The pulp and paper industry is characterized by a vast and highly integrated supply chain. The overall fibre value chain starts in the forest, continues through harvesting, sawmills, pulp and paper mills and ends with distribution to the customer base as multiple products. Decision making challenges related to varying time horizons arise along the value chain and thus coordination of the overall supply chain is essential. Supply chain management (SCM) is designed to assist with this coordination as it involves the design, adaptation and management of business processes across all levels of enterprise with the ultimate goal of increasing profitability and market competitiveness. The figure below presents a simplified example of the pulp and paper industry supply chain structure with corresponding key decision making parameters at each SCM level.

The current challenging forest industry situation is forcing individual companies to look at various business strategies. (1) From a SCM point of view, if the strategy is to compete in the traditional core commodity business, then optimisation of the current value chain will assist in improving cost structure. (2) If the strategy incorporates exploring emerging markets in Asia or South America then the supply chain concepts should be used to exploit synergies worldwide. (3) Finally, if the company is planning on diversifying by integrating new production processes (e.g., biorefinery), these new processes must be integrated in the SCM. In order to achieve maximum benefits from implementing a SCM, specialized models such as margin-based production costing, revenue management and uncertainty models should be integrated in the supply chain operation.

Figure: Supply chain structure and supply chain decision-making matrix