

Location Risk Intelligence.

Master the physical risks
caused by natural hazards
and climate change



US\$

270bn

natural disaster
losses across the
world in 2022

Source: Munich Re

6 out of 10 top business risks stem from natural disasters and climate change. That's a fact

Business leaders from around the world have ranked the risks with the highest impact on their company success in the coming 10 years. The first four of these top ten risks listed by the World Economic Forum in its Global Risk Report 2023 for the coming decade are directly related to natural disasters and climate change. And in 6th and 10th place, two more environmental risks rank also in the top 10.

This is a powerful reminder that managing climate risk will have an overwhelming impact on the business success of any company, including yours, far ahead of economic, geopolitical, societal and technological risk issues. It is time for you to rise to the challenge.

1. Failure to mitigate climate change
2. Failure of climate-change adaptation
3. Natural disasters and extreme weather events
4. Biodiversity loss and ecosystem collapse
5. Large-scale involuntary migration
6. Natural resource crises
7. Erosion of social cohesion and societal polarization
8. Widespread cybercrime and cyber insecurity
9. Geoeconomic confrontation
10. Large-scale environmental damage incidents

Source: Economic World Forum

It's a further fact that the effects of climate change will have a much greater impact on the future of your business. **Are you ready?**



What is your climate risk strategy?

Real estate and other assets that you manage as an insurer, bank, investor or company owner, whether in the form of individual assets or large portfolios, are **increasingly exposed to risks from natural hazards and climate change**. After all, your decisions and strategies determine how successful you will be in your business in the future.



Climate risks yes! But how high?

You are in good company if you also have no idea how high your climate risk is because you simply do not know **how to reliably understand and measure your risk exposure** in order to develop strategies based on valid data to effectively protect your assets.



How resilient is your value chain?

In an increasingly globalised economy, it is becoming more and more difficult for you and your company to keep track of the geographical distribution of **your value chain** in order to **assess the spread of risks** and to be able to take **early countermeasures if necessary**.



Increased pressure in reporting?

Repeated new regulatory requirements and internal guidelines are constantly **increasing the pressure on you to report comprehensively and transparently** on associated risks.



Running out of answers?

In addition, you face questions from a **wide range of stakeholders** about **climate-related risks and their impact on your business** that are increasingly difficult to answer.



Always at the cutting edge of science?

Finally, you are probably wondering how you can ensure that **your view of climate risk is in line with the latest scientific evidence**. After all, it's about management's confidence in your expertise.

Master your risks with the easy-to-use analysis tool for advanced decision-making

Munich Re's Location Risk Intelligence Platform is a modular SaaS platform that enables you to understand, measure and manage risks from natural hazards and climate change - worldwide.

In particular, the platform supports you in incorporating climate-relevant effects into your decision-making, thus meeting the increasing demand for more transparency about your company's exposure along the entire value chain.

By entering individual locations or uploading entire portfolios into Location Risk Intelligence Platform, you can easily analyse, visualise, compare and document climate risks in the form of meaningful reports. The modular platform allows you not only to identify your current and future climate risks, but also to consider the financial implications of climate change.

- **1 Understand**

Understanding the risks of your business is key. From granular assessment of each street-level address to identifying key climate risk concentrations in huge portfolios.
- 2 Measure**

Evaluate the financial impact of climate change to your assets and investments. Generate forecasts and use the Climate Impact Model to drive your investment decisions and adapt your key performance indicators accordingly.
- 3 Manage**

Transform your organisation into a resilient one that is best prepared for unexpected events by enriching your decision-making through reliable risk data. Select the right risk management solutions to manage and transfer the precisely forecast climate risks.

These are the **use cases best supported** by climate risk data

✓ Underwriting

In a changing climate it is critical to ensure that your offering remains compatible with the physical climate risk exposure expected over the lifetime of the product or service you provide, rather than having to change the offering every time unprecedented events occur.

✓ Strategic underwriting

As physical climate risk is expected to have a significant impact on our communities, it is vital that companies understand how to adapt their offering to continue to serve their customers in the most effective way.

✓ Investment

It is critical for any investment decision to consider the exposure to physical climate risk during the acquisition stage, as it affects both expected future income and asset appreciation.

✓ Risk modelling

As a rapidly emerging risk with long-term implications, climate change needs to be reflected in the risk models used for pricing or assessing capital requirements, in order to adequately capture the key risks to which a company is exposed.

✓ Balance sheet management

Physical climate risks can materialise and affect a company's assets, liabilities and future earnings. It is therefore critical for the management of companies to demonstrate to their shareholders or lenders that such risks are being adequately managed.

✓ Third-party risk management

Keeping critical supply chain and business operations running is vital to ensuring business continuity. Understanding your suppliers' exposure to climate risk allows you to be prepared for immediate risk mitigation activities.

✓ Risk management

As a new type of risk with the potential to lead to systemic issues, companies must demonstrate that they fully understand the impact of climate change on their activities through integration into their existing risk management frameworks, and that they take it into account in all key decision-making processes.

✓ Reporting

As physical climate risk impacts the way we do business, there is increasing pressure on management to disclose its exposure to such risk, as evidenced by increased reporting frameworks and complexity, while regulators have moved from voluntary to mandatory adherence to such frameworks. These requirements can't be met without adding climate risk data from trusted sources.

✓ Regulatory response

Complying with emerging physical climate change regulations across multiple jurisdictions presents a significant challenge for companies. Global and trusted climate risk data helps you to meet these often complex regulations, and they are easy to integrate into your operations.



Gain a competitive edge by factoring climate risk into your business decisions ...

... with **Location Risk Intelligence Platform**, the solution for assessing and managing physical risks from natural hazards and climate change. It will literally enable you for the first time to calculate the risks to your assets and their financial impact.



- ✓ **Increase profitability** and improve top and bottom-line results
- ✓ **Stay competitive** by incorporating risk in advance and adapting your offerings accordingly
- ✓ **Avoid losses** and safeguard your business
- ✓ **Avoid bad assets** in your portfolio all around the globe
- ✓ **Meet your stakeholder requirements** by responding with confidence based on sound climate risk insights and analytics
- ✓ **Be well prepared** for reporting. Right out-of-the-box and with customisable reporting capabilities
- ✓ **Reduce time and effort.** Location Risk Intelligence combines data visualisation, evaluation and reporting in a single tool
- ✓ **Stop the guesswork.** Base your decisions on reliable data and benefit from a globally leading climate data provider
- ✓ **Improve decision-making** and become an expert - based on reliable and trustworthy data, using the latest scientific standards



Munich Re has been our trusted partner in measuring the impact of climate change across our real estate portfolios. Their Location Risk Intelligence Platform provides us with assessments on not only our entire portfolio, but also on individual assets. These insights provide us with in-depth knowledge of our future potential risk exposure from extreme weather events.



Jeff Bray | SVP, Head of Global Risk Management, Prologis

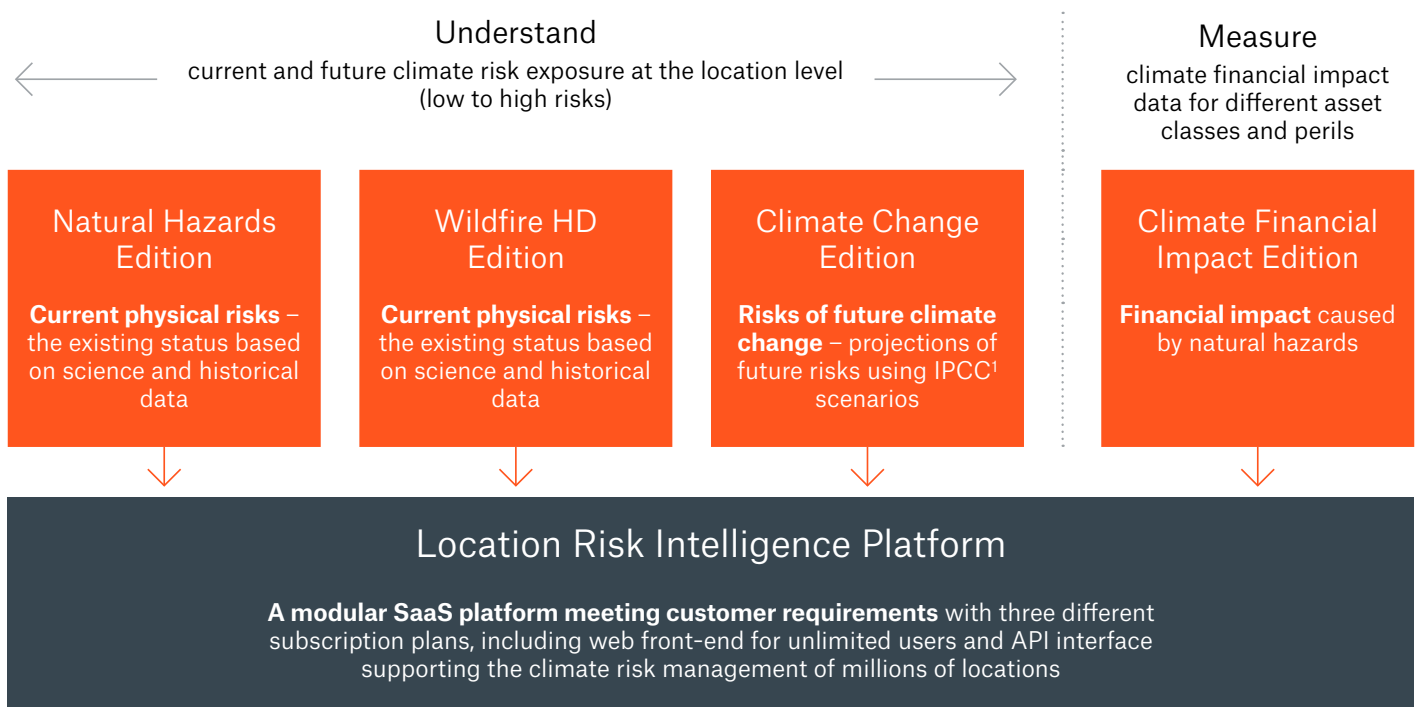
↓ **Download Prologis case study** | munichre.com/rmp/downloads

Our comprehensive solution enables you to manage all your climate risks in a highly professional way – and in just one place

Location Risk Intelligence Platform is also as easy to implement as it is to use. This minimises your effort, both in implementation and in day-to-day risk assessment and portfolio management.

Our platform also supports the continuous integration of functional and data requirements, making it a future-proof investment that keeps you ahead of the curve when it comes to climate risks.

The modular SaaS solution for managing physical climate and natural disaster risks



¹IPCC: Intergovernmental Panel on Climate Change



With the help of
**Munich Re's climate
risk data** we are
well-prepared for
heightened reporting
requirements, such as
Pillar 3 disclosure.



DKB

Deutsche Kreditbank AG

Rainer Rettinger, Risk Management Specialist,
Deutsche Kreditbank AG (DKB)



From four risk editions, choose the one that suits you best

Location Risk Intelligence provides risk data in four different editions to ensure that you can choose your dedicated solution for identifying and measuring risks.

Natural Hazards Edition to generate assessments on the basis of data from past events, Wildfire HD Edition with higher resolution for superior wildfire risk assessments, Climate Change Edition for future-related assessments on the basis of climate change models, and Climate Financial Impact Edition for assessing the financial impact of climate-related events.

Natural Hazards Edition

This is the ideal solution for companies which want to reliably evaluate the current exposure of their portfolios or individual locations to a comprehensive collection of natural hazards. In addition to the comprehensive overall risk score, which is based on the three individually accessible detailed scores for earthquake, storm, and flood, users receive dedicated ratings for a total of 12 natural hazards.

Wildfire HD Edition

Wildfire HD Edition allows you to analyse and assess the increasing wildfire risk in the USA, Canada and Australia due to climate change. Compared to the wildfire information included in the Natural Hazards Edition, the Wildfire HD Edition maps offer significantly higher resolution. This allows you to see the risks more clearly, especially for the Wildland Urban Interface (WUI), the key zone for high-risk locations. You can order the Wildfire HD Edition separately or in combination with the other editions.

Climate Change Edition*

This edition will help you not only to understand your exposure to current physical risks, but more importantly to analyse and assess the physical risks associated with climate change in different future scenarios. Considering both acute and chronic climate risks, this edition provides information on seven climate hazard scores. And unlike the Natural Hazards Edition, the risk scores are not only calculated based on past events, but also include projected changes in the intensity and frequency of future events under different climate scenarios.

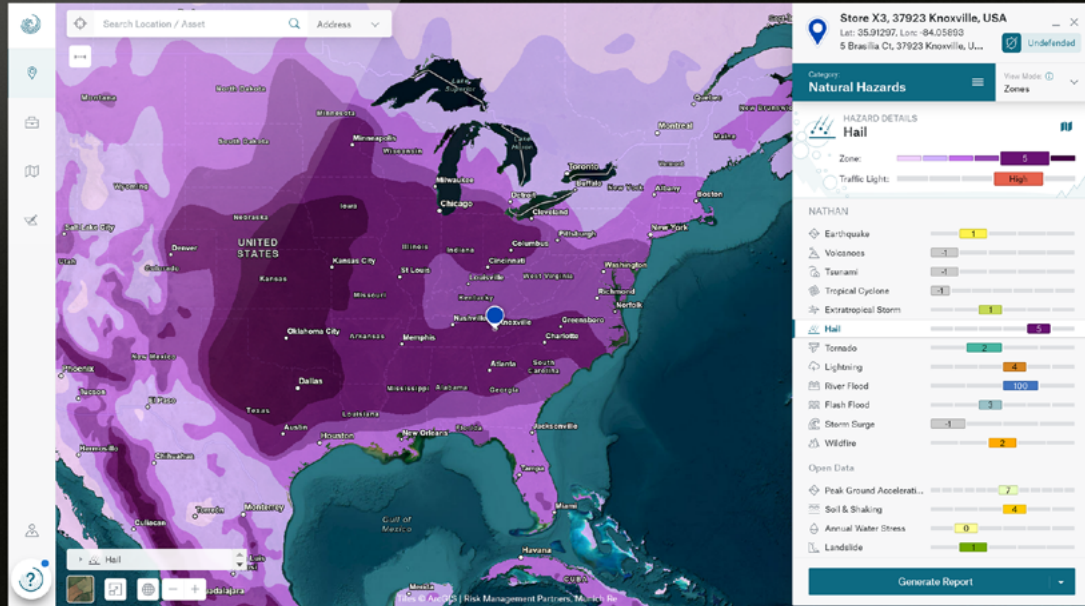
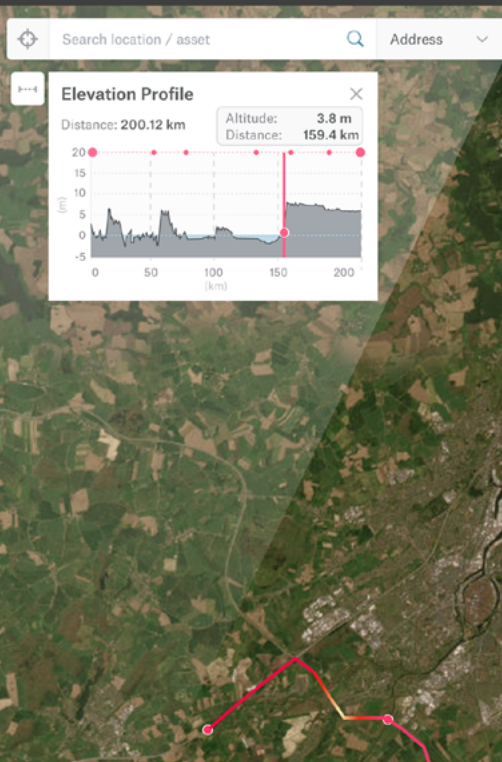
Climate Financial Impact Edition

Climate Financial Impact Edition is the latest development of the product and allows you to quantify the financial impact of climate change for selected perils and define the "Climate Expected Loss".

Want to know more? Find more information about the editions in the respective brochures

↓ munichre.com/rmp/downloads

*Also available as an On-Demand option



Not only modular, but also flexible and scalable

Location Risk Intelligence Platform is available in three subscription plans with varying levels of functionality that you can access flexibly through either a web application or an API.

Business

The Business subscription plan is your entry point into the modular, scalable Location Risk Intelligence solution landscape.

With this subscription plan, all you need is a browser to start identifying and comprehensively assessing the physical risk of individual locations and entire portfolios.¹ By augmenting individual location and portfolio assessments with powerful mapping, geocoding, analytics (e.g. complex filtering), and reporting services, the Business subscription plan enables you to comprehensively manage physical risks.

Corporate

In addition to all the standard features of the Business subscription, the Corporate subscription includes features such as Portfolio Management, Portfolio Aggregation and Comparison, Areas & Lines and gives you access to Customer Success.

The portfolio management functionality allows you to manage your portfolios with a complete set of tools including portfolio filtering, visualisation and sharing. Portfolio aggregation and comparison provides you with another valuable tool for uncovering the risk exposure of your assets in detail by aggregating portfolios and comparing them to each other or to a subset.

The area and line function allows you to assess physical hazards for geographic shapes that go beyond point representation on a map. So if you are interested in large areas (e.g. airports and manufacturing plants) or complex infrastructure (e.g. railways and highways), you can simply outline these shapes on a map and instantly generate a score for the enclosed area. And, as mentioned above, you get access to our Customer Success support team.

Enterprise

The Enterprise subscription plan includes the full functionality of the platform, so all the features of the Business and Corporate plans, plus access to the REST API and Single Sign-On (SSO) functionality. Both with initial implementation support.

By combining Location Risk Intelligence Platform with access to the REST API, the Enterprise subscription is the right choice if you want to benefit from the powerful, interactive risk assessment capabilities of the platform, but also want to seamlessly integrate these insights into your own processes and application environments.

And with Single Sign-On, you get a powerful tool to increase both cyber security and operational efficiency.

¹ The scope of the available hazards and metrics that you can use for your assessments depends on your Location Risk Intelligence edition choice.

Subscription plans and platform functionalities. Choose the plan that suits you best

Subscription plans	Business	Corporate	Enterprise
Platform features and services			
– Single asset assessment	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
– Portfolio assessment	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
– Export manager	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
– Maps	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
– Elevation profile	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
– Support hotline	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
– Access to Customer Success	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
– Portfolio management	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
– Portfolio aggregation and comparison	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
– Areas & Lines	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
– REST API	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
– Single Sign-On	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

☒ Included in this subscription plan ☐ Not available in this subscription plan

High-value platform functionalities



Single asset assessment

Using asset assessment you can search for individual locations and quickly identify how exposed they are to current as well as future hazards, and what their exposure implies in terms of risk. Finding locations is easy, either by entering coordinates, an address or just selecting a location on the map. As a search result you receive two types of scores: firstly, a risk score in which individual risk assessments are grouped for the purpose of directly identifying red flags, and secondly, hazard zones with detailed asset score representation for the kind of in-depth analysis that enables risk-aware decision-making. This continuous risk monitoring process is supported by smart features with which you can save your scored locations as assets, and then fully manage them in the asset panel list or move individual assets to portfolios.



Portfolio assessment

If you are responsible for entire asset portfolios (such as real estate or production sites), you will need an extended risk view across your entire portfolios.

Assess climate risk for portfolios with multi-million sites in a single operation.

The traffic light visualisation enables you to easily review the risk distribution of your portfolio and to identify red flags. You can dive deeper by examining the exposure of your portfolio, or subsets of it, to each individual hazard. Reports from your portfolio assessments can be downloaded in the format of your choice.

Managing your portfolio assessments is convenient and time-saving: upload your portfolio by drag-and-drop using standard formats such as Excel or CSV, and then store it in your portfolio panel for future use. If your portfolio changes, you can add or delete assets, or rename your entire portfolio.



Portfolio management

Managing portfolios is a complex task. To help you manage these successfully, we provide you with a complete toolset including portfolio filtering, visualisation and sharing. While portfolio filtering helps you to understand the risk in a subset of your portfolio, portfolio visualisation allows you to view the locations of your portfolio on a digital world map. This is supported by a variety of settings, such as different background maps, opacity adjustments or colour changes, which you can use for the ideal visual representation of the insights you gain from the risk analysis.

You can also improve collaboration with selected colleagues or your entire organisation by sharing uploaded and scored portfolios with a simple click of your mouse.



Export manager

By exporting your climate risk data, you can meet the growing demand for greater transparency and share your data with all relevant stakeholders. To enable them to use your data in other applications, you can export the results of your analysis as a CSV or Excel file, or as a comprehensive report in PDF format.

In addition, the export manager allows you not only to customise your reports by making specific selections from all the data available, but also to save them as export templates for repeated use, ensuring their consistent application across your organisation.



Maps

Understanding risk is mission-critical and requires the best possible representation of the results. This is where our wide range of available maps comes in and makes the difference. They are an integral part of the Location Risk Intelligence Platform and allow you to visualise each hazard value in the best possible way.

For example, you can change your base map, completely rearrange maps, increase or decrease opacity, or select the desired map directly from the score panel in order to visualise your results clearly and without the risk of any misinterpretation.



Customer Success and support hotline

Ensure satisfied users and accurate results from day one with an intuitive user interface and user-specific in-app guidance.

When using the platform for the first time, or if you need assistance, the built-in wizard guides you through the platform's features and common use cases with interactive, step-by-step instructions which help you to get up and running quickly.

The connected support centre helps you find answers to the most frequently asked questions, as well as technical explanations and advice. This area also enables users to report bugs or other issues, as well as to find all the legal information about the platform.

The profile section not only contains all your account details and password settings, but also provides an up-to-date overview of your data usage.



Elevation profile

Understand your risk exposure in detail. By simply drawing a line between any two locations on the map you can analyse the elevation (height above sea level) in a graph for the entire distance. Risks, such as being affected by flooding, can thus be assessed with the highest degree of precision.

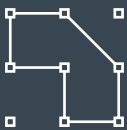


Portfolio aggregation and comparison

Uncover the risk exposure of your assets in detail by aggregating portfolios and comparing them with each other or with a subset. This adds an additional perspective to your portfolio management in a wider context.

By aggregating portfolios or expanding existing ones, you can keep a constant eye on the physical risks threatening your portfolio, even as new assets are added.

The portfolio comparison puts context into your portfolio management, as you can benchmark the risk exposure of a portfolio or its subset with another portfolio. This can also be done with aggregated portfolios.



Areas & Lines

Business data is not always ideally represented by an address or coordinate. For example, railway lines, roads, airports, industrial plants, renewable energy parks and ecological areas require specific risk scoring capabilities that extend asset characteristics from single points to user-drawn areas & lines and predefined geometries.

Area & line scoring capabilities show the percentage of an area exposed to a particular natural hazard and provide relevant risk insights for such areas.

To conduct risk assessments at a broader regional level, you can choose from a wide range of prescored areas, including aggregated assessments for countries, administrative zones, postcodes, NUTS zones, or CRESTA zones and more.



REST API

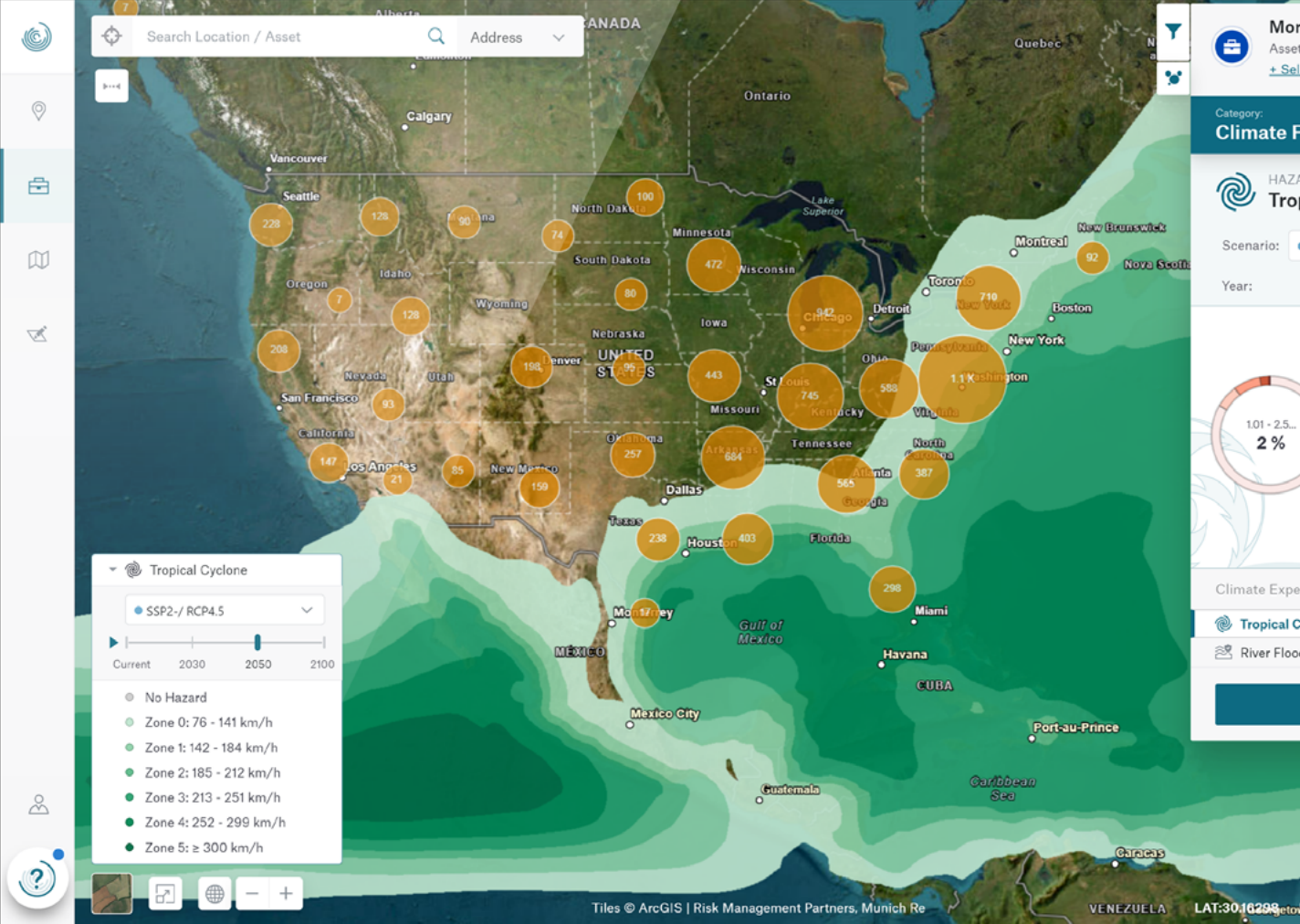
Leverage your natural-hazard and climate risk data across business systems. Location Risk Intelligence provides you with the option of retrieving all scores via a REST API. Using this stateless protocol, you can seamlessly integrate almost all of Location Risk Intelligence's assessment tools and datasets into your own application environment.



Single Sign-On

Single Sign-On is a simple way to increase both cyber security and the efficiency of your operations, in that to access different software applications with the highest possible level of security your employees only need to sign in once with one set of credentials, rather than multiple times.

Because your employees only need to remember one username and password, you also reduce the risk of data leaks due to weak or re-used passwords, as well as the work involved in managing user accounts. And, by the way, you also enhance user satisfaction through significantly increased user-friendliness.



Quick implementation – ready to go!

Get started within 2 days!

1. Choose your edition
2. Activation and Onboarding
3. Run initial tool-guided single asset or portfolio risk assessments

Get in contact



Want to know more or get your personal demo? Visit us online

Download the **respective brochures** of our editions as part of our Location Risk Intelligence Platform at: munichre.com/rmp/downloads

Get your **personal demo** of the edition you're interested in:

Get a demo

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