Geospatial Open Data Sharing

Presented by Steven Ackerly

What is Geospatial Open Data Sharing?

"***Open data*** *is the idea that some data should be freely available to everyone to use and republish as they wish, without restrictions from copyright, patents or other mechanisms of control [1].*"

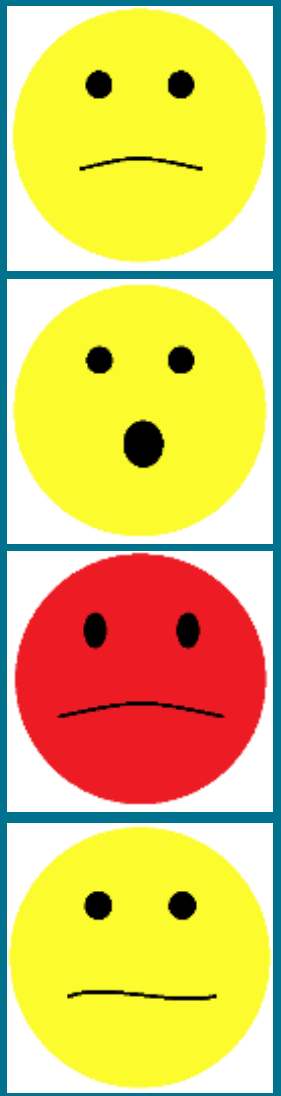
https://en.wikipedia.org/wiki/Open_data

However, it does not mean you shouldn't benefit!

[1] Auer, S. R.; Bizer, C.; Kobilarov, G.; Lehmann, J.; Cyganiak, R.; Ives, Z. (2007). "DBpedia: A Nucleus for a Web of Open Data". The Semantic Web. Lecture Notes in Computer Science. ***4825****. p. 722. ISBN 978-3-540-76297-3. doi:10.1007/978-3-540-76298-0_52.*

Arguments Against Open Data

- My data is expensive, I cannot share it for free
- We have worked too hard on this, we could not possible share it for free
- If I share my data, others might be able to do my job
- How can I trust people to attribute me, the honour system is flawed?
- My data is terrible, I don't want anyone to know
- My data is of no use to anyone
- The internet is not something we always have access to
- I don't know how to start!

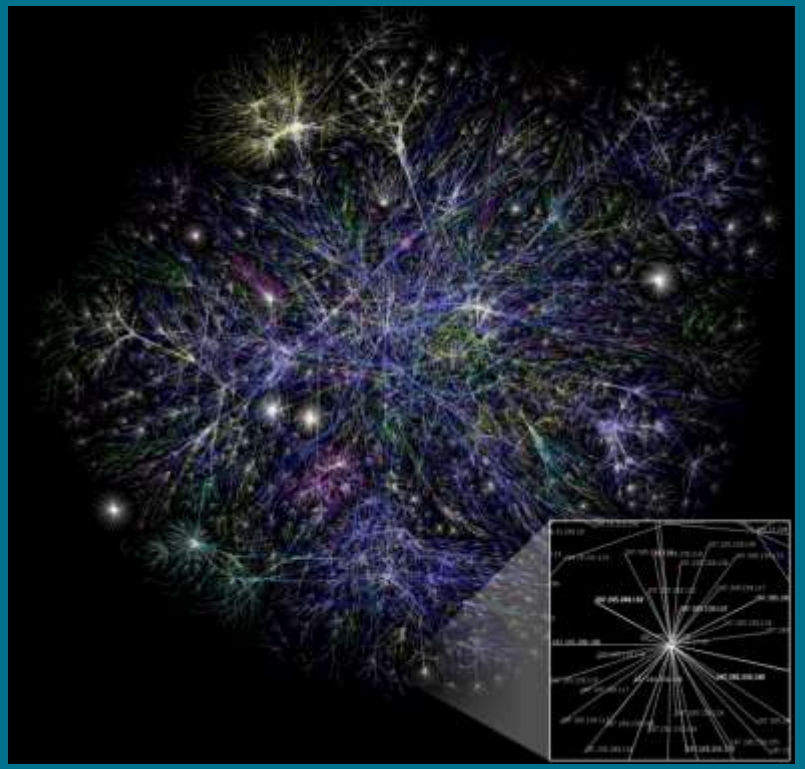


Arguments for Open Data

- Stakeholders want my data, we should make it easier to share.
- I don’t know who wants this, lets find out who does?
- Data is taken “as is”, manage expectation and reduce liability
- If people start using the data, it may be recognised and appreciated
- If you share data, we may have an opportunity to make it better.
- Passive influence, supply can create demand
- Create a case for your work, show others that your data matters!

Geospatial Open Data Concepts

- Machine readable, where possible
  - Digital computing
  - Interoperability and Open standards
- Open access to science data
  - Concept established in 1957, formation of World Data centre
  - Minimise the risk of data loss, maximise accessibility
- Open access to government data
  - Public, private and international benefit
  - Avoid duplication



Visualise the Internet “The Opte Project”
http://www.opte.org/

Open Data Consideration

Data can be open unless

- Legal issues
  - To open data, discuss legal issue restricting the access
  - Discuss with legal or legislative experts, what can be done?
- License issues
  - Purchased data, what are the terms?
  - Can the data be use as derived data?
- Privacy/consent concerns
  - Anonymise the data, remove any reverse engineering
- Unavoidable commercial reality

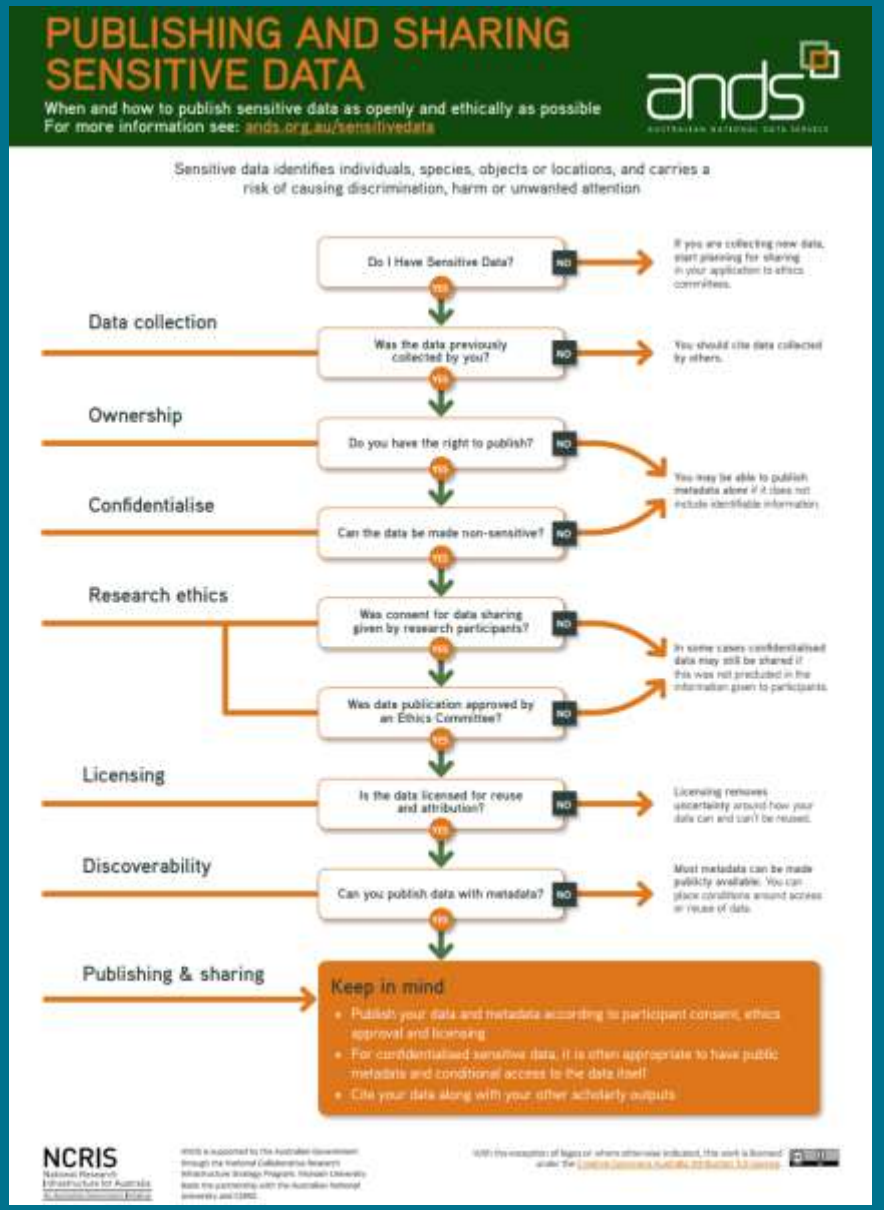
Ethics of Open Data

Sometime data has privacy and consent concerns

How do you share data when there are concerns issues?

- Can the data be anonymized/non sensitive?
- Aggregate the data be presented so it cannot be reverse engineered?
- Discuss concerns, document risks, get approval

National Research Infrastructure for Australia
http://guides.library.uwa.edu.au/c.php?g=325196&p=2178575



How Does Your Data Improve?

- Feedback from stakeholders, mature the way you handle criticism
  - Can (constructive) criticism be used to get more resources?
  - If people take the time to give feedback, it can validates the existence of the data
- Citizen science and crowd sourcing
  - Why maintain some data with few, raise an army!
  - Open street maps, as example
  - Just like Wikipedia competes with the Encyclopaedia

Tips for Open Data

- Start small, grow your capacity and strategy
- Gather statistics and feedback, measure your efforts
- Don’t assume that people don’t want your data
- Have metadata that tells people
  - What is it?
  - What was it made for?
  - When was it made?
  - The data is used “as is”, find an online licensing mechanism that suits
  - Who to attribute?

Methods of Data Access

- Web services, put it on everyone's maps
  - 2D and 3D online
  - Stream your data, use web service concepts like caching to make it lighting fast
- Simple data downloads, open is better
  - Shapefiles
  - KML, GML, GeoJSON
  - Geotiffs (georeferenced)
- Keep it simple, use the cloud. Budget can be a few dollars a month.

One Geology, http://www.onegeology.org/

Open Data Licensing

- Look at an online licensing mechanism such as creative commons
- Find ones that are tried and tested
  - Creative Commons License
    - Many flavours, pick one to suit
    - Now international and version 4.0

CC BY-SA (Attribution-ShareAlike)

CC BY-NC (Attribution-NonCommercial)

CC BY-NC-SA (Attribution-NonCommercial-ShareAlike)

CC BY-NC-ND (Attribution-NonCommercial-NoDerivatives)

- MIT License (software)
- GNU General Public License (software)
- Apache License (software)

Geoscience Australia and Open Data Licensing

- Ensuring our key client, the Australian Government, is being served
- Delivering systems that are easier to access and maintain
- Demonstrating our scientific activity to support Government policy
- Improving metadata and provenance of scientific data

Thankyou

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