EPFL

MODULE 5 :

Introduction to Crisis Management

2025

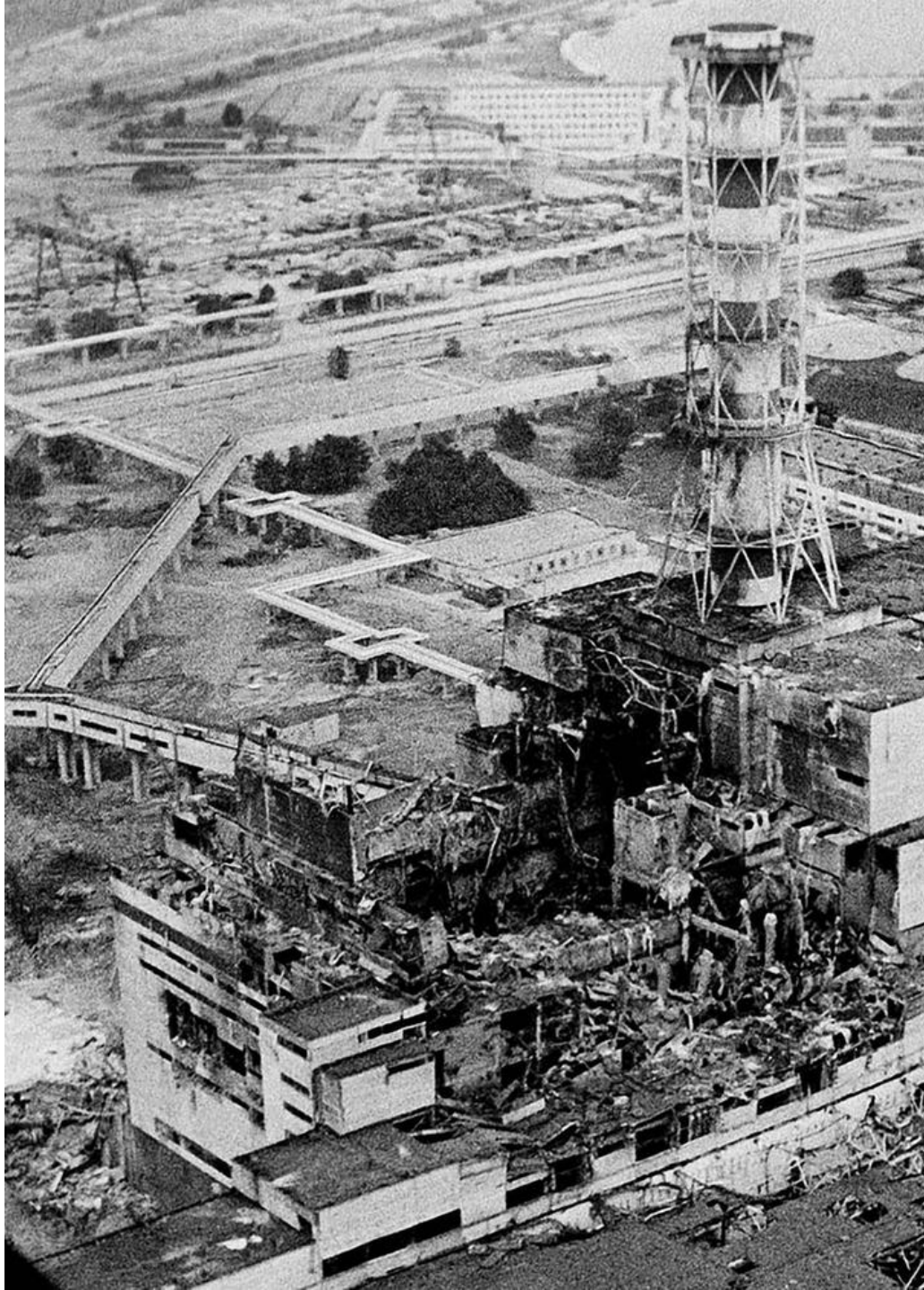# Crisis management: Introduction

- Crises are inevitable, regardless of the risk management system's quality.

- When a hazard is known and quantified, an accident is certain, but the timing remains uncertain.

- Similarly, crises surprise and often occur at inopportune moments, adhering to Murphy's law.

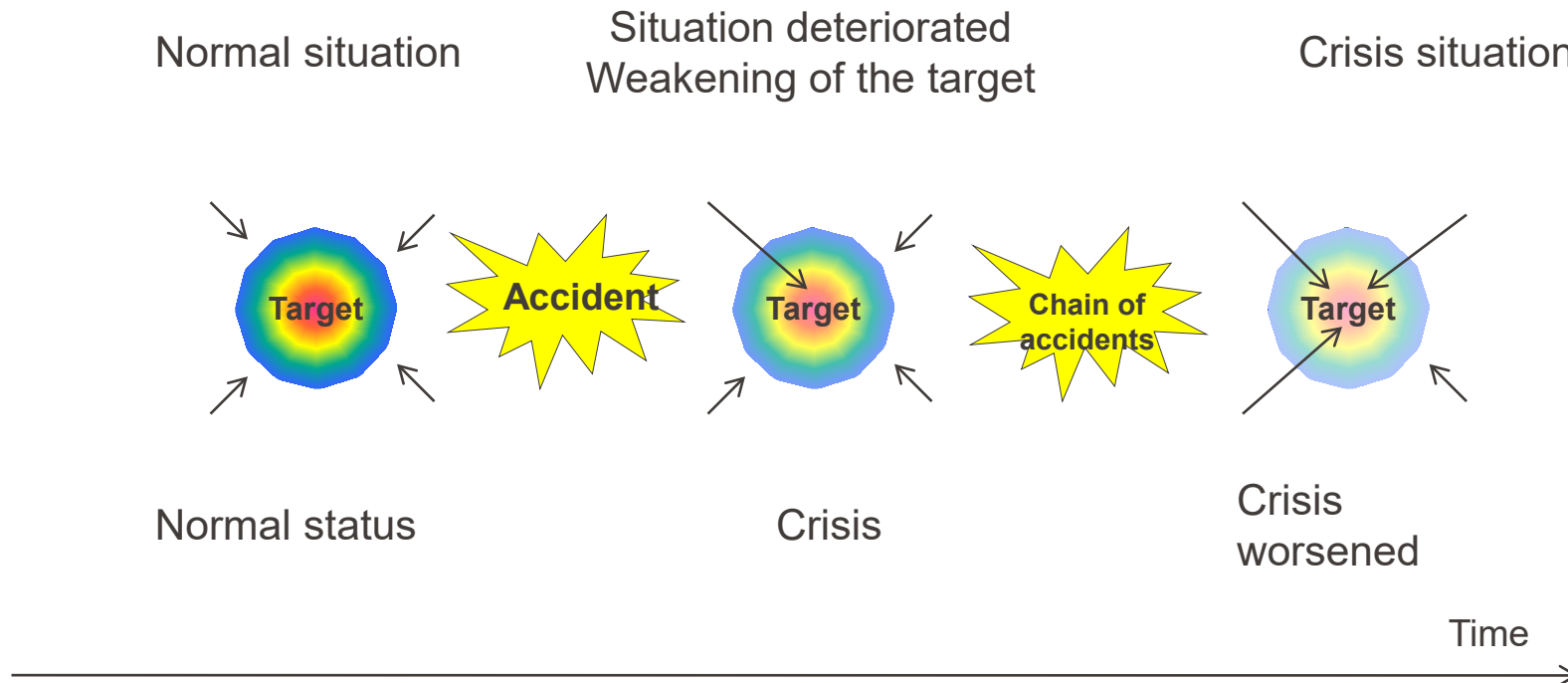*Source: 1929 financial crisis, https://www.britannica.com/*

Crisis management: Comment

Unlike risk management, which involves assessing potential threats and finding the best ways to avoid them, crisis management involves dealing with threats after they occurred.
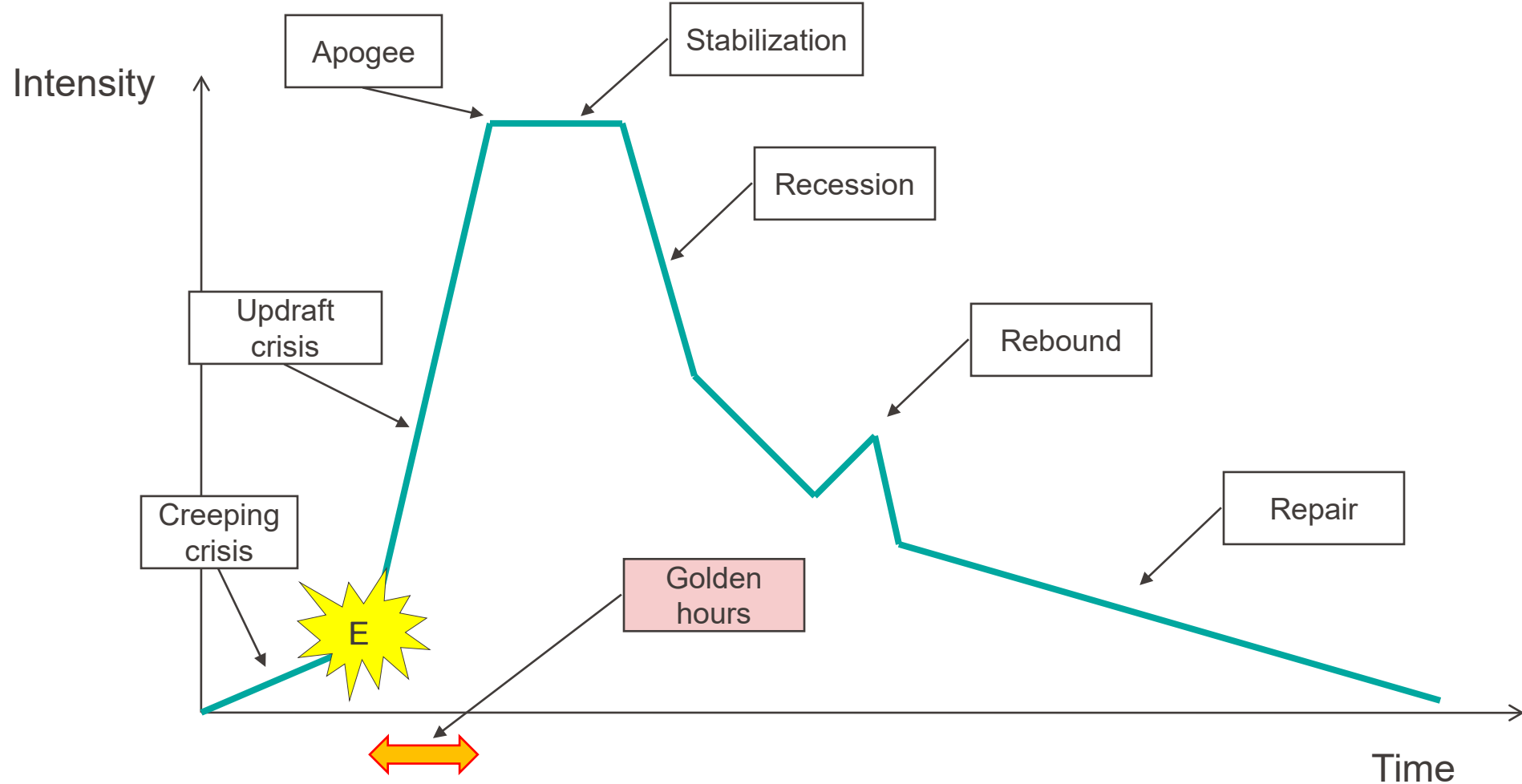
Crisis management: Modeling

A crisis can take on multiple dimensions and timelines:

- It may result from a series of past events, a creeping degradation.

- It can emerge from a major event, resembling a sudden cataclysm.

- The outcome of future events that unfold in a cascading fashion.

Normal situation

Situation deteriorated
Weakening of the target

Crisis situation

Target — Accident — Target — Chain of accidents — Target

Normal status

Crisis

Crisis worsened

Time

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Crisis management: Chronology of a crisis

Crisis management: Covid 19 - example

Data source: https://ourworldindata.org/coronavirus
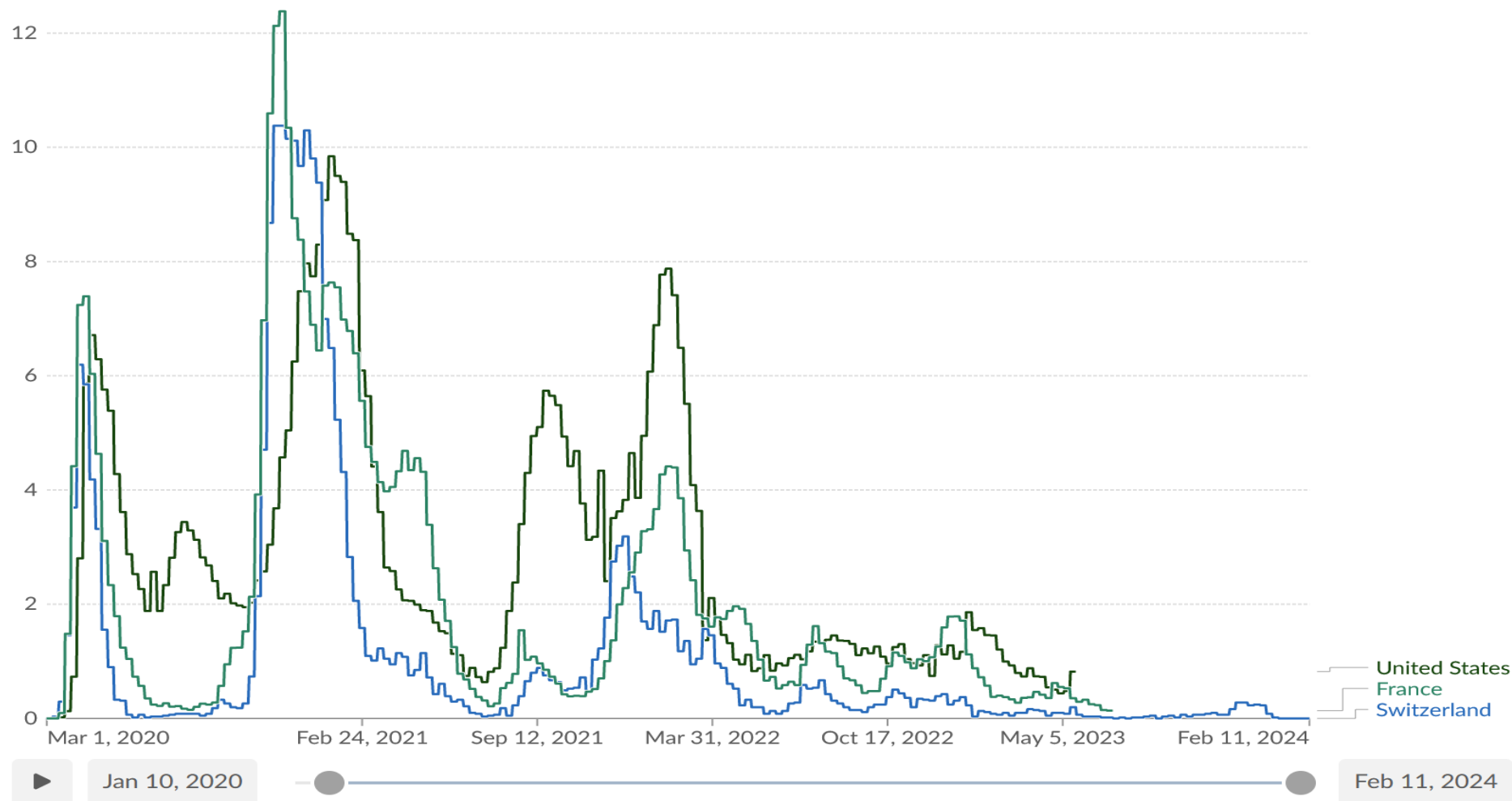
Crisis management: Covid 19 – example - multiwave

Daily new confirmed COVID–19 deaths per million people

7-day rolling average. Due to varying protocols and challenges in the attribution of the cause of death, the number of confirmed deaths may not accurately represent the true number of deaths caused by COVID-19.

Data source: https://ourworldindata.org/coronavirus

Crisis : Deepwater Horizon - What happened ?

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- The Deepwater Horizon drilling rig explosion refers to the April 20th, 2010 explosion and subsequent fire on the semi-submersible Mobile Offshore Drilling Unit (MODU) operating at -5000 m, which was owned and operated by Transocean and drilling for BP in the Macondo Prospect oil field about 40 miles (60 km) southeast of the Louisiana coast.

- The explosion killed 11 workers and injured 16 others; another 99 people survived without serious physical injury. It caused the Deepwater Horizon to burn and sink, and started a massive offshore oil spill in the Gulf of Mexico; this environmental disaster is now considered the second largest in U.S. history.
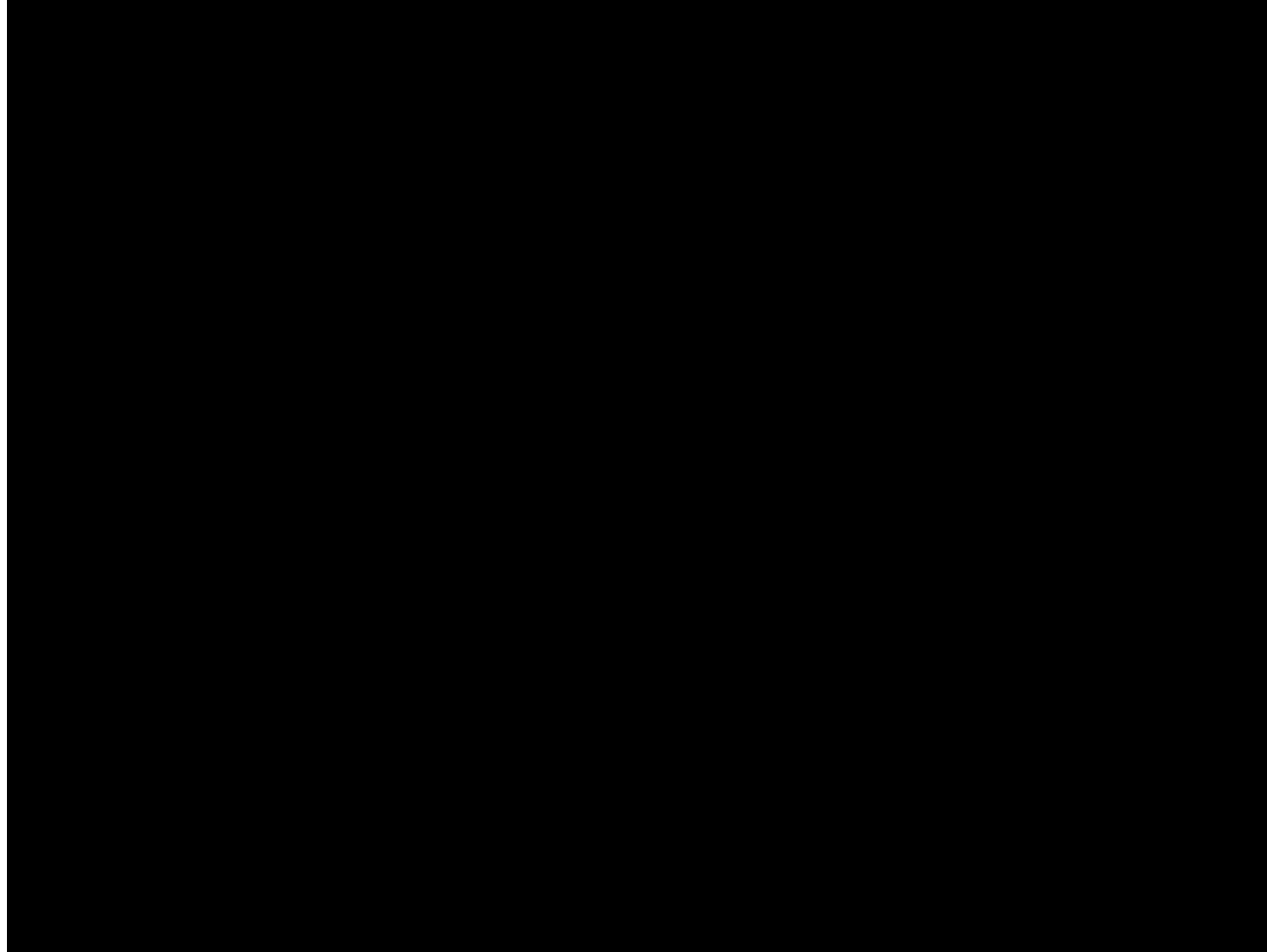
The Deepwater Horizon ready for work in the GOM.

Source: https://www.offshore-mag.com/

Crisis : Deepwater Horizon – Some pictures

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Time 1`52``

Crisis : Example : Hurricane Katrina (1)

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1. ## Creeping crisis

   Thursday, August 25th, 2005, tropical storm Katrina threatens to gain power in the warm waters of the Atlantic and upgrades to the rank of a Category 3 hurricane before striking the southeast coast of Florida.

Source: https://www.wikipedia.org

2. ## Updraft crisis

   Friday, August 26th, 2005, 04h45, Hurricane Katrina reached the southeast coast of Florida where it has already killed at least two people and left hundreds of thousands houses without power.

   21h50: Hurricane Katrina kills five people in southeastern Florida and knocks out power to more than two million people, before finding the strength to touch the warm waters of the Gulf of Mexico.
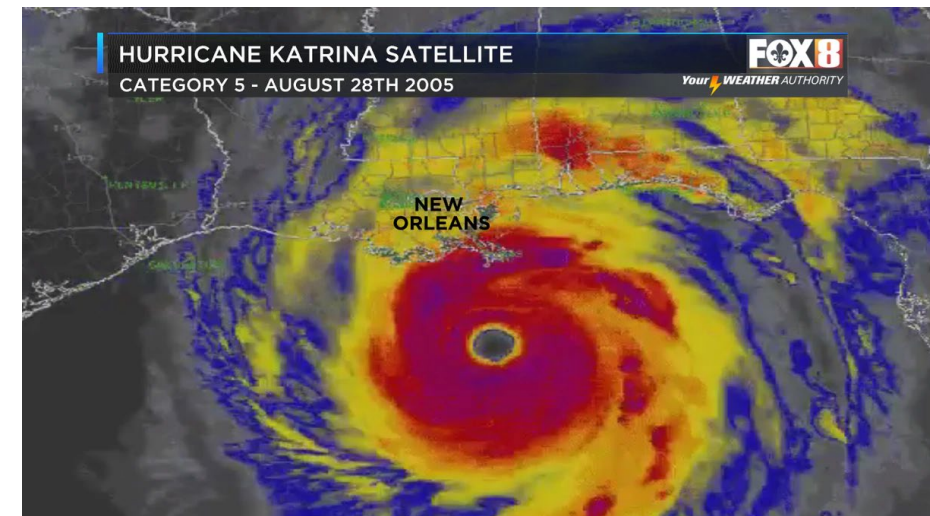
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3. **Apogee**

Sunday, August 28th, 2005, 09h25: Residents of New Orleans begin to evacuate the city threatened by Hurricane Katrina approaching with renewed vigor.
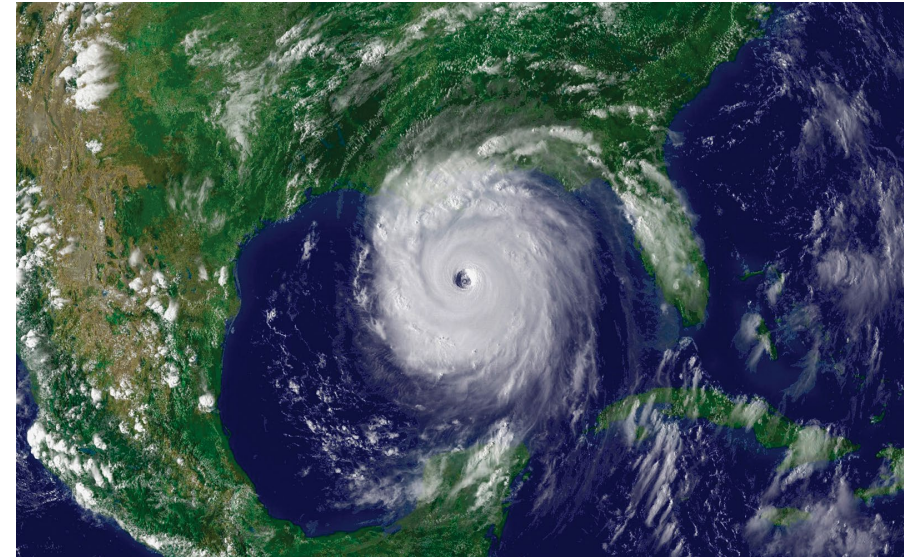
09h50: The merchants of the French Quarter (Vieux Carré) from New Orleans pile sandbags in front of their stores to protect them from floods that may be caused by Hurricane Katrina.

22h15: The winds of Hurricane Katrina have significantly increased steadily, reaching Category 5, and blowing at 284 km/h, threatening to cause catastrophic damage.

Source: https://www.britannica.com/event/Hurricane-Katrina

HURRICANE KATRINA SATELLITE
CATEGORY 5 - AUGUST 28TH 2005
FOX 8
Your WEATHER AUTHORITY

NEW ORLEANS

Source: https://www.fox8live.com/2020/08/29/hurricane-katrina-record-storm-years-later/

Crisis : Example : Hurricane Katrina (3)

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4. Recession

Monday, August 29th, 2005, 09h27: Katrina is downgraded to category 4 but it is not excluded that it may strengthen up again on land to return to category 5.

12:54: In the eye, to the east of the hurricane, the Mississippi overflows and floods Slidell and Mobile up to 9 to 10 meters.

13:00: The hurricane is located 112 kilometers from the city, it progresses at a speed of 25 kilometers per hour.

Source: https://www.houstonpublicmedia.org

Crisis : Example : Hurricane Katrina (4)

5. Rebound

Monday, August 29th, 2005, 13h21: The conditions start to improve in New Orleans, but degrade rapidly in Picayune and Springhill.

13h38: Water seepage in the Superdome, where10'000 people are present because the couldn't evacuate on their own.

14h04: Ochsner hospital is flooded up to the first floor, patients are moved to the upper floors.

15h05: The drinking water system is polluted and unfit for consumption.

16h53: Hurricane Katrina was downgraded to Category 3 hurricane.

Source: https://www.nbcnews.com/id/wbna13916867

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6. Repair

Tuesday, August 30th, 2005, The extent of major damage in several states make the provisional invoice of over 25 billion dollars. Hurricane Katrina becomes the most expensive one in history and one of the most deadly.

Wednesday, August 30th, 2005, 13h00: The mayor of New Orleans orders the total evacuation of the last residents and the total closure of the city for at least 6 to 12 weeks.

Emergency services decide not to deal immediately with the floating bodies to concentrate their efforts on the survivors.

Thursday, 1st September 2005, the evacuation of refugees from the Superdome in New Orleans is suspended after shots are fired at military helicopters of the searching party. The National Guard sends hundreds of military police to regain control.

Source: https://www.newsweek.com/ and https://www.defensemedianetwork.com
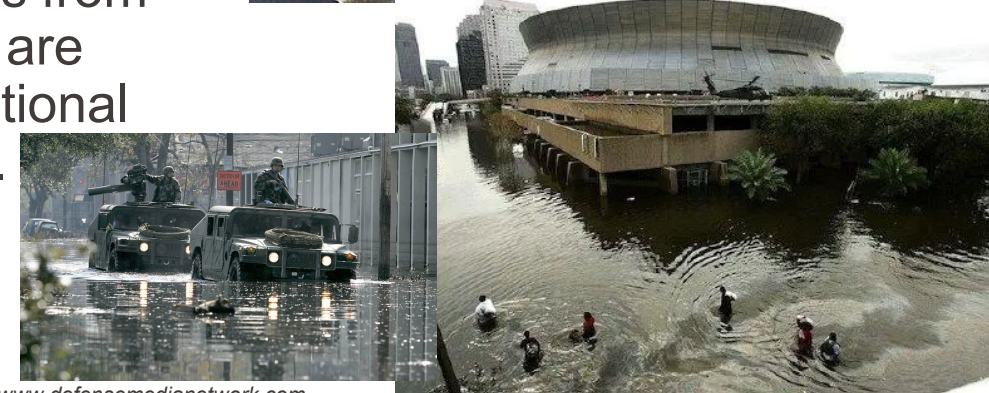
Crisis : Example : Hurricane Katrina (6)

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7. **And now !!!**

   Currently, in 2025, repairs of damages caused by Katrina are not fully yet completed. The efforts to return to normality continue.

Crisis management: Main steps

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Crisis management involves three primary steps:

Before
- Anticipation
- Preparing for Potential Crises

During
- Response / Action
- Managing the Actual Crisis and Recovery
- Communication

After
- Durability
- Post-Crisis Feedback

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Crisis management: Illustration Katrina - continued

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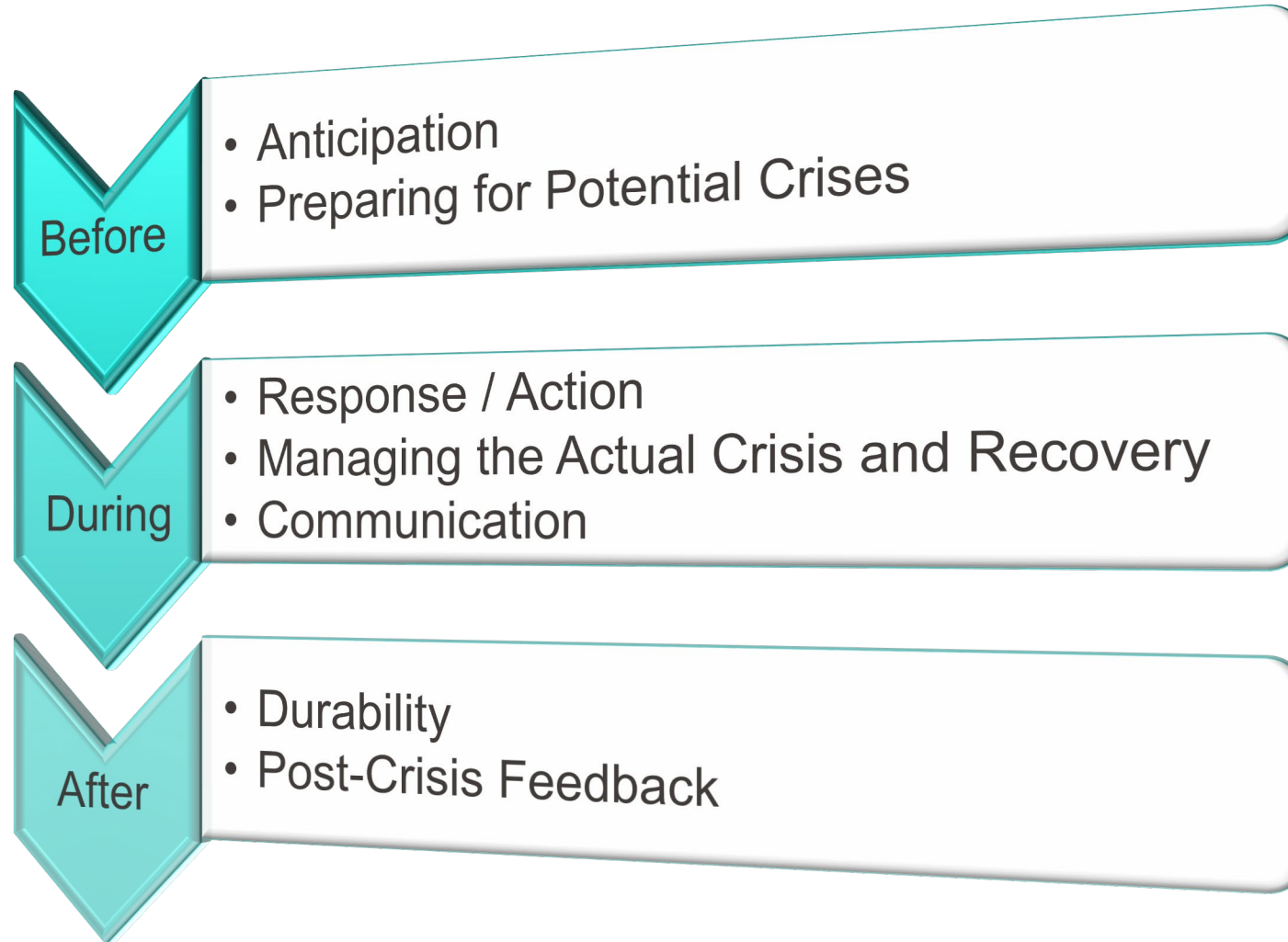
"The only lifeline in Kenner (10 miles of New Orleans) was the Walmart stores. We didn't have looting on a mass scale because Walmart showed up with food and water so our people could survive"
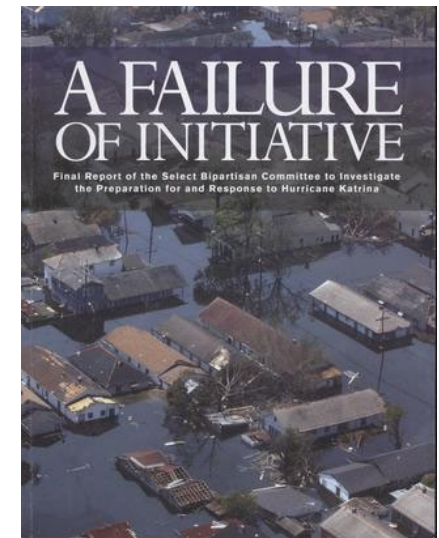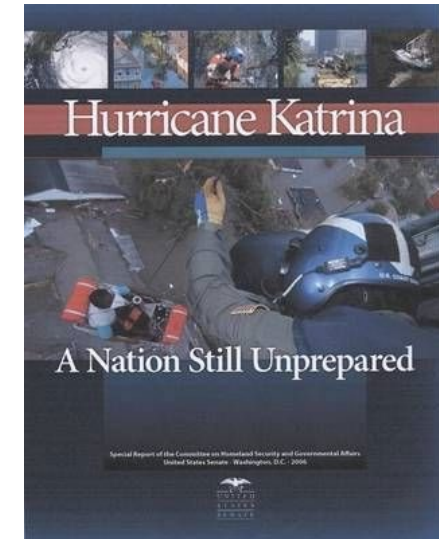
Philip Capitano, Mayor of Kenner in 2005.

Source: https://corporate.walmart.com/newsroom/community/20150824/katrina-devastated-but-courage-and-compassion-survived

Crisis management: Illustration Katrina - references

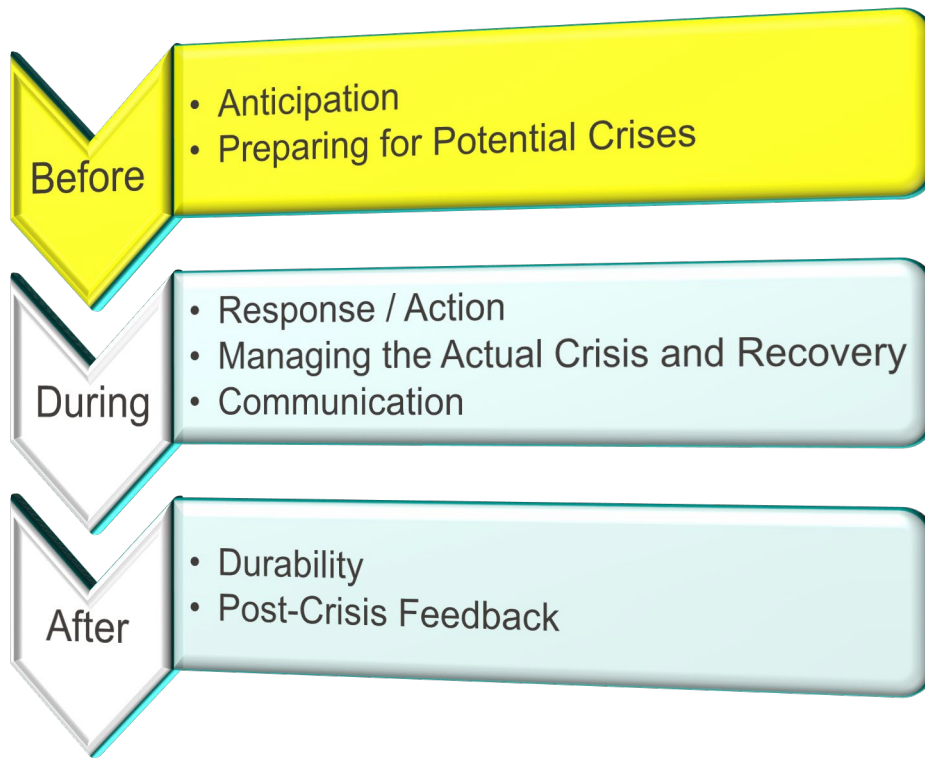Investigation Reports on FEMA (Federal Emergency Management Agency).

- United States Senate Committee on Homeland Security and Governmental Affairs: "A nation still unprepared" (2006)

- Select House Committee: "A Failure of Initiative: Final Report of the Select Bipartisan Committee to Investigate the Preparation for and Response to Hurricane Katrina" (2006)

Crisis management: Hurricane Katrina - Walmart (1)

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Walmart case

Before
- Anticipation
- Preparing for Potential Crises

During
- Response / Action
- Managing the Actual Crisis and Recovery
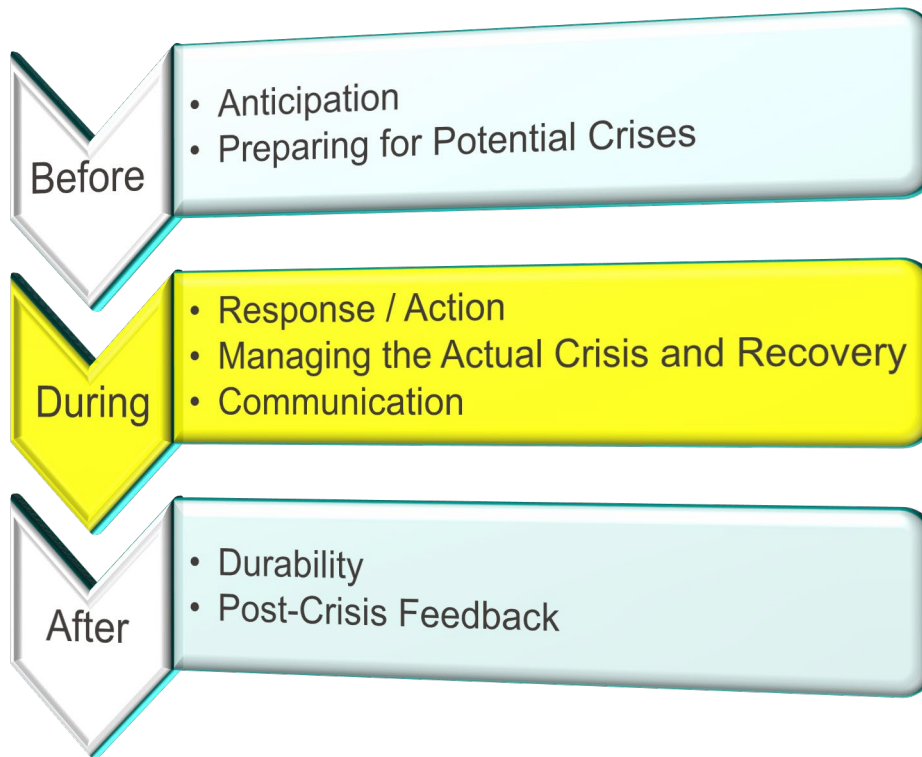- Communication

After
- Durability
- Post-Crisis Feedback

Building organizational capacity:

- High-level awareness for natural hazard preparedness.

- Business continuity team with senior management involvement.

- Decentralized decision-making capabilities.

- Contracts with weather operators for reliable forecasts.

Walmart case

- **Before**
  - Anticipation
  - Preparing for Potential Crises

- **During**
  - Response / Action
  - Managing the Actual Crisis and Recovery
  - Communication

- **After**
  - Durability
  - Post-Crisis Feedback
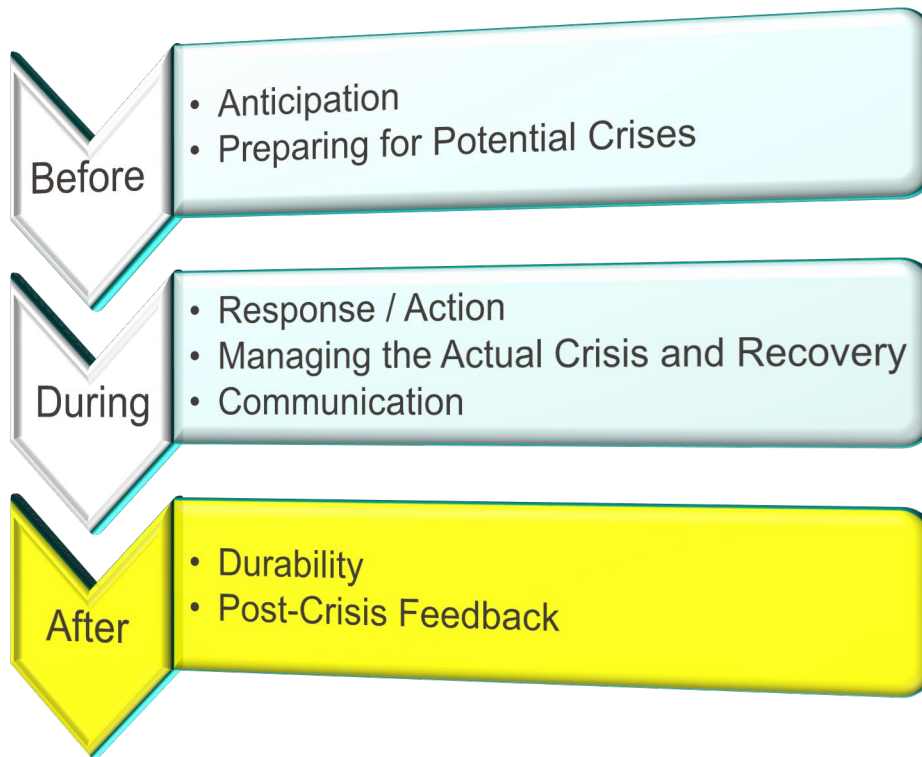
Staff:

- Expansion of BCT from 6 to 60 members, including senior managers.

- Local recognition and rewards for store managers who made courageous decisions.

- Established action protocols and risk-related decision-making processes.

- Precise weather assessments enabled timely relocation of emergency systems to safer areas.

- Activation of additional logistics capabilities.

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Walmart case

Before
- Anticipation
- Preparing for Potential Crises

During
- Response / Action
- Managing the Actual Crisis and Recovery
- Communication

After
- Durability
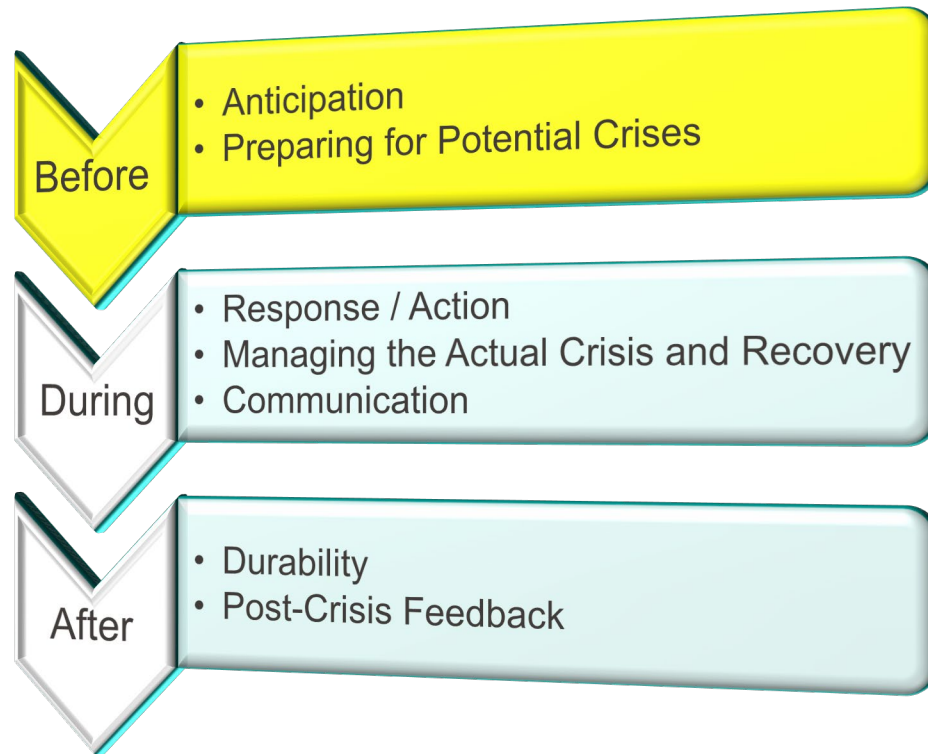- Post-Crisis Feedback

Capitalization :

- Implement a feedback system.

- Recognize and reward decision-makers.

- Reinforce strategic commitment to decentralized decision-making.

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FEMA (Federal Emergency Management Agency)

Before
- Anticipation
- Preparing for Potential Crises

During
- Response / Action
- Managing the Actual Crisis and Recovery
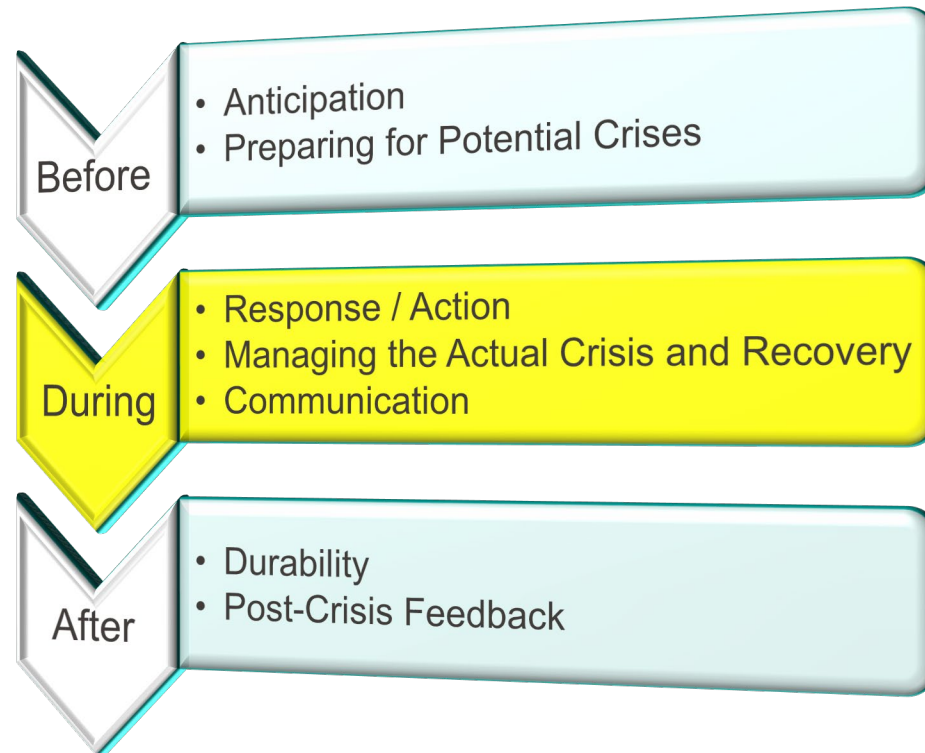- Communication

After
- Durability
- Post-Crisis Feedback

Agency dedicated to disaster management :

- Shifting focus to terrorism risks post 9/11.
- Reduced capacity and resources under Bush Presidency.
- Loss of "preparation" function.
- Reliance on Temporary Contracts.
- Unprecedented challenge.
- Scattered decision-making capabilities.
- Treating hurricane Katrina as a local event, not national.
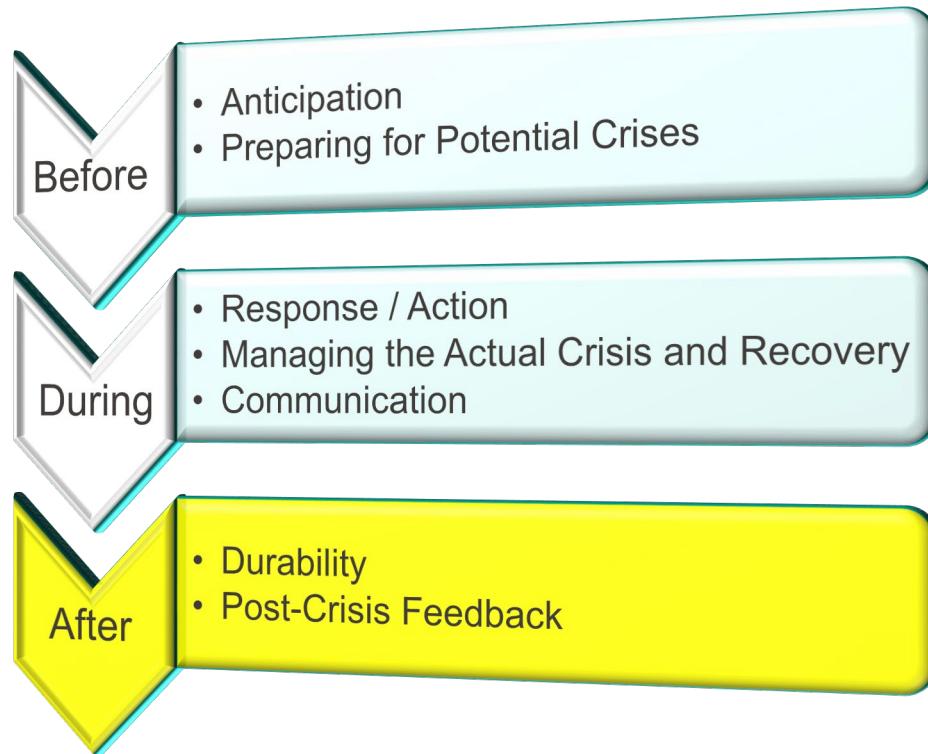- Lack of anticipation for cascading disasters and inadequate scenarios.

FEMA

During the crisis:

- FEMA resource coordination with limited capacity.
- Involvement of 500 different organizations in crisis management.
- Insufficient participation (36 instead of 95-125).
- Centralization of stakeholders and communication system failures.
- Misallocation of emergency services.
- Lack of adaptability in dealing with an extraordinary situation beyond traditional approaches.

Before
- Anticipation
- Preparing for Potential Crises

During
- Response / Action
- Managing the Actual Crisis and Recovery
- Communication

After
- Durability
- Post-Crisis Feedback

FEMA (Federal Emergency Management Agency)

- Before
  - Anticipation
  - Preparing for Potential Crises

- During
  - Response / Action
  - Managing the Actual Crisis and Recovery
  - Communication

- After
  - Durability
  - Post-Crisis Feedback

**Numerous reports and expert assessments of this event:**

- Reassessing assets and resources.
- Utilizing knowledge and experience.
- Embracing "all hazards preparedness".
- Preparing for Katrina-type crises, including cascading scenarios.

Crisis : Example : Hurricane Katrina (7) - conclusion

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The Executive Summary of the Special Report of the Committee on Homeland Security and Governmental Affairs (2006; ISBN 0-16-076749-0)

Among the numerous contributing factors to these failures, the Committee identified four overarching ones:

1. Long-term warnings were disregarded, and government officials neglected their duty to prepare for a forewarned catastrophe.

2. In the days immediately before and after landfall, government officials took insufficient actions or made ill-advised decisions.

3. The systems that officials relied on to support their response efforts experienced critical failures.

4. Government officials at all levels failed to provide effective leadership.

Crisis management: Crisis communication (1)

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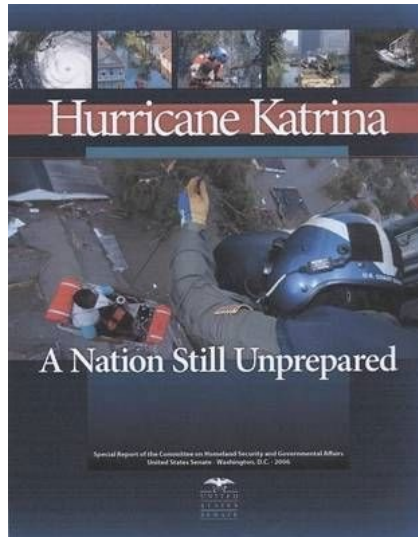
Why deal with crisis communication?
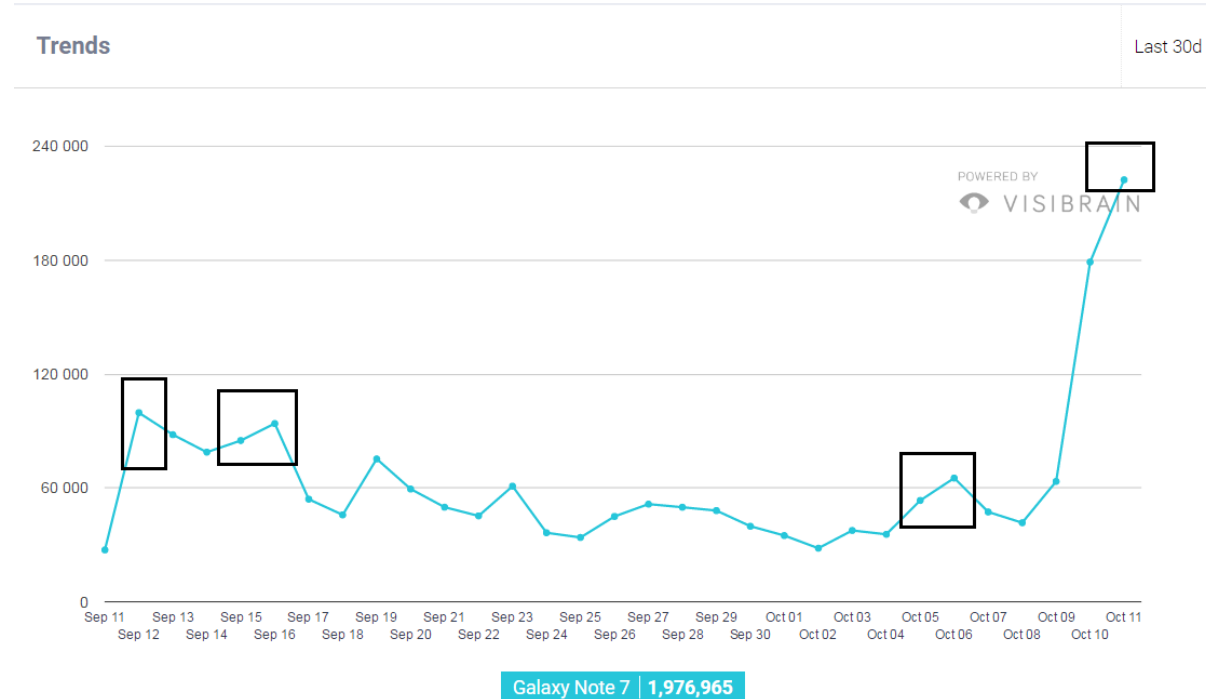
If you don't do it, others will do it for you !

Crisis timeline – 2016 Samsung's Galaxy Note 7 recall nightmare

There have been **1,976,965 mentions of the Galaxy Note 7 on social media over the past 30 days**. The graph below clearly shows the spikes in the number of mentions caused by key events of the crisis:

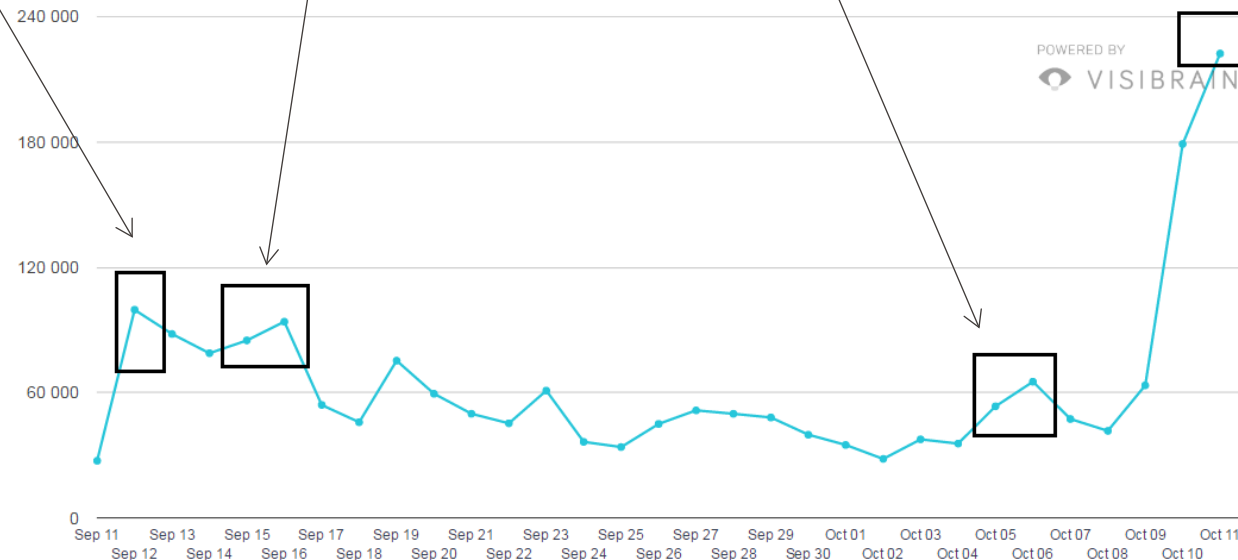# Crisis management: Crisis communication (1.1)

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September 12th 2016: Samsung's stock takes a tumble after the brand issues an official statement telling Galaxy Note 7 owners to switch off their phones - fuelling rumours on social media about the possibility of the smartphone being discontinued.

September 15th: Samsung announces a new wave of "safe" phones to be made available.

October 5th: Samsung's nightmare starts again as a Galaxy Note 7 starts to smoke on a plane in Louisville, causing it to be evacuated. The phone was switched off and had a certified "safe" battery. The story unleased a torrent of ridicule on social media, including a Grand theft Auto mod featuring the smartphone as a weapon.

- October 8th: A video of one of the smartphones catching fire in a Burger King restaurant goes viral. The clip, which shows an employee wearing heat-resistant gloves attempting to dispose of the phone, currently has over 1 million views.
- October 10th: Samsung pauses the production of the Galaxy Note 7
- October 11th: Samsung announces that it will be ceasing all sales and production of the Galaxy Note 7

Trends

POWERED BY
VISIBRAIN

240 000

180 000

120 000

60 000

0

Sep 11 Sep 13 Sep 15 Sep 17 Sep 19 Sep 21 Sep 23 Sep 25 Sep 27 Sep 29 Oct 01 Oct 03 Oct 05 Oct 07 Oct 09 Oct 11
Sep 12 Sep 14 Sep 16 Sep 18 Sep 20 Sep 22 Sep 24 Sep 26 Sep 28 Sep 30 Oct 02 Oct 04 Oct 06 Oct 08 Oct 10

Galaxy Note 7 | 1,976,965

Time 12``

Crisis management: Crisis communication (2)

2 factors have shaken up crisis communication :

Social networks

Appearance of citizen journalists

Mistrust of institutions

Parallel information networks

Crisis management: Crisis communication (3)

Strategic crisis communication is essential for responding to criticism, maintaining, or restoring an institution's trust and image capital.

Crisis

According to Chinese ideograms

CRISIS "The Chinese use two characters to write the word 'crisis.'

危機

crisis
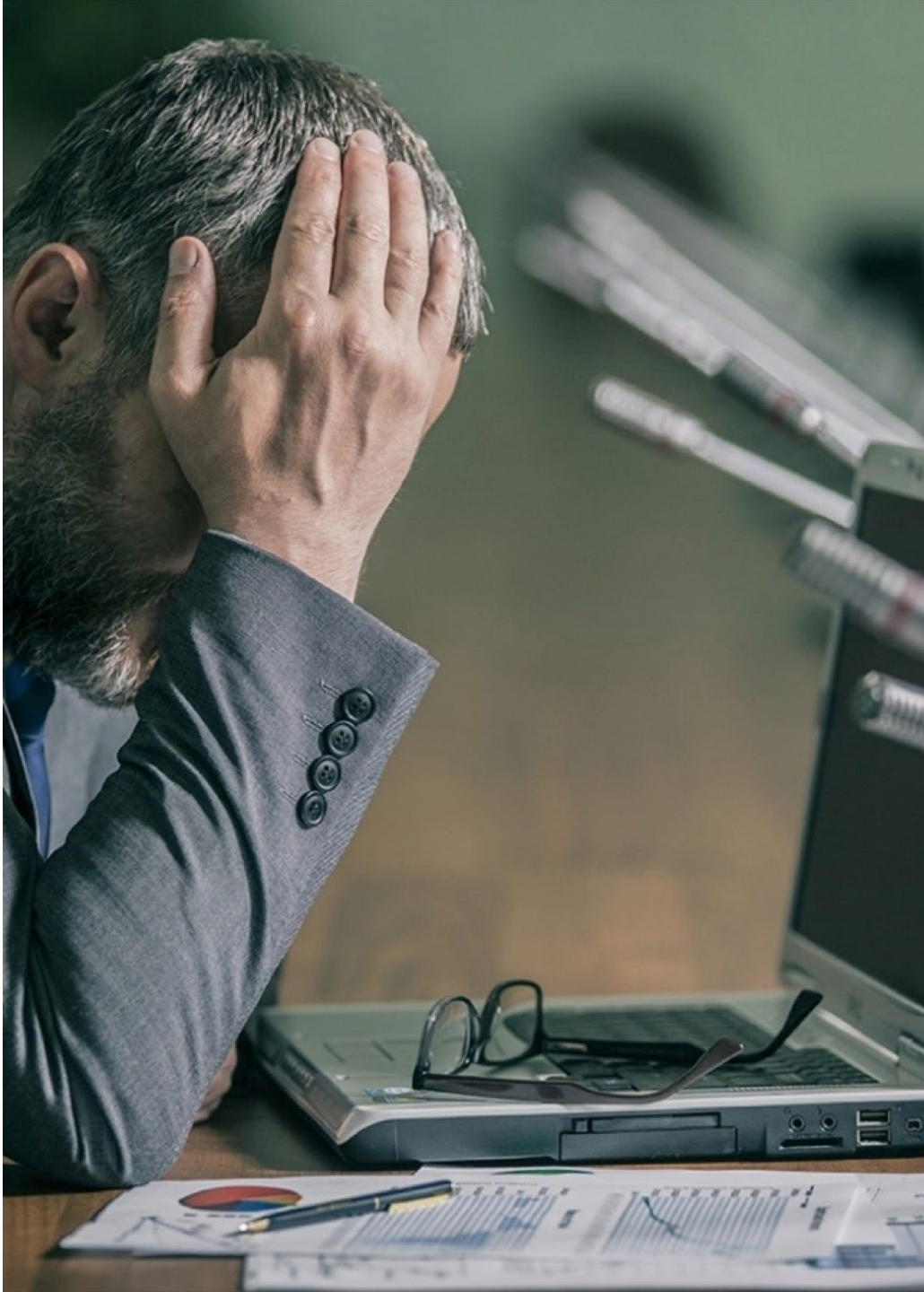
One stands for **danger**;

the other for **opportunity**.

Crisis management: Crisis communication (4)

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What happens when you are stuck in a crisis ? How will you react ?

Source: http://biztoonz.com

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Crisis management: Crisis communication (5)

"It Can't Happen To Us"

- Crisis management revolves around effective communication → designate a single spokesperson.

- The goal is to restore and/or maintain trust and confidence.

- The most effective communication strategy acknowledges the situation, commits to understanding the facts, and taking measures to prevent a recurrence.

- Crisis communication requires ongoing preparation and adaptation as new information becomes available.

Crisis management: Crisis communication (6)

Essential skills for effective communication:

- Stay calm and composed.
- Maintain perspective.
- Quick analysis and synthesis.
- Be proactive.
- Make fast, sound decisions.
- Stay positive.
- Effective speaking.
- Inform effectively.

EPFL

Source: https://www.edcast.org/learn/public-affairs-how-to-be-a-government-pio-spokesperson-fall-2015

Business Continuity Management

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Source: https://www.certificationeurope.com/

The Business Continuity Plan (BCP) is both the name of a concept, a procedure and a document that describes it.

The plan must allow a group (government, community, institution, company, hospital ..) to operate in degraded mode, or in a situation of major crisis.

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- It is designed to ensure the continuity of critical operations during emergencies or disasters (availability).

- This formalized and regularly updated strategic document outlines the response to disasters or significant losses, aiming to reduce disruption.

- Its objective is to mitigate the impacts of a crisis or natural disaster on a company, government, institution, or group.

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The BCP

Crisis management: Business continuity plan - BCP (3)
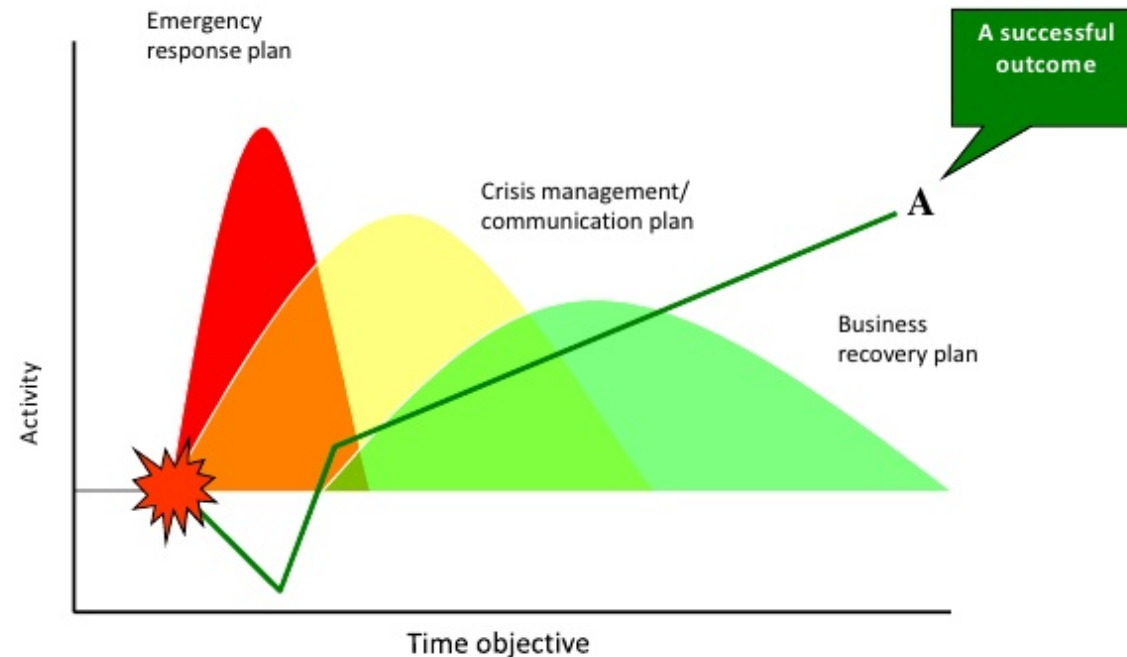

Reference: BS25999-1, 2006

What to do when a disruption occurs ?

Disruptions are managed through three steps:

1. Response

2. Continuation of critical services

3. Recovery and restoration

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PDCA for BCP

Plan
Implement a continuity program.
Form an oversight committee.
Develop policies and procedures.
Create a documentation system.
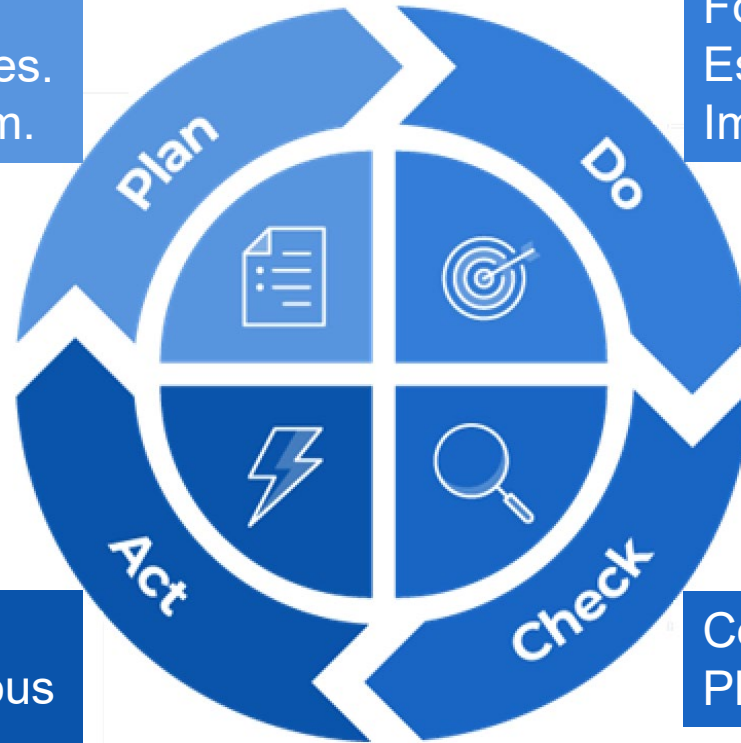
Do
Conduct business impact and risk analysis.
Formulate a recovery plan.
Establish a communication plan.
Implement an exercises program.

Act
Enforce necessary corrective actions and implement continuous improvement measures.

Check
Conduct internal audits.
Plan management reviews..

Polycrisis (1)

Source: Illustration made by AI

The World Economic Forum's Global Risks Report 2023 introduces the concept of a "polycrisis" to describe how present and future risks can intertwine, creating a network of interconnected global risks. The combined effects of these risks are greater than the individual impact of each risk on its own.
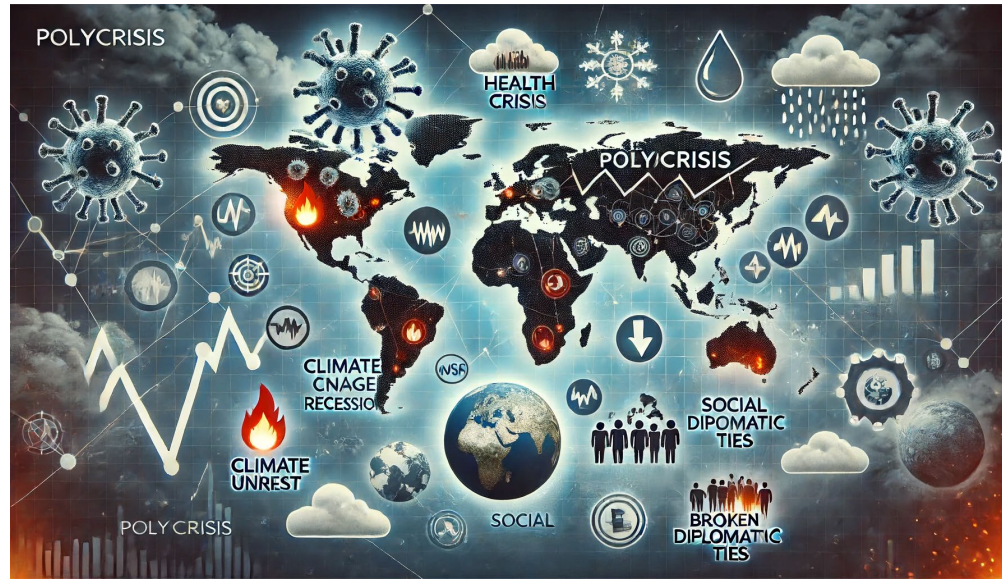
Polycrisis (2) : A simplified definition

- A polycrisis refers to a scenario where multiple interconnected crises happen simultaneously, intensifying the severity of each crisis.

- These crises can span various domains, such as economic, political, social, environmental, health-related, and technological.

- Their interaction amplifies the vulnerabilities and challenges within the affected systems.

Polycrisis (3) : An example

A recent example of polycrisis on a global scale occurred during 2020-2021, where multiple crises unfolded simultaneously, leading to complex and interconnected ripple effects.

Polycrisis (4) : An example

The pandemic has triggered an unprecedented global health crisis.

COVID-19 pandemic

Efforts to contain the virus, including lockdowns and business closures, resulted in a global recession.

Economic crisis

Social and economic inequalities have deepened, with disparities in access to healthcare and vaccines further heightening social tensions.

Social crisis

The handling of the pandemic sparked political tensions, with debates arising over individual freedoms versus public health, as well as criticism of government responses to the crisis.

Political crisis

Extreme weather events, including wildfires, hurricanes, and floods, have increased in frequency, often intensified by climate change.

Climate crisis

Misinformation and conspiracy theories surrounding COVID-19 and vaccines have made managing the pandemic more difficult and have heightened public mistrust in institutions and scientific experts.

Information crisis

Crisis management: Conclusion

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Time 2`00``

Source: https://www.motuscommercials.co.uk