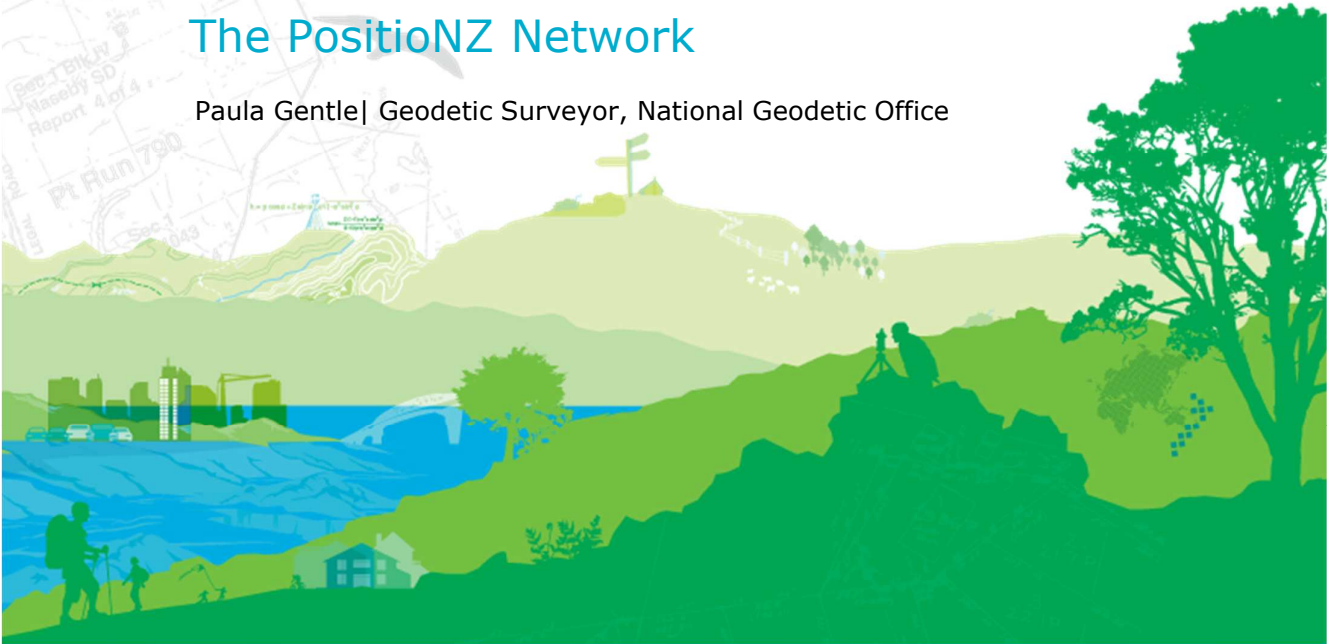


New Zealand's National CORS Network

The PositionNZ Network

Paula Gentle | Geodetic Surveyor, National Geodetic Office



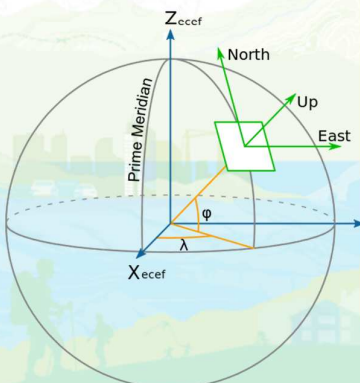
XXV FIG Congress, Kuala Lumpur, 19 June 2014

newzealand.govt.nz

The New Zealand Situation

New Zealand Geodetic

- established in 1996
- semi dynamic datum
- nominally referenced to ITRF97
- includes a deformation model
- aligned to ITRF97



newzealand.govt.nz

New Zealand's CORS Network

PositionZ Network

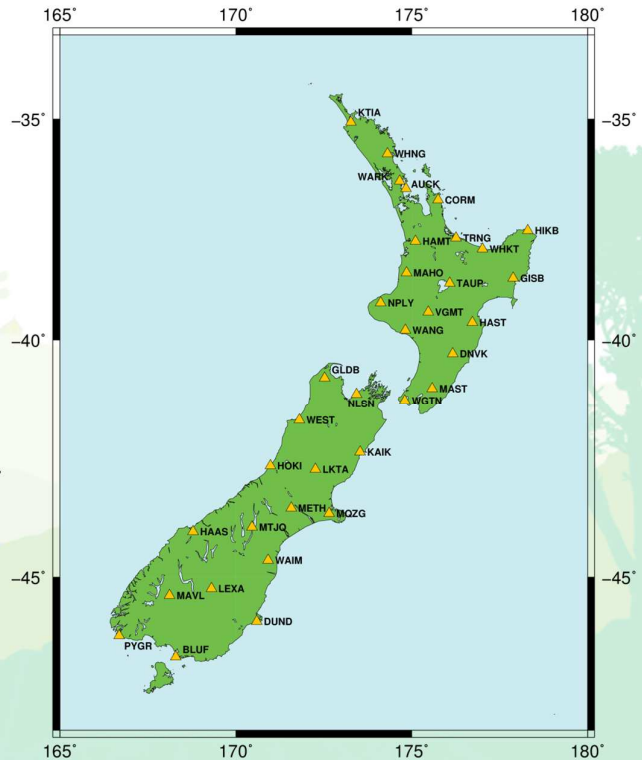
35 on the mainland of NZ

1 on the Chatham Islands

- Original station on Chatham Islands was decommissioned in 2012

3 in Antarctica

- 2 operated by UNAVCO as part of the POLNET Project



The PositionZ Partnership



LINZ and GNS Science have a 12 year partnership to provide the National CORS Network - PositionZ

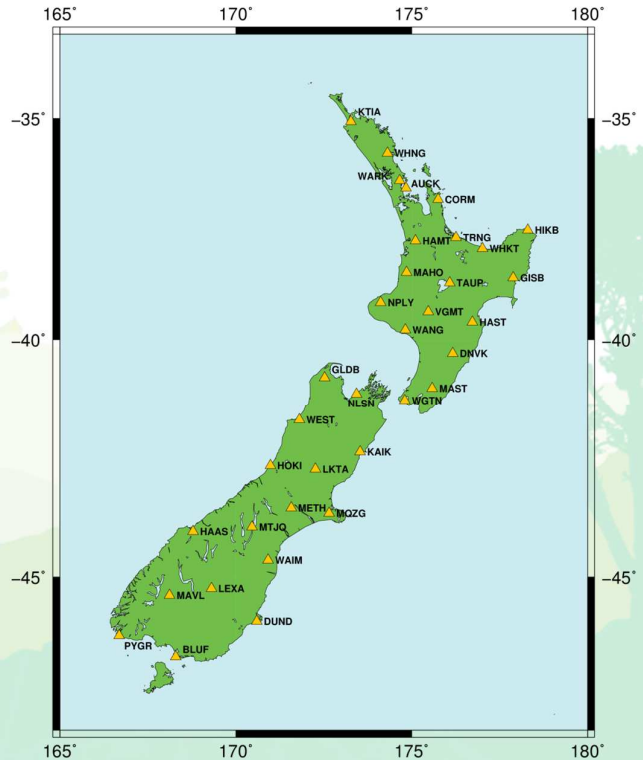


The purpose of the network

To maintain the relationship between NZGD2000 and ITRF96 over time

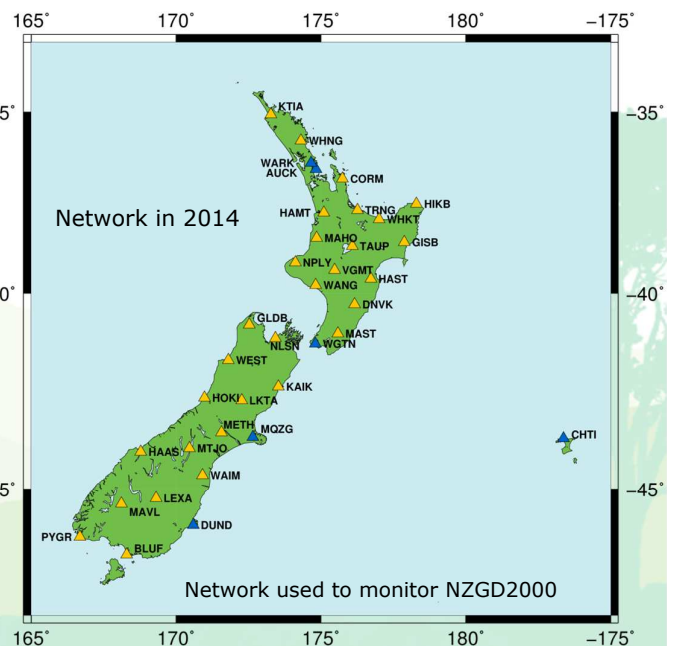
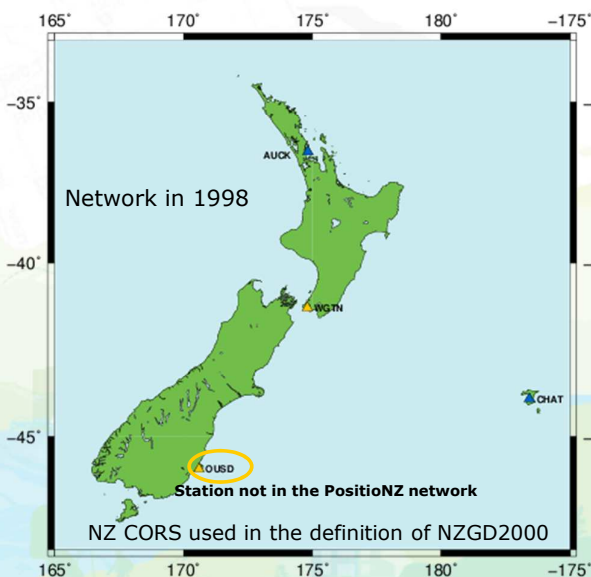
To monitor tectonic plate movement at the national level

To provide a real time network to encourage and support GNSS usage in New Zealand



The purpose of the network

To maintain the relationship between NZGD2000 and ITRF96 over time



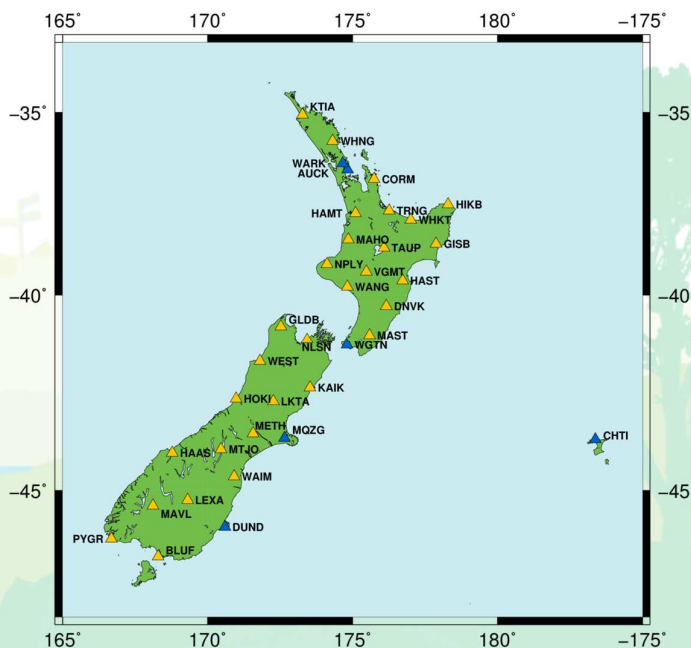
- ▲ LINZ CORS Station
- ▲ LINZ IGS CORS Station

The purpose of the network

To maintain the relationship
between NZGD2000 and ITRF96
over time

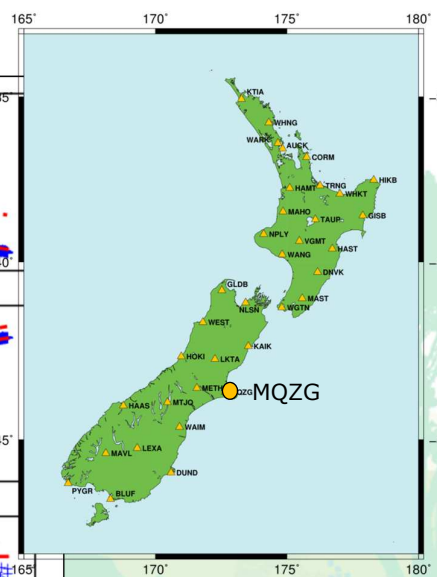
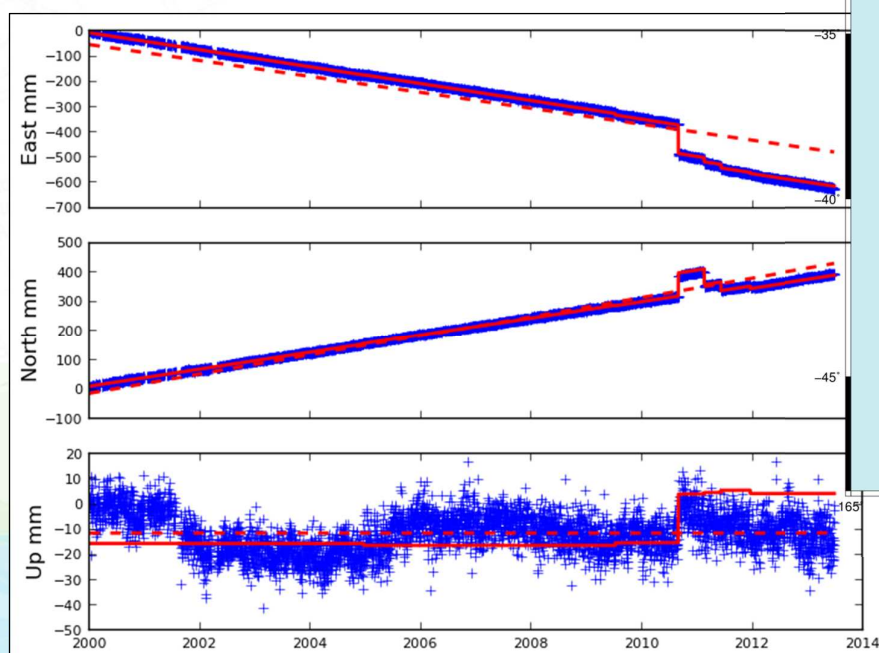
LINZ will soon be producing
its own network time series

LINZ is a data centre for
APREF and is moving toward
becoming an analysis centre



The purpose of the network

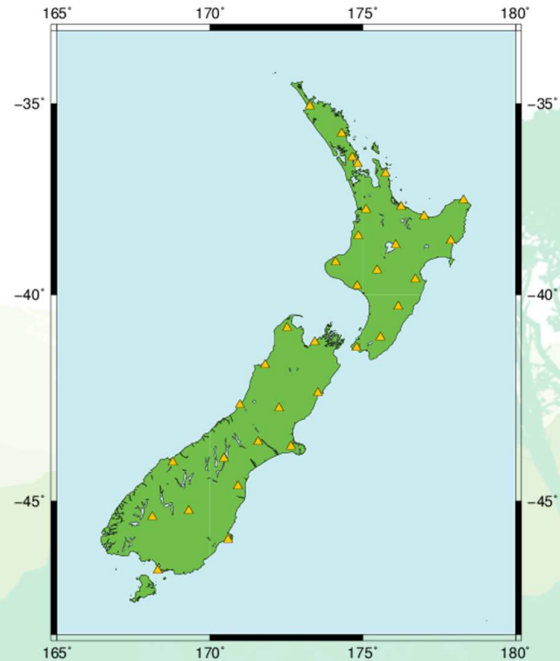
To monitor tectonic plate
movement at the national level



--- Original deformation model (version 20000101)
— Updated deformation model (version 20130801)

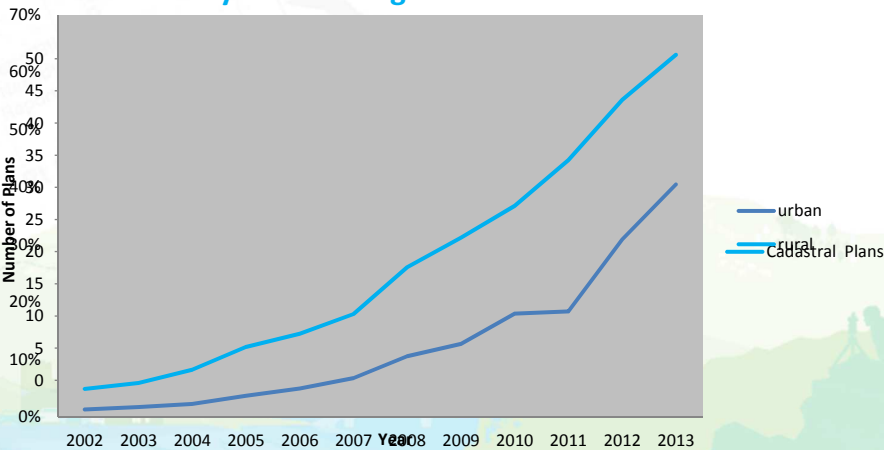
The purpose of the network

To provide a real time network to encourage and support GNSS usage in New Zealand



CORS related products and services

Cadastral Surveys Using GNSS



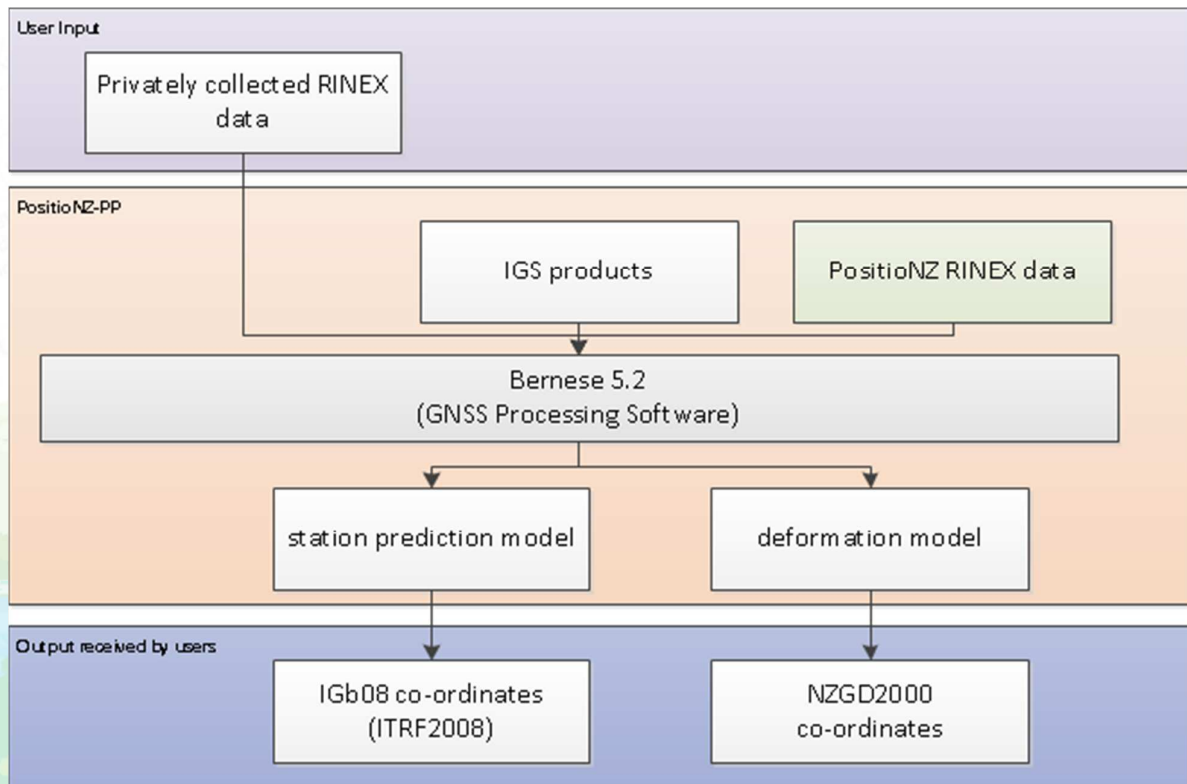
GNSS Products and Services

RINEX Data
Daily 30" Second data
Hourly 30" Second data
15 min 1 Second data

PositionNZ-RT Service
1 second RTCM data

PositionNZ-PP Service
Online GNSS Post Processing
(to be released)

PositionNZ-PP (post processing service)

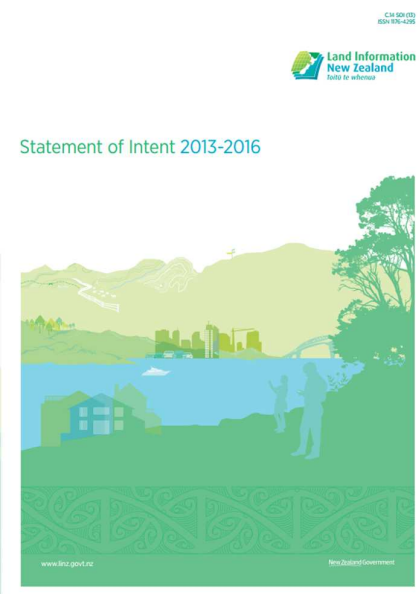


CORS related products and services

GNSS initiatives are supported in the **LINZ 2013-16 Statement of Intent**

• "recommendations to improve the current delivery of geodetic services to customers who are increasingly using global systems such as Global Navigation Satellite Systems (GNSS) and datums"

• "enhancing the delivery of our GNSS services which enable data to be submitted, automatically processed, and position results returned"





LINZ GNSS Data is licensed under a Creative Commons Attribution 3.0 New Zealand License

LINZ releases data in alignment with the New Zealand Open Access and Licensing Framework (NZGOAL)



<http://ictk.ch/content/bundesarchiv-lanciert-open-government-data-portal>

Open Government Case Study: PositionNZ GNSS Data

<http://ict.govt.nz/guidance-and-resources/case-studies/open-data/positionz/>



FIG Working Week

Christchurch New Zealand 2–6 May 2016

Recovery from a natural disaster