Chapter 7
Strategic Roadmapping as a Policy Tool for Meso-Level Industrial Transformation:
The Case of Cellulosic Fibre Value Chain in the Green Triangle, South Australia

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ABSTRACT

This chapter illustrates the use of strategic roadmapping as a policy tool for regions or industry sectors to formulate a strategy to renew and transform their industrial base when faced with structural decline, diminishing opportunities, and intensifying competitive pressures. This approach is illustrated by the case study of the forest and wood products industry in the Green Triangle region in the southeast of South Australia, both the road maps produced and the staged policy recommendations made for immediate, short, and long-term action. The chapter concludes by summarising the key arguments for the use of strategic roadmapping as policy tool for industrial transformation, and identifying some future avenues for strategic roadmapping in the forest and wood products industry and in manufacturing industry in general.

INTRODUCTION

When exposed to fierce global competition manufacturing industries working in high cost operating environments face the risk of becoming locked in low value add products, outdated production technology and eroding competitiveness. With insufficient capacity to innovate and adopt new technologies companies, industries and entire regions can fall into a self-enforcing spiral of industrial decay having negative repercussions on firm profitability, supplier industries, employment and local communities.

Policy makers need to select their strategy among three basic options. They can allow the force of creative destruction to take its toll by

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letting uncompetitive industry dwindle and hope more cost effective operations will grow to replace it. This laissez-faire approach has a high economic and social cost in the short run. It provides no guarantee that more competitive businesses will emerge to replace the vanishing ones. Large stocks of local natural and human resources may also become redundant. Alternatively, policy makers can start providing financial and fiscal support to the troubled industry in order to improve viability of the industry and maintain it in its current operation. While this option might be politically attractive in order to save jobs it also has a high economic cost and holds no guarantee in the longer run. If anything, it puts back the necessary transformation thus making it even harder to deal with the inevitable changes at a later stage.

The third option for governments is to take an active role in catalysing transformation towards a new technological trajectory with a view to developing higher value add products for future markets. This is a challenging task for public policy makers to undertake. Governments are notoriously ill equipped to identify opportunities with long term prospects. They are also not in a favourable position to direct industry towards new pathways. Nonetheless, when encountering severe economic challenges this option holds the best odds.

In this chapter, we present a strategic roadmapping approach to assist governments and industries to identify future pathways towards higher value add and assist them in initiating transformation through innovation and adoption of new technologies. We demonstrate the use of our approach with a case roadmapping process carried out in South Australia's forest industry. The forest and wood products industry and associated value chain, along with many other Australian manufacturing industries, has experienced a very difficult decade, peaking in recent times from the exceptional circumstances created by the global financial crisis and increased globalisation. Coupled with internal factors such as a lack of re-investment, aging equipment and poor management decisions have resulted in a significant reduction in industry profitability and a loss of employment opportunities that have combined to create an atmosphere of doom and gloom in the crisis situation that exists today.

The Regional Development Australia Limestone Coast has met this challenging situation by pursuing an agenda of economic diversification to broaden the economic base of the South East through the initiative of The Limestone Coast Economic Diversification Forum. In turn, the South Australian government have felt compelled to act and sought the assistance of VTT Technical Research Centre of Finland, as experts in the forest product value chain, to develop grounded pathways for the renewal of the industry, both in the short (3–5 years), medium (5–10 years) and long-term (greater than 10 years), through a roadmap exercise.

This chapter is based on South Australian Cellulosic Fibre Value Chain Technology Roadmap project conducted in 2012 and 2013 in the Limestone Coast region, South Australia, which forms part of a wider region known as the Green Triangle. The objective of the project was to provide the region with a future strategy to renew its industrial basis. The project was funded by Department of Manufacturing, Innovation, Trade, Resources and Energy (DMITRE) and led by VTT Technical Research Centre of Finland (Ahlqvist et al., 2013a, 2013b).

The paper is structured as follows. In the next section we briefly discuss how industrial transformation and related policies can be catalysed through foresight and strategic roadmapping. In the third section we outline the contexts of our case study, forest and wood products industry in the Green Triangle, South Australia. In the fourth section we present the strategic roadmaps, constructed to open future-oriented perspectives in forest and wood products industry. In the fifth section we depict the recommendations crafted on the basis of the roadmaps – this stage was an important one, because especially the roadmaps