

State of TerriaJS

Nick Forbes-Smith | FOSS4G 2022 Firenze

Australia's National Science Agency





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

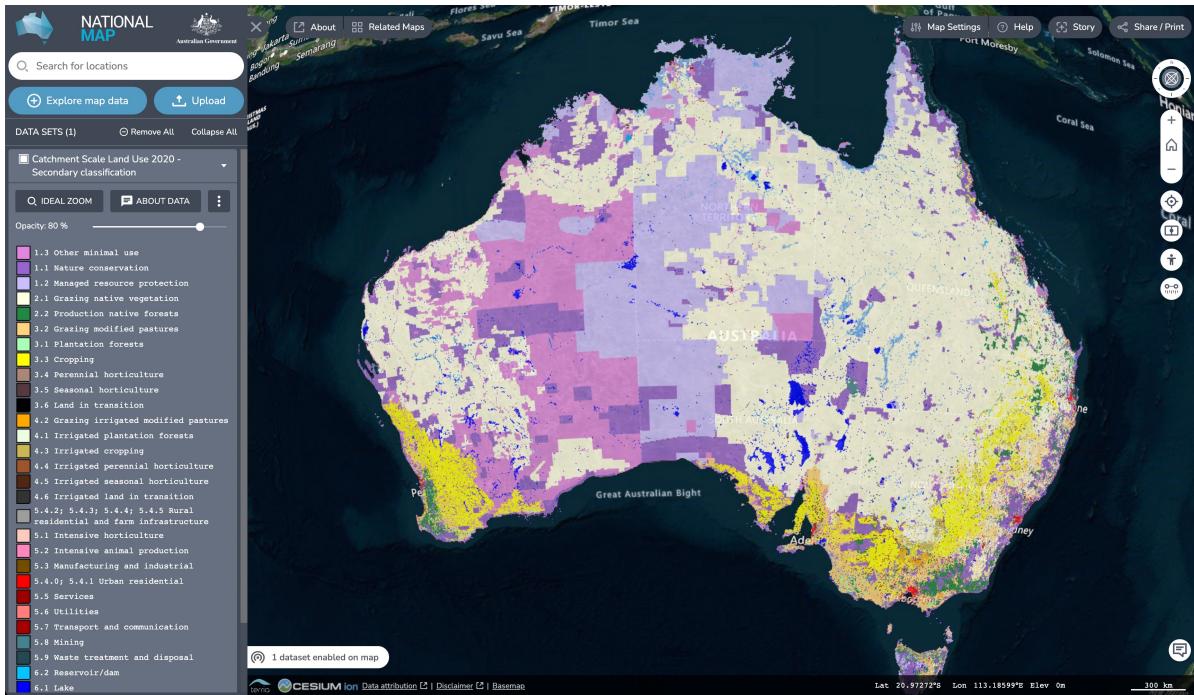
- An open-source framework for web-based geospatial catalogue explorers
- **Cesium/Leaflet** based in-browser tool for looking at 2D and 3D data
- Find us at terria.io



(Australian) NationalMap

nationalmap.gov.au

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



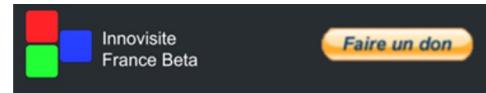


TerriaJS Adoption by Community

Industry



Gov/ Research



NGOs



Food and Agriculture Organization of the United Nations



Open Data Platform



Geography Teachers' Association of Victoria Inc.





Version 8 release

- Milestone V8 release 12 months ago
- Rewrite from **JavaScript** (knockout.js) to **TypeScript** (React/mobX)
- Becoming more stable/mature
- Thank you to all contributors
 - Especially to Zoran Kokeza!



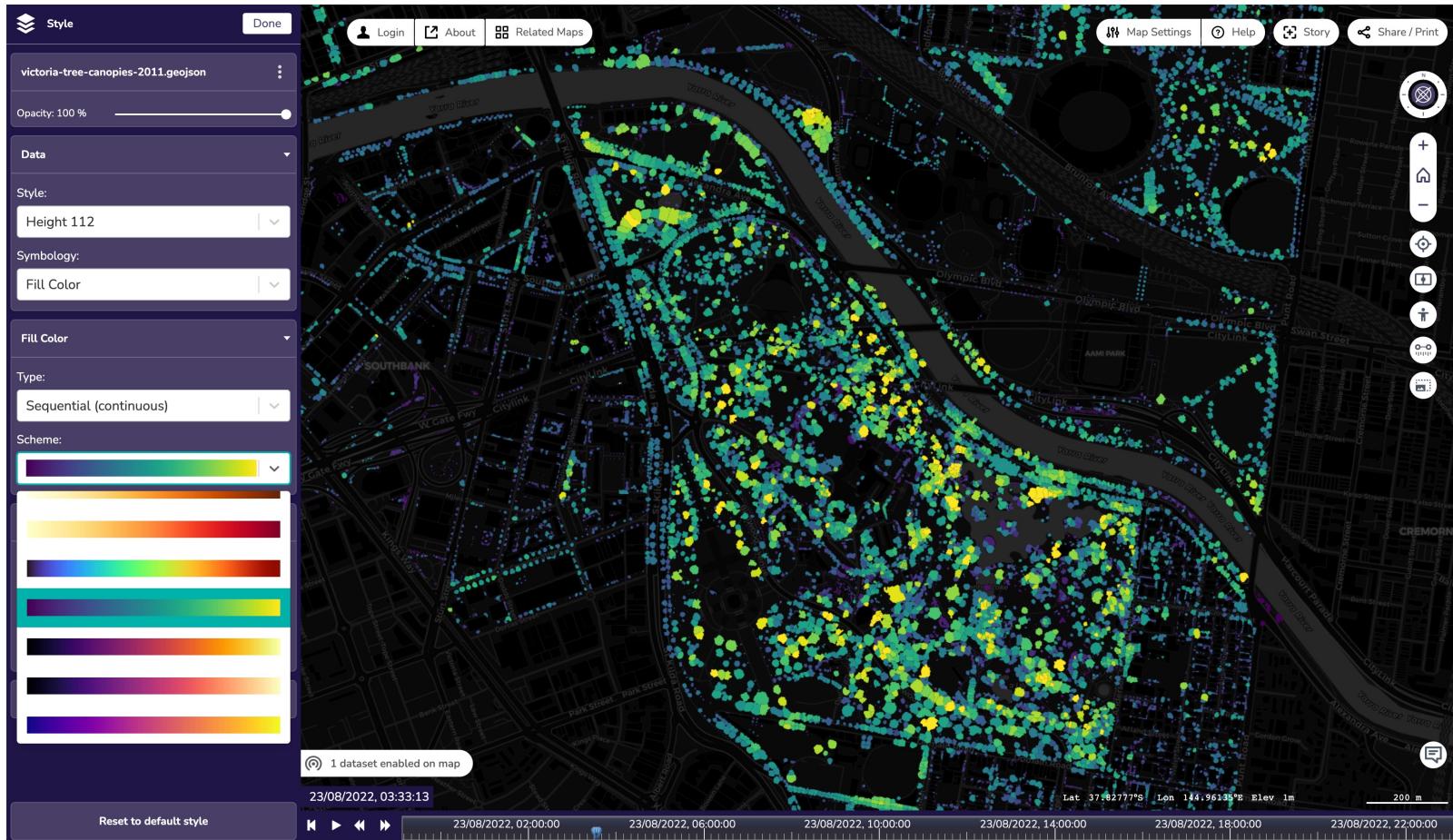
Some notable new features

- Mapbox Vector Tile support using [protomaps.js](#) (+geojson-vt)
- Edit style (for vector data)
- 3D clipping box
- 3D compare/splitter
- New Plugin API - github.com/terriaajs/plugin-sample



GeoJSON -> MVT + Edit style

vic.digitaltwin.terria.io





Edit style (marker)

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

This screenshot shows a digital twin interface for Melbourne, Victoria, Australia. The map displays a dense urban area with a grid of streets. Numerous traffic lights are represented by small red, yellow, and green icons. White human-shaped icons are scattered across the map, particularly concentrated in the central business district and along major thoroughfares. On the left, a sidebar titled 'Edit style (marker)' allows users to change the marker type and variable. The variable 'Site Type' is selected, and the marker type is set to 'pitch'. Other options like 'picnic-site' and 'place-of-worship' are also listed. The top of the screen features a navigation bar with links for 'Login', 'About', 'Related Maps', 'Map Settings', 'Help', 'Story', 'Share / Print', and a question mark icon. A timestamp at the bottom left indicates the data was captured on August 23, 2022, at 03:33:13. The bottom of the screen has a timeline with time points from 02:00:00 to 22:00:00.



3D Clipping box

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 Compare/Splitter

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



Future plans

- Story v2.0
- Imagery Compare/Splitter v2.0
- Catalog search by location
- 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
- github.com/terriajs
- nationalmap.gov.au
- vic.digitaltwin.terria.io