

Marsh Analytics Platform: **MAP**

Empowering Confident
Decision-Making in an
Uncertain World



A MODERN APPROACH TO RISK MANAGEMENT

Cyber security, climate change, geopolitical strife, economic uncertainty – these are just some of the dynamics driving volatility in the modern risk environment. Businesses are increasingly impacted by rapidly emerging, complex risks with the potential to materially change expected results.

Generating growth in the face of this constantly evolving risk landscape is a priority mandate for C-suite executives. As catastrophic risk increases and new risks emerge, business leaders need more than historical views for risk planning.

Uncertainty around what the world will look like two years from now, or even tomorrow, can create challenges in understanding risk. Having a better understanding of risk and volatility is increasingly a requirement for optimal risk management.

Confidence in Strategic Planning

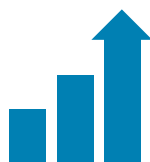
By providing a new, forward look at risk, Marsh enables clients to quantify and manage risk through an innovative combination of data, analytics, and technology. The insights from the Marsh Analytics Platform (MAP) empower companies to take a holistic view of risk to confidently move forward with strategic plans in today's modern risk environment.

CLIENTS *are able to*
USE THE MAP ANALYTICAL FRAMEWORK
TO LEVERAGE *a holistic look at RISK*
QUANTIFICATION, *coupled with FINANCIAL*
MODELLING, *to gain greater KNOWLEDGE and*
CONTROL *of their insurance purchasing process and*
RISK TRANSFER OPTIONS.

MAP is delivered through a ground-breaking mobile platform that allows clients to have a real-time, customised, dynamic conversation about risk financing options. MAP leverages a multi-step process to give clients:



AND



LEADING TO:



A Forward Look – Now, risk planning can leverage Marsh’s deep pool of claims, exposure, and placement data across industries, companies of differing size, geographies, and products to deliver a clear, informed view of future loss potential and volatility.

A Customised Financial View – MAP combines loss modelling with an analysis of key income statement and balance sheet drivers to enable clients to assess risk tolerance with respect to their unique capital position.

Optimal Decisions – MAP delivers a transparent view into a company’s economic cost of risk (ECOR), helping clients determine optimal risk financing structures and risk mitigation investments.



BIG DATA: THE MARSH GLOBAL LOSS DATA LIBRARY

The Marsh Global Loss Data Library represents more than US\$300 billion in aggregate claims. It contains losses in dozens of countries around the world, and more than 20 industries, to deliver a more complete picture of current and emerging trends in risk.

SOPHISTICATED ANALYTICS: ECOR EXPLAINED

The traditional measure of risk exposure, total cost of risk (TCOR), does not typically account for fluctuations in loss from year to year. In the modern risk environment, senior leaders need to understand and account for this volatility. ECOR measures volatility through an implied risk charge (IRC), which is added to the traditional TCOR equation. IRC calculates the cost of volatility unique to each company through a combination of risk volatility and cost of capital. The ECOR analytical framework integrates risk management decision-making and financial planning.

INNOVATIVE TECHNOLOGY: iMAP

Through the industry's only real-time, mobile content-delivery platform for risk analytics, Marsh helps clients navigate massive amounts of data related to exposure, claims, and placement information all in a dynamic, customised, and easy-to-understand experience.

MAP Delivers Clear Results

Since 2013, many clients have been able to use the MAP analytical framework to leverage a holistic look at risk quantification coupled with financial modelling, quantifying potential losses and the cost/benefit of insurance structures in connection with key performance indicators, including impacts to earnings per share.



Marsh has used iMAP – the mobile version of the platform – to assist thousands of clients in evaluating risk financing through a dynamic, real-time, and customised experience. This solution applies to companies ranging from large, multinational

organisations to smaller, regional businesses. The full scope of industries served includes: aviation, chemicals, construction, energy, financial services, healthcare, manufacturing, professional services, real estate, retail, and transportation, among others.

The MAP Approach: Integrating Data, Analytics, and Technology

At each stage of a client's interaction with MAP, Marsh has designed an engagement experience that focuses on:

1	Leveraging data to build a more complete view of risk.
2	Using detailed analysis to create a tailored approach.
3	Delivering insights for complex decision-making through an easy-to-use technology platform.

WITH MORE THAN

US\$300 BN

IN AGGREGATE CLAIMS,
THE MARSH GLOBAL LOSS
DATA LIBRARY *contains losses in*
DOZENS OF COUNTRIES
and **MORE THAN 20 INDUSTRIES.**



The MAP Value Chain

IDENTIFYING A RISK UNIVERSE

Building the optimal risk financing programme is not possible without a complete understanding of a company's risk universe.

Using an industry-leading library of risk maps and loss models, MAP identifies the broad scope of corporate risks, including industry-specific, general enterprise, and emerging risk issues. These risks are then mapped to show frequency, severity, and corporate exposure for both insurable and non-insurable risks. The dynamic risk map (DRM) can be adjusted in real-time to demonstrate how insurance can be applied to mitigate these issues. Leveraging both a company's specific loss history and Marsh's global aggregated data enables the creation of custom loss distributions for specific risk issues in real-time.

MAP IN ACTION

Using dynamic risk maps, companies can use MAP's technology to present easy-to-read assessments of their complete risk profiles to boards of directors and senior leadership teams as part of annual corporate strategy planning.





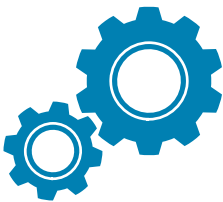
ESTABLISHING A UNIQUE RISK TOLERANCE ASSESSMENT

Each company's unique financial profile directly impacts how it views transferring risk through insurance. Put simply, more financially stable, profitable organisations can bear a higher amount of risk.

MAP views risk tolerance in terms of how much risk a company can likely absorb without impacting key performance indicators. Establishing both a company's risk tolerance and associated appetite for risk requires a clear understanding of its loss history, insight into emerging risk trends and, most importantly, a grounding in company-specific financial data. Through MAP's real-time platform, companies can explore how key factors such as the cost of capital impacts key business strategy elements such as expected pricing. Putting a company's own financial profile and outlook against its potential risk exposure creates a clear, tailored view to the enterprise's overall risk tolerance.

MAP IN ACTION

This assessment can easily be acquired through the MAP platform and can be accessed by key strategic, financial, and risk officers in assessing an organisation's overall appetite for risk and understanding how insurance plays a critical role in managing the risk an organisation bears as part of its overall capital allocation planning.



LEVERAGING RISK FINANCING OPTIMISATION (RFO)

With an established risk profile and tolerance level, MAP then distills this information into a company's specific economic cost of risk through Marsh's unique approach to risk financing optimisation (RFO).

RFO allows companies to structure insurance programmes and risk transfer mechanisms designed to address identified risk issues in the most economically efficient manner, while also meeting the risk-tolerance goals of the organisation as a whole.

With no built-in assumptions of insurance need, MAP offers a more holistic view of risk financing options relevant to a company's unique financial position. Through RFO, companies can dynamically consider dozens of possible financing structures against insight into how the market is pricing relevant insurance placements. Through RFO, MAP can calculate estimated market calculations of expected loss, expected margin, and, ultimately, return on investment (ROI).

MAP IN ACTION

With a clear understanding of key risk issues and the tolerance level of the organisation, business leaders and risk managers can use RFO to design a plan that efficiently deploys capital toward managing risk. Empowered by a clear understanding of the company's optimal use of capital toward offsetting risk, companies can easily assess and address change in times of corporate or economic volatility.

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92%

ACME



to develop cyber risk insurance
work exposures.

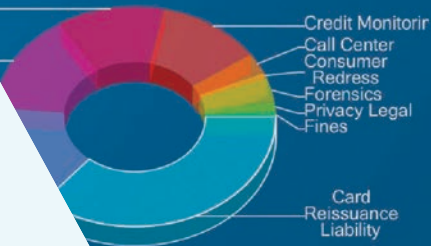
Record Type >

PCI

PHI

PII

Cost by Type



Selected Cost by Return Period

(\$'s M)



(\$'s in millions)

	Call Center	Credit Monitoring	Fines	Forensics	ID Theft Repair	Privacy Legal	Privacy Notification
	\$0.004	\$0.002	\$0.008	\$0.000	\$0.115	\$0.003	\$0.073
	\$0.071	\$0.023	\$0.087	\$0.000	\$0.157	\$0.057	\$0.086
	\$0.656	\$0.149	\$0.581	\$0.000	\$0.318	\$0.591	\$0.131
	\$1.611	\$0.332	\$1.213	\$0.318	\$1.116	\$1.676	\$0.201
	\$19.278	\$4.245	\$16.669	\$0.917	\$1.709	\$18.586	\$0.247
	\$113.405	\$21.367	\$76.354	\$1.417	\$2.067	\$115.844	\$0.276
	\$0.055	\$0.887	\$0.185	\$0.718	\$0.042	\$0.213	\$0.908
	\$0.881	\$40.800	\$8.861	\$38.893	\$1.124	\$1.883	\$44.651

Risk Tolerance

Risk Financing

IDEAL Model

Geospatial

Casualty

Cyber Model

Benchmarking

More

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Marsh – A Differentiated Approach to Analytics

Marsh has created a global infrastructure to deliver the MAP solution to companies all around the world. Part of this has involved strategically integrating the power of analytics in our business by training our professionals on the MAP solution across Marsh's global footprint and product lines. The global MAP infrastructure includes hundreds of regional sales and technical professionals around the world. This infrastructure, and our MAP analytical approach, deliver a more quantified, objective, and informed view of risk and risk management for the C-suite.

Marsh believes that the combined power of data, analytics, and technology presents significant financial and strategic opportunities for companies operating in today's dynamic and often uncertain economic environment. We work with clients to capitalise on these opportunities across their business lines, tapping into the full power of Marsh, including a wide range of proprietary tools and expert insights. Using data, analytics, and technology, we help our clients to solve problems that currently or could potentially impact their operations, finances, people, and growth initiatives, so they can move forward confidently with their strategic business decisions.

To learn more about how the Marsh Risk Finance Practice can help,
please contact your local Marsh representative or:

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