

Publication date: December 2014

Source:Futures, Volume 64

Author(s): Rider W. Foley , Arnim Wiek

Nanotechnology has driven speculations and projections of all colors and shapes. However, there is a paucity of future scenarios that explore distinct nanotechnology innovation and governance models. This study asks: What could the dominant innovation models look like in the future, and, in contrast, what could alternative ones look like? And how conducive are those different models to mitigating sustainability challenges and improving quality of life? To make the exploration tangible, this study focuses on nanotechnology innovation in an urban region (Phoenix, Arizona). The study uses a mixed methods approach, linking intuitive and analytical scenario construction, to allow for creativity while ensuring analytical rigor. Findings suggest four different models of nanotechnology innovation and governance affect sustainability challenges quite differently. Market-oriented and closed collaboration amplify the lack of social cohesion, result in low-wage service sector jobs, and intensify resource extraction rates. Alternatively, social entrepreneurship and open-source innovation are more conducive to addressing sustainability challenges and improving quality of life, in particular in urban areas. The study concludes that the way a society innovates and governs its emerging technologies is decisive for the way those technologies work in favor of, or against comprehensive public interests.

[Read Full Article](#)