

Deloitte.



Mitigating Risks through Agile Supply Chain Management

Early detection and active management
of supply chain risks

**MAKING AN
IMPACT THAT
MATTERS**

since 1845

Facing today's challenges: how to align external factors towards an agile supply chain	04
Proven methods to master today's changing challenges	08
Early Warning System	10
Supplier Quick Check	12
Task Force and Deep Dive Management	14
Performance Improvement in Operations	18
Your opportunity: mitigate supply chain risk and move toward a more agile supply chain management	20
Your contacts	22

Facing today's challenges: how to align external factors towards an agile supply chain

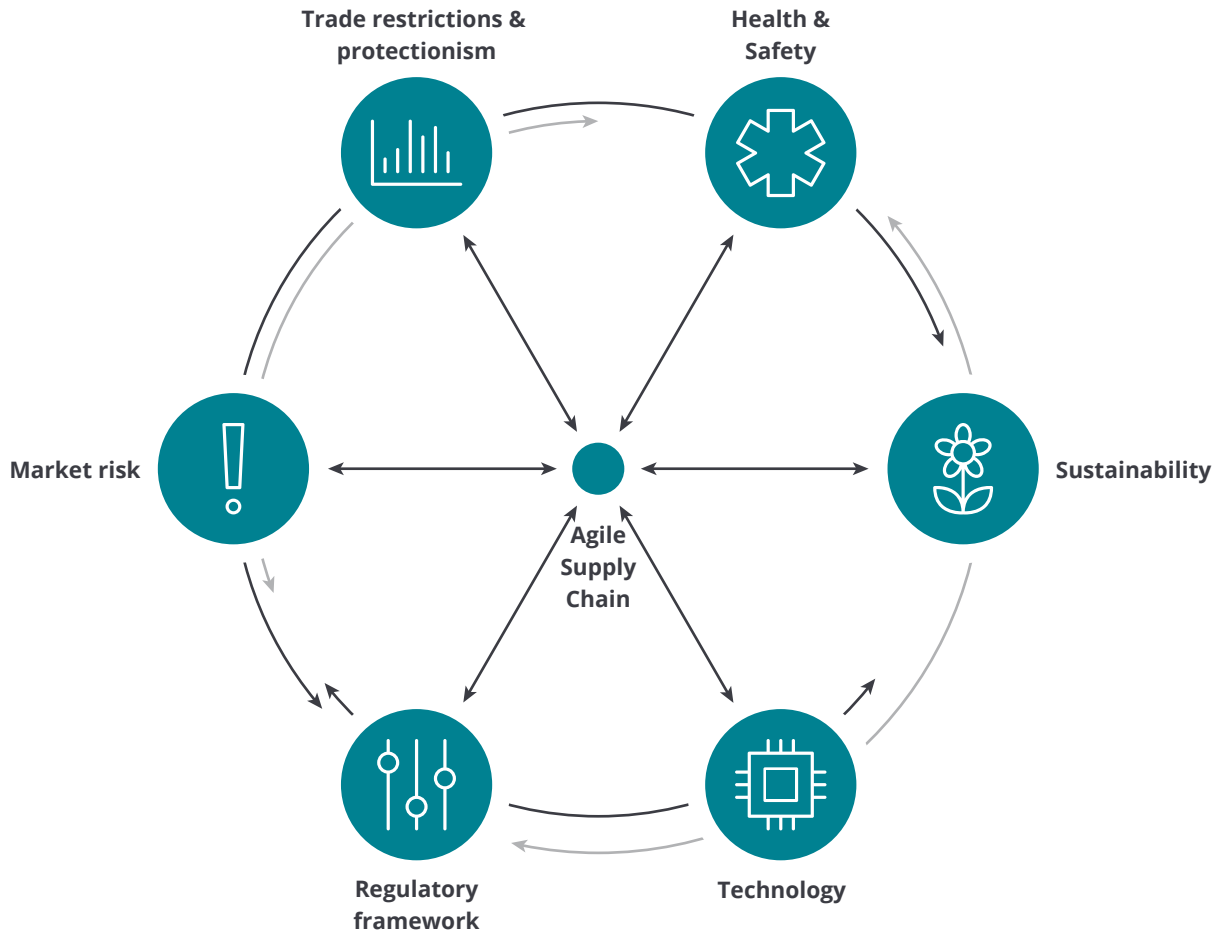
The challenges for manufacturing companies are constantly changing – you need an agile network to respond

Manufacturing companies in general, and automotive companies in particular, are facing a complex set of challenges ranging from trade restrictions and technological change (digitalization, e-mobility, autonomous driving) to the rules and regulations governing them. To make matters worse, the shutdowns during the COVID-19 crisis have caused a severe downturn in global GDP – despite the generous financial relief packages bankrolled by governments and central banks. Global automotive sales, for example, which had been in decline since 2018, took an unprecedented nosedive after COVID-19 containment measures were introduced.

It is now up to manufacturers to make sure their business models and supply chains remain viable into the future, given the massive transformation on the industry landscape.

Based on our analysis of various studies and recent publications, the key challenges for companies in this environment are market risks, regulatory requirements, technological change, trade restrictions, protectionism as well as health & safety regulations and sustainability. These challenges are all interconnected and interdependent, making it vital for us to approach them collectively as we reshape our supply chains for the future.

Fig. 1 – Increasing challenges in supply chain management



Trade restrictions & protectionism

Increasing trade restrictions and protectionism through import and export duties, additional levies, volume restrictions, subsidies and complex technical standards

Market risk

Continuing economic downturn and tense market environment along with additional uncertainty among consumers and the negative impact that has on spending habits

Regulatory framework

Increasing regulatory density and complexity due to stricter regulations at the local level as well as the legislative and regulatory framework of other sectors (e.g., Telecommunications Act, Energy Industry Act)

Technology

Technological shift from the internal combustion engine to the electric powertrain and a change in focus from hardware to software development

Sustainability

Rising public pressure (e.g., protests) for green economic policies

Health & safety

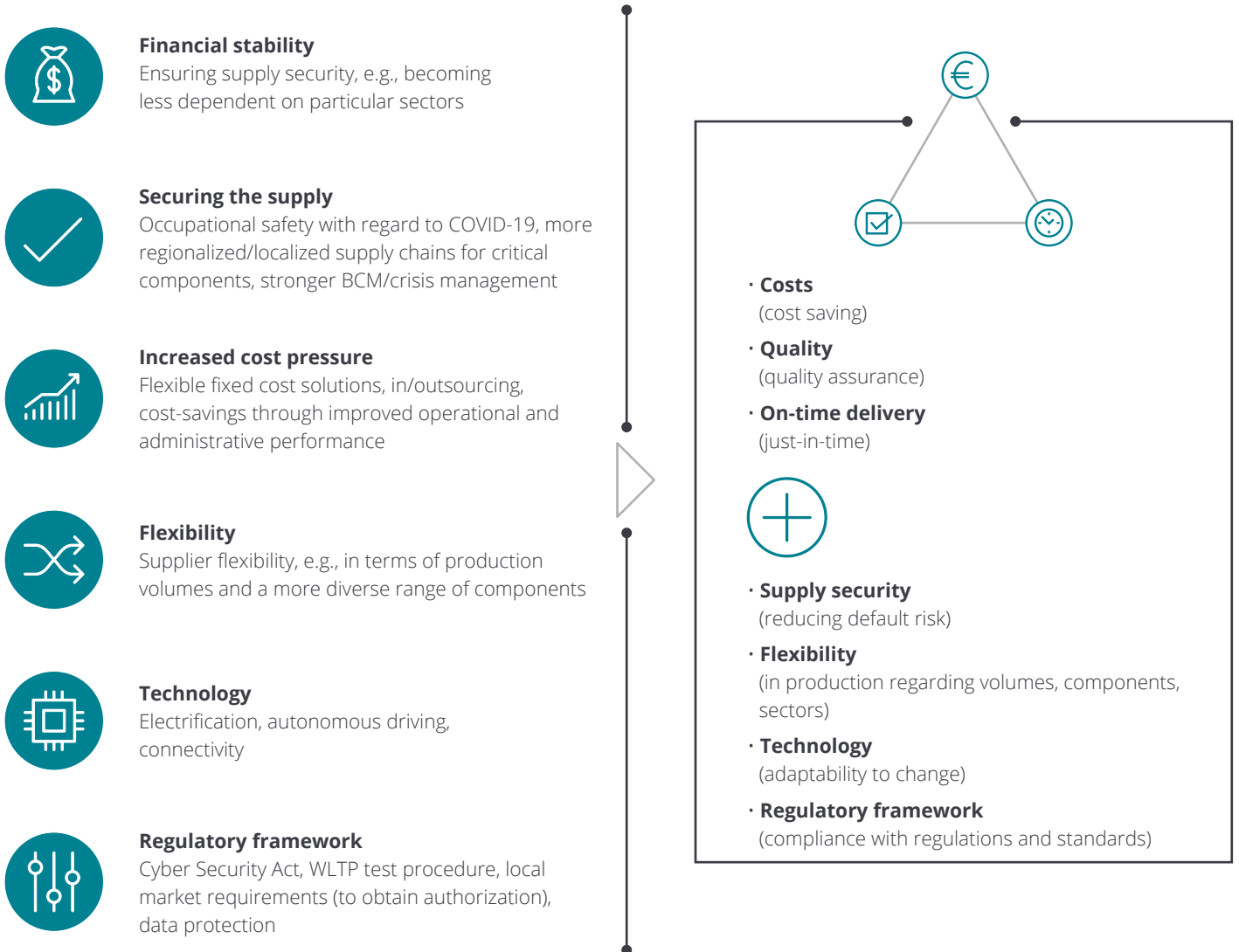
Demands for COVID-19-related safeguards and the continuous oversight of the same

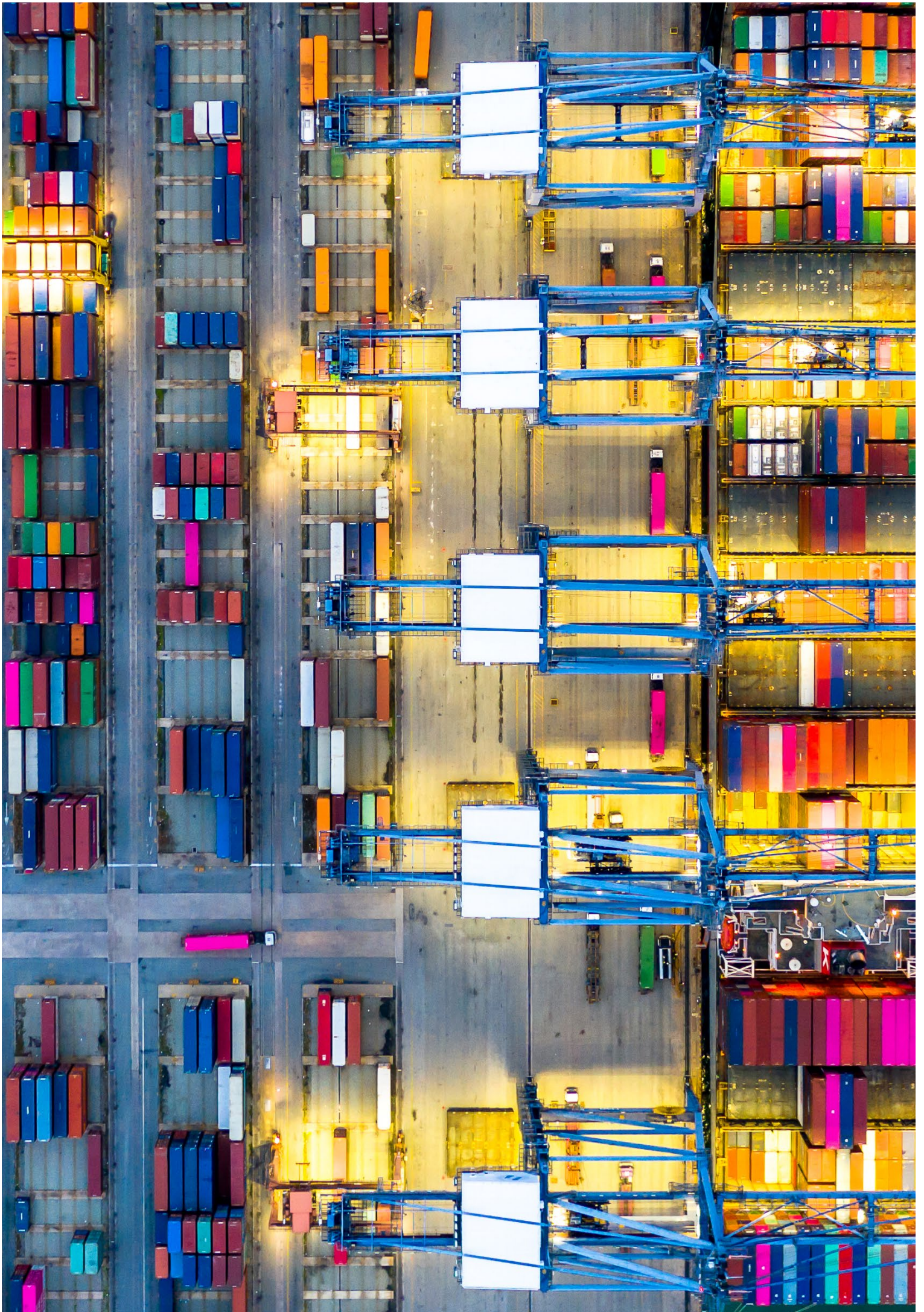
To successfully reimagine supply chains for the future, it is vital to consider all of the factors that could potentially impact the recalibration of your supplier network.


cost and on-time delivery. The recent shut-downs and their effects have made two success factors particularly critical: supply security and flexibility.

Based on the insights into today's market mentioned above (i.e., new challenges and interdependencies), we can add issues such as supply security, flexibility, technology and the regulatory framework to the well-known success factors of quality,

Fig. 2 – Key drivers and business success factors in the agile supply chain







Proven methods to master today's changing challenges

Different options for stabilizing your supply chain

There are a range of methodologies that have a strong track record in our client projects, whether they are utilized in a crisis phase or for a specific situation, on an individual basis or in combination.

The Early Warning System, for example, is designed to detect supply chain disruptions in a timely manner by identifying high-risk suppliers (using operational and financial indicators).

In an effort to increase transparency and to identify efficiency or optimization potential in a certain supplier, we rely on the so-called Supplier Quick Check. Our Task Force and Deep Dive Management methods have proven very effective in the midst of an acute crisis, when securing supply is the top priority. The Performance Improvement in Operations method does just what the name says (improving key performance indicators), while the Financial Rating tool generates ad-hoc assessments of a particular supplier's financial health.

“When it comes to securing our own supply chain, we are simply not acting fast enough.”

Participant in the Deloitte study “Supplier risk management in the German automotive industry 2020”

Fig. 3 – Different options for stabilizing the supply chain



Early Warning System

Early risk detection – proactive prevention instead of reactive response

Companies often claim to know exactly who their high-risk suppliers are. According to Pareto, however, this is only true for about 80 percent of suppliers on average. The other 20 percent remain undetected, with the potential to cause the same massive disruption to your supply chain as the usual high-risk suspects.

A lot of companies are reluctant to invest the effort in data collection and analysis that is required to detect high-risk suppliers. Based on our past experience, however, we can say that it is well worth the effort when you take into account the nature of the existing risks and the advantages of timely management.

A wide range of studies and technical papers dealing with identifying supply chain risk have recently been published. We would like to highlight two of these publications as examples (Deloitte Study¹ in collaboration with Zeppelin University in Friedrichshafen

and a study conducted by Thomas Y. Choi, Dale Rogers and Bindiya Vakil, published in the Harvard Business Review²). The main conclusions of both are as follows:

- The earlier you detect risks, the greater the range of options you have to respond.
- The only way to ensure early detection is to automate the analysis and collection of key operational data

That's why our solution harnesses the operational data of suppliers to identify those targets that have the potential to inflict serious damage as well as those that are highly likely to inflict damage.

After high-risk suppliers have been identified, we put them through our Supplier Quick Check for further evaluation and to determine the potential default risk.

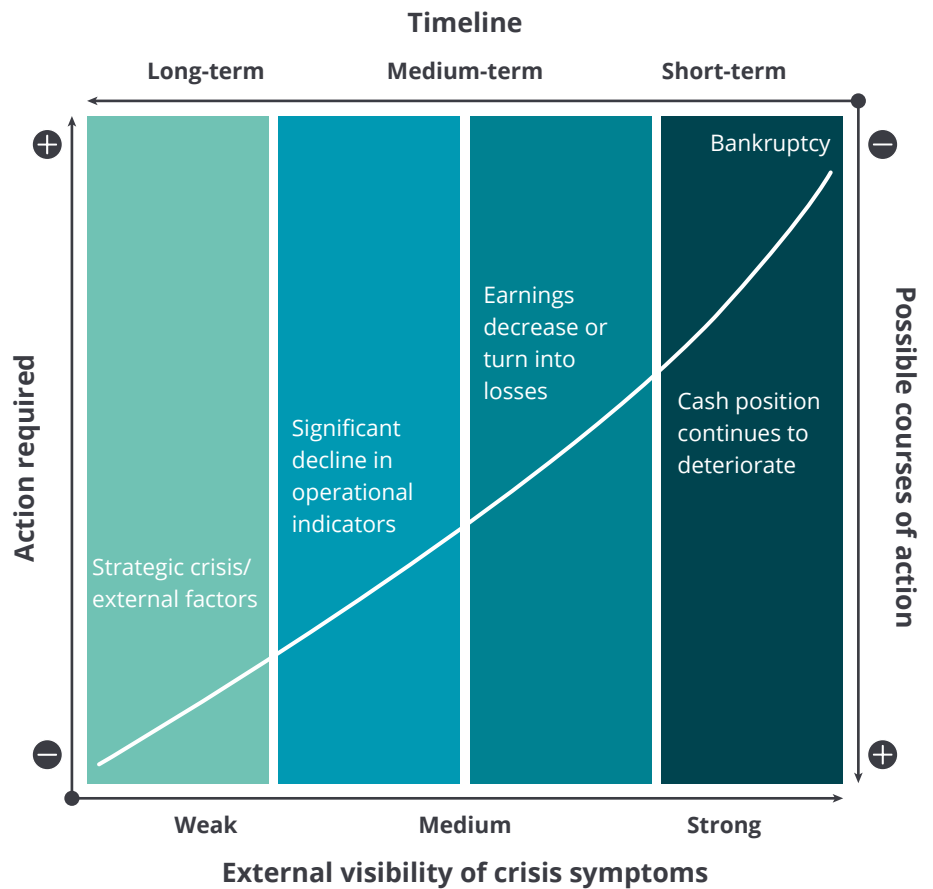
Due to our Early Warning System, we can harness the operational indicator data of high-risk suppliers to detect potential supply chain disruptions

¹ Lieferanten-Risikomanagement in der deutschen Automobilindustrie 2020, Deloitte

² Corona virus is a wake-up-call for Supply Chain Management, Harvard Business Review, 27.05.20

Fig. 4 – Typical corporate crisis timeline

- More than 50 of the respondents in Deloitte’s study “2018 EERM Extended Enterprise Risk Management”³ indicated that today their companies are “to some extent more dependent” (42%) or even “significantly more dependent” (11%) on external suppliers.
- 70 percent of the 300 respondents of a survey⁴ conducted late January/early February, i.e., immediately after the COVID-19 outbreak in China, reported that they were still in the process of collecting and assessing data using analog means to determine which suppliers had a site in the regions of China that were in lockdown.
- Mapping your supply chain network can be a resource-intensive and complex process, but there is no way around it. Companies will find that the benefits of the process seriously outweigh the cost and effort needed to set it up.



³ EERM Extended Enterprise Risk Management 2018, Deloitte Studie

⁴ Corona virus is a wake-up-call for Supply Chain Management, Harvard Business Review, 27.05.20

Supplier Quick Check

Transparency as a basis for targeted action

As part of an overall financial risk management system, Supplier Quick Check offers an effective way to assess the financial health of your suppliers.

Fig. 5 – Financial Quick Check – Transparency as a basis for targeted action



Basic data

General information

- Address and contact details of the company and contact person
- Corporate structure (incl. liability structure, e.g., cash pooling, PLTAs, IC loans)
- Existing purchasing volume and responsible purchasing team
- Pending orders
- ...



Financial health check for suppliers

Profitability indicators

- Sales trends/forecasts, EBIT/ EBITDA margin, net income/loss for the year
- Business plan
- ...

Capital structure

- Equity ratio
- Capital structure/financing
- Evaluation of available options to raise capital
- ...

Cash flow

- Cash flow from operating, investing and financing activities
- Current ratio
- Current cash flow incl. forecast
- ...

Restructuring measures

- Feasibility assessment
- Assessment of the potential financial impact
- ...

The analysis uses financial indicators and potential restructuring measures, among other things, to recommend a specific course of action for the company under review. The recommendation could be to find out how much buffer stock there is of components from this particular company or to stop placing orders with this company all together.

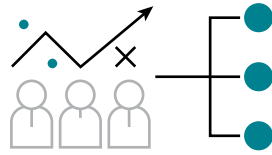
In contrast to the Financial Quick Check, the Operational Quick Check focuses on analyzing processes and validating operational indicators for various business areas.

The result is more transparency about the supplier's current position as well as a recommended course of action that will be effective in this risk category, for example:

- Information about the supplier's current potential and risk
- Detection of other high-risk suppliers in the supply chain
- Recommended short and medium-term measures to stabilize the supply chain

The measures recommended by the Operational Quick Check may not achieve their stated objectives in the short or the medium term, or they may identify more serious shortfalls or additional optimization potential. In this case, users can transition to the supplier stabilization phase to secure the supply of the components in question and/or initiate the Performance Improvement in Operations process.

Fig. 6 - Operational Quick Check - Reasons for supply disruption



Possible starting point

- High-risk supplier detected by the Early Warning System
- Disruption in the supply identified by a customer (e.g., decline in delivery performance, increase in unscheduled runs, quality issues)
- Problems with new production starts
- Improvement potential identified in operations



Our approach with proven standardized tools

1. Analysis to identify bottlenecks and various risk criteria
2. Development of an action plan
3. Evaluation and prioritization of actions
4. Detailed supplier evaluation based on selected risk criteria
5. Management summary drafted and released: brief overview of all relevant information

Task Force and Deep Dive Management

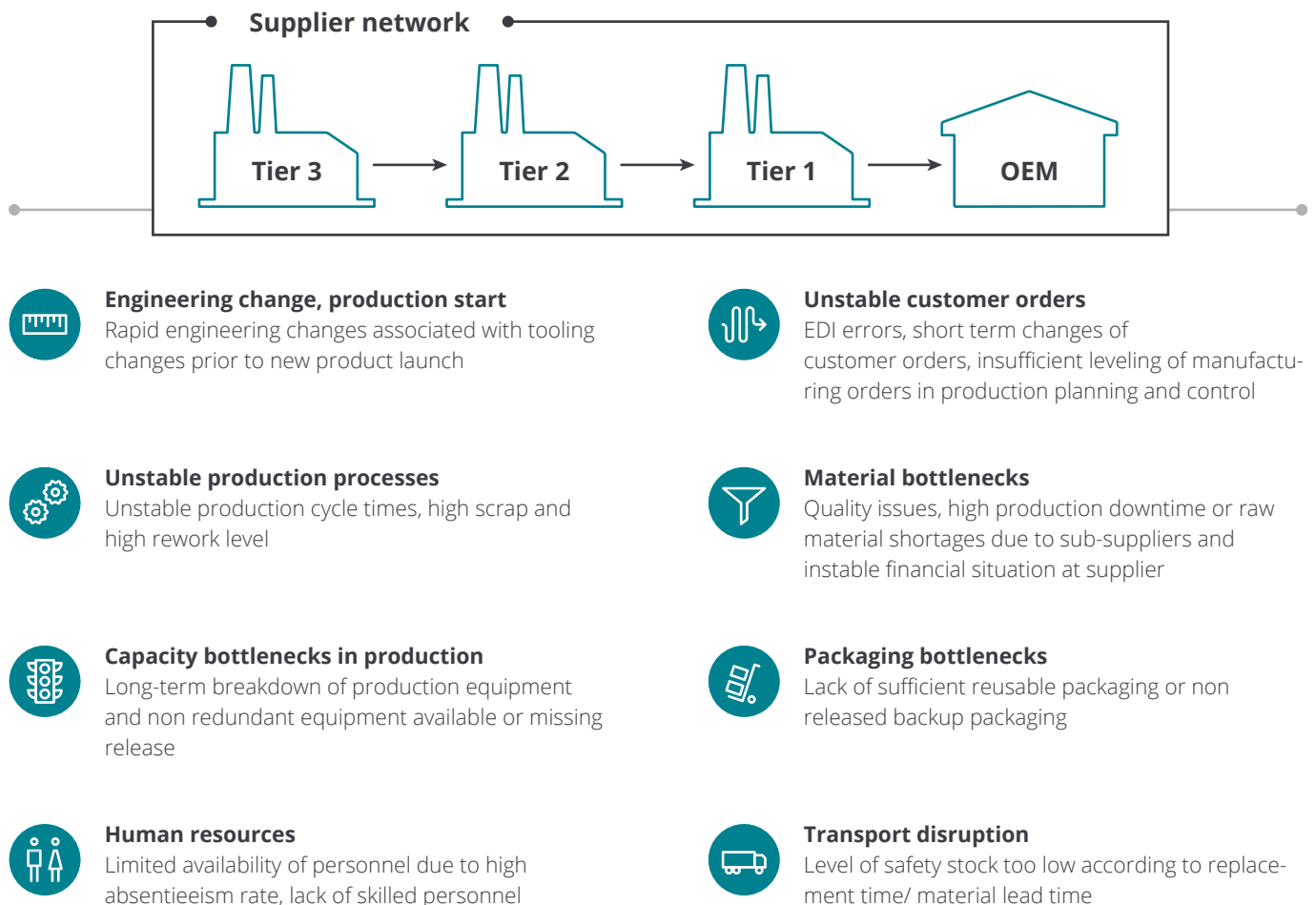
Proven tools to safeguard against supply disruptions and stabilize the supply chain

Our Task Force Management and Deep Dive Management tools provide more transparency about the reasons for supply disruptions, define and implement the necessary measures to stabilize supply and recommend further measures to improve

performance and maintain the supplier relationship over the long term.

See Figure 7 for a list of the operational incidents that could potentially disrupt or interrupt the supply chain.

Fig. 7 – Examples of possible causes for supply disruptions/interruptions



The potential incidents and causes for those incidents vary widely within the production process. They often have a cross-company effect and occur simultaneously or in quick succession across multiple business units. This can increase complexity (ability to control) and lead to critical supply bottlenecks along the supply chain.

You can use Task Force or Deep Dive Management to detect disruptions in supply.

We use Task Force Management when one supplier becomes significantly less reliable due to operational issues, leading to (potential) unplanned production downtime at the customer site. The objective is first to manage the bottleneck and keep the supply chain flowing and then to come up with an effective plan to reduce the customer's supply backlog. At the same time, every effort is made to stabilize the supplier's operations.

Figure 8 shows the four steps in our Task Force Management process designed to safeguard supply and improve supplier stability.

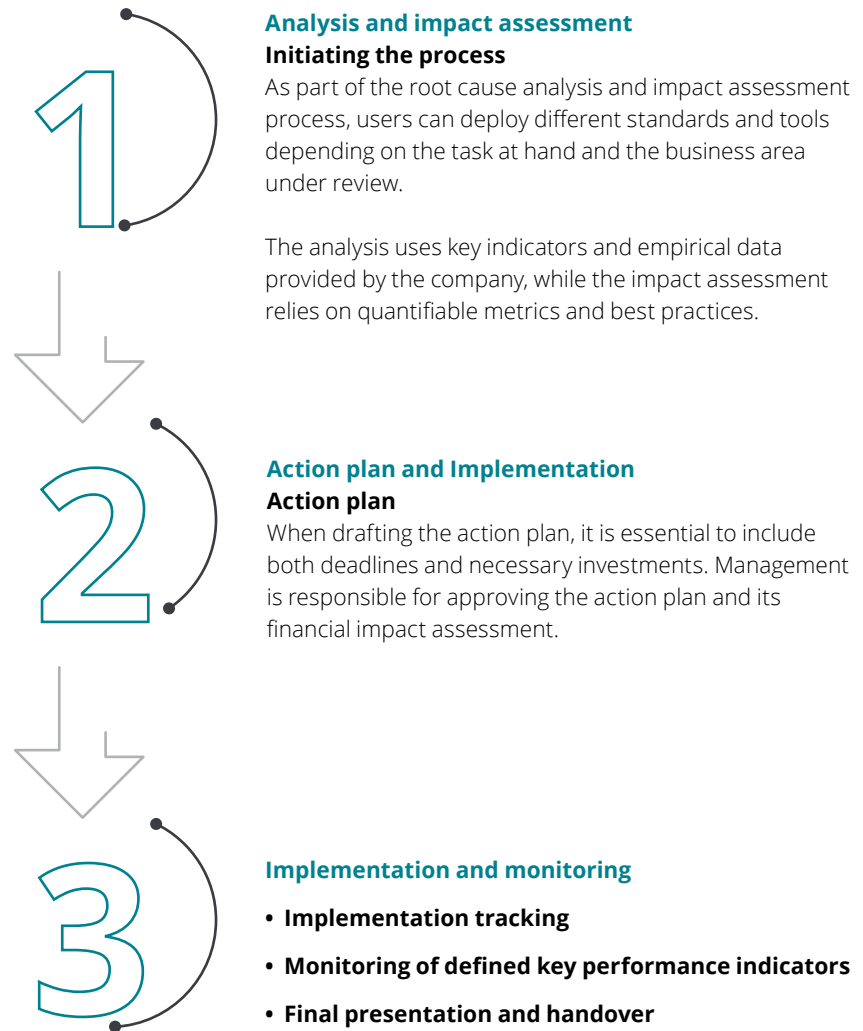
Fig. 8 – Task Force – Stabilizing supply



Deep Dive Management comes into play if a supplier is unable to ensure stable supply over a certain period of time or if there is a recurring problem in the supply chain.

The focus of this approach is to identify the exact cause of the disruption by first conducting a structured as-is analysis. This is used to develop and implement measures to effectively eliminate those causes and improve supply stability.

Fig. 9 - Deep Dive Management - Eliminating the cause of a disruption through detailed problem analysis



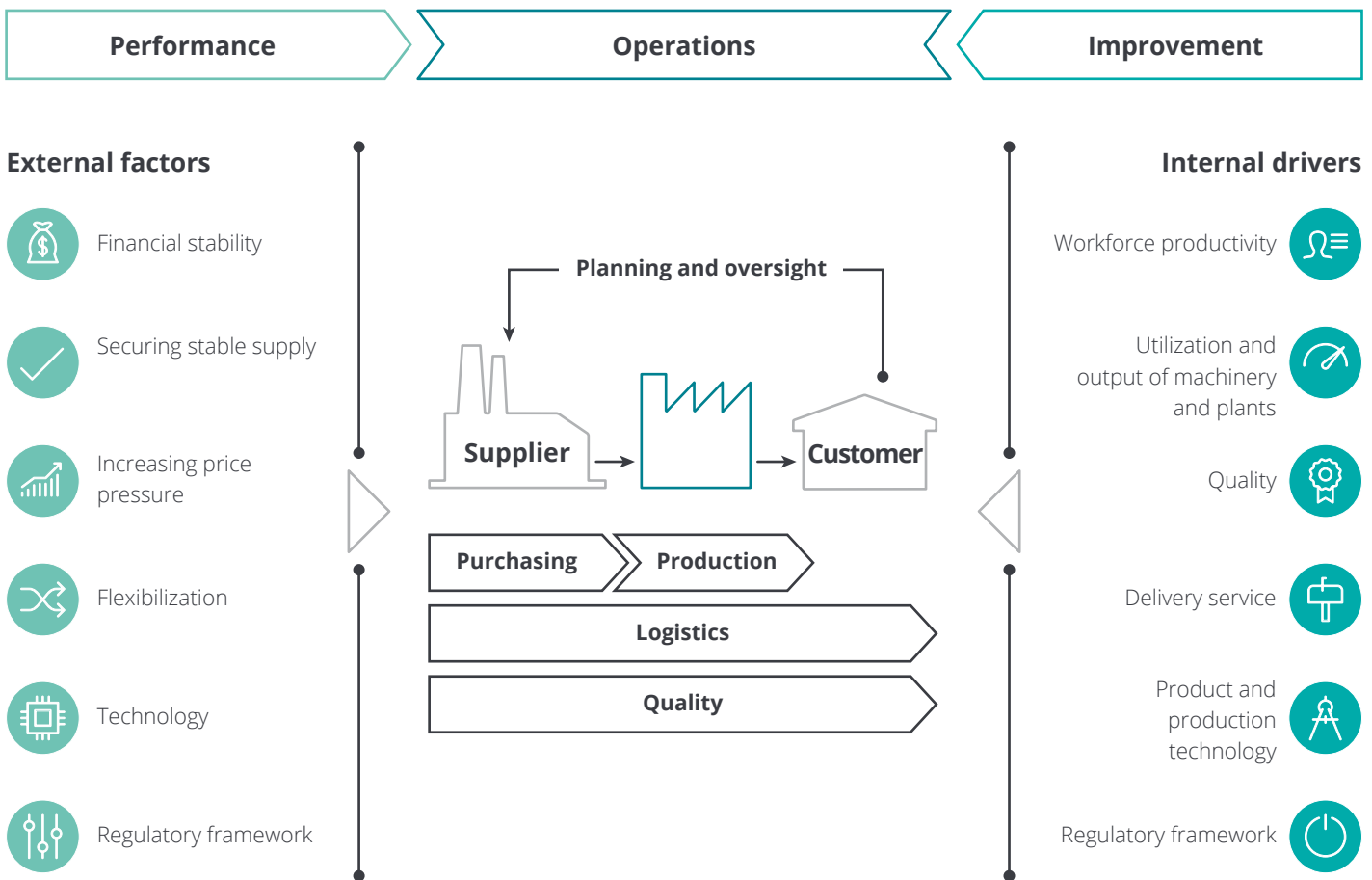
Transparency is at
the heart of good
supply chain risk
management

Performance Improvement in Operations

A tool to improve operational performance with a strong track record

With certain external factors outside your control, it is vital for companies to monitor and continuously improve their internal drivers, i.e., to achieve sustainable growth in profits and the EBIT margin.

Fig. 10 – External factors and internal drivers determine business success



In an effort to identify what leverage internal drivers have and to improve or increase them over time, we rely on a range of different methodologies in our practice. This structured approach is designed to make the value creation process more efficient and more sustainable.

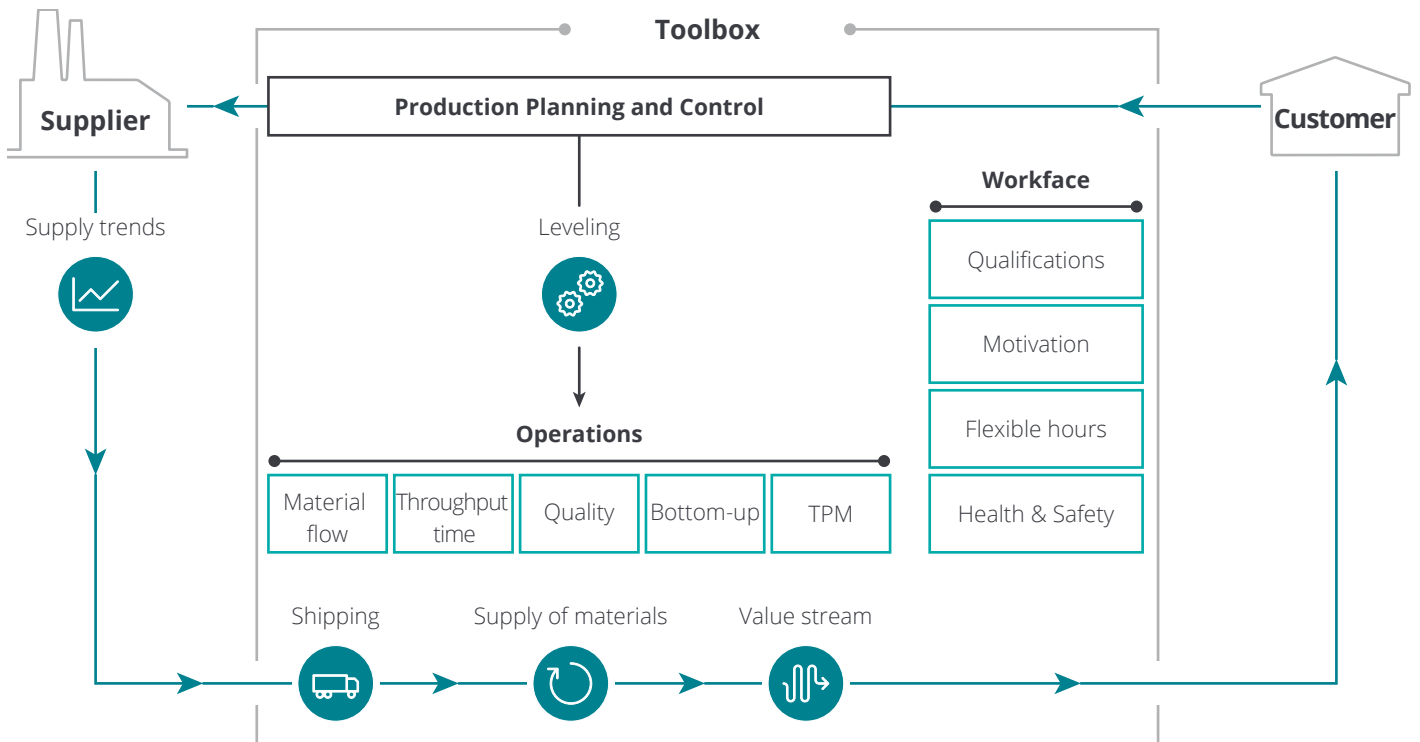
Based on the potential for improvement we have identified, we implement the specific measures required to improve performance.

There are four key phases in our Performance Improvement in Operations process:

- As-is analysis using the Quick Check method
- Estimated financial impact of the improvement potential identified
- Drafting of the action plan
- Implementation and follow-up of agreed measures

By the end of the project, the team is focused on achieving the objectives defined in the second phase using operational indicators.

Fig. 11 - Performance Improvement - targeted use of tools to secure long-term operational stability



	Supplier development	Shipping	Supply of materials	Flow	Throughput time	Perfection	Bottom-up	TPM
Tools in the Toolbox	• Process analysis	• Milk run	• Visual Kanban	• Production Kanban	• Standardize workflow	• Quality assurance	• Shop Floor Management	• 5S
	• Analysis of improvement potential	• Packaging plan	• Supermarket	• Heijunka	• Kaizen	• 5W, Ishikawa	• Inventory optimization (e.g. consignment stock)	• SMED
	• System analysis			• Layout planning		• Poka Yoke		• Autonomous preventative maintenance

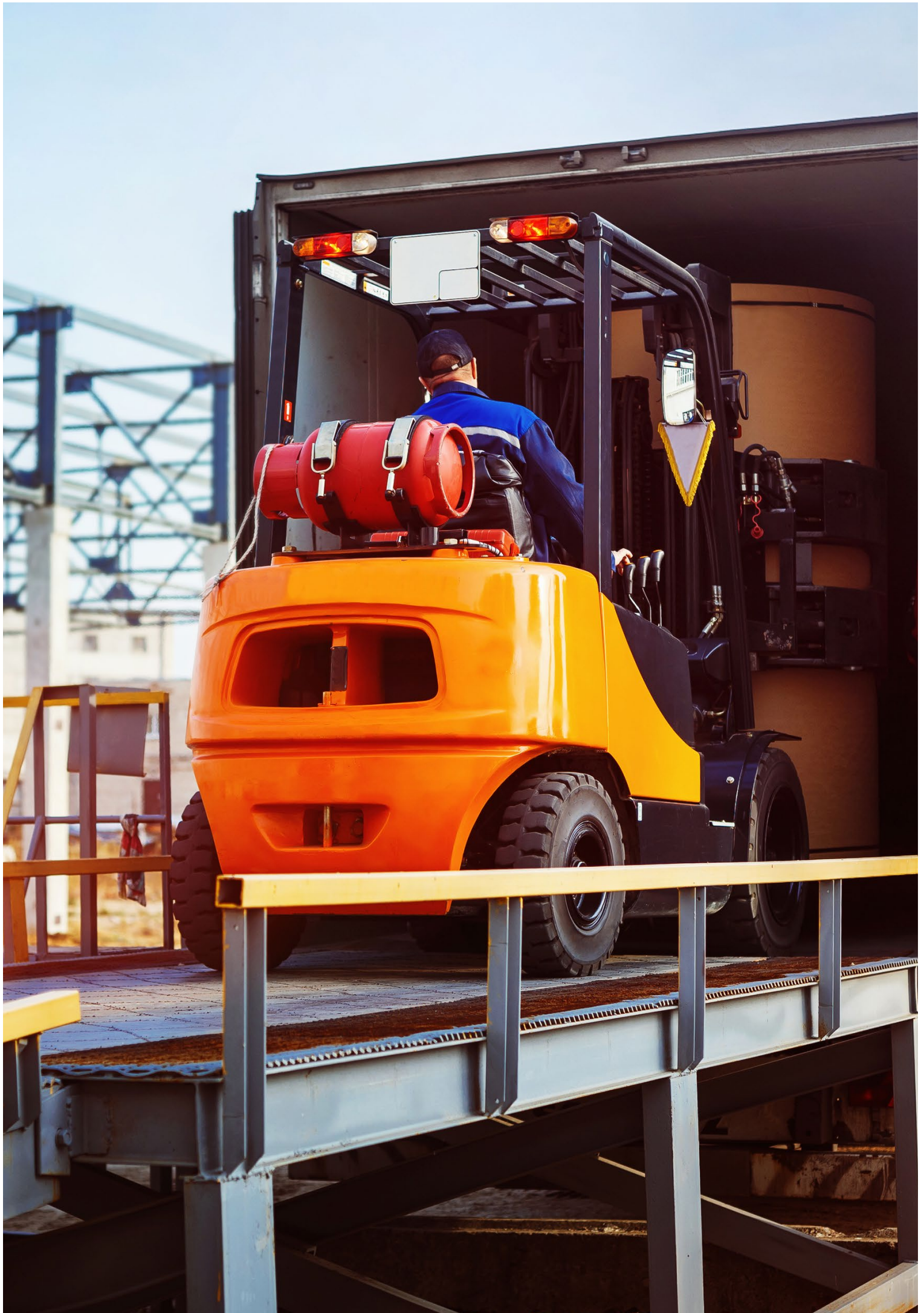
Your opportunity: mitigate supply chain risk and move toward a more agile supply chain management

Become one of the “winners”, take a proactive management approach and commit to making your supply chain management more agile.

- Now is the time to transform your supply chain with our strategic agility practices.
- Take the time for a health check “today” to assess your company’s status quo and identify improvement potential in your supply chain for “tomorrow”.

“After the Covid-19 crisis dissipates, we will see companies fall into one of two categories. There will be those that don't do anything, hoping such a disruption won't ever happen again. These companies will be taking a highly risky gamble. And there will be firms that heed the lessons of this crisis and make investments in mapping their supply networks so they do not have to operate blind when the next crisis strikes and rewrite their contracts so they can quickly figure out solutions when disruptions occur. These companies will be the winners in the long term.”

Thomas Y. Choi, Dale Rogers, Bindiya Vakil - “Coronavirus is a wake-up-call for supply chain management” published in Harvard Business Review, May 27, 2020



Your contacts

We look forward to a vibrant exchange of experiences and approaches – get in touch with us to find out more.



Frank Wehrle

Director

Tel: +49 (0)711 16554 7243

fwehrle@deloitte.de



Sonja Remschel

Senior Manager

Tel: +49 (0)711 16554 7271

sremschel@deloitte.de



Dietmar Kaesser

Senior Manager

Tel: +49 (0)221 9732 4411

dkaesser@deloitte.de



Oswald Oster

Senior Manager

Tel: +49 (0)89 29036 8318

ooster@deloitte.de



This presentation contains general information only, which is not intended to address the specific circumstances of any particular case or to be used as a basis for any decision, financial or otherwise. Deloitte GmbH Wirtschaftsprüfungsgesellschaft, Deloitte Touche Tohmatsu Limited, any of its member firms or related entities (collectively, the "Deloitte Network") are not, by means of this presentation, rendering professional advice or services. No entity in the Deloitte Network shall be liable or responsible for any loss whatsoever sustained by any person who relies on this presentation.

Deloitte refers to one or more of Deloitte Touche Tohmatsu Limited, a UK private company limited by guarantee ("DTTL"), its network of member firms and their related entities. DTTL and each of its member firms are legally separate and independent entities. DTTL (also referred to as "Deloitte Global") does not provide services to clients. Please see www.deloitte.com/de/UberUns for a more detailed description of DTTL and its member firms.

Deloitte is a leading global provider of audit and assurance, consulting, financial advisory, risk advisory, tax and related services for entities from all areas of business; legal advisory services in Germany are provided by Deloitte Legal. With a global network of member firms and related entities in more than 150 countries, Deloitte combines outstanding expertise with first-class service, giving clients the support they need to solve complex business challenges. Our more than 312,000 professionals at Deloitte are committed to making an impact that matters.