This article is based on collaboration among McKinsey, the Ellen MacArthur Foundation and the World Economic Forum. The above link includes extensive information about the circular economy concept.

Society is returning to ideals of earlier times, embracing a circular economy, a regenerative economic model that eliminates the traditional “take, make, and dispose” approach to manufacturing. Common business terms like supply chain and end-user reflect the linear nature of the traditional economy. In a circular economy products are designed for reuse/assembly, remanufacture, or use as raw materials for other products. As a result, materials see multiple cycles of use and, if properly designed, can eventually be reintegrated into the natural environment. It is claimed that global materials savings from this approach could top $1 trillion per year by 2025 AND the circular economy could become a, “tangible driver of global industrial innovation.”

The move toward a circular economy is partially driven by the rising cost of materials. An additional driver is changing societal values and expectations that drive legislation like the European Union End of Life Vehicle Directive which requires car manufacturers to take back their cars at the end of life. This has meant a shift in design thinking in car companies, facilitating the recycling process.

The forest sector has long exemplified principles of the circular economy. Many fiber-based products rely on by-products from primary breakdown operations. Also, the paper industry is an effective recycler. According to the AF&PA, just over 65% of all paper in the US is recycled. However, large volumes of de-inking chemicals are employed to make this possible. Improved design for ink removal would mean reduced chemical use, an area ripe for further innovation.

The authors conclude by saying, “By applying the principles of a circular economy—a system that is regenerative by design—forward-looking companies can seize growth opportunities while laying the groundwork for a new industrial era that benefits companies and economies alike.” This trend may be a key opportunity for forest sector firms to innovate their business models.

Stay tuned to a newly minted EU research project titled CaReWood. Its primary goal is to develop business models for the cascade use of recovered wood. It is estimated that half of the 95 million m³ of solid wood used in the EU27 countries could be recovered and reused with unchanged mechanical properties.