

What is a Smart Motorway?

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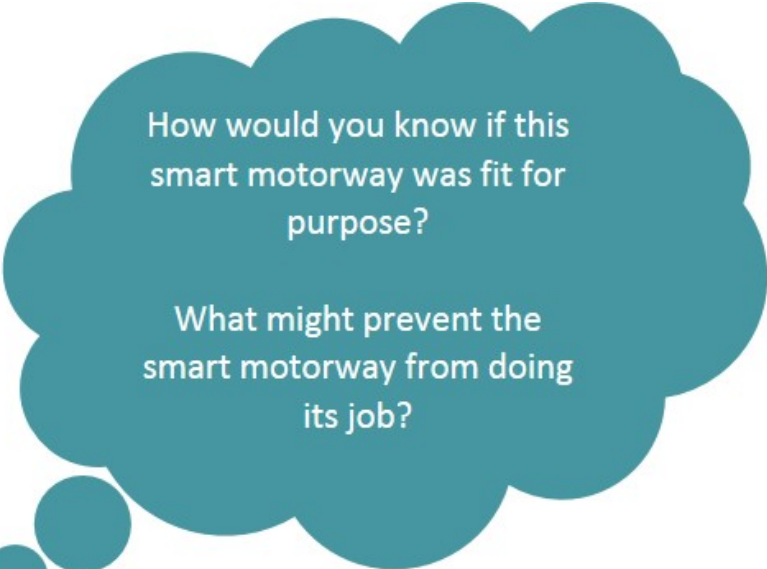
A smart motorway is actively monitored and managed by traffic operators through a network of sensors and radars, cameras, and speed and lane control signs.

A smart motorway is managed by traffic operators. It has a network of sensors and radars, cameras, and speed and lane control signs.

What are the parts of a smart motorway?

A smart motorway is fitted with a network of detection equipment (radars, loops and CCTV cameras) and electronic signs that are programmed to respond automatically to manage the flow of traffic. As the volume of traffic increases, the smart motorway automatically adjusts the speed limit to reduce congestion and get as many vehicles as possible through the area. They are used effectively around the world as transport agencies seek to improve people's journeys while getting the most out of existing road corridors.

There are three important parts of a smart motorway:



How would you know if this smart motorway was fit for purpose?

What might prevent the smart motorway from doing its job?

1. smart technologies such as sensors, cameras, message signs, speed and lane control signals, and automated enforcement systems
2. smart monitoring and management
3. smart drivers.

When all the parts come together, the stop/start nature of congestion is reduced, traffic moves more smoothly, more vehicles get through a section of road and everyone arrives at their destination sooner and more safely.

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How do the smarts work?

Smart motorways reduce congestion by carefully controlling the flow of vehicles. The most critical time when the system can influence the severity of congestion is as the traffic volume begins to build, that is before the road becomes congested.

Detectors under the road and radars mounted on lighting poles and gantries count the number of vehicles in each lane, as well as the speed they're travelling.

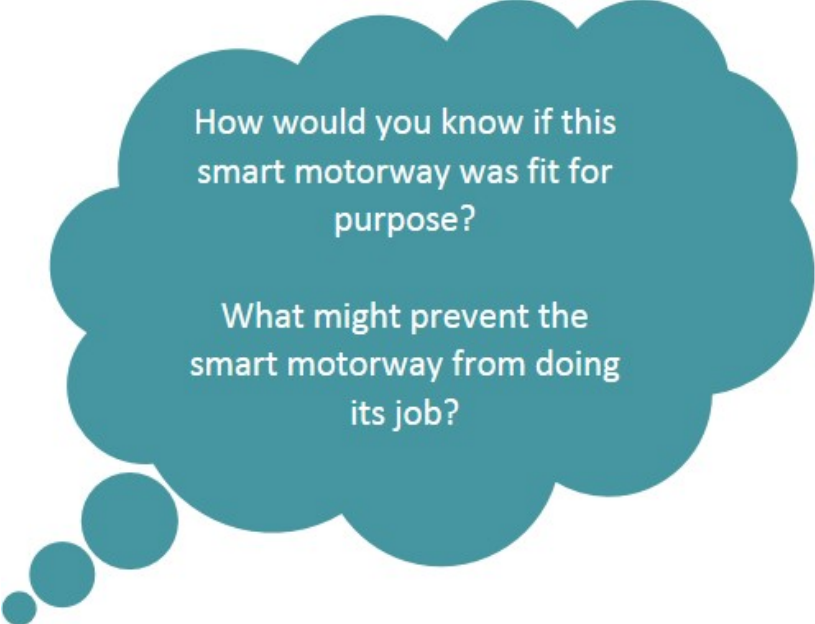
The smart system calculates the rate at which the road is becoming congested, factors in what is likely to happen based on traffic records that are continually updated and monitored, and automatically adjusts the speed limit to pace the traffic and delay queues being formed.

Watch this video to see how pacing traffic flow gets more vehicles through.

What are the parts of a smart motorway?

There are three important parts of a smart motorway:

1. Smart technologies such as sensors, CCTV cameras, message signs, speed and lane control signals, and automated enforcement systems



How would you know if this smart motorway was fit for purpose?

What might prevent the smart motorway from doing its job?

2. Smart monitoring and management

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3. Smart drivers.

How do the smarts work?

Smart motorways reduce congestion by carefully controlling the flow of vehicles.

Detectors under the road and radars mounted on lighting poles and gantries count the number of vehicles in each lane, as well as the speed they are travelling.

The smart system calculates how fast the road is becoming congested. It also factors in what is likely to happen based on traffic records that are continually updated and monitored. The smart system then automatically adjusts the speed limit to pace the traffic and delay queues being formed.

Watch this video to see how pacing traffic flow gets more vehicles through.

Māori keywords:

Audio Māori keywords:

- [aroturuki - to monitor](#) [3]
- [whakahaere - to manage](#) [4]
- [tere - speed](#) [5]
- [paerongo - sensor](#) [6]
- [pū whakaahua - camera](#) [7]
- [tohu - sign \(noun\)](#) [8]

Samoan keywords:

taupulega	monitor (watch over)
faatonu, tapena	manage
saoasaoa	speed
fa'aailoga e'e	sensor (detector)
mea pu'e ata	cameras
faailoga	sign (noun)

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Tongan keywords:

Tokangekina'isiiofi (watch by viewing)	monitor (watch over)
fakamā'opo'opo	manage
lele vave	speed
me'a fai ta sikiuliti	sensor (detector)
me'a faitā	cameras
faka'ilonga	sign (noun)

Cook Islands Maori keywords:

akonokono	monitor (watch over)
akatere	manage
viviki	speed
akakite'anga	sensor (detector)
nene'i	cameras
akairo	sign (noun)

Niuean keywords:

onoono tumau	monitor (watch over)
fakamaopopo/fak akatoatoa	manage
mafiti	speed
matini fuafua	sensor (detector)
pokiata	cameras
fakailoaaga	sign (noun)

Find out more about the smart motorway from the [NZTA website](#) [9].

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A smart motorway includes smart technologies such as sensors, cameras, message signs, speed and lane control signals, and automated enforcement systems. Image: NZTA.



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The smart motorway will be actively monitored and managed by traffic operators. Image: LEARNZ.



[12]

Being a smart driver is also part of the smart motorway system. Image: NZTA.

Source URL: <http://www.learnz.org.nz/node/1018>

Links

[1] <http://www.learnz.org.nz/sites/learnz.org.nz/files/bg-what-is-a-smart-motorway.mp3?uuid=5c6da20881084>

[2] <http://www.learnz.org.nz/sites/learnz.org.nz/files/bg-easy-what-is-a-smart-motorway.mp3?uuid=5c6da20880ab4>

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[3] http://www.learnz.org.nz/sites/learnz.org.nz/files/aroturuki_0.mp3?uuid=5c6da208811d7

[4] http://www.learnz.org.nz/sites/learnz.org.nz/files/whakahaere_4.mp3?uuid=5c6da208812da

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[6] <http://www.learnz.org.nz/sites/learnz.org.nz/files/paerongo.mp3?uuid=5c6da208814ca>

[7] <http://www.learnz.org.nz/sites/learnz.org.nz/files/pu-whakaahua.mp3?uuid=5c6da208815bd>

[8]

http://www.learnz.org.nz/sites/learnz.org.nz/files/tohu_0.mp3?uuid=5c6da208816b0

[9] <http://www.nzta.govt.nz/projects/wellington-northern-corridor/smart-motorway/>

[10] <http://www.learnz.org.nz/sites/learnz.org.nz/files/sm153-bg-what-is-a-smart-motorway-01.jpg>

[11] <http://www.learnz.org.nz/sites/learnz.org.nz/files/sm153-bg-what-is-a-smart-motorway-02.jpg>

[12] <http://www.learnz.org.nz/sites/learnz.org.nz/files/sm153-bg-what-is-a-smart-motorway-03.jpg>