We propose a system that supports the evolution of scientific publications from static papers into dynamic, executable research documents and aim for the main aspects of open access: improving the exchange of, facilitating productive access to, and simplifying reuse of research results that are published over the internet.

Building on existing open standards and software, this project develops standards and tools for executable resarch documents, and will demonstrate and evaluate these, initially focusing on the geosciences domains. Building on recent advances in mainstream IT, o2r envisions a new architecture for storing, executing and interacting with the original analysis environment alongside the corresponding research data and manuscript. o2r bridges the gaps between long-term archiving, practical geoscientific research, and publication media.