

COVID-19

Business continuity in uncertain times

CAMELOT Point-of-view, May 2020

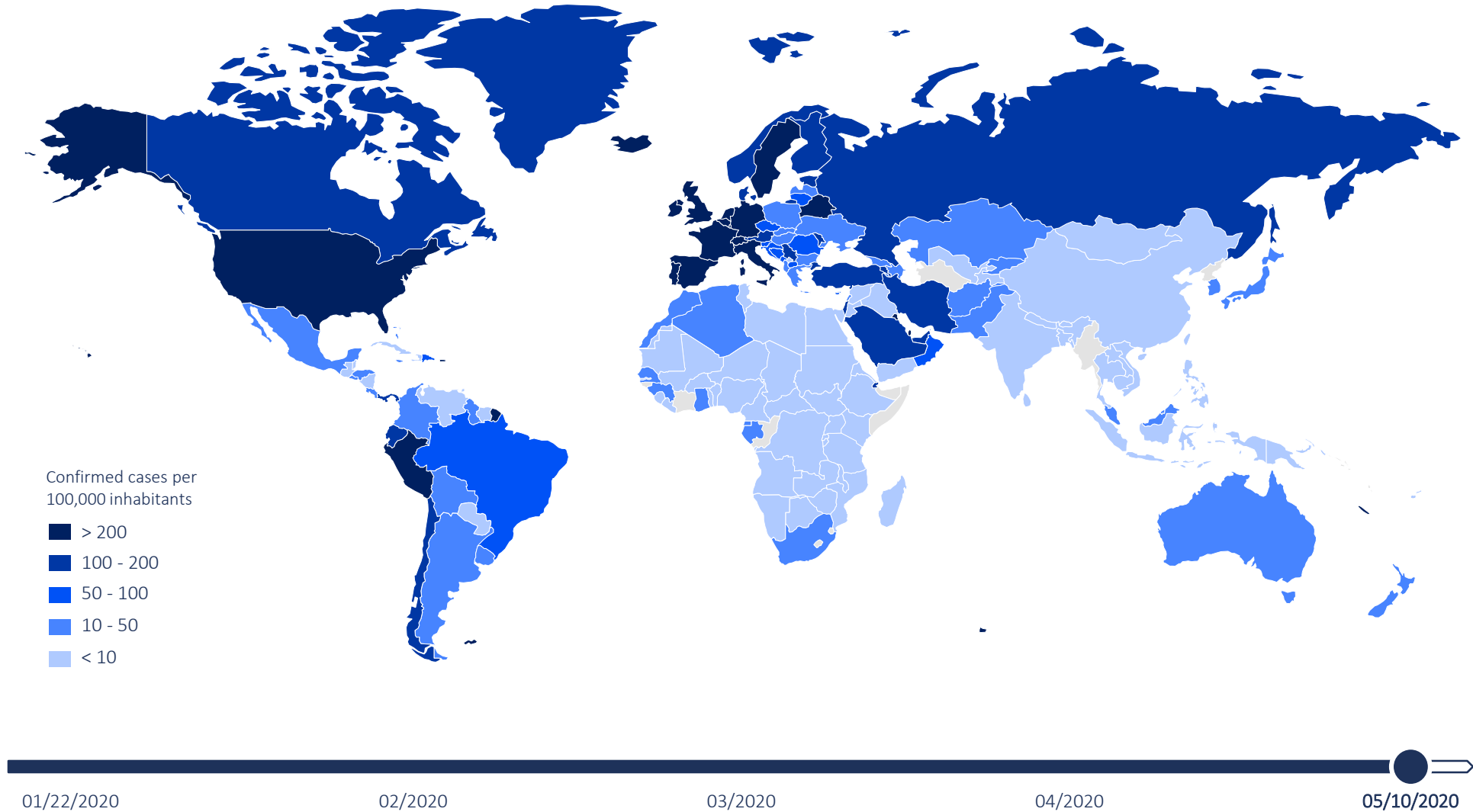


**Global COVID-19
Situation**

Overcome the
economic impacts

Our COVID-19
Service Offering

COVID-19 originally a regional issue has been risen to a global concern within the last months – further propagation is expected by several institutions and organizations



By now, all major worldwide and European industrial nations are impacted by COVID-19 with respect to human health and economic stability

Countries ¹	Cases confirmed	Mortality Rate	Lockdown Actions	Financial Aid	Entry Restriction
US	1.329.260	6%	● ● ○	✓	Entry stop especially for EU, Border control
ES	224.350	12%	● ● ●	✓	Entry stop until Mid-May + EU entry restriction
UK	220.449	14%	● ● ●	✓	EU entry restriction until June
IT	219.070	14%	● ● ○	✓	Border control + EU entry restriction until June
FR	177.094	15%	● ● ●	✓	Border control + EU entry restriction until June
DE	171.879	4%	● ○ ○	✓	Border control + EU entry restriction, Quarantine
BR	162.699	7%	● ● ○	✓	Entry stop
CH	84.010	6%	● ○ ○	✓	Entry ban for all entries of foreigners
IN	67.161	3%	● ● ●	✓	Entry stop
BE	53.081	16%	● ● ○	✓	Border control + EU entry restriction until June
NL	42.826	13%	● ● ○	✓	EU entry restriction until June
SE	26.322	12%	● ○ ○	✓	Border control + EU entry restriction until June
PL	15.996	5%	● ● ○	✓	Border control + EU entry restriction, Quarantine
JP	15.777	4%	● ● ●	✓	Stop of visa-free entry, quarantine obligation
KR	10.909	2%	● ● ○	✓	Stop of visa-free entry, quarantine obligation

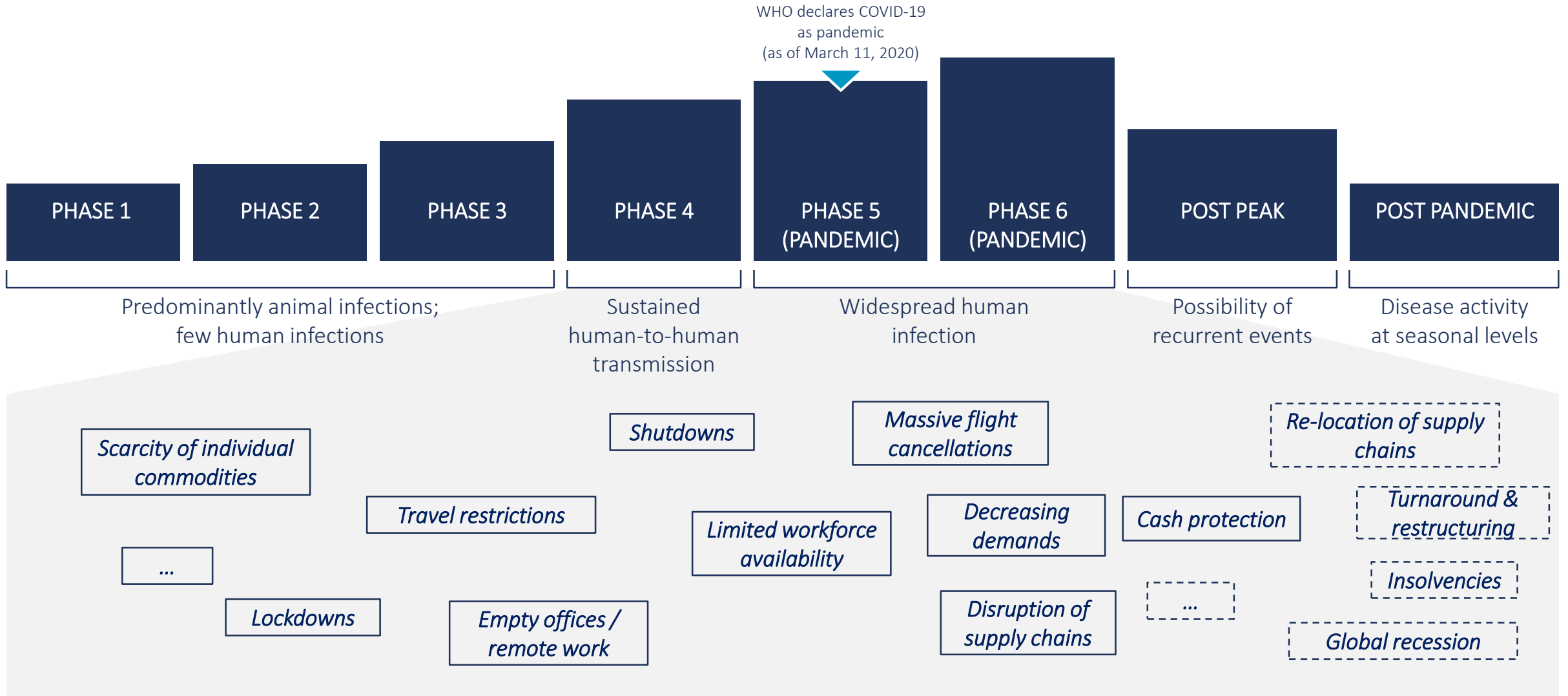
● ● ● Strict lockdown ● ● ○ Partial lockdown ● ○ ○ Slight lockdown ○ ○ ○ No lockdown ✓ Financial aid announced

1) Top 10 countries per GDP + Top 5 EU

Source: Johns Hopkins University, WHO, RKI, Foreign office (May 11, 2020)



COVID-19 has major impacts on private and macro economic environment – currently there are several limitations with most likely more to come



Note: Mentioned model used to describe H1N1 in 2009; Currently "There is no official category (for a pandemic)" according to Tarik Jasarevic (WHO spokesman)

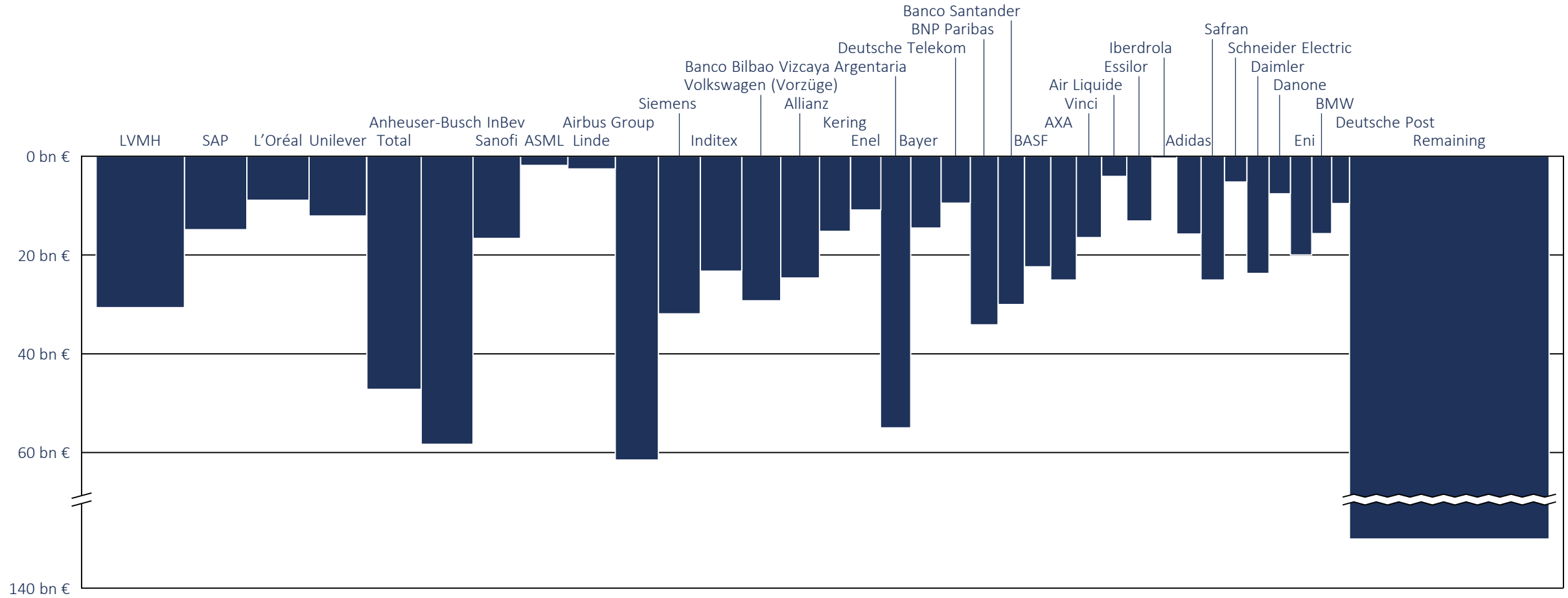
Current events

Possible future events












Source: WHO



COVID-19 already has a huge impact on global economy – Euro Stoxx 50 companies lost year to date over 797 bn € in market capitalization mostly due to COVID-19



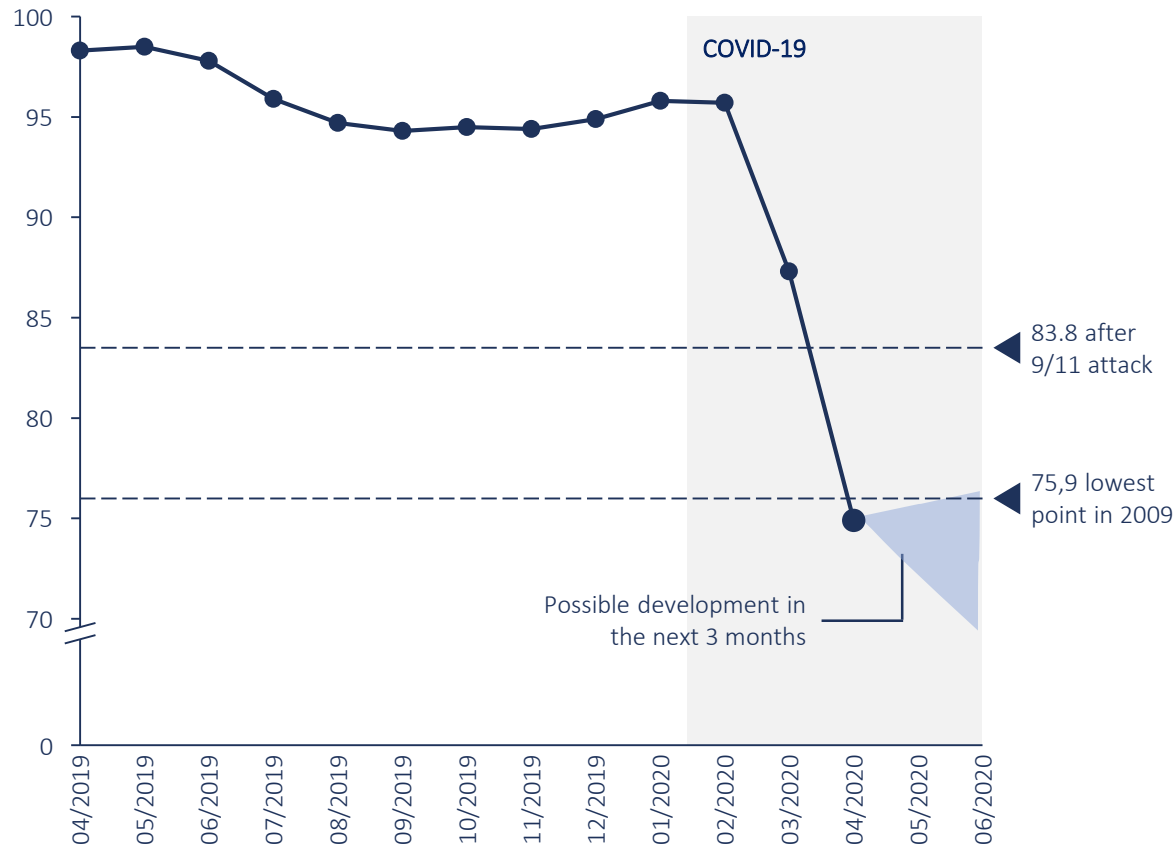
Impacts of the COVID-19 crisis can already be felt in many industries, but the situation will continue to intensify

<p>- 57% <i>year to date price return</i></p>  <p>AIRBUS</p> <p>Drop in demand; Aircraft manufacturing</p>	 <p>Drop in demand; Consumer Goods</p> <p>- 45% <i>year to date price return</i></p>	<p>Production downtime; Automotive</p>  <p>- 45% <i>year to date price return</i></p>	<p>Drop in demand, Production downtime; Lighting, Automotive Supplier</p>  <p>- 31% <i>year to date price return</i></p>
 <p>Insolvency, Retail sector</p> <p>- 57% <i>year to date price return</i></p>	 <p>Drop in demand; Electronics</p> <p>- 31% <i>year to date price return</i></p>	<p>Drop in demand; Retail</p>  <p>- 28% <i>year to date price return</i></p>	 <p>Drop in demand; Consumer Goods</p> <p>- 17% <i>year to date price return</i></p>
<p>L'ORÉAL</p> <p>Drop in demand; Cosmetics</p> <p>- 4% <i>year to date price return</i></p>	 <p>Drop in demand; Retail</p> <p>- 18% <i>year to date price return</i></p>	<p>Drop in demand, Production downtime; Consumer Electronics</p>  <p>- 6% <i>year to date price return</i></p>	<p>Production downtime; Lighting</p>  <p>- 12% <i>year to date price return</i></p>



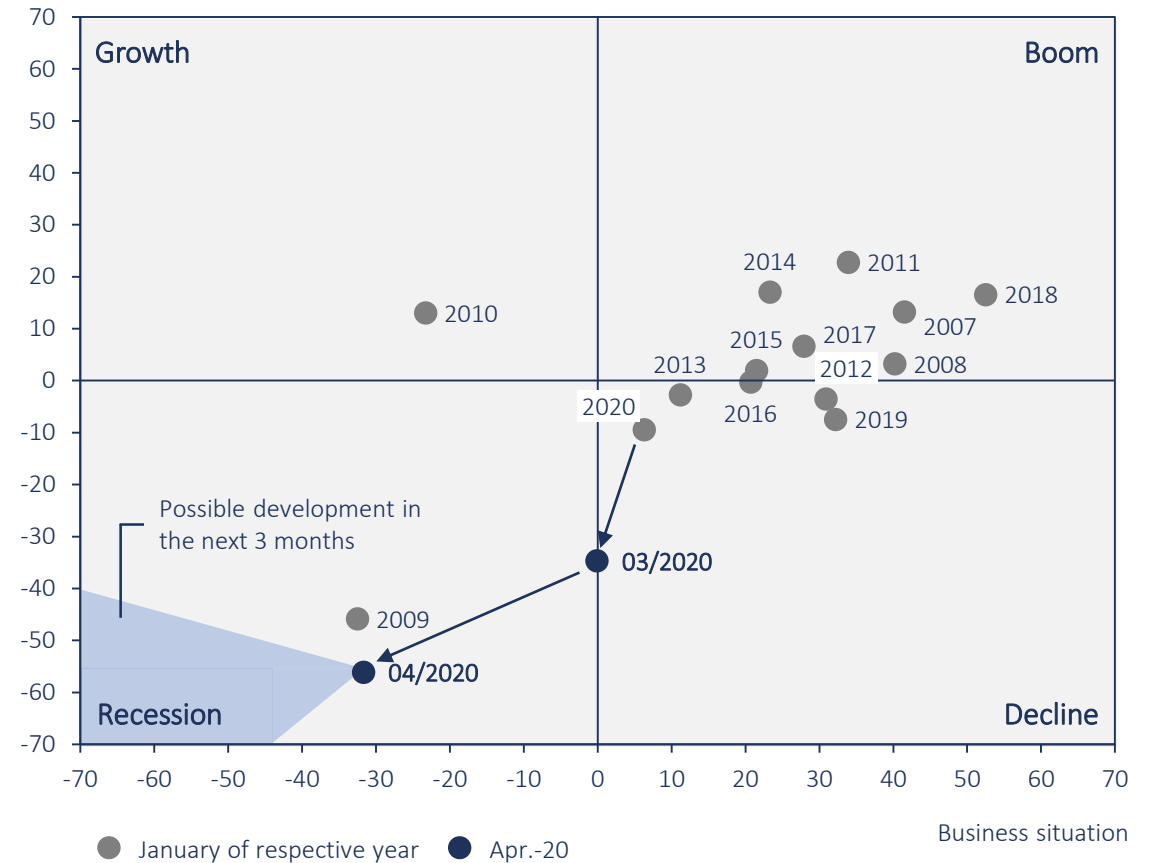
According to the latest „ifo business climate index“ the threat of a recession dramatically increased for the German manufacturing industry due to COVID-19

Ifo business climate index








Ifo Threat Matrix

Business expectation



Gross domestic product is expected to drop significantly according to leading institutions globally



Source	Time Period	 Germany	 China	 USA	 France	 Italy
Deutsche Bank	1 st quarter		-32%			
Deutsche Bank	2 nd quarter	-24%		-33%	-24%	-24%
Goldman Sachs	2 nd quarter			-31%		
Bank of America	2 nd quarter			-12%		
JPMorgan Chase & Co.	2 nd quarter	-22%	-40%	-25%	-22%	-22%
European Central Bank	Annual	-5%			-5%	-5%



IMF	Annual	-7%	-7%	-6%	-7,2%	-9,1
WTO	Annual	-5,4%	-7,9%	-8,8%		
OECD	Annual		-4,9%	-2,1%		-4,8%
Institut der deutschen Wirtschaft	Annual	-5,4%				

Source: Publication by respective institution

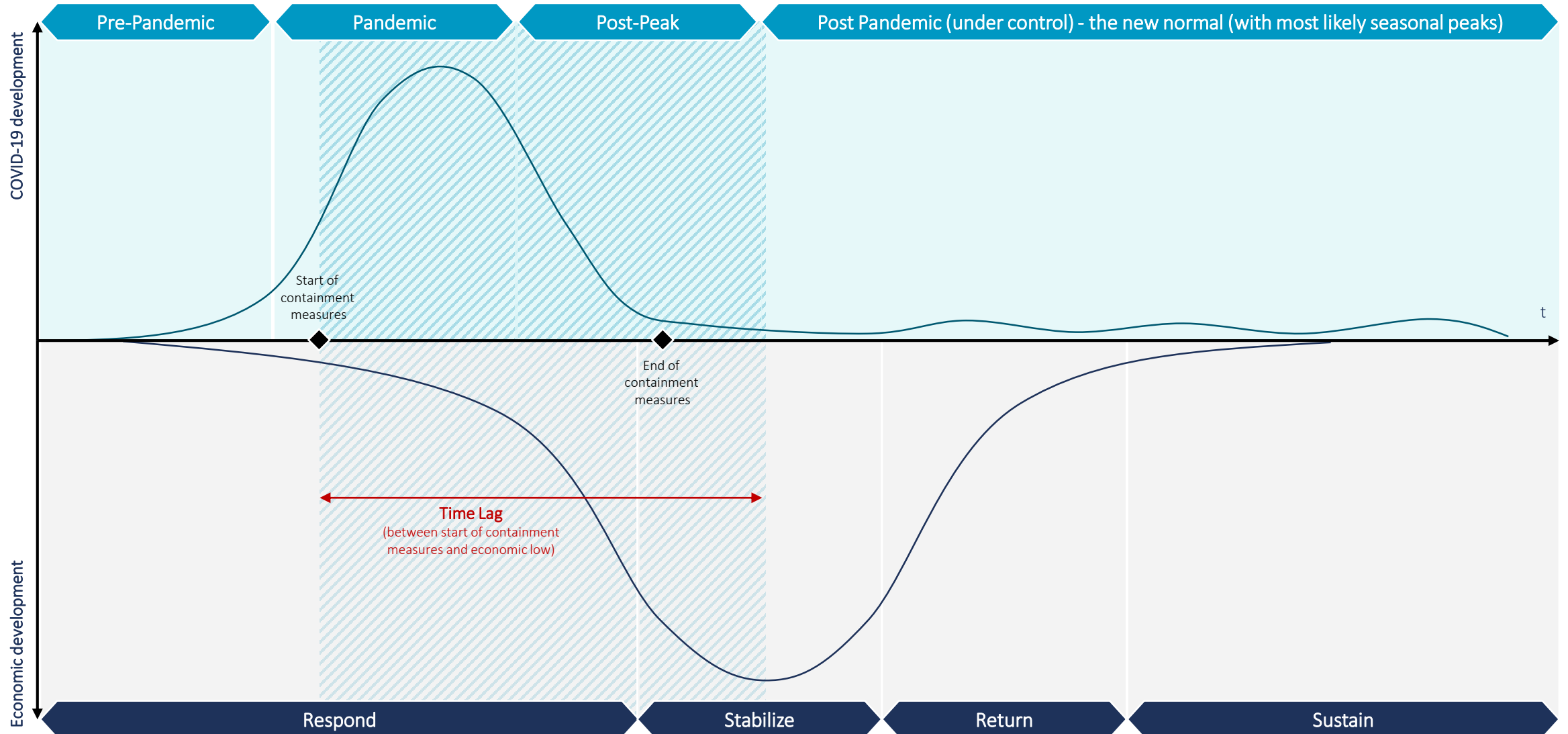


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Service Offering

There is a time lag between the pandemic peak and the economic shortfall to be expected



There are four phases to overcome the crisis – each having individual goals

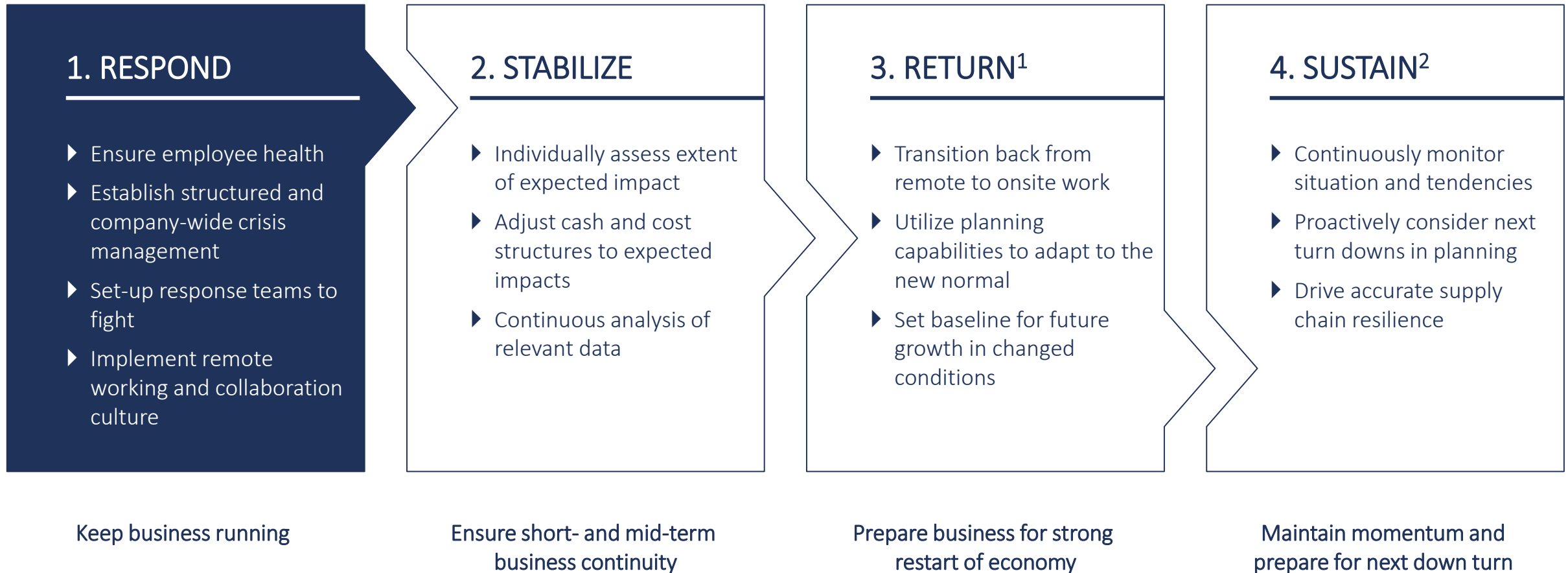


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In the first phase **RESPOND** – besides ensuring employee health – the major efforts should focus on keeping the business running

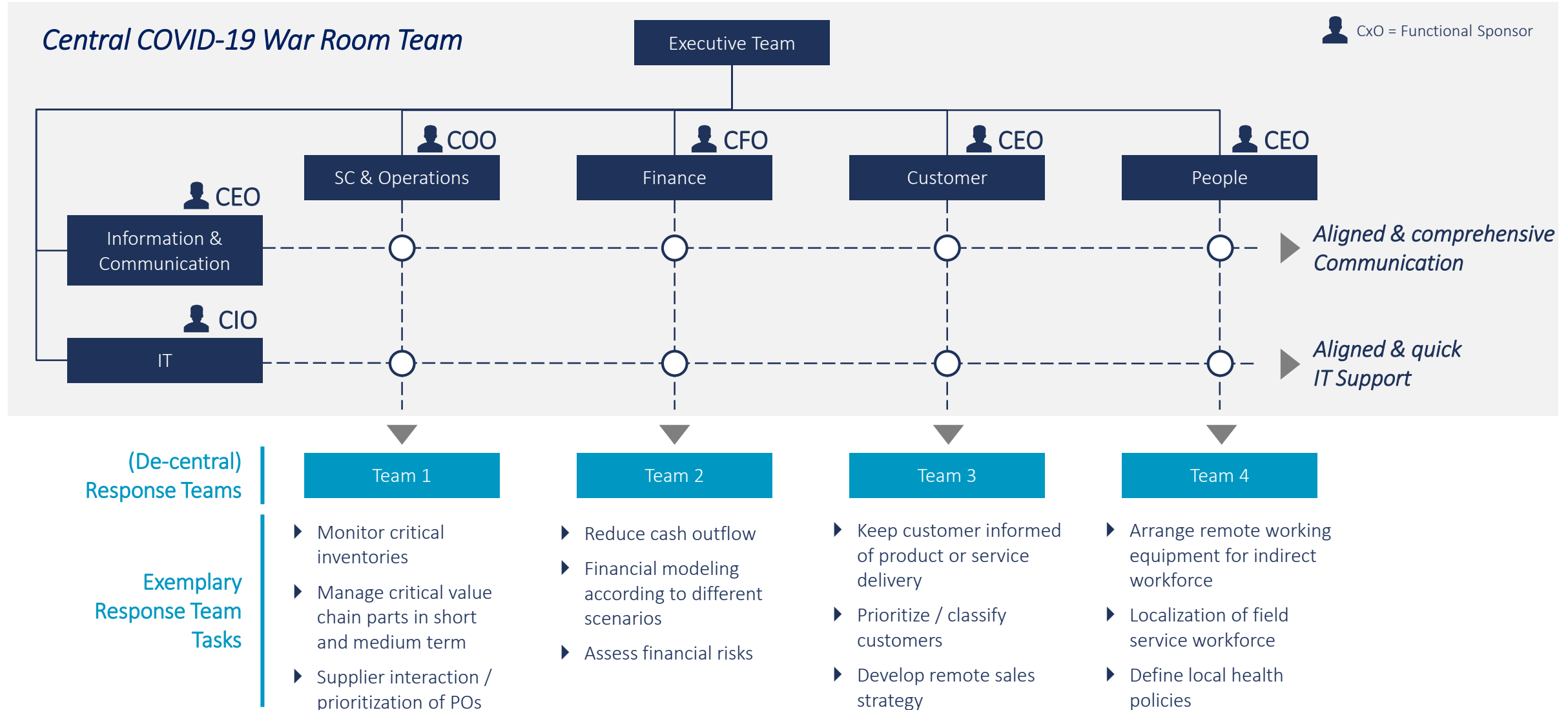


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A war room approach should be considered to ensure a quick and adaptable execution of tasks under this difficult condition





We currently discuss various key questions with our customers (CxO areas)

Customer

Maintain beneficial customer relationship



- ▶ How to prevent/mitigate decreasing customer demands?
- ▶ Is our customer classification up-to-date?
- ▶ What is the risk for our key customers?
- ▶ How to maintain field sales and services in times of increasing travel restrictions?
- ▶ How to keep up high class customer service and ensure our customers are frequently and targetedly informed?
- ▶ How can we support our key customers?
- ▶ ...

People

Protect the workforce



- ▶ Where are our employees located/in operation?
- ▶ How can we protect our workforce and keep our operations running?
- ▶ How to mitigate reduced workforce availability?
- ▶ How is our workforce impacted by the economy?
- ▶ How to reduce the (financial) impact for our workforce?
- ▶ ...

Information & Communication

Ensure proper communication



- ▶ How to utilize and synthesize information from different sources and locations?
- ▶ How to ensure an evidence-based decision-making process?
- ▶ How does the end game scenario look like?
- ▶ Who are our stakeholder groups?
- ▶ How to ensure that all stakeholders get the required information?
- ▶ ...

Supply Chain & Operations

Keep up supply chain and operations running



- ▶ Which parts of our value chain is impacted to what extent and do we have the proper emergency plans?
- ▶ Which facilities/key suppliers are in high-risk areas and can we shift to areas with lower risk exposure?
- ▶ Are our own and our suppliers' inventories visible?
- ▶ How can we maintain delivery reliability/performance?
- ▶ What are possible future scenarios?
- ▶ Which products are our strategic ones and must be produced as long as possible?
- ▶ ...

Finance

Safeguarding future cash-flow



- ▶ What are the financial implications of decreasing customer demands (and possible scenarios) and how do they impact our budget/forecast?
- ▶ What is our own/key suppliers/key customers risk exposure and how can we mitigate it?
- ▶ To what extent is our working capital/cash flow impacted and do we need to take actions?
- ▶ Can we benefit from any financial aid programs?
- ▶ ...

IT

Provide necessary infrastructure



- ▶ What equipment is required to ensure remote work?
- ▶ Which tools enable an efficient remote collaboration?
- ▶ Can we facilitate decision-making and communication with appropriate tools and solutions?
- ▶ Do we have to scale up our infrastructure for massive remote work?
- ▶ How to quickly enable our workforce in new tools?
- ▶ ...

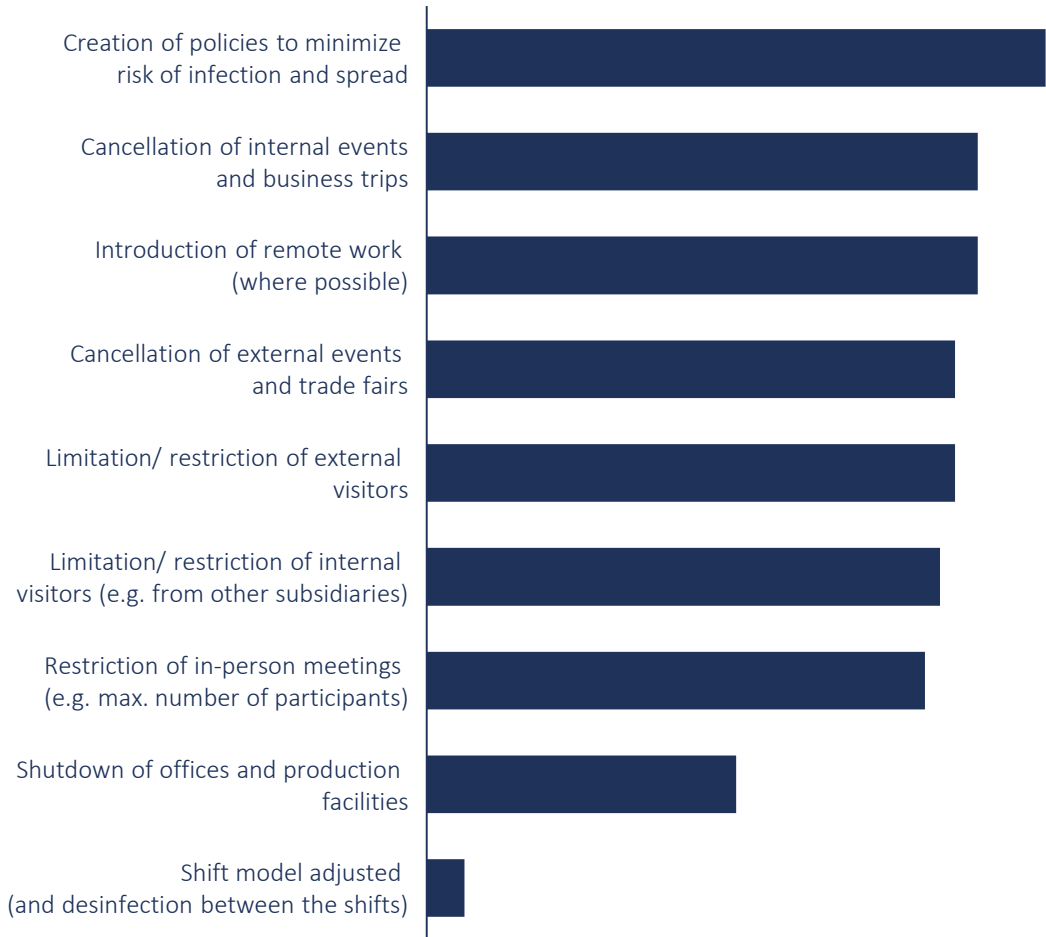




To reduce the risk of spread of COVID-19 most companies introduced remote working where possible which requires the adoption of virtual collaboration

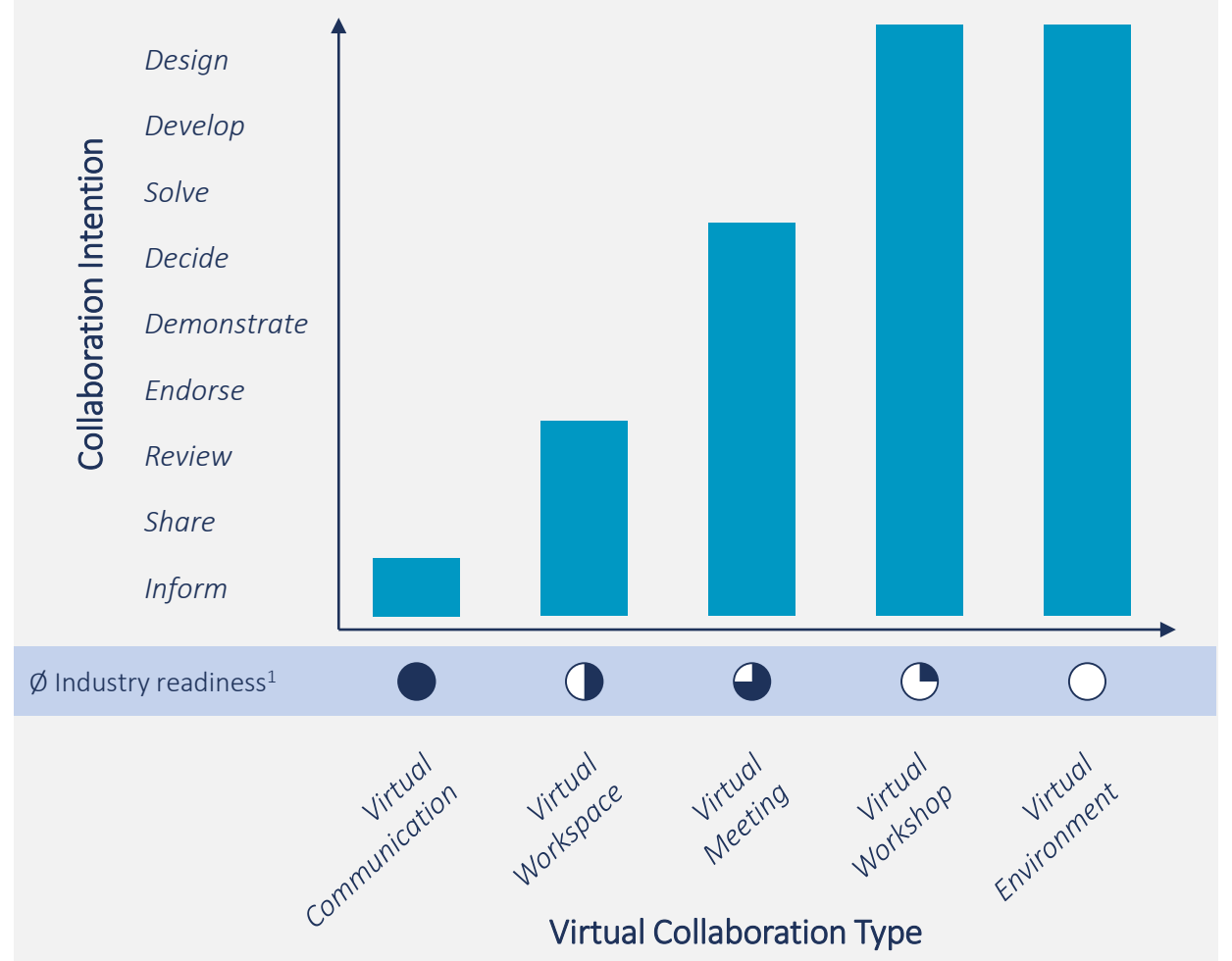
Question

What measures have you already implemented to protect your workforce?



Source: CAMELOT COVID-19 Pulse Check

Remote working by means of virtual collaboration



1) Based on CAMELOT Experience from Industry Projects





Remote working can be roughly categorized in four types with different requirements

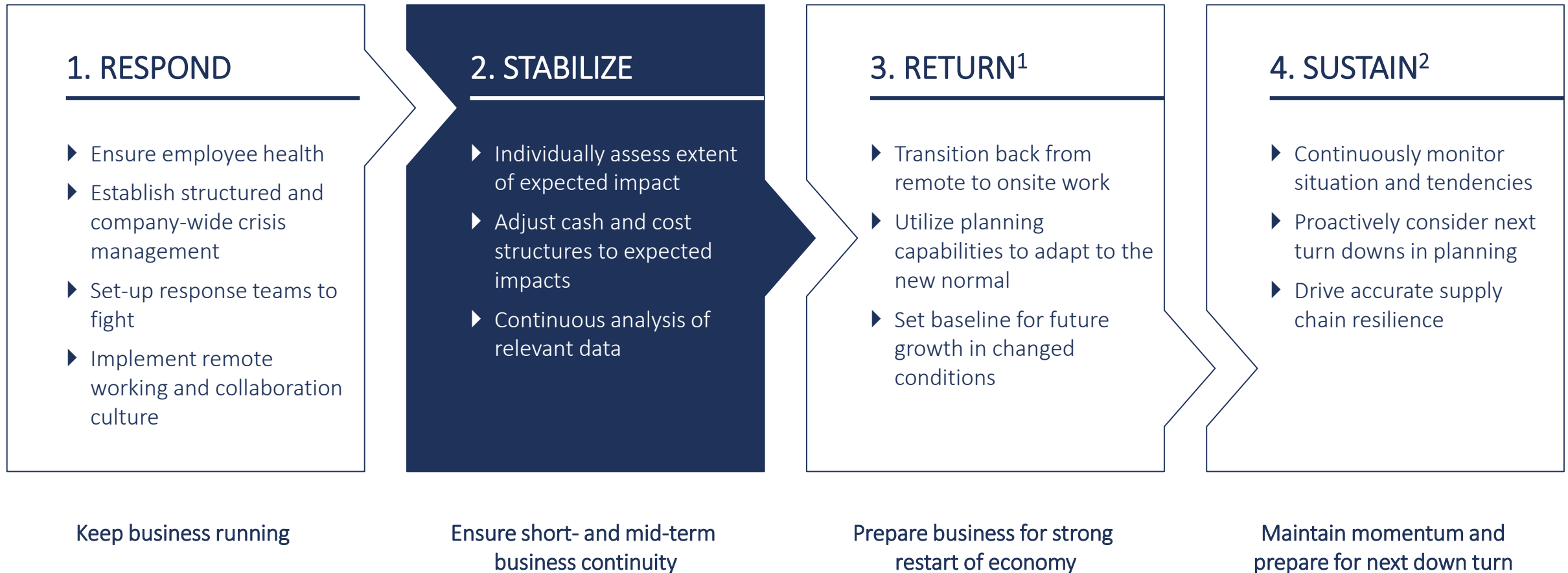
Collaboration Methods	Virtual Workspace	Virtual Communication / Meeting	Virtual Workshop	Virtual Environment
Description	Organization based virtual platform that provides information, tools and services with the focus on efficient cooperation	Means for exchanging information without being face-to-face. Could be a discussion or presentation in which participants present facts, problems or plans	Form of multi party interaction in which issues are identified, solutions are developed, and targets states are designed	Form of interaction with both the computer environment and the work of other users in a virtual world
Use Cases	<ul style="list-style-type: none"> ▶ Administration of projects ▶ Shared document processing ▶ Documentation exchange and versioning ▶ Task assignment ▶ Team organization 	<ul style="list-style-type: none"> ▶ Project Alignment ▶ Activity prioritization ▶ (Project) Status update ▶ Interviews ▶ Concept presentation ▶ Training session ▶ Solution support 	<ul style="list-style-type: none"> ▶ Problem spotting and solving ▶ Process analysis and design ▶ Value stream mapping ▶ Organization analysis and design ▶ Ideation workshop ▶ Strategy development 	<ul style="list-style-type: none"> ▶ Guided information tour ▶ Real-time demo ▶ Trade-Fair
Preferred Tools ¹	<ul style="list-style-type: none"> ▶ Teams  ▶ SharePoint  	<ul style="list-style-type: none"> ▶ Teams  ▶ Zoom  	<ul style="list-style-type: none"> ▶ Miro  	<ul style="list-style-type: none"> ▶ Hexafair  ▶ vFairs 

¹Besides the tools preferred by CAMELOT, all customer-specific systems can be used for virtual collaboration





In the **STABILIZE** phase the business continuity in the short- and mid-term should be fostered



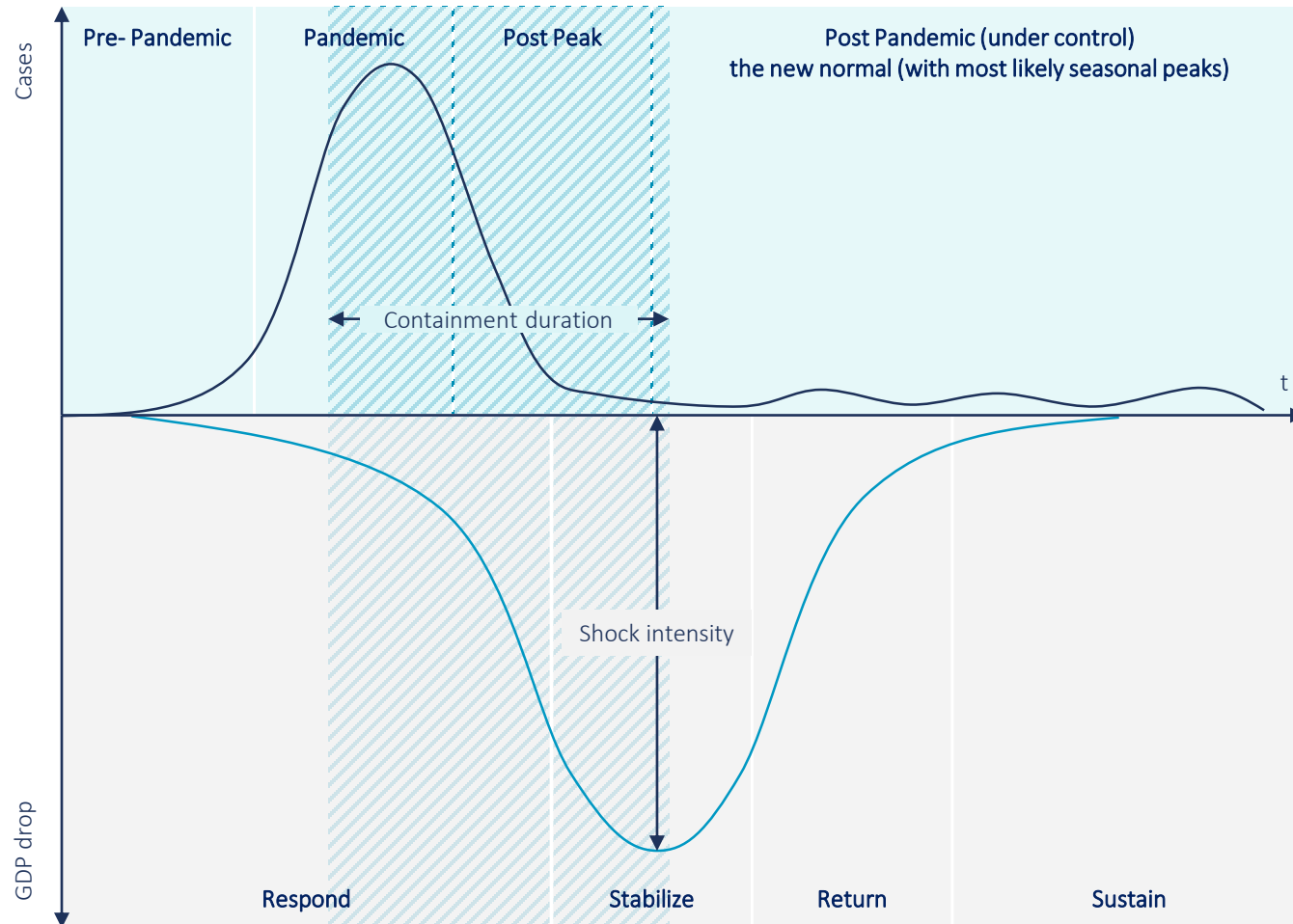
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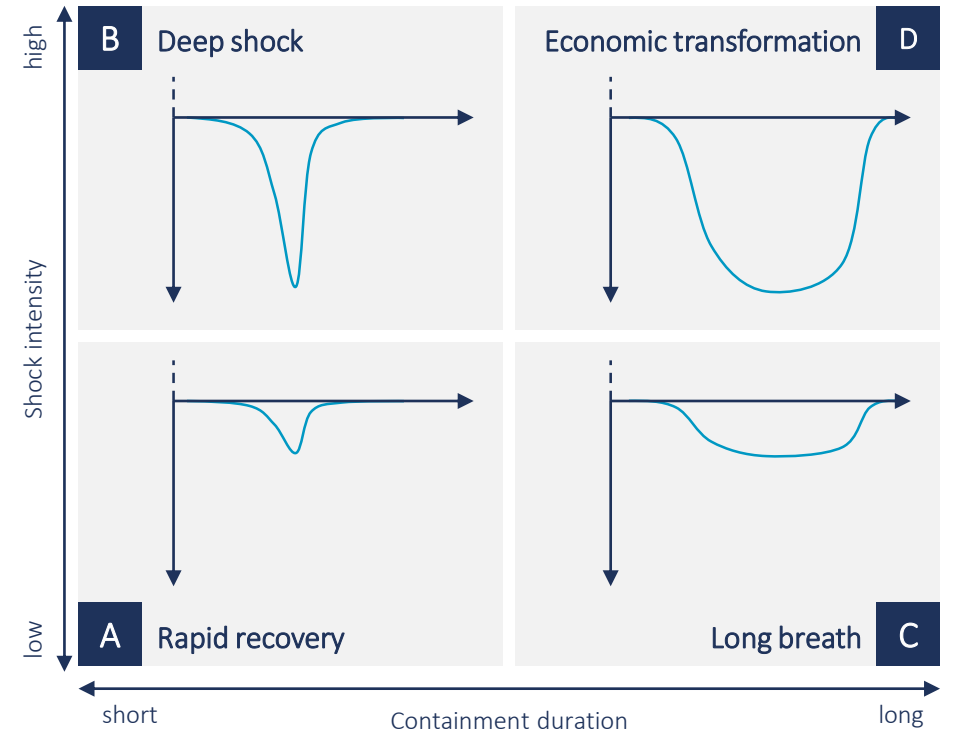


The economic impact of COVID-19 has two major drivers resulting in four different scenarios how the down and upturn could look like

Shock Curve



Scenario Matrix



Containment Duration Indicators

- ▶ Mortality rate
- ▶ Number of (new) cases
- ▶ Replication factor (R)
- ▶ ...

Shock Intensity Indicators

- ▶ GDP drop
- ▶ Order entry
- ▶ Revenue decrease
- ▶ ...





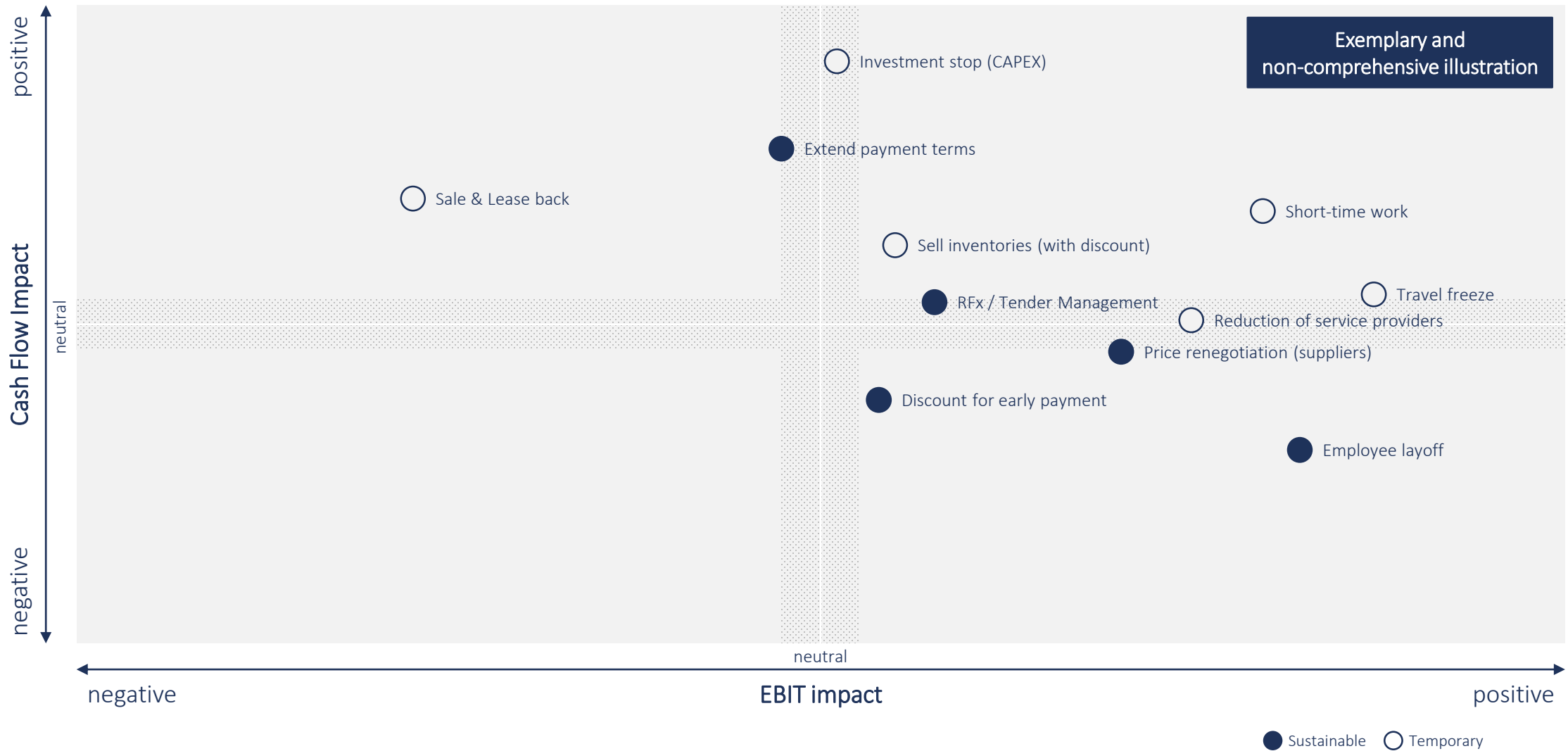
It is important to assess the most likely scenario for your company in order to be able to initiate the right measures to stabilize your business and increase the survivability

	A Rapid Recovery	B Deep Shock	C Long Breath	D Endgame Scenario
Economic scenario	<ul style="list-style-type: none"> ▶ In addition to the health-related consequences, the economic consequences of the short COVID-19 crisis area are manageable ▶ Lockdowns end by summer, whereas remote working and restrictive travelling stays in place ▶ Potential seasonal peaks are more manageable 	<ul style="list-style-type: none"> ▶ The impact of the COVID-19 outbreak is akin to an adverse supply-side shock, with an enforced decline in the number of hours worked ▶ The shock is inevitably causing major disruptions to trade ▶ A reduction in cash-flow and higher uncertainty delay corporate investment ▶ Existing inventory levels run down 	<ul style="list-style-type: none"> ▶ The COVID-19 epidemic and the containment lasts for a long time ▶ After the initial shock phase, the spread is slowed down, revealing in a moderate shock intensity ▶ The long-term course of the COVID-19 epidemic has slowed the economy and encouraged structural changes in economical behavior and values 	<ul style="list-style-type: none"> ▶ High shock intensity and long containment duration are resulting in wide-spread bankruptcies and credit defaults ▶ The focus on national interests has massively shaken up the confidence in global cooperation, and a return to former routines is no longer possible ▶ Decrease of global growth 2020 and revenue losses have led to a severe economic crisis
Focus	<p>Cash </p> <p>Cost </p>	<p>Cash </p> <p>Cost </p>	<p>Cash </p> <p>Cost </p>	<p>Cash </p> <p>Cost </p>



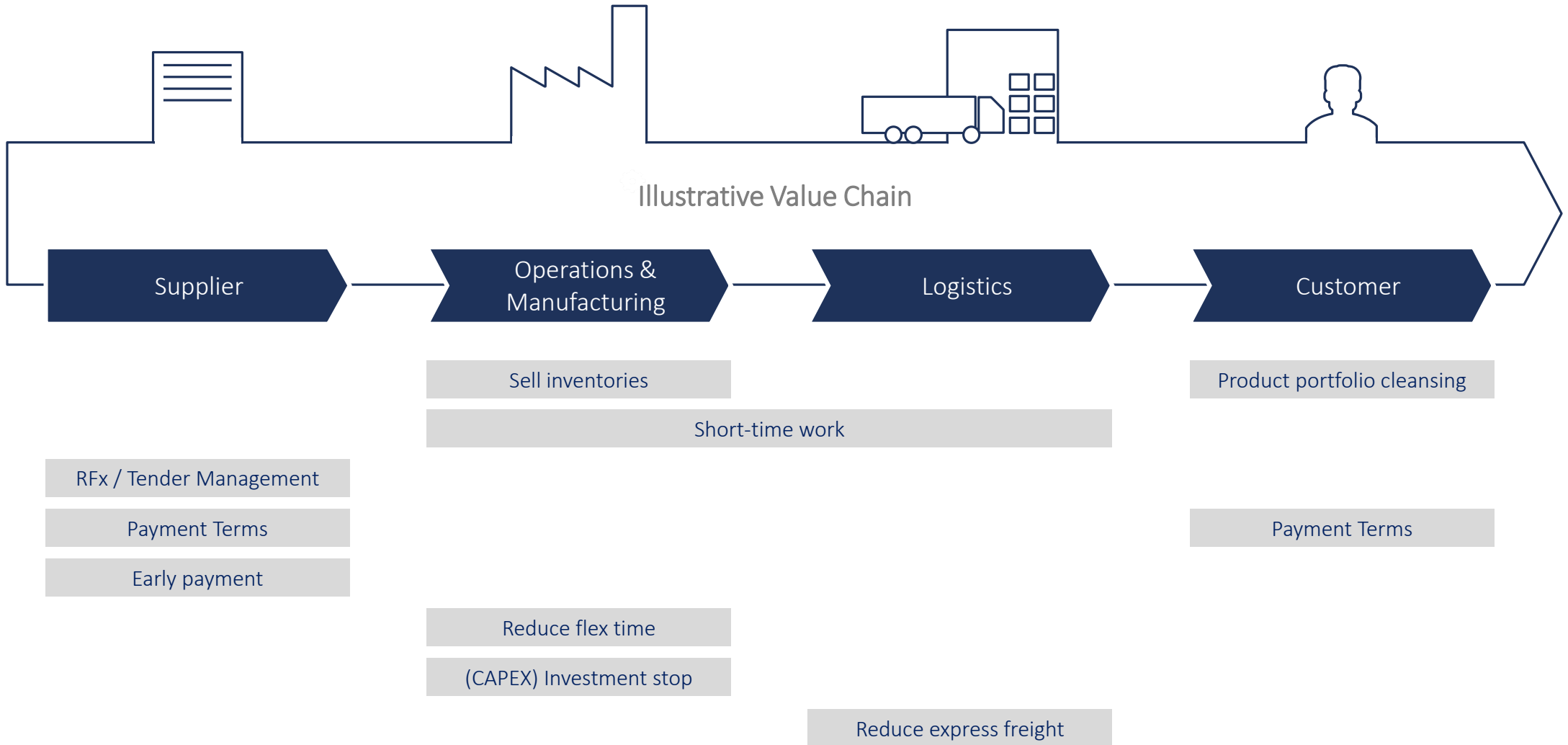


To safeguard the cash and cost structures different measures can be initiated with different effect





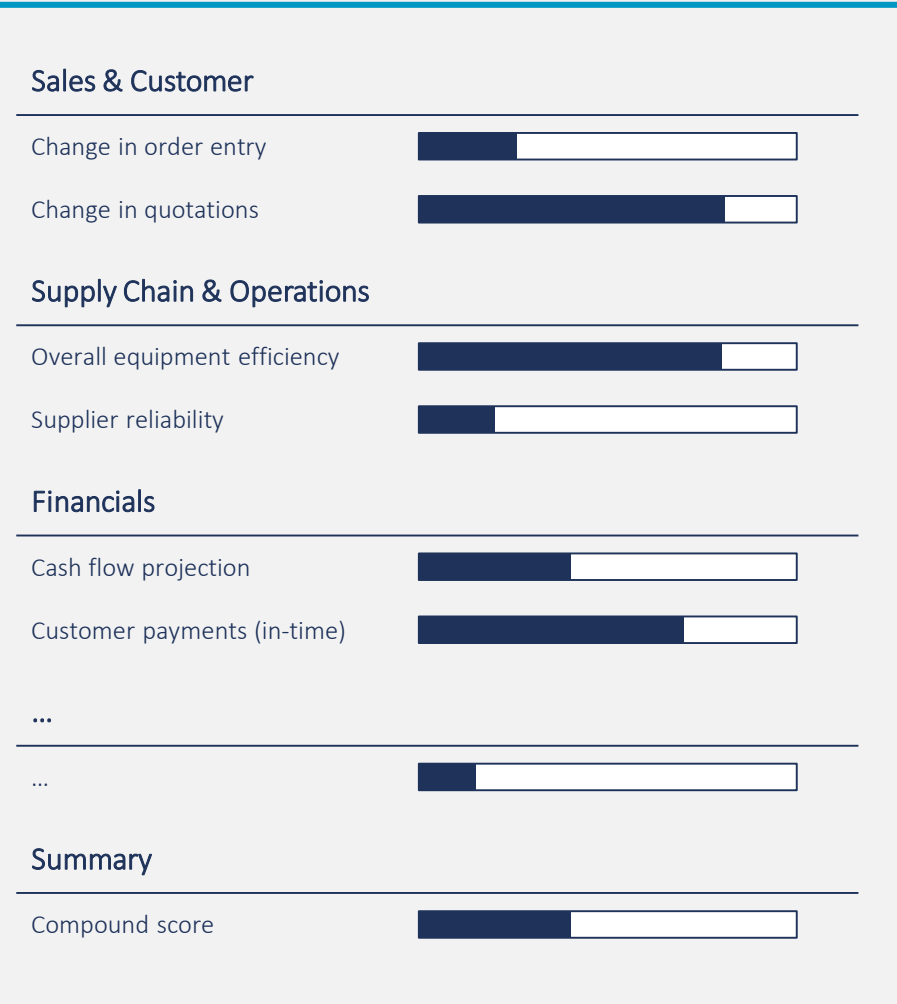
A lot of cash and cost efficiency related measures can be realized along the entire value chain



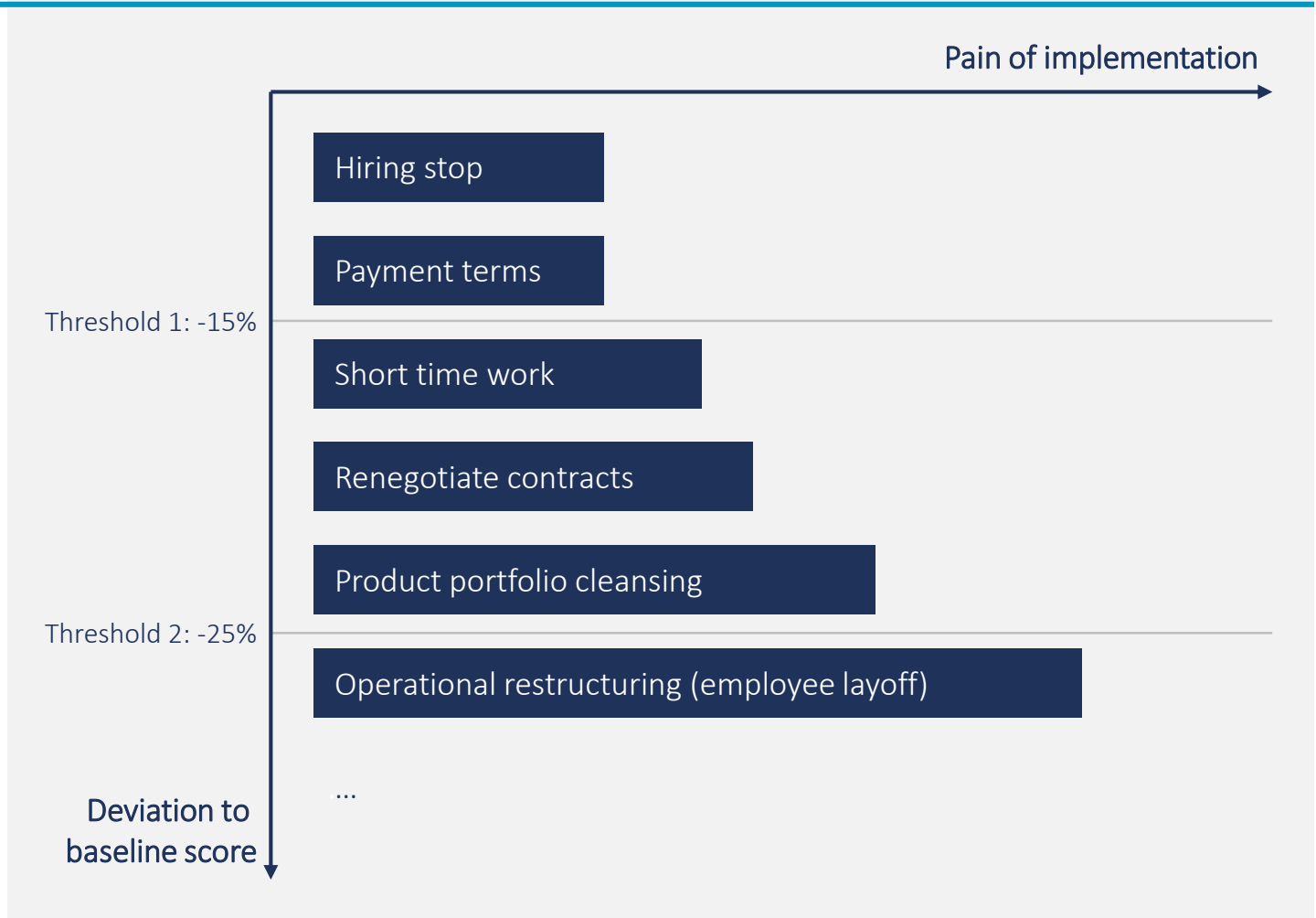


In order to be prepared for possible eventualities, a set of measures should be defined with specified thresholds for an implementation – starting with “low pain high impact” measures

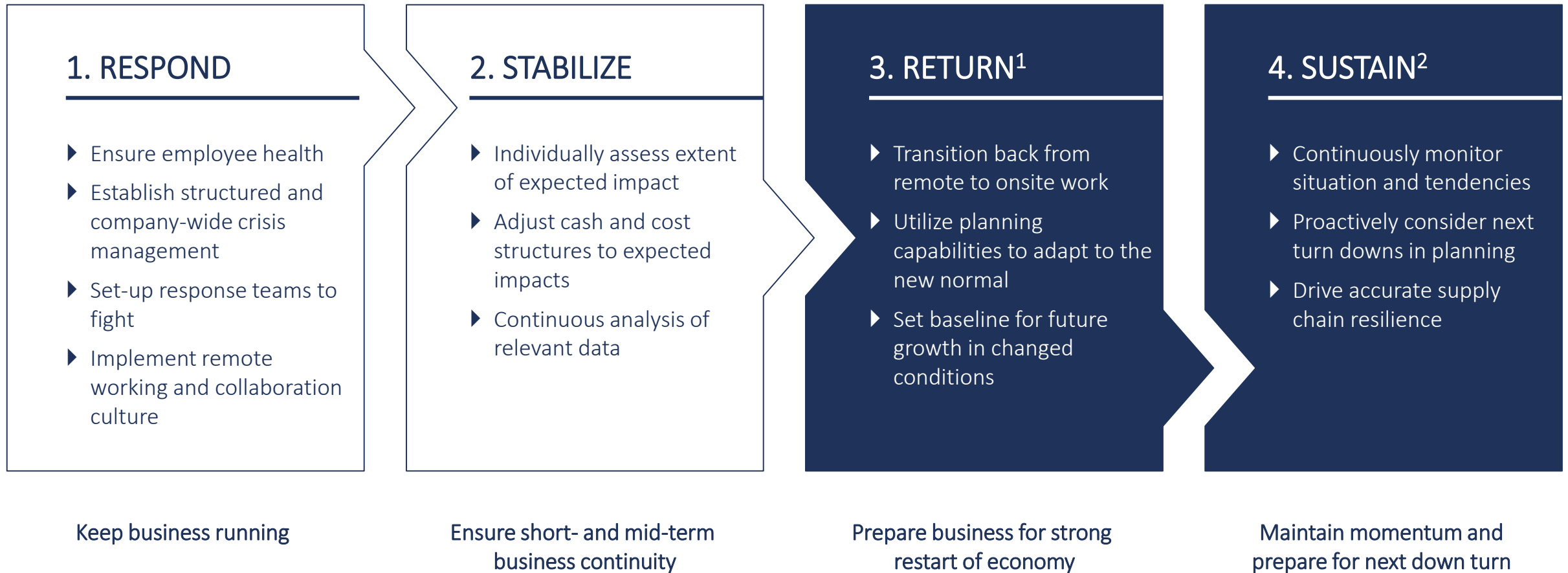
Exemplary dashboard extract



Exemplary set of measures



In the phases **RETURN** and **SUSTAIN** the main objective should be to prepare the business for a restart of the economy and prepare for a possible subsequent down turn



1) To be published in June 2020 2) To be published in July 2020



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Some examples on which we are currently working on with our customers to **Respond** on COVID-19

COVID-19 War Room coordination

- ▶ Coordination of War Room Streams (PMO) and execution of internal crisis communication
- ▶ Introduction of Digital collaboration tools and people enablement to boost remote efficiency
- ▶ Lead of Supplier Response Team to improve material availability



Chemical Industry

Re-allocation of product portfolio

- ▶ Shift of product production portfolio between highly COVID-19 impacted plants to less impacted plants across Europe and Asia
- ▶ Definition of “crisis product portfolio” to reduce material complexity (for suppliers) and maintain delivery reliability for more than 90% of standard and extended application cases



Industrial Manufacturing

Ad-hoc Demand Analysis

- ▶ Review of customer demand utilizing CAMELOT's *COVID-19 Impact Analyzer for Supply Chain Management*
- ▶ Identification of critical material for short-term inventory increase to prevent production stops due to material shortage



Industrial Manufacturing





Some examples on which we are currently working on with our customers to **Stabilize** the company during COVID-19

Preparation of cost reduction portfolio

- ▶ Identification of scenarios on future development and definition of thresholds to take action
- ▶ Development of short, mid and long-term measures for cost and cash optimization considering headwinds and implementation costs based on CAMELOT Model Company
- ▶ Set-up of central implementation PMO



Industrial Manufacturing

Process quick assessment

- ▶ Quick assessment of order management and delivery relevant processes regarding workforce requirements
- ▶ Estimation of workforce requirements for several service level scenarios
- ▶ Development of recommendation for several scenarios considering service level and order volume in regards of short-time work (and equivalent) for European subsidiaries



Industrial Manufacturing

Demand & supply analysis

- ▶ Review of customer demand utilizing CAMELOT's *COVID-19 Impact Analyzer for Supply Chain Management*
- ▶ Review and update of existing product portfolio relevant analyses (e.g. ABC/XYZ) and adaption to current demand trends
- ▶ Coordination of demand and supply balancing (COVID-19 S&OP)



Industrial Manufacturing



Value Chain Cost Efficiency: Facing a crisis like COVID-19 the quick adaptation of the cost structure is vital

CAMELOT's Cost Efficiency Approach



< 3 weeks

- ▶ CAMELOT's Cost Efficiency Approach is generating quick results in a time-sensitive situation
- ▶ The approach is focusing on sustainable cost efficiency rather than impulsive actions
- ▶ Major cost levers are identified and associated measures developed
- ▶ Different scenarios for the development of the crisis are considered
- ▶ Decision making is eased by fast calculation of different scenarios and bundles of measures with CAMELOT's Cost Efficiency Tool



From potentials to roadmap within 3 weeks



Early prioritization enables identification of Quick-Wins



Centralized coordination of associated cost efficiency initiatives



Parallelization of preparatory tasks



Active management of headwinds and side-effects

Value Chain Cost Efficiency: Our Cost Efficiency Tool accelerates the project by supporting the entire cost efficiency workflow



Calculation of different scenarios for the development of the crisis



Evaluation of different combinations of measures



Quick setup and first hypotheses due to utilization of model companies

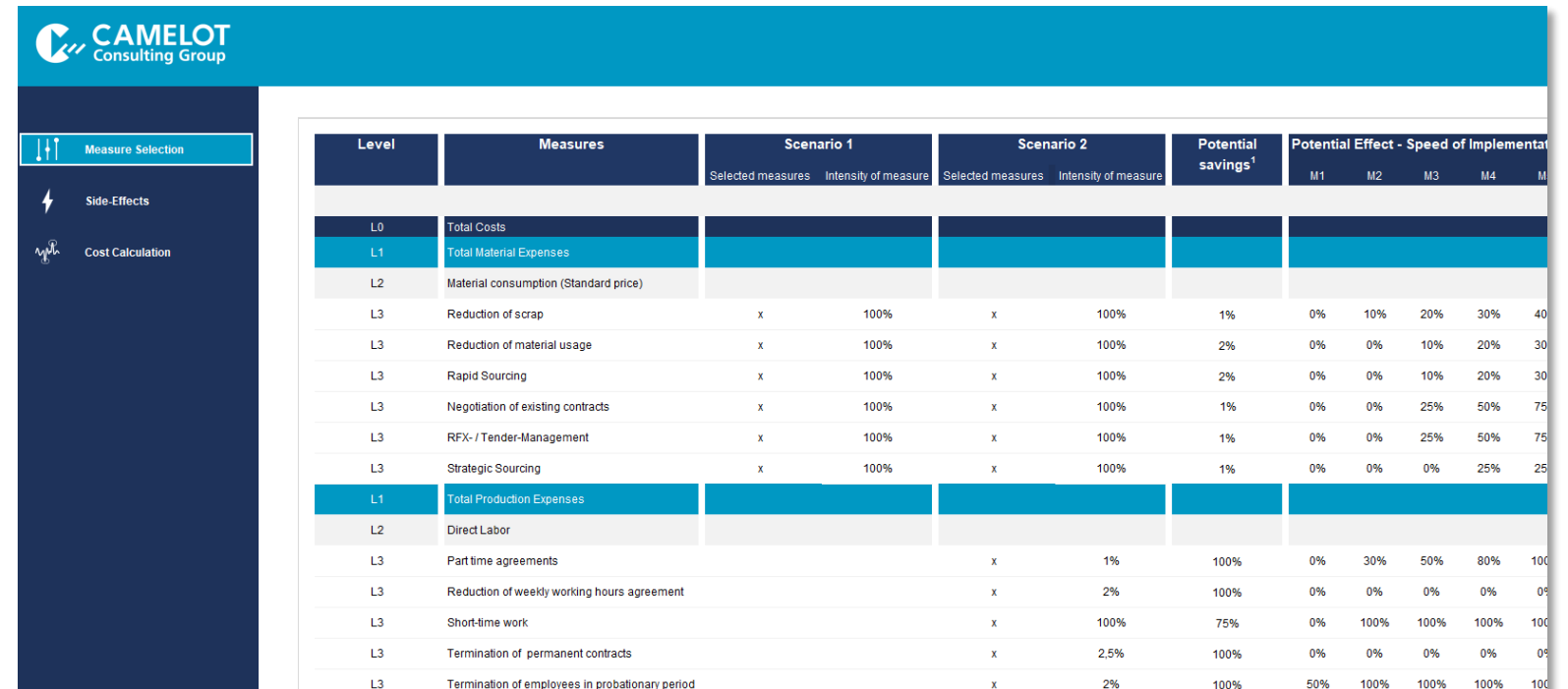


Accurate calculation of bottom-line effects



Time-lag consideration of individual measures

CAMELOT's Cost Efficiency Tool



Level	Measures	Scenario 1		Scenario 2		Potential savings ¹	Potential Effect - Speed of Implementation						
		Selected measures	Intensity of measure	Selected measures	Intensity of measure		M1	M2	M3	M4	M5		
L0	Total Costs												
L1	Total Material Expenses												
L2	Material consumption (Standard price)												
L3	Reduction of scrap	x	100%	x	100%	1%	0%	10%	20%	30%	40%		
L3	Reduction of material usage	x	100%	x	100%	2%	0%	0%	10%	20%	30%		
L3	Rapid Sourcing	x	100%	x	100%	2%	0%	0%	10%	20%	30%		
L3	Negotiation of existing contracts	x	100%	x	100%	1%	0%	0%	25%	50%	75%		
L3	RFX- / Tender-Management	x	100%	x	100%	1%	0%	0%	25%	50%	75%		
L3	Strategic Sourcing	x	100%	x	100%	1%	0%	0%	0%	25%	25%		
L1	Total Production Expenses												
L2	Direct Labor												
L3	Part time agreements			x	1%	100%	0%	30%	50%	80%	100%		
L3	Reduction of weekly working hours agreement			x	2%	100%	0%	0%	0%	0%	0%		
L3	Short-time work			x	100%	75%	0%	100%	100%	100%	100%		
L3	Termination of permanent contracts			x	2.5%	100%	0%	0%	0%	0%	0%		
L3	Termination of employees in probationary period			x	2%	100%	50%	100%	100%	100%	100%		



Free of Charge



Web based software-as-a-service



Ready to use plug- and-play solution
free of charge



Quickly identify most affected
products



Scenario based planning for best,
worst and most likely cases



Easy integration to MS Excel via up-
and download function

Impact Analyzer for Supply Chain Management

Current Challenge

- ▶ Limited transparency on the impact of COVID-19 crisis on end customer demand
- ▶ Judgmental decision-making during crisis meetings which is not based on observed facts and statistics
- ▶ Supply chain impact hard to estimate especially on inventory level and overall production capacity

Benefits

- ▶ Correlation analysis of the end customer demand and COVID-19 cases per product-country
- ▶ Machine learning based demand forecasting leveraging COVID-19 databases of Johns-Hopkins University, sentiment analyzes via Google & Twitter as well as CAMELOT industry benchmark database
- ▶ Scenario-based forecast creating a best, worst and most likely demand scenario
- ▶ Evaluation of the inventory and capacity effects based on estimated demand scenarios
- ▶ All analysis results can be downloaded to MS Excel

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