changes needs to be mitigated by early engagement with stakeholders [24].
- Security and Compliance Challenges- potential reputational risk and data breaches [25].
- Resistance to Change – can hinder progress and implementation. Stakeholder investment is key [24].

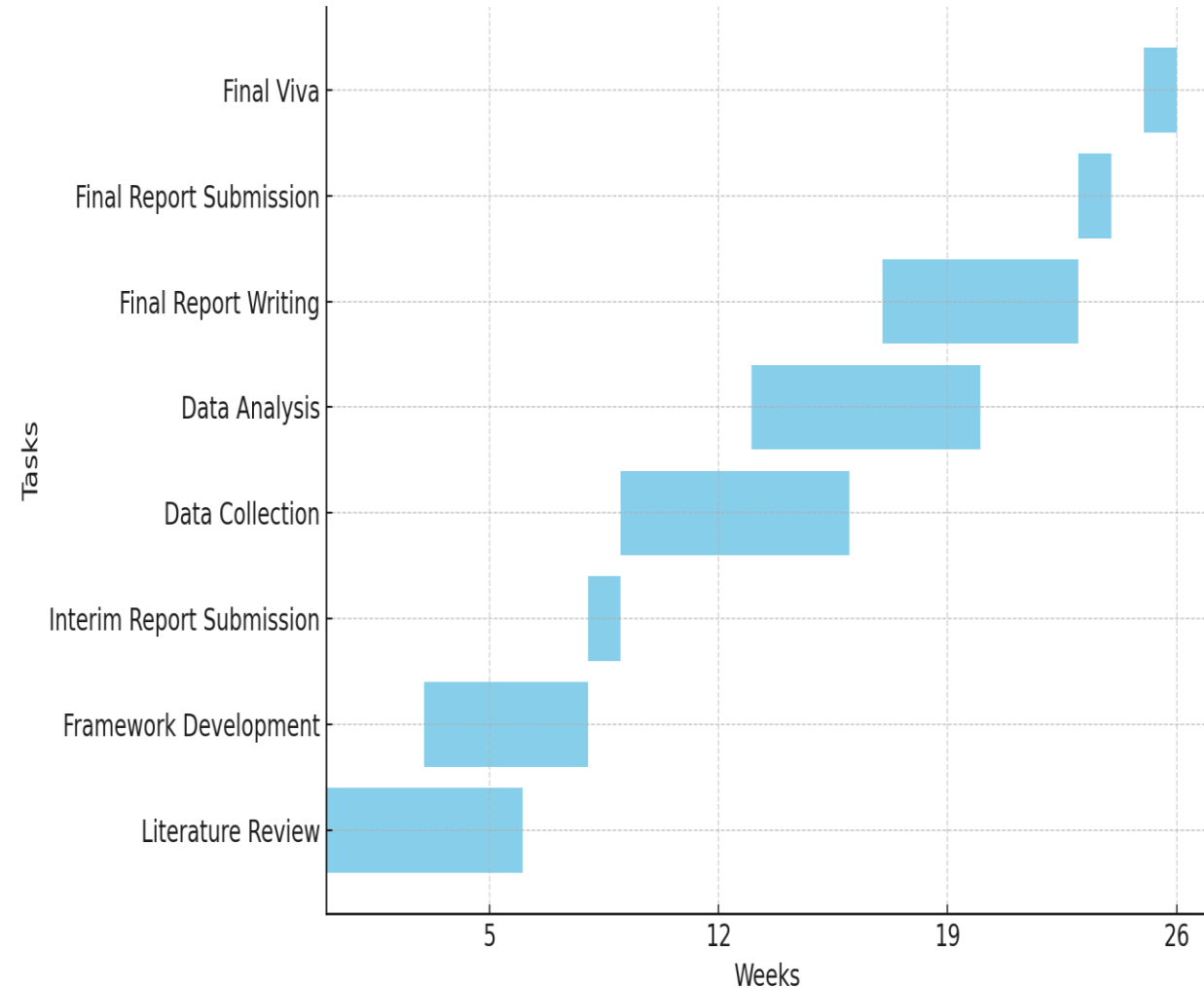
Project Plan Overview



Phases:

1. Literature Review (Weeks 1-6)
2. Framework Development (Weeks 4-8)
3. Interim report submission (week 9)
4. Data Collection (Weeks 10-16)
5. Data Analysis (Weeks 14-20)
6. Final Report (Weeks 18-23)
7. Final report submission (week 24)
8. Final Viva (week 26)

Gantt Chart for Project Timeline



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