

## True Sustainability Requires a Complete Rethink of Supply Chains



**Luk Van Wassenhove**

Emeritus Professor of Technology and Operations Management

### Van Wassenhove's impact in brief

- ▶ Van Wassenhove is the most renowned management thinker in humanitarian logistics and closed loop supply chains, having single-handedly propelled the humanitarian sector to new heights of supply chain efficiency and disaster relief.
- ▶ He has paved the journey to sustainability, leading his field in initiating the concept of a reverse supply chain. By identifying the process required to retrieve a used product from a customer and remanufacture it for a second life, he has laid strong operational foundations for what is now termed the circular economy.
- ▶ Van Wassenhove's pioneering work has transcended academia, giving truly workable solutions to industry, policymakers and NGOs. His work was integral to the implementation of the European Union's electrical waste directives.
- ▶ His research in the past three decades has always been closely related to many of the UN Sustainable Development Goals. His work on humanitarian logistics directly tackles No Poverty and Zero Hunger (SDGs 1 & 2), while his work on closed loop supply chains is the most progressive thinking towards Responsible Consumption and Production (SDG 12).
- ▶ In addition to playing an active role to change industry and travelling the world to research solutions to complex problems, Van Wassenhove's research productivity is exceptional, and his work heavily cited.

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In 1999 the International Federation of Red Cross and Red Crescent Societies (IFRC) asked Luk Van Wassenhove for assistance. The sheer scale of Hurricane Mitch, the second deadliest Atlantic hurricane on record, had totally **overwhelmed** the disaster response and IFRC management was conducting an urgent review of its systems and processes.

The organisation was keen to draw on Van Wassenhove's experience applying scientific models and tools to address the increasingly complex logistical challenges of organisations in the private and public sector. Always on the lookout for new and difficult problems to solve, Van Wassenhove was happy to oblige. He subsequently helped IFRC decentralise its supply chain and pre-position relief teams in carefully located warehouses, hastening

response times and enhancing relief efforts. Since then Van Wassenhove has assisted dozens of humanitarian NGOs and private sector agencies to resolve a host of problems ranging from improving environmental and social impacts in relief supply chains to identifying ways to deliver medicines into countries like Afghanistan and Sudan. His research emphasises the critical role logistics and supply chain management play in the humanitarian context.

The work has triggered a wave of academic and industry interest, with supply chain management now a permanent item on relief agencies' board agendas while humanitarian logistics has expanded to become one of the largest sub-fields in the discipline of operations management today.

“Luk was single-handedly responsible for professionalising the sector,” says Rob McConnell, Fleet Consultant and former IFRC field logistics head. “Every academic article you read on the subject will reference his work in some way.”

“The practicality and clarity of his studies has also helped to stimulate interest among commercial partners such as DHL and TNT and really changed the focus of relief work.”

In fact, Van Wassenhove was a catalyst for the establishment of the [Fleet Forum](#), a platform bringing together humanitarian agencies and private sector operators such as UPS and Land Rover. His research and case studies highlight the integral role fleet management plays in programme delivery.

## Pushing firms to change

Sustained by a fervent belief that introducing sustainable practices does not require firms to sacrifice profits, Van Wassenhove has opened up new areas of operations management and helped narrow the gap between research and policy-making. Many streams of his research have taken place concurrently and have informed one another. He is renowned for developing Closed-Loop Supply Chains (CLSC); his insights in this area playing a central role in the passing of workable amendments to the European Union's Waste Electrical and Electrical Equipment (WEEE) Directive, which imposes responsibility for the proper handling and recycling of electrical and electronic products onto producers. Through this, and his ground-breaking work with humanitarian groups, Van Wassenhove has demonstrated the significant influence that supply chain management can have on creating positive and sustainable change.

In the 1990s, Van Wassenhove emerged as a pioneer in sustainability research, working closely with Xerox as it became one of the first companies to remanufacture and sell a new "green line" of copying machines. Since then he has helped dozens of companies across a multitude of sectors to recycle, integrate, reuse and resell refurbished or remanufactured products.

His advances in these areas underpin many of the concepts at the heart of today's circular economy.

"While there is now a lot of talk about sustainability as a strategy, Luk's work has a deeper influence in that it actually affects the way firms operate," says Joseph D. Blackburn, Vanderbilt University's James A. Speyer Professor of Production Management Emeritus.

"Working towards sustainability requires lots of little steps and Luk has worked on almost all of them."

Van Wassenhove's contributions to management science and society have been acknowledged by five major professional operations management and management sciences societies: INFORMS; EUROMA; MSOM; the European Association of Operational Research Societies, and POMS.

He has authored and contributed to [627](#) papers and reports (including 352 academic peer-reviewed publications) and been cited in more than 44,000 publications (twenty times more than the average management researcher, according to Blackburn).

## Closed-loop Supply Chains

As one of a small group of forward-thinking researchers at the vanguard of the reverse logistics movement, Van Wassenhove collaborated with Daniel Guide, Professor of

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Operations & Supply Chain Management at Penn State University, to develop business models for CLSC. Many of these models and metrics for measuring impact are used extensively today.

Following the release of their initial papers, Van Wassenhove and Guide started a series of Closed-loop Supply Chain Workshops, bringing together academics, journal editors, policy makers and senior industry executives. The events continue today and have been influential in taking sustainable supply chain and operations management out of obscurity and into the mainstream.

## Better electrical waste management

Van Wassenhove's pragmatic approach to sustainability was influential during the implementation of the European Union's WEEE Directive.

"There was a lot of uncertainty from business at the time; government ministers were ignoring the costs being imposed on industry and advice was being taken largely from NGOs," Guide recalls.

"Luk was able to show ways of taking back product that makes sense for both business and the environment. And to get organisations to understand some of the ramifications of their own policies."

## Ongoing impact

Van Wassenhove is the founder of [INSEAD's Humanitarian Research Group](#) and Social Innovation Centre and created the framework for [the Hoffmann Global Institute for Business and Society](#). Through these centres he collaborates with leading response organisations including Médecins Sans Frontières, UNICEF, Marie Stopes International, UNHCR, and the World Food Programme (WFP).

Van Wassenhove's humanitarian and sustainable logistics projects continue to inspire a new generation of researchers and industry leaders to broaden their approach to logistics to deliver both profits and positive change.

"He has this extraordinary ability to draw people in, to get people collaborating and to bring ideas together," comments Ernst Hoestra, CEO of Cycleon, a CLSC company set up under Van Wassenhove's guidance.

Blackburn concurs, "Luk has a huge network of colleagues and great facility for finding the right people – from leading academics to PhD students – and getting them involved in projects. Many of the young academics he mentored and inspired have gone on to become some of the best operations management researchers in the world today."