

# State of TerriaJS

Nick Forbes-Smith | FOSS4G 2022 Firenze

Australia's National Science Agency



Who we are

# Australia's national science agency



One of the world's largest multidisciplinary science and technology organisations



5,200+ dedicated people working across 58 sites globally



State-of-the-art national research infrastructure



We delivered \$7.6 billion of benefit to the nation in FY21



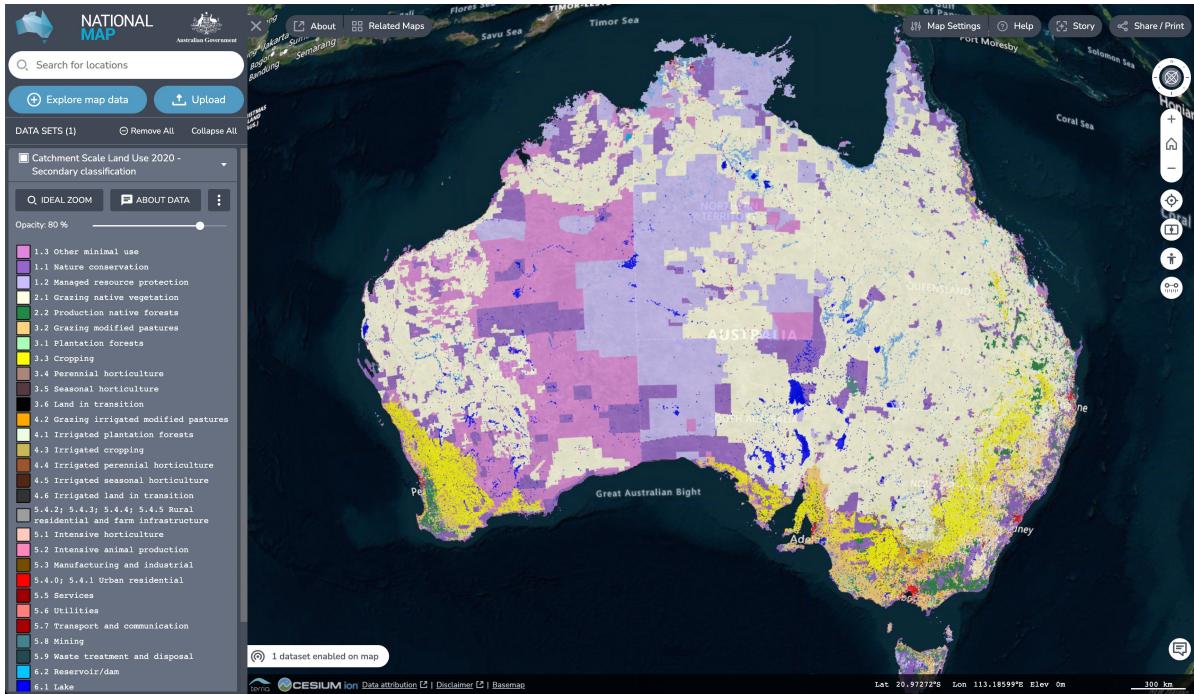
# TerriaJS

- An open-source framework for web-based geospatial catalogue explorers
- **Cesium/Leaflet** based in-browser tool for looking at 2D and 3D data
- Australian team working at CSIRO's Data61
- Find us at [terria.io](https://terria.io)

# (Australian) NationalMap

[nationalmap.gov.au](http://nationalmap.gov.au)

- Birth of TerriaJS
- Geospatial data discovery, visualisation and sharing
- Launched 2014
- 14,000+ datasets, 30,000+ sessions/month



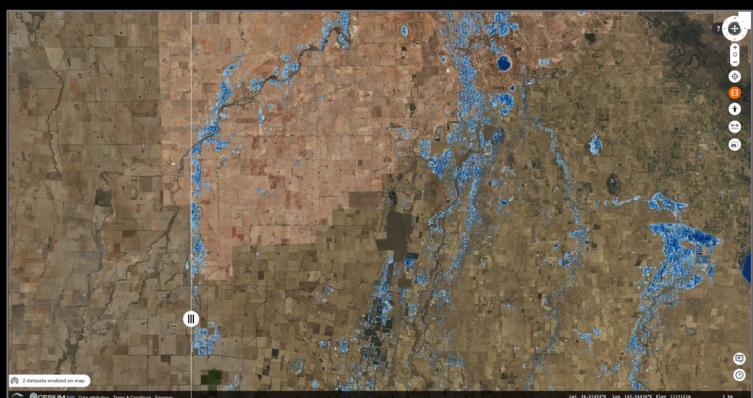


# Victoria (Aus) Digital Twin

[vic.digitaltwin.terria.io](http://vic.digitaltwin.terria.io)



Linking to national open datasets



Historical data supports preparation for future



Draws on massive aerial imagery archive



Visualise plans in place before construction begins

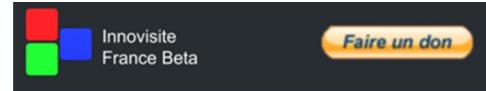


# TerriaJS Adoption by Community

## Industry



## Gov/ Research



## NGOs



Food and Agriculture Organization of the United Nations



Open Data Platform





## Version 8 release

- 12 months ago
- Big re-write to TypeScript / mobX
- Becoming more stable
  
- Thank you to all contributors
  - Especially to Zoran Kokeza!
- Thanks for your patience



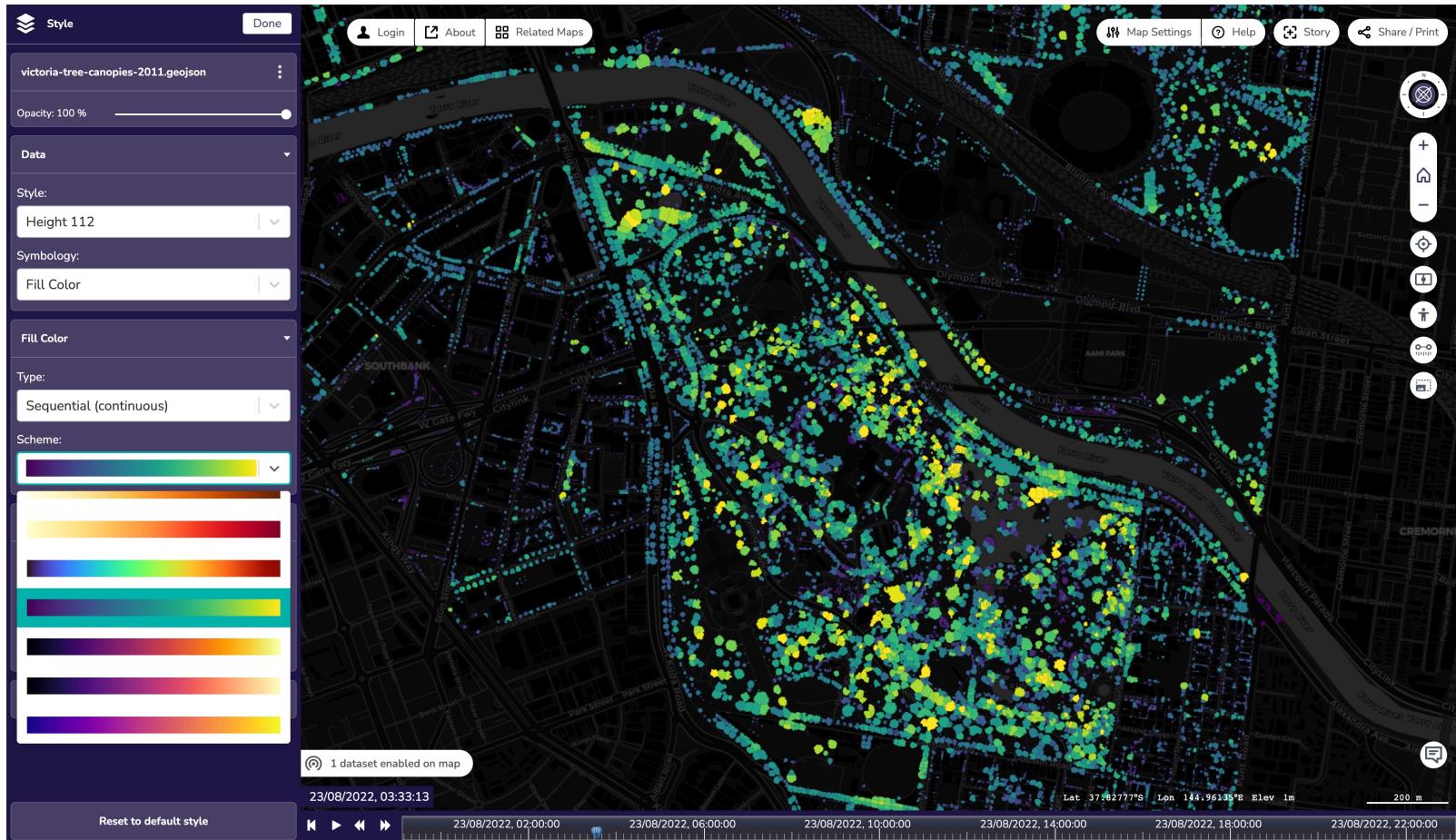
## Some notable new features

- Mapbox Vector Tile support using [protomaps.js](#)
- Edit style (for vector data)
- 3D clipping box
- 3D splitter
- New Plugin API - [github.com/terriaajs/plugin-sample](https://github.com/terriaajs/plugin-sample)
- Translation – through Weblate



# MVT + Edit style

[vic.digitaltwin.terria.io](http://vic.digitaltwin.terria.io)





# Edit style (marker)

[vic.digitaltwin.terria.io](http://vic.digitaltwin.terria.io)

Style Done

Login About Related Maps

Map Settings Help Story Share / Print

?

+

-

Home

Orientation

Search

User icon

Print

Legend

Help

Feedback

2048

Lat 37.81591°S Lon 144.94572°E Elev 3m

23/08/2022, 03:33:13

23/08/2022, 02:00:00 23/08/2022, 06:00:00 23/08/2022, 10:00:00 23/08/2022, 14:00:00 23/08/2022, 18:00:00 23/08/2022, 22:00:00

Reset to default style

Style Data

Style: Select...

Symbology: Point/Marker Style

Marker Style

Variable: Site Type

Type: Qualitative

Enum styles

INT

POS

Value: POS

Marker: pitch

picnic-site

pitch

place-of-worship

playground

police-IP

Done

1 dataset enabled on map

23/08/2022, 03:33:13

Lat 37.81591°S Lon 144.94572°E Elev 3m

23/08/2022, 02:00:00 23/08/2022, 06:00:00 23/08/2022, 10:00:00 23/08/2022, 14:00:00 23/08/2022, 18:00:00 23/08/2022, 22:00:00

The screenshot displays a digital twin visualization of Melbourne, Australia, showing a satellite view of the city. Overlaid on the map are numerous white human icons and red, yellow, and green traffic light symbols, indicating various locations of interest or data points. The interface includes a sidebar for styling these markers, a legend, and various map controls. A timestamp at the bottom indicates the data was captured on August 23, 2022, at 03:33:13.



# 3D Clipping box

[vic.digitaltwin.terria.io](http://vic.digitaltwin.terria.io)

VICTORIA Australia Digital Twin Victoria CSIRO DATA 61

X Login About Related Maps Map Settings Help Story Share / Print

Search for locations

+ Explore map data Upload

DATA SETS (1) Remove All Collapse All

Sunbury Train Station BIM

IDEAL ZOOM ABOUT DATA :

Opacity: 100 % Shadows: None

Clip model Show clipping box Above ground only

Clip direction: Clip inside the box

1 dataset enabled on map

23/08/2022, 03:33:13 23/08/2022, 02:00:00 23/08/2022, 06:00:00 23/08/2022, 10:00:00 23/08/2022, 14:00:00 23/08/2022, 18:00:00 23/08/2022, 22:00:00 Lat 37.57908°S Lon 144.72860°E Elev 214m 5 m



# 3D Splitter

[vic.digitaltwin.terria.io](http://vic.digitaltwin.terria.io)

**Digital Twin Victoria**

Search for locations

+ Explore map data    Upload

DATA SETS (1)    Remove All    Collapse All

SPLIT SCREEN MODE X

Show Terrain on the

Left    Both    Right

Terrain hides underground features

Melbourne Central 2021 3D Photomesh

Q IDEAL ZOOM    ABOUT DATA    ...

Opacity: 100 %

Left    Both    Right

Shadows:

None

Clip model

1 dataset enabled on map

23/08/2022, 03:33:13

23/08/2022, 02:00:00    23/08/2022, 06:00:00    23/08/2022, 10:00:00    23/08/2022, 14:00:00    23/08/2022, 18:00:00    23/08/2022, 22:00:00

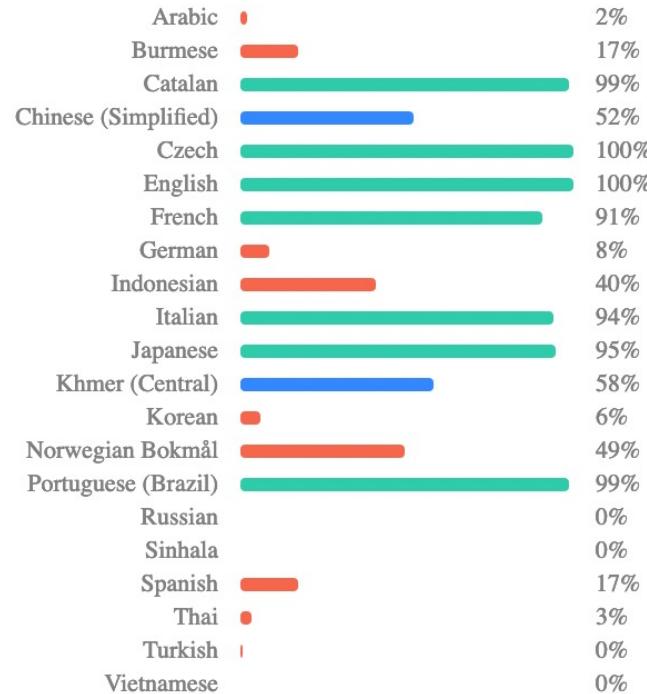
Map Settings    Help    Story    Share / Print

Zoom controls: +, -, Home, Reset, Pan, Clip, Measure, Map, Satellite, Street View, Layers

Coordinates: Lat 37.81957° S    Lon 144.96557° E    Elev 0m    20 m

# Translation

- Thank you to contributors!





## Future plans

- Story v2.0
- Compare/Splitter v2.0
- Catalog search by location
- UI / View layer refactor
- Upgrade to TypeScript 4.x
- Mobile support...
- Improve documentation...



# My other talk!

## Exploring the World's Open Data Portals

Discovery, Visualisation and Analysis of Open Data with TerriaJS

Friday 12:30–13:00 in Room 4

### Links

- [terria.io](https://terria.io)
- [nationalmap.gov.au](https://nationalmap.gov.au)
- [vic.digitaltwin.terria.io](https://vic.digitaltwin.terria.io)
- [github.com/terriajs](https://github.com/terriajs)