Open Government Case Study: NZ tide prediction data

Purpose of agency

Land Information New Zealand (LINZ) is a New Zealand government department responsible for managing property rights, location information, and Crown land.

LINZ is also responsible for providing charts and hydrographic services, producing specialised nautical charts to aid safe navigation in New Zealand waters and certain areas of Antarctica and the South West Pacific. LINZ publishes annual and fortnightly Notices to Mariners as well as other important nautical and tidal information.

Many third party applications of LINZ's NZ Tide prediction data

High value public data released for re-use

LINZ releases tide prediction data at http://www.linz.govt.nz/hydro/tidal-info/tide-tables/ which is the authoritative source of tide prediction data in New Zealand. Tables are provided in both PDF and comma separated text (CSV) format. Instructions to use the text files are provided.

Examples of re-use

A number of third party applications re-using the data have been developed, including the following:

- NZ Tides Pro - this iPhone app, developed by a New Zealand application developer "Wingism", re-uses New Zealand tide prediction data. There are over 50 comments against this application at the Apple App Store, all positive about its ease of use or usefulness, rating on average 4.5 stars out of 5

- NZ Tides - This Android app by Jevon Longdell has 10,000-50,000 downloads, and an average 4.19 out of 5 rating (57 ratings))

- TidePlan - this Android application has 1,000 - 5,000 downloads, average 4.4 out of 5 rating (30 ratings). The tide information provided is currently limited to New Zealand ports only

- Tide Prediction - an Android application by muchoviento. Enables offline viewing of graphical tidal charts. An event view shows the times for ebb and flood. 100,000 - 500,000 downloads; average 3.8 out of 5 rating (1065 ratings)

- QuickTide - offers tide predictions for anywhere in New Zealand from an Apple Mac. A simple interface provides tide heights and times information.

New Zealand MetService uses tide prediction data on its public weather website

Several businesses are using the data including:

- Oceanfun Publishing - http://ofu.co.nz/ specialises in the production and supply of high quality graphics, conveying sun, moon, and tide information. Tidespy is the free tide info area of the website. The website states that "we supply reliable and verified tide data. This is why we use figures computed by official government agencies". Oceanfun also offers web tools like an application programming interface (API) and produce a calendar and a series of 7 pocket-size booklets of tide predictions

- New Zealand MetService - uses the LINZ tides data on its public weather website and includes LINZ data on the weather page in daily papers.

Economic and social impacts

- developers have created one iPhone app, three android apps and one Mac app
- Oceanfun Publishing develops visual representations of tides, relying on the LINZ tides prediction data as a reliable and verified source. They mash it up with fishing information & regulations
- the New Zealand Metservice uses the LINZ tidal prediction data on its website to complement its free weather forecast data
- commercial & community newspapers, fishing & boating magazines & websites like windsurf.co.nz use the visualisations

- the public can understand & interpret Oceanfun and the MetService's visualisations of the LINZ tide data
- the applications make it easier for commercial & recreational boaties, or anyone who wants to use beaches or be out on the sea to make good risk management decisions
- they also allow prediction of the impact of flooding for coastal regions, and for planning & emergency management purposes
- BRANZ has integrated boundary, property & topographic data with their data to give the public information on earthquake & corrosion risk zones

Efficiency impacts

- other agencies re-use the LINZ tide prediction data applications, complementing other data sources
- central and local government use LINZ tidal prediction data for planning, emergency management and advisory purposes