



ShakeAlert® System Licensing Pathway and Technical Partnership Updates

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03 November 2022



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Shake!lert™
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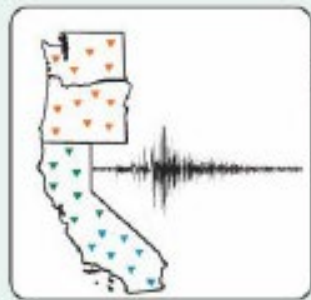


**EARTHQUAKE
WARNING
CALIFORNIA**

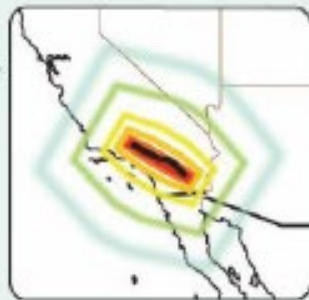
ShakeAlert System Roles and Responsibilities

Who does what in the ShakeAlert® System?

USGS ShakeAlert® system detects the earthquake



Monitors
ground motion
in real time



Estimates
earthquake
location, size,
and shaking
distribution

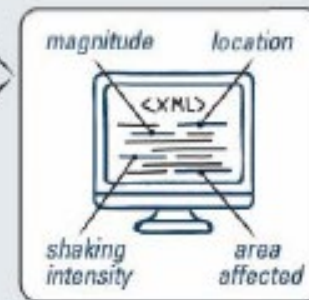


Publishes
ShakeAlert
Message
in XML

Technical Partner delivers the alert



Receives
Message via
data feed



Screens
Message for
regionally
relevant
information



Issues alerts
and prompts
automated
actions

Technical Engagement Team

ShakeAlert Technical Engagement Regional Coordinators		
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www.ShakeAlert.org



@USGS_ShakeAlert

Path 1: Work with an existing ShakeAlert Technical Partner (Licensed Operator - LtO)


- Learn about the ShakeAlert Technical Partners who have experience working in your industry:
<https://tinyurl.com/CurrentShakeAlertPartners>
or short list at:
<https://www.shakealert.org/implementation/lto/>
- Reach out to any or all Technical Partners, and compare quotes and product specs





Path 2: Become your own Technical Partner and connect directly to ShakeAlert servers

- Follow the ShakeAlert Licensing Pathway Step-By-Step Guide
- Develop and test your implementation
- Meet USGS standards for technical performance and training



PNSN Data & Products Overview

QuickShake

Spectrograms

Near Real Time

Alarms & Notification

Earthquake Early Warning

Waveform Data

Seattle Seahawks

NetQuakes Data

Earthquake Impacts

Seattle SoundersFC

Data & Products

Earthquake Early Warning

ShakeAlert Licensed Operators

ShakeAlert Licensed Operators

Background

The ShakeAlert® Earthquake Early Warning system, operated by the U.S. Geological Survey (USGS), quickly detects significant earthquakes, estimates shaking, and issues ShakeAlert Messages to Licensed Operators. Licensed Operators, who entered into a license agreement with the USGS, use this information to develop and deliver alerts and notifications to people and trigger automated actions to protect vital systems and infrastructure, potentially seconds before shaking arrives at their location.

In most instances, Licensed Operators are integral to the success of the ShakeAlert project. By building systems that deliver ShakeAlert-powered alerts and automate actions, Licensed Operators help save lives, minimize injuries, and reduce earthquake damage to property and infrastructure. They can play a critical role in mitigating immediate earthquake losses, subsequent indirect earthquake economic impacts, and possible ripple effects, or "secondary disasters." These mitigation efforts can increase a community's recovery and speedily return to normal status.

Licensed Operators span multiple industries and sectors, and include private for-profit companies, public entities, and nonprofit organizations.

Disclaimers

This page is not the ultimate resource. Visit the Licensed Operator's website for more information about their product and services.

The USGS does not directly or indirectly endorse any product or service provided by these Licensees.

The Pacific Northwest Seismic Network (PNSN), operated by the University of Washington and the University of Oregon, does not directly or indirectly endorse or warrant any product or service provided by these Licensees.

Definitions

- *EEW*: Earthquake Early Warning
- *Licensed Operator (LtO)*: USGS-approved ShakeAlert Partners demonstrated their ShakeAlert-powered product(s), service(s), and/or applications to end-users and met USGS performance standards (e.g., speed, reliability, technical performance, and education and training).
- *End-user*: End-users receive ShakeAlert-powered products or services from LtO Partners. End-users include people who receive these products or services directly (e.g., to their cell phones), as well as organizations that work with an LtO Partner to implement automated "machine-to-machine" actions.
- *Business-to-Business*: A B2B, or "business-to-business" company provides ShakeAlert-powered products and services to other businesses.
- *Business-to-Consumer*: A B2C, or "business-to-consumer," company sells directly to individual consumers.

The following ShakeAlert Licensed Operators (LtO) provide ShakeAlert-powered implementations.

Licensed Operator	Product Name	Type of Product	Can automate infrastructure actions allowed under agreement with USGS	Can deliver alerts in public spaces where end-users are in controlled environments (e.g., hospitals, offices)	Can deliver public alerts to end-users in any environment (e.g., cell phone app)	Current implementation examples	Business-to-business (B2B) or Business-to-consumer (B2C)	Location availability of product, service, or application	Website	Preferred contact information
Early						PA systems, speakers, VOIP, voice activated fire alarm boxes, handheld two-way radio; open gates and fire			Washington,	Link Backlinks

Streamlining the ShakeAlert Licensing Pathway (2020)

- All partners sign only one Pilot License Agreement - PLA). All converted use cases are migrated to **Appendix B** of the ShakeAlert agreement.
- The PLA is recycled over and over so as a partner develops new use-cases they do not need to renegotiate additional agreements.
- PLA available at: <https://www.ShakeAlert.org/implementation/partners>.

STEP 4

License to Operate (LtO) Conversion



The PLA has a one-year term. Within 90 days of the end of the term, the Technical Partner must meet with the USGS and determine whether to extend the PLA, modify the PLA, plan conversion to an LtO, or terminate the PLA. If the PLA expires and the Technical Partner intends to continue work on a pilot project, a new PLA must be executed.



If the USGS Performance Review is successful, the PLA will be converted to an LtO status. Before a PLA-to-LtO conversion can take place, all parts of the SOW must be finalized. The final SOW must contain the technical details of the project and the E&T Plan.



Upon LtO conversion, the Technical Partner will be permitted to sell or distribute their product and/or service.

STEP 5

Ongoing Reporting and Accountability



LtOs must provide an annual report to the USGS that includes documentation that the product or service provided by the LtO is performing according to the terms in the SOW. For example, if a Technical Partner is delivering ShakeAlert-powered alerts, the performance benchmarks described in the PLA must be met. Technical Partners may, with USGS approval, amend their SOW after LtO conversion.

ShakeAlert Strategic Plan: Expand and Diversify ShakeAlert Technical Engagement and Implementation

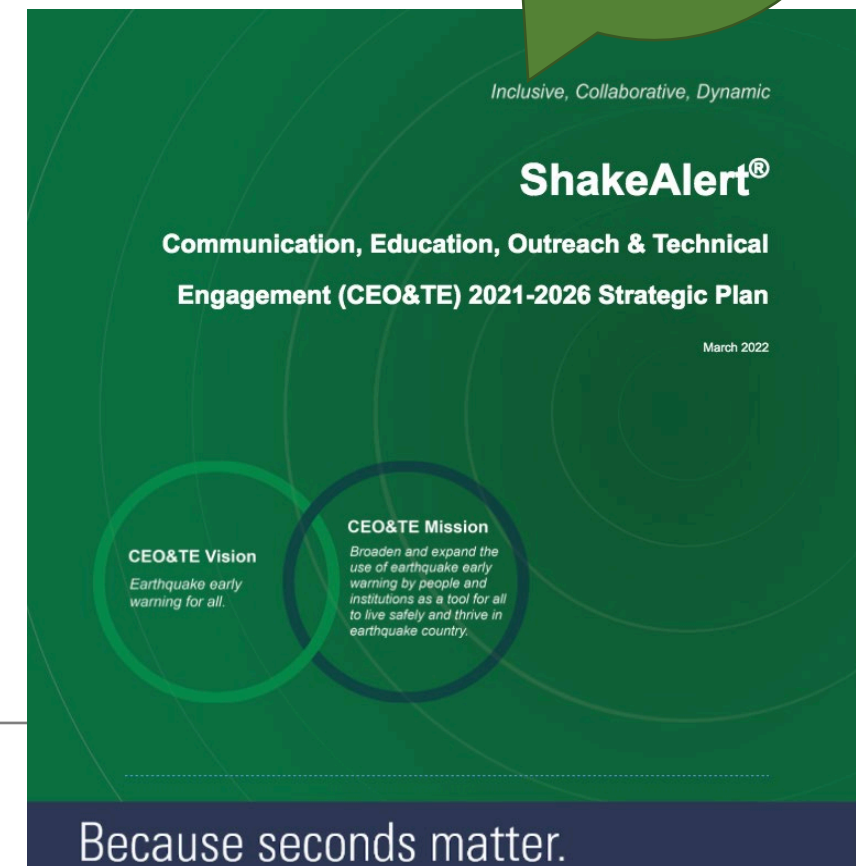
(1) Develop a strategy for engagement of key technical sectors.

There are 16 Critical Infrastructure Sectors which support the requirements defined by *Presidential Policy Directive 21 (PPD-21)*: "Critical Infrastructure Security and Resilience" which advances a national policy to strengthen and maintain secure, functioning, and resilient critical infrastructure. (pp. 12-13 – Target Sectors)

(2) Define a 4-year action plan (to the end of 2026) to be implemented by the ShakeAlert CEO&TE team.

(3) Develop tools to aid in the recruitment of potential technical partners in communications, manufacturing, infrastructure, technology, and other key industries that either can directly benefit from EEW or are positioned to develop ShakeAlert-powered products and services for end-users in the ShakeAlert states.

ShakeAlert
CEO&TE 2021-
26 Strategic
Plan is
available on:
ShakeAlert.org



Thank you!



Questions and Discussion