





## HSE LEADERSHIP IN CRISIS AND BUSINESS CONTINUITY MANAGEMENT

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DAMAC Properties has grown to become one of the world's foremost luxury developers, with projects spanning the GCC, Levant, Middle East, United States and United Kingdom.

42,000 HOMES DELIVERED\* 28,000 IN PLANNING AND PROGRESS\*

We adds vibrancy to the cities in which its projects are located, with a huge and diverse portfolio that includes skyscrapers, communities and branded residences.

19,165	2,463	1,782	1,297	9,046	1,039
Residential Units in Dubai	Hotel Apartments	Mixed Used Units in Dubai	Office & Retail Units	Units in Master Communities	Residential Units overseas





## What is a Crisis?

An abnormal situation which is beyond the scope of normal business operations and which threatens the immediate safety, operations or the reputation of the corporation.









## **Crisis Management**

The Four Phases of Emergency Crisis Management

□ Mitigation/Prevention

Preparedness

Response

Recovery







### **Elements of Crisis Management Plan**

The Four Phases of Emergency Management						
<u>Mitigation</u>		Includes any activities that prevent an emergency, reduce the chance of an emergency happening, or reduce the damaging effects of unavoidable emergencies.				
Preventing future emergencies or minimizing their effects		Buying flood and fire insurance for your home is a mitigation activity. Mitigation activities take place before and after emergencies.				
<u>Preparedness</u>		Includes plans or preparations made to save lives and to help response and rescue operations. Evacuation plans and stocking food and water are both examples of preparedness.				
Preparing to handle an emergency		Preparedness activities take place before an emergency occurs.				
<u>Response</u>		Includes actions taken to save lives and prevent further property damage in an emergency situation. Response is putting your preparedness plans into action.				
Responding safely to an emergency		Seeking shelter from a tornado or turning off gas valves in an earthquake are both response activities take place during an emergency.				
<u>Recovery</u>		Includes actions taken to return to a normal or an even safer situation following an emergency. Recovery includes getting financial assistance to help pay for the repairs.				
Recovering from an emergency		Recovery activities take place after an emergency.				





#### **Emergency Preparedness / Responses:**

Emergency is an incident (natural or man-made) that can cause major loss in terms of Personal loss, Asset loss and Environmental loss. LOAMS ensuring that all risk based potential emergencies are identified and addressed in a systematic manner.

LOAMS established a Corporate Emergency Response Team (ERT) to respond to emergency situations. The ERT shall undergo necessary trainings with regards to emergencies. LOAMS ensuring that all the members of emergency response team are competent in terms of knowledge, trainings, skills and experience etc. to deal with the different emergency situations that might occur.

**Corporate Emergency Response Team:** Consists of General Manager, Snr. Vice President, Vice President, Snr. Directors & Directors of organization wherein they play the Leadership role to control the crisis.

**Core Emergency Response Team:** Consists of HSE In charges, Snr. Managers, Managers, Technical teams, Site Operational teams.

**Local Authorities Emergency Team:** Police, Ambulance, Civil Defence, DEWA, RTA, Coast guard, etc.







#### **Emergency Equipment's / Tools:**

The emergency response team shall ensure that emergency response arrangements are readily available. The emergency response team shall also make sure that they have contact lists of all people who may be affected by the incident, including staff, client and suppliers and the insurance company

PPE's	Equipments	Machines / Tools	
Safety Jacket	Ladders	Scrub /dryer RO	
Helmets	Sign boards	Line tester	
Gum boots	Barricade (extend)	Sump Pump	
Plastic sheet roll	Buckets	Carpet extractor	
Dry duster/cloths	Solo bins (240L)	Multimeter	
Rain coat	Flat trolley	Dry sand (bags)	
Face mask	Floor Squeeze	Disposable Coverall	
Hand gloves (box)	Mop buckets	Spanner Set box	
Goggles	AED (Automatic External Defibrillator) Kit	Hand tools	
Door stoppers	Fire Hydrant Spray Gun	Pipe Range	
Safety Harness	High output Megaphone	Bolt Cutter	







#### **Emergency Evacuation:**

"A continuous and unobstructed way of exit travel from any point in a building or structure to a public way (a street, yard, court or other open space leading to the street)."

Three parts to an escape route: The way of exit access, The exit, The way of exit discharge







#### Fire & Life Safety Systems:

Fire prevention methods include:

Heat and / or smoke detectors. Automatic fire sprinkler systems. Building codes and materials. Flame retardant furnishings and materials.







#### **Centralized Command Control Centre:**

- Crisis management process enhanced the communication efficiency of crisis controls, using latest Hi-tech delivering notifications (SMS, Emails) and precise guidelines to all interested parties (tenants, owners and visitors) to ensure safety of all at all times during crisis. That was integrated with our existing VMS and Salesforce software.
- ✓ Preparation & review of all potential scenarios and produce crisis standard notices and guidelines.
- Integrate our hi-tech communication portal wit VMS and Salesforce database to ensure registration of all concerned parties
- ✓ Sending regular/emergency notifications across building and master communities

#### **Benefits:**

Improve in-house team and management response timing.

Improve customer's response timing and increase communication efficiency.

Significant impact on the crisis control in term of timing, containing and reporting.

#### **Success Measures:**

In-house team response timing. Authority's response timing. Customer's response timing and effectual response. Crisis impact measurement.











#### **Recovery (Post Crisis !!!)**

Recovery planning is basically including the resumption of business activities and restoration of resources in order to minimize disruption and to resume business output as quickly as possible.

Recovery is basically the return to the pre-emergency condition. As a part of business continuity management the FM Director of respective projects shall establish a business recovery team based on the type and magnitude of incident / emergency.

As soon as possible after the emergency has finished and the response plan have been implemented the corporate CMP team shall have the following key responsibilities; but not limited to:

- Assess the extent of the damage caused during the crisis and conduct critical incidents debrief. Keep staff informed throughout the recovery process.
- Identify alternate suppliers, facilities, processes to ensure business is not affected.
- Be prepared for the possibility of broken or damaged equipment, machinery and systems. Know who can fix them and have their contact details at hand. Consider renting or borrowing equipment if necessary.





#### **Testing of the Crisis Management Plan / Requirements**

The Crisis Management Plan will require constant reappraisal and revision as flaws and omissions in the plan will always be revealed during exercises. At the same time, changes in organisational structure necessitate regular revision and updating of the plan and of course, frequent training / exercises.

The testing of Crisis Management Plan shall be done on periodic basis in accordance with Emergency Response Plan. This Crisis Management Plan shall be reviewed on regular basis or as when required. Situations where the plan may require review are outlined below

- $\checkmark$  Identification business risk during first period of operation.
- ✓ Exercising Emergencies and feedback highlighting deficiencies.
- ✓ Occurrence of incident and recommendations / lesson learnt from such incidents.
- $\checkmark$  Results of internal and external audits.
- $\checkmark$  Changes of the legal requirements.
- $\checkmark$  Changes in the process / activity and site structure.
- ✓ Changes in emergency arrangements.





#### **Testing of the Crisis Management Plan / Requirements**





DCD Drills has been conducted frequently in all the buildings / projects in coordination with Civil Defense, Dubai Police and Dubai Ambulance teams, to validate the effectiveness of Crisis Management requirements.







#### **Testing of the Crisis Management Plan / Requirements**







Massive Drill has been conducted with the close coordination of Civil Defense Headquarters, covering 3 to 4 Fire Stations across the Dubai to enhance & validate the crisis arrangements to test the major fire emergencies.





#### **Training with DCD**

Safety and security are part of Damac core values. Accordingly, DAMAC'S LOAMS hosted training sessions with the Dubai Civil Defence Department as part of the OWN initiative at the DAMAC Park Towers, involving DAMAC employees and other well-known developers. The two-day training prepared them with life-saving and emergency skills including, first-response and evacuation operations, how to use fire extinguishers and damage control skills.







#### **Case Study: Crisis / Business Continuity Management from the Incidents**

#### Lesson Learnt from previous Incidents:

Incident: The spread of the external fire onto combustible with the consequence of radiation or direct exposure to fire (litter from the balcony, parked cars, etc.),

Reaction to fire properties of the materials on a façade, influence the speed of fire spread on the envelope of a building. The mechanism of fire spread through openings on an ETICS façade with combustible insulation.



#### RAPID FIRE SPREAD

Cladding system contributes to flame spread resulting in risk of multiple simultaneous secondary fires.







#### How Drones Are Used to Optimize Physical Security

Unmanned aerial vehicles are now finding increased application in the security sector. In the coming years, more and more businesses are going to deploy AI-based drone security systems to improve perimeter protection and situational awareness at their facilities and minimize health and safety risks to human guards. Additionally, they help reduce operational costs and make physical security cost-effective for businesses of all sizes.

**Monitoring vast and hazardous areas**. Drones can do those tedious and repetitive tasks of monitoring large areas very efficiently and rapidly, inspecting hard-to-reach locations and gathering data necessary to assess potentially dangerous situations

#### 24/7 surveillance and Patrolling with drones

Security drones used for video surveillance can provide practical and necessary functions. Drones can serve to augment human guards by patrolling the worksites and capturing aerial footage of the assets, securing perimeters and preventing break-ins.

#### **COVID-19 and its repercussions**

To keep track of those not complying with COVID safety measures and issue warnings to them. Doing this manually among large crowds can be a challenge for security teams but with Scylla-powered drones, there is little to worry about.





#### **<u>Case Study</u>: Crisis / Business Continuity Management from the Incidents</u>**

Lesson Learnt based on the Incident / Study:

- Study on fire protection systems in terms of Passive & Active.
- Review the Effectiveness of maintenance and maintain the Fire & Safety Systems.
- Study & installed automated fire extinguishers in the balconies.
- Undertaking Letter from occupants.
- Regular Surveillance & monitoring the storages of buildings through Inspections.
- Training of staffs to dealt with any emergencies.
- Adoption of changes for new projects based on the new UAE FLS code.





#### **<u>Case Study</u>: Crisis / Business Continuity Management from the Incidents** LIVE Demonstration of Automated Fire Extinguishers in Balconies









## **Central Monitoring System:**

Central command and monitoring system being implemented across all projects and pilot project has been implemented in Park Towers and Ocean heights.









## **Central Monitoring System:**



DAMAC

CAUSE AND EFFECTS 24/10/16 1:03 Effects Signal to Access door to release Signal to Jet Fan Panel ground floor and doors EVAC Message Pressur. Fans ON in Stair Case Switch off the AHUs & FAHUs Signal to Gate Berrier to Lift to Switch ON all SPF land other floor and SD/HD/MCP/ Activatio in Podium 1 SD/HD/MCP/ Activation in Podium 2 SD/HD/MCP/ A SD/HD/MCP/ Activation in Podium 4 SD/HD/MCP/ Activation in Podium 5 SD/HD/MCP/ Activation in Podium 7 SD/HD/MCP/ Acti SD/HD/MCP/ Activation in Floor 3 SD/HD/MCP/ Activation Floor 4 SD/HD/MCP/ Activation in Floor 5 SD/HD/MCP/ Activation in Floor 6 DAMAC 1.2







#### **Automatic Cavity Fire Suppression**

Fire detection and response time is very important factor to protect a high rise building from fires that can spread outside or through the cavity, and in addition to time, we keep into consideration the following criteria for existing buildings installations:

- Minimal change to the existing building infrastructure structure.
- Maximum utilisation of existing sprinkler systems, pumps and water tanks.
- Minimal impact during installation for building users including low system visibility for apartment owners / users.







#### **Drone solutions**

Study has been conducted to use the Drone operations to overcome the operational difficulties like Long Towers Routine Patrolling, Big areas patrolling & Inspections

Thermal cameras can quickly find abnormally high temperature points. Then approach the target point and use the visible zoom camera to confirm the fire situation. thermal inspection for gas leakage in pipelines, or even to inspect the abnormal heating from solar panels for example, or even for search and rescue missions while we can detect the people temperatures.







#### **Drone solutions**









# THANK YOU FOR YOUR TIME