



Greece, 8-9 April 2019



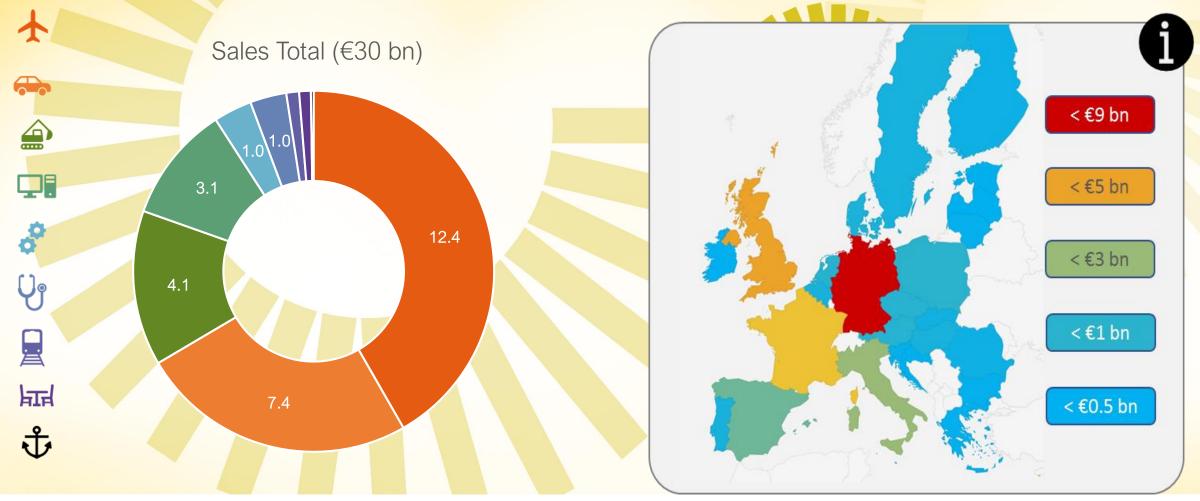
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The Scale of Remanufacturing in Europe



Definition of Remanufacturing - ISO 8887

Source: www.remanufacturing.eu





The Ship of Theseus



Plutarch, who lived c.45 to 120 AD, asked at what point – if ever – did the famous ship of Theseus become a different vessel during the many years of repairs and replacements to its wooden structure?

Source: https://www.oakdenehollins.com/reports/2018/01/01/report-template-chrrf

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Multi-Product Example



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supply chain synergy

syncreon

- Opened in Zary 2013 expanded 2018
- Growing valorisation requirement due to returned internet sales
- 5 "Core" Categories for Remanufacture:
 From Lexmark cartridges to ATM's
- High variability (>50%) in weekly "core" returns
- Unit costs for refurbishment and remanufacture reduced through in-house management and control system
- c. 500 employees





Robotics – Transmission Controllers



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www.alec-electronics.de/about/

The majority of businesses in remanufacturing are SME's – many are either independent of OEM's or are "approved third party" remanufacturers operating with the support of OEMs





Digital Platforms – Enabling Remanufacturing

- IBM

- Technology platforms (<u>IBM Cloud</u>)
- **Process platforms** enable industry peers to unlock the value of data with AI, robotics and automation, designed into key processes (IBM Group Insurance Platform)
- Market platforms enable trusted exchange between diverse partners on a global scale, by providing secure, transparent and traceable proof of identity, ownership, payments, logistics and recourse (IBM Food Trust)



Erich Clementi

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Developments in China

4 National
Demonstration
Bases for
Remanufacturing
e.g. – Hejian City

"High speed" to "High quality" Hejian City

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Greek National Circular Economy Strategy Action Plan Recommendations to Promote the Greek Remanufacturing Sector

- 1. <u>Under Action Point 1.23</u>: Commission a survey of the remanufacturing sector focus on the ports and marine sector.
- 2. <u>Under Action Point 1.2</u>: Include Remanufactured products in procurement preferences for the circular economy e.g. Office Furniture/Medical Devices/IT/Printer Cartridges
- 3. <u>Under Action Point 1.10</u>: Adopt a "Product Value Retention" approach see: http://www.resourcepanel.org/
- 4. <u>Under Action Point 1.5</u>: Permit companies by law to supply a remanufactured replacement should a new product fail during its guarantee period.
- 5. <u>Under Action Point 1.7</u>: Promote remanufacturing where it prevents the loss of Critical Raw Materials during ferrous and non ferrous recycling.
- 6. Check out the EU Circular Economy Stakeholder Platform https://circulareconomy.europa.eu/platform/
- 7. Inward Investment Choices US and European OEM's and also China



Investigate and organise
Remanufacturing in the Ports and Marine sector

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