

BCI SUPPLY CHAIN RESILIENCE REPORT 2018



Contents



Foreword, BCI

Supply chains are often exposed to risks and threats brought by natural or man-made disasters. In addition, these challenges are becoming more dynamic as organizations are increasingly interconnected through global networks. While a wider outreach



can be beneficial, as it provides more options for choosing materials, employing talent and reducing costs, such growing complexity can also mean increased vulnerability to disruptions. Hence, it is important to maintain a resilient supply chain to keep performances at high levels.

Business continuity professionals play a key role in mitigating incidents in the supply chain. In its tenth year, the Business Continuity Institute, supported by Zurich, is releasing its Supply Chain Resilience Survey 2018. The 589 professionals who responded to the survey name the top five causes of disruptions their organizations faced in the past 12 months and they indicate what type of mitigation measures they are implementing.

Through the years, we have seen higher levels of awareness and adoption of best practices, as the majority of the organizations this year acknowledge the importance of reporting disruptions (73%). An upward trend is also observed in terms of emergency preparedness as more professionals report insuring financial losses compared to the previous year (49% to 53%). In addition, there are more organizations that have business continuity arrangements in place in dealing with supply chain (74% to 76%) compared to last year. This tends to have a positive impact on areas such as supply chain visibility and top management commitment.

Although we are moving towards more resilient supply chains each year, opportunities for refinement are still there. Strong top management commitment, one of the main keys to ensuring resilience, declines from last year by 7% (41% to 33%). Further, more respondents also admit that they do not analyse the full extent of their supply chain in case of disruption compared to last year (from 22% to 30%).

Collaboration among networks is an essential element in keeping the supply chain intact. In the same way, this report is made possible thanks to the help of all the organizations and professionals who answered the survey. It is with collective efforts in monitoring disruptions, disseminating knowledge, and increasing awareness that we can overcome challenges and reduce vulnerabilities for supply chains.

David Thorp, Executive Director, BCI

Foreword, Zurich

The balance between risk and reward is the very essence of business: you have to take risks in order to generate returns and high returns involve greater risks. However, there is a difference between risks taken as a result of careful judgement and those taken unwittingly. This report will help you to answer the questions around careful judgement of supply chain risks.



In a world of increasing complexity and uncertainty, the risk of supply chain disruption has become one of the most fundamental risks that organizations face across virtually all sectors in today's global and increasingly interdependent economy.

Companies need to manage all the risks they face more rigorously than ever and in many cases can be overwhelmed by the size and difficulty of the task. Many risks are identifiable and can be managed reasonably easily, but more worryingly there are risks that cannot easily be spotted and catch an organization's unawares.

Often supply chain risks fall into this latter category, particularly for large multi-national operations where there can be many hundred suppliers at primary, secondary and even tertiary level. In many cases it would appear many businesses do not really know who is supplying their key components and materials beyond tier one and have no practical contingency plans in place to deal with a disaster should it occur.

A sustained interruption to a supply chain will result in reputational issues, loss of market share and in many instances make it very hard for a company to remain sustainable in what is already a volatile environment.

Following extensive research and survey's by the BCI, the purpose of this report is largely to answer a number of key questions for organizations around the resilience of their supply chain, in terms of what are the current key risks and how risk and supply chain managers can identify, assess and practically improve the scenarios they face.

As with all risks you need to be prepared and expect the unexpected!

Jean-Pierre Krause,

Global Head of Risk Engineering, Zurich Insurance Company Ltd.

ZURICH

Foreword, Commercial Risk Europe

Opportunity from risk

We at Commercial Risk Europe are delighted to work with the Business Continuity Institute on this excellent and highly regarded survey that continues to grow in



scale and significance and this year generated almost 600 responses from 76 countries.

Supply chain is arguably where the business continuity and risk management professions meet in prefect unison.

As once again underlined by this survey over half of those companies that took part suffered a supply chain disruption in the last 12 months and over half of these events were with Tier 1 suppliers.

These are significant and regular fundamental business risks that will and do occur. And yet, as also shown by this year's survey a shockingly high number of affected companies (just under third) do not analyse the source of their supply chain disruptions and only about one half of the losses suffered are actually insured.

This reveals a potentially serious problem: While companies know they are exposed and do suffer supply chain disruptions it does not appear that systems are in place to identify, measure, properly manage and ultimately transfer those risks where possible.

This could also, however, also be identified as an opportunity because this shows that there remains great potential for risk and insurance managers and business continuity professionals to work more effectively together to focus on supply chain risk and deliver a far improved service for their companies.

We all know that cyber risk will only grow in significance, IT outages will be an ever-present threat and weather risk can only grow – these are the main supply chain threats based on this survey.

This means that risk and business continuity professionals need to combine their knowledge, skills and resources in a more coherent manner than ever before. They also need to challenge the insurance market to come up with more comprehensive, reliable and fairly priced risk transfer solutions and related services to help out too.

Research such as this report and events such as our Supply Chain conference in London in November in partnership with UK risk management association AIRMIC provide a great platform to take this partnership further and make a real difference.

Adrian Ladbury,

Director and Co-owner at Commercial Risk

Commercial Risk Europe

Foreword, CIPS

Given the basic necessity of businesses trying to get the right goods, to the right places on time, this report delivers both predictable and startling results about how resilient our supply chains really are.



The old adage, "fail to plan and you plan to fail," is never more true than in the management of supply chains. Supply chains are more interconnected, and will become more global than ever despite the transactional and ideological separations opening up rifts in some regions of the world.

The less surprising failures could be called the usual suspects such as IT outages and weather disruption. Though there is much we can do to plan for how we will ensure continuity of supply chains in such instances , we can't ultimately control the weather for example or the increasingly sophisticated operations of scammers. We must always consider risks, anticipate some kind of disruption, plan the actions to mitigate risks and be comfortable with implementing a different strategy at a moment's notice.

Another cause of disruption highlighted in the report is around skills and talent development. As the largest professional body in the world for procurement and supply management we are advocates for continuing professional development at all stages of a career, striving to guide our members to what's on the horizon. This means more strategic thinking as automation takes hold, and the need for stronger relationship management with both suppliers and other business disciplines.

Managing supply chains cannot be a sole pursuit. Procurement professionals must not only work more closely with suppliers but with risk and business continuity professionals to understand the landscape we are now operating in. Supply chain risk will continue to be a growing challenge, and it should be given bigger strategic focus in any business. Research like this is an invaluable guide.

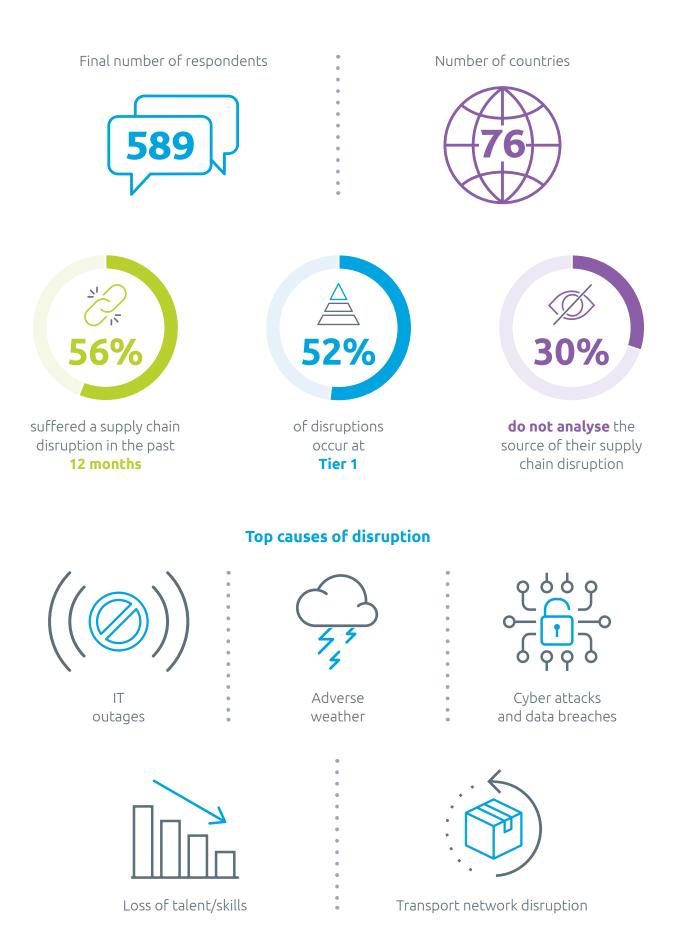
We know that risk can come in many forms, and not always a bolt from the blue. Risks of disruption can be identified, anticipated and mitigated against. So how high on your business agenda is the mitigation of the key risks to your particular business?

Malcolm Harrison, Group CEO, CIPS



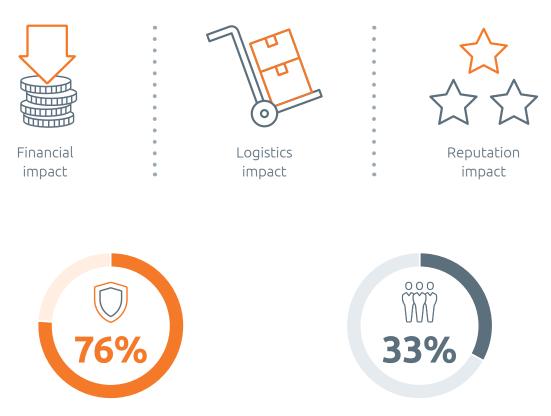


Executive Summary





Consequences of disruption:



have **BC arrangements** in place to deal with supply chain disruptions

report strong **top management commitment** (-8% from last year)

Future threats (12 months)



Cyber attacks and data breaches



IT outages



New laws or regulations



Adverse weather



Loss of talent/skills

Future threats (5 years)



Cyber attacks and data breaches



IT outages



Adverse weather



New laws or regulations



Act of terrorism



Supply Chain Disruption

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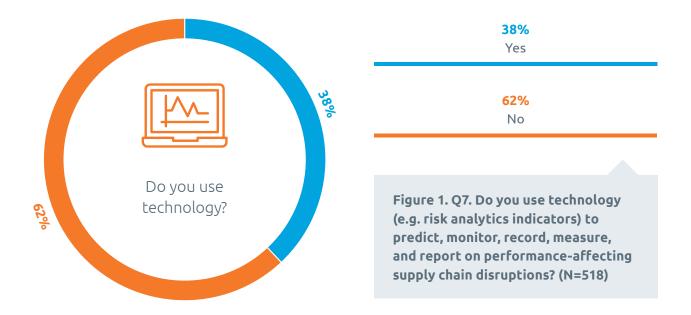
Supply Chain Disruption

Reporting of supply chain disruptions (Table 1) has increased by 3% compared to last year (from 70% to 73%). Overall, the majority of organizations have consistently shown high levels of reporting through the years (68% on average). On the other hand, more than one in four (27%) do not report supply chain disruptions at all, even though this is an improvement from last year's 31%.

Year	Firm-wide reporting	Reporting within certain departments	No reporting
2018	30	43	27
2017	32	38	31
2016	34	38	28
2015	28	37	35
2014	27	40	33
2013	23	40	37
2012	25	39	39

Table 1. Levels of reporting supply chain disruptions, in % (2012-2018). Based on Q6: Do you record, measure, and report on performance-affecting supply chain disruptions? (N=521)

As for last year, organizations appear reluctant towards the adoption of more advanced solutions in the supply chain, with only 38% saying they employ technology to predict, monitor, record, measure and report on disruptions (Figure 1). However, it is worth noting that organizations that have business continuity arrangements are much likelier to embed technology into their supply chain (46%) compared to those who do not have them (14%).



The software of choice for professionals using technology in the supply chain remains Excel (46%), with a 5% increase from last year (Figure 2). BCM software rises from fourth to second place (14%) compared to 2017, revealing a small but noticeable improvement in the uptake of technology in business continuity. Segmenting the data per industry sector, it can be observed that sectors such as finance & insurance make a higher use of BCM software (19%). Differently, incident response data (33%) seems to be more popular in public administration and defence.

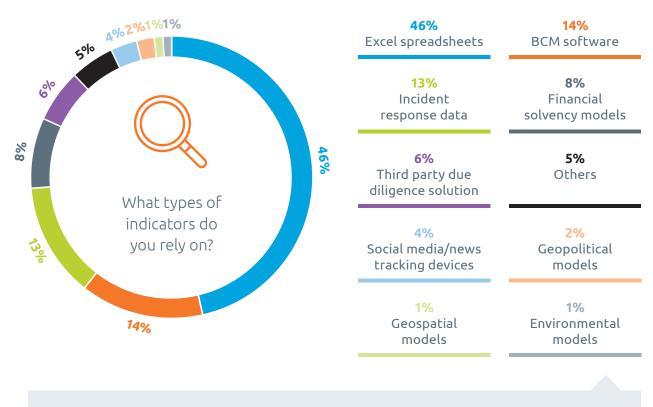


Figure 2. Q8. What types of indicators do you rely on to predict, monitor, record, measure, and report on performance-affecting supply chain disruptions? (N=232)

The number of organizations suffering a disruption in the past twelve months (Figure 3) has decreased from 65% to 56%. However, it should be noted that the number of those not knowing whether they suffered a disruption or not has increased by 6% (10% to 16%).

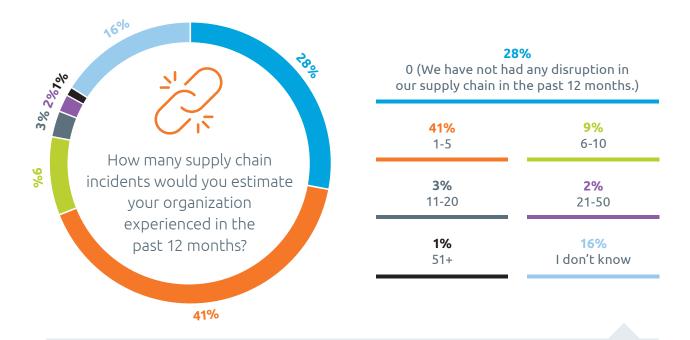
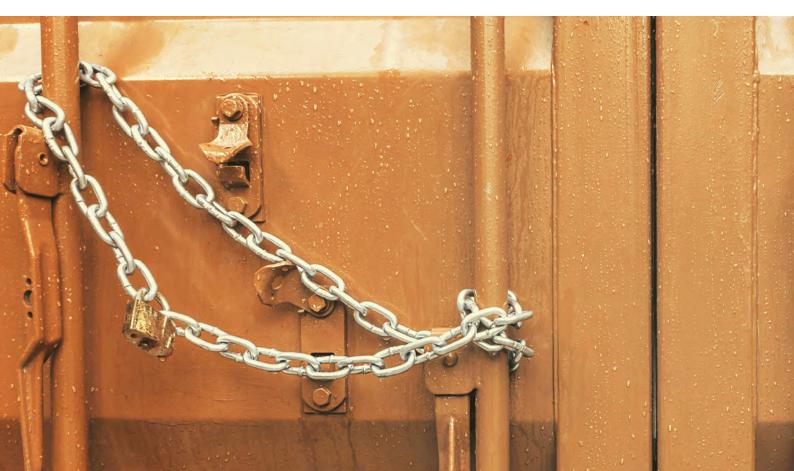


Figure 3. Q9. How many supply chain incidents would you estimate your organization experienced in the past 12 months that caused a significant disruption? (N=499)



More organizations than last year report supply chain disruptions among their Tier 1 suppliers (from 44% to 52%). In addition, more respondents admit that they do not analyse the full extent of their supply chain in case of disruption (from 22% to 30%) compared to the previous twelve months (Figure 4). It is worth noting that this last figure improves for those organizations adopting technology, as only 18% of them do not fully analyse disruptions to their suppliers. The three main types of software that practitioners use to track incidents are excel spreadsheets, BCM software and financial solvency models.

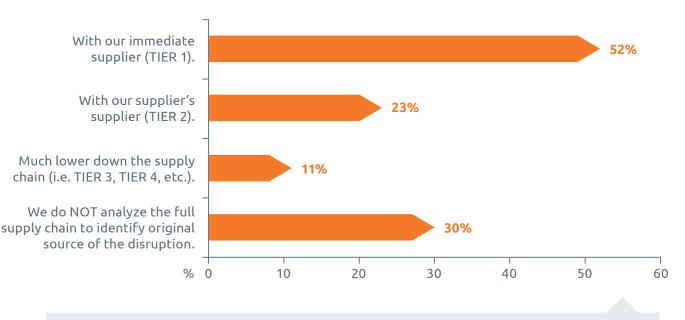


Figure 4. Q10. Considering the supply chain incidents that you are aware of in the last 12 months, which of the following apply in your experience? The predominant source of disruption across all events was: (N=409)

The threat landscape for supply chains has somewhat changed in the past twelve months (Figure 5). While unplanned IT or telecommunications outages (53%) remain the most common cause of disruption, adverse weather (41%) follows up, rising from sixth place last year. The top five is then completed by cyber attacks and data breaches (33%), loss of talent/skills (30%) and transport network disruption (27%). It is worth pointing out that cyber attacks and loss of talent/skills might be connected, as organizations struggle to find qualified professionals to employ in their cyber security functions¹. It is also worth highlighting how health and safety incidents (19%) make it to the top ten (in eighth place) from twenty-first last year. This reflects increased efforts by organizations and institutions to crack down on the circulation of dangerous substances in the supply chain²³.

1 www.csoonline.com/article/3247708/security/research-suggests-cybersecurity-skills-shortage-is-getting-worse.html

- $\ 2\ www.coindesk.com/walmart-kroger-nestle-team-with-ibm-blockchain-to-fight-food-poisoning$
- 3 www.foodmanufacture.co.uk/Article/2018/07/11/BSI-revises-global-safety-standard

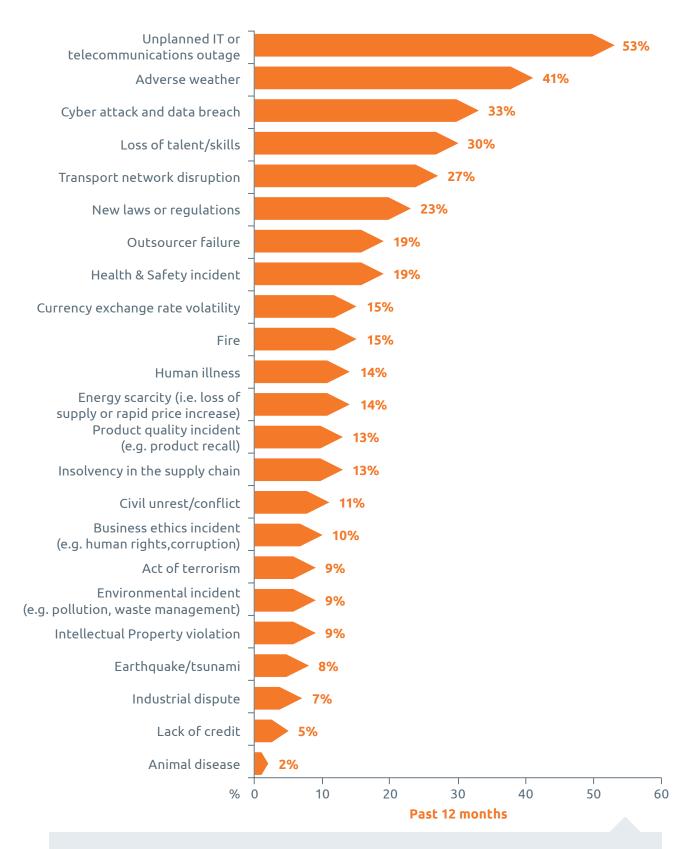


Figure 5. Q11.a. Looking at the following threats, please tell us whether they caused any significant disruption to the supply chain of your organization in the past twelve months. (N=376)

Organizations tend to suffer mostly in financial terms (62%) when it comes to disruptions to their supply chain (Figure 6). However, the majority of professionals also report logistics and reputation impacts (54%) as consequences of an incident. Filtering the data, it can be observed how different disruptions lead to different types of costs. Adverse weather events tend to aggravate particularly logistics costs (62%), while cyber attacks are worse for financial (70%) and reputation damage (60%). Differently, health and safety incidents exacerbate all three categories (financial impact 68%, reputation impact 64%).

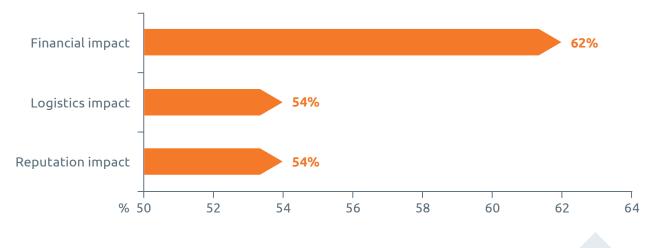
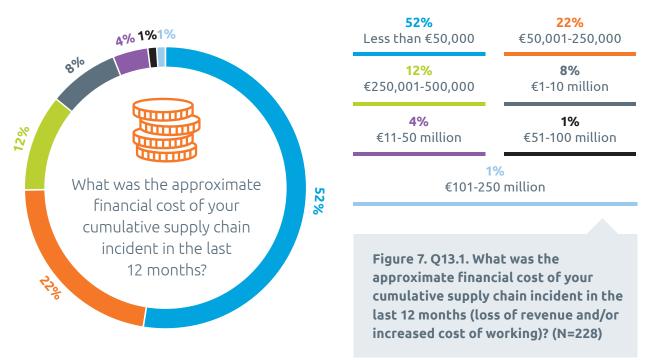


Figure 6. Q12. Which of the following impacts or consequences arose from the incidents/ disruptions experienced in the last 12 months? Tick as many as applicable. (N=330)

More than one in ten (14%) of the respondents surveyed suffered losses for more than one million euros (Figure 7), confirming the positive trend registered in 2017⁴. Looking at the levels of preparedness and their relation to cost, organizations with business continuity or disaster recovery arrangements tend to suffer similar levels of losses (16%).



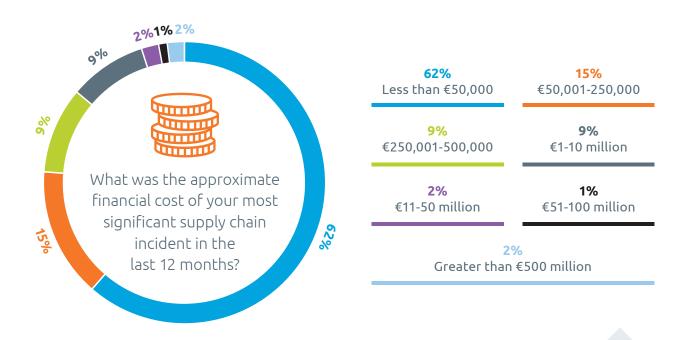
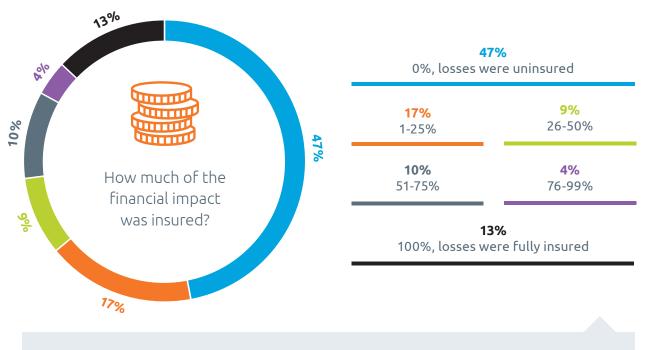


Figure 8. Q13.2. What was the approximate financial cost of your most significant supply chain incident in the last 12 months (loss of revenue and/or increased cost of working)? (N=114)

Improvement is seen as more than half of the respondents (53%) report insured losses (Figure 9), a slight increase from last year's 49%. On the other hand, the value for those organizations that fully insure their losses remains at 13%. This shift reveals growing preparedness among organizations; although efforts must be sustained to achieve more resilient supply chains.





Out of those respondents that do not fully insure their losses, the majority (52%) do not know the reason for this. This part of the sample includes professionals from business continuity, risk management and supply chain management. Furthermore, 19% mentioned that they were happy to take the rest of the financial impact and 15% reported that they only covered traditional physical damage events. Nevertheless, 7% were not aware of available coverage of non-damage supply chain insurance plans (Figure 10).

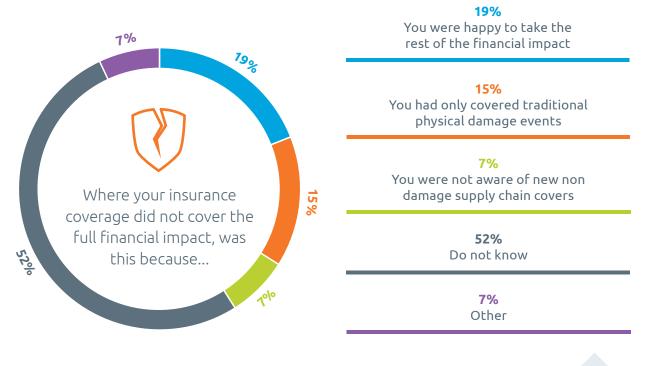


Figure 10. Q15. Where your insurance coverage did not cover the full financial impact of disruptions, was this because... (N=333)



Cyber attacks and data breaches (55%) and IT outages (54%) top the chart with nearly equal consensus from the respondents (Figure 11). Previous BCI research shows how these two types of disruptions might be connected, as IT outages are often considered a secondary effect of cyber attacks⁵. Adverse weather (41%) can only be found in fourth position even though it was the second most disruptive event in the past year (Q11a). It is also interesting to highlight a concern for health, as human illness (25%) and health and safety concerns (24%) both feature in the top ten.

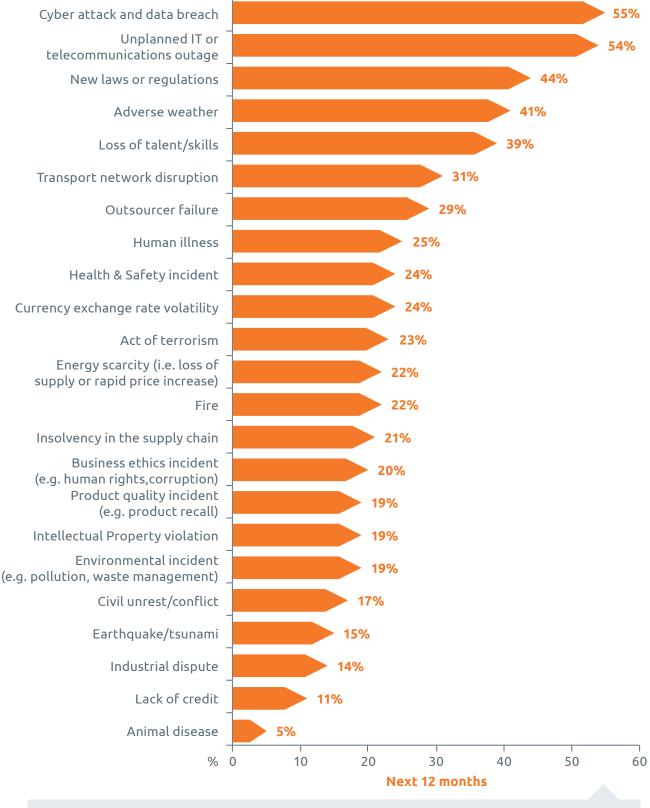


Figure 11. Q11.b. Looking at the following threats, please tell us whether they are a cause of concern for the next twelve months. (N=376)

Cyber attacks and data breaches (49%) are the most concerning challenge for professionals over the next five years (Figure 12). Following, IT outages (41%) and adverse weather (39%) rank respectively second and third. These threats can often be connected to one another, as IT outages can be a consequence of both cyber attacks or extreme weather events. This year, new laws or regulations (36%) appear less worrying to respondents in the long term, as they drop from second to fourth place. Interestingly, act of terrorism (34%) makes the top five, unlike in 2017 when it ranked seventh.

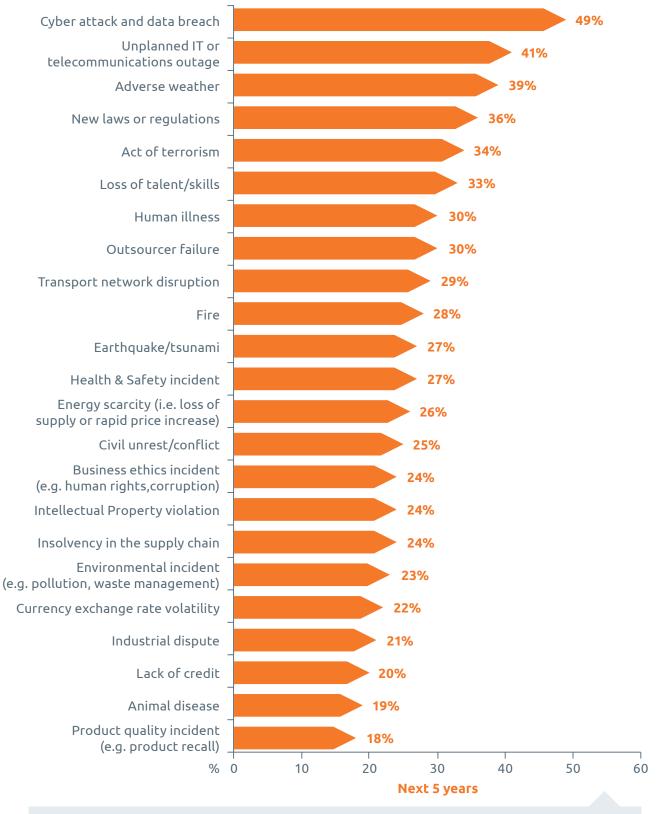


Figure 12. Q11.c. Looking at the following threats, please tell us whether they are a cause of concern for the next five years. (N=376)

Through the years, this study has emphasised the importance of top management in developing supply chain resilience. Top management buy in and leadership are key enablers to the facilitation of good practices in the supply chain. However, this year high top management commitment (Figure 13) dropped by 8% from the previous report (41% to 33%). In addition, the number of large businesses with high top management support declined from 44% to 34%. Interestingly, small and medium sized enterprises (SMEs) reported greater involvement of top management than that of large businesses at 41% compared to 34% (Table 4).

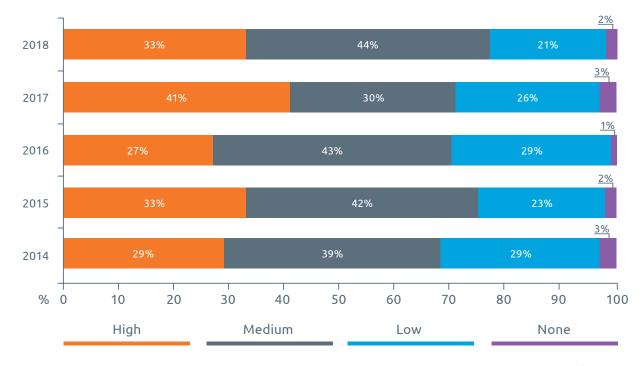


Figure 13. Q16. How would you assess your organization's top management commitment to managing supply chain risk? (N=370)



Almost three-quarters of organizations (76%) report having business continuity arrangements in place to deal with supply chain disruptions; this is slightly higher (+2%) than last year's figure. Furthermore, this year's results show that 95% of the respondents are aware of the presence or absence of business continuity measures in their organization, the highest figure reported since 2012 (Table 2). This shows the growing interest and commitment to business continuity in supply chain management.

Үеаг	Yes	No	Don't know	N
2012	58%	25%	17%	442
2013	75%	19%	6%	405
2014	72%	22%	6%	375
2015	68%	25%	7%	323
2016	73%	25%	7%	358
2017	74%	16%	10%	285
2018	76%	19%	5%	383

Table 2. Tracking supply chain business continuity arrangements, 2012-2018. Based on Q17: Does your organization have its own business continuity arrangements in place to deal with supply chain disruption? (N=383)

Organizations with business continuity arrangements are three times more likely to report greater supply chain visibility (36% compared to 12%). They are also more likely to insure supply chain losses (+7%) and almost six times more likely to receive top management support in strengthening good practice (Table 3).

Indicator	Business continuity arrangements present (Q17)	No business continuity arrangements (Q17)
Firm-wide reporting of supply chain disruption (Q6)	36%	12%
Insuring supply chain losses (Q14)	55%	48%
High top management commitment to supply chain resilience (Q16)	41%	7%

Table 3. Comparing practices between organizations with or without supply chain business continuity arrangements

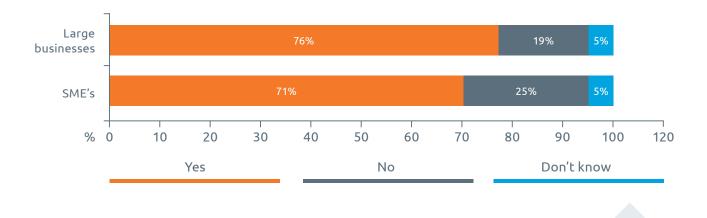


Figure 14. Q17. Does your organization have its own business continuity arrangements in place to deal with supply chain disruption? (N=383)

Large businesses perform better than small and medium enterprises when arranging business continuity practices in dealing with supply chain disruptions (Figure 14). It must be noted, however, that more SMEs are accepting business continuity arrangements to build greater supply chain resilience than last year (from 67% to 71%). Further, SMEs have outperformed large enterprises in terms of firm-wide reporting of supply chain interruptions and high top management commitment (Table 4).

Indicator	SMEs	Large businesses
Firm-wide reporting of supply chain disruption (Q6)	33%	29%
Insuring supply chain losses (Q14)	46%	56%
High top management commitment to supply chain resilience (Q16)	41%	34%

Table 4. Comparing practices SMEs and large enterprises

The majority of the respondents (72%) reported asking their new and existing suppliers about their business continuity arrangements (Figure 15). The figures show that making sure suppliers have business continuity measures in place has a positive relationship with firm-wide reporting, and high top management commitment (Table 5).



Figure 15. Q18. Do you or your organization ask key suppliers (new/existing) whether they have business continuity arrangements in place? (N=376)

Indicator	Asking key suppliers about business continuity arrangements (Q18)	NOT asking key suppliers about business continuity arrangements (Q18)
Firm-wide reporting of supply chain disruption (Q6)	36%	17%
Insuring supply chain losses (Q14)	52%	54%
High top management commitment to supply chain resilience (Q16)	41%	10%

Table 5. Comparing practices between organizations as to asking key suppliers about business continuity arrangements

Almost half of the respondents (47%) claim that more than 60% of their suppliers have business continuity in place to deal with supply chain disruptions (Figure 16). In addition, roughly a quarter of the organizations (23%) report that 80% or more of their suppliers have business continuity arrangements in place.

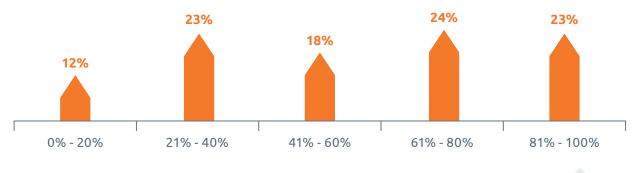


Figure 16. Q19. Considering your key suppliers, what percentage of them would you say have business continuity arrangements in place to address their own needs? (N=358, Median = 60)

More than two-thirds (65%) of the respondents recognise the importance of a sound business continuity plan for their key suppliers (Figure 17), followed by the certification or alignment against industry standards (51%). In addition, organizations asking about their key suppliers' business continuity management (BCM) programmes (44% to 51%) have increased, similarly to those complying with good practice such as the BCI Good Practice Guidelines (42% to 46%).

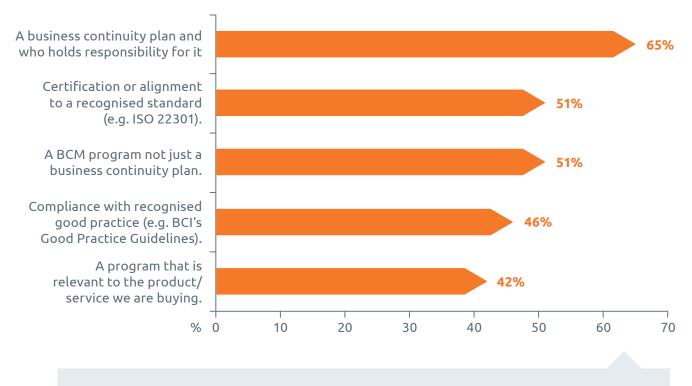


Figure 17. Q20. What information do you seek in order to better understand the business continuity arrangements of key suppliers? We look for: (N=349)

Organizations rely on various methods to obtain assurance from their key suppliers (Figure 18). Administering self-assessment questionnaires is still the most common technique (60%) trailed by requiring copies of supplier documentation (53%), while there is a slight drop in the percentage of the organizations that do not collect any information (from 14% to 11%).

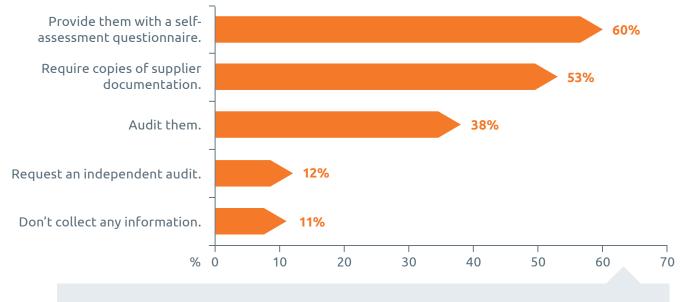


Figure 18. Q21. How do you collect this information? We... (N=347)

Validating supplier's business continuity is one of the key processes in business continuity and supply chain management, especially as an increasing number of organizations require business continuity management in bidding and procurement⁶. This essential step, however, remains a challenge for many organizations. Consistently with last year's report, 47% of the organizations do not check their suppliers' business continuity arrangements (Figure 19).

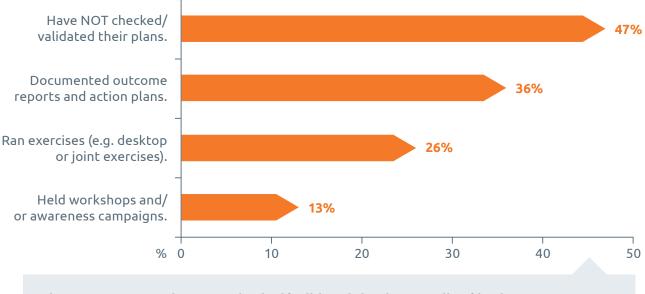


Figure 19. Q23. How have you checked/validated that key suppliers' business continuity arrangements might work in practice? We: (N=351)

Over a third of the respondents (40%) review business continuity requirements with key suppliers at contract renewal, a slight increase from 39% last year (Figure 20). However, the percentage of organizations that never review suppliers' business continuity arrangements has increased from 13% to 14%.

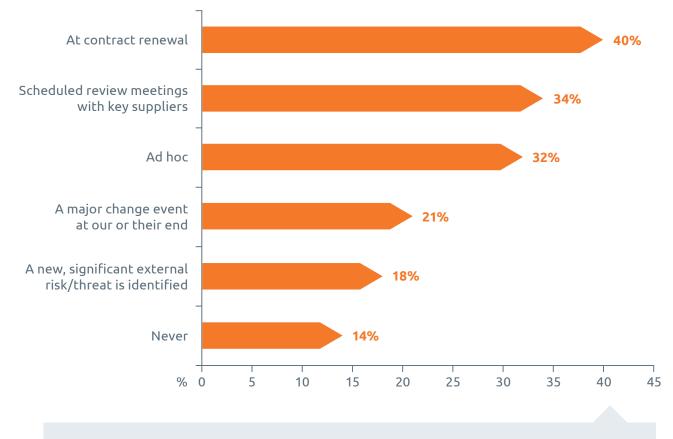


Figure 20. Q24. How often do you review your business continuity requirements with key suppliers and their capability to meet them? Tick as many as applicable. (N=352)



The percentage of the organizations that always provide client assurance through business continuity arrangements (Figure 21) when tendering for a new contract has slightly dropped from the last report (15% to 11%).

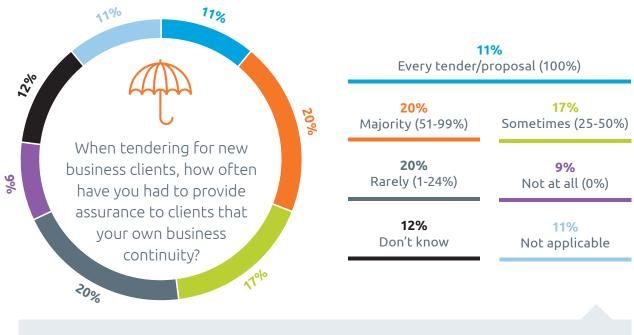


Figure 21. Q25. When tendering for new business clients over the past 12 months, how often have you had to provide assurance to clients that your own business continuity? (N=356)

Although business continuity has been repeatedly mentioned in dealing with suppliers, only 36% of the organizations report that business continuity is integrated in their procurement process, a decrease from last year's 43% (Figure 22). In addition, the number of organizations that do not mention business continuity in supplier discussions has increased from 18% to 20%.

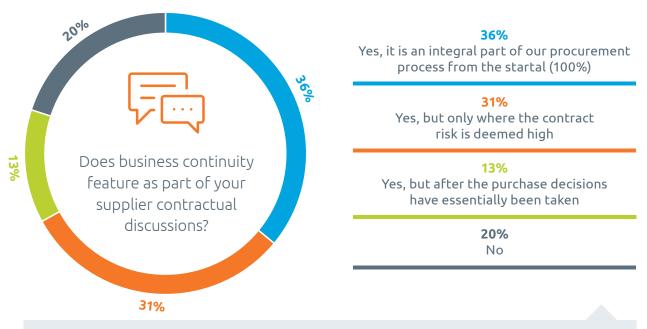


Figure 22. Q22. Does business continuity feature as part of your supplier contractual discussions? (N=350).



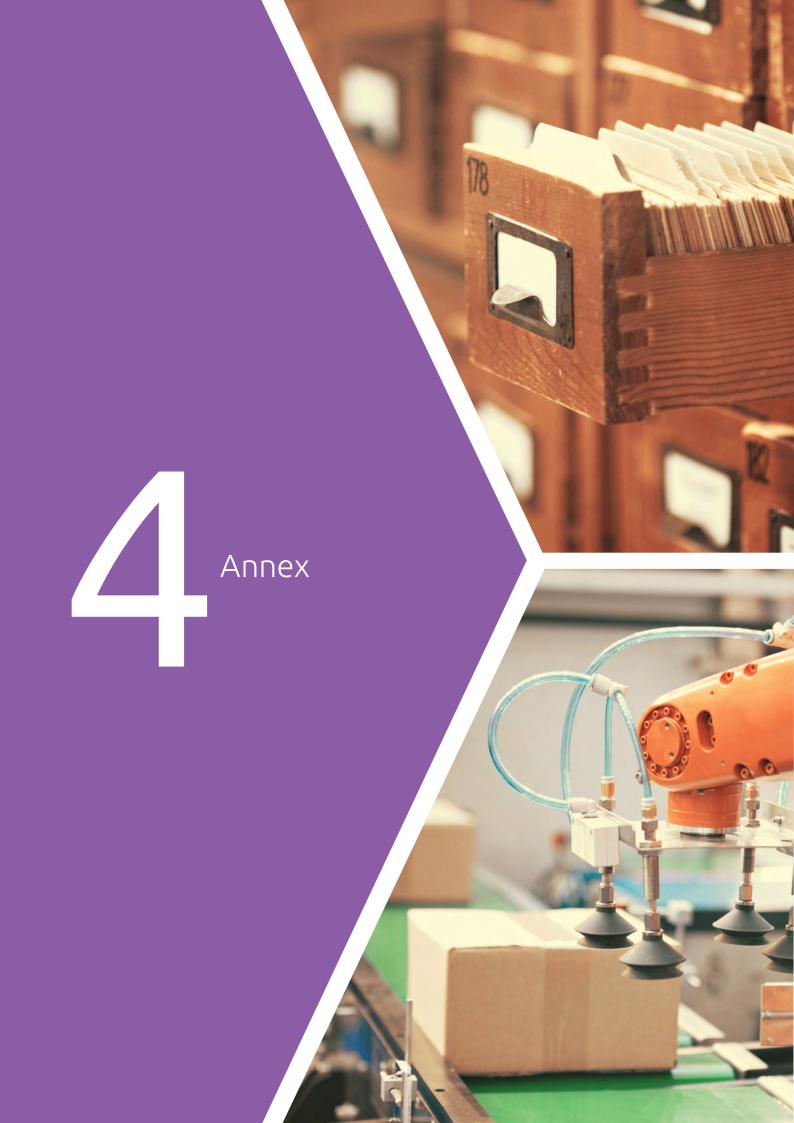
A minority of organizations employ technology to analyse disruptions in their supply chain. In addition, those who do adopt it tend to rely on traditional software such as Excel, rather than more advanced systems. However, those organizations that utilise technology solutions have more success in analysing incidents among their suppliers.

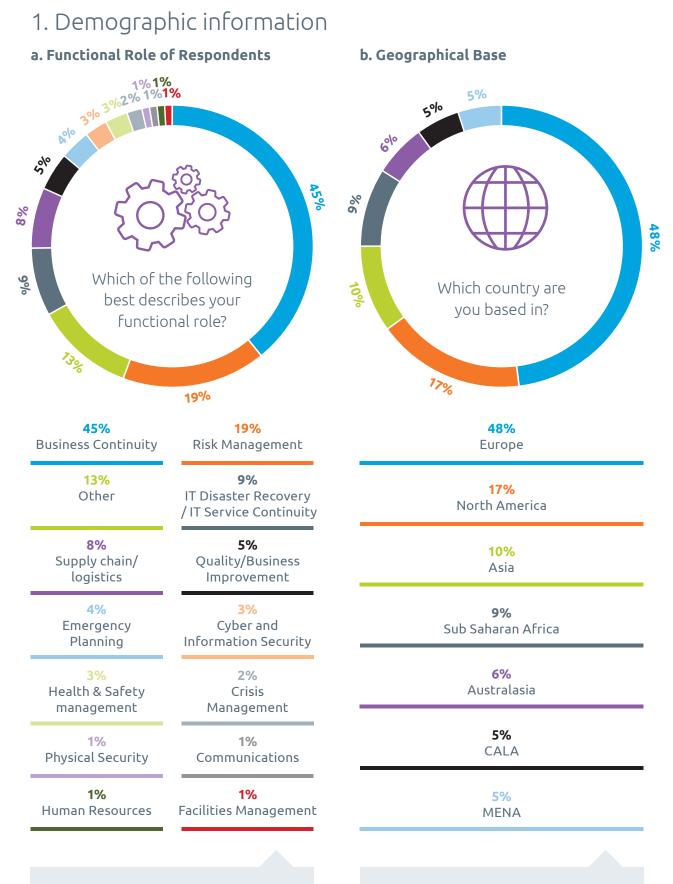
There is an upward trend regarding organizations that have insurance coverage. On the other hand, it is worth noting that most of those who report not having insurance do not know the reason why this is the case. This reveals an awareness gap that can be rather costly for organizations. Business continuity arrangements can help have a better visibility of issues such as this one as well as helping professionals obtain better insurance deals through reduced risks.

Non-physical threats, such as cyber attacks or IT outages, are the main threat to supply chains both in the short and long-term. Other challenges such as adverse weather, terrorism and human illness affect the supply chain, which is especially worrying as one disruption can trigger more. For instance, a hurricane might lead to a power cut-off and disease outbreaks, while a cyber attack could damage IT systems.

The uptake of business continuity arrangements experiences an upward trend. An increasing number of organizations embed business continuity to protect their supply chains, which also has a positive impact on other areas such as insurance and top management commitment.

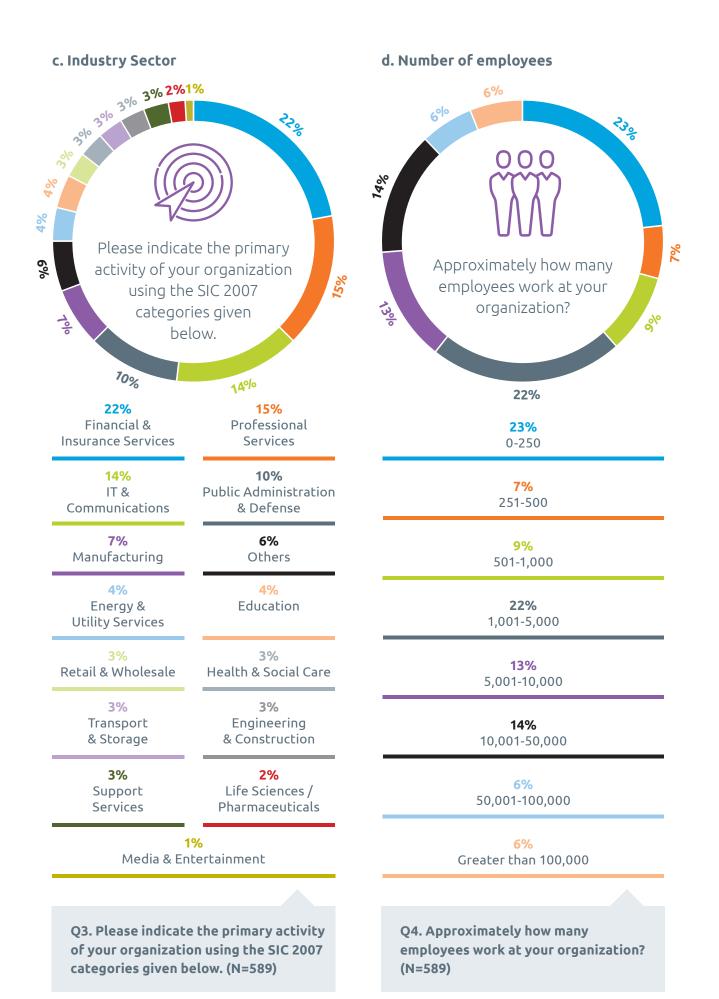
Strong top management commitment declines from last year, even though it stays within the average value for the past five years (33%). While it is a positive sign that this value has been quite consistent through the years, there is room for improvement as top management support is key to ensuring resilience.



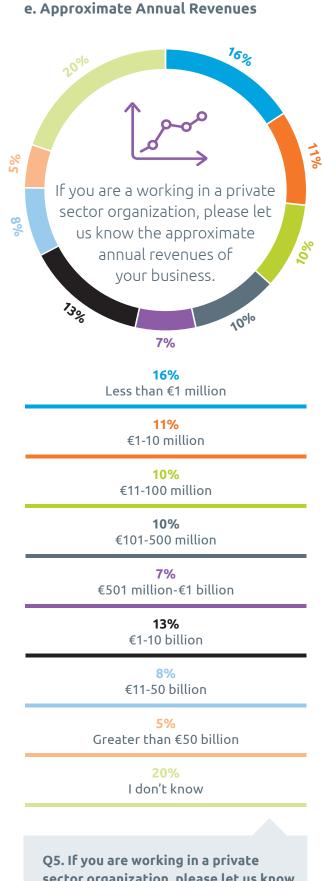


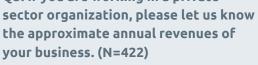
Q1. Which of the following best describes your functional role? (N=589)

Q2. Which country are you based in? (N=589)



34







2. Causes of disruption

a. By Region/Country

Rank	Еигоре	North America	Australasia	CALA
1	Unplanned IT or telecommunications outage (69%)	Unplanned IT or telecommunications outage (68%)	Adverse weather (68%)	Unplanned IT or telecommunications outage (79%)
2	Adverse weather	Adverse weather	Transport network	Adverse weather
	(61%)	(59%)	disruption (62%)	(68%)
3	Transport network disruption (51%)	Loss of talent/skills (53%)	Unplanned IT or telecommunications outage (50%)	Outsourcer failure (64%)
4	Cyber attack and	Cyber attack and	Health & Safety	Transport network
	data breach (47%)	data breach (43%)	incident (50%)	disruption (56%)
5	New laws or	Product quality	Industrial dispute	Loss of talent/skills
	regulations (41%)	incident (42%)	(50%)	(56%)

Rank	MENA	Sub-Saharan Africa	Asia	UK
1	Health & Safety incident (43%)	Unplanned IT or telecommunications outage (68%)	Adverse weather (54%)	Unplanned IT or telecommunications outage (74%)
2	Unplanned IT or telecommunications outage (41%)	Energy scarcity (60%)	Unplanned IT or telecommunications outage (53%)	Adverse weather (72%)
3	Loss of talent/	Loss of talent/	Loss of talent/	Transport network
	skills (29%)	skills (59%)	skills (46%)	disruption (64%)
4	Currency exchange	Currency exchange	Transport network	Health & Safety
	rate volatility (27%)	rate volatility (52%)	disruption (43%)	incident (53%)
5	Energy	Transport network	Fire	Currency exchange
	scarcity (25%)	disruption (48%)	(38%)	rate volatility (50%)

Rank	US	India	Canada	Australia
1	Unplanned IT or telecommunications outage (68%)	Adverse weather (69%)	Unplanned IT or telecommunications outage (67%)	Adverse weather (78%)
2	Adverse weather (62%)	Unplanned IT or telecommunications outage (68%)	Loss of talent/skills (58%)	Health & Safety incident (57%)
3	Loss of talent/skills (51%)	Civil unrest/conflict (58%)	Adverse weather (45%)	Unplanned IT or telecommunications outage (50%)
4	Cyber attack and data breach (50%)	Transport network disruption (56%)	Outsourcer failure (44%)	Human illness (50%)
5	Fire (44%)	Fire (46%)	Insolvency in the supply chain (43%)	Energy scarcity (50%)

b. By industry

Rank	Financial & Insurance Service	Professional Services	IT & Communications
1	Unplanned IT or telecommunications outage (71%)	Adverse weather (65%)	Unplanned IT or telecommunications outage (58%)
2	Adverse weather (50%)	Unplanned IT or telecommunications outage (62%)	Adverse weather (47%)
3	Loss of talent/skills	Loss of talent/skills	Transport network disruption
	(50%)	(51%)	(45%)
4	Cyber attack and data breach	Currency exchange	Loss of talent/skills
	(46%)	rate volatility (48%)	(44%)
5	Transport network disruption	Transport network disruption	Cyber attack and data breach
	(39%)	(44%)	(39%)

Rank	Public Administration	Manufacturing	Retail & Wholesale
1	Unplanned IT or telecommunications outage (71%)	Transport network disruption (60%)	Unplanned IT or telecommunications outage (88%)
2	Adverse weather (67%)	Unplanned IT or telecommunications outage (59%)	Transport network disruption (88%)
3	Transport network disruption (53%)	Health & Safety incident (54%)	Product quality incident (86%)
4	Cyber attack and data breach (44%)	Loss of talent/skills (53%)	Currency exchange rate volatility (80%)
5	Act of terrorism (43%)	Adverse weather (53%)	Health & Safety incident (71%)

c. By Size of Business

Rank	SMEs	Large Enterprises	
1	Unplanned IT or telecommunications outage (54%)	Unplanned IT or telecommunications outage (68%)	
2	Adverse weather (51%)	Adverse weather (58%)	
3	Transport network disruption (45%)	Loss of talent/skills (50%)	
4	Currency exchange rate volatility (44%)	Transport network disruption (48%)	
5	Energy scarcity (42%)	Cyber attack and data breach (46%)	

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Gianluca has a Masters in Geopolitics, Territory and Security from King's College London. He has experience writing academic and industry publications, speaking at international conferences, and delivering projects for companies such as BSI, Everbridge, Zurich and Sungard AS. His previous professional experience includes working for the Italian Presidency of the Council of Ministers.

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Acknowledgements

The BCI would like to thank Zurich, Commercial Risk Europe and CIPS for their support with this report.



About the BCI

Founded in 1994 with the aim of promoting a more resilient world, the Business Continuity Institute (BCI) has established itself as the world's leading Institute for business continuity and resilience. The BCI has become the membership and certifying organization of choice for business continuity and resilience professionals globally with over 8,000 members in more than 100 countries, working in an estimated 3,000 organizations in the private, public and third sectors. The vast experience of the Institute's broad membership and partner network is built into its world class education, continuing professional development and networking activities. Every year, more than 1,500 people choose BCI training, with options ranging from short awareness raising tools to a full academic qualification, available online and in a classroom. The Institute stands for excellence in the resilience profession and its globally recognised Certified grades provide assurance of technical and professional competency. The BCI offers a wide range of resources for professionals seeking to raise their organization's level of resilience, and its extensive thought leadership and research programme helps drive the industry forward. With approximately 120 Partners worldwide, the BCI Partnership offers organizations the opportunity to work with the BCI in promoting best practice in business continuity and resilience.

The BCI welcomes everyone with an interest in building resilient organizations from newcomers, experienced professionals and organizations. Further information about the BCI is available at www.thebci.org.

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About Zurich

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Correct as of August 2018