# Endeavour India

Part 1

Post impact phase?

Readiness

Mitigation

Raising the alarm?

Pre-disaster phase?

Impact

Booklet

**A Guide for Readiness & Mitigation by Venkatram, AOEC 2021**


# Understanding a public facility or building

# Understanding a facility or building

- Name of  the facility or building:

- Year built: Current age:

- Built by:
- Renovated or expanded by:
- Maintained by:
- Working days / hours:
- Number of house-keeping and maintenance staff:

- Facility or building used for (Tick as applicable):  Central government services/ State Government services/Business purposes/Education purposes/Education and Residential purposes/Other purposes

- Classification of services available at facility or building:

# Understanding a facility or building

- Is the facility purely for children of government officials (Tick as applicable)? Yes/No
- Do VIPs / foreign delegates make visits (Tick as applicable): Yes/No
- Is the facility visited by general public (Tick as applicable)? Yes/No
- Is the facility visited by aged people (Tick as applicable)? Yes/No
- Does the facility include a dormitory or hostel for children (Tick as applicable)? Yes/No
- Is the facility constructed to help the handicap or differently able?
- Are contractual agreements used in running the facility or building? Yes/No
- Name(s) of contractors or third party companies:
- 
- Working days / hours:
- Number of contractual staff:

# Understanding a facility  or building

- Any disaster risk probability assessment available for the facility or building?
- Yes/No. If yes, is the facility or building vulnerable? Yes/No

- Any terror attack probability assessment available for the facility or building?
- Yes/No. If yes, is the facility or building vulnerable? Yes/No

- **Nature of vulnerability:**

# Part 1 (TOC)

# Disaster Management Readiness (Basic Edition)

# Disaster Management readiness

In an increasingly competitive and changing world, it is organizational readiness that gives an edge. Having a plan for Disaster Management today, can help a team of people demonstrate effectiveness in situations/mass emergencies and also save lives or reduce chances of uncontrollable incidences.

As part of a Disaster Management Programme, one could design a Disaster Management pamphlet to describe what a disaster is and how the facility/ building/organization/associated community is ready to manage an occurrence specific to its vulnerability. The pamphlet will include details of certain One Point Contact for Governance indicators that are thought important while dealing with an occurrence.

The sample pages describe information that could be part of the Disaster Management pamphlet. This preview is also followed by a section on the various details thought crucial while dealing with an occurrence.

# Disaster Management and Safety

**What is a disaster?**

WHO defines a disaster as any occurrence that causes damage, disruption, loss of human life and sudden deterioration of health and health services on a scale sufficient to warrant an extraordinary response from outside the affected community or organization or area.

**What are the needs of a disaster affected community or organization?**

The needs depend upon a number of factors like

+ The type of disaster

+ The resources of the community or organization

+ It's degree of preparedness, availability of a master plan

+ The stage in the disaster's evolution or deterioration

# Disaster Management and Safety

**What does this mean to a government, non-government or private organization or community?**

An organization or community must be organized and ready to act in a disaster or mass emergency situation. A well-prepared or well-informed organization or community will already know what is needed to provide crucial information or take decisive steps for relief and restoration services / programmes.

**Understanding phases of any disaster**

+ The Pre-disaster phase

+ Raising the alarm or being on the alert phase

+ The Impact phase

+ The Post impact phase

# Disaster Management and Safety

**What does a organization or community have to do to address disasters or emergency situations?**

All organizations or communities have to be prepared for 3 kinds of disasters

+ Internal disasters like a fire or an explosion or a security breach
+ External disasters like an earthquake, collapse of a building/part of the building
+ Forewarned disaster like the outbreak of an epidemic

What does a organization **or community** have to do for each phase in a disaster?

Pre-disaster phase: Risk assessment or mitigation

Alert phase: Utilization of a window or duration of time available for preparedness accordingly (if this is possible for a disaster category)

Impact phase: Utilization of prior planning or preparedness to activate a response mechanism, Switching over to alternate systems, updating of status of response

# Disaster Management and Safety

measures and if necessary coordinating for outside assistance.

**Post-impact phase:**
+ Evacuation / Rehabilitation / Relief

+ Establishing of, continuing of a triage to take decisive remedial action to ensure healthcare services for the afflicted, injured or sick (termed as SMART or as relevant healthcare)

+ Re-establishment of primary services

+ Initiating of restorative programmes

+ Re-establishment of sanitary support to prevent outbreak of epidemics

# Disaster Management and Safety

**What is triaging?**

It is a methodology to help your disaster management team act on a person's untreated but preliminarily injured condition. This keeps in mind that the person injured due to the disaster or accident is incapable of action, or is unfamiliar with the need for treatment (or may even be from a far off area, another city, state or country).

The triage system categorizes a person's need for healthcare under different conditions such as:

a. Category 1: Critical / will need to be rushed to a hospital and needs resuscitation

b. Category 2: Serious / Needs medical treatment immediately but can wait for an ambulance

c. Category 3: Urgent / Needs medical treatment within an hour

d. Category 4: Simple / Needs care when possible

e. Category 5: Needs to be kept under observation but this can be done as relevant on one's own responsibility

# Disaster Management and Safety

**A common checklist to understand an organization's readiness for disasters or emergency situations?**

1. Review report of likely disaster scenarios
2. Review report of the organization's capabilities, strengths and weaknesses to work in a situation
3. Forming of a Disaster Management committee
4. Preparing of a plan so it includes the following:

+ Identification of a Command post & alternatives at the disaster site
+ Development of a system to sound a disaster alert
+ Development of a triage system to categorize steps to be taken according to severity or priority
+ Reception of casualties from other afflicted areas of the facility
+ Providing or arranging to provide healthcare services to the afflicted or the injured (termed as SMART or as relevant healthcare)
+ Disposal of dead bodies (if relevant)

# Disaster Management and Safety

+ Development of good communication systems
+ Well-planned first-aid kits and supplies
+ Well-placed, sheltered or relocatable Equipment and machinery
+ Plan for handling of public relations
+ Plan for management of movement within the organization and planning of efficient traffic control
+ Plan for mobilizing of additional manpower and volunteers
+ Plan to prevent health hazards and infections

5. Programme for Rehearsal of plan

6. Quality Assurance in Updating of plan

# Disaster Management and Safety

While designing a disaster management plan there are certain elements that are crucial for the organization or community

1. Roles and functions that are important are that of the

+ Disaster Management coordinator
+ Facility Administrator or Building Administrator or Manager
+ Department Heads
+ Health officer/staff trained in providing first-aid (termed as SMART or as relevant healthcare)

2.Important or connected departments are

+ The Administration department
+ The Evacuation Team

# Disaster Management and Safety

3. Support areas or units important are

+ Housekeeping services
+ Public Relation
+ Communications
+ Transportation
+ Maintenance or Engineering department
+ Security and Safety services
+ Media relations etc

# Disaster Management readiness

These details are thought important for the staff/occupants/visitors while dealing with an occurrence

1. Steps to be taken during the occurrence

2. Indication of any screening done aprior to tag occupants/visitors and offer help/ relief

3. Location of the suitable Command post at the disaster site with details on how to get there

4. Fire-exit routes or pictorial plan of all exits that can be used during a fire

5. Name and contact details of the Head of the Evacuation Team

6. Name and contact details of the Head of the Disaster Management committee

7. Name and contact details of the Building/Facility Administrator or Manager

# Disaster Management readiness

Added to this, an organization or community could also go in for exclusive Gap analysis for Disaster Management readiness, wherein a customized report will be generated after an interview with the Public Facility Administrator or Building Administrator or Manager.

# Part 2 (TOC)

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# Organizational or community preparedness?

By,
K.S.Venkatram
AOEC & SSHGIEC, 2016-2019

# Organizational preparedness

There are three aspects to being organizationally prepared to mitigate and manage disasters i.e.

1. Identification of rescue capacity of the organization or community via quick reaction teaming and swinging into action formations
2. Identification of transportation capacity of the organization or community to help shift injured/sick/ailing to other associated or available healthcare providers
3. Identification of treatment capacity of the organization or community in both scenarios when the disaster site is at the same location or when injured/sick/ailing are being transferred into the organization for immediate treatment and relief (termed as SMART or as relevant healthcare)

All three capacities are measured on the basis of number of victims that can be rescued/relocated/treated per hour, given that the seriousness of the situation and conditions of the injured/sick/ailing can vary depending upon the type of disaster.

# Organizational preparedness

All three capacities must be related to or synchronized while associating with nearby hospitals and other healthcare providers to provide relief during disasters.

**Mitigating disasters**

Advances in science, methodologies and technology have made it easier for organizations interested in mitigating disasters via proactive measures like the following i.e.

1. Creating more awareness for the need for disaster management
2. Ensuring rules and regulations are laid down or followed to improve safety from disasters
3. Planning of systems and procedures to help improve safety from disasters
4. Laying down regulations for plans of new constructions or inspecting & retro-fitting existing buildings to improve resistance to certain kinds of disasters

# Organizational preparedness

Keeping this in mind, it becomes necessary for an organization or community to outline what it must continually assess itself for, to understand its readiness to mitigate and manage disasters. The following sections provide more details.

# Self-assessment to understand readiness?

By,
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AOEC & SSHGIEC, 2016-2019

# Being responsive as an organization

An important aspect of a Disaster Management plan is to understand whether your organization or community is responsive today. A responsive organization or community is one that can successfully deal with continuous change, situational needs and emergencies.

To be responsive for disaster management, the organization or community must have a plan with internal checklists, processes, discipline to do exactly what is necessary and competence that comes through drills and rehearsals.

A responsive organization or community must have the following core organizational systems for effectiveness i.e.

1. A good directional system
2. Effective control systems
3. Efficient Operating systems/procedures

# Being responsive as an organization

What is a **good directional system**?

From the disaster management perspective, this comprises of context like

1. Well-understood purpose that describes what the organization or community will do for disaster management

2. Readiness vision that describes what steps will be taken to be prepared. This includes what financial measures, internal business process measures, learning and training measures for staff and visitor/customer related measures the organization or community will include in its solution to ensure lives are saved and injuries are controlled during a disaster

3. Values that describe what disciplinary rules /attitude development the organization or community will set as targets to help its people conduct themselves as expected in the time of need. This also includes being open to ensure problems are identified early, confronted and solved to ensure efficiency

# Being responsive as an organization

What are the common **effective control systems**?
What makes a disaster management plan efficient is the element of control that lies within the organization or community, here 2 factors stand out primarily i.e. organizational culture and strategy.

By **organizational culture** we refer to the following:

1. Cohesiveness of the staff or community to deliver for a purpose in a disaster/emergency

2. Addressing of individual belief systems that influence behavior of whether I am accountable, is it part of my job, what happens to my personal safety etc

3. Any norm or Decisions-support policy to simulate, monitor, and improve the overall effectiveness and efficiency with which people work together to deliver for the various Critical-to-Life saving / Quality characteristics, goals and objectives that matter in a disaster/mass emergency

# Being responsive as an organization

By **organizational strategy** we refer to the following:

1. Explanations of why disaster management is important to the organization or community given the role it plays

2. An organization wide understanding of whom services are being provided to and how staff/occupants/visitors/people are inept in acting independently in a disaster/mass emergency

3. An indication of why readiness could matter in competitive differentiation when it comes to recognizing performance

4. Conducting of training, drills etc to ensure the staff/teams are physically and mentally prepared to act in a disaster/mass emergency

5. An identification of funding and incentives that will be associated with the disaster management program

# Being responsive as an organization

The operating systems or procedures for disaster management must be well-rehearsed and easy to perform. These operating systems or procedures must include the following:

1. An organizational structure that is simple and transparent like having a Disaster Management committee, a dedicated team of staff who will shoulder much of the responsibilities & discharge specific duties during a disaster/mass emergency, and an Evacuation team that consists of staff who will help shift/evacuate injured/other people to safer locations.

2. A flatter organizational hierarchy that permits dedicated staff to take decisions as close to the problem as possible, where purpose, vision, values and strategy help drive what best can be done.

3. Well-thought of people management systems, where training, participation systems, added role play in objectives systems, incentive planning etc help bring

# Being responsive as an organization

out positive involvement in the staff or team

4. Well-designed work processes/procedures/instructions that can be

easily followed, practiced or rehearsed. They must also be

+ Easy to perform and judge in mock drills or in actual conditions
+ Staff-centric and/or visitor-centric in ensuring lives are saved and injuries are controlled
+ Aware of the competence and skills available in the organization to ensure right decision-making or delegation
+ Aware of the intricacies and vulnerabilities of the building or facility to ensure best approaches are adopted
+ Able to coordinate multiple involvements like alerting, activation, evacuation or reception, triaging, allocation of services/reallocations/transfers of injured/ailing etc

# Key considerations in a disaster management plan

By,
K.S.Venkatram
AOEC & SSHGIEC, 2016-2019

# Key considerations

Emergency Response Pincode?

Phases in Disaster management

# Key considerations

Depending upon the role or services offered, your organization or community will be expected to do some of the following when a disaster occurs:

1. Diffuse the situation with well-rehearsed thinking

2. Provide best possible care to all the casualties

3. Save or help save as many lives as possible

4. Minimize the disabling effect of injuries, fractures, blood loss, incidence of infection etc (termed as SMART or as relevant healthcare in a non-healthcare organization)

5. Manage all casualties and people calmly without being overwhelmed by magnitude of occurrence

# Key considerations

6. Establish the identities of persons affected, collect and safely preserve their belongings

7. Organize the resources / facilities required or make alternate arrangements with maximum efficiency so there is no oversight or negligence

8. Manage crowds, brief the press and public authorities

9. Provide for safe and alternate route mapping to ensure people can move around without hindrance

10. Assess the damage and workout a plausible repair and restoration strategy

11. Raise awareness about process of disaster management in staff, occupants and visitors

# Key considerations

**What is the first step?**

**Identifying of the measure of the potential of a disaster to cause damage i.e.** this can be defined as the probability of harmful consequences or expected losses from hazards and vulnerable conditions.

Here hazards can refer to natural disasters and man-made disasters i.e.

1. Natural disasters like earthquakes, floods, cyclones, hurricanes, famine, heat wave, cold wave etc.
2. Man-made disasters like fires, explosions, collapse of building, epidemics, system failures etc.

Vulnerabilities can refer to:

1. Location of facility i.e. crowded neighborhood, isolated place, generally unsafe area, other inherited vulnerabilities due to geographical conditions
2. Type of services being provided, ineptness of staff/occupants/visitors/people to act independently for their safety

# Key considerations

3. Presence of children, aged people, infirm or pregnant women
4. Mixed background of staff or people in the organization or community
5. Lack of disaster management awareness and education within the organization or community
6. Inadequate planning for disaster management
7. Social and economic backwardness of people living in and around the building/facility
8. Unplanned construction/expansion/aging of building/facility
9. Unplanned urbanization of location/locations in and around the building/facility

Disaster risk probability = $\frac{\text{Hazards relevant} * \text{Vulnerabilities that exist}}{\text{Capacity of the facility to bear disaster}}$

This probability can be rated as Controlled Impact, Low Impact, Medium Impact, Significant Impact, High risk etc, which then will drive what your organization or community will need to do for disaster management readiness and mitigation.

# Key considerations

After identifying the disaster risk probability, the NEXT Steps are to develop strategies for Risk reduction and Risk Transfer.

Risk reduction involves

1. Designing of a Disaster Management plan where each hazard relevant to the organization or community will need a different type of preparedness
2. Designing of a Contingency plan reckoner to help answer crucial questions
3. Designing of a team charter to identify and coordinate work by all teams involved in disaster management
4. Development of a Risk Mitigation plan to reduce impact or severity of losses that occur during a disaster

Risk transfer involves

4. Getting insurance policies to protect the organization and its staff or community and its people against damages that occur
2. Arranging for contingency funds / disaster management funds

# Key considerations

Designing of a **Disaster management plan** will include the following**:**

1. Sensitization meeting to bring about awareness of need for disaster management
2. Formation of the Disaster management committee, which will be the main decision-making body for formulation of policy and plan for disaster management. The committee can be constituted by the following members:

a. Chief Administration officer/CEO/CFO/COO (if relevant)
b. All heads of departments (if relevant)
c. Facility Administrator or Building Administrator or Manager
d. Health officer / staff trained in providing first aid
e. Representatives of the staff or community

3. Hazard identification with details of any history of disasters, identification of any potential hazard, preparation of a seasonality calendar showing the months of occurrences of events and the months for preparedness & mock drills.
4. A detailed inventory of resources to be used for disaster management

# Key considerations

5. Carrying out of a mapping exercise on various parameters like risks, vulnerabilities and capacity to deal with occurrences. Some of the maps that can be designed are as follows:

a. Facility mapping of vulnerable areas

b. Social mapping of (disaster management) trained staff or teams available, human resources available, vehicles & ambulances available, generators / diesel sets available, fire extinguishers available, water sources available, emergency/first aid treatment areas available, immediate evacuation areas, visitors waiting areas, control room, information/public relation counters, media rooms, volunteers reception areas etc

c. Staff mapping of kinds of staff/visitors/people that are incapable of independent action, have disabilities etc

d. Vulnerability mapping of types of disasters that affect location, location of electrical installations, treatment plants, tall/weak structures, old and defunct infrastructure, hazardous material being stocked, explosive material being stocked, staff/visitors at risk etc

# Key considerations

e. Safe and alternate route mapping to give people an opportunity to use an unhindered path to reach safety during specific disasters

6. Selection of disaster management team and deciding of constitution of sub-teams or task forces to conduct core activities i.e. like

a. Early warning team
b. Disaster coordinator
c. Evacuation team
d. Damage assessment team
e. Relief team/trained staff
f. Facility management or Building management team
g. Trauma counseling team etc

7. Arrangement of training for each of the disaster management teams/task forces at the organization level, at the fire services department, at police headquarters, etc

# Key considerations

8. Planning and scheduling of rehearsals, mock drills, updating of observations

9. Periodic gap analysis/preparedness assessment and updating of policy and plan

10. Maintaining of a disaster manual containing a step by step approach for doing things in a disaster situation

# Key considerations

A Contingency Plan reckoner which helps answer crucial questions that form basic elements of the plan i.e.

| Who | This specifies who does what |
|---|---|
| Whom | Whom to contact |
| Where | Where to evacuate people / provide first aid etc |
| When | When to bring different aspects of the plan to action |
| What | What to do in particular situations |
| How | How to do particular things that are needed for disaster management |
| Why | Why should things be done according to a plan, why should some things be done in unforeseen aspects |

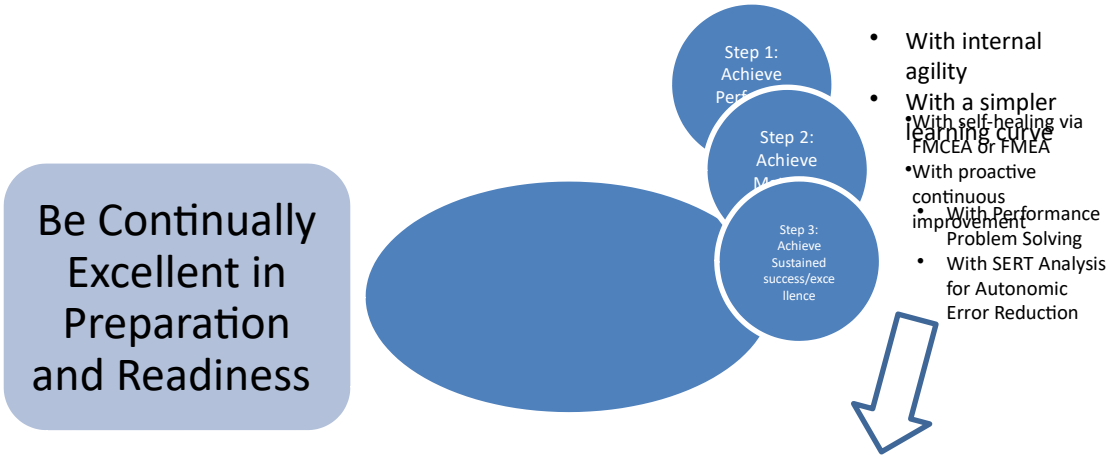
# Key considerations

A **team charter (for all the teams involved in disaster management)** that outlines the following details:

1. Name of team and names of members
2. Who does this team report to?
3. Focus and content of work for the whole team and individual team members
4. What does this team and its members need to do their work, in terms of "Kaizen's 5Ms i.e. manpower, materials, machines/equipment, methods/SOPs, measurements"?
5. What is this team and its members accountable for?
6. What authority does this team and its members have to take decisions and commit to action?
7. What does meeting objectives seem like for this team and its members?
8. What else can this team and its members do?
9. What to do if things go wrong or when plans cannot be implemented?
10. How can this team and its members deal with stress, un-workability, trauma etc?

# Key considerations

A 3-D axis policy for teams involved in disaster management



# Key considerations

A **Risk Mitigation plan** should outline those activities that help the organization check or control the damage that can be caused during a disaster i.e.

1. It should involve **structural mitigation** to assess and ensure the buildings, installations and other construction activity conform to norms

2. It should also involve **non-structural mitigation** like
a. Legal framework planning and establishment
b. Land-use or space-use planning
c. Financial framework and incentives planning
d. Training and education
e. Awareness raising/sensitization

# Checklists for structural mitigation

By,
K.S.Venkatram
AOEC & SSHGIEC, 2016-2019

# Key considerations

When it comes to **structural mitigation** for hazard resistant construction, there are different norms and guidelines that need to be followed for each type of disaster

**(A) For Earthquakes**

We can make buildings, offices or living spaces earthquake resistant. The key considerations are as follows:

1. The design of a facility or building constructed on a seismic zone will vary from that of a building constructed in a region of higher seismic resistance. The design will take into consideration any ground shaking that will be major, medium or minor, and will reduce the risk of serious damage, collapsing structures and falling debris.
2. The building should be so constructed that it adheres to Building codes for structural and non-structural design measures
3. The structures should have high vibration energy absorption, seismic resistant steel should be used

# Key considerations

What happens during an earthquake?

1. First is **the vertical or horizontal acceleration of the ground**, which moves suddenly sideways or upwards. If frame of building does not have enough sway strength it may fall down.

Norm/Guideline: Design sway resistance in steel used in buildings

2. Second is the **vibration from shock waves**, which causes oscillations. The oscillations can build up and produce greater sway loads until the building collapses or overturns.

Norm/Guideline: Improve ductility of steel frames of buildings

3. Third is the **after shock**, where buildings rely on internal walls or sheer bracing for sway resistance

Norms/Guidelines:

(a) Follow norms or guidelines for Building configuration

(b) Follow norms or guidelines for Foundation

# Key considerations

(c) Follow norms or guidelines for control on openings in walls

(d) Follow norms or guidelines for control on wall length and building height

(e) Follow norms or guidelines for water-proofing of building

(f) Follow norms or guidelines for providing vertical reinforcement

**(B) For Cyclones**

To achieve hazard resistant construction for cyclones, we need to keep in mind the following points and needs:

1. The building must be protected from high-velocity winds
2. The whole structure should be designed in such a way that it can withstand lateral movement and uplift forces
3. Certain parts of the building such as the frames and gables should be braced
4. The connection between the roofs and the walls should be strengthened
5. Other protection measures could include

(a) Follow norms or guidelines in selection of site

(b) Follow norms or guidelines in planning orientation of building

# Key considerations

(c) Follow norms or guidelines in deciding upon parameters for building foundation

(d) Follow norms or guidelines in deciding upon openings in the building

(e) Follow norms or guidelines in deciding upon paneling in the building

(f) Follow norms or guidelines in deciding upon roof and rooftop structures for the building

(g) Other norms or guidelines are installing of wind-break fences and planting of shelter belts in the direction of the wind, if building is in the country-side, or out in the open

**(C) For Floods**

There are various mitigation measures to control damage to buildings due to floods, some of them are

(1) Selecting site such that it is away from flood plains or away from large water bodies that can flood

(2) If it is not possible to select a site away from flood plains or large water bodies, then it is important to follow certain mitigation measures like

# Key considerations

(a) Follow norms or guidelines to elevate the building so as to keep the lowest floor above flood level

(b) Making the building water tight to restrict entry of water (blocking of doors, windows and air vents with boards, use of coal fly-ash in construction of embankments or dykes)

(c) Making the exposed parts of the building resistant to water damage (use of coal fly-ash as it has self-cementing properties)

(d) Designing sloping rooftops, basements, driveways and suitable storm water drains to help prevent water logging in manageable circumstances

**(D) For Landslides and Mudslides**

There are certain mitigation measures that can control damage to buildings due to landslides or mudslides, they are as follows:

(1) Selecting proper sites for construction

(2) Avoiding cutting down of trees to make way for construction sites

(3) Planting trees on open or unconsolidated slopes of hilly areas

(4) Constructing channels or drainage systems on slopes

# Key considerations

(5) Constructing retention structures
(6) Constructing deflection structures or protection walls
(7) Constructing wide ditches around building

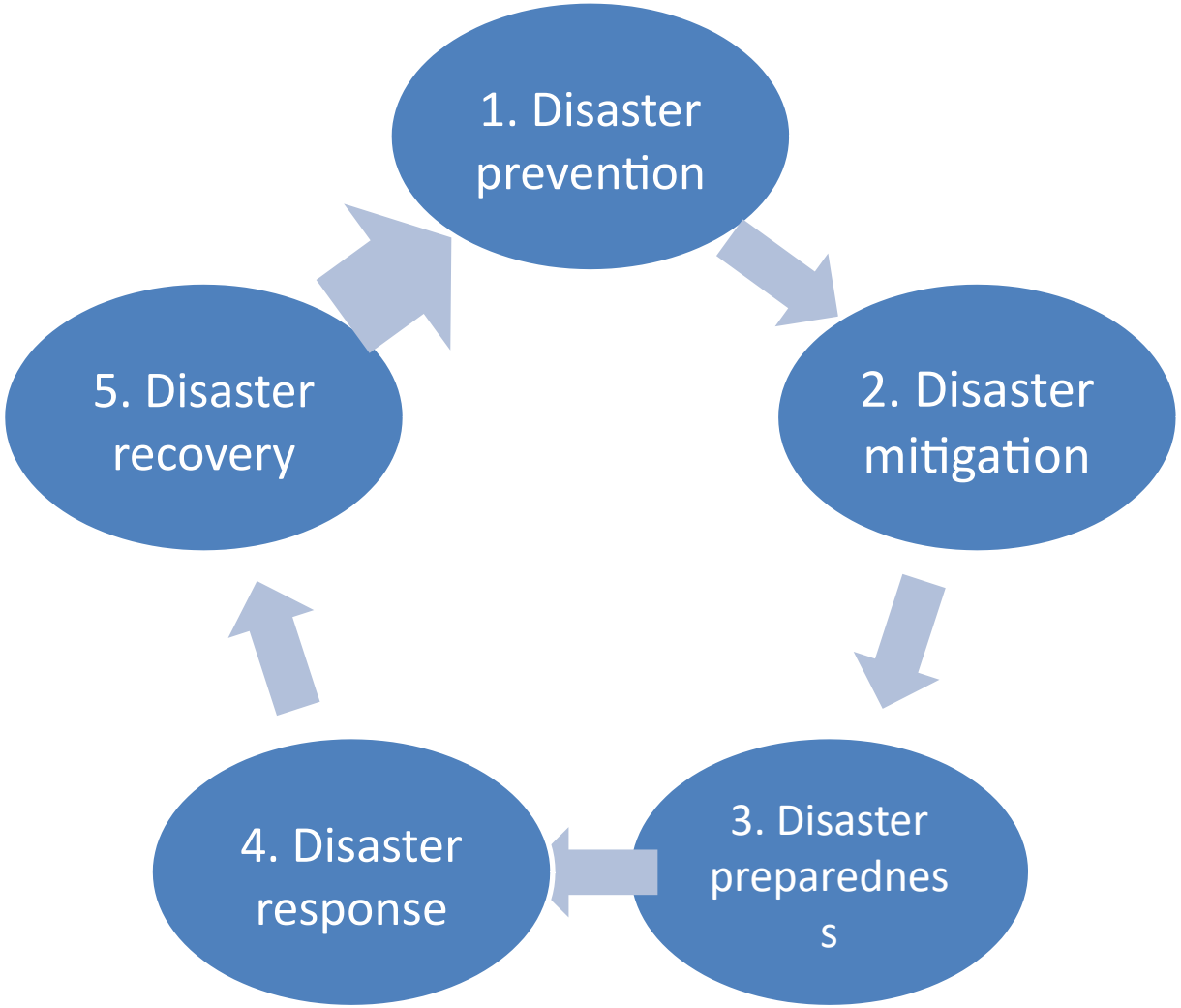
**(E) If building or facility on a hill**, one needs to watch out for the following warning signs:

(1) Sudden jamming of doors and/or windows
(2) Cracks appear on plaster
(3) Cracks on the ground or paved areas begins to widen slowly
(4) Water distribution lines, under-ground utility lines break
(5) Walls either tilt or move
(6) Outside walls or stairs pull away from the main building
(7) Fences or poles tilt or move
(8) Ground at base of slope swells up
(9) Water appears at the base of the slope

# Checklist for the preparation of a disaster management plan

By,
K.S.Venkatram
AOEC & SSHGIEC, 2016-2019

# Steps in disaster management



# Steps in Disaster Management

Disaster Management preparation and readiness should ensure the following:

1. Preparation of a comprehensive plan and Disaster manual

2. The plan should describe the chronological sequence of actions to be taken starting from disaster identification to the system of activation of the plan etc

3. The plan should include identification of areas for reception, triage, resuscitation, treatment and/or for keeping of dead bodies

4. The plan should include allocation of tasks and distributing of duties to the disaster management teams and staff

5. The plan should include a policy and procedure for passing on and exchanging information with civil authorities

6. The plan should include a process to arrange for emergency supplies / first-aid (termed as SMART or as relevant healthcare)

# Steps in Disaster Management

7. If applicable the plan should arrange for special treatment procedures in case of a chemical gas leak, nuclear radiation, poisoning, burns etc (termed as SMART or as relevant healthcare)

8. The plan should identify a location and help setup a Control Centre

9. The plan should also help generate aprior sufficient number of forms for identity tags, lists of casualties, list of valuables (possessions of casualties) etc

10. The plan should include a documented procedure for triaging and allocation of prioritized care to treat casualties so they receive maximum benefit

11. The plan should include a procedure for delivering first aid (as possible) to casualties and incidence specific directives or counseling to affected people on site

12. The plan should include a procedure for getting assistance or for transfer of casualties to nearby hospitals

# Steps in Disaster Management

13. The plan should include a procedure for the stop-gap provision of food/safe drinking water to the casualties

14. The plan should include a procedure for crowd management

15. The plan should include a procedure for efficient management and quick disposal of dead bodies

15. The plan should include a procedure for quick and efficient communication

16. The plan should include a procedure for immediate and periodic briefing of public and press

17. The plan should include a programme for carrying out mock drills with regular periodicity (as realistically as possible) at different times of the day/night

# Steps in Disaster Management

18. The plan should include a procedure to maintain a documented record of every mock drill to help identify deficiencies and lacunae in the disaster management process

19. The plan should include an outline of how a written record should be maintained about each disaster handled by the organization or community, with details on problems faced, un-workability seen, lessons learnt etc

# Checklist

What are the **main areas that a plan or "gap analysis checklist" must consider**?

1. General points about organizational readiness
2. Points about organizational structure, clarity of purpose, vision, values and strategy
3. Details about the kind of site/facility/building that this organization or community is operating from? For an organization, details about whether the location is the headquarters?
4. Points about Alerting and procedures
5. Points about Activation and procedures
6. Points about the handling of casualties and triaging
7. Points about how different areas will be integrated for immediate evacuation
8. Points about maintaining of alternate or viable schedules of accommodation
9. Points about reallocation and transfer of injured to ancillary or alternate accommodation
10. Points about planning for and arranging for emergency supplies / first aid
11. Points about transportation facilities
12. Points about physical infrastructure availability/alternatives planning

# Checklist

13. Points about evacuation / relocation procedures
14. Points about occupational safety
15. Points about dealing with incidental bio-medical waste handling
16. Points about arranging for emergency mortuary facilities or methods to dispose of dead bodies
17. Points about inter-sectoral coordination
18. Points about public relations, liaison, planning with government authorities and volunteers
19. Points about immediate relief/recovery
20. Points about long-term repair/restoration and development

# Measuring the effectiveness of the plan

By,
K.S.Venkatram
AOEC & SSHGIEC, 2016-2019

# Disaster Management planning

Some of the indicators of the quality of a good disaster management plan are:

1. Awareness and compliance for in-built safety of infrastructure

2. The completeness of the plan, disaster manual and process for disaster management for all possible contingencies including periodic reviews incorporating inclusions or changes for deficiencies found and corrective actions taken during mock drills

3. The time taken for informing teams and staff during mock drills

4. The response time of teams and staff

5. Time taken for teams to be in their respective places ready to discharge duties

6. Number of casualties taken care of or rehearsal cases and time taken for completing emergency resuscitation and documentation

# Disaster Management planning

7. Time taken to arrange for alternate emergency supplies / first-aid

8. Time taken to setup Command post or Control Centre

9. Time taken to setup reception area, treatment area, additional safe areas etc

10. Cases addressed efficiently to avoid loss of lives, organs, or limbs

11. Effectiveness of remedial thinking shown to address unexpected problems without any issues

12. Adequacy of thinking for Disaster risk probability where this is equal to

$$\frac{\text{Hazards relevant} * \text{Vulnerabilities that exist}}{\text{Capacity of the facility to bear disaster}}$$

# Measuring effectiveness

Your organization or community can measure the effectiveness of your disaster management solution by the following:

1. Designing and Implementing of a Disaster Management Performance Program on the lines of an Organizational Performance Program
2. Carrying out mock drills or rehearsals twice a year.
3. Revising, updating and modifying the plan and checklists based on the experience during the drills/rehearsals
4. Evaluating best approaches for all 5 steps of disaster management by periodic gap analysis or self-assessment
5. Maintaining a performance summary for all 5 steps of disaster management via tabulations based on details for key components, key considerations, key performance measures, key responsiveness seen or key results seen.

You can avail of templates for measuring your effectiveness for mitigation by ordering for the toolkit on sustainability. The details shared via this guide are not an end but just a beginning on what your organization or community may need to understand whilst putting together a disaster management solution.

# Considerations for non-structural mitigation

By,
K.S.Venkatram
AOEC & SSHGIEC, 2016-2019

# Key considerations

When it comes to **non-structural mitigation** for disaster mitigation and management, there are different norms and guidelines that need to be followed for aspects like

(1) Planning of first-aid

(2) Availing of mobile healthcare units (depending upon need)

(3) Building awareness of the need for public education and protecting of rights of afflicted people

(4) Designing of a health-education plan to counsel, advise and offer relief to the Afflicted

Refer to Part 3 of this toolkit for more details.

# Part 2 (TOC)

**Contents** **Page**

# Responsibility of Management councils

By,
K.S.Venkatram
AOEC & SSHGIEC, 2016-2019

# Responsibility of Management

- 1. Do those responsible for management support safety initiatives and quality improvement plans?
- 2. Do those responsible for  management address the organization's social responsibility?
- 3. Does the organization document its service standards?
- 4. Does the organization have a formal documented agreement for all outsourced services?
- 5. Does the organization monitor the quality of its outsourced services?
- 6. Does the organization ensure appropriate proactive risk management across its services?

# Responsibility of Management

- 7. Does the management implement systems for internal and external reporting of system and process failures?
- 8. Does the management ensure appropriate corrective and preventive actions are taken to address safety related incidents?
- 9. Does the management monitor and audit its Quality Management System periodically?
- 10. Does the management have a vision for continually excellent services?
- To connect further into how an organization can work towards continual excellence and self-sustenance, you can ask for AOEC's Handbooks/Guides/Case studies to understand how you can improve your business model today. You can send your request to ksvenkatram@yahoo.co.in or venkataoec@gmail.com or call 09342867666.

# Gap Analysis for Disaster Management vision

By,
K.S.Venkatram
AOEC & SSHGIEC, 2016-2019

# Gap Analysis for DM vision

- **Details to help understand the interest:**
- The Go Green plan has been a mission for many years. We could help the network community step further. The next few pages describe how this can be done.

- Today, India as a country is affected by many natural disasters like floods, earthquakes, failures in ecosystems etc.
-
- There are successful programmes that help conservation. The question that AOEC would like to raise here is that, do we autonomously deliver life support, to help people help themselves when the country, its states or nearest neighbouring countries are affected by a natural disaster.

# Gap Analysis for DM vision

- **What is the background?**
- We are familiar with the terms networks and grids, AOEC introduces a new term “Life Support Grids”. Today grids (a special network of computers) are known to help organizations host or use IT resources in fail-safe and share-usage modes.
- 
- If we have been doing this for IT resources to ensure operations uptime, then it is important for organizations to understand the impact of what is commonly experienced i.e. lack of life support around us.
- 
- The question being asked is “What can we do to make sure that life around us can avail of fail-safe services and life support management at times of disasters like floods, earthquakes, fires, etc?”
- 
- We are not talking about implementing networks that are accessible, available, controllable, or reliable but we are talking about a next step. The point being, can we design support into our networks, so the new lifecycle provides for different life support services. To understand more about this, we look at some value additions….
- 
- *The crux of a life support network (called as a milling network) is to drive organizations to universally help life.*

# Gap Analysis for DM vision

**Life Support Grids and planning services**

- The interest is to get people who use networks to invest in services (milling services) that act as contributors to a life support network.
- 
- Organizations interested in life support would need to implement a program called “the Life Support Service Program”, to enable communities, customers, or companies investing in their products or services to finance life support via multiple options. There are different entities that need to be planned for or implemented for this program.

- There are many leading technology providers, healthcare is a common aspect connecting people. It is expected that an organization’s decision to use its technology for life support could change the way investors relate to what is available today as options in selecting organizational networks and services.

- Many organizations are delivering for the human aspect of networks, with AOEC’s Go Green plan, your organization could also announce its leading interest to make its services and network “Green Lifecycle Card based, human and eco-focused”.

# Gap Analysis for DM vision

- **Some questions**
- What could influence this proposal? All this depends upon what your organization or community would like to invest in or implement as technology for unified enterprise services.

- Due to the need to keep this section brief, and in synch with the assessments, you are told to refer to the article on “Life Support Grids” (in the complete edition CD) for more details.

# Gap Analysis for Facility or Building Management and Safety

By,
K.S.Venkatram
AOEC & SSHGIEC, 2016-2019

# Gap Analysis for Facility Management and Safety

1. Does a safety committee coordinate development, implementation and monitoring of a safety plan and policies? Yes/No/Partially

2. Are safety devices installed across the facility or building and are they inspected periodically? Yes/No/Partially

3. Does the facility or building have non-smoking zones? Yes/No/Partially

4. Are facility inspection rounds to ensure safety, conducted at least twice in a year for frequently used areas and at least once a year for infrequently used areas? Yes/ No/Partially

5. Are inspection reports documented and are corrective and preventive measures undertaken? Yes/No/Partially

# Gap Analysis for Facility Management and Safety

6. Is there a safety education programme for staff?  Yes/No/Partially

7. Are facilities appropriate to the scope of services of the facility or building? Yes/No/Partially

8. Does the facility or building operate to ensure safety of people, children, aged, infirm, staff, customers and visitors? Yes/No/Partially

- Are up-to-date drawings maintained to support details of site layout, floor plans and fire-escape routes? Yes/No/Partially

9. Are internal and external sign postings largely understood by the staff, consultants, patients, customers and visitors? Yes/No/Partially

10. Is potable water and electricity available around the clock? Yes/No/Partially

# Gap Analysis for Facility Management and Safety

11. Are alternate sources of electricity and potable water provided as a backup for any failure/shortage? Is there a plan for water management? Yes/No/Partially

12. Does the management committee regularly test these alternate sources? Yes/No/Partially

13. Is the provision of space in accordance with the available literature on good practices (Indian and international standards) and directed by government agencies? Yes/No/Partially

14. Are there designated individuals responsible for the maintenance of all facilities? Yes/No/Partially

15. Is there a documented operational and maintenance plan (inclusive of preventive and breakdown planning)? Yes/No/Partially

16. Are maintenance staff contactable around the clock for emergency repairs? Yes/No/Partially

# Gap Analysis for Facility Management and Safety

17. Are response times monitored right from reporting to inspection and thereon implementation of corrective actions? Yes/No/Partially

18. Does the management committee plan for equipment in accordance with its services and strategic plan? Yes/No/Partially

19. Are equipments selected, purchased / rented, updated or upgraded by a collaboration process? Yes/No/Partially

20. Are equipments inventoried and proper logs maintained as required? Yes/No/Partially

21. Do qualified and trained personnel operate and maintain equipment and utility systems? Yes/No/Partially

22. Is there a documented operational, house-keeping and maintenance (incidental, preventive and corrective) plan? Yes/No/Partially

# Gap Analysis for Facility Management and Safety

23. Is there a maintenance plan for water management? Yes/No/Partially

24. Is there a maintenance plan for electrical systems? Yes/No/Partially

25. Is there a maintenance plan for heating, ventilation and air-conditioning? Yes/No/Partially

26. Is there a documented procedure for equipment replacement and disposal? Yes/No/Partially

27. Do qualified and trained personnel operate and maintain the equipment? Yes/No/Partially

28. Are the equipment periodically inspected and calibrated for their proper functioning? Yes/No/Partially

# Gap Analysis for Facility Management and Safety

29. Do documented procedures govern procurement, handling, storage, distribution, usage and replenishment of chemicals/corrosive liquids/explosive gases? Yes/No/Partially

30. Are chemicals/corrosive liquids/explosive gases handled, stored, distributed and used in a safe manner? Yes/No/Partially

31. Do procedures for chemicals/corrosive liquids/explosive gases address the safety issues at all levels? Yes/No/Partially

32. Are there alternate sources for chemicals/corrosive liquids/explosive gases in case of issues or hazards? Yes/No/Partially

33. Does the management committee regularly test these alternate sources? Yes/No/Partially

34. Is there an operational and maintenance plan for any piped gas/corrosive liquid flow, and compressed air installation? Yes/No/Partially

# Gap Analysis for Facility Management and Safety

35. Does the management committee have plans and provisions for early detection, abatement and containment of fire, and non-fire emergencies (disasters) within the facilities? Yes/No/Partially

36. Does the facility or building have a documented safe-exit plan in case of fire and non-fire emergencies? Yes/No/Partially

37. Are the staff trained for life saving roles in case of such emergencies? Yes/No/Partially

38. Are mock drills held at least twice a year? Yes/No/Partially

39. Is there a maintenance plan for fire-management related equipment? Yes/No/Partially

40. Does the management committee identify potential emergencies on a periodic basis? Yes/No/Partially

# Gap Analysis for Facility Management and Safety

41. Does the management committee have a documented disaster management plan? Yes/No/Partially

42. Are provisions made for the availability of (first aid specific) medical supplies, equipment and materials during such emergencies? Yes/No/Partially

43. Are the staff/teams trained for disaster management roles in case of such emergencies? Yes/No/Partially

44. Is the disaster management plan tested at least twice a year? Yes/No/Partially

45. Does the management committee have plans for handling community emergencies, epidemics and other disasters? Yes/No/Partially

46. Are hazardous materials identified within the facility or building? Yes/No/Partially

# Gap Analysis for Facility Management and Safety

47. Do documented procedures govern identification of house-keeping chemicals, other hazardous materials, discarding, handling, tagging, collection for temporary storage, and safe disposal? Yes/No/Partially

# Gap Analysis for IT Service Continuity (Basic Edition)

By,
K.S.Venkatram
AOEC & SSHGIEC, 2016-2019

# Gap Analysis for IT Service Continuity

As organizations, institutions, facilities, crucial buildings are becoming increasingly dependent upon IT services, it is important to plan for business service continuity and IT service continuity.

This does mean carrying out of risk analysis and identification of risk mitigation measures to ensure an organization can overcome situations like disasters or failures of its facilities, systems and equipment.

If an organization has processes for Business Service Continuity and IT Service Continuity, then it can

a. Manage recovery of its systems after a disaster
b. Reduce loss of service availability time and offer better continuity in services after a disaster
c. Minimize interruption to business activities

# Gap Analysis for IT Service Continuity

What do processes for Business Service Continuity and IT Service Continuity include?

1. They assess the risk and resulting impact of disruption of services (systems & equipment) following a disaster
2. They identify services (inclusive of systems and equipment) vital to the business earlier on and adopt well-thought of preventive/alternative measures for these elements
3. They define periods within which vital services, systems and equipment should be restored after a disaster
4. They take measures to prevent, detect, prepare for and mitigate the effects of disasters and/or to reduce their impact
5. They define a well-thought of approach to restore vital services, systems and equipment when needed
6. They develop, test and regularly maintain a recovery plan with sufficient detail to help survive a disaster where it is possible to restore services to normal after a certain period
7. They help install reliable systems and equipment with sufficient planning for reliable facility management, redundancy with prior arrangement for backup systems and equipment (where possible)

# Gap Analysis for IT Service Continuity

What does a plan for Business Service Continuity and IT Service Continuity depend upon?

1. Service Level Management or obligation of organization to provide a certain level of services at all times
2. Availability Management for its facilities, systems and equipment by designing and implementing preventive measures to ensure more service availability time
3. Configuration Management that identifies the specifications and configurations of systems, and equipment accurately so as to help replace them after a disaster
4. Capacity Management that helps the organization use its facilities in an efficient manner or to the fullest, by ensuring periodic facility planning with regular facility management where it is possible to switch to recovery mode when needed
5. Change Management that helps audit, identify and track changes to the specifications and configurations of processes, systems and equipment at all times, so the same can be restored as quickly as possible when needed
6. Periodic self-assessment of these areas to ensure the organization understands issues, gaps and lacunae as early as possible

# Service Evaluation and Review Technique (SERT) for self-sustaining services

By,
K.S.Venkatram
AOEC & SSHGIEC, 2016-2019

# Service Evaluation and Review Technique

**Why is SERT an important facet in an organization or community?**

Apart from planning, organizing, staffing, and controlling for operations effectiveness, directing people is important as it helps an organization or community initiate and guide action towards desired business and quality objectives.

The factors that determine successful directing of people are

1. Communication methodology
2. Leadership and Delegation
3. In-house training
4. Motivation
5. Decisions Support (AOEC's strategy)

Your organization's "Service Model and Organizational Behavior Model (OBM)" decides the overall effectiveness and efficiency with which people work together to deliver for the various Critical-to-Quality characteristics, goals and objectives.

# Service Evaluation and Review Technique

**Does your Service Model account for the following?**

1. Acceptability of services (according to Accreditation levels)

2. Acceptability of services (according to other Quality assurance levels)

3. Contingency planning (for agility needed in emergencies, disasters and other unseen needs)

4. Successful directing of people/safe practices adherence/organizational culture (to manage cost of quality costs and also meet continual quality improvement objectives)

# Service Evaluation and Review Technique

**Does your Organizational Behavior Model account for the following?**

People in an organization respond / act on the basis of a hierarchy of needs

1. Physiological needs – need for food, clothing, shelter etc
2. Security and social needs – need to earn for sustenance, and need for reassurance that there is no fear of loss of job, property and shelter
3. Social affiliation or acceptance needs – a need to belong, a need to be accepted by others
4. Self-esteem needs – need for power, prestige, status, self-confidence
5. Self-actualization needs – need to maximize one's potential, self-expression

It needs to be pointed out that as people advance in an organization their physiological and security needs reduce but their affiliation, esteem and actualization needs increase.

# Service Evaluation and Review Technique

**Does your Organizational Behavior Model take into consideration the following behavioral sciences and their specific focus?**

1. **Psychology** where the focus is on

+ Learning/Competence
+ Motivation
+ Recognition of personality
+ Perception and apparent reasoning/beliefs
+ Need for training or interest in training
+ Leadership effectiveness
+ Job satisfaction or role satisfaction
+ Capability for individual decision-making
+ Inspiration to perform / get appraised for performance
+ Attitude measurement
+ Work stress etc

# Service Evaluation and Review Technique

2. **Sociology** where the focus is on responses to

+ Formal organizational theory
+ Bureaucracy
+ Organizational technology
+ Organizational culture
+ Group dynamics or team work
+ Role of communication in the organization
+ Healthy use of position/power or need for more power/self-expression
+ Recognition of conflicts and conflicts management
+ Inter-group behavior or inter-personal relationships

# Service Evaluation and Review Technique

3. **Social psychology** where the focus is on
+ Behavior change management
+ Attitude change management
+ Adept communication in all circumstances
+ Group process management / inter-department role play
+ Group decision-making

4. **Anthropology** that focuses on
+ Organizational culture and its effect in social diversity
+ Organizational environment and its influence on personnel
+ Recognition of comparative values, attitudes in personnel/customers
+ Understanding of behavior/beliefs through cross-culture analysis

# Service Evaluation and Review Technique

**What does your Organizational Behavior Model (OBM) influence?**

In any organization the OBM and appropriate Personnel Management methodology influences the following:

1. SMART Service transformation specific response policy (or SSTSR policy)
2. Productivity
3. Absenteeism
4. Contributions to organizational goals
5. Job satisfaction

This influence can be observed at 4 levels:

1. Individual level
2. Group level
3. Organizational system level
4. Decisions Support level

The next few pages illustrate the influences at the 4 levels…

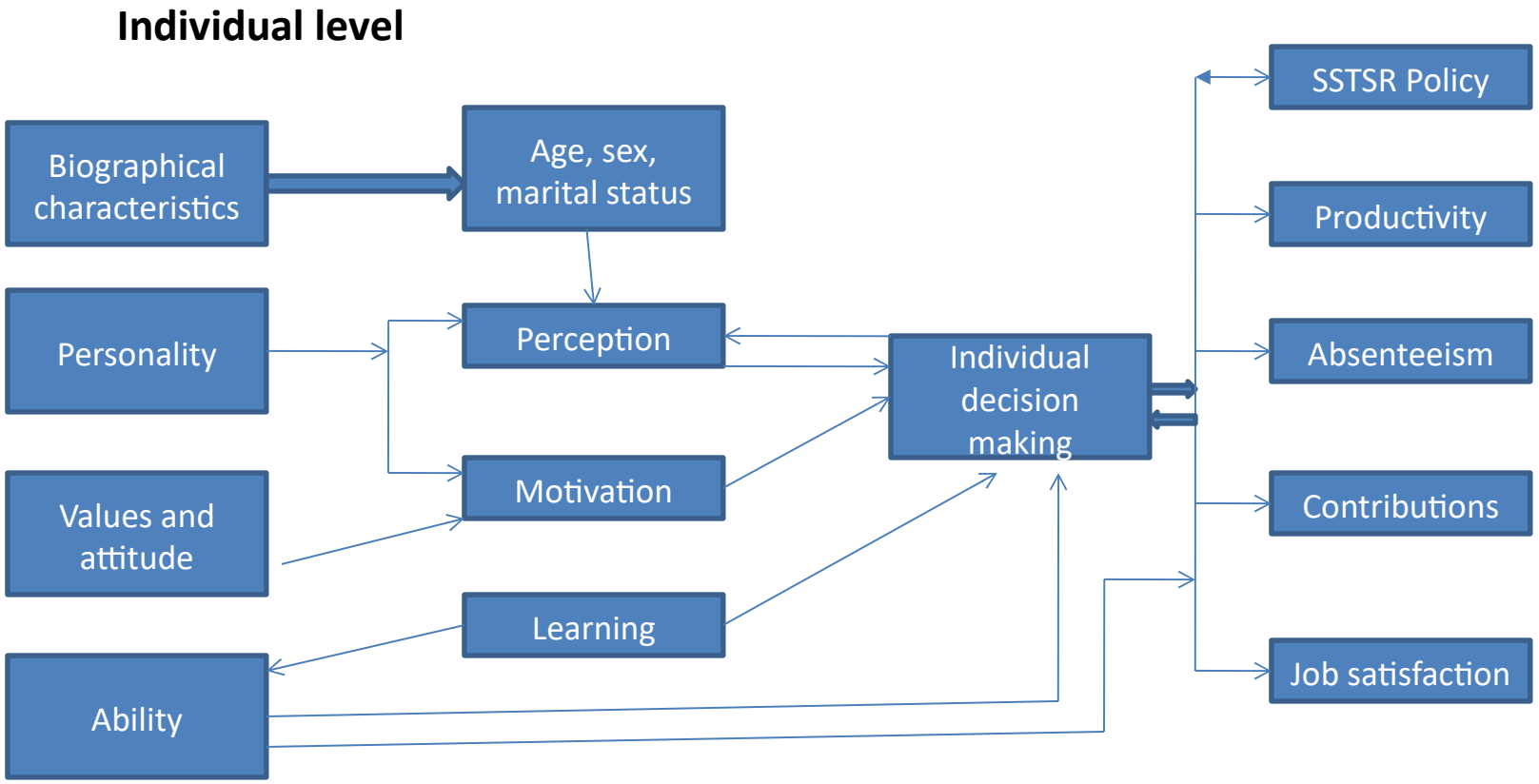
# Service Evaluation and Review Technique

**What is the SMART Service Transformation Specific Response (SSTSR) policy?**
It is a policy that directs people/staff to review and respond to needs, issues or transformations in services, so safe practices are adhered to during day to day interactions, or after checkpoint evaluations.

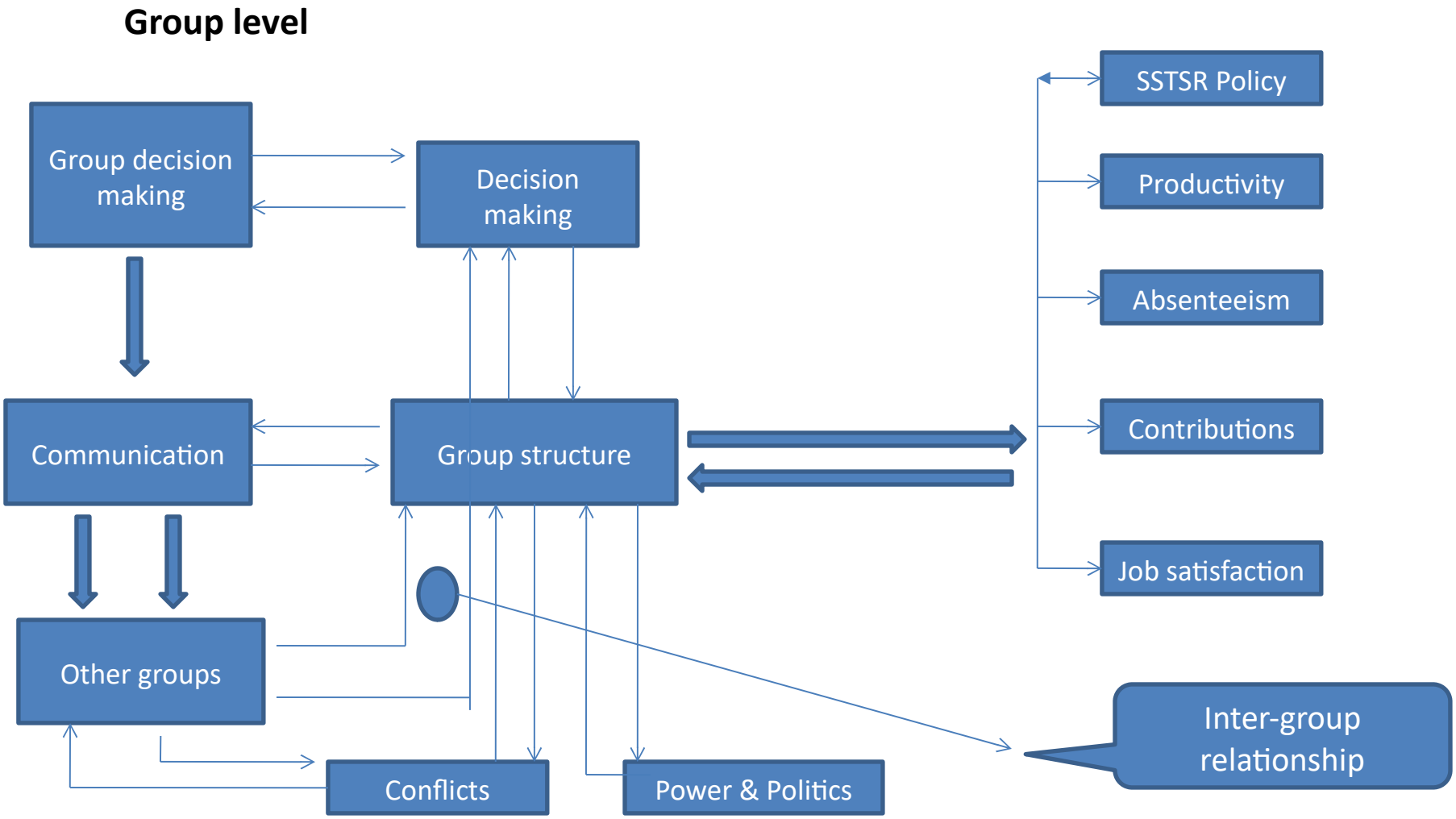
It involves the need to document/utilize new concept Incidence Mitigation and Adaptation Questionnaires (made up of Self-network profiles, Total Quality Management Questionnaires, Total Quality Management Surveys etc), SMART First Aid Fulfillment Worksheets and Peer Skills Questionnaires. The above policy and its new methodology documentation is a conceptualization by AOEC to complement your quality control framework and make your organization's service model autonomous* and SMART*.

AOEC's toolkit/handbooks/guides include certain ready to use information to get started in your journey to improve your ratings in facility management. Take the NEXT step ask for the facility management toolkit/handbook/guide.

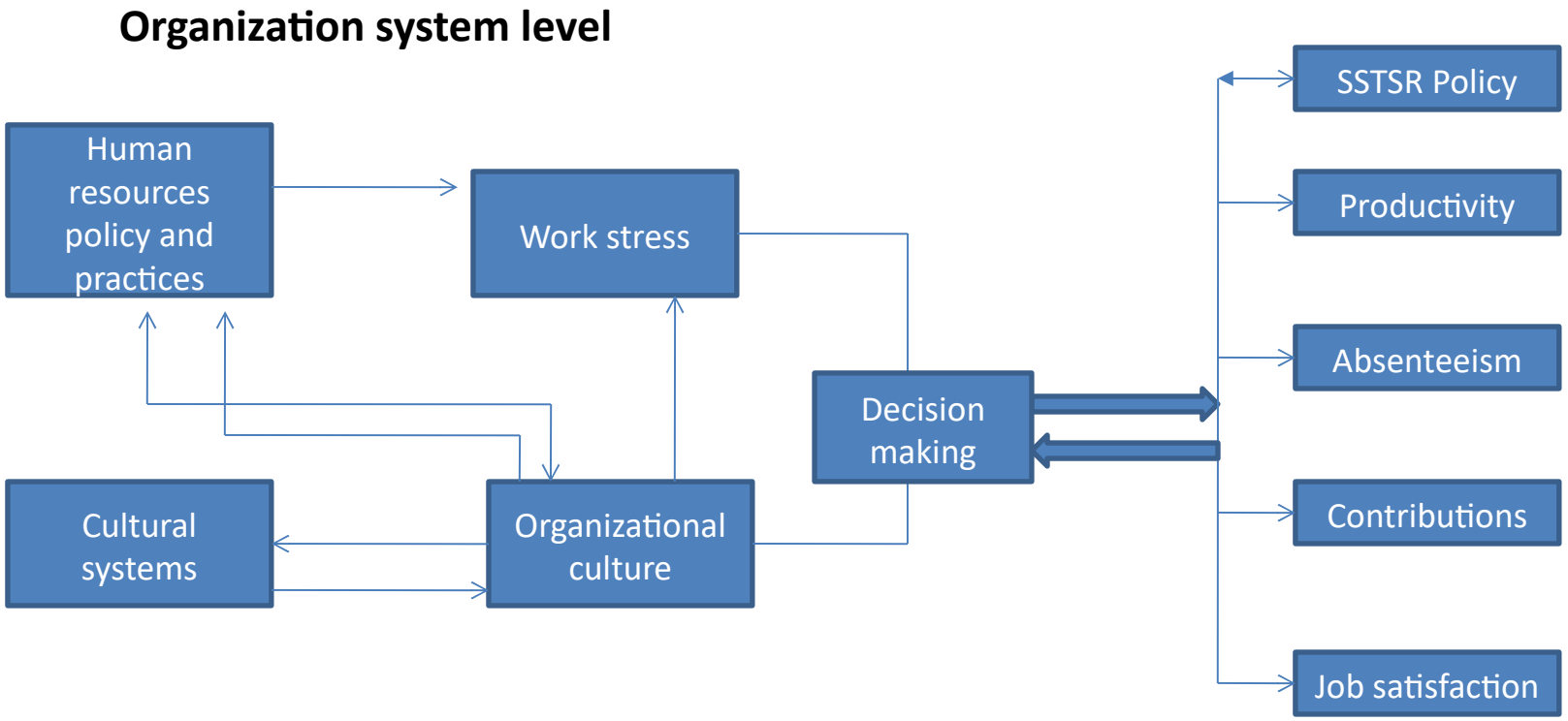
# Service Evaluation and Review Technique



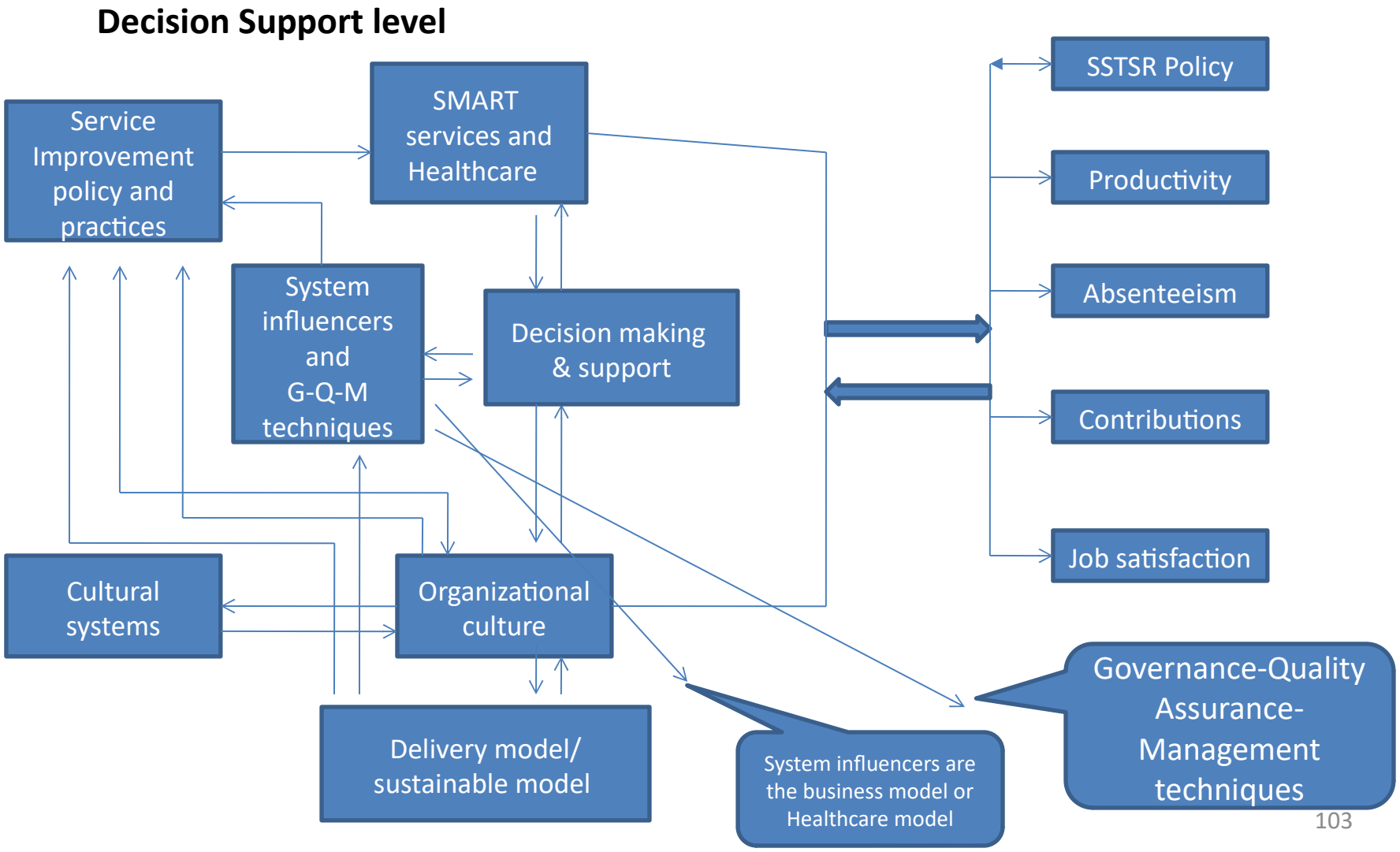
# Service Evaluation and Review Technique



# Service Evaluation and Review Technique



# Service Evaluation and Review Technique



# Service Evaluation and Review Technique

**Given these considerations and factors, the 4 main areas that can help your organization manage its work requirements are:**

1. Identifying & managing of **competence** of personnel
2. Improving of **awareness** of personnel
3. Implementing of satisfactory **training programs**
4. Implementing of SERT acceptability

**The gap analysis done during the SERT assessment can identify what is important for your organization**

5. Accreditation model specific areas
2. System influencer specific areas
3. Integrated sustainability quotient specific factors for facilities

# Service Evaluation and Review Technique

**What is SERT acceptability?**

It is an indication of complete acceptability that your facility management model is sustainable and continually excellent. This understanding is achieved via a gap analysis to assess how your organization delivers the following:

1. Better availability with demonstration of unique value
2. Improved acceptability for quality and competence in techniques
3. Overall accountability in services
4. Qualified total cost of ownership or affordability

This gap analysis will include a series of questions or assessments based on documentation from high-performance buildings, ISO 14000 family of standards and other conceptualizations by AOEC to improve your ability to manage today's system influencers, and the need to understand and manage cause for change in facility management.

# Service Evaluation and Review Technique

**NEXT Steps**

1. You could conduct a study to understand the issues faced while directing people or managing people or while planning readiness and mitigation
2. You could conduct a study to identify which factors (SSTSR policy, productivity, absenteeism, contributions, job satisfaction) and levels are most affected in the existing Organizational Behavior Model and Service Model
3. You could look at adopting some practices from the ISO 14000/ISO 9001:2008/ISO 9004:2009 for better readiness and mitigation
4. You could work on improving the current feedback and grievance redressal procedures to understand the issues affecting your organization
5. You could work on in-house counseling methodologies to further inspire and motivate personnel/staff and reduce conflicts that may affect your readiness and mitigation solution

# Effectiveness in uncontrollable situations and mass emergencies

This botklet can help a  management council, third party company or community plan for and implement or improve solutions for life saving practices and fail-safe services at times of disasters like floods, earthquakes, fires, mass accidents, epidemics etc.

Disasters/emergencies

Standards and Practices

Readiness/Mitigation

The consultant K.S.Venkatram  has a B.E. in Computer Engineering, and also holds MCP, MCAD and MCSD certifications. He has  25+ years of experience  in IT Service Management, manufacturing, healthcare etc