

SMART TECHNOLOGY IN FIRE PREVENTION



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The Directorate of Fire and Emergency Service is entering in to its 33rd Year of existence. The mission of Fire and Emergency Services is to prevent Fire and Emergency incidents. We have always been doing this through Public Awareness. In the age of Technology and Digitalization the Fire and Emergency Service, being a Multi Hazard Response Force have to change and be “SMART”. In order to be well prepared for the Safety challenges, the Fire and Emergency Service as the First Responder to any incidents have now become more proactive than reactive.

It is this proactiveness that has enabled the Directorate of Fire and Emergency Services to conceive and develop a State of Art 24x7 Emergency Monitoring System that uses M2M Technology. The project is titled “**SAFE GOA 24X7 EMERGENCY MONITORING SYSTEM**”. It is developed by using IOT based platform utilizing Technological Advancements, integrating IT application and Digitization.

EMERGENCY MONITORING SYSTEM

The vision of Safe Cities is to provide the Citizens with a safe and secure living environment. An IOT framework is used to develop the “**SAFE GOA 24x7 Emergency Monitoring System**”. It would provide for Remotely Monitoring in real time the functional status of Fire Protection System i.e. Fire Detection, Fire Suppression, Gas Detection and Fire Alarm of all the stakeholders/facilities/occupancies such as Industry, Hospitals, Hotels, Banks, High Rise Buildings etc.

The 24x7 Real time connectivity starts from the design of IOT Gateway, the GPS/GPRS Communication medium and also the cloud based service of Data Collection, Analytics, Dash boarding, Reporting and dispatching of Fire Fighting Vehicles which completes the full cycle of the service. The State Fire and Emergency Services Control Room provides a proactive approach to the First Responders on the location and type of Incident enabling intelligent decision-making and then reducing and Minimizing Loss of Life and Loss of Physical Assets thereby aiming at “**SURAKSHIT GOA**”.

OBJECTIVE AND BENEFITS

- All facilities (Industries, Hospitality, Hospitals, Banks, High Rise Buildings, etc. having independent Fire Protection Systems will connect with **SAFE GOA 24x7 Emergency Monitoring System (EMS)**).
- The Emergency Monitoring System (EMS) will help to monitor the Health of the Fire Protection System (Fire, Detection, Alarm and Fire Fighting System) in real time and facilitate immediate dispatch of appropriate resources, thus saving the time lost in different rounds of response.

- Ensure all facilities in Goa have a functional Fire Protection System on 24x7 Basis.
- Optimize use of Manpower needed for Periodical Fire Safety Audit and limiting it to first physical inspection and thereafter on line monitoring of the functional efficacy of the Fire Protection System.
- This will enable the department to issue online No Objection Certificate (NOC) for those occupancies who are compliant with the requirement thus facilitating the “**Ease of Doing Business**”.
- Minimize loss due to Business/Activity disruption due to Fire Incident through Automated Compliance Monitoring System.
- Integration of Global Positioning System (GPS) with the Emergency Monitoring System (EMS) to facilitate optimum utilization of fleet of Fire Fighting Appliances (FFA).
- Integrate the Emergency Monitoring System (EMS) with the “**SMART CITY**” Scheme.

PRE-MPTIVE ACTION USING KNOWLEDGE TOOLS

As part of the continuous efforts of the department to incorporate technological advancements in its planning and execution of development action we are collaborating with Prof. Kotha Mahender, Department of Earth Science, Goa University to utilize their expertise in Statistical and Time Service Analysis.

This project would aim at developing 2 important analytics knowledge Tools i.e. **(1) Hot Spot mapping of recorded fire incident (2) Creating a New Fire Hazard Index (FHI)** to help identify locations that face higher exposure to fire causing factors.

Every Fire and Emergency leader wants every individual in their care to be safe from fire, be it intentional, due to electrical equipment (which is a major cause of fire in older cities) or due to natural causes. But they often do not have the resources to reach everyone at once for greatest effectiveness. This data analytics/knowledge based approach based approach increases public safety from fire because it helps to understand, assess, and measure fire incidence and its patterns leading to cost effective solutions in line with the old adage *“what you can’t measure you can’t manage”*.

GOA DISASTER RESPONSE CADET CORP

At the stage of setting up of Goa Fire Service, the function of the Department was limited to fire fighting. Later on in conformation with the National policy and guidelines from the Standing Fire Advisory Council, Emergency Services were added to the Departments role and accordingly it was re-christened as Fire and Emergency Services. Such work involving major operations invariably need deployment of large number of trained manpower, all of whom need not be expert Fire Fighters but will need to have basic knowledge of Disaster Preparedness and Response.

Globally, it is seen that the local communities raise their own team of volunteers and the organized services provide appropriate training to these volunteers. The trained volunteer can considerably close the gap in the manpower in the State Fire and Emergency Services. Such skill development training can also be helpful for the Industry and other organizations who require manpower for their internal Fire Safety and Prevention and other Disaster Response activities. A balance between volunteer support and regular establishment has to be maintained so that best possible results are achieved at the minimum possible cost.

Being enrolled as Disaster Response Cadet Corp Volunteer provides the young cadet an opportunity to acquire certain technical skills which includes Fire Safety, Fire Prevention, Medical First Responder and Disaster Preparedness. This will enhance his/her employability and will also provide to the Department a dependable set of citizens in every Fire Station jurisdiction who can be relied upon to assist the Fire and Emergency Service Personnel responding to any incidents. More focus will be on the young volunteer being better informed, more physically fit and capable of taking up specific task as per the training provided to them. It is known universally that informed intervention by the community is the key to minimize loss of life and property in a Disaster situation, big or small. It is for these reasons the Government has considered for raising of a Volunteer Corp to be named as **Goa Disaster Response Cadet Corp (GDRCC)** in the State.

The training programme is being drawn up in a manner akin to the **National Skill Development Program**. This will enable the Volunteer Cadets to secure employment in related fields.

Today is observed as National Fire Service Day. We re-dedicate ourselves to our mission **“We Serve to Save”**. We also avail of this opportunity to pay our Homage to valiant Martyrs of Fire Services in the Country who made the supreme sacrifice in the process of saving others lives and property.

As in every year, the theme for this Year for creating public awareness is;

“Firemen – Your Partner to save Life and Property”.

As ever we look forward to achieve optimum efficiency with the help of well informed citizens extending all possible help to the department in its endeavour to serve the State.

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