



Lisbon School
of Economics
& Management
Universidade de Lisboa



Free and Open Source Software

& Much More!

Prof. Doutor **Carlos J. Costa**

Index

- The Code Source
- Intellectual Property
- Copyleft
- Free Software and FSF
- Open Source and OSI
- Open Source vs. Free Software
- Free and Open Source Software Research
- Creative commons
- Open data

The Code Source

```
if (top !== self)
function calcWidth() {
  var wW = 0;
  if (typeof window.innerWidth == 'number') {
    wW = window.innerWidth;
  } else if (document.documentElement.clientWidth) {
    wW = document.documentElement.clientWidth;
  } else if (document.body.clientWidth) {
    wW = document.body.clientWidth;
  }
  if (sH = document.documentElement.scrollHeight) {
    var wH = window.innerHeight || document.documentElement.clientHeight || document.body.clientHeight;
    wW = (document.all && (sH > wH)) ? document.body.clientWidth : document.documentElement.clientWidth;
  }
}
```



Intellectual Property



- Industrial property: Patents



Intellectual Property



- Industrial property: Trade Marks



Intellectual Property

- Copyright



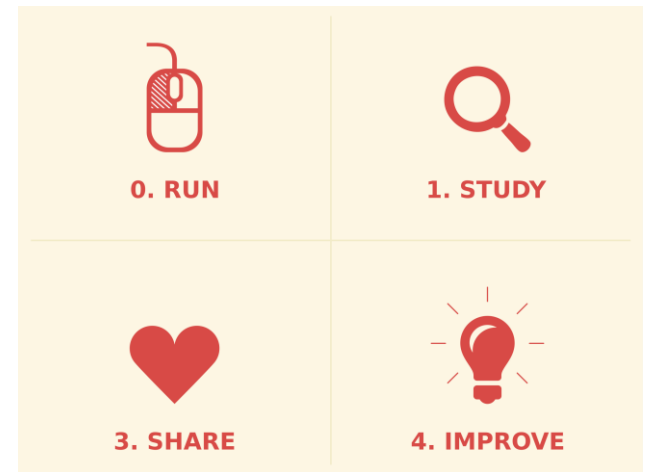
Copyleft

- Copyleft is a general method of making software free and enforcing that all its modified and extended versions are also free.
- Copyleft says that anyone who distributes the software, with or without modifications, must give third parties the freedom to copy and modify the software again.



Free Software

- The **freedom to run** the program as you wish, for any purpose (freedom 0).
- The **freedom to study** how the program works, and change it so it does your computing as you wish (freedom 1). Access to the source code is a precondition for this.
- The **freedom to redistribute** copies so you can help others (freedom 2).
- The freedom to distribute copies of **your modified** versions to others (freedom 3). By doing this you can give the whole community a chance to benefit from your changes. Access to the source code is a precondition for this.



Free Software Foundation

- The Free Software Foundation (FSF) is a non-profit with a worldwide mission to promote computer user freedom.
- Richard Stallman
- Founded: 1985
- <https://www.fsf.org>

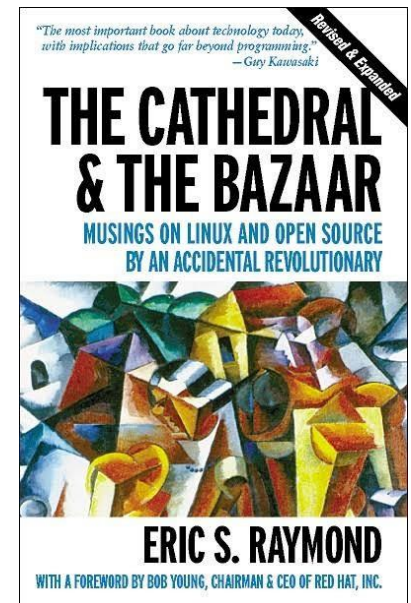


Free Software



Open Source

- More “realistic” approach
- open source software is better than proprietary software.
- Collaborative development:
 - Software engineering tools
 - Business model

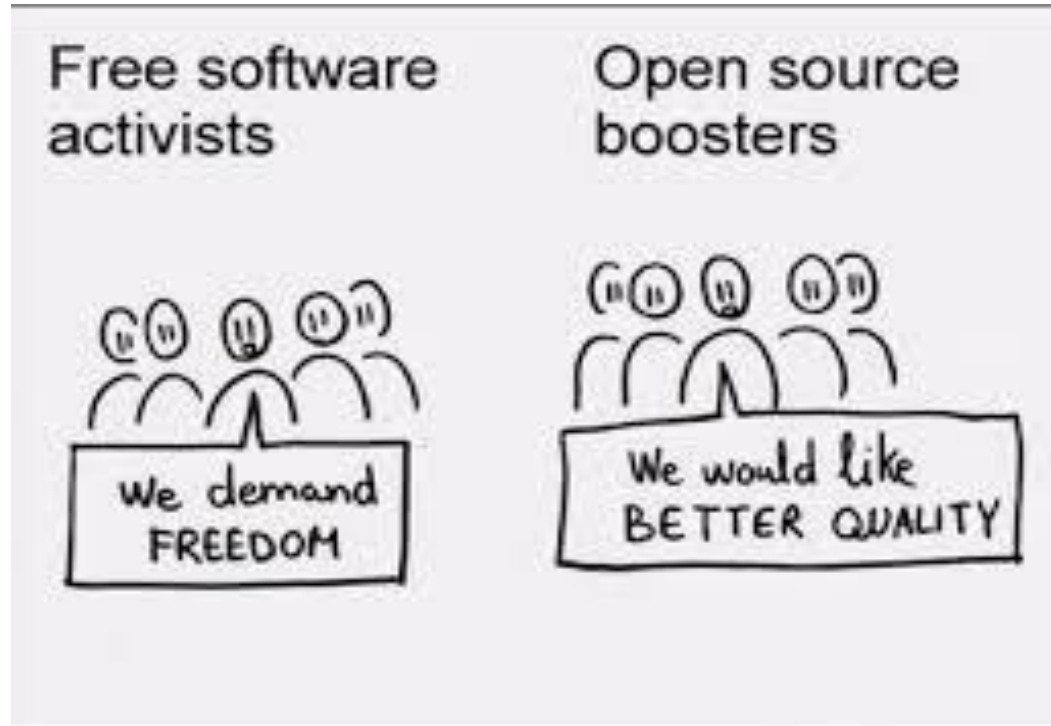


Open Source Initiative

- Non-profit
- Founded 1998
- <https://opensource.org/>
- OSI was jointly founded by Eric Raymond and Bruce Perens in late February 1998, with Raymond as its first president, Perens as vice-president, and an initial Board of Directors including Brian Behlendorf, Ian Murdock, Russ Nelson, and Chip Salzenberg.



Open Source vs. Free Software



- Stallman, 2016

Free and Open Source Software

- Law - Licences



Free and Open Source Software Law - Licences

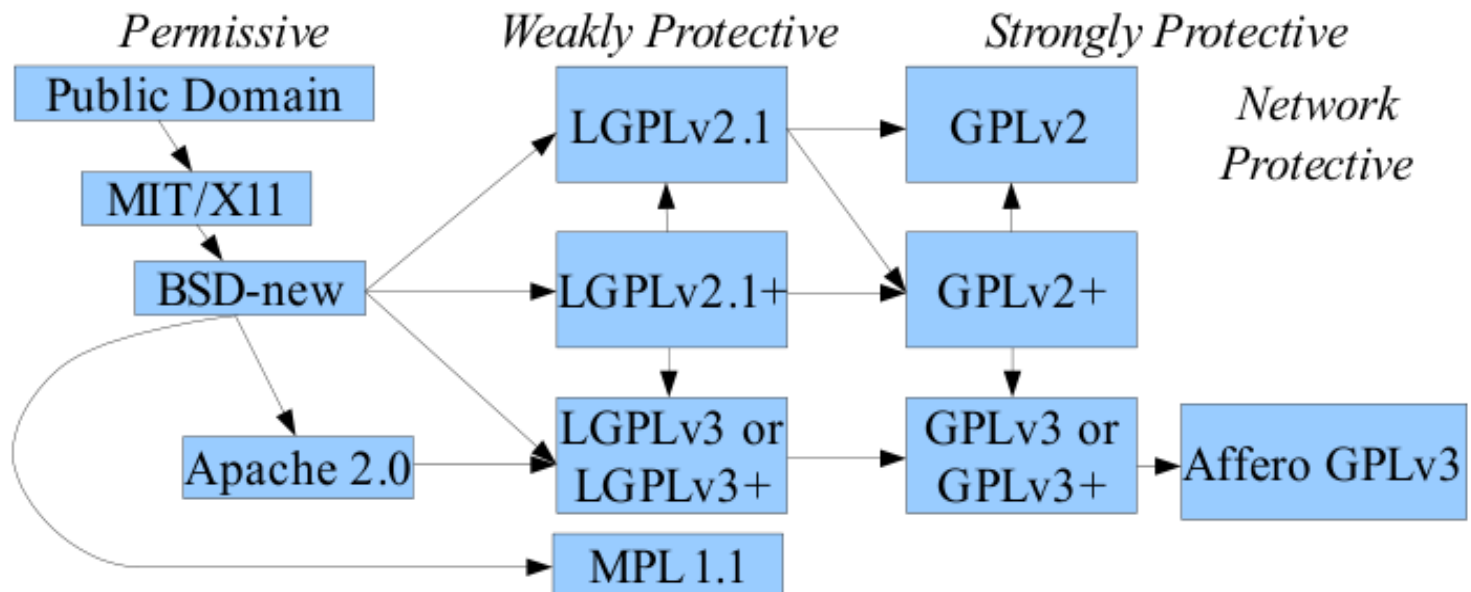
	GPL	LGPL	MPL	Apache	BSD-3	MIT
Use	X	X	X	X	X	X
Modification	X	X	X	X	X	X
Distribution	X	X	X	X	X	X
Provide source code in distribution	X	X	X			
Show license on distribution	X	X	X	X	X	X
Identify changes in distribution	X	X	X	X		
Modifications in the same work with the same license (weak copyleft) in the distribution	X	X	X			
Derivatives must have the same license (strong copyleft) in the distribution	X	X				
Prohibited to disclose trademark of the original entity without prior authorization				X	X	

Free and Open Source Software

- Law – Licences
 - <http://choosealicense.com/>
 - <https://www.gnu.org/licenses/license-list.html>
 - <https://tldrlegal.com/>
 - <https://opensource.org/licenses/>

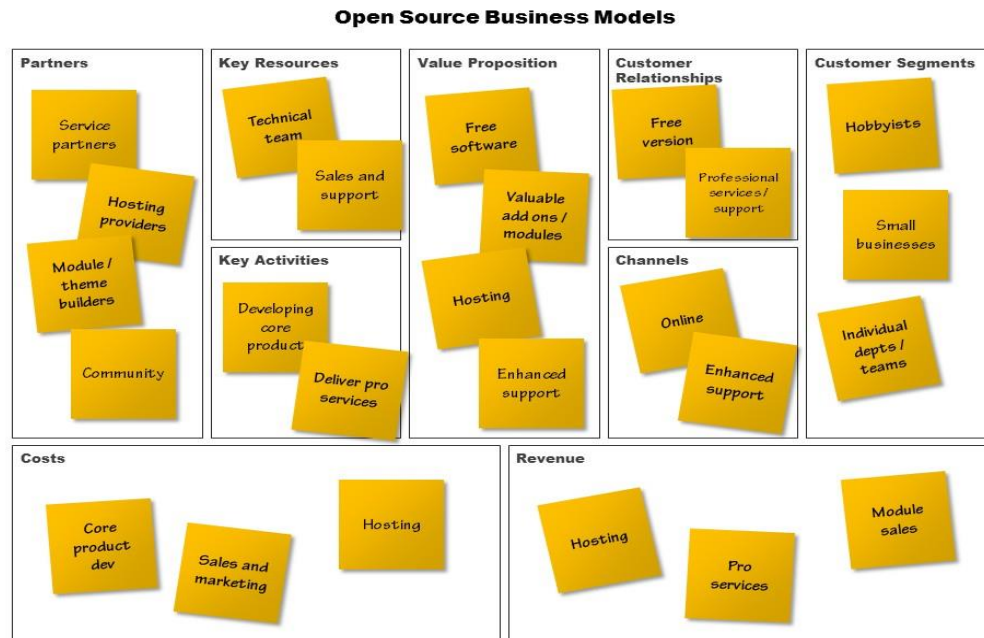
Free and Open Source Software

Law – Licences



Free and Open Source Software

- Management: New Business Models



Free and Open Source Software

- Software Engineering



Free and Open Source Software

- Informatics and End Using



Free and Open Source Software

- Economics and Social Approaches



Free and Open Source Software

- Motivations

Love



Money



Glory



Creative Commons

<https://creativecommons.org/license/>



The screenshot shows a web browser window with the URL <https://creativecommons.org/licei>. The page is titled "Características da Licença" and contains several sections for configuring a license:

- Características da Licença**: A section with the subtitle "As suas escolhas neste painel irão atualizar os outros painéis nesta página." It contains two questions:
 - "Permitir que adaptações do seu trabalho sejam compartilhadas?" with radio buttons for "Sim", "Não", and "Sim, desde que os outros compartilhem igual" (which is selected).
 - "Permitir usos comerciais do seu trabalho?" with radio buttons for "Sim" and "Não" (which is selected).
- Licença Seleccionada**: A section showing the selected license: "Atribuição-NãoComercial-Compartilhual 4.0 Internacional". Below the text are four icons: CC, BY (person), NC (dollar sign with slash), and ND (circular arrow). A note at the bottom says "Esta não é uma Licença de Cultura Livre." with a star icon.
- Ajude os outros a atribuírem-no!**: A section with the subtitle "Esta parte é opcional, mas, ao preenchê-la, irá adicionar metadados legíveis por máquinas ao HTML sugerido!"
- Tem uma página web?**: A section with a question mark icon and a small Creative Commons logo.

Open Access



Open Access



Open Data

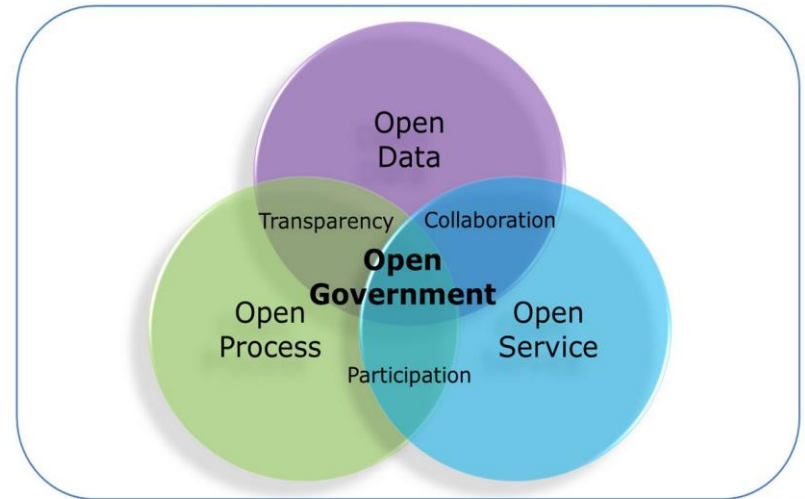


- <https://www.pordata.pt/>
- <https://dados.gov.pt/pt/>
- <https://data.europa.eu/euodp/en/home>
- <https://data.europa.eu/euodp/en/data/group>
- <https://www.europeandataportal.eu/>
- <http://lisboaaberta.cm-lisboa.pt/index.php/pt/>

Open



 European Commission | **Open Government concept**



Vision Paper: <http://ec.europa.eu/digital-agenda/en/news/vision-public-services>

References

Bibliography

- Aparicio, A & Costa, C. (2012). Macroeconomics leverage trough open source. In Proceedings of the Workshop on Open Source and Design of Communication (OSDOC '12). Association for Computing Machinery, New York, NY, USA, 19–24.
DOI:<https://doi.org/10.1145/2316936.2316941>
- Chesbrough, H. (2013). Open business models: How to thrive in the new innovation landscape. Harvard Business Press.
- Kavanagh, P. (2004). Open source software: implementation and management. Digital Press.
- Open Source Initiative. (2006). Open source licenses.
- Raymond, E. (1999). The cathedral and the bazaar. Knowledge, Technology & Policy, 12(3), 23-49.
- Silva, D., Aparicio, M., & Costa, C. J. (2019). Estudo bibliométrico de software livre e open source.. In R. Goncalves, I. Pedrosa, M. P. Cota, & A. Rocha (Eds.), 2019 14th Iberian Conference on Information Systems and Technologies (CISTI) [8760695] (Iberian Conference on Information Systems and Technologies, CISTI; Vol. 2019-June). IEEE Computer Society.
<https://doi.org/10.23919/CISTI.2019.8760695>
- Silva, D. G., Coutinho, C., & Costa, C. J. (2023). Factors influencing free and open-source software adoption in developing countries—an empirical study. Journal of Open Innovation: Technology, Market, and Complexity, 9(1), 21-33.
- Stallman, R. (2003). Free software foundation (fsf).
- Tapscott, D., & Williams, A. D. (2008). Wikinomics: How mass collaboration changes everything. Penguin.
- Tapscott, D. (2010). Macrowikinomics. Penguin Canada

Webgraphy

- <http://www.oreilly.com/openbook/opensources/book/>
- <http://choosealicense.com/>
- <https://www.gnu.org/licenses/license-list.html>
- <https://tldrlegal.com/>
- <https://opensource.org/licenses/>
- <http://dcti.iscte.pt>