



UNITED NATIONS
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Institute on Comparative Regional Integration Studies



Future Trends Series - GR:REEN Project

Title of the report

The Global Technology Revolution 2020, In-Depth Analyses; Bio/Nano/Materials/Information Trends, Drivers, Barriers, and Social Implications

Area

Science & Technology

Reporter

RAND National Security Research Division

Type of the Reporter

Non-Profit Research Organisation

Periodically updated?

No

First issued year

2006

Latest update

2006

Official website

http://www.rand.org/content/dam/rand/pubs/technical_reports/2006/RAND_TR303.pdf

Language available

English

Short summary

“Various technologies—including biotechnology, nanotechnology (broadly defined), materials technology, and information technology—have the potential for significant and dominant global impacts by 2020. This report is based on a set of foresights (not predictions or forecasts) into global technology trends in the abovementioned areas and their implications for the world in the year 2020. These foresights were complemented by analysis of data on current and projected S&T capabilities, drivers, and barriers in countries across the globe.”

Key trends

- Accelerated technology development will continue.
- “Capability and Need Differences Are Driving Global Technology Revolution Differences around the World. Because of vast differences in countries’ S&T capacity, as well as their institutional, human, and physical capacity required to develop drivers for, and overcome barriers to, implementing technology applications, the impact of the global technology revolution will show substantial regional and international variation.”
- “Public Policy Issues May Strongly Influence Technology Implementation. The nature of a technology application can determine the politics that surround it. Many of the most controversial Technology

Applications involve biotechnology—for example, GM crops, GM insects, genetic screening, gene therapy, and genetic selection of offspring.”

- “Maintaining Science and Technology Capacity Requires Consideration and Action. Because of the accelerating pace of technology development and the rapid improvement of capacity to acquire and implement Technology Applications in emerging economies, maintaining country position in relative capacity to implement Technology Applications will require continuing efforts to ensure that, for example, laws, public opinion, investment in R&D, and education and literacy are drivers for, and not barriers to, technology implementation.”
- “Capacity Building Is an Essential Component of Development. The implementation of Technology Applications to address the problems and issues that developing countries face is not primarily about technology, or even S&T capacity. The greater challenge is the development of institutional, human, and physical capacity, including effective and honest governance.”
- “Public Policy Issues Relating to Technology Applications Will Engender Strong Public Debate. Some important Technology Applications raise significant public policy issues that engender strong and sometimes conflicting reactions and opinions within and between countries, regions, and various ethnic, religious, cultural, and other interest groups.”

Suggestions

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Methodology

Research from primary and secondary sources; modelling

Reference to other trends reports? If yes, which reports?

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