

A Micro to Macro **SOLUZION** System



**SOLUZION** Micro to Macro

The Macro **SOLUZION** is instigated by Governments, Military, Commercial and Agencies Stakeholders with the ability to install a network over a Community, Town, City, Region or whole Country. This provides a comprehensive robust sensor monitoring and communication system, maximizing the early warning response system to multiple hazard types

Cost of the Micro to Macro **SOLUZION** system:

The comparison between only a 'Million \$' to **SOLUZION** net work a City, and the potential casualty costs of a 1b\$ and the comparison between under '\$100' to install **SOLUZION** devices in the home and the price of a life, highlights how affordable and cost effective **SOLUZION** is, not only minimizing loss of life but also casualty \$costs to Administrations

Aim of the Micro **SOLUZION**:

- Enabling individuals and the community to purchase personal domestic sensor alarms
- Integrating freely into an installed network system and capable to stand alone with a range of easy to install devices for their homes and offices
- Creating an independent micro network system for their community



# The '**SOLUZION**' System

Is for

**Governments, Military, Commerce & Industry, Agencies, Communities & Individuals**

Distributed and Installed Globally by  
**'VERUS VICIS **SOLUZION** CONSORTIO'**  
 [A Limited Liability Partnership UK No: OC356963]

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**Together Creating the Dynamic '**SOLUZION**'**



**A Real Time Early Warning Natural Hazard Sensor Communication System**

What if everyone could get 'real time' early warnings of Earthquakes, Landslides, Tsunamis, Cyclones and Floods, straight into their homes, offices, hospital and school

**SOLUZION** now offers the opportunity to Governments, Emergency Services, Military and Industry to protect its citizens, personnel and employees and critical supply infrastructure!

*"In fact **SOLUZION** offers this opportunity direct to every individual"*

A dynamic solution of natural hazard event sensor integration and extensive alarm communication providing realistic early warnings

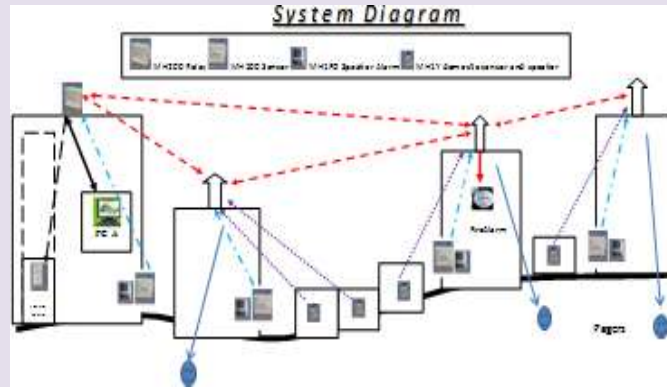
**Together Creating The Dynamic '**SOLUZION**'**



**Multiple Hazard SOLUZION Early Warning Integration**

What the **SOLUZION** system provides:

An opportunity to integrate with other hazard type early warning systems providing a united communication and data integration facility, relaying real time warnings through Disaster Management Centres potentially to every individual within an affected region using Wireless, Ethernet, Satellite and SMS technology and additional bespoke pagers



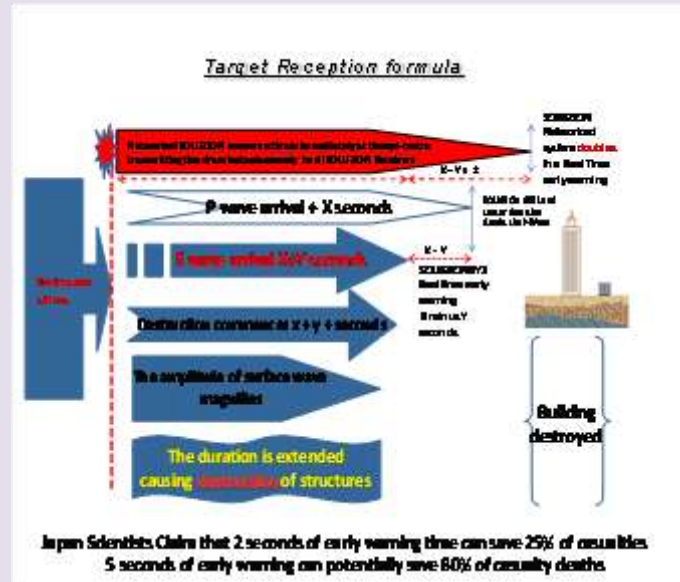
**SOLUZION** system is designed to be installed within:

- Residences** – Homes, Hotels, Hostels, Apartments
- Critical Community facilities** – Hospitals, Health Centres, Schools, Universities, Child Care facilities
- Governance Facilities** – Administration, NDMA’s, Coordination centres
- Emergency Services Bases** – Fire & Rescue, Ambulance, Police
- Secured facilities** – Prisons, Detention Centres, Banks
- Commercial Centres** – Offices, Street Retail, Malls, Department stores
- Leisure facilities** – Theme Parks, Cinemas, Theatres, Stadiums
- Public Transport** – Trains Stations, Bus Stations, Airports, Ferry Docks
- Communications Infrastructure** - Road Highways – Flyovers - Bridges, Causeways, Tunnels - Dams, Dykes, Embankments, Rail networks
- Critical Supply** - Power stations, Oil fields, Nuclear Facilities, Wind farms, Petrol Storage, Chemical Facilities, Gas storage
- Utility and Supply lines** – Oil lines, Electricity lines, Gas Lines, Fuel Stations
- Antiquities** - **Places of Worship**
- Military establishments** – Bases, Barracks, HQs, Border Control
- Industry** - Factories, Distribution, Storage, Servicing

*“SOLUZION is designed to protect the individual”*

**SOLUZION Dynamics**

The inherent dynamics within all **SOLUZION** sensors, relays, transceivers and software systems allows a multitude of future opportunities to develop and integrate as real time early warning technology and ‘reliable prediction’ science unfolds within multiple hazard types.



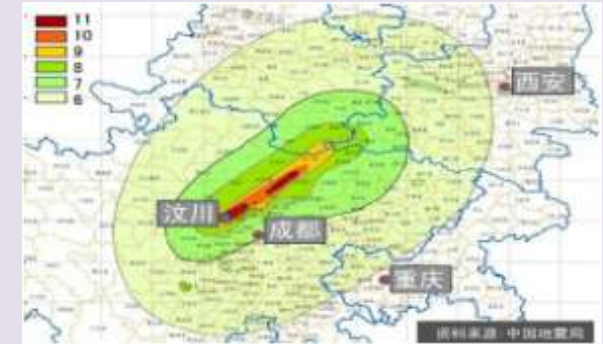
How does **SOLUZION** create the early warning?

The sensors detect the P-Wave which travels ahead of the destructive S-Wave. Sensing and communicating the difference in the arrival of the two waves, allows a real time of multiple seconds early warning, enabling individuals to take immediate precautionary actions in preparation to the earthquakes arrival; these vital seconds of early warning makes the potential difference between life and death, ensuring that individuals are not taken by surprise whilst in work, at school or at home asleep

The ‘**crucial SOLUZION difference**’ is that it extends real time early warnings beyond all existing ‘p-wave receiving’ technologies by a radio broadcast from its’ epi-centre devices leapfrogging the p-wave within the networked region providing up to twice the early warning time of other existing systems

**Event Assessment SOLUZION Technology**

A key Development is the “fast earthquake disaster reporting system”, where the software is now able to report the intensity and distribution of quakes almost immediately after they strike using the networked **SOLUZION** System devices. It took more than 2 days to realize the disaster distribution in 2008. Now **SOLUZION** can determine the scale of a seismic event within three minutes inside a networked region.



Seismic event ‘casualty cost’ case study

Table 3 Value of casualties in the 1994 Northridge Earthquake, in 1994 US\$ (Porter et al., in press).

Injury severity	Count	Unit cost	Total cost
DOA (Dead on arrival, no care required)	27	\$2,600,000	\$70,200,000
Die in hospital	6	2,600,000	15,600,000
Hospitalized/trauma cases	9	1,980,000	17,820,000
Hospitalized/non-trauma cases	129	150,000	19,350,000
Emergency treat & release	8,200	40,000	328,000,000
Out of hospital treat & release	16,400	40,000	656,000,000
Injured no treatment	221,400	5,000	1,107,000,000

If injuries in the 1994 Northridge earthquake are representative of injuries in future U.S. events, then the economic value of future earthquake injuries—the amount that the U.S. government would deem appropriate to expend to prevent all such injuries—is on the order of \$200 million per year (in 2005 constant dollars). Of this figure, 96% is associated with nonfatal injuries.

**SOLUZION** could dramatically reduce the casualty costs. *“In Japan 2 seconds of early warning time can reduce casualties by 25% with 5 seconds warning potentially reducing casualty rates by 80%”* Japan (REIC)



