CRISIS & DISASTER GOVERNANCE FOR GOVERNMENT & BUSINESS
Truscott paper for the Oman National Crisis Management Symposium 29 October 2013

Jim Truscott is the Chief Executive Officer of *Truscott* Crisis Leaders, an international consultancy with its head office in Perth Australia and consultants based in nine countries. He has been a crisis practitioner and continuity planner for his entire career initially in government special operations where he was intimately involved in coordinating strategic responses to regional and global crises, and now as a consultant. During his 35 years in strategic and operational environments he has had a central leadership role within multi-disciplinary teams over a diverse range of high-risk enterprises and emergencies. His operational experience includes serving as a Commonwealth Monitor with the Rhodesian Psychological Operations Unit at the end of the bush war in 1979; controlling SAS participation during multiple crises in Indonesia, Papua New Guinea, Cambodia and Kuwait; the peace operations in Bougainville, East Timor, Solomon Islands and Fiji; the fish poaching from the Southern Ocean; and the security for the Sydney Olympics from 1996 through to 2000. As a businessman for the last 13 years he writes contingency plans for organizations to deal with an array of issues, threats and risks, and he advises executives and management teams in the art of crisis leadership across Europe, Africa, the Gulf and Asia Pacific. He has credentials in emergency, crisis and disaster management in military, business and government settings and this experience in planning strategy in situation rooms and concurrently managing emergencies in operations rooms allows him to advise organizations across all sectors. He has consulted in thirty countries across multiple sectors including banking, insurance, broking, government, manufacturing, mining, rail, aviation, maritime, energy, water, power, construction, oil& gas, fast moving consumer goods, not for profit, hotel and entertainment. He is the author of the recently published *Dancing with The Tiger – The Art of Business Crisis Leadership* www.businesscrisisleadership.com

Good morning Ladies and Gentlemen. I have been tasked to set the scene for the symposium and open creative discussion on national crisis management capability. Clearly this is a large subject and so I will focus on areas which will generate discussion. I will address the thresholds between crisis and disasters and discuss comparative approaches to prevention, planning, response and recovery within business and government. In particular I will cover current approaches to critical infrastructure protection. I will address international standards, the role of the internet and the journey towards resilience, and I will conclude with developing future capability. You will also find a set of questions in your notes that should generate the desired discussion.

First let me establish my credentials to speak on national crisis management. I have been involved with the management of failure in one form or another for 40 years, initially in military special operations and currently in business with multinational listed companies in 30 countries, including government organizations in Australia. I have been involved in multiple hazardous events and tests of national significance such as disruptions to 5% of Malaysia's economy in just one oil platform riser containing Tapis crude, the preparation of Australia's National Blood Supply contingency plan, widespread floods, cyclones and tsunamis in many countries, terrorist bombings, mass casualty events and central business district evacuations in some cities, sea port, shipping channel disruptions and other transport disruptive events, governance issues affecting investor confidence, IT disasters, pandemics, loss of O&G well control on land with mud disasters that flow for 1,000 years, marine oil pollution events at sea similar to the Gulf of Mexico, massive energy shortfalls leading to widespread system black situations across power grids and rolling power shortages, and also humanitarian

evacuations of people. Single points of failure, single points of sale and high consequence or black swan events are our business. You could say crises as usual, or business under attack rather than business as usual.

Right up front it is important to put the crisis word, the C-word into perspective. The crisis word conjures all sorts of meanings depending upon your station in life, but it is essentially a turning point or decision point, no matter which way you look at it. Some government organizations steer clear of its use as it is tantamount to failure although the US Marines are now using it in their scaled back organization. Most businesses only allow the chief executive to utter the word under tight investor constraints. Most governments prefer to use the less emotional emergency word or the act of god disaster word. The medical definition of crisis is when disease takes irreversible control of the body and so prevention and planning these days is as important as response and recovery. The disaster word means 'bad star' in Greek and it comes from the destruction of a star such is its horrific significance in comparison to the crisis word. Indeed there is often much confusion between the emergency word, the crisis word and the disaster word as there is indeed many differences in the prevention, planning, response and recovery architecture used by business and government when it comes to the management of failure.

In the last ten years there has been a plethora of government websites, international standards, good practice notes, glossaries, guiding principles and concepts of operations at a national level produced by many countries and professional bodies to achieve commonality on approaches to prevention, planning, response and recovery. Most recently the UAE has produced such a public document. Countries like the UK are leading the way on the legislative front with their Civil Contingencies Act while countries like the US are putting a large investment onto public education post 9/11. So much so that there is now a job called civil protection professionals. International groups like the Business Continuity Institute, the Disaster Recovery Institute and the American Society of Industrial Scientists all have their own publications. Indeed the Business Continuity Institute has actually produced a comprehensive list of all such publications. Such is the emotion of the crisis word that I predict that there will never be an agreed international standard on the management of failure. There is a British standard BS11200 under development called strategic crisis decision making, but its international take up is a cultural leap too far to bridge in my experience. Let's wait and see as some fifty countries have signed up to the recently issued international standards on business continuity. The international water sector will release a standard on crisis management for Water companies in 2014 and we may well see a trend in more industry specific material coming.

The expression crisis management then is all about making the best of that turning point or decision point. It is all about developing and implementing strategy under pressure at that moment of danger or suspense. The word 'strategy' derives from the Greek word *strategos*, meaning the art of the general. Napoleon said that leaders are dealers in hope and he would promote people to General if they seemed to be lucky. Today my presentation is not about hope or being lucky; it is all about planning for the unpredictable and unthinkable; a bit like Noah's rule where predicting rain doesn't count, but building arks does. This is contingency planning and beyond or consequence management plus plus.

I would now like to talk about trends in critical infrastructure protection in response to calls for greater national shock proofing. What exactly does this latest resilience buzz word mean? There have been many papers and discussions on this subject recently as it enters crisis and consequence management vernacular. Resilience comes from resile, which comes from the word reed. Resilience is about reeds that blow over in the wind but stand back up when the wind stops. There are several diagnostic tools in use and a consistent view has emerged. In general terms resilience is understood to be the ability for an organization to withstand shock. It has come about as a way of describing the blending of

management disciplines with the best organizations having moved beyond risk and emergency management. What began as emergency management and evolved through disaster recovery into business continuity and crisis management has now become crisis leadership and disaster avoidance. We are seeing a rebalancing of a 'response and recovery mindset' to one of 'preparation and mitigation.' Resilience can be viewed as the 'sweet spot' expression on the number ten golf club whereby with an effective combination of management disciplines it is possible to hit a golf ball out of any sand bunker. According to Gary Player, the international golf player, the more he practiced the luckier he got.

Some of the approaches to achieving resilience across the pillars of prevention, planning, response and recovery are influenced or directed by government regulation and varying controls over critical infrastructure protection in some countries. Regardless of government requirements, all approaches to prevention, planning, response and recovery are influenced by their degree of application. We see that there are large differences between the policies, plans and procedures in use by governments and businesses, and substantial differences between those held by public and private companies. Some embed it in their governance and others only do it on a rainy day.

What is the best combination of management disciplines to achieve resilience in Oman? How do you make your organization in Oman, anti-fragile? The general view is that resilience is as much an attitudinal or cultural approach as it is hands on management. That is, resilience is as much a state of mind as it is documentation. There is agreement that organizations become resilient when they put people first, when they have diversity available as part of the organizational model, and when they coordinate effectively with external parties. This attitudinal approach to shock proofing leads to sector wide responses in communities and business cooperation of a kind in the market place as a normal strategy. It is the drawbridge, moat, castle and network of castles approach to prevention, planning, response and recovery. This is the domain of the risk register, the business impact analysis and the security threat assessment, all basic tools for crisis management, at any level from household to nation state. Such thinking and action also enables effective approaches to horrific scale disasters such as from pandemics which have impacts across all sectors. The tipping point expression is now part of resilience jargon. It comes from epidemiology and it describes the multiple points of failure, all independent, that a pandemic has across sectors. Some governments now embrace cross sector planning as normal.

All of the emergency response, emergency, crisis and business continuity management disciplines are often mixed up and confused by many different organizations. It causes confusion in action and it can severely degrade the result. Some policies, plans and procedures focus on emergency response in isolation. Some organizations focus on emergency management in isolation. Some organizations focus on crisis management in isolation. Some organizations focus on business continuity management in isolation. Some organizations confuse emergency response and emergency management. Some organizations see crisis management as a subset of business continuity management. Some organizations see it the other way around. Some organizations only do business continuity management inside the operational organization while others do it strategically outside the organization's fence with third parties. Some organizations even debate the merits of modern day international standards for business continuity with good old contingency planning which has been around for 2,000 years. Some organizations link risk management, emergency management, crisis management and business continuity management inclusive of IT disaster recovery in a seamless management continuum in a system of governance across all lines of business. Some call it a business resilience framework. The moral of the story is the importance of reducing the chaos of terminology and success will follow. It is all about solving comprehensive problems under pressure in simple effective ways. Some organizations that we have worked with have changed the name of their crisis or black swan

group to avoid the crisis word being used in their title. It can cause confusion and it can hinder interoperability with other organizations and government departments in the management of failure.

In terms of current thinking and action on resilience, there are a variety of approaches in different countries, driven by their own circumstances. There are also many best-in-craft practices or aspirational approaches put up by various academics, consultants and practitioners. Some jurisdictions have gone down the legally binding, regulation or good practice path. For example some countries have legislation for the power and water sectors to mandate that they have security plans in place based upon all hazards risk assessments and that they are tested annually with active participation by police and other relevant government departments. Some countries focus on transport disruptive events and some countries also require plans if a disruption in one sector has a flow on impact to another sector. Some countries focus on the singular terrorism hazard, because it can attract more funding, although the trend is now towards an all hazards approach. Some countries have created national emergency management agencies and some agencies are separate from police to give it independence and regulatory powers. Many countries have a hazard management agency or combat authority approach to disruptive events be they human or natural events for the continuation of essential services, energy or gas shortages, bush or urban fires, dam breaks, fuel shortages, marine oil pollution, marine transport emergencies and so on. These statutory and combat control agencies have varying degrees of authority and responsibility across the spectrum of prevention, planning, response and recovery with varying degrees of centralized control and decentralized execution through national and multi-agency frameworks. Some of these frameworks integrate government, business and non-government organizations.

What is the current state of organization resilience in Oman? Some countries map their critical infrastructure to varying degrees and they know exactly where the single points of failure are and exactly what the upstream and downstream interdependencies look like. The UK now has a publicly available national risk register. There is also an Australian risk register. What would it take to have an Oman risk register on the Internet? The Business Continuity Institute also produces a very useful annual horizon scan of risks. There are a range of views as to what could or should be done with this knowledge by governments, owners and operators of infrastructure. In Australia, the Federal Government has had a Trusted Information Sharing Network to engender cooperation across business sectors and government departments with each sector being managed through Infrastructure Assurance Advisory Groups. These mechanisms rely on voluntary and unpaid participation by the market place, public and private company alike, and each Infrastructure Assurance Advisory Group is at different levels of thought and cooperation. There have been frustrations expressed that a lot of information has been collected and gone into a bureaucratic vacuum with little in the way of concrete outcomes. However Australia has a system of State and Federal Governments and there is little that the Federal Government can really do other than to coordinate and guide consequence management across all jurisdictions. The UK has similar issues with respect to Scotland.

Where are the single points of failure (SPOF) in Oman? Most developed countries still do not seem to manage failure of its critical infrastructure in any systematic way. The State of Western Australia where I come from recently experienced a severe shortage of gas from an explosion at an offshore gas plant. The event highlighted that the State's definition of an energy hazard was too limited as in the aftermath of the outage commercial laundries were on the cusp of shutting down, which would have caused grief for the hospital system to say the least. It is too ridiculous to say that there should be a hazard management agency for commercial laundries when there is a power outage? Or like occurred in this particular problem, should it be simply left to market forces and commercial contracts to resolve gas

shortages? There is also a concern in some countries that many of the single points of failure are in the hands of government and that not enough money is being spent on their protection or indeed on the upgrading of infrastructure. On the other extreme, the global financial crisis exposed the cash hazard hidden under a mountain of debt and underpinned by speculation in several countries. It is interesting to see that the British Government is now proposing legislation to have senior bankers face prison for reckless risk taking. Whether you agree with that approach or not, moral hazards and not just physical hazards, have now entered the lexicon of the finance sector and international crisis management.

I know only little about the national vulnerabilities of Oman but as a former Special Operations engineer it would not take me long to find out more. I would start with the very good case study on the current state of emergency management in Oman on the internet. I would then be looking for critical shipping lane junctions and very tight shipping turning circles. I would be looking for traffic operations centres and train controls that manage road and rail. I would be looking for gas plants with single connections to the grid and pipeline beach valves for all subsea pipelines coming ashore. Some of you can probably visualize these locations in your heads. We recently supported an international O&G company that operates in Oman and the UAE with such infrastructure. I would be looking for single-point compressor stations along land pipelines, single aviation fuel pipelines, crucial electrical power distribution nodes and communications towers. I would be looking for specialist supplies of medical oxygen and food like yeast, data centres and call centres. It begs of course whether the ability or inability to manage public information is considered a hazard or not. The issue of public notification and national warning systems in the wake of disasters is receiving much attention and funding in many countries including the widespread use of social media. The Canadians are considering making a proportion of the 700MHz spectrum for a public safety broadband network. It is also interesting to note that the US Securities and Exchange Commission ruled in April that public companies can make use of social media to make price-sensitive announcements. StockTwits is like Twitter for investors and it already has 300,000 followers. StockTwits, Twitter and Facebook will in all likelihood eventually replace traditional and more costly market disclosure through stock exchanges and financial reports. Even the Australian Prime Minster recently tweeted the election date before making a public announcement. Another example of the power of social networks is following the earthquake and tsunami in Japan in 2011 where voice communications broke down, but data communication was still possible with people using Twitter and Facebook to communicate.

The analysis and modeling of all known and unknown interdependencies between the critical infrastructure of any given city, region or country is a complex task. Collaboration and information sharing is needed between public and private operators of critical systems is absolutely necessary. It creates a more resilient nation, so much so that it has become indispensable for many developed countries. The Dominos model used in Canada allows propagation of consequences over time and it serves as an aid for decision-making in any Crisis Management situation. The anticipation of the propagation of failures and the resulting consequences enables its users to implement specific, appropriate mitigation measures to ensure public safety. There is now a European program for critical infrastructure protection focusing on disruptions that affect two or more countries in the European Union with a focus on the security of the energy and transport sectors. They use the national critical infrastructure (NCI) and European Critical Infrastructure (ECI) expressions. Europe is also working on mapping all nodes and networks forming the Internet, including data sets which cover critical infrastructure, to enhance continental resilience.

Power failure is still the largest and most significant single point of failure in most countries, be it from under generating capacity, limited grid connectivity or inadequate fuel storage. There is only one supplier of chlorine gas for all water companies in Australia and

they only produce it at one plant in one city. We can discuss and find weaknesses in singular assets or supply chains all day but power and water supply chains underpin modern society and logic would say that their loss of functionality must be managed in a formal way. In Australia, over 80% of such critical infrastructure is owned by the private sector, and many traditional government service functions such as local government engineering and social services are now being provided by business. What is not so clear is how many supply chains are inter-connected or where exactly the touch points and inter-dependencies are. This is where the concept of tipping points arises, with multiple points of failure and all of them are inter-dependent. In some recent meltdowns in power systems, they collapsed to such an extent that the normal response of selective load shedding was no longer possible. The best that the grid controllers could do was to manage rolling blackouts on an hourly basis. Water and electricity are the most critically interdependent. Water needs electricity for pumps, filtration and distribution. Electricity needs water for cooling at the generators. The issue of interdependencies is becoming quite complex as society develops. Given what has happened in Madrid, London and Moscow, transport infrastructure remains a focal point for terrorism. There is also the big issue of cyber security with the increased application of facilities remotely operated by SCADA. This year there were reports of a foreign army hacking into water utilities in the US and manipulating water treatment levels. Hackers were also able to attack *The Washington Post*, *Time* and *CNN* through a trusted content recommendation service used by all three, allowing them to publish propaganda and attempt to direct readers to their own web presence. The intrusion was overcome within about thirty minutes, but what if the hackers had targeted government systems like water, power and traffic regulation?

The question remains as how to best manage sensitive national information to achieve the redundancy and third party involvement required to achieve resilience? What sovereign approaches to diversity and third party involvement are required in Oman? To what extent should National Crisis arrangements create linkages across-silo organizations and involve businesses who control critical infrastructure in Oman? In terms of a people at risk or a people first approach to resilience, all countries have loss of people identified as a national hazard through the label of a human epidemic. It would seem smart to extend this approach to all other hazards to achieve diversity and third party involvement. The crux seems to be in declaring the loss of critical infrastructure, particularly single points of failure or choke points as a hazard to society and managing their loss of functionality in a formal way. This is the decision that needs stimulus just as the global financial crisis has forced the financial community to identify and root out all moral hazards. We can divide, split up and separate critical infrastructure as much as we like, but it must be considered a hazard in any shape or form and a hazard management or control agency must be appointed with full responsibility for prevention, preparation and planning, response and recovery. In some cases there may be hazard management agencies for a single asset. In other cases the energy and power sectors generally should have an overarching hazard management agency perhaps split into upstream and downstream, but with crossover responsibility.

There is also a powerful precedent with an Internet connected society to make loss of data a hazard or for data centers collectively to be labeled as critical infrastructure. Five billion people can now speak to each other by telephone, and about one-third of the world's population or 2.7 billion people have access to the Internet. Some of you may be thinking that making loss of data a national hazard, is going too far but Facebook is looking for new ways to attract more people to its service which already has 1.15 billion users. The reality is that we are now in a situation where society is so interconnected, indeed hyper connected, that the recognition of tipping points is difficult. The only way that the recognition process can be best dealt with is through empowerment of prevention and planning responsibility as part of hazard management agency functionality. A few years ago the US financial cash reserves came under an incredible run of funds over just a few hours. It was a damn close

event as Wellington, the famous English general once remarked. It was solved by a rapid injection of cash over several hours and the situation went away just as rapidly as it had started. One could argue that cash failure should be a hazard whether the cause is speculation or a mountain of debt.

In terms of confidence building how do you plan for the unthinkable, especially low probability, high consequence type scenarios? True crises emerge from the unknown, so crisis leadership is dealing with the unthinkable and the unpredictable. The best plan never survives contact with a risk issue, but simulations of disasters can effectively raise issues, expose vulnerabilities, as well as lay the foundation for resolution. According to Albert Einstein, games are the most elevated form of investigation. Simulations of national hazards enable people to visit vision. They enable leaders to be in the future and to look back as the present. They permeate leadership down through the organization. Simulations in teams are the most effective method to stimulate leaders to a systemized way of harnessing vision and solving complex problems. Process and process checkers will guide them on this journey of most likely and most dangerous thinking. While some government and business organizations need detailed plans, the most important element is to have a trained and flexible response by teams who know their roles and can respond quickly to recover the organization to an acceptable state within necessary time frames. If this is the case then the right decision will be made at the right times. Repeated exposure to volatility builds resilience just as Mike Tyson the famous boxer said, that everyone has a plan until they are punched in the face. Little wonder the United States is focusing on public education.

In terms of principles of crisis response, crises call for leaders with answers, decision, strength, and a map of the future, someone who knows where the organization ought to be going. In short, someone who can make hard problems seem simple. Einstein also said that imagination is more important than knowledge. Clearly leadership is the most important critical success factor in coming out of a crisis, so how can you put leadership, civil and military teamwork in a document in Oman? Crises are an environment where trial and error, ambiguity and evolving ends are normal. How do you prepare government, communities and business for that in Oman? These situations demand an adaptive mental stance, adaptive approaches to problem solving and bold action to create opportunity in ambiguous circumstances. Experience tells us that this capability only comes though the study of crises in symposiums like this one and through practice in real or simulated circumstances, reinforced by natural talent. You cannot put this capability in a plan. It has to be bottled in another way. That said there are some proven techniques that you can reinforce through planning and preparation. It is not so much in the plan but in the planning. The first is documenting process and workflow. When leaders must perform in a team on their feet under pressure, it is process that gets them though. This aspect is so important that it is now best practice for crisis leaders and emergency commanders to be aided by process checkers. It a function not so much concerned about the strategic or planning outcome but rather the methodology to be followed to arrive at that outcome. It is the de Bono blue hat, thinking about thinking approach to problem-solving and decision making.

So what does a common 'government, community and business under attack' process look like in a plan, a written document? It is simply this suite of tools. Recognition, notification and activation; problem solving and decision making by front line management teams; hand off of issues to the crisis/disaster management team; developing and implementing plans and strategy by the crisis/disaster management team; communicate, communicate, communicate; and return to business as usual or customer facing solutions or abandoned. This is the process for civil protection professionals and business executives allowing them to respond to any moral or physical hazard. Unless you see this workflow simply put in a contingency plan, perhaps with slightly different wording, then there is little hope that the plan will ever get used. Unless there is natural talent for leadership and team

work in teams, on their feet and under pressure, plans which do not give process guidance may hardly ever get used. Leaders must become comfortable following these processes in front of staff. If they own these processes, they will become so comfortable that these processes inspire them and reinforce their courage to act. There is a big difference between an action plan and a plan that is actionable or executable. The big difference between crisis leadership and crisis management is in the situational awareness and human decision making.

What now of the future? Some futurists say that with 40% of the world's information going through back offices in India each day, an IT disaster of Pearl Harbour proportions is just around the corner. Cyber-attacks and data theft on a grand scale will almost certainly get worse before they ever get better. Terrorism will almost certainly evolve in its sophistication. There is no doubt that climate change, with cyclones predicted to get 50% faster and 50% more deadly in the next fifty years, will feature along with environmentally displaced refugees on a global scale. Another developing mindset is that most people accept that climate change is unavoidable and so the focus is now on adaption which is starting to drive some of the resilience agenda. Stock exchange turmoil and business reputation recovery is likely to remain volatile with social media now becoming a legal form of market disclosure. I predict the continuing growth of internet based, virtual crisis management environments, as digital war rooms. I see even faster information fusion in war rooms and crisis coordination centres, and also sophisticated telephone based national warning systems. I foresee crippling financial demands being made on insurance and fiscal distress in the re-insurance sector. There will probably be increasing government intervention in critical infrastructure protection similar to the UK Civil Contingencies Act and the resilience concept will become part of legislation in many countries. I foresee continued public education in emergency management and universal use of the incident command system across government and business, internationally. The incident command system has been elevated to a mandatory national approach to managing all crises. It is, for better or worse, the future of crisis management and the model continues to remain the central plank in crisis management policy as is the National Incident Management System (NIMS) in the US. That said, it is an open to question as to whether any form of social coordination can achieve what we might consider to be a successful response in the aftermath of true disasters. Interoperability is all about people and processes with layers of technology. Shared communications networks and secure channels are of are of secondary importance to the operational procedures of those who need to communicate, those who they need to communicate with, what messages they need to communicate, and through what chain of command. Management and control of incidents needs to remain at the local level, but with stronger mechanisms for national co-ordination.

In summary it is obvious that we must learn from the past to prepare for the future. It is obvious that all countries must toughen up to withstand increasing disaster intensity, increasing disaster frequency, increasing disaster impact zone size and the increasing number of people affected by a disaster. Most countries still do not have sophisticated mechanisms to respond effectively, and just get by. I put that governments, society and business all now needs coordinated and sophisticated single point of failure mechanisms in order to respond effectively. We already have enough understanding. The participants in this symposium already know where most choke points and single points of failure are in this country. We do not need any more understanding. We are no longer misguided. What we now need are legally empowered, hazard management agencies, be they private or public or both, and tested cross agency action plans where interdependencies exist across the full spectrum of natural and human hazards.

So ladies and gentlemen, like good strategy, national crisis management begins before the first move. However carefully an organization in Oman goes through the steps,

and however well drawn its plans are, it is the leadership teams proficiency that will achieve success and efficiency and ultimately determine the organization's reputation when a threat materializes and becomes a major event. Do you have any questions of me or of the tiger?

DISASTER & CRISIS GOVERNANCE FOR GOVERNMENT & BUSINESS
AN OPEN LETTER
Resilience – Fact or Fantasy in Oman?

Ask yourself these questions:

- Should prevention, preparation and planning, response and recovery (PPRR) be left to government and communities or business and market forces in making Oman a resilient community?

- What is current thinking in Oman on resilience, single points of failure and the status of national responses for critical infrastructure hazards especially in the energy, power and water sectors?

- How many single points of failure (SPOF) are there in Oman?

- Who really knows where the SPOF are?

- How many SPOF are in the hands of business, state owned and government trading enterprises in Oman?

- How many SPOF are inter-connected and do we know where the touch points and interdependencies are?

- Should knowledge of SPOF be kept secret or in silos in Oman?

- Should there be a lead agency for each SPOF or are existing arrangements good enough in Oman?

- Should there be a lead agency for SPOF in the energy, power and water sectors in particular in Oman?

- Should prevention, planning, response and recovery for SPOF be left to business and market forces in Oman?

- What is required to make Oman a resilient community?

- Are you working in an organization that has confidence in its resilience?

- How do you contribute to that confidence in resilience?

- How could you share this resilience information with others?

- How can you investigate resilience further?

In the long history of humankind it is those who have learned to collaborate and improvise most effectively that have prevailed. Charles Darwin