



Nachhaltigkeit & Resilienz in der
Lieferkette

Heiko Schwarz
Global Supply Chain Risk Advisor

Today's Agenda

- Introduction
- The 5 Major Pillars of the Risk Report
- Major challenges and how to solve them
- Questions & Discussions

Sphera is the leading global provider of **enterprise sustainability, risk and performance management** software, data and services.



**ENVIRONMENT,
HEALTH, SAFETY &
SUSTAINABILITY**



**PRODUCT
STEWARDSHIP**



**SUPPLY CHAIN
TRANSPARENCY**



**OPERATIONAL RISK
MANAGEMENT**



SOFTWARE
Aggregate, digitize & monitor ESG risk & performance data.

DATA ANALYTICS
Apply predictive & prescriptive analytics for scenario planning & benchmarking.

CONSULTING
Leverage insights to drive business outcomes & meet regulations.

OUR MISSION

To create a safer, more sustainable and productive world.

We have a global footprint with local impact.

- HEADQUARTERS
- DEVELOPMENT CENTER
- SALES CENTER



1 million+
Individual users

7,000+
Customers

80+
Countries

1,300+
Colleagues

Disruption is the new normal. Risk intelligence is table stakes for today's procurement teams.

European farmer protests disruption supply chain supermarkets (Feb 24)

Panama Canal restrictions impact 100m tons of cargo (Jan 24)

Red Sea rerouting puts 10% of world's fleet out of service (Jan 24)

Supply chain cyber threats grow 63% (Nov 23)

UAW strikes lead to \$5.5 BIL in losses for automakers (Nov 24)

Since passing UFLPA, over 5K containers worth 1.8 BIL detained (Sep 23)

Unexpected cost increases

Loss of revenue

Unsatisfied customers

Damaged reputation

Supply chains face added pressure from **15+ new or evolving ESG regulations** and stakeholder expectations.

Global

- IFRS S1 + S2
- UN's Plastics Treaty
- Modern Slavery Acts

North America

- California's SB253 & 261 (Scope 3)
- Single-use Plastics Bans
- UFLPA
- CA Modern Slavery Act

Europe

- Germany's LkSG
- CBAM
- Deforestation Regulation
- CSRD and CSDDD
- Conflict Minerals Regulation

Australia

- Climate Change Bill

Getting it right delivers incredible business value.

Supply chain agility flips the script on how companies operate in a dynamic environment.

REDUCED
OPERATING
COSTS

9-16%

Reduced
procurement
costs

World Economic Forum

CULTURE OF
CALCULATED RISK-
TAKING AND
INNOVATION

5-20%

Revenue
uplift

World Economic Forum

SUPPLIER
COLLABORATION TO
REACH ESG GOALS
AND COMPLIANCE

1.8x

From 10-point
increase in public
ESG score

Deloitte

ENHANCED RISK
MITIGATION AND
RECOVERY TIME

4.2%

Loss per year
caused by supply
chain disruptions

Supply Chain Dive Survey

IMPROVED
CUSTOMER
SATISFACTION AND
BRAND REPUTATION

88%

Global consumers
prioritize ethically
sourced products

Supply Chain Dive Survey

Getting it wrong is costly.

55% of disruption emanates from sub-tier suppliers, yet 2 out of 3 businesses can't tell if their closest supply chain partners are meeting basic compliance standards.



SEC Fines Deutsche Bank Subsidiary \$19 Million for Misstating ESG Objectives

The U.S. Securities and Exchange Commission (SEC) on Monday fined DWS Securities, a subsidiary of Deutsche Bank (DB), a combined \$25 million...



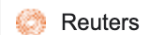
Starbucks sued for allegedly using coffee from farms with rights abuses while touting its 'ethical' sourcing

Starbucks was sued for marketing its commitment to "100% ethical" sourcing while using some suppliers with "documented, severe human rights..."



Extreme Networks slumps on expected 3Q loss, supply chain issues still impacting business

Extreme Networks (NASDAQ:EXTR) shares plummeted Wednesday following its latest quarterly earnings report, in which it missed consensus...



Tesla, Volvo Car pause output as Red Sea shipping crisis deepens

Automakers Tesla and Geely-owned Volvo Car said they were suspending some production in Europe due to a shortage of components, the first...



Procurement teams are **pioneering new operating models.**

P A S T

Cost-focused and reactive

Siloed from C-suite

Limited visibility

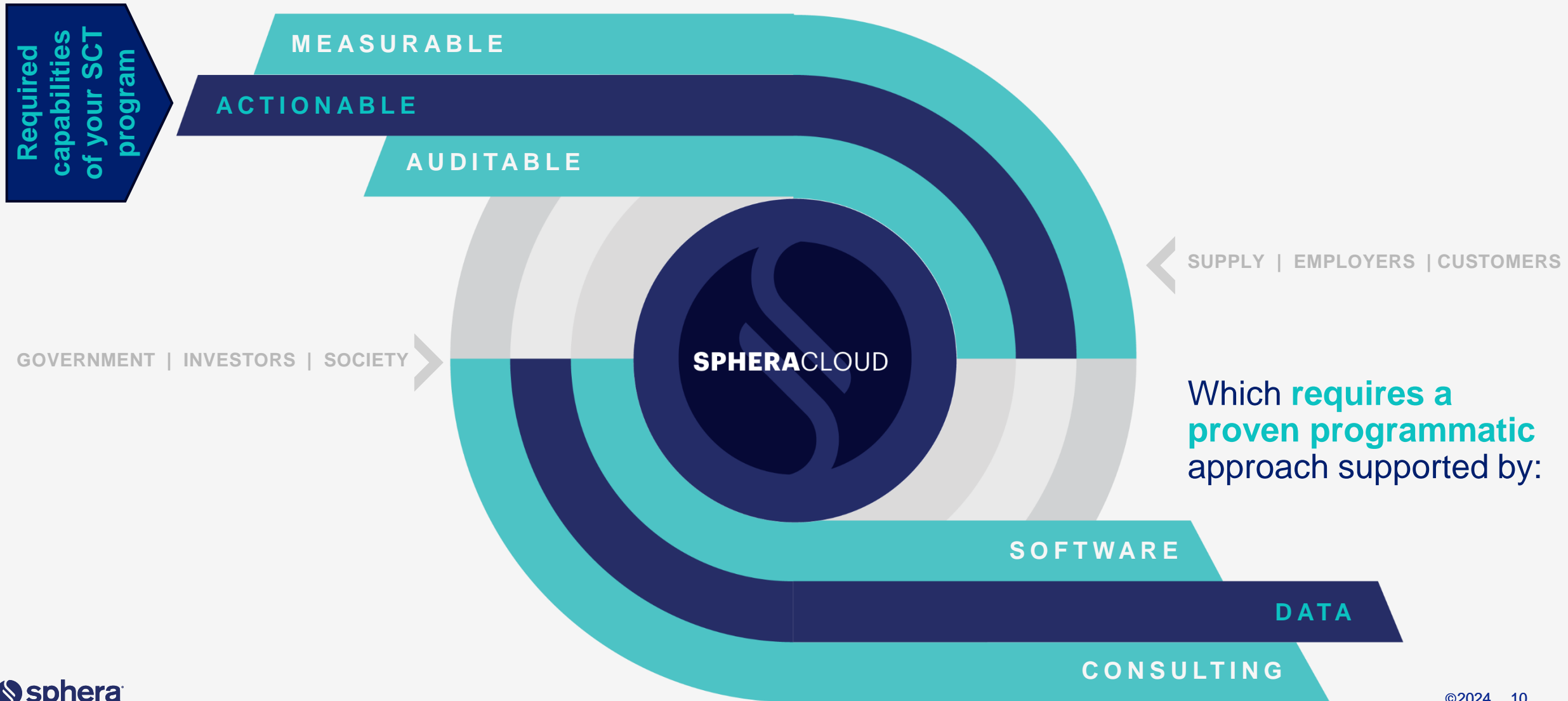
F U T U R E

Predictive and entrepreneurial

Champion of procurement evolution
and supplier partnership

Building resilience
and strategic agility

The convergence between Supply Chain Risk and Environmental performance is **happening now.**



What was the risk you were most dealing with the last 12 months?

- 1) Financial Risk
- 2) Cyber Incidents
- 3) Natural Hazards
- 4) ESG-Related Risks
- 5) Exceptional Circumstances

About the 2024 Risk Report

Our intention is to provide actionable insights into the state of supply chains today:

- 1) Investigate key trends
- 2) Analyze how they will shape the future
- 3) Illustrate how resilient, agile and sustainable supply chains empower businesses

The new, user-friendly study design makes the report more tangible and user-friendly

- The hypothetical company (Company ASC) is modeled after a typical business that relies on a complex supply chain
- Company ASC helps us illustrate the various supply-chain-related risks experienced by an average mid-sized company in 2023

Origin of the data

All insights are provided by the AI-powered Risk Intelligence component of the Sphera Supply Chain Risk Management (SCRM) software covering more than 1 million supply chain risk objects (supplier, sub-suppliers, warehouses/DCs, bottleneck regions,...)

Reputable news articles worldwide, multi-language screening

Commercial data sources
(Ratings, Sanction Control, ...)

Government and NGO data sources (UN, Transparency Int., ...)

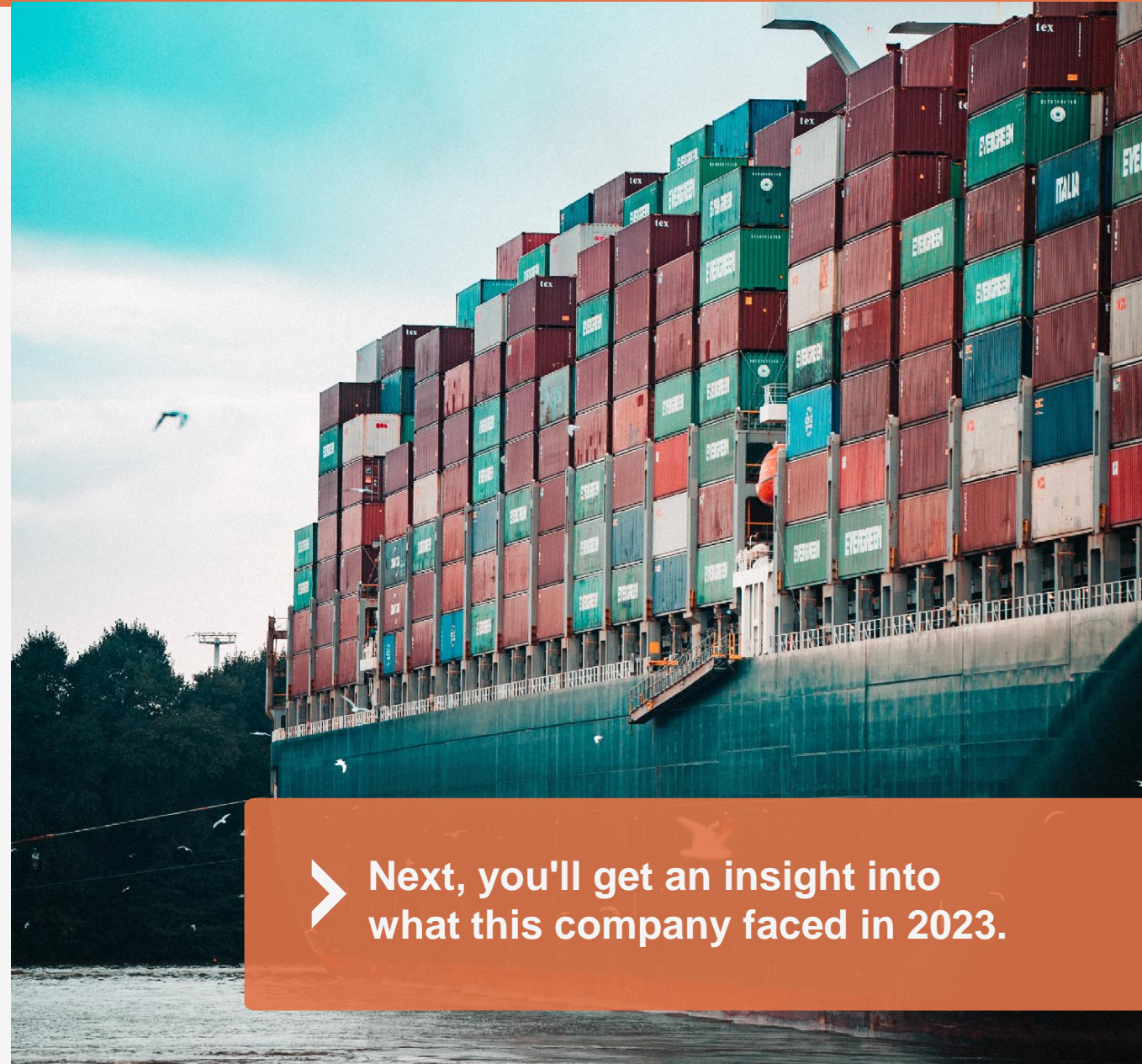
Each month, Risk Intelligence scans more than 15 billion reputable news articles, commercial and government data sources and 1 million customer and supplier sites around the world.

We compiled all risk indicator messages created from January 2023 through November 2023. We then compared these insights to those created during the same time period in 2022.

LET'S MAKE IT TANGIBLE:

An imaginary company

Company ASC is a manufacturing firm that employs 5,000 people and is headquartered in Europe. It has multiple international sites, a globally distributed purchasing volume and leverages best-cost country sourcing opportunities. It operates a supply network with 2,000 suppliers, along with relevant sub-suppliers, warehouses and distribution centers.



➤ Next, you'll get an insight into what this company faced in 2023.

Key findings

Primary and secondary Covid-19 effects almost dropped to zero but supply chains remained vulnerable to a range of risks

1

FINANCIAL HEALTH

- The most vulnerable risk area in 2023
- Financial distress due to economic downturns, inflation and rising interest rates
- More than one-third (36%) of the financial risk notifications warned of worsening revenue and growth outlook

2

CYBER INCIDENTS

- The number and impact of cyber-related issues continue to accelerate.
- We observed a 62% rise in cyber-related supply chain issues
- Cyber incidents typically cause delays, loss of confidential data and factory shutdowns. They are also associated with high recovery costs.

3

NATURAL HAZARDS

- Extreme weather events increased, correlating with the global warming trend
- Tornadoes increased by 45%, hailstorm by 26% and tropical cyclone by 6%.
- Also February's earthquake in Turkey and northern Syria caused risk to rise by 25%.

4

ESG-RELATED RISKS

- ESG risks rose by 6% overall in 2023.
- Specific topics within ESG rose noticeably:
- Human rights violations increased by 12% and labor practices by 13%.
- This indicates that regulators, investors and customers are shining a brighter spotlight on these topics.

5

EXCEPTIONAL CIRCUMSTANCES

- Out-of-the-ordinary incidents continuously threaten supply chains, so did in 2023
- Three situations in particular tested supply chain agility and resilience:
 1. War in Ukraine
 2. Panama Canal restrictions
 3. Red Sea attacks

Economic Trends Influencing Supplier Financial Health



5 supplier **financial risk warning-signals** and events every month

33 Early-Warning Signals p.a.

- Key employee stability warnings up by 8%
- Revenue / growth outlook downgrades remains at the high as of the pandemic peak
- Supplier Site closures up by 26%
- One Supplier facing a relevant patent issue

25 Ultimate Events p.a.

- High mergers and acquisitions activities (>1 per month)
- 9 Product release delays
- Number of Supplier Bankruptcy alerts rose by 42%

Cyber incidents grew in scope and frequency



1 cyber incident every 6 months

The average cost of a data breach is **\$4.45 million**, according to a 2023 IBM survey of more than 550 global organizations affected by such an incident.

62% increase over 2022 in cyber-related supply chain issues.

Consequences of cyber incidents in supply chains

- Data breaches and theft of product designs, pricings, customer data
- Disruption of operations
- Financial consequences such as cost for recovery, customer penalties/loss,...
- Regulatory issues and legal consequences with financial impact

Extreme weather events had increased more than 5 times since the 1970s, while the cost per event increased nearly 77%*



5 significant weather-related issues in 2023 (~1 issue every 2nd month)

Most likely Weather Events by occurrence

- Extratropical storms
- Tropical cyclones
- Floodings

Climate Change drives increase in extreme Weather

- River floods up by 74%
- Tornadoes up by 45%
- Hailstorms up by 26%

Supplier fire in the automotive parts industry

REAL-LIFE EXAMPLE: JOYSON SAFETY SYSTEMS

Whether through a wildfire, explosion or other causes, a fire at a supplier's facility can have devastating consequences. Joyson Safety Systems (JSS) is a manufacturer of automotive safety systems. When one of JSS's suppliers in Latin America burned down completely, reaction time was critical. Alerted by Sphera Supply Chain Risk Management, JSS was able to immediately send a technician to what was left of the supplier's facility. JSS was able to retrieve its specialized tools, minimally damaged, from the ashes. JSS refurbished its tools and shipped them to a partner who could continue production.

"The supplier probably wouldn't have informed us of the fire until a few days later," estimates Velat Özkilinc, executive vice president, chief purchasing officer at Joyson Safety Systems. Those few days were pivotal because JSS had limited inventory levels. With Sphera Supply Chain Risk Management, JSS was able to avoid production downtime.

Regulatory changes and supply chain complexities translated into greater risk of noncompliance, accompanied by reputational damage



18 ESG issues in 2023
(1.5 issues every month)

18 ESG-related warnings p.a.
(+6% by occurrence)

- Business partner fined due to ESG non-compliance
- Industrial disputes/strikes related to ESG topics
- Human rights issues
- Environmental pollution at supplier sites

Biggest ESG-Risk changes

- Human rights issues rose 12%
- Labor practice issues went up 13%

Challenges through **exceptional circumstances** relating to war, geopolitical conflicts, as well as restrictions in Panama Canal transits



2 major supply chain issues per year (-27%)

In 2022, warnings of geopolitical risk increased 87%, with a further rise of 7% in 2023 mainly driven by war in Ukraine

Niger's military coup in July contributed to the rise too

Panama Canal restrictions

Beginning in April, ship transits were cut due to low water levels, resulting in backlogs and inflated prices.

Red Sea attacks

Starting in November, attacks by Yemen's Houthi rebels on vessels in the Red Sea caused many shipping companies to reroute their vessels to avoid the Suez Canal.

Incidents such as explosions, fires or strikes can have disastrous business consequences and costs.

Although taking place at a single location such as at a port, such incidents usually affect a large number of companies and disrupt global supply chain operations.

The Challenges

From Supplier to
Supply Chain
Resilience Focus

Piecework vs.
Holistic Programs

Assessment Fatigue
vs. Supplier
Collaboration

ESG Compliance in
a complex
environment

Prevention vs.
Reaction,
Compliance
Reporting

The Right Governance & Skills

+ In essence, resilient and sustainable supply chains require a more **proactive, technology-driven and collaborative approach.**

- Engage and assess
- View multi-tier data
- Monitor resilience and sustainability

- Analyze, report and disclose
- Proactive product design

Sphera helps build durable supply networks, embrace uncertainty, and evolve capabilities.



- Source based on holistic risk profile
- Improve risk profile with corrective action

Supply Chain Transparency

Holistic, Real-Time Risk Visibility

View of real-time AI optimized media monitoring, premium data sources and predictive supply chain risks, combined with ESG, and compliance vulnerabilities, verified by suppliers, and an expert risk research team.

Regulatory Compliance

Issue identification, impact assessment, and interactive mapping technology.

- *Ethical Supply Chain Management*
 - CSDDD
 - CSRD
 - LkSG
 - UFLPA
- *Supplier ESG Assessments*
 - Scope 3
 - Human Rights Compliance
 - Supplier ESG Assessment
 - Deforestation
 - And 16 more...

SCRM



SupplyShift



Proactive Risk Management through Supplier Improvement

Supplier selection, engagement, and corrective actions.

- *Supplier Management*
- *Impact Analyzer*
- *Action Planner*



Supplier Scorecards



Sphera Supplier Register

SpheraCloud Insights



SpheraCloud Exchange



INTEGRATED SUSTAINABILITY

Corporate Compliance and Reporting Disclosures



Corporate Sustainability



Scope 1,2,3 Reporting

Product Sustainability and Net Zero Goals

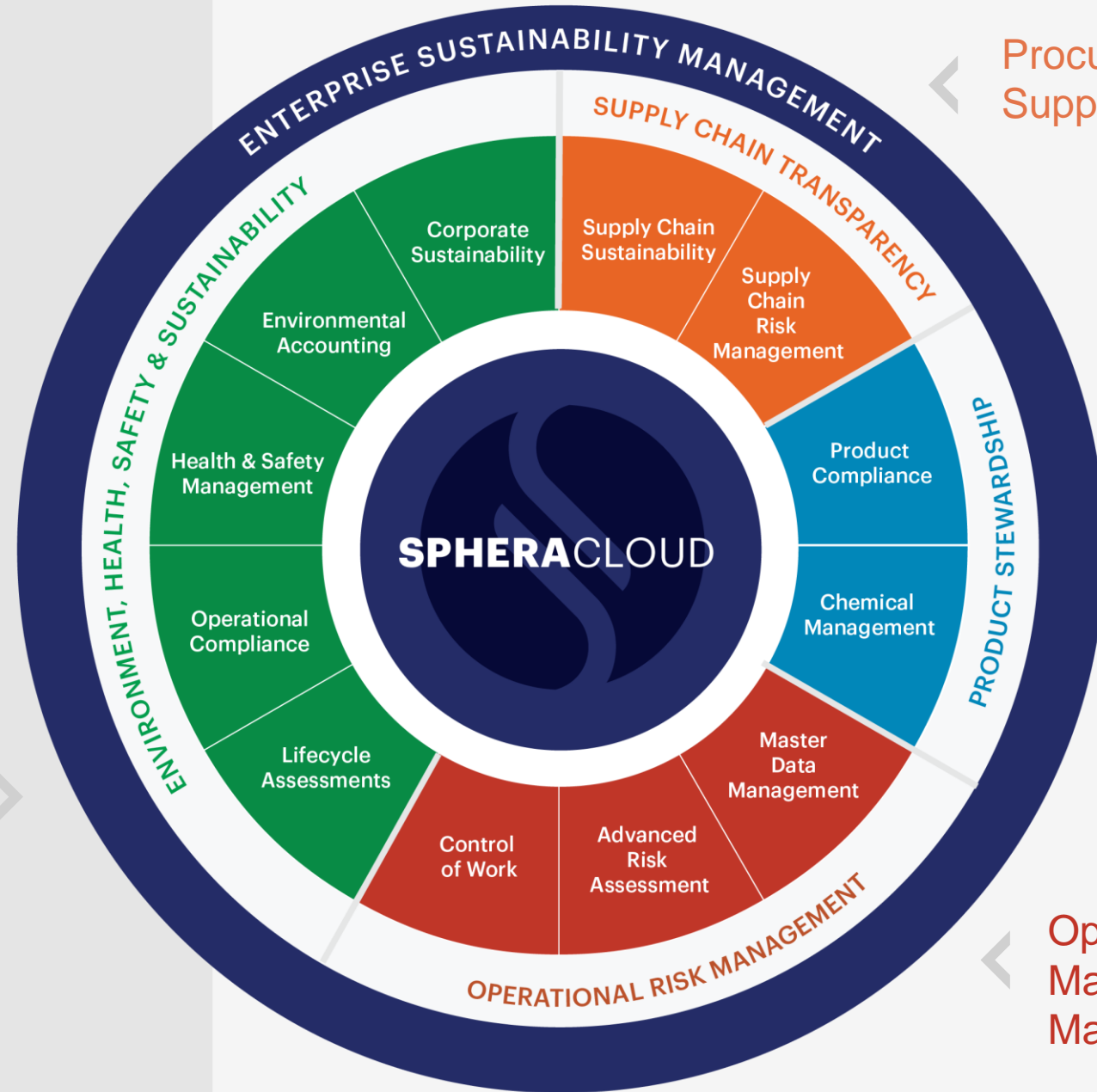


Proprietary Emission Factor Master Data



Lifecycle Assessments

Enterprise Sustainability Management



Procurement / Supply Chain / Supply Chain Sustainability

Product Stewards / Compliance Managers

Operations / Process Safety Managers / Reliability & Maintenance

Chief Sustainability Officer / EHS Leader

Companies that trust Sphera on their journey of change

SPHERA SUPPLY CHAIN
TRANSPARENCY SOLUTIONS

INDUSTRIALS &
MANUFACTURING



AUTOMOTIVE



RETAIL



BIO, PHARMA,
HEALTHCARE



CONSUMER
GOODS



SERVICES,
ELECTRONICS
& TECHNOLOGY



Sphera works with leading companies in 19 industries.

Our experts provide clarity to **drive real change.**



Heiko

Supply chain risk management

As Sphera's Global Supply Chain Risk Advisor and founder of riskmethods, Heiko brings more than 20 years of software solutions experience with a focus on procurement, supply chain, and risk management. He uses his experience and passion to ensure our customers adopt their SCRM programs successfully.



Indrani

Supply chain and ESG

Indrani brings 15+ years of in-depth ESG expertise in supply chain sustainability, stakeholder engagement, and reporting on impact. She acts as a trusted advisor, partnering with customers to design, build, and implement impactful responsible sourcing programs and drive excellence in supplier performance through the adoption of our SCS solution.



Alex

Supply chain Sustainability

As Sphera's Global Advisor for Sustainable Supply Chains and co-founder of SupplyShift, Alex Gershenson brings two decades of experience and a PhD in Environmental Studies from UC Santa Cruz. He's passionate about finding solutions to global challenges and leveraging technology to create more responsible supply chains.



Steffen

Supply chain risk management

As Sr. Director Client Services, Steffen brings over 8 years of expertise in implementing innovative solutions that enhance risk awareness and resilience. Managing the global customer operations team serving more than 3,000 customers across 80 countries, he imparts insights into emerging trends, new methodologies and technology to meet the needs of the evolving landscape.



Benjamin

Supply chain risk management

Benjamin brings over 10 years of diverse business expertise, including extensive international experience across Canada, Germany and China, specializing in supply chain, procurement and software solutions. With a keen grasp of domestic and international business dynamics, his expertise shapes strategic implementations that drive organizational success in dynamic global environments.



Jamie

Supply chain Sustainability

Jamie Barsimantov co-founded SupplyShift and is the VP of Supply Chain Strategy at Sphera. He received his doctorate in Environmental Studies from UC Santa Cruz, focused on environmental economics and resource management. Jamie has extensive consulting and academic experience in sustainability, climate action strategy, and responsible supply chains.



Sphera is the leading global provider of integrated sustainability, risk & performance management software, data and services.

Address

130 East Randolph St, Suite 1900
Chicago, IL 60601 USA

Phone

(312) 796-7160

Online

sphera.com/contact-us

Heiko Schwarz

Global Supply Chain Risk Advisor
hschwarz@sphera.com
+49 162-2651000