

CRISIS▶RESPONSE

VOL:12 | ISSUE:1 | SEPTEMBER 2016

WWW.CRISIS-RESPONSE.COM

JOURNAL

PROTECTION | PREVENTION | PREPAREDNESS | RESPONSE | RESILIENCE | RECOVERY



ANTIBIOTIC RESISTANCE CONFRONTING THE GLOBAL CRISIS

PLUS: Brexit; Flooding in France; Nanoparticles & First Responders;
Agriculture & terrorism; Search & Rescue in Antarctica; Crisis leadership;
Stability policing; Public information & social media; Conflict de-escalation;
Robotic developments; Command & Control in the 21st Century

SUBSCRIBE TO
CRISIS▶RESPONSE JOURNAL



IN PRINT | DIGITAL | ONLINE

The Crisis Response Journal is available by subscription only

Subscribers receive our quarterly hard copy, along with iPad or Android tablet version. A full archive of all past and current articles is also available to all subscribers. Choose the right subscription plan for you, from Individual Full, Digital Only, Institutional & Corporate or Student

Visit our website for around-the-clock news, blogs and events updates

www.crisis-response.com

Editor in Chief
Emily Hough
emily@crisis-response.com

Business Development
Jeffrey Montgomery
jeff@crisis-response.com

Chief Scientific Editor
Ian Portelli, BCDM, PhD
ian@crisis-response.com

Urban Resilience Editor
Andy Marshall
andy@crisis-response.com

Design and Production
Tim Baggaey
www.graphicviolence.co.uk

Subscriptions and Administration
Emma Wayt
emma.wayt@crisis-response.com




Web Administration
Rhys Jones
rhys@crisis-response.com

Director
Colin Simpson
colin.simpson@crisis-response.com

Subscriptions
Crisis Response Journal is published quarterly; it is available by subscription in hard copy, digital and online
Tel: +44 (0) 208 1661690; subs@crisis-response.com

Back issues
Existing subscribers: £25 (US\$45; €36) per hard copy issue (free with online access);
Non subscribers: £40 (US\$72; €58) per issue
Tel: +44 (0) 208 1661690;
backissues@crisis-response.com

Published by Crisis Response Journal Ltd
PO Box 6269, Thatcham, RG19 9JX, UK
Tel: +44 (0) 208 1661690; mail@crisis-response.com
www.crisis-response.com
COPYRIGHT Crisis Response Journal Ltd 2015
Articles published in may not be reproduced in any form without prior written permission
Printed in England by Gemini Press
ISSN 1745-8633

 www.crisis-response.com
 join the *CRJ* LinkedIn group
 follow us on twitter @editorialcrj



contents

News	4	The global reaches of antibiotic resistance ...	30
Comment		Saskia Popescu asks: how would first responders feel about carrying out their roles? How would any person feel about something as simple as shaking hands?	
Brexit: A European opportunity?	8	Agriculture as a terrorist target	32
Prince Michael of Liechtenstein introduces our section devoted to the UK’s vote to leave the European Union		Agriculture and environmental systems are vulnerable to attack, says Christoph Schroth	
Views from <i>CRJ</i>	12	The ICDO and Swiss co-operation.....	36
<i>CRJ</i> ’s Editorial Advisory Panel thoughts on the effects of Brexit upon security, resilience and civil protection		The ICDO and Switzerland have a long history of co-operation to improve civil protection	
Brexercise and testing: Blue skies ahead?	14	Urban resilience: People, not technocrats	38
The UK is a leading player in EU safety exercises and there is no reason this should change, says Brian Dillon		We cannot make our cities more resilient if we consider this to be a technocratic issue, says Laura Kavanaugh	
Features & Analysis		Mass evacuation mission.....	40
Spring flooding in France	16	Jörg Szarzynski and Albrecht Beck report from a combined IOM and UNDAC preparedness mission in Vanuatu	
Four people died and 24 were injured in flooding earlier this year, write Christophe Libeau and Pierre Joubert		Victim identification	41
Medical care for all victims of war	20	Jay Levinson and Abraham Domb provide insight into the complexities of identifying victims after an earthquake	
Serena Leone introduces Emergency, an Italian-founded, international NGO that builds hospitals and provides healthcare in countries savaged by conflict		Working together for safety in the Antarctic ..	42
Fighting the nanoparticle war	22	The remoteness of the Antarctic makes Search and Rescue a difficult proposition, says Martin Boyle	
Nanotechnology is of immense value in a wide variety of applications, but nanoparticles can also be toxic for humans, especially first responders. Our authors explain how early detection can protect people working in hazardous environments		Crisis management	
Antimicrobial resistance	26	Struggling with ‘dark dynamics’	46
This September, global leaders gather at the UN General Assembly to commit to fighting antimicrobial resistance. Why is the issue so important? Marc Mendelson and Ramanan Laxminarayan explain		Today’s crisis management is not designed for unmapped and poorly understood challenges, writes Patrick Lagadec	
		CM: From war room to boardroom.....	48
		Tony Jaques says every executive and director should be concerned about preventing crises	

Flooding in France p16



Pierre Joubert

Nanotoxicity risk p22



US Navy | Photographer’s Mate 2nd Class Jim Watson



Terrorism, Security, Conflict

UK counter-terrorism strategy	52	An ear to the ground or head in the sand?	76
Roger Gomm says terrorists continue to target crowded places that are less protected		Jan M Gutteling and Peter W de Vries describe how new insights into how the public responds to a crisis – whether they seek or avoid risk-related information in emergencies – will help shape better risk communication	
Crime or terrorism: What’s in a name?	54	Technology	
It is important to avoid rushing to blame ‘terrorism’ for all and any violent acts in society, contends Christine Jessup		Emergency incident management.....	79
Civil protection in the hyper-terrorism age	56	<i>CRJ</i> talks to Joel Portice of Intermedix	
Alex Townsend-Drake concludes that civil protection as an end can only be achieved through careful political change		R&D: Robots that assemble themselves	80
Unlocking sustainable conflict resolution.....	58	Our authors report on tiny, intricate origami robots, which have the potential to revolutionise response to all manner of emergency situations	
Casey Brunelle argues that strategic foresight is the pathway to sustainable conflict resolution		R&D: The potential of apps to save lives	82
NATO stability policing	62	Millions of people’s lives have been changed thanks to the ingenuity of Apple’s HealthKit and ResearchKit. There is no telling how many lives will be saved in the future	
Vittorio Stingo describes NATO’s stability policing to tackle the challenges of failing or collapsed nation states		In-depth	
Countering the insider threat	64	Hashtag hazards	85
Andrew Brown reports on de-escalation and negotiation techniques used when training police in Afghanistan		21st century incident command systems.....	86
Working in hostile environments.....	68	Addressing terrorist mindsets.....	88
Advice on how to protect yourself in hostile or fragile environments from Rob McAlister		Prevention or liability?.....	90
Public safety		Firefighting in tunnels	92
Preparing the public for terrorism	72	Regulars	
Susan Anson and Hayley Watson describe a project on the complexities of preparing the public for terrorist attacks		Books	93
Social media: A two-way street	74	Events	94
Rob Shimmin explores how companies and emergency services might improve their use of social media in a crisis		Looking Back.....	97
		Frontline.....	98

Safety co-operation in Antarctica p42



Jessica Fitzpatrick

De-escalation & negotiation p64



2 Scots | Andrew Brown



comment

As usual, this edition spans emergency and disaster analysis, prevention, protection, preparedness, response and resilience.



Admittedly, it is equally morbidly fascinating and disturbing to see how crises intersect, conflating and exacerbating one another, spawning greater emergencies that appear simply beyond the scope of prevention or mitigation, sometimes leaving agencies seemingly powerless to respond effectively to their sheer scale and complexity. But how bad is the global situation? After all, it is not beyond experts’ capabilities to predict, identify and categorise tomorrow’s most devastating disasters. Terrorism, natural catastrophes, conflict: This edition addresses and provides insight into all of the above.

At this time, we don’t have definitive statistics for 2016. But, despite the widely-held perception that terrorist attacks are increasing, the US State Department’s annual terrorism report notes a 13 per cent decrease in attacks in 2015, with 14 per cent fewer deaths. This year’s figures might be higher (page 52), and modus operandi may be shifting, but the line between criminality and terrorism has become blurred, and we must be wary of classifying all violent criminal acts as terrorism, as Christine Jessup warns (page 54).

Again, we know that natural disasters are on the rise. But Munich Re says last year saw a fall in losses from such catastrophes in terms of incidents, fatalities and in financial losses.

Granted, these figures are in no way cause for complacency; we are certain to face larger and more complex emergencies in the future. But there is an even greater lurking disaster, which *CRJ* has touched upon in past editions (Prof Steiner, *CRJ* 10:1); one that we can no longer afford to ignore. Deaths in a world without antibiotics could dwarf all other catastrophes, killing up to ten million people a year (page 26).

How sobering it is to reflect that, despite all our technological advances, prevention, co-operation and hard work in crises and disasters, an absence of antibiotics would not only claim more lives than climate, conflict and terrorism combined, but augment their effects immeasurably. Let’s hope that the high level UN meeting on this subject in September produces the unequivocal commitment that this smouldering global health emergency demands.
Emily Hough

Struggling with 'dark dynamics'

Our crisis management techniques cannot handle today's unmapped and poorly understood critical challenges, says **Patrick Lagadec**. It is time for training to challenge leaders to cope with the unknown

Our complex and vulnerable societies are experiencing the challenges of emerging systemic crises. Bedrocks are being shaken, social fabrics cracked, and our conventional safety barriers submerged. Crises detonate in new liquefied and tightly coupled contexts, prone to swift global tremors.

Our best crisis management techniques have not been designed for such a context. Even crisis communication, the iconic motto of our times, is in disarray. Social media, the new child of the communication family, is impressive in its speed and scale, but is not the silver bullet.

This landscape is the same on every single front, whether environmental, technological, economic, safety or security, or even with regard to society as a whole. Take recent events in France: A complex terrorist attack in Paris (November 2015); another blow on Bastille day; and the most recent killing of a priest in Church; 'unseasonal' flooding (page 16), endless strikes with outbursts of violence, including rioters vandalising a children's hospital in Paris; and hooliganism turmoil linked to the Euro 2016 football competition. But 'unthinkable' eruptions are also bursting forth on a global level, often intertwined. Examples include the November 2015 lockdown in Brussels and the 2013 lockdown in Boston, gigantic fires attacking Fort McMurray, the Orlando massacre – which followed a similar pattern to the Bataclan theatre attacks in Paris, and the Brussels airport attacks in March 2016, which were linked to the Paris attacks.

At the same time, Europe is stunned and crumbling under the endemic challenges of a migrant influx, and an active disassembly line of institutional 'exits' looming on the agenda. The unmappable Brexit is just the latest news of the day.

It is certainly crucial that conventional abilities continue to be developed strongly: technical tools, organisational designs, communication protocols and the use of social networks have to be constantly improved. But the essential issue is one of leadership. Because if you no longer know where to go, turbulent environments rapidly transform any tactical difficulties into a series of strategic quagmires.

In fact, the challenge is colossal: decision-makers have to deal with off-scale, unknown, chaotic, fast mutating realities, fragile expertise, unprepared mindsets and media rules demanding simple-short-comfortable answers. This is all often foreign to organisational culture, knowledge, and preparation. To borrow an image from physics, it is time to clarify some operational keys to help upgrade the preparedness of leaders to deal with these dark dynamics. They are dark because they are unmapped and poorly understood but are, in fact, absolutely crucial.

This new brave world calls for at least some

basic moves, the first being specific seminars on leadership mindsets to cope with the unknown.

Officials have been prepared to deal with well-defined situations, within clear-cut typologies in globally stable contexts. Leaders are generally chosen for their efficiency in the use of the best answers and managerial techniques – and this paradigm is especially dominant in the emergency world. The initial and essential rupture today is to quit that mindset, to switch from response to questioning. A leader's task is to struggle with the unknown, to open up unmapped roads – not to co-ordinate a set of conventional responses brought by a predefined mix of well-known players according to specific plans. This is very hard, both culturally and psychologically, since such a struggle with questions means that individuals and teams are rapidly thrown into the void, forced into the wild land of discoverers, far from the managerial or administrative spheres. The key battlefield is the blind spot. The critical point is not to act rapidly, but rather take time to reflect and wonder: "Which questions did we forget to ask? What are the hidden challenges, the invisible dark matter, and intractable dark dynamics?"

The operational translation of such a demand is well known, even if rarely applied; leaders, executives, and their immediate aides must be prepared during specific seminars devoted to helping them to change visions, grammars, and reflexes. Posing impossible questions is the ultimate stage; but if leaders want to find the appropriate pathways and operational responses, they have to go through this kind of challenging and surprising seminar to discover how to envision, tackle and navigate uncharted waters. This is a critical step to avoid immediate paralysis when confronted by unreadable dynamics.

The dynamics of such seminars demand that ready-made PowerPoint presentations are banned; pre-planned responses and organisational maps must be put aside. The only objective is to give leaders the opportunity to feel, understand, and test the kind of void, beyond borders, that a crisis has in store. And if executives refuse to participate in such seminars, they should be considered incapable of leading in today's crises.

The next move is that of specific drills. Crisis exercises are common, but their scenarios are rarely devised to put leaders to the test and to train them. Instead, participants are expected to react, co-ordinate and communicate. It is very rare to see real surprises – such as the recent flooding of the Seine, where the floodwaters rose during the 'wrong' season, from the 'wrong' tributaries and where critical sensors were out of order. It is even rarer that leaders are afforded the opportunity to be confronted with the unknown, to deal with experts in the void, to interact with unfamiliar actors, and to grasp a systemic issue with no borders. Drills are generally emergency-based scenarios that do not really test leadership.

A decisive leap is now necessary. And leaders have to be convinced to participate in such critical exercises, which must be short. A large-scale exercise, stretching day and night over two days, is only appropriate when the objective is to see how individuals can resist fatigue. The real issue is to train leaders in developing their creative ability to navigate the unknown.

In a nutshell, the fundamental concept of exercises and drills has to be rethought and redesigned if we want to prepare top-level decision-makers to lead in our chaotic world. The good news is that such a breakthrough is not that difficult: it only requires a clear view of what is necessary today, some operational capacity to drive such drills, and above all the courage to engage that crucial mutation.

We are used to considering that our leaders are advised by technical specialists who bring the best expertise, clarifying uncertainty and presenting the few remaining options. The point now is to establish a group of experts in the unknown who, from the very start, have to work on four questions: What is the essence of the problem? What are the traps? Who are the actors? And, last but not least, what could be the few dynamics

Which questions did we forget to ask? What are the hidden challenges, the invisible dark matter and intractable dark dynamics?

to inject in the system that would help to navigate creatively?

This is the concept of the Rapid Reflexion Force (RRF), which I have developed within some advanced organisations in various countries. The objective is to help the leadership to envision their role and to clarify their navigation. It has proven to be extremely efficient and appropriate.

Operationally, the process demands two main steps, the first being to establish and train an RRF, which means finding individuals who would be stimulated by such a creative job. This is not that difficult since many are more than happy to work within that framework. The next step is to prepare leaders to interact creatively with that group. Obviously, the RRF is there to help, and in no way intended to replace the leadership.

The real difficulty is not technical, but cultural, so the governing principle has to be changed: the objective is not to find 'the' good solution in the usual toolbox, but to clarify the strategic maps into the unknown, and to prepare creative answers. Experience in the field shows that it is not that difficult to have everyone understand that the Rapid Reflexion Force is in fact extremely useful (see *CRJ*, 3:2 and 4:2).

Obviously, a more global preparation is necessary, preparing everyone to open their minds and capacities for this new brave world of the unknown. It requires that everyone maintains excellence in his or her specific job, knowing better than ever the best processes and usual responses. But, in addition, it demands the ability to envision total surprise, deep changes and mutations in visions, objectives, and operational rules. The intrinsic difficulty is that in the crisis world, the bulk of our preparation in all cultures, tends to produce rigid postures and fixed codes and responses.

The practical avenue to success lies in bold personal engagement of leaders, large conferences for all in order to clarify the new challenges and positive dynamics to confront them.

The message should be clear: "Yes, you must keep your competence; but, in addition, we need your intelligence, your practical ability to navigate the chaotic world."

Three years ago a vice-president in Silicon Valley told his employees: "Now on, the unknown is your field of responsibility." This comment applied to new discoveries, but it should also be considered as the fundamental mindset in crisis handling and preparation.

Author



Dr Patrick Lagadec is a former senior scientist of research at the Ecole Polytechnique in Paris, France, and a Member of CRJ's Editorial Advisory Panel. He has recently published: *Le Continent des imprévus- Journal de bord des temps chaotiques, Paris, Les Belles Lettres, 2015*

CRJ

Our global crisis landscape is one of shockwaves that rupture the environment, technology, economics, safety and security, affecting society as a whole. But leaders have been trained to deal with well-defined situations with clear cut typologies in globally stable contexts. It is time for this to change

Philippe Plailly | Science Photo Library