Agile Development vs Waterfall

From my understanding the Agile Development method is basically a method that is continuous and relies mainly on communication between a team or developers and clients in order to progress. This seems to be good for any long-term project, but seems a bit overkill for short term projects. The Waterfall method makes it so that the development team can only move on to the next phase after the previous was successfully completed.

After looking at both and comparing the two I would personally go with Waterfall for a short-term project, and Agile for long term projects perhaps something like an ever-updating program such as game or website. However, if I were making a short-term project such as a simple calculator then there would be no need for such a long process.