

Running Your Own Rendering Infrastructure

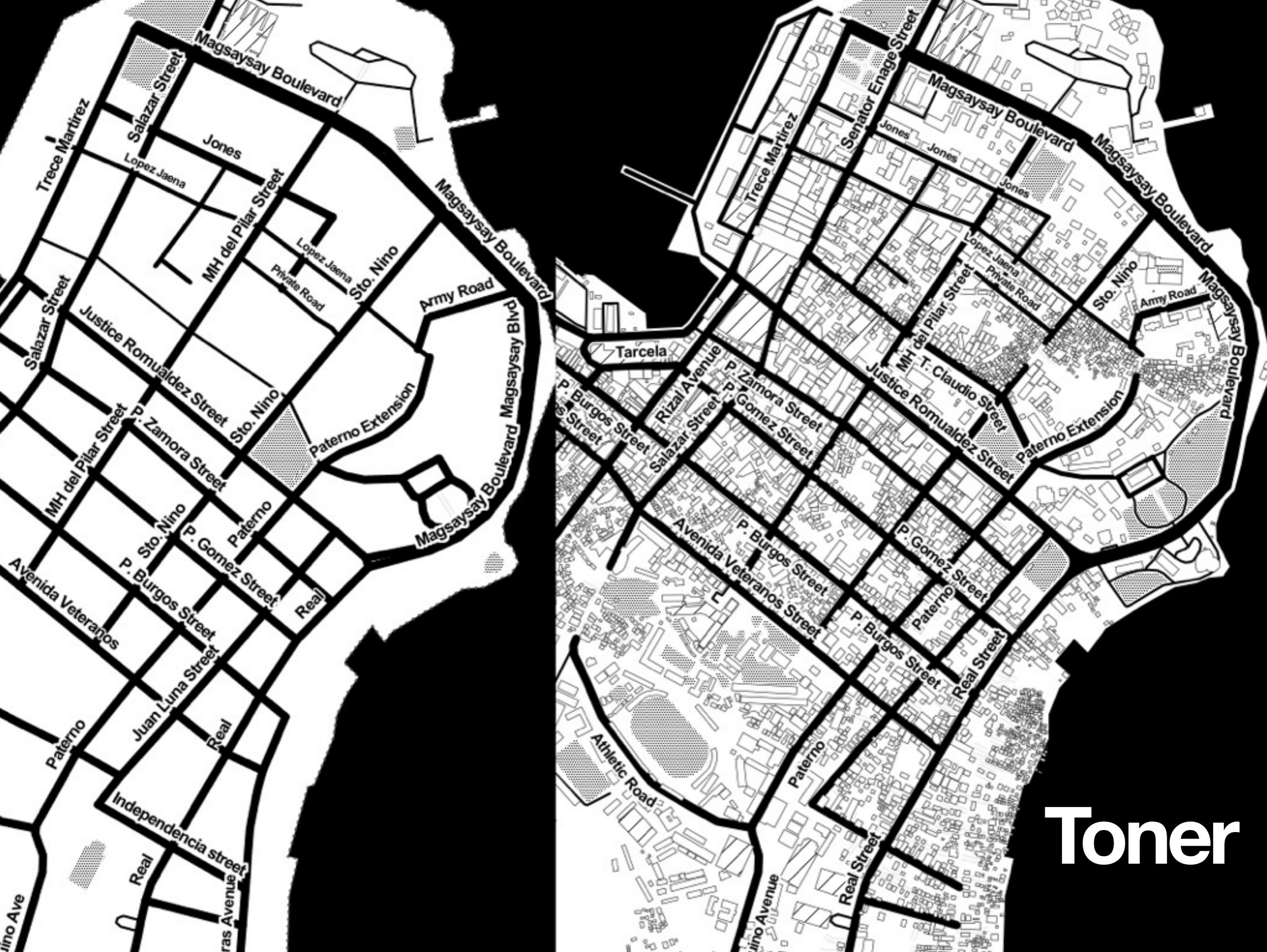


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Biases Up Front

- Hosting maps is only part of what we do
- Needs to scale with limited attention
- We use OSM, Natural Earth, + domain-specific data
- This is how **we** do it, given our unique constraints
- Conditions change, constantly





Toner

Lessons Learned

- Your map is an app: version it and include deps
- Your data is an API
- Shield what's fragile
- Repeat

services vs. a Service

Goals

- minimal administrative overhead
- straightforward to update data and styles
- cost-effective
- performant
- flexible
- can be handed over to clients with minimal technical capacity
- horizontally scalable

Rules of Thumb

- If X can be accomplished without shared state, don't use shared state.
- Use other products' ops teams to sleep better.
- Lean on others (people, software) to focus effort.

Your Map is an App

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e.g. <https://github.com/stamen/toner-carto>

Your Data is an API

Concerns, Separated

Ephemeral Caching

Cache Seeding

Persistent Caching

Rendering + Post-Processing

Data

A wide-angle photograph of a vast field of golden wheat under a dramatic sky. The sky is filled with large, white, puffy cumulus clouds against a deep blue background. The horizon is flat, and the foreground is a dense expanse of ripe wheat.

The Cloud?

Concerns, Separated



Ephemeral Caching



Cache Seeding



Persistent Caching



Rendering + Post-Processing



Data

Mapbox



A large stack of red lattice-boom excavators, all facing towards the right, is piled up behind a chain-link fence. The machines are labeled 'XTREME' and 'ANHE' on their booms. The background shows a clear blue sky and some trees.

Ephemeral Caching



Cache Seeding



Persistent Caching

Rendering + Post-Processing





Data

tl; dpa

- Your map is an app
- Your data is an API
- Shield what's fragile
- Always be iterating
- Fastly
- AWS / Heroku
- github.com/mojodna/tessera

Thank you!

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