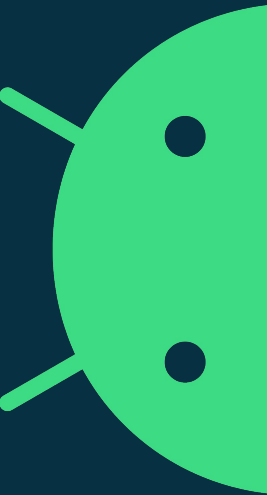




Android ELS

Additional Data

android-emergency-location@google.com
android.com/els







Salvatore Baglieri
Head of Operations



Micah Berman
Product Manager

Today...

You will walk away with all the tools you need to make your calltakers' lives easier with Android additional data:

1. understand what ELS is and how it works

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You will walk away with all the tools you need to make your calltakers' lives easier with Android additional data:

1. understand what ELS is and how it works
2. understand what data is available to you

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1. understand what ELS is and how it works
2. understand what data is available to you
3. understand what is needed to use it in your center today

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1. understand what ELS is and how it works
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3. understand what is needed to use it in your center today
4. *...plus a take-home cheatsheet!*

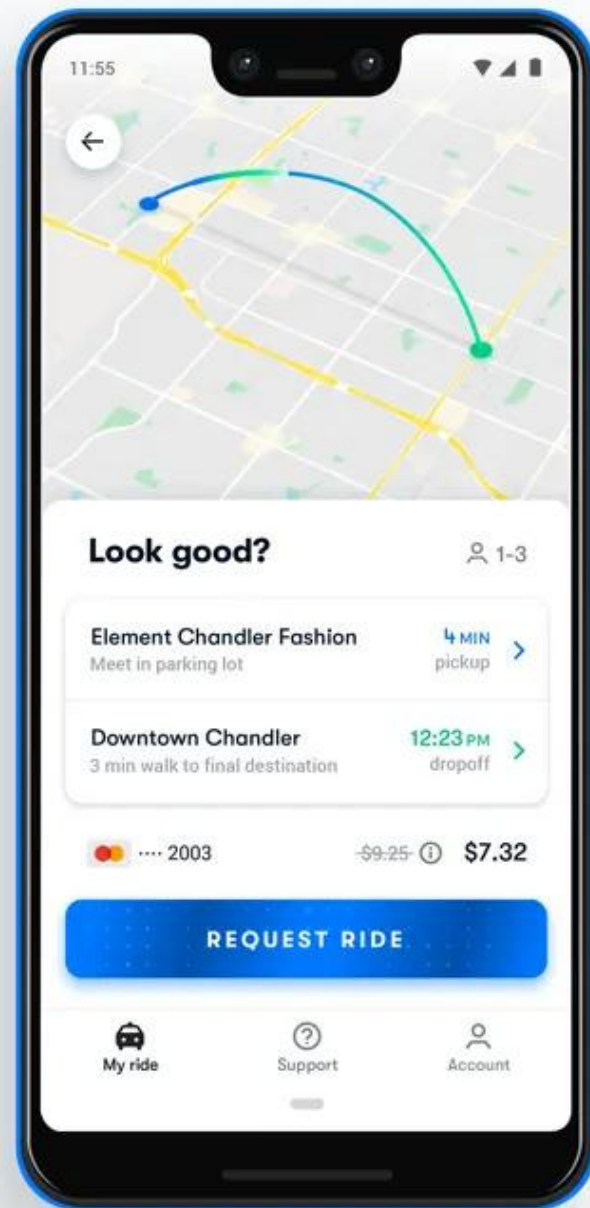
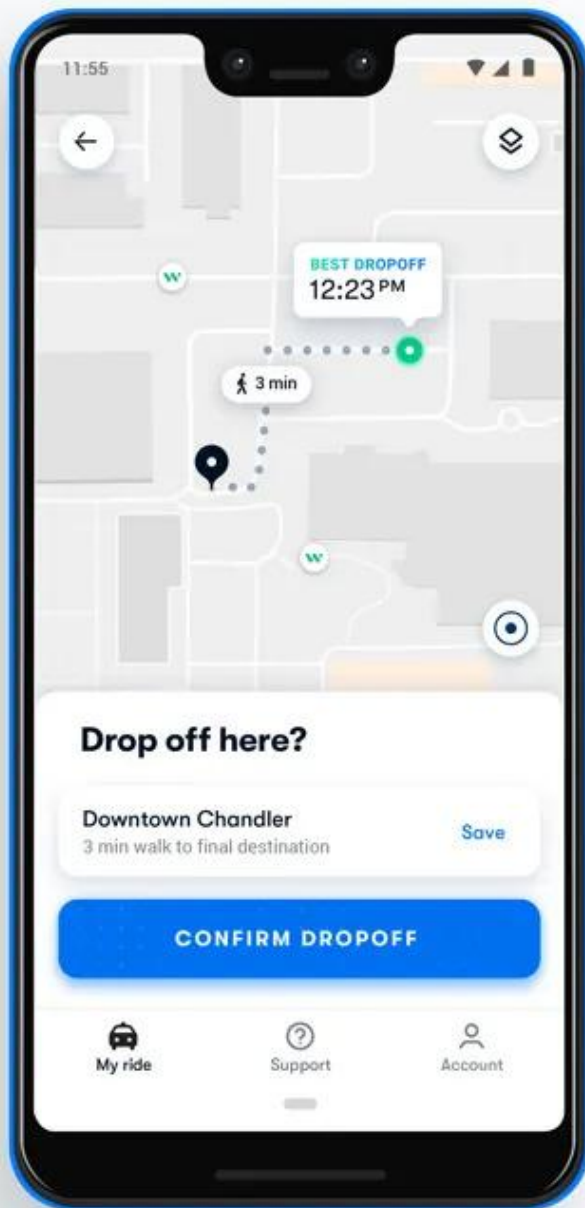
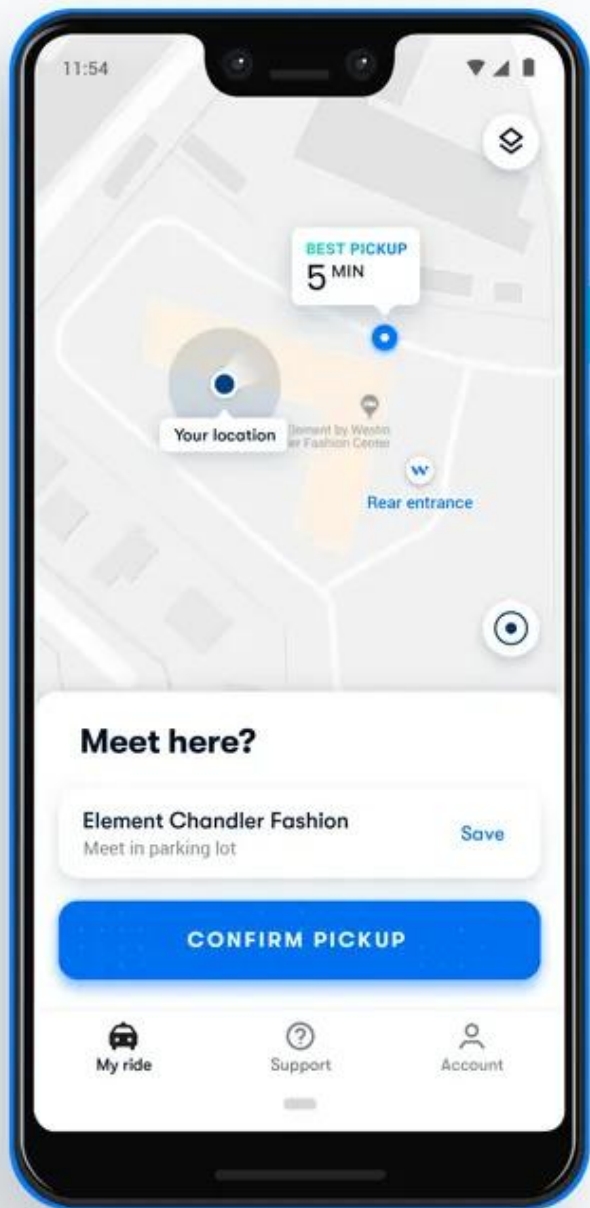


**Reducing emergency response times by 60 seconds
can save 10,000 lives/year in the US alone.**

US Federal Communications Commission



Enable Android users to get help from emergency responders more effectively ***wherever*** and ***whenever*** they need it.



Android Emergency Location Service



Emergency call initiated by Android user

Using FLP, ELS location computed *on device*. Info *sent directly* to endpoint as Text SMS or HTTPS message, using AML standard

Endpoint is managed by *ELS Partner*, who makes information available to Emergency Services. Partner works with Google on *ELS configuration*.

Google's control

Partner's control

ELS is



On every device, no setup required

ELS is available on 99%+ of Android devices in the market today and is on by default.

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Our system sends data in formats that are easy for first responders to consume and integrate with their systems.

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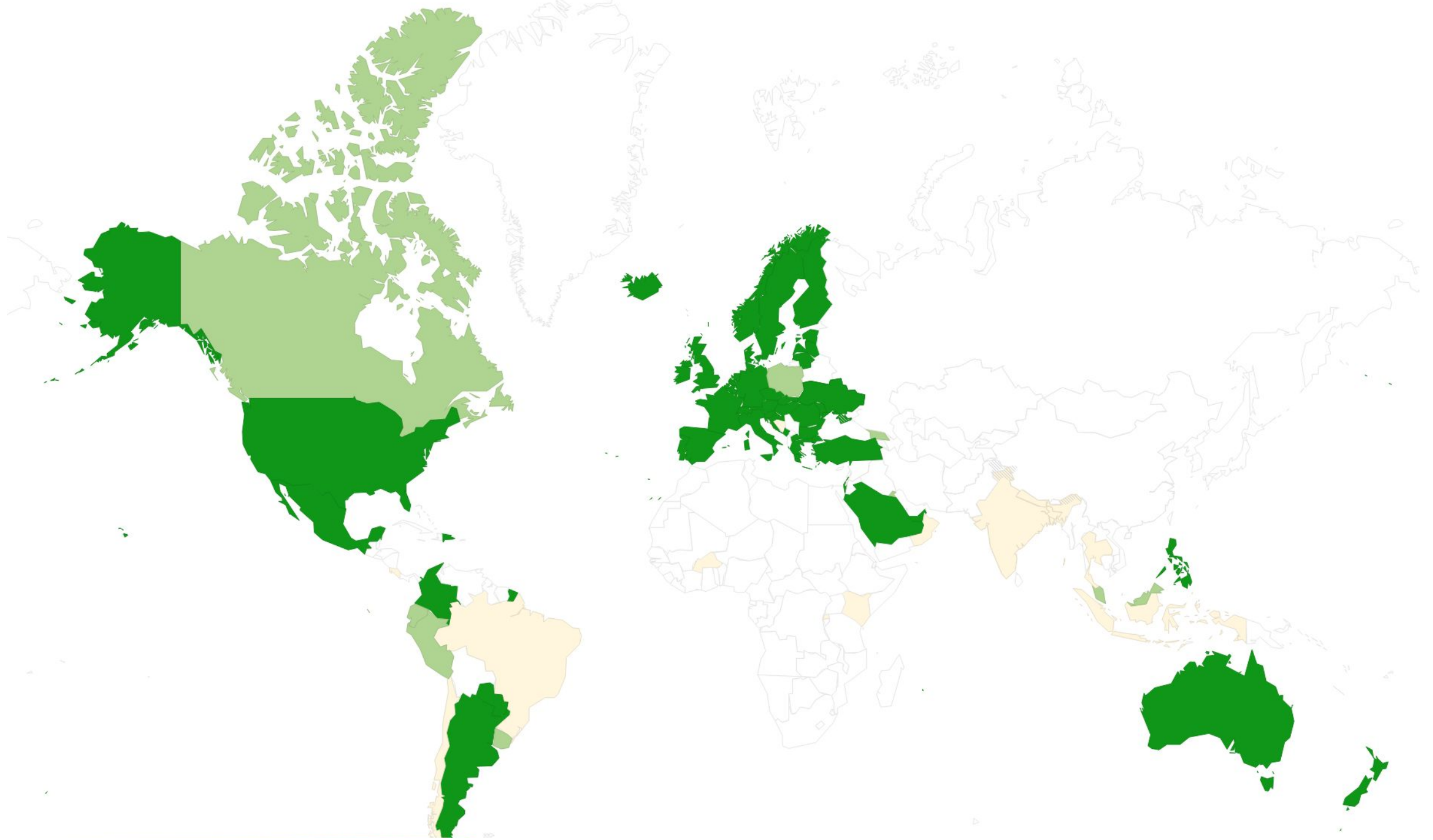
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Private

Information is sent directly from phones to first responders - Google doesn't receive any private information.





Quality

Fast, accurate &
reliable



Growth

More countries,
more users helped



Usefulness

Richer context
signals



Quality

Fast, accurate &
reliable



Growth

More countries,
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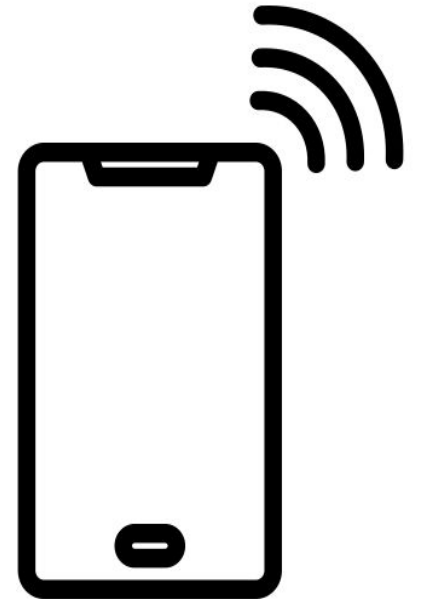


Usefulness

**Richer context
signals**

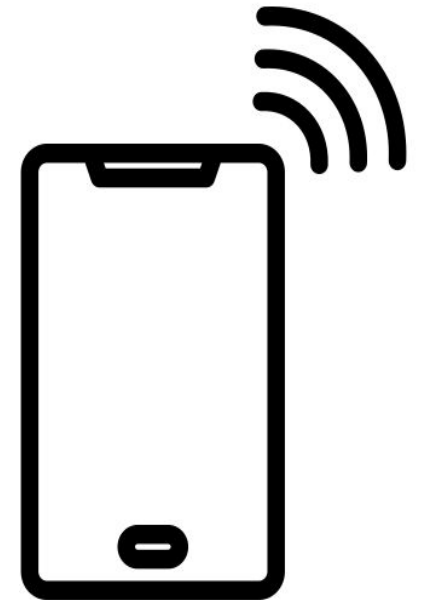
AEI sends **additional information** that may be helpful

- ELS Additional Emergency Information extends ELS **beyond caller location**, providing other information that can meaningfully improve an emergency response.
- We visit PSAPs all around the world each year, and we **see how much time you spend asking callers for information**. We want to make this easier, faster and more complete.
- AEI is generally **on by default** and generally supported on most devices, but it will only be provided when available.
- It is **sent securely** via ELS HTTPS messages to the endpoint, but then **needs to be displayed by your CPE**.
- All ELS data, including AEI, is **always free**. Google will never charge and your vendor shouldn't either. They may charge to modify your *software*, but not for the data itself.



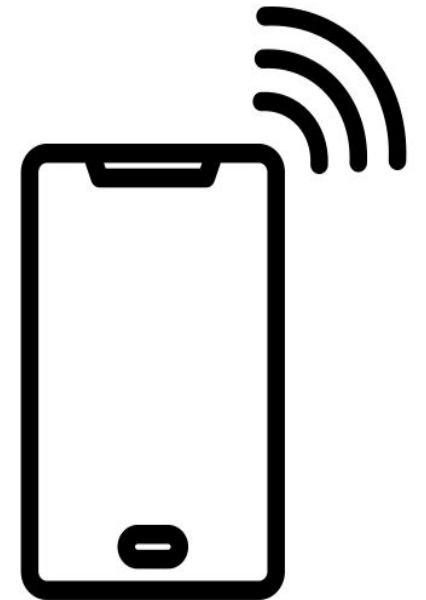
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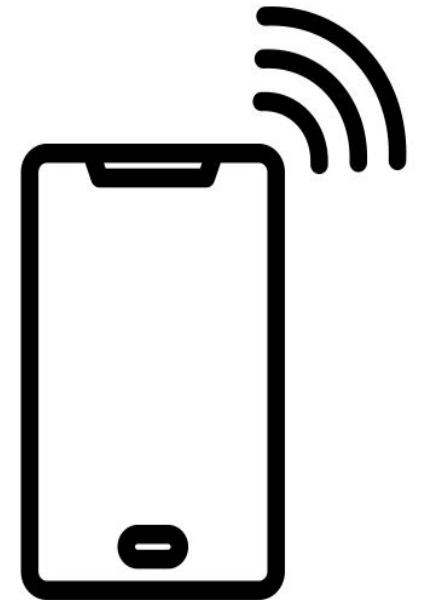
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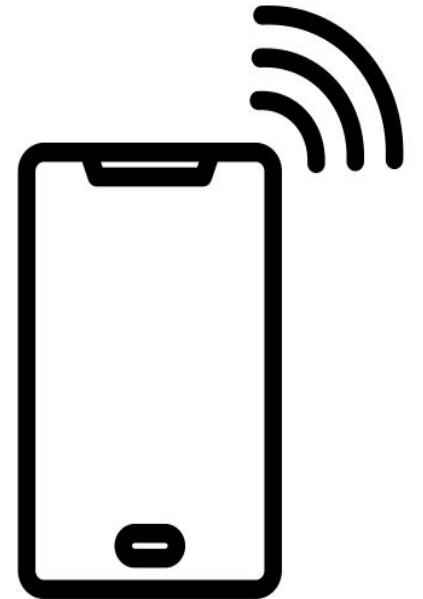
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AEI that's available today

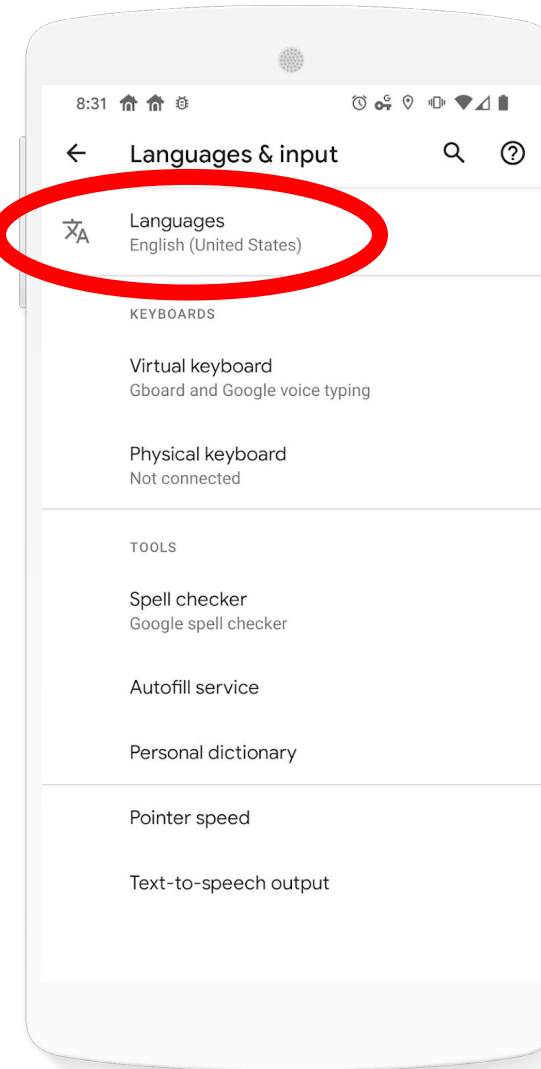
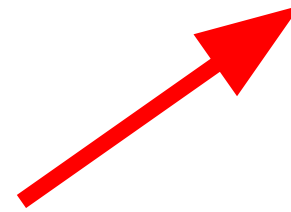
AEI Type	What it is and how it helps	Example data display
Device language	Users' system interface language setting, to assist in identifying an appropriate translator if needed	Device language is Mandarin
Emergency type	On some devices, buttons allow caller to silently select emergency type (medical, fire, or police)	User selected medical assistance
Car crash detection	The time of any detected car crash; 30 min validity	Device detected car crash at 3:01pm
Fall detection	The time of any detected severe fall; 30 min validity	Device detected fall at 3:01pm
Medical information [user opt-in]	Medical Information such as date of birth, blood type, allergies, medications, medical conditions	Allergies: latex, penicillin, peanuts; Medications: ibuprofen 200mg daily
Emergency contacts [user opt-in]	The user's emergency contacts, including name, phone number, relationship	John Doe, +1 123 456 7890, father; Jane Doe, +1 222 333 4444, mother

Where does it come from?

In 2018, the San Francisco ECC received **18,278** emergency calls requiring translation.

It can take several minutes to identify caller language and get translators on the line.

Sometimes it can take 10 minutes or longer.



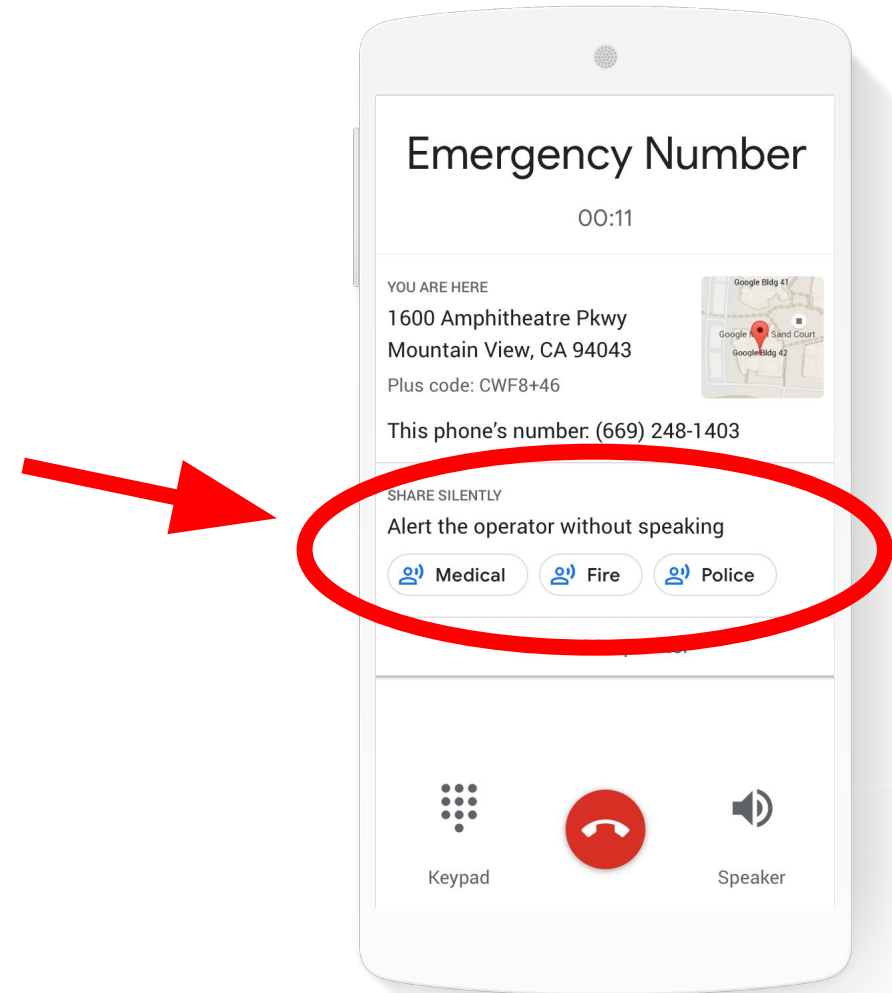
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Where does it come from?

If users can't speak what sort of help they need, they can call 911 and then use one of three buttons on screen to indicate what they require.

When a user chooses a button, their phone will read out information about the emergency over the line -- and, with ELS, the information will also be sent directly to your calltakers' screen.



AEI that's available today

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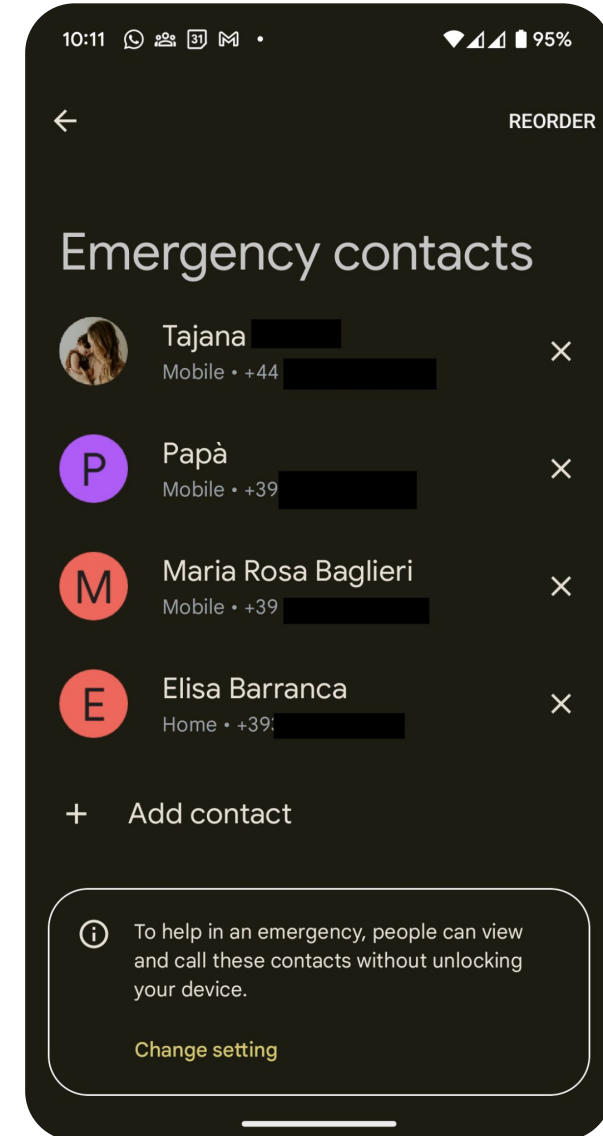
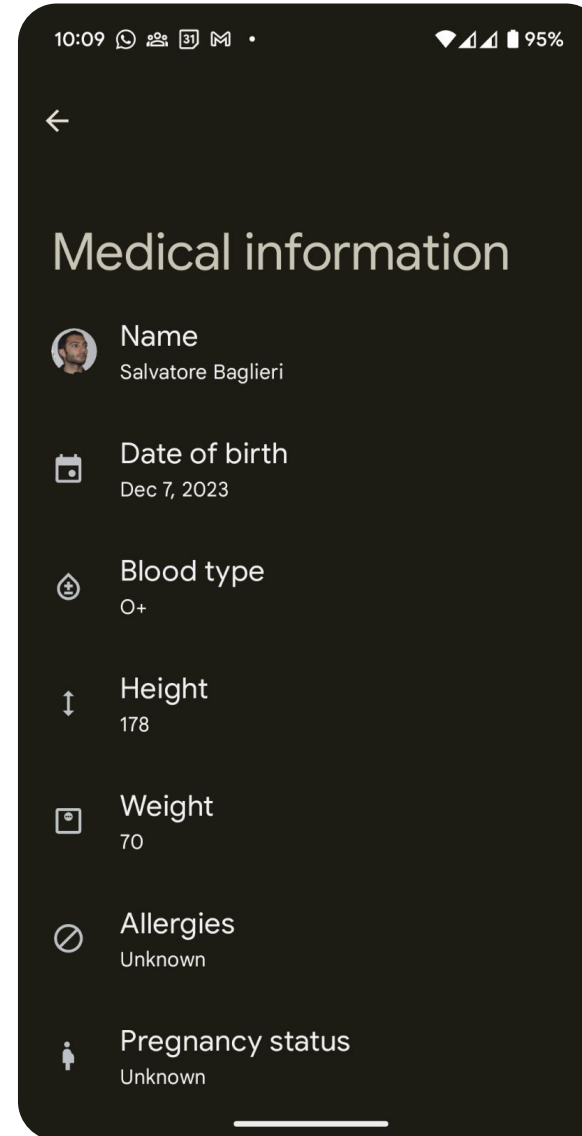
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Where does it come from?

Users can enter their medical information and emergency contacts using the system safety application on their phone (varies by device manufacturer). Many manufacturers are integrated today, and more will be in the coming years.

Public safety help in encouraging users to enter and keep this information updated is critical to making sure it's useful when it's needed most.



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Android Emergency Location Service + Additional Data

A PSAP Center Manager's Overview

ELS is an Android service built to assist PSAP calltakers in locating and helping mobile callers

What it is: The Emergency Location Service (ELS) is a free, default-on system service on nearly every Android phone in use today. It sends highly accurate location additional information directly to PSAPs.

Where it is available: The service is enabled on a country-by-country basis. Google pioneered this service in 2014. Today, it helps handle hundreds of millions of calls per day for billions of users across 60+ countries.

How it works: When a user places a call or SMS to an official emergency number in a supported region, ELS activates on the phone and sends information to an endpoint (usually operated by a government, cellular carrier, or third party vendor). The information is then displayed in the PSAP by either native or over-the-top solutions. Learn more about ELS and how it works: android.com/els.

ELS provides more than just location: Additional Emergency Information (AEI)

We've worked with organizations like [NENA](#) and [EENA](#) as well as hundreds of PSAPs to make the service more useful. When available, ELS may also send additional information designed to support calltakers. We've outlined the types supported today in the table below - and your input will shape what we build next.

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How to enable AEI for your calltakers

Getting ELS data in your center is simple. To make this data available to your calltakers, you'll need to:

- (1) Contact the authority that runs your ELS endpoint (usually a cellular carrier or federal authority). They should support ELS over HTTPS and enable general AEI + sensitive AEI in their ELS configuration.
- (2) Contact your software vendor(s). They must support the ingestion and display of AEI to your calltakers. ELS is provided by Google free of charge, and in turn your vendors must *never* charge you for access to the data. They may, however, charge you to modify any relevant software to display it.
- (3) As appropriate, create and implement policy and training to support AEI use.

Questions or ideas? Get in touch

We are a very small team, but we want to help. Reach out any time for new ideas or feedback:

android-emergency-location@google.com. **Thanks to you and your staff for all you do.**

Medical Information + Emergency Contacts for **users**

1. Users enter (or update) medical information and emergency contacts **via the device's safety app**
2. In the same app, users **opt in to share** this information when they call or SMS 911

Medical Information + Emergency Contacts for PSAPs

1. PSAPs work with endpoint ensure AEI is enabled
2. PSAPs work with software vendors to enable display of AEI
3. Center management writes policies / procedures regarding the use of this data

What's next?

1. What new additional data might be helpful?
 - Additional dispatchable/semantic location, when we have high confidence
 - Call source (lock screen, 5-button-press, fall detection)
 - Battery percentage
 - Indoor vs outdoor detection
 - Activity detection
 - Closest business, landmark, POI :)
2. Anything else we can do to help?
android-emergency-location@google.com