

Future-Oriented Technology Assessment

Łukasz Nazarko^a

^aFaculty of Management, Białystok University of Technology, 45A Wiejska Str., Białystok, 15–351, Poland, e-mail: l.nazarko@pb.edu.pl

Abstract: The purpose of this paper is to develop a concept of Future-Oriented Technology Assessment (FO TA) as a particular form of Technology Assessment (TA) which is focused on the examination of the impact of emerging technologies that is considerably delayed in time, indirect and thus difficult to anticipate. In the article the author attempts to create a coherent conceptual system comprising Future-Oriented Technology Assessment (FTA), Future-Oriented Technology Analysis and Responsible Research and Innovation (RRI). The deliberations are based on the literature review, bibliometrics and the logical construction method. The paper is expected to provide grounding for further research on the objectives, methods, stakeholders, results and best practices of Future-Oriented Technology Assessment. In the context of the rising importance of the Responsible Research and Innovation idea, Future-Oriented Technology Assessment is discussed as a potentially effective tool to pursue policy goals within RRI agenda.

Keywords: technology assessment, Future-Oriented Technology Analysis, Responsible Research and Innovation, foresight, innovation policy

References

- [1] Belina B, Mazurkiewicz A, Giesko T, Karsznia W. Tracking and predicting solution development in R&D projects using a complex assessment method. *Economics and Management* 2015; 7(3):7–14.
- [2] Ejdys J. *Regionalny foresight gospodarczy. Scenariusze rozwoju lokalnego. [Regional business information foresight. Local development scenarios]*. Warszawa: Związek Pracodawców Warszawy i Mazowsza; 2013.
- [3] Ejdys J. Overcoming problems associated with uncertainty of the environment by using foresight approach. *Economics and Management* 2013; 18(2):331–339.
- [4] Ejdys J, Ustinovičius L, Stankevičienė J. Innovative application of contemporary management methods in a knowledge-based economy-interdisciplinarity in science. *Journal of Business Economics and Management* 2015; 16(1):261–274.
- [5] Halicka K. Innovative classification of methods of the Future-oriented Technology Analysis. *Technological and Economic Development of Economy* 2016; 22(4):574–597.
- [6] Gudanowska AE. Tworzenie mapy wiedzy opartej na tematyce projektów badawczo-rozwojowych na przykładzie województwa podlaskiego [Creating knowledge maps based on the themes of R&D projects on the example of the Podlaskie region]. *Economics and Management* 2015; 7(1):257–270.
- [7] Halicka K. Forward-Looking Planning of Technology Development. *Business, Management and Education* 2015; 13(2):308–320.
- [8] Halicka K. Designing routes of development of renewable energy technologies. *Procedia-Social and Behavioral Sciences* 2014; 156:58–62.
- [9] Halicka K. Prospektywna analiza technologii [Future-Oriented Technology Analysis]. In: Knosala R., ed., *Innowacje w zarządzaniu i inżynierii produkcji* 2015; 2:87–98.
- [10] Halicka K, Lombardi PA, Styczyński Z. Future-oriented analysis of battery technologies. *2015 IEEE International Conference on Industrial Technology (ICIT)*:1019–1024.
- [11] Kononiuk A, Gudanowska A, Nazarko J, Glińska E, Glińska U, Ejdys J. *Kierunki rozwoju nanotechnologii w województwie podlaskim. Mapy. Marszruty. Trendy. [Directions of nanotechnology development in Podlaskie Voivodship. Maps. Roadmaps. Trends]*. Białystok: Oficyna Wydawnicza Politechniki Białostockiej; 2013.
- [12] Nazarko J. Kształtowanie polityki innowacyjnej regionu np. foresight technologicznego <NT FOR Podlaskie 2020>. [Shaping of the innovation policy of a region on the example of <NT FOR Podlaskie 2020> technology foresight]. *Optimum. Studia Ekonomiczne* 2011; 2(50):241–251.
- [13] Nazarko J. *Regionalny foresight gospodarczy. Metodologia i instrumenty badawcze [Regional business information foresight. Methodology and research instruments]*. Warszawa: Związek Pracodawców Warszawy i Mazowsza; 2013.
- [14] Nazarko Ł. Istota foresightu i jego percepja w Polsce. [The essence and perception of foresight in Poland]. *Optimum. Studia Ekonomiczne* 2011; 4(52):224–234.