Uptime
Beyond hazards

Adding hazard intelligence to your business resilience strategy

Abstract

Our world is changing at an unprecedented pace.

Climate change is causing more frequent and more severe weather events. Shifting environmental conditions, economic forces and numerous other hazards are triggering complex cascading effects that impact business operations both directly and indirectly. As a result, buildings, facilities, products, distribution, supply chains, and people are more exposed to risk than ever before.

Recent global events have shown just how severe the impacts of these hazards can be – and highlighted the need for greater hazard visibility, so organisations can prepare for them proactively.

With years of engineering expertise at Royal HaskoningDHV, we know about the changing climate and weather factors you're facing. But, even more importantly, we know exactly how those factors can impact your industry, locations, physical assets, business processes and portfolios.

Software experts at Royal HaskoningDHV Digital are developing a digital platform that enables you to leverage almost 140 years of engineering knowledge and insights, and use them to help sense and respond more quickly to the hazards your assets and processes are exposed to. We're blending a sophisticated modern solution with decades of deep asset, engineering and hazards expertise to help secure your business continuity now, and in the future.

Today's three primary change dynamics

There are three primary change dynamics having a significant disruptive impact on business continuity today:

1 Global climate change

Global climate change is altering the patterns of when, where and with what magnitude meteorological events like storms, heat, cold or precipitation occur. Each of these events pose a clear risk to the business assets and operations exposed to them. However, severe weather conditions aren't the only business continuity challenge posed by climate change.

The pace of climate change itself has also become a major risk for many. With conditions shifting so quickly and severely, the historical hazard data and risk profiles that businesses have built up over many years are quickly being invalidated – leaving many organisations exposed to risk without even realising it.

2 Increasing socio-economic complexity

Today's global supply chains and business processes are tightly engineered for maximum speed, productivity and efficiency. When external conditions are as expected, that's good news for most businesses. But, it has also left both supply and value chains very vulnerable to disruption.

With such strong dependencies between each link in the chain, even a relatively small local environmental or weather hazard can lead to major disruption in your business continuity. The cause and effect relationships between hazards and assets have become so interwoven and complex that improving hazard visibility and proactively mitigating hazard-related risk have become virtually impossible for many.

3 Geopolitical tensions

Across the globe, significant geopolitical tensions appear to be here to stay. With worldwide resolutions seeming highly unlikely, organisations understand that flexibility is critical for production and supply networks to frequently change in response to continuous shifting conditions.

Altering and adapting those networks has an immediate impact on operations and continuity, but practically, that's just the tip of the iceberg. Frequent geopolitical shifts put a huge burden on operations, supply and value chain teams – forcing them to make more frequent, higher-value decisions without reliable information and visibility. Major choices like new suppliers and procurement partners are being made more often, increasing the chances of making a poor decision or investment.

The real impacts of environmental hazards

In 2018 and 2019, Europe experienced two consecutive long, dry summers. While temperatures remained above expected levels for a significant period of time, on the surface, it didn't look like a major climate emergency. However, the full cascading impacts quickly became clear.

High temperatures and long periods without rainfall led to low water levels in rivers – meaning ships could carry less cargo. As a result, petrol stations, consumer goods production, power plants, and food and beverage industries all over Europe began to experience severe supply shortages.

Conditions that initially appeared relatively unthreatening, quickly triggered cascading supply chain disruption that hit some of the largest and most notable organisations in the world. Few were prepared for such significant supply shortages.

In a separate event, when flooding hit Bosnia, a major international franchise retailer saw a significant drop in revenue – even though none of its store or distribution outlets were directly impacted. The floods caused major travel disruption, meaning products simply couldn't reach store shelves. Without visibility of this hazard, the retailer was unable to adapt quickly and suffered a significant financial loss.

Every day we see new examples of how environmental and climate hazards can impact business operations. Each is unique, but there's one thing they all have in common – they all could have been better mitigated if the impacted organisations had greater hazard visibility, and a stronger understanding of the cascading environmental effects their assets, operations and processes are directly and indirectly exposed to.

Recognise these challenges? We've got you covered

As a decision maker in procurement, business continuity, risk management, supply chain management, real estate, site or asset operations, or investment and insurance, it's up to you to manage your clients', suppliers' or employer's risk and hazard exposure.

Practically, that task has two parts.

1. Generating single-location insight

Firstly, you need to be equipped to adequately and appropriately respond to events as they happen, in any part of the world where they're likely to impact your business, processes, or investments.

To do that, you'll need immediate visibility of locations, suppliers, productivity and all impacted assets to help you make the right decisions quickly, based on real-time hazard insight. Through this, you can quickly identify the pinch points and friction areas where developing hazards are most likely to impact your supply, value and delivery chains.

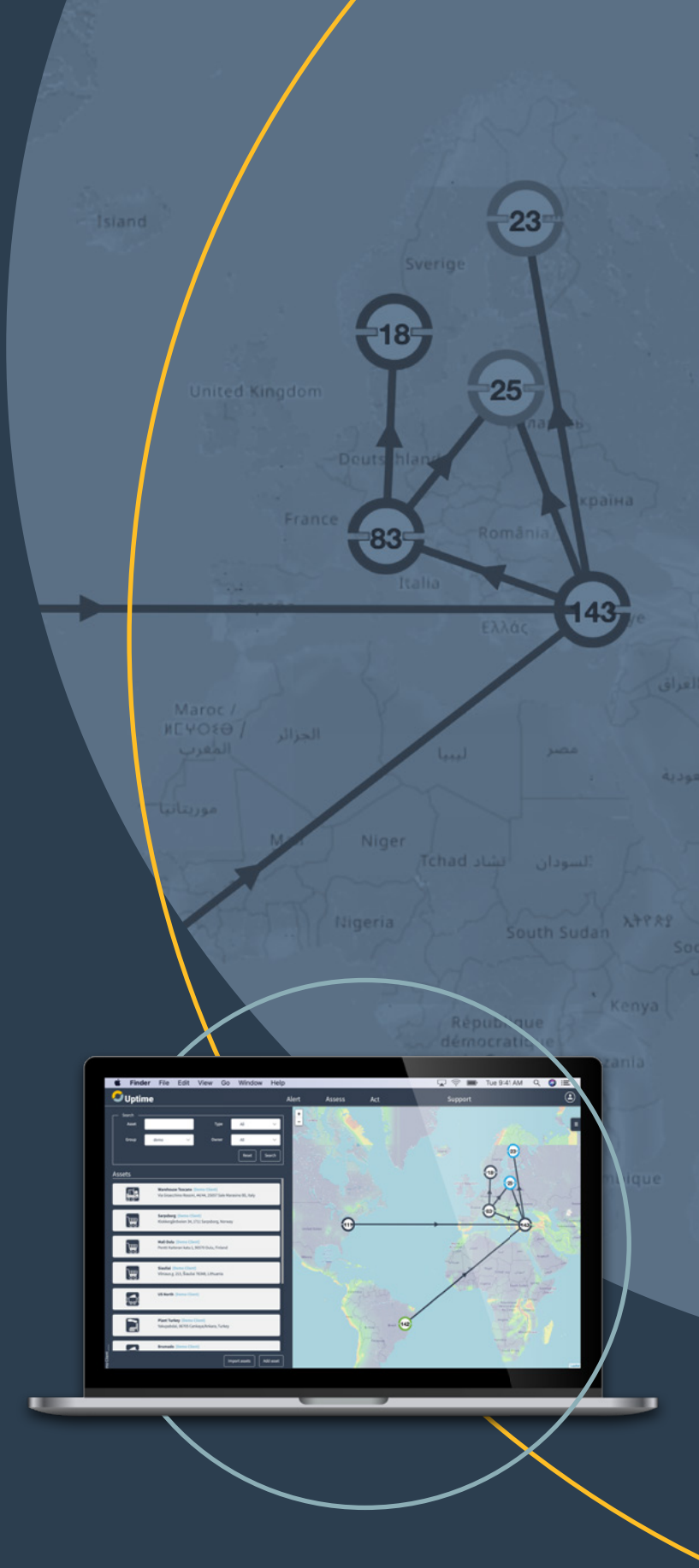
2. Getting an overview of all assets with real-time monitoring

Secondly, you need to maintain constant oversight of the assets and processes you're responsible for keeping operational and profitable. For this, you may benefit from continuous monitoring of your facilities and assets – as well as those of key suppliers. With this insight, you'll be able to anticipate and predict hazard patterns with increased accuracy, and be alerted to imminent events which are likely to impact your business.

Being able to run medium- to long-term what-if scenarios can also help you make strategic decisions for yourself, your suppliers and investors. In risk management and business continuity, knowledge truly is power, and being able to act now to mitigate potential future losses can represent the difference between resilient response and reactive disaster management for any location in the world.

Uptime, our intuitive hazard intelligence platform, has been created to help you manage and succeed in both of those difficult tasks. By equipping you with the insight and visibility required to spot relevant trends, monitor current events, forecast future events and provide valuable insights through scenario modelling, it enables a robust, proactive approach to hazard and risk management.

It provides the insight you need to safeguard business continuity, avoid potentially catastrophic operational disasters, and ensure that business can continue as normal when a hazard outside of your control strikes. Plus, it also enables you to identify valuable opportunities to optimise or strengthen processes – becoming a valuable source of competitive advantage.



Uptime in action

USE CASE 1

Historic and future exposure, risk and impact assessment for any location in the world

Problem

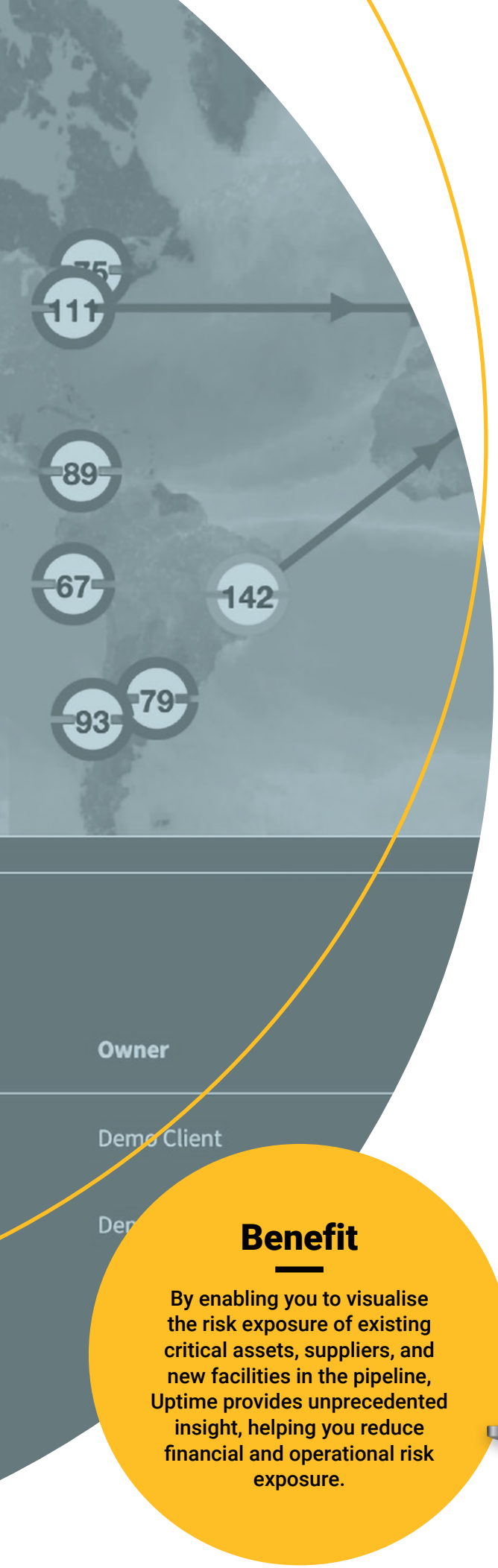
Many companies run their offices, production facilities, distribution or data centers, using up to seven tiers of suppliers. Risk might be offloaded to others through Service Level Agreements, but severe weather events like storms, heavy rainfall, long-term drought or extreme cold can impact each of them, leading to outages, supply disruptions and revenue and reputation losses.

With supplier relations changing all the time, it's difficult to stay ahead of shifting conditions and assess the environmental hazard vulnerability of new and existing suppliers at speed.

Solution

As the climate changes and we more frequently face severe weather conditions, having a continuously updated exposure assessment for your whole value chain is the first step to outperforming your competitors and staying in business.

Uptime integrates relevant data sources and models to provide you with insights covering all your points of interest in an intuitive, easy-to-use interface, as and when you need it. We combine historical data and models with 'what-if' scenario modelling and deep asset expertise to give you a reliable view of hazard exposure and risk, fast.



Benefit

By enabling you to visualise the risk exposure of existing critical assets, suppliers, and new facilities in the pipeline, Uptime provides unprecedented insight, helping you reduce financial and operational risk exposure.

USE CASE 2

Monitoring, forecasting, identifying cascading effects and alerting

Problem

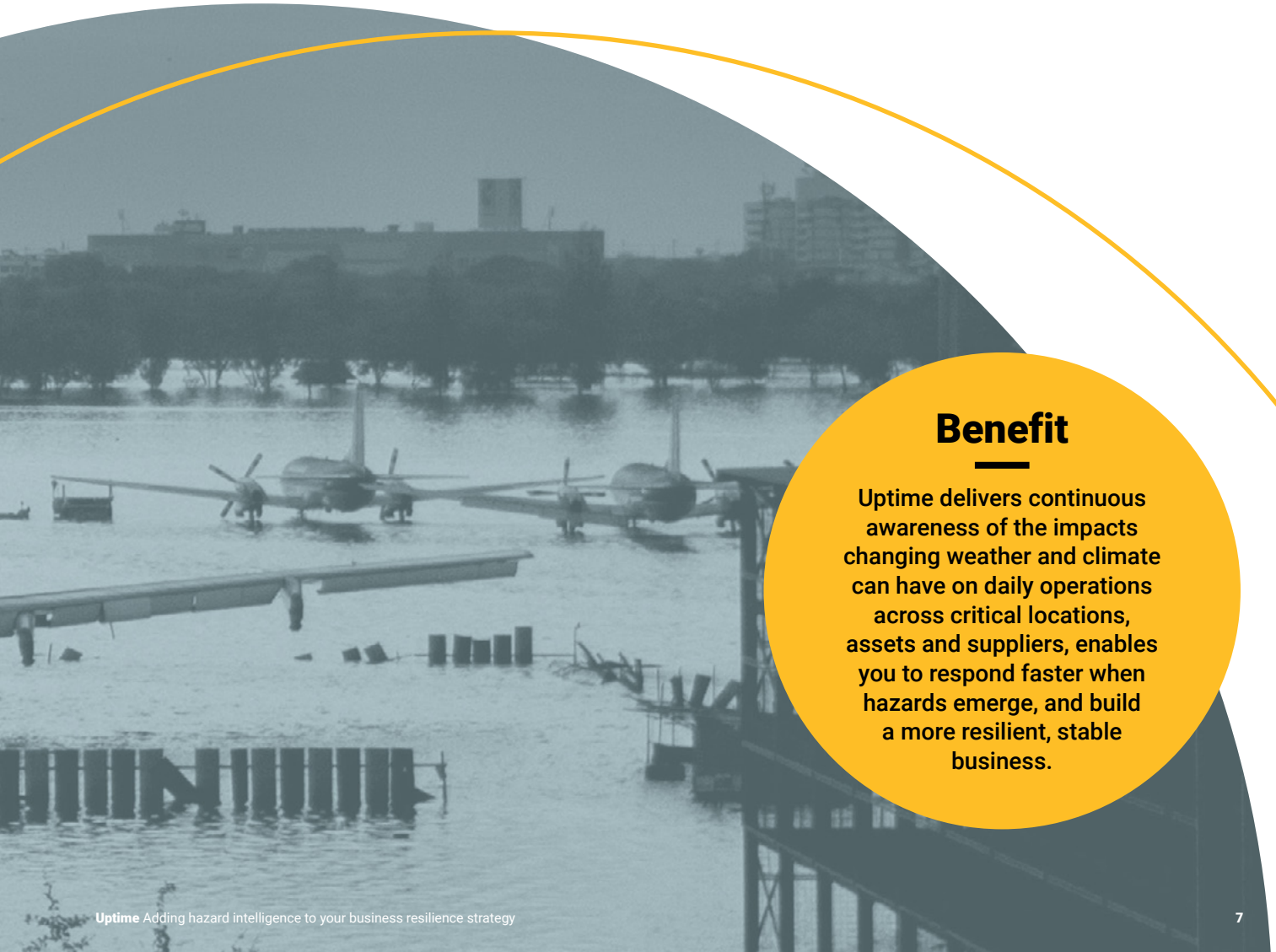
Currently, many organisations struggle to accurately monitor and forecast environmental and climate hazards. Conducting exposure and risk assessments using statistical data is a good start. But to establish a truly robust business continuity position, you need to continuously monitor your locations, assets, and processes at a global and local scale.

Today, most companies react to events as the information trickles in, losing time and with it, the ability to react adequately. As our examples in the previous section have shown, virtually any hazard of any size can have a significant operational impact if not identified and mitigated early enough.

Solution

With our deep expertise and knowledge in logistics, traffic flows and supply chains, we design and help manage ports, airports, production facilities and assets on a global scale. We assess climate change and weather impacts across multiple business lines and territories.

With Uptime, we're providing our clients with new insights into cascading climate-related effects to help them understand how they can directly or indirectly impact their business before it's too late.



Benefit

Uptime delivers continuous awareness of the impacts changing weather and climate can have on daily operations across critical locations, assets and suppliers, enables you to respond faster when hazards emerge, and build a more resilient, stable business.

Our invitation to you

Today's world's is complex, and understanding all of the cascading effects and impacts presented by emerging hazards can be extremely tough. Most solutions offered today focus on helping you understand one specific direct phenomenon, are either targeted at expert users or lack the level of insight risk and continuity teams demand.

The Uptime software platform enables you to quickly scan your business ecosystem and identify where environmental phenomena could impact you the most. Then, you can look at exposure at a deeper level, identifying the real business impacts a hazard could trigger.

Whether you want to analyse individual assets or complex supply chains, Uptime merges Royal HaskoningDHV's deep asset, engineering and supply chain expertise with real-time and historical data insights to give you a complete picture of the assets and processes you need to safeguard. We analyze hazards in the context of your operations, so that you can focus on becoming a more resilient company and increasing your Uptime.

Now, we invite you to discuss your supply chain, asset or insurance portfolio with us. Let us know the challenges you're facing, and we'll show you how Uptime can help you ensure that it's always 'business as usual' – even following the most severe environmental phenomena.

Your business is our concern.

About the author

Djeevan Schiferli is a digital transformation leader with a wealth of experience helping organisations visualise a smarter future, then deliver and achieve it by leveraging the right people, data, and digital capabilities.

Djeevan has embraced an entrepreneurial approach to digital transformation – identifying and translating market and technology drivers into practical transformation strategies and building new scalable ventures.

Today, Djeevan leads Royal HaskoningDHV Digital's Resilience Software Suite, devising innovative ways to help clients adapt to and operate in a rapidly-changing, complex world.

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Uptime is a hazard intelligence platform by **Royal HaskoningDHV Digital.** As part of Royal HaskoningDHV we bring almost 140 years of worldwide experience in the field of Industry & Buildings, Transport & Planning, Maritime & Aviation and Water to the design of this product. Developing, building and maintaining sustainable solutions to improve people's lives and business processes is what we do:

Enhancing Society Together.

For more information on the Uptime software platform visit our website

www.resiliencesuite.com

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