

IFS Change for Good Winner profile 2022: Volvo Group Circular Operations & Solutions

Halving emissions and using just 20% of the energy required for new part manufacture, Volvo Group Circular Operations & Solutions is the winner of our 'best use of IFS technology in a sustainability initiative' category. Andreas Gustafsson, VP of Circular Operations & Solutions, explains how the company's remanufacturing operations and circularity goals are eliminating waste, reducing emissions and optimizing the use of resources.



For nearly 100 years, Swedish multinational corporation Volvo Group has been manufacturing, selling, and servicing commercial vehicles. In 2016, it became the world's second largest manufacturer of heavy-duty trucks.

Since the 1950s, growing a sustainable business has allowed Volvo Group to deliver good value for both customers and stakeholders. As part of Volvo's efforts, the group is committed to both remanufacturing and recycling to reduce energy consumption, cut CO2 emissions, protect resources and eliminate waste. In the case of remanufacturing, Volvo Group Circular Operations & Solutions uses IFS software to manage and analyze processes across multiple remanufacturing centers globally.

80%

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Substantial savings

Extending the service life and operational uptime of fleet assets contributes to increasing circularity. Remanufacturing commercial vehicle components and sub-assemblies can dramatically reduce the consumption of resources. Explains Gustafsson, "We can put a fully warranted remanufactured truck gearbox or engine back on the market with roughly 50% of the CO2 footprint of producing it new and reduce the energy needed by 80%. It's 'win-win-win' for the environment, the customer and our business. Remanufacturing also means that virtually all metal scrap from Volvo production operations is recycled or reused," he says.

Remanufactured components are delivered with the same or higher quality as new ones, with a full warranty, often at a better price, to customers worldwide. The current remanufacturing program operates with a wide variety of parts and components, with future aims to cover even more markets and more components.

Energy savings are especially significant in the current climate. Observes Gustafsson, "I think energy is currently our scarcest and most worrying global resource. Our ability to deliver a complex remanufactured product like an engine or drivetrain with 80% lower energy consumption shines a light on the business model opportunities for manufacturers in all sectors globally."

Electrification means growth

Employing 810 people, in 2021 the group produced around 5,000 remanufactured engines and 11,300 remanufactured transmissions, alongside other parts and components. Despite this, the penetration of remanufactured products are relatively low. With increased focus and circularity and with the introduction of electrified drivelines, significant growth is targeted. By 2025, annual remanufactured part sales are expected to rise with 60% percent compared to the 2018 sales.

Looking ahead, Gustafsson sees the market interest in emissions-free transport driving a major uplift in demand for remanufactured components. "We have a growing shift towards electrified commercial fleets, with the use of electric drivetrains, lithium batteries and hydrogen fuel cell technology," he says. "Volvo Group is already the world's first manufacturer to have all-electric heavy goods (44 tonne) vehicles in serial production. By 2030, we expect at least 35% of the trucks we sell globally will be electric. In addition, we see fossil-free production of biofuels extending the life of some current combustion-engine vehicles on fleets. Our ambition is reach net-zero greenhouse gas emissions by 2040.

"The relatively low penetration of remanufactured parts and components in conventional combustion engine and driveline vehicles could easily rise with an electrified fleet, because of the need to replace components during every vehicle's lifetime."

Technology insights

One way that IFS technology is helping is by maximizing the value chain within the remanufacturing plants. “We want to create the highest possible salvage grade products for customers. By visualizing historic data in IFS, we can see the optimum remanufacturing processes that should be applied, and necessary new components needed, to maximize quality and efficiency,” says Gustafsson.

For any remanufacturing exchange program to work at scale, another challenge is to maximize the core return, in order to have material to remanufacture. With more focus on circularity, dismantling of used trucks may be another option, in order to recover cores for remanufacturing, and to commercialize used parts. To address this Renault Trucks, a Volvo Group company, has just announced a used truck dismantling operation of industrial scale. It adds another stream to scale up our circularity efforts,” he says.



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**Andreas Gustafsson,
VP of Circular Operations & Solutions**



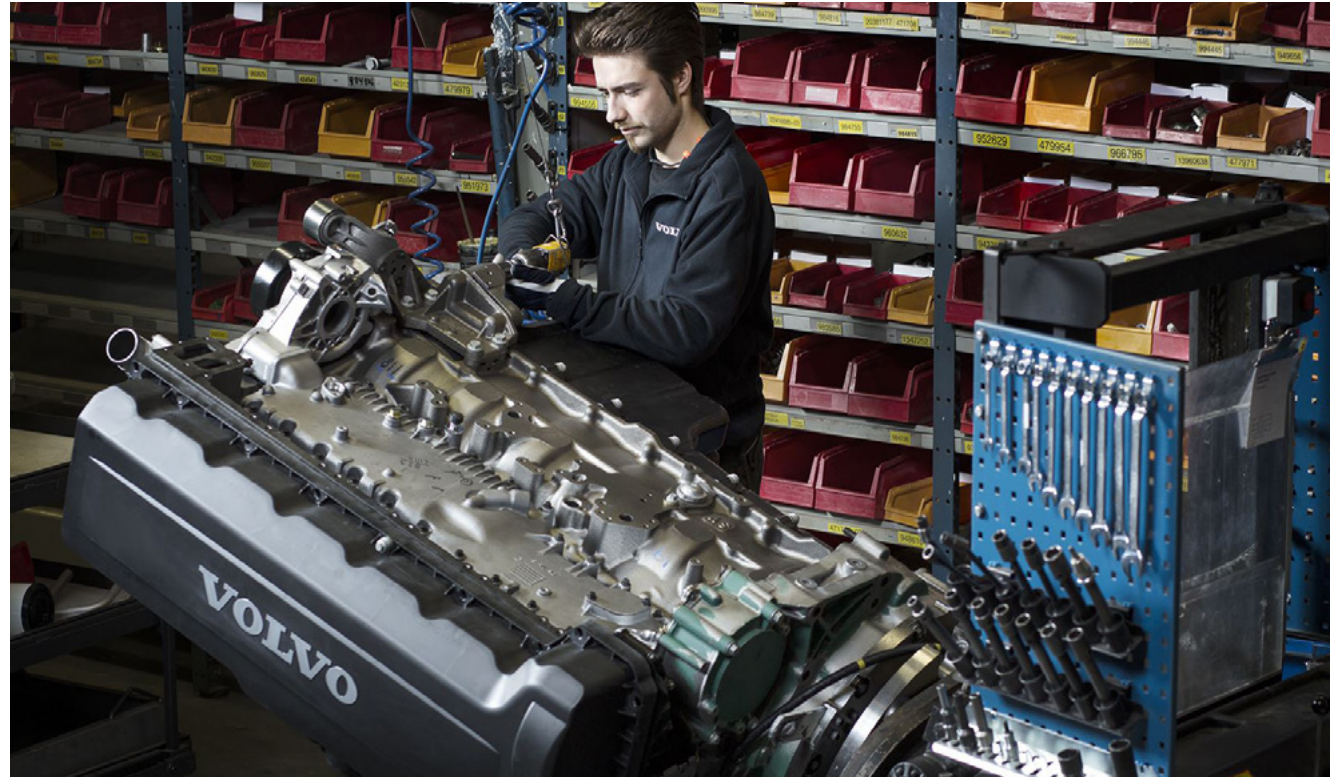
Entry category: best use of IFS technology in a sustainability initiative

This category is for any business using IFS technology that enables or supports a sustainability initiative. There should be evidence IFS technology is used to the greatest extent possible, delivering metrics to help drive their sustainability goals.

Making sustainable business

In terms of advising other companies embarking on a sustainability journey, Gustafsson suggests looking closely at the circular economy opportunities is the place to start. “The 9R framework – Refuse, Rethink, Reduce, Reuse, Repair, Refurbish, Remanufacture, Repurpose, Recycle and Recover – is a great tool to examine moving from a linear to a more circular economy. Working through the steps lets you identify and close the tightest loop that delivers the most value,” he says. “Re-use, repair and refurbish approaches are effective strategies to eliminate or dramatically reduce the use of energy and production of CO2.”

Observes Gustafsson, “Volvo Group started doing remanufacturing many years ago not because it was a sustainability initiative, but because it was good business. I believe we should not make business sustainable; rather, we should make sustainable business.”



Judges' awarding comments...

“Volvo has a clear purpose. This is not some fleeting ESG initiative. This is right at the heart of their business.”

Find out more

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