

Wood Mackenzie's Approach to Cybersecurity

Version 1 January 2023

©2023 Wood Mackenzie Ltd.



Cyber Security Overview

This overview of our approach to cybersecurity is for informational purposes only; to learn more about how we protect data, our certified security controls, data transfers mechanisms, data back-ups and more please contact us at here.

As a global research and consultancy business, Wood Mackenzie understands the importance of data security and always has a "security first" mindset. Part of that mindset includes providing quality data, analytics, and insights to our customers while providing solutions, products and services protected by a comprehensive Information Security Program that includes the following:

- Compliance with the NIST 800-53 Cybersecurity Framework.
- A SOC2 Type II certification for Wood Mackenzie's Supply Chain Product where security controls are audited for compliance annually.
- Evaluation of ISO 27001 certification for applicable Wood Mackenzie Products

Our Cyber Risk Governance Program includes an Executive Risk Management Team designed to fulfill the company's data responsibility objectives throughout all facets of the company. In collaboration with Wood Mackenzie's Compliance Council, the Cyber Risk Governance Program directs and prioritizes elements such as:

0	Confidentiality Requirements	0	Network Security
---	------------------------------	---	-------------------------

Information Management
 Access Control, Roles & Permissions

Software Development o Third Parties & Subcontractors

Incident Management
 Asset Management

o Business Continuity & Disaster Recovery o Vendor Risk Review

Risk Management
 Change Management

Physical Security & Infrastructure
 Information Backup & Recovery

o International Data Transfers

For our Vendor Risk Management please see supplier commitment requirements included in our Supplier Code of Conduct available here.

This overview does not constitute any binding agreement nor establish any legally enforceable obligation. It is subject to modification at the sole discretion of Wood Mackenzie.



Executive Oversight & Governance

Executive Oversight

Wood Mackenzie's Executive Risk Management Team and the Compliance Council oversees the company's management of cybersecurity, including oversight of appropriate risk mitigation strategies, systems, processes, and controls. The Executive Risk Management Team and Compliance Council receives regular reports from Wood Mackenzie's Leadership about the company's cybersecurity risks, management review processes, overall health, and readiness to respond to an incident.

Cyber Risk Management Leadership Roles

The Compliance Council, which includes the top corporate executives, provides guidance and authority related to the enforcement of Wood Mackenzie's Framework, including the strategies, policies, procedures, processes, and systems, established by management to identify, assess, measure, monitor, and manage risks. The Compliance Council also reinforces the corporate risk appetite and determines whether residual risk is acceptable.

The Enterprise Risk Management and Compliance (ERM&C) function oversees and advises on implementation of the Framework throughout Wood Mackenzie. In doing so, the ERM&C division aggregates and assesses risk across the enterprise. Within the division are Wood Mackenzie's Cybersecurity and Information Risk Management functions that partner with Wood Mackenzie's corporate functions to help ensure that risk management strategies are implemented. The ERM&C division also hosts training and awareness sessions, sponsors working groups across the enterprise on critical security topics and provides centralized incident response.

Promoting a Culture of Awareness and Ownership with All Employees

Wood Mackenzie recognizes that all Wood Mackenzie employees and many third parties have significant roles and responsibilities in ensuring the fulfillment of Wood Mackenzie's risk management strategy and objectives. In summary, these roles and their responsibilities include:

- The Wood Mackenzie workforce (employees and third parties) is accountable for understanding and complying with all security policies, guidelines, and procedures, including Wood Mackenzie's Acceptable Use Policy that establishes the responsibilities for the workforce when using company assets.
- Internally designated data owners report to and are empowered by the executive management of their
 respective Wood Mackenzie business and have full accountability for the security of the business unit's
 segment of products and services.
- Application owners are responsible for the overall procurement, development, integration, modification, and operation and maintenance of application systems supporting Wood Mackenzie businesses and functional units.
- Systems owners are responsible for providing the technology services for the set of application systems and related infrastructure supporting Wood Mackenzie businesses.



Policies and Governing Documents

Policies governing our operations are written and designed to embed industry leading controls designed to mitigate risk to Wood Mackenzie and our customers.

Executive management authorizes a risk policy, information security framework documents, and supporting policies that support our comprehensive cyber risk culture.

Wood Mackenzie employees, contractors, and third parties are responsible for ensuring compliance with all information security policies.

External Audits, Certifications, and Attestations

Wood Mackenzie's control environment, including controls related to cybersecurity described in this document, are regularly subject to independent testing from both internal and external audits. A closed-loop corrective action process manages any potential exceptions identified during audits.

International Data Transfers

Wood Mackenzie has adopted appropriate policies, procedures, contracts, and security measures to ensure that cross-border transfer of data meets government and client expectations.

Risk Identification and Management

Risk Assessment

Wood Mackenzie's process for risk management aligns with enterprise strategic objectives and defines expectations for the organization to identify, assess, and manage risk. Wood Mackenzie conducts various risk assessments with our businesses no less than annually to understand cybersecurity risk to organizational operations. Results from risk assessments serve two primary purposes: first, the results inform Wood Mackenzie's cyber risk management strategy, objectives, and key initiatives; and second, if any material risks are identified, they require risk response and action plans to mitigate identified risks.

The risk response process requires identification of the business owner and affected process owners. The Information Risk Management team oversees plans for control activities to implement risk responses and to identify costs, benefits, and execution responsibilities of control and process owners.

Asset Management

Wood Mackenzie has an established asset management policy and associated procedures to ensure the data, personnel, devices, systems, and facilities that enable the organization to achieve business purposes are identified and managed consistent with their relative importance to business objectives and Wood Mackenzie's risk strategy. The policy includes assets managed on premises as well as those supported by third-party hosting and cloud-based services.

- Information assets are clearly identified, documented, and regularly updated in a centrally managed inventory, which includes designated business, data, application, and system owners.
- Wood Mackenzie classifies data based on the value and sensitivity of the information to the organization. Specific handling and data security controls are defined and deployed depending on data classification.
- Software installed on any machine connecting to a Wood Mackenzie or member company network must be used only for authorized business purposes.



Supply Chain Risk Management

Wood Mackenzie has established a third-party risk management policy and supporting processes to identify, assess and manage supply chain risk. The policy requires that vendors are assessed and tiered based on their risk to the company. Vendors are then subjected to varying levels of due diligence and ongoing monitoring that aligns with the inherent risk of services they provide.

Suppliers are required to acknowledge and commit to compliance with a <u>Supplier Code of Conduct</u>, which includes privacy and confidentiality provisions.

Risk Prevention and Protection

To provide for the security and resiliency of its systems and assets, Wood Mackenzie has deployed a defense-in-depth strategy of protective solutions, including the following:

Identity Management and Access Control

Wood Mackenzie has established policies, procedures, and associated system functionality to 1) limit access to physical and logical assets and associated facilities to authorized users, processes, and devices, and 2) manage access consistent with the assessed risk of unauthorized access. These controls include but are not limited to:

- Access requests initiated by a member of Wood Mackenzie's workforce are associated with a
 corresponding "common identifier" (a user ID) that serves as an element of authentication and is designed
 to provide both nonrepudiation and audit logging.
- Information access is governed by the principle of least privilege, where information access is limited to that which is necessary to perform job responsibilities.
- Access to Wood Mackenzie information is controlled through a managed process that addresses authorizing, modifying, and revoking access, as well as a periodic review of information system privileges.
- Web filtering functionality is deployed to manage Internet access. Internet search or access requests are
 routed through the filter, which blocks access to inappropriate or potentially harmful websites and
 otherwise enforces corporate and regulatory policy compliance.
- Remote access to Wood Mackenzie information assets is controlled through multi-factor authentication.
- Vendor access to any information assets is governed by associated data classification handling requirements.

Physical Security

Wood Mackenzie has deployed policies, procedures, and supporting systems so each of its facilities, including data centers and storage facilities, have appropriate physical access controls in place to protect it from unauthorized access. Those controls include but are not limited to the following:

- Physical access management systems are deployed for Wood Mackenzie facilities, including data centers and storage facilities.
- CCTV monitoring on a 24/7 basis is often deployed at points of access to Wood Mackenzie facilities and within Wood Mackenzie controlled secure spaces, including those with high concentrations of sensitive data.
- Physical and printed media and other types of physical assets are disposed of by confidential means, such as shredding or confidential disposal services.
- Visitors to Wood Mackenzie facilities must present a valid government ID and be escorted by a Wood Mackenzie employee.



Data Protection

Wood Mackenzie has deployed controls to provide assurance that information and records (data) are managed consistent with the company's risk strategy and governing data principles to protect the confidentiality, integrity, and availability of the data. These controls include but are not limited to the following:

- Data is classified according to a data classification and handling policy.
- Data is controlled and managed in accordance with the data handling requirements set forth in the policy, which considers our Wood Mackenzie global workforce, compliance requirements for offshore access, and customer requirements for data sharing and segregation.
- Sensitive data is restricted to only authorized individuals, and such data is protected (i.e., tokenized, encrypted, etc.) in accordance with industry best practice methods when stored or processed.
- Non-publicly available data is encrypted by industry-leading protocols and algorithms when in transit or at rest.
- Data is encrypted on any mobile device that has the capability to store Wood Mackenzie information, including mobile devices, laptops, notebooks, and smartphones.
- Data is encrypted on any media used for purposes of disaster recovery, business continuity, and archiving.
- Data storage is encrypted for any remotely accessible Wood Mackenzie information assets, including but not limited to web-accessible resources and file-sharing systems.
- Development and testing environments are separated from production environments.
- Data is retained in accordance with our global records management policy, in alignment with business need, and per applicable laws and regulations.
- Wood Mackenzie generally follows industry standards for data disposition and destruction that involves
 methods specific to the media or storage type, so information cannot be retrieved or reconstructed in the
 event the storage device is either reused or destroyed.

Application and Infrastructure Security

Wood Mackenzie has established security policies that address purpose, scope, roles, responsibilities, management commitment, and coordination among organizational entities, as well as processes and procedures that are maintained and used to manage the protection of information systems and assets.

Perimeter Security

- Wood Mackenzie's network is architected to restrict access to only authorized users for authorized services for both external and internal parties.
 - Multiple firewall devices at external access points into the network prevent intrusion, limit accessible services, and isolate Wood Mackenzie's network from those of customers and other third parties.
 - Firewalls protect Internet-facing infrastructure and applications. There are firewalls between demarcation zones and Wood Mackenzie's internal network.
 - Firewalls restrict access between network segments to allow only authorized personnel access to specifically configured services.
- Web application firewalls are deployed to protect web applications from malicious activities such as crosssite request forgery, cross-site scripting (XSS), and SQL injection.
- Secure e-mail gateway services supported by dynamically updated threat intelligence feeds are deployed to
 evaluate inbound e-mail traffic, blocking or quarantining e-mails exhibiting suspicious characteristics.
 Examples of these controls are reputation filters for known malicious senders or those that spoof
 otherwise trusted senders, content filters for spam or malware, and threat filters for phishing or other nonmalware based social engineering threats such as business e-mail compromise attempts.
- Vulnerability and penetration assessments are proactively performed to simulate an external attacker, so Wood Mackenzie can enhance its defenses, with findings remediated within internally defined service level agreements.



Secure Development and Change Management

Wood Mackenzie has developed and published a secure development policy and related procedures, which are designed to provide assurance that secure coding practices are infused throughout Wood Mackenzie's software development life cycle (SDLC), and to uphold data quality standards and practices, from initial planning through disposal of the system. Significant development requirements include but are not limited to:

- Development adheres to secure standards set forth by the Open Web Application Security Project (OWASP) and the Application Security Working group (ASWG).
- Development staff are trained in current secure coding practices.
- Wood Mackenzie member companies follow a SDLC process that undergoes reviews by Wood Mackenzie Risk and Compliance division.
- Production code is reviewed using security checkpoints throughout the software development life cycle to enable consistent application of security.
- Changes follow a formal change control procedure to enable the security and integrity of the information and information system.
- Static code scanning and/or dynamic code scanning is performed for systems, and systems must be void of any known vulnerabilities rated as high or critical prior to release to production.

Configuration Management

Wood Mackenzie's configuration management policy and related procedures are designed to ensure that consistent and secure configuration baselines are established and maintained across the Wood Mackenzie Ltd. enterprise to encompass relevant components such as endpoints (laptops, desktops, browsers, and mobile devices), operating systems, application services, virtualization, and cloud services. Specific controls include but are not limited to:

- Maintaining baseline configurations as current, using automated mechanisms to reflect approved changes.
- Following a formal change control process that includes oversight from a change advisory board.
- Automating change control process, and other mechanisms, such as file integrity monitoring, to detect and prevent unauthorized changes.
- Enforcing access restrictions, logging, and log review of changes to confirm changes are properly approved.
- Deploying automated mechanisms to verify correct operation of security functions upon system startup and restart and to provide notification and alerts of failed security tests.
- Scanning cloud-based environments weekly to identify any configuration changes not consistent with baseline configuration standards and security rules.

Endpoint Security

Wood Mackenzie has enacted policies and procedures to manage endpoints, prevent vulnerabilities whenever feasible, and otherwise identify and promptly remediate the occurrence of vulnerabilities. These include but are not limited to:

- Wood Mackenzie patch management program is based on best practices, including maintaining a current
 inventory of IT components, risk rating these components for patch relevancy, monitoring vendor patches,
 establishing a patch deployment schedule based on applicability and risk rating, and following a controlled
 change management process for patch deployment, testing, and release to production.
- Endpoint detection and response software is installed on endpoints to prevent malware and provide forensic capability to assist with incident response.
- Antivirus/antimalware software is installed on Wood Mackenzie endpoints, and employees are prohibited from disabling such software.
- Endpoint data loss prevention software is installed on endpoints that restricts use of removable media.



Awareness and Training

Wood Mackenzie provides the members of its workforce, including personnel and partners, cybersecurity awareness education and training to enable them to perform their information security-related duties and responsibilities consistent with Wood Mackenzie policies, procedures, and agreements.

- Employees must acknowledge and adhere to key Wood Mackenzie information security policies upon hiring and on an annual basis thereafter.
- Employees also receive information security training tailored to specific job functions upon hiring and thereafter on an annual basis.
- Employees with elevated system privileges and those with information security responsibilities receive a more intense level of training relative to their specific functions.
- Wood Mackenzie conducts unannounced enterprise phishing assessments targeting our workforce, with additional training enrollments for individuals that fail the assessment.

Monitoring and Detection

Continuous Monitoring

Wood Mackenzie establishes logging and monitoring capabilities to enable the ongoing review and reconstruction of user activities and timely detection of potential vulnerabilities, malicious activity, security violations, performance, and processing exceptions.

- User-related audit logs are maintained for a wide range of system activities and regularly reviewed for
 indications of anomalous activities. Activities that are logged and monitored include but are not limited to
 successful and unsuccessful login attempts; actions performed by privileged users; changes, additions, or
 deletions to any account with root or administrative privileges; and the creation, deletion, and modification
 of system-level objects. Logs maintained by Wood Mackenzie are attributable to a unique user, and time
 synchronization technology is leveraged to assist with the maintenance of an accurate audit trail.
- System components and applications are configured such that audit logs, network telemetry data (e.g., packet metadata), and security events from across the enterprise are captured in a centralized Security Incident and Event Monitoring (SIEM) system.
- Wood Mackenzie performs frequent scans to monitor for potential vulnerabilities to applications, networks, operating systems, and cloud services. Those potential vulnerabilities are assigned severity ratings that determine the required remediation timeframe.
- Database activity monitoring is employed for critical database systems with regular review for suspicious or anomalous activity.
- Data loss prevention (DLP) software is deployed to monitor potential data exfiltration and generate triggers for incident management purposes and provide logging for forensic purposes.
- Wood Mackenzie User and Entity Behavioral Analytics (UEBA) incorporates machine learning to enhance
 user and peer group behavioral analysis. Machine learning enables risk scoring to be applied to potential
 anomalies that reflect the likelihood of a threat related to the anomalous behavior. Wood Mackenzie UEBA
 automatically triggers and prioritizes incident response events.
- Wood Mackenzie Security Operations Center (SOC) operates on a 24/7/365 basis to monitor, identify,
 respond to, and remediate any incidents that threaten the confidentiality, integrity, and availability of Wood
 Mackenzie's information systems. The SOC leverages data from Wood Mackenzie security components
 such as firewalls, intrusion protection systems, and authentication platforms, as well as other sources.



Response and Recovery Planning

Incident Response Program (IRP)

Wood Mackenzie has established an IRP that includes policies and procedures that encompass the life cycle of incident management. Wood Mackenzie has defined roles and responsibilities in detail for each stage of the IRP, as outlined below. Personnel must successfully complete training before being assigned IRP responsibilities and at least annually thereafter.

Wood Mackenzie's ER&C organization oversees IRP planning, deployment, and execution for the entire IRP life cycle.

IRP phase	Key activities		
Preparation	Incident response procedures are defined in detailed for potential scenarios. Communications and coordination procedures are defined in detail. Plans are communicated and periodically tested.		
Identification	Incidents are assessed and classified according to Incident Classification criteria defined in the Wood Mackenzie incident response policy. The appropriate teams are activated and investigate the incident including collecting evidence and performing root-cause analysis.		
Containment	Approaches are defined and deployed to limit the impact of the incident. This includes limiting the incident to affected hosts and affected assets and providing notification in accordance with applicable laws and contractual obligations.		
Eradication	The root cause of the incident is identified. As appropriate, affected systems are removed from production environment, any malware is securely removed, systems are hardened and patched, and updates are applied.		
Recovery	Affected systems and devices are restored and returned to the business environment in a manner that ensures no threat remains.		
Lessons Learned	Analysis is performed to ultimately learn from incident and potentially improve future response efforts and incident documentation is completed.		



Business Continuity Program (BCP)

Wood Mackenzie has established a BCP consisting of policy and supporting procedures to protect the safety of Wood Mackenzie personnel, guests, and business partners, and to enable the timely recovery of services and information systems to conform to business management, regulatory, and customer requirements. BCP components include:

- · Crisis management plans
- Emergency response plans
- · Risk and vulnerability assessments
- Business impact analysis
- · Business continuity planning
- · Pandemic plans

Data Backup

All Wood Mackenzie businesses and functional areas create and manage a data backup plan to fulfill BCP and disaster recovery requirements in accordance with the Wood Mackenzie Business Continuity Management Policy and applicable laws and regulations.