



## Kocaeli

Title of the Initiative	Prepare Before It's Too Late: Learn To Live With Earthquake
Initiative Duration	1 January, 2012
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Comments by the Jury	<p>Kocaeli has in the recent past suffered from a severe earthquake, which destroyed great parts of the city and region, killing some 18,000 people. As a result, the city decided it must plan, research and educate far better for the future. To this end, it established a new programme entitled "Prepare before it's too late" which started in early 2012.</p> <p>It combines two distinct but complementary strands in a single centre. The first is a comprehensive seismological monitoring facility through which data is collected and risks are analysed. The second is a broad-based citizen education component.</p> <p>One specific innovation is the way the programme coordinates the emergency management agencies, including NGOs, Universities, research centres, and local government agencies. The education component focuses particularly on children, with the use of theatre in primary schools as an imaginative way of raising the awareness of youngsters. Since January 2012 the initiative has reached more than 20,000 students, including 500 disabled children, and over 3,500 people have visited the centre. The innovative approach aims also to be a source of learning and replication by other municipalities and their partners, and has already led to interest from other cities.</p>

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*Kocaeli has a population of 1,601,720 people and covers a land area of 3,505 sq km.*

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## Prepare Before It's Too Late: Learn To Live With Earthquake

### Background Information

As being just inside the active seismic belt Marmara Region situated west side of the North Anatolian Fault Line. Kocaeli is the epicentre for the 17 August Marmara Earthquake which affected all the region and cost approximately 18,000 deaths according to the official figures. Kocaeli Metropolitan Municipality start pilot project to take actively part in this social issue. The project directly affects three institutions (project partners) and more than 1.5 million people lives in the region.

### Goals of the Initiative

The main aim of the project is: with the help of seismological monitoring and earthquake education centre, monitoring, evaluating, analyzing, solving and archiving the characteristics of the earthquakes via data's gathered from 23 different 'ground motion stations' to facilitate Local Earthquake Database, earthquake risk maps, emergency response plan, earthquake resistant construction plan and efficient seismological monitoring system. Also; alongside the monitoring educating the citizens through various activities such as 'earthquake simulator', 'theatre', 'seminars' and lectures too boost awareness among the society.

The main innovation in the initiative is for the first time in Turkey under the leadership of a Local Government, Central Administration (Emergency Management Presidency) and NGO (Chamber of Industry) new managerial cooperation has initiated. Also; institutions such as NGO's, Universities, Research Centres (TUBITAK), Private Sector Representatives, City Council and The National Education Directorate of the City has took part in the project as associate partners.

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## Parties and Partners to the Initiative and Resources Used for Implementation

Kocaeli Seismological Monitoring and Earthquake Education Centre project is running with the partnership of Kocaeli Metropolitan Municipality (KBB), Prime Ministry Disaster and Emergency Management Presidency (AFAD), Kocaeli Chamber of Industry (KOSANO). The centre and stations has financed by these three organizations. The Chamber of Industry undertook the coordination among the private industrial sectors; Disaster and Emergency Management Presidency provide technical help during the start up phase and Kocaeli Metropolitan Municipality by attaining 6 technical staff, allocating building and central database network provides sustainability for the project.

**The resources used for implementing the initiative include:**

Project has implemented with the co-financial contributions of the organizations whose names referred above. Also; University of the Bosphorus provides technical education for the technical staff, Turkish Scientific And Technical Researches Institution provides technical expertise to run the centre, City Council's disable and youth assemblies take part to enhance civic engagement and according to the agreement signed between Kocaeli National Education Directorate and the Metropolitan Municipality two the institutions account for the dissemination phase of the project among the pupils.

## Innovation for the Initiative

The project has two undividable part monitoring and educating. Within the education part; earthquake educations has been done in primary schools, and a theatre whose name is 'Moving World' performs all around the city and has managed to reach approximately 20,000 students also; thanks to the special program for the disable children, with these program hundreds of disabled children and their parents has benefited from these courses. As the last chain of the education program applied training program has been run by using the earthquake simulator (three dimensional quake tray) to simulate earthquake environment.

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Also, data's which are collected from 23 stations, feeds the national earthquake database and help to facilitate local network. This is the first network run by a local authority in Turkey.

In this context; educational part of the project can be considered as evolutionary since it based on former experience and lessons. Also; in the scope of the local authorities having seismological centre can be considered as revolutionary impact since there aren't any similar example and as serving as a model for the other cities.

This centre was initiated with the cooperation of three leading institutions (local govt., public body and NGO) and can be evaluated under the 'Partnership and Civic Engagement' subject.

Also, Prime Ministry Disaster and Emergency Management Presidency is responsible to monitor seismological movement in Turkey. This model used to contain just scientific considerations and the educational and dissemination part used to stay in background. After starting the initiative with theatre, training (theoretical and practical) educational and dissemination part starts being on the top of the agenda. By using the advantage of being closer to the society the metropolitan municipality and the citizens have benefited from this model. In this sense; this model has innovative in terms of the methodology (governance and administration) applied.

Local Earthquake Database has generated by modelling the National Database and the simulator has developed by modelling the simulator of Disaster and Emergency Management Presidency. Another third dimension added to have more realistic quake effect. A lot of meeting and technical study visit hold to Turkish Scientific and Technical Researches Institution and the University of Bosphorus provide education program for the technical staff.

Although the centre has officially run less than one year, a lot of representatives from local governments, universities and from foreign countries, and sister cities of the metropolitan municipality in particular has visited the centre and shared technical information. Kocaeli Metropolitan Municipality also uses its official press (newsletters, social and visual media) to disseminate the initiative.

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## Obstacles and Solutions to the Innovation

Beyond the bureaucratic obstacle and other referred above the most crucial point of the initiative was demolishing the prejudices of the society. Unfortunately, people who experienced 17 August Earthquake have a lot of misbelieve and the most effective way to eliminate the prejudices is education. So the main focus of the initiative was set as primary school students.

## Outcomes and Assessments

Outcomes achieved are as follows:

Thanks to the data's gathered from the local earthquake database, Earthquake Risk (Danger) Maps and the regulations for the compatible construction with the ground has released Also, the local network feed the national network so shake-maps can be facilitated with these data's.

The theatre has reached more than 20,000 pupils (within two years) and the centre has been visited approximately 3,500 people. Also, with the disable children program 500 children and their parents got information about earthquake and prevention, first aid techniques.

In printed and visual media a lot of news and article has released and this helps to increase the awareness of the centre and also serve to keep earthquake reality warmer. Visitor coming around the country and world help to disseminate and contribute to the reputation and foreign policy of the city positively.

Assessments are as follows:

Beyond scientific parameters such as: azimuth, epicentral distance, depth of focus, coordinates, richter local magnitude used in seismological centre the number of visitors who visited the centre and number of educated people measured regularly by the experts. This data's set as a parameter to evaluate the success to reach the targeted figures.

## Methods Applied

With the help of the gathered data's the network fed by more detailed and

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healthy information. Seismic maps have been updated, national earthquake network fed by local stations instantly.

## Benefit to Other Cities

The project should be evaluated under three aspects in terms of innovation and beneficiary side for the other cities, regions, communities and local governments in particular:

1. The Structure of the Partnership: In addition to information referred below the project has a multi partnered structure consisting of Local government, Public Government, NGO, University, Research Centre, National Education directorate and City Council.

2. Providing Opportunity for Local Governments to Take Part in outside the Scope of the Authority: Local Governments have more chance to reach citizens easily. So, the centre set as a model for the state for further enactment in legal system.

3. Serving as a Model for the other Cities: Already having know-how regarding to the seismologic and educational divisions the centre is ready to share its knowledge.

In this sense the main outputs of the project are:

- “Local Earthquake Network and Seismologic Monitoring System” has established.
  - The data’s gathered from the centre will be used legal base for the Law of “reformation of the lands under the risk of disaster”
  - The early warning data’s will be shared with private sector for the “emergency action plan” in case of an earthquake.
  - With the cooperation of the research centre and Universities, modeling studies will be carried out to predict the behavior of the regions and strategically important facilities in particular under high scale earthquake.
  - Earthquake Master Plan will be done by using these seismological data’s.
  - With the help of the education division the awareness among the citizens against earthquake will be increased.
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