



Finance
& Services

Land & Property Information



NSW ATLAS - A Framework for Sharing Government Information

ESRI UC 2011 International User Conference

San Diego, 11th – 15th July 2011



Presentation Overview

- NSW ATLAS – The Book
- Making an Online Version
 - HTML Page Navigation
- Under the Covers
 - JSON
 - Online Visualisation Challenges
 - Performance Improvement
- Summary and Questions

the atlas

of new south wales
second edition

SIX Web 2.0 Strategic Planning V0.1.mmap

Aboriginal Heritage

Aboriginal culture is more than objects and artefacts, it's a living culture linked to the whole environment - plants, animals and landscapes.

The Two Sisters Midden heritage is made up of 17000 years - as well as 10000 years for the Two Sisters. Heritage places can include natural resources, objects, structures and traditions that have meaning for individuals and communities here and now. But the past will only be known by current and future generations.

Aboriginal people have lived in the area known as NSW for at least 65000 years. Many places around the state share the presence of Aboriginal communities prior to 1788, and are significant to Aboriginal communities today. They are important to Aboriginal people for social, cultural, spiritual, historical, and contemporary reasons. Aboriginal people have deep spiritual and emotional ties to Country.

There are over 20,000 known Aboriginal sites in NSW. Many are from long shell middens on the coast, or small surface scatters of stone artefacts in the inland, river and plains. Other important heritage sites include rock art, burial places, ceremonial sites, grinding grooves, quarries and shellfish sites. It is the character of the sites, including when, how and why they were used, that is most important. It is the places, not the artefacts, that have cultural meaning and value. Some of the places where Aboriginal people have lived during occupation of what is now NSW are the Two Sisters, which were used as a part of the Two Sisters.



Aboriginal people have lived in the area for over 65,000 years.

an Extra Strong concept of Aboriginal Spirituality

Aboriginal values are related to all landscapes, including the sea, forests, rivers and plains, and mountains, along with birds and trees, open places and Great Events.

The heritage and meanings are connected with stories and cultural knowledge that is still passed on today.

Aboriginal communities work to maintain Aboriginal heritage in the context of the wider landscape, rather than focusing on individual archaeological or historic 'sites'. A 'cultural landscape' approach offers an opportunity to move away from a focus on objects and sites or artefacts to a focus on the landscape as a whole, including the natural and cultural elements.

The idea of cultural landscapes is that all parts of the landscape are alive with cultural meaning, that all landscapes contain the stories of human life, and that human and ecological history is intertwined. A cultural landscape approach to heritage management recognizes that Aboriginal heritage sites are connected to each other across the landscape by past and present use and meanings.

Aboriginal people in NSW recognize the cultural values of landscape and the connections between natural and cultural heritage as integral parts of attachment to the land and the sea, rivers and coastal areas, as well as part of 'Country' and their lives and traditions.

The continued use of natural resources in built and modern environments is a cultural resource too. This practice shows Aboriginal communities' past and present knowledge, as well as natural, plants of cultural value, and to family life and wellbeing. The health of a species and the land is central to Aboriginal heritage.

Aboriginal people across NSW are increasingly working with government and the private sector to ensure that they are recognized as heritage. In addition to participating in development and planning processes, this process can provide Aboriginal people access to land to not only maintain connections and communities in the environment, but also to ensure and protect the values within the landscape, heritage not being developed that brings the way forward 'natural' and 'cultural' heritage.



history and exploration

The story of how NSW was discovered

Aboriginal people have lived in the area for over 65,000 years. The first European to see the area was James Cook in 1770. He was on a voyage to find a southern continent. He sailed along the east coast of Australia and named it New South Wales. He also discovered the Two Sisters. The Two Sisters are two large rock formations on the coast of NSW. They are made of sandstone and are about 100 metres high. They are named after the two sisters of the Two Sisters Midden. The Two Sisters Midden is a large shell midden that was used by Aboriginal people for over 10,000 years. It is one of the largest shell middens in the world. The Two Sisters Midden is a testament to the long history of Aboriginal people in the area.

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Aboriginal Cultural Landscape Sites

- Cultural landscape sites
- Heritage sites of Aboriginal significance
- Cultural landscape sites that are also heritage sites
- Cultural landscape sites that are also heritage sites

European Settlement

By 1825, much of the north-east and central eastern regions of the colony had been settled, including the southern tablelands, the Hunter Valley and the Mandorrah from Dubbo to Gungahlin.

There are a number of different interpretations of the European settlement of NSW that encompass a range of places and a variety of time periods. It is generally accepted that the first European settlement in NSW was the settlement of Sydney in 1788. However, the settlement of Sydney was not the only one, as other settlements were established in the Hunter Valley and the Blue Mountains. The settlement of Sydney was the first of a series of settlements that were established in the Hunter Valley and the Blue Mountains. The settlement of Sydney was the first of a series of settlements that were established in the Hunter Valley and the Blue Mountains.

The first purpose, which was not defined as those which Europeans had brought the land, at least initially within the colonial settlement and horticultural systems. The first purpose of the land settlement was to provide a source of food and clothing for the settlers. The first purpose of the land settlement was to provide a source of food and clothing for the settlers.

It is also important to remember that although only the small scale aspects of settlement are shown on the map of Colonial NSW, the process was always always much more complex in the real world. Many people, both wanted and unwanted, were up and down the coast of NSW. Some land only had a few small farms, while others were large and well established.

In the 1820s, the first of the major land settlements in NSW was the settlement of Sydney. The settlement of Sydney was the first of a series of settlements that were established in the Hunter Valley and the Blue Mountains. The settlement of Sydney was the first of a series of settlements that were established in the Hunter Valley and the Blue Mountains.

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Clear Settlements



Settlements established by 1800
Settlements established 1801-1820
Settlements established 1821-1840
Settlements established 1841-1860

history and exploration

the atlas of new south wales

Establishment of Towns, 1788-1825



New England and the settlement of the Hunter Valley in the 1820s, as well as the settlement of the Blue Mountains in the 1830s. The settlement of the Hunter Valley was the first of a series of settlements that were established in the Hunter Valley and the Blue Mountains. The settlement of the Hunter Valley was the first of a series of settlements that were established in the Hunter Valley and the Blue Mountains.

very from their lack because of the very small supply of wool, and also because they were always short of sheep, especially wool and dry ewes. Only the most excellent wool was taken up for export, leaving the rest of the flock to be used for the domestic market.

A second phase in the settlement process in many parts of the colony, and later the new, involved building up large pastoral holdings, rather than small, scattered, independent ones. This process was also supported by the government's efforts to encourage the settlement of the land. The government's efforts to encourage the settlement of the land were supported by the government's efforts to encourage the settlement of the land.

the rest of the land proved much less profitable, and also more difficult to settle.

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Population

By 2040 the median age in the State is projected to be 41 years, with one in five of the State's residents 65 years and over.



Population growth from Sydney's basin is by a considerable margin Australia's largest source. During 2009 an increased net migration of 22,000 net migrants to NSW, 51.5% of the total Australian population increase, was concentrated in Sydney, with 24.9% of the national total.

The State's demographic pressure focuses on the basin directly facing north the rest of NSW. This is with little regional or long-term growth seen. The low point of the recovery has seen the NSW national growth differential widen, between the year of 2004 and the end of 2008 the basin population expanded by just 1.3%, against a national increase of 3.7%.

The main drivers of the State's population growth are natural increase (births minus deaths) and net interstate migration. Over the 2003-07 period these two components of

growth respectively added around 50,000 and 28,000 persons. Following these years net interstate migration has fallen to the point where it contributed only 20,000 people.

In line with this, interstate inflows and outflows, net interstate migration, have been minimal for the State but increased significantly in some years, rising from negative 1,100 in 2006 to 1,100 in 2008.

79,000 in 2008, these figures representing approximately 30% of the net national net interstate migration gains.

The annual net interstate migration has over the period 2005-06 to 2007-08 ranged from 50,000 to 120,000 in 2007. Annual three quarters of the low has been in Queensland, with smaller losses in each of the other states and territories.

In the 2006 Census 2.7% of the population identified as being of indigenous origin. This was 30.4% of the identified net interstate indigenous population.

A major feature of the NSW population is its very skewed age structure, with 26% of the residents being in a better than aging the rest. The underlying driver behind this pattern is the distribution of water resources. Much more is to be seen highly concentrated within the coastal basin. 57% of the State's population is living in the Sydney basin, of which 12% is in the immediate area surrounding the Sydney Harbour, and a further 22% in the immediate area surrounding the Macquarie Harbour. The only potentially additional inland centres (Goulburn, Orange, Murrumbidgee, Bathurst, Dubbo, Lismore, and Queerbran) are all small. Orange (35,000), Dubbo (30,000), and Bathurst (20,000) have the largest populations in inland NSW. The inland basin of the Sydney basin is 'less dense' than the coastal basin, with a population density of 120 per sq km, compared to 200 per sq km in the coastal basin.

Significant interstate migration in NSW is a result of the state's population structure, which is skewed towards younger ages. This is a result of the state's population structure, which is skewed towards younger ages. This is a result of the state's population structure, which is skewed towards younger ages.

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interactions in events and our final state change migrants to the other states.

Over the most recent year period 30% of the State's population has migrated to the coastal basin, with 12% migrating to the Sydney basin. This is a result of the state's population structure, which is skewed towards younger ages. This is a result of the state's population structure, which is skewed towards younger ages.

The relative contributions of Sydney and the basin and our migration to population change will vary over time. In some years the Sydney basin will contribute more to the state's population growth, while in other years the basin will contribute more. This is a result of the state's population structure, which is skewed towards younger ages. This is a result of the state's population structure, which is skewed towards younger ages.

In a number of areas with large elderly populations in their population, such as the Hunter, the Sydney basin, and the Macquarie Harbour, migration has been a key driving factor in all areas experiencing population decline.

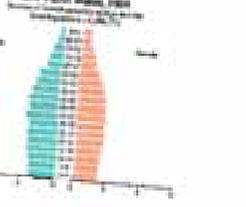
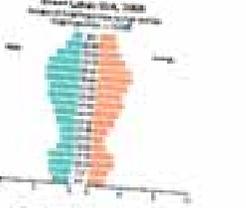
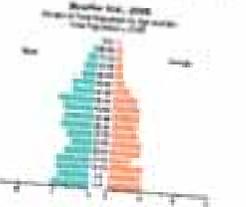
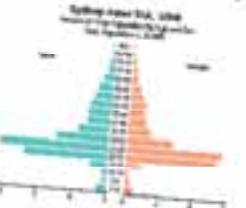
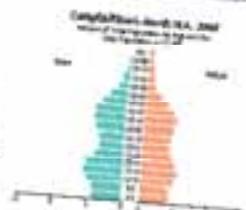
Significant inter-state migration, such as the Sydney basin, has been a key driving factor in all areas experiencing population decline.

The 'immigrant' population in the Sydney basin is the largest, with a median age of 29 years, compared with 32.7 years for the State as a whole.

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the effect of New South Wales



Contents

History & Exploration

- v Foreword
- 1 Preface
- 2 Acknowledgements
- 4 Introduction
- 5 **Aboriginal Heritage**
Department of Environment, Climate Change and Water
- 7 **Changing State Borders**
Mr David Clark, Land and Property Management Authority
- 11 **Explorations**
Dr Louise Edlin, Macquarie University
- 17 **European Settlement**
Dr Graham Aylett, Macquarie University
- 21 **Gold Rush**
Dr Graeme Aylett, Macquarie University
- 23 **Sydney 1788-2018**
Dr Graham Aylett, Macquarie University
- 28 **Population**
Dr Eileen McCartney, Macquarie University and
Mr Frank Vickers, Macquarie University
- 33 **Indigenous Populations**
Dr Eileen McCartney, Macquarie University and
Mr Frank Vickers, Macquarie University
- 35 **Social Inclusion**
Dr Eileen McCartney, Macquarie University and
Mr Frank Vickers, Macquarie University
- 37 **Women**
Dr Eileen McCartney, Macquarie University and
Mr Frank Vickers, Macquarie University
- 38 **Immigration**
Dr Eileen McCartney, Macquarie University
- 41 **Religion**
Associate Professor Michael Wright, University of Sydney
- 47 **Ancestry**
Professor Ian Burnley, University of New South Wales

People

Economy

- 49 **Immigration**
Professor Ian Burnley, University of New South Wales
- 55 **Tourism**
Mr Bob Smith, Tourism NSW
- 59 **Crime**
Dr Leigh Price, NSW Bureau of Crime Statistics and Research and
Mr John Hoggan, NSW Bureau of Crime Statistics and Research
- 63 **Labour Force**
Professor Bob Mitchell, University of Newcastle and
Mr Michael Forgan, University of Newcastle
- 67 **Labour Underutilisation**
Professor Bob Mitchell, University of Newcastle and
Mr Michael Forgan, University of Newcastle
- 69 **Taxation & Revenue**
Professor Bob Mitchell, University of Newcastle and
Mr Michael Forgan, University of Newcastle
- 71 **Economic Stability**
Professor Bob Mitchell, University of Newcastle and
Mr Michael Forgan, University of Newcastle
- 73 **Ports & Trade**
Mr Dennis Manning, AAR Maritime
- 77 **Agriculture**
Troy Moody, Industry and Investment NSW and
Department of Environment, Climate Change and Water
- 79 **Agriculture – grains & olives**
Troy Moody, Industry and Investment NSW
- 81 **Agriculture – fruit & vegetables**
Troy Moody, Industry and Investment NSW
- 85 **Agriculture – wine**
Troy Moody, Industry and Investment NSW
- 87 **Agriculture – livestock**
Troy Moody, Industry and Investment NSW
- 89 **Fisheries**
Troy Moody, Industry and Investment NSW
- 93 **Forestry**
Forest NSW
- 95 **Coal**
Industry and Investment NSW
- 99 **Natural Gas Exploration**
Industry and Investment NSW

“make an online version”

ESRI ArcGIS Server

ESRI JavaScript API

IBM WebSphere

Deliver in 3 months

Inputs

Book

HTML exports

photos

charts



IBM WebSphere

Web Content Mgmt

Maps

geospatial files

high-res images

Excel tables



ArcGIS Server

file geodatabases

demo

ATLAS of NEW SOUTH WALES BETA



Explore and learn

Uncover ancient Aboriginal culture and the early European explorers. Learn about modern-day agriculture and our environment. Discover the people who live in New South Wales, and what makes them tick.

Topics



Economy



Elections



Environment



History



People

ATLAS EXPLORER



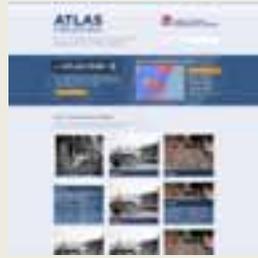
Navigate around NSW and explore maps of Population, Agriculture, Elections, Crime, History and more.

START EXPLORING

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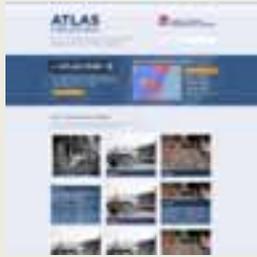
Link to article





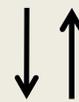
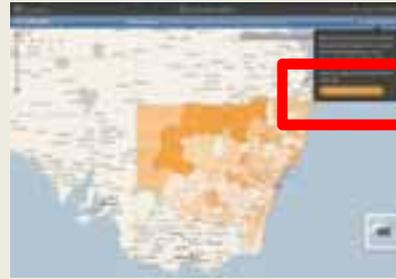
Link to map





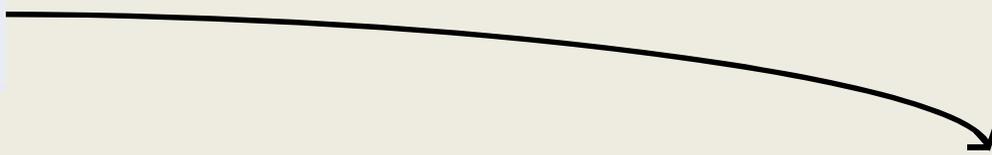
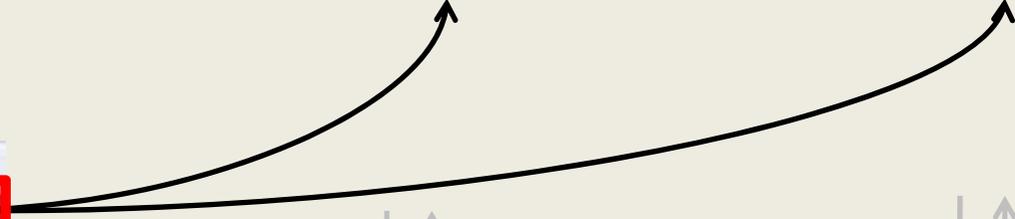
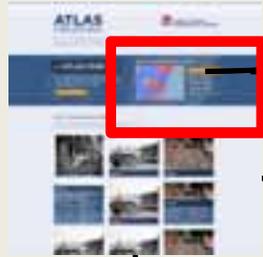
Link to articles











Under the covers

ArcGIS Server 10.0 with JavaScript API v2.3

- feature layers
- time-aware layers
- cached layers

Tying them all together: JSON

JSON framework

- JSON object defines the layer
 - Type (dynamic, tiled, feature)
 - Fields and Aliases
 - Chart contents and size
 - Time-aware details

Forestry map

Link to article

Layer path

Fields & aliases

Tiled map

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    "summary": "This map shows the location of managed forests across NSW",
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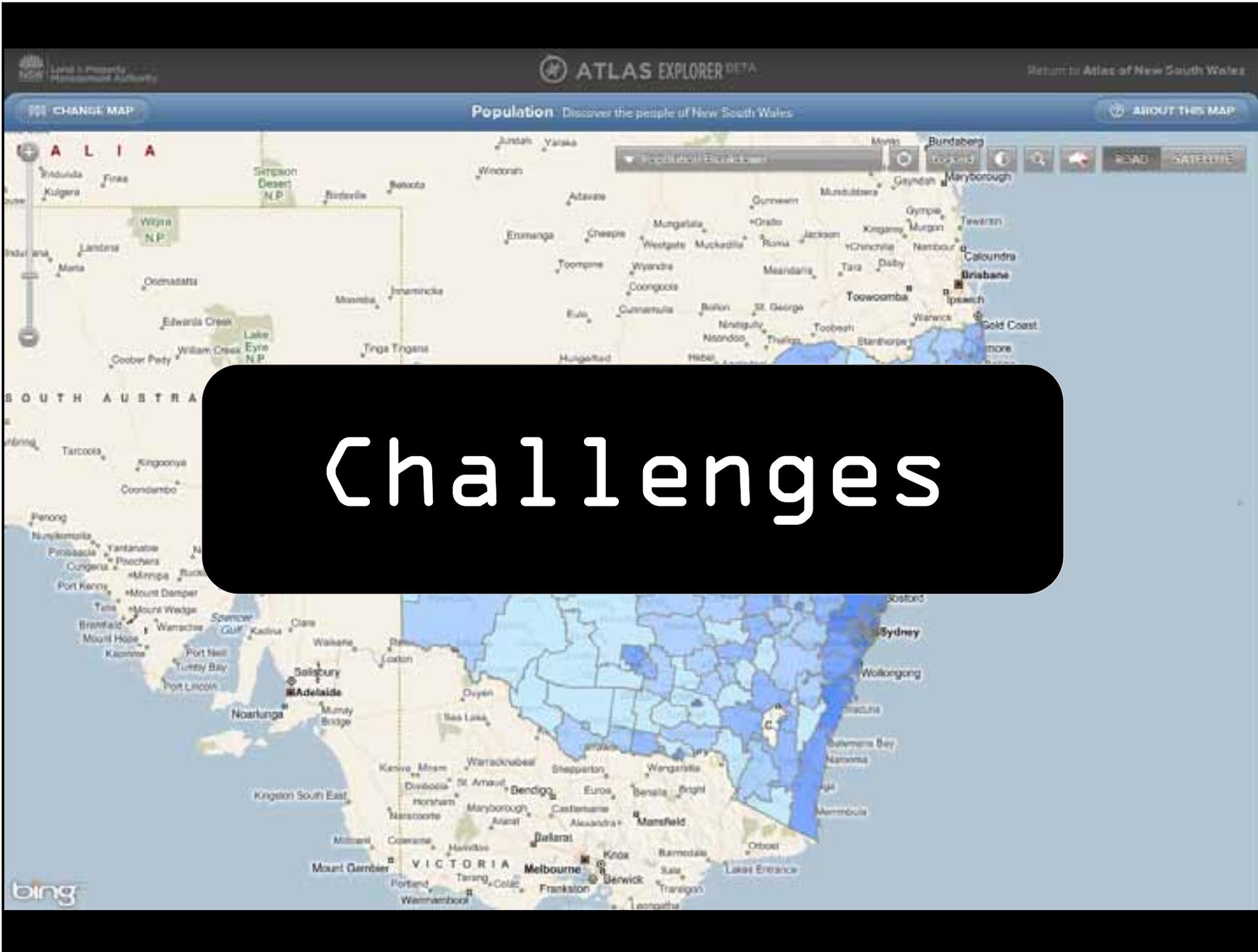
Why JSON?

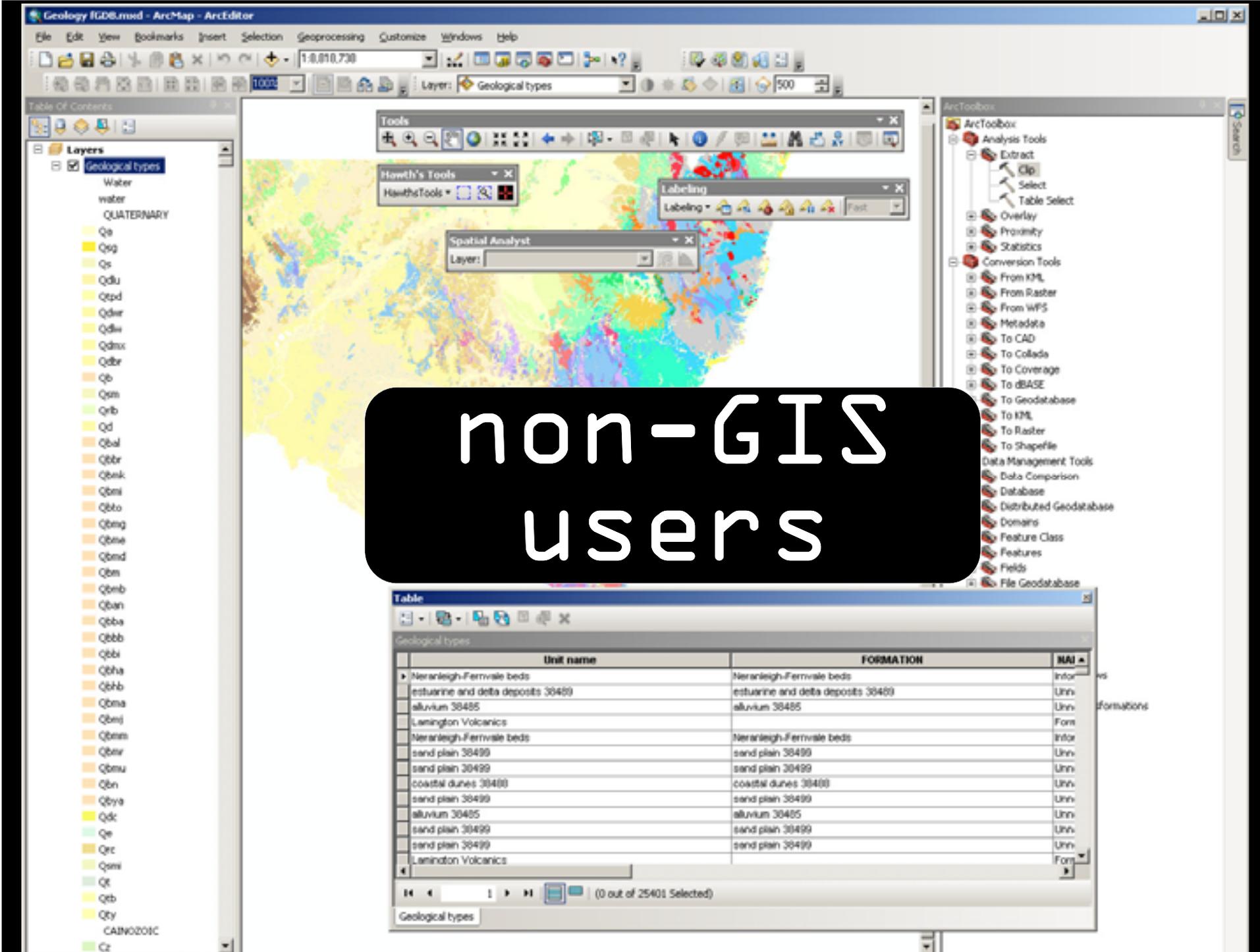
Flexibility

- Add new layers instantly
- Support multiple layer types
 - Link to article, or not

Extensibility

- Add new objects easily
(chart, table, iframe...)





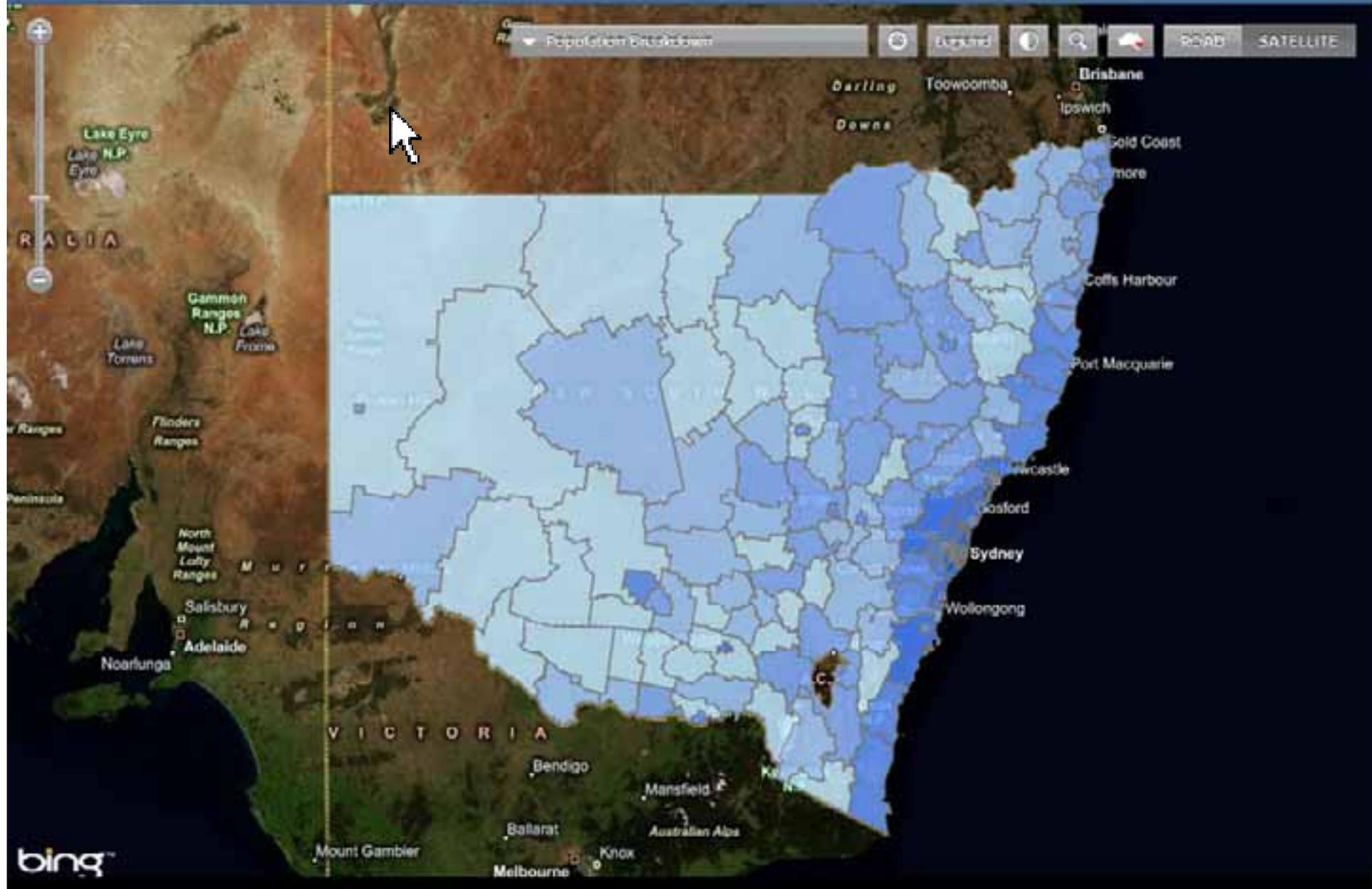


navigation
as a
behaviour of
the map

CHANGE MAP

Population Discover the people of New South Wales

ABOUT THIS MAP



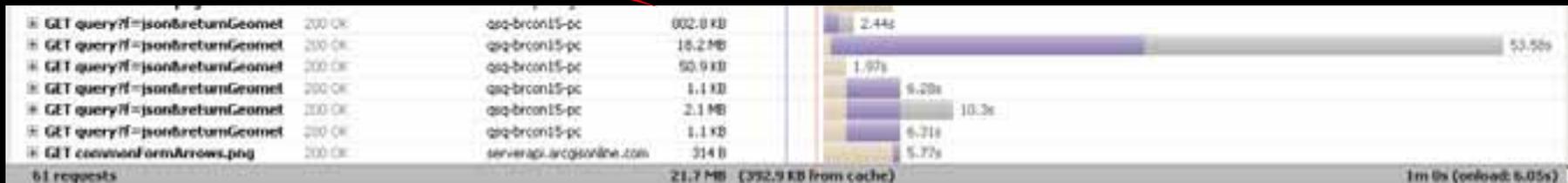


Identify as a
behaviour of
the **layer**

Performance

~20 Mb

53.6 secs



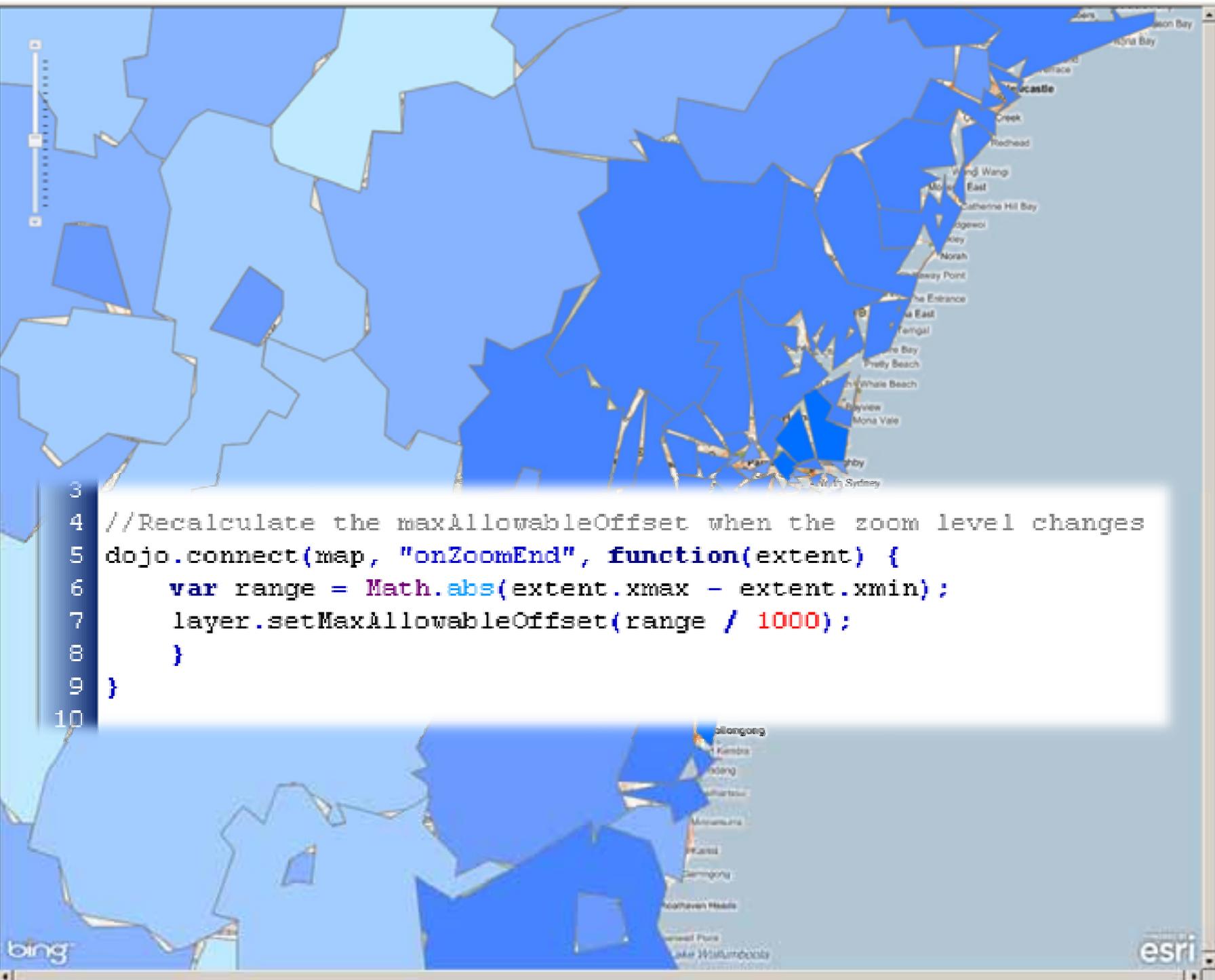
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outFields: ["*"],
maxAllowableOffset: 3500,
infoTemplate: infoTemplate
});
map.addLayer(featureLayer);
```

~200 kb

~2 secs



```
3
4 //Recalculate the maxAllowableOffset when the zoom level changes
5 dojo.connect(map, "onZoomEnd", function(extent) {
6     var range = Math.abs(extent.xmax - extent.xmin);
7     layer.setMaxAllowableOffset(range / 1000);
8     }
9 }
10
```



Summary

500 Mb of text, photos, tables

3.5 Gb of geospatial data

~3 months from start to finish

atlas.nsw.gov.au



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