

CYBER VALUE-AT-RISK (CYBER VaR)



Marsh Risk Consulting (MRC) Cyber VaR analysis quantifies an organization's enterprise cybersecurity risk and identifies the potential financial loss, in dollars, that would result from a severe cyber-attack on enterprise IT networks. Our Cyber VaR analysis can help you:

- Quantify cybersecurity risk with a mathematically sound, traceable, and repeatable application of the value-at-risk (VaR) methodology developed within the investment community.
- Develop a risk management strategy that aligns and rationalizes investment in risk mitigation, risk transfer, and risk retention with risk appetite.
- Enhance your ability to integrate cybersecurity risk into your enterprise risk management program.
- Produce cybersecurity metrics suited to the needs of C-level executives and the board of directors.
- Provide defensible justification for cybersecurity investments.
- Gain insight into how risk is distributed among your organization's core business systems to inform risk transfer strategies.

CYBER VaR DETAILS AND CONSIDERATIONS

MRC's Cyber VaR analysis is designed around two use cases:

ENTERPRISE LEVEL ANALYSIS

- Develops an understanding of the financial impact of a severe cybersecurity incident at the enterprise level. Focuses on the organization's key critical IT systems, applications, and databases that directly impact revenue or business requirements.
- Models the enterprise based on the critical IT assets and their exposures, the cybersecurity controls environment, and the cyber threat.
- Produces analytical results that include the dollar value of a "1-in-20 event" over the next year.
- Identifies the top mitigation measures to reduce the Cyber VaR.

Who it's for

- Organizations that want to understand their cybersecurity risk and the impact a breach or failure could have on operations.

What you get

- A repeatable and traceable calculation of cybersecurity risk in financial terms.
- Identification of exposures associated with critical business applications, databases, and IT systems.
- Documentation of the current cybersecurity defensive posture and controls environment aligned to a specific framework.
- A modeled cybersecurity loss distribution for the enterprise.
- Increased metrics-based precision for cyber risk management and risk transfer decision making.

- Provides for the robust expression of cyber risk appetite and the development of a cohesive risk management strategy that encompasses risk mitigation, risk transfer, and risk retention.

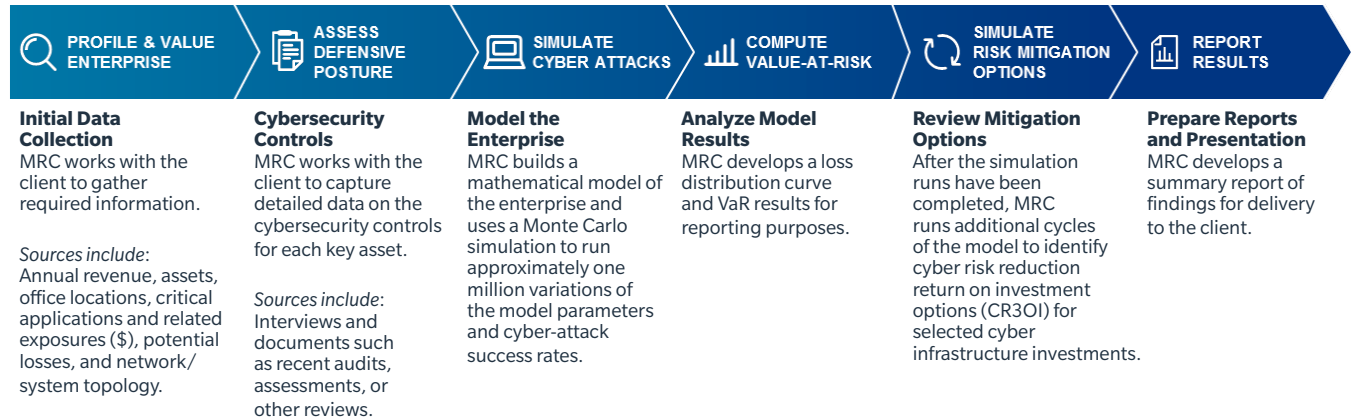
ANALYSIS OF ALTERNATIVES

- Rigorous analysis that allows the risk reduction potential of cybersecurity controls to be compared. Provides a meaningful

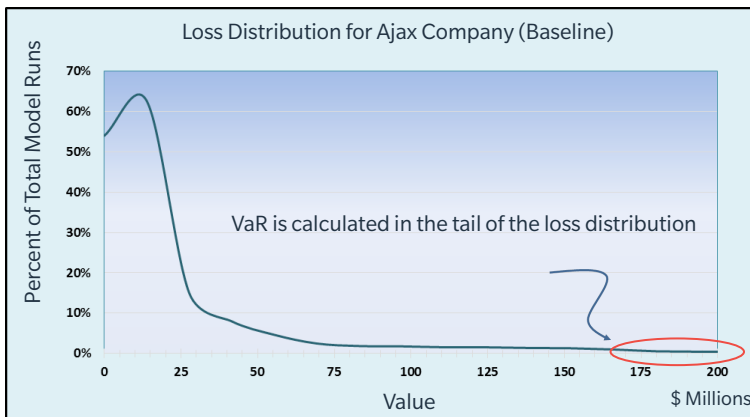
cyber risk reduction return on investment (CR3OI) metric.

- Informs decision making on cybersecurity investments with traceable and defensible results.
- Supports the sequencing and prioritization of control deployments in a multi-year roadmap.

OVERALL APPROACH



SAMPLE ANALYTICAL REPORTS



Top Ten Mitigations (Related to the Baseline SEVERE Value-at-Risk)

Recommended Action	Critical Business Application	Risk Reduction Potential
Improve Maintenance	Ajax Manufacturing System	\$3,958,812 (↓10%)
Improve Information Protection Processes & Procedures	Ajax Manufacturing System	\$3,687,796 (↓9%)
Improve Information Protective Technology	Ajax Manufacturing System	\$3,514,645 (↓9%)
Improve Maintenance	Ajax Services and Sales System	\$2,384,390 (↓6%)
Improve Protective Technology	Ajax Services and Sales System	\$2,094,386 (↓5%)
Improve Information Protection Processes & Procedures	Ajax Services and Sales System	\$1,815,836 (↓4%)
Improve Maintenance	Ajax HR System	\$1,548,690 (↓4%)
Improve Risk Management Strategy	Ajax Services and Sales System	\$1,473,375 (↓4%)
Improve Protective Technology	Ajax HR System	\$1,367,623 (↓3%)
Improve Maintenance	Ajax Financial System	\$1,322,799 (↓3%)

Additional information can be found on www.marshriskconsulting.com and on www.marsh.com, or:

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