# Continuity of business and operations of MSMES vis-à-vis disaster scenarios

## Theoretical Module

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*Training Workshop for MSMEs on continuity of business and operations vis-à-vis natural disasters"*
*28, 29 and 30 June 2017*
*Belize City, Belize*
*SP/TC-MIPYMESCNOFD/DT N° 4-17*

# Business continuity and operations in the face of disasters

## Training Workshop for MSMEs

**Yves Dávila**

**SELA Consultant**

SISTEMA ECONÓMICO
LATINOAMERICANO
Y DEL CARIBE

# Agenda

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1. Introduction to business continuity
2. Roles and responsibilities to consider
3. Prioritize activities based on urgency
4. Protect more urgent activities
5. Design and implement strategies for response, continuity and recovery
6. Document continuity plans
7. Perform tests and exercises for the continuity plans
8. Raise awareness and competences in the organization
9. Mantain the business continuity program
10. Business continuity program indicators

# Module 1

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## Introduction to business continuity

- Presentations
- Importance of business continuity and operations
- Current standard

# Presentations

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- Name
- Position
- Experience in any disaster
- Expectations of the course

# Importance of BC

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- Major events always occur
  - Increasingly severe impacts
    - Climate change
    - Population growth
    - Acceleration of economies

# Importance of BC

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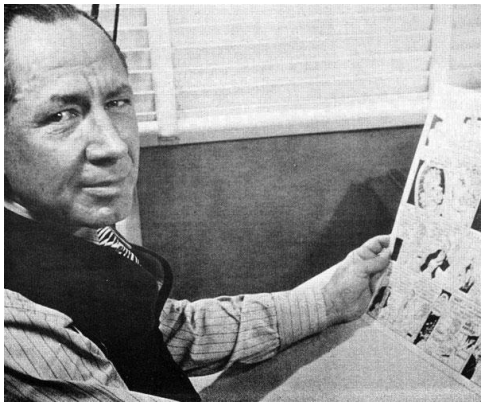
- Murphy's Law

*"If anything can go wrong, it will. Moreover, it will go wrong in the worst way, at the worst time and in a way that causes the greatest possible harm."*



Edward A. Murphy Jr. (1949)

# Importance of BC

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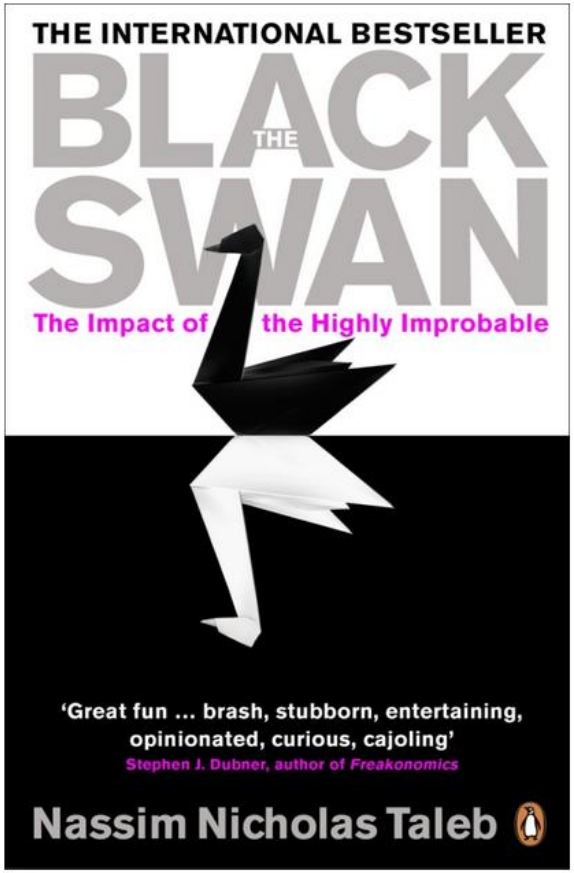
- The black swan

*"I stop and summarize the triplet: rarity, extreme impact and retrospective (though not prospective) predictability. A small number of Black Swans explains almost everything in our world, from the success of ideas and religions, to the dynamics of historical events, to elements of our own personal lives."*



# Importance of BC

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- Natural hazards
  - They occur without intervention by human beings and attributable to a physical phenomena of natural origin
- Hazards caused by man
  - Accidental risks
  - Intentional risks
- Technological hazards
  - Main computer breakdown
  - Telecommunication damage
  - Power failures, electricity or public services outages

# Current standard

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- ANSI/ASIS SPC.1 – Business continuity
- NFPA 1600 – Business continuity
- ISO 22301 / 22313 – Business continuity
- Business Continuity Institute  (thebci.org)
- Disaster Recovery Institute International (drii.org)
- ISO 22317 – Guide for carrying out BIA
- ISO 22320 – Incident response
- ISO 22398 – Guideline for exercises
- ISO 27031 – Information technology continuity
- Others?

# ISO 22301 / 22313

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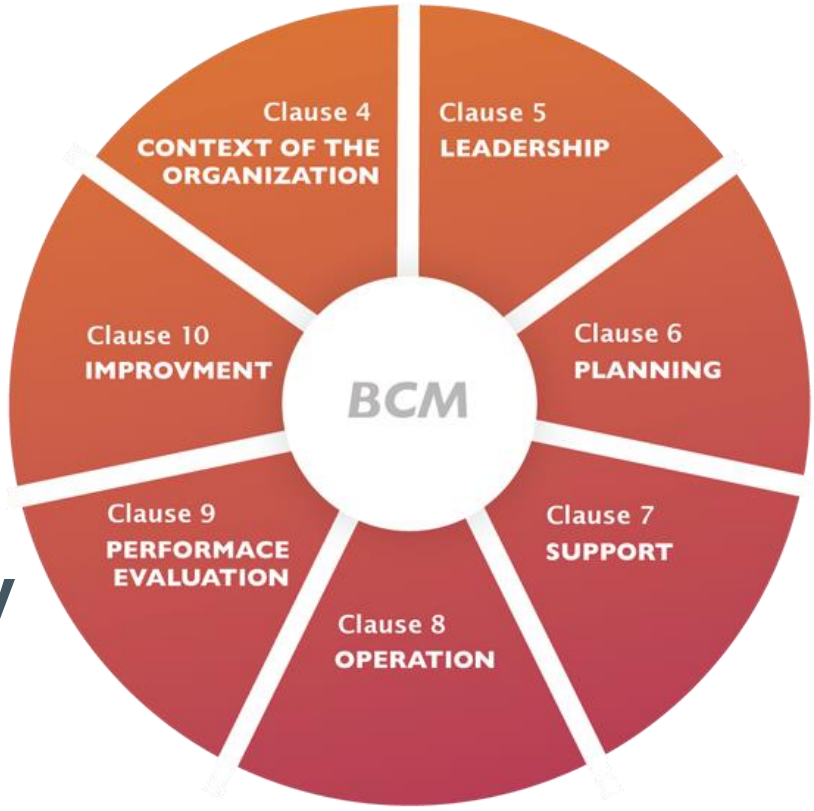
- Relevant for organizations with high risk (financial, telecommunications, mining, transport and the public sector) hoping to implement a **business continuity** management system



# ASIS SPC.1-2009

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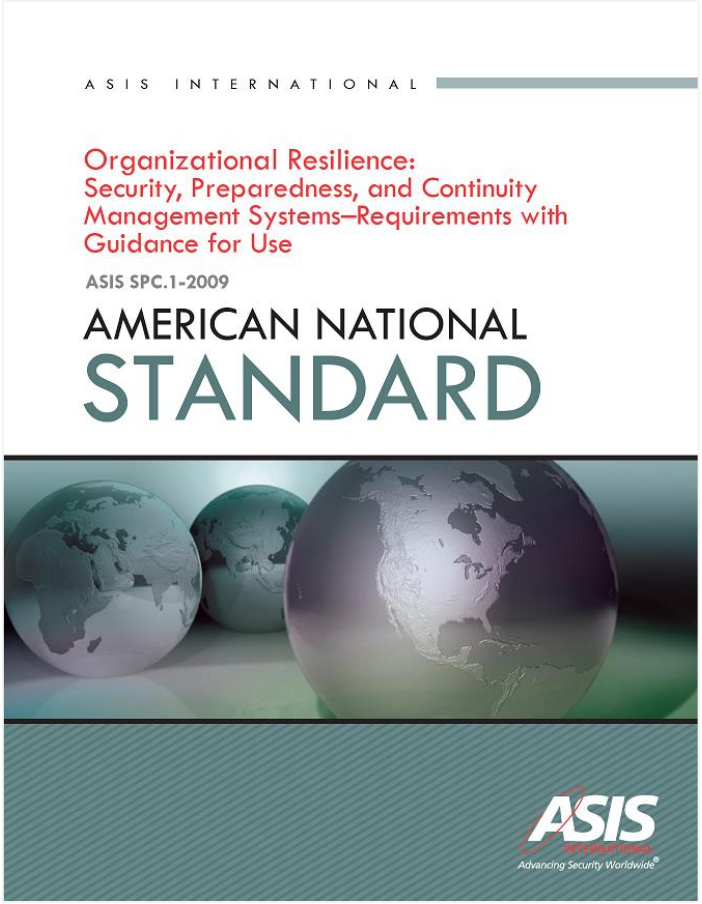
- Applicable to organizations hoping to establish, implement, maintain and improve an **organizational resilience** management system



# NFPA 1600

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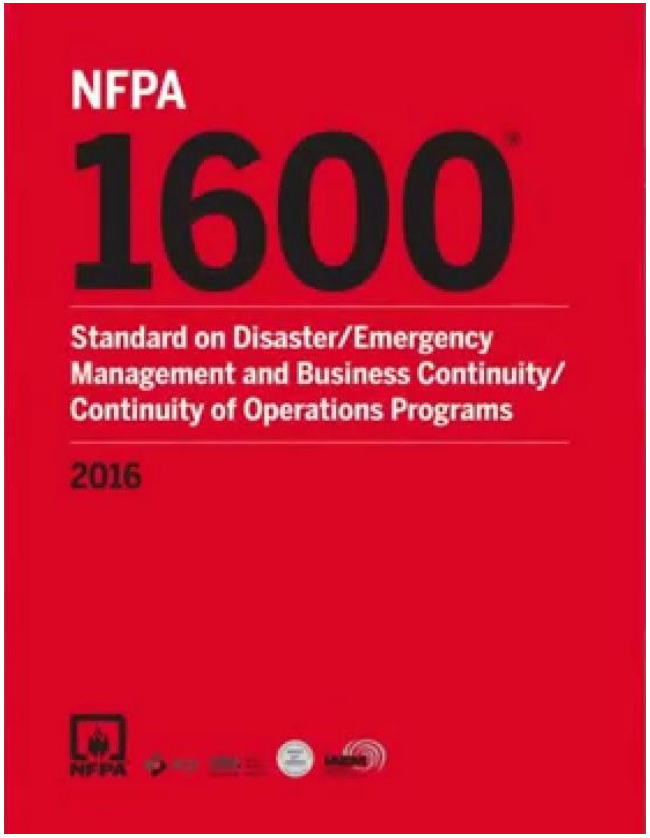
- Highlights the important components of an **emergency management** system that enables organizations to develop a business continuity programme



# Good Practice Guidelines
## BCI - Business Continuity Institute

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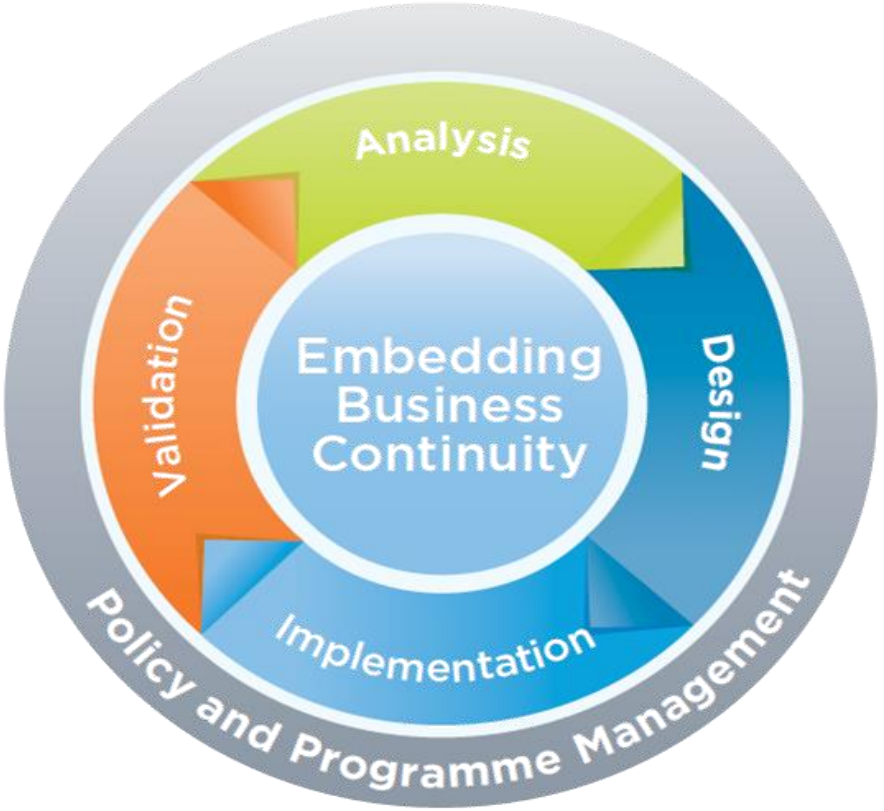
- PP1: Policy and Programme Management
- PP2: Empowerment / Incorporating Business Continuity
- PP3: Analysis
- PP4: Disign
- PP5: Implementation
- PP6: Validation




The BCM Life Cycle
Improving organizational resilience
www.thebci.org

# Las 10 prácticas profesionales del DRII

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1. Project Initiation and Management
2. Risk Evaluation and Control
3. Business Impact Analysis
4. Developing Business Continuity Strategies
5. Emergency Response and Operations
6. Developing and Implementing Business Continuity Plans
7. Awareness and Training Programmes
8. Testing and Maintaining Business Continuity Plans
9. Crisis Communication
10. Coordination with Public Authorities

DRI International

Disaster Recovery Institute International
www.drii.org

# ISO 27031

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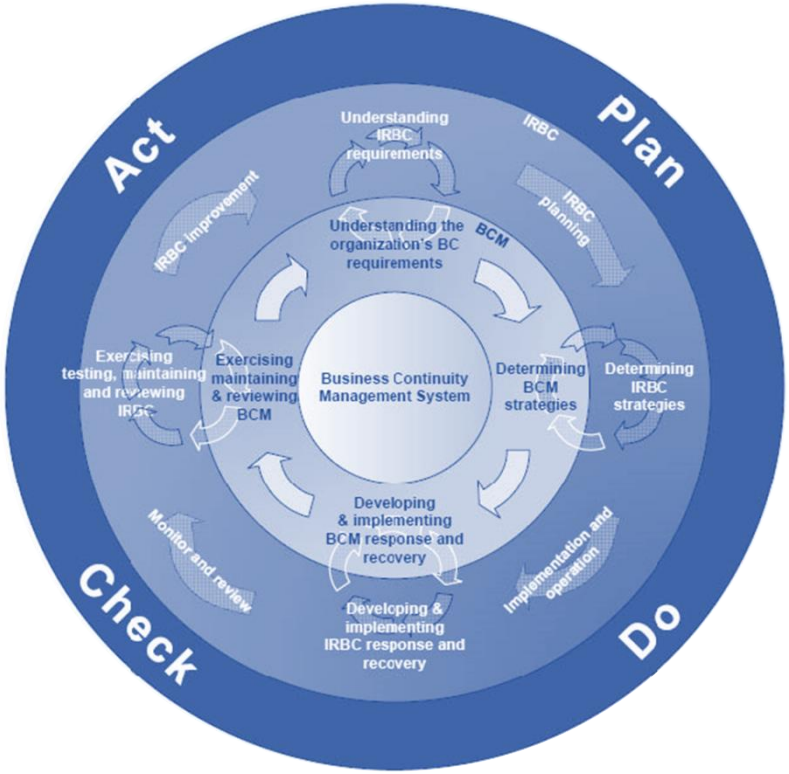
- Methodological guidelines for information and communication technology readiness for business continuity




Source ISO27031

# Module 2

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## Roles and responsibilities to consider

- Participant Roles
- Business continuity policy
- Follow-Up meetings
- Internal audit

# Participant roles

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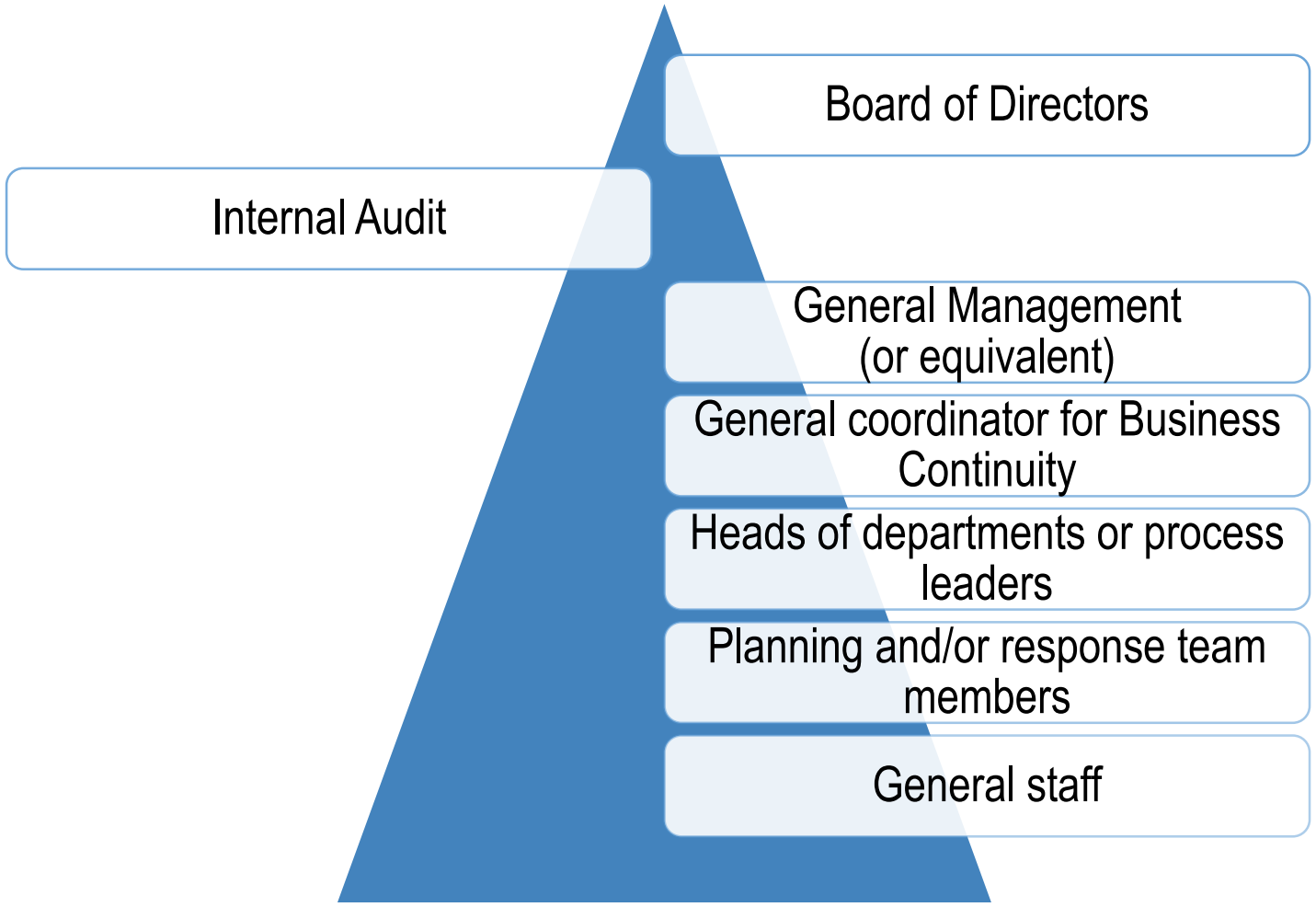

# Board of Directors

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- Responsible for business continuity and operations of the organization
- Entrusts this responsibility to the highest hierarchical authority in the organization (General manager)
- Requests accountability on the matter at the end of each period that is deemed convenient
- Approve, as appropriate, the investments in resources necessary to achieve the implementation of business continuity and operations.
- Approve the scope of business continuity and operations

# General Management

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- Responsible for supervising BC
- Constant review of management process for business continuity and operations
  - Assign a responsible person with adequate political hierarchy and necessary competency
- Approve, as appropriate, the investments in resources necessary to achieve the implementation of business continuity and operations.
- Lead an incident and crisis response scheme
  - Incident response team
  - Operative, emergency or reputational type incidents

# General coordinator of BC

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- Responsible for implementing and maintaining BC
  - Reports progress to general management
  - Depending on the size of the organization, this function could be shared (for medium or small organizations) or exclusive (for large organizations)
- Implementation of the continuity programme should follow a methodological order according to one or a set of international standards
- It should involve the heads of the departments or process leaders
- It should have the necessary competence, specialized training credentials
  - Participate in forums and conferences on business continuity at local, regional and international levels

# Head of department or process leader

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- Responsible for implementing and maintaining business continuity and operations in his/her area or process
  - Designates a person responsible for articulating internal efforts for business continuity
- If it is a support department or support to operations, he/she leads the incident response within its area
  - Security, Human Resources, General Services, Information Technology
  - Prepares the organization for specific incidents, for example pandemic, fire, seism or earthquakes, computer center breakdown
  - He(she also supports recovery of critical areas or processes
- He/she should work together and under the leadership of the business continuity general coordinator
- He/she should have the necessary competences and specialized training credentials

# Member of the planning and/or response teams

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- Usually comprised of operative staff under the departments
- During the implementation and maintenance process of business continuity and operations, he/she provides expert knowledge on priorities and recovery needs
- During an exercise or a real incident, he/she participates in response to the incident applying the plans and continuity strategies prepared during the planning stage
- The members of the planning and/or response teams should have the necessary competences, specialized training credentials

# General staff

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- Although they do not necessarily participate actively in business continuity, they participate in it in the following manner:
  - They know how to notify an incident that could cause interruption in operations
  - They recognize the recovery team of their area or process and know … Texto incompleto en español)
  - They know how, when and to whom a real incident should be reported
  - They know how to channel requirements by the press or other interested parties on the situation

# BC policy

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- Declaration of Top Management
  - Expresses its commitment with the implementation and maintenance of business continuity
  - Establishes justification (which is of interest to the interested parties)
- Defines roles and responsibilities
  - Committed resources
  - With knowledge
  - With empowerment

# Follow-Up Meetings

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- The government is also implemented with follow-up meetings and review on behalf of the authority
- It is recommended once every two or three months
- If the meetings are held too far apart from each other, then it is very likely that problems which may occur during implementation or maintenance of the continuity program may not remedied.

# Internal audit

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- Internal audit should ensure that the continuity process is carried out according to the instructions given by the Board of Directors and in accordance with the best professional practices in this regard.
- The auditor should be and independent person
- The auditor should have adequate competences to provide opportunities for improvement aligned with the objectives of the continuity process

# Module 3

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**Priorize activities based on urgency**

- The scope of BC
- Non-tolerable thresholds
- Maximum Tolerable Period of Disruption (MTPD)
- Minimum level of services (MBCO)
- Recovery Time Objective (RTO)
- Identify minimum necessary resources

# Scope of BC

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- BC is not for the entire organization
  - Low probability events
  - Protect in a redundant way only what is really critical
  - Bear in mind that BC competes with efficiency and cost reduction
- Which products or services will be guaranteed despite a major event?
- There are several ways of establishing the scope of BC
  - By product or service with the most revenue
  - By most risky location
  - As required by the regulator or by a client

# Impact thresholds

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- Who are the parties interested in our products and services?
- What would be their minimum requirements in case of a major event?
  - In terms of revenue or loss of clients
  - In legal or contractual terms
  - In terms of environmental impact
  - In terms of impact to people
  - In terms of reputational damage
- Will any regulator require any minimum level of service?

# Maximum Tolerable Period of Disruption (MTPD)

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- Is the time it would take for adverse impacts to become unacceptable arising as a result of the disruption or absence of:
  - Product or service?
  - Area?
  - Process?
  - Locality?
- Scenarios should be considered for analysis
  - Severe interruption only happens to the entity
  - Or it is a massive event where the entire society is affected
- The point in time in which there is a greater demand or need for the product or service, area, process, or locality must be analyzed.

# Maximum Tolerable Period of Disruption (MTPD)

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| Service or Activity | | | How long do the impact thresholds take to become intolerable? | | | | |
|---|---|---|---|---|---|---|---|
| Description | Critical Season-ality | Most stressful scenario | Econo-mic | Clients or users | Legal or regula-tory | Environ-mental | Security of the people |
| Service 1 | | | $MTPD_1$ | No aplica | $MTPD_2$ | $MTPD_3$ | No aplica |
| ... | | | | | | | |
| Activity 1 | | | | | | | |
| ... | | | | | | | |

(ejemplo)
El **MTPD del Servicio 1** será el mínimo entre $MTPD_1$, $MTPD_2$ y $MTPD_3$

# Minimum level of services in BC (MBCO)

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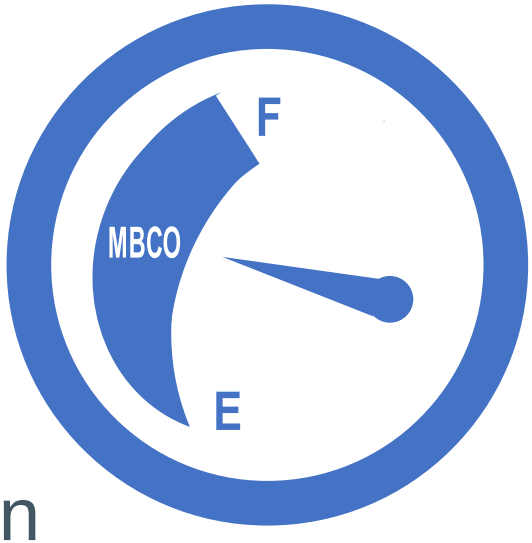
- Before MPTD occurs, what level of service should be achieved?
  - For some or all clients?
  - For some or all localities?
  - For hours or continuously?
  - The entire service level or only a part?




- Analysis of that point in time when there is a greater demand or need for the product or service.

# Recovery Time Objective (RTO)

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- Any value from ZERO to **less than** MTPD is valid.
- If the RTO is close to ZERO, the cost of the alternative strategy to satisfy MBCO will be very expensive
- If RTO is close to MTPD there is a very high risk that the organization reaches or surpasses the impact threshold
  - Although the cost is lower, it is not convenient.
- RTO could be better defined once the possible recovery strategies are determined

# Recovery windows (exmple)

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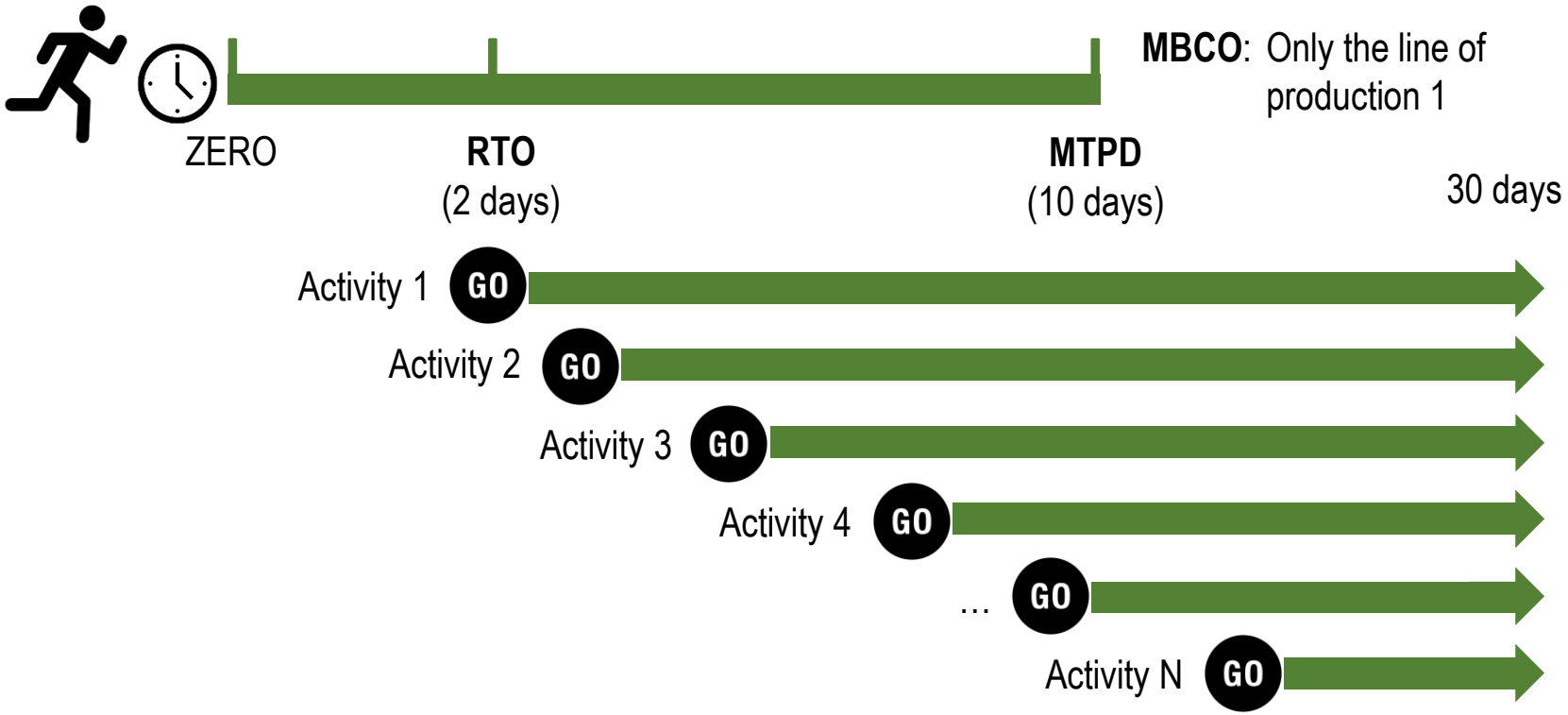
- Determine the recovery windows for critical activities to provide the service, process, area or locality evaluated



# Identify minimum necessary resources

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- Considering the recovery time windows, the necessary resources are estimated for each moment
  - People
  - Infrastructure
  - Equipping
  - Information Tecnhology
  - Finance
  - Regulatory reports
  - Suppliers
  - Interested parties to be contacted

# Identify minimum necessary resources

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## People

- Minimum necessary staff
  - Which person needed is available?
  - What is his/her position or role?
- Alternative transport
  - What transport options are there?
- Alternative communication
  - What communication options are there?


**Note: Answers should be for each point in time from the lowest RTO**

# Identify minimum necessary resources

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## Infrastructure

- Facilities from where they could continue working or producing
  - From home?, Another location?, Another plant?
- Basic services
  - Demand for electricity
  - Demand for water
  - Others?


**Note: Answers should be for each point in time from the lowest RTO**

# Identify minimum necessary resources

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## Equipment

- What basic equipping is needed for operation
  - Tools? Computers? Others?
- Minimum supples or consumables
  - Amount of material
  - Non-perishable foodstuff
  - Others?


**Note: Answers should be for each point in time from the lowest RTO**

# Identify minimum necessary resources

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## Information Tecnhology

- What specific applications are needed
- Which application, if not available, brings the activity to a standstill
  - Is there any alternative means?
  - For how long can the alternative means be used?


**Note: Answers should be for each point in time from the lowest RTO**

# Identify minimum necessary resources

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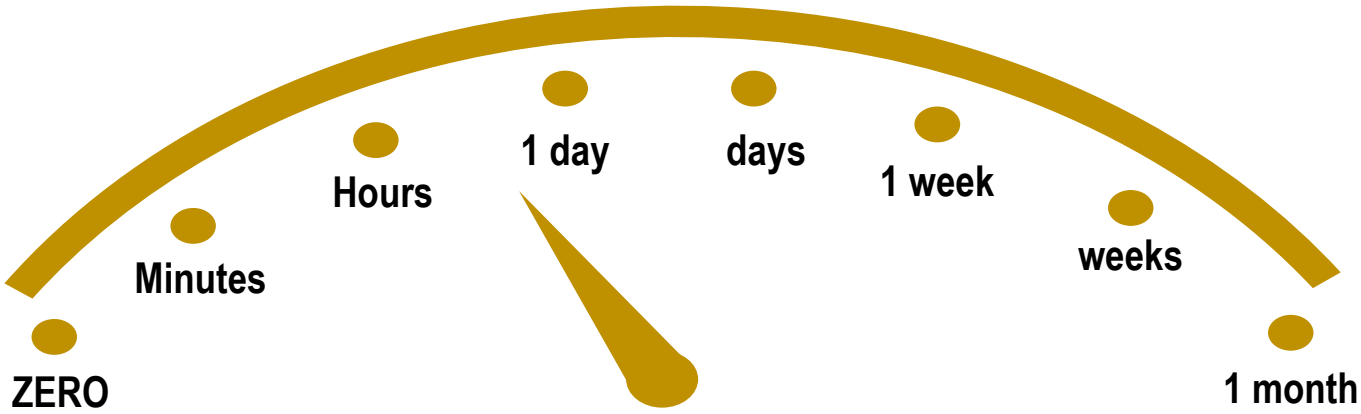
## Tolerance to data loss

- For each application identified, how much historical data loss can be tolerated
  - RPO (Recovery Point Objective)



# Identify minimum necessary resources

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## Other resources

- Financial capacity
  - Loans to meet payments
  - Petty cash for emergency cash
- Obligations or regulatory reports that must continue
- Interested parties who should be kept informed (including suppliers)


**Note: Answers should be for each point in time from the lowest RTO**

# Module 4

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**Protect most urgent activities**

- General concepts of risks
- Identify risk events
- Identify existing controls
- Estimate impacts
- Estimate probabilities
- Estimate level of risk

# General concepts

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- Business continuity and operations “are activated” after the interruption
- Risk evaluation seeks to prevent the interruption
- There are many ways or methods
  - Cause – effect analysis
  - Root cause
  - Impact Probability (ISO 31000)

- It serves to identify vulnerabilities during prrimary operation
- It also serves to identify failure points in the recovery strategy

# General concepts

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- Risk event
  - Threat that may impact a resource, bringing a crucial activity to a standstill
- Existing control
  - Measures already existing in the organization that mitigates the risk event from occurring
- Level or risk = Probability * Impact
  - Quantitative vs. qualitative

# Identify risk events

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- Identify threats applicable to the organization's reality
  - Worldwide / continent
  - At country / province / vecinity levels
  - At premises level
  - At floor / area / activity levels
- What resources are impacted?
  - People, communications and transport
  - Infrastructure, equipping, supplies and consumables
  - Informatic applications and data
  - Suppliers and other interested parties

# Identify existing controls

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- Identify controls already existing in the organization
- A control can mitigate the impact on more than one resource
- Rating of control effectivity could be standarized
  - It is documented and formalized
  - Maintenance is done or practiced
  - It has worked in a previous event

# Estimate the impact

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- Quantitative vs. qualitative
- It could be calculated considering the following form
  - Estimate the interruption time in case the risk event occurs **(t)**
  - Estimate the impact considering in which time interval the interruption time falls (t)
    - **Very low**: Between 0 and (RTO / 2)
    - **Low**: Between (RTO / 2) and RTO
    - **Medium**: Between RTO and ((RTO + MTPD) / 2)
    - **High**: Between ((RTO + MTPD) / 2) and MTPD
    - **Very high**: Greater than MTPD

# Estimate probability

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- Quantitative vs. qualitative
- It could be calculated considering the following form
  - Estimate the threat probability
    - **Very low** : ocurring beyond 25 years
    - **Low**: occurring every 25 years
    - **Medium**: occurring every 10 years
    - **High**: occurring every 5 years
    - **Very high**: occurring yearly
  - Considering the effectiveness of existing controls, estimate how many levels will drop

# Estimate the level of risk

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| Impact / Proba-bility | Very low | Low | Medium | High | Very high |
|---|---|---|---|---|---|
| Very high | | | | | Extreme |
| High | | | | High | |
| Medium | | | Medium | | |
| Low | | Low | | | |
| Very low | | | | | |

- Extreme
- High
- Medium
- Low

# Adicional considerations

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- If the primary operation is evaluated
  - It is not advisable to take into account the alternate scheme as an existing control
    - Unless there is no way to reduce the risk
- If the recovery strategy is evaluated
  - The idea is to identify weaknesses of the alternative scheme
    - Single points of failure
- The priority of the controls to be implemented will be based on the level of identified risk
  - Extreme risk in the first place

# Module 5

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**Design and implement strategies for response, continuity and recovery**

- Strategic options vs. Implementation costs
- Examples of strategic options
- Strategies for handling incidents or crisis

# Options vs. Investment

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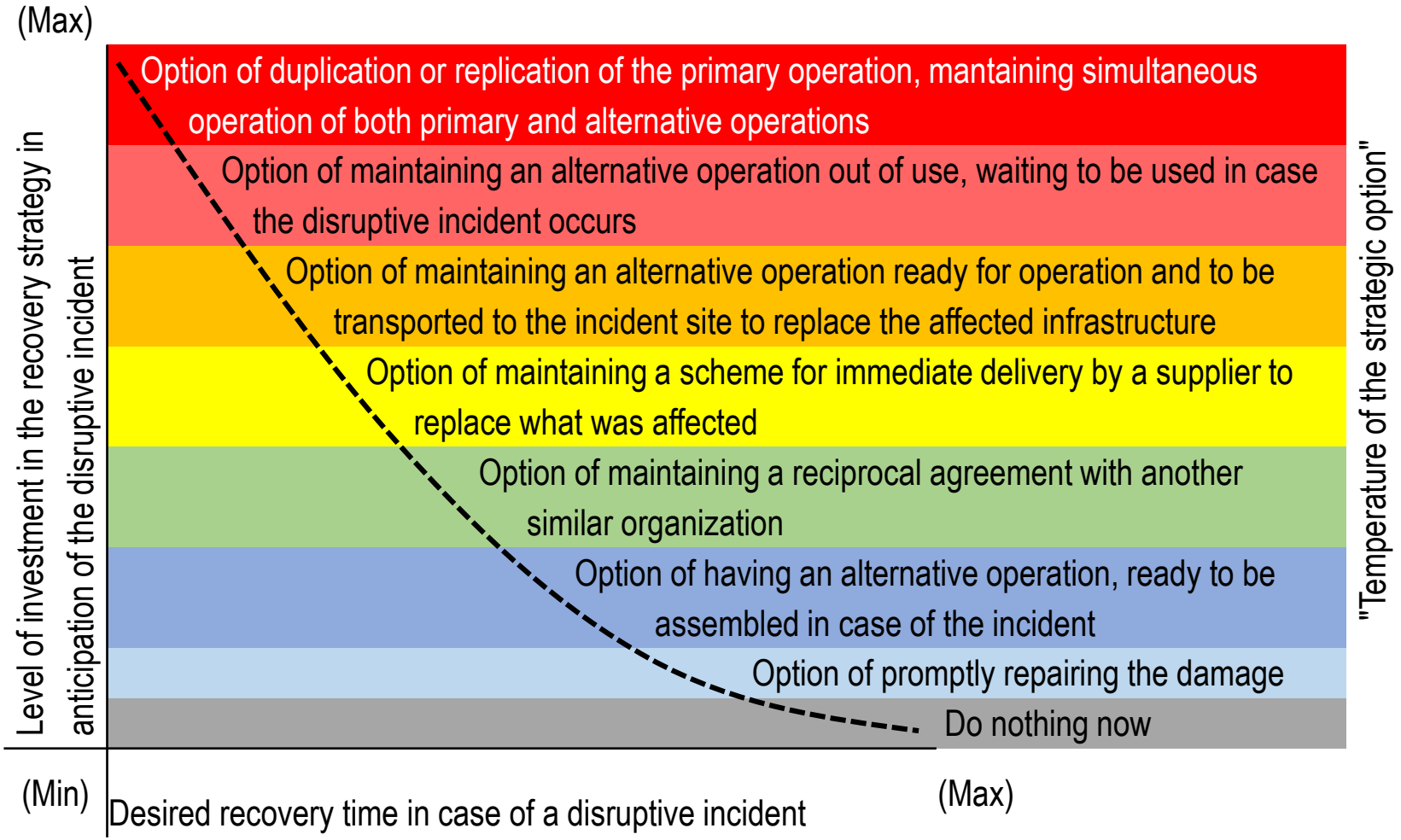

# Strategy options

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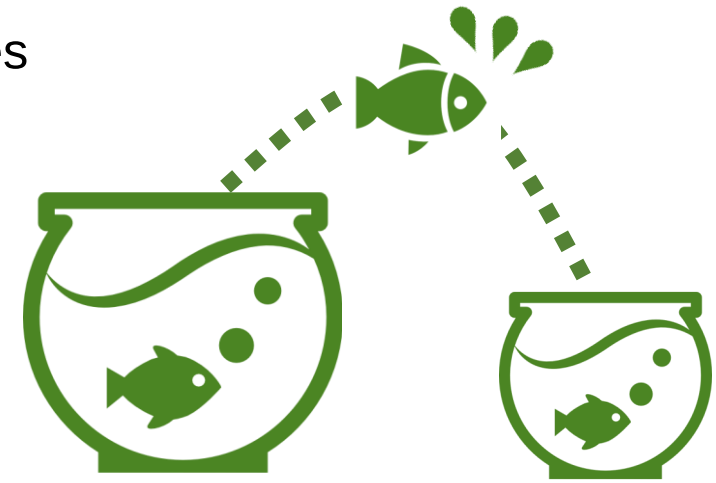
- They apply for each resource
  - People
    - Staff, Transport, Communications
  - Infrastructure
    - Facilities, basic services
  - Equipping
    - Equipping, supplies, consumables
  - Information technology
    - Applications
    - Data backup
  - Finance
  - Regulatory reports
  - Suppliers



# Examples

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- People
  - Succession plan
  - Primary alternative or identified alternatives
  - Policies prohibiting primary and alternative staff from travelling at the same time and using the same means;
  - Prohibition to take vacations at the same time
  - Implementation of programmes for health and emotional control for staff identified as crucial

# Examples

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- Physical infrastructure
  - Alternative locations for operation guaranteeing supply of public services from different sources
  - Agreements with hotels
  - Training rooms
  - Reuse of the sales force space (if it were not urgent to recover)
  - Work from home

# Examples

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- Equipping
  - Renewal of equipment and storing the old for spare parts
  - Maintain obsolete services at a mínimum level of operation
  - Assemble models or transportable machinery (if posible) to take to the affected location
  - Identify equipping of services that are not so critical to dismantle, take them to the affected location and assemble them there.

# Examples

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- Material and consumables
  - Keep small stock in strategic places
  - Establish stock supply agreements with various suppliers
  - Establish reciprocal agreements with similar organizations to provide mutual support in case of a disruptive event

# Examples

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- Informatic and data systems
  - Replicate the computer center at an alternative location, whether totally or partially, according to what has been identified as most critical
  - Outsource the IT service and take it to the “cloud”
  - Make backup copies and restore as necessary.

# Examples

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- Financial vulnerability
  - Maintain contingent lines of credit to meet needs at the time of the incident
  - Keep cash available for access in order to meet cash needs during the incident
  - Establish procedures for recording and controling damages and expenses associated with the incident for subsequent claims to the insurer
  - Maintain differed payment agreements with suppliers in case of major incidents

# Examples

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- Suppliers
  - Have more than one supplier for provision of goods and services
  - If it is not possible, establish joint procedures for response to a disruptive incident
  - Measure the level of maturity according to the BCMM of the supplier in order to request, in time, the adequate level of preparation for disruptive events.

# Strategies for managing incidents or crisis

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- At the level of communication among the continuity team
  - Maintain, acquire and assemble a massive notification system and collaboration platform to be used during the disruptive incident
  - Acquire mobile phones from different suppliers
  - Acquire satelite phones
  - Have pre-established agreements with media and broadcasters to publish key messages in case there is no other available means.

# Strategies for managing incidents or crisis

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- At the level of reputation management
  - With regard to clients, have procedures for communication in crisis, considering possible scenarios of image affectation and prioritizing the affected audiences.

- At the level of managing relations with public authorities
  - With regard to the regulator or public authority, establish with anticipation channels for notification and mutual assistance in case the disruptive incident occurs.

# Module 6

SISTEMA ECONÓMICO LATINOAMERICANO Y DEL CARIBE

## Document continuity plans

- General concepts
- General structure
- Types of plans
  - Response to incidents affecting the security of the organization's staff and assets
  - Response to incidents affecting the organization's image
  - Response to incidents interrupting the IT systems
  - Response to incidents of operation disruption
  - Incident or crisis management

# General Concepts

SISTEMA ECONÓMICO LATINOAMERICANO Y DEL CARIBE

- Continuity plans formalize strategies
- It is a document intended for consultation and use during the disruptive incident.
  - It is important therefore that it is easy to read and
  - Made as a memory aid to remember what needs to be done
  - It is not a procedure of steps to be followed, to the minimum level of detail, by anyone available at the time of the disruptive incident
    - Worse yet, if it is an inexperienced person in the activity or service to be recovered.

# General Concepts

SISTEMA ECONÓMICO LATINOAMERICANO Y DEL CARIBE

- The plans will not necessarily follow the same guidelines that are followed with the procedures for consultation, guidance or training in the daily activities of the organization
  - The model or template will be different
  - Ideally, a continuity procedure does not seek to create new operating procedures for contingency
    - The epitome is to use everything from day to day
  - Unless strictly necessary
    - Procedures, different from the day to day, can be created
      - This may consider manual procedures but it is important to consider the respective risks

# General structure

SISTEMA ECONÓMICO LATINOAMERICANO Y DEL CARIBE

- Objectives and scope
- Recovery priorities according to MTPDs and RTOs
- Response or continuity or recovery team
- Team activities (preferably by role)
- Strategy to be used at staff level (more than one per role)
- Strategy to be used at physical  infrastructure level (operation site alternatives)
- Strategy to be used at material, consumables and supply level, (where the necessary resources are kept)
- and similarly for each type of resource;
- Annexes
  - Contact data
  - Location plans
  - Templates to be used at the time of the incident

# Types of plans

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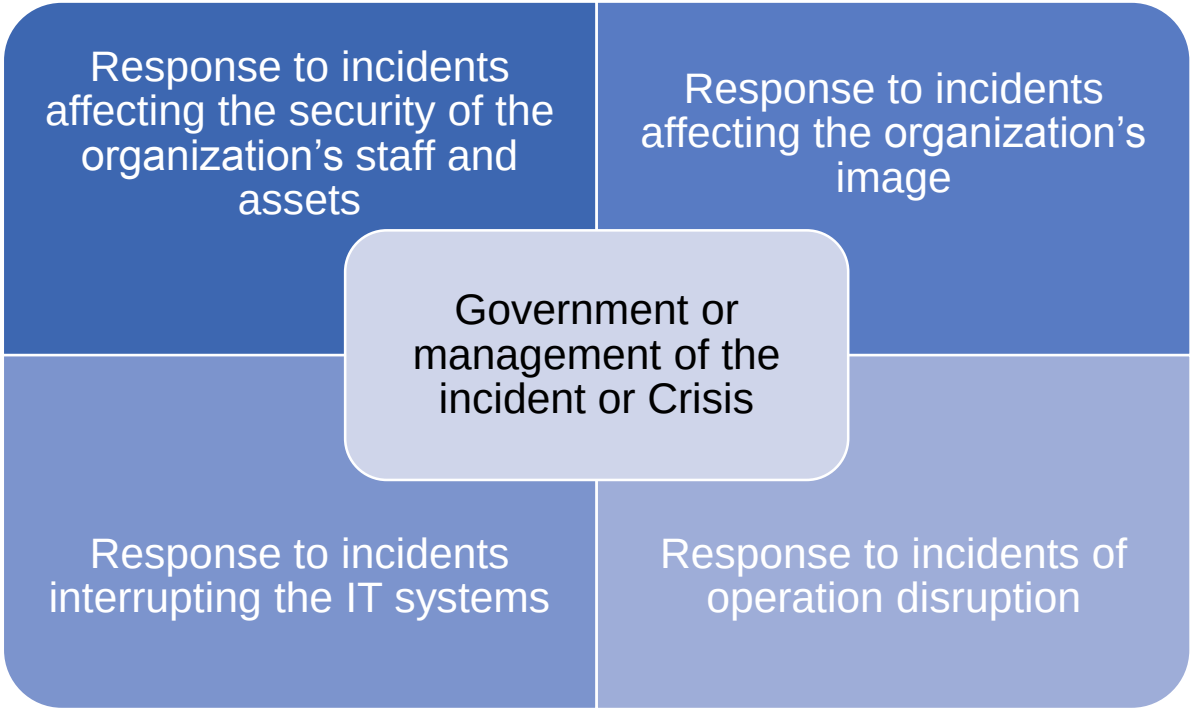
- According to the type of response documented



# Response to incidents affecting the security of the organization's staff and assets

SISTEMA ECONÓMICO LATINOAMERICANO Y DEL CARIBE

- The main objective is to try to safeguard the activity or service operation at the physical location which has been affected by specific scenarios
  - What to do to minimize affectation of the staff in case of pandemic
  - What to do to minimize affectation of the organization's staff and assets in case of fire or seism / earthquakes
  - What to do to minimize damages to the organization's staff and assets in case of a hazardous spillage
- The types of incidents will relate to the risk assessment of the most probable threats or those of major impact.
- In this case, the teams will be more focused on first response brigades such as, for example: evacuation, fire, among others.

# Response to incidents affecting the organization's image

SISTEMA ECONÓMICO LATINOAMERICANO Y DEL CARIBE

- The main objective is to safeguard the organization's reputation
  - What possible risks of image affectation exist
  - What audiences are affected and in what priority
  - What communication media is appropiate for each audience
  - What spokespersons are established to communicate the message
- The team in this case will be led by the person responsible for institutional image and his/her support staff as well as the spokespersons themselves

# Response to incidents interrupting the IT systems

SISTEMA ECONÓMICO LATINOAMERICANO Y DEL CARIBE

- The main objective is to continue providing IT systems, data and information
- Recovery priorities should be set
  - The RTO of an IT service is the minimum of all RTOs of the services or activities that use that service
- The recovery team of IT services is conformed as follows:
  - IT authority
    - Will participate in the most important decisions for recovery
    - Keeps the organization’s authorities informed
  - Technical staff
    - For servers, data bases, telecommuunications and applications
    - Responsible for recovery of the IT services at the operative level

# Response to incidents of operation disruption

SISTEMA ECONÓMICO LATINOAMERICANO Y DEL CARIBE

- The main objective is to continue providing the services and activities of the organization
- The recovery priorities will be given according to RTOs
- The continuity recovery team is conformed as follows:
  - Led by the the heads of functional units or process leaders
    - Depending how best the organization is structured to respond to a disruptive incident
    - It is a key part of the leadership capacity that the organization may have during the incident
  - Staff with key positions to perform minimal activities according to the established RTOs

# Management of incidents o crisis

SISTEMA ECONÓMICO LATINOAMERICANO Y DEL CARIBE

- The main objective is decisión-making through the formation of an Incident Management Committee or Crisis Committee
- This crisis committee comprises the organization's authorities
  - It shall be convened to support the decisions of the team that is responding to the incident
  - It will be called upon according to the type of incident
    - By staff security,
      by reputation affectation,
      by affectation of the IT services,
      by affectation of the key business activities

# Module 7

SISTEMA ECONÓMICO LATINOAMERICANO Y DEL CARIBE

## Conduct tests and exercises of the continuity plans

- General concepts
- Increasingly complex exercises
- Planning of exercises
- Types of exercises

# General concepts

SISTEMA ECONÓMICO LATINOAMERICANO Y DEL CARIBE

- The plans will be paper only and will go no further but will be exercised
- Success of the plan at the time of the disruptive event is not on how well documented it is but how well practiced and internalized it is
- The main objective of an exercse is to practice the plan and progressively expose it to the greatest posible stress
  - It is not seeing whether or not the plan works
  - Identify opportunities for improvement
  - Determine the additional skills needed

# Increasingly complex exercises

SISTEMA ECONÓMICO LATINOAMERICANO Y DEL CARIBE

- The athlete's analogy
  - No world champion was born that way
- An organization that is just starting its continuity programme should not start with a super complex test
  - It should start simple
    - Only with a general fire scenario with desktop exercises and validating the functioning of certain critical equipping and emphasizing the evacuation of staff

  - The following exercise will be somewhat more complex
    - It will be simulating wounded and hence alternative needs
  - In this way it will progressively create greater complexity
    - At some point it will lead to the "shutdown" of their operations and use of the alternatives that the strategies defined and in less time than the required RTOs.

# Planning of exercises

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- The organization should plan its test objectives over time
  - What it hopes to achieve in a year? in two? in three? maybe even in five years?
  - The objectives should be validated year by year.

- Frequency of the exercises should be prudential in order to leave room for the organization to meet its day to day operation objectives
  - The levels of complexity should be progressive at the pace established by the organization
  - But too much time should not elapse so that the staff forgets the plans
    - Or with the changes of the organization, the plans are no longer useful

# Types of exercises

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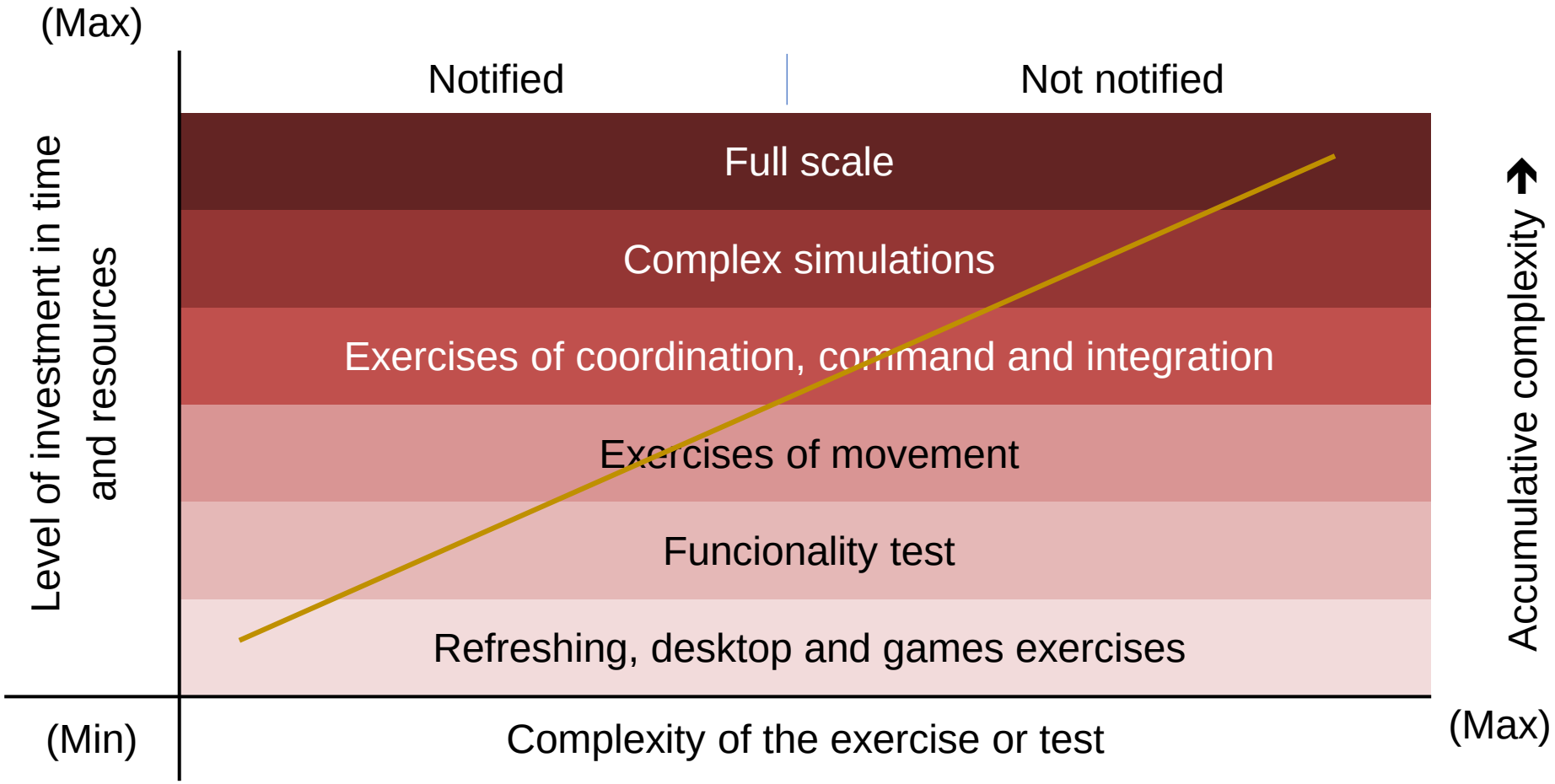

# Types of exercises

SISTEMA ECONÓMICO LATINOAMERICANO Y DEL CARIBE

- Refreshing, desktop and games
  - Disseminate and create general knowledge in the use of the plan and the strategy options
- Functionality tests
  - To ensure that the infrastructure and equipping are operative and functioning
  - To exercise the staff who operate such equipping
- Movement
  - To know where to move
    - How and by what means to move and if it is achieved within the allocated time objectives
- Coordination, command and integration
  - To exercise coordination of the incident o crisis management committee

# Types of exercises

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- Full scale
  - In addition to what is being simulated, it seeks to stop a crucial service
    - What should be recovered within the expected times with the risks that this represents
    - As far as possible, it is performed in controlled environments
- An un-notified exercise does not seek “to see if the plan Works”
  - It increases stress management skills and alert levels appropriate for a disruptive event
  - The corresponding authority should always be notified
    - In order to anticipate any risk of unavailability

# Module 8

SISTEMA ECONÓMICO LATINOAMERICANO Y DEL CARIBE

**Raise awareness and competences in the organization**

- Justification
- Raising of awareness
- Training

# Justification

SISTEMA ECONÓMICO LATINOAMERICANO Y DEL CARIBE

- The day-day of the organization will make the issue of continuity in time become less important
  - Creating a culture of business continuity and operations within the organization is a task that must be constant

# Raising awareness

SISTEMA ECONÓMICO LATINOAMERICANO Y DEL CARIBE

- If the issue of continuity has not yet been implemented in the organization
  - Sensitization will seek to justify the need to establish a business continuity program
    - From past events
    - With incidents occurring in other organizations
    - Due to regulatory or legal obligations
    - For audit requirements


- If continuity is already implemented,
  - Sensitization will seek to remind the staff that it is an important issue to be prepared because "the unthinkable event could happen"

# Creating awareness

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- Work with the organization's internal communications area
  - Better ways of delivering the message to the staff and the appropriate means of doing so
    - Newsletters, websites, posters, chats, games
    - Once a year, the day, the work shift or the week of continuity.
- Sensitization should be focused on the type of target audience
  - There should always be indicators that measure whether the desired results are being achieved
    - If it is not measured, there is no way of knowing if the method used is being effective

# Training

SISTEMA ECONÓMICO LATINOAMERICANO Y DEL CARIBE

- Training seeks to provide knowledge and experience on different topics of continuity
  - Concepts of business continuity and operations
    - Safety of staff and security of critical assets
    - Affectation of image and reputation
    - IT interruption
    - Operations disruption
    - Government and management of incidents or crisis;

  - In the use and application of recovery strategy alternatives and continuity plans
    - The exercises are successful tools for providing knowledge and experience
  - In the day to day activities by the alternatives

# Training

SISTEMA ECONÓMICO LATINOAMERICANO Y DEL CARIBE

- Training and creating competences should be focused by the type of target audience
  - The results should be measured to determine whether it is being effective and meets the objectives of building capacities
    - If it is not measured, there is no way to know if it is being effective

# Module 9

SISTEMA ECONÓMICO LATINOAMERICANO Y DEL CARIBE

## Maintain the business continuity programme

- Justification
- Identifying change
- Managing change
- Controlling change
- Managing documentation

# Justification

SISTEMA ECONÓMICO LATINOAMERICANO Y DEL CARIBE

- The organization is always changing
  - People change, responsibilities change
  - Services change
  - Premises and facilities change
  - Systems change
  - Suppliers change and other parts of the organization change

- That is why one of the most important challenges of continuity is to achieve that, despite the changes the organization, continuity is not outdated

# Identify change

SISTEMA ECONÓMICO LATINOAMERICANO Y DEL CARIBE

- The success of change management is knowing who can inform it and the frequency with which the source of change should be consulted
  - The main source of information for staff changes can be Human Resources
    - Frequency for consulting is every fifteen days
    - The means is by a format of additions, deletions and modifications of staff sent by email;
  - The main source of information for computer system changes is the IT Department
    - Specifically the IT change committee
    - Frequency for consulting is once a month participating in meetings at the invitation of said committee

# Managing change

SISTEMA ECONÓMICO LATINOAMERICANO Y DEL CARIBE

- The changes to be considered will be those that directly impact continuity
  - Mainly its resources
    - services; processes o activities; people, transport and communications; physical infrastructure, public services and work environments; equipping, materials and supplies; IT services; suppliers; financial viability; among others

- Once a change is identified, it should be recorded in a log and the impact on the BC programme should be analyzed
  - If the impact is low or moderate, it could wait for the updating cycle the following year
  - If the impact is high or very high, the current year's operative work plan should be modified and updating of the continuity components should be contemplated where necessary

# Controlling change

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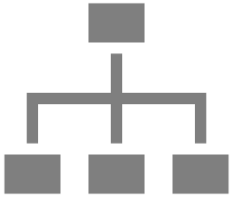
- It should keep record of what changed, who changed and who approved what was changed and what is the new version of the modified document

# Managing documentation

SISTEMA ECONÓMICO LATINOAMERICANO Y DEL CARIBE

- In case the document (for example a plan) needs to be re-distributed, it would be necessary to request the old versions of the document and archive them or destroy them and deliver the new versions
- The document of the plan is a controlled document
  - The content of the plan is responsibility of the owner of the department or process
  - The continuity coordinator is responsible for accessing the document and distributing it only to whom the plan needs to be delivered



# Module 10

SISTEMA ECONÓMICO LATINOAMERICANO Y DEL CARIBE

## Business continuity programme indicators

- Justification
- The BCM Module
- Strategic objectives in BC

# Justification

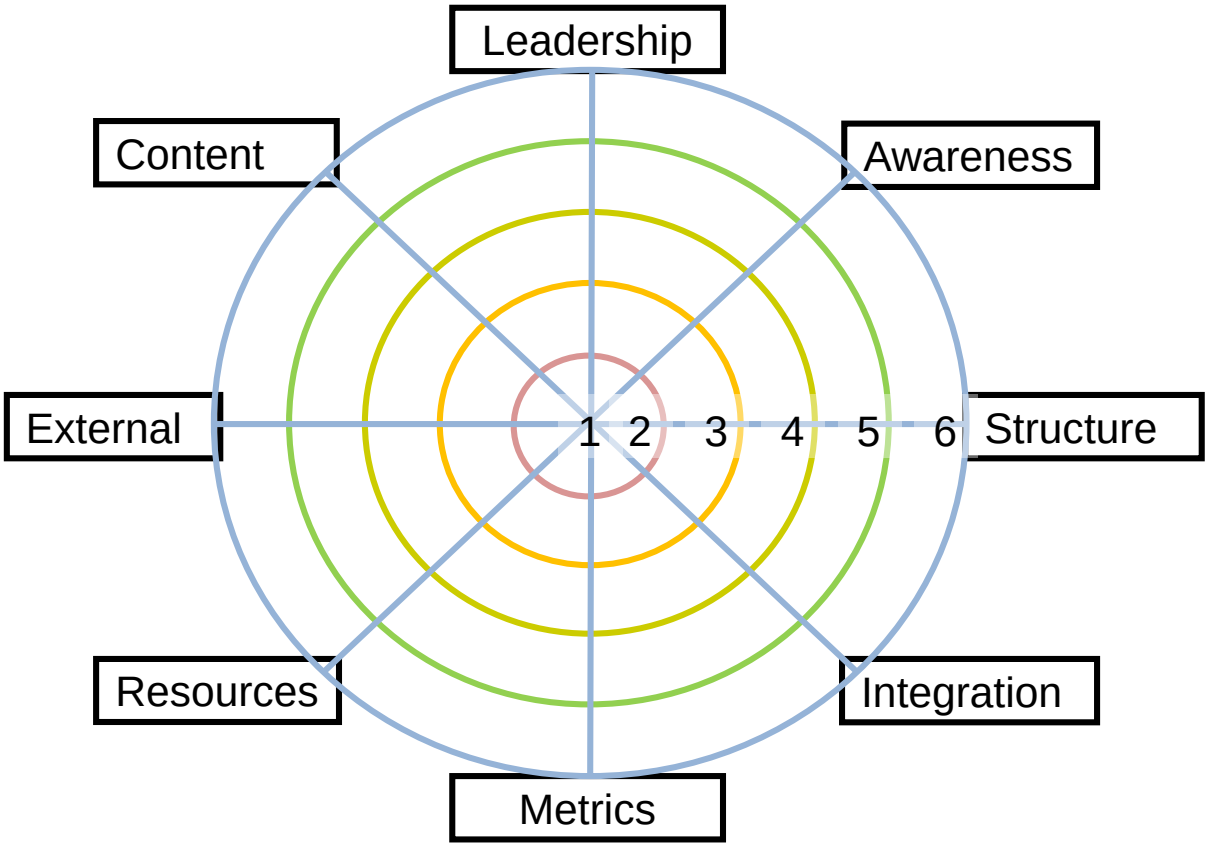
SISTEMA ECONÓMICO LATINOAMERICANO Y DEL CARIBE

- An organization without indicators to measure its progress, or without a strategic plan, will have no way of measuring whether it is progressing
- The same happens with the programme for business continuity and operations
  - If its maturity is not measured and strategic objectives are not presented, over time it will not be able to show the authorities whether or not it is improving

# The BCM Model

SISTEMA ECONÓMICO LATINOAMERICANO Y DEL CARIBE

- Business Continuity Maturity Model




- Levels 1 and 2: At risk
- Levels 3 and 4: Competent
- Levels 5 and 6: Excellence

# The BCM Model

SISTEMA ECONÓMICO LATINOAMERICANO Y DEL CARIBE

- It establishes eight competences that the organization should achieve
  - (1) Leadership by authorities
  - (2) Awareness and interest by the general staff
  - (3) Structure, roles and responsibilities
  - (4) Interiorization and integration with internal and external parts
  - (5) Measuring continuity by metric indicators
  - (6) Having competent resources and making investments according to scenarios intended to be protected
  - (7) Guarantee of the supply chain and of the management of third party expectations
  - (8) Methodological order in conformity with best practices

# The BCM Model

SISTEMA ECONÓMICO LATINOAMERICANO Y DEL CARIBE

- Measures six levels of maturity
  (1) No continuity efforts are made
  (2) At least one functional department is making some effort on its own initiative
  (3) Several functional departments attempt coordinating efforts through a work commission
  (4) The organization is applying a better practice, and a function for business continuity and operations has been established
  (5) The organization has moved from theory to practice in the application of best practices, and is implementing a continuity program for the organization in all departments within the scope of continuity, although not yet fully successful in some departments
  (6) The organization has a regular and consistent practice of excellence and all functional departments, within the scope of continuity, are highly committed; there are strategy options and their plans are frequently put into practice.

# Strategic objectives of BC

SISTEMA ECONÓMICO LATINOAMERICANO Y DEL CARIBE

- Based on the results from the BCM module, progressive objectives can be defined
  - Example
    - The first year to reach level three
    - The second year to maintain the level
    - The third year to reach level four
  - Another example could be
    - The first year to reach level four in the competences of leadership and awareness and, in the rest, at least level three for departments with RTO less than four hours
    - The second year to reach level four in all competences for departments with zero RTO; and for RTO departments twenty four, to reach level three in competences of leadership and awareness

- Said objectives should be measured annually and compared with the results from the previous year
  - As the organization matures, the strategic objectives for BC can be better adjusted

# Business continuity and operations in the face of disasters

## Training Workshop for MSMEs

**Yves Dávila**

**SELA Consultant**

SISTEMA ECONÓMICO
LATINOAMERICANO
Y DEL CARIBE

# Agenda

SISTEMA ECONÓMICO LATINOAMERICANO Y DEL CARIBE

1. Introduction to business continuity
2. Roles and responsibilities to consider
3. Prioritize activities based on urgency
4. Protect more urgent activities
5. Design and implement strategies for response, continuity and recovery
6. Document continuity plans
7. Perform tests and exercises for the continuity plans
8. Raise awareness and competences in the organization
9. Mantain the business continuity program
10. Business continuity program indicators

# Module 1

SISTEMA ECONÓMICO LATINOAMERICANO Y DEL CARIBE

## Introduction to business continuity

- Presentations
- Importance of business continuity and operations
- Current standard

# Presentations

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- Name
- Position
- Experience in any disaster
- Expectations of the course

# Importance of BC

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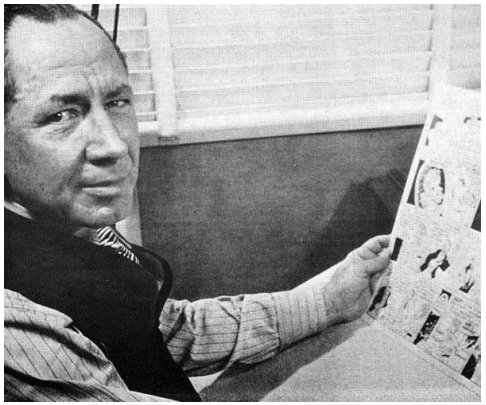
- Major events always occur
  - Increasingly severe impacts
    - Climate change
    - Population growth
    - Acceleration of economies

# Importance of BC

SISTEMA ECONÓMICO LATINOAMERICANO Y DEL CARIBE

- Murphy's Law

*"If anything can go wrong, it will. Moreover, it will go wrong in the worst way, at the worst time and in a way that causes the greatest possible harm."*



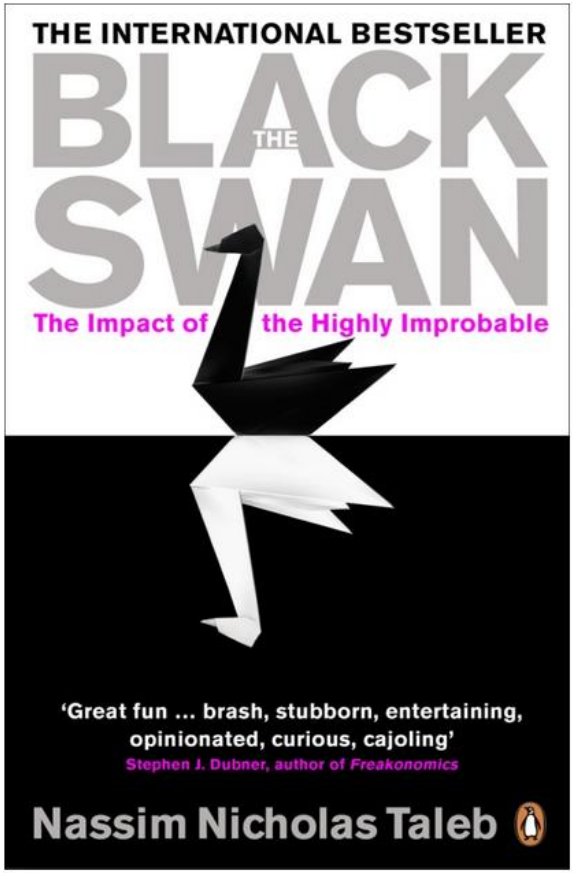
Edward A. Murphy Jr. (1949)

# Importance of BC

SISTEMA ECONÓMICO LATINOAMERICANO Y DEL CARIBE

- The black swan

*"I stop and summarize the triplet: rarity, extreme impact and retrospective (though not prospective) predictability. A small number of Black Swans explains almost everything in our world, from the success of ideas and religions, to the dynamics of historical events, to elements of our own personal lives."*



# Importance of BC

SISTEMA ECONÓMICO LATINOAMERICANO Y DEL CARIBE

- Natural hazards
  - They occur without intervention by human beings and attributable to a physical phenomena of natural origin
- Hazards caused by man
  - Accidental risks
  - Intentional risks
- Technological hazards
  - Main computer breakdown
  - Telecommunication damage
  - Power failures, electricity or public services outages

# Current standard

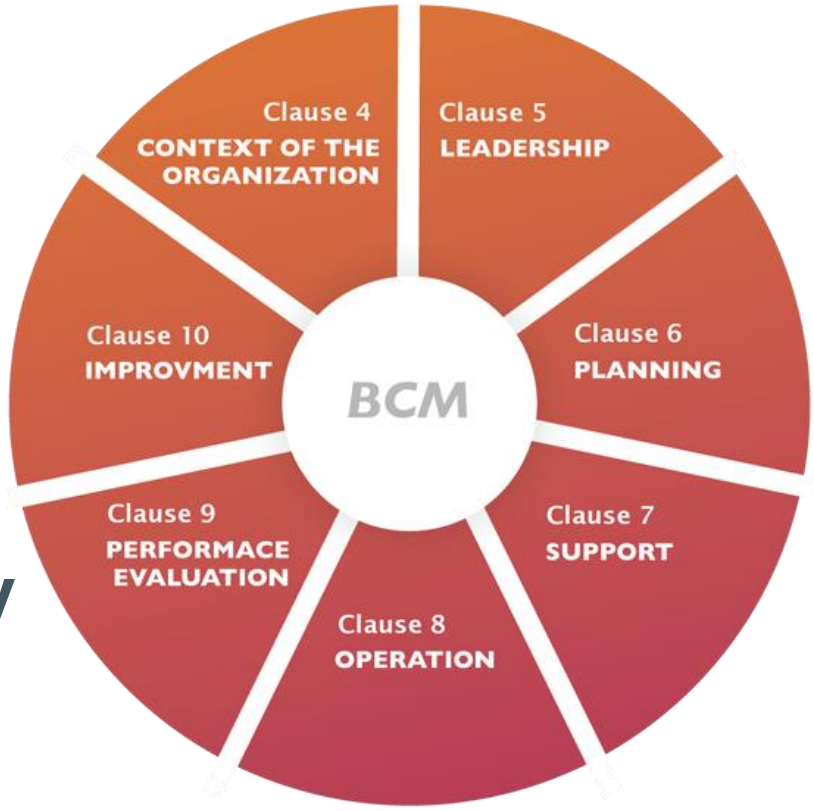
SISTEMA ECONÓMICO LATINOAMERICANO Y DEL CARIBE

- ANSI/ASIS SPC.1 – Business continuity
- NFPA 1600 – Business continuity
- ISO 22301 / 22313 – Business continuity
- Business Continuity Institute  (thebci.org)
- Disaster Recovery Institute International (drii.org)
- ISO 22317 – Guide for carrying out BIA
- ISO 22320 – Incident response
- ISO 22398 – Guideline for exercises
- ISO 27031 – Information technology continuity
- Others?

# ISO 22301 / 22313

SISTEMA ECONÓMICO LATINOAMERICANO Y DEL CARIBE

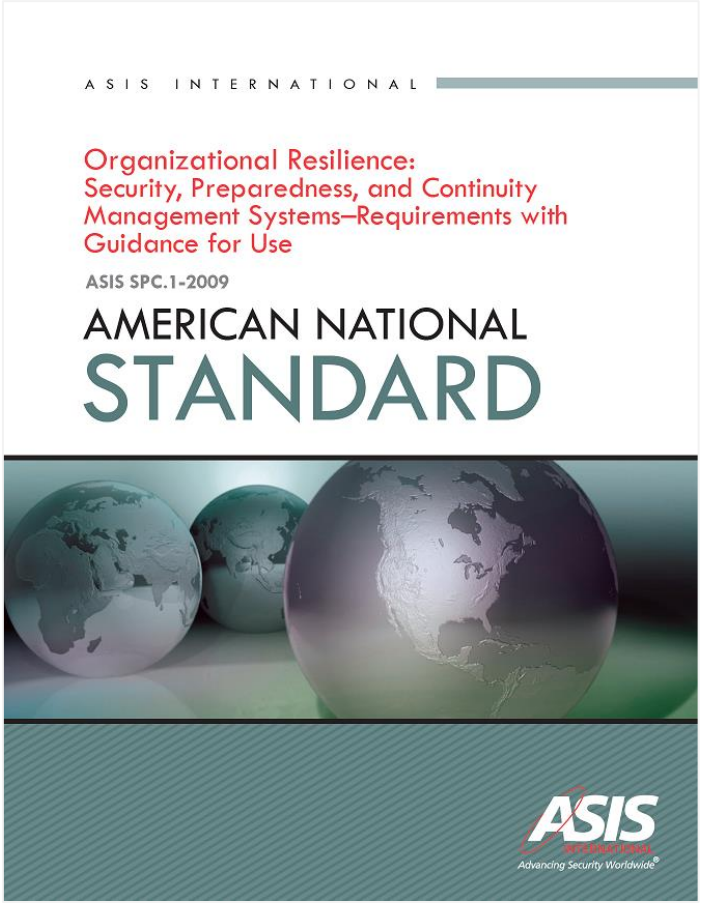
- Relevant for organizations with high risk (financial, telecommunications, mining, transport and the public sector) hoping to implement a **business continuity** management system



# ASIS SPC.1-2009

SISTEMA ECONÓMICO LATINOAMERICANO Y DEL CARIBE

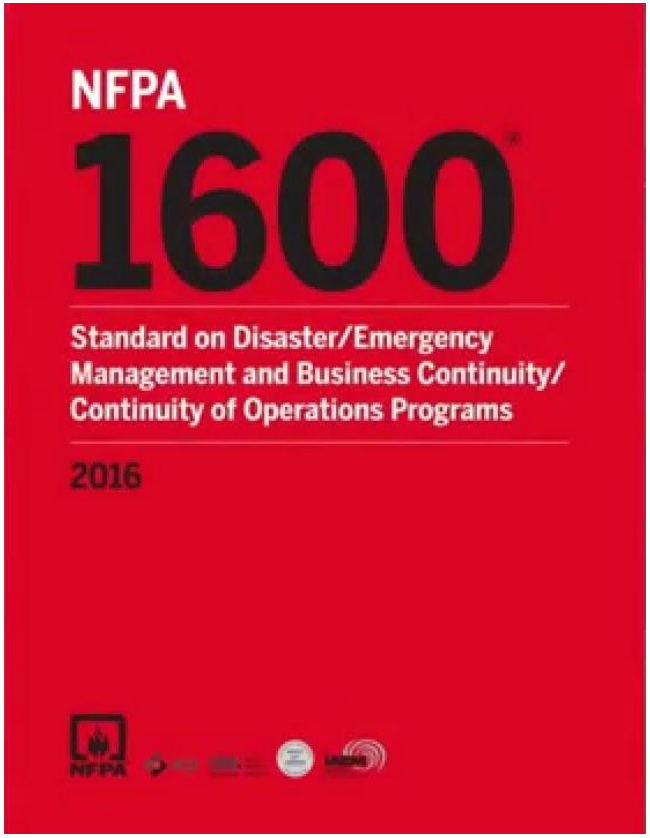
- Applicable to organizations hoping to establish, implement, maintain and improve an **organizational resilience** management system



# NFPA 1600

SISTEMA ECONÓMICO LATINOAMERICANO Y DEL CARIBE

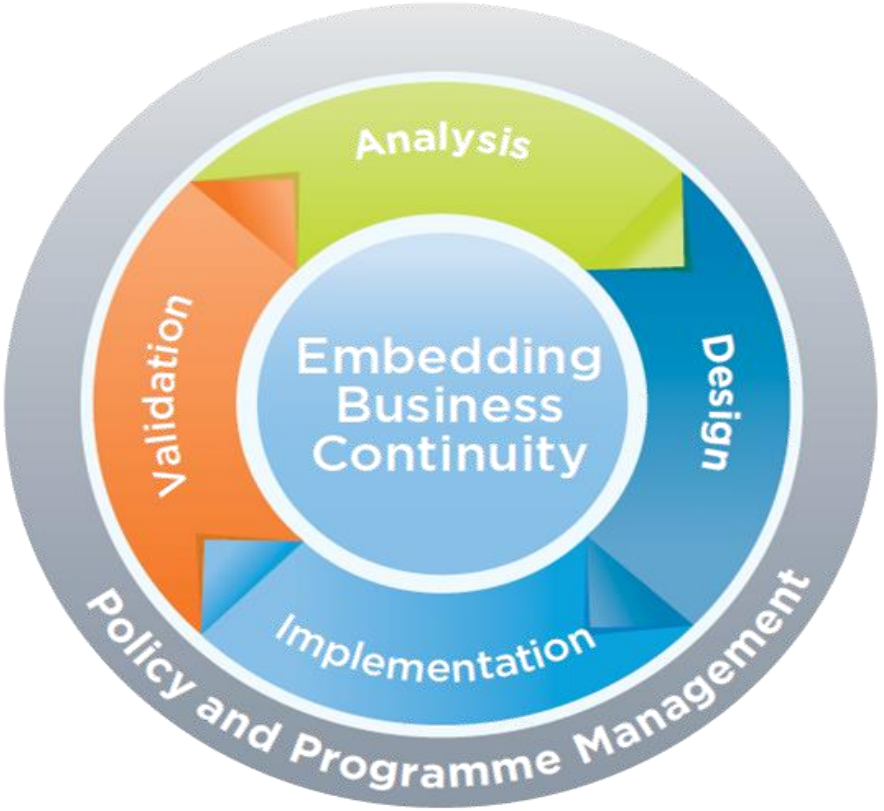
- Highlights the important components of an **emergency management** system that enables organizations to develop a business continuity programme



# Good Practice Guidelines
## BCI - Business Continuity Institute

SISTEMA ECONÓMICO LATINOAMERICANO Y DEL CARIBE

- PP1: Policy and Programme Management
- PP2: Empowerment / Incorporating Business Continuity
- PP3: Analysis
- PP4: Disign
- PP5: Implementation
- PP6: Validation




The BCM Life Cycle
Improving organizational resilience
www.thebci.org

# Las 10 prácticas profesionales del DRII

SISTEMA ECONÓMICO LATINOAMERICANO Y DEL CARIBE

1. Project Initiation and Management
2. Risk Evaluation and Control
3. Business Impact Analysis
4. Developing Business Continuity Strategies
5. Emergency Response and Operations
6. Developing and Implementing Business Continuity Plans
7. Awareness and Training Programmes
8. Testing and Maintaining Business Continuity Plans
9. Crisis Communication
10. Coordination with Public Authorities

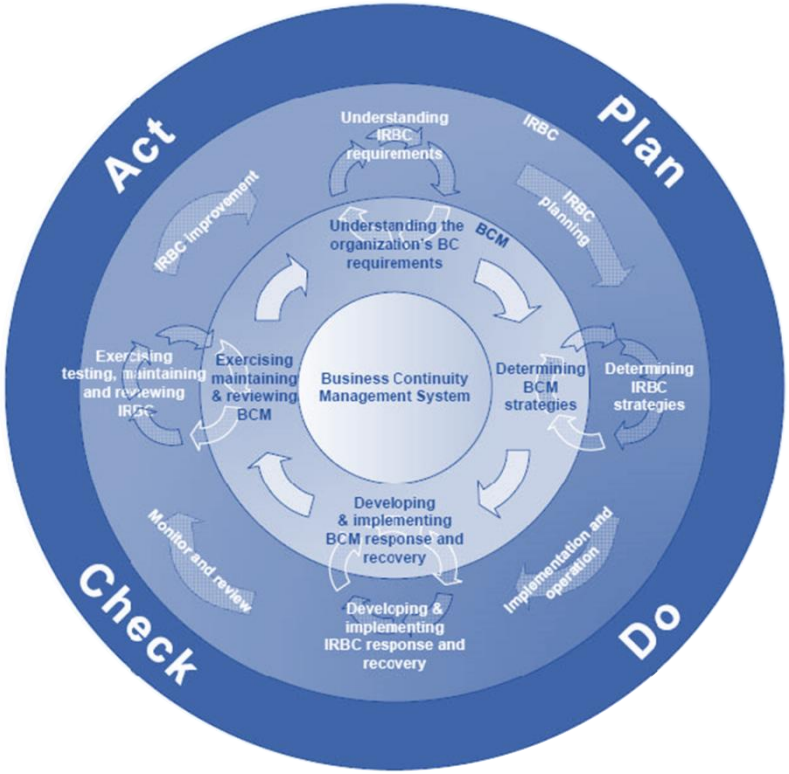
DRI International

Disaster Recovery Institute International
www.drii.org

# ISO 27031

SISTEMA ECONÓMICO LATINOAMERICANO Y DEL CARIBE

- Methodological guidelines for information and communication technology readiness for business continuity




Source ISO27031

# Module 2

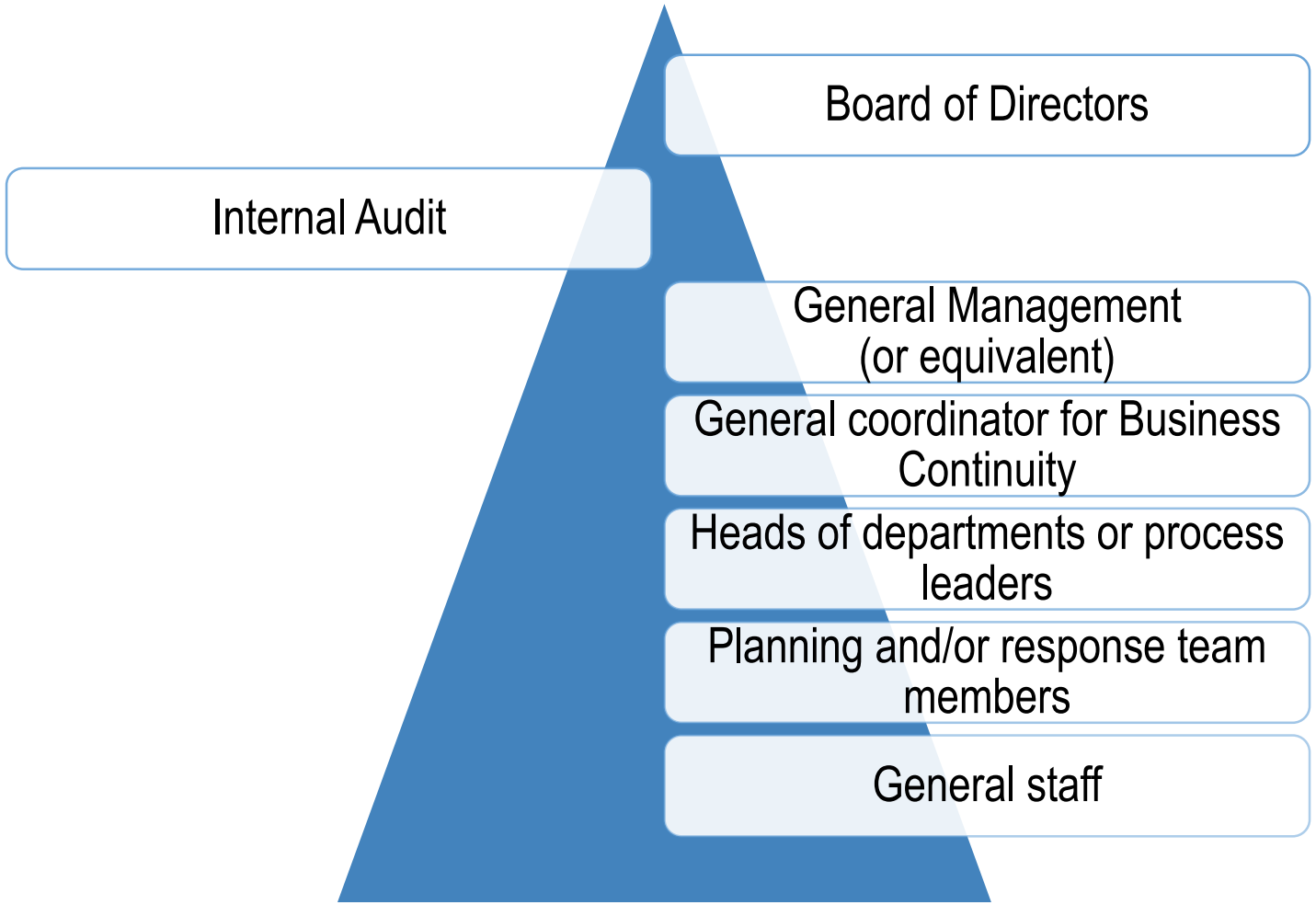
SISTEMA ECONÓMICO LATINOAMERICANO Y DEL CARIBE

## Roles and responsibilities to consider

- Participant Roles
- Business continuity policy
- Follow-Up meetings
- Internal audit

# Participant roles

SISTEMA ECONÓMICO LATINOAMERICANO Y DEL CARIBE



# Board of Directors

SISTEMA ECONÓMICO LATINOAMERICANO Y DEL CARIBE

- Responsible for business continuity and operations of the organization
- Entrusts this responsibility to the highest hierarchical authority in the organization (General manager)
- Requests accountability on the matter at the end of each period that is deemed convenient
- Approve, as appropriate, the investments in resources necessary to achieve the implementation of business continuity and operations.
- Approve the scope of business continuity and operations

# General Management

SISTEMA ECONÓMICO LATINOAMERICANO Y DEL CARIBE

- Responsible for supervising BC
- Constant review of management process for business continuity and operations
  - Assign a responsible person with adequate political hierarchy and necessary competency
- Approve, as appropriate, the investments in resources necessary to achieve the implementation of business continuity and operations.
- Lead an incident and crisis response scheme
  - Incident response team
  - Operative, emergency or reputational type incidents

# General coordinator of BC

SISTEMA ECONÓMICO LATINOAMERICANO Y DEL CARIBE

- Responsible for implementing and maintaining BC
  - Reports progress to general management
  - Depending on the size of the organization, this function could be shared (for medium or small organizations) or exclusive (for large organizations)
- Implementation of the continuity programme should follow a methodological order according to one or a set of international standards
- It should involve the heads of the departments or process leaders
- It should have the necessary competence, specialized training credentials
  - Participate in forums and conferences on business continuity at local, regional and international levels

# Head of department or process leader

SISTEMA ECONÓMICO LATINOAMERICANO Y DEL CARIBE

- Responsible for implementing and maintaining business continuity and operations in his/her area or process
  - Designates a person responsible for articulating internal efforts for business continuity
- If it is a support department or support to operations, he/she leads the incident response within its area
  - Security, Human Resources, General Services, Information Technology
  - Prepares the organization for specific incidents, for example pandemic, fire, seism or earthquakes, computer center breakdown
  - He(she also supports recovery of critical areas or processes
- He/she should work together and under the leadership of the business continuity general coordinator
- He/she should have the necessary competences and specialized training credentials

# Member of the planning and/or response teams

SISTEMA ECONÓMICO LATINOAMERICANO Y DEL CARIBE

- Usually comprised of operative staff under the departments
- During the implementation and maintenance process of business continuity and operations, he/she provides expert knowledge on priorities and recovery needs
- During an exercise or a real incident, he/she participates in response to the incident applying the plans and continuity strategies prepared during the planning stage
- The members of the planning and/or response teams should have the necessary competences, specialized training credentials

# General staff

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- Although they do not necessarily participate actively in business continuity, they participate in it in the following manner:
  - They know how to notify an incident that could cause interruption in operations
  - They recognize the recovery team of their area or process and know … Texto incompleto en español)
  - They know how, when and to whom a real incident should be reported
  - They know how to channel requirements by the press or other interested parties on the situation

# BC policy

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- Declaration of Top Management
  - Expresses its commitment with the implementation and maintenance of business continuity
  - Establishes justification (which is of interest to the interested parties)
- Defines roles and responsibilities
  - Committed resources
  - With knowledge
  - With empowerment

# Follow-Up Meetings

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- The government is also implemented with follow-up meetings and review on behalf of the authority
- It is recommended once every two or three months
- If the meetings are held too far apart from each other, then it is very likely that problems which may occur during implementation or maintenance of the continuity program may not remedied.

# Internal audit

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- Internal audit should ensure that the continuity process is carried out according to the instructions given by the Board of Directors and in accordance with the best professional practices in this regard.
- The auditor should be and independent person
- The auditor should have adequate competences to provide opportunities for improvement aligned with the objectives of the continuity process

# Module 3

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**Priorize activities based on urgency**

- The scope of BC
- Non-tolerable thresholds
- Maximum Tolerable Period of Disruption (MTPD)
- Minimum level of services (MBCO)
- Recovery Time Objective (RTO)
- Identify minimum necessary resources

# Scope of BC

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- BC is not for the entire organization
  - Low probability events
  - Protect in a redundant way only what is really critical
  - Bear in mind that BC competes with efficiency and cost reduction
- Which products or services will be guaranteed despite a major event?
- There are several ways of establishing the scope of BC
  - By product or service with the most revenue
  - By most risky location
  - As required by the regulator or by a client

# Impact thresholds

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- Who are the parties interested in our products and services?
- What would be their minimum requirements in case of a major event?
  - In terms of revenue or loss of clients
  - In legal or contractual terms
  - In terms of environmental impact
  - In terms of impact to people
  - In terms of reputational damage
- Will any regulator require any minimum level of service?

# Maximum Tolerable Period of Disruption (MTPD)

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- Is the time it would take for adverse impacts to become unacceptable arising as a result of the disruption or absence of:
  - Product or service?
  - Area?
  - Process?
  - Locality?
- Scenarios should be considered for analysis
  - Severe interruption only happens to the entity
  - Or it is a massive event where the entire society is affected
- The point in time in which there is a greater demand or need for the product or service, area, process, or locality must be analyzed.

# Maximum Tolerable Period of Disruption (MTPD)

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| Service or Activity | | | How long do the impact thresholds take to become intolerable? | | | | |
|---|---|---|---|---|---|---|---|
| Description | Critical Season-ality | Most stressful scenario | Econo-mic | Clients or users | Legal or regula-tory | Environ-mental | Security of the people |
| Service 1 | | | $MTPD_1$ | No aplica | $MTPD_2$ | $MTPD_3$ | No aplica |
| ... | | | | | | | |
| Activity 1 | | | | | | | |
| ... | | | | | | | |

(ejemplo)
El **MTPD del Servicio 1** será el mínimo entre $MTPD_1$, $MTPD_2$ y $MTPD_3$

# Minimum level of services in BC (MBCO)

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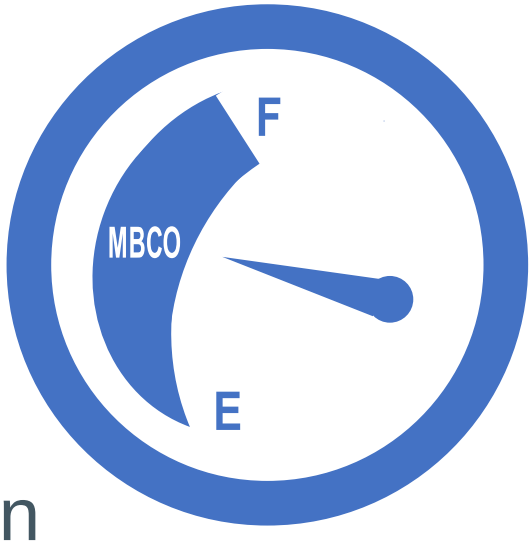
- Before MPTD occurs, what level of service should be achieved?
  - For some or all clients?
  - For some or all localities?
  - For hours or continuously?
  - The entire service level or only a part?




- Analysis of that point in time when there is a greater demand or need for the product or service.

# Recovery Time Objective (RTO)

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- Any value from ZERO to **less than** MTPD is valid.
- If the RTO is close to ZERO, the cost of the alternative strategy to satisfy MBCO will be very expensive
- If RTO is close to MTPD there is a very high risk that the organization reaches or surpasses the impact threshold
  - Although the cost is lower, it is not convenient.
- RTO could be better defined once the possible recovery strategies are determined

# Recovery windows (exmple)

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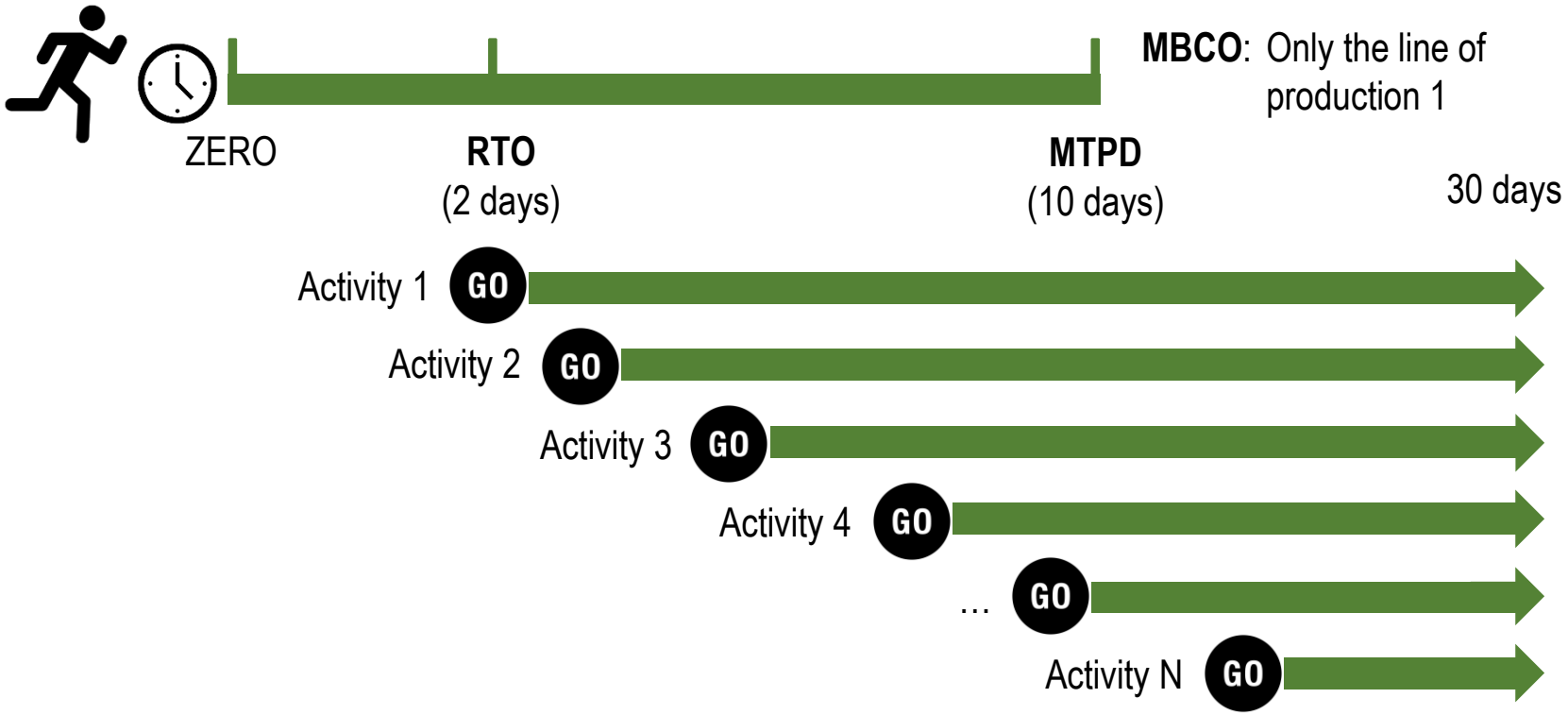
- Determine the recovery windows for critical activities to provide the service, process, area or locality evaluated



# Identify minimum necessary resources

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- Considering the recovery time windows, the necessary resources are estimated for each moment
  - People
  - Infrastructure
  - Equipping
  - Information Tecnhology
  - Finance
  - Regulatory reports
  - Suppliers
  - Interested parties to be contacted

# Identify minimum necessary resources

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## People

- Minimum necessary staff
  - Which person needed is available?
  - What is his/her position or role?
- Alternative transport
  - What transport options are there?
- Alternative communication
  - What communication options are there?


**Note: Answers should be for each point in time from the lowest RTO**

# Identify minimum necessary resources

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## Infrastructure

- Facilities from where they could continue working or producing
  - From home?, Another location?, Another plant?
- Basic services
  - Demand for electricity
  - Demand for water
  - Others?


**Note: Answers should be for each point in time from the lowest RTO**

# Identify minimum necessary resources

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## Equipment

- What basic equipping is needed for operation
  - Tools? Computers? Others?
- Minimum supples or consumables
  - Amount of material
  - Non-perishable foodstuff
  - Others?


**Note: Answers should be for each point in time from the lowest RTO**

# Identify minimum necessary resources

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## Information Tecnhology

- What specific applications are needed
- Which application, if not available, brings the activity to a standstill
  - Is there any alternative means?
  - For how long can the alternative means be used?


**Note: Answers should be for each point in time from the lowest RTO**

# Identify minimum necessary resources

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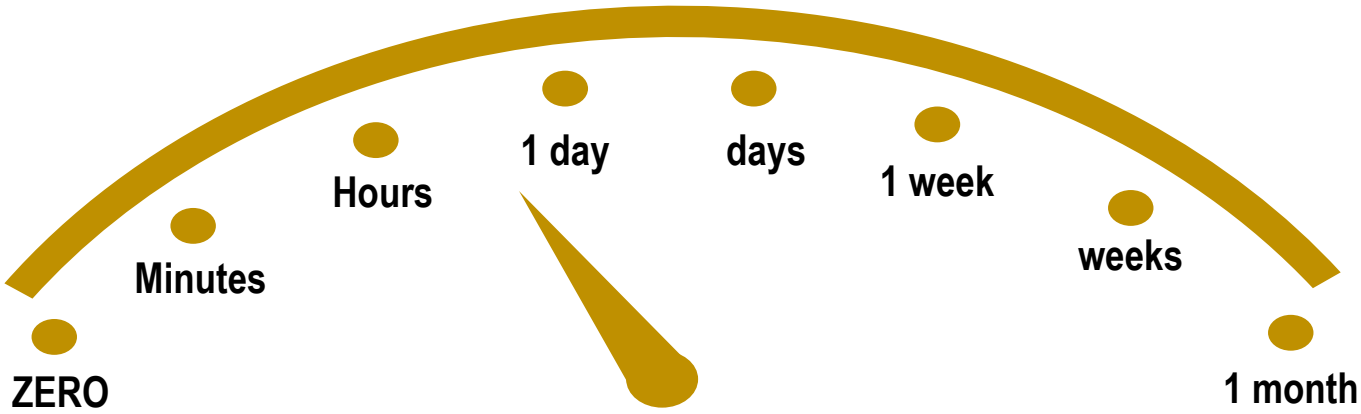
## Tolerance to data loss

- For each application identified, how much historical data loss can be tolerated
  - RPO (Recovery Point Objective)



# Identify minimum necessary resources

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## Other resources

- Financial capacity
  - Loans to meet payments
  - Petty cash for emergency cash
- Obligations or regulatory reports that must continue
- Interested parties who should be kept informed (including suppliers)


**Note: Answers should be for each point in time from the lowest RTO**

# Module 4

SISTEMA ECONÓMICO LATINOAMERICANO Y DEL CARIBE

**Protect most urgent activities**

- General concepts of risks
- Identify risk events
- Identify existing controls
- Estimate impacts
- Estimate probabilities
- Estimate level of risk

# General concepts

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- Business continuity and operations “are activated” after the interruption
- Risk evaluation seeks to prevent the interruption
- There are many ways or methods
  - Cause – effect analysis
  - Root cause
  - Impact Probability (ISO 31000)

- It serves to identify vulnerabilities during prrimary operation
- It also serves to identify failure points in the recovery strategy

# General concepts

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- Risk event
  - Threat that may impact a resource, bringing a crucial activity to a standstill
- Existing control
  - Measures already existing in the organization that mitigates the risk event from occurring
- Level or risk = Probability * Impact
  - Quantitative vs. qualitative

# Identify risk events

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- Identify threats applicable to the organization's reality
  - Worldwide / continent
  - At country / province / vecinity levels
  - At premises level
  - At floor / area / activity levels
- What resources are impacted?
  - People, communications and transport
  - Infrastructure, equipping, supplies and consumables
  - Informatic applications and data
  - Suppliers and other interested parties

# Identify existing controls

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- Identify controls already existing in the organization
- A control can mitigate the impact on more than one resource
- Rating of control effectivity could be standarized
  - It is documented and formalized
  - Maintenance is done or practiced
  - It has worked in a previous event

# Estimate the impact

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- Quantitative vs. qualitative
- It could be calculated considering the following form
  - Estimate the interruption time in case the risk event occurs **(t)**
  - Estimate the impact considering in which time interval the interruption time falls (t)
    - **Very low**: Between 0 and (RTO / 2)
    - **Low**: Between (RTO / 2) and RTO
    - **Medium**: Between RTO and ((RTO + MTPD) / 2)
    - **High**: Between ((RTO + MTPD) / 2) and MTPD
    - **Very high**: Greater than MTPD

# Estimate probability

SISTEMA ECONÓMICO LATINOAMERICANO Y DEL CARIBE

- Quantitative vs. qualitative
- It could be calculated considering the following form
  - Estimate the threat probability
    - **Very low** : ocurring beyond 25 years
    - **Low**: occurring every 25 years
    - **Medium**: occurring every 10 years
    - **High**: occurring every 5 years
    - **Very high**: occurring yearly
  - Considering the effectiveness of existing controls, estimate how many levels will drop

# Estimate the level of risk

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| Impact / Proba-bility | Very low | Low | Medium | High | Very high |
|---|---|---|---|---|---|
| Very high | | | | | Extreme |
| High | | | | High | |
| Medium | | | Medium | | |
| Low | | Low | | | |
| Very low | | | | | |

- Extreme
- High
- Medium
- Low

# Adicional considerations

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- If the primary operation is evaluated
  - It is not advisable to take into account the alternate scheme as an existing control
    - Unless there is no way to reduce the risk
- If the recovery strategy is evaluated
  - The idea is to identify weaknesses of the alternative scheme
    - Single points of failure
- The priority of the controls to be implemented will be based on the level of identified risk
  - Extreme risk in the first place

# Module 5

SISTEMA ECONÓMICO LATINOAMERICANO Y DEL CARIBE

**Design and implement strategies for response, continuity and recovery**

- Strategic options vs. Implementation costs
- Examples of strategic options
- Strategies for handling incidents or crisis

# Options vs. Investment

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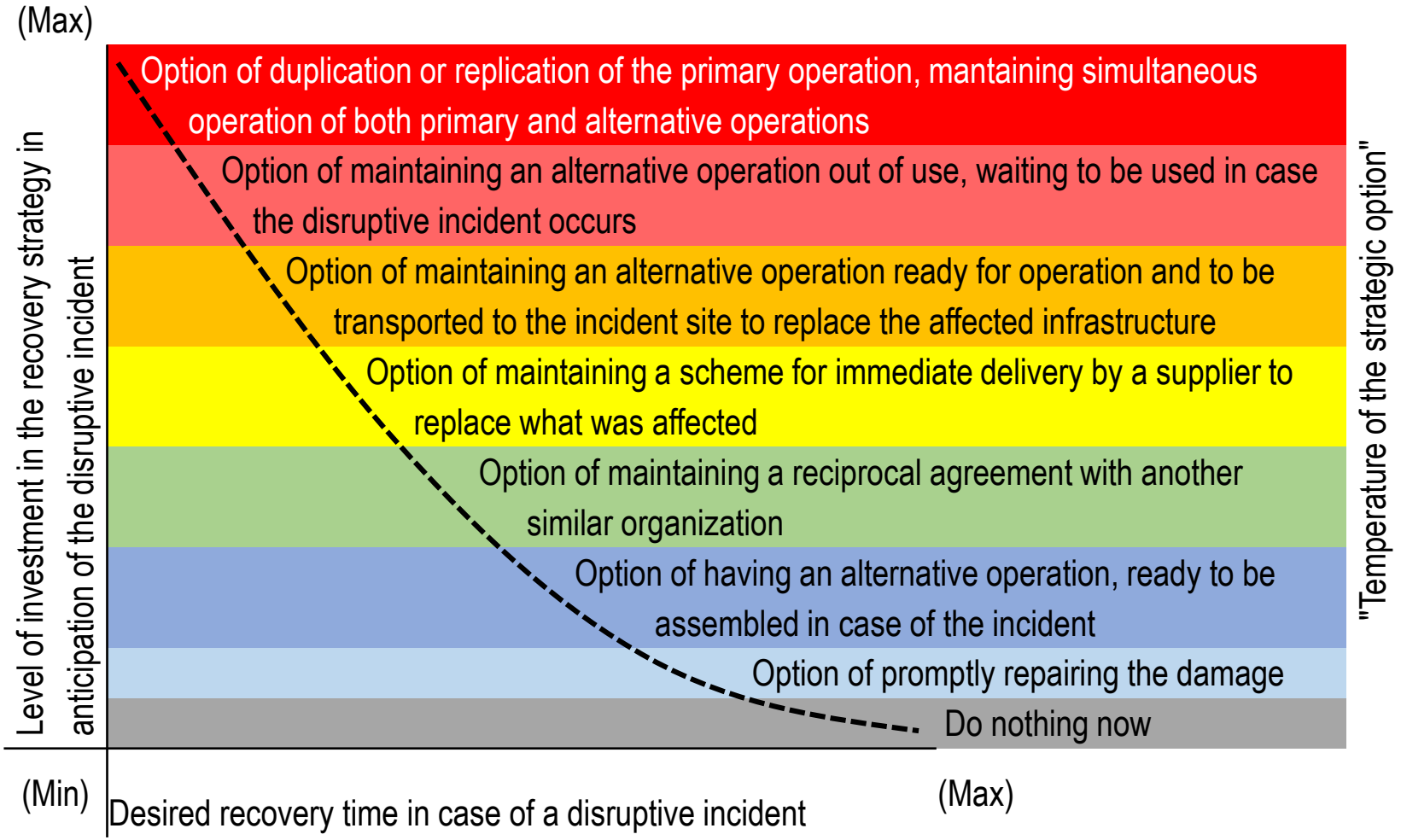

# Strategy options

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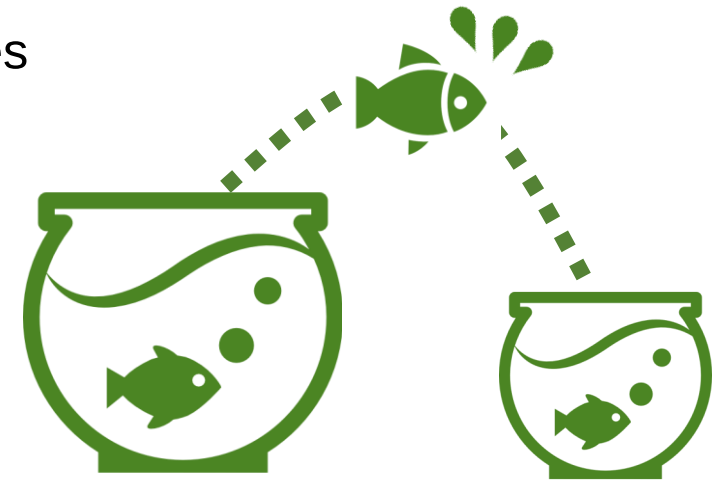
- They apply for each resource
  - People
    - Staff, Transport, Communications
  - Infrastructure
    - Facilities, basic services
  - Equipping
    - Equipping, supplies, consumables
  - Information technology
    - Applications
    - Data backup
  - Finance
  - Regulatory reports
  - Suppliers



# Examples

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- People
  - Succession plan
  - Primary alternative or identified alternatives
  - Policies prohibiting primary and alternative staff from travelling at the same time and using the same means;
  - Prohibition to take vacations at the same time
  - Implementation of programmes for health and emotional control for staff identified as crucial

# Examples

SISTEMA ECONÓMICO LATINOAMERICANO Y DEL CARIBE

- Physical infrastructure
  - Alternative locations for operation guaranteeing supply of public services from different sources
  - Agreements with hotels
  - Training rooms
  - Reuse of the sales force space (if it were not urgent to recover)
  - Work from home

# Examples

SISTEMA ECONÓMICO LATINOAMERICANO Y DEL CARIBE

- Equipping
  - Renewal of equipment and storing the old for spare parts
  - Maintain obsolete services at a mínimum level of operation
  - Assemble models or transportable machinery (if posible) to take to the affected location
  - Identify equipping of services that are not so critical to dismantle, take them to the affected location and assemble them there.

# Examples

SISTEMA ECONÓMICO LATINOAMERICANO Y DEL CARIBE

- Material and consumables
  - Keep small stock in strategic places
  - Establish stock supply agreements with various suppliers
  - Establish reciprocal agreements with similar organizations to provide mutual support in case of a disruptive event

# Examples

SISTEMA ECONÓMICO LATINOAMERICANO Y DEL CARIBE

- Informatic and data systems
  - Replicate the computer center at an alternative location, whether totally or partially, according to what has been identified as most critical
  - Outsource the IT service and take it to the “cloud”
  - Make backup copies and restore as necessary.

# Examples

SISTEMA ECONÓMICO LATINOAMERICANO Y DEL CARIBE

- Financial vulnerability
  - Maintain contingent lines of credit to meet needs at the time of the incident
  - Keep cash available for access in order to meet cash needs during the incident
  - Establish procedures for recording and controling damages and expenses associated with the incident for subsequent claims to the insurer
  - Maintain differed payment agreements with suppliers in case of major incidents

# Examples

SISTEMA ECONÓMICO LATINOAMERICANO Y DEL CARIBE

- Suppliers
  - Have more than one supplier for provision of goods and services
  - If it is not possible, establish joint procedures for response to a disruptive incident
  - Measure the level of maturity according to the BCMM of the supplier in order to request, in time, the adequate level of preparation for disruptive events.

# Strategies for managing incidents or crisis

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- At the level of communication among the continuity team
  - Maintain, acquire and assemble a massive notification system and collaboration platform to be used during the disruptive incident
  - Acquire mobile phones from different suppliers
  - Acquire satelite phones
  - Have pre-established agreements with media and broadcasters to publish key messages in case there is no other available means.

# Strategies for managing incidents or crisis

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- At the level of reputation management
  - With regard to clients, have procedures for communication in crisis, considering possible scenarios of image affectation and prioritizing the affected audiences.

- At the level of managing relations with public authorities
  - With regard to the regulator or public authority, establish with anticipation channels for notification and mutual assistance in case the disruptive incident occurs.

# Module 6

SISTEMA ECONÓMICO LATINOAMERICANO Y DEL CARIBE

## Document continuity plans

- General concepts
- General structure
- Types of plans
  - Response to incidents affecting the security of the organization's staff and assets
  - Response to incidents affecting the organization's image
  - Response to incidents interrupting the IT systems
  - Response to incidents of operation disruption
  - Incident or crisis management

# General Concepts

SISTEMA ECONÓMICO LATINOAMERICANO Y DEL CARIBE

- Continuity plans formalize strategies
- It is a document intended for consultation and use during the disruptive incident.
  - It is important therefore that it is easy to read and
  - Made as a memory aid to remember what needs to be done
  - It is not a procedure of steps to be followed, to the minimum level of detail, by anyone available at the time of the disruptive incident
    - Worse yet, if it is an inexperienced person in the activity or service to be recovered.

# General Concepts

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- The plans will not necessarily follow the same guidelines that are followed with the procedures for consultation, guidance or training in the daily activities of the organization
  - The model or template will be different
  - Ideally, a continuity procedure does not seek to create new operating procedures for contingency
    - The epitome is to use everything from day to day
  - Unless strictly necessary
    - Procedures, different from the day to day, can be created
      - This may consider manual procedures but it is important to consider the respective risks

# General structure

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- Objectives and scope
- Recovery priorities according to MTPDs and RTOs
- Response or continuity or recovery team
- Team activities (preferably by role)
- Strategy to be used at staff level (more than one per role)
- Strategy to be used at physical  infrastructure level (operation site alternatives)
- Strategy to be used at material, consumables and supply level, (where the necessary resources are kept)
- and similarly for each type of resource;
- Annexes
  - Contact data
  - Location plans
  - Templates to be used at the time of the incident

# Types of plans

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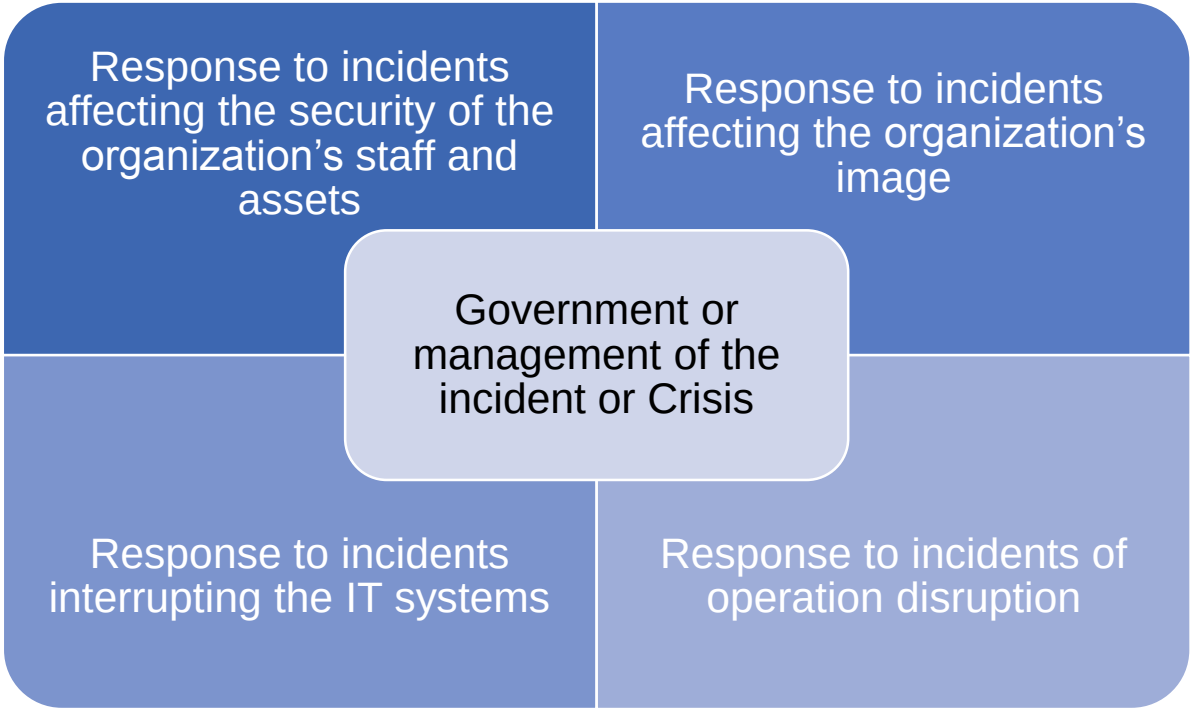
- According to the type of response documented



# Response to incidents affecting the security of the organization's staff and assets

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- The main objective is to try to safeguard the activity or service operation at the physical location which has been affected by specific scenarios
  - What to do to minimize affectation of the staff in case of pandemic
  - What to do to minimize affectation of the organization's staff and assets in case of fire or seism / earthquakes
  - What to do to minimize damages to the organization's staff and assets in case of a hazardous spillage
- The types of incidents will relate to the risk assessment of the most probable threats or those of major impact.
- In this case, the teams will be more focused on first response brigades such as, for example: evacuation, fire, among others.

# Response to incidents affecting the organization's image

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- The main objective is to safeguard the organization's reputation
  - What possible risks of image affectation exist
  - What audiences are affected and in what priority
  - What communication media is appropiate for each audience
  - What spokespersons are established to communicate the message
- The team in this case will be led by the person responsible for institutional image and his/her support staff as well as the spokespersons themselves

# Response to incidents interrupting the IT systems

SISTEMA ECONÓMICO LATINOAMERICANO Y DEL CARIBE

- The main objective is to continue providing IT systems, data and information
- Recovery priorities should be set
  - The RTO of an IT service is the minimum of all RTOs of the services or activities that use that service
- The recovery team of IT services is conformed as follows:
  - IT authority
    - Will participate in the most important decisions for recovery
    - Keeps the organization’s authorities informed
  - Technical staff
    - For servers, data bases, telecommuunications and applications
    - Responsible for recovery of the IT services at the operative level

# Response to incidents of operation disruption

SISTEMA ECONÓMICO LATINOAMERICANO Y DEL CARIBE

- The main objective is to continue providing the services and activities of the organization
- The recovery priorities will be given according to RTOs
- The continuity recovery team is conformed as follows:
  - Led by the the heads of functional units or process leaders
    - Depending how best the organization is structured to respond to a disruptive incident
    - It is a key part of the leadership capacity that the organization may have during the incident
  - Staff with key positions to perform minimal activities according to the established RTOs

# Management of incidents o crisis

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- The main objective is decisión-making through the formation of an Incident Management Committee or Crisis Committee
- This crisis committee comprises the organization's authorities
  - It shall be convened to support the decisions of the team that is responding to the incident
  - It will be called upon according to the type of incident
    - By staff security,
      by reputation affectation,
      by affectation of the IT services,
      by affectation of the key business activities

# Module 7

SISTEMA ECONÓMICO LATINOAMERICANO Y DEL CARIBE

## Conduct tests and exercises of the continuity plans

- General concepts
- Increasingly complex exercises
- Planning of exercises
- Types of exercises

# General concepts

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- The plans will be paper only and will go no further but will be exercised
- Success of the plan at the time of the disruptive event is not on how well documented it is but how well practiced and internalized it is
- The main objective of an exercse is to practice the plan and progressively expose it to the greatest posible stress
  - It is not seeing whether or not the plan works
  - Identify opportunities for improvement
  - Determine the additional skills needed

# Increasingly complex exercises

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- The athlete's analogy
  - No world champion was born that way
- An organization that is just starting its continuity programme should not start with a super complex test
  - It should start simple
    - Only with a general fire scenario with desktop exercises and validating the functioning of certain critical equipping and emphasizing the evacuation of staff

  - The following exercise will be somewhat more complex
    - It will be simulating wounded and hence alternative needs
  - In this way it will progressively create greater complexity
    - At some point it will lead to the "shutdown" of their operations and use of the alternatives that the strategies defined and in less time than the required RTOs.

# Planning of exercises

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- The organization should plan its test objectives over time
  - What it hopes to achieve in a year? in two? in three? maybe even in five years?
  - The objectives should be validated year by year.

- Frequency of the exercises should be prudential in order to leave room for the organization to meet its day to day operation objectives
  - The levels of complexity should be progressive at the pace established by the organization
  - But too much time should not elapse so that the staff forgets the plans
    - Or with the changes of the organization, the plans are no longer useful

# Types of exercises

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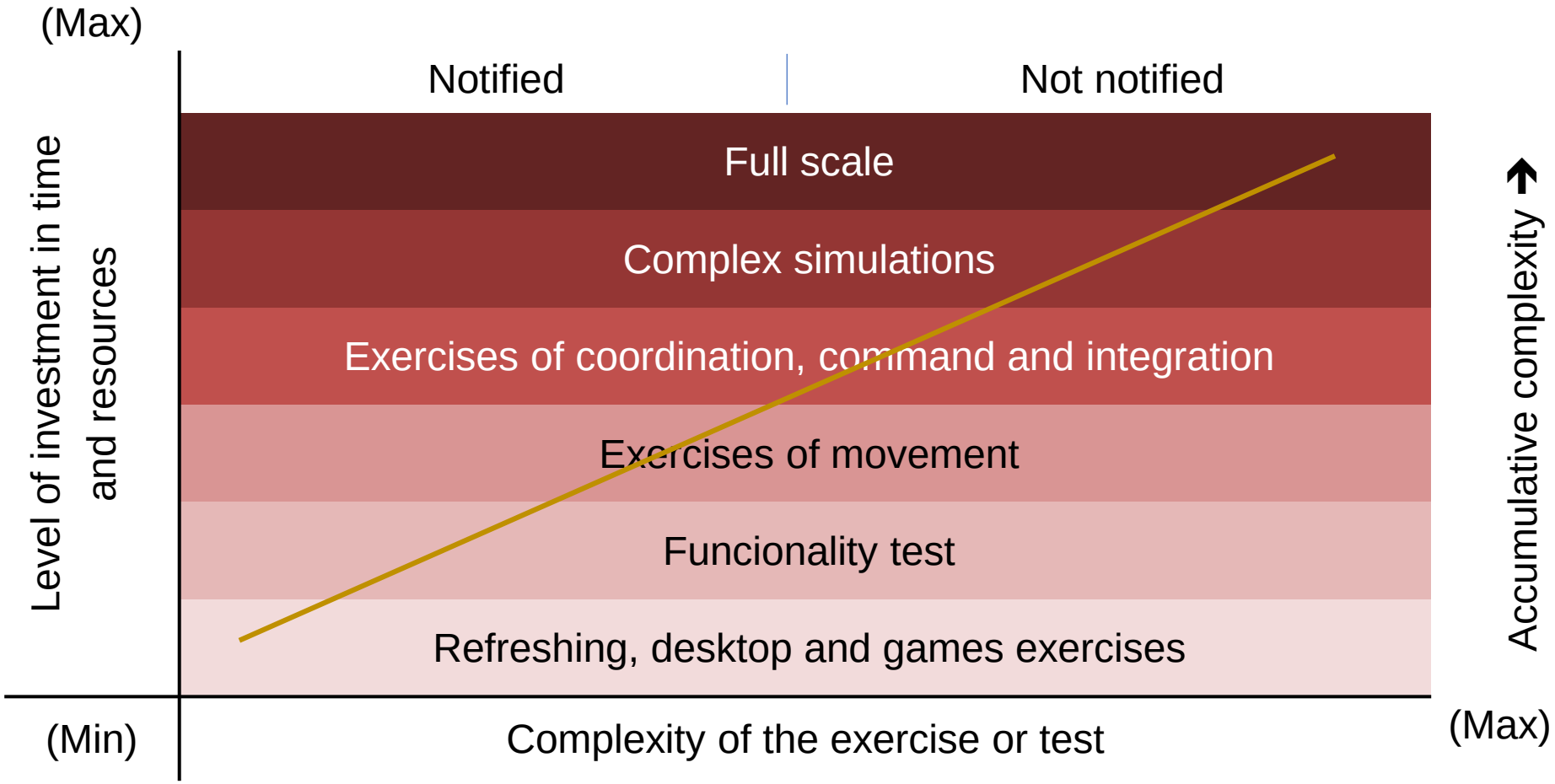

# Types of exercises

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- Refreshing, desktop and games
  - Disseminate and create general knowledge in the use of the plan and the strategy options
- Functionality tests
  - To ensure that the infrastructure and equipping are operative and functioning
  - To exercise the staff who operate such equipping
- Movement
  - To know where to move
    - How and by what means to move and if it is achieved within the allocated time objectives
- Coordination, command and integration
  - To exercise coordination of the incident o crisis management committee

# Types of exercises

SISTEMA ECONÓMICO LATINOAMERICANO Y DEL CARIBE

- Full scale
  - In addition to what is being simulated, it seeks to stop a crucial service
    - What should be recovered within the expected times with the risks that this represents
    - As far as possible, it is performed in controlled environments
- An un-notified exercise does not seek “to see if the plan Works”
  - It increases stress management skills and alert levels appropriate for a disruptive event
  - The corresponding authority should always be notified
    - In order to anticipate any risk of unavailability

# Module 8

SISTEMA ECONÓMICO LATINOAMERICANO Y DEL CARIBE

**Raise awareness and competences in the organization**

- Justification
- Raising of awareness
- Training

# Justification

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- The day-day of the organization will make the issue of continuity in time become less important
  - Creating a culture of business continuity and operations within the organization is a task that must be constant

# Raising awareness

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- If the issue of continuity has not yet been implemented in the organization
  - Sensitization will seek to justify the need to establish a business continuity program
    - From past events
    - With incidents occurring in other organizations
    - Due to regulatory or legal obligations
    - For audit requirements


- If continuity is already implemented,
  - Sensitization will seek to remind the staff that it is an important issue to be prepared because "the unthinkable event could happen"

# Creating awareness

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- Work with the organization's internal communications area
  - Better ways of delivering the message to the staff and the appropriate means of doing so
    - Newsletters, websites, posters, chats, games
    - Once a year, the day, the work shift or the week of continuity.
- Sensitization should be focused on the type of target audience
  - There should always be indicators that measure whether the desired results are being achieved
    - If it is not measured, there is no way of knowing if the method used is being effective

# Training

SISTEMA ECONÓMICO LATINOAMERICANO Y DEL CARIBE

- Training seeks to provide knowledge and experience on different topics of continuity
  - Concepts of business continuity and operations
    - Safety of staff and security of critical assets
    - Affectation of image and reputation
    - IT interruption
    - Operations disruption
    - Government and management of incidents or crisis;

  - In the use and application of recovery strategy alternatives and continuity plans
    - The exercises are successful tools for providing knowledge and experience
  - In the day to day activities by the alternatives

# Training

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- Training and creating competences should be focused by the type of target audience
  - The results should be measured to determine whether it is being effective and meets the objectives of building capacities
    - If it is not measured, there is no way to know if it is being effective

# Module 9

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## Maintain the business continuity programme

- Justification
- Identifying change
- Managing change
- Controlling change
- Managing documentation

# Justification

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- The organization is always changing
  - People change, responsibilities change
  - Services change
  - Premises and facilities change
  - Systems change
  - Suppliers change and other parts of the organization change

- That is why one of the most important challenges of continuity is to achieve that, despite the changes the organization, continuity is not outdated

# Identify change

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- The success of change management is knowing who can inform it and the frequency with which the source of change should be consulted
  - The main source of information for staff changes can be Human Resources
    - Frequency for consulting is every fifteen days
    - The means is by a format of additions, deletions and modifications of staff sent by email;
  - The main source of information for computer system changes is the IT Department
    - Specifically the IT change committee
    - Frequency for consulting is once a month participating in meetings at the invitation of said committee

# Managing change

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- The changes to be considered will be those that directly impact continuity
  - Mainly its resources
    - services; processes o activities; people, transport and communications; physical infrastructure, public services and work environments; equipping, materials and supplies; IT services; suppliers; financial viability; among others

- Once a change is identified, it should be recorded in a log and the impact on the BC programme should be analyzed
  - If the impact is low or moderate, it could wait for the updating cycle the following year
  - If the impact is high or very high, the current year's operative work plan should be modified and updating of the continuity components should be contemplated where necessary

# Controlling change

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- It should keep record of what changed, who changed and who approved what was changed and what is the new version of the modified document

# Managing documentation

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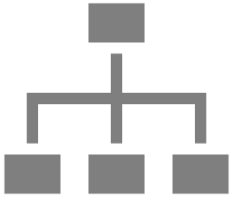
- In case the document (for example a plan) needs to be re-distributed, it would be necessary to request the old versions of the document and archive them or destroy them and deliver the new versions
- The document of the plan is a controlled document
  - The content of the plan is responsibility of the owner of the department or process
  - The continuity coordinator is responsible for accessing the document and distributing it only to whom the plan needs to be delivered



# Module 10

SISTEMA ECONÓMICO LATINOAMERICANO Y DEL CARIBE

## Business continuity programme indicators

- Justification
- The BCM Module
- Strategic objectives in BC

# Justification

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- An organization without indicators to measure its progress, or without a strategic plan, will have no way of measuring whether it is progressing
- The same happens with the programme for business continuity and operations
  - If its maturity is not measured and strategic objectives are not presented, over time it will not be able to show the authorities whether or not it is improving

# The BCM Model

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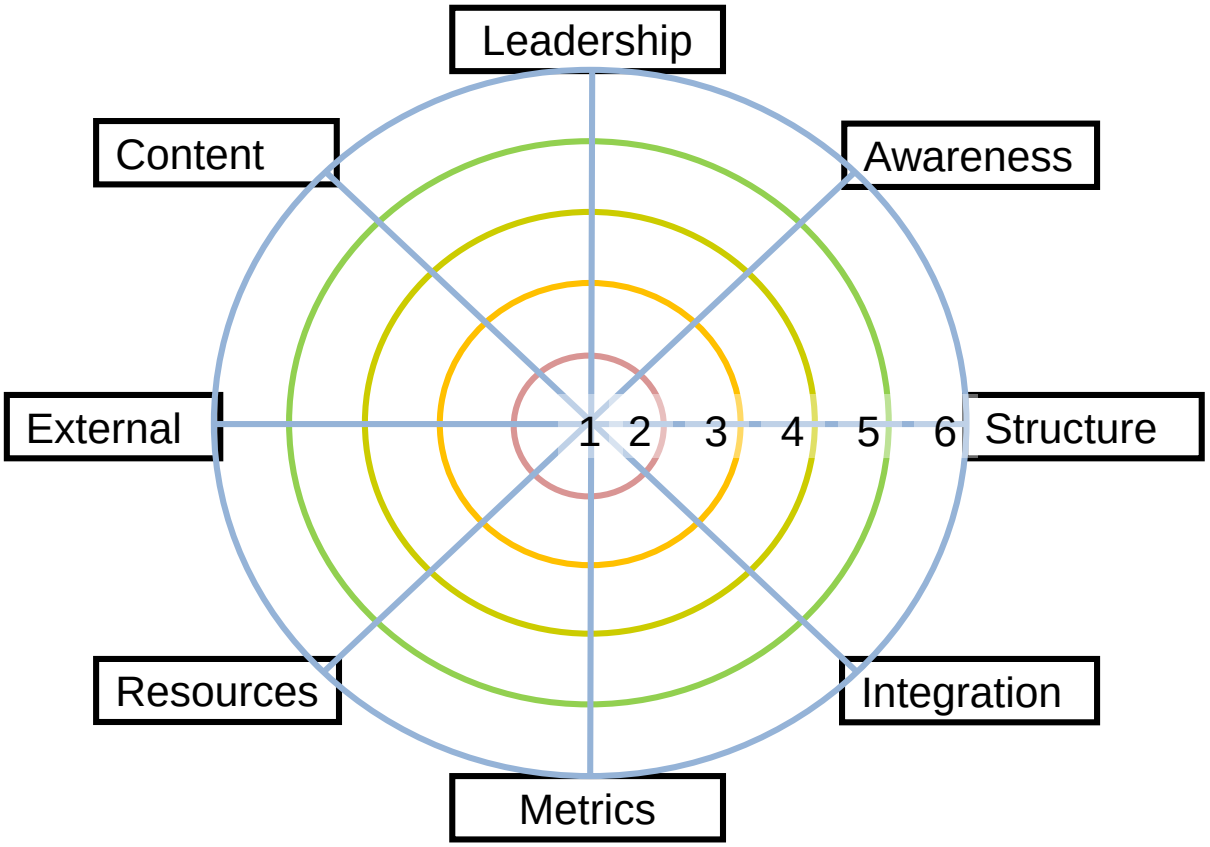
- Business Continuity Maturity Model




- Levels 1 and 2: At risk
- Levels 3 and 4: Competent
- Levels 5 and 6: Excellence

# The BCM Model

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- It establishes eight competences that the organization should achieve
  - (1) Leadership by authorities
  - (2) Awareness and interest by the general staff
  - (3) Structure, roles and responsibilities
  - (4) Interiorization and integration with internal and external parts
  - (5) Measuring continuity by metric indicators
  - (6) Having competent resources and making investments according to scenarios intended to be protected
  - (7) Guarantee of the supply chain and of the management of third party expectations
  - (8) Methodological order in conformity with best practices

# The BCM Model

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- Measures six levels of maturity
  (1) No continuity efforts are made
  (2) At least one functional department is making some effort on its own initiative
  (3) Several functional departments attempt coordinating efforts through a work commission
  (4) The organization is applying a better practice, and a function for business continuity and operations has been established
  (5) The organization has moved from theory to practice in the application of best practices, and is implementing a continuity program for the organization in all departments within the scope of continuity, although not yet fully successful in some departments
  (6) The organization has a regular and consistent practice of excellence and all functional departments, within the scope of continuity, are highly committed; there are strategy options and their plans are frequently put into practice.

# Strategic objectives of BC

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- Based on the results from the BCM module, progressive objectives can be defined
  - Example
    - The first year to reach level three
    - The second year to maintain the level
    - The third year to reach level four
  - Another example could be
    - The first year to reach level four in the competences of leadership and awareness and, in the rest, at least level three for departments with RTO less than four hours
    - The second year to reach level four in all competences for departments with zero RTO; and for RTO departments twenty four, to reach level three in competences of leadership and awareness

- Said objectives should be measured annually and compared with the results from the previous year
  - As the organization matures, the strategic objectives for BC can be better adjusted