

AUSTRIA IST ÜBERALL.

LIEFERANTEN- RISIKOMANAGEMENT

Risikobewertung mit
Unterstützung von digitalen
Tools

3.3.2022

AUSTRIA IST ÜBERALL.



Begrüßung/Einführung

Martha Bogacz

Programmmanagerin Sourcing
AUSSENWIRTSCHAFT Industry

Sourcingaktivitäten



Ziele:

1. Awareness auf die Thematik
2. Wissensvermittlung durch Webinare, Workshops etc.
3. Unternehmen unterstützen bei Ihrem Sourcingprozess

AUSTRIA IST ÜBERALL.



Lieferanten- Risikomanagement

Christian SANTNER

Österreichischer Partner
EAC International Consulting

WKO
AUSSENWIRTSCHAFT
AUSTRIA
RISK MANAGEMENT
WEBINAR 2022

3rd March 2022



OUR EXPERTISE – CONSULTING IN EMERGING MARKETS

More than 25 years of international consulting in Asia and other key emerging markets – we are experts for analysis, strategy development and globalization solutions

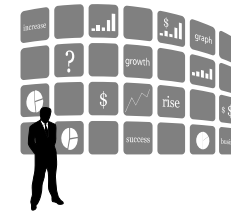
> 100 EXPERTS IN OUR OFFICES IN

- MUNICH
- GRAZ
- SHANGHAI
- MUMBAI
- MOSCOW



FUNCTIONAL COMPETENCIES

- STRATEGY
- M&A
- OPERATIONAL EXCELLENCE
- DIGITALIZATION
- SUSTAINABILITY



EXPERTISE IN EMERGING MARKETS

- CHINA
- INDIA
- SOUTH EAST ASIA
- NORTH EAST ASIA
- RUSSIA
- CEE



INDUSTRY COMPETENCIES

- INDUSTRY & TECHNOLOGY
- MOBILITY
- BUILDING & CONSTRUCTION
- ENERGY & ENVIRONMENT
- LIFE SCIENCE
- CHEMICALS
- CONSUMER GOODS
- EXHIBITION



OUR OFFERING – SUCCESS WITH TAILOR MADE SOLUTIONS

EAC offers holistic consulting solutions from strategy development to roll-outs and operational efficiency programs for mid-cap and multinational companies in growth markets

STRATEGY

- Go-to-market Strategy
- Product Design-to-value Initiative
- Portfolio Diversification
- Innovation Strategy
- Strategy Execution Cockpit

M&A

- Acquisition
- Divestures
- Corporate Finance Services

OPERATIONAL EXCELLENCE

- Performance & Cost Improvement
- Sales Push & Distribution Excellence
- Global Footprint Advisory
- SCM & Sourcing
- Human Resources

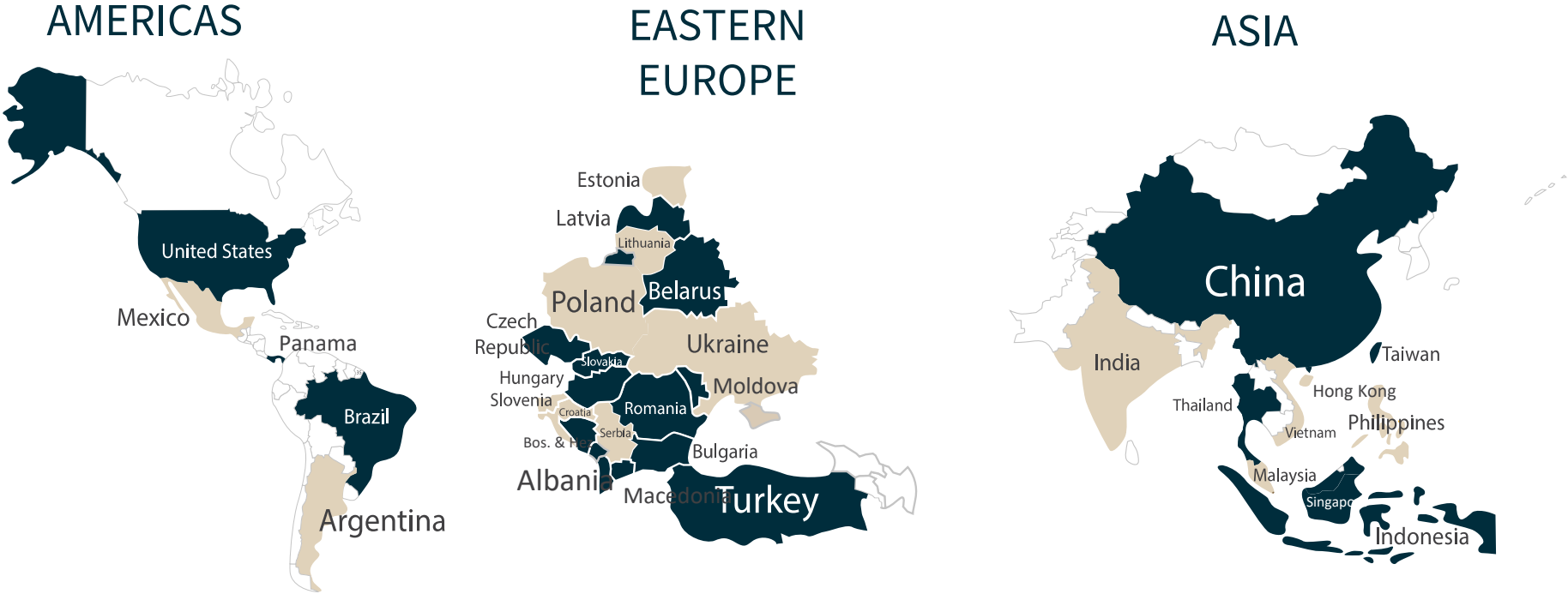
DIGITALIZATION

- Digital Business Models
- Digital Transformation
- E-Commerce Strategy
- Digital Empowerment

SUSTAINABILITY

- Sustainable Supply Chains
- Circular Economy Potential
- Climate Protection
- Waste Reduction

WHERE WE SUPPORT



Our Expertise

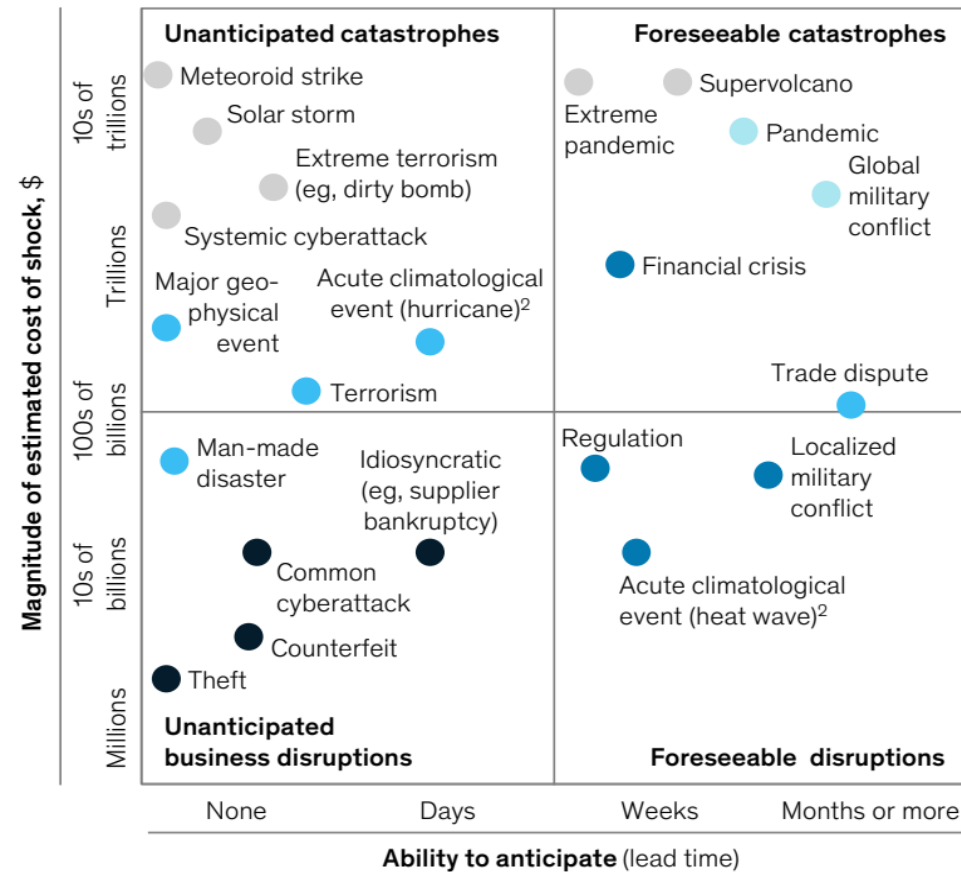
- **VALUE CHAIN ANALYSIS**
- **MANUFACTURING SITE EVALUATION**
- **SCM & SOURCING**
- **PROCUREMENT EXCELLENCE**
- **DIGITALIZATION**

DISRUPTIONS OCCUR WITH REGULARITY

Unfortunately, we see a lot of disruptions recently

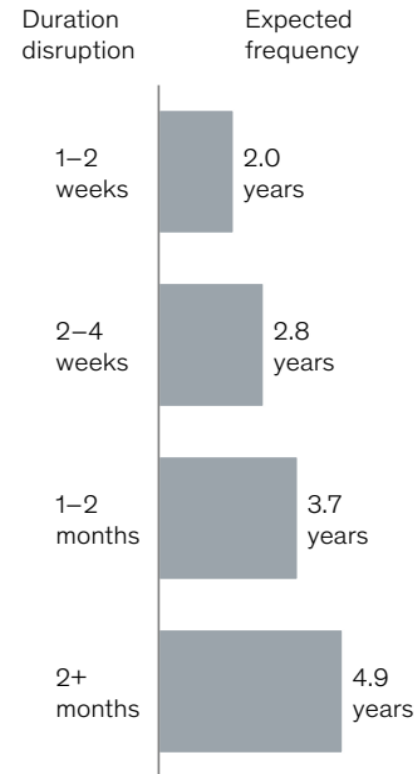
Magnitude and ability to anticipate

Historical frequency: More frequent (dark blue/black) to Less frequent (light blue), Has not (yet) occurred at scale¹ (grey)



Expected frequency of a disruption, by duration, years

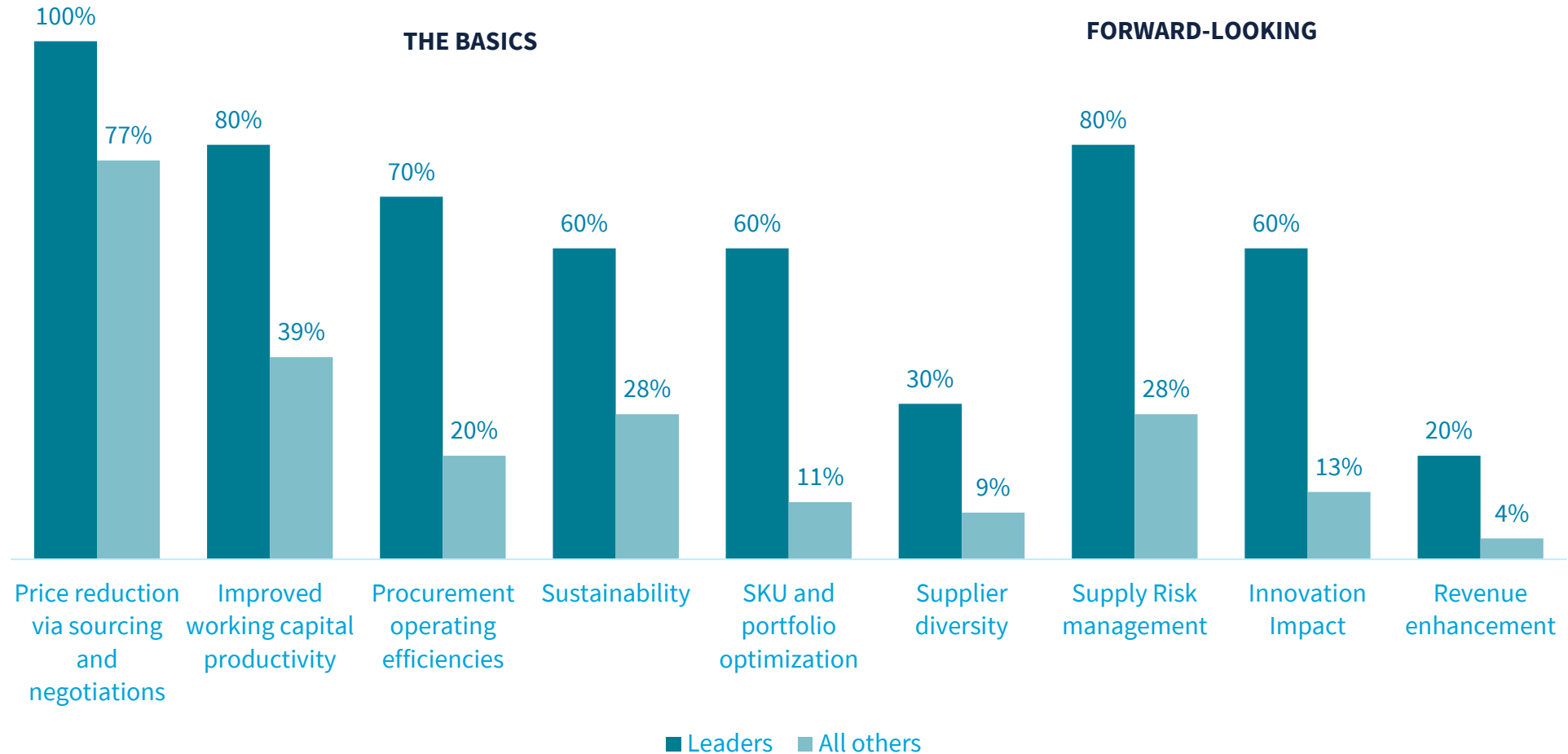
Based on expert interviews, n = 35



WHAT KPIS WILL WE TRACK IN THE FUTURE?

Supply Risk Management is the top-named forward looking KPI measure by leading companies

Type of Value Created By Procurement
(% respondents indicating 'high')



VALUE CHAIN RISK IS A PRODUCT FROM EXPOSURE TO SHOCKS AND VULNERABILITIES IN SUPPLIER NETWORKS AND BUSINESS PRACTICES



SUPPLY-CHAIN ACTIONS ALONG THE VALUE CHAIN

Businesses must respond on multiple fronts at once: at the same time that they work to protect their workers' safety, they must also safeguard their operational viability, now increasingly under strain from a historic supply-chain shock.



DEMAND SIDE

harder to predict, partially difficult to "steer customer"



SUPPLY SIDE

Multiple factors to be analyzed, more details in the supply chain need to be evaluated



SAFETY STOCK, LOGISTICS AND DISTRIBUTION

Logistics and Distribution/Inventory needs to be planned thoroughly and in shorter terms

Create transparency on multiple supply chain

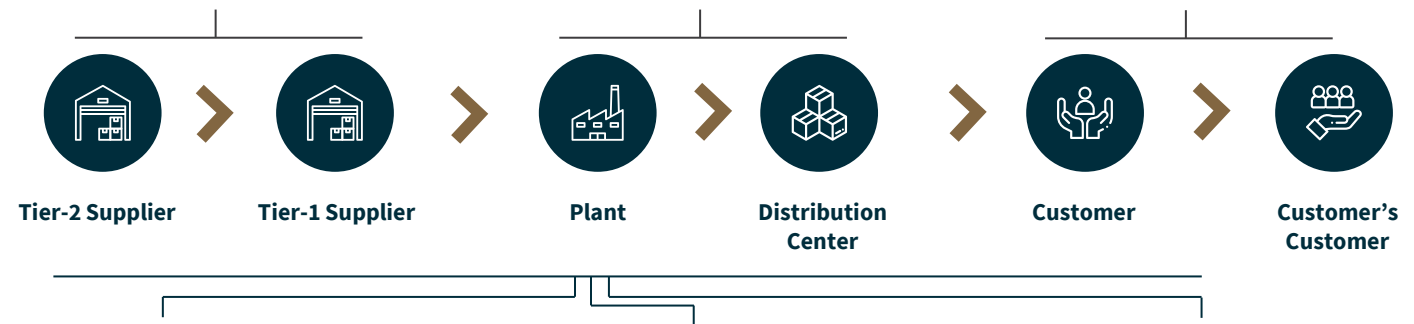
- ✓ Determine critical components and determine origin of supply
- ✓ Assess interruption risk and identify likely tier-2 and onward risk
- ✓ Look to alternatives sources if suppliers are in severely affected regions
- ✓ Get a clear picture of critical raw material sources

Optimize production and distribution capacity

- ✓ Assess impact on operations and available resource capacity (mainly workforce)
- ✓ Ensure employee safety and clearly communicate with employees
- ✓ Conduct scenario planning and assess impact on operations, based on available capacity
- ✓ Optimize limited production, according to human health impact, margin, and opportunity cost/ penalty

Assess realistic final-customer demand

- ✓ Work with sales and operations planning to get demand signal to determine required supply
- ✓ Leverage direct-to-customer channels of communication
- ✓ Use market insights/ external database to estimate for customer's customers



Estimate available inventory

- ✓ Estimate inventory along the value chain, including spare parts/ remanufactured stock
- ✓ Use after-sales stock as bridge to keep production running

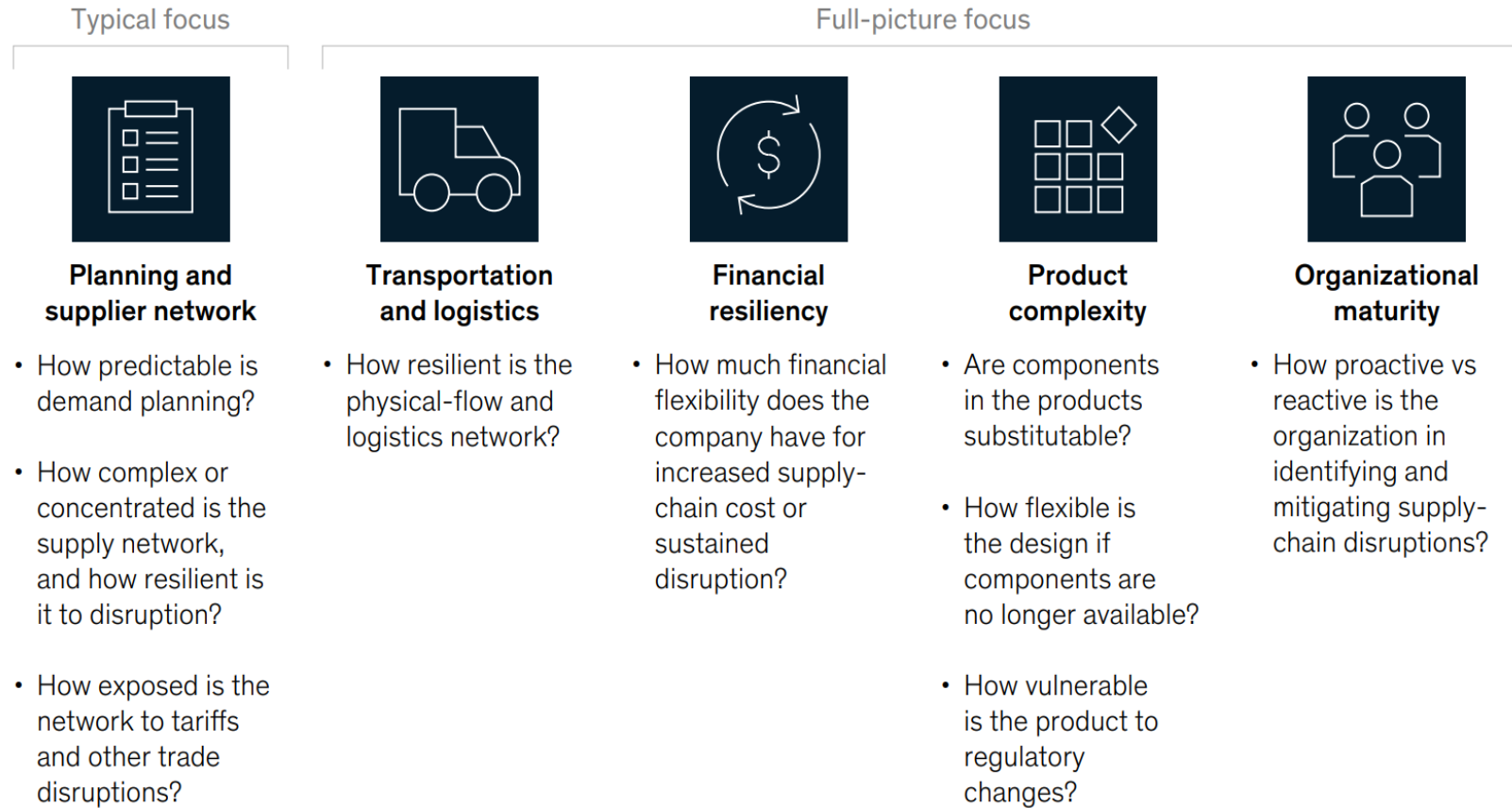
Identify and secure logistics capacity

- ✓ Estimate available logistics capacity
- ✓ Accelerate customers clearance
- ✓ Change mode of transport and prebook air/ rail capacity, given current exposure
- ✓ Collaborate with all parties to leverage freight capacity jointly

Manage cash and net working capital

- ✓ Run supply-chain stress tests vs major suppliers' balance sheet to understand when supply issues will start to stress financial or liquidity issues


SUPPLY CHAIN DISRUPTIONS – DRIVERS OF POTENTIAL VULNERABILITY




WHAT ARE THE TYPICAL ISSUES IN SUPPLIER RISK MANAGEMENT?




Contracts containing complex and complicated agreements



Inability to meet required volumes




Insufficient project management by supplier



Lack of information related to supplier financial distress



Quality issues linked to operations




Sharing no / incorrect information



Increase in demand for existing supply capacity



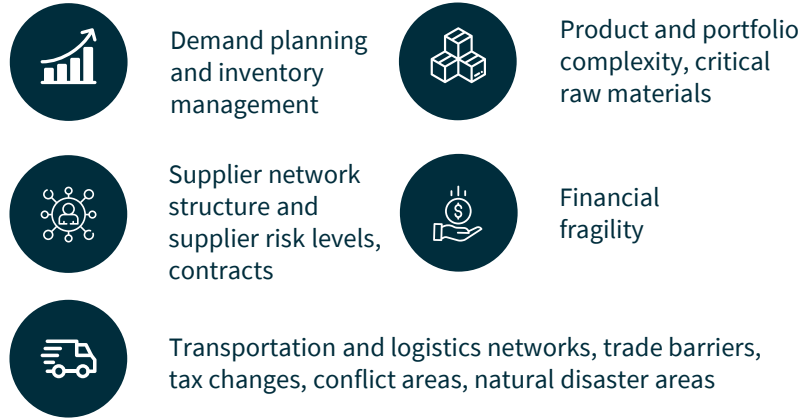
Limited capacity to assess and manage suppliers



Lack of transparency

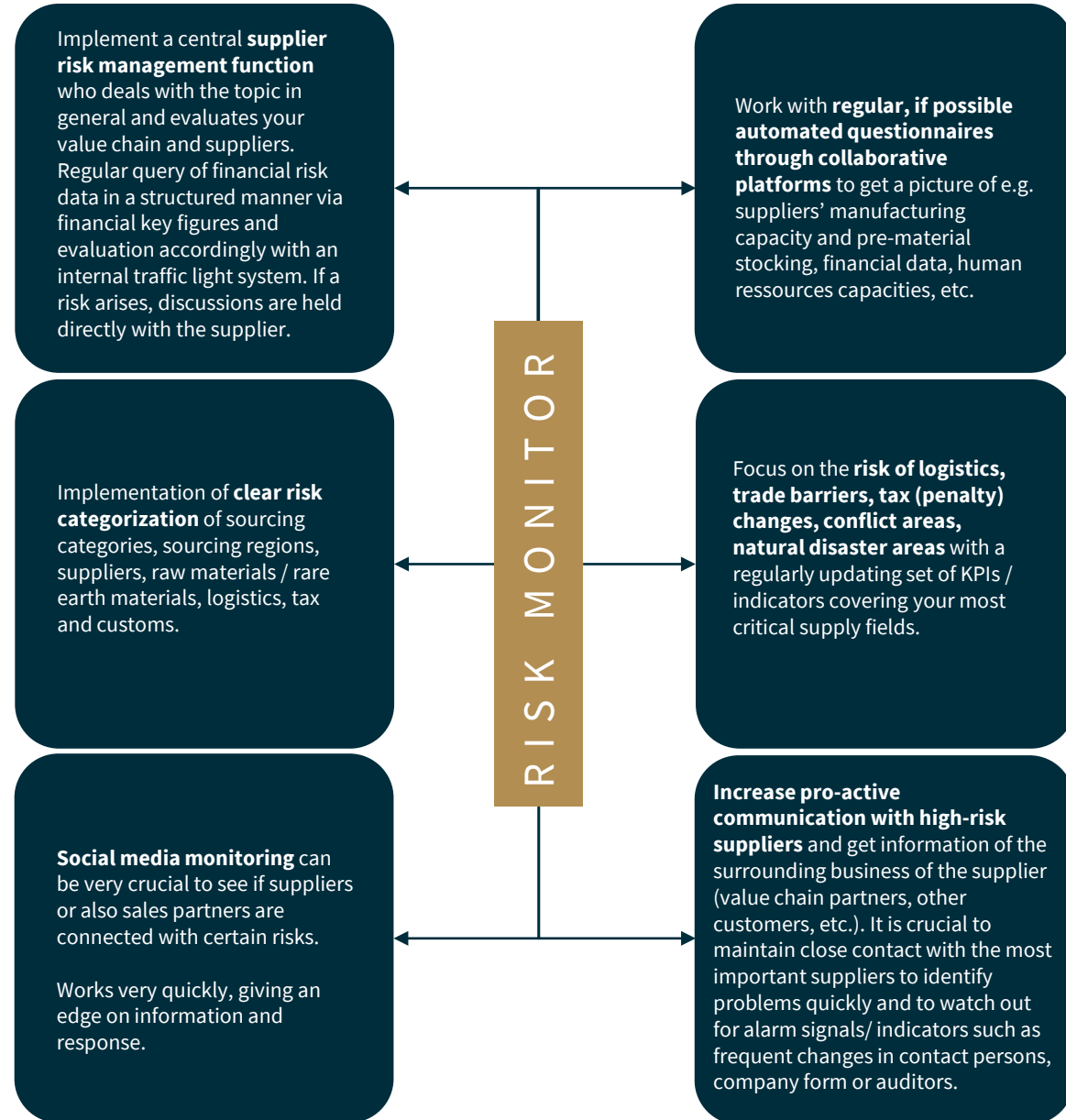
IMPLEMENTATION OF SUPPLIER RISK MANAGEMENT

Companies have to evaluate their risks in five critical areas:



And take the following actions to create resilient supply chains:

1. Map your value chain in detail and prioritize your highest risk areas
2. Leverage the full digital potential to monitor, connect and collaborate across the supply/value chain
3. Diversify your supplier network and geographic footprint
4. Strengthen critical suppliers or bring production of key components in-house
5. Build alternatives in transportation and logistics
6. Move to modular product design with standardized inputs
7. Harden physical assets to withstand natural disasters
8. Increase inventory levels and safety stock
9. Increase flexibility across suppliers, manufacturing sites and customer channels wherever possible
10. Create cash flow and balance sheet buffers – including for suppliers



THERE ARE NUMEROUS SOURCES OF RISK - IDENTIFY THE RISK AREAS APPLICABLE TO THE PRIORITIZED CATEGORIES AND RAW MATERIALS

INTERNAL RISK SOURCES

BUSINESS-RELATED RISK SOURCES

- Poor Financial Health
- Poor Management Vision
- High-Price Variability

OPERATIONAL RISK SOURCES

- Flexibility Constraints
- Capacity Constraints
- Quality Problems
- Poor Inventory Management
- High Cycle-Time Variability
- Shipping and Distribution Distance plus Methods
- Insufficient Safety Measures

EXTERNAL RISK SOURCES

GEOPOLITICAL RISK SOURCES

- Natural Disasters
- Currency and Exchange Rate Fluctuations/Economic Stability
- Political Stability of Region

COMPLIANCE

- Labor, Health & Safety
- Regulatory & Legal
- Environmental
- Audit Failures
- Certifications

MARKET RISK SOURCES

- Wages
- Commodity Fluctuations
- Marketing Constraints
- Low Number of Qualified Suppliers
- Multitier Sourcing

Probability and impact analysis help in identifying risk areas which require the most attention

1. SUPPLY CHAIN MAPPING AND ANALYTICS

Not only COVID-19 has elevated the need for greater visibility of suppliers through all the tiers of the supply chain, as the outbreak has caused sequential disruption across the globe. Having active visibility of critical supply chain components, inter-dependencies, and data to properly assess potential operational and financial weaknesses is more crucial than ever before, to help plan and manage immediate contingencies and to create a more resilient supply chain in the longer-term.

Three key actions

1

Establish a central risk management and a task force, to leverage data analytics and to gather insight

To identify the immediate challenges of suppliers and third party service providers and assess their impact on the business.

2

Perform a mapping exercise and risk assessment across all categories, tiers of suppliers and third-party service providers

Establish a criticality categorization to identify the immediate challenges of suppliers and third party service providers and assess their impact on the business.

3

Conduct scenario planning exercises









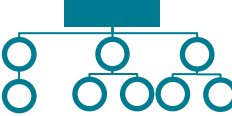



To understand the operational implications, both financial and operational, of various scenarios and identify mitigation options.

Details and where you could seek support

- Get support regarding our global intelligence and data analytics resources, partners can help you rapidly map the lower tiers of your supply chains, analysing both individual supplier and wider third party risks as well as the interdependencies between suppliers or third parties to fully understand the supply and service chain 'ecosystem'.
- Establish and monitor critical risk indicators, KPIs and market intelligence to ensure to keep track of supplier and third party service provider risk profiles and make timely optimal decisions.
- Try to monitor international exposure trends, restrictions and relief against your supply and service chain 'ecosystem'.
- Try to identify opportunities to improve operations across the supply and service chain 'ecosystem' through machine learning, advanced analytics and strategic visualisations.

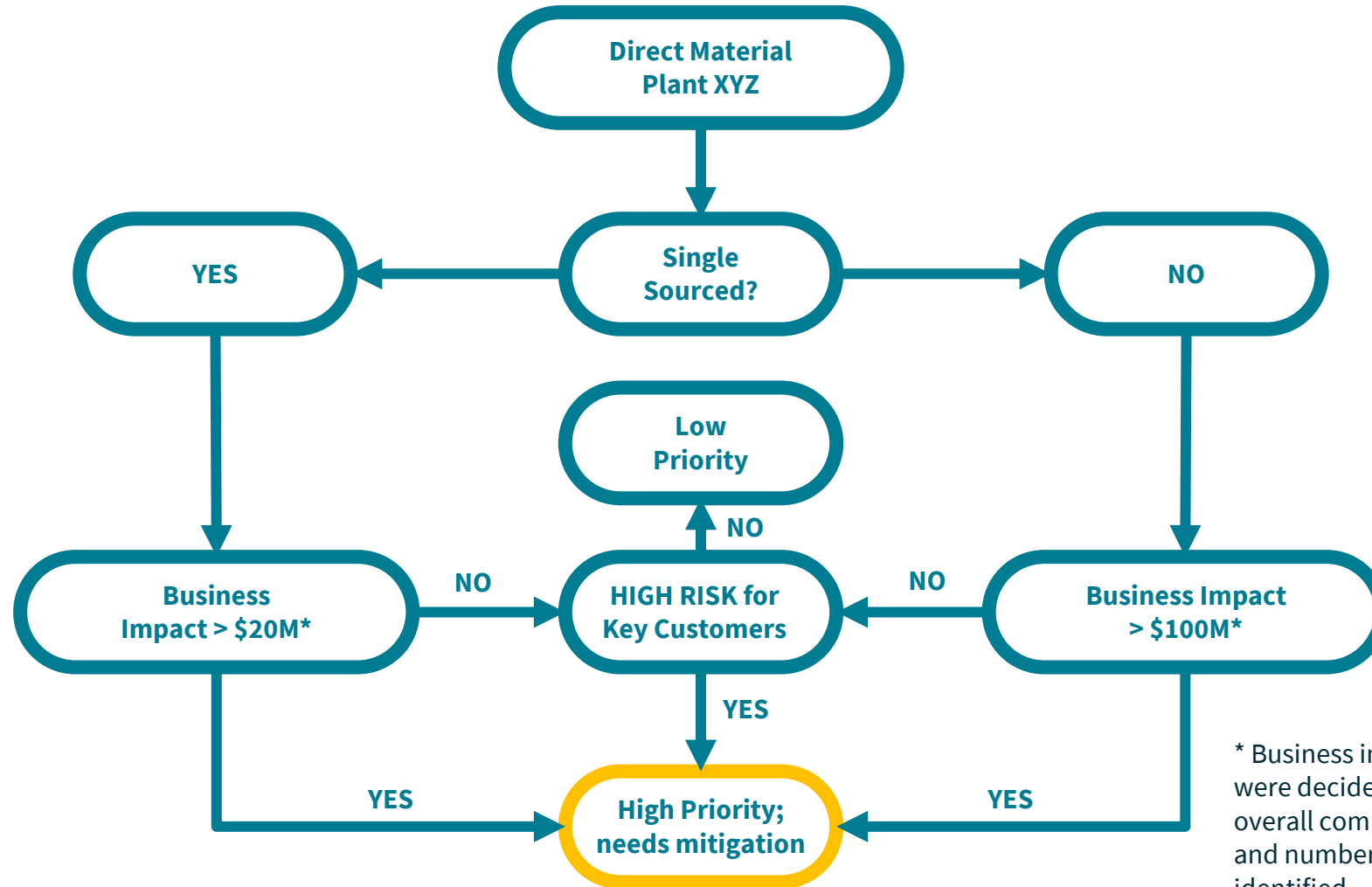
THE STRUCTURE OF SUPPLY CHAIN NETWORKS CAN CREATE OR REDUCE VULNERABILITY

Analyze your supplier structure in the most relevant categories in order to be clear about the risks and the changes necessary regarding your supply structure

	Creates Resilience		Invites Vulnerability	
Concentration Density of spending with top suppliers or in single geography		Lower likelihood that supplier disruption causes bottlenecks		Increases dependency on single suppliers
Substitutability Extent to which suppliers are sole source of component or input		Many substitutes Redundancies limit risk of disruption		No substitutes Higher likelihood that supplier disruption causes bottlenecks
Concentration Density of spending with top suppliers or in single geography		Supplier disruptions unlikely to affect full network		Supplier disruption can affect full network
Depth Layers of sub-tier suppliers		Increases ability to spot risk in subtiers		Lowers visibility into subtiers
Visibility Extent to which customer can trace spending at subtier level		Many subtiers known Transparency		Few subtiers known Lack of transparency
Dependence Sub-tier suppliers that are highly dependent on one customer or are SMEs		Decreases likelihood subtier is vulnerable to financial shocks		Higher subtier vulnerability to financial shocks

SEGMENT AND PRIORITIZE THE CRITICAL RAW MATERIALS BASED ON IDENTIFIED CRITERIA

Segmentation can be done by site, cluster of sites, region, etc. Define the thresholds for criteria.



* Business impact thresholds were decided on the basis of overall company revenues and number of critical SKUs identified

2. LOGISTICS AND SECURITY

The sudden and unprecedented change in demand and supply is creating significant logistical and security challenges. Impacts include difficulties or inability to get components and end-products to their destination; shortages of supply of specialist drivers; delays in maintenance and servicing of vehicles and shortages of specialist equipment to deliver goods where needed; and rises in theft and/or loss of product. After this initial crisis phase it will be crucial to manage logistics dynamically to ensure that capacity is appropriately balanced throughout the network.

Three key actions

1

Model the existing logistics network to understand constraints

From a volume and value perspective, including recognizing any unique channel requirements and agreed service levels, displaced transportation, border restrictions and freight bottlenecks.

2

Review physical security threats, vulnerabilities and controls

Understand current crime trends and consider how high value assets will be secured and insider and external threat mitigated.

3

Identify opportunities to mitigate risks to delivery

Model different logistics scenarios to understand the trade offs between cost, service and inventory.

Details and where you could seek support

- Use a Logistics Value Dashboard tool to:
 - ✓ Understand current logistics network from a volume and value perspective
 - ✓ Evaluate different logistics scenarios and understand the cost, service and inventory trade offs
 - ✓ Identify opportunities for logistics cost, service and flexibility improvements through analytics
 - ✓ Provide benchmarking, spend profiling, and opportunity analyses
 - ✓ Prioritize cost, service and flexibility
- **Deliver an accelerated physical security review focusing** on new vulnerabilities introduced through adaptations of supply chain and changing local market conditions.

3. DISTRIBUTORS, AGENTS AND RESELLERS

Unprecedented shifts in demand for certain products and raw materials, and stocks of certain crucial items running low, requires consideration of how to control third party behaviors around pricing. Ethical, legal and reputational risks arising from accelerated onboarding and contracting with distributors need to be managed.

Three key actions

- 1 Review contract tenure with third parties**
Consider options to move to shorter term contracts with distributors (three to six months) to reduce the at-risk period from third party behaviors in pricing decisions when stocks are low and demand is high.
- 2 Enhance remote transactional and performance monitoring**
Particularly where distributors deal with public officials or operate across borders and are responsible for import / export.
- 3 Enhanced oversight of Public Tender responses**
Introduce review and pre-approval procedures for tender responses by distributors, to monitor commercial propositions (prevent excessive price inflation) and collusion between payor and distributor (e.g. through exclusive product or service specification in the tender document).

Details and where you could seek support

- Accelerated enhanced desk-top due diligence services to enable new distributors or agents to go live more quickly.
- Social media surveillance to monitor commentary on individual distributors by regulators, competitors, customers and employees.
- Data analytics over transactions between the primary client and the distribution channel to identify indicators of pricing irregularities, channel stuffing or illicit trading.
- Remote third-party monitoring; document review, third party management interviews, and limited remote sample testing to provide observations on third party's risk awareness and control framework (ethical, regulatory, financial), and reinforce primary client's contractual oversight.
- Digital third-party induction and training mechanisms to enable faster delivery and simplify monitoring of training completion.
- Contract review and negotiation.

4. CRITICAL LABOR AVAILABILITY IN THE SUPPLY AND SERVICE CHAIN ECOSYSTEM

Supply Chain disruptions can affect both availability of workers and their ability to travel to work in some locations; companies are assessing strategies to deploy temporary workers for some roles and automate or use technology for others. Difficulties are arising in contingencies for specialist skills. Labor rights, working conditions may be open to abuse / increased risk of modern slavery.

Three key actions

1

Assess workforce requirements

Identify key roles within the supply and service chain ecosystem and assess the impact of illness, stay at home, social distancing requirements and travel restrictions on the ability to secure the workers required to sustain operations and services. This may also include assessing channel partners' staffing.

2

Identify shortfalls and develop alternatives

Develop plans for maintaining critical functionality for roles identified as key and impacted by the crisis. This may include alternative worker arrangements and the use of automation to extend the capacity and capabilities of available staff.

3

Execute and evaluate longer term opportunities

Commence execution while exploring the potential for longer term benefits involving Supply Chain 4.0 opportunities for technologies such as VR.

Details and where you could seek support

- Provide an intermediary service between organizations observing stretch in resource demands and those with a surplus capacity.
- Adoption of smart supply chain planning solutions (demand sensing) reducing time burden of key personnel.
- Targeted application of AI and RPA technologies on transactions / repeatable tasks to relieve stretched workforce.
- Stand-up the technology to support virtual and augmented reality solutions and other simulators to facilitate remote equipment set-up, calibration and maintenance.
- Help assess and mitigate tax risks associated with people working from home or outside of their normal location.
- Technology enabled role and skills identification and the identification of populations to reskill and redeploy.
- Identify roles or areas of work within roles which could be automated and work to redesign roles and retrain employees accordingly.

5. FINANCIAL HEALTH OF SUPPLIERS AND THIRD-PARTY SERVICE PROVIDERS

Shocks to the supply and service chain ‘ecosystem’ are already resulting in significant effort for companies, including those from: missed sales opportunities; increased direct costs from supplier pass through or re-sourcing at short notice; reputational damage from failure to service demand; quality costs from rushed or shortcut delivery and excessive time management spent on managing crisis.

Three key actions

1

Increase control over disruptions in your supply and service chain ‘ecosystem’ and your ability to proactively mitigate risk

Agility in responding to continuously changing developments and awareness of changes is key. These then need to be acted upon rapidly.

2

Embed an improved supplier and third-party risk management framework across the business

Rapidly revisit and bolster the risk management framework for suppliers and third-party service providers, creating (amongst others) improved visibility on their financial health, operations and business continuity risks.

3

Proactively address critical concerns by facilitating better and automated communications with suppliers and other third parties

Ongoing dialogue across your suppliers and third-party service providers is critical, so consider how to facilitate and automate real time dialogue with them to proactively address critical concerns and continuously assess the situation.

Details and where you could seek support

- Undertake a rapid risk assessment of your end-to-end supply and service chain ‘ecosystem’ commencing with an initial review of the top categories and most critical suppliers or providers, then establish consistent methodology suitable to assess vulnerability and resilience of the full supply or service chain.
- Try to maintain an up-to-date view of the financial, as well as operational position of critical suppliers and third-party service providers, through our access to a variety of information and intelligence tools (both external and internal).
- Increase financial support including (early) payment acceleration (SCF) or cash injections through corporate for your critical suppliers or third-party service providers, either to ensure supply chain continuity or to have the ability to cope with temporary increase in demand.
- Minimize unplanned reactive costs such as finding alternative suppliers or third-party service providers at short notice.
- Support the day-to-day operations of procurement function and increase process-automatization.
- Improve the continuity of supply through early warning systems and enhanced and automatized supplier and third-party service provider information.
- Provision of augmented resources to deal with immediate critical issues.

6. DIGITAL OPERATIONS AND CYBER SECURITY

Increasing likelihood and impact of cyber attacks may cause cyber security good practices to fall by the wayside as organizations become more technology dependent than ever. Attackers exploit uncertainty, unprecedented situations, and rapid IT and organizational change. Responding to these issues will serve in the long-run as remote working and digital operations become more widespread across all sectors.

Three key actions

- 1 Secure their newly implemented remote working practices**
 - Ensure remote access systems are fully patched and securely configured.
 - Ensure on-premise security controls still apply to systems when they are not on the internal network.
 - Monitor and react to issues encountered by remote workers.
- 2 Ensure the continuity of critical security functions**
 - Prioritize reducing reliance on people, as well as maximizing the use of process and technology to perform key cyber security tasks.
 - Update incident response plans and playbooks to ensure they function with a workforce primarily working remotely.
 - Review how privileged users are going to perform administration.
- 3 Counter opportunistic threats that may be looking to take advantage of the situation**
 - Mitigate the increased risk of insider threats in the event of redundancy or termination.
 - Provide specific guidance to employees to be extra vigilant when it comes to requests for personal or financial information or money.

Details and where you could seek support

- Analyze in detail the weaknesses of your digital operations in your value chain.
- Ensure senior leadership is informed and supported when making critical decisions about IT and security.
- Deploy a clear strategy and implementation plan to protect against, detect and respond to cyber attacks.
- Manage rapid IT change and securely architect new remote working practices.
- Ensure detection and response capabilities remain effective despite new ways of working.
- Rapidly implement technical security controls to protect against cyber attacks.

7. ENVIRONMENTAL, SOCIAL, GOVERNANCE AND REGULATORY COMPLIANCE

No only COVID-19 has disturbed the steady state of compliance, with rapid onboarding of third parties in the supply and distribution channels, and further flexibility needed to respond to changing volumes and demand. Yet fraud risk has risen, regulators remain active and there is the European Supply Chain Act on its way. Those who neglect ESG responsibilities now may face customer hostility later and find themselves the subject of regulatory investigation when the crisis has passed.

Three key actions

1

Ensure compliance remains active, visible and assertive to new risks

Refresh risk assessment to take account of new risks and ensure compliance focus on these areas. Reinforce ethics and values in communications and focus on business-critical compliance activities.

2

Invest now into automated and digitized communication and documentation

Ensure business justification is documented to avoid delays.

3

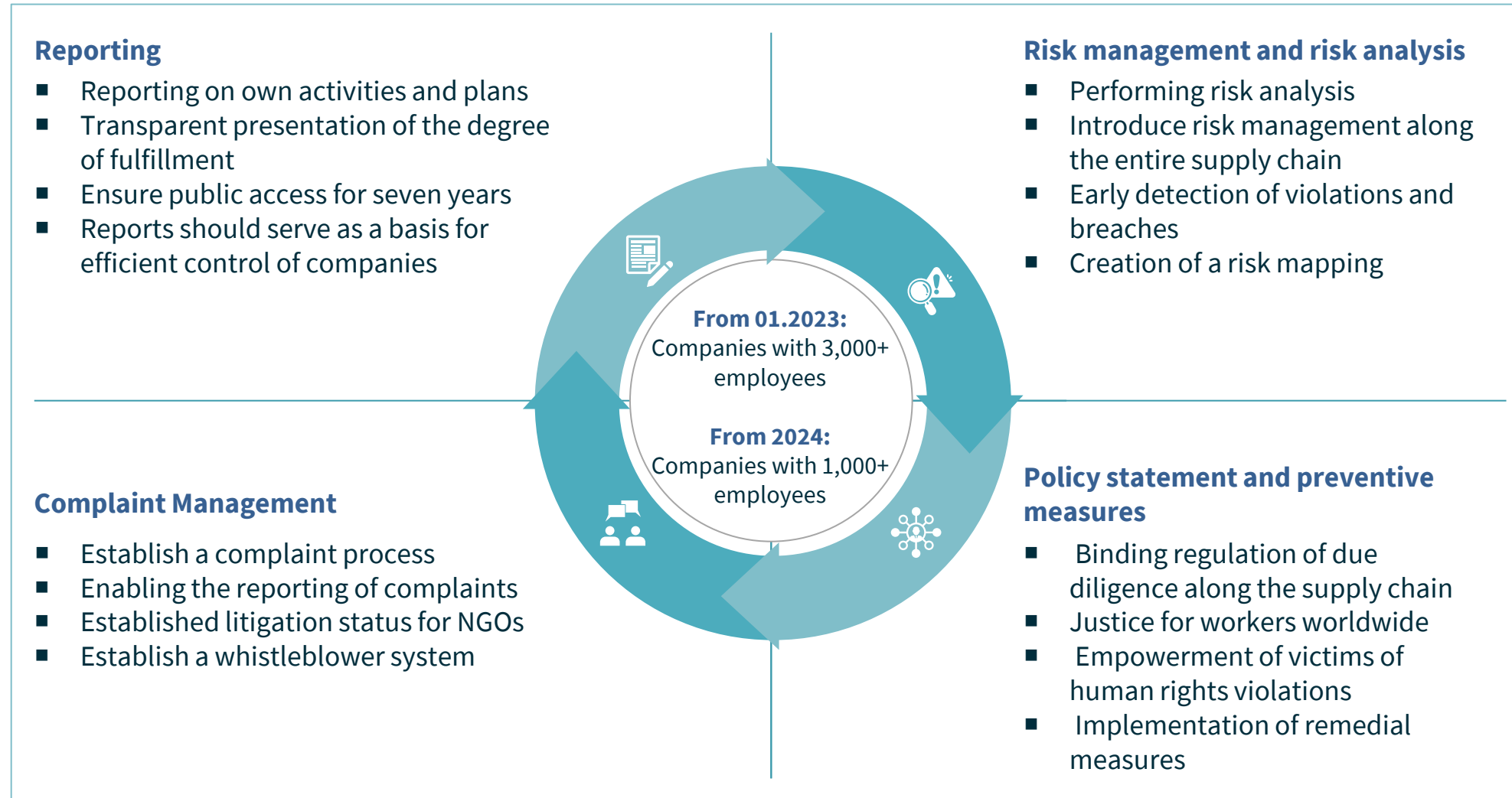
Leverage technology and any extra capacity to support your response

Use technology and any available human resources to support rapid onboarding and automatization of third-party suppliers and distributors and due diligence.

Details and where you could seek support

- Scanning your goods and services supply chain to identify where disruptions could place additional stresses on ESG performance and regulatory compliance (e.g. maintaining compliance with modern slavery and anti-corruption requirements).
- Reviewing your ESG supplier and third-party service provider selection and onboarding policies and processes to determine how they could be adapted for sourcing during supply disruptions (e.g. to identify those requirements that are critical to maintaining compliance and protecting your reputation).
- Using an outsourcing model to facilitate a rapid third-party onboarding process by reviewing new suppliers' and third-party service providers' ESG practices, undertaking integrity and anti-corruption due diligence, and training new suppliers and providers on critical ESG requirements.
- Use supply chain scanning tools to provide live monitoring of ESG and regulatory compliance performance of new suppliers.
- Incorporate ESG requirements into contracts or codes of conduct.
- Leverage remote auditing technology to continue with supplier monitoring and assurance programmes.

Major requirements to be fulfilled by SCM Organizations



European Supply Chain Act is announced to be more strict than the German version

18 Unternehmen



EU-Lieferkettengesetz

Mittelstand fürchtet schärfere Kontrollpflichten

Die EU-Kommission legt diesen Mittwoch ihren Plan eines europaweiten Lieferkettengesetzes vor. Darin enthalten sind auch Klagerrechte für Betroffene aus Afrika und Asien.

Christoph Schluhmann
Düsseldorf

In Anbete zu einem Termin der EU-Kommission klingt im ersten Moment beruhigend. Über „ein Paket für eine gerechte und nachhaltige Wirtschaft“ werde man am Mittwoch hören. „Aktive eine Mischung über nachhaltige Arbeit weltweit und nachhaltige Unternehmensführung“. Das Briefed für den März eine Freshworkforce in Aussicht stellt, was allerdings von höherer Relevanz. Verkünden wird die Kommission, so jedenfalls fürchten viele, einen gravierenden Eingriff in den Geschäftsbereich europäischer Unternehmen. Beobachter rechnen mit der Vorlage eines EU-Lieferkettengesetzes, das weit über die Bestimmungen der deutschen Regelungen hinausgeht. Diese hätte der Bundesrat vor dem Sommer verabschiedet.

Topflicher das Bundesgesetz ab kommenden Jahr Unternehmen mit mehr als 1000 Beschäftigten (1000 ab 2024), Lieferanten auf Menschenrechtsverletzungen und Umweltverstoße zu überprüfen, will Briefed der briten hinaus auch kleine und mittlere Firmen in die Pflicht nehmen. Eine weitere Verschärfung Beschränkt auf die deutsche Gesetz bei Verstoßen auf Bußgelder, wenn auch in Höhe von bis zu zwei Prozent des Umsatzes, wird die EU-Kommission womöglich weitergeben. Sie will Betroffenen etwa in

Starke Bedenken der Wirtschaft

Welche Auswirkungen deutsche Unternehmen durch das Lieferkettengesetz fürchten, Antworten in Prozent der Befragten

Hohe Verwaltungskosten	91%
Beschäftigung kleinerer Unternehmen*	86%
Wettbewerbsnachteil gegenüber Unternehmen aus Drittländern	86%
Haftung für unvorhersehbare Schäden	80%
Schwerwiegende, prägnante Lieferkettensproben zu finden	58%
Absatz von Risikofaktoren/Nachfrage für Schwellenländer	55%

*) Unternehmen mit geringem Ressourcenpotential (10 bis 2000 Mitarbeiter) Quelle: IFA/Verbraucher

Daher ernstet der deutsche TÜV-Vorstand der deutschen Industrie erhebliche Versäumnisse, sollte wenn es um die Vorbereitungen auf das milde deutsche Lieferkettengesetz geht. Zwei Drittel der Einzelhandelsbetriebe sortieren zwar seit Ausbruch der Coronapandemie ihre Lieferketten neu, fand eine beim Institut Fraunhofer in Auftrag gegebene Studie heraus. Aber nur 33 Prozent können sich um Nachhaltigkeitsaspekte bei der Beschaffung. Das demnächst Unklarheitsgefühl deckt sich mit einer im Januar veröffentlichten Studie der Wirtschaftskammer (GfK) von Westfalen (GfK). Die Hamburg Juristen ermitteln, dass von den zunächst 2900 deutschen Unternehmen, für die das Bundesgesetz gelten wird, sich lediglich 1000 in die Hilfe Kontrollen ihrer Lieferanten im Ausland vornehmen. Weiter Briefed die Zahl der sorgfältigen Firmen am Mittwoch auf den Mittelstand aus, wird die Lage prekär. Gerade einmal die Hälfte hat bislang überhaupt von dem 2021 beschlossenen Lieferkettensorgfaltspflichtengesetz gehört, wie der TÜV-Vorstand herausfand. Gespräch nach ist der Nachholbedarf. Auf Umwelt- oder Sozialstandards in den Lieferkettensystemen laut Umfrage heute gerade einmal 46 Prozent der Unternehmen. Nur sieben Prozent der insgesamt 100 befragten Firmen geben an, aufgrund von Menschenrechtsverletzungen oder Umweltschäden schon

Handelsblatt

DIENSTAG, 22. FEBRUAR 2022, NR. 37

len. Die Importeure gehen zu den wichtigsten Abschnitten der Plantagen im nordindischen Darjeeling, wo nach Angaben der Stiftung für Handelshilfe gearbeitet wird. Die von den Lieferanten gezahlten 2,25 Euro am Tag reichen für die Teeplantagen nicht zum Überleben, kritisierte die Studie. Im Juli 2020 landeten zudem Darjeeling-Mehrwertsteuer, darunter Abercrombie & Fitch, Adidas, H&M und auf einer schwarzen Liste von 100 Menschenrechtsorganisationen. Sie hätten Garne in der chinesischen Uiguren-Region erpackt, die in Arbeitslagern festgehalten würden. Die Güter, bei der Beschaffungsgen die Bestimmungen des Lieferkettengesetzes zu verstoßen, ist angesichts der Globalisierung erheblich. 24,9 Millionen Menschen, schätzt die Internationale Arbeitsorganisation (ILO), sind weltweit von Zwangsarbeit betroffen. Band en Viertel der mordernen Südeuropäer seien Kinder. Das Risiko dabei, selber die 48 Prozent der deutschen Unternehmen, die sich von Lieferanten konkrete Informationen lassen, kontrollieren sie zum Teil zu hoch. Das Viertel von ihnen geben laut Kolping. Gespräch mit Lieferanten beziehungsweise Lieferanten-Fragebogen an, 47 Prozent holen nach eigenen Bekunden „Schuldtigungen des Lieferanten“ ein.

Nur 19 Prozent der deutschen Firmenverantwortlichen berichten, ihre Lieferanten tatsächlich zu auditieren oder persönlich zu besuchen. Ein Viertel von ihnen verlässt sich laut der Studie (GfK) darauf, Dienstleister wie Tiv Nord, Tiv Süd, Hans-Comet oder die Auditoren-Pufferfirma SGS für die Audits im Ausland zu entscheiden. Die Kennenmäßigkeit scheint demnach groß, dass andere, darin bereits ein neues Geschäftsmodell erkennen, die Verfahren noch nicht eröffnet, sind ein ausländische Verzerrungssystem des Importeurs, so schweide die Bundesregierung vor, soll mit Dienstleistungen Handlungen beispielsweise die Teepflanzung durchzuführen, dringt von Aufträgen in Deutschland. Am FC dabei kann der Einkaufsleiter seinen Kundenstamm in Echtzeit

auffordern, selber an den Plücker bereitzustellen. Per Kamera ist so zu ermitteln, ob es sich um Kinderarbeit handelt. Auch die Liste der geringsten Erzeugnisse ließe sich auf diese Weise direkt auf der Plantage per Screenshot dokumentieren. Wo es in welchen Ländern und Branchen die größten Sozial- und Umweltprobleme gebe, die es vertieft zu prüfen gilt, soll künftig Künstliche Intelligenz entscheiden. Angesichts solcher Herausforderungen hält sich die Regierung der deutschen Wirtschaft über das Lieferkettengesetz in Grenzen. 91 Prozent der Firmen befürchten hohe Verwaltungskosten, ermittelte der TÜV-Vorband, 86 Prozent einen Wettbewerbsnachteil gegenüber Drittländern. Zudem glauben 86 Prozent, dass die Suche nach geeigneten Lieferanten dadurch erschwert wird. „Grande kleinen und mittelständlichen Unternehmen fällt es schwer, die Einhaltung sozialer und ökologischer Standards in der dritten, vierten oder fünften Stufe ihrer Lieferkette zu überprüfen“, weist Joachim Bähler, Geschäftsführer des TÜV-Verbands, Doch die Zahl der Unternehmen ist weitaus größer als vermutet. 84 Prozent der befragten Firmen begreifen grundsätzlich klar definierte Sorgfaltspflichten entlang der Lieferketten. So gar für die verschiedenen Regeln, wie sie der EU-Kommission verschweben, setzen sich einige von ihnen ein. Darunter die Controllingfirma Hapag-Lloyd. „Menschenrechte und Umweltschutz über den gesamten Produkt“, begründete ein Sprecher auf Anfrage der Rechercheur wie 200 Beschäftigten unterzeichnete sogar einen Aufruf der Business & Human Rights Resource Centre, der die strengeren Regeln der EU-Kommission unterstützt – inklusive der zivilrechtlichen Haftung. Neben rund 100 weiteren Unternehmen ebenfalls an Board: Euron, Ericsson, Danone und Ikea. Die schwedische Mobilfunk-Indie könnte sich damit selber in Bedrohung befinden. Eine internationale Bürgerinitiative will Ikea-Lieferanten aktuell das Radio in manchen Wäldern und unethischen Produktionsbedingungen in Bulgarien festhalten können.

33

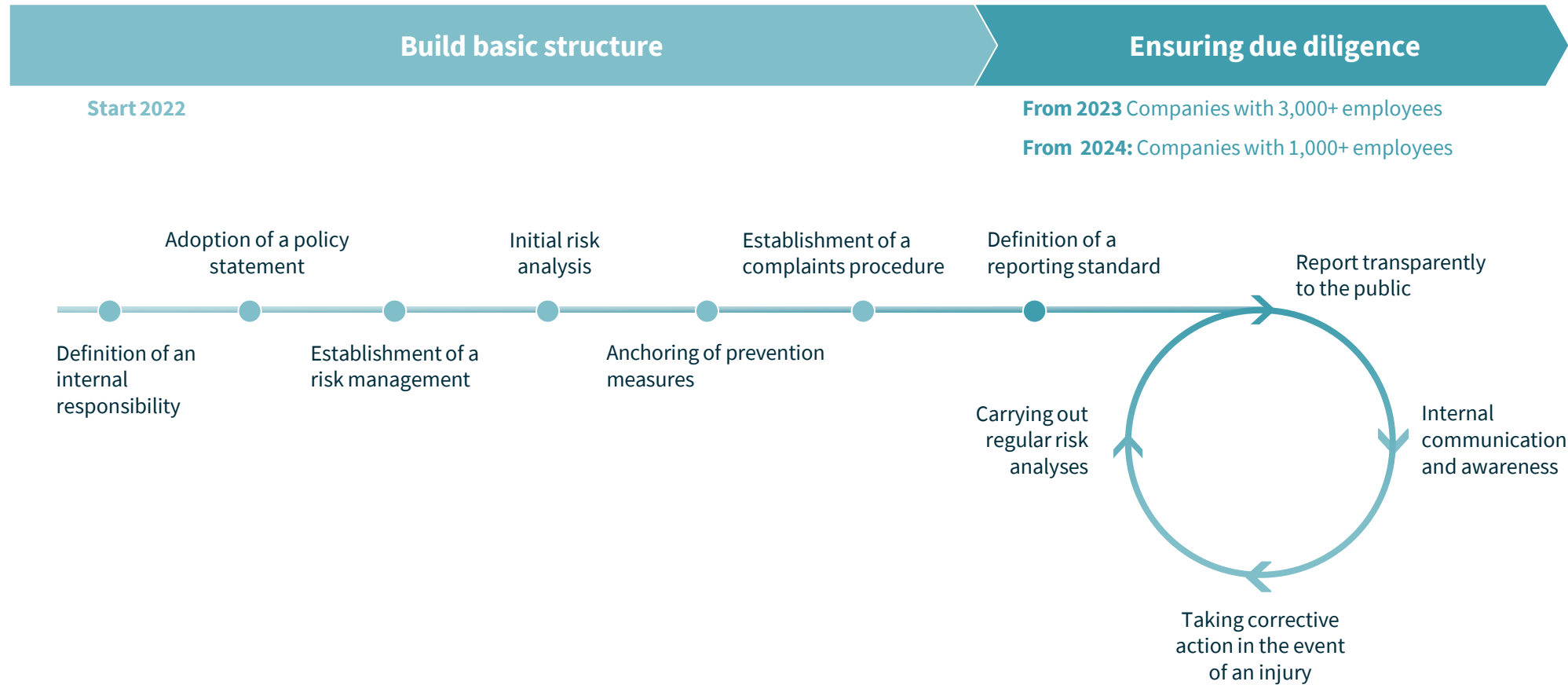
Prozent der befragten Unternehmen erwarten sich um Nachhaltigkeitsaspekte bei der Beschaffung

- German supply chain act as blue print
- For companies with > 500 employees
- High risk companies > 250 employees (textile, wood, farming industry)

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Major steps to be taken by SCM Organizations to accomplish German Supply Chain Act



8. CONTRACT AND COMMERCIAL

Disruptions are leading companies to re-evaluate the contractual terms they have with their customers, suppliers and other commercial partners. In order to do this, they need to have ready access to all contract and commercial agreements, to identify the key terms that pose risk or opportunity to them.

Three key actions

- 1 Mapping Contracts**
Understanding who you have contracts with (in and out), interdependencies, JVs and build central database of contracts.
- 2 Identifying key contractual provisions**
Enhance contract management, contract compliance monitoring and cost reduction programmes by using technology to increase coverage, target resources and enhance insights. Deep dive into common terms, break clauses, terminations, notification periods and anti-competitive prohibitions.
- 3 Action plan and on-going contract management**
Build a plan to address any risk areas identified in key actions 1 & 2 above. Proactively engage counterparts as appropriate and consider implementing contract lifecycle management tools.

Details and where you could seek support

- Use AI technology tools to:
 - ✓ Digitize your contracts to develop a central contract database
 - ✓ Automatically review your contracts for compliance with standard terms
 - ✓ Capture commercial obligations and track performance by combining commercial transactional data (e.g. spend, invoices with contract terms and clauses)
 - ✓ Identify contracts which are most at risk of value leakage and maximize impact of cost reduction programmes
- Implement the required steps to be used also remotely to enhance contract accessibility and analysis.
- Implement automatic reminders for negotiating or imposing temporary or permanent changes to contracts, including exercising step-in or suspension rights, terminations, price adjustments.

9. CLAIMS AND LOSSES

Although there is ambiguity over whether force majeure clauses will apply with recent disruptions in the supply and service chain ‘ecosystem’, companies need to be considering the mechanisms to recover loss (both in-bound and out-bound claims) as a result of such disruption. Whilst the actual mechanism for recovery may be unclear, there are important steps for companies to take now to support future claims.

Three key actions

1

Identify contracts at risk of failure or delay as a result of a critical situation and examine the relevant terms in relation to the right to, and basis for, compensation

Prioritizing contracts which have the biggest impact on supply and service chain ‘ecosystem’ and are most at risk from non-delivery.

2

Understand the information required to support and substantiate any future claim(s) and the timelines around any such claims

Following the prescribed procedures to make sure that the steps are effective and enforceable.

3

Identify the relevant sources of information required for the claim

Establish clear processes to capture and store the information required to support the loss.

Details and where you could seek support

- Provide expert guidance to help clarify the type and nature of information and documentation that be being captured. Forensically capture data to preserve key documents and decisions taken, to support future claims.
- Develop baseline position of current commercial performance and cost assessment to prepare for force majeure clauses being invoked.
- Ensure suppliers and third-party service providers don’t receive relief from pre-existing under performance or failure.
- Model how capacity constraints may impact a damages claim and border modelling of business impact and damages / loss.
- Assess the grounds for and value lost as a result of early or wrongful termination of a contract.
- Assess the scope for alleging breach of contract and indirect consequential losses arising as a result of an alleged breach of contract.
- Guidance and representation in invoking or defending against contractual processes, such as force majeure, material adverse change or termination rights
- Assistance with any disputes that arise.

10. TAX AND CUSTOMS

Disruptions caused recently including ailing or increased customer demand, changes to physical supply chains, the onboarding of new suppliers / supplier locations and the consequent contractual documentation will drive a number of tax and customs consequences that need to be proactively assessed in order to mitigate risks. The incidence of indirect taxes can have a major impact on sourcing decisions and the way these decisions are made will also be relevant to where profits and losses arise through the supply chain, and in turn where tax and customs liabilities will arise.

Three key actions

1

Implement relevant emergency tax and customs measures introduced to support business and supply chains

Such as various EU and other international government announced tax payment deferrals.

2

Assess the indirect tax and customs risk and optimize authorizations / reliefs available

In order to mitigate unnecessary indirect tax and customs risk costs and/or avoid border delays. Understand critical duty clearances to keep products moving cross-border.

3

Identify areas of key resource constraint in undertaking daily indirect tax operation

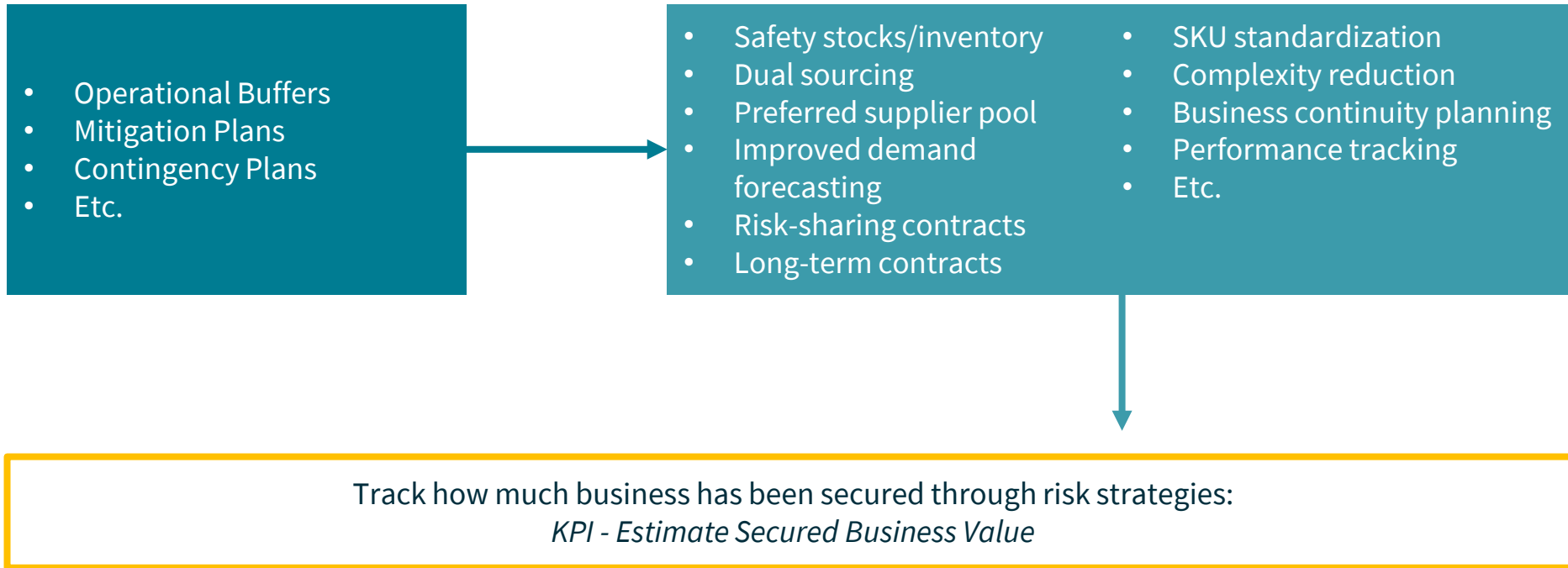
Such as customs declarations and wider compliance reporting (e.g. VAT reporting).

Details and where you could seek support

- Identify global emergency tax measures (e.g. tax payment deferrals) and the use of government wage relief schemes relevant to the business and its supply chains and assist implementation.
- Conduct tariff assessments and mitigation for changing supply chains, including support with border requirements for alternative products from varying trade routes. This includes modelling indirect tax and customs implications of varying trade routes using data analytics tools.
- Provide additional/surge resource for indirect tax and customs operations, incl. technical assessment and compliance.
- Review new contractual documentation to ensure it aligns with the desired indirect tax treatment and consequently minimize indirect tax and customs risk.
- Revisit internal contractual relationships and pricing to manage direct tax exposure and optimize cash flow.
- Review location of individuals working outside normal location to identify and help mitigate tax risks.

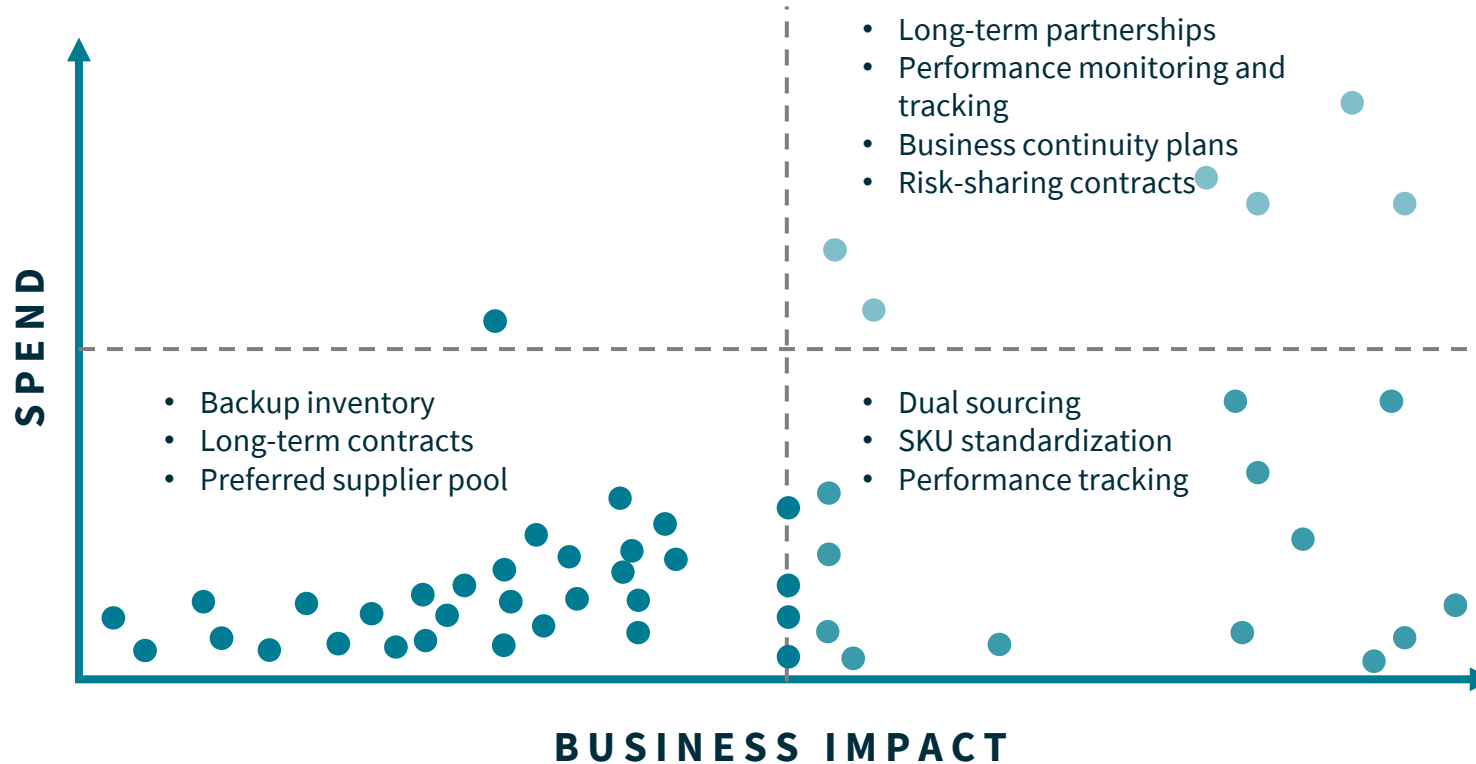
THERE ARE NUMEROUS STRATEGIES AVAILABLE FOR RISK REDUCTION

Evaluate the outcome of your risk reduction measures as a KPI



RISK REDUCTION STRATEGIES BY SPEND AND BUSINESS IMPACT

Visualization of the outcome of your risk reduction measures as a KPI



GENERATE RISK SCORES FOR CRITICAL SUPPLIERS TO ESTIMATE THE VALUE AT RISK

Risk exposure is defined as a measure of the magnitude of a risk

ESTIMATE THE VALUE AT RISK



SAMPLE RISK SCORE

RISK SOURCE	RISK METRIC	SCALE	WEIGHT	RISK RATING	
Low number of qualified sources	Single sourced? (In case of distributor?) /Only producer in the market? (e.g, patented)	Dual Sourced	XX	XX%	20%
		Sole sourced	XX		
		Single sourced & no alternates	XX		
Financial stability	Financial score	X-X	XX	XX%	20%
		X-X	XX		
Legal liability	XXX	Yes	XX	XX%	5%
		In Process			
		No			
Flexibility	XXXX	Multiple Plants	XX	XX%	20%
		Single Plant			
Lead times	XXXXX	LT < X week	XX	XX%	20%
		X week < LT < Y Weeks			
		LT > Y weeks			
Total Risk Exposure			75%		
Business Impact			\$ 50,000,000		
Value at Risk			\$ 37,500,000		

SPEND ANALYSIS – CATEGORY RISK & SUPPLIER NUMBERS VS. ATTRACTIVE SOURCING MARKETS

A spend analysis regarding risk and an implementation of major category strategies including risk factors helps to identify potential alternative sourcing markets

Product group	WG designation	Country	No. of suppliers	Qty articles	Risk assessment	EKV je WG/country	HS Code Analysis	Alternative Sourcing Countries
010	Laserbearbeitung					503.631,50 €	✓ done	Osteuropa, Türkei
011.02	Stahl-Profil					828.311,21 €	✓ done	China, Indien
015	Drehteile					2.900.500,43 €	✓ done	Osteuropa, China, Taiwan
015	Drehteile	China	1	3	3	8.441,53 €		
015	Drehteile	Polen	2	2	3	941,37 €		
016	Federn					1.178.261,66 €	✓ done	China, Taiwan, Osteuropa
017	Stanzteile					4.678.730,37 €	✓ done	Osteuropa, China, Taiwan, Vietnam
017	Stanzteile	Polen	4	56	2	985.170,33 €		
018	Kaltformteile					10.775.326,81 €	✓ done	Osteuropa, China, Taiwan
018	Kaltformteile	China	1	9	4	195.313,28 €		
018	Kaltformteile	Polen	3	8	3	24.171,00 €		
018	Kaltformteile	Slowenien	1	27	4	482.764,30 €		
019	Schmiedeteile					1.737.716,97 €	✓ done	Osteuropa, China, Taiwan
019	Schmiedeteile	China	1	7	3	28.700,94 €		
019	Schmiedeteile	Polen	2	5	3	44.436,30 €		
019	Schmiedeteile	Taiwan	1	13	4	1.576.222,80 €		
020	Laserbearbeitung V2A					711.822,53 €	✓ done	Osteuropa
021.02	Stahl-Profil V2A					1.004.685,12 €	✓ done	China, Indien
025	Drehteile V2A					788.119,18 €	✓ done	Osteuropa, China, Taiwan
025	Drehteile V2A	China	1	1	4	28.439,06 €		
026	Federn V2A					398.523,33 €	✓ done	
027	Stanzteile V2A					654.125,91 €	✓ done	
029	Kaltformteile V2A					340.304,09 €	✓ done	
029	Kaltformteile V2A	China	1	1	4	4.619,70 €		
029	Kaltformteile V2A	Slowenien	1	1	3	9.898,38 €		
031	Zinkdruckguss					28.224.918,66 €	✓ done	China, Taiwan, Osteuropa
031	Zinkdruckguss	China	1	2	4	17.319,40 €		
031	Zinkdruckguss	Polen	1	185	5	2.077.528,36 €		
031	Zinkdruckguss	Serbien	1	7	4	89.530,96 €		
042	Messingguss					2.318.648,78 €	✓ done	China, Indien, Osteuropa
042	Messingguss	Polen	1	2	3	53.439,72 €		
045	Sinterteile					282.098,42 €		
045	Sinterteile	Polen	1	1	3	1.894,20 €		
045	Sinterteile	Taiwan	1	9	3	180.280,77 €		
045.01	MIM-Teile					311.606,23 €		
046	Feinguss					2.137.880,68 €	✓ done	China, Taiwan, Osteuropa
046	Feinguss	China	3	87	2	1.497.636,69 €		
046	Feinguss	Polen	1	1	4	1.283,40 €		
046	Feinguss	Serbien	1	7	3	140.029,14 €		
046	Feinguss	Taiwan	1	13	4	496.305,40 €		
051	Alu-Profil					6.550.579,84 €	✓ done	China, Türkei, Osteuropa
051	Alu-Profil	Türkei	1	47	4	440.373,49 €		
051	Alu-Profil	Ungarn	1	129	3	2.595.198,97 €		
052	Alu-Zeichnungsteile					998.244,46 €	✓ done	Osteuropa, China

Category strategies including risk factors

Category	Observations	Initial Hypothesis	Consolidation	Supplier screening	Benchmark
Fabrications	High number of suppliers (83 suppliers), handling 6,972 SKUs, parts not matched to best suppliers, no hard negotiations, a lot of assembly in HCC, not too complex parts	Consolidate existing supply base, explore Supply Markets in Eastern Europe and Asia, get clarity of cost drivers, do €/kg benchmarks, frame contracts with core suppliers, implement penalties for delayed deliveries / Quality Problems, get feedback from Suppliers on Design/Manufacturability improvements, Install Capacity Planning	●	◐	●
Machined Parts	High number of suppliers (90 suppliers), handling 3,327 SKUs, no matching and grouping of parts with the capable suppliers in terms of machining capabilities, no cost breakdown (material, machining, etc.)	Design/Manufacturability improvements, Install Capacity Planning	●	◐	●
Standard Electrical Parts	More than 1.825 Electrical Standard SKUs are handled with more than 3,397 POs, no catalogue buying in place	C parts management, install catalogue buying, reduce PO numbers for low value parts	●	◐	◐
Standard Mechanical Parts	More than 3,948 SKUs are handled with more than 3,277 POs, no catalogue buying in place		●	◐	◐

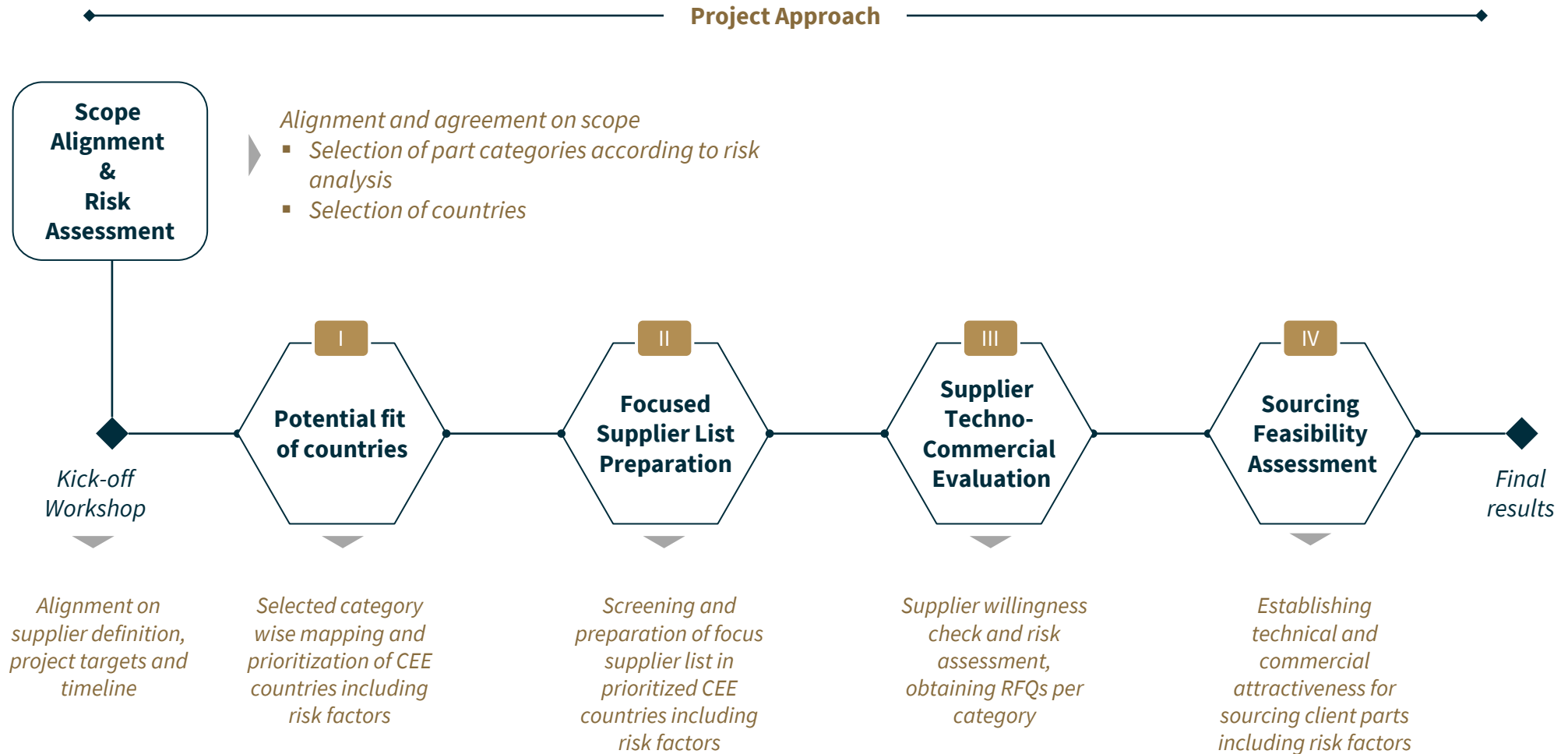
Country attractiveness, supply base indicators

Permanent magnets and articles of materials other than metal
Total world export in 2018 is 1.495872 Billion USD

No	Country	Exports in 2018 in USD Billions	Exports as a % of total world exports in 2018
1	China	0,42	28,1%
2	Germany	0,16	10,5%
3	Hong Kong, China	0,14	9,5%
4	Korea	0,13	9,0%
5	Japan	0,10	6,4%
6	US	0,06	4,2%
7	Philippines	0,06	3,9%
8	France	0,05	3,6%
9	Malaysia	0,04	2,9%
10	Italy	0,04	2,8%
11	Netherlands	0,03	2,0%
12	Turkey	0,03	1,8%
13	Thailand	0,03	1,7%
14	Israel	0,02	1,6%
15	Czech Republic	0,02	1,4%

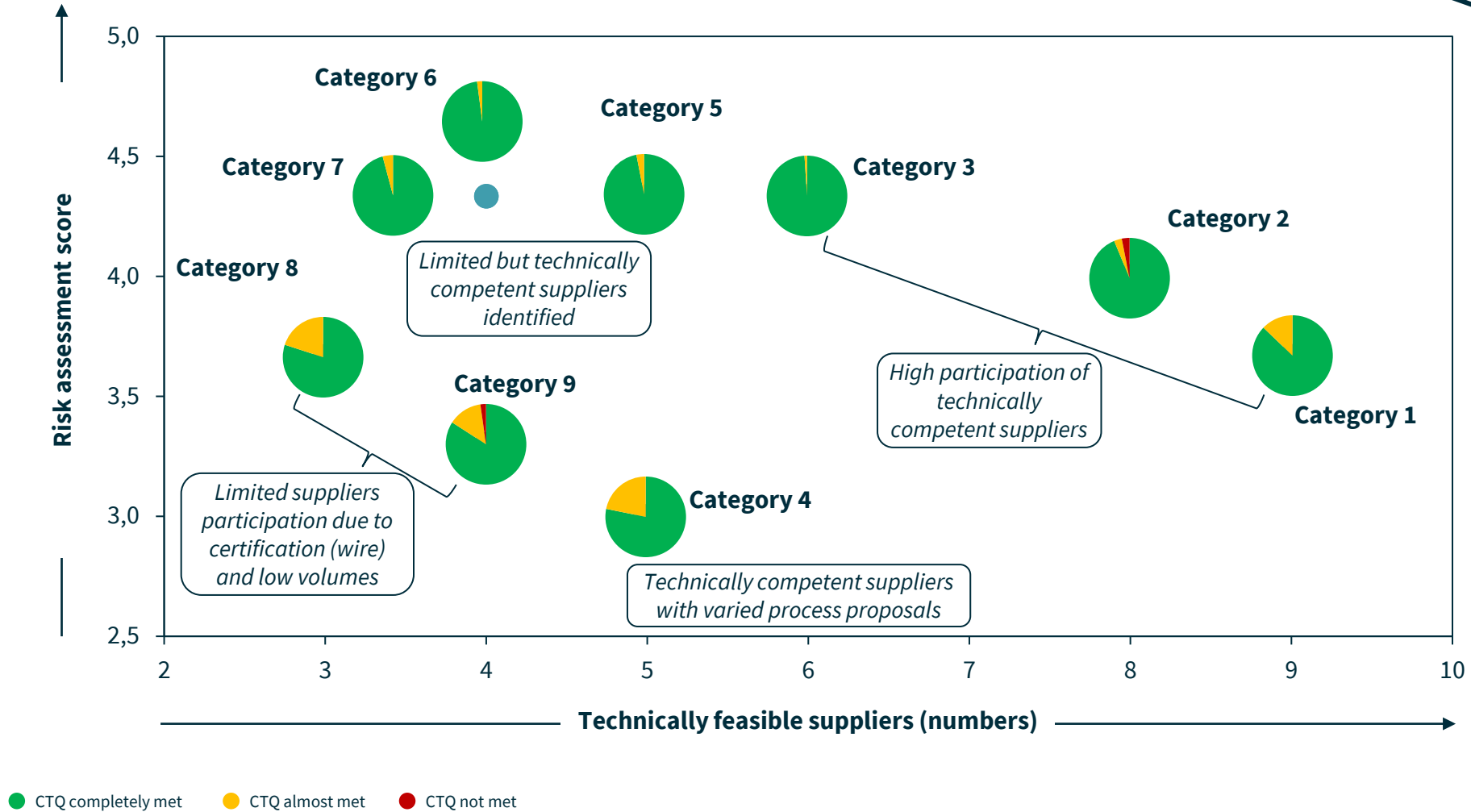
ALTERNATIVE SUPPLIER ENGAGEMENT CONCEPT

Modular approach to establish sourcing potential for Nearshoring in Central and Eastern Europe for high-risk categories



Techno and risk feasibility of the suppliers – category wise sourcing attractiveness to be assessed

EXAMPLE



SUPPLIER PRE-AUDIT AND EXPEDITING – EXPERIENCE

Audit result will also help to on-board and improve the supplier for future cooperation

Example

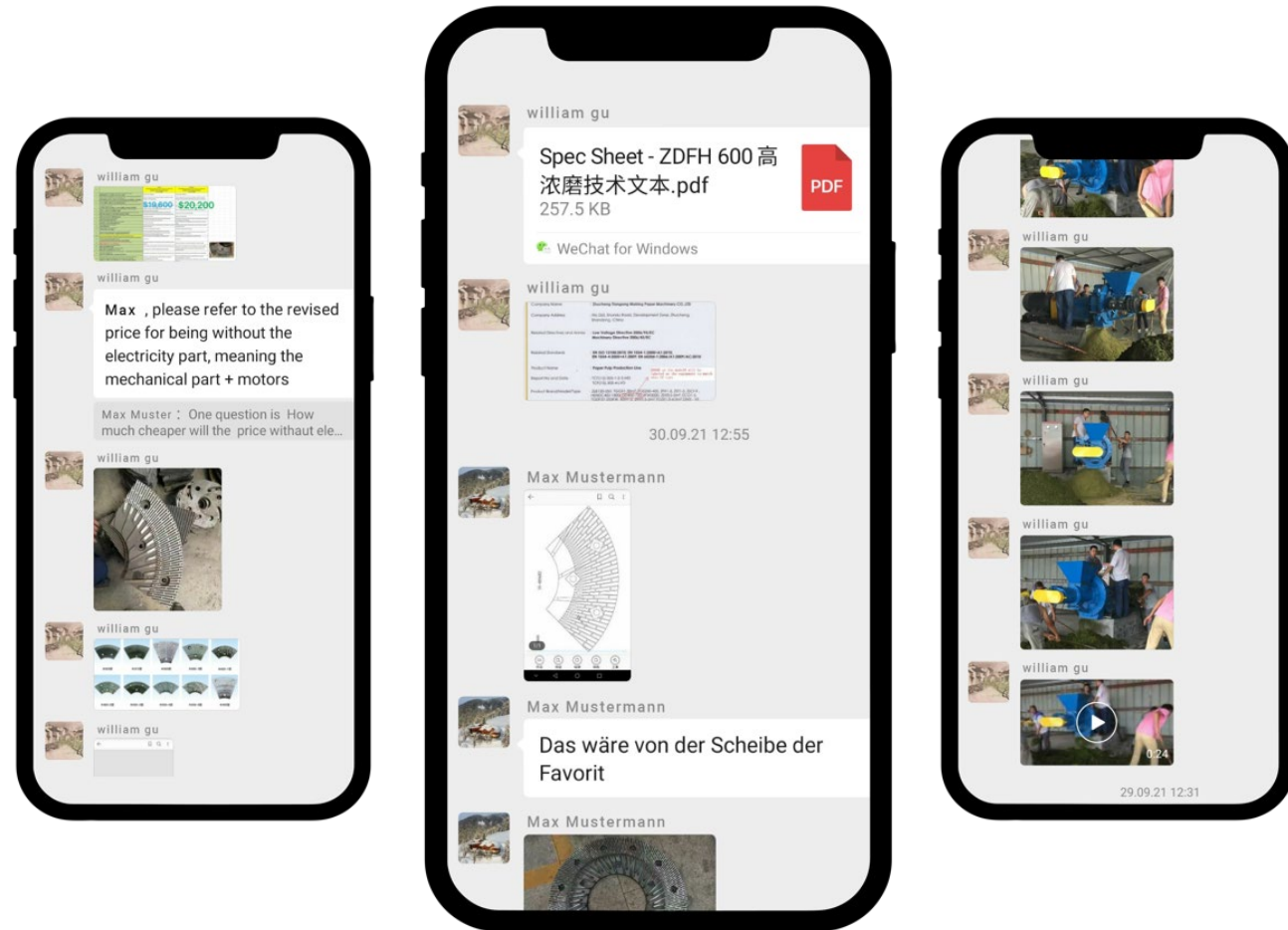
Comments	Workshop Impressions
<ul style="list-style-type: none"> Headcount: <ul style="list-style-type: none"> > 260 Equipment: <ul style="list-style-type: none"> > 5 Japanese, 122 local machines (87 Haitian HTF-200, 35 Chende CJ-80NCII) Production Scope: <ul style="list-style-type: none"> > Large and exterior parts in-house (70% of total plastic component demand) Visualization: <ul style="list-style-type: none"> > Yes 	
<p>Very large, clean and well-organized production site for key plastic components for relevant SDA's</p>	

Comments	Workshop Impressions
<ul style="list-style-type: none"> Headcount: <ul style="list-style-type: none"> > 250 Equipment: <ul style="list-style-type: none"> > 258 local machines (Guangdong/ Yangzhou Forging Equip. Co., Ltd.) Production Scope: <ul style="list-style-type: none"> > All metal parts for SDA (Mainly toaster and oven) Visualization: <ul style="list-style-type: none"> > Yes 	
<p>The work area was clean and safe and provided clear visual aids to employees</p>	

Warehouse	Relevant SDA Assembly

Quality Management	QC Impressions
<ul style="list-style-type: none"> Headcount: <ul style="list-style-type: none"> > 444 in total Equipment: <ul style="list-style-type: none"> > No information provided General applied AQL and sample sizes <ul style="list-style-type: none"> > Sample: S-2, S-3 <ul style="list-style-type: none"> - Critical: 0 - Major: 1.5 - Minor: 2.5 Life-cycle testing <ul style="list-style-type: none"> > Sample: Every 10,000th unit > Average: 3,000 cycles, can be extended to customer requirements 	

SUPPLIER VISITS WITH LIVE COMMUNICATION



SUPPLIER SHORT-LISTING – SELECTION PORTFOLIO

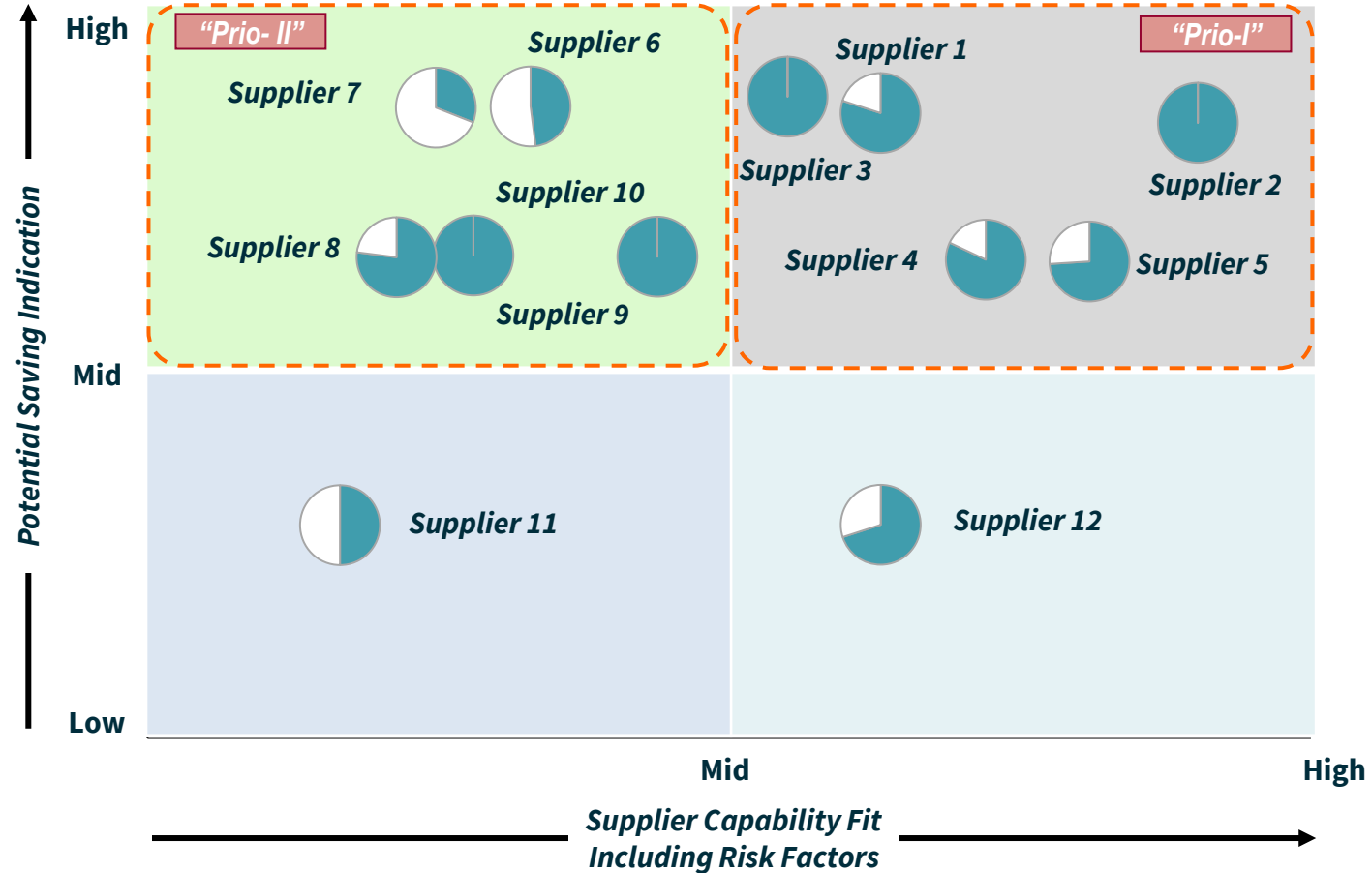
Identify best-fit suppliers based on supplier pre-audit; detailed results and supplier profiles to be presented to client in joint workshop

Case Study

Potential savings indication compared with current supplier

Supplier capability criteria

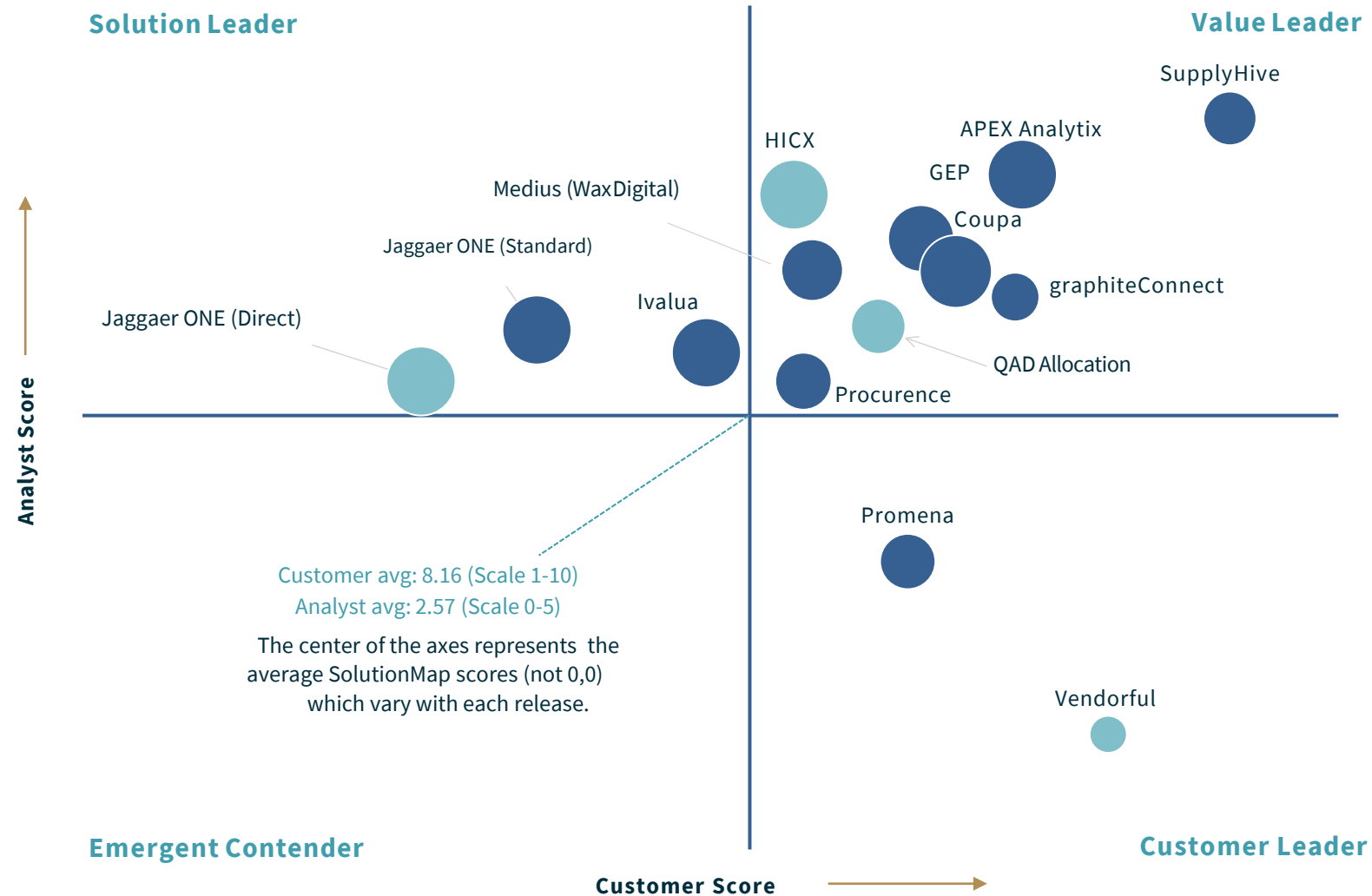
- **Product sourcing competence** – client relevant (30%)
- **Application fit** - client relevant (30%)
- **Standards and certifications** - client relevant (20%)
- **Risk factors** - client relevant (20%)



% Share of relevant sourcing component revenue in all products

SUPPLIER RELATIONSHIP AND RISK MANAGEMENT (SRM)

Overview of SRM solutions offering Risk Management Functionalities and Supplier Collaboration



Supplier Risk Management Solutions

Supplier Risk management solutions use data analytics and AI tools to provide real-time and predictive risk alerts across suppliers enabling effective supply chain management for companies

OVERVIEW

Digital cloud based software tools serving as a centralized platform for **tracking suppliers** across the complex supply chain network for individual supplier relationships and **assessment of risks and potential vulnerabilities** occurring due to financial, environmental, accidents, political and legal incidents

Key Features	Advantages
<ul style="list-style-type: none"> • Centralized Platform for assessment of risk across suppliers 	<ul style="list-style-type: none"> • Gaining supplier visibility and risk scores enabling companies to manage risks, plan and optimize supply chain
<ul style="list-style-type: none"> • Event monitoring through feeds from news, social media and other streams across the globe for any critical risks 	<ul style="list-style-type: none"> • Getting real-time and predictive risk alerts enabling companies to correct and achieve immediate supply chain continuity
<ul style="list-style-type: none"> • Data Analytics and AI engines for tracking of incidents and real-time reporting and predictions 	
<ul style="list-style-type: none"> • Customized interactive dashboards and supplier risk assessment-based scorecards 	

Supplier Risk Management Solution Examples



Supplier Audit Solutions

Supplier audit solutions help organizations to plan, conduct, report, score and assess risk of suppliers for any compliance risk and resolution of issues

Supplier Audit Solutions

- For companies in diverse industries, **periodic audits of internal operations and suppliers for compliances is important to conform with regulations** set by the authorities
- To enable organizations conduct supplier audits in a fast and effective way, software companies offer **digital audit solutions enabling early risk detection and resolution** of any compliance issues
- Solutions offer online/ offline ability, **mobile device compatibility** for access on the go, **dashboard creation** and **collaboration with suppliers** on a **centralized, configurable, cloud enabled system**

Key Features – Audit Solutions

Planning and Scheduling <ul style="list-style-type: none"> ▪ Plan audits and align auditor and supplier calendars 	Conducting Audits <ul style="list-style-type: none"> ▪ Checklist preparation, take notes, document findings, image record - all on the go 	Audit Report Generation <ul style="list-style-type: none"> ▪ Report template preparation, process information and generate report
Data Analysis and Scoring <ul style="list-style-type: none"> ▪ Data assessment for supplier performance, trend analysis, reporting and scorecard 	Risk Assessment <ul style="list-style-type: none"> ▪ Supplier process compliance, risk profile creation, highlight risks and review 	Auditee Response <ul style="list-style-type: none"> ▪ Share audit results and risks with auditee for review and providing relevant responses

Supplier Audit Solutions



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Lieferanten- Risikomanagement

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One step ahead of supply chain risks



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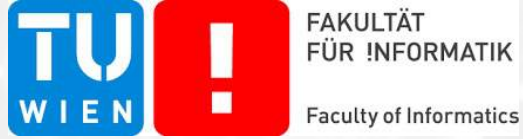
Gartner

**COOL
VENDOR
2021**

FUTURE



Spend Matters



Founded in 2017 as TU Wien „Spin-off“
Based on PhD Research from 2012-2017



Reference customers



100.000+

Suppliers
onboarded

3.000+

Active
Users

30+

Commodities &
Raw Materials

25

Employees
65% Engineering

Supply Chains have never been more complex and intrtransparent

Industrial companies today often source from:

1.000+
Suppliers

100+
Countries

50+
Commodities

Supplier Risk Management today

+90% of companies employ static risk management

How **clean** are my suppliers ?



**Code of Conducts,
Self Assessments & Audits**

How **stable** are my suppliers ?



**Financials &
Credit Reports**

Supplier Risk Management today

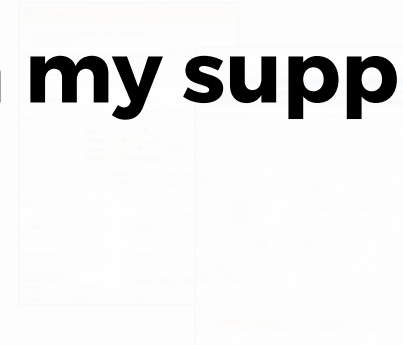
+90% of companies employ static risk management

How **clean** are my suppliers ?



**Code of Conducts,
Self Assessments & Audits**

How **stable** are my suppliers ?



**Financials &
Credit Reports**

What risks are really happening in my supply chain?

Disruption Risks



Labor Unrest



DEMI KESEJAHTERAAN WARGA
AKAN KAMI PERJUANGKAN
PAI TITIK DARAH PENGHASIS

HANYA
YANG
BOLEH

JANGAN BODOHKIN
WARGA KAMI !!!

PERLAKUKAN WARGA
KAWAN PERJUANG
NYA TITIK DARAH

1. Bapak Ridwan Yang Terima Warga Hanya Womera
Pengelolaan Limbah Daur S410 Sepenuhnya
Untuk Membantu Manamandisjahteraan Warga
Yang Selama Ini Bapak Kuasa
Tolong Ubah PT SAMI Serahkan kepada
Warga Secepat !!!
2. Kami PPB (Pegawai Pemuda Bugil) Bersama Warga
Siap Memperjuangkan Tanpa Balas Maksud Untuk Mengelola Limbah
PT SAMI Sepenuhnya Tanpa Melalui Pihak Ke Dua !!!

HANYA LI
NG KAM

2. Bapak Ridwan...
Selaku Warga Pribadi Juga Mendukung Perubahan Untuk Mengubah
Isi Perut Kami !!!
4. Selama Ini Kami Dan Bukan Kami...
karena Punya Warga Di Bawah Fungsinya Kami Tidak Berjuang
Maka Kami Harus Berjuang !!!

Disruption Risks



Industrial Accident



Sustainability Risks



Pollution



LACKING RISK AWARENESS HAS SERIOUS CONSEQUENCES



**Production
stoppages**

**10.000 - 100.000 \$
PER MINUTE**



**Supply Chain Act
Non-compliance**

**2% of
ANNUAL REVENUES**



**Reputational
damages**

**33% of
CUSTOMERS LOST**

THE DATA IS OUT THERE

Social Media usage rates are above 50% everywhere in the world

Social Media Penetration in 2018

64% Eastern Asia

55% Southeast Asia

63% South America

59% Central America

55% Middle East

Predicting supply chain & sustainability risks from global media data



**Social Media,
News, Blogs**
Global
& Multilingual
+50 languages



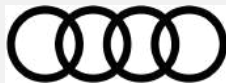
**Prewave
AI**

Based on 8 years
AI R&D



**Supply Chain & ESG
Risk Alerts**

Reference customers



Case study

科林环保技术有限责任公司



Insolvency of Kelin Environmental Equipment Co.Ltd.

First Prewave warning more than 2 months in advance



**Insolvent on
17 November 2018**

No English language news coverage

Case study

科林环保技术有限责任公司



Insolvency of Kelin Environmental Equipment Co.Ltd.

First Prewave warning more than 2 months in advance



Regulatory Shutdown happens

14 Sep
2018

Chinese source(s)

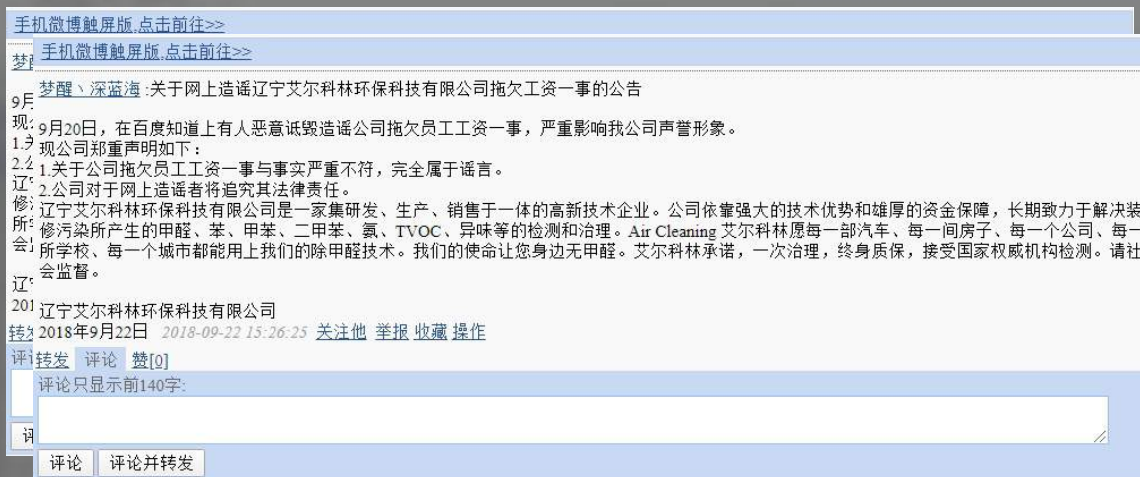


Insolvency of Kelin Environmental Equipment Co.Ltd.

First Prewave warning more than 2 months in advance



Chinese Social Media source(s)



The screenshot shows a Weibo post from user '梦醒、深蓝海' (Mengxing, Shendehai) dated September 20, 2018. The post title is '关于网上造谣辽宁艾尔科林环保科技有限公司拖欠工资一事的公告' (Announcement regarding the rumor on the internet about Kelin Environmental Equipment Co., Ltd. in Liaoning being in arrears of wages). The content states that on September 20, someone maliciously spread rumors on Baidu Know about the company's wage arrears, which severely damaged its reputation. The company makes a serious statement: 1. The rumor about wage arrears is completely false. 2. The company will pursue legal action against anyone who spreads rumors online. The post also includes a detailed description of the company's services and a commitment to quality and safety.

Case study

科林环保技术有限责任公司



Insolvency of Kelin Environmental Equipment Co.Ltd.

First Prewave warning more than 2 months in advance



100+ Risk Categories covered by Prewave



Predictable

Labor unrest



Predictable

Political unrest



Predictable

Financial Stress



Predictable

Legal Stress



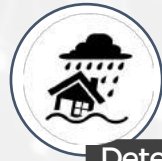
Detectable

Industrial Accidents



Detectable

CSR Incidents



Detectable

Natural Disasters



Detectable

Cyber Risks

Disruption Risks

Sustainability / ESG

Financial & Legal

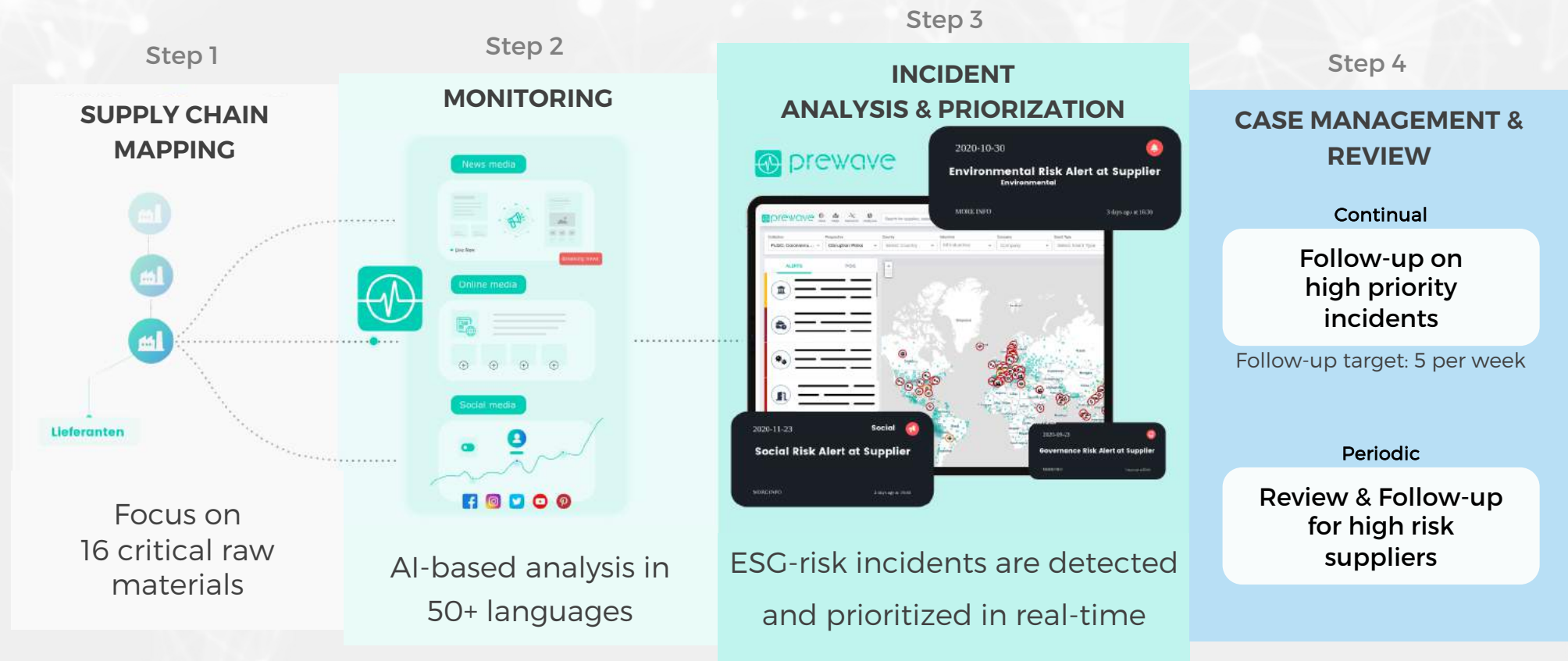
Together for more transparency

How Audi, Porsche and Volkswagen use Prewave Artificial Intelligence to minimise sustainability risks

5000+
Direct
Suppliers

1000+
Indirect
Suppliers

16
Critical Raw
Materials



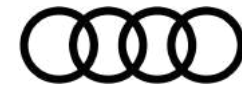
THE RESULTS SPEAK FOR THEMSELVES

Benchmarking Results

95% of cases
identified

50%
well in advance

„Prewave **enables us to find out about sustainability risks much earlier** on, so we can respond more quickly “



Marco Philippi
Head of Procurement Strategy
Audi

Benefit from the Network effect – 100.000+ suppliers already on Prewave

A. Supplier Monitoring

Prewave already covers 100.000+ direct & indirect suppliers

100.000+ Industrial Suppliers

10.000+ Raw & Processed Materials Suppliers

Chemicals, Plastics, Processed Metals, etc.

B. Commodity / Raw Material Monitoring

Prewave already covers the supply chains of 25+ Commodities & raw materials

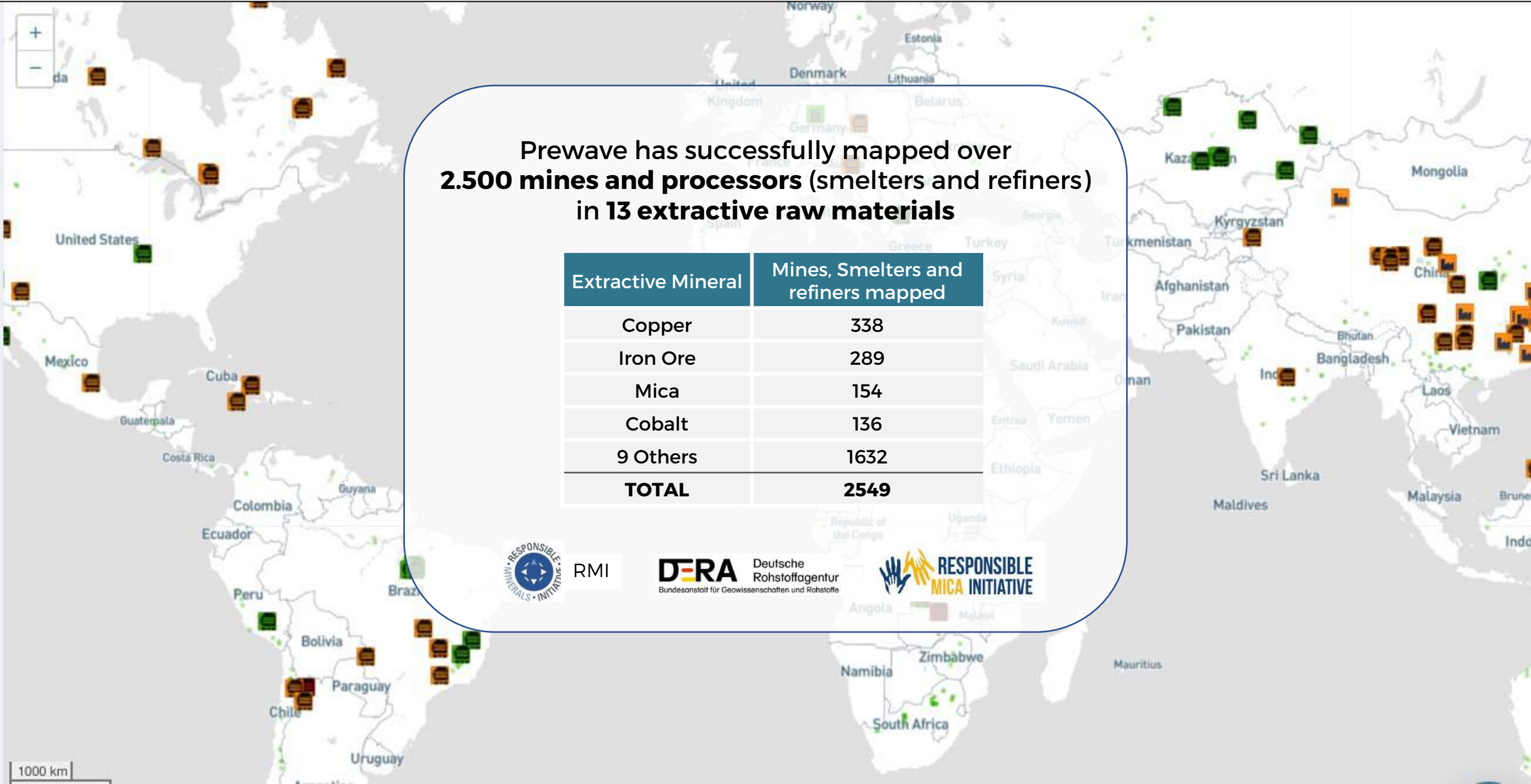
5.000+ Mines & Mining companies

300+ Copper Mines
50+ Cobalt Mines
All Mines of: Glencore, Codelco,....

25+ Commodities & Critical Materials

Cobalt, Bauxite, Mica, Leather, Lithium, Rubber, Rare Earths, etc..

NGO- / Partner-datasets



Prewave has successfully mapped over **2.500 mines and processors (smelters and refiners)** in **13 extractive raw materials**

Extractive Mineral	Mines, Smelters and refiners mapped
Copper	338
Iron Ore	289
Mica	154
Cobalt	136
9 Others	1632
TOTAL	2549



RMI



Multi-tier risk monitoring dashboard for the global semiconductor supply chain

Multi-tier mapping of the semiconductor supply chain

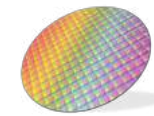
Tier-1



300+ Semiconductor device manufacturers



Tier-2



100+ Fabs & Foundries



Tier-3



50+ Wafer Factories



MULTI-TIER MAPPING

Semiconductor supply chain



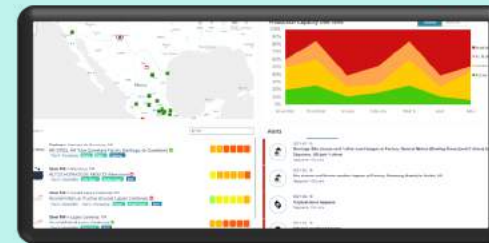
500+ companies & factories across all tiers

RISK MONITORING



Based on AI in 50+ languages and 100+ risk categories

RISK & CAPACITY IMPACT DASHBOARD



Instantly visualize the **risk & capacity impact** of any disruptions on the entire supply chain

Ukraine Suppliers Mapping

← ALERTS POIS

Steel Mill
ArcelorMittal Kryvyi Rih
Metals, Minerals • Kryvyi Rih, UA

Disruption status [Request update](#)
At risk
Connect with Supplier to view and request status updates

- 2022-03-01 **Protest/Demonstration and Labor demonstration happen at Factory:...**
Happens / Occurs in-company
- 2022-02-28 **Site closure announced at Steel Mill: ArcelorMittal Kryvyi Rih in Kryvyi Rih, UA**
Announcement / Broadcast direct
- 2022-02-27 **Labor strike stops at ArcelorMittal in Longueuil, CA (and 1 other)**
Terminates / Stops in-company
- 2022-02-28 **Labor strike happens at ArcelorMittal in Aviles, ES**
Happens / Occurs in-company
- 2022-02-27 **Labor strike stops at Factory: ArcelorMittal (Longueuil) (and 1 other) in...**
Terminates / Stops in-company
- 2022-02-24 **Site closure announced at ArcelorMittal in Ukraine, UA**
Announcement / Broadcast in-company
- 2022-02-24 **Military Conflict announced in Ukraine, UA**
Announcement / Broadcast regional

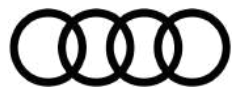
The map displays the geographical distribution of suppliers across Ukraine. Two callout boxes are present: one for LEONI Wiring Systems UA GmbH (Ivano-Frankivsk region) and another for ArcelorMittal Kryvyi Rih. The map includes major cities and regional boundaries, with a scale bar at the bottom left.

Tier-N Supply chain exposure analysis



Making tomorrow's supply chains more resilient and sustainable

„Prewave
**enables us to find out
about sustainability risks
much earlier** on, so we can
respond more quickly “



Marco Philippi
Head of Procurement
Strategy

„Thanks to Prewave we
deal with a complex
situation more effectively
and have the necessary
transparency to get
through the crisis.
Moreover **we are well
prepared for the future!**“



Andreas Schön
Head of Sourcing &
Procurement Governance

„Working together with
Prewave and its
Artificial Intelligence
we are **identifying risks
along the
entire supply chain.**“



Gunnar Büchter
Executive Director
Procurement & Strategy

Making tomorrow's supply chains more resilient and sustainable



Contact: info@prewave.ai



Harald Nitschinger
Co-Founder & Managing Director

harald@prewave.ai

AUSTRIA IST ÜBERALL.

Lieferanten- Risikomanagement

Q & A

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