SPACE IN EVERYDAY LIFE

How many satellites does it take to get through an ordinary day?

7,420

Satellites behind services a typical New Zealander relies on, according to University of Auckland research.

15 SATELLITE SYSTEMS



Each dot is one system. Each system can contain many satellites.

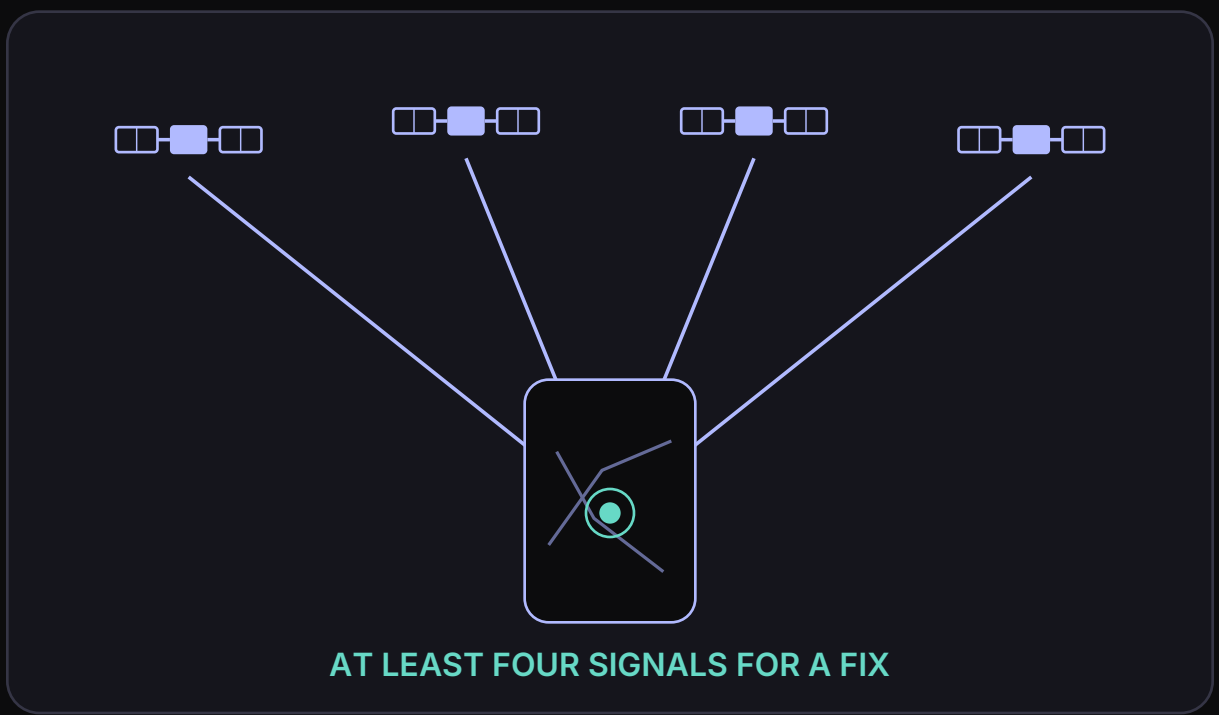
Stevie Katavich-Barton | University of Auckland | 2026

From internet to GPS: how many satellites does one person need?

Swipe →

01 / NAVIGATION

That blue dot on your map? It’s doing maths.



AT LEAST FOUR SIGNALS FOR A FIX

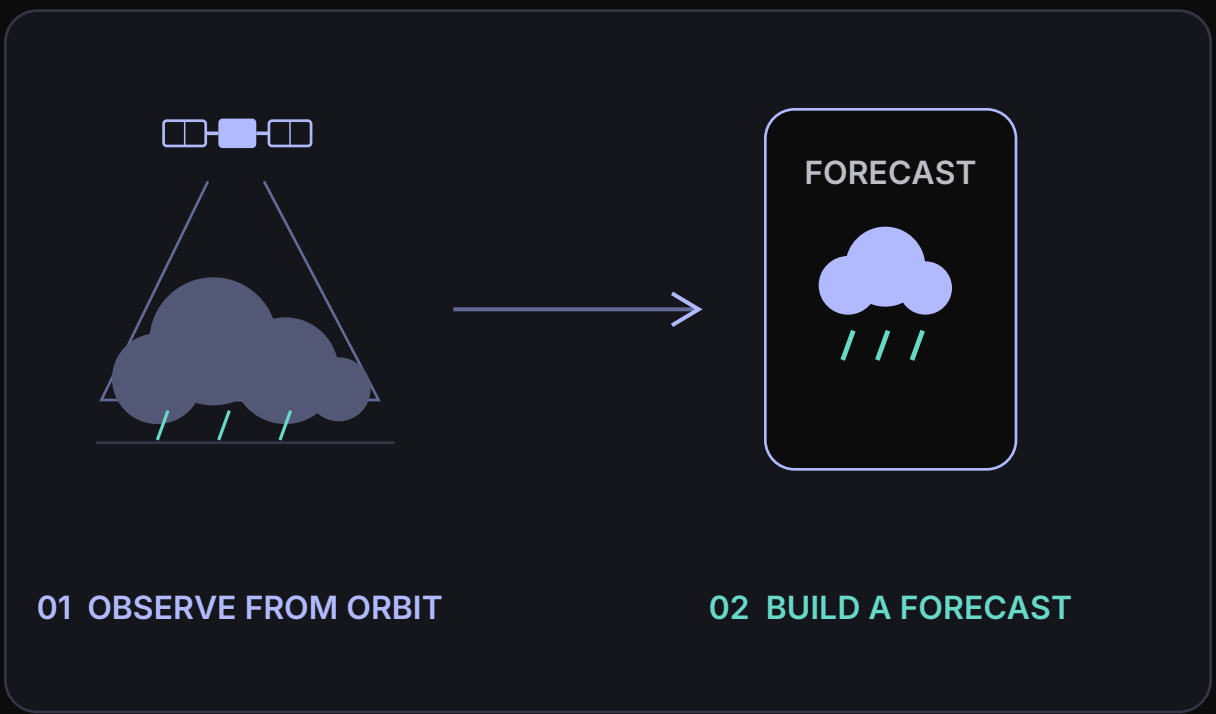
When you use satellite navigation, your phone uses signal timing to calculate its position and correct for the error in its own clock.

European Space Agency | F. Zonno | 2023
How Galileo works (infographic)

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02 / WEATHER

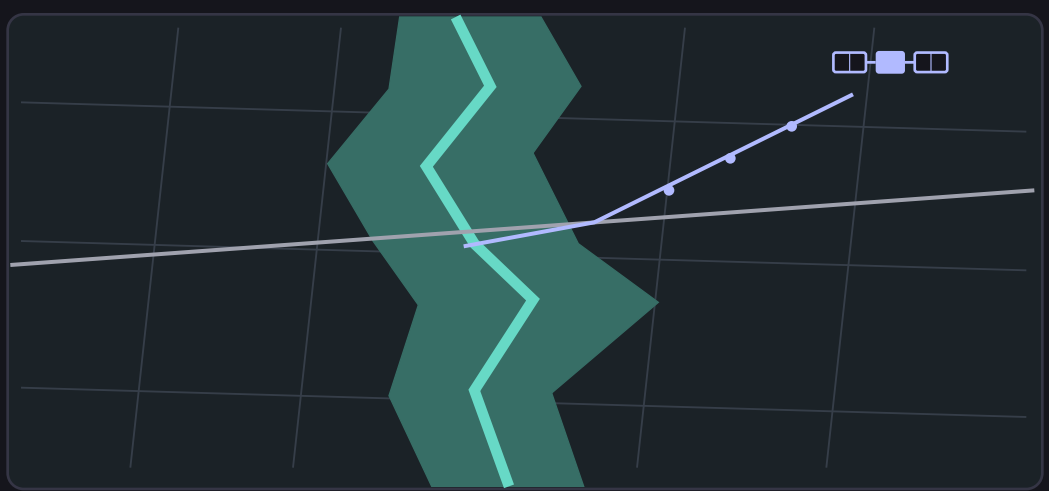
Will it rain on your way home?



Weather satellites observe clouds and the atmosphere. Forecasters combine these observations with other data.

03 / FLOOD RESPONSE

Storm clouds can hide a flood. Radar can see through them.



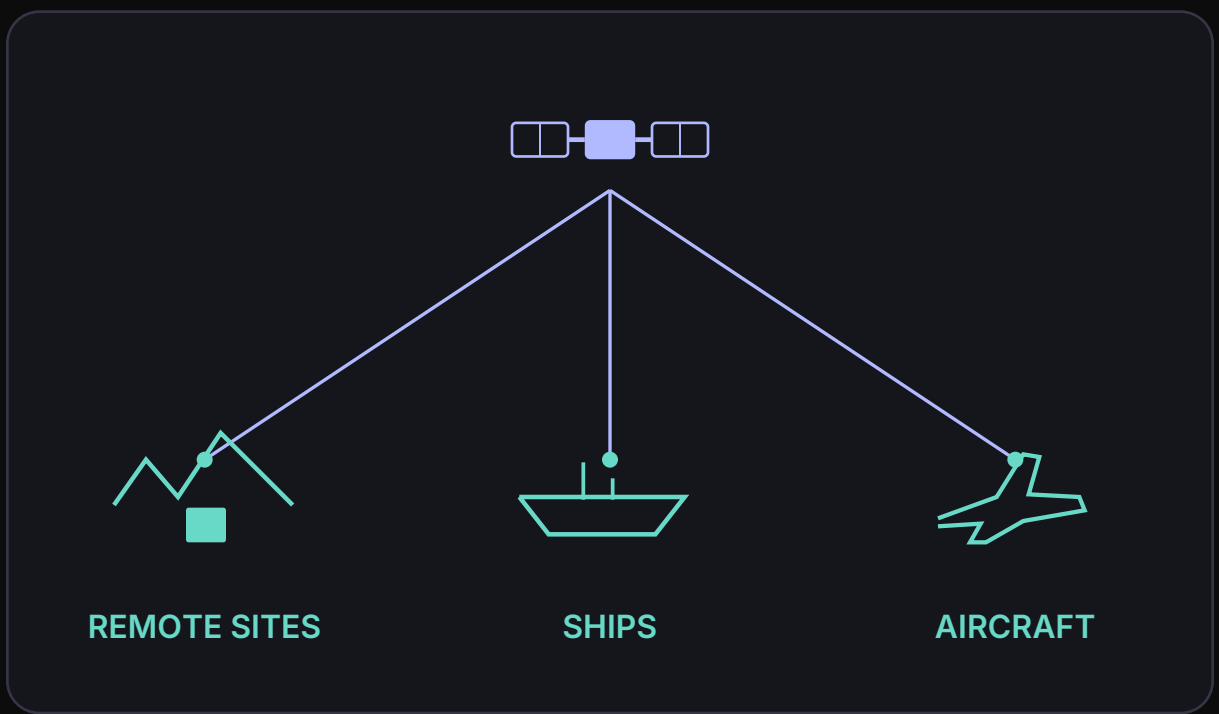
Radar satellites can detect flooding through cloud cover, helping responders see which areas are affected.

European Space Agency
10 ways Sentinel-1 data lets us see our world

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04 / CONNECTIVITY

How do you get Wi-Fi in the middle of the ocean?



Satellite broadband can reach remote communities, ships and aircraft equipped to receive it.

05 / FINANCIAL TIMING

What if two stock exchange clocks disagree?

EXAMPLE: CLOCKS OUT OF SYNC

FIRST ORDER	SECOND ORDER
09:30:00.120	09:30:00.110

THE SECOND ORDER LOOKS EARLIER



GPS can give both clocks the same time reference.

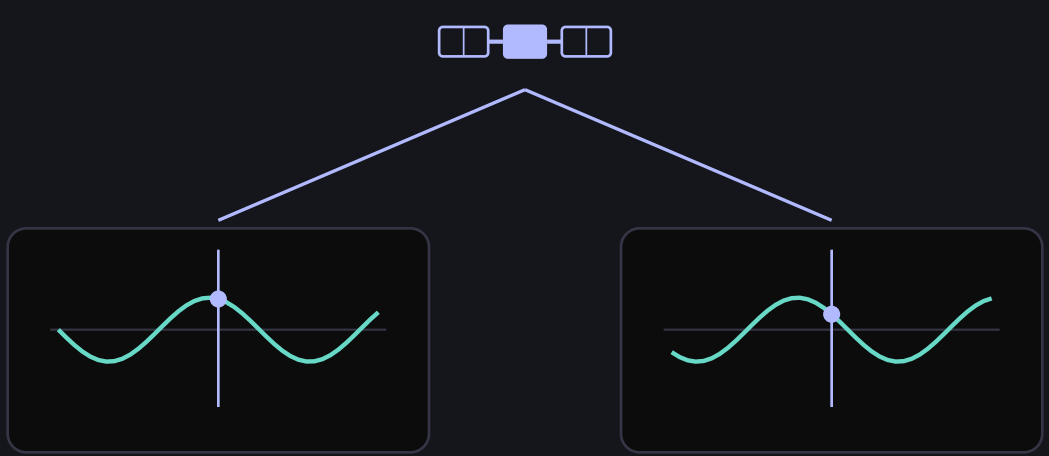
Trading systems record when orders arrive. If their clocks disagree, the timestamps can show events in the wrong order.

Michael A. Lombardi | NIST Technical Note 2189 | 2021
Stock exchanges · PDF p. 38

Swipe →

06 / ELECTRICITY GRIDS

What do your lights have to do with satellites?



GPS gives power grid operators a shared clock. When something goes wrong, they can line up readings from different parts of the grid to see where it started.

Michael A. Lombardi | NIST Technical Note 2189 | 2021
Power grid synchronisation · PDF p. 45

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SPACE FLUENCY

How many satellites do you think you relied on today?

Satellites help us find our way, see what the weather is doing and keep distant systems in step.

What’s one thing you use every day that you’d like to trace back to space?

COMING SOON

We need to talk about space.

Strategic communication for a changing world.
