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**Sustainable Supply Chains: An Overview and Outlook**

The second half of the twentieth century witnessed the rise of a consumption-based economy around the globe. This trend resulted in an ever-increasing threat for environmental sustainability. Environmentally conscious manufacturing, waste reduction and product recovery have emerged as alternative means of coping with this significant societal problem. Supply chains with product recovery capabilities aim at capturing the remaining economical value in used, unsold, or obsolete products. From a logistics viewpoint, however, the resulting reverse flow of goods from consumers toward upstream echelons, and hence the simultaneous presence of forward and reverse flows causes unique challenges for supply chain design. Under pressure from environmental groups and the society at large, governments are increasingly involved in regulating product recovery, because it can serve as an effective mechanism for sustaining the environment. The European Union, for example, requires manufacturers to establish environmentally sound recovery processes for waste electrical and electronic equipment and end-of-life vehicles. On the other hand, an increasing number of companies have been implementing comprehensive programs in order to reap the potential benefits of remanufacturing. In particular, Kodak's one-time-use camera has gone through four major redesigns so as to reduce the material content and energy required in the manufacturing process, and to increase the number of recycled and reused parts. Another example is HP's Design for Environment Program that aims at developing HP LaserJet and inkjet print cartridges that use fewer materials and are easier to recycle. Having saved more than \$2 billion from earth-friendly design and manufacturing, Xerox reports that 90 percent of all product models introduced since 2004 were developed with remanufacturing in mind. I will provide an overview of the state of the art in sustainable operations, which will be mostly based on a selective review of our own research work. The talk will conclude with my personal views on fruitful research avenues in this relevant, exciting and challenging area.

**Biography:** Vedat Verter is a Professor of Operations Management at Desautels Faculty of Management, McGill University as well as an Associate Member of McGill's School of Environment. He is also Adjunct Professor at Telfer School of Management, University of Ottawa. Professor Verter's research focuses on supply chain design, hazardous materials logistics, healthcare operations management as well as sustainable supply chains. His work in these four areas is well recognized through top tier journal publications as well as invited presentations around the globe. In the area of sustainable operations, Professor Verter focuses on closed-loop supply chains, product recovery and government legislation. His research in this domain has been funded by Social Sciences and Humanities Research Council of Canada for the past ten years. Professor Verter is a Senior Editor of the Sustainable Operations department in Production and Operations Management and Editor-in-Chief of Socio-Economic Planning Sciences, an international journal focusing on public sector decision making.

