COVID-19
Lessons Learned
Summer 2022

Pandemic Special Interest Group
Institute of Risk Management

irm

Developing risk professionals

Contents

1. Executive Summary

At the time of writing the world has been dealing with COVID-19 for more than two years and it has reached every corner of the planet, and has caused substantial medical, economic, and social disruption leading to in excess 500 million cases and more than 6.39 million deaths (according to Our World In Data).

Despite various warnings the global community was not prepared to effectively deal with the pandemic. The impact of COVID-19 has been driven by two major aspects: The infection and its impact on sectors of the population; and the public policy responses taken to limit its spread which commonly included social distancing and actions taken to halt non-essential leisure and work activities.

The effects of such measures on consumer spending and business operations have been devasting. The global GDP for 2020 decreased by an estimated 3.5% over 2019 figures, largely as a result of the pandemic. However OECD predicted a return to pre-pandemic levels in 2021.

Many countries have seen several waves of infections, with subsequent waves sometimes worse than the preceding wave(s). The "delta" variant caused increasing infection rates and required restrictions to be reintroduced in many areas; Omicron spread quickly but proved less virulent; further variants are anticipated.

Although we could be closer to the end of the pandemic than the beginning, we can take nothing for granted. Research suggests there will be other pandemics in the future and that the frequency of their occurrence may be increasing. We must be better prepared to meet them.

For most people and businesses, the downsides of the pandemic have outweighed the upsides, however some businesses and sectors have done well during the pandemic, especially those that were able to adapt quickly to the changing situation or were already poised to take advantage of opportunities that arose.

Consumer spending was down but people have saved more money in general and the release of this pent-up demand has helped to drive economic recovery. Firms in the insurance/banking area have also done well through the COVID-19 crisis in comparison to those in non-online retail, travel, transport and entertainment for instance.

The concentration and focus on dealing with COVID-19 has also increased risk exposure in other areas by the creation of new risks, by giving less attention to existing risks and/or by providing many more potential weaknesses in current protective measures – particularly in the case of increased cyber risk exposure. Major concerns are now being expressed over the increases in hospital waiting lists and the adverse impact of postponing treatment for critical illnesses.

Although several new pandemic-specific lessons learned have been identified and are discussed, surveys and research indicate that those organisations with good, well planned, and practiced crisis/emergency management systems and processes in place, have fared better during the pandemic than those that did not. It also appears to be the case that firms that were struggling with their business models prior to the pandemic or those who were less resilient to external shocks did not fare well.

The key lessons identified are:

1. Governments, businesses and organisations failed to heed clear warnings and were not adequately prepared
2. Crisis management planning and preparedness is valuable and means organisations survive
3. Leadership and communication are critical skills to when managing crises
4. Employee management and work practices will never be the same again
5. Infection control within the workplace is a key skill
6. Digital transformation has accelerated as a result of the pandemic
7. The pandemic has created new risks, elevated others, but has also opened up opportunities
8. There will be future pandemics.

This document is based on a literature search and on feedback to various surveys that have been made by different parties during the pandemic, including the two surveys carried out by the IRM.

It is by no means complete, but forms a basis on which to develop much needed support materials for the risk community.

There seems to be a general consensus in the risk community that a future focus on organisational resilience is required.

We are still living with COVID-19 and the situation continues to evolve.

Lessons will continue to be learned and refined.

In the meanwhile, there will be a focus on translating the key lessons learned so far into useful support materials to help businesses and organisations better prepare for future pandemics.

This report has been prepared by IRM's Pandemic Group. The Chair, Seamus O Shea, can be contacted via the IRM and welcomes any members who may wish to contribute to further research work.

This is an interim report and will be updated once the Covid emergency is declared over.

2. Introduction

General

We have been living with the COVID-19 pandemic for more than two years. Many countries have seen or are seeing several waves of infections, with subsequent waves sometimes worse than the preceding wave(s). The pandemic continues to be driven by the new variants which can result in restrictions being reintroduced. China has currently locked Wuhan down after four cases in it's COVID zero policy. At the time of writing there are promising signs that we could be closer to the end than the beginning, particularly the impact of rising vaccination rates, and restrictions are being lifted in most countries. However, we can take nothing for granted.

Research suggests that there will be other pandemics in the future and that the frequency of their occurrence may be increasing. We must be better prepared to meet them.

In many cases organisations have had little ability to directly mitigate the impacts of the pandemic – the hospitality industry for example where many businesses were closed or the transport industry where travel was constrained as part of the precautions imposed by governments around the world. In such cases their survival will, to a large extent depend on the support mechanisms put in place by those governments. Organisations need to actively pursue such avenues if they are to survive.

However, although several pandemic-specific lessons learned have been identified and are discussed in this report, surveys and research indicate that those organisations with good, well planned, and practiced crisis management/emergency management systems and processes in place, have fared better during the pandemic than those that did not.

It is appreciated that many small businesses do not have dedicated risk management resources at their disposal or have even had access to trained and experienced risk managers. Such businesses may well have suffered more than those that did. The IRM Charities Group (1) have already identified that smaller charities will benefit from access to greater support on continuity planning from sector bodies and others. In developing this lessons learned report and documents, guides and resources that will be developed subsequently, one of the aims will be to provide risk management support across a wider audience in the hope that more businesses are better prepared to face the next pandemic or emergency.

Although lessons continue to be learned as the pandemic progresses the most significant lessons were learned in the early stages of it and included the critical importance of preparedness and good emergency/crisis management plans, and the need to be able to respond quickly and effectively to a developing situation.

This document is intended to support the wider risk community in understanding how to plan for, react to and recover from pandemics. It is based on a literature search and on feedback to various surveys that have been made by different parties during the pandemic, including the two surveys carried out by the IRM. It is by no means complete but forms a basis on which to develop much needed support materials for the risk community.

It is clear that despite there being a number of common lessons that have been identified, differing lessons have been learned by different businesses and sectors and that the reaction to the pandemic has varied between businesses in different sectors as well as those in the same sector.

In view of this such a report can only ever hope to provide general guidance, albeit on some key specific issues, which will hopefully mean that businesses can be better placed to deal with the ongoing COVID-19 crisis and future pandemics.

Since we are still living with COVID-19 this report is, by necessity, an interim or "story so far" report. The situation regarding COVID-19 is still developing and lessons will continue to be learned and refined.

In the meanwhile, there will be a focus on translating the key lessons learned into useful support materials to help businesses and organisations better prepare for future pandemics.

Perhaps the key lesson to be learned is that countries, organisations and business were not adequately prepared for the COVID-19 pandemic and the key question arising from this is: How did they not see this coming, and why were they not adequately prepared?

Various parties have views on this. It is not the intent of the Pandemic Group to answer this but to try and ensure that we are better prepared for the next one.

This report is aimed at the membership of the IRM and the wider risk community. It is intended that it will also be accessible to those businesses and organisations that do not have a dedicated risk management function or even an assigned Risk Manager and who may not be members of the IRM presently.
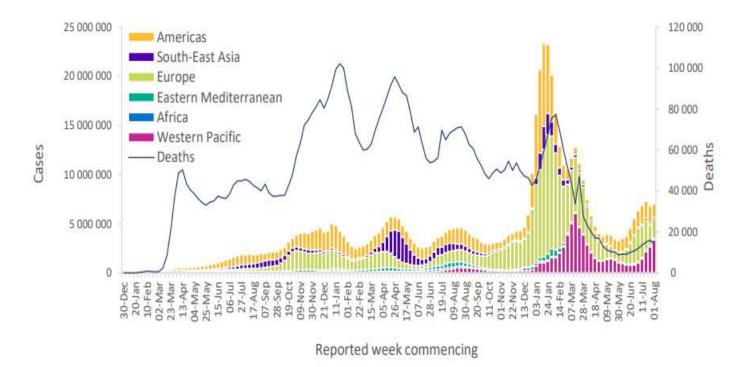
Timeline of COVID-19

A novel coronavirus outbreak was first documented in Wuhan, Hubei Province, China in December 2019. At the time of writing (Summer 2022) this pandemic has reached every corner of the planet, and similar to previous pandemics, it has caused substantial medical, economic, and social disruption leading to in excess 500 million cases and more than 6.39 million deaths.
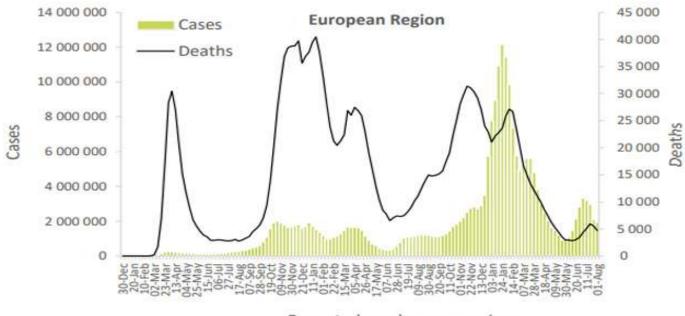
The graphics here indicate the development of the pandemic by showing:

•   The number of cases and deaths globally, and;

•   The number of cases and deaths across Europe.

Figure 1. COVID-19 cases reported weekly by WHO Region, and global deaths, as of 7 August 2022**

Source: WHO Weekly Covid-19 Epidemiological Update Edition 104, published 10th August 2022

European Region

Source: WHO Weekly Covid-19 Epidemiological Update Edition 104, published 10th August 2022

Impact of COVID-19 on business

Whereas natural disasters tend to affect physical assets pandemics affect an organisation's people and thus its capabilities. Recovery involves restoring management control and organisational capability. In many cases continuity plans may have failed or been less effective than planned as their focus was on response, recovery and restoring service following natural disasters.

COVID-19 has delivered a two-pronged attack: The infection itself; and the equally strong public policy responses to limit its spread. Common government responses included enforced social distancing through some form of "lockdown"; where non-essential leisure and work activities were banned – the effects of these measures on consumer spending and business operations have been devastating. (2)

The COVID-19 outbreak is unprecedented compared to the outbreaks that have occurred since the 1918 Spanish Flu influenza in both global reach and number of infections. To limit the spread of the disease, severe restrictions on movement and association have been implemented globally. Lockdowns, social distancing requirements, border closures, travel restrictions, and bans on mass events have all severely affected economies and communities.

Typically, the first risk that emerges shortly after a pandemic outbreak is related to lost labour supply. The restrictions imposed soon after the COVID-19 outbreak generated further economic shocks; in particular, loss of customers and supply chain disruptions, which has led to the dramatic business discontinuities.
The International Monetary Fund (IMF) World Economic Outlook Update of January 2021 suggests that the global GDP for 2020 decreased by 3.5 % based on 2019 figures. Now we are facing the great resignation as peopl reassess thier careers.

McKinsey (3) cites a UK Office for National Statistics survey from April 2020 which found that 30 % of businesses in the UK reported they had less than three months of cash reserves, 24 % paused trading and many more turned to government support (79 % applied for the Coronavirus Job Retention Scheme).

Another key feature of the COVID-19 crisis was that those most vulnerable to it were the older age cohorts and those with underlying health conditions whereas the 1918 Spanish Flu primarily affected working age people between 20 and 40. It seems that working age people have been, in general, less likely to have a serious illness as a result of being infected by COVID-19. This age cohort typically will be the people that are providing the response to the crisis and therefore firms can expect to better manage their response as a result.

The plans worked well but only because of a concerted effort across functions and senior management. If the pandemic had affected working age people more than it did, businesses would have found it harder to implement and adapt plans to deal with it. There is no guarantee that future pandemics will follow a similar pattern.

It is worth noting that infection increases related to the Delta variant and subsequently the Omicron variant appear to be affecting younger people more than older people – this may well indicate the effectiveness of the vaccination programmes.

It is also fair to say that some businesses and sectors have done well during the pandemic, especially those that were able to adapt quickly to the changing situation or were already poised to take advantage of opportunities that arose – Amazon for example, and the considerable growth in on-line shopping and home delivery. Consumer spending may be down but people have saved more money in general and the release of this pent-up demand helped to drive recovery in 2021.

Firms in the insurance/banking area have also done well through the COVID-19 crisis in comparison to those in non-online retail, travel, transport and entertainment for instance. Although for most people the downside has outweighed the upside it is clear that the pandemic has presented opportunities to many businesses.

COVID-19 is still with us and its effects are still being felt across the world and across all economic sectors. But the long-term impact of COVID-19 on business is still unknown. We are now learning to live with Covid.

3. Key Lessons Learned

Lesson 1: Governments, businesses and organisations failed to heed clear warnings and were not adequately prepared.

- Four years ago Bill Gates used a TED (Technology Entertainment and Design) talk to warn that the greatest risk of global catastrophe was most likely to be a highly infectious virus and that the world was not ready for the next epidemic;

- The Severe Acute Respiratory Syndrome (SARS) related coronavirus was one of several viruses identified by the World Health Organisation in 2016 as a likely cause of future epidemics;

- Lloyds of London Market Paper 'Pandemic Potential Insurance Impacts' – A pandemic is inevitable: 1918 may not be the worst case; and economic impacts may be significant.

- Global Preparedness Monitoring Board (GPMB) noted in 2019 that [4]: "…there is a very real threat of a rapidly moving, highly lethal pandemic of a respiratory pathogen killing 50 to 80 million people and wiping out nearly 5% of the world's economy."

Notwithstanding these warnings it became clear very early on in the COVID-19 pandemic that no-one was adequately prepared for it. Although there had been several pandemics in the preceding years and lessons had been learned from these it seems that few nations, organisations, businesses or communities had adequately prepared for a pandemic of the scope and scale of COVID-19.

Despite the fact that organisations were confronted with global health emergencies before, such as SARS (2003), H1N1 (2009) and Ebola (2014-2016), many organisations seem to have forgotten lessons learned[5]. Perhaps this was because previous epidemics were not global in impact: SARS 2003 stayed in Asia; MERS in 2012 stayed in the Middle East and Ebola was mostly in Africa. Perhaps the thinking was that any future viruses would follow the same path and be localised elsewhere?

In November 2017 the European Centre for Disease Prevention and Control (ECDC) produced their "Technical Report: Guide to revision of national pandemic influenza preparedness plans – Lessons learned from the 2009 A(H1N1) pandemic." It is interesting to note that many of the shortcomings identified in the report were left over from a previous virus event and almost certainly have been repeated in COVID-19. It is an unfortunate and not uncommon situation that many reports of accidents and emergencies over the years have bemoaned the fact that lessons from previous such incidents had not actually been learned, even if they had been identified at the time.

In view of this such a report can only ever hope to provide general guidance, albeit on some key specific issues, which will hopefully mean that businesses can be better placed to deal with the ongoing COVID-19 crisis and future pandemics.

In their Annual Report 2020 'A World in Disorder' GPMB states: "The COVID-19 pandemic has revealed a collective failure to take pandemic prevention, preparedness and response seriously and prioritize it accordingly. It has demonstrated the fragility of highly interconnected economies and social systems, and the fragility of trust…"

Whatever the reason – lessons seem to have been forgotten.

Although few organisations had pandemic risk as a high priority and had specific plans to deal with pandemics, many businesses had in place crisis/emergency management plans and/or business continuity plans which although not specific to pandemics proved to be useful in helping them deal with the pandemic. Which leads to the second key lessons learned.

Lesson 2: Crisis management planning and preparedness is valuable and means organisations survive.

In their COVID-19 lessons learned (The story so far) report of June 9 2020 (6), The Institute of Operational Risk (IOR) noted that as 2019 drew to a close operational resilience discussions in the UK were focussed on reviewing and responding to the consultation papers issued by the Prudential Regulation Authority (PRA) and Financial Conduct Authority (FCA) and developing operational resilience frameworks, in the main designed to respond to cyber and IT issues. Such discussions and efforts undoubtedly contributed to a relatively higher level of preparedness in the finance and insurance sectors to deal with and survive major emergencies. Surveys undertaken at different times in 2020 and by different organisations and agencies have indicated that this sector has fared better than most during the pandemic.

The initial survey carried out by the IRM in April 2020 suggested that 82% of respondents were satisfied with their organisation's initial response. After much more experience of the pandemic the December 2020 IRM survey showed that a very high percentage (89%) of respondents indicated that they were satisfied or very satisfied with the how their firms business continuity arrangements and crisis management plans have responded to the crisis. Firms moved quickly to adapt their working practices and ways of working, with technology stated as being the key enabler that helped employees work remotely and safely.

In the IRM COVID-19 Global risk management response (1) the Nuclear Industry SIG noted that it had continuity plans in place for some critical activities and mature emergency response and crisis management arrangements to respond to events – all of which enabled them to respond promptly and prudently to the changing situation brought about by the pandemic.

Although they may not have had plans that specifically addressed pandemic risks organisations that had good plans in place were better able to manage the pandemic. But despite the business continuity plans helping organisations survive the pandemic, if they were biased towards natural disasters that impacted on hard assets and infrastructure more than on people, they may not have been as useful as pandemic plans would have been.

An August 2020 report of a survey in the insurance sector notes that whilst most UK firms seem to have weathered the crisis to date, it does appear that few did so in the manner laid out in their pre-COVID-19 business continuity planning. (7)

A FERMA Covid-19 Survey Report 2020 on Risk Management, Recovery and Resilience (8) indicated that:

- Business Continuity Plans (BCPs) were in place in the majority of respondents' companies (74%) and helped to mitigate impact of the COVID-19 crisis.

- BCP's and other measures help to explain why the vast majority of respondents (90%) said their organisations had been well or reasonably prepared to manage the pandemic, even though pandemic was only on a minority of risk registers (31%)

- Interconnected risks need more attention. Risk and Insurance Managers identified several inter-linkages of risks in areas ranging from cyber to climate. A key lesson is that measures that are sufficiently flexible, such as robust BCP, can create resilience for organisations to different systemic or major catastrophe risks.

Even so, these measures have need to be adapted to take account the effect of actions by public authorities. This complex interaction needs to be embedded into risk management and loss prevention measures and assessment models going forward.

We have to look at risks in a new way, and the EU can support this exploration in its policy responses.

Lesson 3: Leadership and communication are critical skills when managing crises

The pandemic required organisational leadership and management to quickly move from their normal business mode to a crisis management mode and effectively respond to the challenges posed by the developing pandemic.

A survey (9) carried out in the insurance sector noted that all firms who viewed their lockdown experience as 'successful' attributed that success to excellent communication from senior management to all stakeholders. Others have attributed success to good communication from the Board.

The IOR survey also observed that the banks had been discussing issues and sharing solutions amongst themselves which undoubtedly contributed to the view that the sector has fared reasonably well in the pandemic.

It also noted that firms had increased their communication to various parties including customers, staff, third parties, and for regulated firms, their supervisors. (6)

The IRM COVID-19 survey in December 2020 identified high quality leadership and good communications amongst the key enablers to help organisations respond effectively.

The IRM Charities Group noted that regular communications are vital to ensure stakeholders understand the response. Regardless of size, understanding your stakeholders is critical. (1)

As the pandemic progressed mainstream and social media almost certainly contributed towards increased confusion by emphasising potential catastrophic consequences or, by contrast underestimating the problem, or in many cases spreading misinformation. There was often an "expert" to give an opinion on the disease, responses to it and so on and so on.

The IRM Cyber Group noted that:

"In the social media landscape, we are seeing campaigns of misinformation about the virus." Working from home (WFH) and potentially greater exposure to mainstream and social media meant that many may have been exposed to large misinformation campaigns."

This undoubtedly increased unnecessarily the stress on an already stressed population. At an organisational level it is important that management identifies and gains access to accurate, credible and reputable information and brief their staff and key stakeholders based on this to at least alleviate the effects of such misinformation. Uncontrolled communication can severely damage the reputation of an organisation.

The crisis management team (CMT) has a key role to play in this and a member of the team should be tasked with responsibility for identifying official source(s) of information and producing regular updates.

Effective leadership and communication were equally as important at the recovery stage as they were at the response phase, and as they ensure effective preparations for the almost inevitable next pandemic.

Lesson 4: Employee management and work practices will never be the same again

This is likely to have been a major aspect for most organisations and personnel. Working from home, furlough, new processes and procedures, additional HSE requirements, and new tools especially around digital collaboration. Some will have worked well others may not.

The pandemic and the measures taken at national level to combat it, required Boards, CEO's and senior managers to take decisions quickly often with far reaching impacts on their staff, families, and other stakeholders, and without an historical frame of reference to guide them.

The increase in numbers of staff working from home, and for many this will have been the first time the organisation adopted such a working arrangement, has introduced many challenges. Perhaps most importantly is the health and safety of staff working from home. HSE.gov.uk considers that an employer has the same health and safety responsibilities for home workers as for any other workers.

Office footprints were reviewed for a cost / convenience perspective as well as from a risk management perspective (9). In some cases the office footprint was insufficient to safely allow full repopulation by the workforce and led to a hybrid arrangement.

There is concern that the use of technology has resulted in a colder social environment, and adversely impacted mentoring, training, and supervision. Relying solely on digital collaboration is not satisfactory for new employees and junior employees who depend heavily on interaction with more senior and/or more experienced colleagues and employers will need to develop ways of ensuring that the needs for greater interaction are met.

There are mixed opinions regarding performance evaluation, but it was noted that employees with strong communication skills and/or able to work independently performed more strongly, whereas employees with poor communication skills and/or requiring close supervision well than before. In the current environment, performance will be evaluated more on production volume and accuracy and less on qualitative and subjective judgements of the individual. (10)

One of the respondents to the IRM December 2020 survey mentioned that: "We have not changed objectives and ways of working – but we should have. There has been a degree of denial and "just keep going" mentality." Although perhaps not widespread this situation is unlikely to have been an isolated one.

The work environment has changed and, in many cases, it is unlikely that things will return to exactly as they were. Employers and employees are getting used to the new normal. Many actions that were initially intended as temporary fixes have now become part of this.

One of the most obvious effects the Coronavirus had on the working world was reflected in the acceleration of remote work/working from home. A Cisco report referenced by TechRepublic (11) suggested that the enterprise has an average of 4.7 times more home workers now compared with before the pandemic. This transition came with growing pains, forcing organisations to quickly provide the technological infrastructure and resources necessary to conduct work from afar. Despite those challenges, nearly three-quarters (74 %) of respondents said their businesses will in some way emerge stronger from the crisis.

Working from home revealed how many distractions there are in the office, according to the report. Many respondents found themselves more productive in their home environment without the interruptions they had in a physical office. This way of work has also caused many healthy practices to surface, many of which respondents believe will stay after the pandemic. Some of these practices that will stay include businesses being more trusting and empowering of employees (53 %), managers increasing flexible working hours (49 %), virtual teams working across locations and departments (38 %), and agile teams forming and disbanding around specific activities (37 %).

Remote working has now become the new normal for some organisations who have been able to implement this and have realised unforeseen benefits as a result.

Many firms have allowed some members of staff to continue working, at least part time, from home and hence plan reductions in their office footprint. The new world of working from home/hybrid working poses challenges for the design, implementation and documentation of an appropriate functional and safe control environment that can cater for staff working from home and in an office setting.

In many cases the speed at which the transition to working from home was made may have precluded proper risk and HSE assessments being made. However, as the pandemic continued organisations had time to properly address many of the issues associated with this culture change, or did so before the new normal becomes established.

The IRM Cyber Group (1) makes the statement that although working from home wasn't entirely foreign, it was never so widespread and in many cases was not considered (or tested) in business continuity plans.

Several concerns have been expressed about the long-term effects of working from home, particularly the possible impact on mental health. A survey carried out by the International Federation of Consulting Engineers (FIDIC) (10) indicated that some firms do not feel that there is a problem and report that a survey carried out by one large Japanese firm found improvements in most aspects of health, including reductions in mental stress, smoking, drinking and improved sleep. The only reported negative consequence was weight gain!

Others (12) suggest that continuously working from home may not be psychologically sustainable as people need the structure and routine of going to work, and need to see people in person to form relationships.

There are other reports which indicate the potential for social/domestic violence and marital/relationship breakdown has increased as a result of the increased scale of working from home.

Some firms fear that 'independence', with all its positive attributes can too easily become isolation, with all its negative consequences.

It is clear that the full effects are yet to be understood and the situation will need to be monitored as time passes.

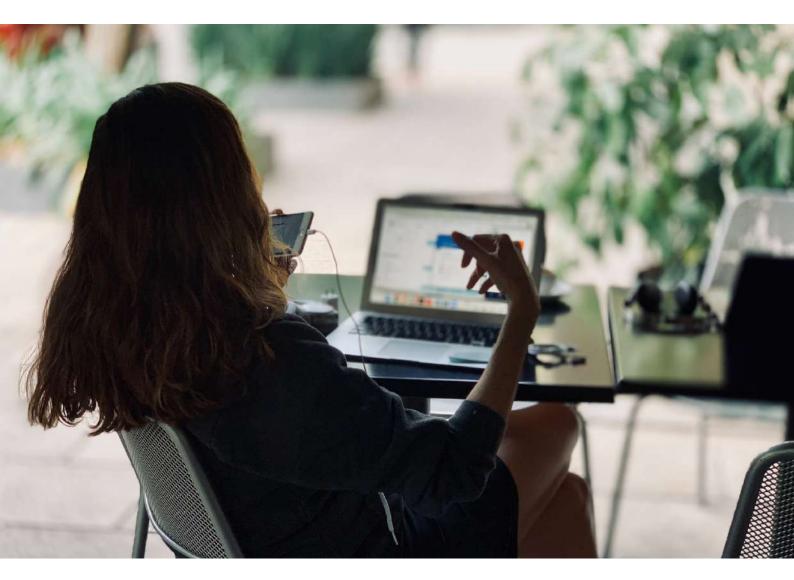## Lesson 5: Infection control within the workplace is a key skill

With the exception of organisations in the health and social care sector and perhaps food preparation sectors, few companies have considered how to effectively manage infection risk within the workplace. It is important that businesses develop and implement ongoing robust procedures and processes to manage this risk within their workplaces.

Simple behaviours such as hand washing; regular disinfecting of surfaces; face masks and social distancing (13) have proven to be the most effective. Companies must learn this lesson and ensure that such precautions are in place and maintained, and regularly inform (both passively through signs, posters etc, and actively through briefings, toolbox talks etc) and educate the workforce both at home and in the normal workplace.

Reports suggest that there has been relatively little evidence of seasonal flu during the pandemic. A major contributor to this is likely to have been the mitigation measures put in place such as social distancing, working from home, closure of hospitality venues, regular sanitising, masks, etc. which are designed to combat the transmissibility of the COVID-19 virus.

Workplaces that remained open had to rapidly introduce the necessary precautions and rules to ensure they could continue business and safeguard staff and customers. Traditionally there has been a tendency for workers to attend work despite feeling a bit 'under the weather'.

During COVID-19 that has been actively discouraged with well-publicised guidelines on how to proceed if feeling unwell. Businesses will have to ensure that this is accepted as things return to 'normal'.

Lesson 6: Digital transformation has accelerated as a result of the pandemic

Prior to the pandemic many organisations will have been in the process of adopting new communications technologies such as Zoom and Teams, particularly those which have personnel working at remote locations or in order to enhance communications and coordination between different offices and geographical locations. In such cases COVID-19 validated and accelerated the introduction of digital transformation initiatives, whereas in others, organisations realised that this was the way forward for their business and implemented them at speed.

Organisations now increasingly rely on digital solutions to help them combat the impacts of COVID-19. At the outset of the pandemic, agile organisations rapidly sourced laptops and other devices, software and facilities to enable their staff to work remotely, and to provide their staff with the technology resources they need. Less agile organisations have played catch-up.

The initial survey carried out by the IRM in April 2020 suggested that 82 % of respondents were satisfied with their organisation's initial response with 80 % stating that technology was a major or significant factor.

The December 2020 IRM (1) survey indicated that a very high percentage (89 %) of respondents indicated that they were satisfied or very satisfied with the how their firms business continuity arrangements and crisis management plans have responded to the crisis. Firms have moved quickly to adapt their working practices and ways of working, with technology stated as being the key enabler that helped employees work remotely and safely.

Most educational establishments (schools, colleges, universities, institutions etc.) established or increased on-line learning offerings, with differing degrees of success.

The CISCO report (11) found that while digital collaboration tools have become critical to remote working and will remain post-pandemic, the new way of work also unveiled the need for social interaction for humans the report found. Some 64% of respondents cited a loss of informal kitchen and watercooler-style exchanges as a challenge. To try and mitigate this gap, respondents said they host social video conferencing meetups (67%), social chat channels (54%), news catch-ups (46%), and interactive competitions (36%).

Respondents to the IRM Global Risk Management Response (1) noted:

- Health & Care Group: An increased emphasis on digital solutions and the sharing of data and information in a secure and timely manner.

- USA Global Ambassador: Everyone was making good use of the collaboration technology to keep working and stay connected.

- Cyber Security Group: That the constant need for communications through meetings provided a huge opportunity for growth for online communication platforms. Noting also that there have been many misinformation campaigns.

Some governments introduced Apps aimed at alleviating pressure on emergency lines whereby remote healthcare diagnoses can be made and further treatment determined. (14)

Other Apps were designed to show the level of exposure to coronavirus of a user according to the times that person crossed paths with other people whose diagnosis was confirmed in the last 14 days. (14) Testing and tracing systems were developed, with varying degrees of success, to help identify hotspots of infections and minimise the spread of the virus.

However, in some cases these may have had unexpected impacts on businesses – the UK "pingdemic" for example, where staff shortages were occurring when staff had to self-isolate after getting pinged following being close to an infected person.

Other common and widespread applications that have spread as a result of COVID-19 are: Contactless payment systems; Contactless ordering and delivery systems

Whilst the digital transformations have shown many positive aspects, there are some risks that have increased as a result of the increased connectivity, in particular the increased cyber security risk which is discussed later. It is likely that many new legal issues will arise as the pandemic fades such as people suing each other for Covid-19 related injuries and deaths.

Lesson 7: The pandemic has created new risks, elevated others, but has also opened up opportunities

General Risk

Accepting that risk can have both positive and negative aspects this section considers the negative aspects whilst the positives or upsides are discussed later in section 7.

Whilst attention has focussed on COVID-19 other risks have not gone away, and new ones may have developed. The distraction of COVID-19 may well have resulted in organisations not managing all of their risks. The following major risks are still present and some may even have worsened as a result of COVID-19:

> Climate change and extreme weather events

> Migration and geopolitical tensions

> Economic depression

> Social unrest; and

> Inflation and sovereign debt crisis

Building in Risk

FIDIC10 noted that most firms feel that teleworking encouraged the growth and development of staff to work independently but also increased the risk of undetected errors in drawings and documents. Some firms have introduced new quality control procedures, but they will only know how effective these have been when projects go to construction.

This was a very critical point and one that was raised in an AON webinar in the energy sector. In this webinar the speaker identified the underlying reasons for a number of historical industrial disasters and indicated the potential for COVID-19 mitigation measures to create similar circumstances.

Such causal factors included: Inspections not performed; engineers relocated and now working remotely while non-engineering specialist staff occupied operational sites; modifications not risk assessed; work not being done and backlogs of critical tasks building up. The key question that organisations must address is - are changes (to designs, processes, construction techniques, asset management regimes etc.) being properly risk assessed?

Digital dependency

COVID-19 has meant a lot of organisations have accelerated the implementation of technology in order to support their operations during the pandemic, often to an unprecedented extent. In many cases they foresee that measures introduced will continue to a greater or lesser degree. This introduces a new set of risks – if their business is fully geared up to operate using modern technology and/or digital collaboration techniques how will they cope if that technology fails.

Cyberattacks are considered to be one of the high level risks, often aimed at the denial of service scenarios. Organisations need to plan for a situation where such technology may not be readily available for an extended period of time.

Cybersecurity risk

In many cases companies reacted swiftly to get their staff working from home, providing them with the technology and connectivity required to keep the business going or to get it going after enforced stoppage. This clearly adversely impacted on the security of the organisations' systems.

In regulated sectors such as finance and insurance cyber security programs were already mature but vulnerabilities have been found. The volume and nature of malware and phishing attacks was one of the key concerns.

IT security functions acted by increasing their own internal campaigns to ensure staff made active decisions around their clicking activities. In the UK, the National Cyber Security Centre (NCSC) detected more UK government branded scams relating to COVID-19 than any other subject." Although they also stated from the data seen to date, the overall levels of cyber-crime have not increased.

Social communication and interaction through meetings, conferences, quizzes, weddings, required a huge growth in the use of online communication platforms which has provide opportunities for Zoom and Microsoft Teams. The security capabilities of these platforms were being closely and publicly scrutinised as companies and people privately adopt the platforms

In the social media landscape, we saw campaigns of misinformation about the virus. Facebook, Google, LinkedIn, Microsoft, Reddit, Twitter, and YouTube all issued a statement that they were "Jointly combating fraud and misinformation about the virus, elevating authoritative content on their platforms, and sharing critical updates in coordination with government health agencies around the world".

There have also been negative impacts from the proliferation of web pages and applications developed by private entities, unrelated to governmental authorities, that offer self-assessments and advice on COVID-19. The medical reliability and data processing guarantees of these Apps and web pages were questionable and posed a risk to the health and privacy of users. (14)

There was an increase in the number of phishing attacks by cyber criminals supposedly representing legitimate authorities (Governments, health services etc.) providing information on the coronavirus through instant messaging and emails in order to access personal information. (14) The increased reliance on digital solutions has resulted in or exposed people to many misinformation campaigns – this made it critical for organisations to ensure that their own communications with stakeholders are sufficient to reassure them despite the misinformation campaigns.

The requirement to use, or be included in, a track and trace system has meant that personal details may have to be given more often than in the past, and to organisations and businesses that would not normally manage such data. This may well bring new responsibilities under national personal data protection laws The IRM Qatar Group said that: "The IT infrastructure in Qatar was such that the working from home transition was fairly straightforward IT wise but that cyber security risks were increasing". (1)

Actions were taken to combat this including the European Commission lead #EUvsVirus aiming to develop innovative solutions for Coronavirus related challenges are also appearing and may have been proven to be helpful.

Health risk

The Health Foundation Inquiry Report "Unfair pandemic. fairer recovery: The COV!D-19impact inquiry,C'J report" was issued in July 2021 (URL ref. https://doi.org/10.37829/HF-2021-HL 12) and identified some adverse impacts on health and the health service in the UK. A more global view is provided by WHO (www.who.int/publications/i/item/WH0-2019-nCo V-EHS-continuity-survey-2021. I.).

Prior to the COVID-19 pandemic health and social care services were facing serious challenges in many countries with a need to deliver more services in a climate where spending has always exceeded investment. The pandemic resulted in increased demand on services with health systems striving to maintain essential health services. The pandemic also highlighted deficiencies in social care infection prevention and control measures, and inequalities in the structure and funding of social care provision.

Disruptions to service provision were inevitable and to better understand the extent of these disruptions WHO launched a 'National pulse survey on continuity of essential health services during the COVID-19 pandemic'. WHO's latest report in April 2021 found that nearly all responding countries reported at least one service disruption and disruptions were reported across all health areas, demonstrating the far-reaching impact oi the pandemic on health systems. Primary care, rehabilitative, palliative and long-term care were most heavily affected, with over 40 % of countries reporting disruptions that affect the availability of and access to quality services, including for the most vulnerable individuals.

NHS England estimates that six million people are on the waiting list for elective care, up from 4.4 million before the pandemic and it further estimates that over 10 million patients who might otherwise have come forward for treatment, did not. Similar concerns are being expressed in other countries leaving health systems with significant challenges in identifying and treating the lost patients. The impact on people waiting for treatment goes beyond the physical and reaches into their family and working lives which can in turn impact on mental health. All indications are that health and social care services are and will continue to be under severe stress long after COV!D-19 has subsided

Lesson 8: There will be future pandemics

Coronaviruses are a large family of zoonotic viruses (capable of transmission from animals to humans) that cause illnesses ranging from the common cold to severe respiratory diseases. There are several known coronaviruses known to be circulating in different animal populations that have not yet infected humans.

The emergence of zoonotic infections capable of infecting humans has been a relatively common occurrence throughout history. The rate at which these infections cross the animal-human barrier has risen in the 21st century due to increased human-animal contact, habitat destruction, the industrial model of agriculture, and population growth. The transmission has been facilitated by factors such as globalisation and ease of travel. (15)

The influenza pandemic of 1918-1919 ("Spanish Flu") was the most severe pandemic in recent history. It was caused by an H1N1 virus of avian origin. In the absence of vaccines and antibiotics control efforts were limited to isolation, quarantine, good personal hygiene, use of disinfectants and limitations on public gatherings.

In its three waves the pandemic resulted in approximately 500 million infections and 50-100 million deaths. It was followed by a severe economic downturn which is estimated to have decreased developed countries' per capita GDP by about 6%. (15)

More recently other pandemics and pandemic threats have occurred, notably: In 1957 (Asian Flu) and 1968 (Hong Kong Flu). It would appear that pandemics and pandemic threats are becoming more common compared to previous centuries with: the SARS outbreak in 2003, the "Swine flu" (H1N1pdm2009) influenza in 2009, the Middle East Respiratory Syndrome (MERS) coronavirus outbreak in 2012, Chikungunya in 2014, Ebola from 2014-2015, the Zika virus in 2015, and the Ebola virus in 2018.

The human case of the MERS appeared in Jordan in April 2012 and Saudi Arabia in September 2012, and was associated with important transmission in healthcare settings and a case-fatality rate of 34%. (15)

Between 2011 and 2018, the WHO tracked 1483 epidemic events in 172 countries. Epidemic prone diseases such as influenza, (SARS), Middle East Respiratory Syndrome (MERS), Ebola, Zika, plague, Yellow Fever and others, are harbingers of a new era of high-impact, potentially fast-spreading outbreaks that are more frequently detected and increasingly difficult to manage. In response to these the WHO developed its Pandemic Influenza Risk Management guide published in 2017 which, although aimed at nation level is largely relevant to a business or organisational context.

Various sources have indicated that animal-human disease pandemics will occur in the future and that it is likely that they will occur with increasing frequency unless actions are taken address the underlying causes of increased contact between animals and humans. Consequently, we need to ensure that we are better prepared to meet the next pandemic and to incorporate lessons learned from that into preparations for the one after that.

The warnings outlined in Lesson 1 are still valid and calls for action are becoming even louder. It seems obvious that governments, populations, businesses, Boards of Directors, consumers, regulators, other stakeholders, etc. will consider poor performance in any future pandemic less charitably than perhaps has been the case for COVID-19. Businesses and organisations must be better prepared to respond to future pandemic events and indeed other high impact low probability or low predictability risks. It is hoped that this lessons learned report and the implementation of recommendations arising from it, will help support this.

The "Risk Doctor" Dr. David Hillson, Honorary Fellow IRM, noted that we can't control the volatile tides of change, so we need to build better boats!".

4. Preparing For The Next Pandemic

Black Swan or Grey Rhino?

From Lesson 1 we know that despite the warnings and warning signs few organisations were adequately prepared for the pandemic, which might suggest that our risk management systems and procedures let us down. It seems clear that in the future we need to ensure a holistic approach that effectively ties in risk management, business continuity planning and the development of organisational resilience.

In his webinar presentation "Black Swan or Grey Rhino – Lessons for risk management" May 2020 Andrew Sheen notes that it could be argued that:

> If coronavirus is a Black Swan, firms and regulators can claim that it could not have been predicted and preventive and detective controls established. This could excuse all parties from failing to prepare for a truly unknown event;

> If it is not a Black Swan, then deficiencies in the risk management framework prevented the event from being identified and managed/mitigated. In this case these deficiencies must be addressed to ensure that firms do not fail to prepare for and mitigate similar events.

Whilst many considered that the COVID-19 pandemic was a "Black Swan" event, this is clearly not the case. Warning signs have appeared over the years and clear calls for action were made by various parties prior to the emergence of COVID-19. Pandemic risk was clearly highlighted as a key risk in the UK National Risk Register and by the GPMB. Despite this most countries, businesses and sectors were less than adequately prepared to deal with such a pandemic. In many cases although pandemic risk was identified in risk registers few people, if any, expected it to impact in such a geographically widespread manner as it did. It also became clear that lessons learned from previous pandemic type events although identified were not always acted upon, a complaint made in previous lessons learned reports from previous pandemic events.

Olga Jonas in the World Development Report 2014 Background Paper on Pandemic Risk states that: "The paper was motivated by the prevalence of pandemic myths. Widely held beliefs that pandemics are inevitable and thus not worth worrying about, that the health sector is managing the risks, and that the pandemic risk is not a development issue lead to underestimation of pandemic risk, scant preparedness, and inadequate prevention." [16]

In "A World at Risk" the first annual report (2019) on global preparedness for health emergencies, the Global Preparedness Monitoring Board (GPMB) notes that: "…There is a very real threat of a rapidly moving, highly lethal pandemic of a respiratory pathogen killing 50 to 80 million people and wiping out nearly 5% of the world's economy." [4]

The report goes on to say: "For too long we have allowed a cycle of panic and neglect when it comes to pandemics: we ramp up efforts when there is a serious threat, then quickly forget about them when the threat subsides."

Whilst we are specifically considering pandemic risks here, much of the guidance indications will be relevant to other major events, as indeed was found with COVID-19 by many organisations whose emergency plans, although not pandemic specific, served them well.

Future Pandemic preparedness

Lesson learned 2 is that better prepared organisations are better able to survive a pandemic (indeed any emergency). This is hardly surprising. It was learned early on in the pandemic that effective preparation is key to managing pandemic risk and maximising the chances of survival.

Although pandemics are usually managed overall by public health authorities COVID-19 has shown that these cannot always be relied upon and businesses must consider their own preparedness.

The report of the Review Committee on the Functioning of the IHR (International Health Regulations) (2005) in relation to Pandemic (H1N1) 2009 concluded: "The world is ill-prepared to respond to a severe influenza pandemic or to any similarly global, sustained and threatening public-health emergency" (17).

The Review Committee recommended that WHO should revise its pandemic preparedness guidance to support further efforts at the national and subnational level. Revisions recommended included: simplification of the pandemic phases structure; emphasis on a risk-based approach to enable a more flexible response to different scenarios; reliance on multisectoral participation; utilization of lessons learned at the country, regional and global level; and further guidance on risk assessment.

The Review Committee's report reflected the broad experiences of Member States during the influenza A(H1N1) 2009 pandemic – and the key point that previous pandemic planning guidance was overly rigid. Member States had prepared for a pandemic of high severity and appeared unable to adapt their responses adequately to a more moderate event.

No plan survives the first moments of engagement but if the flexibility is there and the team can quickly and effectively adjust to changing situations it will.
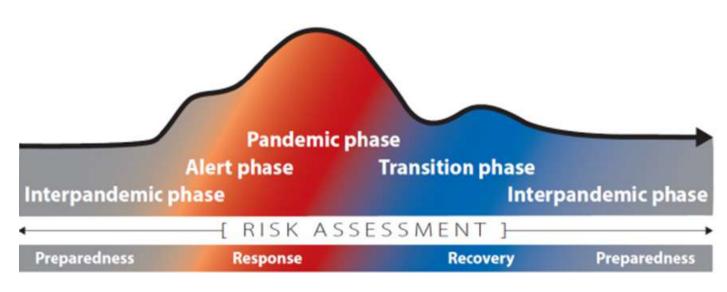
The figure below shows the pandemic continuum developed by the WHO in their "Pandemic Influenza Risk Management guide of 2017". This shows the pandemic phases as a continuum and also shows the phases in the context of preparedness, response and recovery. The constant throughout the continuum is risk management – it is important that this does not stop.

We are currently in the recovery area of the continuum although many organisations have been addressing preparedness for the next pandemic and continue to do so as they adapt to COVID-19.

Gartner in their 30th January 2020 article noted that "Preplanning is essential during any crisis, but pandemics require extra activities.

That includes keeping close contact with epidemiologists…" [in a normal business sense this would be keeping up-to-date with accurate and true information so you can plan accordingly and keep your staff accurately informed] as well as monitoring and modelling impacts over months.

Gartner advises to improve the company's overall capabilities - the pandemic provided an opportunity to see where the company may be exposed and which business activities may not go as planned during the spread of an infectious disease. It is also vital to document the responses, noting surprises or assumptions in the plans that turn out to be wrong. As well as those that worked well.

Source: WHO

In their June 2020 report "Covid-19 – Lessons Learned (The Story so far)" The IOR note:

> "Those that had well developed pandemic and other recovery plans and have successfully utilised recovery sites, redirected work to other less impacted offices, introduced shift patterns and remote working and triaged non-critical activities".

> Pandemic scenarios – firms that had regularly run comprehensive and detailed pandemic scenarios with senior management participation to test both the capital and risk management impacts of a pandemic were better prepared for COVID-19 than those that had not.

But you must be sure that your exercises are as realistic as you can make them and that the assumptions made are valid. In Exercise Cygnus a test response to an influenza pandemic by the UK Govt./NHS et al in 2016, it was noted that some of the assumptions involved just-in-time (JIT) procurement of items such as PPE, including face masks. As it turned out the widespread scale of COVID-19 meant that JIT was no longer available.

The survey also found that found that firms that had regularly run comprehensive and detailed pandemic scenarios with senior management participation to test both the capital and risk management impacts of a pandemic were better prepared for COVID-19 than those that had not.

Although the IOR survey was largely based on the insurance sector where operational resilience is fast becoming as important from a regulatory perspective as financial resilience, others have reported similar findings in their surveys and reviews.

The Journal of Risk and Financial Management found that many organizations were surprised by the depth and severity that the pandemic has had on their organisations. Given this, it is important that organizations examine scenarios that depict the type of scenario the world is currently facing in terms of concurrent pandemic predicaments resulting from demographic, economic, operational, and strategic risks.

In this context, examining Enterprise-wide Risk Management (ERM) from a strategic lens is required. This requires examining risk scenarios with a special focus on how the organisations' most valuable assets and value drivers are affected, so that in future crises these value drivers can be maintained to sustain the organizations' viability. (19)

The World Bank Policy Working Paper 9514 of January 2021 found that better-managed firms are more resilient to the disruption caused by the COVID-19 pandemic, especially so in manufacturing and better managed service firms who are able to pivot their product mix and switch to remote working arrangements.

Learning the lessons

Identifying lessons learned is of little use if it is not followed up by an appropriate management system reporting to Board level that ensures plans are put in place and implemented to ensure that the lessons are put into practice. Emergency/crisis management plans should include specific responsibilities for the identification, recording and dissemination of lessons learned throughout the organisation and a management control system that ensures the implementation of such lessons.

One of the measures that helped IOR survey organisations to manage and mitigate pandemic specific issues was lessons learned exercises. Pandemic issues were monitored, lessons learned identified and considered with a formal process to ensure that mitigating actions were agreed and implemented. As things return to some form of normality senior management and Boards should undertake their own investigations into the pandemic and how they dealt with it.

Crisis management plans need to specifically address this critical issue. The process should include the identification of the crisis team member responsible for recording and reporting on lessons learned, and the undertaking of a review which will include a technical investigation into the cause of an event and an assessment of the effectiveness of the response.

In the case of a pandemic like COVID-19 which has a long duration impact the process must allow for lessons to be learned as the crisis unfolds so that appropriate actions may be taken to adapt or fine tune the organisations ongoing response to the crisis.

It is important that the lessons learned are considered on a wider basis i.e. lessons learned from one type of emergency or crisis event may well be suitable for other types of crises or emergency. Clifford Chance (21) noted that experience gained by their Hong Kong office staff in working from home during the political unrest in Autumn 2019 enabled them to develop a template for home working that was successfully applied to their other offices in dealing with Covid-19. Many organisations will have had plans in place to deal with "denial of service" type events that covered moving staff to a remote working basis that worked well in dealing with COVID-19.

Perhaps the Asian region experience of previous pandemics enabled them to learn from past diseases as a number of countries in that region reacted faster than other regions in taking strong mitigation actions – tracking and tracing, closing borders, schools etc. quarantines etc.

It is important to identify measures that are or may be applicable across different crises and in differing timescales.

As with any event COVID-19 has presented opportunities to businesses that have been prepared and able to react quickly to flex their response and take advantage of such opportunities. Examples include introducing/ increasing on-line offerings, introducing or expanding home delivery services, or changing work practices to ensure compliance with any new restrictions. According to the IRM survey (and others) approximately 7 % of respondents noted that they had benefitted from the pandemic.

Once businesses are in the recovery stage it is critical that their Boards and senior management conduct a lessons learned exercise so that they can specifically identify what went well, what didn't and the circumstances of both. Once done a mechanism for ensuring that appropriate actions are taken to build in the lessons learned should be implemented.

Emergency/crisis planning

Things change rapidly during pandemics as we have seen. National and regional restrictions can change overnight and sometimes with very little notice. In emergencies and crises, the situation tends to be fluid and can change at any time and with little or no advance warning. All of the information that you would like in order to make a decision may not be immediately available and given the fluidity of the situation it would not be prudent to wait until 100 % of the information is available before critical decisions are made. The crisis management plans/crisis management teams must have the ability and authority to facilitate rapid decision making based on available information at the time the decision needs to be made. Waiting too long may mean that it is too late for the decision to have the desired impact.

Organisations need to emphasis quick, efficient and continuous decision making – 70% certainty now is better than 100% later when you may well have gone out of business. (3)

Where networks of local teams have been set up there should also be an emphasis on removing or reducing hierarchical barriers – crisis management teams need to be given autonomy and there should be more direct communications between top management (CEO) and the frontline.

The Business Continuity Institute (22) suggests that building resilience into organisational DNA is more important than ever and recommends:

> Get digitalised

> Act swiftly but have a plan that informs your decision making

> Plan for the unexpected. Planning should not be too focussed on specific risks. Need to be able to adapt to changing situations – need to be agile and flexible

> Put crisis communication team in place and practice with them regularly (along with the rest of the crisis management team)

> Keep up with testing and simulation

> Work with experts

> Look carefully at your supply chain.

Pandemic plans should include full and up-to-date details: The crisis management team; communication arrangements for staff, customers, third parties and regulators, pandemic scenarios for risk management, and lessons learned processes.

Leadership and communication

We have already identified in Lesson 3: Effective Leadership and communication are critical for survival and it is critical that these are carefully managed.

An early report on the initial pandemic experience in Italy (23) identified a number of key concerns related to communication. Although the lessons were specifically concerned with the national situation in Italy, most are relevant to the management of a major crisis in an organisational setting. The relevant key concerns were:

> Conflicting information reported by multiple messengers, plus the spread of fake news, caused a lack of respect for rules. People struggled to change their habits. Some bars and shops did not respect the restrictions and people underestimated the importance of reducing their social contacts. This public reaction resulted from an institutional miscommunication, which in turn undermined the credibility of the recommendations provided by the government

> Delays in releasing information can allow stakeholders time to act on information they may get from other sources

> Paternalistic attitudes represented by a simple "don't panic" message usually promote the opposite reaction. Stakeholders must be properly informed if you need them to coherently follow the plan

> Internal conflicts and misalignment between key parts can result in mistrust and severely undermine the management of a crisis, increase confusion and create an image of chaos outside

> Although most have viewed improved communications from the Board and senior management positively others (11) have suggested that corporate communications have, to some extent, displaced middle-management communications at the branch and division level. The FIDIC survey (10) noted that a number of firms have tried to address this by delegating the transmission of the corporate messaging to middle-management, but the results have been mixed.

It is critical that the reasons for an extraordinary change in communication protocols are clearly understood throughout the organisation and that there is a plan in place for an orderly transition back once some form of "normality" is attained.

At the project level, communications have become more formalised, with more scheduled meetings and most firms believe that productivity is better than before. However, there are fewer impromptu discussions, leading to concerns that such things as innovation and the development of peer-to-peer relationships may have suffered. (10)

The Communicating with Disaster Affected Communities (CDAC) Network (24) identified a number of lessons learned relating to communication during pandemics. Although aimed at governments and agencies several of their lessons learned translate well to an organisational setting:

> Prepare ways to share sophisticated information quickly

> Have communication channels and cooperation plans in place and understood throughout the organisation

> Work to re-engage communities as participating partners – this worked in many sectors as retired personnel were brought back to the workplace

> Find ways to get staff involved and have a meaningful say in the response – make this the cornerstone of any COVID-19 communications plan.

Other key factors to bear in mind are:

> Improve the clarity and consistency of risk communications (25)

> Identify and implement a clear and well understood communication tree for the organisation (26)

> Consistency shapes norms. Messages that also provide a rationale for the necessary behavioural changes are most effective (13)

> Establish a common purpose and clear communications (e.g. write a new mission statement or set of objectives and ensure they are communicated effectively to stakeholders.) (3)

Risk Management, and Business Continuity Planning

At some point, hopefully in the near future, COVID-19 will go away and no longer be newsworthy. It's at this time that people start to forget and investment in anti-pandemic measures will start to tail off or become much harder to obtain. That will be a mistake that we as risk managers must try and avoid.

Organisations able to absorb and adapt to the challenges of the COVID-19 pandemic successfully are, by definition, resilient. Many found themselves making decisions at a speed, which would have been unthinkable in pre-COVID-19 times. The IRM survey April 2020 found that 92 % of respondents predicted a greater focus on operational resilience.

COVID-19 has shown that the consequences of a pandemic are difficult to reliably estimate and the persistence of it hard to define. Pandemic risk should be perceived in terms of a severe threat to an entity's overall strategic objectives and suggests that many organisations' risk management approaches may need substantial re-examination. (19)

News and Insights on Global Risk (April 26 2020 article by Dr. Mark Trexler) suggests that COVID-19 has exposed the weakness of traditional risk management strategies.

Although the particular article is primarily concerned with climate change it makes a key point in that systemic risks like COVID-19 requires systemic preparedness and a systemic response. And traditional business risk management does not deliver either. Where organisations had a generic pandemic risk in their risk registers it seems clear that the COVID-19 pandemic has shown that this was underestimated in both magnitude and dimension.

AON (27) noted that the COVID-19 pandemic has devastated health systems and economies, alerting many leaders to gaps in their risk readiness and the need for a different approach. It will likely serve as a catalyst for change in many organisations there was overwhelming evidence that taking an enterprise-wide approach to the crisis response was the most valuable lesson.

To learn from the events of the past two years, organisations should strengthen their decision making in each of the three time frames—react and respond, recover and reshape—and reprioritize enterprise risk management and resilience, including:

> Expanding risk to encompass long-tail and emerging risks: Boards and executive management teams need to broaden their perspective when considering risk and increase their focus on identifying and evaluating future major shocks that could disrupt strategic objectives and present threats to their organisation. In doing so, organisations can be better prepared and further invest in the areas that help them grow

  It is clear that resilience plans associated with prior business models will not be sufficient to protect organisations from emerging risks. This will also require elevating the role of the risk manager to guarantee risk is part of C-suite and executive business priorities, ensuring each business function is resilient and remains growth-oriented in a changing risk landscape

> Building a more resilient workforce: There is an overwhelming consensus that people are at the heart of business resilience and strategy success. It is notable that during the early stages of recovery, respondents viewed protecting their people as the top priority across the globe

  Workforce stability and engagement is a key driver for businesses to be sustainable and adaptable across all countries and industries in a volatile and changing risk landscape. To achieve workforce resilience, organisations should focus on employee well-being, talent retention, operational improvements and new, innovative working models and technology

> Rethinking access to capital: Few respondents said they submitted a claim triggered by COVID-19 under their insurance program or captive, which suggests that insurance was not viewed as a solution or was unable to meet organizations' risk financing needs. This is likely because the risks are either uninsurable, or the scale of the event exceeded conventional program limits or capacity

> While government support has helped some organisations fill a gap, it is clear that companies need new and innovative solutions to face not only pandemic-related risk exposures but also a changing risk environment that is becoming more complex and volatile. Organisations should seek solutions from the insurance industry to help manage their total cost risk and consider alternative financing structures, such as captives and specific coverage, for emerging risks.

Many organisations that had pandemic plans in place had anticipated a relatively contained impact, either in their locale or in that of some of their suppliers or customers. How were supply chains impacted and how did organisations deal with the issues? Risk management will need to look more closely at supply chains and partnerships security in future pandemic planning.

The IRM survey (1) found that 96% of the respondents indicated that the case for strengthening risk management was clear while only 46% expected their risk management budgets to increase, of which only 17% expected a greater than 10% increase in budgets to occur.

Key activities for firms presently are strengthening business continuity management processes, promoting organisational resilience and a rapid transformation to risk-based decision making. Overall the majority of firms are responded well to the crisis, however some 20% of firms are having difficulty with funding while circa 1/3rd have experienced reduced sales and revenue.

Some 28% of risk professionals expect the changes to their roles as a result of COVID-19 to be permanent.

55% of firms are reviewing their risk appetites as a result of COVID-19. Robust continuity plans and work done on resilience were stated as being more helpful in responding to the crisis. Indeed, greater focus on building operational resilience is the highest pandemic driven change in risk management for 93% of respondents followed by greater board level interest in strategic risks at 86% and integration of business continuity planning into ERM at 78%.

83% will be undertaking a review of their strategic plans and risks in response to the crisis which is a similar figure to the April COVID-19 2020 survey.

An EY survey (28) of 500 board directors and CEOs carried out in 2019 stated that just 40% said their ERM was effective in managing atypical and emerging risks.

60% of pre-COVID-19 boards recognised that ERM at their business was not sufficiently geared up to identify and mitigate new threats. It goes on to say that "Covid-19 now stretches risk functions' capabilities even further.

The pandemic is not only a major threat in itself, but a force that will reshape and exacerbate new and adjacent risks that organisations struggled to contain even before the outbreak.

Businesses must be looking hard at their relationships – too reliant on single geographies? Or other reliances that leave them vulnerable. There is no guarantee that future pandemics will be the same as COVID-19 and organisations need to consider scenarios that examine the effects of concurrent predicaments.

This requires examining risk scenarios with a special focus on how the organisations' most valuable assets and value drivers are affected, so that in future crises these value drivers can be maintained to sustain the organizations' viability.

In their 2019 survey report EY (28) note that 'while companies cannot predict when a crisis or Black Swan event may occur, boards that prepare organisations to have the strategic, operational and financial resiliency to recover from emerging global risks will be better positioned to respond and minimise their impact.'

The FERMA survey results highlight the importance of effective business continuity planning but it is critical that the developed plans have the ability to flex so the organisation can adapt as a situation unfolds. This is a point raised by many risk commentators and leads into the aspect of organisational resilience and agility, the latter being the ability to flex and move depending on what comes along.

The IOR notes that sole reliance on Business Continuity Plans (BCP) is significantly less effective, as the pandemic has impacted across multiple locations and countries while BCP relates to coping with denial of something e.g. buildings or staff or IT etc.

In this instance in the UK denial is primarily access to buildings due to lockdown and secondarily some loss of staff capacity due to primary school closures and concerns over loss of suppliers.

Pandemic plans should include full and up-to-date details: The crisis management team; communication arrangements for staff, customers, third parties and regulators; pandemic scenarios for risk management; and lessons learned processes.

In their Policy Research Working Paper, January 2021 the World Bank (20) found that better managed firms are more resilient to the disruption caused by the Covid-19 pandemic, especially so in manufacturing. They also found that better managed service firms were able to pivot their product mix and switch to remote working arrangements.

5. Post Pandemic Planning

It is important that as well as planning for and preparing to respond to pandemics businesses needed to prepare for and plan recovery from pandemics – returning to a "new normality" or perhaps back to business as usual..

Future of office space: Smaller firms less likely to reduce space, some larger firms see the opportunity for working from home enabling them to reduce space by implementing staggered hours/days, hot desking, office hoteling.

Most firms see a hybrid model where many staff will be given the opportunity to work from home for part of the time but preserving a minimum core presence in the office.

Staffing levels; due to cost savings over a number of years, the staffing numbers in certain areas is minimal and we hold a lot of posts which are single points of failure.

Insurance and legal commentators have indicated that there has been and will continue to be an increase in COVID-19 related litigation: people having issues working from home (long term mental impacts will be tricky, accidents at home etc.); people catching COVID-19 and attributing it to someone who coughed near them or to a close work colleague for example.

Staff who normally worked away from home base on short-term overseas assignments, travelling sales representatives, business development staff etc. will in many cases have continued to work using digital collaboration methods (Zoom, Teams, etc.) and may continue in this manner as part of a 'new normal.' McKinsey [29] estimates that about 20 % of business travel may not return after the pandemic.

In addition to an increased number of staffs working from home organisations had to deal with staff who will need to be mobile again, and there will be those who have continued to be mobile to some degree.

There should be clear plans and procedures in place for them – particularly where constraints, vaccinations, infection rates etc. vary from those "at home". Proper risk assessments need to be made of mobility plans and movements. Some form of journey management/risk assessment process will need to be developed and put in place, as well as clear guidelines for how to deal with possible infection, forced quarantine and so on.

6. Third Party and Supply Chain management

Many organisations that had pandemic plans in place will have anticipated a relatively localised impact, either in their locale or in that of some of their suppliers or customers. However, COVID-19 has resulted in supply chains around the world facing major disruptions and difficulties adjusting to the new demands and needs of a locked-down world. Its nature has meant that no economy is immune from its effects.

Deloitte noted that many enterprises don't truly understand their supply chains. Some organisations may have discovered there were critical points of weakness in their supply chains that were not identified until they were stressed by the pandemic. (30)

This brought supply chain resilience to the forefront for many organisations … often in painful ways. The World Economic Forum commented: "The COVID-19 pandemic has changed the business environment for many organizations around the globe, and has highlighted the importance of being able to react, adapt and set up crisis management mechanisms in order to weather situations of uncertainty." (30)

Some companies were better prepared than others to respond to the pandemic. They have built strong relationships with key suppliers and have put systems in place to provide visibility across the extended supply network to better understand their risks and drive specific actions based on their priorities. They developed agility within their production and distribution networks to quickly reconfigure and maintain supply to global demand, and they invested in supply chain planning and control tower solutions to better sense and re-spond, and even predict, supply chain issues. (31)

Other companies are scrambling. These companies are overly reliant on a single geography or a single sup-plier for key products. They don't have enough visibility across the extended supply network to see their risks. They don't have the systems to understand their inventory status, to project stock-outs of direct materials and optimize production, or to project stock-outs of finished goods to optimize customer allocation, and they don't have flexible logistics networks to ensure the flow of goods in a profitable manner. (31)

COVID-19 has taught some important lessons about supply chain resilience, and organizations that put those lessons into action will be better prepared to withstand the next major disruptive event.

Responders to the IRM's Global Risk Management Response (1) noted:

- FinServ Group: A greater understanding of the dependencies around third parties and the sensitivities in relation to resilience strategies. This includes a clear understanding of key business activities and accurately identifying the key risks and mitigation strategies

- Health & Care Group: Risks have manifested themselves in the supply chain

- Nuclear Industry Group: The industry is relatively small and tightly knit and we have global networks of operators who are very familiar with sharing learning from experience. These networks have been ready in unusual times to give us support and benchmarking opportunities

- Nuclear Industry Group: Highlighted their close ties with the local community (common for nuclear plants) and how this enabled them to help each other, especially for the plant to help the community

- Firms have needed to ensure that third party arrangements continue to operate in accordance with approved parameters, third parties themselves were able to manage the pandemic and that communi-cation channels with all suppliers were maintained and effective.

Companies must take a closer look at their supply lines and assess the risks and weaknesses associated with them. Many organisations found that they had pared their business back to such a level they struggled to cope with the pandemic. Too few staff or not enough of the right skills and versatility, too few spares, re-placements etc.

Despite warnings of possible pandemics few countries, if any, had sufficient stocks of face masks, ventilators, ICU trained staff; many companies had insufficient laptops and staff trained to use them to facilitate the rapid increase in remote working brought on by the pandemic.

The IOR (6) noted that the trend of the last decade has been to remove redundancy and eliminate spare capacity on the grounds of improving efficiency has made organisations more vulnerable and fragile to COVID-19 like shocks. Emergency Planning should not rely on potentially risky supply chains – masks and ventilators were cases in point in the early stages of the pandemic.

If the items are critical to your emergency plans you should have secure access to such supplies. This has to include skills – for example the number of ICU trained staff seemed to be insufficient to match the number of ICU beds in various health services including the NHS. Such skills need to be maintained and tracked as an essential part of the emergency management plans – nurses need to be encouraged and incentivised to develop and maintain ICU skills even if their normal "day job" is in a maternity or A&E ward for example.

7. The "upsides" of COVID-19

Whilst Lesson 7 suggests that dealing with the pandemic has created new risks and may have increased existing risks, in addition to the downside of COVID-19 there have also been upsides in the form of new opportunities or enhanced existing ones.

Some organisations will have largely benefitted from the pandemic, others will have reacted swiftly and maximised the opportunities presented by the pandemic (home deliveries, online sales, developing outdoor hospitality spaces, reduced office costs, increased transportation and delivery operations, etc.).

In some cases, the upside may be permanent (working from home and reduced office costs).

As companies grow more used to managing staff working remotely there is the potential to widen the geographical area for recruitment and thus potentially access a greater pool of talent.

Some specific examples of sectors/companies that have found the upside of COVID-19 are:

- The World Bank (2020) [31] has estimated the demand for different services during COVID-19 using Google search data and found that for face-to-face services such as those in the leisure and hotel trade demand dropped dramatically. They also found that for those services that could be done remotely demand increased dramatically as did demand for those who provided solutions to enable transacting with people without face-to-face contact happen and hence why the information and communication technologies (ICT) sectors also increased substantially during the COVID-19 crisis

  In fact, over the three month period that the Google data was measured across 182 countries the rate of decrease in demand for hotel services at 63 % was matched by a corresponding increase in demand for ICT services. The individual changes at the country level were driven by the strength of the lockdown response that each local government put in place in reaction to the COVID-19 crisis

- Mckinsey (2021) [33] examined the grocery sales market in Europe and found that sales in 2020 were on average 20 % higher than in 2019. Some of this early demand was driven by shoppers hoarding goods but the longer term and main drivers were the various government restrictions put in place to combat the crisis and also consumers focus on health

  The main increase in demand for grocery sales was through online channels which grew on average by 55 % across Europe while hypermarkets grow by only 3 %. Interestingly in Sweden where the public faced the least social restrictions consumers tended to shop in hypermarkets located away from population centres while Italians shopped in local small shops due to the tight restrictions in movement there

- Pharmaceutical companies were at the centre of the response to the COVID-19 crisis and Pfizer revealed that it made $3.5 billion in revenue for the first 3 months of 2021 which in part comes from the firm's vaccine for Covid-19 which reputedly has a profit margin which is over 20 %. The firm plans to produce 2.5 billion vaccines in 2021 which the firm expects should generate $26 billion in revenue. [34]

- Amazon has been one of the standout successes during the COVID-19 crisis with revenue climbing to $113 billion in the 2nd quarter of 2021 which is a 27 % increase from $88.91 billion for the same period in 2020. During the height of the pandemic Amazon gained 200 million more customers and had to hire 500,000 extra workers to meet this demand. [35]

8. COVID-19 and other existential risks

Existential Risks

The Cambridge University Centre for the Study of Existential Risk (CSER) notes that global risks share many common challenges: how to develop robust methods for studying high impact low probability events, how to engage with a truly global audience and how to translate research into policy impact. These create the opportunity to learn lessons from across many different risks.

CSER defines global catastrophic risks as those that could kill at least 10 % of the global population, or cause equivalent damage. Under several headings they are considering a variety of environmental, technological, and biological risks including:

> Natural pandemic (COVID-19 for example)

> Manufactured pandemic (bioweapons)

> Climate change

> Ecosystem collapse

> Geoengineering error

> Nuclear winter

> Artificial intelligence

Although there are potentially catastrophic natural risks also (super volcanoes, solar flare activity and asteroid collision) they are less interested in those, given that we as a race, are perhaps less able to take preventive action. However, businesses should consider these along with the others and develop mitigation strategies relevant to their business.

Whilst many of the existential risks would/may be catastrophic to the human race most could in a reduced form become existential business threats. Such existential business risks result in disruption but may also have potential for advantageous transformation. Businesses need to develop their preparedness to deal with such risks.

At the Salzburg Global Corporate Governance Forum (October 2020) (36) the question was asked: What does it take for a business to survive an existential threat? It considered that "Business resilience in light of existential threats raises issues about corporate board leadership and management. These issues include the corporate board's make-up, corporate board structure, and balancing corporate board leadership with management leadership. To prepare for when not if existential threats emerge should entail a review of questions likely to encourage boards to do the right thing at the right time and for the right reasons…."

Climate change

Recently extreme climatic and weather-related events have brought about high economic and human costs. The Forum states that although it can be difficult to attribute a discrete event to anthropogenic climate change, research in attribution is finding that extreme events, such as wildfires, heatwaves, droughts and heavy rains, are made more likely by human caused climate change. Regardless of one's views on the cause of climate change, it is clear that climatic and weather-related events can significantly impact on businesses.

Other commentators such as McKinsey (37) highlighted the climate change related risks that are associated with lengthy and dispersed supply chains. They note that supply chains are already being disrupted by extreme weather, and this will increase with climate change. As we work through the pandemic climate change and COVID-19 recovery plans are often discussed together. Many countries intend to make substantial investments in order to facilitate or accelerate economic and social recovery following COVID-19.

Much of this investment is likely to be aimed at or targeted based on carbon reductions to net zero or "building back greener" as the UK Government initiative is titled.

Such programmes will present both positive and negative risks and organisations and businesses will need to be sure to maximise the former and minimise the impact of the latter.
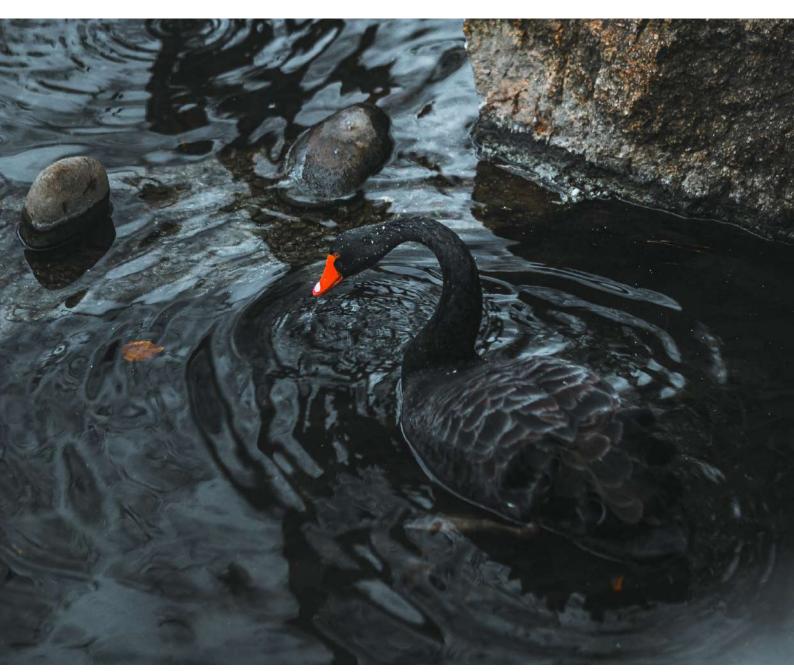
Asteroid strike

The Adophis asteroid was first discovered in 2004 after which NASA says it was put on the list of most hazardous asteroids that could impact earth. Researchers estimate that a potential hit from the 1100-foot asteroid could kill 10 million. Potential impacts in 2029, then in 2036 and most recently in 2068 have been ruled out with NASA calculations showing no impact risk for at least 100 years.

High impact and low probability risks, and Black Swans

The COVID-19 pandemic has clearly indicated that the risk community needs to more carefully consider how we consider high impact low probability (predictability) risks. The pandemic has shown that they can and do occur.

In addition to these, the Risk Doctor notes that: "Black Swans are coming – invisible until they arrive, but the effects will be huge and unpredictable, and we must be ready."

9. Conclusions

The lessons identified in this note are:

1.   We were not adequately prepared for the pandemic

2.   Organisations with effective crisis management plans in place are better placed to survive

3.   Effective leadership and communication are critical to successfully managing a crisis

4.   COVID-19 has driven changes in traditional employee management and work practices

5.   Few organisations considered how to manage infection risks within the workplace

6.   Digital transformations have played a key role in successfully managing the pandemic

7.   Dealing with the pandemic has created new risks and may have increased existing risks

8.   There will be other pandemics in the future.

Lessons 1 and 8 are perhaps the most important to appreciate. We were not ready for this pandemic and there will be others. It is absolutely critical that organisations prepare for the next pandemic and equally for other high impact low probability risks and whatever 'Black Swans' that may be on their way.

Organisations need to review their risk management and business continuity planning systems and processes, and aim to develop an holistic approach to improving organisational resilience. This is already in progress in the financial and insurance sectors where the regulatory pressures are driving for operational resilience to be placed on a par with financial resilience.

Surveys indicated that the discussions of operational resilience prior to the pandemic were instrumental in helping that sector in successfully managing it so far.

It is hardly surprising that having good crisis management plans in place, and exercising effective leadership and communications with stakeholders were found to help organisations manage the crisis. The future challenge is to make sure that those plans and processes will specifically address pandemic risks.

It seems likely that the work environment has changed forever for many employees and companies. The transition has been rapid and enabled by digital transformations. The rapidity of the transition may have resulted in inadequate risk assessments being made and, in many cases, the long-term risks may not be fully understood.

As the pandemic subsides and as part of the planning for the next one it is important that the appropriate risk assessments are made and adjustments made where required.

The pandemic is not yet over and work will continue in establishing some form of new normality which will include planning for future shocks.

It is clear from these that the risk community needs to improve preparedness. Lessons learned 2 through 7 identify key aspects that businesses should address in preparing for future pandemics and will form the basis for support documentation development by the Group.

10. Future Group actions

There is a huge volume of information relating to COVID-19 being produced every day – a trend that is likely to continue in the future. This report has used some of this to present some key lessons learned. The second survey conducted by the IRM (December 2020) also included a question requesting respondents to advise on how they felt the IRM could help.

On the basis of the lessons learned and the identification of possible areas of future support for pandemic risk management, the Pandemic Group will be focussing on developing a "Sound Practice Guide(s)" to support the risk community in preparing for and managing the consequences of future pandemics.

References

1) IRM Covid-19 global risk management response. October 2020 document presenting the findings of the SIG leaders and those of other main IRM groups.

2) Resilience in the face of uncertainty: early lessons from the Covid-19 pandemic. Journal of Risk and Research, April 2020

3) Agile resilience in the UK: Lessons from COVID-19 for the 'next normal'. McKinsey article October 2020

4) A World at Risk. 1st annual report on global preparedness for health emergencies. Global Preparedness Monitoring Board (GPMB). September 2019

5) Addressing the impact of COVID-19 Post-crisis review and lessons learned. Deloitte 2020

6) Covid-19 - Lessons Learned (The Story so far) - IOR June 2020

7) Crescendo Advisors: Lessons learnt from Covid-19: Enhancing resilience in the insurance industry. August 2020 article.

8) Risk management recovery and resilience - Covid-19 survey report, FERMA 2020.

9) Crescendo Advisors paper - August 2020

10) FIDIC Covid-19 Bulletin Jan 2021

11) 6 business lessons learned as a result of Covid-19. TechRepublic article based on a Cisco report (A new perspective in the Modern Workplace)

12) Article in Men's Health Magazine Jan/Feb 2021. Simon Wessely

13) Article in "The Conversation" 06/08/20 - Calgary Canada

14) PONS IP Blog Covid-19 Lessons learned and new challenges in data protection (08 September 2020)

15) Defusing Covid-19: Lessons learned from a century of pandemics. Tropical Medicine and Infectious Disease report 30th November 2020. USA, Mexico, WHO, IAIM (International Association of Immunisation Managers.

16) World Development Report 2014: Pandemic Risk

17) "Pandemic Influenza Risk Management - A WHO guide to inform & harmonise national & international pandemic preparedness and response" WHO/WHE/IHM/GIP/2017.1

18) The Pillars of pandemic planning – Gartner Article published 30 January 2020

19) Journal of risk and financial management Article 16 December 2020: The challenges and opportunities for ERM Post Covid-19: Agendas for future research.

20) Coping with COVID-19 Does management make firms more resilient? World Bank Group Policy Research Working Paper 9514 January 2021

21) Corporate lessons learned from Covid-19 - thought leadership. Clifford Chance, December 2020

22) BCI Article 200414 The Covid-19 lessons businesses must learn

23) Mismanagement of Covid-19: lessons learned from Italy - Journal of risk research Vol. 23: Maria Laura Ruiu Northumbria University April 2020

24) CDAC Network: Working paper November 2020

25) WEF Global Risk Report 2021

26) How employers can start to lock in the lessons learned from Covid-19. Silicone Republic, Article by Kisa Ardhill on 200615 interviewing Frieda Murphy

27) Reprioritising risk and resilience for a Post-Covid-19 Future. AON end 2020

28) Four ways to advance risk oversight. Deloitte report based on a survey carried out in 2019.

29) The future of work after Covid-19 - McKinsey report Feb 2021

30) Five lessons learned from Covid-19 recovery. Deloitte article, 19 October 2020

31) Covid-19 Managing supply chain risk and disruption. Deloitte

32) Winners and Losers from COVID-19: Global evidence from Google Search. World Bank Group Policy Research Working Paper 9268, June 2020

33) Disruption & Uncertainty: The State of Grocery Retail 2021 Europe. McKinsey & Company. March 2021

34) Pfizer reaps hundreds of millions in Profits from Covid Vaccine. NYT article May 4 2021

35) Amazon predicts slower sales growth as Covid boost eases. BBC News item 29 July 2021

36) What does it take for a business to survive and existential threat? First of the four summaries from the 2020 annual meeting of the Salzburg Global Governance Forum October 2020

37) Could climate become the weak link in your supply chain. MGI case study August 2020.

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