

## Chapter 2

# Methodological Approach to Development of the Universal TB Model

### ABSTRACT

*While the previous chapter can be considered as purely theoretical, this chapter focuses on the methodology. It introduces the details associated with methods, techniques, and approaches whose application led to the main output of this book. Firstly, an extensive literature review that provides background for discussion of available resources and existing knowledge background is provided. Semi-structured interviews help to acquire insights of insiders. Both methods help to identify the main issues and problems, non-existence of unifying systemic definition included. This chapter also provides details to applied statistical analysis and systems approach which represents a framework in which the whole TB analysis and synthesis are conducted. Special attention is paid to the design and construction of various types of systems and description of TB as a soft system.*

### APPLIED METHODS

Due to the complexity and multidisciplinary of the research, various methods were used, starting with a literature review researching available resources, progressing to a picture of the background in research, going on to semi-structured interviews (with stakeholders around TBs and with members),

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questionnaires (to learn more about particular TBs), internet searches, a scientific database research, statistical analysis and finally an in-depth analysis. Further methods include comparison, the Spiral of Knowledge also known as SECI model (Nonaka, 1991), Systems Analysis (Bureš, 2011), Soft System Methodology (Checkland, 1993) as well as a synthesis of all these. A strong correlation among Information and Knowledge Management and Information Technologies was also found, with relevant theories researched and implemented.

Prior to an analysis of TB as a system, or more precisely a soft system, the precise nature of TB should be explored. This includes defining what it is, identifying it as a system and soft system, and determining a methodology for analysis. This line of exploration was followed below.

## **Literature Review**

The literature review had to entail a very extensive reach into many disciplines and sciences. This includes, but is not limited to, economics (Holmgren, 2011, Clement et al., 2017, Lietaer et al., 2012, Jevons, 1875, Samuelson and Nordhaus, 2005, White, 2015, Lietaer and Dunne, 2013, Mill, 1900, Boulding, 2004), knowledge management (Hildreth et al., 2000, Lehaney, 2004, Lesser and Storck, 2001, Nonaka, 1991, Otcenaskova et al., 2012, Shreiber et al., 2002), information management (Anthes, 2016, Bureš and Tučník, 2014, Linderman et al., 2005, Maes, 1999, Maes et al., 2000), complementary economic systems (Blanc, 2011, CCRC, 2016, Clement et al., 2017, DeMeulenaere, 2008, Hale et al., 2004, Hallsmith et al., 2011, Kennedy et al., 2012, Martignoni, 2012, Seyfang, 1999, Seyfang and Longhurst, 2012a, Seyfang and Longhurst, 2012b, Schroeder et al., 2011, Economist, 2013, Lietaer et al., 2012, Lietaer, 2001), general systems theory and systemic approaches (Boulding, 2004, Bureš, 2011, Checkland, 1993, Checkland, 1999, Kim, 2000, Kim and Lannon, 1997, Rapoport, 1967, Senge, 2006, Skyttner, 2001, Skyttner, 2005, Smutek, 2017, Wiener, 1951), sociology and anthropology (Beamer, 1992, Fiske, 1992, Fiske and Haslam, 2005, Sandu, 2012), psychology (Jordan, 1968, Ilin, 2013). Some results of these findings have already been outlined above. TB is very broad topic and in each of these fields it would be possible to conduct extensive research. For this book, it was necessary to explore briefly all possible connections to various fields, but the main direction explored is systems engineering. To maintain focus



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