

RESILIENCE AND QUALITY MANAGEMENT

Presentation by Alastair McAslan, Executive Director
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Alastair McAslan is the Executive Director of the Resilience Centre at Cranfield University in the United Kingdom. He joined the university in 2001 following a career in the British Army, which included two years with the United Nations in New York and three years with the Geneva International Centre for Humanitarian Demining, where he became involved in work supporting the humanitarian and development sectors. His particular interests are strategic planning, quality management and capacity development through organisational re-design and management training.

Introduction

A recent search on Google identified over 24 million web sites and electronic documents which refer to the subject of quality management. The concept of quality and the discipline of quality management, provide ample opportunity for academics, practitioners and consultants to meet and exchange ideas on how best to improve the effectiveness and efficiency of organisations through the application of quality management. My own university – Cranfield University in England – invests considerable time and intellectual effort in translating the principles of quality management into procedures which can be used by national authorities, international organisations, commercial entities and not-for-profit organisations.

In this presentation, I aim to provide a short overview of Cranfield University, and in particular the Cranfield Resilience Centre. I will summarise the concept of resilience, and I will stress the usefulness of the concept to disaster preparedness and crisis management. I will also explain in outline the importance of quality management in improving organisational resilience.

In my second presentation I will address the application of quality management to the humanitarian and development sectors in more detail. I will chose one area where we have particular experience – that of quality management in humanitarian demining.

Cranfield University

Cranfield University is one of Britain's largest centres for post-graduate teaching, applied research and consultancy services. Our academic and research work benefits 1,000 national and international organisations each year, including the United Kingdom Government, the European Commission and the United Nations. The university has a staff of 1,700 and operates on two campuses – Cranfield and Shrivenham.

The university has a strong reputation for the delivery of high quality education, and is almost unique in its post-graduate focus and its access to military as well as civilian resources. Its ethos is the collaboration between academia and practice.

Around 10,000 students attend our post-graduate and short courses each year. There is a strong and growing emphasis on international links with joint research and teaching programmes being conducted with sister universities throughout the world.

Resilience at Cranfield University

The Resilience Centre is based at the Shrivenham campus of Cranfield University, where the university is the academic provider in management and technology to the Defence Academy.

The Resilience Centre was established in September 2004 in response to the British Government's Civil Contingencies Act. We provide a single resilience focus within the university and we draw on the capabilities of several departments and specialist units.

"We are now more aware than ever of the risks that society faces from disruptive challenge. Increasingly complex networks of economic and social activity, the threat of international terrorism and changing climate have led to a series of emergencies and heightened concerns for the future. Many of the certainties that determined the way in which the public, private and voluntary sectors prepared for past emergencies cannot now be relied upon. Traditional emergency planning needs to be more flexible and have greater regard to risk management. A new framework is needed to build a wide range of co-ordinated, capable responses."

Douglas Alexander, Minister for the Cabinet Office, 2004

Resilience is not new to Cranfield. In 1986, the university established the Disaster Management Centre at Shrivenham with the aim of providing world class education and training to individuals in the management of disasters in the UK and overseas. The Centre pioneered the professionalisation of the disaster management sector and encouraged organisations and authorities to apply rigour and discipline to a subject which had previously been seen as a technical response to unforeseen natural and human-made disasters. From 2000, Cranfield also drove forward the application of management thinking to humanitarian demining.

Resilience at Cranfield University addresses the risk of major accidents or incidents, and the threat of deliberate attacks on a country's infrastructure, businesses and civilian population from terrorist attacks.

We also address the needs of countries vulnerable to natural disasters or conflict. This includes crime related to the ownership and use of small arms, and the threat to civilians from mines and unexploded ordnance.

The Centre aims to reduce the impact on the individual and community by increasing the efficiency and effectiveness of operations throughout the disaster management cycle including prevention, preparedness, response and recovery activities. At Cranfield we refer to this approach as humanitarian resilience.

Humanitarian resilience addresses the particular challenges from natural and human made disasters with a humanitarian impact. This impact may be sudden and immediately overwhelming such as the 2004 tsunami disaster in South East Asia. It may also be caused by disasters with a slow onset, initially less apparent and with long lasting humanitarian implications. Such disasters can involve explosive remnants of war, the uncontrolled ownership and use of small arms and light weapons, AIDS, de-forestation and global warming.

A key strength of the Centre is our emphasis on field-based research and studies which have an immediate practical application. The results of this work are folded into our post graduate and short training courses.

Resilience

So what is resilience? The Collins Concise Dictionary defines resilience as "... the ability (of a person) to recover easily and quickly from illness or hardship". The Oxford Concise Dictionary defines it as "... the act of rebounding back".

The United Nations' International Strategy for Disaster Reduction defines resilience as “.... an ability to recover quickly from, or adjust easily to, misfortune, change or disturbance the capacity of a system, community or society to resist or change in order that it may obtain an acceptable level of functioning and structure.”

From these definitions, key words can be deduced that describe the characteristics of resilience: strong, resist, absorb, elastic, cope, recover and rebound.

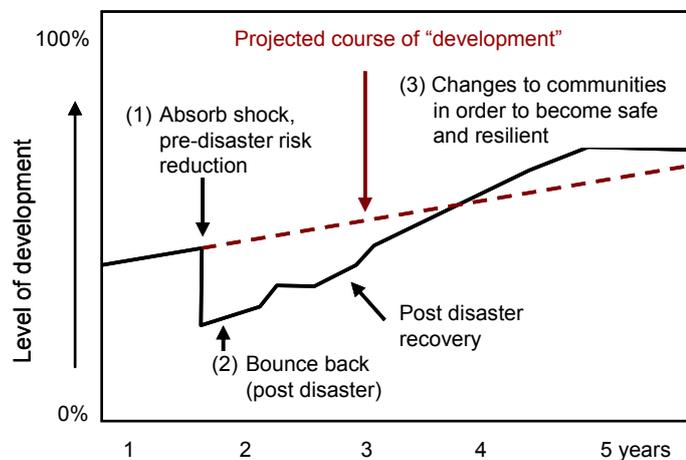
In a recent paper, my colleagues Dr Ian Davis and Dr Yasamin Izadkhah define resilience as “.... the ability of communities, their physical, social, political and economic systems and their buildings and settlements to withstand hazard generated forces and demands, to bounce back rapidly and to adapt to cope with future threats.”

In disaster situations, the over-arching aim is to create resilient systems and to build resilient societies who inhabit a resilient environment. This is achieved through four ambitious objectives. These are:

- (1) To reduce the probability of failure through risk reduction measures;
- (2) To reduce the consequences of failure, in terms of fewer injuries, fewer lives lost and reduced damage, both direct and indirect;
- (3) To reduce the time needed for recovery; and
- (4) To reduce patterns of vulnerability that can develop during the process of reconstruction.

A resilient community is one that has, firstly, the ability to absorb the shocks of hazard impact so that they do not become disasters; secondly, the capacity to bounce back during and after disaster; and thirdly, the opportunity for change and adaptation following a disaster.

These three characteristics are shown in the diagram. The diagram describes, in the form of a time-line, a given situation, perhaps a country or a large urban centre, that seeks to develop over time. It then experiences a major disaster followed by a successful attempt to recover.



The concept of resilience and its application to disaster preparedness and crisis management is discussed in detail in a paper prepared by my colleagues at Cranfield University: Dr Ian Davis and Dr Yasamin Izadkhah. A copy of their paper is included in the Cranfield University information packs which are available at this workshop.

At the end of this presentation, I will willingly take questions on the nature and goals of resilience, and the benefits we see in further developing the concepts of resilience and humanitarian resilience to disaster preparedness and crisis management.

Quality management

The word *quality* has many meanings: a degree of excellence, consistency, conformance with a requirement, and freedom from defects, imperfections or contamination. ISO 9000:2000 describes quality as “.... the totality of features and characteristics of a product or service that bear on its ability to satisfy a stated or implied need”.

The concept of *quality management* evolved in the 1970s and 80s, and was used by management to achieve levels of excellence in manufacturing. Those companies which embraced the philosophy to change their organisations and practices achieved higher levels of performance and a clear competitive edge. Since the early 1990s this approach has been applied to the public sector and 'non-profit' organisations with similar improvements in performance.

At Cranfield University we address quality in most of our teaching from masters degrees to short courses, and we have a number of applied research projects. Indeed one of my deputy directors is developing a quality management system for a major donor in humanitarian demining. I will address her work in some detail in my second presentation.

In our work on the application of quality management to disaster preparedness and crisis management we stress three requirements:

- (1) The need to develop appropriate quality management systems and processes;
- (2) The need to develop appropriate performance measures; and
- (3) The need to have a strong commitment throughout the organisation for the use of formal quality management approach.

These issues may seem self evident, but our experience in the humanitarian and development sectors is a serious lack of quality management. There are many reasons for this. The first is that many people involved in disaster management have social science backgrounds, and few have management degrees. They interpret their commitment to noble causes as "quality", when often their commitment to humanitarian ideals may result in poor management systems and procedures.

On our courses and with our consultancy services we stress the importance of quality management. And we work with national authorities, international organisations, commercial entities, and not-for-profit organisations to develop a quality approach which meets their particular needs.

In my next presentation I will explain the work we are doing for a major donor by assessing the effectiveness of different quality approaches and models for humanitarian demining, and by providing a set of guidelines for the application of quality management to the humanitarian demining sector. I will also brief you on a most successful project we have just completed with an Afghan NGO which we have helped establish using ISO 9000.

Conclusion

In summary, the concept of resilience is new to disaster preparedness and crisis management. We consider it to be a particularly useful and strong concept which moves us on significantly from previous ideas and approaches. The term 'resilience' is easily understood in the English language as implying strength and elasticity, and the ability to resist, absorb, cope and recover. I hope the word translates adequately into Persian!