Cultivating Strategic Imagination in the Next Generation Transportation Professional

Farber, Darryl - Penn State University (dfarber@engr.psu.edu) Pietrucha. Martin - Penn State University

Potentially the biggest failure in transportation planning is a failure of imagination. How many times have we heard, "we did not see it coming," "it wasn't on our radar," "nobody could have planned for THAT?" The increasing complexity and interconnectedness of transportation systems worldwide and the connectedness with other critical infra-structure, such as telecommunications, and electricity, as well as land-use planning demands that the next generation transportation professional have an intellectual toolkit that is broader and more strategically oriented than today's tactical and operational perspective. The ability to understand the complicated dynamics of transportation systems as complex, large-scale socio-technical systems requires the cultivation of an ability to imagine the possible and understand the consequences of what sometimes are called low probability, high impact events. Although one can not plan for every remote possibility, one does need to develop a framework for interpreting the potentially far-reaching implications of seemingly minor events and to craft strategies that can effectively respond to these possibilities. One may think of this capacity as strategic imagination. In this paper we explore scenario planning for cultivating strategic imagination and in particular explore scenario planning as a way that can enable not only the individual transportation professionals to think more creatively but that through its incorporation into the transportation planning process create a common medium to think through and reflect upon the deeper connections among socio-technical systems as a system of systems. We use an example of a scenario planning exercise for the Centre Region, Centre County, Pennsylvania, USA to illustrate how scenario planning may be used to think imaginatively, but practically of the connections between land-use and transportation. Enhancing the learning of the multiple stakeholders increasingly involved in transportation planning in understanding the transportation system as a system of systems and an element of a larger system is needed for more holistic planning. Cultivating this type of skill in future transportation professionals is at the heart of the problem of creating livable communities.