

## Remanufacturing delivers during 2020–22 in “war-time supply conditions”

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*This article is based on a keynote presentation by David Fitzsimons to the Reverse Logistics Association meeting at RAI in Amsterdam June 2022.*

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Binshi Xu survived the bloodshed of the 1970s Chinese Cultural Revolution to become an influential academic studying remanufacturing techniques. It is his advice that has kept industrial-scale value retention processes (VRP) such as remanufacturing and refurbishment in China’s national five-year plans. And yet, China has been the principal source of the four factors that have been so unwelcome to prospective remanufacturing businesses since 2000: average annual factory gate deflation of between 1 and 2%; miniaturization; light-weighting with cheap polymers, and shorter product-life cycles.



*Binshi Xu, 2016*

Although China has developed its own circular economy programme, the global economic impacts from China’s scale, pricing methods and trade since 2000 have not been favourable to remanufacturing. We have to ask what did academician and former military leader Binshi Xu say that so consistently convinced China’s economic planners? It was this: the capability to disassemble, repair, upgrade, test and then return to service a used product is of greatest value during war-time conditions. Developing and then maintaining a remanufacturing capability is a guarantee of survival when supply chains become unstable.

The disruption to many global supply chains since early 2020 should have tested whether remanufacturing businesses achieve higher sales and profitability. To date, no one has published an academically rigorous survey of the €30-billion European remanufacturing sector’s performance since 2020. But the companies and organisations in our network at the European Remanufacturing Council have shared multiple anecdotes hinting that the past two years have provided, in some product sectors, exceptional financial returns. Some have even described circumstances in 2020 to 2022 as being on occasion “like trying to manage war-time supply conditions”.



Circular Computing was the first to witness a change in attitude towards remanufacturing. Steve Haskew reported that, within three weeks of the pandemic lockdown, one of the leading laptop OEMs had contacted the company to investigate the quality of their remanufactured laptops. The OEM was motivated not so much by the circular economy, nor by the need to preserve critical raw materials nor even reduce CO<sub>2</sub> emissions by 70%, it was simply that they needed to meet unprecedented demand. Circular Computing is now investing in a second factory to scale up the remanufacturing output of laptops originally made by HP, Dell, and Lenovo.

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## **AISIN**

AISIN, one of the world's largest transmission manufacturers, saw how disruptions to chip supply quickly reduced production at their customers' vehicle factories. The consequent increase in the price of both new and used cars was interpreted by AISIN as a market signal that demand for remanufacturing services would increase. They were able to adapt to the fluctuation in demand thanks to their remanufacturing activities at Mons in Belgium, where the Lean techniques implemented enable a transmission to be turned around, completely remanufactured, within seven days. During a recent plant visit led by Renaud De Meyer, a range of ten transmissions ready to be shipped from the factory included two that had originally been fitted in 2008MY\* passenger vehicles. The transmissions have since been sent back for installation on the original, 14-year-old vehicles. [\*manufacturing years]

## **TVH**

TVH, a worldwide supplier of replacement parts and accessories for hydraulic lifting equipment, material handling, industrial vehicles, construction and agricultural equipment has a remanufacturing unit in Waregem, Belgium. Somewhat later than Circular Computing and AISIN, it became clear to TVH that lead times for the supply of aftermarket parts were sometimes being stretched into weeks instead of days as containers were held up in the global supply chain. TVH supplies parts suitable for Linde, Jungheinrich, Still, Toyota, and similar brands – clients with an urgent need to repair equipment (notably PCBs, joysticks, electrical motors, hydraulic components ) who were glad to have the option of a remanufactured alternative to a new component. Prices for new components increased, dragging up the price for substitute remanufactured parts that are traditionally sold at half the price of a new part.

In recent years, remanufacturing has been promoted as a key element of a more circular economy and one necessary to climate policies. Policymakers have responded well by accepting that remanufacturing has been ignored and often disadvantaged by regulations written to optimize the 250-year-old linear economy. The proposed revisions to the EU EcoDesign Directive and the 2022 version of the Blue Guide (used to regulate all CE marked products) have been welcomed by remanufacturers. Since 2020 however, the value retention processes of industrial-scale remanufacturing and refurbishment have delivered even more than a circular economy. The investment case for VRP has improved. But the question remains – will the global economy return to its old ways which disadvantaged remanufacturing?

I don't know if the global economy will return to its previous pattern of delivering annual factory gate deflation and marginal production sold into western markets at any price but my guess is that, regardless of the cooling of trading relationships with Chinese manufacturers, the foresight of Chinese academician Binshi Xu will resonate beyond China.

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If the strategic investment questions raised in this article are relevant to you, and an initial conversation is your next step, you are welcome to get in touch with the author or one of our subject-matter experts on this subject.

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**For additional information please contact:**



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**About the Council:**

The vision of the European Remanufacturing Council is to triple the value of Europe's remanufacturing sector to €100 billion by 2030. We will bring together businesses from every product sector to share knowledge, and seek changes to policy with the aim of making remanufacturing a normal part of the product life cycle.

**For more information about the CER please visit**  
[www.remancouncil.eu](http://www.remancouncil.eu)



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**About Oakdene Hollins:**

Oakdene Hollins is a research and consulting business that advises clients on the circular economy and sustainability. From offices in the UK and Brussels we provide market research and science-based evidence for Government and business clients.

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