

# IT'S OPEN SOURCE

## how could that possibly go wrong!?

Marco Bernasocchi  
@mbernasocchi



# Marco Bernasocchi

OPENGIS.ch Founder and CEO

QGIS.org Co-Chair

MSc in GIS @ UNIZH

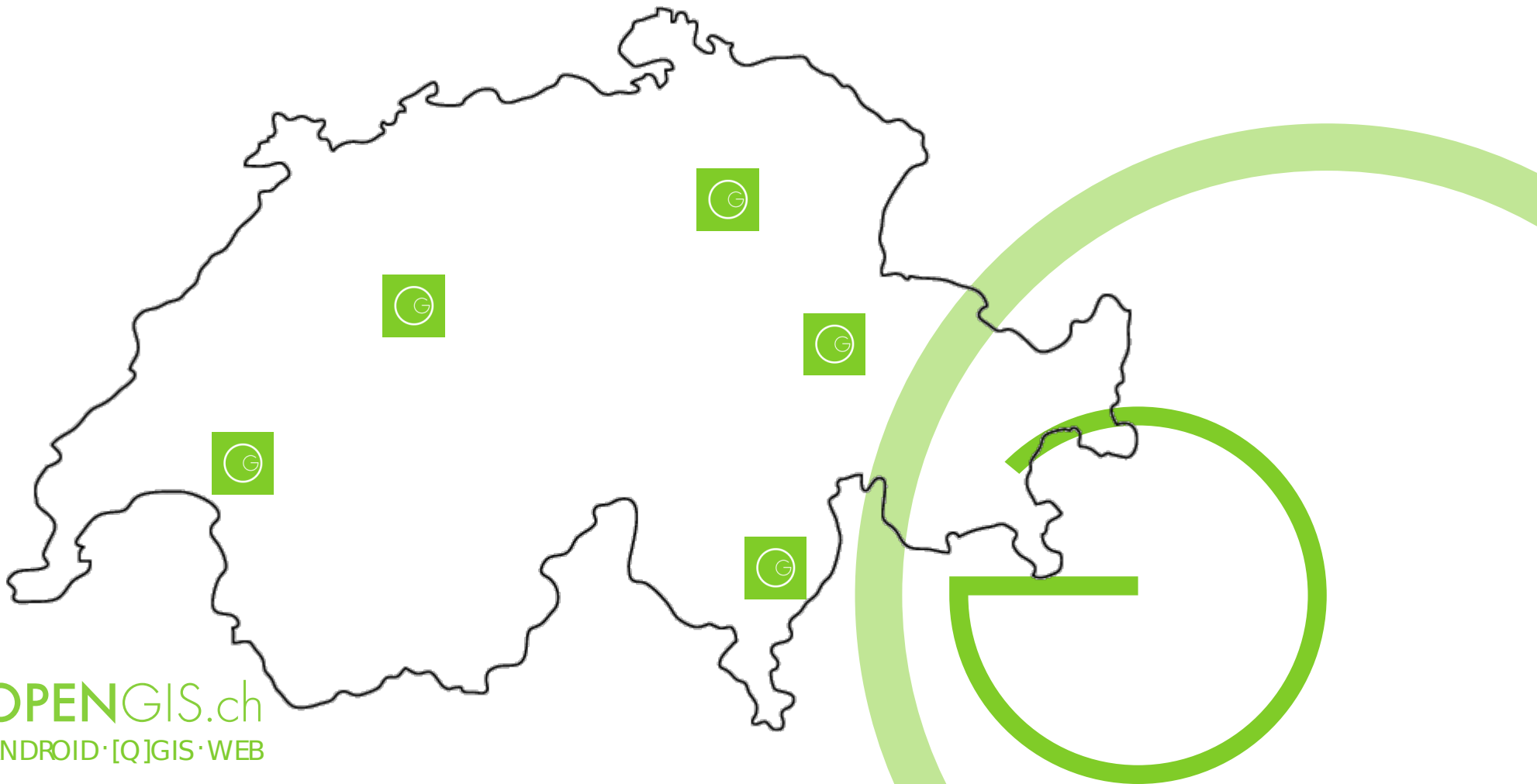
Outdoors-lover

marco@opengis.ch



# OPENGIS.ch LLC

Open source Geo-spatial Experts Made in Switzerland



# OPENGIS.ch LLC

We Are **Fullstack GeoNinjas** And Offer A **Personalised Service** Around Your **Geodata Solutions Needs**. Our **Vast Experience** In **OpenSource** Technologies Combined With Our **Agile** And **Distributed Nature** Will Help You **Quickly Implement** Your **Envisioned Solution** With A **Low Tco**, **No Vendor Lock in** And **Complete Control** Over The **Developed Software**.

# Free/Libre Open Source Software

- Free to: Use, Learn, Change, Share
- “free software” is a matter of liberty, **not price**. To understand the concept, you should think of “free” as in “free speech,” not as in “free beer”.

*“Unquestionably one of the great seminal figures of the hacker culture.”*  
—Eric Raymond, open source evangelist and author of *The Cathedral and the Bazaar*

## FREE AS IN FREEDOM

RICHARD STALLMAN'S  
CRUSADE FOR FREE SOFTWARE



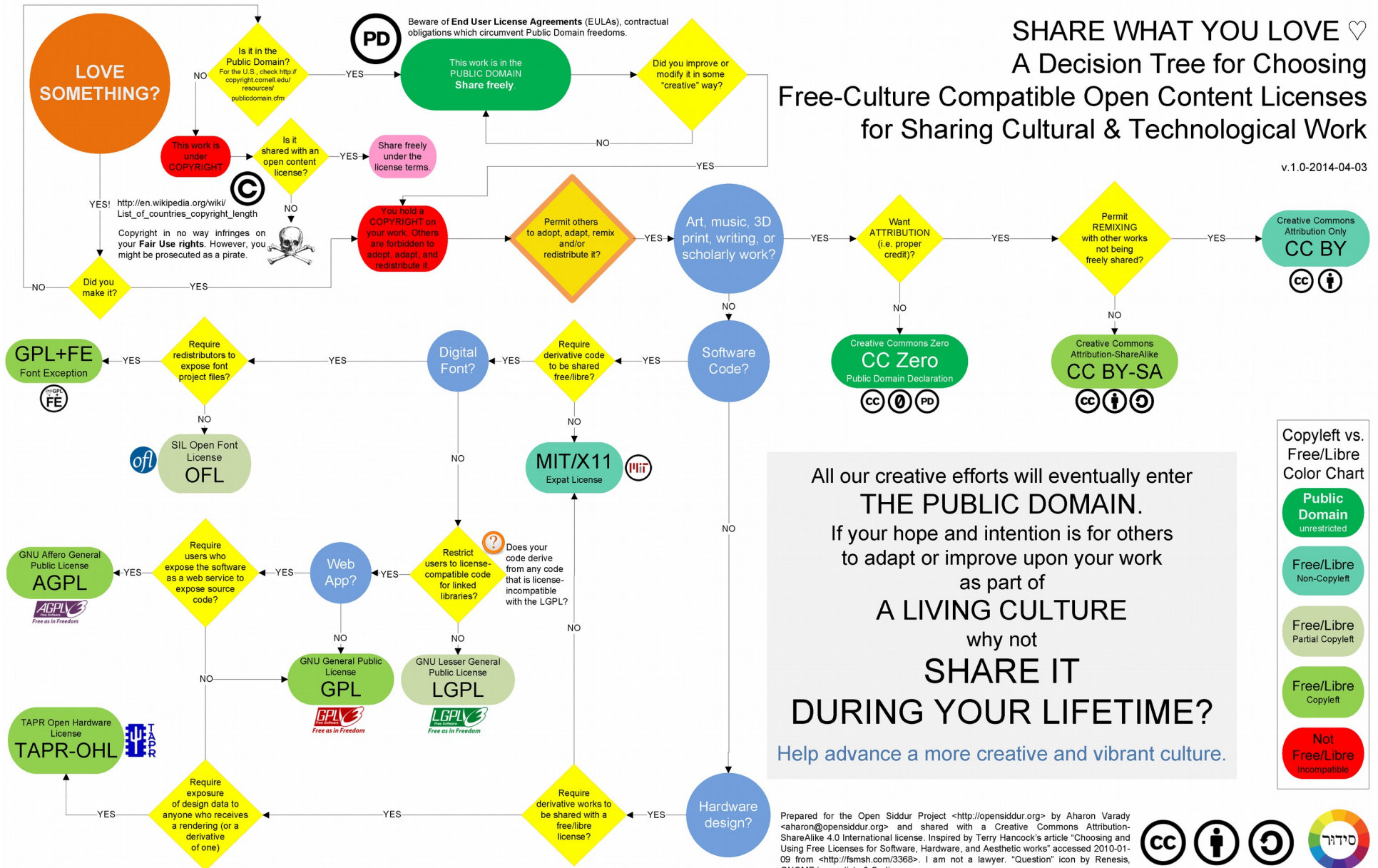
SAM WILLIAMS

# The fine print: OS License!?!?

- Lots of licenses to choose from... to protect your work
- GPL Is now, and will forever be free
- BSD Is free, but new versions don't have to be free too
- Apache Similar to BSD
- Lots and lots more: IBM, Intel, MIT, Mozilla, Python, Microsoft Sun, ...
- <https://opensource.guide/>



# OS Licenses



# OS Licenses, links

- <http://opensource.org/licenses/category>
- <http://www.gnu.org/licenses/licenses.en.html>
- <http://bit.ly/1JCkhQA>





# And for the Data?

Does wikipedia.org sound familiar?

Creative Commons



The infographic is titled 'A Quick Intro' and features the Creative Commons logo. It explains that Creative Commons is a non-profit that helps sharing and reuse of creativity and knowledge via free legal and technological tools. It compares the 'TRADITIONAL COPYRIGHT SYSTEM' (All rights reserved) with 'CREATIVE COMMONS' (allows you to easily give people the right to share or even build upon your work, and allows you to reserve only those rights that you want). Below this, it lists 'LICENSE TYPES' with icons for Attribution (CC BY), Attribution-NonCommercial (CC BY-NC), Attribution-ShareAlike (CC BY-SA), and Attribution-NonCommercial-ShareAlike (CC BY-NC-SA).

**creative commons** A Quick Intro

Creative Commons is a non-profit that helps sharing + reuse of creativity & knowledge via free legal and technological tools. These tools are not alternatives to copyright laws, rather they work alongside them.

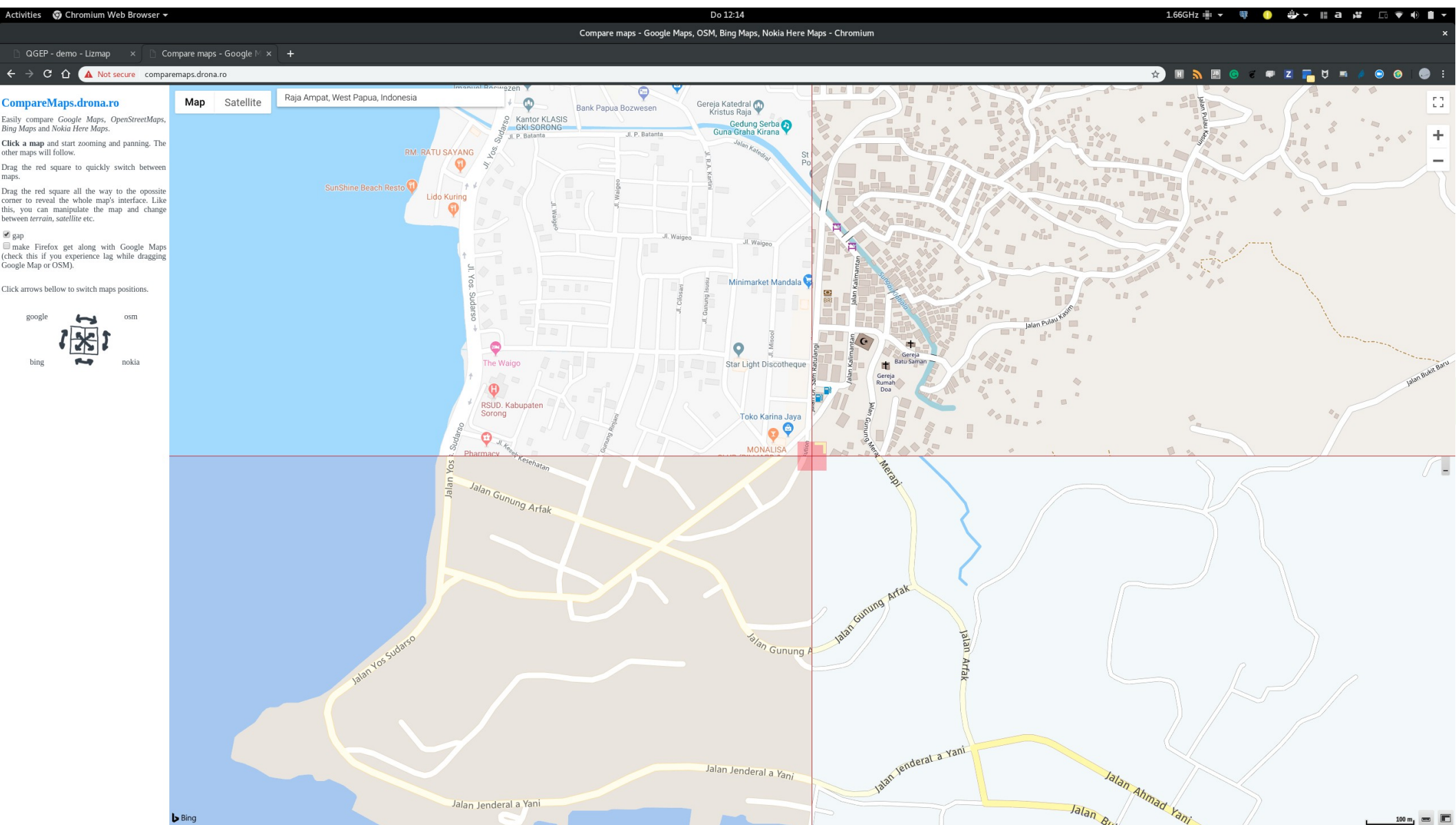
**TRADITIONAL COPYRIGHT SYSTEM** **VS** **CREATIVE COMMONS**

- Allows you to easily give people the right to share or even build upon your work
- Allows you to reserve only those rights that you want.

**LICENSE TYPES**

Icon	License Type
	Attribution (CC BY)
	Attribution - Non Commercial (CC BY-NC)
	Attribution - ShareAlike (CC BY-SA)
	Attribution - Non Commercial - ShareAlike (CC BY-NC-SA)

# open[street | drone | aerial]map.org



# Using vs Contributing

Using FOSS does NOT mean that you have to share what you did

if you redistribute (e.g. sell, publish) what you did you need to comply with the licenses of the used tools

# 5 Reasons NOT to use Opensource AKA FUD

- No support → the community might be sleeping / skiing /running
- Vendor Persistence → OS is made in garages
- In the commercial world, features follow commercial demand. If, as a paying customer, you want a new feature, you contact your account manager or log a bug, and you'll get an answer as to whether and when you will get that feature.  
→ you don't know when the community will be back from sleeping / skiing /running
- Vendors rigorously test their products before selling them  
→ No open bugtracker means no bugs
- Perhaps the biggest reason the largest e-commerce sites and web applications are deployed on commercial databases is the cost of failed transactions is simply too high to risk "free."  
→ Never ever trust Free
- <https://www.datanami.com/2015/09/03/five-ways-open-source-databases-are-limited/>
- For some serious fun: [https://www.youtube.com/watch?v=DoZv6Gb\\_mYo](https://www.youtube.com/watch?v=DoZv6Gb_mYo)

# 5.5 reasons to adopt open source

- Direct access to code / control
- Accelerated innovation
- Improved interoperability
- Superior code quality and security
- Reduced costs and simplified operations
- (Ethics)

# 5.5 reasons to adopt open source

## Direct access to code

- No Lock in
- More agile and effective progress.
- Extendable and reusable.
- flexibility to evaluate and adapt software and systems as needed.
- Result: solutions that truly fit the needs and goals of the businesses.
- Additionally, putting the code directly in the hands of developers reduces technical debt by allowing organizations to evaluate, modify, extend, and add features to software in real time, as needs inevitably evolve.

# 5.5 reasons to adopt open source

## Direct access to code

“The most expensive developments are the ones you do yourself, so better not tie them to vendors”

“We would like to do our custom solution”



# 5.5 reasons to adopt open source

## Improved interoperability

- Based on Open standards,
- interoperable with other standards-based systems and technologies.
- Open Source can play well with most COTS products
- Imagine the possibilities and efficiencies to be gained from the ability to connect and share data across different proprietary COTS solutions.

# 5.5 reasons to adopt open source

## Superior code quality and security

- Vast and growing community of skilled programmers whose expertise drives the development and transformation of Open Source technologies.
- Constantly enhanced and battle-tested across a wide range of use cases and domains.
- Rugged, around-the-clock scrutiny and testing to identify and eliminate security threats, bugs, and flaws
- By the time commercial software has been tested to the same extent as Open Source code, a new iteration of the program has generally been released, requiring a whole new testing process, as well as costly infrastructure upgrades and migrations, a new learning curve, and (often) additional licensing fees.

# 5.5 reasons to adopt open source

## Costs and simplified operations

- Affordable alternative to COTS software
- When companies move to Open Source solutions, they effectively eliminate the vendor lock-in associated with commercial software. Users of Open Source technologies are not tied to long-term contracts, limited feature sets, unpredictable release schedules, or licensing costs (not to mention, the administrative nightmare of complying with a multitude of COTS licenses).
- No run-time licensing fees, As many copies of an application or platform on as many computers as they need, often with zero additional cost.

# 5.5 reasons to adopt open source

## Costs and simplified operations

FOSS does NOT mean no costs involved

Training, consulting, migrations, ... all generate costs like for COTS software

# 5.5 reasons to adopt open source Ethics

Your published contributions can be studied and build upon creating forward momentum and pushing the community forward



# Why FOSSGIS?

- Flexibility
- No lock-in
- Control
- Speed of Development
- Ability to influence a project
- Cost sharing
- Scalability: No per-seat licensing costs
- Reuse instead of re-inventing the wheel

# New Aspects with FOSSGIS

- Project versus product
- Power users should invest [financially] in their key projects they use
- FOSS-GIS users have more responsibilities than consumers of a commercial product
  - But this can be mitigated by using a support company
- Partially different support channels



# Common Challenges

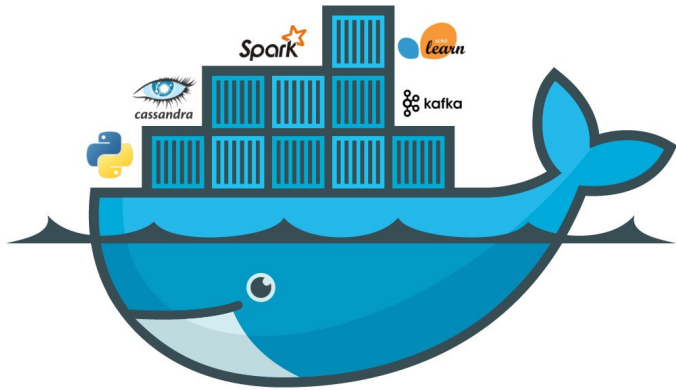
- Combination and integration with existing databases and applications
- Quality assurance of basic data
- Data exchange with National and regional gov
- GIS project management
- Missing cooperation and lack of comprehension for the big picture

# Costs?

- Staff [re-]training
- Migrations
- Custom developments
- Support
- ...



# Will I be alone?



# Will I be alone?



MS Bought GitHub for \$7.5 billion

IBM Bought Redhat for \$34 billion

Kubernetes users

# Community support

- Free
- Non – binding
- Easier to get for “sexy” features



# Commercial support – one shot

- Custom development
- Teaching
- Consulting
- Migrations / Installations
- ...



# Commercial support – long term

- Contents same as for one shot
- Yearly pool of support hours
- Additional **SLA** possible

<https://opengis.ch/qgis-support>

- Initiatives like OPENGIS.ch' sustainability initiative

<https://opengis.ch/qgis-sustainability-initiative>



# Questions & Discussion

Thank you for the attention

<http://opengis.ch>

@mbernasocchi  
[marco@opengis.ch](mailto:marco@opengis.ch)