Methodology

In this study, all the software have been analyzed from a scale of analysis called "Economic Criteria" proposed by the OSCOS consortium. These 19 criteria are provided below.
In the context of the study and as it is presented in the assessment criteria in the next pages, there is no technical analysis. For each criterion, the notes range from 0 to 2. 0 is the lower note possible per criterion, and 2 is the best one. Thus, the "best" software can reach a total of 38 points.

The selected criteria can be categorized into three subsets: sustainability, industrial solution and strategy. It is only based on the information available on the software Websites.

A. Sustainability

The sustainability parameters include:
• **Maturity**: This parameter focuses on evaluating the age, stability and crisis management methods in light of the history of the software considered.
• **Adoption level by the community and its users**: We intend to evaluate the popularity of the software, their online availability, references, as well as the opinion of the community (when relevant). We also look at whether books about the evaluated software have been published (as a sign of global adoption).
• **Activity**: This parameter focuses on the developers, on their turnover within the development team and on their responsiveness when bugs are reported. We also evaluate the frequency of software updates and their importance (minor or major).
• **Independence of developments**: The less software developments are achieved by employees of a single company, the higher the rating.

B. Industrial solution

• **Services**: It is necessary to explore the potential services provided either by the primary development team or by third parties in terms of training, support and consulting.
• **Documentation**: The documentation provided to users plays an essential part in the scientific understanding of the source code. The more the documentation is tailored to address the needs of the different users of the software evaluated, the higher the score.
• **Tools**: During the installation and usage of the software, debugging tools might constitute a valuable asset. A higher grade is given depending on their availability and usage.

C. Strategy

• **Roadmap**: This evaluation criterion concerns whether some kind of planning for the evaluated software (new updates, new bug fixes, etc…) is provided on the software website. Software get the maximum note when the roadmap is actually dated.
• **Sponsor**: The existing tights between a software development and its industrial support is important information as it can favor the software sustainability overtime.
• **Strategic Independence**: Beyond the independence of development, is the team dependent on a single player? Is his strategic vision shared by other projects? Is the team involved with standardization procedures?