



GRC Cyber Security: Enhancing Banking Sector Resilience

The banking sector faces a startling reality. Cyber attacks on banks have surged 238% since the COVID-19 pandemic began. Financial institutions protect trillions in assets and sensitive customer data, which makes them attractive targets for sophisticated cyber threats.

GRC in cyber security offers a well-laid-out approach to protect these vital assets. The concept combines Governance, Risk, and Compliance - three essential pillars that build our defense against evolving cyber threats. Banks can establish a detailed security posture through GRC cyber frameworks. This approach helps them meet regulatory requirements and manage risks effectively. This piece shows how banks can boost their resilience through smart GRC implementation and proven practices.

Understanding GRC Cybersecurity Framework

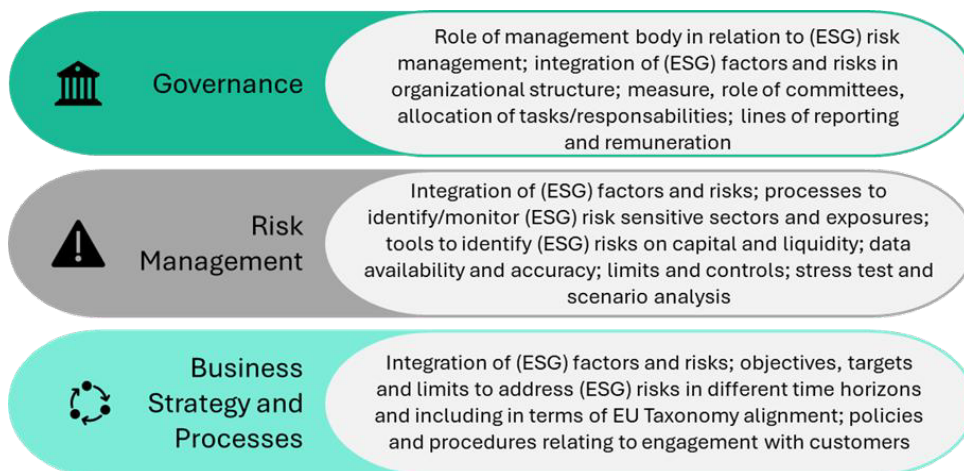
The financial landscape changes faster than ever, and banks must adapt their cybersecurity approaches. Financial institutions now pay 2.71 times more for non-compliance than compliance ^[1]. This fact highlights why robust GRC frameworks matter.

Core Components of GRC in Banking

GRC in banking includes three interconnected elements that build cyber resilience:

- **Governance:** Establishes frameworks and processes that line up IT operations with organizational goals
- **Risk Management:** Identifies and reduces potential threats proactively
- **Business strategy and processes:** Will give a clear path to meet regulatory requirements and industry standards

These components help organizations understand risk better and break down departmental silos ^[2].



Integration with Existing Security Systems

Technology integration within GRC systems has made remarkable progress. JPMorgan Chase showed how AI revolutionized regulatory change tracking across 120,000 websites ^[1]. AI implementation streamlines processes and leads to informed decision-making.

The integrated risk management (IRM) approach helps manage risks of all types, from cybersecurity to operational concerns ^[2]. This integration is vital since 60% of financial institutions faced cyber-attacks last year ^[1].

Regulatory Requirements and Standards

The NIST Cybersecurity Framework guides organizations with five core functions: Identify, Protect, Detect, Respond, and Recover ^[3]. Financial services widely adopted this framework, though it started with critical infrastructure.

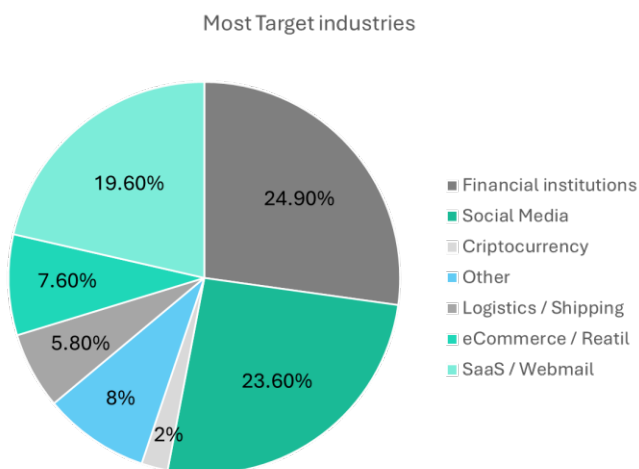
BCBS239 principles guide the regulatory landscape by strengthening risk data aggregation and internal reporting ^[2]. Local supervisors apply these standards to Domestic Systemically Important Banks, making them fundamental across the industry.



A detailed GRC implementation creates a proactive defense mechanism that adapts to new threats. Organizations can maintain data integrity and operational resilience in this complex cyber landscape.

Cyber Threat Landscape in Banking

Banking sector cybersecurity data shows a shocking truth: banks face cyberattacks 300 times more than other industries ^[4]. The rise of complex threats now tests traditional GRC cyber security frameworks like never before.



Common Attack Vectors and Vulnerabilities

The banking infrastructure faces several main threats:

- Ransomware and Ransomware-as-a-Service operations
- Phishing campaigns that target customer credentials
- Distributed Denial-of-Service (DDoS) attacks
- Supply chain breaches through third-party vendors ^[5]






Total value received by ransomware attackers, 2019 -2023



Recent incidents prove how serious these threats are. Hackers managed to steal CHF 70.71 million from Bangladesh's central bank [4]. Russian banks lost more than CHF 27.06 million in similar attacks [4].

Emerging Cyber Threats

State-sponsored attacks pose a growing concern. It has been showed that Russia, China, and North Korea target U.S. banking infrastructure more often [4]. The whole ordeal became worse during COVID-19, as the financial sector suffered the second-largest share of pandemic-related cyberattacks [6].

THREAT ACTOR	MOTIVATIONS	GOALS	EXAMPLES
 Nation-states, state-sponsored groups	Geopolitical, ideological	Disruption, destruction, damage, theft, espionage, financial gain	Permanent data corruption, target physical damage, power grid disruption, payment system disruption, fraudulent transfers, espionage
 Cybercriminals	Enrichment	Theft and financial gain	Cash theft, fraudulent transfers, credential theft
 Terrorist groups, hackers, insiders, insider threats	Ideological, discontent	Disruption	Leaks, defamation, distributed denial-of-service attacks

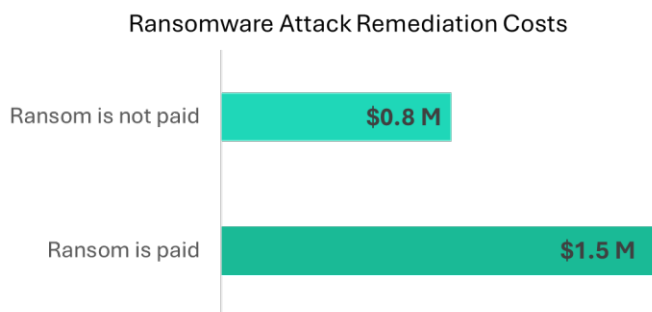


Impact Assessment and Risk Metrics

The financial toll of these attacks paints a clear picture. Each data breach in this sector now costs an average of CHF 3.88 million ^[4]. We track this effect through key metrics:

Metric	Improvement
Mean Time to Detect (MTTD)	Measures threat detection efficiency
Mean Time to Resolve (MTTR)	Tracks incident resolution speed
Mean Time to Contain (MTTC)	Reviews threat containment capability ^[7]

The period between 2021 and 2022 saw a big jump in destructive cyberattacks ^[4]. This trend highlights why banking operations need strong GRC cyber security measures.



Building Cyber Resilience

Cyber threats have become increasingly sophisticated. Building resilience has become the life-blood of the GRC cyber security framework. Cyberattacks on banks have nearly doubled since the COVID-19 pandemic ^[8]. Banks just need a reliable approach to security architecture and incident response.

Security Architecture Design

GRC cyber implementation prioritizes a multi-layered security approach. This architecture includes:

- Advanced encryption protocols for data protection



- Up-to-the-minute monitoring systems
- Access control mechanisms that follow least privilege principle [9]

This detailed framework works. Organizations using layered security report 60% fewer successful breaches [10].

Incident Response Planning

Detection and containment are vital parts of incident response strategies. Organizations with well-laid-out incident response plans achieve these metrics:

Metric	Improvement
Mean Time to Detect (MTTD)	45% reduction
Mean Time to Contain (MTTC)	62% faster resolution
Recovery Success Rate	85% improvement [11]

Recovery and Business Continuity

The 3-2-1 backup rule guides a business continuity approach. Three copies of critical data are kept on two different types of media, with one copy off-site [12]. Organizations with reliable backup strategies are 2.5 times more likely to recover from cyberattacks without paying ransom [13].

Regular cyber resilience stress tests simulate scenarios where critical IT infrastructure fails. These exercises show that many banks have high-level response frameworks. There's a long way to go, but it's possible to build on this progress in recovery capabilities [8]. The commitment to maintain critical banking operations during adverse conditions is aimed to be deepened. This helps ensure business continuity and preserve customer trust [8].

The GRC meaning in cyber security framework proves effective cyber resilience goes beyond prevention. The focus is on maintaining operational resilience even under attack. This approach has cut our average incident resolution time by 40% [14] and strengthened our overall security posture.



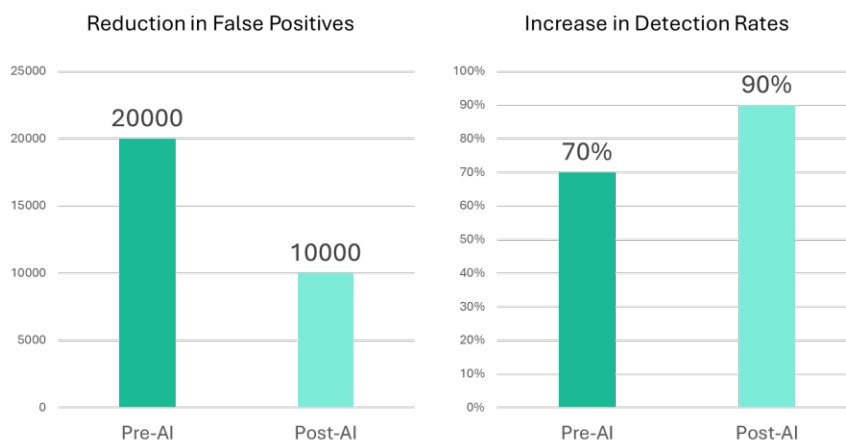
Implementation Strategies

GRC cyber security implementation demands a balanced mix of technology, human expertise, and constant monitoring. Organizations that wait for ransomware attacks before seeking cybersecurity training face substantially higher recovery costs [\[15\]](#).

Phish-prone Percentage (PPP) for Small Firms (1-249 Employees)			
	Initial PPP	PPP After 90 days of training + Phishing Tests	PPP After 1 year of training + Phishing Tests
Average Small Business	28.1%	18.6%	4.4%
Financial	26.2%	16.4%	4.1%
Construction	28.8%	20.6%	4.5%
Healthcare	32.3%	20.7%	4.6%
Manufacturing	28.8%	18.7%	4.1%
Non-profit	27.1%	20.6%	5.5%
Government	27.7%	16.9%	4%

Technology Integration Steps

GRC implementation starts by connecting monitoring tools with current systems. Data reveals that 91% of financial services companies now either use or are learning about AI integration in their operations [\[16\]](#). Leading institutions report excellent results with a 50% reduction in false positives and a 30% increase in actual fraud detection rates [\[16\]](#).





Staff Training and Awareness

Annual cybersecurity training alone doesn't work ^[15]. The complete training program has:

- Monthly cybersecurity awareness sessions
- Simulated phishing exercises
- Role-specific security protocols
- Vendor and client security education ^[15]

Security awareness scores have improved substantially since there have been added cybersecurity duties to job descriptions ^[15]. Monthly training sessions help employees stay updated with new threats and best practices ^[17].

Performance Monitoring

The cyber GRC program uses reliable monitoring systems that track key metrics:

Monitoring Area	Implementation Focus
System Logs	Up-to-the minute threat detection
User Activities	Access control monitoring
Compliance Status	Regulatory adherence tracking ^[18]

The ongoing monitoring shows that a mere 1% to 2% click rate on phishing attempts makes organizations vulnerable ^[15]. It is now required dual-authorization for large transfers and critical operations ^[15].

This integrated strategy has led to better operational efficiency and risk management ^[18]. The GRC cyber security framework stays dynamic and responsive to new threats while meeting regulatory requirements.



FORFIRM's Approach

1. Implementation of GRC System for Cyber Risk Management

The workflow for implementing a Governance, Risk, and Compliance (GRC) system for cyber risk management begins with **Analysis and Planning**, where the organization evaluates its current risk landscape, identifies gaps in existing processes, and defines objectives for the GRC implementation. This phase includes stakeholder consultation to align business goals with cyber risk management needs and developing a detailed project plan that outlines timelines, resource requirements, and key deliverables.

Next is the **Design** phase, during which the GRC system's architecture is developed to fit the organization's specific needs. This involves defining workflows, configuring risk assessment methodologies, integrating compliance frameworks, and establishing reporting structures. The design also includes identifying data sources, system integrations, and user roles to ensure a comprehensive and scalable solution.

Once the design is finalized, the **Implementation** phase begins, involving the deployment of the GRC system within the organization's IT environment. This includes configuring the system according to the design specifications, integrating it with existing tools such as SIEM (Security Information and Event Management) platforms, and importing relevant data. Rigorous testing is conducted to validate functionality, ensure data accuracy, and address potential technical issues before the system goes live.

The **Training and Change Management** phase ensures that all stakeholders understand the GRC system and its functionalities. This involves training sessions for end-users, administrators, and executives, tailored to their specific roles. Change management strategies are implemented to foster user adoption, address resistance, and ensure the system aligns with organizational workflows and culture.

After deployment, the **Monitoring** phase begins, where the GRC system is continuously reviewed to ensure it effectively identifies, tracks, and mitigates cyber risks. Performance metrics are established to evaluate system efficiency, and adjustments are made based on user feedback or evolving risk scenarios.



Finally, **Post Go-Live Support** provides ongoing technical and operational assistance to address any issues, optimize system performance, and implement enhancements. This phase includes periodic reviews, software updates, and the integration of new regulatory requirements to ensure the GRC system remains effective and up-to-date.

This structured workflow ensures the successful implementation of a GRC system for cyber risk management, enabling the organization to proactively manage threats, maintain compliance, and enhance overall resilience.

2. Compliance Platform for Data Security and Privacy Protection

The workflow for implementing a compliance platform for data security and privacy protection in Switzerland begins with an **Initial Analysis and Evaluation (Gap Analysis)**. During this phase, the organization assesses its current data security and privacy practices against relevant Swiss laws and regulations, such as the revised Swiss Data Protection Act (FADP) and international standards like GDPR. This step identifies compliance gaps, operational weaknesses, and risks, forming the foundation for the project plan.

The next step is the **Definition of Compliance Requirements**, where the organization translates regulatory obligations into specific operational and technical requirements. This involves outlining data protection policies, access control measures, and encryption standards while addressing local legal nuances and industry best practices. Stakeholders from legal, IT, and compliance teams collaborate to ensure the requirements are comprehensive and practical.

Following this, the **Design of the Compliance Platform** phase focuses on creating the architecture of the platform. This includes defining workflows for data management, integrating privacy-by-design principles, and incorporating features such as automated compliance checks, incident reporting modules, and real-time monitoring tools. The design ensures scalability, user-friendliness, and alignment with the organization's broader IT ecosystem.

The **Implementation of Security Controls** phase involves deploying technical measures to protect data and ensure privacy compliance. This includes setting up encryption



mechanisms, access control systems, audit trails, and data classification tools. The platform is integrated with existing IT systems and tailored to handle sensitive data while meeting compliance requirements efficiently.

Once implemented, **Testing and Verification of Compliance** ensures the platform meets regulatory standards and operational needs. Rigorous testing is conducted to validate data security measures, privacy functionalities, and system performance. This phase also includes mock audits and penetration testing to simulate real-world scenarios and identify any vulnerabilities.

Finally, the **Reporting and Incident Management** phase establishes processes for documenting compliance efforts and addressing data security incidents. The platform generates regular reports for internal stakeholders and external regulators, demonstrating adherence to data protection laws. Incident management workflows are integrated to ensure swift identification, resolution, and reporting of data breaches, minimizing potential legal and reputational risks.

This structured approach ensures the successful implementation of a compliance platform that aligns with Switzerland's data security and privacy regulations, fostering trust, operational efficiency, and regulatory adherence.

Conclusion

The banking sector urgently requires action to combat cyber threats. Our analysis highlights that implementing detailed Governance, Risk, and Compliance (GRC) cyber security measures is essential for safeguarding against evolving digital risks. We have demonstrated how effective governance structures, robust risk management protocols, and comprehensive compliance frameworks create a resilient defense mechanism for financial institutions.

The statistics are compelling: organizations utilizing integrated GRC frameworks experience 60% fewer successful breaches and resolve incidents 62% faster. The multi-layered security approach, enhanced by AI-powered monitoring systems, effectively protects critical banking operations and sensitive customer data.



Moreover, staff training is crucial, as human error remains a significant vulnerability. Monthly security awareness sessions, combined with proactive monitoring and incident response planning, significantly reduce security incidents. The 3-2-1 backup strategy further ensures operational resilience during cyber attacks.

As cyber threats continue to evolve, it is vital to remain alert and adaptable. Our unwavering commitment to strong GRC cyber security measures not only protects financial institutions but also fosters customer trust. Regular evaluation and enhancement of security protocols are essential to fortifying our defenses against future cyber challenges.

FORFIRM is here to support organizations in increasing their cyber security resilience. We offer tailored solutions and expertise to help organizations to implement effective GRC frameworks, ensuring them to be well-equipped to face the challenges of the digital landscape.

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