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Effective Risk Management in Information Security Balancing Threats and Solutions - A diagnostic study

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INTRODUCTION

“In today’s digital landscape, cyber risks are evolving at an unprecedented pace, affecting not only data but also the reputation and operational stability of organizations.

”Information Security Risk Management (ISRM) is the structured process of identifying, assessing, and mitigating risks associated with information technology systems.

As ISRM becomes a vital part of business support, organizations must implement independent, adaptive strategies to align security practices with business goals.
This evolution in strategy ensures that organizations can remain resilient and effectively respond to emerging threats.

Agenda

- Overview
- Current Risk Landscape
- Identifying & Assessing Risks
- Research Analysis
- Mitigation Strategies
- Best Practices for Future-Proofing Security

Current Risk Landscape and Factors Influencing ISRM Strategy

Problem Statement: Rising Cyber Threats and Risks

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- Cybercrime costs are expected to reach $10.5 trillion by 2025.
- Cyber threats are rapidly increasing in the retail industry, requiring robust ISRM strategies.
- Evaluate the effectiveness of Information Security Risk Management (ISRM) practices in Kuwait's retail industry.
- Analyze how ISRM practices help protect data and reduce risks in the retail sector.
- Investigate key factors influencing ISRM success and gaps in practices

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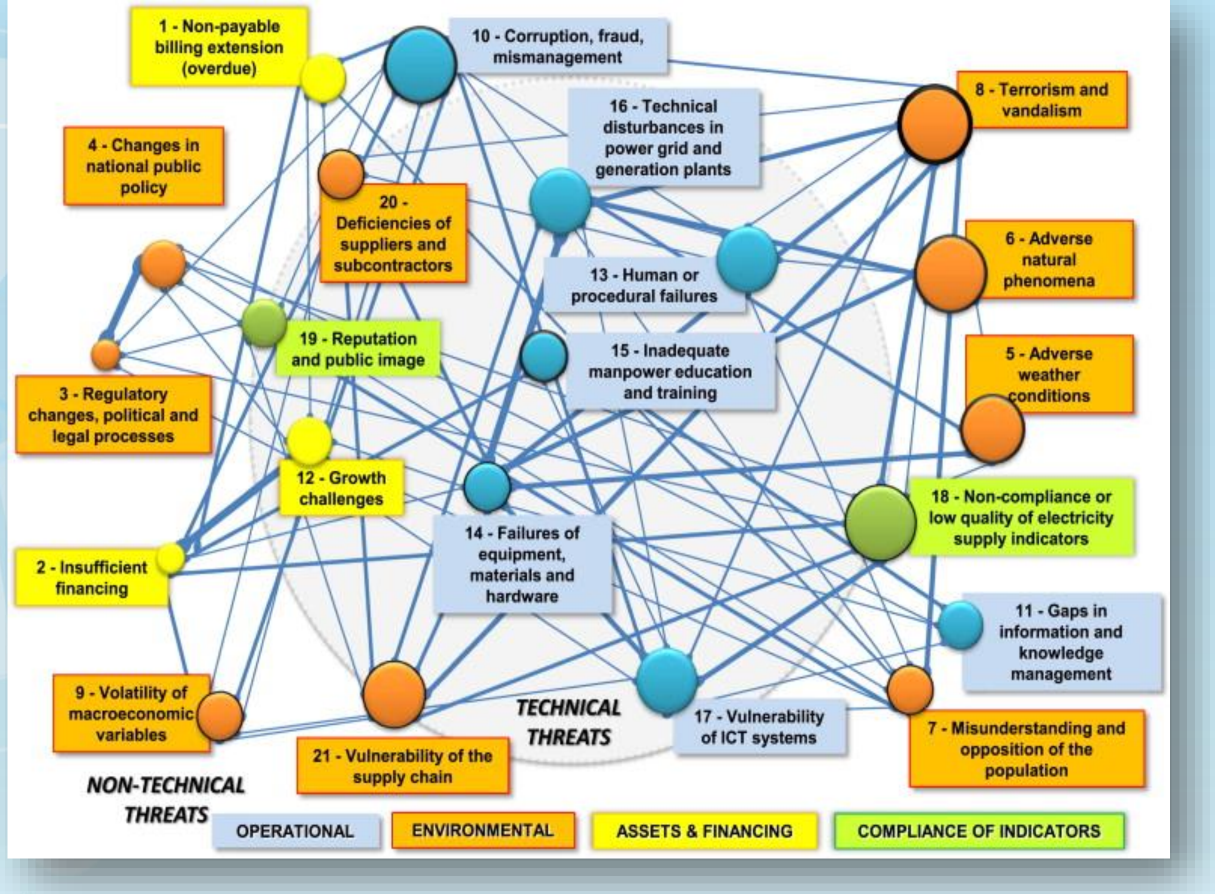
Importance of Addressing Interconnected Risks

- Cascading Effects: One security incident can quickly lead to multiple consequences.
- Increased Attack Surface : With businesses adopting cloud technologies, IoT, and relying on third-party vendors, their attack surface increases, creating more potential points of entry for attackers.
- Complexity in Response: Addressing a cyber incident becomes more challenging when multiple interconnected risks are involved.


1 - Non-payable billing extension (overdue)
10 - Corruption, fraud, mismanagement
8 - Terrorism and vandalism
4 - Changes in national public policy
16 - Technical disturbances in power grid and generation plants
20 - Deficiencies of suppliers and subcontractors
6 - Adverse natural phenomena
13 - Human or procedural failures
19 - Reputation and public image
15 - Inadequate manpower education and training
5 - Adverse weather conditions
3 - Regulatory changes, political and legal processes
12 - Growth challenges
18 - Non-compliance or low quality of electricity supply indicators
14 - Failures of equipment, materials and hardware
2 - Insufficient financing
11 - Gaps in information and knowledge management
9 - Volatility of macroeconomic variables
TECHNICAL THREATS
17 - Vulnerability of ICT systems
7 - Misunderstanding and opposition of the population
21 - Vulnerability of the supply chain
NON-TECHNICAL THREATS
OPERATIONAL
ENVIRONMENTAL
ASSETS & FINANCING
COMPLIANCE OF INDICATORS

Retail Industry in Kuwait

Category	Statistics	Sources
Projected E-commerce Revenue	USD 4.5 billion by 2025 in the Middle East	PwC
E-commerce Growth Rate	9.5% CAGR in the Middle East from 2023 to 2027	Statista
Internet Penetration Rate	98% in Kuwait as of 2023	Blue Weave Consulting
Social Media Usage	86% of the population in the Middle East are active social media users	We Are Social
Overall Retail Market Size (2022)	USD 253.4 billion in the Middle East	Blue Weave Consulting
Projected Retail Market Size (2029)	USD 345.6 billion in the Middle East	Blue Weave Consulting
Youth Demographic Influence	50% of the Middle Eastern population are under 30, driving e-commerce demand	World Bank
Key Growth Drivers	Urbanization, rising purchasing power, digital transformation, and e-commerce demand	Blue Weave Consulting

Key Factors Influencing ISRM and Cybersecurity Challenges in Retail

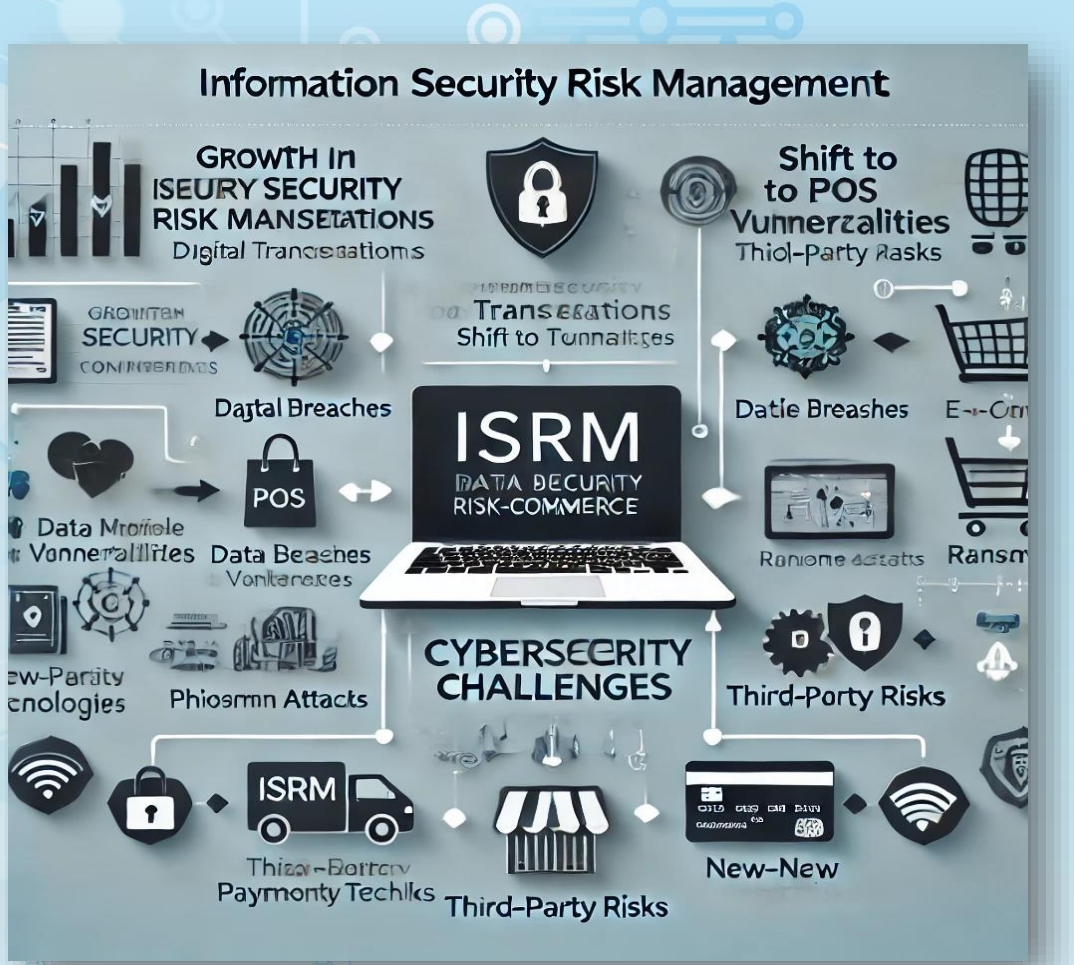
Growth in Digital Transactions

Shift to E-Commerce. Mobile Commerce

Pandemic Impact (COVID 19)

Cybersecurity Challenges in Retail

Data Breaches, POS Vulnerabilities, Phishing Attacks, Ransomware, Third-Party Risks, New Payment Technologies



Research Analysis

Governance Mechanism:

- Is a positive view of governance structures, indicating strong leadership in managing security risks but a need to redefine governance strategies.

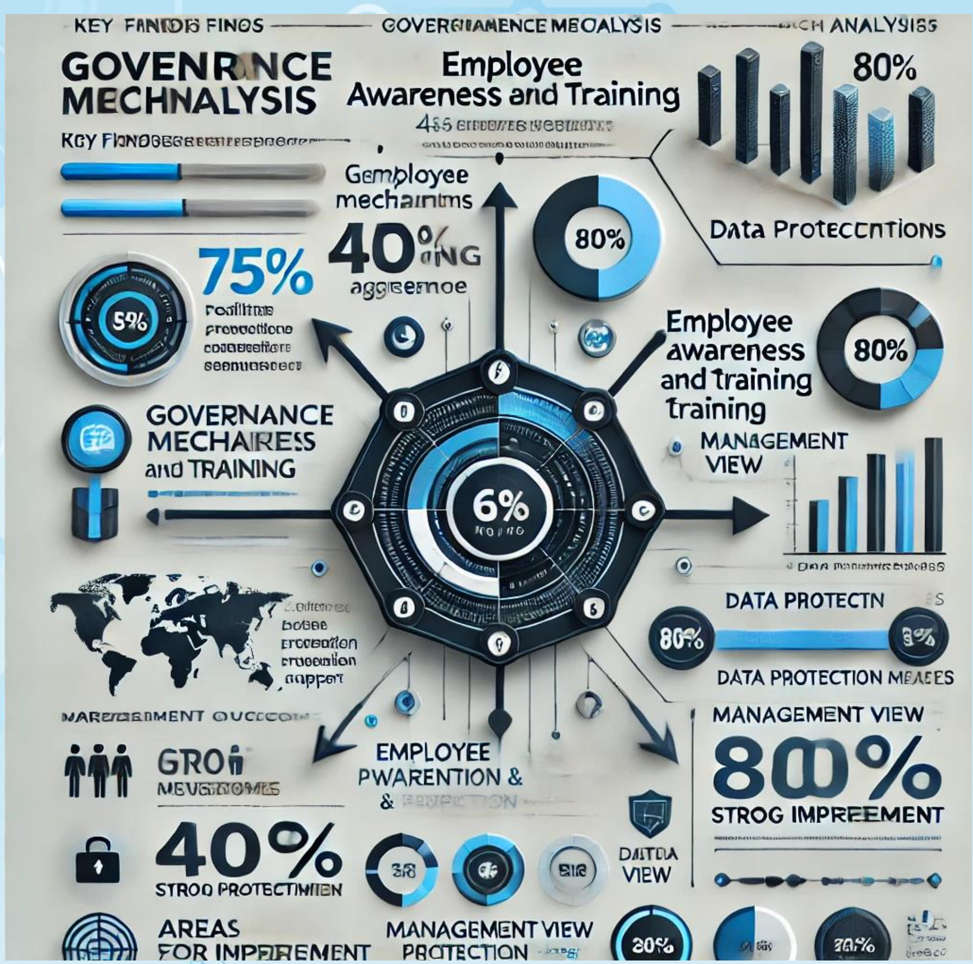
Employee Awareness and Training:

- Awareness programs are effective with major area of concern remain in training quality or frequency.

Data Protection Measures:

- Strong adherence to encryption and data storage but weaknesses in their data protection mechanisms.

Management View: Strong commitment, integrated approach.



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Risk Assessment and Mitigation Strategies

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Risk Management - An Integrated Approach

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Start with ISO 31000 to create a unified risk culture.

Deploy NIST RMF for continuous monitoring and IT security.

Leverage COBIT to align IT risks with business strategies.

Utilize TOGAF & SABSA to ensure security is built into your enterprise architecture.

Holistic Risk View, Compliance & Resilience, Adaptability

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Mitigation Strategies & Future Trends

- Evolving threats in the InfoSec space **(AI-driven attacks, quantum computing risks).**
- **Prevention**: (Zero Trust Architecture, MFA), regular security audits, and continuous monitoring (SIEM tools).
- **Detection**: Real-time monitoring, intrusion detection systems (IDS), and vulnerability scanning.
- **Response**: Robust **Incident Response Plan** (IRP).
- **Vendor Risk Management**: Ensuring third-party vendors compliance.
- **GRC tools** (Governance, Risk, Compliance) are becoming integral in large organizations to ensure continual risk monitoring and assessment.

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Thank You

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