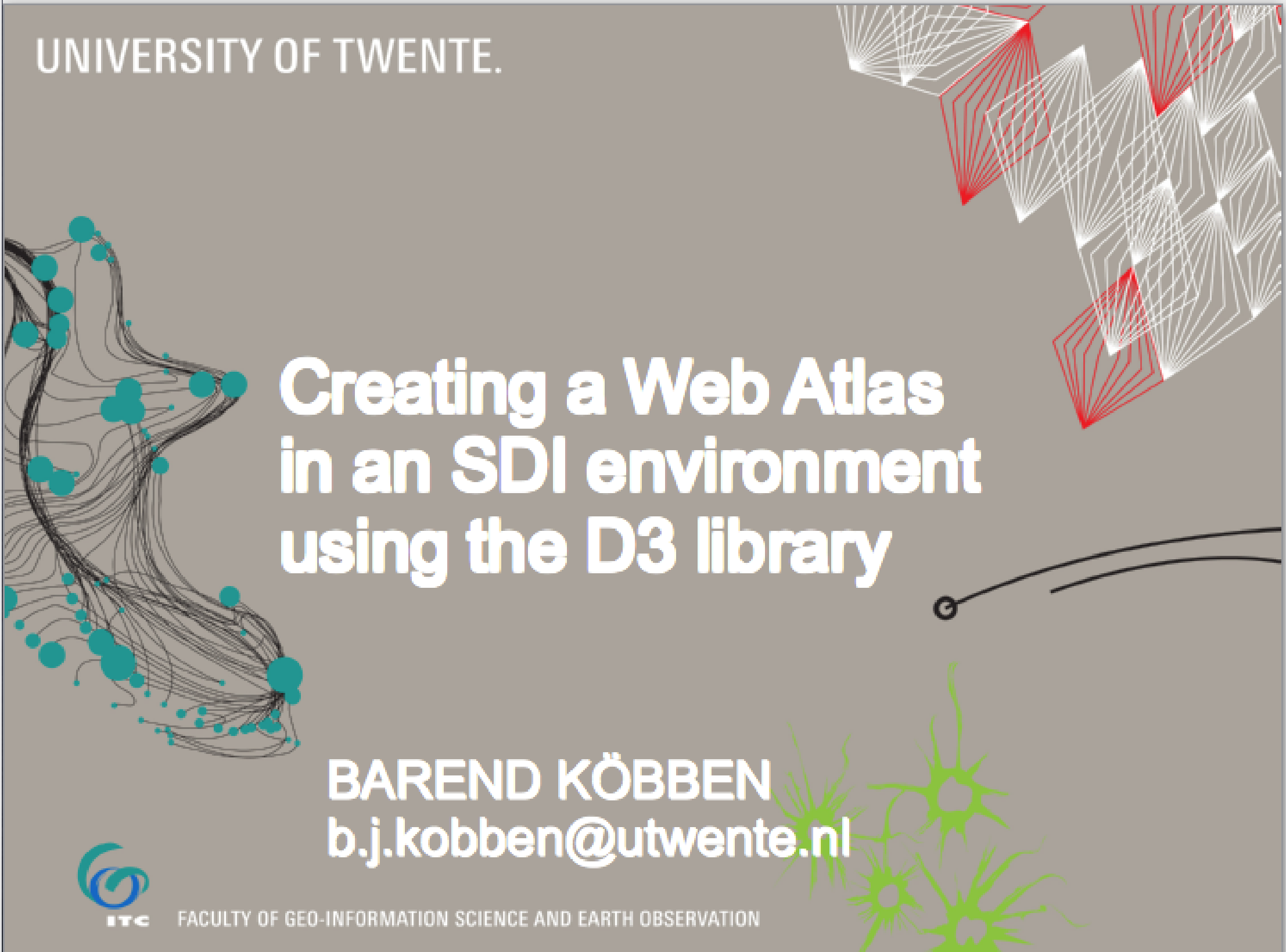


UNIVERSITY OF TWENTE.



Creating a Web Atlas in an SDI environment using the D3 library

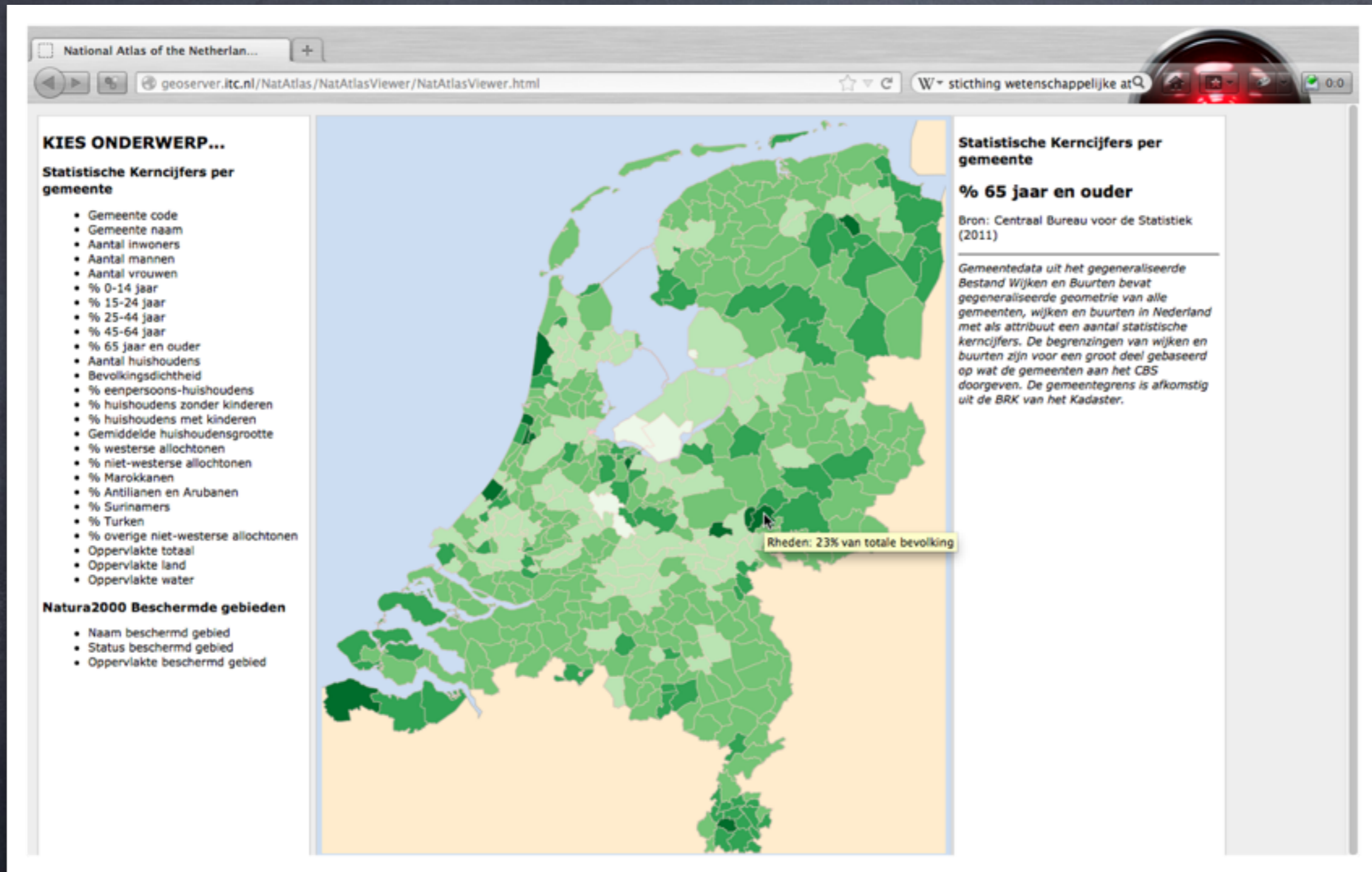
BAREND KÖBBEN
b.j.kobben@utwente.nl



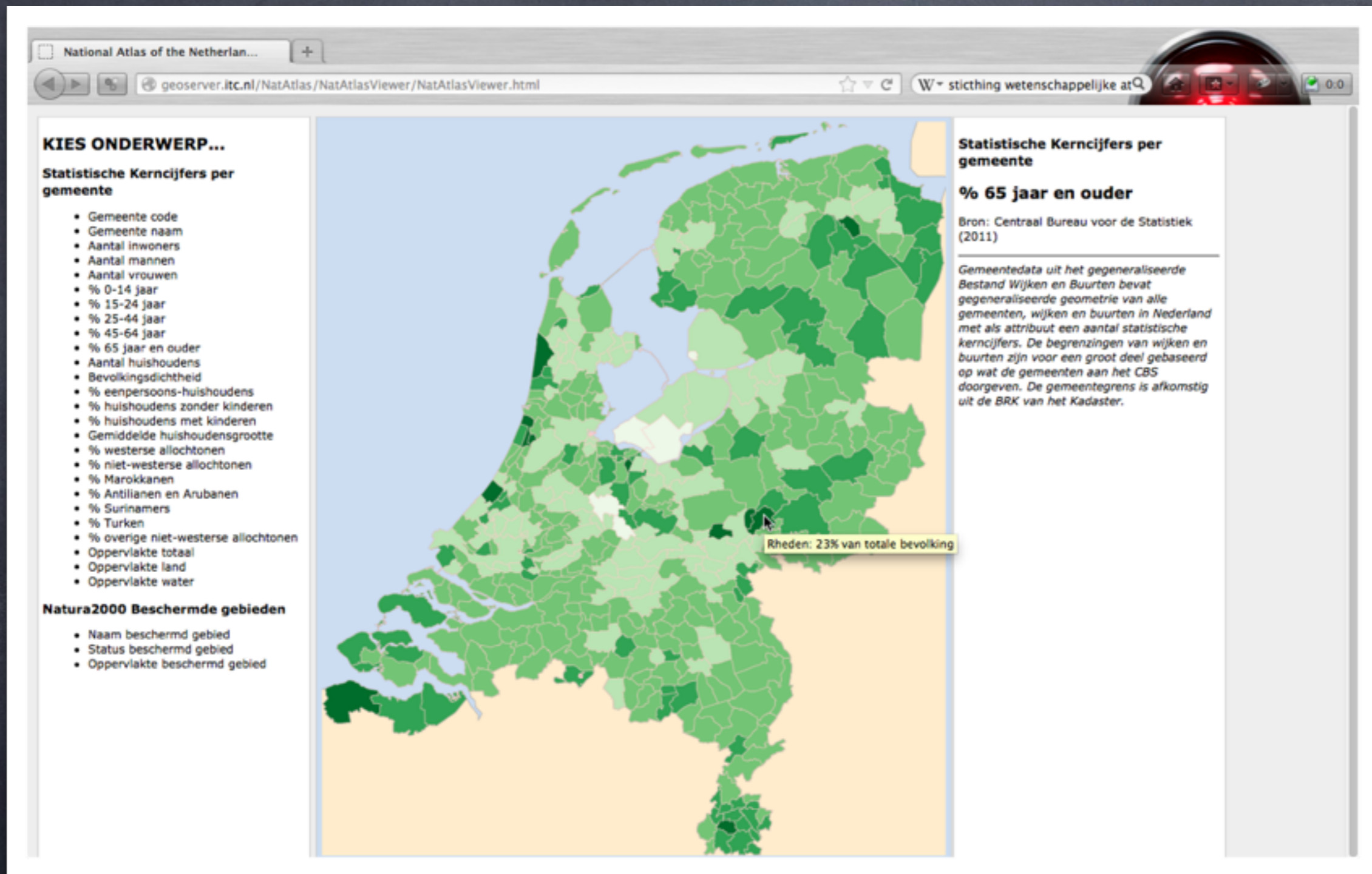
FACULTY OF GEO-INFORMATION SCIENCE AND EARTH OBSERVATION

For details see: Cartographic Journal 50:3, pp. 225–231

Demo time!



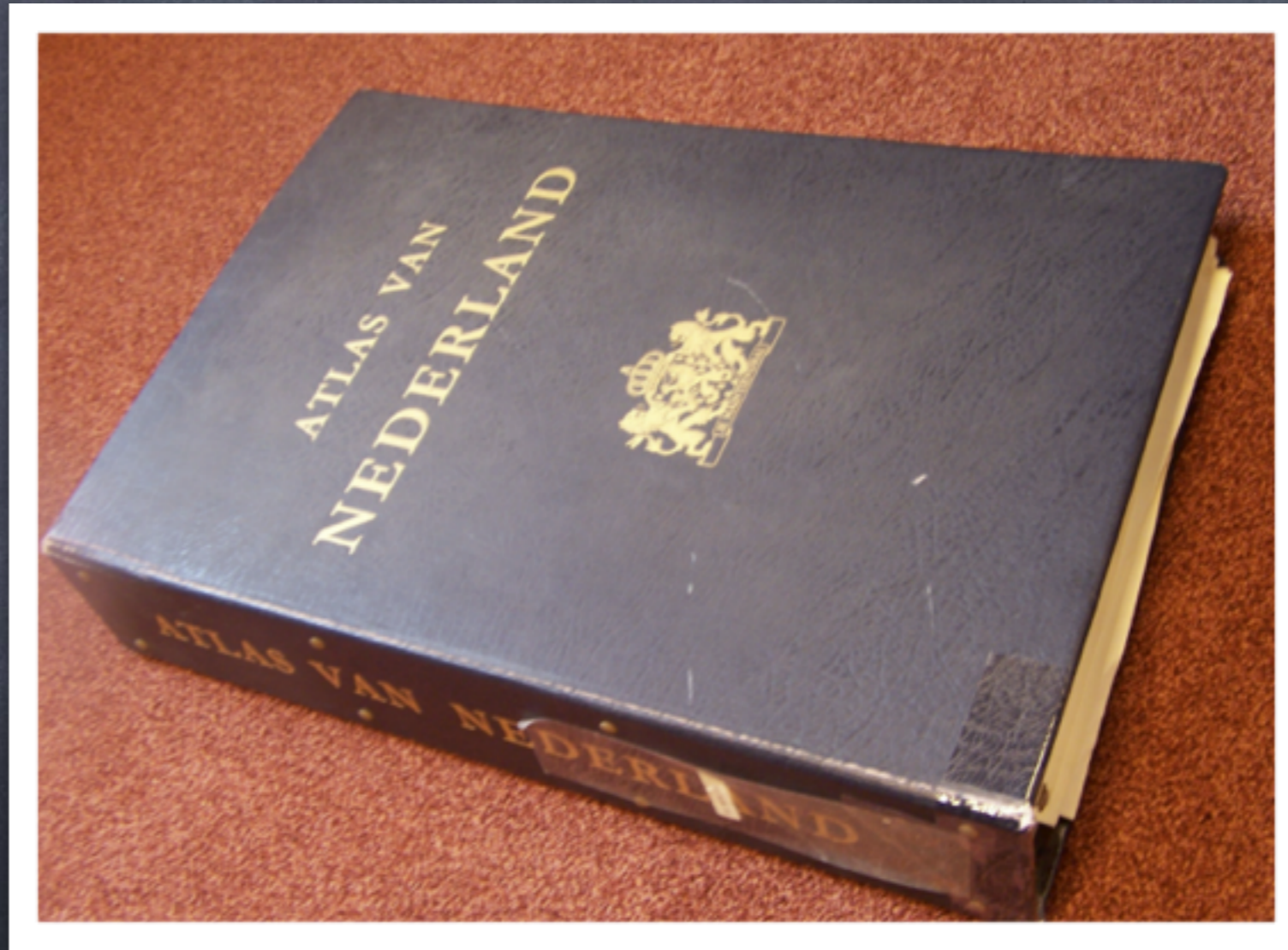
demo shows the “public face”



what's the story behind it?

Brief history of the Dutch National Atlas

Brief history of the Dutch National Atlas



1st edition (1963–1978)

Brief history of the Dutch National Atlas



2nd edition (1989–1995)

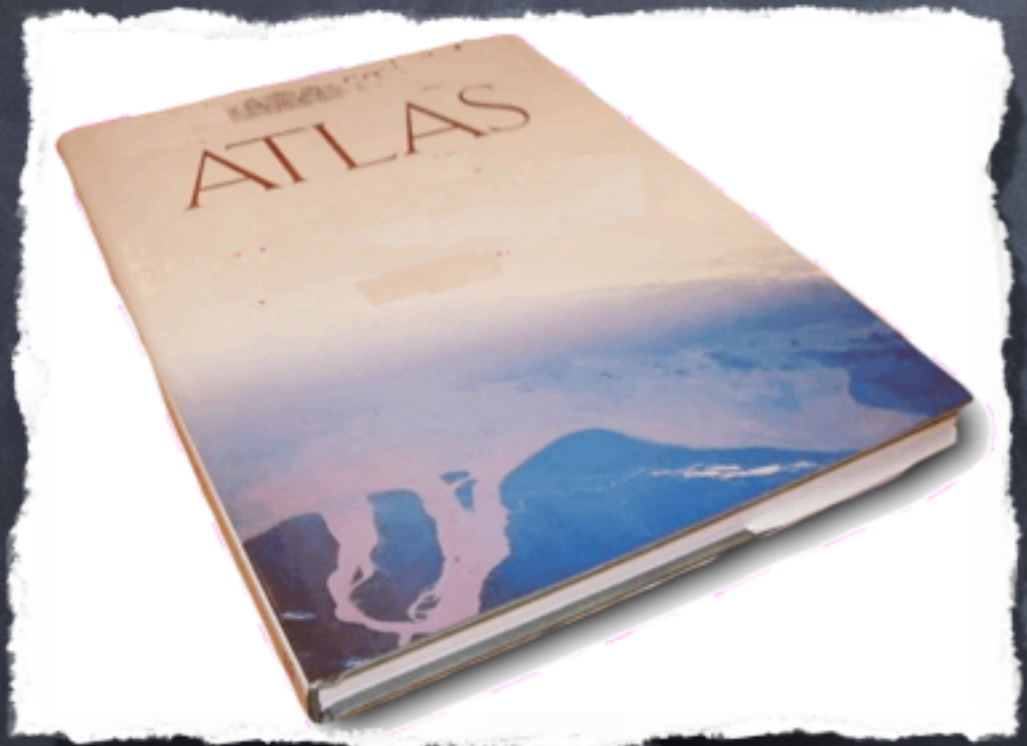
Brief history of the Dutch National Atlas

after 1998 government involvement
and funding ended
=> limited and fragmented academic
projects to keep atlas alive

2000:
digital facsimile of 2nd edition

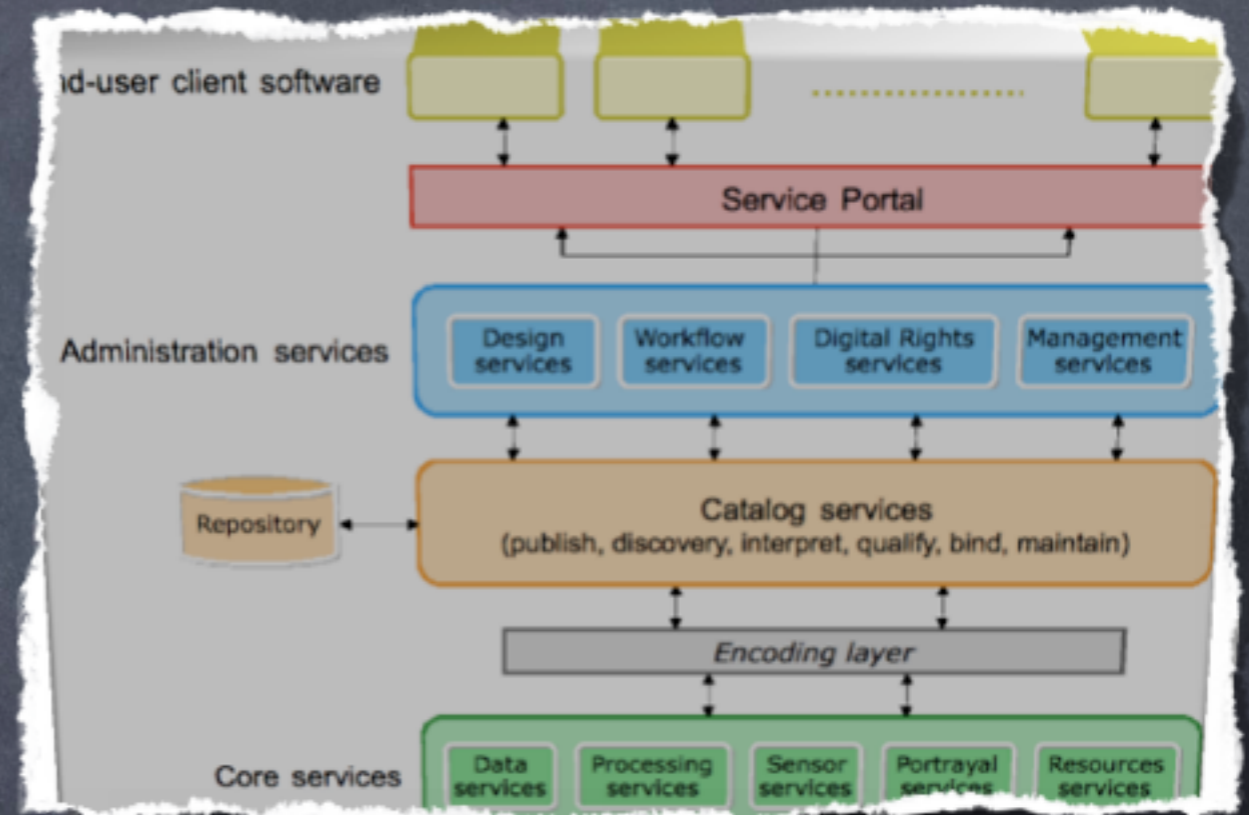
Atlas as part of a Spatial Data Infrastructure

Atlas as part of a Spatial Data Infrastructure



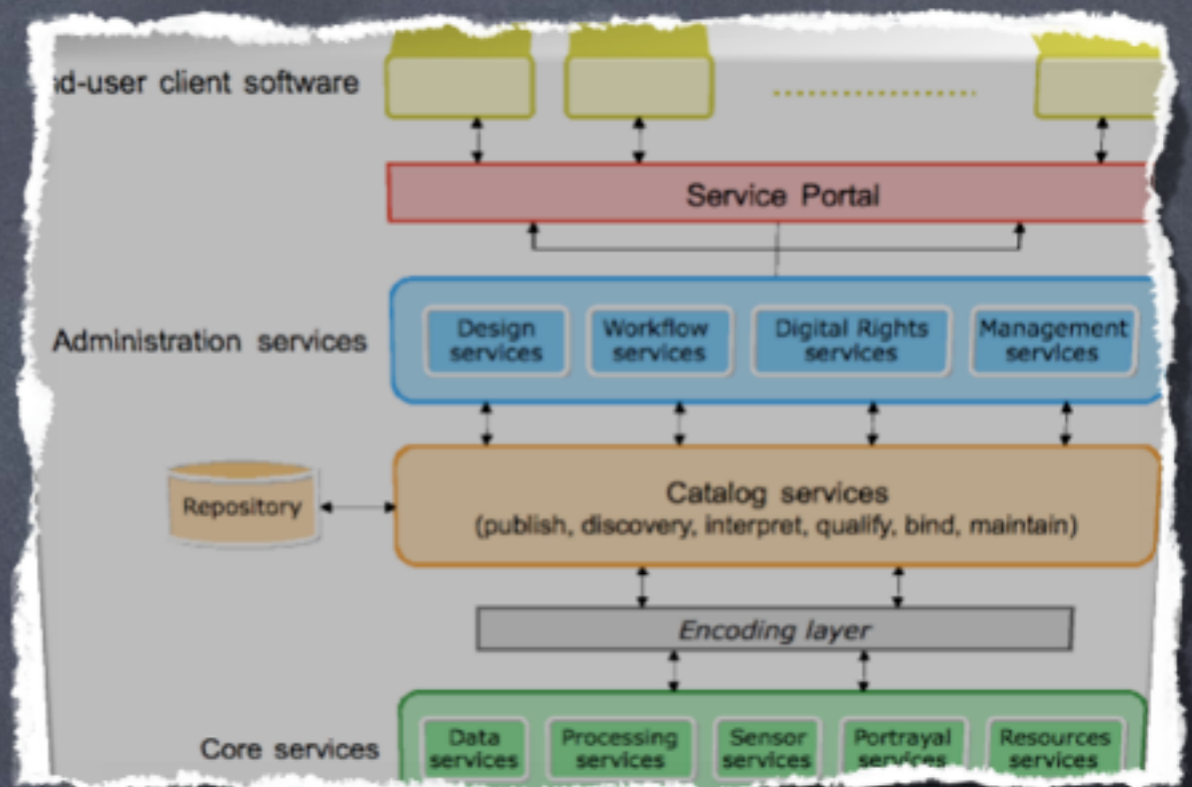
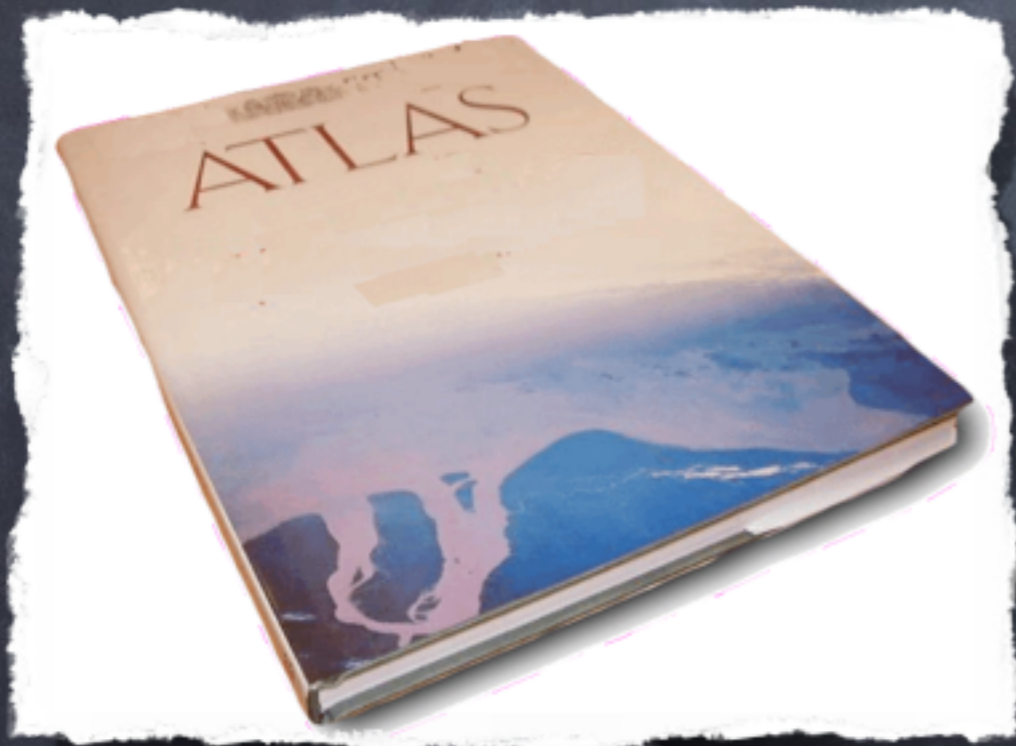
presents a synthesis
optimised for visualisation

Atlas as part of a Spatial Data Infrastructure



visualisation of separate data, not optimised for combinations (synergy)

Atlas as part of a Spatial Data Infrastructure

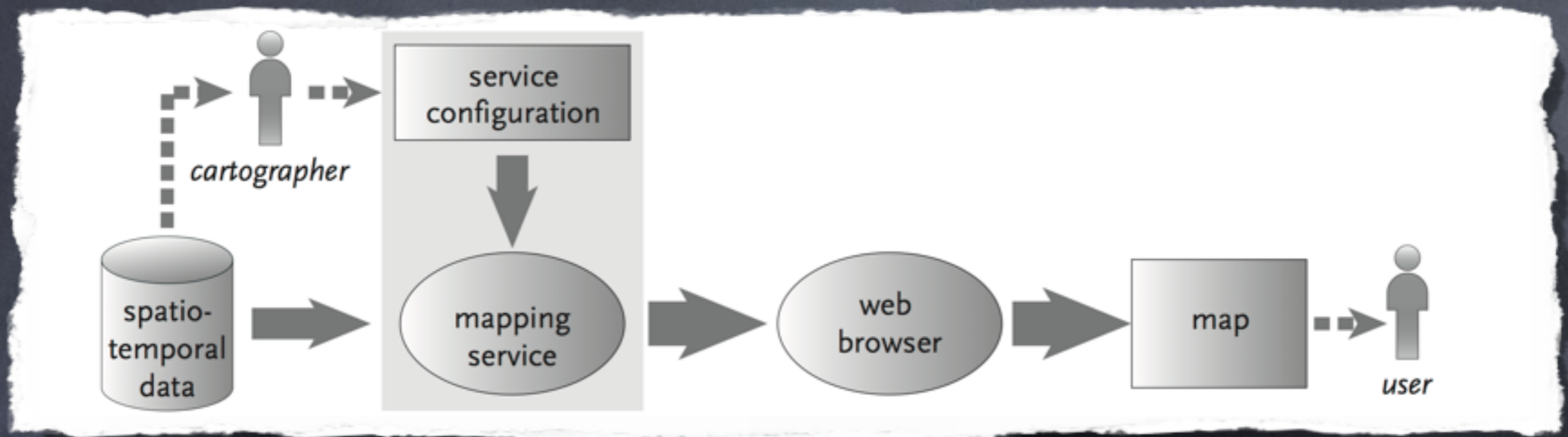


a combination of
two different worlds

Mapping in a webservices environment

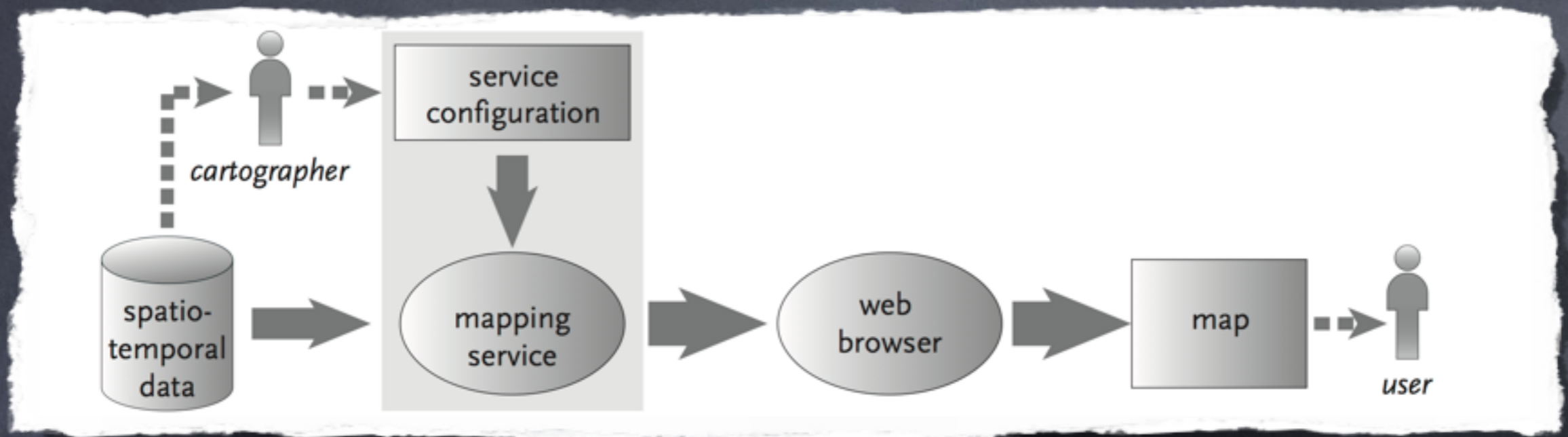
where the atlas is
“just another SDI node”...

Mapping in a webservices environment



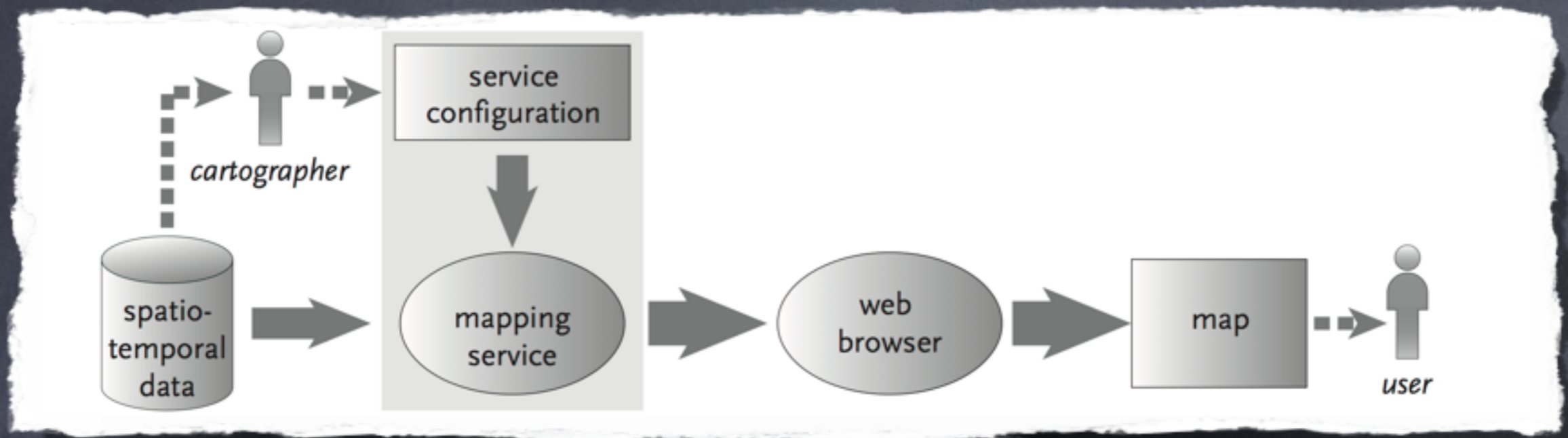
typical set-up nowadays

Mapping in a webservices environment



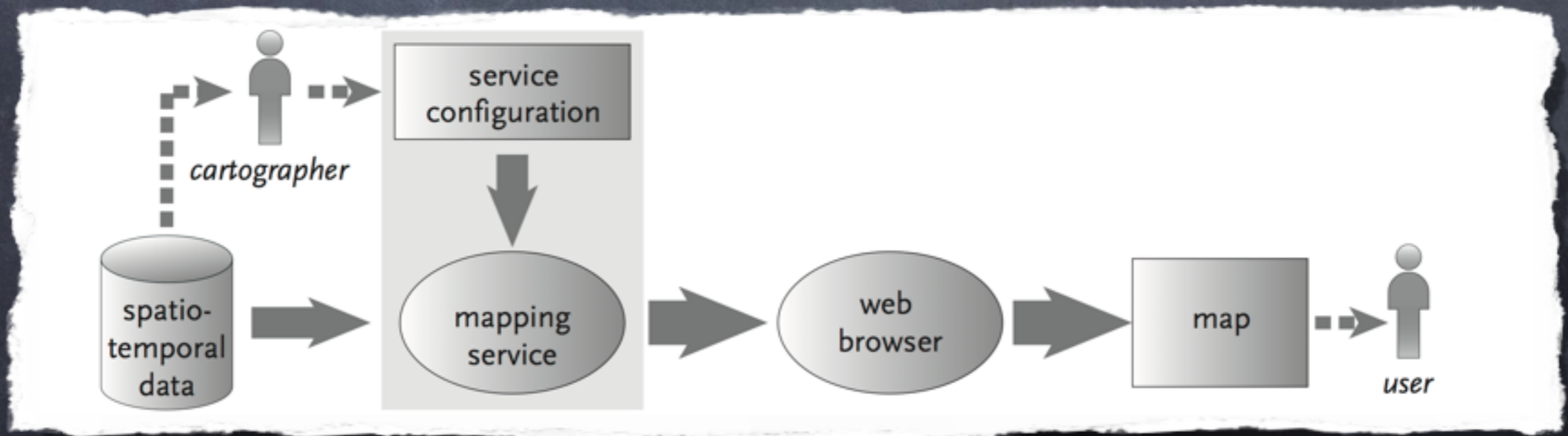
possibilities for direct and automatic production of maps

Mapping in a webservices environment

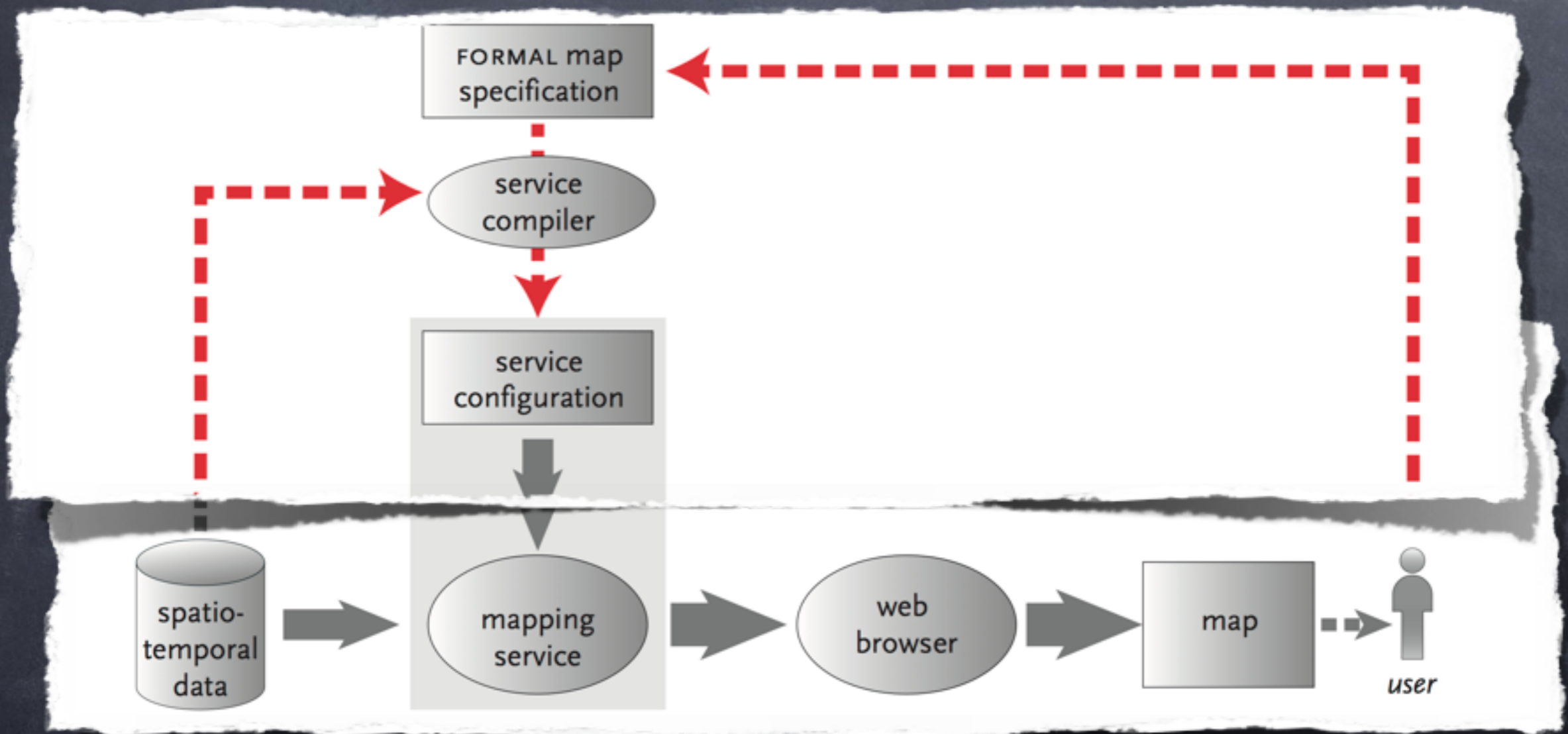


possibilities for direct and automatic
production of maps
...but “automatic” is limited:
cartographic decisions are fixed
beforehand

Mapping ~~in~~ a webservices environment as part of

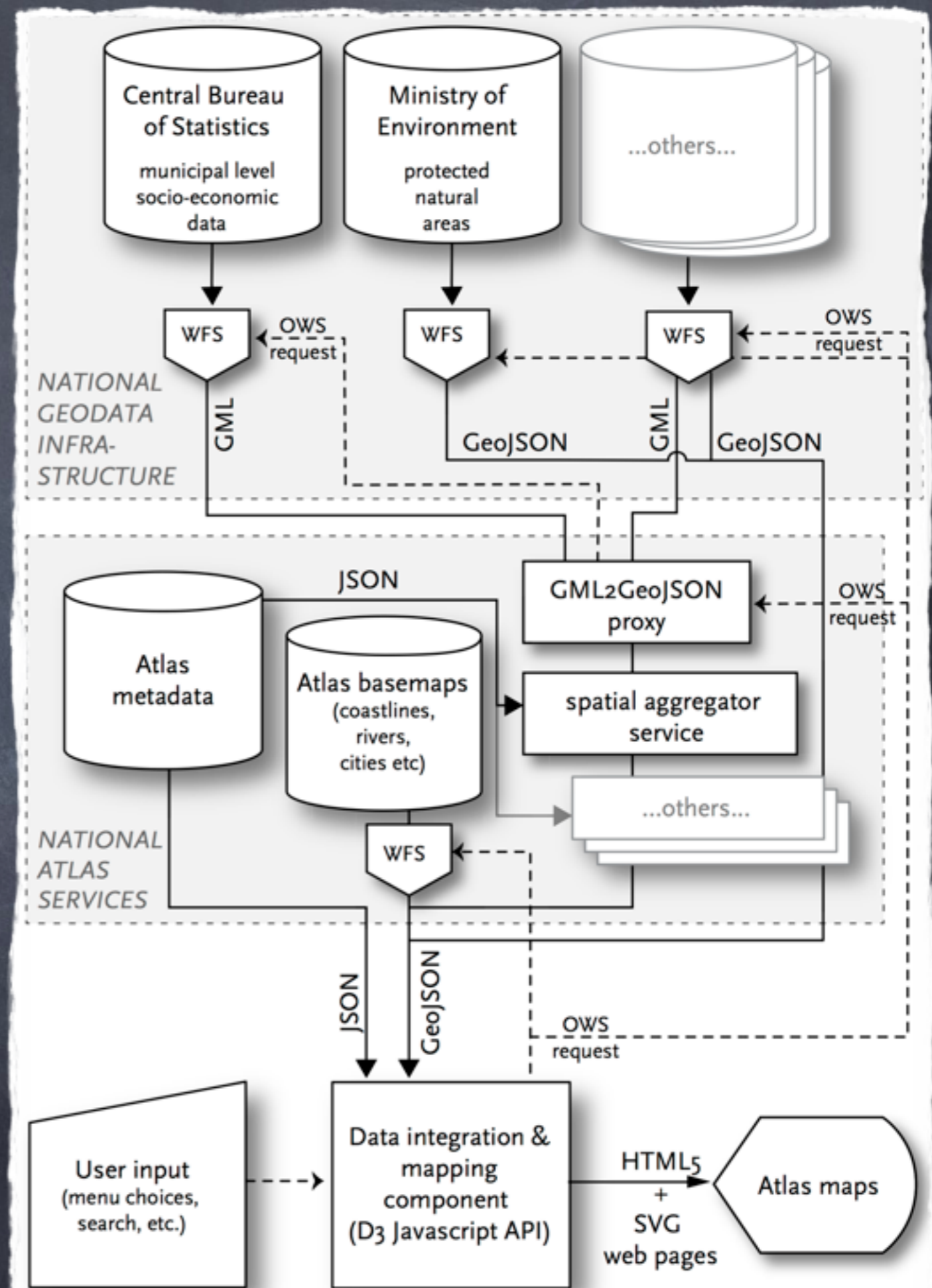


Mapping ~~in~~ a webservices environment as part of

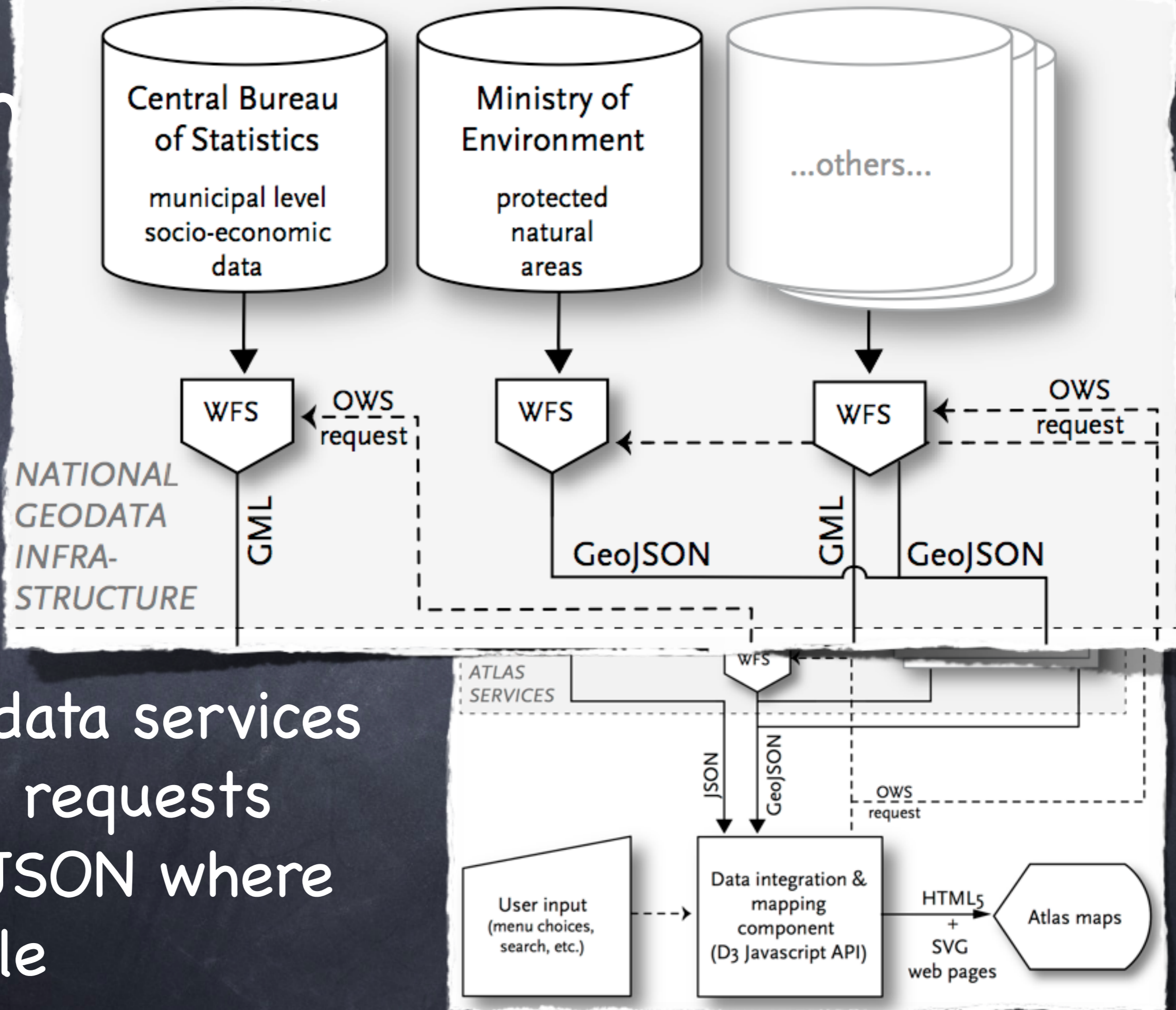


direction of research

Architecture

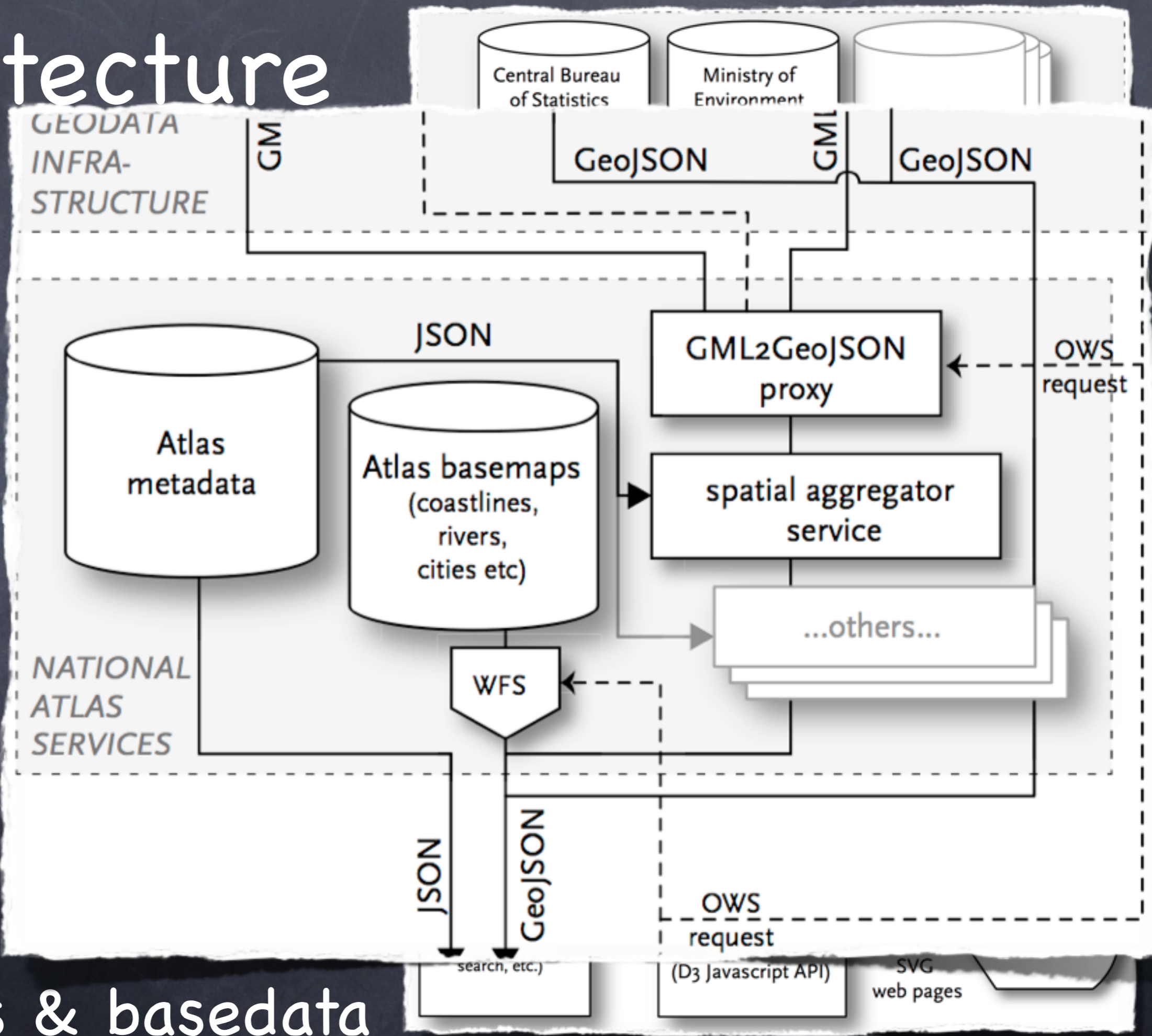


Arch



- use data services (WFS) requests
- GeoJSON where possible

Architecture

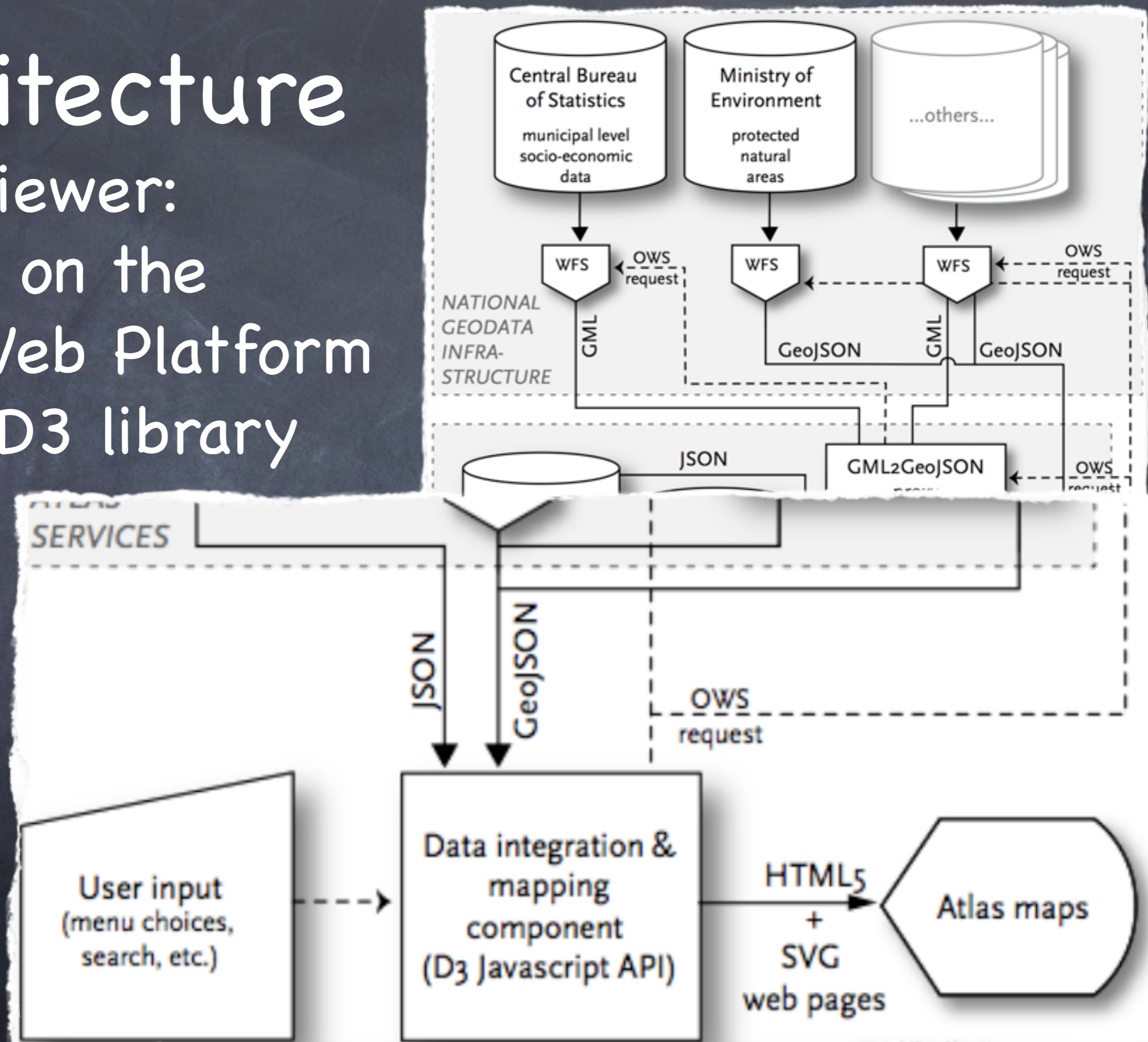


ATLAS
utility
services & basedata

Architecture

Atlas Viewer:

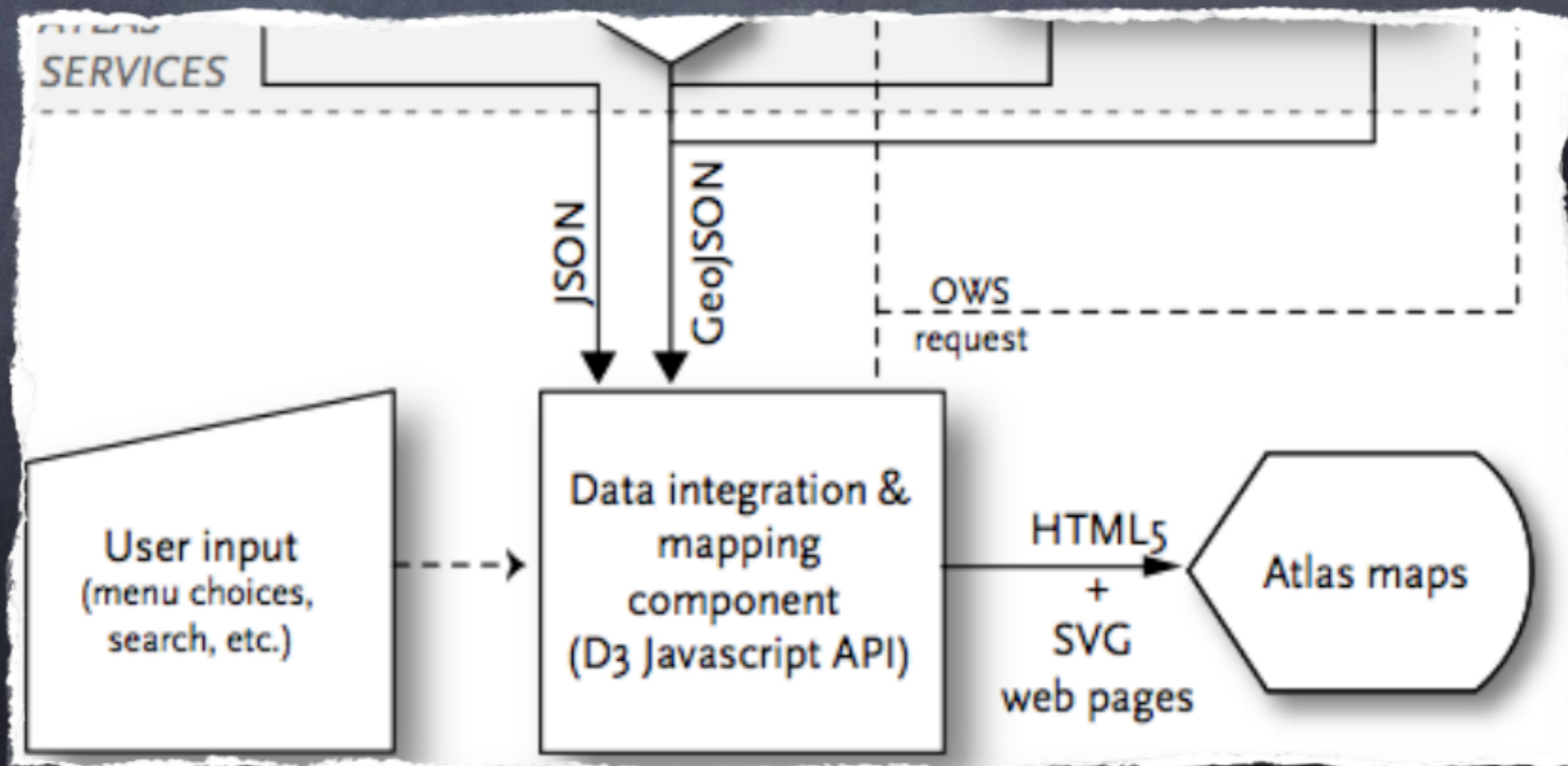
- based on the Open Web Platform
- uses D3 library



Architecture

Atlas Viewer: D3.js [<http://d3js.org>]

- bind arbitrary data to the DOM
 - then apply data-driven transformations to it
- ⇒ very suitable for our project



Conclusions

the test bed shows:

Conclusions

the test bed shows:

that a (National) Atlas as an integral part of
a (National) SDI is feasible

Conclusions

the test bed shows:

that a (National) Atlas as an integral part of
a (National) SDI is feasible

provides many advantages
(up-to-date, flexible, extensible,
interoperable)

What's next?

work in slow progress (funding ended 2009)

core is implemented, still missing parts:

viewer:

better menus, full legends, more maptypes

atlas services:

spatial aggregator & more

Thank you!

follow the progress at:

www.nationaleatlas.nl
(follow the english)

D3-based viewer:

<https://github.com/kobben/NatAtlas>