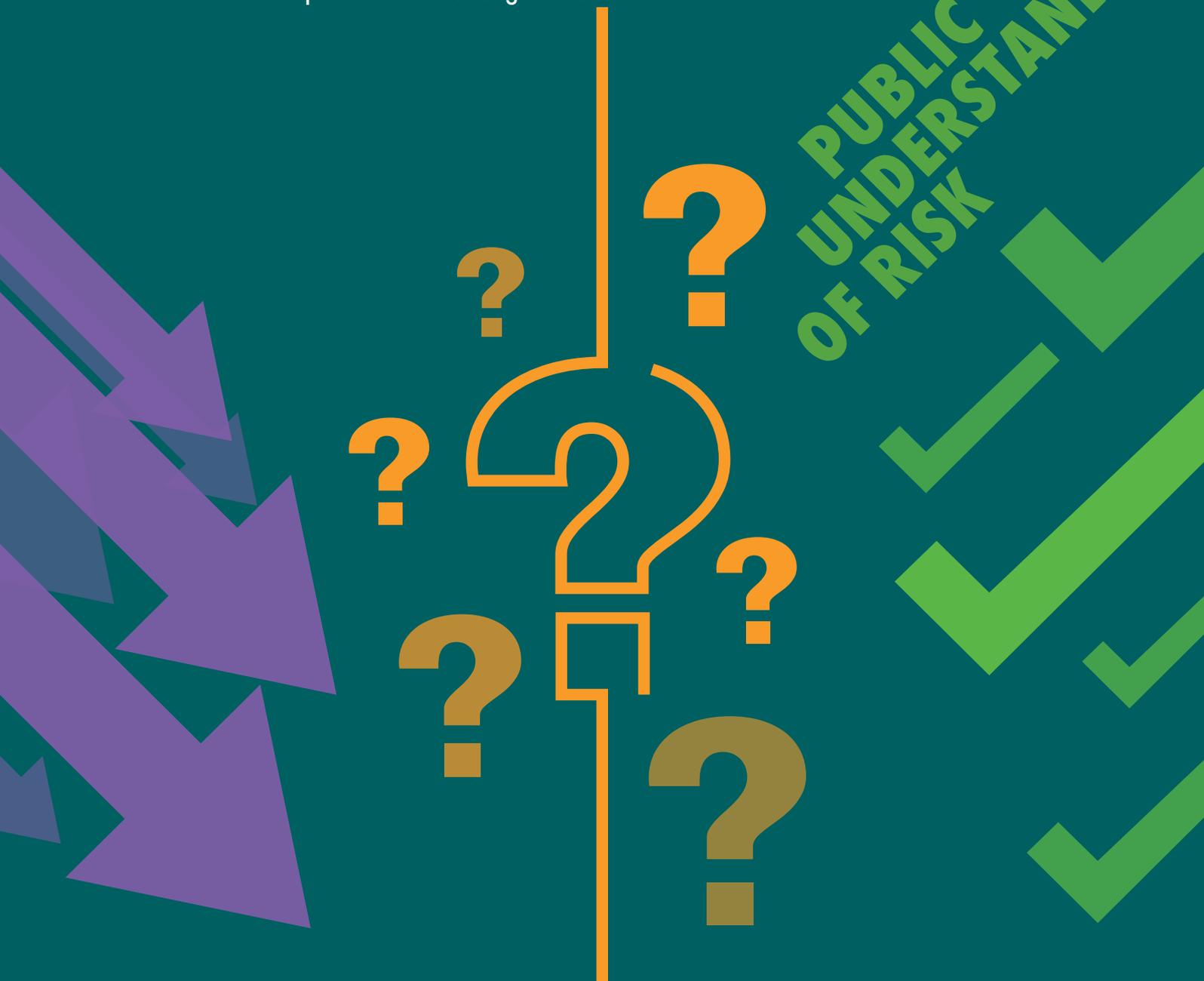


ENGINEERING A SAFER FUTURE

LEARNING FROM CRISIS: FROM DISRUPTION TO TRANSFORMATION

What has the Covid-19 pandemic taught us about the future of public understanding of risk?

PUBLIC
UNDERSTANDING
OF RISK





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ACKNOWLEDGEMENTS

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CONTENTS

ABOUT THE SERIES: LEARNING FROM CRISIS	1
ABOUT THIS CONVERSATION	2
PARTICIPANTS	3
EMERGING INSIGHTS	4
PRIORITY ACTIONS / KEY TAKEAWAYS	7

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This report, *What has the Covid-19 pandemic taught us about the future of public understanding of risk?*, is one of a series of related reports and podcasts available at www.lrfoundation.org.uk/en/learning-from-crisis



Summary report



Data



Safety at work



Education



Infrastructure



Public understanding of risk

ABOUT THE SERIES: LEARNING FROM CRISIS

Resilience is the ability to withstand, adapt to changing conditions, and recover positively from shocks and stresses.

The Resilience Shift is committed to understanding how crisis can reveal both the weaknesses and strengths of the systems on which we rely, and to sharing stories and insights across a variety of sectors towards building long-term resilience.

We have investigated the experience of recent crises, bringing together diverse experiences and perspectives across stakeholders to bear witness to the impacts of deeply disruptive events, and the individuals, decisions, technologies and processes that shaped the response and recovery.

*Learning from Day Zero*¹ is a series of film-based learning modules capturing reflections from key individuals involved in the response to the 2017-18 water crisis in Cape Town, South Africa. Developed in partnership with the Cape Town Drought Response Learning Initiative, these modules feature insights curated from over 50 hours of in-depth, filmed conversations with government officials, civil society activists, academics, and business and community leaders.

The *Resilient Leadership*² project is a real-time reflective learning document that captures reflections from city government and corporate leaders navigating their organisations' responses to the Covid-19 pandemic. Through insights distilled from weekly conversations over a 4-month period, the project reveals key attributes of leadership during a crisis and identifies three questions to shape the future of resilient leadership.

*Engineering a Safer Future*³ – insights from which appear in this publication – seeks to explore the impact of disruption and its ability to create a window of opportunity for transformative change. The insights emerged from in-depth expert conversations with senior leaders about the ramifications of the Covid-19 crisis in more detail within specific sectors.

Collectively, these investigations not only strengthen our broad understanding of resilience in practice, but also help us to shape and influence future work. They also actively explore different and innovative approaches to capturing and sharing learning.

1 <https://www.resilienceshift.org/cape-town-learning-from-day-zero/>

2 <https://www.resilienceshift.org/resilient-leadership/>

3 www.lrfoundation.org.uk/en/learning-from-crisis

ABOUT THIS CONVERSATION: PUBLIC UNDERSTANDING OF RISK

In the *Public Understanding of Risk* session, held on 24 September 2020, participants were asked to examine how their work life has changed between January and September 2020 due to the Covid-19 pandemic; how they have managed to stay resilient – both personally and professionally – and prepare for a ‘new normal’ future.

The session was a lightly guided discussion of how the Covid-19 pandemic has affected public understanding of risk, with thematic emphasis on the areas of leadership and decision making, disaster risk governance, risk communications, and the relationship between the pandemic and the climate crisis as concerns the above issues. The conversation drew on emerging findings from the Foundation’s research as well as input from grant holders and experts around global perceptions on risk and how these might be affected by the Covid-19 crisis. The session reflected on how Covid-19 has disrupted existing practice around risk governance and communications, how the sector has adapted, and what lessons the current disruption holds for our shared future.

ENGINEERING A SAFER FUTURE

At The Resilience Shift, we have long recognised that the past is an increasingly unreliable predictor of the future, and that deep uncertainty around challenge and risk is felt across many sectors. In 2020, the rapid global impacts of Covid-19, and its consequences across every aspect of the work that Lloyd’s Register Foundation supports, provided a unique opportunity for us all to consider the transformations we’d like to see as we emerge from this crisis.

Together, Lloyd’s Register Foundation and The Resilience Shift have developed this series of conversations as an antidote to the pervasive online ‘noise’ that confronts us as we seek serious discussion and meaningful insight into the ramifications of this crisis. We sought to bring together innovators working within the Lloyd’s Register Foundation’s grant programme, joined by outside subject matter specialists, with the aim of surfacing insights on the likely scale and permanence of changes that Covid-19 has triggered. Our participants also examined how we approach infrastructure systems and interdependencies, and what the pandemic can tell us about our existing preparedness and horizon-scanning practices.

With the five sessions respectively focused on safety at work, data and information systems, education, infrastructure and public understanding of risk, this series explores both the impact of disruption and how disruption can create windows of opportunity for change.

APPROACH AND FORMAT

The closed-door, intimate roundtable format was designed to facilitate fluid interaction amongst a small group of partners, associates, subject matter experts and grantees of the Lloyd’s Register Foundation and of The Resilience Shift. Participants were given latitude to steer the conversation towards their specific sector or area of concern, their experience of challenges, and their thoughts on plausible ways forward.

PARTICIPANTS

ABOUT THE MODERATORS

Dr. Juliet Mian | The Resilience Shift*
Deputy Director

An experienced Civil Engineer of over 20 years' experience working on infrastructure projects both in the UK and overseas, Juliet is a systems thinker who cares deeply about delivering engineering solutions to meet the challenges our planet faces.

Dr. Tim Slingsby | Lloyd's Register Foundation Director of Skills & Education

Tim is the Director of Skills & Education at Lloyd's Register Foundation.

ABOUT THE PARTICIPANTS

Dr. Koh Chan Ghee | National University of Singapore* Director, LRF Institute for Public Understanding of Risk

A registered civil engineer, Chan Ghee heads the multi-disciplinary team at the Institute which include experts in behavioural science, communications, psychology and data analytics. He was a recipient of the prestigious Marie Curie Fellowship awarded by the Commission of the European Communities, as well as the IES Best Paper Award. He is currently the Director of the Centre for Hazards Research.

Tracey Brown | Sense about Science*
Director

As Director of Sense about Science, Tracey has turned the case for sound science and evidence into popular science campaigns to urge scientific thinking among the public and the people who answer to them. She works to expand and protect honest discussions of evidence, challenge opinions and change behaviour of governments, media and corporations in the use of scientific evidence.

Andrew Rzepa | Gallup* UN Advisor on SDGs, Partner

Andrew leads Gallup's public sector division in Europe, the Middle East, and Africa. He is responsible for Gallup's global research programmes in the region, partnering with charities, governments, and Europe-based UN entities to address global data gaps.

Dr. Hania Farhan | Gallup* Senior Director, Methodology

Hania specialises in research methodology and survey design to measure social and economic dimensions in an international context. She leads several Gallup projects, including more recently the 2018 MetLife Foundation's Financial Health survey, and the 2019 Wellcome Trust's Wellcome Global Monitor on global attitudes to and trust in science and vaccines.

* Lloyd's Register Foundation grant recipient

EMERGING INSIGHTS

EMERGING INSIGHT 1

Collective memory is short, and planners tend to ‘fight the last war’

Collective memory in the aftermath of significant disruptions (natural disasters, terrorism events, or macro systems failures) is nearly always shorter than it needs to be from a resilience perspective. The appeal of ‘a return to normal’ is always significant, as is the impulse to dedicate resources to threat-specific overpreparation designed to prevent the last disruption from happening again. Both responses are understandable but flawed: the pre-Covid ‘normal’ contained structural inequality and social challenges that should be addressed as we recover, and the next disruption is unlikely to be another pandemic.

In the wake of the Covid-19 crisis we will have a relatively brief window to discuss and adopt practices towards meaningful

resilience. We should be careful to use that opportunity as a chance to implement wide-spectrum agility and responsiveness and rather than simply shovelling resources into pandemic preparedness. We should also seize the moment to maximise the number of voices in the conversation, to prevent our recovery from merely reinforcing inequities of the pre-Covid past.

THINGS TO THINK ABOUT:

- How does your organisation think about risk? Has the Covid pandemic had an impact on your risk assessment or future planning practices, and if so, how has it changed them?
- What steps can your organisation or sector take to ensure agility in the face of an array of possible future disruptions? What lessons from your Covid response can be generalised to help navigate future challenges?

“Covid is a learning moment for how we work without thorough evidence. If we wait to see the evidence for what climate change is going to do to our planet, we’ll be too late.”

“Attitudes towards safety reporting are critical. A feeling of confidence and reliability is as important as reliability itself.”

The Covid-19 pandemic can be viewed as a rapid learning experiment about how to cope more effectively with climate change.⁴

⁴ Botzen, P., Duijndam, Se., van Beukering, P. www.ncbi.nlm.nih.gov/pmc/articles/PMC7513891/

EMERGING INSIGHT 2

Trusted communications require the right communicator

Studies consistently show that for the general public, after immediate family and friends, the most trusted communicators are medical professionals, particularly during health emergencies; celebrities also regularly rank higher than government personnel in terms of reported trust.

As political parties in many nations worldwide become more ideologically driven and factionalised, finding independent, trusted channels for communication of vital information – even if those channels are unconventional – can make a significant difference in public acceptance of data.

THINGS TO THINK ABOUT:

- What channels does your organisation preferentially use for crisis communications? How effective were they during your response to Covid-19?

Where many countries in the developing world are more used to dealing with relatively recent past experiences related to either safety or trauma, they are consequently better prepared than some high-income countries, such as the United States and many in Europe, that have taken fewer precautions.⁵

EMERGING INSIGHT 3

Trust in science is widespread. Understanding of science is not

Trust in science and scientists is fairly globally widespread among the general public. This does not translate to widespread understanding of scientific language, procedures or timelines. In just one example, studies indicate that *frequency* data (e.g. 1 in 4 chance of infection) is more readily understood by the lay public than *percentage* data (e.g. 25% chance of infection); despite this, percentages are used by a majority of scientific and public health communicators.

In communicating essential information about a scientifically complex and evolving disruption like the Covid pandemic, officials need to serve as effective interpreters.

THINGS TO THINK ABOUT:

- What challenges did your organisation or sector face in effectively communicating with staff, clients, partners and customers about your responses to the pandemic?
- What sources does your sector or organisation turn to for trusted communications? What elements make them particularly effective? How can these be adapted to your own communications?

⁵ Gallup. news.gallup.com/opinion/gallup/328187/fear-social-distancing-global-perceptions-risk-vary.aspx

EMERGING INSIGHT 4

Inflection moments can be shaped towards either meaningful change, or lock-in of suboptimal expedient solutions

Loosening of structures during a crisis response allows both change and solidification of trends. Sometimes these inflection moments provide windows for real, considered change; more often the temporary systems, procedures and structures we adopt out of expediency end up becoming permanent.

As we navigate the recovery from the Covid-19 pandemic, we have a responsibility to carefully think through and communicate the downstream effects of the shifts we make – to remote working, to digital platforms, to public health measures, to increased reliance on delivery logistics and beyond. This requires a mature conversation across organisations, sectors and with the public about the nature of the real risks we face, and how we can learn from the pandemic experience to improve our response.

THINGS TO THINK ABOUT:

- What new platforms, habits or procedures has your organisation adopted as a response to the Covid pandemic, and are they likely to become permanent? What was the process that led to choosing those specific solutions?
- How can your organisation or sector ensure thoughtful choices around adopting new technologies, standards or platforms in future crises? What structures can be put in place for effective review of those choices?

Understanding risks and effectively communicating them will be increasingly vital as technological disruption and information dissemination increases at a dizzying pace.⁶

Covid-19 is a mass trauma the likes of which we've never seen before. Our most complex social extensions, and the building-blocks of our personal realities, have been coloured indelibly.⁷

⁶ Lloyd's Register Foundation. www.lrfoundation.org.uk/en/news/foresight-review-public-understanding-risk
⁷ BBC. www.bbc.com/future/article/20210203-after-the-covid-19-pandemic-how-will-we-heal

PRIORITY ACTIONS / KEY TAKEAWAYS

KEY TAKEAWAY 1

Use the post-crisis moment to identify and address real fragilities in our systems

The post-Covid inflection moment will see no shortage of ambitious plans to combat the next *pandemic* rather than the next *disruption*, and no shortage of proposed measures that sound good or test well in a focus group rather than meaningfully enhancing resilience. As we talk about a 'return to normal', it's important to recognise that the pre-Covid world did not provide equally for all, and as we change our systems in the future, we should work to ensure the new future is resilient, safe and sustainable for all.

The pandemic has provided us with significant insight into how the public understands risk and the fragilities that this can create. At every level, across nations, sectors, organisations and companies, we must use this moment for a clear-eyed analysis of what fragilities have been exposed by the crisis and what resource allocations will meaningfully strengthen our response to and recovery from a *spectrum* of possible future disruptions.

KEY TAKEAWAY 2

Leverage unconventional communications channels to avoid loss of trust

Cynicism, distrust and withdrawal are hugely damaging to effective public response to disruptions like the Covid-19 crisis. Communications around public risk must recognise the prevalence of social media platforms as a key channel for significant percentages of the population; this means engaging with those channels, but also shaping messages to contend with those platforms' reductive effects.

Ensure that when communicating critical data to the public, particularly around risk, the information comes from trusted, relatable sources; accounts for the variety of communicators required to reach digital platforms; and can be understood and actioned by the general public. If this means using unconventional channels or circumventing hierarchies, so be it.

KEY TAKEAWAY 3

When messaging around risk, meet the public where they are

Understanding of scientific terminology and procedures is not widespread, particularly during a disruptive event such as a pandemic; messaging needs to be understandable, meaningful, and actionable to the public and must cut through the omnipresent 'noise' of a 24/7 news cycle, social media feeds and rumour.

Qualitative data can be more relatable; acknowledging individuals' fear and worry can generate connection. Narratives about optimal reactions can help instil a sense of purpose. Shape your message to use terminology and phrasing that will be clearly understood, even at risk of scientific precision; package your message in a digestible and repeatable format. Most importantly, include actionable steps to restore a sense of agency and control.

KEY TAKEAWAY 4

Make careful, intentional choices during transition moments

Once the immediate shock and emergent response to this inflection point is past, we need to make carefully considered decisions about our long-term adaptations, from what digital platforms we use to carry on remote work to how we reshape public spaces and systems. Maximising true resilience rather than simply embedding defences against a similar crisis should be a priority.

The Covid-19 pandemic represents a potential reset in the way we talk about risk. Many of our responses to this crisis, particularly in the early stages, depended heavily on evidence of spread, infection rates, and efficacy of control measures. If we intend to meaningfully intervene in climate change, to name just one likely disruption, we cannot wait for evidence of consequences; the post-Covid moment is an ideal time to begin shifting our thinking about how to proceed.



ABOUT LLOYD'S REGISTER FOUNDATION

The Lloyd's Register Foundation seeks to secure for the benefit of the community high technical standards of design, manufacture, construction, maintenance, operation and performance for the purpose of enhancing the safety of life and property at sea, on land and in the air.

The *Engineering a Safer Future* programme is designed to focus on sharing existing experience and knowledge within and between sectors, and forms an important part of the delivery of our strategic theme accelerating the application of research.

The Lloyd's Register Foundation's programme supports resilience, by addressing:

- Governance: incentives, standards, rules, legal and financial
- Capacity building and engagement: professional development, publications, communication and public engagement
- Data and supporting tools: shared datasets, modelling and simulation, decision support
- International and global scale networks: studies of global systems, supply chains, knowledge networks.

ABOUT THE RESILIENCE SHIFT

The Resilience Shift is a catalyst for positive change. We seek to inspire and empower a global community to make the world safer through resilient infrastructure. Our mission is to help ensure the safety and continuity of the critical infrastructure and services that make our lives possible. From water and transportation to communications and energy, resilience is essential to everything we do. We're working globally to help define resilience and provide pathways from theory to practice.

Supported by Lloyd's Register Foundation and Arup, The Resilience Shift provides knowledge and tools to those responsible for planning, financing, designing, delivering, operating and maintaining critical infrastructure systems. We are not just a think tank, not just a grant-making body, and not just a convening network. Our impact is achieved through a proactive approach combining all three of these roles.

The Resilience Shift's approach is through learning by doing in collaboration with others, as well as by sharing knowledge and fostering a global community. We want to create value for those we are seeking to influence, thereby maximising the positive impact for society. We focus on tools and approaches to put this shift in resilience thinking into practice, identifying the drivers and enablers for infrastructure resilience, and advancing a common understanding of resilient systems, within and between critical infrastructure sectors.

☺☺☺ THE RESILIENCE SHIFT



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