

ISLR

Assignment 4

March 25, 2025

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MCL2024010

Mtech(CLIS) 2nd Semester

1. What is the aim of the thesis? (Primary and Secondary)

Ans: The **primary objective** of the thesis is to identify the risk and challenges during the implementation of ISMS as per ISO 27001 standard and provide solution to improve the implementation process.

Secondary objective: The study aims to analyze existing literature and real-world cases to identify best practices and offer key learning, that can help startups implement ISO 27001 successfully

2. Create criteria to measure the size of the organization?

Ans: The thesis defines startups as a subset of SMEs(Small and Medium Enterprise and provides the following criteria:

Number of employees: Startups typically have no more than 50 employees

Company age: Startups are less than 10 years old

Growth potential: They struggle for existence and focus on innovative ideas

Compliant: Fully meets ISO 27001 requirements.

Partially compliant: Some security measures are in place.

Non-compliant: No security measures

3. How does ISMS benefits the SME/Startups?

Ans: There are few important benefits as given below:

Regulatory Compliance: Helps meet GDPR and legal requirements.

Security Framework: Provides a structured risk management approach

Competitive Advantage: Enhances customer and stakeholder trust.

Improved Risk Management: Helps in early identification of threats and improves data security

Business Continuity: Ensures operational stability and reduces downtime in case of security incidents

4. **How does the LR being conducted to ensure the systematic LR and to get desired output?**

Ans: The literature review follows a structured and systematic process using PRISMA(Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines and best practices from Webster & Watson (2002), Levy & Ellis (2006), and Moher et al. (2009)

Steps in Conducting the Literature Review:

Identification: Keyword search using terms like "security, ISO27001, startups, ISMS, implementation"

Screening: Filtering research articles based on relevance and quality

Eligibility: Evaluating studies based on their applicability to startups

Data Extraction: Using concept matrices to analyze key themes

5. **What are the main finding of the LR and suggestive way to overcome it?**

Ans: There are few suggestive measure as given below:

Lack of resources: Use pre-built templates for policy documentation.

Implementation complexity: Break down the process into smaller, manageable phases.

Lack of project planning: Treat ISMS as a structured project with designated roles and timelines.

Role clarity issue: Clearly define security roles (CISO, Data Protection Officer).

Employee resistance: Conduct security awareness training programs.

Complex ISO 27001 language: Develop simplified versions of documentation.

6. What are the types of Research methods being used in this research?

Ans: Types of Research method used:
Exploratory multiple case study: Investigates real-world startup experiences with ISO 27001
Qualitative approach: Includes case studies, structured interviews, and expert evaluations
Relativist approach: Captures multiple viewpoints and interpretations.

7. Make a table to compare the results also validate if the research goals have been successfully achieved?

Research Goal	Achieved?	Validation Evidence	Example
Identify challenges in ISO 27001 implementation	Yes	Case studies confirmed multiple challenges	struggled with resource allocation, following security policies, unclear security roles
Provide practical solutions	Yes	Suggested phased implementation and training	pre-built security policy templates, start small and expand gradually
Compare findings with existing literature	Yes	Cross-analysis with previous research findings	Lack of management support, complex security policies,
Offer key insights for startups	Yes	Summarized best practices in ISMS adoption	Simplified security documentation reduced implementation time, management buy-in significantly improves ISMS success
Determine if lack of expertise is a major issue	Yes	Case studies confirmed that startups often lack in-house security expertise	Outsourced security tasks, but struggled to align external consultant work with internal processes
Validate that startups can implement ISO 27001 with minimal resources	Yes	Multiple startups successfully implemented ISMS with low-cost solutions	Free open-source risk management tools to comply with ISO 27001, utilized security training videos instead of hiring expensive consultants

Table 1: Research Goals Achievement Summary

8. List down the future research areas?

Ans: There are few important aspect in which future research can be conducted:

Future Research Area	Description
Further standardization of ISO 27001 implementation	Developing standard templates to simplify the process
Developing open-source ISMS solutions	Creating free compliance frameworks for startups
Exploring automated security control implementation	Investigating AI-driven automated compliance checks
Human factor in security adoption	Analyzing how employee behavior impacts ISMS success
Comparing effectiveness of different ISMS models	Evaluating NIST vs. ISO 27001 for startups

Table 2: Future Research Area table.